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RESEARCH MEMORANDUM

PRESSURE DISTRIBUTIONS ON THE BLADE SECTIONS OF THE NACA 10-(3)(066)-033 PROPELLER UNDER OPERATING CONDITIONS

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PRESSURE DISTRIBUTIONS ON THE BLADE SECTIONS OF THE NACA 10-(3)(066)-033 PROPELLER UNDER OPERATING CONDITIONS

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SUMMARY

This is the first of a series of papers presenting the preliminary results obtained in tests of five propellers. The tests were made to determine blade-section characteristics from measurements of the pressure distributions on the blade sections under operating conditions. Values of the section normal-force coefficients, chordwise-pressure-force coefficients, and pitching-moment coefficients obtained by integration of the pressure distributions are presented for 11 sections of one of the propellers having a design lift coefficient of 0.3 and varying in thickness from about 4 percent at the tip to 16 percent at the spinner surface. The measured pressure distributions, together with the results, are presented in the form of tables, and, to expedite distribution, no attempt is made in this paper to analyze the data.

INTRODUCTION

A need for propeller blade-section characteristics in the transonic speed range has long been recognized, but because of wind-tunnel choking effects such data have not been obtained by the usual two-dimensional airfoil tests in wind tunnels. In the low-subsonic-speed range, propeller characteristics may be accurately predicted (reference 1) from a knowledge of the two-dimensional airfoil characteristics. In the important transonic-speed range, however, it is not known whether the two-dimensional airfoil characteristics, even if they were available, could be used for the accurate prediction of propeller performance. A knowledge of the effects of velocity gradient along the blade, the three-dimensional tip effects, and the action of centrifugal force on the boundary layer along the blade would also be desirable.

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To fill this urgent need for detailed information, a preliminary investigation (reference 2) was made in the Langley 16-foot high-speed tunnel to determine the propeller section characteristics by measuring the pressure distribution on the airfoil sections of an operating propeller. Although the forward Mach number did not exceed 0.7 in these tests, the combination of rotational and forward speeds produced blade-section Mach numbers as high as 1.2. The results of this preliminary investigation showed that an enlightening knowledge of the operating characteristics of the blade sections at high Mach numbers was obtained, and a more comprehensive program of tests was begun. Five propellers were constructed and instrumented for the measurement of the pressure distribution on any section along the blade radius. The blades had NACA 16-series sections with design lift coefficients of 0, 0.3, or 0.5, and varied in thickness from about 3 to 30 percent. The tests of these five propellers have been completed, and many data have been obtained for a total of 40 blade sections.

The purpose of this paper is to present in preliminary form the results of the tests of one of the five propellers, and to expedite distribution no attempt has been made to analyze the data. Pressure distributions were obtained on 11 sections of this propeller, having a design lift coefficient of 0.3 and varying in thickness from about 4 to 16 percent.

SYMBOLS

The symbols used throughout this paper, some of which are defined in figure 1, are as follows:

B number of blades

b blade chord, feet

c distance from section leading edge to any point on the chord, feet

$\bar{c}$ distance from section leading edge to any point about which pitching moments are taken, feet

c_c section chordwise-force coefficient

c_d section drag coefficient

c_{d_f} section friction-drag coefficient

c_l section lift coefficient

c_{l_d} blade-section design lift coefficient

c_m section pitching-moment coefficient about the quarter-chord point

c_n section normal-force coefficient

D propeller diameter, feet

F_c section chordwise pressure force, pounds

F_n section normal pressure force, pounds

G Goldstein induced-velocity correction factor for a finite number of blades

g acceleration due to gravity $\left(32.2 \text{ ft/sec}^2\right)$

h blade-section maximum thickness, feet

J advance ratio (V/nD)

K gas constant (53.3 ft-lb/lb/°F)

M Mach number of advance

M_x helical section Mach number $\left(M\sqrt{1 + \left(\frac{\pi x}{J}\right)^2}\right)$

m section pitching moment, pound-feet

N propeller rotational speed, revolutions per minute

n propeller rotational speed, revolutions per second

P pressure coefficient $\left(\frac{p - p_o}{q_x}\right)$

p static pressure at a point on the airfoil surface, pounds per square foot

p_m static pressure as read on manometer board (uncorrected for centrifugal pressure), pounds per square foot

p_o free-stream static pressure, pounds per square foot

q_x resultant dynamic pressure at a radial station x, pounds per square foot $\left(\frac{1}{2}\rho W_o^2\right)$

R propeller-tip radius, feet

r radius to a blade element, feet

r_p polar ordinate, feet

r_s radius to orifice in rotating shaft of pressure-transfer device, feet

s distance along surface of the blade section, feet

$\overline{T}$ absolute mean temperature of air in propeller tubing, $^{\circ}F$ absolute

V velocity of advance (corrected for wind-tunnel wall-interference effects), feet per second

W_o velocity vector $\left(\sqrt{V^2 + (\pi x n D)^2}\right)$

W resultant velocity at blade section, feet per second

w_i induced velocity at blade section, feet per second

x fraction of propeller-tip radius (r/R)

y normal distance from chord line to upper or lower surface of airfoil, inches

α_i induced angle of attack, degrees

α_x angle of attack of blade element, corrected for induced flow and blade deflection, at radial station x, degrees $(\beta_x - \phi + \Delta\beta)$

α_x' geometric angle of attack of blade element at radial station x, degrees $(\beta_x - \phi_o)$

β blade angle, degrees (equal to 45° at $x = 0.70$)

$\beta_{0.75R}$ blade angle at 0.75 tip radius, degrees

β_t twist in blade measured from station $x = 0.75$, degrees

β_x blade angle at station x, degrees $\left(\beta_{0.75R} - \beta_t\right)$

$\Delta\beta$ change in blade angle caused by operating loads, degrees

θ polar angular ordinate, radians

ρ mass density of air in free stream, slugs per cubic foot

σ solidity $\left(B\frac{b}{D}\Big/\pi x\right)$

ϕ helix angle, degrees $\left(\phi_o + \alpha_i\right)$

ϕ_o geometric helix angle, degrees $\left[\tan^{-1}(J/\pi x)\right]$

ψ slope angle at the surface of the section referenced to chord, degrees

ω propeller rotational speed, radians per second

Subscripts:

L lower-surface value

U upper-surface value

APPARATUS

Propeller dynamometer.— The dynamometer used to test the propellers is powered by two 1000-horsepower electric motors arranged in tandem and coupled for the present tests to allow the power of both motors to be expended through a single propeller. A variable-frequency power supply affords an accurate speed control from 300 to 2200 revolutions per minute. A detailed description of the dynamometer is presented in reference 3, and a schematic diagram of the apparatus used for the pressure-distribution tests is shown in figure 2. The fairing profile was calculated from a distribution of sources and sinks to produce a body of revolution with

uniform axial velocity in the plane of the propeller. This axial-velocity distribution has been checked experimentally and found to be uniform within 1 percent. The gap between the propeller blade and the spinner surface at the propeller blade-spinner juncture is very small, but is not sealed. Most of the propeller tests were made with two blades; however, a few tests were made with only one blade to increase the range of advance ratio and power loading for a given blade angle. For these one-blade tests an articulated hub with a counterweight was used, but the counterweight was completely enclosed in the spinner. Figure 3 is a photograph of the dynamometer with the one-blade propeller installed.

Propeller blades.- The propeller blades are made of solid duralumin and are designated the NACA 10-(3)(066)-033 design. The digits in the propeller designation indicate a 10-foot-diameter propeller having NACA 16-series blade sections (reference 4) with the following design parameters at the 0.7 radius: section design lift coefficient of 0.3, thickness ratio of 0.066, and solidity of 0.033 per blade. These blades have a rectangular plan form with a blade width of 8 inches extending to within $1\frac{1}{4}$ inches of the tip. Also, the blade-section camber, or design lift coefficient, was the same for all sections except at the 0.975 radius, where the blade section was not a true NACA 16-series airfoil. This section at the 0.975 radius was the result of the fairing necessary at the tip of the propeller, and the ordinates were measured after the blade was constructed. These ordinates for the blade section at the 0.975 radius are given in table 1.

Figure 4 gives the blade-form curves for the NACA 10-(3)(066)-033 blade design, and figure 5 is a photograph of the blade containing the pressure tubes. The pressure tubes were imbedded in both the upper and lower surfaces of the blade at 12 specified chordwise stations where it was desired to measure the pressure. The tubing was laid in radial grooves with the tops of the tubes flush with the surrounding surface of the blade, and were retained in the blade by peening the edges of the grooves at intervals along the radius. A metal spray was applied to fill any cavities around the tubes. The blade was then carefully finished to its original shape. Orifices could then be drilled in the tubes at any desired radial station. The first pressure distributions were obtained on the outboard station nearest the tip, and when measurements at this station were complete, the orifices were plugged with a low-melting-point alloy and a new set of orifices drilled at the next desired inboard station. Eleven radial stations, as indicated in figure 4, were chosen as the blade sections of the NACA 10-(3)(066)-033 propeller on which pressure distributions were desired.

The true static pressure at an orifice on the blade surface is not indicated directly on the recording manometer because of the effect of centrifugal pressure acting on the column of air inside the blade tubes. The centrifugal pressure correction can be calculated very accurately when the air column temperature is known. This temperature was assumed to be the same as the mean blade temperature which was measured by means of a resistance thermometer installed in an additional groove cut into the thrust face of the propeller blade at the 50-percent-chord station. The blade mean temperature was recorded simultaneously with the pressures for each test point.

Pressure-transfer device.- The pressure tubes were brought out of the blade surface inside the rotating spinner and run through the hollow dynamometer shaft to a transfer device mounted in the rear. Details of this pressure-transfer device are shown in figure 6. It was necessary to measure only 24 pressures simultaneously, but 30 chambers were provided to have spares in case of a leaking chamber. The pressure tubes shown in the stationary spacers were brought out at the rear end plate and connected to a multiple-tube manometer located outside the tunnel test section. The pressures were recorded by a remotely operated camera.

Optical deflectometer.- An accurate knowledge of the blade-section angle of attack in the reduction of pressure data to airfoil coefficients is obviously desirable; moreover, such knowledge is essential to the accurate determination of the component of normal force acting in the drag direction. While both the initial blade angle and the nominal helix angle could be determined precisely, the aerodynamic and centrifugal forces acting on the blade produced a torsional deflection of appreciable magnitude. An optical deflectometer (fig. 7) was devised for measuring the blade torsional deflection. In principle, the deflectometer was a theodolite movable along an axis parallel to the propeller axis of rotation. A broad light beam transmitted along the optical axis was reflected from a small mirror attached to the propeller blade. The reflection could be seen only when the mirror surface was normal to the optical axis. From a knowledge of the location of the theodolite center with reference to the propeller, and azimuth and elevation of the optical axis, the instantaneous blade angle and consequently blade torsions were determinable. Blade twist was measured simultaneously with the pressure measurements at three radial stations, $x = 0.45$, 0.70, and 0.90. Repeated tests after fully developing the instrument and operation techniques indicated that the data obtained with the deflectometer were accurate to within 0.10° at the higher speeds, and to within 0.05° at the lower speeds.

TESTS

Because the blade-section angle of attack is a function of advance ratio for a constant blade angle, a Mach number range was covered by running the tests successively over the same range of advance ratio using proportionately increased values of tunnel airspeed and propeller rotational speed. Most of the tests were made with the blade angle set at 45° at the three-quarter (45-inch) radius. A constant rotational speed was used for some of the tests, and a range of advance ratio was covered by changing the tunnel airspeed, which could be varied from about 60 to 500 miles per hour. Because of dynamometer power limitations the complete range of advance ratio could not be covered at rotational speeds above 1600 revolutions per minute $\left(\beta_{0.75R} = 45^{\circ}\right)$; therefore some tests were made with the tunnel-air-stream Mach number held constant, and the range of advance ratio was covered by changing the propeller rotational speed.

Additional tests were made for the radial stations, $x = 0.65$ and 0.78. These additional tests consisted of two groups. In one group, tests were made at a rotational speed of 1350 revolutions per minute for blade angles from 20° to 55° in 5° increments. In the other group, tests were made at a blade angle of 30° for several constant values of rotational speed up to 2160 revolutions per minute. These additional tests were made to study the effects of different radial blade loadings and Mach number gradients on the measured pressure distributions. Also, a greater range of section angle of attack was possible in the tests made at the lower blade angles. In order to extend the range of section angle of attack at the higher Mach numbers several tests were made with a one-blade propeller to obtain pressure distributions at the 0.975, 0.95, 0.85, and 0.70 radius stations.

Running the tests as described, adequate ranges of section Mach number and angle of attack were obtained for each of the 11 blade sections. The Mach number range covered for the outboard sections was from about 0.7 to 1.2, and for the inboard sections from about 0.3 to 0.7. The section angle-of-attack range was from about −2° to 11° for low values of Mach number, and from about −2° to 4° for the higher values of Mach number.

REDUCTION OF DATA

The usual wind-tunnel-wall corrections, as described in reference 3, have been applied to the data to obtain the equivalent free airspeed.

Pressure coefficient.— The pressure coefficient for any pressure at the surface of the section is defined as the difference between the measured surface pressure and the ambient free-stream static pressure divided by the resultant section dynamic pressure; therefore

$$P = \frac{p - p_o}{q_x}$$

The propeller rotation produces a change in the section velocity and the total pressure, but the static pressure and mass density remain unchanged from the free-stream condition. The pressure p at a point on the blade surface is the pressure recorded on the manometer corrected for the centrifugal force on the air column in the pressure tube due to the rotation of the blade, so that

$$p = p_m e^{\left[\frac{\omega^2}{2gK\bar{T}}\left(r^2 - r_s{}^2\right)\right]}$$

In the present installation r_s was very small compared with r, and consequently was neglected in computing the corrected pressure p.

Normal-force coefficient.— The normal force is that pressure force acting perpendicular to the chord of the section

$$F_n = \oint p \cos \psi \, ds = \int_o^b \left[\left(p_L - p_o\right) - \left(p_U - p_o\right)\right] dc$$

The normal-force coefficient is defined as the normal force acting on a section of unit span divided by the chord of the section and the resultant section dynamic pressure; thus,

$$c_n = \frac{F_n}{q_x b} = \int_o^{1.0} \left(P_L - P_U\right) d\frac{c}{b}$$

Chordwise-force coefficient.— The chordwise force of a section is defined as the pressure force acting parallel to the chord.

$$F_c = \oint p \sin \psi \, ds = \int_o^b \left[\left(p_U - p_o\right)\tan \psi_U - \left(p_L - p_o\right)\tan \psi_L\right] dc$$

The chordwise-force coefficient is defined as the chordwise force acting on a section of unit span divided by the chord and the resultant dynamic pressure; thus,

$$c_c = \frac{F_c}{q_x b} = \int_0^{1.0} \left[P_U \tan \psi_U - P_L \tan \psi_L\right] d\frac{c}{b} \tag{1}$$

or

$$c_c = \int_0^{2\pi} (P)\left[\frac{\sin \psi}{\sin(\theta - \psi)}\right]\left(\frac{r_p}{b}\right) d\theta \tag{2}$$

Equation (2) is the equivalent of equation (1) with the Cartesian coordinates converted to polar coordinates and with the origin located within the section. The total c_c is produced by evaluating these two equations. Equation (1) is used to evaluate that portion of chordwise-force coefficient from $\frac{c}{b} = 0.025$ to $\frac{c}{b} = 1.0$. Equation (2) is used to evaluate the chordwise-force coefficient from $\frac{c}{b} = 0$ to $\frac{c}{b} = 0.025$. About the chord line the sign of the slope angle ψ was taken to be positive for the forward half of the upper surface and negative for the forward half of the lower surface. The origin of the polar coordinate system was placed on the chord line at a c/b value of 0.125. In equation (2), r_p is used to represent the radius from the polar origin to the point on the surface of the section.

Pitching-moment coefficient.- The pitching-moment coefficient of a section is defined as the moment of the normal force about a given station on the chord of a section of unit span, divided by the chord squared and the resultant section dynamic pressure; thus,

$$c_m = \frac{m}{q_x b^2} = \frac{\bar{c}}{b}\int_0^{1.0} (P_L - P_U) d\frac{c}{b} - \int_0^{1.0} (P_L - P_U)\frac{c}{b}\, d\frac{c}{b}$$

A positive value of moment coefficient is defined as a moment tending to increase the section angle of attack. In this paper the moments were taken about the section quarter-chord point where $\frac{\bar{c}}{b} = 0.25$.

Angle of attack.– In addition to the correction of the section angle of attack necessary because of the blade deflection, a second correction is necessary because of the induced flow. The section angle of attack may be expressed as

$$\alpha_x = \beta_x - \phi_o + \Delta\beta - \alpha_i = \alpha_x' + \Delta\beta - \alpha_i$$

where $\Delta\beta$ is the deflection angle and α_i is the induced angle. The deflection angle was measured with the optical deflectometer previously described, and the measured values have been checked against values calculated from a knowledge of the loading along the blade radius. In most cases excellent agreement was obtained between the calculated and measured values of the deflection angle, but in some of the initial tests, before the deflectometer and operation techniques were fully developed, differences amounting to about 0.4° were found. In such cases the calculated values of the deflection angle were used.

The induced angle was calculated by a method of successive approximations using Lock's equation (reference 5) relating the interference velocity w_i with the true resultant velocity W.

$$w_i = \frac{\sigma c_l W}{4G \sin \phi}$$

Since the interference velocity may be assumed to be perpendicular to the true resultant velocity, then

$$\tan \alpha_i = \frac{\sigma c_l}{4G \sin \phi}$$

It should be pointed out that if the actual loading along the blade radius is considerably different from an optimum (or Goldstein) loading, then the induced angles calculated for the blade sections using Goldstein's factor G are in error. However, the assumption of an optimum loading was made in calculating the induced angles presented in this paper. As a first approximation for calculation of the induced angle, c_l was assumed to be equal to c_n, and ϕ was assumed to be equal to ϕ_o. Usually only two or three approximations were required to obtain calculated values equal to the assumed values. The values used for Goldstein's induced-velocity correction factor G for a finite number of blades were obtained by an interpolation of the values calculated by Lock in reference 5 for a two-blade propeller (fig. 8). The values of Goldstein's factor G for a one-blade propeller (fig. 9) were obtained by extrapolation to the one-blade case of values presented in reference 5 for

two-, three-, and four-blade propellers. As a guide in determining the proper shape of the extrapolated curves Prandtl's equation (reference 5) was used.

RESULTS

The complete results are presented in tables 2 to 12, each table showing the results for one of the 11 chosen blade sections. The blade section and blade twist at each radial station, together with the corresponding table number, are listed in the following table:

Radial station, x	Blade section	Blade twist, β_t (deg)	Table number
0.30	NACA 16-316.25	-23.8	2
.45	NACA 16-310.00	-14.3	3
.50	NACA 16-308.94	-11.5	4
.60	NACA 16-307.50	-6.4	5
.65	NACA 16-307.00	-4.2	6
.70	NACA 16-306.62	-2.0	7
.78	NACA 16-305.85	1.1	8
.85	NACA 16-305.30	3.5	9
.90	NACA 16-304.80	5.3	10
.95	NACA 16-304.40	6.9	11
.975	(See table 1)	7.7	12

The digits following the dash in the blade-section designation have the following significance: The first digit is 10 times the design lift coefficient and the remaining digits give the section thickness in percent chord, for example, the blade section at the 0.95 radius is an NACA 16-series section having a design lift coefficient of 0.3 and a thickness of 4.4 percent of the chord. Each of the tables presenting the results is subdivided into several parts, each part being on a separate page showing the data for a particular test condition over a range of advance ratio. Since there are many tables, an index to the tables is provided at the end of the paper to facilitate their use.

Pressure distributions.- The value of the pressure coefficient at each chordwise station on both the upper and lower surfaces is given in a column of the tables for each test point. Each column therefore defines a pressure distribution. Above each column are given the corresponding values of advance ratio, section Mach number, nominal angle of attack, deflection angle, induced angle of attack, normal-force coefficient,

moment coefficient, and chordwise-pressure-force coefficient. It will be noted in the tables that a few faired values, rather than measured values, of the pressure coefficient are given. This was necessary for points at the trailing edge and, in some cases, for points near the trailing edge of the outboard radial stations where the section thickness was insufficient to allow installation of a pressure tube. In the few instances where the faired value of the pressure coefficient at the trailing edge differed for the upper and lower surfaces, only the value for the lower surface is indicated in the tables. The values given for the pressure coefficient at the leading edge of the blade sections were calculated for the stagnation pressure.

Figure 10 shows some typical pressure distributions along the section chord which were obtained for the NACA 16-304.40 blade section located at the 0.95 radius. The angle of attack was approximately the same (0.6°) for all three distributions shown. At the subcritical speed, Mach number 0.64, a typical subsonic pressure distribution was obtained which is relatively flat and in close agreement with the theoretical two-dimensional pressure distribution calculated for this section. At this Mach number the section had a normal-force coefficient of 0.20. At a Mach number of 0.9, which is just at the critical speed of this section, there is little change in the shape of the pressure diagram except an increase in the magnitude of the pressures and slight irregularities near the leading edge. With this increase in Mach number the normal-force coefficient increased to a value of 0.34, which is approximately the increase predicted by the Prandtl-Glauert rule. When the Mach number is increased beyond the critical to a low supersonic speed, the pressure diagram undergoes considerable change. The pressures near the leading edge of the blade section become more positive, and over most of the upper surface supersonic flow is established which terminates in a shock close to the trailing edge. In this transition the lift coefficient has dropped back to a value appreciably lower than was obtained at the critical speed. It should be noted that at the subcritical speed low pressures on the rear half of the blade section are counterbalanced by low pressures over the forward part with the result that the pressure drag is very small. At the supersonic speed, however, pressures over the rear half of the blade section are much more negative than those over the forward half with the result that there exists a large chordwise pressure force or drag, and also a change in the pitching moment about the quarter-chord point.

Pressure diagrams such as those in figure 10 have been integrated to obtain values of the section normal-force, chordwise-force, and moment coefficients presented in the tables. These coefficients, together with the section Mach number and angle of attack, are plotted in figure 11 to show the variation with advance ratio. The data in figure 11 are from a single test, and from several plots such as this cross plots may be made to show the variation of the coefficients with Mach number, using

angle of attack as a parameter. Although it is not the purpose of this paper to analyze the data presented, a brief inspection of the results has indicated certain phenomena and limitations which must be considered in any thorough analysis of the data.

Blade loadings.– In addition to providing a picture of the lift along the radius of a propeller, loading curves are important in the reduction of the data for two reasons:

(1) The radial loading affects the blade deflections which are of considerable magnitude and must be taken into account in the determination of the section angle of attack.

(2) The radial loading affects the induced angle of a section which must also be taken into account in the determination of the angle of attack.

The variation of the normal-force coefficient along the blade radius is shown in figure 12 for propeller operation at an advance ratio of 2.2 and the five values of stream Mach number shown. It should be emphasized that these curves show the actual loading at the propeller blade, as distinguished from the usual loading downstream obtained from wake-survey measurements. The upper curves in figure 12 show the variation of blade-section Mach number along the blade radius, and the line legends correspond to the lines of the loading curves below. Note that as the stream Mach number increases from 0.38 to 0.56 the loading over the outer portion of the blade increases progressively. This increase corresponds to the increase shown by the second diagram in figure 10. As the stream Mach number is further increased to 0.60, the outboard sections lose some of their lift because of compressibility effects. At a stream Mach number of 0.65 the blade sections over the outer half of the blade are operating at Mach numbers above their critical, and at the 0.65 radius the section normal force has dropped to a comparatively low value. However, at the 0.7 radius stations where the section is operating at a Mach number of 0.93 there is a considerable recovery of the lift.

Blade deflections.– Since the blade deflections depend to a large extent on the loading along the blade radius, the radical changes in the loading curves with changes in Mach number shown in figure 12 will cause radical changes in the blade deflections. Figure 13 shows the blade deflections along the blade radius for the loading curves in figure 12. At the blade tip the deflection angle changes from 0.55° to −0.33° when the stream Mach number changes from 0.56 to 0.65. Note that the changes in the shapes of the deflection curves correspond to the changes in the loading curves of figure 12. The test condition chosen in figures 12 and 13 is for a lightly loaded propeller, and for some conditions of operation the deflection angle amounted to as much as 2.3°.

It should be pointed out that since the advance ratio is the same for all the data in figure 12 the angle of attack of a blade section at a particular radius would be the same for all the stream Mach numbers if the deflections and induced effects are disregarded.

Induced-angle correction.- Figure 14 shows the variation of the normal-force coefficient with angle of attack for several outboard radial stations operating at a constant section Mach number of 0.65. In figure 14(a) no correction for the induced angle has been applied to the values of angle of attack, and in figure 14(b) a correction for the induced angle has been applied assuming an optimum loading along the blade radius. Since the outer sections of the blades have the same camber but are slightly thinner than the inboard ones, the slopes of the curves for the outer sections would be expected to be as great or greater than for the inboard ones. Figure 14 shows that the induced-angle correction increases the slopes of the curves, but the assumption of an optimum loading in calculating the induced angles may lead to errors in the determination of the true angle of attack and of the lift-curve slopes. In figure 15 the loading parameter $bc_l/bc_{l0.75R}$ for an optimum (or Goldstein) loading is compared with the loading obtained experimentally for the same operating condition. The curves of figure 15 are typical in that they show that the experimental propeller loading deviates from the ideal with relatively high loading near the tip and low loading inboard. With a loading of this type it would be expected that the induced angles for stations near the tip would be greater than those calculated from the simple relation used. The curves of figure 14 also indicate that the induced angles near the tip must be greater if the data are to be consistent. The values of the induced angle α_i presented in the tables are therefore somewhat in error, particularly for the outboard blade sections. The extent of the error in the induced angles has not yet been determined, but at the present time an attempt is being made to develop an adequate method for calculating the induced angle for an arbitrary loading. A treatment of this subject is given in reference 6. It should be pointed out that there are other factors, such as Mach number effects (reference 7), which should be taken into account in an accurate determination of the true section angle of attack.

Blade-section lift coefficient.- The values of the normal-force and chordwise-force coefficients may be resolved into blade-section lift coefficients by using the relationship

$$c_l = c_n \cos \alpha_x - c_c \sin \alpha_x$$

Since the last term in the above equation is the product of two small quantities and since the cosine of small angles is approximately one, the value of the section lift coefficient is very nearly equal to the

normal-force coefficient. Since this is true, the error in the angle of attack (due to inaccuracy of the induced-angle calculation) will have a negligible effect on the values of the section lift coefficient.

Blade-section drag coefficient.- The values of the blade-section drag coefficient may be obtained by using the relationship

$$c_d = c_n \sin \alpha_x + c_c \cos \alpha_x + c_{d_f}$$

where c_{d_f} is the friction drag coefficient. This friction drag coefficient has been estimated to be about 0.004 from a study of the data presented in reference 8. An inspection of the above equation for the drag coefficient reveals that an error in the angle of attack will have a greater effect on the values of the drag coefficient than on the lift coefficient because of the trigonometric relations used in calculating the drag from the normal and chordwise forces. For this reason an accurate determination of the drag coefficient is not possible until an accurate evaluation of the induced angle and section angle of attack is made.

The determination of the chordwise-force coefficient, as described under the section on reduction of data, is at best an approximation from $\frac{c}{b} = 0$ to $\frac{c}{b} = 0.025$. At Mach numbers below the critical most of the pressure drag is caused by the pressures over the leading edge of the blade section. Since it was not possible to install pressure tubes in the blades at the leading edge, the values of the chordwise-force coefficient at the lower Mach numbers are greatly affected by the fairing of the pressure-distribution curves in the region of the leading edge. For this reason values of the chordwise-force coefficient are given in the tables only for those Mach numbers which are above the critical for the particular blade section. The evaluation of the chordwise-force coefficient at Mach numbers above the critical is believed to be reasonably accurate, and the values are given to indicate the trend of the blade-section drag in this important Mach number range. In general, the blade-section drag at subcritical speeds as determined from the pressure distributions will not be reliable, since both the chordwise force and the component due to the normal force are so uncertain.

Blade-section moment coefficient.- The moment coefficients were calculated about the quarter-chord point from the values of the normal force and do not include the effects of the chordwise force. This simplification results in a negligible error since the blade sections are thin and have fairly low cambers. The values of the pitching moment about the quarter-chord point are generally negative, that is, they tend to reduce the blade angle.

One-blade propeller tests.- The results of the one-blade propeller tests are included in the tabulations. A preliminary analysis of these data reveals some disagreement with the results of the two-blade propeller tests. The reason for this disagreement is not yet known. It may be due in part to the inaccuracy in the final angle of attack. It is expected that further analysis of these data may provide an explanation.

Langley Aeronautical Laboratory
National Advisory Committee for Aeronautics
Langley Air Force Base, Va.

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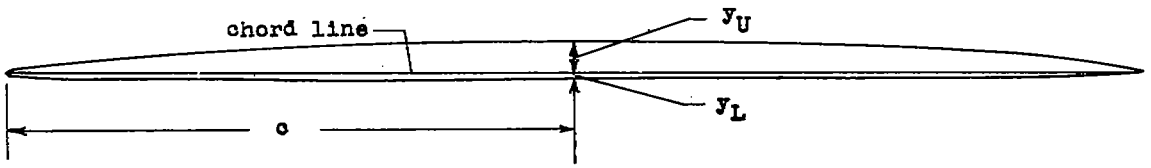
[redacted]

TABLE 1. ORDINATES FOR THE BLADE-SECTION AT THE 0.975 RADIUS OF THE NACA 10-(3)(066)-033 PROPELLER



c, inches	y_U, inches	y_L, inches
0	0	0
.048	.010	.009
.10	.023	.014
.20	.040	.021
.40	.065	.027
.60	.085	.031
.80	.102	.034
1.20	.134	.039
1.60	.161	.043
2.00	.185	.049
2.40	.205	.053
3.20	.230	.050
4.00	.240	.041
4.80	.233	.040
5.60	.216	.044
6.40	.186	.044
7.20	.134	.040
7.60	.085	.031
8.00	0	0

[redacted]

[redacted]

TABLE 2.— PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-316.25 PROPELLER BLADE SECTION (x = 0.30)

(a) N = 1140 rpm; $\beta_{0.75R}$ = 45°.

	J	1.633	1.766	1.877	2.008	2.128	2.261	2.376	2.554	2.480	2.352	2.209	2.088	1.972	1.855	1.697
	M_x	.322	.344	.359	.383	.401	.420	.439	.467	.457	.434	.413	.393	.373	.358	.331
	α_x'	8.79	6.89	5.46	3.94	2.69	1.43	.44	-.95	-.39	.64	1.72	2.75	4.34	5.74	7.82
	$\Delta\beta$	.02	.02	.02	.02	.01	.01	0	0	0	0	.01	.01	.02	.02	.02
	α_i	1.73	1.37	1.12	.89	.80	.68	.52	.32	.39	.59	.73	.82	.95	1.19	1.55
	c_n	.7079	.5672	.4709	.3768	.3432	.2977	.2303	.1432	.1723	.2581	.3197	.3535	.4035	.4995	.6393
	c_m	.0271	.0222	.0172	.0021	-.0233	-.0473	-.0566	-.0780	-.0722	-.0548	-.0365	-.0166	.0083	.0187	.0270
	c_c															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.026	1.030	1.033	1.037	1.041	1.046	1.049	1.056	1.054	1.041	1.044	1.040	1.035	1.033	1.028
	.025	-1.979	-1.484	-1.103	-.756	-.489	-.258	-.071	.176	.081	-.111	-.357	-.564	-.837	-1.192	-1.709
	.050	-1.771	-1.397	-1.116	-.850	-.650	-.471	-.318	-.105	-.190	-.346	-.545	-.704	-.918	-1.175	-1.572
	.100	-1.317	-1.098	-.932	-.764	-.639	-.521	-.415	-.261	-.322	-.433	-.569	-.675	-.813	-.971	-1.208
	.200	-1.040	-.916	-.816	-.701	-.632	-.560	-.491	-.383	-.431	-.495	-.583	-.649	-.735	-.824	-.991
	.300	-.917	-.834	-.764	-.686	-.643	-.596	-.546	-.468	-.502	-.545	-.610	-.653	-.706	-.766	-.885
	.400	-.789	-.735	-.698	-.639	-.622	-.599	-.565	-.509	-.533	-.557	-.606	-.623	-.654	-.690	-.784
	.500	-.677	-.653	-.638	-.604	-.611	-.603	-.583	-.549	-.565	-.573	-.596	-.604	-.613	-.623	-.683
	.600	-.528	-.535	-.541	-.529	-.564	-.573	-.565	-.544	-.559	-.554	-.566	-.549	-.532	-.521	-.546
	.700	-.336	-.382	-.415	-.432	-.482	-.527	-.522	-.519	-.525	-.511	-.504	-.461	-.430	-.388	-.380
	.800	-.102	-.133	-.180	-.240	-.324	-.370	-.406	-.451	-.445	-.380	-.344	-.295	-.224	-.148	-.127
	.900	-.043	.028	.072	.095	.024	-.061	-.083	-.124	-.116	-.068	-.016	.063	.101	.075	-.015
	.950	-.043	.028	.090	.162	.200	.169	.142	.088	.104	.149	.195	.196	.154	.088	-.010
Lower surface	.0375	.753	.591	.442	.298	.128	-.035	-.184	-.419	-.325	-.130	.048	.185	.337	.502	.662
	.075	.522	.382	.253	.142	.006	-.107	-.224	-.389	-.325	-.179	-.047	.056	.175	.306	.440
	.150	.320	.200	.103	.021	-.080	-.163	-.242	-.353	-.310	-.207	-.115	-.044	.045	.142	.243
	.250	.166	.071	-.002	-.061	-.137	-.199	-.251	-.331	-.299	-.222	-.160	-.110	-.045	.030	.106
	.350	.064	-.014	-.080	-.123	-.177	-.225	-.260	-.318	-.296	-.241	-.194	-.154	-.105	-.046	.005
	.450	-.021	-.085	-.137	-.170	-.212	-.245	-.275	-.315	-.302	-.257	-.221	-.195	-.159	-.112	-.076
	.550	-.112	-.163	-.202	-.217	-.252	-.268	-.291	-.318	-.313	-.272	-.248	-.239	-.216	-.174	-.147
	.650	-.171	-.210	-.237	-.237	-.252	-.251	-.263	-.274	-.273	-.253	-.241	-.247	-.236	-.210	-.207
	.750	-.214	-.243	-.254	-.233	-.227	-.212	-.211	-.195	-.202	-.201	-.211	-.224	-.236	-.232	-.249
	.850	-.187	-.195	-.193	-.162	-.094	-.051	-.035	.012	-.007	-.027	-.061	-.106	-.171	-.183	-.207
	.925	-.139	-.133	-.080	-.002	.057	.115	.148	.203	.184	.149	.093	.038	-.012	-.090	-.157
	.975	-.095	-.062	-.015	.076	.179	[a].190	.279	.295	.298	.279	.222	.148	.053	-.018	.091
	1.000	[b]-.070	[b]0	[b].013	[b].104	[b].252	[b].229	[a].450	[a].333	[a].360	[a].350	[b].320	[b].205	[a].189	[b].024	[a]-.010

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

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TABLE 2.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-316.25 PROPELLER BLADE SECTION (x = 0.30) - Continued

(b) N = 1350 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.696	1.792	1.884	1.999	2.099	2.205	2.308	2.405	2.541	2.484	2.383	2.288	2.178	2.069	1.954	1.850	1.750
	M_{r_1}	.396	.412	.427	.449	.469	.489	.508	.526	.552	.542	.521	.503	.480	.464	.439	.420	.404
	α_r	7.85	6.53	5.36	4.03	2.97	1.93	1.00	.19	-.86	-.43	.35	1.18	2.19	3.28	4.54	5.78	7.09
	$\Delta\beta$	.04	.03	.03	.02	.02	.02	.01	.00	.00	.00	.00	.01	.02	.02	.02	.03	.03
	α_i	1.56	1.32	1.13	.95	.80	.67	.60	.48	.31	.38	.49	.61	.71	.85	.99	1.21	1.46
	c_n	.6439	.5509	.4760	.4046	.3439	.2906	.2635	.2110	.1384	.1681	.2152	.2674	.3068	.3652	.4198	.5090	.6058
	c_m	.0309	.0268	.0164	.0007	-.0095	-.0268	-.0438	-.0569	-.0740	-.0671	-.0548	-.0396	-.0230	-.0020	.0091	.0208	.0293
	c_o																	
	c/b	Pressure coefficient, P																
Upper surface	0.000	1.040	1.043	1.047	1.052	1.057	1.061	1.066	1.071	1.078	1.075	1.069	1.064	1.060	1.056	1.050	1.045	1.042
	.025	-1.730	-1.489	-1.109	-.788	-.545	-.319	-.159	-.004	.191	.108	-.030	-.192	-.340	-.619	-.911	-1.243	-1.572
	.050	-1.620	-1.374	-1.138	-.896	-.714	-.536	-.405	-.269	-.107	-.179	-.298	-.428	-.545	-.766	-.990	-1.236	-1.479
	.100	-1.241	-1.090	-.966	-.808	-.689	-.571	-.484	-.385	-.270	-.322	-.407	-.501	-.565	-.719	-.867	-1.018	-1.151
	.200	-1.005	-.922	-.832	-.740	-.668	-.597	-.552	-.484	-.408	-.440	-.493	-.554	-.576	-.683	-.776	-.863	-.958
	.300	-.894	-.840	-.777	-.714	-.668	-.622	-.590	-.551	-.495	-.519	-.555	-.597	-.597	-.674	-.734	-.800	-.866
	.400	-.777	-.741	-.704	-.662	-.638	-.612	-.595	-.573	-.539	-.553	-.575	-.602	-.581	-.638	-.672	-.718	-.762
	.500	-.669	-.655	-.641	-.618	-.616	-.607	-.600	-.595	-.580	-.585	-.593	-.605	-.571	-.608	-.623	-.638	-.663
	.600	-.526	-.522	-.535	-.536	-.545	-.561	-.569	-.573	-.570	-.570	-.566	-.573	-.524	-.530	-.531	-.529	-.530
	.700	-.334	-.371	-.402	-.428	-.453	-.478	-.514	-.531	-.535	-.530	-.521	-.515	-.438	-.435	-.413	-.380	-.356
	.800	-.091	-.112	-.157	-.214	-.263	-.309	-.344	-.381	-.442	-.410	-.362	-.342	-.270	-.240	-.184	-.126	-.103
	.900	-.017	.028	.079	.107	.098	.029	-.026	-.076	-.111	-.093	-.057	-.023	.080	.130	.103	.062	.008
	.950	-.017	.035	.098	.154	.179	.206	.178	.138	.100	.116	.152	.179	.251	.175	.134	.069	.008
Lower surface	.0375	.648	.583	.465	.317	.185	.039	-.078	-.224	-.421	-.331	-.184	-.057	.119	.239	.384	.521	.632
	.075	.469	.374	.276	.160	.052	-.037	-.142	-.255	-.396	-.333	-.225	-.129	.005	.094	.211	.323	.418
	.150	.270	.197	.120	.034	-.046	-.125	-.187	-.264	-.363	-.320	-.244	-.178	-.065	-.012	.073	.161	.233
	.250	.131	.070	.009	-.051	-.111	-.173	-.216	-.273	-.344	-.312	-.255	-.207	-.117	-.087	-.047	.043	.093
	.350	.031	-.016	-.061	-.115	-.160	-.205	-.237	-.282	-.336	-.312	-.266	-.233	-.153	-.140	-.092	-.037	.004
	.450	-.054	-.091	-.129	-.168	-.204	-.238	-.258	-.296	-.334	-.320	-.282	-.255	-.190	-.184	-.147	-.110	-.077
	.550	-.142	-.166	-.195	-.220	-.247	-.274	-.282	-.311	-.342	-.329	-.303	-.284	-.223	-.234	-.212	-.175	-.160
	.650	-.194	-.218	-.233	-.246	-.255	-.269	-.274	-.285	-.301	-.294	-.278	-.269	-.223	-.246	-.233	-.219	-.206
	.750	-.235	-.248	-.246	-.246	-.244	-.243	-.228	-.224	-.220	-.224	-.221	-.231	-.203	-.240	-.245	-.245	-.245
	.850	-.198	-.201	-.188	-.151	-.117	-.092	-.059	-.036	-.007	-.023	-.039	-.067	-.047	-.126	-.175	-.189	-.199
	.925	-.150	-.132	-.061	-.024	.014	.065	.117	.161	.193	.176	.152	.107	.103	.005	-.034	-.096	-.145
	.975	-.093	-.062	-.010	.186	.125	.201	.259	.286	.292	.288	.281	.249	.235	.108	.030	-.033	-.081
	1.000	[b]-.052	[b]-.017	[b].010	[b].349	[b].200	[b].315	[b].330	[b].350	[a].334	[a].334	[a].349	[b].335	[b].334	[b].180	[b].048	[b].010	[a]0

[a]Faired value.
[b]Lower surface only.

[redacted]

[redacted]

TABLE 2.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-316.25 PROPELLER BLADE SECTION (x = 0.30) – Continued

(c) N = 1500 rpm; $\beta_{0.75R}$ = 45°.

	J	1.963	2.015	2.118	2.197	2.284	2.374	2.467	2.534	2.501	2.426	2.335	2.242	2.169	2.092	2.006
	M_r	.492	.506	.525	.543	.560	.581	.601	.616	.607	.589	.569	.550	.534	.519	.501
	α_r'	4.45	3.87	2.79	2.02	1.22	.45	-.29	-.80	-.55	.03	.78	1.60	2.29	3.05	3.97
	$\Delta\beta$	.03	.03	.02	.02	.01	0	0	0	0	0	.01	.01	.02	.02	.03
	α_i	1.03	.90	.77	.69	.61	.54	.42	.33	.35	.44	.57	.63	.73	.80	.95
	c_n	.4382	.3832	.3303	.2997	.2655	.2394	.1852	.1458	.1552	.1935	.2513	.2726	.3165	.3439	.4052
	c_m	.0094	.0023	-.0061	-.0182	-.0365	-.0528	-.0641	-.0732	-.0704	-.0610	-.0451	-.0304	-.0150	-.0048	.0056
	c_c															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.062	1.065	1.070	1.076	1.080	1.086	1.092	1.097	1.094	1.089	1.083	1.077	1.071	1.069	1.064
	.025	-.914	-.721	-.495	-.346	-.176	-.032	.107	.206	.167	.055	-.100	-.245	-.396	-.558	-.787
	.050	-1.014	-.878	-.691	-.571	-.433	-.309	-.186	-.097	-.135	-.239	-.369	-.492	-.614	-.743	-.918
	.100	-.899	-.819	-.691	-.609	-.518	-.428	-.337	-.273	-.299	-.375	-.471	-.555	-.636	-.720	-.835
	.200	-.807	-.769	-.682	-.630	-.578	-.522	-.464	-.424	-.440	-.492	-.552	-.602	-.647	-.699	-.768
	.300	-.767	-.752	-.688	-.656	-.622	-.587	-.547	-.525	-.533	-.569	-.609	-.640	-.662	-.699	-.743
	.400	-.699	-.707	-.659	-.639	-.624	-.606	-.578	-.571	-.574	-.597	-.619	-.636	-.643	-.665	-.685
	.500	-.645	-.664	-.633	-.622	-.622	-.621	-.607	-.613	-.612	-.623	-.627	-.627	-.623	-.633	-.637
	.600	-.545	-.576	-.557	-.571	-.582	-.592	-.589	-.602	-.596	-.599	-.594	-.584	-.566	-.555	-.550
	.700	-.420	-.466	-.459	-.467	-.514	-.543	-.546	-.562	-.553	-.552	-.540	-.503	-.462	-.455	-.433
	.800	-.183	-.255	-.270	-.292	-.331	-.363	-.390	-.443	-.419	-.386	-.355	-.324	-.281	-.255	-.216
	.900	.099	.088	.082	.050	0	-.049	-.077	-.106	-.089	-.071	-.033	.013	.066	.097	.099
	.950	.129	.150	.192	.207	.187	.157	.133	.106	.120	.137	.166	.196	.201	.177	.145
Lower surface	.0375	.384	.255	.151	.067	-.055	-.166	-.293	-.422	-.365	-.259	-.122	-.007	.103	.195	.315
	.075	.209	.105	.027	-.040	-.131	-.214	-.308	-.406	-.364	-.285	-.181	-.095	-.010	.058	.153
	.150	.069	-.017	-.071	-.114	-.180	-.237	-.303	-.374	-.344	-.291	-.217	-.155	-.093	-.045	.027
	.250	-.026	-.098	-.134	-.167	-.216	-.256	-.303	-.359	-.333	-.295	-.240	-.197	-.150	-.114	-.061
	.350	-.096	-.157	-.180	-.205	-.242	-.271	-.306	-.352	-.331	-.304	-.262	-.228	-.191	-.166	-.123
	.450	-.156	-.207	-.225	-.241	-.268	-.286	-.313	-.352	-.335	-.315	-.284	-.259	-.228	-.212	-.177
	.550	-.216	-.264	-.272	-.282	-.298	-.309	-.330	-.360	-.348	-.334	-.309	-.292	-.274	-.260	-.235
	.650	-.248	-.283	-.281	-.284	-.288	-.286	-.297	-.315	-.306	-.302	-.292	-.286	-.276	-.274	-.259
	.750	-.258	-.283	-.270	-.263	-.250	-.229	-.223	-.229	-.226	-.237	-.240	-.255	-.261	-.265	-.264
	.850	-.166	-.169	-.138	-.114	-.081	-.042	-.016	-.003	-.008	-.035	-.063	-.093	-.117	-.139	-.160
	.925	-.056	-.045	.004	.045	.098	.153	.185	.201	.194	.166	.127	.080	.033	-.001	-.041
	.975	.030	.067	.131	.186	.243	.280	.292	.288	.292	.284	.261	.225	.170	.113	.051
	1.000	[a].089	[a].120	[a].255	[a].286	[a].320	[a].334	[a].335	[a].315	[a].323	[a].326	[a].417	[a].415	[a].330	[a].200	[a].112

[a]Paired value.

[redacted]

NACA

[redacted]

TABLE 2.– PRESSURE COEFFICIENTS AND AERODYNAMICS CHARACTERISTICS OF AN NACA 16-316.25 PROPELLER BLADE SECTION (x = 0.30).– Continued

(d) M = 0.56; $\beta_{0.75R} = 45^{\circ}$.

	J	2.121	2.149	2.189	2.221	2.256	2.272	2.319	2.339	2.369	2.414	2.446	2.477	2.520
	M_r	.616	.612	.613	.612	.610	.604	.608	.607	.606	.606	.605	.605	.601
	α_r'	2.76	2.48	2.10	1.79	1.47	1.33	.92	.74	.49	.13	-.13	-.37	-.69
	$\Delta\beta$	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	0	0	0
	α_i	.75	.73	.69	.65	.59	.58	.56	.54	.52	.45	.41	.37	.31
	c_n	.3255	.3132	.3010	.2835	.2558	.2532	.2471	.2371	.2297	.1984	.1813	.1623	.1384
	c_m	-.0034	-.0058	-.0149	-.0167	-.0298	-.0326	-.0454	-.0517	-.0560	-.0626	-.0646	-.0691	-.0751
	c_c													
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.098	1.096	1.097	1.097	1.096	1.094	1.096	1.095	1.094	1.094	1.094	1.094	1.093
	.025	-.407	-.363	-.297	-.248	-.177	-.155	-.084	-.050	-.005	.061	.101	.142	.197
	.050	-.666	-.621	-.562	-.518	-.453	-.435	-.367	-.336	-.296	-.233	-.198	-.158	-.108
	.100	-.699	-.667	-.623	-.592	-.541	-.531	-.477	-.456	-.422	-.378	-.347	-.315	-.279
	.200	-.719	-.695	-.665	-.645	-.610	-.607	-.566	-.555	-.529	-.501	-.478	-.452	-.426
	.300	-.736	-.720	-.699	-.686	-.658	-.660	-.628	-.621	-.601	-.582	-.562	-.541	-.520
	.400	-.703	-.694	-.681	-.671	-.656	-.662	-.639	-.637	-.621	-.612	-.596	-.581	-.566
	.500	-.668	-.664	-.658	-.656	-.647	-.660	-.646	-.648	-.637	-.635	-.625	-.613	-.606
	.600	-.575	-.581	-.593	-.597	-.596	-.612	-.605	-.612	-.607	-.610	-.601	-.595	-.593
	.700	-.456	-.467	-.474	-.483	-.495	-.522	-.540	-.557	-.556	-.562	-.557	-.552	-.555
	.800	-.240	-.262	-.279	-.294	-.308	-.331	-.349	-.365	-.370	-.389	-.397	-.410	-.441
	.900	.105	.095	.072	.054	.039	.013	-.013	-.034	-.048	-.069	-.078	-.089	-.099
	.950	.187	.197	.200	.204	.202	.190	.184	.167	.158	.142	.131	.122	.123
Lower surface	.0375	.142	.104	.056	.017	-.032	-.069	-.111	-.150	-.185	-.262	-.297	-.339	-.415
	.075	.014	-.012	-.051	-.082	-.117	-.148	-.175	-.207	-.230	-.289	-.315	-.342	-.399
	.150	-.077	-.099	-.125	-.151	-.173	-.198	-.214	-.236	-.253	-.294	-.309	-.330	-.368
	.250	-.142	-.158	-.179	-.197	-.212	-.234	-.241	-.258	-.267	-.299	-.309	-.324	-.353
	.350	-.191	-.204	-.219	-.234	-.244	-.263	-.262	-.277	-.282	-.307	-.315	-.324	-.346
	.450	-.236	-.246	-.258	-.269	-.274	-.290	-.285	-.297	-.300	-.319	-.324	-.330	-.346
	.550	-.288	-.294	-.302	-.310	-.311	-.326	-.315	-.324	-.323	-.339	-.340	-.342	-.355
	.650	-.301	-.305	-.305	-.311	-.306	-.317	-.299	-.302	-.298	-.307	-.306	-.305	-.313
	.750	-.288	-.289	-.286	-.285	-.272	-.277	-.250	-.249	-.239	-.239	-.234	-.227	-.228
	.850	-.149	-.143	-.132	-.125	-.103	-.103	-.067	-.059	-.043	-.035	-.025	-.016	-.008
	.925	0	.012	.032	.047	.078	.083	.126	.138	.155	.169	.179	.192	.194
	.975	.131	.148	.172	.193	.223	.226	.261	.267	.279	.283	.287	.295	.286
	1.000	[a].236	[a].270	[a].272	[a].300	[a].315	[a].330	[b].344	[b].350	[a].352	[a].342	[a].338	[a].337	[a].330

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 2.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-316.25 PROPELLER BLADE SECTION (x = 0.30) – Continued

(e) M = 0.60; $\beta_{0.75R}$ = 45°.

J	2.077	2.106	2.132	2.158	2.185	2.220	2.247	2.273	2.299	2.329	2.360	2.391	2.426	2.461	2.512
M_r	.662	.660	.659	.658	.657	.657	.656	.653	.652	.648	.647	.646	.647	.644	.644
α_r'	3.21	2.91	2.65	2.39	2.13	1.80	1.56	1.32	1.09	.83	.57	.31	.03	–.25	–.63
$\Delta\beta$	.02	.02	.02	.02	.02	.01	.01	.01	.01	.01	0	0	0	0	–.01
α_i	.80	.75	.71	.68	.63	.58	.54	.53	.50	.45	.45	.42	.40	.37	.29
c_n	.3445	.3226	.3058	.2942	.2710	.2523	.2348	.2332	.2184	.1974	.1961	.1835	.1755	.1642	.1271
c_m	.0088	.0046	.0008	–.0049	–.0064	–.0125	–.0179	–.0265	–.0291	–.0373	–.0400	–.0523	–.0613	–.0669	–.0711
c_c															
c/b	Pressure coefficient, P														
Upper surface															
0.000	1.114	1.113	1.113	1.113	1.112	1.112	1.112	1.111	1.111	1.109	1.109	1.109	1.109	1.108	1.108
.025	–.454	–.393	–.340	–.285	–.240	–.179	–.126	–.084	–.041	–.001	.028	.071	.123	.158	.220
.050	–.751	–.689	–.633	–.579	–.534	–.478	–.424	–.385	–.343	–.306	–.276	–.236	–.187	–.155	–.093
.100	–.794	–.746	–.702	–.660	–.626	–.581	–.537	–.508	–.473	–.445	–.420	–.389	–.353	–.326	–.276
.200	–.821	–.787	–.753	–.726	–.693	–.666	–.630	–.611	–.585	–.563	–.545	–.520	–.498	–.478	–.439
.300	–.839	–.813	–.786	–.763	–.738	–.721	–.691	–.678	–.657	–.641	–.623	–.609	–.592	–.579	–.544
.400	–.783	–.768	–.751	–.739	–.720	–.714	–.691	–.686	–.671	–.661	–.649	–.638	–.631	–.623	–.597
.500	–.721	–.719	–.711	–.707	–.695	–.695	–.682	–.683	–.675	–.672	–.662	–.661	–.662	–.658	–.641
.600	–.592	–.593	–.595	–.603	–.595	–.613	–.609	–.623	–.623	–.622	–.620	–.625	–.636	–.638	–.626
.700	–.451	–.453	–.461	–.476	–.460	–.486	–.490	–.516	–.530	–.542	–.546	–.466	–.583	–.589	–.582
.800	–.197	–.199	–.214	–.242	–.208	–.256	–.271	–.309	–.325	–.336	–.342	–.372	–.401	–.415	–.434
.900	.077	.076	.088	.099	.082	.080	.088	.052	.039	.027	.020	–.031	–.061	–.084	–.088
.950	.126	.125	.145	.171	.120	.156	.177	.191	.192	.184	.184	.170	.148	.133	.122
Lower surface															
.0375	.171	.130	.099	.064	.029	–.024	–.057	–.100	–.137	–.184	–.206	–.254	–.317	–.363	–.437
.075	.031	0	–.022	–.048	–.077	–.121	–.144	–.176	–.202	–.241	–.253	–.288	–.335	–.371	–.424
.150	–.076	–.097	–.112	–.133	–.151	–.185	–.198	–.223	–.242	–.269	–.276	–.302	–.335	–.361	–.394
.250	–.152	–.167	–.179	–.191	–.206	–.232	–.239	–.257	–.268	–.290	–.294	–.310	–.335	–.354	–.378
.350	–.209	–.221	–.226	–.239	–.248	–.269	–.273	–.286	–.294	–.310	–.312	–.323	–.342	–.356	–.373
.450	–.262	–.272	–.274	–.281	–.288	–.304	–.305	–.314	–.319	–.334	–.332	–.339	–.352	–.361	–.373
.550	–.327	–.331	–.332	–.335	–.339	–.351	–.347	–.352	–.354	–.365	–.360	–.362	–.371	–.376	–.383
.650	–.349	–.350	–.344	–.343	–.346	–.351	–.343	–.343	–.340	–.347	–.338	–.334	–.335	–.338	–.338
.750	–.348	–.344	–.332	–.324	–.325	–.322	–.308	–.299	–.291	–.293	–.279	–.267	–.258	–.255	–.248
.850	–.212	–.204	–.188	–.172	–.174	–.158	–.139	–.116	–.099	–.094	–.078	–.057	–.039	–.027	–.013
.925	–.066	–.056	–.033	–.008	–.016	.014	.040	.075	.094	.104	.119	.149	.169	.181	.192
.975	.045	.065	.092	.123	.109	.148	.174	.211	.229	.231	.241	.265	.274	.278	.274
1.000	[b].090	[a].125	[b].161	[a].207	[b].173	[b].219	[a].240	[b].290	[b].305	[a].304	[b].310	[b].311	[a].315	[a].325	[a].307

[a]Faired value.
[b]Lower surface only.

[redacted]

[redacted]

TABLE 2.— PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-316.25 PROPELLER BLADE SECTION (x = 0.30) — Concluded

(f) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.129	2.162	2.179	2.198	2.220	2.248	2.268	2.283	2.319	2.338	2.359	2.389	2.413	2.433
	M_x	.722	.720	.717	.714	.713	.711	.710	.706	.708	.704	.701	.702	.699	.698
	α_x'	2.68	2.35	2.19	2.01	1.80	1.55	1.37	1.23	.92	.75	.58	.33	.13	-.02
	$\Delta\beta$	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	α_i	.69	.64	.63	.61	.57	.52	.48	.43	.41	.39	.39	.34	.28	.23
	c_n	.2987	.2761	.2742	.2639	.2471	.2252	.2097	.1871	.1781	.1703	.1703	.1477	.1252	.1032
	c_m	.0113	-.0011	-.0013	-.0020	-.0074	-.0092	-.0123	-.0141	-.0184	-.0213	-.0287	-.0287	-.0349	-.0354
	c_o														
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.138	1.137	1.136	1.135	1.134	1.133	1.133	1.131	1.132	1.130	1.129	1.129	1.128	1.128
	.025	-.209	-.140	-.133	-.112	-.086	-.047	-.015	.015	.054	.079	.103	.138	.168	.192
	.050	-.541	-.470	-.461	-.438	-.411	-.370	-.338	-.306	-.267	-.242	-.217	-.181	-.151	-.130
	.100	-.659	-.600	-.595	-.574	-.554	-.520	-.491	-.468	-.435	-.412	-.392	-.362	-.335	-.317
	.200	-.783	-.728	-.725	-.705	-.688	-.657	-.633	-.610	-.582	-.562	-.546	-.523	-.499	-.486
	.300	-.881	-.832	-.834	-.813	-.792	-.766	-.741	-.715	-.691	-.671	-.657	-.638	-.616	-.605
	.400	-.890	-.836	-.833	-.810	-.795	-.776	-.758	-.737	-.718	-.703	-.693	-.682	-.662	-.656
	.500	-.801	-.778	-.782	-.770	-.765	-.756	-.748	-.736	-.724	-.717	-.716	-.714	-.701	-.700
	.600	-.626	-.621	-.633	-.630	-.636	-.640	-.639	-.635	-.636	-.636	-.642	-.650	-.642	-.646
	.700	-.459	-.460	-.475	-.475	-.481	-.487	-.488	-.491	-.498	-.507	-.523	-.542	-.545	-.552
	.800	-.206	-.207	-.226	-.229	-.235	-.245	-.246	-.248	-.252	-.258	-.268	-.283	-.288	-.295
	.900	.107	.114	.111	.114	.113	.115	.120	.126	.134	.136	.134	.128	.133	.130
	.950	.149	.170	.170	.172	.170	.164	.164	.162	.170	.165	.158	.151	.156	.153
Lower surface	.0375	.080	.030	.009	-.011	-.038	-.085	-.114	-.145	-.176	-.203	-.237	-.279	-.310	-.348
	.075	-.025	-.068	-.090	-.108	-.111	-.160	-.182	-.201	-.229	-.259	-.285	-.310	-.319	-.355
	.150	-.129	-.155	-.169	-.180	-.195	-.223	-.239	-.257	-.271	-.284	-.304	-.325	-.339	-.361
	.250	-.200	-.217	-.229	-.237	-.252	-.270	-.283	-.295	-.304	-.313	-.326	-.343	-.350	-.367
	.350	-.255	-.265	-.277	-.278	-.289	-.307	-.316	-.323	-.329	-.335	-.344	-.354	-.358	-.373
	.450	-.307	-.314	-.324	-.327	-.334	-.347	-.354	-.361	-.359	-.362	-.368	-.375	-.376	-.389
	.550	-.377	-.380	-.387	-.386	-.391	-.402	-.405	-.408	-.406	-.404	-.406	-.407	-.404	-.414
	.650	-.393	-.388	-.393	-.391	-.391	-.399	-.397	-.398	-.391	-.386	-.383	-.378	-.370	-.378
	.750	-.376	-.369	-.367	-.361	-.357	-.359	-.354	-.349	-.336	-.328	-.320	-.309	-.297	-.302
	.850	-.317	-.183	-.189	-.179	-.175	-.167	-.159	-.152	-.137	-.128	-.118	-.107	-.092	-.095
	.925	-.043	-.015	-.008	.003	.011	.021	.031	.040	.053	.061	.065	.074	.083	.081
	.975	.086	.120	[a].140	.140	.147	.155	.160	.167	.176	.179	.180	.179	.183	.178
	1.000	[a].158	[a].188	[a].240	[a].260	[a].230	[a].220	[a].225	[a].240	[a].230	[a].230	[b].226	[b].222	[b].235	[b].223

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 3.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-310.00 PROPELLER BLADE SECTION (x = 0.45)

(a) N = 1140 rpm; $\beta_{0.75R}$ = 45°.

	J	1.620	1.738	1.858	1.986	2.098	2.199	2.340	2.443	2.568	2.516	2.401	2.270	2.158	2.060	1.929	1.783	1.700
	M_x	.366	.382	.401	.417	.435	.448	.468	.483	.504	.496	.478	.457	.441	.431	.410	.390	.376
	α_x	10.41	8.42	6.57	4.74	3.27	2.04	.44	-.64	-1.87	-1.37	-.21	1.21	2.53	3.76	5.54	7.71	9.05
	$\Delta\beta$	.15	.13	.11	.10	.08	.06	.04	.03	-.01	.01	.03	.05	.07	.09	.10	.12	.14
	α_i	2.44	2.05	1.71	1.34	1.08	.87	.58	.40	.18	.28	.47	.71	.97	1.13	1.52	1.90	2.21
	c_n	.9830	.8291	.7026	.5532	.4523	.3635	.2452	.1703	.0765	.1187	.1997	.3003	.4042	.4703	.6269	.7750	.8980
	c_m	-.0007	-.0180	-.0195	-.0182	-.0226	-.0338	-.0434	-.0526	-.0582	-.0559	-.0470	-.0407	-.0294	-.0226	-.0190	-.0190	-.0080
	c_o																	
	c/b	Pressure coefficient, P																
Upper surface	0.000	1.034	1.037	1.041	1.045	1.049	1.052	1.056	1.060	1.065	1.063	1.059	1.054	1.050	1.048	1.043	1.039	1.036
	.025	-2.649	-2.126	-1.613	-1.154	-.783	-.500	-.178	.032	.243	.153	-.065	-.325	-.626	-.896	-1.328	-1.867	-2.803
	.050	-2.635	-1.737	-1.410	-1.051	-.783	-.575	-.329	-.160	.017	-.062	-.238	-.446	-.673	-.865	-1.218	-1.591	-2.287
	.100	-2.131	-1.275	-1.050	-.818	-.659	-.526	-.356	-.237	-.108	-.163	-.291	-.437	-.590	-.700	-.934	-1.185	-1.414
	.200	-1.059	-.956	-.824	-.676	-.572	-.505	-.397	-.319	-.230	-.270	-.354	-.451	-.542	-.599	-.748	-.905	-.970
	.300	-.866	-.824	-.733	-.629	-.554	-.500	-.421	-.368	-.297	-.329	-.391	-.465	-.527	-.571	-.679	-.793	-.828
	.400	-.752	-.715	-.657	-.579	-.526	-.482	-.424	-.386	-.333	-.356	-.402	-.460	-.509	-.536	-.616	-.698	-.712
	.500	-.639	-.621	-.585	-.529	-.495	-.470	-.429	-.401	-.367	-.383	-.412	-.454	-.485	-.499	-.555	-.616	-.613
	.600	-.555	-.555	-.534	-.499	-.482	-.473	-.448	-.432	-.410	-.420	-.436	-.465	-.482	-.480	-.513	-.555	-.538
	.700	-.412	-.420	-.418	-.400	-.399	-.400	-.397	-.391	-.381	-.386	-.391	-.409	-.401	-.391	-.396	-.427	-.399
	.800	-.240	-.244	-.252	-.254	-.269	-.292	-.297	-.319	-.314	-.319	-.302	-.299	-.284	-.256	-.250	-.258	-.224
	.900	-.058	-.026	.002	.012	.004	-.027	-.045	-.065	-.079	-.075	-.052	-.041	-.017	.013	.012	-.020	-.018
	.950	-.012	.020	.074	.108	.121	.125	.115	.094	.075	.083	.109	.117	.123	.120	.092	.044	.021
Lower surface	.0375	.841	.778	.661	.484	.313	.163	-.064	-.247	-.468	-.366	-.154	.041	.228	.379	.579	.726	.814
	.075	.648	.585	.481	.330	.202	.087	-.075	-.201	-.350	-.282	-.136	-.001	.135	.249	.407	.529	.620
	.150	.462	.405	.321	.211	.115	.037	-.075	-.160	-.242	-.208	-.117	-.026	.067	.151	.268	.364	.442
	.250	.320	.265	.205	.118	.044	-.015	-.096	-.155	-.216	-.186	-.125	-.063	.007	.073	.165	.236	.299
	.350	.222	.187	.136	.065	.007	-.039	-.102	-.145	-.194	-.171	-.123	-.077	-.023	.032	.102	.161	.215
	.450	.148	.117	.078	.022	-.027	-.062	-.113	-.145	-.184	-.163	-.125	-.091	-.047	-.006	.054	.097	.144
	.550	.080	.063	.032	-.021	-.055	-.079	-.118	-.145	-.175	-.158	-.133	-.105	-.071	-.038	.012	.040	.085
	.650	.008	-.003	-.026	-.061	-.089	-.103	-.134	-.147	-.168	-.158	-.138	-.122	-.101	-.076	-.036	-.020	.021
	.750	-.030	-.031	-.042	-.068	-.083	-.088	-.107	-.111	-.120	-.116	-.109	-.102	-.092	-.076	-.050	-.040	-.010
	.850	-.042	-.031	-.034	-.052	-.058	-.050	-.050	-.039	-.033	-.035	-.044	-.057	-.056	-.050	-.039	-.040	-.018
	.925	-.022	.005	.006	.005	.010	.037	.050	.066	.080	.076	.056	.047	.022	.006	.005	-.001	.013
	.975	-.012	.012	.006	.018	.044	.087	.120	.153	.176	.167	.133	.103	.064	.035	.012	-.001	.026
	1.000	[a]0	[b].019	[b].005	[b].030	[b].055	[b].110	[b].144	[a].207	[a].233	[a].224	[b].176	[b].128	[b].085	[b].054	[b].019	[b].001	[a].030

[a]Faired value.
[b]Lower surface only.

[redacted]

[redacted]

TABLE 3.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-310.00 PROPELLER BLADE SECTION (x = 0.45) - Continued

(b) N = 1350 rpm; $\beta_{0.75R}$ = 45°.

	J	1.781	1.866	1.950	2.035	2.119	2.197	2.294	2.427	2.558	2.491	2.362	2.268	2.172	2.094	1.991	1.917	1.847
	M_x	.465	.476	.492	.508	.521	.533	.550	.573	.598	.585	.559	.542	.526	.515	.497	.483	.472
	α_x'	7.74	6.45	5.24	4.09	3.01	2.06	.94	-.48	-1.77	-1.12	.20	1.24	2.36	3.32	4.68	5.71	6.73
	$\Delta\beta$	.20	.18	.15	.13	.11	.10	.08	.04	-.01	.01	.06	.09	.11	.12	.14	.16	.18
	α_i	1.94	1.74	1.53	1.26	1.05	.91	.67	.42	.13	.30	.56	.76	.98	1.11	1.37	1.60	1.81
	c_n	.7933	.7157	.6334	.5245	.4394	.3823	.2848	.1787	.0565	.1265	.2365	.3194	.4123	.4645	.5696	.6582	.7427
	c_m	-.0136	-.0145	-.0181	-.0190	-.0216	-.0336	-.0435	-.0513	-.0559	-.0547	-.0460	-.0410	-.0323	-.0236	-.0171	-.0154	-.0151
	c_o																	
	c/b	Pressure coefficient, P																
Upper surface	0.000	1.055	1.058	1.062	1.066	1.069	1.073	1.078	1.085	1.092	1.088	1.080	1.075	1.071	1.068	1.063	1.060	1.057
	.025	-2.004	-1.582	-1.403	-1.010	-.747	-.502	-.246	.043	.133	.158	-.091	-.323	-.579	-.814	-1.160	-1.417	-1.672
	.050	-1.636	-1.442	-1.207	-.974	-.784	-.601	-.400	-.163	-.108	-.065	-.272	-.462	-.654	-.832	-1.085	-1.285	-1.500
	.100	-1.227	-1.088	-.934	-.773	-.661	-.550	-.412	-.245	-.243	-.170	-.321	-.456	-.583	-.691	-.845	-.984	-1.124
	.200	-.929	-.851	-.751	-.659	-.586	-.531	-.439	-.330	-.365	-.273	-.381	-.468	-.541	-.606	-.708	-.783	-.866
	.300	-.807	-.757	-.685	-.621	-.568	-.531	-.464	-.389	-.453	-.344	-.421	-.485	-.532	-.582	-.659	-.706	-.761
	.400	-.702	-.670	-.618	-.574	-.539	-.511	-.464	-.412	-.499	-.378	-.431	-.481	-.512	-.550	-.602	-.634	-.672
	.500	-.608	-.594	-.561	-.531	-.512	-.498	-.464	-.432	-.539	-.409	-.442	-.477	-.494	-.515	-.555	-.570	-.591
	.600	-.542	-.541	-.520	-.503	-.498	-.502	-.480	-.461	-.590	-.448	-.466	-.489	-.494	-.499	-.523	-.525	-.532
	.700	-.392	-.410	-.395	-.394	-.403	-.415	-.412	-.412	-.548	-.401	-.405	-.416	-.401	-.397	-.407	-.400	-.396
	.800	-.202	-.226	-.227	-.235	-.253	-.286	-.288	-.311	-.462	-.310	-.294	-.295	-.266	-.249	-.241	-.222	-.212
	.900	.016	.026	.041	.040	.030	.002	-.012	-.035	-.194	-.034	-.020	-.012	.020	.033	.034	.038	.027
	.950	.055	.088	.112	.128	.141	.144	.143	.125	-.033	.128	.137	.142	.149	.137	.113	.102	.081
Lower surface	.0375	[a].711	.662	.564	.432	.311	.168	.009	-.241	-.667	-.356	-.111	.060	.229	.346	.479	.604	.702
	.075	.572	.481	.400	.294	.200	.091	-.022	-.198	-.533	-.273	-.107	.015	.140	.225	.328	.432	.516
	.150	.403	.326	.267	.185	.118	.039	-.035	-.151	-.409	-.197	-.091	-.012	.074	.135	.210	.293	.360
	.250	.271	.211	.162	.100	.046	-.014	-.066	-.151	-.382	-.182	-.107	-.050	.016	.061	.118	.185	.239
	.350	.191	.142	.104	.052	.010	-.035	-.076	-.144	-.360	-.167	-.107	-.067	-.011	.022	.064	.120	.164
	.450	.124	.084	.055	.012	-.024	-.062	-.091	-.144	-.349	-.161	-.117	-.080	-.042	-.015	.020	.069	.102
	.550	.066	.031	.011	-.024	-.052	-.081	-.101	-.144	-.334	-.155	-.121	-.097	-.062	-.045	-.020	.020	.049
	.650	.005	-.021	-.038	-.066	-.086	-.107	-.122	-.151	-.331	-.157	-.135	-.118	-.091	-.082	-.069	-.031	-.005
	.750	-.022	-.043	-.052	-.071	-.081	-.092	-.097	-.112	-.278	-.114	-.103	-.095	-.079	-.078	-.074	-.045	-.027
	.850	-.027	-.043	-.038	-.050	-.049	-.053	-.039	-.039	-.188	-.031	-.038	-.042	-.044	-.052	-.057	-.036	-.027
	.925	.005	.005	.011	.009	.021	.039	.056	.070	-.071	.079	.063	.051	.038	.019	0	.012	.013
	.975	-.014	-.005	.016	.028	.048	.080	.116	.152	.009	.162	.139	.106	.071	.043	.015	.012	0
	1.000	[b]-.054	[b]-.010	[b].019	[b].038	[b].055	[b].104	[b].147	[b].188	[a].046	[b].200	[b].175	[b].135	[b].085	[b].054	[b].021	[b].019	[b]-.010

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 3.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-310.00 PROPELLER BLADE SECTION (x = 0.45) – Continued

(c) N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

J	1.930	2.007	2.063	2.147	2.226	2.295	2.377	2.445	2.536	2.503	2.465	2.422	2.391	2.353	2.318	2.275	2.114	2.051	1.984
M_x	.540	.557	.567	.583	.601	.612	.628	.642	.661	.655	.647	.636	.630	.622	.616	.609	.575	.562	.547
α_x'	5.52	4.46	3.72	2.66	1.72	.93	.04	-.66	-1.56	-1.24	-.87	-.43	-.10	.30	.68	1.16	3.07	3.88	4.77
$\Delta\beta$	.25	.21	.18	.14	.10	.07	.04	0	-.04	-.03	-.01	.01	.03	.05	.06	.08	.15	.18	.22
α_i	1.61	1.37	1.19	1.04	.89	.74	.57	.38	.18	.25	.34	.43	.51	.60	.69	.78	1.11	1.25	1.47
c_n	.6661	.5697	.4955	.4368	.3742	.3139	.2406	.1635	.0768	.1077	.1468	.1848	.2187	.2565	.2926	.3277	.4639	.5194	.6086
c_m	-.0199	-.0177	-.0247	-.0290	-.0366	-.0415	-.0455	-.0479	-.0577	-.0546	-.0520	-.0472	-.0465	-.0437	-.0418	-.0420	-.0261	-.0228	-.0169
c_a																			
	c/b	Pressure coefficient, P																	
Upper surface	0.000	1.075	1.079	1.082	1.087	1.093	1.096	1.102	1.107	1.114	1.112	1.109	1.105	1.102	1.100	1.098	1.095	1.085	1.081	1.077
	.025	-1.677	-1.194	-.941	-.677	-.446	-.252	-.069	.090	.265	.209	.133	.047	-.027	-.109	-.200	-.307	-.789	-1.028	-1.345
	.050	-1.370	-1.137	-.959	-.760	-.578	-.423	-.273	-.140	.014	-.035	-.102	-.175	-.241	-.309	-.381	-.471	-.843	-1.018	-1.237
	.100	-1.055	-.883	-.786	-.666	-.547	-.443	-.335	-.239	-.120	-.158	-.211	-.265	-.312	-.359	-.409	-.475	-.719	-.819	-.949
	.200	-.844	-.745	-.683	-.613	-.544	-.478	-.403	-.338	-.253	-.280	-.318	-.357	-.389	-.420	-.454	-.501	-.642	-.704	-.786
	.300	-.763	-.695	-.658	-.600	-.554	-.507	-.457	-.413	-.349	-.366	-.396	-.424	-.444	-.467	-.489	-.526	-.623	-.666	-.726
	.400	-.682	-.634	-.611	-.571	-.538	-.507	-.470	-.444	-.398	-.409	-.434	-.450	-.465	-.477	-.491	-.523	-.588	-.616	-.660
	.500	-.611	-.580	-.569	-.545	-.527	-.507	-.484	-.469	-.440	-.446	-.465	-.473	-.480	-.487	-.496	-.521	-.553	-.569	-.599
	.600	-.561	-.541	-.544	-.536	-.531	-.523	-.511	-.508	-.496	-.497	-.507	-.510	-.510	-.511	-.512	-.531	-.536	-.539	-.558
	.700	-.424	-.418	-.428	-.430	-.438	-.443	-.438	-.443	-.443	-.439	-.445	-.443	-.439	-.439	-.435	-.448	-.428	-.419	-.426
	.800	-.230	-.238	-.259	-.272	-.295	-.304	-.308	-.321	-.335	-.326	-.328	-.321	-.312	-.309	-.301	-.309	-.264	-.246	-.241
	.900	.027	.035	.030	.028	.012	-.001	-.010	-.018	-.033	-.024	-.024	-.020	-.012	-.008	-.002	-.005	.029	.034	.032
	.950	.081	.101	.113	.133	.146	.144	.138	.134	.129	.137	.133	.134	.139	.141	.148	.136	.126	.112	.090
Lower surface	.0375	.588	.469	.368	.254	.128	.002	-.145	-.312	-.521	-.435	-.359	-.265	-.182	-.107	-.030	.031	.307	.410	.509
	.075	.418	.322	.239	.154	.061	-.031	-.133	-.254	-.398	-.337	-.286	-.218	-.162	-.107	-.050	-.012	.191	.275	.355
	.150	.279	.204	.142	.083	.019	-.045	-.113	-.192	-.277	-.241	-.214	-.172	-.133	-.097	-.057	-.033	.110	.171	.225
	.250	.168	.110	.062	.017	-.028	-.076	-.128	-.187	-.252	-.222	-.200	-.172	-.142	-.114	-.085	-.069	.035	.084	.126
	.350	.104	.057	.017	-.017	-.054	-.089	-.130	-.179	-.230	-.205	-.188	-.165	-.142	-.119	-.096	-.087	-.002	.036	.072
	.450	.052	.011	-.023	-.047	-.075	-.103	-.137	-.177	-.217	-.197	-.185	-.165	-.147	-.128	-.106	-.103	-.036	-.008	.021
	.550	.002	-.028	-.058	-.076	-.094	-.115	-.143	-.177	-.208	-.190	-.184	-.167	-.153	-.136	-.120	-.117	-.067	-.043	-.020
	.650	-.052	-.074	-.099	-.108	-.121	-.136	-.157	-.184	-.202	-.190	-.185	-.177	-.164	-.152	-.138	-.138	-.106	-.087	-.072
	.750	-.066	-.082	-.101	-.100	-.103	-.110	-.123	-.140	-.145	-.138	-.141	-.135	-.128	-.119	-.110	-.115	-.102	-.091	-.082
	.850	-.058	-.064	-.076	-.064	-.056	-.052	-.054	-.061	-.051	-.047	-.055	-.059	-.056	-.052	-.050	-.060	-.071	-.067	-.066
	.925	-.008	-.010	-.009	.013	.032	.041	.047	.046	.065	.065	.052	.047	.047	.047	.047	.035	.002	-.008	-.014
	.975	-.013	-.002	.011	.041	.077	.101	.118	.119	.143	.142	.127	.121	.121	.119	.110	.090	.027	.008	-.012
	1.000	[b]-.015	[b]-.001	[b].021	[b].059	[b].095	[b].126	[b].151	[b].149	[b].175	[b].175	[b].161	[b].154	[b].156	[b].150	[b].140	[b].114	[b].033	[b].018	[b]-.016

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 3.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-310.00 PROPELLER BLADE SECTION (x = 0.45) – Continued

(d) N = 1600 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.045	2.134	2.214	2.276	2.350	2.427	2.483	2.511	2.457	2.394	2.313	2.249	2.179	2.115
	M_x	.604	.621	.637	.650	.663	.682	.694	.701	.688	.673	.654	.640	.627	.616
	α_x'	3.96	2.82	1.86	1.15	.33	–.48	–1.05	–1.32	–.79	–.14	.72	1.45	2.27	3.06
	$\Delta\beta$	.19	.17	.14	.11	.07	.03	–.01	–.03	.01	.05	.09	.12	.15	.17
	α_1	1.32	1.12	.95	.79	.61	.43	.30	.23	.37	.53	.70	.87	1.04	1.17
	c_n	.5477	.4697	.4006	.3326	.2597	.1839	.1274	.0965	.1555	.2248	.2942	.3658	.4355	.4897
	c_m	–.0198	–.0262	–.0361	–.0436	–.0469	–.0551	–.0601	–.0607	–.0583	–.0497	–.0455	–.0394	–.0320	–.0244
	c_c														
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.094	1.099	1.105	1.110	1.115	1.122	1.127	1.130	1.124	1.118	1.111	1.107	1.102	1.098
	.025	–1.039	–.720	–.481	–.287	–.098	.086	.201	.256	.146	–.007	–.183	–.366	–.587	–.799
	.050	–1.066	–.820	–.626	–.470	–.311	–.149	–.047	.001	–.097	–.229	–.384	–.532	–.713	–.876
	.100	–.858	–.717	–.588	–.486	–.373	–.255	–.175	–.140	–.215	–.312	–.427	–.528	–.648	–.749
	.200	–.743	–.655	–.582	–.523	–.451	–.370	–.311	–.281	–.340	–.409	–.488	–.545	–.621	–.672
	.300	–.707	–.641	–.592	–.557	–.503	–.447	–.405	–.383	–.425	–.470	–.529	–.568	–.618	–.651
	.400	–.653	–.610	–.575	–.554	–.517	–.481	–.454	–.441	–.469	–.493	–.537	–.558	–.594	–.612
	.500	–.599	–.574	–.553	–.547	–.525	–.507	–.490	–.485	–.498	–.509	–.538	–.545	–.567	–.574
	.600	–.563	–.555	–.553	–.559	–.547	–.548	–.543	–.546	–.546	–.541	–.558	–.555	–.560	–.553
	.700	–.431	–.438	–.449	–.463	–.465	–.475	–.479	–.482	–.479	–.464	–.470	–.453	–.450	–.432
	.800	–.242	–.262	–.285	–.307	–.314	–.335	–.346	–.350	–.340	–.315	–.316	–.295	–.279	–.256
	.900	.040	.041	.030	.011	–.001	–.016	–.019	–.022	–.018	–.005	.001	.020	.033	.045
	.950	.105	.130	.149	.148	.147	.141	.140	.136	.138	.147	.143	.151	.138	.129
Lower surface	.0375	.404	.275	.159	.024	–.120	–.297	–.435	–.517	–.369	–.192	–.054	.087	.210	.316
	.075	.268	.171	.083	–.016	–.120	–.247	–.343	–.400	–.297	–.171	–.075	.030	.120	.202
	.150	.162	.094	.036	–.037	–.108	–.188	–.249	–.284	–.224	–.140	–.080	–.003	.054	.118
	.250	.078	.027	–.018	–.075	–.126	–.185	–.231	–.258	–.209	–.148	–.105	–.046	–.002	.045
	.350	.029	–.011	–.043	–.091	–.134	–.178	–.217	–.240	–.199	–.148	–.118	–.067	–.033	.005
	.450	–.014	–.044	–.070	–.108	–.142	–.178	–.209	–.230	–.196	–.154	–.129	–.088	–.062	–.032
	.550	–.054	–.073	–.089	–.125	–.153	–.179	–.203	–.220	–.194	–.159	–.142	–.105	–.085	–.064
	.650	–.098	–.111	–.119	–.147	–.168	–.185	–.203	–.214	–.196	–.171	–.160	–.131	–.119	–.102
	.750	–.104	–.104	–.103	–.121	–.134	–.142	–.147	–.156	–.146	–.131	–.131	–.110	–.106	–.100
	.850	–.082	–.070	–.056	–.063	–.064	–.054	–.053	–.057	–.057	–.054	–.066	–.059	–.065	–.067
	.925	–.016	.006	.030	.034	.043	.059	.063	.062	.059	.053	.035	.033	.016	.003
	.975	–.005	.030	.066	.088	.118	.142	.145	.141	.141	.133	.098	.082	.047	.027
	1.000	[b]–.003	[b].041	[b].081	[b].115	[b].150	[b].184	[b].187	[b].179	[b].185	[b].174	[b].130	[b].112	[b].061	[b].034

[b]Lower surface only.

[redacted]

[redacted]

TABLE 3.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-310.00 PROPELLER BLADE SECTION (x = 0.45) - Continued

(e) $M = 0.56$; $\beta_{0.75R} = 45°$.

	J	2.116	2.131	2.149	2.175	2.207	2.245	2.286	2.314	2.353	2.395	2.412	2.452	2.491	2.532
	M_x	.679	.676	.672	.669	.666	.665	.662	.657	.657	.656	.650	.650	.647	.645
	α_x	3.05	2.86	2.64	2.32	1.94	1.50	1.03	.72	.30	-.15	-.32	-.73	-1.12	-1.52
	$\Delta\beta$	.17	.17	.16	.15	.13	.11	.09	.08	.06	.05	.04	.02	.01	-.01
	α_i	1.22	1.16	1.10	1.05	.96	.88	.77	.66	.56	.46	.40	.32	.26	.18
	α_n	.5116	.4839	.4606	.4426	.4045	.3710	.3271	.2819	.2371	.1945	.1723	.1361	.1123	.0765
	α_m	-.0285	-.0303	-.0347	-.0361	-.0378	-.0395	-.0402	-.0436	-.0451	-.0461	-.0472	-.0498	-.0515	-.0530
	c_c														
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.121	1.120	1.118	1.117	1.116	1.115	1.114	1.112	1.112	1.112	1.110	1.110	1.109	1.108
	.025	-.718	-.654	-.587	-.527	-.442	-.354	-.242	-.155	-.074	.020	.063	.135	.193	.266
	.050	-.907	-.827	-.756	-.698	-.618	-.538	-.435	-.361	-.286	-.207	-.167	-.101	-.048	.018
	.100	-.788	-.733	-.692	-.652	-.597	-.538	-.460	-.402	-.348	-.288	-.258	-.206	-.168	-.116
	.200	-.746	-.703	-.673	-.645	-.606	-.559	-.501	-.457	-.418	-.374	-.351	-.312	-.284	-.243
	.300	-.733	-.697	-.676	-.655	-.625	-.589	-.542	-.507	-.477	-.442	-.427	-.391	-.370	-.334
	.400	-.682	-.653	-.641	-.625	-.606	-.580	-.542	-.518	-.494	-.469	-.455	-.428	-.412	-.385
	.500	-.632	-.610	-.609	-.599	-.589	-.569	-.540	-.525	-.507	-.488	-.480	-.457	-.446	-.424
	.600	-.603	-.587	-.595	-.590	-.589	-.573	-.553	-.544	-.532	-.520	-.515	-.497	-.493	-.474
	.700	-.452	-.445	-.457	-.461	-.466	-.460	-.451	-.449	-.445	-.441	-.441	-.431	-.434	-.425
	.800	-.240	-.241	-.263	-.271	-.284	-.284	-.288	-.294	-.299	-.304	-.309	-.309	-.320	-.319
	.900	.059	.065	.055	.049	.039	.037	.030	.020	.012	.004	-.006	-.010	-.026	-.034
	.950	.123	.140	.142	.144	.144	.148	.155	.150	.147	.145	.140	.142	.131	.127
Lower surface	.0375	.292	.273	.228	.194	.138	.084	.012	-.062	-.134	-.221	-.279	-.343	-.425	-.510
	.075	[a].200	[a].191	[a].160	[a].128	[a].092	[a].053	[a]-.006	[a]-.060	[a]-.110	[a]-.165	[a]-.200	[a]-.238	[a]-.270	[a]-.309
	.150	.108	.102	.074	.057	.026	.003	-.032	-.071	-.105	-.145	-.173	-.199	-.236	-.269
	.250	.035	.033	.013	-.002	-.026	-.044	-.068	-.097	-.124	-.153	-.173	-.191	-.220	-.244
	.350	-.007	-.005	-.024	-.034	-.054	-.068	-.087	-.111	-.131	-.153	-.171	-.182	-.205	-.223
	.450	-.042	-.038	-.053	-.060	-.079	-.089	-.104	-.122	-.139	-.156	-.171	-.180	-.198	-.212
	.550	-.075	-.068	-.082	-.090	-.102	-.109	-.120	-.136	-.147	-.163	-.176	-.179	-.194	-.202
	.650	-.116	-.108	-.119	-.122	-.133	-.137	-.142	-.155	-.163	-.174	-.184	-.183	-.195	-.197
	.750	-.113	-.100	-.108	-.110	-.116	-.115	-.117	-.127	-.131	-.137	-.146	-.140	-.145	-.145
	.850	-.077	-.062	-.065	-.063	-.067	-.062	-.057	-.062	-.061	-.061	-.067	-.058	-.058	-.052
	.925	-.004	.014	.015	.017	.019	.025	.033	.034	.039	.042	.039	.053	.054	.064
	.975	.025	.046	.051	.060	.065	.076	.094	.098	.107	.114	.116	.130	.133	.145
	1.000	[b].038	[b].054	[b].060	[b].072	[b].080	[b].094	[b].115	[b].120	[b].136	[b].141	[b].147	[b].164	[b].168	[b].175

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 3.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-310.00 PROPELLER BLADE SECTION (x = 0.45) – Continued

(f) M = 0.60; $\beta_{0.75R}$ = 45°.

	J	2.112	2.134	2.160	2.196	2.225	2.249	2.291	2.319	2.348	2.371	2.413	2.446	2.473	2.501
	M_x	.728	.723	.721	.719	.717	.712	.711	.706	.704	.700	.701	.699	.695	.693
	α_x'	3.10	2.82	2.50	2.07	1.73	1.45	.98	.67	.35	.11	–.33	–.67	–.95	–1.22
	$\Delta\beta$	.15	.14	.14	.12	.11	.10	.08	.06	.05	.03	.01	0	–.01	–.02
	α_i	1.19	1.13	1.07	.98	.91	.83	.73	.65	.57	.50	.39	.33	.27	.20
	c_n	.5000	.4742	.4510	.4116	.3816	.3487	.3081	.2732	.2435	.2145	.1674	.1413	.1158	.0855
	c_m	–.0318	–.0323	–.0338	–.0349	–.0361	–.0376	–.0397	–.0424	–.0466	–.0469	–.0492	–.0501	–.0515	–.0516
	c_a	–.0066													
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.140	1.138	1.137	1.136	1.135	1.134	1.133	1.132	1.131	1.129	1.130	1.128	1.127	1.126
	.025	–.536	–.493	–.448	–.363	–.299	–.233	–.139	–.068	–.020	.031	.099	.161	.203	.258
	.050	–.821	–.743	–.681	–.586	–.519	–.451	–.364	–.296	–.255	–.205	–.141	–.083	–.045	.007
	.100	–.732	–.699	–.660	–.596	–.543	–.491	–.425	–.373	–.341	–.301	–.252	–.205	–.175	–.134
	.200	–.784	–.750	–.706	–.649	–.602	–.555	–.502	–.461	–.437	–.405	–.368	–.330	–.306	–.273
	.300	–.819	–.800	–.755	–.705	–.657	–.612	–.568	–.532	–.514	–.486	–.455	–.422	–.401	–.374
	.400	–.782	–.754	–.720	–.685	–.648	–.613	–.580	–.553	–.539	–.517	–.494	–.468	–.451	–.428
	.500	–.721	–.706	–.680	–.660	–.631	–.606	–.583	–.564	–.557	–.540	–.523	–.502	–.489	–.473
	.600	–.676	–.671	–.656	–.652	–.631	–.616	–.601	–.590	–.590	–.577	–.566	–.551	–.543	–.530
	.700	–.464	–.471	–.470	–.481	–.474	–.473	–.469	–.471	–.479	–.475	–.474	–.467	–.465	–.464
	.800	–.219	–.232	–.239	–.263	–.265	–.272	–.280	–.287	–.301	–.305	–.312	–.316	–.322	–.328
	.900	.064	.065	.068	.060	.061	.054	.049	.042	.032	.026	.014	.009	.001	–.011
	.950	.110	.118	.128	.139	.148	.151	.155	.154	.148	.152	.146	.147	.143	.139
Lower surface	.0375	.228	.191	.167	.102	.067	.019	–.056	–.118	–.177	–.227	–.307	–.377	–.438	–.518
	.075	.135	.104	.088	.038	.013	–.022	–.076	–.123	–.164	–.201	–.255	–.304	–.345	–.402
	.150	.068	.045	.033	–.001	–.018	–.042	–.077	–.108	–.140	–.161	–.197	–.228	–.254	–.281
	.250	–.002	–.019	–.027	–.054	–.064	–.082	–.110	–.130	–.155	–.169	–.197	–.217	–.237	–.261
	.350	–.042	–.057	–.060	–.081	–.087	–.099	–.121	–.138	–.158	–.169	–.190	–.205	–.221	–.242
	.450	–.074	–.084	–.085	–.105	–.108	–.116	–.134	–.147	–.164	–.172	–.190	–.201	–.215	–.230
	.550	–.108	–.116	–.115	–.130	–.130	–.136	–.149	–.160	–.174	–.177	–.192	–.201	–.210	–.221
	.650	–.149	–.155	–.151	–.162	–.158	–.163	–.172	–.179	–.188	–.189	–.202	–.205	–.210	–.217
	.750	–.139	–.144	–.136	–.141	–.137	–.136	–.142	–.144	–.151	–.150	–.155	–.156	–.158	–.159
	.850	–.095	–.095	–.087	–.085	–.078	–.076	–.074	–.073	–.078	–.073	–.074	–.068	–.068	–.065
	.925	–.015	–.014	–.004	.003	.013	.019	.022	.028	.026	.031	.034	.042	.045	.051
	.975	.012	.016	.028	.042	.058	.068	.081	.089	.088	.099	.106	.120	.122	.130
	1.000	[b].025	[b].030	[b].036	[b].060	[b].073	[b].087	[b].104	[b].118	[b].115	[b].128	[b].140	[b].156	[b].160	[b].161

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 3.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-310.00 PROPELLER BLADE SECTION (x = 0.45) – Concluded

(g) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.121	2.148	2.170	2.187	2.206	2.230	2.253	2.270	2.300	2.322	2.344	2.365	2.393	2.424
	M_r	.793	.790	.787	.783	.779	.777	.774	.769	.767	.765	.760	.755	.756	.754
	α_r'	2.98	2.65	2.38	2.18	1.95	1.67	1.41	1.21	.88	.63	.40	.17	–.13	–.45
	$\Delta\beta$	.12	.12	.11	.11	.11	.10	.10	.09	.09	.08	.08	.07	.06	.06
	α_1	1.11	1.04	1.01	.97	.92	.86	.81	.75	.65	.61	.52	.50	.43	.36
	c_n	.4639	.4368	.4232	.4077	.3871	.3619	.3400	.3161	.2761	.2561	.2206	.2110	.1819	.1519
	c_m	–.0487	–.0457	–.0464	–.0477	–.0460	–.0457	–.0460	–.0460	–.0485	–.0485	–.0492	–.0534	–.0525	–.0560
	c_o	.0086	.0088	.0081	.0081	.0076	.0076	.0078	.0092	.0082	.0092	.0103	.0116	.0132	.0137
	x/b	Pressure coefficient, P													
Upper surface	0.000	1.167	1.166	1.164	1.163	1.161	1.160	1.159	1.157	1.156	1.155	1.153	1.151	1.151	1.151
	.025	–.261	–.217	–.189	–.166	–.142	–.105	–.069	–.044	–.004	.033	.085	.108	.165	.211
	.050	–.550	–.487	–.452	–.424	–.398	–.361	–.324	–.296	–.257	–.219	–.171	–.147	–.093	–.048
	.100	–.539	–.512	–.491	–.476	–.459	–.431	–.403	–.385	–.353	–.323	–.283	–.266	–.220	–.183
	.200	–.648	–.625	–.612	–.607	–.596	–.572	–.547	–.530	–.499	–.472	–.436	–.421	–.379	–.345
	.300	–.752	–.726	–.699	–.681	–.669	–.660	–.647	–.641	–.614	–.586	–.549	–.533	–.491	–.459
	.400	–.812	–.790	–.776	–.773	–.762	–.734	–.697	–.673	–.647	–.625	–.595	–.583	–.546	–.515
	.500	–.897	–.882	–.866	–.854	–.829	–.800	–.765	–.739	–.693	–.660	–.636	–.630	–.598	–.572
	.600	–.992	–.969	–.945	–.922	–.882	–.841	–.800	–.785	–.756	–.731	–.714	–.711	–.685	–.661
	.700	–.481	–.531	–.554	–.567	–.565	–.566	–.570	–.579	–.549	–.548	–.549	–.556	–.538	–.531
	.800	–.216	–.202	–.197	–.201	–.209	–.221	–.235	–.254	–.263	–.273	–.288	–.304	–.307	–.316
	.900	–.039	–.010	.016	.036	.051	.058	.061	.056	.059	.053	.047	.037	.035	.025
	.950	.014	.032	.056	.075	.091	.105	.117	.121	.132	.136	.142	.139	.149	.153
Lower surface	.0375	.142	.094	.074	.039	.010	–.029	–.064	–.106	–.144	–.188	–.249	–.295	–.354	–.415
	.075	[a].074	[a].045	[a].027	[a]0	[a]–.022	[a]–.057	[a]–.090	[a]–.110	[a]–.143	[a]–.168	[a]–.209	[a]–.221	[a]–.296	[a]–.357
	.150	.026	0	–.009	–.030	–.048	–.067	–.085	–.108	–.123	–.145	–.173	–.199	–.220	–.243
	.250	–.045	–.065	–.071	–.088	–.101	–.117	–.131	–.148	–.158	–.175	–.195	–.214	–.230	–.247
	.350	–.085	–.102	–.104	–.118	–.129	–.141	–.151	–.166	–.174	–.184	–.199	–.215	–.225	–.237
	.450	–.123	–.137	–.137	–.148	–.157	–.166	–.172	–.184	–.188	–.197	–.208	–.220	–.226	–.235
	.550	–.164	–.175	–.174	–.181	–.188	–.194	–.196	–.204	–.205	–.211	–.217	–.226	–.229	–.233
	.650	–.218	–.224	–.219	–.223	–.226	–.228	–.227	–.232	–.228	–.229	–.233	–.239	–.237	–.237
	.750	–.204	–.208	–.199	–.199	–.198	–.196	–.189	–.192	–.185	–.183	–.184	–.186	–.180	–.177
	.850	–.144	–.148	–.134	–.131	–.125	–.119	–.110	–.108	–.100	–.096	–.090	–.092	–.080	–.073
	.925	–.055	–.055	–.041	–.033	–.023	–.016	–.004	0	.011	.016	.024	.024	.036	.047
	.975	–.035	–.023	–.002	.013	.027	.041	.059	.064	.080	.087	.098	.100	.117	.133
	1.000	[b]–.026	[b]–.015	[b].002	[b].025	[b].049	[b].067	[b].090	[b].095	[b].116	[b].120	[b].130	[b].140	[b].157	[b].175

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 4.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-308.94 PROPELLER BLADE SECTION (x = 0.50)

(a) N = 1140 rpm; $\beta_{0.75R}$ = 45°.

J	1.623	1.736	1.822	1.924	2.060	2.168	2.315	2.432	2.566	2.511	2.397	2.243	2.105	1.990	1.883	1.772	1.686
M_x	.383	.399	.413	.423	.443	.459	.478	.496	.514	.505	.488	.466	.450	.432	.418	.406	.391
α_x'	10.56	8.64	7.26	5.73	3.82	2.42	.66	-.64	-2.03	-1.47	-.26	1.50	3.23	4.78	6.33	8.06	9.47
$\Delta\beta$	.25	.21	.18	.16	.12	.09	.06	.03	0	.01	.04	.07	.11	.14	.16	.20	.23
α_i	2.38	2.09	1.81	1.56	1.21	.95	.65	.41	.15	.25	.49	.81	1.08	1.33	1.63	1.98	2.23
c_n	.9803	.8613	.7479	.6478	.5006	.3945	.2719	.1739	.0616	.1071	.2048	.3352	.4445	.5520	.6752	.8149	.9216
c_m	-.0228	-.0188	-.0310	-.0335	-.0275	-.0374	-.0454	-.0628	-.0578	-.0586	-.0565	-.0457	-.0331	-.0314	-.0333	-.0268	-.0117
c_o																	
c/b	Pressure coefficient, P																
Upper surface 0.000	1.037	1.041	1.044	1.046	1.050	1.054	1.059	1.063	1.068	1.065	1.061	1.056	1.052	1.048	1.045	1.042	1.039
.025	-1.677	-2.411	-1.794	-1.406	-.981	-.609	-.240	.097	.251	.250	-.108	-.426	-.790	-1.166	-1.545	-2.446	-1.955
.050	-1.705	-2.257	-1.486	-1.225	-.892	-.634	-.355	-.156	.052	-.038	-.267	-.443	-.767	-1.025	-1.319	-2.581	-1.969
.100	-1.732	-1.599	-1.098	-.917	-.692	-.544	-.358	-.220	-.075	-.138	-.312	-.454	-.627	-.793	-.974	-1.188	-1.899
.200	-1.542	-.901	-.865	-.752	-.609	-.521	-.397	-.305	-.207	-.249	-.383	-.464	-.568	-.678	-.791	-.898	-1.268
.300	-1.175	-.764	-.759	-.674	-.567	-.510	-.418	-.349	-.274	-.309	-.423	-.470	-.536	-.621	-.705	-.777	-.830
.400	-.828	-.659	-.652	-.590	-.501	-.474	-.408	-.354	-.299	-.333	-.423	-.445	-.486	-.549	-.608	-.664	-.634
.500	-.588	-.572	-.573	-.531	-.469	-.451	-.402	-.369	-.332	-.352	-.433	-.435	-.463	-.505	-.546	-.579	-.530
.600	-.453	-.504	-.522	-.496	-.448	-.454	-.421	-.399	-.374	-.387	-.453	-.440	-.454	-.477	-.506	-.515	-.455
.700	-.344	-.395	-.423	-.409	-.379	-.403	-.389	-.379	-.367	-.378	-.433	-.402	-.393	-.405	-.420	-.405	-.358
.800	-.241	-.251	-.272	-.272	-.254	-.296	-.308	-.322	-.316	-.321	-.373	-.301	-.279	-.274	-.273	-.263	-.233
.900	-.132	-.063	-.052	-.036	-.021	-.064	-.083	-.092	-.103	-.102	-.143	-.070	-.043	-.035	-.045	-.048	-.084
.950	-.078	.009	.026	.061	.095	.082	.116	.047	.027	.031	.001	.070	.092	.077	.049	.023	-.017
Lower surface .0375	.819	.768	.696	.592	.420	.215	-.007	-.203	-.478	-.359	-.191	.111	.319	.487	.633	.746	.792
.075	.640	.580	.514	.420	.283	.122	-.041	-.181	-.360	-.292	-.186	.097	.203	.333	.456	.559	.614
.150	.474	.422	.359	.290	.193	.074	-.036	-.126	-.244	-.199	-.151	.015	.133	.224	.314	.399	.451
.250	.335	.287	.236	.187	.110	.015	-.062	-.126	-.216	-.183	-.158	-.026	.062	.136	.204	.268	.317
.350	.254	.212	.167	.129	.068	-.008	-.067	-.116	-.188	-.164	-.153	-.042	.027	.083	.142	.197	.236
.450	.177	.144	.113	.080	.032	-.036	-.080	-.116	-.177	-.157	-.156	-.058	-.002	.042	.092	.133	.168
.550	.112	.081	.051	.031	-.010	-.062	-.093	-.121	-.158	-.154	-.163	-.083	-.037	-.007	.038	.073	.102
.650	.053	.039	.016	-.001	-.027	-.076	-.093	-.109	-.144	-.135	-.136	-.086	-.051	-.026	.009	.034	.057
.750	-.008	-.005	-.021	-.026	-.033	-.078	-.093	-.102	-.110	-.116	-.146	-.088	-.066	-.052	-.024	-.012	.001
.850	-.016	-.001	-.001	-.001	-.015	-.036	-.028	-.012	-.022	-.021	-.065	-.039	-.028	-.017	.002	-.001	.001
.925	-.024	.016	.023	.022	.014	.020	.056	.069	.071	.069	.016	.037	.007	.011	.025	.023	.009
.975	-.039	.046	.044	.045	.056	.088	.132	.159	.163	.160	.101	.113	.065	.039	.038	.045	.023
1.000	[b]-.049	[b].060	[b].049	[b].052	[b].080	[b].140	[b].171	[a].233	[a].225	[a].222	[a].195	[b].162	[b].104	[b].053	[b].041	[b].051	[b].027

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 4.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-308.94 PROPELLER BLADE SECTION ($x = 0.50$) – Continued

(b) $N = 1350$ rpm; $\beta_{0.75R} = 45^{\circ}$.

J	1.730	1.829	1.931	2.031	2.135	2.267	2.361	2.479	2.564	2.445	2.325	2.218	2.114	1.981	1.889	1.803
M_x	.476	.491	.504	.522	.538	.560	.577	.597	.611	.588	.567	.549	.532	.509	.494	.484
α_x'	8.74	7.16	5.63	4.22	2.84	1.22	.14	-1.14	-2.00	-.78	.55	1.81	3.12	4.91	6.25	7.56
$\Delta\beta$	.30	.28	.25	.20	.16	.11	.07	.03	-.01	.04	.08	.13	.16	.22	.26	.29
α_i	2.20	1.94	1.62	1.33	1.07	.81	.60	.34	.17	.43	.67	.88	1.09	1.49	1.76	2.01
c_n	.8876	.7884	.6635	.5477	.4413	.3365	.2516	.1435	.0706	.1797	.2810	.3652	.4516	.6132	.7189	.8166
c_m	-.0169	-.0294	-.0309	-.0288	-.0362	-.0474	-.0540	-.0623	-.0628	-.0597	-.0549	-.0409	-.0344	-.0327	-.0314	-.0258
c_c																
c/b	Pressure coefficient, P															
Upper surface																
0.000	1.058	1.063	1.065	1.070	1.074	1.080	1.085	1.091	1.096	1.089	1.082	1.077	1.072	1.066	1.063	1.060
.025	-2.279	-2.201	-1.430	-1.065	-.721	-.337	-.094	.155	.315	.086	-.178	-.469	-.777	-1.245	-1.660	-2.426
.050	-2.255	-1.625	-1.279	-1.008	-.755	-.460	-.268	-.059	.082	-.116	-.335	-.563	-.795	-1.136	-1.401	-1.848
.100	-1.775	-1.155	-.953	-.773	-.613	-.432	-.300	-.153	-.051	-.193	-.349	-.496	-.637	-.858	-1.039	-1.200
.200	-.961	-.909	-.794	-.683	-.583	-.466	-.380	-.280	-.207	-.307	-.410	-.507	-.598	-.735	-.843	-.916
.300	-.785	-.792	-.710	-.633	-.560	-.480	-.416	-.344	-.288	-.361	-.440	-.507	-.569	-.669	-.744	-.791
.400	-.684	-.683	-.620	-.563	-.513	-.460	-.414	-.360	-.322	-.374	-.432	-.478	-.523	-.593	-.644	-.676
.500	-.588	-.594	-.554	-.516	-.487	-.452	-.418	-.399	-.357	-.391	-.430	-.461	-.490	-.536	-.572	-.585
.600	-.505	-.528	-.508	-.484	-.472	-.458	-.440	-.419	-.405	-.423	-.446	-.459	-.473	-.496	-.514	-.510
.700	-.396	-.422	-.420	-.410	-.416	-.422	-.411	-.406	-.401	-.402	-.418	-.415	-.413	-.420	-.420	-.406
.800	-.243	-.257	-.264	-.255	-.287	-.305	-.335	-.346	-.343	-.341	-.325	-.298	-.282	-.268	-.258	-.241
.900	-.068	-.044	-.024	-.012	-.034	-.070	-.076	-.089	-.093	-.080	-.075	-.050	-.030	-.021	-.033	-.042
.950	-.001	.025	.062	.089	-.097	.077	.069	.051	.041	.062	.075	.096	.097	.076	.044	.024
Lower surface																
.0375	[a].743	.710	.591	.455	.287	.073	-.092	-.329	-.524	-.247	-.026	.157	.317	.526	.656	.742
.075	.594	.524	.421	.304	.174	.035	-.107	-.274	-.394	-.215	-.061	.073	.196	.365	.477	.555
.150	.434	.375	.291	.207	.109	-.002	-.078	-.182	-.269	-.148	-.048	.042	.126	.251	.335	.399
.250	.297	.248	.184	.117	.041	-.042	-.095	-.175	-.242	-.146	-.073	-.010	.053	.150	.221	.271
.350	.220	.177	.127	.071	.011	-.052	-.094	-.155	-.205	-.131	-.077	-.027	.021	.099	.156	.199
.450	.149	.117	.074	.028	-.024	-.074	-.107	-.158	-.196	-.139	-.093	-.052	-.014	.053	.098	.136
.550	.087	.061	.026	-.012	-.051	-.091	-.115	-.153	-.184	-.137	-.103	-.075	-.045	.007	.049	.079
.650	.034	.015	-.010	-.044	-.073	-.101	-.115	-.140	-.161	-.131	-.107	-.087	-.067	-.023	.006	.031
.750	-.012	-.021	-.036	-.060	-.084	-.095	-.099	-.113	-.122	-.107	-.095	-.087	-.078	-.046	-.024	-.007
.850	-.004	-.003	-.012	-.021	-.030	-.024	-.014	-.014	-.012	-.009	-.018	-.035	-.036	-.016	-.004	.006
.925	.009	.017	.014	.008	.017	.045	.065	.084	.091	.080	.061	.032	-.001	.007	.021	.029
.975	.034	.035	.030	.037	.069	.128	.162	.183	.190	.182	.151	.094	.053	.033	.033	.049
1.000	[a].028	[a].061	[b].038	[b].050	[b].080	[a].185	[a].204	[a].230	[a].246	[a].225	[a].199	[b].131	[b].124	[a].080	[a].060	[a].070

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 4.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-308.94 PROPELLER BLADE SECTION (x = 0.50) - Continued

(c) N = 1500 rpm; $\beta_{0.75R}$ = 45°.

	J	1.907	1.961	2.056	2.132	2.216	2.305	2.386	2.454	2.539	2.518	2.429	2.342	2.282	2.172	2.080	2.030	1.957
	M_r	.545	.556	.576	.590	.607	.621	.638	.652	.668	.664	.645	.630	.618	.599	.580	.573	.556
	α_r'	5.98	5.20	3.88	2.88	1.83	.77	-.12	-.88	-1.76	-1.54	-.61	.35	1.04	2.38	3.56	4.23	5.25
	$\Delta\beta$	.37	.33	.27	.22	.16	.09	.03	-.02	-.08	-.07	0	.06	.11	.19	.25	.29	.33
	α_i	1.80	1.59	1.34	1.09	.94	.74	.54	.39	.18	.24	.46	.65	.79	1.03	1.23	1.42	1.65
	c_n	.7359	.6544	.5516	.4529	.3929	.3084	.2265	.1645	.0781	.0997	.1932	.2703	.3287	.4258	.5071	.5839	.6758
	c_m	-.0277	-.0286	-.0311	-.0364	-.0429	-.0565	-.0621	-.0674	-.0696	-.0678	-.0660	-.0579	-.0519	-.0374	-.0328	-.0292	-.0286
	c_o																	
	c/b	Pressure coefficient, P																
Upper surface	0.000	1.076	1.079	1.085	1.090	1.095	1.100	1.105	1.111	1.117	1.115	1.108	1.103	1.099	1.092	1.086	1.084	1.079
	.025	-1.981	-1.435	-1.042	-.742	-.475	-.216	-.019	.126	.296	.259	.074	-.136	-.285	-.620	-.942	-1.161	-1.521
	.050	-1.401	-1.260	-1.015	-.792	-.588	-.380	-.216	-.092	.060	.025	-.137	-.316	-.437	-.702	-.943	-1.091	-1.296
	.100	-1.055	-.950	-.773	-.640	-.522	-.387	-.274	-.185	-.071	-.098	-.218	-.342	-.422	-.586	-.729	-.824	-.975
	.200	-.870	-.812	-.700	-.616	-.541	-.452	-.377	-.319	-.238	-.257	-.341	-.424	-.477	-.584	-.675	-.738	-.826
	.300	-.769	-.731	-.650	-.587	-.540	-.480	-.426	-.385	-.323	-.339	-.399	-.461	-.500	-.568	-.634	-.676	-.737
	.400	-.665	-.642	-.581	-.535	-.507	-.469	-.430	-.403	-.359	-.370	-.414	-.456	-.482	-.534	-.573	-.600	-.645
	.500	-.583	-.572	-.531	-.503	-.488	-.464	-.440	-.425	-.394	-.402	-.429	-.456	-.472	-.493	-.527	-.545	-.572
	.600	-.522	-.525	-.498	-.485	-.486	-.480	-.466	-.461	-.445	-.449	-.464	-.477	-.482	-.484	-.500	-.506	-.523
	.700	-.417	-.432	-.419	-.420	-.432	-.442	-.435	-.441	-.434	-.437	-.438	-.443	-.444	-.424	-.424	-.425	-.425
	.800	-.245	-.267	-.266	-.278	-.304	-.327	-.360	-.376	-.368	-.368	-.370	-.340	-.316	-.287	-.272	-.265	-.257
	.900	-.014	-.016	-.008	-.015	-.038	-.069	-.075	-.090	-.087	-.095	-.085	-.074	-.060	-.022	-.012	-.012	-.012
	.950	.051	.067	.091	.109	.109	.082	.075	.059	.060	.053	.066	.082	.094	.109	.095	.084	.065
Lower surface	.0375	.646	.561	.431	.309	.173	.005	-.148	-.303	-.556	-.480	-.244	-.057	.054	.247	.386	.471	.587
	.075	.472	.397	.287	.192	.085	-.038	-.150	-.262	-.393	-.363	-.219	-.084	-.001	.146	.253	.321	.418
	.150	.335	.274	.195	.128	.053	-.031	-.104	-.175	-.263	-.240	-.150	-.063	-.007	.093	.169	.220	.295
	.250	.220	.168	.109	.057	0	-.064	-.119	-.172	-.241	-.226	-.153	-.085	-.045	.029	.087	.127	.184
	.350	.157	.111	.065	.024	-.020	-.069	-.112	-.156	-.210	-.200	-.140	-.087	-.057	.004	.047	.080	.128
	.450	.098	.061	.022	-.011	-.047	-.089	-.125	-.162	-.203	-.193	-.148	-.106	-.076	-.031	.005	.035	.077
	.550	.047	.014	-.016	-.041	-.068	-.100	-.128	-.156	-.190	-.184	-.146	-.114	-.091	-.059	-.031	-.008	.026
	.650	.004	-.025	-.049	-.068	-.086	-.113	-.135	-.154	-.175	-.172	-.148	-.124	-.105	-.082	-.063	-.043	-.014
	.750	-.025	-.050	-.062	-.074	-.082	-.094	-.105	-.117	-.127	-.126	-.116	-.104	-.090	-.082	-.073	-.060	-.039
	.850	-.006	-.012	-.014	-.017	-.015	-.002	-.003	-.002	-.002	-.012	-.017	-.020	-.020	-.033	-.035	-.027	-.014
	.925	.019	.006	.003	.015	.041	.065	.075	.085	.094	.090	.081	.063	.057	.022	.003	.004	.014
	.975	.033	.026	.040	.070	.103	.157	.176	.189	.196	.192	.183	.156	.137	.080	.040	.035	.030
	1.000	[b].049	[b].036	[b].071	[b].110	[b].155	[a].227	[a].245	[a].250	[a].290	[a].248	[a].242	[b].210	[b].195	[b].124	[b].063	[b].053	[b].039

[a]Faired value.
[b]Lower surface only.

[redacted]

[redacted]

TABLE 4.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-308.94 PROPELLER BLADE SECTION (x = 0.50) - Continued

(d) N = 1600 rpm; $\beta_{0.75R}$ = 45°.

	J	2.058	2.138	2.221	2.299	2.371	2.446	2.516	2.472	2.411	2.353	2.279	2.209	2.108
	M_x	.623	.635	.649	.665	.678	.696	.711	.700	.686	.675	.656	.646	.626
	α_x'	3.85	2.80	1.77	.84	.03	-.50	-1.52	-1.07	-.42	.23	1.07	1.92	3.19
	$\Delta\beta$	.28	.23	.18	.13	.07	.01	-.05	-.01	.04	.09	.12	.19	.25
	α_i	1.34	1.14	.97	.78	.60	.42	.25	.33	.51	.65	.87	1.03	1.22
	c_n	.5523	.4716	.4026	.3239	.2510	.1790	.1045	.1387	.2132	.2735	.3613	.4868	.5058
	c_m	-.0280	-.0388	-.0493	-.0570	-.0646	-.0737	-.0694	-.0732	-.0676	-.0607	-.0522	-.0472	-.0329
	c_c													
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.100	1.105	1.110	1.115	1.120	1.128	1.133	1.130	1.123	1.120	1.112	1.108	1.101
	.025	-1.003	-.723	-.470	-.220	-.033	.167	.140	.216	.064	-.081	-.317	-.512	-.866
	.050	-1.025	-.809	-.607	-.399	-.241	-.066	.051	-.022	-.157	-.283	-.479	-.639	-.915
	.100	-.788	-.664	-.548	-.411	-.302	-.174	-.081	-.140	-.241	-.331	-.467	-.564	-.757
	.200	-.725	-.649	-.575	-.488	-.415	-.326	-.258	-.299	-.372	-.432	-.524	-.585	-.686
	.300	-.679	-.623	-.580	-.522	-.470	-.407	-.352	-.388	-.438	-.481	-.548	-.584	-.649
	.400	-.608	-.568	-.544	-.509	-.476	-.432	-.392	-.418	-.451	-.481	-.527	-.545	-.588
	.500	-.555	-.530	-.522	-.503	-.482	-.460	-.433	-.452	-.469	-.487	-.518	-.522	-.544
	.600	-.521	-.513	-.519	-.516	-.509	-.503	-.489	-.500	-.502	-.508	-.522	-.514	-.518
	.700	-.435	-.442	-.457	-.472	-.471	-.485	-.471	-.478	-.469	-.469	-.476	-.452	-.438
	.800	-.269	-.287	-.313	-.332	-.377	-.407	-.402	-.407	-.390	-.359	-.327	-.307	-.279
	.900	-.001	-.011	-.039	-.064	-.076	-.091	-.095	-.096	-.079	-.072	-.057	-.032	-.009
	.950	.096	.113	.109	.094	.079	.061	.057	.058	.076	.085	.097	.110	.103
Lower surface	.0375	.402	.293	.165	.006	-.145	-.354	-.558	-.426	-.233	-.096	.068	.188	.349
	.075	.266	.180	.080	-.041	-.152	-.303	-.406	-.350	-.217	-.115	.005	.099	.224
	.150	.179	.120	.051	-.033	-.110	-.203	-.269	-.228	-.151	-.086	-.005	.061	.149
	.250	.095	.049	-.005	-.069	-.125	-.200	-.252	-.222	-.157	-.107	-.045	.004	.071
	.350	.053	.017	-.026	-.075	-.122	-.181	-.222	-.202	-.147	-.106	-.059	-.019	.034
	.450	.007	-.020	-.054	-.096	-.135	-.184	-.215	-.199	-.157	-.121	-.083	-.050	-.005
	.550	-.029	-.050	-.076	-.110	-.140	-.178	-.204	-.193	-.157	-.132	-.100	-.072	-.041
	.650	-.065	-.078	-.096	-.120	-.148	-.172	-.187	-.182	-.157	-.133	-.113	-.094	-.072
	.750	-.077	-.081	-.091	-.105	-.119	-.131	-.135	-.137	-.126	-.115	-.104	-.092	-.082
	.850	-.036	-.031	-.028	-.024	-.022	-.018	-.013	-.019	-.024	-.023	-.030	-.033	-.036
	.925	.002	.020	.041	.060	.072	.088	.101	.088	.076	.067	.049	.032	.006
	.975	.038	.075	.109	.150	.177	.197	.207	.196	.185	.169	.131	.095	.054
	1.000	[b].071	[b].072	[b].172	[b].220	[a].272	[a].320	[a].300	[a].315	[a].250	[a].248	[b].186	[b].129	[b].103

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 4.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-308.94 PROPELLER BLADE SECTION (x = 0.50) - Continued

(e) $M = 0.56$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.110	2.136	2.160	2.186	2.230	2.246	2.279	2.305	2.338	2.368	2.394	2.434	2.468	2.511
	M_r	.702	.699	.694	.691	.689	.684	.683	.679	.676	.673	.671	.668	.667	.661
	α_r'	3.17	2.83	2.53	2.20	1.66	1.47	1.08	.77	.40	.06	-.23	-.66	-1.03	-1.47
	$\Delta\beta$	.26	.24	.22	.19	.16	.15	.13	.11	.09	.07	.05	.03	.01	-.02
	α_i	1.29	1.21	1.13	1.09	.97	.89	.81	.72	.61	.52	.44	.38	.28	.19
	c_n	.5335	.5032	.4690	.4532	.4039	.3710	.3384	.2997	.2561	.2165	.1865	.1610	.1187	.0797
	c_m	-.0374	-.0385	-.0416	-.0413	-.0429	-.0447	-.0464	-.0472	-.0488	-.0524	-.0529	-.0547	-.0578	-.0579
	c_o														
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.130	1.129	1.127	1.126	1.125	1.123	1.123	1.121	1.120	1.118	1.118	1.117	1.116	1.114
	.025	-.713	-.652	-.567	-.514	-.395	-.343	-.247	-.178	-.082	-.008	.043	.119	.190	.271
	.050	-.921	-.836	-.735	-.680	-.566	-.517	-.430	-.365	-.281	-.217	-.170	-.099	-.034	.037
	.100	-.735	-.695	-.638	-.607	-.529	-.498	-.436	-.391	-.330	-.283	-.247	-.193	-.143	-.087
	.200	-.748	-.710	-.663	-.641	-.581	-.558	-.513	-.476	-.431	-.395	-.368	-.323	-.290	-.245
	.300	-.730	-.701	-.661	-.648	-.597	-.582	-.544	-.517	-.481	-.452	-.428	-.392	-.365	-.327
	.400	-.656	-.636	-.608	-.659	-.560	-.549	-.519	-.495	-.468	-.447	-.428	-.400	-.382	-.352
	.500	-.599	-.587	-.571	-.568	-.541	-.534	-.513	-.495	-.474	-.458	-.444	-.420	-.405	-.381
	.600	-.564	-.558	-.549	-.552	-.533	-.532	-.517	-.505	-.491	-.481	-.470	-.452	-.446	-.425
	.700	-.455	-.456	-.456	-.465	-.457	-.462	-.457	-.453	-.447	-.444	-.439	-.429	-.427	-.414
	.800	-.261	-.270	-.276	-.289	-.291	-.301	-.304	-.310	-.312	-.318	-.321	-.320	-.327	-.326
	.900	.026	.020	.017	.004	.001	-.010	-.014	-.025	-.033	-.042	-.046	-.051	-.064	-.070
	.950	.122	.122	.125	.119	.126	.123	.125	.119	.115	.110	.108	.105	.094	.088
Lower surface	.0375	.316	.283	.240	.200	.138	.099	.037	-.019	-.094	-.162	-.210	-.280	-.371	-.487
	.075	.199	.174	.140	.106	.061	.029	-.017	-.060	-.115	-.165	-.199	-.247	-.306	-.360
	.150	.137	.118	.093	.066	.035	.011	-.019	-.050	-.088	-.119	-.140	-.168	-.203	-.242
	.250	.064	.048	.029	.006	-.014	-.032	-.055	-.079	-.106	-.130	-.145	-.163	-.192	-.220
	.350	.027	.014	0	-.019	-.035	-.050	-.067	-.086	-.108	-.126	-.137	-.151	-.175	-.196
	.450	-.016	-.027	-.039	-.055	-.064	-.077	-.090	-.105	-.122	-.140	-.148	-.158	-.178	-.193
	.550	-.047	-.054	-.064	-.078	-.084	-.095	-.106	-.118	-.131	-.143	-.148	-.154	-.170	-.181
	.650	-.073	-.079	-.084	-.098	-.100	-.109	-.115	-.124	-.134	-.142	-.145	-.146	-.157	-.163
	.750	-.092	-.094	-.098	-.109	-.106	-.112	-.114	-.120	-.125	-.130	-.129	-.126	-.133	-.132
	.850	-.035	-.037	-.036	-.045	-.036	-.041	-.037	-.042	-.040	-.039	-.036	-.029	-.031	-.026
	.925	.013	.016	.019	.013	.026	.026	.033	.031	.037	.039	.046	.056	.059	.069
	.975	.058	.063	.069	.067	.083	.085	.096	.098	.109	.114	.123	.134	.139	.151
	1.000	[b].088	[b].100	[b].103	[b].106	[b].135	[b].119	[b].130	[b].147	[b].166	[b].159	[b].180	[b].179	[b].200	[b].191

[b]Lower surface only.

[redacted]

[redacted]

TABLE 4.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-308.94 PROPELLER BLADE SECTION (x = 0.50) – Continued

(f) M = 0.60; $\beta_{0.75R}$ = 45°.

	J	2.099	2.134	2.159	2.188	2.221	2.262	2.288	2.319	2.353	2.381	2.423	2.461	2.512
	M_x	.753	.751	.746	.740	.736	.734	.731	.728	.725	.720	.719	.715	.711
	α_x'	3.31	2.86	2.54	2.18	1.77	1.28	.97	.61	.22	-.09	-.55	-.95	-1.48
	$\Delta\beta$	.21	.20	.19	.17	.15	.12	.11	.09	.06	.04	.01	-.02	-.06
	α_i	1.37	1.29	1.19	1.14	1.03	.88	.82	.73	.61	.54	.46	.36	.21
	c_n	.5690	.5335	.4942	.4735	.4281	.3677	.3406	.3065	.2555	.2258	.1919	.1535	.0877
	c_m	-.0508	-.0513	-.0531	-.0590	-.0584	-.0615	-.0629	-.0643	-.0655	-.0677	-.0712	-.0733	-.0761
	c_c	-.0065	-.0050											
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.150	1.149	1.148	1.145	1.143	1.142	1.141	1.140	1.139	1.137	1.137	1.135	1.133
	.025	-.555	-.502	-.448	-.383	-.321	-.197	-.155	-.083	-.008	.051	.119	.194	.291
	.050	-.851	-.752	-.659	-.581	-.512	-.390	-.350	-.281	-.213	-.159	-.095	-.025	.066
	.100	-.681	-.651	-.613	-.564	-.517	-.430	-.401	-.348	-.295	-.255	-.205	-.150	-.074
	.200	-.786	-.742	-.700	-.651	-.610	-.537	-.513	-.466	-.423	-.393	-.352	-.307	-.245
	.300	-.839	-.785	-.750	-.708	-.666	-.602	-.578	-.534	-.495	-.469	-.433	-.395	-.337
	.400	-.859	-.794	-.733	-.682	-.647	-.596	-.578	-.538	-.508	-.486	-.457	-.426	-.379
	.500	-.765	-.719	-.678	-.640	-.617	-.588	-.576	-.545	-.524	-.508	-.485	-.461	-.421
	.600	-.707	-.679	-.653	-.632	-.620	-.603	-.600	-.573	-.556	-.546	-.530	-.512	-.480
	.700	-.477	-.480	-.490	-.491	-.498	-.513	-.517	-.502	-.496	-.497	-.488	-.480	-.461
	.800	-.265	-.277	-.294	-.302	-.313	-.326	-.336	-.337	-.348	-.371	-.380	-.394	-.386
	.900	.021	.016	.002	-.002	-.014	-.060	-.044	-.044	-.056	-.069	-.077	-.087	-.092
	.950	.125	.132	.130	.133	.128	.120	.111	.113	.103	.093	.086	.074	.065
Lower surface	.0375	.274	.238	.186	.148	.099	.004	-.039	-.091	-.167	-.239	-.309	-.409	-.576
	.075	.169	.142	.100	.071	.032	-.041	-.076	-.112	-.170	-.222	-.274	-.343	-.409
	.150	.115	.097	.065	.045	.017	-.034	-.059	-.080	-.120	-.157	-.187	-.228	-.271
	.250	.041	.028	.002	-.010	-.033	-.073	-.089	-.105	-.134	-.163	-.185	-.220	-.251
	.350	.003	-.005	-.026	-.035	-.051	-.083	-.098	-.107	-.131	-.153	-.170	-.197	-.219
	.450	-.037	-.041	-.058	-.041	-.077	-.100	-.114	-.121	-.139	-.159	-.171	-.193	-.205
	.550	-.074	-.075	-.087	-.090	-.073	-.119	-.131	-.134	-.149	-.164	-.173	-.189	-.197
	.650	-.092	-.091	-.101	-.098	-.107	-.120	-.128	-.128	-.139	-.150	-.156	-.166	-.165
	.750	-.113	-.107	-.113	-.108	-.112	-.118	-.124	-.121	-.128	-.135	-.135	-.139	-.130
	.850	-.046	-.036	-.034	-.029	-.028	-.029	-.032	-.025	-.025	-.028	-.023	-.022	-.009
	.925	.015	.031	.035	.045	.047	.056	.056	.067	.070	.070	.081	.087	.105
	.975	.073	.094	.106	.121	.128	.146	.149	.159	.170	.171	.181	.190	.204
	1.000	[b].110	[b].129	[b].154	[b].155	[b].174	[b].200	[b].210	[b].215	[a].233	[a].230	[a].240	[a].249	[a].250

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 4.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-308.94 PROPELLER BLADE SECTION (x = 0.50) – Concluded

(g) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.114	2.150	2.170	2.193	2.220	2.245	2.270	2.286	2.318	2.338	2.368	2.385	2.415
	M_x	.814	.813	.806	.803	.800	.797	.794	.790	.789	.784	.781	.776	.773
	α_x'	3.11	2.65	2.40	2.11	1.78	1.48	1.18	.99	.62	.40	.06	–.13	–.46
	$\Delta\beta$	.22	.18	.17	.15	.13	.12	.11	.10	.07	.06	.04	.02	–.01
	α_l	1.17	1.14	1.09	.99	.95	.85	.75	.71	.62	.55	.47	.41	.35
	c_n	.4845	.4723	.4535	.4123	.3948	.3555	.3135	.2961	.2594	.2277	.1971	.1723	.1458
	c_m	–.0749	–.0803	–.0810	–.0724	–.0685	–.0637	–.0644	–.0637	–.0623	–.0651	–.0647	–.0624	–.0668
	c_o	.0075	.0084	[a].0089	.0099	.0093	.0110	.0102	.0111	.0119	.0126	.0137	.0147	.0145
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.177	1.177	1.173	1.172	1.170	1.169	1.168	1.166	1.165	1.163	1.162	1.160	1.159
	.025	–.223	–.189	–.154	–.115	–.094	–.051	.041	.018	.065	.108	.153	.181	.228
	.050	–.482	–.438	–.398	–.353	–.329	–.286	–.196	–.219	–.171	–.130	–.087	–.057	–.014
	.100	–.463	–.444	–.423	–.396	–.381	–.349	–.270	–.303	–.264	–.234	–.200	–.180	–.145
	.200	–.608	–.588	–.570	–.548	–.539	–.510	–.435	–.469	–.433	–.409	–.378	–.360	–.329
	.300	–.687	–.676	–.659	–.632	–.622	–.599	–.539	–.581	–.551	–.525	–.495	–.475	–.442
	.400	–.766	–.752	–.731	–.710	–.707	–.684	–.608	–.638	–.599	–.573	–.545	–.524	–.494
	.500	–.796	–.785	–.774	–.757	–.750	–.713	–.635	–.667	–.624	–.596	–.573	–.562	–.539
	.600	–.888	–.887	–.873	–.849	–.839	–.806	–.726	–.750	–.709	–.692	–.674	–.662	–.637
	.700	–.826	–.901	–.940	–.934	–.906	–.809	–.706	–.728	–.682	–.657	–.628	–.598	–.583
	.800	–.316	–.308	–.282	–.255	–.249	–.247	–.213	–.282	–.292	–.309	–.320	–.334	–.346
	.900	–.118	–.101	–.058	–.012	.005	.025	.075	.023	.022	.011	.003	–.011	–.021
	.950	–.030	–.006	.036	.071	.088	.111	.170	.129	.134	.132	.132	.128	.125
Lower surface	.0375	.149	.110	.075	.039	.008	–.030	–.034	–.120	–.166	–.229	–.286	–.337	–.411
	.075	.067	.036	.007	–.023	–.048	–.078	–.071	–.147	–.184	–.232	–.272	–.310	–.357
	.150	.044	.023	.002	–.020	–.038	–.060	–.040	–.112	–.131	–.164	–.188	–.211	–.235
	.250	–.025	–.041	–.058	–.075	–.090	–.104	–.076	–.142	–.156	–.182	–.199	–.217	–.240
	.350	–.062	–.077	–.090	–.102	–.111	–.124	–.091	–.152	–.161	–.182	–.195	–.211	–.227
	.450	–.110	–.122	–.131	–.141	–.150	–.157	–.121	–.180	–.184	–.199	–.211	–.221	–.230
	.550	–.150	–.159	–.165	–.172	–.177	–.181	–.140	–.195	–.195	–.202	–.213	–.221	–.227
	.650	–.184	–.189	–.190	–.190	–.192	–.191	–.146	–.198	–.192	–.201	–.203	–.208	–.209
	.750	–.213	–.214	–.206	–.201	–.197	–.188	–.139	–.187	–.176	–.182	–.179	–.180	–.176
	.850	–.135	–.130	–.114	–.103	–.098	–.088	–.032	–.077	–.067	–.065	–.058	–.083	–.051
	.925	–.075	–.062	–.036	–.021	–.012	.001	.059	.017	.030	.032	.041	.043	.052
	.975	–.039	–.016	.020	.044	.056	.073	.134	.094	.105	.108	.120	.122	.133
	1.000	[b]–.018	[b]–.002	[b].050	[b].079	[b].090	[b].110	[b].172	[b].138	[b].152	[b].144	[b].163	[b].165	[b].171

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 5.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.50 PROPELLER BLADE SECTION (x = 0.60)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.634	1.770	1.888	1.995	2.144	2.263	2.397	2.570	2.501	2.328	2.210	2.085	1.974	1.857	1.735
	M_r	.421	.437	.451	.463	.488	.497	.518	.537	.529	.506	.493	.474	.460	.446	.431
	α_r'	10.49	8.20	6.34	4.78	2.71	1.19	-.47	-2.36	-1.58	.41	1.86	3.51	5.08	6.83	8.76
	$\Delta\beta$	.42	.36	.30	.25	.18	.12	.05	-.03	0	.08	.15	.21	.26	.32	.37
	α_i	2.47	2.27	1.89	1.54	1.12	.81	.53	.08	.25	.67	.97	1.28	1.60	1.98	2.33
	c_n	.9466	.8740	.7301	.5983	.4397	.3210	.2110	.0300	.1010	.2645	.3803	.5006	.6236	.7682	.8967
	c_m	-.0226	-.0205	-.0384	-.0424	-.0459	-.0528	-.0601	-.0568	-.0566	-.0532	-.0452	-.0444	-.0454	-.0328	-.0154
	c_c															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.045	1.049	1.052	1.056	1.061	1.063	1.069	1.074	1.072	1.065	1.062	1.057	1.054	1.051	1.048
	.025	-1.837	-2.412	-1.814	-1.142	-.689	-.360	-.020	.336	.201	-.160	-.500	-.900	-1.248	-2.219	-2.402
	.050	-1.811	-2.308	-1.289	-.976	-.669	-.404	-.149	.139	.024	-.260	-.505	-.786	-1.051	-1.579	-2.333
	.100	-1.692	-1.519	-.986	-.796	-.566	-.409	-.228	-.014	-.100	-.308	-.475	-.651	-.843	-1.028	-1.547
	.200	-1.385	-.903	-.758	-.640	-.492	-.394	-.279	-.134	-.193	-.332	-.435	-.551	-.674	-.771	-1.008
	.300	-1.013	-.750	-.682	-.608	-.500	-.421	-.334	-.222	-.268	-.379	-.450	-.545	-.630	-.702	-.779
	.400	-.727	-.634	-.595	-.538	-.459	-.404	-.341	-.256	-.292	-.375	-.425	-.490	-.557	-.604	-.627
	.500	-.542	-.553	-.536	-.502	-.454	-.404	-.355	-.292	-.317	-.382	-.425	-.471	-.517	-.546	-.523
	.600	-.427	-.472	-.479	-.464	-.434	-.414	-.376	-.323	-.343	-.401	-.420	-.442	-.475	-.483	-.439
	.700	-.325	-.375	-.391	-.391	-.381	-.375	-.362	-.318	-.330	-.375	-.377	-.381	-.399	-.388	-.338
	.800	-.229	-.247	-.259	-.275	-.285	-.291	-.295	-.273	-.281	-.303	-.287	-.276	-.281	-.258	-.222
	.900	-.150	-.090	-.059	-.059	-.072	-.081	-.094	-.093	-.091	-.095	-.074	-.059	-.068	-.065	-.087
	.950	-.110	-.021	.026	.041	.092	.037	.026	.008	.011	.021	.041	.047	.028	.012	-.030
Lower surface	.0375	.805	.736	.648	.496	.254	.076	-.170	-.539	-.385	-.072	.161	.364	.522	.666	.770
	.075	.653	.579	.496	.374	.191	.071	-.103	-.353	-.246	-.038	.124	.274	.394	.512	.609
	.150	.486	.420	.353	.255	.122	.037	-.078	-.250	-.177	-.038	.076	.185	.270	.364	.446
	.250	.357	.298	.245	.163	.064	.001	-.085	-.215	-.164	-.055	.031	.111	.180	.252	.320
	.350	.275	.226	.186	.121	.041	-.007	-.075	-.172	-.133	-.055	.016	.079	.130	.193	.251
	.450	.209	.170	.140	.083	.016	-.022	-.073	-.149	-.118	-.060	-.004	.050	.090	.142	.190
	.550	.136	.110	.087	.043	-.014	-.042	-.080	-.140	-.115	-.072	-.027	.015	.048	.086	.127
	.650	.084	.069	.059	.019	-.024	-.047	-.071	-.117	-.100	-.069	-.034	-.003	.022	.057	.084
	.750	.028	.032	.032	.002	-.024	-.032	-.048	-.080	-.067	-.062	-.029	-.014	.003	.026	.043
	.850	-.005	.022	.037	.019	-.002	0	-.001	-.016	-.007	-.010	.001	.010	.019	.029	.027
	.925	-.032	.028	.059	.046	.031	.049	.059	.061	.064	.045	.041	.042	.045	.049	.027
	.975	-.084	.032	.082	.066	.054	.086	.110	.136	.134	.093	.074	.060	.068	.071	.014
	1.000	[b]-.125	[a].031	[a].100	[b].072	[b].067	[b].104	[a].135	[a].182	[a].175	[a].114	[b].094	[b].070	[b].079	[a].080	[a].010

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 5.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.50 PROPELLER BLADE SECTION (x = 0.60) - Continued

(b) N = 1350 rpm; $\beta_{0.75R}$ = 45°.

	J	1.689	1.773	1.865	1.995	2.092	2.185	2.302	2.409	2.565	2.495	2.384	2.284	2.172	2.074	1.949	1.859	1.738
	M_x	.506	.518	.533	.549	.568	.579	.599	.616	.642	.629	.609	.594	.577	.563	.541	.526	.511
	α_x'	9.54	8.15	6.70	4.77	3.42	2.18	.71	-.56	-2.29	-1.53	-.27	.93	2.35	3.66	5.44	6.80	8.72
	$\Delta\beta$	.57	.54	.49	.37	.30	.24	.14	.06	-.05	-.01	.08	.16	.25	.30	.42	.49	.55
	α_i	2.52	2.33	2.04	1.64	1.34	1.09	.81	.51	.09	.28	.58	.83	1.15	1.40	1.76	2.13	2.39
	c_n	.9730	.8970	.7889	.6380	.5258	.4261	.3206	.2019	.0355	.1090	.2297	.3290	.4523	.5490	.6843	.8264	.9224
	c_m	-.0157	-.0173	-.0307	-.0417	-.0465	-.0512	-.0553	-.0587	-.0630	-.0652	-.0588	-.0560	-.0494	-.0436	-.0379	-.0271	-.0160
	c_o																	
	c/b	Pressure coefficient, P																
Upper surface	0.000	1.065	1.069	1.073	1.077	1.083	1.086	1.092	1.098	1.107	1.102	1.096	1.091	1.085	1.081	1.075	1.071	1.067
	.025	-2.093	-2.194	-2.274	-1.236	-.956	-.601	-.271	.018	.348	.206	-.046	-.305	-.671	-1.043	-1.425	-2.404	-2.491
	.050	-2.073	-2.100	-1.622	-1.097	-.863	-.608	-.360	-.135	.141	.020	-.188	-.386	-.657	-.911	-1.194	-1.883	-2.241
	.100	-1.772	-1.764	-1.112	-.904	-.714	-.564	-.392	-.233	-.023	-.113	-.269	-.409	-.590	-.738	-.971	-1.200	-1.617
	.200	-1.344	-1.074	-.848	-.721	-.608	-.513	-.401	-.297	-.156	-.220	-.324	-.412	-.527	-.625	-.763	-.859	-1.102
	.300	-.972	-.782	-.765	-.680	-.604	-.534	-.454	-.376	-.259	-.306	-.383	-.449	-.540	-.613	-.707	-.764	-.841
	.400	-.727	-.648	-.659	-.598	-.544	-.500	-.438	-.381	-.296	-.332	-.390	-.440	-.498	-.549	-.620	-.657	-.673
	.500	-.571	-.561	-.591	-.555	-.521	-.498	-.447	-.409	-.342	-.362	-.404	-.440	-.494	-.521	-.567	-.583	-.562
	.600	-.458	-.478	-.523	-.507	-.489	-.482	-.447	-.421	-.378	-.391	-.425	-.453	-.473	-.487	-.513	-.512	-.468
	.700	-.355	-.374	-.422	-.423	-.420	-.425	-.403	-.393	-.371	-.376	-.402	-.412	-.413	-.415	-.422	-.410	-.364
	.800	-.250	-.245	-.281	-.291	-.301	-.320	-.311	-.313	-.315	-.318	-.324	-.322	-.309	-.294	-.282	-.268	-.245
	.900	-.147	-.096	-.070	-.058	-.068	-.086	-.083	-.090	-.103	-.102	-.098	-.092	-.074	-.061	-.059	-.072	-.112
	.950	-.104	-.043	.009	.035	.039	.031	.035	.030	.015	.007	.023	.030	.042	.043	.024	.002	-.056
Lower surface	.0375	.764	.722	.641	.499	.345	.174	-.003	-.233	-.559	-.430	-.176	.019	.228	.387	.555	.669	.742
	.075	.606	.565	.491	.375	.254	.128	.006	-.149	-.391	-.276	-.112	.019	.169	.286	.418	.518	.585
	.150	.444	.411	.343	.257	.165	.072	-.009	-.114	-.281	-.205	-.089	0	.103	.190	.287	.369	.426
	.250	.314	.287	.229	.161	.092	.019	-.047	-.128	-.243	-.190	-.107	-.035	.045	.110	.189	.254	.302
	.350	.240	.217	.172	.115	.060	0	-.047	-.107	-.199	-.156	-.092	-.040	.022	.078	.136	.191	.230
	.450	.173	.158	.119	.073	.027	-.019	-.054	-.104	-.176	-.140	-.091	-.049	-.001	.043	.091	.135	.176
	.550	.106	.098	.069	.031	-.007	-.046	-.071	-.111	-.164	-.139	-.101	-.068	-.028	.005	.044	.084	.107
	.650	.056	.049	.031	.002	-.025	-.055	-.069	-.104	-.138	-.118	-.092	-.068	-.041	-.015	.010	.044	.055
	.750	.003	.012	0	-.016	-.026	-.048	-.054	-.073	-.097	-.085	-.069	-.053	-.035	-.021	-.011	.013	.016
	.850	-.028	-.004	-.002	-.006	-.015	-.025	-.016	-.024	-.030	-.019	-.020	-.014	-.012	-.007	-.007	.011	-.003
	.925	-.045	-.013	.007	.015	.017	.019	.035	.039	.049	.058	.044	.041	.028	.021	.010	.019	-.010
	.975	-.116	-.059	-.019	.002	.027	.044	.075	.088	.115	.132	.099	.083	.049	.027	.014	.022	-.023
	1.000	b-.161	b-.092	b-.040	b-.020	b.019	b.051	b.092	a.115	a.145	a.170	a.125	a.104	b.055	b.028	b.010	b.021	b-.033

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 5.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.50 PROPELLER BLADE SECTION (x = 0.60) - Continued

(c) N = 1500 rpm; $\beta_{0.75R}$ = 45°.

	J	2.536	2.445	2.360	2.259	2.183	2.088	2.010	1.948	1.975	2.055	2.140	2.221	2.312	2.389	2.474
	M_r	.710	.691	.676	.656	.644	.626	.614	.603	.606	.624	.637	.652	.668	.682	.697
	α_r'	-1.98	-.97	.01	1.24	2.21	3.47	4.56	5.46	5.06	3.93	2.77	1.72	.59	-.33	-1.29
	$\Delta\beta$	-.16	-.03	.09	.23	.33	.44	.53	.58	.56	.48	.38	.28	.15	.05	-.11
	α_i	.14	.40	.63	.96	1.18	1.44	1.70	1.95	1.82	1.55	1.28	1.08	.79	.58	.33
	c_n	.0574	.1581	.2516	.3781	.4655	.5652	.6665	.7588	.7111	.6058	.5013	.4245	.3116	.2284	.1329
	c_m	-.0724	-.0691	-.0628	-.0579	-.0522	-.0451	-.0354	-.0285	-.0335	-.0438	-.0515	-.0542	-.0613	-.0671	-.0728
	c_c															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.133	1.126	1.120	1.112	1.108	1.101	1.097	1.094	1.095	1.101	1.105	1.101	1.117	1.122	1.128
	.025	.348	.170	-.042	-.367	-.637	-1.010	-1.635	-2.236	-1.980	-1.241	-.799	-.504	-.189	.028	.230
	.050	.138	-.017	-.193	-.448	-.657	-.936	-1.119	-1.844	-1.313	-1.080	-.779	-.553	-.310	-.135	.035
	.100	-.026	-.153	-.285	-.466	-.604	-.767	-.914	-.989	-.965	-.810	-.680	-.537	-.369	-.242	-.113
	.200	-.171	-.259	-.346	-.461	-.546	-.640	-.743	-.812	-.779	-.689	-.589	-.502	-.399	-.317	-.230
	.300	-.284	-.351	-.418	-.500	-.565	-.640	-.706	-.752	-.729	-.668	-.602	-.531	-.459	-.397	-.329
	.400	-.325	-.378	-.426	-.480	-.526	-.574	-.619	-.653	-.637	-.593	-.549	-.502	-.450	-.407	-.361
	.500	-.375	-.409	-.439	-.475	-.513	-.540	-.568	-.585	-.576	-.550	-.528	-.494	-.456	-.427	-.396
	.600	-.417	-.440	-.459	-.480	-.495	-.505	-.518	-.522	-.518	-.509	-.501	-.486	-.470	-.448	-.430
	.700	-.405	-.419	-.424	-.424	-.428	-.425	-.425	-.419	-.418	-.422	-.428	-.425	-.423	-.416	-.408
	.800	-.338	-.344	-.331	-.313	-.306	-.290	-.277	-.261	-.265	-.282	-.300	-.306	-.323	-.332	-.339
	.900	-.093	-.094	-.079	-.061	-.054	-.042	-.035	-.029	-.025	-.034	-.048	-.055	-.071	-.080	-.091
	.950	.034	.035	.050	.061	.065	.067	.058	.049	.060	.065	.066	.067	.056	.046	.029
Lower surface	.0375	-.712	-.372	-.158	.083	.225	.376	.504	.595	.560	.441	.294	.162	-.037	-.210	-.443
	.075	-.369	-.237	-.097	.071	.173	.285	.384	.457	.431	.337	.223	.127	-.014	-.132	-.272
	.150	-.268	-.172	-.077	.041	.111	.192	.267	.326	.303	.229	.147	.082	-.019	-.097	-.197
	.250	-.235	-.169	-.102	-.009	.050	.116	.174	.221	.204	.145	.079	.024	-.056	-.115	-.186
	.350	-.186	-.136	-.083	-.012	.029	.082	.129	.168	.155	.106	.053	.013	-.048	-.093	-.148
	.450	-.165	-.126	-.085	-.029	.008	.048	.085	.117	.106	.068	.024	-.008	-.057	-.091	-.136
	.550	-.158	-.126	-.097	-.050	-.022	.011	.042	.069	.062	.029	-.007	-.032	-.071	-.097	-.133
	.650	-.135	-.114	-.094	-.059	-.036	-.013	.010	.032	.028	.002	-.027	-.043	-.076	-.093	-.117
	.750	-.086	-.077	-.068	-.047	-.031	-.016	-.003	.007	.005	-.005	-.025	-.035	-.056	-.062	-.076
	.850	-.009	-.009	-.013	-.005	-.004	.001	.005	.010	.012	.005	-.002	-.002	-.008	-.005	-.004
	.925	.077	.071	.056	.049	.042	.033	.026	.023	.031	.031	.039	.048	.054	.067	.082
	.975	.151	.139	.112	.087	.072	.040	.017	.007	.015	.031	.058	.082	.102	.130	.158
	1.000	[a].215	[a].185	[a].159	[b].105	[b].084	[b].038	[b]-.003	[b]-.021	[b]-.005	[b].020	[b].060	[b].098	[a].128	[a].165	[a].195

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 5.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.50 PROPELLER BLADE SECTION (x = 0.60) – Continued

(d) N = 1600 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.505	2.478	2.404	2.333	2.279	2.211	2.158	2.116	2.041	2.070	2.136	2.178	2.245	2.306	2.374	2.444
	M_r	.757	.749	.733	.721	.710	.697	.686	.679	.663	.670	.682	.689	.701	.713	.728	.741
	α_r'	-1.64	-1.34	-.50	.34	.99	1.84	2.53	3.09	4.12	3.72	2.83	2.27	1.42	.66	-.15	-.96
	$\Delta\beta$	-.18	-.12	.02	.15	.23	.32	.39	.45	.54	.50	.42	.36	.27	.19	.08	-.06
	α_i	.15	.28	.54	.76	.94	1.13	1.32	1.46	1.68	1.63	1.37	1.25	1.04	.85	.66	.42
	c_n	.0600	.1123	.2135	.3016	.3723	.4442	.5168	.5729	.6568	.6381	.5361	.4910	.4126	.3358	.2623	.1671
	c_m	-.0769	-.0803	-.0698	-.0647	-.0609	-.0546	-.0508	-.0462	-.0398	-.0492	-.0487	-.0552	-.0595	-.0648	-.0678	-.0768
	c_d	.0219	.0165														.0148
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.152	1.149	1.142	1.137	1.133	1.128	1.124	1.121	1.115	1.117	1.122	1.125	1.130	1.134	1.141	1.145
	.025	.354	.285	.102	-.097	-.286	-.506	-.739	-.937	-1.427	-1.251	-.836	-.645	-.391	-.179	.006	.204
	.050	.142	.079	-.081	-.248	-.403	-.582	-.773	-.946	-1.324	-1.186	-.857	-.697	-.489	-.318	-.162	.007
	.100	-.031	-.083	-.212	-.342	-.453	-.576	-.696	-.783	-.861	-.853	-.743	-.650	-.514	-.391	-.276	-.144
	.200	-.186	-.221	-.314	-.402	-.469	-.544	-.614	-.659	-.754	-.721	-.641	-.586	-.508	-.434	-.357	-.268
	.300	-.315	-.341	-.412	-.482	-.532	-.584	-.636	-.671	-.734	-.711	-.659	-.614	-.556	-.506	-.447	-.379
	.400	-.370	-.389	-.440	-.486	-.516	-.550	-.581	-.602	-.642	-.625	-.594	-.567	-.534	-.502	-.461	-.415
	.500	-.429	-.437	-.467	-.497	-.513	-.540	-.559	-.567	-.589	-.577	-.565	-.552	-.524	-.505	-.481	-.456
	.600	-.488	-.485	-.497	-.514	-.521	-.527	-.529	-.528	-.536	-.530	-.531	-.528	-.521	-.519	-.504	-.495
	.700	-.467	-.457	-.459	-.463	-.455	-.450	-.445	-.439	-.436	-.433	-.445	-.447	-.452	-.459	-.458	-.462
	.800	-.373	-.373	-.355	-.342	-.325	-.315	-.302	-.290	-.277	-.277	-.299	-.306	-.319	-.335	-.341	-.372
	.900	-.093	-.088	-.076	-.070	-.056	-.048	-.039	-.032	-.025	-.024	-.038	-.040	-.052	-.065	-.067	-.087
	.950	.040	.039	.055	.063	.072	.072	.077	.075	.068	.074	.075	.079	.074	.066	.066	.045
Lower surface	.0375	-.909	-.615	-.289	-.108	.037	.159	.271	.343	.457	.426	.305	.233	.101	-.043	-.185	-.416
	.075	-.359	-.325	-.184	-.063	.039	.127	.209	.263	.352	.327	.233	.181	.086	-.017	-.115	-.263
	.150	-.296	-.245	-.137	-.055	.017	.078	.140	.178	.244	.227	.156	.120	.051	-.023	-.088	-.193
	.250	-.267	-.227	-.149	-.088	-.028	.021	.070	.104	.137	.142	.083	.055	-.003	-.063	-.111	-.189
	.350	-.218	-.184	-.123	-.076	-.030	.008	.046	.072	.115	.105	.056	.033	-.010	-.056	-.092	-.153
	.450	-.194	-.167	-.117	-.081	-.043	-.013	.018	.039	.074	.067	.027	.008	-.027	-.065	-.093	-.141
	.550	-.183	-.161	-.123	-.094	-.064	-.039	-.012	.004	.032	.027	-.006	-.020	-.050	-.082	-.102	-.141
	.650	-.157	-.140	-.115	-.094	-.070	-.054	-.033	-.018	.003	-.001	-.027	-.038	-.060	-.085	-.097	-.125
	.750	-.105	-.095	-.081	-.071	-.054	-.045	-.030	-.020	-.007	-.006	-.027	-.032	-.047	-.063	-.070	-.085
	.850	-.018	-.011	-.014	-.015	-.008	-.008	-.003	0	.001	.003	-.003	-.001	-.007	-.013	-.009	-.009
	.925	.074	.079	.066	.055	.050	.041	.041	.036	.026	.033	.038	.045	.048	.052	.062	.074
	.975	.149	.159	.134	.109	.096	.075	.064	.051	.021	.033	.057	.073	.088	.103	.123	.147
	1.000	[a].188	[a].215	[a].170	[b].132	[b].119	[b].090	[b].068	[b].058	[b].011	[b].029	[b].059	[b].090	[b].111	[b].127	[a].158	[a].180

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 5.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.50 PROPELLER BLADE SECTION (x = 0.60) – Continued

(e) M = 0.56; $\beta_{0.75R}$ = 45°.

	J	2.122	2.149	2.177	2.195	2.224	2.250	2.279	2.309	2.338	2.370	2.405	2.435	2.468	2.501	2.535
	M_x	.753	.749	.745	.740	.735	.732	.728	.724	.721	.717	.713	.709	.706	.702	.699
	α_x'	3.01	2.66	2.29	2.06	1.68	1.36	.99	.63	.27	–.10	–.51	–.86	–1.23	–1.60	–1.97
	$\Delta\beta$	.42	.38	.34	.31	.27	.24	.20	.16	.11	.09	.04	0	–.03	–.07	–.10
	α_i	1.53	1.43	1.33	1.28	1.17	1.07	.99	.85	.75	.65	.53	.46	.34	.24	.12
	c_n	.6019	.5619	.5226	.5032	.4600	.4232	.3897	.3374	.2948	.2584	.2113	.1813	.1368	.0945	.0474
	c_m	–.0569	–.0569	–.0652	–.0628	–.0666	–.0682	–.0657	–.0675	–.0688	–.0710	–.0714	–.0718	–.0718	–.0723	–.0732
	c_c	–.0104	–.0068													
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.150	1.149	1.147	1.145	1.143	1.142	1.140	1.139	1.137	1.136	1.134	1.133	1.132	1.130	1.129
	.025	–.662	–.603	–.524	–.484	–.404	–.319	–.246	–.133	–.055	.022	.107	.158	.228	.298	.361
	.050	–.893	–.782	–.653	–.603	–.521	–.444	–.379	–.253	–.210	–.145	–.076	–.028	.032	.091	.149
	.100	–.804	–.725	–.657	–.622	–.558	–.496	–.442	–.367	–.310	–.259	–.201	–.164	–.114	–.063	–.018
	.200	–.719	–.673	–.629	–.606	–.562	–.516	–.476	–.423	–.380	–.344	–.301	–.273	–.238	–.202	–.168
	.300	–.767	–.746	–.709	–.683	–.636	–.590	–.548	–.503	–.464	–.431	–.395	–.372	–.340	–.309	–.282
	.400	–.797	–.740	–.680	–.649	–.611	–.574	–.540	–.506	–.473	–.447	–.418	–.398	–.370	–.346	–.321
	.500	–.697	–.669	–.645	–.626	–.601	–.571	–.544	–.518	–.494	–.474	–.449	–.435	–.418	–.402	–.385
	.600	–.611	–.609	–.603	–.595	–.581	–.564	–.543	–.528	–.508	–.489	–.471	–.459	–.444	–.431	–.416
	.700	–.464	–.473	–.484	–.487	–.487	–.485	–.475	–.475	–.464	–.457	–.444	–.435	–.425	–.417	–.409
	.800	–.281	–.295	–.312	–.321	–.327	–.334	–.333	–.344	–.346	–.352	–.352	–.350	–.343	–.340	–.337
	.900	–.002	–.011	–.024	–.031	–.037	–.047	–.050	–.063	–.069	–.078	–.083	–.088	–.086	–.089	–.093
	.950	.101	.097	.094	.091	.088	.082	.081	.072	.067	.058	.051	.044	.045	.044	.038
Lower surface	.0375	.300	.253	.203	.175	.125	.070	.024	–.066	–.132	–.204	–.285	–.346	–.431	–.553	–.718
	.075	.235	.201	.161	.140	.105	.064	.031	–.032	–.079	–.127	–.181	–.223	–.269	–.324	–.384
	.150	.162	.136	.106	.089	.065	.036	.013	–.032	–.063	–.097	–.133	–.160	–.194	–.239	–.280
	.250	.089	.067	.045	.031	.013	–.010	–.027	–.063	–.086	–.112	–.141	–.161	–.186	–.214	–.245
	.350	.061	.044	.026	.014	.001	–.020	–.031	–.059	–.076	–.095	–.116	–.131	–.148	–.171	–.196
	.450	.032	.017	.002	–.007	–.017	–.031	–.041	–.063	–.076	–.092	–.107	–.120	–.134	–.150	–.171
	.550	–.005	–.017	–.028	–.034	–.043	–.054	–.060	–.080	–.088	–.100	–.110	–.121	–.131	–.144	–.161
	.650	–.029	–.037	–.045	–.050	–.054	–.062	–.066	–.081	–.086	–.093	–.101	–.110	–.117	–.126	–.137
	.750	–.026	–.032	–.036	–.039	–.040	–.047	–.046	–.056	–.060	–.063	–.067	–.074	–.076	–.081	–.091
	.850	.001	–.001	–.001	–.001	.001	0	.001	–.003	–.003	–.003	–.003	–.005	–.005	–.008	–.015
	.925	.046	.047	.050	.052	.058	.058	.060	.063	.066	.068	.072	.072	.072	.070	.067
	.975	.064	.068	.078	.083	.091	.096	.101	.111	.118	.125	.135	.137	.133	.131	.126
	1.000	[b].070	[b].070	[a].090	[b].096	[b].104	[b].115	[b].122	[b].133	[b].143	[a].157	[a].174	[a].118	[a].165	[a].160	[a].156

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 5.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.50 PROPELLER BLADE SECTION (x = 0.60) – Continued

(f) M = 0.60; $\beta_{0.75R}$ = 45°.

	J	2.124	2.154	2.183	2.204	2.230	2.258	2.275	2.310	2.337	2.367	2.395	2.427	2.456	2.493	2.521
	M_r	.800	.795	.794	.787	.783	.779	.770	.769	.766	.762	.758	.755	.751	.747	.744
	α_r'	2.99	2.59	2.21	1.94	1.61	1.25	1.04	.61	.29	-.07	-.40	-.77	-1.09	-1.51	-1.81
	$\Delta\beta$	.32	.31	.28	.26	.23	.19	.17	.11	.07	.03	-.01	-.06	-.10	-.15	-.19
	α_i	1.47	1.36	1.29	1.23	1.12	1.02	.95	.86	.75	.67	.58	.46	.38	.28	.18
	c_n	.5768	.5361	.5090	.4832	.4419	.4039	.3758	.3394	.2977	.2661	.2277	.1806	.1519	.1097	.0697
	c_m	-.0737	-.0749	-.0759	-.0747	-.0724	-.0736	-.0736	-.0772	-.0768	-.0768	-.0763	-.0792	-.0793	-.0760	-.0765
	c_c	-.0005	.0002	.0018	.0022	.0041	.0063	.0074	.0088	.0115	.0126	.0137	.0152	.0158		
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.170	1.168	1.168	1.164	1.163	1.161	1.158	1.157	1.156	1.154	1.153	1.151	1.150	1.148	1.147
	.025	-.437	-.387	-.331	-.311	-.233	-.172	-.131	-.059	.009	.062	.133	.205	.252	.313	.362
	.050	-.664	-.567	-.486	-.462	-.384	-.326	-.289	-.224	-.165	-.118	-.056	.008	.048	.105	.150
	.100	-.637	-.594	-.550	-.533	-.469	-.421	-.392	-.336	-.287	-.248	-.197	-.145	-.110	-.061	-.021
	.200	-.683	-.624	-.568	-.556	-.513	-.480	-.458	-.418	-.383	-.354	-.316	-.276	-.248	-.208	-.177
	.300	-.726	-.701	-.664	-.652	-.624	-.601	-.579	-.536	-.498	-.469	-.433	-.396	-.370	-.335	-.305
	.400	-.800	-.768	-.741	-.734	-.686	-.638	-.607	-.564	-.530	-.501	-.471	-.437	-.414	-.379	-.353
	.500	-.828	-.802	-.760	-.711	-.658	-.633	-.611	-.582	-.559	-.537	-.512	-.486	-.468	-.438	-.415
	.600	-.916	-.870	-.796	-.740	-.707	-.674	-.654	-.620	-.598	-.575	-.556	-.531	-.513	-.487	-.466
	.700	-.608	-.546	-.549	-.538	-.535	-.541	-.535	-.525	-.520	-.511	-.502	-.490	-.481	-.465	-.450
	.800	-.258	-.269	-.284	-.293	-.314	-.327	-.338	-.345	-.356	-.361	-.371	-.376	-.374	-.366	-.361
	.900	-.017	-.004	-.006	-.010	-.022	-.031	-.042	-.049	-.060	-.063	-.076	-.084	-.086	-.088	-.088
	.950	.076	.095	.103	.105	.100	.095	.089	.084	.074	.070	.061	.054	.052	.050	.048
Lower surface	.0375	.222	.178	.138	.115	.053	-.003	-.042	-.102	-.181	-.235	-.321	-.417	-.518	-.725	-.928
	.075	.178	.146	.116	.100	.053	.015	-.015	-.058	-.113	-.150	-.207	-.265	-.296	-.330	-.347
	.150	.117	.095	.073	.059	.028	-.001	-.021	-.050	-.089	-.113	-.151	-.191	-.222	-.259	-.288
	.250	.044	.028	.014	.005	-.020	-.043	-.057	-.080	-.110	-.130	-.162	-.190	-.209	-.232	-.255
	.350	.022	.009	-.001	-.009	-.028	-.047	-.057	-.073	-.097	-.111	-.134	-.155	-.169	-.188	-.204
	.450	-.012	-.019	-.026	-.031	-.046	-.059	-.070	-.080	-.100	-.109	-.129	-.145	-.156	-.168	-.180
	.550	-.052	-.055	-.058	-.061	-.074	-.082	-.089	-.097	-.113	-.120	-.133	-.145	-.153	-.163	-.169
	.650	-.075	-.071	-.069	-.072	-.079	-.085	-.089	-.094	-.106	-.109	-.118	-.126	-.130	-.136	-.141
	.750	-.072	-.064	-.058	-.059	-.063	-.064	-.068	-.067	-.076	-.078	-.083	-.085	-.086	-.090	-.092
	.850	-.035	-.023	-.012	-.011	-.009	-.008	-.010	-.005	-.011	-.011	-.012	-.010	-.008	-.007	-.009
	.925	.018	.035	.050	.052	.058	.060	.062	.067	.064	.066	.069	.073	.075	.074	.075
	.975	.041	.065	.085	.090	.101	.108	.112	.123	.121	.127	.132	.139	.138	.137	.138
	1.000	[b].049	[b].078	[b].104	[b].110	[b].133	[b].128	[b].139	[b].152	[b].148	[a].166	[a].170	[a].175	[a].176	[a].170	[a].169

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 5.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.50 PROPELLER BLADE SECTION (x = 0.60) - Concluded

(g) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.106	2.135	2.167	2.186	2.210	2.246	2.263	2.283	2.304	2.330	2.351	2.379	2.400	2.421
	M_x	.870	.868	.866	.860	.856	.852	.847	.844	.837	.833	.828	.824	.818	.815
	α_r'	3.23	2.84	2.42	.217	1.86	1.41	1.19	.95	.69	.37	.12	-.21	-.45	-.70
	$\Delta\beta$	.37	.31	.25	.21	.16	.10	.07	.04	.01	-.04	-.08	-.14	-.18	-.23
	α_i	1.13	1.06	1.00	.97	.90	.84	.81	.73	.65	.59	.50	.45	.38	.28
	c_n	.4432	.4174	.3935	.3813	.3548	.3323	.3181	.2890	.2555	.2342	.1994	.1781	.1516	.1116
	c_m	-.0754	-.0751	-.0732	-.0747	-.0775	-.0769	-.0749	-.0775	-.0762	-.0751	-.0724	-.0770	-.0765	-.0788
	c_c	.0256	.0255	.0244	.0239	.0234	.0225	.0215	.0186	.0178	.0174	.0189	.0193	.0196	.0204
	c/p	Pressure coefficient, P													
Upper surface	0.000	1.203	1.203	1.201	1.198	1.196	1.195	1.192	1.190	1.187	1.185	1.183	1.181	1.178	1.177
	.025	-.106	-.073	-.039	-.020	.008	.057	.087	.120	.159	.195	.228	.265	.302	.338
	.050	-.372	-.332	-.292	-.276	-.246	-.201	-.176	-.143	-.107	-.070	-.039	-.003	.035	.074
	.100	-.397	-.374	-.349	-.337	-.313	-.275	-.253	-.225	-.195	-.164	-.139	-.108	-.078	-.049
	.200	-.472	-.444	-.411	-.396	-.380	-.354	-.345	-.325	-.304	-.284	-.266	-.245	-.223	-.201
	.300	-.614	-.593	-.601	-.578	-.565	-.539	-.533	-.519	-.509	-.498	-.487	-.465	-.441	-.414
	.400	-.694	-.683	-.671	-.669	-.657	-.635	-.639	-.632	-.613	-.584	-.564	-.546	-.525	-.497
	.500	-.699	-.691	-.677	-.673	-.662	-.645	-.639	-.617	-.594	-.577	-.599	-.538	-.517	-.501
	.600	-.791	-.784	-.771	-.767	-.761	-.741	-.739	-.719	-.702	-.670	-.659	-.645	-.634	-.613
	.700	-.872	-.865	-.852	-.853	-.852	-.858	-.827	-.804	-.780	-.762	-.756	-.744	-.726	-.706
	.800	-.318	-.311	-.289	-.281	-.272	-.257	-.254	-.254	-.280	-.317	-.322	-.334	-.342	-.333
	.900	-.278	-.271	-.249	-.236	-.218	-.189	-.162	-.111	-.071	-.038	-.019	-.015	-.020	-.032
	.950	-.260	-.250	-.226	-.208	-.185	-.147	-.107	-.043	.001	.040	.061	.081	.086	.088
Lower surface	.0375	.125	.086	.042	.006	-.034	-.088	-.143	-.188	-.257	-.315	-.383	-.503	-.613	-.750
	.075	.109	.080	.065	.021	-.009	-.047	-.088	-.118	-.164	-.202	-.243	-.290	-.356	-.506
	.150	.070	.049	.025	.003	-.018	-.044	-.074	-.095	-.127	-.150	-.176	-.208	-.244	-.266
	.250	.008	-.010	-.030	-.048	-.066	-.086	-.111	-.125	-.151	-.170	-.191	-.215	-.241	-.264
	.350	-.017	-.032	-.050	-.065	-.080	-.096	-.115	-.125	-.146	-.159	-.175	-.191	-.212	-.229
	.450	-.044	-.057	-.073	-.085	-.098	-.110	-.126	-.132	-.146	-.155	-.167	-.179	-.196	-.206
	.550	-.127	-.139	-.152	-.161	-.170	-.177	-.188	-.189	-.197	-.199	-.207	-.213	-.222	-.226
	.650	-.170	-.179	-.188	-.191	-.195	-.198	-.201	-.195	-.196	-.191	-.195	-.194	-.197	-.194
	.750	-.212	-.219	-.219	-.214	-.211	-.202	-.194	-.177	-.169	-.159	-.157	-.148	-.145	-.139
	.850	-.212	-.212	-.204	-.191	-.178	-.159	-.142	-.114	-.099	-.082	-.077	-.062	-.054	-.045
	.925	-.207	-.199	-.181	-.159	-.139	-.109	-.088	-.047	-.024	.001	.008	.026	.038	.051
	.975	-.337	-.314	-.278	-.239	-.203	-.152	-.105	-.036	.003	.041	.051	.078	.095	.113
	1.000	[b]-.444	[b]-.420	[b]-.360	[b]-.309	[b]-.260	[b]-.196	[b]-.123	[b]-.039	[b].009	[b].052	[b].072	[b].109	[b].128	[b].150

[b]Lower surface only.

[redacted]

[redacted]

TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.00 PROPELLER BLADE SECTION ($x = 0.65$)

(a) $N = 1140$ rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.637	1.750	1.883	1.980	2.126	2.230	2.367	2.518	2.582	2.458	2.321	2.197	2.067	1.949	1.840	1.720
	M_x	.446	.456	.473	.483	.503	.515	.532	.551	.558	.542	.523	.508	.495	.478	.468	.454
	α_x'	10.48	8.60	6.52	5.09	3.05	1.68	–.02	–1.76	–2.46	–1.08	.54	2.11	.385	5.54	7.18	9.09
	$\Delta\beta$	.54	.47	.38	.32	.24	.17	.07	–.03	–.06	.01	.10	.19	.27	.34	.41	.49
	α_1	2.61	2.36	2.03	1.67	1.23	.95	.62	.22	.07	.39	.72	1.05	1.39	1.78	2.21	2.45
	c_n	.9618	.8759	.7620	.6249	.4658	.3606	.2348	.0845	.0265	.1471	.2735	.3994	.5271	.6680	.8225	.9083
	c_m	–.0583	–.0222	–.0288	–.0403	–.0411	–.0457	–.0519	–.0587	–.0574	–.0590	–.0501	–.0457	–.0410	–.0579	–.0232	–.0347
	c_c																
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.051	1.053	1.057	1.060	1.065	1.068	1.072	1.078	1.080	1.075	1.070	1.066	1.063	1.059	1.056	1.053
	.025	–1.389	–1.546	–2.092	–1.244	–.783	–.472	–.113	.224	.336	.097	–.220	–.593	–.964	–1.575	–2.165	–1.484
	.050	–1.352	–1.546	–1.805	–1.095	–.749	–.523	–.248	.018	.115	–.086	–.336	–.608	–.894	–1.163	–1.886	–1.468
	.100	–1.334	–1.535	–1.073	–.834	–.591	–.446	–.257	–.070	.005	–.146	–.320	–.500	–.691	–.885	–1.441	–1.448
	.200	–1.262	–1.305	–.727	–.665	–.509	–.418	–.295	–.170	–.117	–.223	–.338	–.450	–.571	–.695	–.834	–1.287
	.300	–1.101	–.955	–.659	–.612	–.504	–.436	–.341	–.252	–.207	–.292	–.377	–.460	–.551	–.638	–.661	–1.049
	.400	–.914	–.674	–.596	–.563	–.487	–.441	–.361	–.302	–.266	–.333	–.395	–.455	–.518	–.587	–.583	–.796
	.500	–.712	–.496	–.504	–.482	–.426	–.394	–.339	–.296	–.268	–.318	–.363	–.402	–.453	–.499	–.494	–.580
	.600	–.555	–.392	–.449	–.440	–.407	–.383	–.346	–.319	–.296	–.333	–.363	–.388	–.423	–.451	–.432	–.434
	.700	–.419	–.306	–.368	–.376	–.358	–.348	–.328	–.317	–.300	–.326	–.343	–.350	–.371	–.382	–.349	–.326
	.800	–.314	–.214	–.260	–.270	–.276	–.282	–.279	–.285	–.276	–.288	–.286	–.274	–.278	–.273	–.243	–.232
	.900	–.217	–.105	–.068	–.062	–.067	–.076	–.079	–.101	–.099	–.099	–.089	–.071	–.073	–.069	–.073	–.138
	.950	–.178	–.059	.019	.031	.045	.045	.038	.018	.022	.021	.036	.048	.038	.024	.005	–.101
Lower surface	.0375	.770	.722	.640	.540	.320	.151	–.075	–.434	–.533	–.283	–.014	.227	.408	.577	.691	.735
	.075	.623	.572	.496	.400	.235	.113	–.039	–.260	–.349	–.180	–.007	.170	.300	.433	.534	.587
	.150	.468	.429	.357	.284	.157	.073	–.031	–.179	–.235	–.120	–.011	.113	.205	.306	.392	.438
	.250	.354	.320	.265	.206	.108	.041	–.026	–.137	–.172	–.092	–.014	.074	.143	.224	.297	.332
	.350	.266	.245	.195	.147	.067	.017	–.033	–.116	–.150	–.092	–.032	.041	.095	.160	.222	.251
	.450	.194	.182	.147	.105	.038	–.001	–.037	–.112	–.131	–.086	–.034	.017	.060	.114	.166	.186
	.550	.134	.125	.100	.063	.011	–.025	–.044	–.108	–.121	–.086	–.046	–.004	.028	.072	.114	.127
	.650	.075	.076	.060	.031	–.011	–.036	–.051	–.097	–.107	–.082	–.055	–.021	.003	.040	.075	.074
	.750	.018	.033	.032	.013	–.018	–.036	–.044	–.074	–.080	–.067	–.053	–.026	–.013	.016	.042	.025
	.850	–.011	.018	.037	.026	.011	.003	.012	–.008	–.007	–.004	0	.012	.015	.027	.042	.005
	.925	–.051	.004	.049	.048	.045	.045	.065	.055	.060	.056	.047	.051	.040	.046	.042	–.018
	.975	[a]–.120	–.024	.063	.053	.048	.059	.107	.105	.113	.103	.083	.060	.043	.056	.047	–.060
	1.000	[a]–.150	[b]–.040	[b].070	[b].060	[b].048	[b].060	[b].129	[b].140	[b].151	[b].131	[b].108	[b].063	[b].044	[b].057	[b].046	[b]–.080

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) - Continued

(b) N = 1350 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.742	1.841	1.949	2.068	2.163	2.261	2.380	2.497	2.564	2.432	2.318	2.218	2.105	2.010	1.900	1.800
	M_r	.542	.559	.573	.593	.606	.620	.639	.658	.669	.646	.626	.612	.595	.582	.567	.551
	α_r'	8.73	7.16	5.53	3.83	2.55	1.28	-.17	-1.52	-2.27	-.78	.58	1.83	3.33	4.65	6.26	7.80
	$\Delta\beta$	.70	.63	.52	.38	.30	.21	.08	-.04	-.09	.03	.15	.26	.41	.44	.58	.66
	α_i	2.50	2.27	1.89	1.51	1.25	.94	.60	.29	.11	.45	.77	1.09	1.41	1.63	2.04	2.39
	c_n	.9277	.8453	.7098	.5742	.4748	.3558	.2268	.1135	.0435	.1752	.2952	.4106	.5355	.6181	.7673	.8879
	c_m	-.0209	-.0216	-.0363	-.0439	-.0459	-.0532	-.0592	-.0637	-.0629	-.0630	-.0547	-.0489	-.0454	-.0465	-.0322	-.0195
	c_o																
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.075	1.080	1.084	1.090	1.095	1.100	1.106	1.113	1.117	1.108	1.101	1.096	1.091	1.087	1.082	1.078
	.025	-1.883	-2.247	-1.794	-1.094	-.773	-.394	-.079	.200	.331	.057	-.235	-.567	-.969	-1.160	-2.530	-1.942
	.050	-1.807	-2.059	-1.128	-1.010	-.760	-.478	-.229	.005	.120	-.120	-.353	-.609	-.906	-1.120	-1.460	-1.877
	.100	-1.609	-1.571	-.878	-.763	-.600	-.420	-.252	-.083	.003	-.174	-.338	-.507	-.694	-.852	-1.054	-1.712
	.200	-1.299	-.870	-.679	-.634	-.537	-.426	-.319	-.204	-.144	-.268	-.373	-.475	-.593	-.688	-.801	-1.168
	.300	-.963	-.716	-.612	-.605	-.539	-.455	-.376	-.287	-.239	-.337	-.416	-.493	-.574	-.640	-.718	-.796
	.400	-.721	-.632	-.548	-.567	-.524	-.467	-.409	-.345	-.309	-.383	-.440	-.491	-.549	-.593	-.641	-.621
	.500	-.544	-.531	-.453	-.493	-.463	-.424	-.386	-.340	-.314	-.367	-.406	-.440	-.479	-.509	-.540	-.503
	.600	-.430	-.453	-.395	-.454	-.438	-.415	-.391	-.362	-.345	-.381	-.406	-.422	-.447	-.463	-.472	-.420
	.700	-.325	-.361	-.312	-.388	-.386	-.377	-.369	-.356	-.348	-.368	-.375	-.378	-.386	-.391	-.382	-.330
	.800	-.231	-.241	-.188	-.282	-.292	-.299	-.307	-.313	-.312	-.316	-.305	-.293	-.287	-.277	-.252	-.223
	.900	-.132	-.067	.024	-.057	-.065	-.075	-.089	-.100	-.105	-.102	-.084	-.067	-.060	-.058	-.053	-.083
	.950	-.090	.007	.108	.049	.053	.053	.046	.035	.030	.037	.047	.058	.053	.042	.020	-.022
Lower surface	.0375	.742	.694	.662	.433	.280	.081	-.153	-.449	-.562	-.282	-.028	.189	.374	.504	.645	.720
	.075	.591	.546	.525	.325	.206	.065	-.094	-.260	-.382	-.180	-.012	.141	.278	.381	.497	.569
	.150	.441	.402	.397	.224	.138	.039	-.069	-.187	-.264	-.125	-.014	.092	.189	.268	.360	.425
	.250	.332	.301	.309	.157	.091	.018	-.056	-.142	-.197	-.097	-.019	.058	.132	.192	.265	.320
	.350	.248	.225	.244	.107	.051	-.004	-.064	-.131	-.173	-.098	-.034	.026	.084	.135	.193	.240
	.450	.184	.167	.196	.070	.024	-.016	-.068	-.118	-.151	-.094	-.041	.005	.053	.093	.141	.183
	.550	.124	.116	.152	.034	-.003	-.030	-.073	-.110	-.137	-.095	-.055	-.016	.020	.055	.092	.126
	.650	.068	.071	.114	.006	-.022	-.048	-.076	-.102	-.123	-.090	-.063	-.034	-.006	.021	.052	.074
	.750	.021	.035	.089	-.009	-.031	-.048	-.066	-.078	-.090	-.074	-.058	-.037	-.019	.002	.020	.035
	.850	-.002	.031	.098	.012	.003	.001	-.004	-.004	-.011	-.005	-.004	.005	.010	.017	.023	.023
	.925	-.027	.031	.112	.042	.039	.046	.051	.063	.062	.055	.047	.044	.040	.040	.027	.015
	.975	-.068	.038	.122	.042	.048	.074	.094	.114	.117	.103	.081	.062	.042	.043	.033	.005
	1.000	[b]-.092	[b].039	[b].130	[b].034	[b].056	[b].082	[b].114	[b].136	[b].148	[b].136	[b].095	[b].070	[b].054	[b].040	[b].039	[b]-.005

[a]Paired value.

[b]Lower surface only.

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TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) - Continued

(c) N = 1500 rpm; $\beta_{0.75R}$ = 45°.

	J	1.960	2.055	2.135	2.242	2.364	2.484	2.544	2.430	2.305	2.206	2.102	2.002
	M_r	.636	.653	.668	.686	.704	.726	.738	.714	.692	.675	.659	.643
	α_x'	5.37	4.02	2.92	1.53	.02	-1.38	-2.05	-.76	.74	1.99	3.37	4.77
	$\Delta\beta$	.71	.59	.48	.31	.10	-.12	-.24	-.02	.20	.37	.53	.66
	α_i	2.06	1.68	1.39	1.09	.70	.35	.11	.50	.87	1.21	1.51	1.85
	c_n	.7732	.6374	.5310	.4126	.2648	.1342	.0406	.1919	.3303	.4606	.5735	.7006
	c_m	-.0288	-.0397	-.0451	-.0539	-.0626	-.0696	-.0752	-.0674	-.0577	-.0507	-.0436	-.0354
	c_o												
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.105	1.111	1.117	1.124	1.131	1.139	1.144	1.135	1.126	1.119	1.113	1.107
	.025	-2.180	-1.421	-.908	-.457	-.060	.232	.358	.102	-.240	-.610	-1.034	-1.831
	.050	-2.015	-1.259	-.936	-.571	-.248	.009	.125	-.111	-.394	-.685	-1.046	-1.687
	.100	-1.062	-.852	-.707	-.501	-.277	-.089	.002	-.178	-.383	-.573	-.767	-.849
	.200	-.778	-.703	-.614	-.492	-.348	-.217	-.153	-.282	-.416	-.533	-.649	-.752
	.300	-.735	-.669	-.609	-.524	-.416	-.318	-.266	-.368	-.465	-.551	-.632	-.704
	.400	-.670	-.620	-.583	-.530	-.454	-.383	-.346	-.421	-.488	-.548	-.597	-.645
	.500	-.563	-.532	-.507	-.475	-.425	-.379	-.354	-.404	-.449	-.486	-.517	-.547
	.600	-.500	-.487	-.474	-.460	-.434	-.410	-.397	-.425	-.449	-.465	-.481	-.493
	.700	-.408	-.406	-.405	-.410	-.402	-.399	-.397	-.406	-.407	-.409	-.407	-.407
	.800	-.266	-.277	-.286	-.307	-.319	-.333	-.340	-.331	-.316	-.303	-.288	-.271
	.900	-.037	-.035	-.041	-.061	-.070	-.086	-.095	-.084	-.071	-.056	-.042	-.038
	.950	.053	.068	.072	.069	.066	.058	.051	.056	.063	.070	.066	.054
Lower surface	.0375	.600	.466	.346	.138	-.131	-.477	-.975	-.301	.004	.219	.391	.533
	.075	.464	.355	.260	.105	-.078	-.260	-.357	-.190	.008	.167	.294	.407
	.150	.337	.251	.181	.069	-.056	-.188	-.272	-.130	.001	.112	.205	.291
	.250	.269	.184	.128	.045	-.049	-.143	-.205	-.101	-.007	.075	.144	.212
	.350	.188	.132	.086	.015	-.059	-.132	-.179	-.102	-.027	.044	.099	.156
	.450	.138	.092	.053	-.005	-.065	-.122	-.160	-.100	-.038	.016	.063	.112
	.550	.094	.053	.021	-.028	-.072	-.117	-.145	-.101	-.057	-.007	.031	.067
	.650	.054	.023	-.004	-.043	-.075	-.106	-.125	-.097	-.065	-.027	.001	.034
	.750	.017	-.005	-.024	-.050	-.066	-.080	-.090	-.081	-.063	-.039	-.020	.001
	.850	.030	.019	.010	-.001	-.001	.002	-.002	-.007	-.007	.004	.010	.018
	.925	.040	.042	.040	.045	.058	.072	.074	.060	.049	.047	.037	.034
	.975	.017	.035	.046	.069	.101	.125	.131	.110	.084	.065	.039	.018
	1.000	b-.011	b.020	b.042	b.080	a.122	a.147	a.149	a.131	b.099	b.071	b.045	b-.012

[a]Faired value.
[b]Lower surface only.

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TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(d) N = 1600 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.032	2.130	2.223	2.324	2.418	2.494	2.513	2.516	2.461	2.372	2.280	2.182	2.095
	M_x	.702	.718	.733	.752	.771	.786	.790	.790	.777	.759	.741	.723	.708
	α_x'	4.34	2.99	1.77	.51	-.62	-1.49	-1.70	-1.74	-1.12	-.08	1.05	2.30	3.46
	$\Delta\beta$	.69	.53	.37	.18	-.04	-.24	-.30	-.31	-.15	.08	.26	.44	.59
	α_1	1.88	1.51	1.20	.86	.56	.25	.08	.09	.36	.70	1.00	1.34	1.64
	c_n	.7155	.5748	.4555	.3284	.2129	.0974	.0316	.0329	.1377	.2661	.3823	.5077	.6252
	c_m	-.0380	-.0452	-.0556	-.0694	-.0740	-.0783	-.0850	-.0839	-.0760	-.0729	-.0633	-.0551	-.0492
	c_c				.0070	.0130	.0150	.0160	.0149	.0133	.0102			
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.130	1.136	1.142	1.150	1.158	1.164	1.166	1.166	1.161	1.153	1.146	1.138	1.132
	.025	-1.427	-.924	-.482	-.117	.152	.331	.374	.384	.264	.023	-.255	-.658	-1.203
	.050	-1.509	-1.095	-.642	-.315	-.073	.096	.136	.146	.031	-.191	-.436	-.808	-1.270
	.100	-1.327	-.761	-.565	-.343	-.161	-.028	.007	.016	-.082	-.251	-.430	-.654	-.889
	.200	-.692	-.681	-.556	-.412	-.280	-.181	-.154	-.146	-.222	-.348	-.468	-.605	-.728
	.300	-.750	-.696	-.608	-.501	-.397	-.314	-.291	-.282	-.348	-.452	-.541	-.637	-.717
	.400	-.690	-.654	-.613	-.545	-.470	-.412	-.396	-.389	-.443	-.513	-.568	-.623	-.661
	.500	-.573	-.554	-.535	-.510	-.467	-.427	-.415	-.409	-.445	-.492	-.516	-.536	-.559
	.600	-.513	-.507	-.510	-.518	-.511	-.501	-.499	-.492	-.506	-.518	-.511	-.504	-.508
	.700	-.421	-.422	-.436	-.462	-.468	-.493	-.503	-.499	-.482	-.472	-.451	-.426	-.420
	.800	-.275	-.282	-.309	-.341	-.348	-.362	-.370	-.369	-.358	-.356	-.328	-.296	-.280
	.900	-.025	-.025	-.036	-.056	-.060	-.067	-.075	-.071	-.071	-.073	-.058	-.035	-.031
	.950	.071	.080	.087	.079	.074	.073	.069	.075	.074	.071	.083	.087	.072
Lower surface	.0375	.501	.353	.176	-.064	-.336	-.819	-1.008	-1.025	-.580	-.201	.039	.267	.421
	.075	.386	.268	.135	-.032	-.201	-.310	-.708	-.765	-.271	-.126	.035	.201	.319
	.150	.280	.187	.090	-.026	-.139	-.257	-.278	-.274	-.216	-.091	.018	.139	.227
	.250	.206	.132	.058	-.029	-.111	-.202	-.233	-.231	-.169	-.074	.004	.094	.162
	.350	.146	.084	.021	-.048	-.112	-.184	-.213	-.211	-.158	-.086	-.020	.054	.109
	.450	.103	.049	.002	-.054	-.108	-.164	-.188	-.185	-.143	-.087	-.031	.024	.071
	.550	.063	.015	-.021	-.068	-.109	-.154	-.173	-.170	-.138	-.094	-.050	-.005	.032
	.650	.027	-.011	-.038	-.072	-.103	-.134	-.148	-.145	-.123	-.093	-.058	-.026	.003
	.750	.007	-.023	-.046	-.066	-.082	-.098	-.109	-.104	-.094	-.078	-.060	-.033	-.013
	.850	.027	.009	.005	.003	0	-.005	-.011	-.006	-.006	-.003	.001	.009	.015
	.925	.049	.043	.047	.064	.070	.073	.068	.073	.069	.063	.054	.048	.042
	.975	.058	.039	.068	.108	.132	.131	.127	.131	.126	.115	.088	.054	.042
	1.000	[b].058	[b].030	[b].075	[b].128	[b].164	[b].160	[b].155	[b].155	[b].160	[b].141	[b].105	[b].057	[b].040

[b]Lower surface only.

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TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(c) M = 0.56; $\beta_{0.75R} = 45^{\circ}$.

	J	2.119	2.164	2.200	2.232	2.261	2.299	2.330	2.361	2.396	2.426	2.452	2.492	2.541
	M_x	.775	.771	.766	.760	.756	.750	.749	.744	.740	.733	.730	.725	.720
	α_x'	3.14	2.54	2.07	1.66	1.29	.81	.43	.06	-.36	-.71	-1.01	-1.47	-2.01
	$\Delta\beta$	.51	.43	.36	.31	.26	.20	.15	.10	.04	-.01	-.05	-.11	-.18
	α_i	1.61	1.40	1.31	1.19	1.05	.89	.82	.68	.59	.47	.41	.28	.11
	c_n	.6148	.5310	.4987	.4506	.3977	.3410	.3106	.3590	.2229	.1790	.1548	.1065	.0419
	c_m	-.0601	-.0580	-.0608	-.0617	-.0639	-.0655	-.0673	-.0696	-.0696	-.0701	-.0698	-.0732	-.0747
	c_c	-.0088	-.0042	-.0016	.0006	.0030	.0061	.0075						
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.160	1.158	1.156	1.153	1.152	1.149	1.149	1.147	1.145	1.142	1.141	1.139	1.137
	.025	-.624	-.516	-.452	-.367	-.277	-.160	-.086	.005	.083	.154	.196	.278	.366
	.050	-.893	-.781	-.666	-.553	-.458	-.348	-.277	-.196	-.126	-.063	-.022	.110	.136
	.100	-.775	-.600	-.568	-.507	-.440	-.362	-.309	-.249	-.194	-.145	-.113	-.058	.012
	.200	-.739	-.640	-.586	-.536	-.483	-.426	-.384	-.340	-.297	-.257	-.234	-.192	-.135
	.300	-.736	-.698	-.673	-.632	-.569	-.513	-.473	-.434	-.394	-.357	-.335	-.301	-.250
	.400	-.804	-.743	-.694	-.661	-.605	-.552	-.513	-.481	-.444	-.413	-.393	-.364	-.322
	.500	-.715	-.648	-.608	-.581	-.540	-.510	-.482	-.461	-.432	-.408	-.392	-.374	-.336
	.600	-.617	-.603	-.584	-.564	-.536	-.518	-.493	-.484	-.460	-.441	-.428	-.418	-.382
	.700	-.432	-.447	-.454	-.460	-.453	-.453	-.445	-.442	-.427	-.418	-.410	-.409	-.382
	.800	-.267	-.279	-.294	-.308	-.312	-.328	-.330	-.344	-.341	-.341	-.338	-.347	-.332
	.900	-.005	-.012	-.021	-.032	-.038	-.055	-.060	-.072	-.073	-.080	-.085	-.100	-.103
	.950	.101	.097	.096	.094	.093	.079	.075	.064	.061	.051	.045	.031	.033
Lower surface	.0375	.312	.233	.186	.120	.061	-.035	-.094	-.184	-.259	-.350	-.410	-.610	-.948
	.075	.242	.182	.146	.097	.056	-.014	-.051	-.111	-.157	-.213	-.239	-.306	-.371
	.150	.172	.125	.098	.063	.033	-.015	-.040	-.083	-.111	-.148	-.171	-.226	-.271
	.250	.122	.085	.065	.037	.017	-.021	-.036	-.066	-.087	-.113	-.130	-.170	-.201
	.350	.073	.044	.028	.005	-.009	-.039	-.052	-.076	-.091	-.112	-.126	-.156	-.177
	.450	.041	.017	.007	-.009	-.021	-.046	-.056	-.076	-.087	-.104	-.113	-.138	-.153
	.550	.006	-.014	-.018	-.033	-.040	-.062	-.068	-.084	-.092	-.105	-.112	-.129	-.139
	.650	-.021	-.037	-.040	-.051	-.057	-.072	-.075	-.087	-.091	-.100	-.105	-.117	-.122
	.750	-.033	-.048	-.050	-.057	-.057	-.069	-.067	-.074	-.075	-.080	-.083	-.089	-.089
	.850	.008	.001	.002	-.003	.001	-.003	0	-.002	0	-.001	-.002	.003	0
	.925	.047	.040	.044	.045	.053	.054	.063	.065	.071	.070	.073	.077	.080
	.975	.051	.049	.061	.068	.081	.098	.112	.122	.132	[a].124	.140	.146	.146
	1.000	[b].050	[b].056	[b].064	[b].075	[b].089	[b].107	[b].135	[b].149	[b].160	[a].151	[a].164	[a].170	[a].181

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(f) M = 0.60; $\beta_{0.75R} = 45^{\circ}$.

	J	2.136	2.172	2.210	2.239	2.266	2.297	2.321	2.365	2.391	2.420	2.453	2.486	2.526
	M_r	.834	.828	.821	.814	.809	.807	.801	.799	.793	.789	.785	.780	.775
	α_r'	2.91	2.43	1.94	1.57	1.22	.83	.54	.01	–.30	–.64	–1.02	–1.40	–1.85
	$\Delta\beta$	.36	.33	.28	.24	.19	.12	.08	0	–.05	–.10	–.17	–.22	–.29
	α_1	1.42	1.36	1.24	1.10	1.04	.87	.79	.66	.57	.47	.37	.25	.11
	c_n	.5387	.5174	.4690	.4168	.3965	.3310	.3000	.2532	.2161	.1806	.1406	.0968	.0406
	c_m	–.0796	–.0869	–.0819	–.0798	–.0757	–.0749	–.0734	–.0737	–.0731	–.0746	–.0776	–.0765	–.0783
	c_o	.0106	.0079	.0059	.0072	.0074	.0091	.0099	.0118	.0127	.0132	.0145	.0148	.0150
	o/b	Pressure coefficient, P												
Upper surface	0.000	1.186	1.183	1.180	1.177	1.175	1.174	1.171	1.170	1.167	1.166	1.164	1.162	1.160
	.025	–.316	–.275	–.225	–.151	–.114	–.027	.024	.101	.158	.207	.266	.321	.379
	.050	–.629	–.554	–.468	–.375	–.334	–.248	–.198	–.125	–.071	–.024	.033	.087	.145
	.100	–.466	–.453	–.429	–.375	–.349	–.286	–.251	–.194	–.154	–.118	–.073	–.032	.016
	.200	–.609	–.575	–.516	–.454	–.432	–.387	–.361	–.318	–.287	–.256	–.224	–.187	–.148
	.300	–.669	–.618	–.588	–.557	–.549	–.523	–.497	–.449	–.415	–.383	–.352	–.317	–.277
	.400	–.708	–.686	–.664	–.642	–.621	–.579	–.566	–.542	–.514	–.480	–.447	–.412	–.374
	.500	–.749	–.732	–.715	–.662	–.638	–.584	–.556	–.531	–.505	–.485	–.460	–.431	–.397
	.600	–.809	–.792	–.752	–.694	–.666	–.643	–.626	–.603	–.576	–.553	–.532	–.498	–.433
	.700	–.841	–.865	–.780	–.723	–.691	–.639	–.605	–.567	–.539	–.512	–.501	–.478	–.431
	.800	–.274	–.244	–.237	–.258	–.273	–.299	–.315	–.323	–.333	–.339	–.349	–.358	–.364
	.900	–.149	–.079	–.017	0	.001	–.010	–.021	–.026	–.036	–.044	–.054	–.065	–.076
	.950	–.103	0	.069	.096	.102	.104	.101	.102	.098	.093	.086	.080	.073
Lower surface	.0375	.197	.149	.100	.030	–.008	–.098	–.167	–.252	–.338	–.426	–.596	–.781	–.989
	.075	.158	.122	.087	.036	.010	–.053	–.099	–.149	–.199	–.239	–.263	–.279	–.523
	.150	.109	.082	.058	.022	.003	–.041	–.074	–.107	–.139	–.172	–.218	–.251	–.274
	.250	.067	.047	.031	.005	–.008	–.042	–.067	–.090	–.116	–.138	–.172	–.195	–.220
	.350	.025	.008	–.003	–.023	–.033	–.060	–.081	–.097	–.117	–.136	–.159	–.175	–.194
	.450	–.012	–.020	–.026	–.041	–.049	–.070	–.088	–.100	–.116	–.128	–.147	–.156	–.170
	.550	–.052	–.054	–.055	–.065	–.070	–.087	–.100	–.109	–.118	–.126	–.142	–.146	–.153
	.650	–.090	–.083	–.078	–.084	–.083	–.096	–.105	–.109	–.116	–.118	–.128	–.130	–.133
	.750	–.116	–.099	–.085	–.084	–.081	–.086	–.092	–.090	–.092	–.093	–.099	–.094	–.092
	.850	–.080	–.048	–.026	–.018	–.012	–.013	–.016	–.011	–.013	–.010	–.010	–.004	.002
	.925	–.066	–.014	.018	.033	.041	.046	.047	.055	.058	.060	.063	.073	.077
	.975	–.103	–.024	.029	.054	.067	.079	.084	.098	.103	.108	.113	.124	.130
	1.000	[b]–.133	[b]–.032	[b].028	[b].062	[b].079	[b].092	[b].101	[b].126	[b].127	[b].131	[b].133	[b].165	[b].151

[b]Lower surface only.

[redacted]

[redacted]

TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(g) $M = 0.66$; $\beta_{0.75R} = 45^{\circ}$

	J	2.084	2.112	2.145	2.160	2.204	2.222	2.243	2.284	2.312	2.347	2.362	2.428
	M_x	.924	.918	.914	.905	.900	.894	.887	.882	.878	.873	.863	.853
	α_x'	3.62	3.23	2.79	2.59	2.02	1.78	1.52	1.00	.65	.23	.05	–.73
	$\Delta\beta$	.48	.40	.31	.28	.17	.14	.09	–.01	–.07	–.16	–.20	–.38
	α_i	1.17	1.08	.94	.85	.81	.69	.59	.49	.43	.34	.28	.14
	c_n	.4439	.4097	.3568	.3239	.3077	.2626	.2239	.1865	.1626	.1303	.1052	.0542
	c_m	–.0898	–.0765	–.0682	–.0629	–.0582	–.0539	–.0515	–.0511	–.0542	–.0608	–.0652	–.0829
	c_o	.0321	.0295	.0293	.0301	.0288	.0282	.0268	.0253	.0238	.0236	.0231	.0213
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.232	1.228	1.226	1.222	1.219	1.216	1.212	1.209	1.207	1.205	1.199	1.195
	.025	–.061	–.040	–.005	.015	.034	.079	.118	.164	.200	.242	.279	.346
	.050	–.372	–.344	–.274	–.238	–.213	–.161	–.117	–.068	–.035	.007	.044	.112
	.100	–.253	–.239	–.236	–.234	–.225	–.196	–.169	–.135	–.111	–.079	–.051	–.001
	.200	–.409	–.395	–.371	–.363	–.351	–.312	–.283	–.252	–.235	–.211	–.191	–.154
	.300	–.483	–.471	–.450	–.441	–.431	–.412	–.400	–.376	–.370	–.360	–.350	–.305
	.400	–.543	–.529	–.512	–.513	–.511	–.495	–.486	–.471	–.465	–.442	–.429	–.414
	.500	–.580	–.570	–.558	–.564	–.563	–.548	–.543	–.524	–.509	–.486	–.475	–.431
	.600	–.647	–.638	–.635	–.646	–.645	–.629	–.623	–.604	–.593	–.577	–.565	–.536
	.700	–.728	–.723	–.722	–.731	–.728	–.718	–.715	–.697	–.689	–.674	–.662	–.647
	.800	–.673	–.501	–.450	–.497	–.421	–.351	–.313	–.285	–.280	–.326	–.416	–.568
	.900	–.351	–.304	–.279	–.282	–.255	–.226	–.199	–.166	–.143	–.119	–.102	–.053
	.950	–.350	–.302	–.274	–.273	–.243	–.215	–.184	–.148	–.115	–.080	–.046	.032
Lower surface	.0375	.181	.172	.097	.045	.008	–.069	–.148	–.227	–.319	–.439	–.580	–.770
	.075	.156	.154	.097	.057	.031	–.025	–.078	–.124	–.173	–.232	–.363	–.631
	.150	.116	.117	.072	.039	.017	–.025	–.067	–.098	–.135	–.173	–.214	–.244
	.250	.080	.082	.044	.018	–.002	–.036	–.068	–.091	–.120	–.147	–.179	–.226
	.350	.029	.034	–.001	–.005	–.044	–.072	–.100	–.119	–.143	–.163	–.188	–.226
	.450	–.012	–.007	–.037	–.064	–.077	–.103	–.126	–.143	–.161	–.175	–.196	–.223
	.550	–.072	–.065	–.093	–.119	–.130	–.153	–.175	–.186	–.199	–.207	–.221	–.234
	.650	–.139	–.132	–.157	–.182	–.191	–.211	–.225	–.230	–.232	–.229	–.235	–.226
	.750	–.225	–.218	–.238	–.262	–.268	–.279	–.281	–.268	–.248	–.225	–.220	–.186
	.850	–.215	–.204	–.217	–.237	–.235	–.235	–.221	–.195	–.166	–.137	–.126	–.077
	.925	–.221	–.208	–.220	–.238	–.233	–.227	–.201	–.164	–.128	–.091	–.068	.005
	.975	–.346	–.344	–.356	–.374	–.361	–.329	–.270	–.208	–.159	–.103	–.060	.047
	1.000	[b]–.466	[b]–.492	[b]–.509	[b]–.496	[b]–.511	[b]–.414	[b]–.320	[b]–.261	[b]–.187	[b]–.130	[b]–.061	[b].079

[b]Lower surface only.

[redacted]

[redacted]

TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(h) N = 1140 rpm; $\beta_{0.75R} = 30^{\circ}$.

	J	0.774	0.890	0.984	1.070	1.200	1.272	1.383	1.480	1.441	1.335	1.246	1.153	1.030	0.940	0.830
	M_r	.365	.370	.381	.393	.408	.415	.423	.438	.434	.418	.406	.401	.393	.381	.361
	α_r'	13.44	10.65	8.47	6.55	3.76	2.88	.09	-1.73	-1.01	1.02	2.81	4.75	7.43	9.48	12.08
	$\Delta\beta$	.35	.33	.30	.25	.18	.14	.08	.02	.04	.11	.16	.21	.27	.31	.34
	α_i	2.89	2.82	2.48	2.03	1.38	1.03	.61	.20	.39	.80	1.21	1.65	2.29	2.67	2.80
	c_n	.9238	.9300	.8320	.6910	.4753	.3582	.2124	.0719	.1377	.2783	.4201	.5655	.7740	.8904	.9051
	c_m	-.0853	-.0468	-.0181	-.0357	-.0410	-.0441	-.0535	-.0560	-.0543	-.0478	-.0404	-.0391	-.0246	-.0134	-.0688
	c_o															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.034	1.035	1.037	1.039	1.043	1.044	1.046	1.049	1.048	1.045	1.042	1.041	1.039	1.037	1.033
	.025	-1.310	-1.316	-1.630	-1.994	-.850	-.500	-.099	.218	.087	-.265	-.666	-1.091	-2.260	-1.963	-1.491
	.050	-1.273	-1.320	-1.656	-1.346	-.794	-.533	-.235	.026	-.082	-.361	-.650	-.963	-1.831	-1.963	-1.428
	.100	-1.069	-1.289	-1.634	-.845	-.611	-.442	-.247	-.061	-.129	-.332	-.520	-.728	-1.144	-1.822	-1.171
	.200	-.913	-1.216	-1.054	-.686	-.517	-.409	-.289	-.153	-.205	-.338	-.452	-.583	-.727	-1.055	-.950
	.300	-.840	-1.064	-.685	-.624	-.504	-.422	-.334	-.228	-.262	-.368	-.459	-.548	-.638	-.731	-.852
	.400	-.780	-.891	-.534	-.578	-.487	-.432	-.359	-.274	-.297	-.390	-.452	-.515	-.579	-.594	-.765
	.500	-.708	-.663	-.445	-.486	-.424	-.379	-.340	-.274	-.290	-.351	-.395	-.442	-.487	-.467	-.662
	.600	-.648	-.486	-.364	-.435	-.396	-.371	-.353	-.302	-.309	-.351	-.377	-.410	-.431	-.387	-.578
	.700	-.584	-.384	-.309	-.370	-.355	-.342	-.343	-.305	-.309	-.335	-.346	-.357	-.357	-.307	-.499
	.800	-.524	-.257	-.220	-.268	-.275	-.274	-.299	-.274	-.272	-.285	-.269	-.268	-.254	-.223	-.428
	.900	-.456	-.164	-.081	-.075	-.078	-.086	-.122	-.138	-.107	-.101	-.075	-.067	-.080	-.128	-.365
	.950	-.416	-.122	-.018	.015	.033	.031	-.003	-.005	.009	.020	.038	.035	.001	-.089	-.333
Lower surface	.0375	.795	.763	.703	.604	.355	.169	-.142	-.432	-.272	.010	.272	.483	.655	.758	.773
	.075	.643	.612	.553	.459	.257	.122	-.099	-.271	-.173	.010	.198	.355	.504	.598	.622
	.150	.487	.462	.406	.324	.171	.072	-.080	-.197	-.126	-.006	.129	.250	.363	.445	.464
	.250	.362	.350	.305	.233	.116	.046	-.074	-.153	-.095	-.016	.085	.176	.267	.338	.350
	.350	.274	.264	.230	.171	.074	.018	-.074	-.135	-.088	-.029	.048	.122	.201	.258	.263
	.450	.194	.198	.174	.124	.043	-.005	-.074	-.122	-.088	-.042	.023	.088	.149	.193	.188
	.550	.114	.133	.125	.085	.012	-.022	-.080	-.116	-.088	-.052	0	.052	.101	.136	.121
	.650	.038	.079	.080	.048	-.009	-.039	-.080	-.104	-.079	-.055	-.020	.024	.061	.083	.054
	.750	-.039	.024	.043	.026	-.019	-.043	-.077	-.085	-.067	-.055	-.027	.010	.035	.037	-.017
	.850	-.103	-.006	.035	.033	.008	.001	-.016	-.014	-.001	-.003	.007	.028	.038	.014	-.069
	.925	-.183	-.034	.031	.048	.036	.035	.035	.051	.059	.043	.041	.049	.046	-.009	-.131
	.975	-.315	-.090	.024	.048	.036	.052	.080	.106	.109	.067	.045	.045	.057	-.059	-.243
	1.000	[b]-.440	[b]-.139	[b].021	[b].052	[b].037	[b].057	[a].104	[a].137	[a].141	[a].080	[b].044	[b].039	[a].061	[b]-.091	[a]-.304

[a]Faired value.
[b]Lower surface only.

[redacted]

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TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(i) N = 1350 rpm; $\beta_{0.75R}$ = 30°.

	J	0.875	0.952	1.047	1.120	1.198	1.285	1.383	1.493	1.437	1.355	1.242	1.167	1.072	1.041	0.995	0.904
	M_x	.445	.449	.463	.472	.482	.494	.509	.522	.512	.503	.492	.483	.468	.461	.457	.446
	α_x'	11.01	9.20	7.05	5.45	3.81	2.02	.10	-1.97	-.94	.63	2.89	4.45	6.51	7.09	8.22	10.32
	$\Delta\beta$	.37	.31	.22	.14	.04	-.07	-.19	-.34	-.26	-.16	-.01	.08	.19	.22	.27	.35
	α_i	2.95	2.66	2.25	1.85	1.44	1.00	.60	.15	.34	.76	1.20	1.63	2.10	2.29	2.46	2.81
	c_n	.9681	.8867	.7600	.6299	.4980	.3474	.2111	.0548	.1189	.2668	.4161	.5569	.7116	.7720	.8256	.9294
	c_m	-.0691	-.0215	-.0246	-.0371	-.0412	-.0442	-.0487	-.0542	-.0524	-.0480	-.0421	-.0413	-.0333	-.0249	-.0182	-.0586
	c_0																
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.051	1.052	1.055	1.057	1.060	1.062	1.066	1.070	1.067	1.065	1.062	1.060	1.056	1.055	1.054	1.051
	.025	-1.587	-1.817	-2.193	-1.247	-.870	-.453	-.084	.259	.119	-.229	-.651	-1.045	-2.048	-2.095	-1.805	-1.340
	.050	-1.484	-1.744	-1.871	-1.097	-.821	-.507	-.228	.059	-.064	-.339	-.651	-.946	-1.460	-1.914	-1.830	-1.333
	.100	-1.233	-1.549	-1.119	-.835	-.635	-.435	-.240	-.037	-.125	-.315	-.526	-.721	-.892	-1.231	-1.744	-1.247
	.200	-1.092	-1.196	-.738	-.660	-.535	-.410	-.285	-.147	-.209	-.332	-.474	-.591	-.716	-.726	-.997	-1.164
	.300	-1.008	-.906	-.659	-.605	-.516	-.427	-.330	-.221	-.271	-.363	-.474	-.556	-.648	-.649	-.665	-1.059
	.400	-.897	-.681	-.599	-.568	-.504	-.440	-.371	-.281	-.323	-.395	-.474	-.531	-.595	-.594	-.577	-.921
	.500	-.744	-.509	-.504	-.477	-.429	-.388	-.333	-.269	-.300	-.349	-.410	-.459	-.500	-.499	-.494	-.743
	.600	-.612	-.400	-.442	-.432	-.405	-.378	-.340	-.295	-.314	-.349	-.395	-.420	-.446	-.436	-.427	-.584
	.700	-.479	-.306	-.362	-.372	-.359	-.347	-.326	-.297	-.314	-.329	-.354	-.368	-.373	-.356	-.346	-.446
	.800	-.367	-.220	-.254	-.268	-.275	-.283	-.278	-.272	-.278	-.276	-.280	-.277	-.268	-.249	-.243	-.334
	.900	-.261	-.116	-.068	-.062	-.117	-.081	-.094	-.102	-.097	-.084	-.074	-.062	-.068	-.066	-.087	-.233
	.950	-.215	-.071	.013	.041	.048	.038	.029	.006	.021	.038	.044	.048	.027	.018	-.021	-.188
Lower surface	.0375	.780	.736	.655	.541	.372	.135	-.132	-.474	-.314	-.006	.255	.450	.611	.660	.685	.722
	.075	.625	.587	.503	.410	.272	.098	-.086	-.297	-.205	.004	.184	.333	.465	.510	.532	.574
	.150	.475	.432	.364	.287	.184	.059	-.067	-.210	-.144	-.006	.120	.231	.330	.371	.388	.425
	.250	.360	.328	.269	.205	.127	.031	-.062	-.160	-.113	-.013	.076	.160	.243	.275	.285	.317
	.350	.271	.247	.198	.147	.084	.001	-.064	-.143	-.108	-.028	.041	.110	.178	.207	.212	.233
	.450	.205	.186	.146	.105	.050	-.014	-.067	-.127	-.101	-.035	.015	.073	.130	.154	.154	.167
	.550	.141	.132	.102	.065	.021	-.029	-.069	-.118	-.097	-.045	-.008	.043	.087	.109	.104	.107
	.650	.078	.081	.065	.041	.004	-.038	-.075	-.106	-.090	-.049	-.020	.018	.054	.070	.059	.053
	.750	.006	.019	.019	.002	-.024	-.057	-.075	-.088	-.083	-.057	-.044	-.015	.010	.024	.006	-.016
	.850	-.014	.017	.035	.026	.014	-.004	-.012	-.014	-.012	-.001	.003	.018	.032	.042	.018	-.030
	.925	-.001	-.006	.040	.041	.040	.033	.038	.050	.046	.043	.033	.040	.038	.046	.012	-.068
	.975	-.161	-.076	.015	.021	.042	.051	.079	.101	.091	.076	.044	.035	.016	.016	-.032	-.165
	1.000	[b]-.139	[b]-.075	[b].012	[b].011	[b].055	[b].055	[b].097	[a].148	[a].120	[b].095	[b].050	[b].038	[b]0	[b].009	[b]-.063	[b]-.184

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(j) N = 1500 rpm; $\beta_{0.75R} = 30^{\circ}$.

	J	0.823	0.894	0.970	1.042	1.113	1.193	1.291	1.375	1.490	1.430	1.341	1.246	1.163	1.081	0.923	0.998	0.860
	M_x	.492	.505	.515	.523	.529	.540	.557	.562	.578	.569	.559	.545	.536	.526	.504	.514	.498
	α_x'	12.25	10.56	8.79	7.17	5.61	3.91	1.90	.25	-1.92	-.80	.91	2.81	4.54	6.30	9.88	8.15	11.36
	$\Delta\beta$	.44	.40	.34	.26	.16	.04	-.12	-.25	-.43	-.34	-.19	-.05	.08	.21	.38	.31	.42
	α_i	3.28	2.96	2.69	2.38	1.98	1.55	1.08	.66	.17	.42	.82	1.28	1.70	2.05	2.81	2.53	2.98
	c_n	1.0650	.9762	.8969	.8014	.6717	.5300	.3751	.2308	.0594	.1493	.2875	.4436	.5799	.6977	.9287	.8468	.9790
	c_m	-.0894	-.0634	-.0147	-.0255	-.0369	-.0435	-.0471	-.0545	-.0569	-.0594	-.0505	-.0505	-.0404	-.0404	-.0269	-.0144	-.0949
	c_c																	
	c/b	Pressure coefficient, P																
Upper surface	0.000	1.062	1.065	1.068	1.070	1.072	1.075	1.080	1.081	1.086	1.083	1.080	1.076	1.074	1.071	1.065	1.067	1.063
	.025	-1.283	-1.323	-1.820	-2.236	-1.453	-.952	-.480	-.095	.272	.094	-.239	-.678	-1.094	-2.014	-1.945	-2.057	-1.077
	.050	-1.291	-1.287	-1.735	-1.979	-1.168	-.908	-.552	-.254	.056	-.095	-.367	-.694	-.917	-1.406	-1.850	-1.959	-1.091
	.100	-1.291	-1.266	-1.641	-1.246	-.898	-.694	-.462	-.260	-.037	-.147	-.336	-.553	-.768	-.952	-1.555	-1.690	-1.091
	.200	-1.253	-1.230	-1.277	-.784	-.710	-.578	-.434	-.306	-.152	-.230	-.356	-.491	-.627	-.747	-1.215	-.981	-1.087
	.300	-1.170	-1.117	-.885	-.701	-.652	-.560	-.453	-.361	-.237	-.299	-.397	-.497	-.592	-.677	-.943	-.711	-1.042
	.400	-1.058	-.959	-.640	-.633	-.599	-.536	-.457	-.395	-.299	-.348	-.422	-.491	-.559	-.616	-.748	-.606	-.972
	.500	-.889	-.767	-.490	-.536	-.509	-.464	-.413	-.365	-.294	-.331	-.383	-.433	-.480	-.521	-.578	-.510	-.848
	.600	-.733	-.599	-.396	-.465	-.458	-.430	-.399	-.369	-.315	-.342	-.383	-.410	-.442	-.460	-.460	-.431	-.724
	.700	-.585	-.450	-.310	-.380	-.389	-.381	-.367	-.357	-.323	-.342	-.361	-.369	-.384	-.387	-.354	-.345	-.593
	.800	-.457	-.332	-.215	-.263	-.276	-.285	-.295	-.304	-.292	-.297	-.298	-.286	-.283	-.271	-.262	-.233	-.476
	.900	-.318	-.224	-.100	-.078	-.064	-.066	-.083	-.099	-.105	-.103	-.093	-.070	-.063	-.067	-.174	-.082	-.356
	.950	-.255	-.178	-.053	.002	.030	.046	.040	.027	.017	.022	.035	.049	.047	.024	-.138	-.022	-.303
Lower surface	.0375	.805	.763	.734	.659	.566	.399	.152	-.133	-.307	-.300	-.018	.269	.469	.615	.758	.703	.768
	.075	.655	.611	.584	.506	.427	.295	.109	-.085	-.311	-.194	-.010	.194	.349	.470	.604	.552	.622
	.150	.498	.463	.433	.366	.300	.200	.066	-.070	-.224	-.139	-.018	.126	.240	.339	.451	.402	.471
	.250	.380	.350	.325	.268	.218	.140	.034	-.062	-.169	-.107	-.027	.083	.170	.248	.339	.300	.354
	.350	.284	.264	.245	.195	.153	.090	.007	-.066	-.150	-.107	-.039	.045	.115	.178	.253	.225	.267
	.450	.208	.196	.182	.142	.106	.055	-.010	-.070	-.136	-.103	-.045	.017	.076	.130	.188	.165	.194
	.550	.134	.129	.123	.094	.064	.022	-.028	-.078	-.126	-.101	-.059	-.008	.040	.085	.124	.111	.121
	.650	.065	.064	.069	.051	.030	-.003	-.044	-.080	-.113	-.097	-.068	-.027	.011	.046	.065	.062	.055
	.750	-.001	.012	.027	.021	.008	-.016	-.052	-.072	-.089	-.079	-.064	-.039	-.006	.019	.015	.025	-.011
	.850	-.040	-.022	.010	.021	.020	.011	-.003	-.013	-.014	-.014	-.010	.004	.016	.028	-.012	.016	-.057
	.925	-.083	-.060	-.006	.028	.039	.040	.034	.037	.012	.044	.035	.037	.040	.041	-.045	.011	-.113
	.975	[a]-.140	-.115	-.029	.032	.030	.032	.051	.074	.101	.092	.064	.039	.032	.048	-.092	0	-.199
	1.000	[a]-.187	[b]-.150	[b]-.037	[b].033	[b].028	[b].032	[b].060	[b].087	[a].163	[b].115	[b].127	[b].040	[b].030	[b].049	[b]-.126	[b]-.011	[b]-.249

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(k) N = 1600 rpm; $\beta_{0.75R}$ = 30°.

J	0.843	0.920	0.980	1.059	1.134	1.215	1.301	1.367	1.480	1.439	1.345	1.263	1.189	1.106	1.029	0.949	0.892
M_x	.528	.545	.547	.557	.584	.580	.594	.600	.615	.610	.598	.589	.574	.563	.553	.549	.536
α_x'	11.77	9.95	8.56	6.79	5.15	3.45	1.70	.40	-1.73	-.97	.83	2.46	3.99	5.76	7.46	9.27	10.60
$\Delta\beta$	.62	.53	.45	.33	.20	.05	-.11	-.24	-.47	-.39	-.20	-.04	.10	.25	.37	.49	.57
α_i	3.11	2.89	2.69	2.36	1.87	1.46	1.03	.71	.16	.41	.83	1.25	1.62	2.00	2.50	2.77	3.05
c_n	1.0106	.9572	.8982	.7995	.6372	.5039	.3571	.2463	.0571	.1429	.2888	.4308	.5550	.6790	.8423	.9243	1.0050
c_m	-.1049	-.0385	-.0151	-.0256	-.0393	-.0418	-.0490	-.0522	-.0594	-.0557	-.0506	-.0448	-.0416	-.0369	-.0179	-.0139	-.0547
c_c																	
c/b	Pressure coefficient, P																
Upper surface																	
0.000	1.071	1.076	1.077	1.080	1.088	1.086	1.091	1.092	1.097	1.096	1.092	1.090	1.085	1.081	1.078	1.077	1.074
.025	-1.134	-1.780	-1.963	-2.301	-1.146	-.857	-.416	-.130	.277	.119	-.230	-.634	-.999	-1.480	-2.287	-2.031	-1.834
.050	-1.130	-1.708	-1.884	-1.789	-1.150	-.846	-.514	-.289	.054	-.078	-.367	-.672	-.961	-1.189	-2.073	-1.908	-1.516
.100	-1.102	-1.517	-1.703	-1.151	-.867	-.652	-.438	-.285	-.043	-.136	-.342	-.546	-.728	-.922	-1.508	-1.724	-1.284
.200	-1.071	-1.276	-1.221	-.791	-.695	-.559	-.425	-.327	-.163	-.227	-.360	-.490	-.608	-.730	-.852	-1.296	-1.241
.300	-1.034	-1.009	-.856	-.709	-.650	-.553	-.454	-.380	-.251	-.302	-.404	-.503	-.586	-.672	-.717	-.903	-1.101
.400	-.976	-.797	-.645	-.638	-.602	-.536	-.465	-.413	-.314	-.352	-.430	-.502	-.559	-.617	-.634	-.671	-.929
.500	-.880	-.622	-.507	-.538	-.515	-.469	-.420	-.382	-.311	-.336	-.393	-.446	-.484	-.522	-.530	-.517	-.738
.600	-.775	-.497	-.413	-.467	-.468	-.437	-.409	-.384	-.334	-.348	-.391	-.423	-.449	-.469	-.451	-.414	-.582
.700	-.654	-.383	-.321	-.379	-.400	-.388	-.379	-.367	-.343	-.346	-.369	-.382	-.394	-.393	-.363	-.323	-.443
.800	-.539	-.291	-.218	-.252	-.284	-.291	-.300	-.305	-.307	-.300	-.300	-.295	-.290	-.272	-.240	-.228	-.337
.900	-.414	-.197	-.094	-.056	-.062	-.065	-.078	-.090	-.110	-.096	-.084	-.071	-.063	-.055	-.065	-.128	-.233
.950	-.358	-.160	-.044	.020	.038	.052	.045	.039	.017	.031	.042	.052	.050	.036	.003	-.091	-.190
Lower surface																	
.0375	.788	.768	.738	.657	.521	.344	.111	-.098	-.544	-.319	-.018	.236	.413	.570	.694	.754	.791
.075	.640	.614	.584	.510	.389	.254	.080	-.064	-.329	-.206	-.007	.171	.306	.432	.543	.599	.636
.150	.486	.463	.437	.370	.273	.166	.045	-.054	-.237	-.143	-.015	.110	.209	.307	.404	.445	.483
.250	.368	.350	.327	.271	.192	.112	.023	-.053	-.180	-.114	-.022	.067	.145	.222	.299	.337	.366
.350	.277	.264	.248	.202	.133	.069	-.003	-.058	-.163	-.111	-.037	.032	.094	.157	.222	.253	.275
.450	.199	.196	.185	.149	.090	.036	-.018	-.064	-.149	-.104	-.044	.006	.058	.109	.165	.188	.200
.550	.129	.132	.127	.099	.050	.007	-.036	-.075	-.138	-.104	-.059	-.019	.022	.066	.113	.126	.136
.650	.055	.070	.074	.057	.016	-.018	-.049	-.078	-.124	-.098	-.064	-.037	-.003	.032	.068	.070	.071
.750	-.014	.015	.029	.026	-.003	-.027	-.054	-.071	-.089	-.080	-.064	-.044	-.016	.007	.030	.021	.010
.850	-.071	-.018	.015	.026	.012	.005	-.007	-.014	-.022	-.010	-.011	-.002	.011	.015	.028	-.002	-.024
.925	-.136	-.056	0	.034	.034	.034	.034	.037	.046	.051	.037	.034	.037	.034	.028	-.025	-.068
.975	-.240	-.116	-.021	.032	.025	.031	.059	.073	.098	.097	.069	.039	.031	.028	.030	-.066	-.130
1.000	[b]-.320	[b]-.153	[b]-.032	[b].031	[b].020	[b].020	[b].073	[b].088	[a].123	[a].120	[b].082	[b].040	[b].027	[b].020	[b].030	[b]-.091	[b]-.176

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) - Continued

(i) N = 1800 rpm; $\beta_{0.75R} = 30^{\circ}$.

J	0.882	0.947	1.007	1.067	1.133	1.204	1.284	1.347	1.414	1.453	1.377	1.314	1.240	1.166	1.098	1.048	0.988	0.920
M_x	.601	.612	.623	.634	.640	.647	.656	.667	.681	.686	.672	.664	.652	.643	.636	.627	.616	.608
α_x'	10.84	9.32	7.95	6.61	5.18	3.68	2.04	.79	-.50	-1.23	.21	1.44	2.93	4.47	5.93	7.03	8.38	9.95
$\Delta\beta$	1.27	1.09	.91	.72	.50	.27	0	-.24	-.44	-.58	-.31	-.10	.15	.40	.62	.77	.96	1.17
α_i	3.13	2.99	2.87	2.59	2.08	1.67	1.23	.89	.52	.25	.70	1.05	1.40	1.90	2.30	2.82	2.88	3.03
c_n	1.0325	1.0000	.9681	.8787	.7135	.5734	.4254	.3096	.1827	.0890	.2441	.3633	.4819	.6531	.7838	.9583	.9681	1.0090
c_m	-.0510	-.0238	-.0126	-.0229	-.0343	-.0438	-.0494	-.0573	-.0598	-.0607	-.0542	-.0518	-.0459	-.0373	-.0305	-.0149	-.0084	-.0416
c_o																		
c/b	Pressure coefficient, P																	
Upper surface 0.000	1.093	1.096	1.100	1.104	1.106	1.109	1.112	1.116	1.122	1.124	1.118	1.115	1.111	1.107	1.105	1.102	1.098	1.095
.025	-2.293	-2.151	-2.708	-2.447	-1.936	-1.031	.555	-.226	.074	.230	-.067	-.381	-.769	-1.523	-2.226	-2.568	-2.681	-1.903
.050	-2.102	-2.058	-2.627	-2.317	-1.779	-1.034	-.643	-.378	-.126	.008	-.252	-.506	-.804	-1.132	-2.085	-2.453	-2.549	-1.844
.100	-1.453	-1.783	-2.426	-1.886	-.882	-.777	-.539	-.365	-.185	-.085	-.275	-.453	-.644	-.883	-.950	-2.256	-2.208	-1.633
.200	-1.172	-1.341	-.826	-.782	-.771	-.655	-.510	-.398	-.277	-.207	-.338	-.456	-.579	-.722	-.795	-.783	-1.008	-1.341
.300	-1.036	-1.015	-.755	-.755	-.724	-.638	-.534	-.450	-.354	-.299	-.401	-.494	-.586	-.684	-.749	-.759	-.825	-1.065
.400	-.884	-.782	-.698	-.697	-.670	-.611	-.543	-.486	-.405	-.372	-.449	-.513	-.576	-.642	-.688	-.702	-.694	-.847
.500	-.724	-.595	-.578	-.579	-.563	-.524	-.479	-.441	-.388	-.358	-.412	-.459	-.502	-.546	-.573	-.582	-.551	-.661
.600	-.595	-.466	-.498	-.511	-.509	-.490	-.463	-.444	-.411	-.391	-.426	-.453	-.479	-.502	-.513	-.509	-.452	-.530
.700	-.479	-.357	-.394	-.413	-.422	-.418	-.410	-.407	-.391	-.381	-.395	-.408	-.416	-.422	-.420	-.409	-.343	-.420
.800	-.386	-.269	-.260	-.274	-.286	-.298	-.310	-.323	-.327	-.322	-.318	-.316	-.307	-.296	-.283	-.274	-.224	-.327
.900	-.293	-.179	-.059	-.053	-.051	-.056	-.069	-.083	-.098	-.100	-.086	-.075	-.063	-.053	-.054	-.057	-.089	-.235
.950	-.257	-.144	.020	.033	.042	.055	.057	.048	.030	.031	.046	.054	.056	.052	.037	.027	-.041	-.199
Lower surface .0375	.801	.773	.718	.651	.534	.390	.181	-.030	-.295	-.508	-.154	.082	.282	.476	.597	.682	.747	.779
.075	.649	.621	.571	.507	.406	.288	.132	-.017	-.193	-.298	-.101	.058	.203	.357	.459	.536	.596	.626
.150	.492	.469	.424	.373	.287	.195	.081	-.026	-.143	-.231	-.082	.028	.132	.247	.331	.395	.447	.473
.250	.372	.355	.319	.276	.206	.133	.045	-.033	-.117	-.180	-.071	.006	.084	.173	.241	.296	.338	.359
.350	.279	.270	.243	.205	.143	.084	.012	-.048	-.117	-.167	-.082	-.018	.041	.117	.174	.222	.257	.270
.450	.206	.201	.182	.151	.098	.046	-.008	-.059	-.115	-.155	-.086	-.032	.012	.075	.124	.165	.193	.198
.550	.135	.137	.128	.103	.055	.013	-.027	-.071	-.115	-.145	-.092	-.049	-.017	.035	.079	.114	.135	.131
.650	.063	.073	.079	.060	.020	-.015	-.050	-.080	-.114	-.136	-.098	-.066	-.039	.002	.037	.069	.081	.066
.750	-.005	.014	.041	.029	-.004	-.032	-.058	-.077	-.097	-.111	-.089	-.069	-.050	-.014	.010	.034	.037	.002
.850	-.049	-.016	.037	.034	.009	0	-.010	-.017	-.025	-.032	-.022	-.015	-.009	.007	.020	.040	.021	-.032
.925	-.103	-.052	.041	.045	.026	.028	.030	.033	.042	.037	.034	.029	.026	.031	.034	.047	.003	-.077
.975	-.208	-.119	.060	.063	.020	.017	.046	.068	.100	.093	.075	.055	.021	.020	.042	.069	-.022	-.160
1.000	[b]-.271	[b]-.166	[b].169	[b].071	[b].019	[b].006	[b].049	[b].082	[a].138	[a].150	[b].100	[b].064	[b].019	[b].008	[b].039	[a].070	[b]-.034	[b]-.210

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) - Continued

(m) N = 2000 rpm; $\beta_{0.75R}$ = 30°.

	J	1.032	1.097	1.140	1.179	1.238	1.289	1.344	1.429	1.387	1.319	1.277	1.218	1.175	1.129	1.081
	M_{x_1}	.697	.703	.708	.714	.727	.732	.740	.755	.750	.736	.733	.719	.715	.706	.697
	α_x	7.39	5.95	5.03	4.20	2.97	1.94	.85	-.78	.01	1.34	2.18	3.39	4.28	5.26	6.30
	$\Delta\beta$	1.61	1.91	.90	.66	.33	.06	-.22	-.63	-.43	-.10	.12	.43	.69	.97	1.28
	α_i	2.97	2.53	2.17	1.90	1.50	1.16	.83	.29	.59	.99	1.27	1.64	1.98	2.31	2.64
	c_n	1.0128	.8658	.7454	.6557	.5186	.4055	.2882	.1019	.2062	.3460	.4408	.5683	.6829	.7935	.9041
	c_m	-.0281	-.0321	-.0396	-.0412	-.0509	-.0566	-.0620	-.0680	-.0635	-.0588	-.0559	-.0531	-.0388	-.0373	-.0298
	c_o		-.0341	-.0228	-.0152	-.0048	.0026	.0091	.0159	.0124	.0053	.0001	-.0092	-.0181	-.0264	
	o/b	Pressure coefficient, P														
Upper surface	0.000	1.128	1.131	1.132	1.134	1.140	1.142	1.145	1.151	1.149	1.143	1.142	1.137	1.135	1.132	1.128
	.025	-1.943	-1.681	-1.384	-1.182	-.676	-.361	-.084	.249	.084	-.225	-.456	-.807	-1.219	-1.522	-1.794
	.050	-1.934	-1.696	-1.477	-1.245	-.858	-.533	-.284	.020	-.132	-.409	-.619	-1.025	-1.321	-1.559	-1.807
	.100	-1.787	-1.548	-1.320	-.943	-.654	-.474	-.303	-.076	-.192	-.390	-.534	-.709	-1.084	-1.413	-1.651
	.200	-1.673	-1.413	-.722	-.736	-.613	-.492	-.377	-.210	-.298	-.433	-.531	-.661	-.755	-.873	-1.536
	.300	-1.380	-.711	-.819	-.759	-.664	-.564	-.466	-.326	-.402	-.516	-.595	-.700	-.778	-.795	-.702
	.400	-.647	-.747	-.751	-.715	-.661	-.594	-.527	-.412	-.474	-.558	-.614	-.681	-.726	-.758	-.702
	.500	-.577	-.624	-.620	-.604	-.579	-.543	-.502	-.419	-.466	-.520	-.556	-.588	-.612	-.623	-.605
	.600	-.519	-.550	-.549	-.543	-.542	-.531	-.519	-.469	-.501	-.521	-.538	-.541	-.549	-.548	-.537
	.700	-.423	-.443	-.441	-.442	-.450	-.461	-.470	-.456	-.469	-.459	-.460	-.448	-.446	-.443	-.438
	.800	-.282	-.289	-.284	-.284	-.305	-.323	-.343	-.352	-.356	-.328	-.319	-.298	-.287	-.287	-.287
	.900	-.041	-.031	-.026	-.028	-.039	-.050	-.067	-.085	-.083	-.055	-.049	-.037	-.031	-.029	-.031
	.950	.075	.075	.073	.071	.074	.074	.067	.056	.057	.073	.074	.070	.070	.073	.078
Lower surface	.0375	.659	.572	.498	.412	.260	.093	-.121	-.556	-.296	.002	.149	.320	.432	.531	.609
	.075	.521	.446	.383	.313	.193	.070	-.080	-.294	-.192	.006	.110	.235	.327	.410	.479
	.150	.390	.326	.275	.219	.128	.037	-.069	-.242	-.147	-.008	.068	.161	.230	.297	.355
	.250	.296	.244	.200	.154	.081	.012	-.067	-.197	-.126	-.021	.034	.107	.162	.219	.266
	.350	.225	.178	.141	.100	.040	-.016	-.084	-.189	-.132	-.043	.001	.061	.107	.156	.200
	.450	.172	.128	.097	.062	.010	-.035	-.094	-.179	-.134	-.059	-.020	.029	.068	.108	.148
	.550	.123	.088	.058	.028	-.018	-.057	-.105	-.171	-.136	-.078	-.047	-.003	.031	.069	.103
	.650	.078	.046	.022	-.005	-.042	-.073	-.109	-.157	-.132	-.087	-.063	-.030	-.002	.033	.063
	.750	.040	.011	-.009	-.029	-.057	-.077	-.100	-.126	-.112	-.087	-.071	-.050	-.028	.001	.028
	.850	.056	.035	.020	.004	-.011	-.019	-.029	-.035	-.031	-.024	-.016	-.007	.003	.026	.049
	.925	.069	.053	.039	.028	.024	.026	.030	.040	.037	.028	.027	.024	.027	.044	.063
	.975	.053	.041	.026	.020	.036	.053	.071	.101	.089	.060	.048	.029	.017	.033	.050
	1.000	[b].041	[b].028	[b].010	[b].019	[b].041	[b].078	[b].090	[b].127	[b].110	[b].069	[b].057	[b].020	[b].010	[b].026	[b].035

[b]Lower surface only.

[redacted]

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TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307-00 PROPELLER BLADE SECTION (x = 0.65) - Continued

(n) N = 2160 rpm; $\beta_{0.75R}$ = 30°.

	J	1.095	1.143	1.196	1.256	1.315	1.373	1.407	1.388	1.311	1.284	1.231	1.180	1.129
	M_x	.765	.768	.775	.783	.798	.806	.811	.809	.790	.789	.782	.773	.764
	α_x'	6.00	4.96	3.84	2.61	1.42	.28	-.37	0	1.50	2.04	3.12	4.18	5.26
	$\Delta\beta$	.90	.64	.39	.10	-.15	-.37	-.49	-.43	-.13	-.02	.21	.46	.72
	α_1	2.68	2.18	1.80	1.40	.95	.55	.29	.45	1.00	1.16	1.54	1.94	2.35
	c_n	.9145	.7478	.6228	.4835	.3317	.1906	.1026	.1555	.3486	.4008	.5285	.6649	.8051
	c_m	-.0700	-.0553	-.0589	-.0636	-.0632	-.0664	-.0662	-.0655	-.0637	-.0660	-.0605	-.0514	-.0521
	c_c	-.0260	-.0162	-.0069	.0029	.0099	.0154	.0176	.0163	.0094	.0063	.0014	-.0109	-.0198
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.155	1.157	1.160	1.163	1.169	1.173	1.175	1.175	1.166	1.165	1.162	1.159	1.155
	.025	-1.235	-1.006	-.686	-.391	-.106	.130	.255	.181	-.118	-.251	-.508	-.876	-1.068
	.050	-1.309	-1.121	-.911	-.628	-.320	-.094	.025	-.046	-.329	-.464	-.821	-.971	-1.208
	.100	-1.232	-.986	-.838	-.520	-.327	-.161	-.069	-.123	-.336	-.426	-.579	-.910	-1.099
	.200	-1.196	-1.009	-.702	-.529	-.394	-.274	-.204	-.245	-.401	-.462	-.618	-.858	-1.088
	.300	-1.185	-.967	-.709	-.619	-.519	-.402	-.336	-.376	-.526	-.577	-.668	-.731	-1.092
	.400	-1.181	-.821	-.802	-.665	-.577	-.506	-.448	-.483	-.586	-.622	-.729	-.832	-.863
	.500	-.794	-.796	-.738	-.630	-.553	-.492	-.453	-.475	-.560	-.587	-.694	-.734	-.794
	.600	-.679	-.713	-.749	-.692	-.628	-.572	-.540	-.559	-.630	-.658	-.714	-.725	-.693
	.700	-.465	-.483	-.528	-.630	-.653	-.654	-.641	-.645	-.654	-.637	-.588	-.503	-.477
	.800	-.280	-.272	-.289	-.309	-.329	-.358	-.399	-.373	-.338	-.322	-.307	-.286	-.279
	.900	-.023	-.029	-.027	-.029	-.034	-.049	-.060	-.051	-.036	-.030	-.036	-.030	-.029
	.950	.072	.048	.055	.068	.074	.074	.065	.072	.077	.075	.054	.053	.057
Lower surface	.0375	.543	.430	.329	.178	-.049	-.310	-.593	-.393	-.043	.072	.236	.369	.476
	.075	.428	.332	.252	.139	-.029	-.195	-.253	-.240	-.025	.058	.179	.281	.367
	.150	.318	.237	.173	.090	-.034	-.154	-.251	-.189	-.033	.028	.116	.195	.267
	.250	.238	.168	.117	.053	-.045	-.142	-.213	-.168	-.044	.003	.071	.135	.194
	.350	.173	.111	.065	.012	-.074	-.156	-.217	-.178	-.073	-.030	.024	.080	.132
	.450	.123	.066	.024	-.018	-.094	-.165	-.217	-.184	-.092	-.053	-.010	.038	.084
	.550	.075	.022	-.017	-.051	-.116	-.178	-.226	-.196	-.116	-.080	-.047	-.004	.040
	.650	.030	-.017	-.050	-.078	-.131	-.183	-.225	-.197	-.129	-.100	-.077	-.040	-.002
	.750	-.003	-.048	-.076	-.093	-.129	-.161	-.193	-.172	-.127	-.108	-.098	-.065	-.034
	.850	.022	-.017	-.036	-.040	-.058	-.069	-.086	-.074	-.052	-.044	-.050	-.030	-.007
	.925	.042	.003	-.006	0	0	.007	.001	.005	.006	.003	-.014	-.002	.013
	.975	.031	-.011	-.007	.012	.036	.063	.067	.066	.041	.025	-.006	-.009	0
	1.000	[b].028	[b]-.020	[b]-.012	[b].017	[b].055	[b].090	[b].100	[b].098	[b].060	[b].036	[b]0	[b]-.015	[b]-.003

[b]Lower surface only.

[redacted]

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TABLE 6.— PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) — Continued

(c) N = 1350 rpm; $\beta_{0.75R}$ = 50°.

	J	2.277	2.388	2.488	2.634	2.783	2.930	3.065	3.009	2.869	2.726	2.579	2.472	2.367
	M_x	.634	.651	.667	.693	.717	.747	.770	.758	.731	.705	.678	.661	.644
	α_r'	6.08	4.73	3.58	1.98	.47	-.93	-2.12	-1.64	-.36	1.04	2.57	3.76	4.98
	$\Delta\beta$	.42	.36	.21	0	-.23	-.44	-.65	-.55	-.35	-.13	.08	.24	.40
	α_i	2.25	1.86	1.60	1.17	.80	.48	.08	.26	.62	.94	1.32	1.62	1.91
	c_n	.8367	.7084	.6088	.4472	.3071	.1826	.0303	.1019	.2386	.3614	.5049	.6198	.7286
	c_m	-.0224	-.0365	-.0423	-.0503	-.0593	-.0700	-.0832	-.0780	-.0652	-.0561	-.0465	-.0368	-.0331
	c_o													
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.104	1.110	1.116	1.127	1.136	1.148	1.158	1.152	1.141	1.131	1.120	1.114	1.108
	.025	-2.279	-1.788	-1.140	-.548	-.130	.169	.391	.302	.040	-.288	-.744	-1.245	-1.954
	.050	-2.167	-1.633	-1.192	-.669	-.319	-.055	.154	.067	-.173	-.456	-.814	-1.223	-1.815
	.100	-1.766	-.827	-.803	-.561	-.329	-.138	.027	-.044	-.223	-.419	-.647	-.833	-.844
	.200	-.769	-.749	-.668	-.528	-.383	-.257	-.134	-.190	-.317	-.443	-.577	-.689	-.761
	.300	-.749	-.712	-.653	-.559	-.456	-.364	-.266	-.313	-.408	-.501	-.593	-.664	-.719
	.400	-.683	-.657	-.615	-.559	-.494	-.434	-.363	-.399	-.464	-.524	-.578	-.626	-.659
	.500	-.567	-.553	-.526	-.496	-.453	-.418	-.374	-.399	-.437	-.472	-.502	-.533	-.555
	.600	-.497	-.495	-.482	-.475	-.456	-.447	-.430	-.442	-.452	-.466	-.473	-.487	-.495
	.700	-.398	-.407	-.406	-.413	-.417	-.426	-.434	-.436	-.425	-.416	-.407	-.410	-.405
	.800	-.256	-.271	-.279	-.302	-.318	-.342	-.361	-.362	-.336	-.312	-.291	-.281	-.268
	.900	-.038	-.033	-.033	-.047	-.058	-.074	-.086	-.090	-.074	-.057	-.048	-.038	-.038
	.950	.040	.059	.074	.073	.077	.068	.063	.059	.066	.074	.077	.066	.049
Lower surface	.0375	.631	.532	.420	.199	-.062	-.375	-1.037	-.723	-.224	.046	.294	.441	.561
	.075	.494	.405	.316	.151	-.031	-.221	-.529	-.313	-.137	.040	.220	.333	.429
	.150	.361	.291	.223	.101	-.025	-.156	-.278	-.242	-.098	.023	.151	.232	.310
	.250	.266	.213	.160	.064	-.025	-.119	-.218	-.181	-.075	.008	.104	.166	.227
	.350	.197	.152	.107	.030	-.041	-.118	-.193	-.165	-.084	-.016	.060	.112	.163
	.450	.145	.105	.071	.007	-.048	-.111	-.168	-.148	-.085	-.029	.030	.074	.116
	.550	.096	.064	.033	-.016	-.062	-.110	-.153	-.139	-.091	-.045	.001	.035	.071
	.650	.054	.027	.003	-.035	-.068	-.101	-.129	-.121	-.089	-.058	-.020	.005	.034
	.750	.023	.005	-.011	-.045	-.062	-.080	-.089	-.090	-.075	-.060	-.031	-.011	.011
	.850	.028	.021	.014	.002	0	.001	.006	.001	-.002	-.002	.007	.013	.023
	.925	.037	.040	.040	.042	.054	.068	.084	.075	.060	.042	.042	.038	.039
	.975	.044	.027	.030	.054	.085	.116	.137	.126	.103	.068	.033	.027	.039
	1.000	[b].055	[b].013	[b]-.014	[b].050	[b].097	[b].118	[b].160	[a].161	[b].132	[b].121	[b]-.010	[b].008	[b].040

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) - Continued

(p) N = 1350 rpm; $\beta_{0.75R}$ = 40°.

	J	1.408	1.508	1.613	1.721	1.848	1.992	2.140	2.074	1.919	1.782	1.671	1.564	1.471
	M_T	.513	.524	.536	.553	.567	.590	.612	.601	.576	.558	.544	.533	.521
	α_T'	9.61	7.75	5.89	4.08	2.06	-.09	-2.14	-1.25	.98	3.09	4.91	6.75	8.43
	$\Delta\beta$	.61	.51	.39	.26	.09	-.13	-.38	-.27	-.02	.18	.32	.45	.55
	α_i	2.66	2.37	1.99	1.58	1.11	.61	.12	.36	.85	1.35	1.79	2.23	2.51
	c_n	.9525	.8562	.7239	.5759	.4078	.2260	.0461	.1352	.3164	.4998	.6563	.8117	.9070
	c_m	-.0293	-.0147	-.0290	-.0385	-.0446	-.0543	-.0560	-.0588	-.0493	-.0407	-.0401	-.0261	-.0173
	c_c													
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.067	1.070	1.074	1.079	1.083	1.090	1.096	1.093	1.085	1.080	1.076	1.073	1.070
	.025	-1.560	-2.076	-1.941	-1.060	-.570	-.064	.316	.143	-.298	-.840	-1.253	-2.234	-1.782
	.050	-1.536	-1.948	-1.365	-1.001	-.622	-.233	.090	-.060	-.419	-.828	-1.141	-1.956	-1.705
	.100	-1.538	-1.641	-.957	-.760	-.514	-.248	-.017	-.128	-.378	-.641	-.872	-1.235	-1.593
	.200	-1.370	-.993	-.750	-.622	-.472	-.301	-.141	-.221	-.384	-.553	-.694	-.776	-1.288
	.300	-1.076	-.725	-.682	-.597	-.488	-.363	-.239	-.299	-.423	-.548	-.647	-.701	-.932
	.400	-.802	-.613	-.617	-.562	-.486	-.397	-.303	-.350	-.443	-.528	-.595	-.630	-.676
	.500	-.586	-.515	-.520	-.482	-.432	-.367	-.298	-.332	-.401	-.461	-.505	-.531	-.511
	.600	-.449	-.441	-.463	-.446	-.414	-.374	-.324	-.350	-.395	-.431	-.459	-.464	-.409
	.700	-.335	-.352	-.385	-.386	-.374	-.359	-.330	-.347	-.368	-.382	-.391	-.379	-.316
	.800	-.240	-.240	-.264	-.280	-.294	-.301	-.298	-.303	-.298	-.287	-.279	-.262	-.222
	.900	-.143	-.079	-.055	-.059	-.076	-.094	-.106	-.104	-.083	-.069	-.065	-.047	-.107
	.950	-.103	-.011	.040	.055	.047	.036	.022	.026	.042	.051	.037	.013	-.057
Lower surface	.0375	.766	.698	.608	.448	.204	-.150	-.541	-.352	.033	.340	.538	.659	.732
	.075	.613	.548	.463	.333	.149	-.098	-.355	-.223	.027	.249	.406	.508	.578
	.150	.461	.403	.332	.231	.096	-.073	-.246	-.157	.009	.168	.286	.372	.431
	.250	.347	.299	.243	.163	.059	-.058	-.182	-.120	-.004	.116	.204	.273	.325
	.350	.267	.223	.175	.111	.028	-.066	-.163	-.117	-.024	.071	.144	.202	.245
	.450	.200	.167	.129	.073	.004	-.069	-.145	-.106	-.031	.040	.101	.148	.182
	.550	.137	.111	.083	.037	-.020	-.075	-.134	-.104	-.047	.009	.060	.099	.124
	.650	.077	.064	.044	.008	-.036	-.077	-.118	-.096	-.058	-.015	.028	.077	.071
	.750	.025	.026	.015	-.008	-.041	-.071	-.093	-.082	-.060	-.024	.004	.024	.027
	.850	-.003	.018	.022	.014	.002	-.009	-.013	-.009	-.006	.005	.019	.030	.012
	.925	-.034	.012	.028	.037	.040	.043	.054	.052	.036	.037	.041	.034	-.004
	.975	-.080	-.002	.017	.025	.045	.083	.108	.099	.063	.035	.039	.052	-.032
	1.000	[b]-.130	[b]-.009	[b].008	[b].017	[b].038	[a].051	[a].136	[a].125	[b].124	[b].032	[b].040	[b].068	[b]-.049

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 6.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) – Continued

(q) N = 1350 rpm; $\beta_{0.75R}$ = 35°.

	J	1.078	1.174	1.264	1.387	1.507	1.652	1.823	1.730	1.571	1.456	1.319	1.230	1.137
	M_x	.474	.486	.495	.509	.527	.546	.566	.553	.534	.516	.501	.491	.480
	α_x'	11.37	9.30	7.44	5.01	2.77	.23	-2.56	-1.07	1.63	3.71	6.34	8.13	10.09
	$\Delta\theta$	.68	.63	.54	.39	.22	-.01	-.28	-.13	.12	.30	.48	.58	.66
	α_i	2.96	2.62	2.29	1.76	1.24	.68	-.01	.34	.98	1.45	2.04	2.45	2.71
	c_n	1.0215	.9123	.8035	.6241	.4408	.2465	-.0032	.1251	.3512	.5162	.7164	.8573	.9390
	c_m	-.0676	-.0186	-.0242	-.0444	-.0362	-.0512	-.0576	-.0540	-.0464	-.0399	-.0347	-.0161	-.0503
	c_o													
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.058	1.061	1.063	1.066	1.071	1.077	1.082	1.078	1.073	1.068	1.064	1.062	1.059
	.025	-1.383	-1.645	-2.192	-1.182	-.686	-.139	.378	.138	-.464	-.879	-1.967	-2.096	-1.442
	.050	-1.385	-1.645	-1.989	-1.086	-.698	-.283	.150	-.061	-.547	-.852	-1.350	-1.916	-1.442
	.100	-1.351	-1.616	-1.284	-.820	-.556	-.282	.034	-.123	-.473	-.650	-.931	-1.610	-1.387
	.200	-1.260	-1.323	-.774	-.659	-.497	-.319	-.099	-.212	-.457	-.546	-.738	-.984	-1.238
	.300	-1.139	-.952	-.687	-.614	-.499	-.368	-.195	-.285	-.481	-.531	-.670	-.712	-1.080
	.400	-.978	-.687	-.617	-.571	-.494	-.395	-.261	-.335	-.490	-.508	-.609	-.596	-.887
	.500	-.786	-.509	-.521	-.491	-.435	-.362	-.261	-.318	-.446	-.441	-.518	-.500	-.688
	.600	-.619	-.402	-.456	-.450	-.413	-.366	-.289	-.335	-.436	-.414	-.462	-.424	-.528
	.700	-.470	-.308	-.370	-.387	-.372	-.349	-.299	-.333	-.403	-.360	-.387	-.338	-.397
	.800	-.352	-.216	-.258	-.285	-.290	-.294	-.275	-.277	-.335	-.274	-.274	-.232	-.289
	.900	-.238	-.111	-.074	-.071	-.080	-.095	-.099	-.108	-.129	-.056	-.072	-.080	-.193
	.950	-.190	-.067	.005	.033	.039	.029	.018	.016	-.005	.058	.019	-.016	-.150
Lower surface	.0375	.796	.749	.669	.504	.259	-.093	-.594	-.350	.069	.391	.603	.709	.757
	.075	.647	.597	.513	.376	.189	-.061	-.397	-.226	.039	.289	.459	.558	.606
	.150	.490	.445	.372	.260	.121	-.051	-.273	-.158	.004	.199	.324	.410	.456
	.250	.373	.334	.275	.165	.076	-.044	-.201	-.125	-.020	.144	.234	.307	.341
	.350	.282	.255	.203	.127	.045	-.052	-.173	-.119	-.040	.094	.171	.231	.257
	.450	.210	.190	.149	.090	.019	-.061	-.155	-.108	-.058	.060	.122	.170	.190
	.550	.144	.131	.100	.047	-.005	-.069	-.137	-.108	-.076	.032	.078	.120	.127
	.650	.077	.075	.057	.016	-.025	-.072	-.121	-.100	-.092	.004	.039	.069	.066
	.750	.016	.028	.025	-.003	-.039	-.069	-.093	-.083	-.096	-.005	.014	.031	.015
	.850	-.019	.010	.028	.016	.001	-.010	-.014	-.013	-.047	.022	.024	.027	-.019
	.925	-.056	-.010	.030	.035	.030	.039	.052	.047	-.005	.050	.036	.019	-.049
	.975	-.121	-.042	.037	.033	.047	.075	.108	.089	.019	.049	.048	.013	-.095
	1.000	[b]-.188	[b]-.073	[a].039	[b].038	[b].054	[a].090	[a].087	[a].118	[b].030	[b].050	[b].049	[b].010	[b]-.121

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) - Continued

(r) N = 1350 rpm; $\beta_{0.75R}$ = 25°.

J	0.588	0.674	0.750	0.839	0.922	1.015	1.098	1.180	1.219	1.137	1.064	0.965	0.870	0.782	0.697	0.613
M_x	.409	.430	.428	.435	.455	.463	.475	.484	.488	.472	.467	.449	.438	.427	.417	.418
α_x'	13.14	10.93	9.03	6.86	4.90	2.77	.93	-.82	-1.63	.09	1.68	3.91	6.12	8.25	10.35	12.49
$\Delta\beta$	.57	.50	.44	.35	.26	.15	.06	-.03	-.08	.02	.10	.21	.31	.41	.48	.55
α_i	3.10	3.01	2.64	2.28	1.68	1.19	.79	.36	.14	.56	.92	1.43	1.95	2.49	2.83	3.07
c_n	.8917	.9084	.8207	.7289	.5480	.3968	.2656	.1212	.0491	.1882	.3092	.4719	.6271	.7842	.8611	.8962
c_m	-.0437	-.0744	-.0134	-.0296	-.0389	-.0414	-.0460	-.0521	-.0480	-.0504	-.0440	-.0418	-.0381	-.0203	-.0139	-.0457
c_o																
c/b	Pressure coefficient, P															
Upper surface																
0.000	1.043	1.048	1.047	1.049	1.053	1.055	1.058	1.060	1.061	1.057	1.056	1.052	1.049	1.047	1.045	1.045
.025	-1.908	-1.251	-1.749	-2.117	-1.036	-.588	-.224	.112	.267	-.046	-.339	-.823	-1.303	-2.054	-1.766	-1.880
.050	-1.804	-1.190	-1.718	-1.676	-.954	-.607	-.345	-.075	.058	-.205	-.430	-.795	-1.108	-1.816	-1.742	-1.702
.100	-1.312	-1.085	-1.659	-.941	-.728	-.500	-.316	-.130	-.036	-.223	-.377	-.616	-.850	-1.429	-1.660	-1.357
.200	-.915	-1.027	-1.098	-.724	-.592	-.450	-.329	-.210	-.140	-.277	-.368	-.523	-.673	-.830	-1.235	-.993
.300	-.749	-.965	-.708	-.661	-.563	-.455	-.367	-.276	-.221	-.324	-.395	-.509	-.618	-.652	-.807	-.838
.400	-.648	-.867	-.561	-.605	-.535	-.452	-.388	-.323	-.278	-.361	-.411	-.492	-.572	-.583	-.596	-.716
.500	-.557	-.748	-.465	-.512	-.464	-.400	-.351	-.302	-.268	-.332	-.368	-.430	-.488	-.496	-.471	-.596
.600	-.497	-.624	-.393	-.458	-.432	-.386	-.351	-.318	-.290	-.340	-.365	-.408	-.444	-.434	-.392	-.512
.700	-.439	-.499	-.312	-.381	-.375	-.350	-.331	-.315	-.292	-.332	-.339	-.363	-.380	-.354	-.315	-.431
.800	-.398	-.392	-.216	-.279	-.293	-.286	-.281	-.287	-.276	-.298	-.285	-.284	-.281	-.249	-.242	-.369
.900	-.350	-.290	-.094	-.082	-.085	-.088	-.091	-.109	-.107	-.113	-.091	-.082	-.081	-.089	-.129	-.307
.950	-.329	-.244	-.043	.007	.026	.032	.027	.008	.007	.009	.027	.036	.021	-.017	-.135	-.276
Lower surface																
.0375	.806	.736	.708	.617	.428	.211	-.015	-.321	-.489	-.181	.059	.342	.543	.664	.738	.781
.075	.646	.585	.555	.468	.311	.151	-.010	-.213	-.314	-.123	.040	.244	.404	.513	.580	.623
.150	.486	.442	.408	.331	.208	.093	-.015	-.153	-.221	-.099	.016	.160	.278	.370	.433	.465
.250	.364	.330	.303	.244	.140	.054	-.023	-.117	-.168	-.086	0	.107	.197	.268	.320	.346
.350	.270	.248	.225	.172	.092	.023	-.034	-.114	-.150	-.086	-.021	.073	.136	.197	.238	.259
.450	.192	.180	.168	.124	.052	-.002	-.039	-.109	-.140	-.086	-.031	.033	.092	.147	.181	.185
.550	.116	.116	.114	.076	.021	-.021	-.054	-.106	-.127	-.086	-.046	.005	.055	.096	.118	.116
.650	.044	.054	.065	.041	-.005	-.038	-.059	-.098	-.115	-.089	-.054	-.017	.023	.052	.060	.048
.750	-.028	-.004	.024	.014	-.023	-.046	-.059	-.085	-.094	-.080	-.057	-.032	0	.018	.012	-.018
.850	-.084	-.041	.012	.020	.001	-.007	-.007	-.018	-.023	-.017	-.005	.002	.015	.018	-.013	-.064
.925	-.150	-.084	0	.041	.026	.032	.038	.040	.038	.033	.032	.031	.032	.018	-.043	-.120
.975	-.239	-.158	-.012	.041	.018	.041	.071	.084	.088	.075	.054	.031	.021	[a]-.029	-.092	-.192
1.000	[b]-.338	[b]-.224	[b]-.026	[b].030	[b]-.014	[b].035	[b].098	[a].175	[a].128	[a].106	[b].059	[b].021	[b]-.001	[b]-.070	[b]-.128	[b]-.246

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 6.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-307.00 PROPELLER BLADE SECTION (x = 0.65) - Concluded

(a) N = 1350 rpm; $\beta_{0.75R}$ = 20°.

	J	0.553	0.619	0.656	0.715	0.769	0.839	0.905	0.988	0.964	0.877	0.829	0.748	0.692	0.656	0.593	0.493
	M_x	.406	.419	.425	.432	.425	.441	.443	.457	.454	.440	.445	.434	.426	.425	.410	.382
	α_x'	9.05	7.34	6.39	4.90	3.56	1.86	.30	-1.62	-1.07	.96	2.10	4.08	5.48	6.39	8.01	10.63
	$\Delta\beta$	.56	.46	.43	.35	.28	.18	.09	-.03	0	.13	.19	.30	.38	.43	.51	.64
	α_1	2.88	2.56	2.23	1.81	1.36	.98	.60	.20	.35	.74	1.12	1.54	1.95	2.31	2.72	3.13
	c_n	.7923	.7310	.6452	.5379	.4130	.3075	.1914	.0652	.1142	.2344	.3483	.4648	.5754	.6726	.7653	.8212
	c_m	-.0166	-.0251	-.0381	-.0387	-.0424	-.0511	-.0527	-.0547	-.0551	-.0496	-.0437	-.0409	-.0420	-.0349	-.0202	-.0419
	c_p																
	o/b	Pressure coefficient, P															
Upper surface	0.000	1.042	1.045	1.046	1.048	1.046	1.050	1.050	1.054	1.053	1.050	1.051	1.048	1.047	1.046	1.043	1.037
	.025	-2.377	-1.934	-1.586	-1.066	-.692	-.362	-.063	.212	.124	-.173	-.506	-.836	-1.156	-1.904	-2.113	-2.015
	.050	-1.808	-1.813	-1.122	-.965	-.684	-.446	-.216	.013	-.060	-.297	-.542	-.804	-1.041	-1.278	-1.820	-1.595
	.100	-1.397	-1.229	-.859	-.727	-.543	-.385	-.228	-.065	-.116	-.285	-.451	-.619	-.784	-.849	-1.341	-1.414
	.200	-.860	-.684	-.682	-.594	-.478	-.376	-.277	-.159	-.197	-.309	-.416	-.524	-.626	-.684	-.769	-1.033
	.300	-.661	-.620	-.620	-.561	-.478	-.396	-.325	-.228	-.261	-.346	-.431	-.511	-.581	-.623	-.635	-.762
	.400	-.573	-.573	-.575	-.535	-.478	-.426	-.353	-.269	-.297	-.381	-.437	-.494	-.548	-.574	-.570	-.600
	.500	-.479	-.483	-.486	-.458	-.413	-.376	-.333	-.275	-.294	-.346	-.384	-.431	-.469	-.481	-.483	-.470
	.600	-.407	-.427	-.443	-.426	-.398	-.371	-.344	-.302	-.316	-.348	-.376	-.407	-.429	-.433	-.421	-.387
	.700	-.328	-.353	-.376	-.373	-.360	-.348	-.336	-.308	-.316	-.334	-.343	-.362	-.371	-.365	-.343	-.308
	.800	-.228	-.255	-.275	-.290	-.292	-.295	-.296	-.277	-.283	-.295	-.285	-.285	-.278	-.267	-.240	-.234
	.900	-.083	-.078	-.080	-.081	-.093	-.104	-.115	-.131	-.116	-.104	-.090	-.082	-.076	-.070	-.081	-.152
	.950	-.020	.005	.015	.028	.026	.015	-.001	-.004	-.002	.013	.030	.032	.028	.024	-.010	-.121
Lower surface	.0375	.696	.631	.563	.445	.257	.070	-.165	-.421	-.327	-.070	.166	.345	.504	.595	.662	.742
	.075	.536	.482	.422	.324	.179	.047	-.115	-.266	-.219	-.050	.117	.246	.369	.447	.510	.585
	.150	.388	.346	.294	.215	.111	.018	-.092	-.197	-.155	-.048	.064	.160	.252	.319	.364	.426
	.250	.288	.247	.205	.145	.064	-.002	-.086	-.153	-.121	-.048	.036	.104	.179	.230	.269	.316
	.350	.213	.185	.150	.094	.026	-.022	-.080	-.139	-.116	-.056	.006	.061	.125	.166	.198	.236
	.450	.156	.135	.101	.058	.002	-.035	-.086	-.125	-.110	-.062	-.011	.032	.083	.120	.146	.172
	.550	.105	.086	.062	.022	-.022	-.046	-.086	-.120	-.107	-.070	-.035	.002	.046	.077	.098	.108
	.650	.058	.046	.024	-.002	-.040	-.055	-.086	-.109	-.099	-.073	-.043	-.022	.016	.040	.052	.055
	.750	.024	.018	.003	-.021	-.052	-.057	-.080	-.087	-.082	-.070	-.052	-.034	-.008	.015	.024	.003
	.850	.018	.024	.015	.003	-.010	-.011	-.018	-.015	-.016	-.012	-.005	-.001	.016	.031	.024	-.018
	.925	.011	.037	.034	.028	.021	.036	.039	.051	.046	.036	.033	.029	.034	.046	.027	-.044
	.975	.011	.024	.015	.016	.026	.064	.084	.112	.104	.073	.047	.026	.019	.031	.015	-.082
	1.000	[b].010	[b].012	[b]-.015	[b]-.010	[b].024	[a].071	[a].113	[a].150	[a].150	[a].096	[b].047	[b].004	[b]-.003	[b]-.011	[b]-.002	[b]-.101

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-306.62 PROPELLER BLADE SECTION ($x = 0.70$)

(a) $N = 1140$ rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.677	1.837	1.949	2.071	2.191	2.309	2.443	2.585	2.521	2.401	2.255	2.120	2.012	1.890	1.765
	M_x	.472	.491	.502	.518	.531	.543	.561	.579	.568	.553	.534	.520	.510	.493	.479
	α_x'	9.67	7.13	5.45	3.72	2.11	.60	-1.01	-2.61	-1.90	-.51	1.28	3.05	4.54	6.32	8.25
	$\Delta\beta$	.62	.50	.41	.31	.23	.12	.01	-.10	-.05	.04	.17	.27	.36	.46	.55
	α_i	2.57	2.22	1.90	1.49	1.09	.76	.45	.07	.21	.54	.92	1.34	1.67	2.09	2.40
	c_l	.9079	.7898	.6805	.5342	.3916	.2748	.1632	.0258	.0781	.1968	.3342	.4839	.6013	.7457	.8504
	c_m	-.0288	-.0286	-.0444	-.0498	-.0488	-.0592	-.0615	-.0646	-.0636	-.0603	-.0515	-.0470	-.0497	-.0342	-.0183
	c_o															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.057	1.062	1.064	1.068	1.072	1.075	1.081	1.086	1.083	1.078	1.073	1.069	1.067	1.062	1.059
	.025	-1.947	-1.689	-1.866	-.907	-.547	-.200	.094	.378	.263	0	-.364	-.774	-1.220	-1.863	-1.796
	.050	-1.917	-1.682	-1.987	-.842	-.574	-.315	-.080	.162	.061	-.157	-.440	-.742	-.960	-1.740	-1.796
	.100	-1.740	-1.569	-.834	-.671	-.494	-.324	-.160	.021	-.058	-.215	-.405	-.605	-.767	-1.278	-1.718
	.200	-1.098	-.895	-.683	-.579	-.477	-.362	-.251	-.127	-.184	-.289	-.410	-.541	-.643	-.695	-1.079
	.300	-.853	-.628	-.609	-.524	-.450	-.369	-.284	-.189	-.234	-.314	-.403	-.500	-.574	-.612	-.740
	.400	-.683	-.530	-.536	-.475	-.419	-.362	-.300	-.226	-.261	-.323	-.384	-.456	-.509	-.548	-.573
	.500	-.551	-.470	-.488	-.445	-.408	-.362	-.318	-.262	-.293	-.337	-.381	-.435	-.471	-.497	-.473
	.600	-.440	-.419	-.448	-.422	-.401	-.379	-.343	-.301	-.327	-.358	-.386	-.422	-.443	-.448	-.395
	.700	-.348	-.347	-.390	-.381	-.372	-.362	-.341	-.314	-.332	-.352	-.366	-.383	-.393	-.384	-.319
	.800	-.262	-.240	-.277	-.281	-.284	-.307	-.290	-.272	-.287	-.300	-.288	-.286	-.285	-.270	-.221
	.900	-.182	-.090	-.089	-.083	-.065	-.103	-.103	-.154	-.141	-.105	-.093	-.089	-.094	-.096	-.104
	.950	-.152	-.019	.006	.024	.028	.006	-.001	.002	-.008	-.006	.027	.005	.008	-.007	-.054
Lower surface	.0375	.741	.646	.552	.393	.188	-.039	-.278	-.600	-.479	-.200	.081	.312	.468	.597	.697
	.075	.593	.511	.424	.301	.148	-.013	-.170	-.374	-.289	-.120	.072	.238	.361	.469	.556
	.150	.444	.376	.307	.211	.099	-.009	-.111	-.245	-.194	-.082	.048	.167	.256	.340	.413
	.250	.334	.279	.227	.153	.064	-.013	-.082	-.177	-.147	-.066	.029	.117	.185	.250	.310
	.350	.255	.213	.170	.109	.042	-.026	-.078	-.150	-.129	-.066	.009	.080	.134	.189	.236
	.450	.186	.157	.118	.072	.011	-.039	-.080	-.137	-.121	-.070	-.013	.046	.092	.137	.172
	.550	.120	.109	.080	.040	-.012	-.054	-.089	-.129	-.119	-.082	-.030	.016	.056	.091	.119
	.650	.072	.070	.051	.021	-.025	-.054	-.072	-.100	-.095	-.068	-.037	0	.034	.058	.076
	.750	.030	.048	.035	.014	-.020	-.039	-.050	-.066	-.066	-.049	-.030	0	.025	.037	.042
	.850	-.008	.040	.044	.030	.002	-.005	.001	-.004	-.008	-.002	0	.016	.037	.043	.023
	.925	-.036	.045	.065	.054	.028	.049	.060	.066	.059	.056	.038	.039	.058	.056	.018
	.975	-.095	.045	.089	.067	.059	.110	.133	.141	.132	.127	.086	.057	.072	.068	-.008
	1.000	[a]-.130	[a].052	[a].099	[a].074	[b].062	[a].152	[a].182	[a].206	[a].192	[a].177	[a].123	[b].069	[a].082	[a].072	[a]-.011

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) – Continued

(b) N = 1350 rpm; $\beta_{0.75R} = 45^{\circ}$.

J	1.762	1.872	1.967	2.079	2.191	2.298	2.404	2.529	2.571	2.494	2.368	2.262	2.163	2.030	1.923	1.841
M_x	.568	.582	.590	.608	.625	.641	.657	.675	.682	.669	.648	.635	.618	.601	.586	.576
α_x'	8.30	6.60	5.19	3.61	2.11	.74	–.54	–1.98	–2.47	–1.59	–.11	1.19	2.48	4.28	5.84	7.08
$\Delta\beta$	.83	.75	.60	.43	.32	.19	.05	–.10	–.13	–.07	.09	.24	.35	.49	.67	.78
α_i	2.53	2.24	1.90	1.52	1.18	.89	.58	.20	.07	.28	.67	.99	1.26	1.66	2.07	2.34
c_n	.9021	.7999	.6791	.5477	.4281	.3245	.2097	.0713	.0261	.1016	.2419	.3581	.4529	.5974	.7386	.8336
c_m	–.0148	–.0257	–.0356	–.0475	–.0505	–.0653	–.0703	–.0705	–.0719	–.0685	–.0674	–.0609	–.0489	–.0431	–.0307	–.0216
c_o																
c/b	Pressure coefficient, P															
Upper surface																
0.000	1.183	1.087	1.090	1.095	1.101	1.107	1.112	1.120	1.122	1.117	1.109	1.105	1.099	1.093	1.088	1.085
.025	–1.991	–2.107	–1.883	–.932	–.573	–.231	.053	.323	.405	.264	–.023	–.336	–.649	–1.061	–2.475	–2.036
.050	–1.918	–1.895	–1.087	–.922	–.623	–.361	–.128	.107	.179	.053	–.192	–.440	–.680	–1.013	–1.268	–1.912
.100	–1.682	–1.475	–.906	–.732	–.534	–.364	–.202	–.029	.030	–.068	–.248	–.415	–.570	–.805	–.964	–1.630
.200	–1.174	–.825	–.748	–.632	–.522	–.403	–.298	–.180	–.138	–.207	–.329	–.434	–.542	–.681	–.776	–.943
.300	–.863	–.666	–.655	–.570	–.492	–.411	–.334	–.242	–.208	–.262	–.355	–.430	–.504	–.602	–.673	–.697
.400	–.644	–.575	–.570	–.512	–.458	–.404	–.348	–.279	–.254	–.295	–.364	–.415	–.467	–.535	–.585	–.572
.500	–.505	–.509	–.517	–.478	–.446	–.406	–.366	–.317	–.298	–.328	–.378	–.414	–.452	–.495	–.524	–.495
.600	–.402	–.447	–.473	–.453	–.439	–.418	–.391	–.359	–.347	–.365	–.399	–.419	–.439	–.462	–.471	–.428
.700	–.314	–.364	–.397	–.396	–.399	–.398	–.393	–.378	–.371	–.382	–.388	–.395	–.399	–.400	–.390	–.382
.800	–.215	–.240	–.265	–.278	–.296	–.331	–.330	–.323	–.322	–.326	–.329	–.309	–.293	–.275	–.256	–.223
.900	–.108	–.070	–.056	–.058	–.075	–.108	–.115	–.123	–.126	–.120	–.106	–.094	–.070	–.058	–.058	–.073
.950	–.064	.007	.033	.049	.046	.014	.013	.010	.007	.011	.007	.034	.047	.042	.023	–.010
Lower surface																
.0375	.720	.648	.550	.401	.199	–.008	–.236	–.569	–.634	–.481	–.170	.069	.244	.462	.598	.674
.075	.582	.514	.429	.310	.158	.010	–.143	–.330	–.409	–.284	–.099	.068	.192	.358	.471	.539
.150	.437	.383	.311	.222	.111	.009	–.090	–.217	–.267	–.187	–.065	.047	.133	.258	.344	.403
.250	.327	.287	.229	.160	.073	–.001	–.070	–.165	–.196	–.142	–.052	.031	.091	.185	.254	.304
.350	.253	.222	.170	.115	.046	–.011	–.069	–.140	–.165	–.126	–.055	.010	.059	.137	.191	.235
.450	.186	.162	.119	.074	.014	–.031	–.077	–.137	–.151	–.122	–.065	–.011	.026	.092	.138	.173
.550	.128	.113	.076	.040	–.017	–.051	–.083	–.127	–.139	–.120	–.077	–.030	–.002	.055	.092	.123
.650	.077	.075	.047	.019	–.022	–.048	–.072	–.103	–.110	–.097	–.065	–.035	–.016	.028	.056	.081
.750	.041	.050	.027	.010	–.020	–.031	–.046	–.064	–.068	–.064	–.042	–.023	–.014	.017	.034	.052
.850	.017	.045	.031	.022	.002	.009	.007	.001	.001	–.001	.007	.009	.007	.020	.026	.033
.925	–.005	.043	.038	.042	.032	.064	.068	.072	.074	.069	.070	.061	.038	.030	.023	.019
.975	–.048	.026	.031	.054	.064	.132	.138	.144	.147	.141	.142	.110	.061	.037	.015	–.002
1.000	[b]–.088	[b]–.006	[b].030	[b].058	[b].078	[a].170	[a].184	[b].162	[b].204	[b].183	[b].202	[a].148	[b].072	[b].043	[b].002	[b]–.030

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 7.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) - Continued

(c) N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.921	2.012	2.129	2.229	2.353	2.453	2.554	2.510	2.400	2.282	2.184	2.073	1.993
	M_x	.653	.667	.687	.701	.723	.741	.736	.749	.728	.707	.691	.675	.661
	α_x	5.86	4.54	2.93	1.61	.06	-1.12	-2.27	-1.78	-.50	.94	2.20	3.69	4.81
	$\Delta\beta$	.90	.77	.59	.40	.14	-.09	-.33	-.22	.04	.29	.49	.69	.80
	α_1	2.35	1.93	1.52	1.18	.79	.42	.09	.23	.60	.99	1.30	1.69	2.05
	c_n	.8411	.6955	.5471	.4265	.2887	.1519	.0348	.0832	.2181	.3600	.4684	.6110	.7371
	c_m	-.0275	-.0401	-.0492	-.0557	-.0734	-.0748	-.0782	-.0760	-.0690	-.0633	-.0510	-.0438	-.0365
	c_D							.0160						
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.111	1.116	1.124	1.130	1.138	1.146	1.151	1.149	1.141	1.132	1.126	1.119	1.114
	.025	-2.179	-1.757	-.823	-.452	-.048	.227	.364	.340	.097	-.242	-.608	-1.047	-1.928
	.050	-2.129	-1.616	-.927	-.570	-.232	.012	.189	.116	-.107	-.395	-.700	-1.152	-1.809
	.100	-1.902	-.791	-.723	-.521	-.289	-.109	.032	-.027	-.197	-.406	-.596	-.825	-.887
	.200	-.728	-.764	-.654	-.534	-.379	-.255	-.149	-.193	-.317	-.454	-.581	-.708	-.765
	.300	-.692	-.676	-.598	-.518	-.408	-.316	-.235	-.269	-.361	-.462	-.547	-.634	-.682
	.400	-.617	-.596	-.543	-.487	-.415	-.353	-.290	-.314	-.383	-.454	-.505	-.567	-.601
	.500	-.560	-.544	-.513	-.477	-.428	-.387	-.347	-.361	-.408	-.454	-.489	-.525	-.545
	.600	-.511	-.504	-.492	-.476	-.450	-.429	-.407	-.413	-.440	-.464	-.476	-.493	-.503
	.700	-.427	-.428	-.430	-.431	-.423	-.420	-.417	-.413	-.422	-.432	-.428	-.429	-.424
	.800	-.281	-.285	-.297	-.307	-.341	-.346	-.343	-.340	-.350	-.328	-.299	-.292	-.283
	.900	-.061	-.053	-.060	-.064	-.093	-.101	-.106	-.100	-.097	-.095	-.060	-.059	-.055
	.950	.034	.047	.053	.061	.039	.028	.025	.030	.031	.038	.060	.050	.045
Lower surface	.0375	.600	.494	.320	.141	-.132	-.436	-.999	-.677	-.271	.008	.223	.410	.532
	.075	.478	.390	.251	.119	-.072	-.266	-.468	-.318	-.162	.024	.179	.322	.421
	.150	.353	.285	.179	.084	-.044	-.167	-.276	-.228	-.106	.018	.129	.231	.310
	.250	.264	.210	.125	.054	-.038	-.130	-.210	-.172	-.079	.006	.087	.167	.217
	.350	.187	.156	.084	.028	-.045	-.119	-.180	-.148	-.079	-.011	.054	.119	.173
	.450	.145	.106	.045	0	-.059	-.119	-.164	-.140	-.085	-.033	.022	.075	.122
	.550	.087	.054	.005	-.033	-.076	-.120	-.152	-.132	-.094	-.051	-.007	.038	.078
	.650	.066	.039	-.003	-.032	-.065	-.100	-.120	-.108	-.081	-.051	-.018	.017	.051
	.750	.043	.025	-.007	-.028	-.045	-.064	-.074	-.068	-.053	-.040	-.017	.009	.034
	.850	.038	.028	.009	0	.002	-.002	0	.002	.004	.001	.004	.020	.036
	.925	.041	.039	.030	.035	.062	.070	.078	.077	.071	.055	.035	.038	.047
	.975	.036	.042	.051	.076	.134	.148	.155	.154	.147	.125	.066	.049	.048
	1.000	[b].031	[b].052	[b].063	[b].096	[a].185	[a].201	[a].201	[a].194	[a].192	[a].184	[b].080	[b].054	[b].048

[a]Faired value.
[b]Lower surface only.

[redacted]

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION ($x = 0.70$) – Continued

(d) $N = 1600$ rpm; $\beta_{0.75R} = 45^{\circ}$.

J	2.070	2.161	2.262	2.360	2.468	2.526	2.490	2.431	2.325	2.231	2.129
M	.728	.739	.759	.776	.794	.806	.798	.787	.765	.751	.732
α_x'	3.73	2.50	1.19	–.02	–1.30	–1.96	–1.55	–.87	.41	1.59	2.93
$\Delta\beta$	.77	.56	.35	.08	–.25	–.45	–.33	–.13	.19	.42	.64
α_i	1.83	1.49	1.12	.77	.38	.09	.25	.52	.87	1.25	1.62
c_n	.6594	.5387	.4058	.2794	.1400	.0310	.0910	.1903	.3161	.4516	.5826
c_m	–.0420	–.0533	–.0677	–.0769	–.0877	–.0900	–.0882	–.0775	–.0714	–.0595	–.0508
c_o			.0033	.0105	.0158	.0157	.0157	.0141	.0076		
	c/b	Pressure coefficient, P									
Upper surface	0.000	1.140	1.145	1.153	1.160	1.167	1.173	1.169	1.165	1.155	1.149	1.142
	.025	–1.032	–.626	–.247	.063	.323	.429	.363	.225	–.050	–.409	–.732
	.050	–1.131	–.906	–.428	–.147	.094	.199	.134	.003	–.247	–.582	–1.068
	.100	–1.071	–.688	–.443	–.237	–.048	.044	–.013	–.120	–.314	–.545	–.785
	.200	–.796	–.686	–.509	–.367	–.226	–.152	–.197	–.281	–.420	–.581	–.724
	.300	–.700	–.644	–.532	–.429	–.318	–.254	–.293	–.362	–.468	–.577	–.663
	.400	–.608	–.580	–.523	–.456	–.375	–.321	–.354	–.404	–.481	–.542	–.587
	.500	–.555	–.546	–.530	–.502	–.451	–.412	–.436	–.471	–.512	–.531	–.549
	.600	–.516	–.519	–.534	–.548	–.543	–.520	–.536	–.544	–.536	–.520	–.516
	.700	–.430	–.442	–.470	–.497	–.548	–.572	–.552	–.511	–.481	–.452	–.438
	.800	–.276	–.290	–.323	–.344	–.370	–.358	–.357	–.348	–.335	–.303	–.288
	.900	–.031	–.035	–.056	–.071	–.083	–.072	–.072	–.068	–.063	–.043	–.039
	.950	.074	.074	.079	.069	.059	.070	.070	.072	.077	.079	.066
Lower surface	.0375	.416	.265	.042	–.218	–.677	–1.037	–.829	–.433	–.113	.145	.324
	.075	.332	.216	.052	–.125	–.375	–.880	–.572	–.256	–.058	.128	.259
	.150	.245	.156	.042	–.079	–.221	–.271	–.242	–.159	–.034	.094	.190
	.250	.180	.110	.023	–.064	–.173	–.220	–.192	–.125	–.032	.062	.135
	.350	.131	.072	.002	–.069	–.153	–.196	–.168	–.119	–.044	.035	.093
	.450	.086	.036	–.022	–.082	–.148	–.183	–.158	–.120	–.061	.004	.053
	.550	.046	.005	–.046	–.094	–.143	–.170	–.151	–.124	–.079	–.023	.019
	.650	.025	–.010	–.047	–.082	–.115	–.136	–.123	–.105	–.071	–.032	–.001
	.750	.014	–.010	–.033	–.055	–.073	–.083	–.074	–.068	–.049	–.023	–.001
	.850	.028	.012	.004	.001	.001	–.005	–.003	–.004	–.002	.006	.019
	.925	.042	.038	.055	.063	.080	.073	.071	.063	.056	.047	.042
	.975	.059	.064	.110	.135	.155	.142	.137	.128	.113	.086	.062
	1.000	b.068	b.075	b.144	a.175	a.195	b.186	b.169	b.163	b.147	b.109	b.076

[a]Faired value.

[b]Lower surface only.

[redacted]

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TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) – Continued

(e) $M = 0.56$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.131	2.161	2.191	2.226	2.253	2.280	2.321	2.351	2.378	2.399	2.437	2.476	2.509	2.542
	M_x	.812	.806	.798	.791	.787	.779	.778	.774	.767	.761	.756	.753	.749	.742
	α_x'	2.91	2.50	2.10	1.65	1.31	.96	.46	.09	–.24	–.49	–.94	–1.39	–1.76	–2.14
	$\Delta\beta$	.57	.51	.44	.37	.31	.26	.18	.11	.06	.01	–.06	–.13	–.19	–.24
	c_l	1.66	1.49	1.39	1.27	1.17	1.03	.92	.79	.65	.55	.43	.33	.21	.09
	c_n	.5974	.5400	.5026	.4587	.4252	.3748	.3342	.2858	.2368	.2006	.1581	.1194	.0781	.0323
	c_m	–.0718	–.0677	–.0687	–.0701	–.0762	–.0714	–.0729	–.0723	–.0710	–.0736	–.0739	–.0751	–.0757	–.0752
	c_c	–.0053	–.0023	–.0003	.0119	.0034	.0054	.0082	.0099	.0115	.0130	.0145			
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.176	1.173	1.169	1.166	1.165	1.162	1.161	1.159	1.156	1.154	1.151	1.150	1.149	1.146
	.025	–.420	–.378	–.341	–.272	–.207	–.128	–.038	.033	.113	.166	.235	.308	.354	.409
	.050	–.734	–.687	–.595	–.483	–.408	–.326	–.239	–.170	–.096	–.047	.014	.085	.128	.181
	.100	–.656	–.553	–.532	–.487	–.435	–.374	–.309	–.254	–.194	–.156	–.106	–.049	–.016	.029
	.200	–.714	–.659	–.619	–.567	–.523	–.471	–.422	–.378	–.326	–.296	–.257	–.213	–.184	–.148
	.300	–.734	–.684	–.639	–.599	–.572	–.524	–.476	–.434	–.391	–.362	–.326	–.287	–.264	–.232
	.400	–.747	–.702	–.685	–.625	–.575	–.532	–.495	–.458	–.415	–.391	–.362	–.330	–.308	–.281
	.500	–.776	–.753	–.699	–.639	–.577	–.542	–.517	–.484	–.449	–.429	–.403	–.375	–.358	–.335
	.600	–.844	–.762	–.696	–.639	–.598	–.570	–.555	–.523	–.490	–.473	–.451	–.428	–.412	–.392
	.700	–.440	–.481	–.481	–.498	–.492	–.489	–.489	–.477	–.460	–.453	–.443	–.427	–.417	–.403
	.800	–.216	–.238	–.272	–.302	–.314	–.321	–.334	–.336	–.334	–.341	–.341	–.336	–.336	–.330
	.900	–.009	–.003	–.016	–.029	–.036	–.046	–.063	–.070	–.070	–.078	–.087	–.091	–.094	–.102
	.950	.071	.086	.088	.093	.090	.084	.070	.064	.063	.055	.046	.038	.033	.023
Lower surface	.0375	.264	.205	.149	.096	.045	–.023	–.114	–.189	–.266	–.338	–.441	–.571	–.727	–.977
	.075	.224	.178	.133	.094	.056	.007	–.057	–.107	–.156	–.204	–.262	–.300	–.328	–.357
	.150	.167	.134	.098	.073	.046	.013	–.031	–.065	–.096	–.126	–.163	–.201	–.234	–.270
	.250	.121	.092	.067	.048	.029	.005	–.031	–.055	–.073	–.095	–.126	–.153	–.175	–.202
	.350	.079	.057	.034	.020	.008	–.013	–.042	–.061	–.074	–.093	–.116	–.133	–.151	–.172
	.450	.037	.003	.001	–.010	–.020	–.035	–.058	–.075	–.083	–.099	–.118	–.128	–.141	–.158
	.550	0	–.016	–.031	–.036	–.045	–.057	–.078	–.088	–.094	–.106	–.119	–.127	–.134	–.147
	.650	–.023	–.032	–.044	–.045	–.048	–.057	–.070	–.078	–.081	–.090	–.099	–.101	–.109	–.118
	.750	–.026	–.031	–.037	–.035	–.035	–.039	–.048	–.052	–.052	–.057	–.063	–.063	–.063	–.072
	.850	–.002	–.003	–.006	.003	.005	.005	.002	–.001	.004	.001	–.003	.001	0	0
	.925	.028	.032	.034	.049	.056	.059	.059	.060	.067	.065	.065	.076	.078	.077
	.975	.049	.061	.072	.108	.119	.125	.132	.134	.140	.139	.140	.152	.154	.153
	1.000	[b].058	[b].080	[b].096	[b].162	[b].154	[b].158	[b].179	[b].181	[b].205	[b].180	[a].218	[a].207	[a].222	[a].216

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 7.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) - Continued

(f) $M = 0.60$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.155	2.183	2.210	2.228	2.253	2.282	2.299	2.327	2.372	2.393	2.422	2.457	2.484	2.516
	M_x	.864	.859	.853	.847	.843	.838	.832	.827	.825	.819	.814	.809	.805	.801
	α_x'	2.58	2.20	1.86	1.63	1.30	.95	.74	.38	-.17	-.42	-.76	-1.17	-1.49	-1.85
	$\Delta\beta$	.37	.34	.30	.26	.21	.15	.11	.05	-.06	-.11	-.18	-.27	-.32	-.39
	α_1	1.38	1.26	1.19	1.11	1.04	.95	.89	.79	.64	.59	.48	.35	.25	.14
	c_n	.4968	.4542	.4284	.4019	.3781	.3439	.3219	.2871	.2310	.2129	.1729	.1258	.0897	.0503
	c_m	-.0844	-.0857	-.0836	-.0846	-.0811	-.0805	-.0805	-.0828	-.0847	-.0873	-.0882	-.0909	-.0905	-.0936
	c_c	.0152	.0150	.0132	.0113	.0103	.0107	.0119	.0122	.0142	.0147	.0153	.0159	.0167	.0165
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.200	1.198	1.195	1.192	1.190	1.188	1.184	1.183	1.182	1.179	1.177	1.174	1.172	1.171
	.025	-.175	-.125	-.089	-.061	-.169	-.028	.060	.120	.211	.235	.307	.340	.371	.416
	.050	-.468	-.372	-.320	-.282	-.235	-.189	-.157	-.099	-.013	.010	.055	.111	.141	.188
	.100	-.395	-.368	-.352	-.335	-.304	-.270	-.244	-.201	-.132	-.115	-.079	-.032	-.008	.031
	.200	-.538	-.502	-.472	-.454	-.431	-.405	-.386	-.351	-.296	-.281	-.252	-.214	-.193	-.159
	.300	-.589	-.556	-.529	-.508	-.482	-.465	-.462	-.443	-.393	-.377	-.350	-.314	-.292	-.259
	.400	-.644	-.604	-.578	-.565	-.556	-.538	-.514	-.482	-.447	-.438	-.412	-.377	-.356	-.327
	.500	-.685	-.649	-.633	-.631	-.617	-.586	-.571	-.553	-.504	-.495	-.478	-.455	-.435	-.407
	.600	-.766	-.748	-.740	-.732	-.711	-.688	-.665	-.631	-.606	-.597	-.561	-.558	-.547	-.524
	.700	-.864	-.858	-.846	-.832	-.811	-.775	-.757	-.744	-.715	-.702	-.683	-.635	-.592	-.557
	.800	-.261	-.264	-.262	-.275	-.301	-.299	-.293	-.315	-.345	-.342	-.357	-.372	-.385	-.392
	.900	-.191	-.161	-.113	-.061	-.019	-.004	-.008	-.018	-.025	-.039	-.051	-.062	-.072	-.080
	.950	-.164	-.110	-.042	.021	.065	.090	.099	.101	.100	.093	.087	.081	.074	.067
Lower surface	.0375	.146	.085	.043	.001	-.056	-.103	-.151	-.233	-.371	-.433	-.559	-.742	-.860	-1.015
	.075	.136	.091	.059	.028	-.013	-.046	-.079	-.134	-.216	-.251	-.320	-.503	-.638	-.833
	.150	.103	.069	.047	.025	-.004	-.024	-.048	-.085	-.135	-.156	-.189	-.225	-.238	-.238
	.250	.068	.041	.026	.010	-.012	-.024	-.041	-.067	-.103	-.119	-.147	-.176	-.192	-.209
	.350	.026	.005	-.006	-.019	-.037	-.047	-.059	-.079	-.107	-.119	-.139	-.159	-.170	-.186
	.450	-.021	-.038	-.044	-.054	-.067	-.073	-.081	-.096	-.119	-.127	-.139	-.151	-.160	-.172
	.550	-.072	-.083	-.086	-.091	-.101	-.102	-.106	-.116	-.130	-.135	-.141	-.148	-.152	-.159
	.650	-.102	-.107	-.104	-.104	-.108	-.104	-.103	-.108	-.114	-.116	-.118	-.121	-.121	-.125
	.750	-.117	-.111	-.102	-.096	-.093	-.084	-.078	-.076	-.076	-.075	-.074	-.072	-.072	-.072
	.850	-.110	-.093	-.072	-.058	-.047	-.033	-.024	-.017	-.008	-.006	-.002	.003	.006	.006
	.925	-.105	-.071	-.034	-.007	.011	.030	.042	.054	.066	.068	.073	.081	.083	.084
	.975	-.151	-.092	-.027	.023	.057	.084	.101	.113	.126	.131	.136	.142	.146	.149
	1.000	[b]-.195	[b]-.112	[b]-.025	[b].040	[b].077	[b].114	[b].137	[b].146	[b].158	[b].165	[b].171	[b].177	[b].180	[b].182

[b]Lower surface only.

[redacted]

[redacted]

TABLE 7.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) - Continued

(g) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

J	2.100	2.125	2.153	2.176	2.199	2.220	2.246	2.284	2.306	2.335	2.347	2.386	2.413	2.445
M_r	.943	.937	.930	.925	.921	.916	.907	.904	.895	.890	.885	.879	.874	.869
α_r	3.32	2.98	2.61	2.30	2.00	1.73	1.40	.92	.64	.28	.14	-.34	-.65	-1.03
$\Delta\beta$	.46	.39	.31	.24	.17	.12	.04	-.07	-.14	-.22	-.25	-.37	-.45	-.55
α_i	1.22	1.13	1.06	.95	.86	.83	.73	.61	.56	.43	.34	.23	.12	.07
c_n	.4368	.4071	.3832	.3432	.3103	.2987	.2632	.2206	.1916	.1561	.1239	.0839	.0445	.0265
c_m	-.1019	-.1018	-.0959	-.0906	-.0883	-.0898	-.0888	-.0872	-.0865	-.0887	-.0821	-.0819	-.0870	-.0965
c_o	.0359	.0351	.0348	.0351	.0349	.0346	.0336	.0318	.0314	.0292	.0288	.0259	.0256	.0247
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.242	1.238	1.235	1.232	1.230	1.227	1.222	1.221	1.217	1.214	1.211	1.208	1.205	1.203
	.025	.015	.037	.051	.082	.109	.135	.173	.219	.250	.287	.308	.344	.375	.414
	.050	-.258	-.211	-.187	-.147	-.115	-.088	-.049	-.003	.028	.065	.085	.121	.152	.190
	.100	-.226	-.215	-.215	-.203	-.189	-.174	-.146	-.111	-.087	-.057	-.043	-.015	.011	.042
	.200	-.376	-.366	-.361	-.340	-.324	-.310	-.291	-.267	-.249	-.224	-.214	-.193	-.172	-.145
	.300	-.435	-.427	-.426	-.410	-.397	-.382	-.359	-.336	-.326	-.317	-.315	-.304	-.284	-.255
	.400	-.489	-.482	-.484	-.469	-.455	-.443	-.427	-.412	-.403	-.386	-.376	-.354	-.341	-.328
	.500	-.544	-.538	-.538	-.518	-.508	-.501	-.493	-.482	-.473	-.451	-.446	-.435	-.425	-.400
	.600	-.625	-.620	-.621	-.611	-.609	-.604	-.600	-.584	-.575	-.561	-.559	-.551	-.528	-.511
	.700	-.716	-.714	-.719	-.715	-.717	-.716	-.709	-.695	-.686	-.675	-.676	-.659	-.646	-.639
	.800	-.797	-.806	-.816	-.818	-.816	-.814	-.811	-.794	-.773	-.732	-.712	-.662	-.664	-.687
	.900	-.379	-.376	-.365	-.342	-.342	-.324	-.280	-.221	-.202	-.178	-.165	-.127	-.098	-.062
	.950	-.353	-.351	-.341	-.317	-.310	-.289	-.245	-.194	-.172	-.145	-.126	-.077	-.042	.012
Lower surface	.0375	.137	.089	.044	-.009	-.060	-.104	-.187	-.293	-.376	-.480	-.547	-.631	-.693	-.765
	.075	.141	.104	.066	.026	-.012	-.044	-.100	-.162	-.212	-.304	-.397	-.537	-.622	-.697
	.150	.118	.089	.058	.029	.001	-.022	-.061	-.100	-.126	-.147	-.170	-.244	-.371	-.544
	.250	.084	.060	.032	.009	-.013	-.031	-.061	-.093	-.115	-.137	-.159	-.188	-.204	-.216
	.350	.040	.019	-.006	-.026	-.046	-.061	-.088	-.114	-.131	-.150	-.168	-.194	-.209	-.221
	.450	-.014	-.034	-.057	-.075	-.093	-.105	-.129	-.151	-.164	-.179	-.197	-.218	-.231	-.238
	.550	-.079	-.097	-.121	-.136	-.153	-.164	-.184	-.201	-.210	-.220	-.236	-.252	-.259	-.254
	.650	-.142	-.161	-.183	-.198	-.212	-.221	-.235	-.243	-.246	-.250	-.260	-.263	-.256	-.231
	.750	-.187	-.204	-.223	-.233	-.245	-.250	-.256	-.251	-.240	-.230	-.233	-.214	-.195	-.166
	.850	-.224	-.243	-.259	-.261	-.264	-.252	-.231	-.201	-.182	-.165	-.160	-.139	-.112	-.081
	.925	-.206	-.221	-.234	-.236	-.236	-.224	-.198	-.164	-.145	-.125	-.114	-.076	-.051	-.011
	.975	-.286	-.300	-.313	-.315	-.312	-.290	-.246	-.192	-.168	-.137	-.115	-.061	-.025	.030
	1.000	[a]-.330	[a]-.338	[a]-.333	[b]-.365	[b]-.423	[b]-.346	[b]-.289	[b]-.215	[b]-.182	[b]-.140	[b]-.126	[b]-.062	[b]-.010	[b].040

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) – Continued

(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.273	2.222	2.182	2.120	2.056	2.020	1.977	1.928	1.867	1.820	1.753	1.715
	M_x	.697	.688	.680	.672	.663	.659	.651	.645	.635	.627	.622	.616
	α_x'	1.05	1.70	2.22	3.05	3.93	4.43	5.04	5.76	6.67	7.39	8.44	9.05
	$\Delta\beta$	.31	.41	.49	.60	.71	.76	.83	.89	.97	1.03	1.08	1.11
	α_i	.79	.96	1.04	1.24	1.41	1.56	1.72	1.85	2.06	2.18	2.16	2.18
	c_n	.3371	.4074	.4487	.5316	.6026	.6697	.7394	.7916	.8877	.9432	.9342	.9445
	c_m	–.0545	–.0549	–.0493	–.0489	–.0439	–.0361	–.0334	–.0234	–.0146	–.0095	–.0221	–.0357
	c_o												
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.128	1.124	1.121	1.118	1.113	1.112	1.110	1.108	1.105	1.102	1.100	1.097
	.025	–.206	–.352	–.493	–.728	–1.028	–1.713	–2.022	–2.260	–2.517	–2.661	–2.170	–1.774
	.050	–.339	–.478	–.594	–.791	–.948	–1.146	–1.842	–2.031	–2.253	–2.418	–1.923	–1.671
	.100	–.390	–.491	–.574	–.711	–.829	–.865	–.930	–1.254	–1.836	–2.018	–1.603	–1.532
	.200	–.405	–.467	–.518	–.603	–.669	–.706	–.731	–.743	–.811	–.980	–1.201	–1.245
	.300	–.428	–.473	–.508	–.564	–.609	–.636	–.659	–.674	–.671	–.687	–.931	–.993
	.400	–.415	–.446	–.470	–.512	–.540	–.559	–.575	–.585	–.584	–.581	–.702	–.768
	.500	–.434	–.452	–.467	–.496	–.514	–.522	–.526	–.535	–.527	–.529	–.538	–.578
	.600	–.425	–.439	–.447	–.459	–.467	–.466	–.465	–.462	–.450	–.442	–.410	–.453
	.700	–.396	–.400	–.402	–.408	–.404	–.395	–.384	–.377	–.364	–.354	–.315	–.355
	.800	–.276	–.279	–.275	–.271	–.263	–.247	–.231	–.226	–.218	–.213	–.218	–.260
	.900	–.055	–.054	–.051	–.049	–.043	–.033	–.032	–.036	–.040	–.049	–.138	–.184
	.950	.065	.064	.063	.061	.057	.054	.044	.037	.032	.024	–.102	–.149
Lower surface	.0375	.002	.107	.185	.301	.394	.458	.521	.573	.641	.689	.714	.740
	.075	.078	.152	.209	.291	.361	.408	.457	.496	.553	.587	.606	.629
	.150	.090	.139	.179	.237	.287	.326	.362	.391	.434	.463	.473	.488
	.250	.030	.067	.097	.144	.186	.216	.245	.273	.313	.336	.348	.365
	.350	–.006	.025	.052	.087	.123	.151	.174	.195	.231	.251	.258	.273
	.450	–.023	.001	.023	.053	.081	.104	.126	.142	.174	.192	.192	.205
	.550	–.033	–.015	.002	.030	.054	.072	.089	.103	.129	.145	.139	.145
	.650	–.047	–.033	–.019	–.001	.018	.034	.045	.057	.079	.090	.077	.078
	.750	–.029	–.019	–.010	.001	.016	.026	.032	.041	.057	.065	.038	.034
	.850	.011	.015	.019	.022	.029	.032	.032	.036	.045	.050	.004	–.006
	.950	.060	.058	.058	.058	.057	.056	.050	.047	.052	.051	–.012	–.033
	.975	[a].090	[a].082	[a].076	[a].065	[a].055	[a].043	[a].029	[a].021	[a].024	[a].019	[a]–.088	[a]–.124
	1.000	[a].195	[a].150	[a].190	[a].180	[a].155	[a]0	[a]0	[a]0	[a].160	[a]0	[a]–.145	[a]–.215

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) – Continued

(1) One-blade propeller; M = 0.57; $\beta_{0.75R}$ = 45°.

J	2.447	2.425	2.397	2.365	2.332	2.301	2.281	2.245	2.230	2.202	2.178	2.149	2.130	2.103	2.084	2.063	2.040	2.020	2.000
M_x	.764	.770	.773	.779	.780	.784	.790	.794	.799	.804	.807	.813	.821	.826	.830	.833	.838	.842	.847
α_x'	-1.05	-.80	-.46	-.08	.32	.70	.95	1.41	1.60	1.96	2.28	2.66	2.91	3.28	3.54	3.83	4.15	4.43	4.71
$\Delta\beta$	-.08	-.04	.02	.08	.15	.23	.26	.33	.36	.42	.47	.53	.57	.63	.67	.72	.77	.81	.86
α_i	.33	.42	.52	.62	.80	.90	.99	1.04	1.11	1.18	1.25	1.30	1.36	1.46	1.52	1.59	1.67	1.70	1.91
c_n	.1419	.1823	.2245	.2639	.3432	.3832	.4226	.4439	.4765	.5048	.5355	.5574	5832	.6232	.6503	.6819	.7181	.7316	.8206
c_m	-.0647	-.0652	-.0655	-.0639	-.0582	-.0580	-.0582	-.0556	-.0561	-.0567	-.0528	-.0524	-.0420	-.0370	-.0655	-.0744	-.0844	-.0900	-.1285
c_o				.0102	.0097	.0081	.0067	.0055	.0034	.0012	-.0004	-.0016	-.0023	-.0023	-.0006	.0011	.0044	.0070	.0136
c/b	Pressure coefficient, P																		
Upper surface																			
0.000	1.155	1.158	1.159	1.160	1.162	1.164	1.166	1.168	1.170	1.172	1.174	1.177	1.179	1.182	1.183	1.185	1.189	1.189	1.193
.025	.263	.210	.146	.083	.002	-.072	-.132	-.192	-.243	-.300	-.348	-.380	-.404	-.429	-.445	-.458	-.459	-.468	-.539
.050	.034	-.015	-.072	-.131	-.203	-.270	-.328	-.263	-.439	-.515	-.595	-.638	-.668	-.699	-.709	-.718	-.718	-.703	-.691
.100	-.103	-.144	-.194	-.239	-.300	-.356	-.406	-.460	-.492	-.516	-.534	-.578	-.638	-.571	-.684	-.708	-.725	-.725	-.721
.200	-.216	-.252	-.292	-.331	-.381	-.432	-.481	-.525	-.538	-.554	-.630	-.662	-.681	-.715	-.741	-.765	-.787	-.796	-.806
.300	-.297	-.329	-.367	-.401	-.448	-.499	-.539	-.560	-.566	-.621	-.645	-.694	-.730	-.770	-.794	-.823	-.850	-.856	-.861
.400	-.326	-.355	-.387	-.418	-.459	-.504	-.532	-.552	-.596	-.638	-.660	-.696	-.735	-.782	-.808	-.834	-.864	-.871	-.881
.500	-.381	-.407	-.438	-.463	-.499	-.538	-.561	-.583	-.625	-.676	-.733	-.749	-.769	-.815	-.854	-.876	-.900	-.909	-.921
.600	[a]-.442	[a]-.456	[a]-.500	[a]-.512	[a]-.534	[a]-.545	[a]-.541	[a]-.553	[a]-.584	[a]-.599	[a]-.582	[a]-.593	[a]-.589	[a]-.627	[a]-.635	[a]-.621	[a]-.638	[a]-.651	[a]-.781
.700	-.401	-.416	-.427	-.433	-.441	-.446	-.442	-.444	-.433	-.424	-.406	-.392	-.394	-.408	-.429	-.429	-.429	-.429	-.661
.800	-.271	-.273	-.274	-.270	-.268	-.263	-.251	-.246	-.233	-.220	-.208	-.192	-.183	-.188	-.226	-.280	-.340	-.367	-.615
.900	-.044	-.041	-.035	-.028	-.025	-.018	-.007	-.004	.006	.007	.009	.002	-.005	-.035	-.087	-.154	-.250	-.307	-.577
.950	.080	.083	.086	.091	.091	.093	.098	.097	.099	.092	.086	.072	.056	.025	-.025	-.084	-.186	-.261	-.314
Lower surface																			
.0375	-.419	-.346	-.256	-.160	.339	.379	.394	.398	.406	.408	.415	.430	.495	.500	.506	.429	.434	.439	.444
.075	-.194	-.153	-.107	-.058	-.006	.040	.083	.117	.150	.183	.213	.241	.266	.295	.314	.340	.367	.378	.396
.150	-.085	-.055	-.021	.011	.042	.073	.107	.128	.155	.177	.201	.219	.239	.262	.276	.297	.318	.330	.340
.250	-.098	-.078	-.057	-.029	-.006	.017	.041	.058	.079	.095	.111	.127	.142	.160	.172	.189	.207	.216	.228
.350	-.107	-.093	-.078	-.057	-.040	-.021	.001	.012	.030	.043	.056	.066	.080	.094	.103	.119	.132	.140	.149
.450	-.092	-.082	-.067	-.052	-.040	-.024	-.005	.002	.017	.026	.037	.044	.054	.066	.070	.084	.096	.101	.106
.550	-.098	-.092	-.083	-.069	-.060	-.048	-.034	-.028	-.016	-.010	-.005	.001	.009	.017	.019	.030	.038	.039	.044
.650	-.092	-.087	-.081	-.070	-.066	-.057	-.046	-.044	-.034	-.032	-.029	-.028	-.023	-.020	-.021	-.016	-.012	-.014	-.013
.750	-.059	-.056	-.055	-.047	-.044	-.038	-.031	-.031	-.025	-.026	-.025	-.028	-.027	-.027	-.034	-.035	-.038	-.045	-.046
.850	.004	.004	.004	.006	-.018	.008	.015	.011	.014	.011	.007	.001	-.002	-.008	-.022	-.029	-.046	-.052	-.074
.925	.069	.067	.063	.064	.061	.058	.061	.056	.058	.052	.043	.030	.024	.011	-.007	-.025	-.058	-.087	-.112
.975	.114	.109	.098	.097	[a].123	[a].098	[a].096	[a].089	[a].091	[a].084	[a].069	[a].044	[a].048	[a].029	[a].013	[a]-.020	[a]-.064	[a]-.113	[a]-.150
1.000	[b].134	[b].133	[b].113	[b].113	[b].153	[b].118	[b].114	[b].107	[b].108	[b].100	[b].082	[b].052	[b].060	[b].036	[a].021	[a]-.015	[a]-.068	[b]-.132	[b]-.168

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) – Continued

(j) One-blade propeller; M = 0.59; $\beta_{0.75R}$ = 45°.

	J	2.222	2.202	2.180	2.150	2.124	2.108	2.081	2.060	2.038	2.013	1.996	1.977	1.955	1.943
	M_x	.830	.837	.840	.840	.845	.854	.860	.863	.868	.871	.878	.881	.886	.890
	α_x'	1.70	1.96	2.25	2.65	3.00	3.21	3.58	3.87	4.18	4.53	4.77	5.04	5.36	5.54
	$\Delta\beta$	.33	.36	.40	.44	.48	.50	.53	.55	.58	.61	.64	.67	.71	.73
	α_i	1.05	1.11	1.18	1.28	1.34	1.38	1.42	1.47	1.50	1.56	1.60	1.64	1.68	1.71
	c_n	.4465	.4729	.5052	.5484	.5729	.5929	.6084	.6277	.6432	.6710	.6877	.7077	.7219	.7368
	c_m	–.0692	–.0729	–.0782	–.0826	–.0826	–.0847	–.0832	–.0829	–.0823	–.0855	–.0878	–.0911	–.0967	–.1000
	c_o	.0074	.0079	.0097	.0096	.0108	.0118	.0124	.0135	.0136	.0143	.0148	.0152	.0159	.0160
	o/b	Pressure coefficient, P													
Upper surface	0.000	1.184	1.187	1.189	1.189	1.192	1.195	1.198	1.199	1.203	1.204	1.207	1.209	1.211	1.214
	.025	–.144	–.185	–.227	–.256	–.277	–.297	–.320	–.341	–.366	–.386	–.385	–.385	–.402	–.434
	.050	–.353	–.400	–.463	–.504	–.527	–.549	–.573	–.588	–.598	–.610	–.612	–.606	–.595	–.589
	.100	–.419	–.432	–.444	–.457	–.498	–.536	–.563	–.576	–.592	–.614	–.624	–.627	–.623	–.619
	.200	–.474	–.506	–.440	–.586	–.596	–.613	–.638	–.656	–.677	–.698	–.709	–.714	–.717	–.715
	.300	–.560	–.570	–.605	–.629	–.646	–.667	–.691	–.712	–.733	–.755	–.764	–.771	–.771	–.771
	.400	–.579	–.607	–.636	–.663	–.681	–.701	–.721	–.738	–.759	–.783	–.794	–.800	–.800	–.799
	.500	–.660	–.672	–.698	–.716	–.731	–.752	–.775	–.787	–.801	–.820	–.829	–.838	–.840	–.838
	.600	–.721	–.754	–.771	–.783	–.790	–.810	–.835	–.851	–.866	–.880	–.882	–.883	–.870	–.852
	.700	–.676	–.732	–.784	–.778	–.701	–.626	–.530	–.477	–.439	–.429	–.420	–.436	–.471	–.483
	.800	–.199	–.200	–.223	–.238	–.258	–.286	–.307	–.324	–.331	–.346	–.357	–.371	–.386	–.392
	.900	–.008	–.027	–.081	–.122	–.170	–.223	–.259	–.292	–.314	–.335	–.346	–.361	–.377	–.384
	.950	.062	.037	–.021	–.065	–.113	–.187	–.233	–.276	–.305	–.328	–.341	–.359	–.376	–.383
Lower surface	.0375	.103	.137	.177	.218	.252	.279	.310	.342	.369	.403	.425	.444	.466	.484
	.075	.118	.145	.174	.207	.235	.257	.281	.307	.330	.358	.378	.393	.413	.430
	.150	.400	.402	.406	.417	.425	.427	.432	.440	.446	.453	.456	.462	.466	.472
	.250	.057	.071	.086	.109	.126	.139	.155	.172	.188	.206	.219	.230	.245	.258
	.350	.003	.014	.025	.043	.057	.068	.081	.096	.108	.125	.137	.147	.160	.172
	.450	–.020	–.013	–.007	.010	.021	.028	.039	.052	.063	.077	.088	.095	.106	.118
	.550	–.051	–.047	–.044	–.032	–.023	–.019	–.012	–.003	.005	.016	.025	.032	.041	.053
	.650	–.072	–.072	–.074	–.068	–.064	–.065	–.061	–.056	–.052	–.044	–.037	–.034	–.026	–.016
	.750	–.065	–.070	–.079	–.076	–.079	–.086	–.088	–.089	–.091	–.088	–.082	–.083	–.077	–.069
	.850	–.027	–.035	–.052	–.058	–.067	–.086	–.097	–.105	–.113	–.115	–.114	–.116	–.114	–.106
	.925	.020	.007	–.017	–.031	–.053	–.086	–.108	–.126	–.141	–.148	–.149	–.151	–.149	–.142
	.975	[a].080	[a].042	[a].010	[a]–.018	[a]–.041	[a]–.090	[a]–.122	[a]–.166	[a]–.197	[a]–.200	[a]–.210	[a]–.200	[a]–.212	[a]–.207
	1.000	[a].122	[a].061	[a].021	[a]–.009	[a]–.035	[b]–.090	[b]–.130	[a]–.208	[a]–.240	[a]–.252	[a]–.280	[b]–.220	[b]–.290	[a]–.295

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) – Continued

(k) One-blade propeller; M = 0.61; $\beta_{0.75R} = 45^{\circ}$.

	J	2.287	2.220	2.197	2.176	2.150	2.130	2.103	2.084	2.064	2.042	2.025	2.010	1.991	1.964
	M_r	.856	.858	.866	.869	.874	.878	.884	.888	.891	.897	.900	.907	.912	.914
	α_r'	.88	1.73	2.03	2.30	2.65	2.91	3.28	3.54	3.82	4.12	4.36	4.57	4.84	5.23
	$\Delta\beta$	.14	.28	.32	.35	.38	.40	.42	.44	.48	.52	.56	.59	.62	.71
	α_i	.69	.98	1.03	1.10	1.16	1.21	1.25	1.28	1.35	1.40	1.44	1.51	1.55	1.59
	c_n	.2935	.4194	.4432	.4729	.5006	.5168	.5355	.5503	.5806	.6039	.6226	.6477	.6639	.6845
	c_m	–.0673	–.0778	–.0783	–.0829	–.0839	–.0829	–.0844	–.0826	–.0921	–.0946	–.0982	–.1018	–.1036	–.1086
	c_o	.0153	.0154	.0167	.0171	.0177	.0186	.0189	.0190	.0200	.0200	.0205	.0209	.0201	.0212
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.197	1.198	1.201	1.203	1.205	1.208	1.210	1.212	1.215	1.219	1.219	1.222	1.226	1.226
	.025	.104	–.051	–.082	–.113	–.152	–.177	–.199	–.216	–.232	–.249	–.259	–.279	–.297	–.312
	.050	–.115	–.269	–.305	–.344	–.399	–.429	–.448	–.469	–.484	–.496	–.501	–.505	–.512	–.521
	.100	–.238	–.350	–.357	–.363	–.372	–.395	–.438	–.467	–.483	–.494	–.501	–.510	–.522	–.535
	.200	–.361	–.418	–.454	–.490	–.515	–.527	–.537	–.554	–.569	–.579	–.589	–.600	–.611	–.625
	.300	–.408	–.510	–.518	–.543	–.571	–.586	–.599	–.616	–.630	–.641	–.654	–.664	–.674	–.686
	.400	–.482	–.552	–.568	–.581	–.611	–.627	–.640	–.651	–.662	–.673	–.684	–.694	–.704	–.719
	.500	–.556	–.617	–.636	–.651	–.672	–.689	–.699	–.712	–.721	–.725	–.732	–.739	–.747	–.759
	.600	–.635	–.708	–.715	–.726	–.743	–.761	–.770	–.781	–.792	–.793	–.797	–.783	–.770	–.760
	.700	–.748	–.819	–.826	–.828	–.825	–.816	–.804	–.782	–.813	–.812	–.823	–.841	–.828	–.857
	.800	–.230	–.240	–.255	–.257	–.270	–.280	–.297	–.315	–.338	–.351	–.366	–.380	–.380	–.403
	.900	–.049	–.123	–.173	–.195	–.227	–.245	–.269	–.290	–.313	–.329	–.344	–.359	–.363	–.386
	.950	–.008	–.071	–.132	–.163	–.206	–.229	–.260	–.284	–.310	–.326	–.341	–.355	–.359	–.384
Lower surface	.0375	–.098	.071	.109	.146	.188	.217	.251	.284	.308	.337	.353	.384	.410	.431
	.075	–.027	.097	.125	.155	.188	.210	.238	.262	.284	.309	.323	.348	.372	.387
	.150	[a]–.015	[a].090	[a].139	[a].149	[a].169	[a].189	[a].198	[a].211	[a].230	[a].255	[a].269	[a].286	[a].288	[a].318
	.250	–.024	.043	.061	.078	.098	.112	.129	.142	.158	.177	.184	.204	.219	.230
	.350	–.066	–.013	.002	.016	.032	.042	.058	.068	.083	.099	.106	.124	.139	.148
	.450	–.082	–.039	–.029	–.017	–.003	.005	.017	.025	.038	.052	.058	.074	.087	.094
	.550	–.110	–.077	–.071	–.062	–.053	–.047	–.036	–.029	–.020	–.009	–.003	.010	.022	.029
	.650	–.129	–.109	–.110	–.104	–.100	–.097	–.090	–.086	–.082	–.072	–.068	–.056	–.045	–.040
	.750	–.115	–.110	–.119	–.119	–.123	–.126	–.125	–.126	–.124	–.117	–.117	–.107	–.096	–.095
	.850	–.067	–.080	–.098	–.108	–.122	–.130	–.136	–.142	–.145	–.141	–.142	–.134	–.125	–.125
	.925	–.017	–.049	–.080	–.098	–.125	–.138	–.151	–.161	–.166	–.163	–.163	–.156	–.146	–.148
	.975	[a].035	[a]–.040	[a]–.060	[a]–.090	[a]–.149	[a]–.148	[a]–.184	[a]–.198	[a]–.215	[a]–.219	[a]–.225	[a]–.223	[a]–.203	[a]–.225
	1.000	[a].063	[b]–.001	[a]–.053	[a]–.108	[a]–.172	[a]–.185	[a]–.219	[a]–.220	[a]–.279	[a]–.275	[a]–.299	[a]–.320	[a]–.281	[a]–.330

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 7.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-306.62 PROPELLER BLADE SECTION (x = 0.70) – Concluded

(i) One-blade propeller; M = 0.64; $\beta_{0.75R} = 45^{\circ}$.

	J	2.250	2.212	2.185	2.166	2.138	2.125	2.100	2.077	2.059	2.040	2.011	1.992
	M_x	.895	.902	.904	.911	.912	.918	.921	.926	.931	.935	.940	.944
	α_x'	1.35	1.83	2.19	2.43	2.81	2.98	3.32	3.64	3.89	4.15	4.56	4.83
	$\Delta\beta$	.03	.14	.21	.27	.35	.39	.46	.52	.57	.63	.74	.81
	α_1	.56	.67	.71	.78	.84	.92	1.03	1.12	1.17	1.24	1.30	1.33
	c_n	.2394	.2877	.3039	.3355	.3594	.3945	.4419	.4781	.5042	.5332	.5613	.5742
	c_m	–.0596	–.0661	–.0705	–.0755	–.0792	–.0881	–.0986	–.1064	–.1097	–.1141	–.1181	–.1267
	c_o	.0267	.0281	.0286	.0291	.0294	.0297	.0314	.0318	.0315	.0318	.0326	.0328
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.216	1.220	1.221	1.223	1.225	1.228	1.230	1.233	1.235	1.238	1.240	1.243
	.025	.128	.132	.102	.075	.053	.028	–.003	–.028	–.048	–.070	–.092	–.103
	.050	–.092	–.090	–.120	–.147	–.172	–.208	–.249	–.280	–.299	–.320	–.342	–.354
	.100	–.218	–.206	–.222	–.231	–.238	–.243	–.249	–.263	–.294	–.328	–.356	–.368
	.200	–.322	–.293	–.308	–.336	–.360	–.383	–.398	–.408	–.414	–.432	–.454	–.466
	.300	–.410	–.394	–.406	–.418	–.434	–.454	–.469	–.479	–.488	–.503	–.523	–.535
	.400	–.452	–.445	–.462	–.468	–.483	–.501	–.517	–.525	–.532	–.545	–.562	–.572
	.500	–.533	–.514	–.532	–.539	–.546	–.561	–.570	–.582	–.586	–.594	–.609	–.613
	.600	–.623	–.599	–.614	–.616	–.614	–.617	–.615	–.610	–.600	–.588	–.581	–.568
	.700	–.736	–.720	–.729	–.729	–.733	–.740	–.751	–.758	–.764	–.773	–.785	–.787
	.800	–.357	–.371	–.397	–.439	–.482	–.531	–.634	–.691	–.718	–.753	–.802	–.821
	.900	–.241	–.235	–.255	–.273	–.291	–.310	–.340	–.356	–.368	–.384	–.407	–.430
	.950	–.226	–.223	–.242	–.261	–.279	–.297	–.326	–.340	–.353	–.368	–.391	–.411
Lower surface	.0375	–.135	–.032	.008	.053	.083	.121	.162	.199	.237	.270	.295	.316
	.075	–.055	.033	.063	.097	.122	.154	.188	.189	.173	.200	.210	.224
	.150	–.001	.074	.095	.120	.139	.162	.189	.209	.228	.249	.262	.273
	.250	–.063	.005	.019	.042	.057	.078	.100	.118	.135	.151	.163	.173
	.350	–.113	–.051	–.038	–.019	–.008	.011	.029	.046	.062	.077	.086	.096
	.450	–.140	–.082	–.072	–.055	–.047	–.030	–.013	.003	.016	.028	.037	.046
	.550	–.180	–.128	–.120	–.105	–.097	–.083	–.069	–.056	–.040	–.029	–.022	–.014
	.650	–.236	–.190	–.185	–.174	–.167	–.155	–.141	–.127	–.114	–.104	–.099	–.091
	.750	–.248	–.211	–.211	–.204	–.200	–.192	–.182	–.171	–.159	–.150	–.146	–.139
	.850	–.232	–.206	–.211	–.209	–.209	–.204	–.199	–.190	–.180	–.174	–.172	–.166
	.925	–.217	–.198	–.204	–.204	–.205	–.198	–.194	–.186	–.176	–.170	–.168	–.163
	.975	[a]–.215	[a]–.200	[a]–.213	[a]–.215	[a]–.218	[a]–.215	[a]–.200	[a]–.205	[a]–.185	[a]–.178	[a]–.183	[a]–.190
	1.000	[a]–.215	[a]–.208	[a]–.228	[a]–.225	[a]–.230	[a]–.228	[a]–.225	[a]–.220	[a]–.200	[a]–.185	[a]–.190	[a]–.200

[a]Faired value.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78)

(a) N = 1140 rpm; $\beta_{0.75R}$ = 45°.

J	2.584	2.479	2.390	2.302	2.209	2.120	2.026	1.914	1.831	1.729	1.605	1.673	1.780	1.872	1.974	2.063	2.158	2.254	2.354	2.443	2.547
M_x	.617	.607	.597	.586	.571	.564	.552	.536	.526	.519	.503	.513	.527	.536	.545	.556	.567	.578	.588	.598	.612
α_x'	-2.62	-1.43	-.38	.69	1.87	3.03	4.32	5.91	7.13	8.69	10.68	9.58	7.91	6.52	5.05	3.81	2.53	1.29	.05	-1.01	-2.21
$\Delta\beta$	-.13	-.05	.04	.14	.26	.35	.44	.56	.64	.75	.89	.81	.70	.60	.49	.40	.31	.21	.08	-.01	-.10
α_i	.01	.28	.56	.82	1.13	1.45	1.74	2.18	2.44	2.70	2.96	2.85	2.53	2.35	1.97	1.60	1.29	.97	.65	.41	.09
c_n	.0032	.0910	.1813	.2639	.3639	.4686	.5542	.6877	.7662	.8423	.9215	.8901	.7927	.7399	.6203	.5103	.4161	.3126	.2106	.1326	.0300
c_m	-.0610	-.0598	-.0602	-.0561	-.0526	-.0487	-.0452	-.0358	-.0296	-.0209	-.0460	-.0286	-.0245	-.0302	-.0463	-.0480	-.0488	-.0528	-.0585	-.0588	-.0615
c_o																					
c/b	Pressure coefficient, P																				
Upper surface 0.000	1.098	1.095	1.092	1.088	1.084	1.082	1.078	1.074	1.071	1.069	1.065	1.067	1.071	1.074	1.076	1.079	1.082	1.086	1.089	1.092	1.096
.025	.384	.220	.018	-.186	-.419	-.765	-1.019	-1.964	-1.941	-1.779	-1.637	-1.753	-1.845	-1.937	-1.436	-.916	-.610	-.307	-.056	.140	.338
.050	.185	.049	-.113	-.269	-.437	-.681	-.896	-1.505	-1.818	-1.715	-1.557	-1.720	-1.841	-1.779	-1.014	-.802	-.574	-.361	-.170	-.013	.146
.100	.039	-.063	-.181	-.290	-.390	-.565	-.717	-.887	-1.400	-1.593	-1.435	-1.585	-1.607	-1.222	-.794	-.647	-.491	-.350	-.221	-.109	.012
.200	-.083	-.152	-.232	-.303	-.349	-.473	-.565	-.657	-.760	-1.120	-1.135	-1.165	-.894	-.677	-.614	-.524	-.432	-.340	-.258	-.184	-.100
.300	-.159	-.211	-.271	-.322	-.349	-.445	-.508	-.579	-.593	-.761	-.917	-.840	-.635	-.578	-.545	-.484	-.418	-.350	-.290	-.233	-.171
.400	-.204	-.243	-.289	-.328	-.339	-.417	-.459	-.512	-.506	-.545	-.714	-.615	-.520	-.506	-.486	-.445	-.396	-.348	-.303	-.260	-.211
.500	-.235	-.263	-.296	-.326	-.324	-.389	-.422	-.459	-.446	-.536	-.581	-.492	-.434	-.450	-.436	-.410	-.376	-.340	-.309	-.275	-.239
.600	-.282	-.300	-.326	-.345	-.331	-.385	-.443	-.419	-.396	-.363	-.463	-.391	-.370	-.407	-.409	-.396	-.376	-.354	-.333	-.307	-.280
.700	-.277	-.289	-.306	-.318	-.291	-.333	-.340	-.343	-.315	-.282	-.367	-.302	-.289	-.330	-.343	-.341	-.330	-.319	-.311	-.293	-.276
.800	-.249	-.254	-.261	-.266	-.226	-.259	-.255	-.253	-.222	-.199	-.290	-.227	-.198	-.238	-.252	-.264	-.263	-.263	-.264	-.253	-.244
.900	-.122	-.120	-.120	-.118	-.073	-.097	-.088	-.090	-.082	-.102	-.221	-.147	-.081	-.089	-.084	-.097	-.104	-.113	-.122	-.120	-.120
.950	-.005	-.001	.001	.003	.048	.020	.019	.005	-.004	-.056	-.192	-.110	-.022	-.001	.019	.015	.013	.007	0	.001	-.002
Lower surface .0375	-.527	-.321	-.162	-.001	.215	.336	.468	.591	.664	.727	.770	.747	.701	.632	.539	.396	.253	.084	-.099	-.275	-.455
.075	-.371	-.239	-.111	-.006	.157	.238	.340	.443	.508	.570	.615	.592	.550	.480	.402	.284	.172	.053	-.071	-.177	-.324
.150	-.242	-.152	-.069	-.001	.122	.170	.244	.325	.377	.432	.468	.447	.412	.354	.294	.203	.124	.039	-.040	-.115	-.206
.250	-.169	-.108	-.050	.001	.102	.122	.178	.238	.284	.324	.352	.337	.310	.262	.215	.144	.091	.030	-.030	-.088	-.146
.350	-.138	-.093	-.048	-.010	.079	.088	.134	.182	.220	.253	.274	.260	.242	.203	.164	.103	.061	.012	-.038	-.071	-.120
.450	-.116	-.076	-.045	-.014	.063	.064	.103	.143	.175	.198	.209	.201	.190	.157	.123	.075	.043	.005	-.034	-.062	-.100
.550	-.110	-.083	-.058	-.035	.034	.034	.062	.095	.122	.137	.141	.138	.136	.109	.089	.042	.013	-.020	-.049	-.069	-.097
.650	-.090	-.068	-.050	-.033	.028	.020	.042	.068	.086	.096	.086	.091	.096	.078	.062	.026	.003	-.020	-.043	-.057	-.077
.750	-.062	-.047	-.036	-.027	.026	.010	.023	.039	.054	.054	.034	.045	.059	.052	.040	.011	-.003	-.020	-.038	-.040	-.055
.850	-.010	.003	.005	.007	.052	.026	.031	.039	.045	.026	-.012	.011	.044	.048	.045	.026	.017	.010	.007	.001	-.005
.925	.056	.062	.060	.056	.095	.060	.058	.057	.054	.022	-.043	-.005	.044	.061	.068	.054	.055	.057	.058	.061	.062
.975	[a].106	[a].115	[a].112	[a].129	[a].154	[a].129	[a].118	[a].072	[a].070	[a].010	[a]-.086	[a]-.030	[a].050	[a].076	[a].110	[a].082	[a].097	[a].113	[a].105	[a].125	[a].135
1.000	[a].139	[a].138	[a].140	[a].185	[a].200	[a].180	[a].161	[a].081	[a].080	[a]-.005	[a]-.129	[a]-.042	[a].052	[a].087	[a].140	[a].100	[a].124	[a].151	[a].137	[a].167	[a].185

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Continued

(b) N = 1350 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.710	1.868	2.034	2.182	2.365	2.527	2.572	2.434	2.278	2.118	1.964	1.806
	M_r	.606	.623	.647	.663	.691	.715	.722	.702	.676	.654	.632	.615
	α_r'	8.99	6.39	4.21	2.22	-.09	-1.97	-2.48	-.90	1.00	3.06	5.20	7.51
	$\Delta\beta$	1.11	.97	.62	.42	.10	-.14	-.18	-.03	.26	.50	.78	1.05
	α_i	2.84	2.54	1.92	1.37	.75	.21	.08	.50	1.05	1.59	2.18	2.68
	c_n	.9026	.8025	.6084	.4403	.2435	.0681	.0258	.1616	.3394	.5110	.6954	.8500
	c_m	-.0240	-.0302	-.0500	-.0537	-.0629	-.0705	-.0762	-.0675	-.0575	-.0506	-.0397	-.0216
	α_0												
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.095	1.102	1.109	1.115	1.125	1.135	1.138	1.130	1.120	1.111	1.105	1.097
	.025	-1.765	-2.520	-1.110	-.617	-.054	.332	.403	.149	-.302	-.871	-2.092	-2.108
	.050	-1.745	-2.365	-1.021	-.624	-.187	.137	.201	-.021	-.382	-.801	-1.452	-1.904
	.100	-1.629	-1.144	-.803	-.539	-.245	-.004	.048	-.125	-.381	-.654	-.840	-1.558
	.200	-1.212	-.724	-.627	-.481	-.295	-.132	-.093	-.216	-.379	-.542	-.684	-1.037
	.300	-.871	-.642	-.565	-.468	-.332	-.211	-.179	-.275	-.394	-.509	-.609	-.729
	.400	-.628	-.553	-.506	-.443	-.347	-.260	-.236	-.305	-.390	-.468	-.535	-.552
	.500	-.502	-.486	-.461	-.425	-.351	-.291	-.273	-.324	-.382	-.438	-.482	-.466
	.600	-.394	-.434	-.439	-.425	-.382	-.345	-.334	-.367	-.400	-.430	-.447	-.392
	.700	-.304	-.345	-.366	-.368	-.348	-.334	-.327	-.345	-.358	-.367	-.368	-.302
	.800	-.224	-.236	-.269	-.286	-.288	-.293	-.294	-.293	-.285	-.276	-.261	-.208
	.900	-.147	-.077	-.089	-.104	-.123	-.142	-.143	-.133	-.116	-.096	-.080	-.093
	.950	-.111	.009	.023	.027	.018	.004	.001	.012	.022	.027	.020	-.038
Lower surface	.0375	.740	.669	.482	.246	-.094	-.439	-.935	-.321	.084	.359	.569	.703
	.075	.587	.520	.356	.169	-.069	-.323	-.362	-.185	.051	.253	.428	.549
	.150	.445	.390	.260	.121	-.036	-.212	-.248	-.125	.039	.182	.317	.415
	.250	.336	.291	.189	.080	-.034	-.159	-.185	-.093	.022	.127	.233	.311
	.350	.259	.227	.140	.052	-.035	-.129	-.149	-.084	.007	.090	.176	.227
	.450	.200	.177	.105	.032	-.034	-.105	-.119	-.069	-.002	.064	.134	.189
	.550	.134	.126	.066	.005	-.050	-.103	-.112	-.079	-.025	.030	.090	.131
	.650	.085	.090	.042	-.009	-.045	-.083	-.089	-.066	-.028	.013	.061	.089
	.750	.037	.061	.027	-.012	-.035	-.054	-.056	-.047	-.025	.002	.038	.054
	.850	.007	.063	.045	.014	.011	.008	.009	.011	.012	.022	.049	.042
	.925	-.007	.068	.068	.057	.067	.075	.079	.071	.061	.059	.067	.037
	.975	[a]-.040	[a].080	[a].105	[a].125	[a].137	[a].150	[a].132	[a].131	[a].123	[a].109	[a].094	[a].034
	1.000	[a]-.062	[a].092	[a].135	[a].167	[a].187	[a].202	[a].166	[a].168	[a].167	[a].146	[a].117	[a].030

[a]Faired value.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(c) N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	1.871	1.954	2.032	2.135	2.240	2.345	2.474	2.550	2.414	2.322	2.206	2.094	2.000	1.934
	M_x	.695	.703	.717	.735	.751	.767	.790	.800	.775	.760	.743	.723	.712	.700
	α_r'	6.54	5.33	4.23	2.83	1.47	.16	-1.37	-2.24	-.67	.44	1.90	3.38	4.68	5.62
	$\Delta\beta$	1.28	1.11	.94	.69	.41	.12	-.23	-.42	-.06	.19	.50	.79	1.02	1.15
	α_i	2.92	2.52	2.09	1.68	1.26	.85	.39	.09	.64	1.00	1.40	1.84	2.23	2.64
	c_n	.9234	.8006	.6645	.5355	.4045	.2723	.1252	.0290	.2055	.3203	.4477	.5845	.7071	.8358
	c_m	-.0255	-.0346	-.0482	-.0541	-.0626	-.0687	-.0828	-.0919	-.0764	-.0672	-.0562	-.0505	-.0442	-.0333
	c_c														
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.127	1.131	1.136	1.143	1.149	1.156	1.166	1.170	1.160	1.153	1.147	1.138	1.134	1.129
	.025	-1.974	-1.694	-1.344	-.814	-.372	-.026	.284	.412	.137	-.130	-.521	-.893	-1.472	-1.791
	.050	-1.915	-1.683	-1.342	-.980	-.479	-.181	.090	.210	-.041	-.271	-.612	-1.106	-1.478	-1.774
	.100	-1.800	-1.571	-1.231	-.722	-.473	-.258	-.050	.054	-.153	-.324	-.553	-.989	-1.348	-1.657
	.200	-1.687	-1.135	-.636	-.594	-.482	-.328	-.154	-.100	-.256	-.372	-.506	-.632	-.617	-1.265
	.300	-.786	-.594	-.625	-.562	-.481	-.380	-.271	-.204	-.329	-.414	-.508	-.591	-.579	-.545
	.400	-.477	-.517	-.574	-.516	-.470	-.401	-.326	-.278	-.367	-.426	-.484	-.534	-.540	-.499
	.500	-.436	-.488	-.526	-.477	-.453	-.409	-.364	-.330	-.390	-.424	-.460	-.492	-.497	-.478
	.600	-.418	-.467	-.505	-.469	-.470	-.454	-.443	-.433	-.450	-.461	-.466	-.476	-.475	-.454
	.700	-.346	-.382	-.419	-.387	-.399	-.397	-.408	-.412	-.406	-.401	-.394	-.392	-.388	-.371
	.800	-.242	-.268	-.305	-.278	-.298	-.306	-.329	-.336	-.322	-.309	-.289	-.280	-.277	-.262
	.900	-.071	-.074	-.101	-.073	-.092	-.101	-.117	-.121	-.114	-.104	-.083	-.075	-.077	-.076
	.950	.032	.038	.016	.047	.041	.043	.034	.034	.034	.039	.047	.041	.036	.032
Lower surface	.0375	.672	.585	.465	.348	.139	-.095	-.776	-1.133	-.301	-.016	.221	.411	.532	.619
	.075	.527	.450	.341	.250	.091	-.066	-.236	-.976	-.167	-.016	.152	.299	.402	.480
	.150	.404	.338	.246	.184	.070	-.035	-.182	-.188	-.111	.021	.112	.219	.300	.361
	.250	.310	.254	.178	.133	.046	-.028	-.134	-.168	-.085	.015	.075	.157	.221	.274
	.350	.245	.197	.123	.095	.025	-.032	-.112	-.145	-.075	-.018	.047	.113	.168	.213
	.450	.197	.155	.091	.070	.013	-.032	-.094	-.121	-.066	-.024	.027	.080	.127	.166
	.550	.140	.103	.044	.031	-.019	-.052	-.097	-.116	-.078	-.046	-.001	.043	.085	.116
	.650	.106	.073	.021	.014	-.025	-.048	-.078	-.092	-.066	-.043	-.013	.022	.057	.085
	.750	.074	.050	.002	.002	-.025	-.036	-.051	-.057	-.046	-.037	-.016	.009	.040	.062
	.850	.074	.059	.014	.027	.013	.014	.015	.016	.015	.010	.015	.030	.055	.072
	.925	.091	.079	.045	.065	.062	.075	.087	.090	.081	.069	.063	.063	.082	.093
	.975	[a].113	[a].110	[a].092	[a].120	[a].125	[a].151	[a].175	[a].150	[a].153	[a].130	[a].109	[a].113	[a].130	
	1.000	[a].125	[a].132	[a].122	[a].159	[a].162	[a].192	[a].191	[a].184	[a].190	[a].164	[a].180	[a].135	[a].130	[a].151

[a]Faired value.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(d) N = 1600 rpm; $\beta_{0.75R} = 45°$.

	J	2.097	2.158	2.240	2.312	2.393	2.454	2.516	2.486	2.416	2.364	2.338	2.284	2.220	2.141
	M_x	.783	.796	.806	.817	.833	.843	.856	.847	.836	.825	.818	.810	.797	.787
	α_x	3.36	2.54	1.47	.57	-.42	-1.13	-1.85	-1.50	-.70	-.06	.24	.92	1.73	2.77
	$\Delta\beta$	.89	.71	.48	.24	-.07	-.33	-.62	-.48	-.17	.05	.14	.34	.53	.76
	α_i	2.00	1.23	.21	-.64	-1.60	-2.15	-2.80	-2.50	-1.80	-1.28	-1.01	-.28	.48	1.47
	c_n	.6394	.5452	.4397	.3361	.2326	.1065	.0142	.0639	.1781	.2765	.3161	.3687	.4603	.5619
	c_m	-.0513	-.0606	-.0714	-.0778	-.0839	-.0996	-.1111	-.1083	-.0897	-.0819	-.0804	-.0727	-.0649	-.0577
	c_c	-.0124	-.0051	.0034	.0086	.0133	.0169			.0138	.0118	.0094	.0057	.0005	-.0072
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.163	1.169	1.173	1.178	1.185	1.190	1.197	1.192	1.187	1.182	1.178	1.175	1.169	1.165
	.025	-.726	-.542	-.273	-.036	.174	.326	.434	.382	.292	.097	.011	-.134	-.355	-.624
	.050	-.903	-.747	-.433	-.205	-.014	.129	.236	.183	.101	-.083	-.161	-.295	-.526	-.813
	.100	-.891	-.680	-.465	-.294	-.140	-.018	.078	.030	-.036	-.195	-.258	-.364	-.521	-.772
	.200	-.906	-.685	-.494	-.382	-.263	-.166	-.085	-.126	-.173	-.306	-.354	-.431	-.532	-.731
	.300	-.877	-.656	-.543	-.465	-.367	-.280	-.203	-.241	-.279	-.403	-.444	-.500	-.571	-.661
	.400	-.623	-.647	-.545	-.484	-.426	-.363	-.294	-.328	-.352	-.450	-.474	-.509	-.575	-.603
	.500	-.483	-.519	-.527	-.492	-.449	-.386	-.347	-.375	-.385	-.467	-.482	-.502	-.509	-.501
	.600	-.474	-.518	-.567	-.582	-.540	-.512	-.472	-.496	-.483	-.550	-.559	-.571	-.569	-.512
	.700	-.384	-.408	-.423	-.534	-.650	-.642	-.599	-.624	-.609	-.639	-.563	-.447	-.427	-.405
	.800	-.258	-.275	-.430	-.289	-.288	-.412	-.622	-.557	-.267	-.296	-.296	-.299	-.290	-.274
	.900	-.049	-.057	-.060	-.067	-.066	-.060	-.054	-.058	-.024	-.074	-.082	-.073	-.066	-.059
	.950	.063	.062	.066	.067	.070	.073	.079	.077	.115	.065	.066	.063	.061	.058
Lower surface	.0375	.399	.277	.129	-.053	-.386	-.826	-.941	-.909	-.581	-.211	-.102	.025	.171	.319
	.075	.294	.199	.087	-.036	-.159	-.684	-.865	-.824	-.180	-.125	-.069	.013	.116	.229
	.150	.224	.149	.070	-.015	-.115	-.160	-.741	-.505	-.120	-.080	-.038	.015	.088	.171
	.250	.164	.105	.046	-.019	-.091	-.158	-.240	-.160	-.082	-.067	-.035	.006	.083	.121
	.350	.121	.072	.025	-.027	-.081	-.136	-.148	-.149	-.062	-.064	-.040	-.008	.034	.085
	.450	.091	.047	.009	-.032	-.075	-.115	-.129	-.126	-.048	-.061	-.043	-.017	.015	.059
	.550	.045	.007	-.025	-.057	-.088	-.120	-.129	-.128	-.059	-.079	-.065	-.046	-.020	.017
	.650	.026	-.006	-.028	-.053	-.075	-.097	-.099	-.102	-.042	-.069	-.058	-.045	-.026	.002
	.750	.008	-.016	-.031	-.044	-.054	-.068	-.065	-.068	-.016	-.054	-.047	-.040	-.031	-.010
	.850	[a].030	.018	[a].005	[a]-.001	[a].005	[a]0	[a].009	[a].008	[a].050	[a].001	[a]0	[a].005	[a]0	[a].010
	.925	.072	.063	.069	.074	.082	.084	.088	.086	.131	.077	.075	.072	.062	.062
	.975	[a].126	[a].112	[a].131	[a].150	[a].145	[a].165	[a].157	[a].150	[a].195	[a].150	[a].147	[a].135	[a].135	[a].122
	1.000	[a].163	[a].140	[a].170	[a].204	[a].183	[a].208	[a].194	[a].189	[a].234	[a].198	[a].195	[a].170	[a].175	[a].159

[a]Faired value.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(e) $M = 0.56$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.158	2.168	2.208	2.252	2.274	2.310	2.348	2.384	2.404	2.439	2.466	2.503	2.533
	M_x	.859	.847	.838	.832	.825	.818	.814	.807	.801	.795	.787	.781	.776
	α_x'	2.53	2.40	1.88	1.32	1.04	.59	.12	-.31	-.55	-.97	-1.28	-1.71	-2.05
	$\Delta\beta$	.60	.57	.46	.35	.29	.20	.11	.01	-.03	-.13	-.20	-.29	-.36
	α_i	1.64	1.63	1.52	1.30	1.20	1.01	.87	.73	.61	.46	.32	.21	.06
	c_n	.5271	.5245	.4871	.4190	.3865	.3252	.2800	.2352	.2284	.1945	.1690	.1213	.0903
	c_m	-.0867	-.0988	-.0823	-.0737	-.0774	-.0774	-.0782	-.0814	-.0719	-.0711	-.0664	-.0703	-.0678
	c_c	.0061	.0033	.0043	.0053	.0055	.0086	.0104	.0120					
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.198	1.192	1.188	1.185	1.182	1.179	1.177	1.174	1.171	1.168	1.165	1.162	1.160
	.025	-.281	-.285	-.236	-.169	-.115	-.012	.053	.130	.181	.253	.301	.346	.388
	.050	-.491	-.494	-.424	-.338	-.279	-.181	-.120	-.049	-.003	.062	.107	.148	.188
	.100	-.463	-.456	-.430	-.396	-.354	-.273	-.223	-.164	-.125	-.073	-.035	.001	.036
	.200	-.554	-.558	-.520	-.450	-.424	-.366	-.322	-.275	-.244	-.200	-.170	-.138	-.110
	.300	-.579	-.581	-.546	-.499	-.490	-.454	-.410	-.360	-.330	-.288	-.259	-.232	-.206
	.400	-.629	-.620	-.580	-.576	-.519	-.482	-.458	-.411	-.382	-.344	-.319	-.294	-.270
	.500	-.678	-.687	-.668	-.598	-.571	-.492	-.463	-.429	-.410	-.380	-.359	-.336	-.316
	.600	-.768	-.766	-.717	-.665	-.615	-.571	-.561	-.537	-.510	-.467	-.439	-.415	-.390
	.700	-.798	-.800	-.758	-.656	-.562	-.558	-.463	-.452	-.439	-.420	-.405	-.393	-.376
	.800	-.219	-.202	-.209	-.232	-.270	-.294	-.304	-.317	-.327	-.328	-.327	-.327	-.319
	.900	-.083	-.031	-.021	-.032	-.054	-.071	-.078	-.091	-.105	-.111	-.115	-.125	-.126
	.950	-.029	.041	.069	.082	.074	.066	.063	.055	.047	.041	.034	.026	.023
Lower surface	.0375	.238	.211	.155	.091	.029	-.081	-.150	-.266	-.407	-.669	-.844	-.994	-1.113
	.075	.175	.151	.109	.064	.017	-.057	-.095	-.144	-.190	-.228	-.242	-.360	-.590
	.150	.138	.118	.086	.055	.022	-.031	-.054	-.095	-.129	-.165	-.192	-.207	-.213
	.250	.097	.083	.058	.038	.012	-.028	-.045	-.073	-.096	-.121	-.142	-.160	-.172
	.350	.062	.049	.031	.017	-.004	-.035	-.047	-.068	-.084	-.102	-.120	-.132	-.142
	.450	.035	.027	.014	.003	-.011	-.037	-.045	-.061	-.073	-.086	-.100	-.110	-.117
	.550	-.015	-.019	-.028	-.032	-.044	-.062	-.066	-.076	-.085	-.092	-.103	-.110	-.115
	.650	-.038	-.035	-.038	-.037	-.043	-.057	-.058	-.063	-.069	-.075	-.081	-.086	-.088
	.750	-.057	-.047	-.040	-.035	-.038	-.045	-.043	-.044	-.048	-.051	-.054	-.055	-.057
	.850	[a]-.021	[a]-.020	[a]-.010	.013	.012	.010	.014	.019	.016	.016	.012	.013	.012
	.925	.002	.032	.051	.070	.072	.074	.080	.086	.086	.086	.083	.086	.085
	.975	[a].018	[a].079	[a].119	[a].140	[a].137	[a].143	[a].138	[a].175	[a].153	[a].148	[a].149	[a].160	[a].145
	1.000	[a].025	[a].107	[a].159	[a].187	[a].175	[a].197	[a].170	[a].239	[a].192	[a].177	[a].180	[a].200	[a].174

[a]Faired value.

[redacted]

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION ($x = 0.78$) – Continued

(f) $M = 0.60$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.158	2.188	2.217	2.251	2.278	2.311	2.350	2.364	2.396	2.428	2.467	2.500	2.521
	M_x	.909	.902	.896	.888	.883	.876	.871	.866	.860	.854	.850	.844	.838
	α_x'	2.53	2.14	1.76	1.33	.99	.58	.10	–.07	–.46	–.84	–1.29	–1.67	–1.91
	$\Delta\beta$	.39	.34	.28	.22	.14	.04	–.08	–.12	–.22	–.32	–.44	–.55	–.61
	α_i	1.31	1.26	1.12	1.06	.96	.86	.74	.70	.59	.47	.37	.14	.03
	c_n	.4216	.4035	.3606	.3432	.3097	.2774	.2387	.2268	.1916	.1529	.1181	.0458	.0097
	c_m	–.0828	–.0796	–.0773	–.0815	–.0875	–.0922	–.0965	–.0937	–.0948	–.1001	–.1003	–.1052	–.1041
	c_o	.0183	.0177	.0173	.0172	.0185	.0181	.0190	.0184	.0174	.0179	.0187	.0179	.0175
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.222	1.220	1.217	1.213	1.210	1.206	1.204	1.201	1.198	1.195	1.194	1.191	1.188
	.025	–.106	–.080	–.024	.010	.075	.128	.187	.207	.249	.299	.355	.388	.416
	.050	–.319	–.279	–.207	–.171	–.106	–.054	.001	.019	.056	.105	.157	.190	.215
	.100	–.308	–.298	–.272	–.256	–.209	–.168	–.123	–.108	–.076	–.037	.009	.035	.059
	.200	–.436	–.424	–.380	–.350	–.309	–.287	–.253	–.241	–.213	–.181	–.142	–.120	–.102
	.300	–.476	–.465	–.434	–.418	–.379	–.366	–.349	–.347	–.330	–.295	–.256	–.234	–.215
	.400	–.533	–.523	–.487	–.477	–.462	–.440	–.410	–.392	–.385	–.370	–.345	–.322	–.303
	.500	–.586	–.583	–.572	–.556	–.516	–.504	–.473	–.467	–.450	–.411	–.386	–.369	–.358
	.600	–.671	–.674	–.637	–.623	–.612	–.579	–.567	–.568	–.548	–.519	–.499	–.495	–.488
	.700	–.767	–.739	–.729	–.731	–.708	–.690	–.678	–.662	–.646	–.639	–.627	–.609	–.586
	.800	–.317	–.295	–.314	–.307	–.386	–.442	–.546	–.575	–.556	–.542	–.510	–.412	–.368
	.900	–.230	–.195	–.173	–.150	–.139	–.115	–.070	–.041	–.026	–.037	–.054	–.070	–.085
	.950	–.224	–.182	–.150	–.115	–.086	–.051	.002	.039	.069	.082	.082	.074	.066
Lower surface	.0375	.181	.138	.071	.023	–.068	–.174	–.333	–.417	–.568	–.733	–.853	–.931	–.997
	.075	.134	.102	.053	.021	–.040	–.094	–.121	–.130	–.240	–.526	–.740	–.836	–.906
	.150	.104	.083	.048	.026	–.018	–.061	–.105	–.125	–.147	–.155	–.238	–.447	–.603
	.250	.068	.051	.024	.009	–.024	–.056	–.087	–.101	–.119	–.142	–.156	–.155	–.151
	.350	.032	.023	.001	–.010	–.037	–.062	–.083	–.091	–.103	–.121	–.136	–.141	–.140
	.450	–.001	–.005	–.023	–.031	–.051	–.068	–.083	–.087	–.094	–.104	–.115	–.116	–.117
	.550	–.063	–.070	–.082	–.085	–.098	–.107	–.113	–.113	–.112	–.117	–.121	–.122	–.122
	.650	–.102	–.100	–.106	–.102	–.108	–.108	–.109	–.103	–.097	–.095	–.095	–.092	–.089
	.750	–.149	–.139	–.135	–.123	–.116	–.105	–.098	–.085	–.076	–.068	–.062	–.058	–.056
	.850	–.133	–.122	–.110	–.092	–.072	–.053	–.038	–.021	–.007	.005	.015	.021	.023
	.925	–.132	–.111	–.089	–.058	–.029	–.001	.022	.043	.061	.079	.092	.098	.101
	.975	[a]–.144	[a]–.122	[a]–.082	[a]–.033	[a]0	[a].025	[a].050	[a].072	[a].105	[a].145	[a].169	[a].168	[a].189
	1.000	[a]–.158	[a]–.153	[a]–.091	[a]–.024	[a].012	[a].036	[a].061	[a].081	[a].120	[a].180	[a].210	[a].210	[a].238

[a]Faired value.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION ($x = 0.78$) - Continued

(g) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.148	2.168	2.190	2.216	2.240	2.260	2.288	2.310	2.336	2.368	2.390	2.407	2.433
	M_x	.995	.985	.980	.974	.968	.963	.957	.952	.943	.937	.932	.925	.920
	α_x'	2.67	2.39	2.11	1.78	1.47	1.21	.86	.60	.27	-.06	-.39	-.59	-.90
	$\Delta\beta$	.24	.17	.10	.02	-.07	-.13	-.23	-.30	-.39	-.47	-.56	-.60	-.69
	α_i	1.20	1.11	.99	.86	.76	.60	.45	.36	.24	.13	.01	-.06	-.15
	c_n	.3839	.3548	.3161	.2755	.2432	.1939	.1452	.1165	.0761	.0429	.0035	-.0197	-.0487
	c_m	-.1257	-.1182	-.1100	-.1037	-.0939	-.0808	-.0755	-.0694	-.0663	-.0707	-.0711	-.0769	-.0805
	c_c	.0414	.0415	.0402	.0397	.0391	.0345	.0328	.0310	.0306	.0301	.0301	.0286	.0282
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.272	1.266	1.263	1.260	1.256	1.253	1.250	1.248	1.242	1.239	1.236	1.233	1.230
	.025	.123	.134	.160	.186	.208	.231	.260	.285	.321	.342	.365	.382	.407
	.050	-.069	-.052	-.020	.007	.029	.050	.077	.104	.139	.157	.181	.195	.218
	.100	-.109	-.111	-.102	-.092	-.079	-.066	-.043	-.021	.009	.023	.043	.055	.074
	.200	-.245	-.247	-.229	-.209	-.194	-.178	-.161	-.149	-.131	-.120	-.104	-.094	-.078
	.300	-.296	-.298	-.286	-.275	-.266	-.259	-.241	-.225	-.215	-.214	-.208	-.207	-.198
	.400	-.356	-.365	-.352	-.338	-.327	-.324	-.319	-.313	-.293	-.290	-.280	-.266	-.255
	.500	-.413	-.424	-.418	-.418	-.415	-.411	-.388	-.372	-.366	-.362	-.349	-.345	-.334
	.600	-.495	-.508	-.505	-.504	-.489	-.478	-.474	-.471	-.453	-.445	-.441	-.447	-.445
	.700	-.594	-.608	-.581	-.571	-.570	-.576	-.573	-.568	-.553	-.558	-.558	-.557	-.546
	.800	-.655	-.675	-.671	-.670	-.669	-.668	-.660	-.658	-.659	-.662	-.661	-.660	-.654
	.900	-.765	-.793	-.794	-.798	-.742	-.505	-.358	-.263	-.237	-.231	-.219	-.198	-.169
	.950	-.760	-.760	-.626	-.503	-.362	-.308	-.267	-.214	-.193	-.189	-.179	-.162	-.135
Lower surface	.0375	.151	.092	.032	-.035	-.101	-.206	-.306	-.383	-.459	-.510	-.564	-.611	-.654
	.075	.130	.083	.041	.004	-.023	-.062	-.172	-.286	-.400	-.459	-.514	-.560	-.602
	.150	.119	.078	.044	.013	-.016	-.055	-.075	-.055	-.173	-.283	-.402	-.467	-.514
	.250	.090	.053	.024	-.004	-.027	-.060	-.093	-.120	-.136	-.143	-.188	-.280	-.386
	.350	.057	.023	-.001	-.024	-.044	-.068	-.090	-.111	-.133	-.152	-.171	-.188	-.214
	.450	.028	-.004	-.025	-.044	-.060	-.084	-.107	-.125	-.146	-.166	-.185	-.201	-.208
	.550	-.038	-.066	-.083	-.100	-.112	-.131	-.145	-.161	-.182	-.203	-.224	-.240	-.249
	.650	-.094	-.123	-.139	-.155	-.166	-.185	-.201	-.213	-.230	-.249	-.271	-.287	-.296
	.750	-.152	-.181	-.197	-.211	-.220	-.235	-.247	-.254	-.264	-.281	-.298	-.286	-.247
	.850	-.204	-.236	-.250	-.263	-.269.	-.280	-.286	-.275	-.242	-.224	-.193	-.139	-.109
	.925	-.194	-.222	-.234	-.245	-.248	-.252	-.246	-.194	-.148	-.137	-.112	-.083	-.059
	.975	[a]-.195	[a]-.220	[a]-.222	[a]-.218	[a]-.210	[a]-.203	[a]-.195	[a]-.116	[a]-.097	[a]-.097	[a]-.084	[a]-.067	[a]-.040
	1.000	[a]-.198	[a]-.220	[a]-.220	[a]-.205	[a]-.150	[a]-.167	[a]-.164	[a]-.085	[a]-.086	[a]-.090	[a]-.080	[a]-.064	[a]-.035

[a]Faired value.

[redacted]

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Continued

(h) N = 1140 rpm; $\beta_{0.75R}$ = 30°.

	J	0.789	0.894	1.034	1.201	1.285	1.405	1.495	1.457	1.357	1.275	1.238	1.109	0.978	0.830
	M_r	.423	.432	.442	.458	.465	.477	.488	.489	.474	.467	.469	.455	.431	.423
	α_r'	11.06	8.86	6.02	2.79	1.23	-.93	-2.49	-1.85	-.07	1.41	2.09	4.55	7.15	10.18
	$\Delta\beta$	.81	.72	.56	.35	.23	.06	-.06	-.01	.13	.25	.29	.47	.63	.77
	α_i	3.04	2.76	2.22	1.48	1.00	.50	.06	.25	.68	1.01	1.24	1.83	2.37	2.95
	c_n	.8466	.7862	.6451	.4404	.2978	.1509	.0174	.0748	.2057	.3023	.3664	.5358	.6807	.8244
	c_m	-.0494	-.0216	-.0430	-.0510	-.0528	-.0562	-.0564	-.0580	-.0504	-.0507	-.0520	-.0506	-.0404	-.0280
	c_c														
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.046	1.048	1.050	1.054	1.055	1.058	1.061	1.061	1.058	1.056	1.057	1.053	1.048	1.046
	.025	-1.274	-1.555	-1.731	-.607	-.204	.172	.443	.333	.028	-.225	-.370	-.853	-2.090	-1.590
	.050	-1.187	-1.553	-1.184	-.529	-.244	.037	.252	.166	-.073	-.260	-.365	-.722	-1.543	-1.543
	.100	-1.071	-1.481	-.643	-.417	-.225	-.034	.122	.055	-.110	-.238	-.304	-.550	-.973	-1.366
	.200	-.875	-.790	-.492	-.338	-.215	-.089	.010	-.032	-.142	-.225	-.261	-.416	-.572	-.841
	.300	-.699	-.482	-.421	-.309	-.217	-.128	-.054	-.087	-.168	-.227	-.255	-.368	-.459	-.593
	.400	-.533	-.367	-.363	-.287	-.217	-.151	-.095	-.123	-.181	-.225	-.243	-.328	-.382	-.434
	.500	-.415	-.289	-.317	-.263	-.212	-.162	-.095	-.141	-.187	-.222	-.227	-.294	-.321	-.335
	.600	-.316	-.234	-.285	-.263	-.225	-.191	-.161	-.177	-.211	-.233	-.291	-.279	-.279	-.252
	.700	-.229	-.159	-.218	-.210	-.193	-.173	-.158	-.166	-.187	-.199	-.195	-.222	-.205	-.176
	.800	-.168	-.084	-.134	-.148	-.144	-.139	-.138	-.143	-.147	-.148	-.139	-.148	-.117	-.108
	.900	-.096	.016	.014	.006	-.011	-.019	-.039	-.038	.023	.015	.001	.006	.018	-.035
	.950	-.059	.064	.116	.119	.108	.096	.078	.081	.094	.102	.117	.118	.104	.005
Lower surface	.0375	.877	.805	.672	.429	.195	-.102	-.372	-.246	.012	.200	.306	.548	.743	.848
	.075	.723	.655	.532	.335	.163	-.034	-.232	-.154	.028	.160	.243	.426	.592	.691
	.150	.584	.519	.419	.269	.146	.013	-.120	-.069	.059	.146	.208	.338	.465	.554
	.250	.470	.420	.341	.224	.135	.033	-.059	-.025	.070	.133	.174	.272	.373	.446
	.350	.395	.350	.285	.193	.121	.039	-.029	.007	.065	.118	.158	.232	.315	.373
	.450	.327	.300	.244	.173	.113	.049	-.008	.011	.070	.110	.147	.209	.270	.312
	.550	.265	.248	.207	.142	.094	.044	-.003	.011	.054	.089	.120	.169	.226	.253
	.650	.213	.206	.177	.128	.092	.049	.015	.027	.059	.086	.112	.152	.191	.207
	.750	.160	.169	.160	.119	.092	.065	.038	.045	.067	.086	.109	.136	.167	.161
	.850	.123	.151	.160	.134	.116	.101	.089	.091	.104	.113	.124	.144	.160	.140
	.925	.089	.145	.180	.170	.162	.156	.152	.150	.152	.157	.169	.169	.170	.116
	.975	[a].062	[a].150	[a].210	[a].227	[a].225	[a].220	[a].229	[a].207	[a].181	[a].190	[a].221	[a].210	[a].208	[a].100
	1.000	[a].047	[a].170	[a].230	[a].268	[a].264	[a].250	[a].290	[a].239	[a].190	[a].207	[a].258	[a].240	[a].229	[a].099

[a]Faired value.

[redacted]

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Continued

(k) N = 1600 rpm; $\beta_{0.75R} = 30^{\circ}$.

	J	0.830	0.897	0.990	1.043	1.119	1.196	1.273	1.355	1.440	1.488	1.400	1.311	1.232	1.159	1.098	1.029	0.940	0.869
	M_x	.616	.614	.632	.642	.645	.652	.664	.674	.684	.690	.674	.665	.661	.646	.636	.634	.627	.619
	α_x'	10.19	8.79	6.90	5.85	4.35	2.88	1.45	-.04	-1.54	-2.37	-.84	.75	2.21	3.59	4.76	6.12	7.91	9.38
	$\Delta\beta$	1.96	1.77	1.48	1.31	1.05	.78	.49	.19	-.12	-.30	.03	.36	.65	.91	1.13	1.36	1.64	1.84
	α_i	3.08	3.01	2.78	2.44	2.03	1.68	1.20	.76	.32	.11	.55	1.04	1.45	1.85	2.14	2.59	2.97	3.03
	c_n	.8677	.8529	.7983	.7067	.5885	.4931	.3562	.2291	.0950	.0339	.1652	.3083	.4304	.5449	.6292	.7498	.8496	.8575
	c_m	-.0432	.0244	-.0244	-.0359	-.0528	-.0558	-.0590	-.0637	-.0652	-.0652	-.0640	-.0603	-.0551	-.0501	-.0441	-.0331	-.0164	-.0269
	c_c																		
	c/b	Pressure coefficient, P																	
Upper surface	0.000	1.098	1.097	1.103	1.107	1.108	1.110	1.115	1.119	1.123	1.125	1.119	1.116	1.114	1.108	1.105	1.104	1.102	1.099
	.025	-1.792	-1.937	-2.351	-2.054	-1.012	-.807	-.359	-.034	.264	.387	.115	-.226	-.574	-.954	-1.692	-2.232	-2.434	-1.823
	.050	-1.699	-1.793	-2.204	-1.928	-1.042	-.742	-.415	-.160	.084	.192	-.041	-.309	-.581	-.861	-1.009	-2.100	-2.194	-1.754
	.100	-1.458	-1.536	-1.175	-.832	-.792	-.611	-.396	-.218	-.039	.044	-.132	-.325	-.504	-.686	-.834	-.935	-1.321	-1.576
	.200	-1.003	-1.051	-.748	-.685	-.619	-.514	-.388	-.270	-.148	-.085	-.211	-.340	-.454	-.558	-.641	-.699	-.914	-1.071
	.300	-.755	-.765	-.641	-.603	-.554	-.482	-.394	-.305	-.210	-.163	-.259	-.356	-.441	-.512	-.567	-.616	-.704	-.789
	.400	-.614	-.579	-.550	-.536	-.506	-.455	-.394	-.325	-.257	-.217	-.290	-.367	-.428	-.476	-.508	-.543	-.563	-.611
	.500	-.529	-.461	-.470	-.471	-.456	-.422	-.384	-.333	-.282	-.254	-.308	-.362	-.407	-.438	-.454	-.473	-.466	-.504
	.600	-.439	-.375	-.413	-.431	-.434	-.416	-.399	-.362	-.329	-.304	-.344	-.381	-.409	-.425	-.426	-.425	-.387	-.406
	.700	-.366	-.293	-.317	-.342	-.360	-.354	-.350	-.330	-.311	-.297	-.319	-.342	-.355	-.359	-.346	-.336	-.293	-.322
	.800	-.305	-.210	-.207	-.230	-.259	-.267	-.277	-.267	-.268	-.262	-.270	-.277	-.276	-.268	-.245	-.221	-.201	-.246
	.900	-.241	-.126	-.055	-.055	-.074	-.085	-.102	-.110	-.118	-.118	-.110	-.109	-.096	-.083	-.060	-.085	-.090	-.166
	.950	-.213	-.088	.015	.032	.040	.040	.029	.019	.018	.019	.021	.027	.032	.037	.046	.033	-.041	-.130
Lower surface	.0375	.750	.727	.670	.584	.483	.341	.123	-.104	-.336	-.486	-.248	.040	.239	.403	.536	.635	.704	.734
	.075	.595	.574	.522	.444	.355	.244	.079	-.073	-.268	-.353	-.152	.023	.166	.290	.401	.488	.552	.583
	.150	.454	.438	.391	.331	.262	.179	.060	-.040	-.173	-.231	-.098	.021	.121	.211	.297	.367	.418	.441
	.250	.340	.329	.295	.246	.195	.133	.040	-.029	-.121	-.164	-.072	.016	.082	.156	.222	.274	.313	.330
	.350	.261	.259	.232	.190	.146	.094	.022	-.036	-.101	-.132	-.065	.002	.058	.111	.169	.213	.241	.254
	.450	.198	.203	.180	.150	.116	.074	.016	-.029	-.082	-.103	-.053	.002	.043	.091	.135	.168	.189	.196
	.550	.134	.139	.131	.102	.070	.040	-.011	-.043	-.082	-.097	-.061	-.023	.010	.050	.092	.120	.131	.096
	.650	.078	.091	.089	.071	.048	.023	-.013	-.040	-.068	-.077	-.050	-.023	.002	.032	.066	.084	.088	.080
	.750	.021	.049	.062	.045	.032	.015	-.013	-.028	-.041	-.045	-.034	-.017	-.003	.018	.046	.059	.049	.033
	.850	-.029	.017	.046	.038	.040	.034	.014	.014	.010	.012	.015	.016	.023	.032	.047	.047	.028	-.003
	.925	-.055	.008	.062	.057	.067	.069	.067	.071	.076	.081	.076	.070	.064	.070	.073	.068	.028	-.015
	.975	[a]-.093	[a]-.012	[a].079	[a].090	[a].091	[a].132	[a].135	[a].114	[a].154	[a].152	[a].145	[a].142	[a].115	[a].120	[a].110	[a].104	[a].030	[a]-.015
	1.000	[a]-.142	[a]-.030	[a].093	[a].111	[a].110	[a].170	[a].188	[a].137	[a].205	[a].200	[a].189	[a].198	[a].152	[a].155	[a].135	[a].131	[a].032	[a]-.010

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Continued

(h) N = 1140 rpm; $\beta_{0.75R}$ = 30°.

	J	0.789	0.894	1.034	1.201	1.285	1.405	1.495	1.457	1.357	1.275	1.238	1.109	0.978	0.830
	M_x	.423	.432	.442	.458	.465	.477	.488	.489	.474	.467	.469	.455	.431	.423
	α_x'	11.06	8.86	6.02	2.79	1.23	-.93	-2.49	-1.85	-.07	1.41	2.09	4.55	7.15	10.18
	$\Delta\beta$	.81	.72	.56	.35	.23	.06	-.06	-.01	.13	.25	.29	.47	.63	.77
	α_i	3.04	2.76	2.22	1.48	1.00	.50	.06	.25	.68	1.01	1.24	1.83	2.37	2.95
	c_n	.8466	.7862	.6451	.4404	.2978	.1509	.0174	.0748	.2057	.3023	.3664	.5358	.6807	.8244
	c_m	-.0494	-.0216	-.0430	-.0510	-.0528	-.0562	-.0564	-.0580	-.0504	-.0507	-.0520	-.0506	-.0404	-.0280
	c_c														
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.046	1.048	1.050	1.054	1.055	1.058	1.061	1.061	1.058	1.056	1.057	1.053	1.048	1.046
	.025	-1.274	-1.555	-1.731	-.607	-.204	.172	.443	.333	.028	-.225	-.370	-.853	-2.090	-1.590
	.050	-1.187	-1.553	-1.184	-.529	-.244	.037	.252	.166	-.073	-.260	-.365	-.722	-1.543	-1.543
	.100	-1.071	-1.481	-.643	-.417	-.225	-.034	.122	.055	-.110	-.238	-.304	-.550	-.973	-1.366
	.200	-.875	-.790	-.492	-.338	-.215	-.089	.010	-.032	-.142	-.225	-.261	-.416	-.572	-.841
	.300	-.699	-.482	-.421	-.309	-.217	-.128	-.054	-.087	-.168	-.227	-.255	-.368	-.459	-.593
	.400	-.533	-.367	-.363	-.287	-.217	-.151	-.095	-.123	-.181	-.225	-.243	-.328	-.382	-.434
	.500	-.415	-.289	-.317	-.263	-.212	-.162	-.095	-.141	-.187	-.222	-.227	-.294	-.321	-.335
	.600	-.316	-.234	-.285	-.263	-.225	-.191	-.161	-.177	-.211	-.233	-.291	-.279	-.279	-.252
	.700	-.229	-.159	-.218	-.210	-.193	-.173	-.158	-.166	-.187	-.199	-.195	-.222	-.205	-.176
	.800	-.168	-.084	-.134	-.148	-.144	-.139	-.138	-.143	-.147	-.148	-.139	-.148	-.117	-.108
	.900	-.096	.016	.014	.006	-.011	-.019	-.039	-.038	.023	.015	.001	.006	.018	-.035
	.950	-.059	.064	.116	.119	.108	.096	.078	.081	.094	.102	.117	.118	.104	.005
Lower surface	.0375	.877	.805	.672	.429	.195	-.102	-.372	-.246	.012	.200	.306	.548	.743	.848
	.075	.723	.655	.532	.335	.163	-.034	-.232	-.154	.028	.160	.243	.426	.592	.691
	.150	.584	.519	.419	.269	.146	.013	-.120	-.069	.059	.146	.208	.338	.465	.554
	.250	.470	.420	.341	.224	.135	.033	-.059	-.025	.070	.133	.174	.272	.373	.446
	.350	.395	.350	.285	.193	.121	.039	-.029	.007	.065	.118	.158	.232	.315	.373
	.450	.327	.300	.244	.173	.113	.049	-.008	.011	.070	.110	.147	.209	.270	.312
	.550	.265	.248	.207	.142	.094	.044	-.003	.011	.054	.089	.120	.169	.226	.253
	.650	.213	.206	.177	.128	.092	.049	.015	.027	.059	.086	.112	.152	.191	.207
	.750	.160	.169	.160	.119	.092	.065	.038	.045	.067	.086	.109	.136	.167	.161
	.850	.123	.151	.160	.134	.116	.101	.089	.091	.104	.113	.124	.144	.160	.140
	.925	.089	.145	.180	.170	.162	.156	.152	.150	.152	.157	.169	.169	.170	.116
	.975	[a].062	[a].150	[a].210	[a].227	[a].225	[a].220	[a].229	[a].207	[a].181	[a].190	[a].221	[a].210	[a].208	[a].100
	1.000	[a].047	[a].170	[a].230	[a].268	[a].264	[a].250	[a].290	[a].239	[a].190	[a].207	[a].258	[a].240	[a].229	[a].099

[a]Faired value.

[redacted]

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Continued

(i) N = 1350 rpm; $\beta_{0.75R}$ = 30°.

J	0.884	0.993	1.118	1.252	1.338	1.437	1.490	1.406	1.306	1.221	1.170	1.059	0.954
M_x	.517	.532	.547	.554	.566	.575	.581	.574	.558	.557	.546	.538	.523
α_x'	9.06	6.84	4.38	1.84	.27	-1.49	-2.40	-.95	.84	2.41	3.38	5.53	7.63
$\Delta\beta$	1.07	.92	.68	.39	.19	-.05	-.17	.03	.27	.46	.58	.80	.98
α_i	2.92	2.51	1.88	1.21	.75	.37	.10	.47	.94	1.43	1.64	2.22	2.67
ρ_n	.8279	.7272	.5504	.3576	.2245	.1118	.0313	.1406	.2802	.4177	.4839	.6485	.7673
c_m	-.0277	-.0371	-.0540	-.0507	-.0569	-.0566	-.0607	-.0580	-.0534	-.0513	-.0498	-.0456	-.0223
c_c													
c/b	Pressure coefficient, P												
Upper surface 0.000	1.068	1.072	1.077	1.079	1.082	1.085	1.087	1.085	1.080	1.080	1.076	1.074	1.070
.025	-1.741	-1.873	-.999	-.452	-.088	.201	.358	.125	-.235	-.624	-.859	-1.699	-1.965
.050	-1.708	-1.747	-.887	-.462	-.192	.026	.168	-.025	-.303	-.582	-.755	-1.103	-1.724
.100	-1.570	-1.314	-.705	-.420	-.233	-.068	.030	-.112	-.311	-.494	-.619	-.819	-1.461
.200	-1.018	-.687	-.556	-.378	-.266	-.156	-.088	-.186	-.315	-.436	-.513	-.637	-.844
.300	-.702	-.567	-.499	-.372	-.286	-.203	-.150	-.227	-.323	-.413	-.476	-.537	-.611
.400	-.548	-.503	-.456	-.370	-.298	-.241	-.198	-.257	-.333	-.397	-.448	-.498	-.501
.500	-.452	-.440	-.417	-.337	-.306	-.258	-.228	-.273	-.327	-.375	-.415	-.445	-.432
.600	-.373	-.399	-.400	-.363	-.332	-.296	-.274	-.306	-.347	-.377	-.409	-.418	-.376
.700	-.296	-.317	-.334	-.320	-.306	-.280	-.266	-.288	-.311	-.327	-.352	-.347	-.295
.800	-.220	-.228	-.254	-.256	-.258	-.249	-.241	-.247	-.260	-.261	-.278	-.255	-.205
.900	-.134	-.086	-.090	-.104	-.120	-.123	-.123	-.122	-.117	-.105	-.120	-.097	-.089
.950	-.093	-.004	.016	.017	.004	-.001	-.003	0	.008	.017	-.004	.005	-.022
Lower surface .0375	.718	.632	.470	.176	-.069	-.300	-.474	-.263	.036	.262	.352	.559	.676
.075	.563	.486	.343	.119	-.055	-.225	-.342	-.170	.016	.178	.244	.417	.523
.150	.425	.364	.250	.086	-.033	-.147	-.220	-.108	.016	.128	.167	.306	.393
.250	.318	.269	.178	.059	-.029	-.107	-.156	-.083	.008	.089	.116	.222	.293
.350	.203	.206	.134	.037	-.029	-.090	-.125	-.073	-.004	.061	.079	.167	.225
.450	.189	.162	.105	.021	-.029	-.076	-.102	-.059	-.011	.043	.051	.130	.176
.550	.129	.116	.071	.001	-.039	-.078	-.096	-.067	-.025	.017	.023	.089	.124
.650	.084	.084	.047	-.007	-.037	-.062	-.076	-.053	-.029	.002	.004	.063	.086
.750	.045	.056	.036	-.007	-.029	-.044	-.049	-.037	-.021	0	-.002	.045	.052
.850	.025	.056	.047	.013	.008	.001	.001	.004	.020	.019	.015	.054	.046
.925	.009	.065	.073	.061	.060	.064	.067	.062	.018	.059	.044	.073	.046
.975	a.010	a.078	a.112	a.112	a.113	a.120	a.132	a.118	a.063	a.103	a.080	a.110	a.050
1.000	a.012	a.084	a.139	a.151	a.145	a.154	a.173	a.149	b.077	a.129	a.100	a.129	a.050

[a]Faired value.

[b]Lower-surface value only.

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TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(j) N = 1500 rpm; $\beta_{0.75R}$ = 30°.

	J	.820	.873	.981	1.096	1.211	1.294	1.380	1.471	1.412	1.339	1.263	1.167	1.044	.928	.846
	M_x	.565	.575	.583	.603	.615	.622	.635	.645	.634	.627	.620	.607	.597	.587	.576
	α_x'	10.40	9.29	7.08	4.80	2.60	1.06	-.49	-2.08	-1.05	.25	1.63	3.43	5.82	8.16	9.85
	$\Delta\beta$	1.32	1.32	1.17	.86	.53	.28	.03	-.25	-.07	.14	.37	.66	1.00	1.27	1.33
	α_i	2.99	2.98	2.60	2.12	1.50	1.02	.59	.14	.40	.80	1.23	1.76	2.42	2.78	2.98
	c_n	.8362	.8432	.7461	.6186	.4435	.3017	.1775	.0419	.1208	.2380	.3645	.5198	.7020	.7934	.8399
	c_m	-.0415	-.0261	-.0332	-.0498	-.0541	-.0553	-.0592	-.0605	-.0619	-.0591	-.0552	-.0521	-.0316	-.0213	-.0310
	c_c															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.082	1.085	1.087	1.093	1.097	1.100	1.105	1.108	1.104	1.102	1.100	1.095	1.092	1.088	1.085
	.025	-1.538	-1.684	-2.077	-1.047	-.568	-.190	.130	.399	.254	-.010	-.337	-.821	-2.210	-1.699	-1.682
	.050	-1.442	-1.634	-1.647	-.956	-.540	-.263	-.015	.206	.084	-.124	-.373	-.785	-1.010	-1.650	-1.628
	.100	-1.278	-1.498	-1.195	-.731	-.444	-.267	-.090	.074	-.018	-.168	-.342	-.570	-.841	-1.488	-1.478
	.200	-.937	-1.000	-.691	-.549	-.383	-.267	-.156	-.044	-.109	-.207	-.315	-.453	-.619	-.894	-.961
	.300	-.741	-.660	-.543	-.477	-.364	-.281	-.197	-.111	-.162	-.235	-.317	-.411	-.526	-.581	-.662
	.400	-.558	-.477	-.454	-.425	-.343	-.284	-.220	-.159	-.197	-.249	-.313	-.378	-.452	-.447	-.495
	.500	-.447	-.375	-.384	-.375	-.321	-.281	-.234	-.188	-.217	-.255	-.301	-.343	-.389	-.363	-.402
	.600	-.346	-.293	-.331	-.349	-.322	-.300	-.266	-.236	-.258	-.281	-.313	-.335	-.350	-.294	-.316
	.700	-.266	-.214	-.242	-.276	-.269	-.260	-.241	-.223	-.238	-.248	-.266	-.273	-.264	-.209	-.238
	.800	-.201	-.145	-.142	-.180	-.193	-.200	-.191	-.188	-.194	-.197	-.202	-.190	-.155	-.123	-.173
	.900	-.129	-.068	0	-.004	-.021	-.043	-.044	-.053	-.052	-.044	-.039	-.016	.018	-.021	-.099
	.950	-.092	-.029	.075	.101	.100	.088	.083	.074	.075	.086	.089	.103	.096	.031	-.064
Lower surface	.0375	.831	.807	.735	.588	.346	.126	-.129	-.389	-.238	-.003	.216	.463	.671	.768	.817
	.075	.678	.655	.582	.455	.264	.101	-.060	-.259	-.151	.014	.165	.354	.527	.617	.665
	.150	.536	.513	.453	.351	.212	.098	-.015	-.148	-.079	.042	.140	.278	.407	.485	.523
	.250	.423	.405	.357	.277	.173	.089	.003	-.089	-.042	.042	.119	.224	.321	.383	.413
	.350	.343	.332	.294	.229	.145	.074	.009	-.061	-.029	.042	.099	.185	.264	.314	.335
	.450	.280	.286	.247	.198	.126	.069	.019	-.039	-.009	.044	.089	.160	.224	.259	.274
	.550	.214	.213	.194	.152	.095	.047	.009	-.034	-.015	.028	.063	.122	.175	.203	.211
	.650	.160	.164	.159	.130	.086	.047	.017	-.018	-.003	.032	.057	.107	.145	.159	.162
	.750	.106	.117	.130	.110	.076	.049	.029	.009	.018	.038	.056	.093	.118	.123	.111
	.850	.064	.085	.119	.113	.096	.081	.070	.059	.063	.081	.084	.107	.111	.102	.075
	.925	.045	.073	.130	.139	.137	.131	.130	.126	.126	.134	.130	.143	.126	.102	.060
	.975	[a]-.060	[a].058	[a].141	[a].172	[a].188	[a].184	[a].183	[a].195	[a].193	[a].209	[a].190	[a].190	[a].168	[a].110	[a].092
	1.000	[a]-.023	[a].048	[a].155	[a].203	[a].238	[a].220	[a].228	[a].235	[a].233	[a].255	[a].229	[a].225	[a].194	[a].120	[a].089

[a]Paired value.

[redacted]

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Continued

(k) N = 1600 rpm; $\beta_{0.75R}$ = 30°.

J		0.830	0.897	0.990	1.043	1.119	1.196	1.273	1.355	1.440	1.488	1.400	1.311	1.232	1.159	1.098	1.029	0.940	0.869
M_r		.616	.614	.632	.642	.645	.652	.664	.674	.684	.690	.674	.665	.661	.646	.636	.634	.627	.619
α_r'		10.19	8.79	6.90	5.85	4.35	2.88	1.45	-.04	-1.54	-2.37	-.84	.75	2.21	3.59	4.76	6.12	7.91	9.38
$\Delta\beta$		1.96	1.77	1.48	1.31	1.05	.78	.49	.19	-.12	-.30	.03	.36	.65	.91	1.13	1.36	1.64	1.84
α_i		3.08	3.01	2.78	2.44	2.03	1.68	1.20	.76	.32	.11	.55	1.04	1.45	1.85	2.14	2.59	2.97	3.03
c_n		.8677	.8529	.7983	.7067	.5885	.4931	.3562	.2291	.0950	.0339	.1652	.3083	.4304	.5449	.6292	.7498	.8496	.8575
c_m		-.0432	.0244	-.0244	-.0359	-.0528	-.0558	-.0590	-.0637	-.0652	-.0652	-.0640	-.0603	-.0551	-.0501	-.0441	-.0331	-.0164	-.0269
c_c																			
c/b		Pressure coefficient, P																	
Upper surface	0.000	1.098	1.097	1.103	1.107	1.108	1.110	1.115	1.119	1.123	1.125	1.119	1.116	1.114	1.108	1.105	1.104	1.102	1.099
	.025	-1.792	-1.937	-2.351	-2.054	-1.012	-.807	-.359	-.034	.264	.387	.115	-.226	-.574	-.954	-1.692	-2.232	-2.434	-1.823
	.050	-1.699	-1.793	-2.204	-1.928	-1.042	-.742	-.415	-.160	.084	.192	-.041	-.309	-.581	-.861	-1.009	-2.100	-2.194	-1.754
	.100	-1.458	-1.536	-1.175	-.832	-.792	-.611	-.396	-.218	-.039	.044	-.132	-.325	-.504	-.686	-.834	-.935	-1.321	-1.576
	.200	-1.003	-1.051	-.748	-.685	-.619	-.514	-.388	-.270	-.148	-.085	-.211	-.340	-.454	-.558	-.641	-.699	-.914	-1.071
	.300	-.735	-.765	-.641	-.603	-.554	-.482	-.394	-.305	-.210	-.163	-.259	-.356	-.441	-.512	-.567	-.616	-.704	-.789
	.400	-.614	-.579	-.550	-.536	-.506	-.455	-.394	-.325	-.237	-.217	-.290	-.367	-.428	-.476	-.508	-.543	-.563	-.611
	.500	-.529	-.461	-.470	-.471	-.456	-.422	-.384	-.333	-.282	-.254	-.308	-.362	-.407	-.438	-.454	-.473	-.466	-.504
	.600	-.439	-.375	-.413	-.431	-.434	-.416	-.399	-.362	-.329	-.304	-.344	-.381	-.409	-.425	-.426	-.425	-.387	-.406
	.700	-.366	-.293	-.317	-.342	-.360	-.354	-.350	-.330	-.311	-.297	-.319	-.342	-.355	-.359	-.346	-.336	-.293	-.322
	.800	-.305	-.210	-.207	-.230	-.259	-.267	-.277	-.267	-.268	-.262	-.270	-.277	-.276	-.268	-.245	-.221	-.201	-.246
	.900	-.241	-.126	-.055	-.055	-.074	-.085	-.102	-.110	-.118	-.118	-.110	-.109	-.096	-.083	-.060	-.085	-.090	-.166
	.950	-.213	-.088	.015	.032	.040	.040	.029	.019	.018	.019	.021	.027	.032	.037	.046	.033	-.041	-.130
Lower surface	.0375	.750	.727	.670	.584	.483	.341	.123	-.104	-.336	-.486	-.248	.040	.239	.403	.536	.635	.704	.734
	.075	.595	.574	.522	.444	.355	.244	.079	-.073	-.268	-.353	-.152	.023	.166	.290	.401	.488	.552	.583
	.150	.454	.438	.391	.331	.262	.179	.060	-.040	-.173	-.231	-.098	.021	.121	.211	.297	.367	.418	.441
	.250	.340	.329	.295	.246	.195	.133	.040	-.029	-.121	-.164	-.072	.016	.082	.156	.222	.274	.313	.330
	.350	.261	.259	.232	.190	.146	.094	.022	-.036	-.101	-.132	-.065	.002	.058	.111	.169	.213	.241	.254
	.450	.198	.203	.180	.150	.116	.074	.016	-.029	-.082	-.103	-.053	.002	.043	.091	.135	.168	.189	.196
	.550	.134	.139	.131	.102	.070	.040	-.011	-.043	-.082	-.097	-.061	-.023	.010	.050	.092	.120	.131	.096
	.650	.078	.091	.089	.071	.048	.023	-.013	-.040	-.068	-.077	-.050	-.023	.002	.032	.066	.084	.088	.080
	.750	.021	.049	.062	.045	.032	.015	-.013	-.028	-.041	-.045	-.034	-.017	-.003	.018	.046	.059	.049	.033
	.850	-.029	.017	.046	.038	.040	.034	.014	.014	.010	.012	.015	.016	.023	.032	.047	.047	.028	-.003
	.925	-.055	.008	.062	.057	.067	.069	.067	.071	.076	.081	.076	.070	.064	.070	.073	.068	.028	-.015
	.975	[a]-.093	[a]-.012	[a].079	[a].090	[a].091	[a].132	[a].135	[a].114	[a].154	[a].152	[a].145	[a].142	[a].115	[a].120	[a].110	[a].104	[a].030	[a]-.015
	1.000	[a]-.142	[a]-.030	[a].093	[a].111	[a].110	[a].170	[a].188	[a].137	[a].205	[a].200	[a].189	[a].198	[a].152	[a].155	[a].135	[a].131	[a].032	[a]-.010

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.85 PROPELLOR BLADE SECTION (x = 0.78) – Continued

(i) N = 1800 rpm; $\beta_{0.75R} = 30^{\circ}$.

J	0.880	0.931	0.998	1.062	1.168	1.236	1.296	1.378	1.449	1.469	1.404	1.347	1.269	1.198	1.110	1.029	0.958	0.904
M_x	.695	.704	.712	.721	.728	.738	.748	.757	.768	.770	.762	.751	.743	.737	.721	.713	.707	.703
α_x'	9.15	8.10	6.74	5.47	3.42	2.14	1.03	-.45	-1.70	-2.04	-.92	.10	1.52	2.80	4.53	6.12	7.55	8.65
$\Delta\beta$	2.42	2.16	1.82	1.50	.96	.61	.30	-.13	-.50	-.61	-.27	-.03	.44	.80	1.25	1.66	2.02	2.30
α_i	3.22	3.22	3.12	2.82	1.99	1.57	1.16	.69	.26	.14	.55	.83	1.32	1.76	2.31	2.95	3.18	3.22
c_n	.9195	.9293	.9099	.8266	.5889	.4655	.3484	.2057	.0787	.0413	.1672	.2475	.3953	.5228	.6804	.8656	.9240	.9210
c_m	-.0277	-.0126	-.0287	-.0352	-.0512	-.0540	-.0643	-.0714	-.0780	-.0793	-.0728	-.0720	-.0610	-.0573	-.0478	-.0328	-.0229	-.0255
c_c																		
c/b	Pressure coefficient, P																	
Upper surface																		
0.000	1.127	1.131	1.134	1.137	1.140	1.144	1.149	1.152	1.157	1.158	1.154	1.150	1.146	1.144	1.138	1.134	1.132	1.131
.025	-2.065	-1.945	-1.759	-1.563	-.897	-.569	-.235	.103	.332	.383	.197	-.008	-.382	-.793	-1.321	-1.679	-1.887	-2.065
.050	-1.955	-1.874	-1.723	-1.565	-1.081	-.653	-.353	-.068	.136	.183	.014	-.161	-.480	-.949	-1.319	-1.665	-1.832	-1.970
.100	-1.645	-1.765	-1.626	-1.462	-.928	-.574	-.380	-.168	-.008	.032	-.105	-.241	-.467	-.706	-1.224	-1.570	-1.731	-1.753
.200	-1.093	-1.638	-1.505	-1.363	-.638	-.523	-.404	-.261	-.144	-.114	-.218	-.314	-.458	-.594	-.637	-1.454	-1.607	-1.153
.300	-.832	-.852	-.934	-.585	-.596	-.519	-.431	-.325	-.233	-.207	-.290	-.365	-.475	-.563	-.597	-.694	-.873	-.814
.400	-.622	-.568	-.515	-.503	-.548	-.501	-.445	-.367	-.297	-.277	-.341	-.397	-.475	-.529	-.559	-.490	-.567	-.574
.500	-.511	-.403	-.424	-.473	-.497	-.466	-.432	-.383	-.335	-.320	-.366	-.404	-.451	-.485	-.501	-.460	-.412	-.476
.600	-.410	-.355	-.409	-.455	-.482	-.470	-.461	-.435	-.407	-.397	-.426	-.448	-.468	-.478	-.480	-.444	-.383	-.388
.700	-.321	-.273	-.334	-.367	-.394	-.392	-.396	-.390	-.382	-.380	-.392	-.397	-.397	-.395	-.392	-.362	-.312	-.306
.800	-.248	-.184	-.230	-.254	-.278	-.288	-.301	-.314	-.319	-.320	-.319	-.315	-.299	-.285	-.275	-.252	-.220	-.233
.900	-.177	-.067	-.061	-.062	-.072	-.082	-.098	-.117	-.127	-.129	-.121	-.116	-.093	-.079	-.074	-.067	-.066	-.168
.950	-.147	-.013	.038	.041	.043	.048	.038	.032	.022	.020	.026	.028	.042	.044	.040	.034	.028	-.139
Lower surface																		
.0375	.745	.707	.652	.586	.393	.237	.054	-.245	-1.003	-1.118	-.410	-.138	.139	.327	.500	.616	.682	.749
.075	.596	.560	.511	.452	.287	.165	.029	-.159	-.293	-.467	-.235	-.100	.090	.232	.374	.477	.540	.600
.150	.460	.431	.392	.343	.210	.120	.024	-.106	-.232	-.252	-.157	-.064	.065	.167	.277	.362	.412	.467
.250	.353	.330	.299	.258	.150	.081	.012	-.077	-.167	-.192	-.112	-.052	.039	.115	.204	.272	.313	.357
.350	.276	.258	.235	.199	.108	.051	-.001	-.073	-.140	-.156	-.100	-.058	.018	.081	.153	[a].227	.246	.280
.450	.221	.204	.187	.155	.077	.029	-.005	-.062	-.112	-.125	-.080	-.051	.004	.054	.114	.167	.192	.221
.550	.150	.146	.135	.107	.040	.001	-.033	-.074	-.112	-.120	-.089	-.068	-.021	.019	.070	.115	.140	.156
.650	.090	.101	.099	.076	.018	-.013	-.034	-.062	-.088	-.094	-.075	-.062	-.028	.002	.044	.081	.099	.103
.750	.043	.062	.073	.056	.008	-.014	-.029	-.044	-.058	-.059	-.049	-.044	-.026	-.005	.029	.086	.069	.051
.850	.015	.054	.083	.068	.034	.013	.008	.008	.005	.006	.010	.005	.007	.021	.048	.097	.070	.023
.925	-.013	.052	.102	.091	.063	.060	.066	.076	.079	.081	.078	.069	.061	.059	.078	.093	.088	-.006
.975	[a]-.060	[a].047	[a].122	[a].135	[a].088	[a].132	[a].135	[a].143	[a].130	[a].132	[a].147	[a].139	[a].134	[a].120	[a].131	[a].130	[a].108	[a]-.054
1.000	[a]-.088	[a].040	[a].140	[a].167	[b].105	[a].185	[a].182	[a].187	[a].157	[a].156	[a].186	[a].185	[a].187	[a].160	[a].170	[a].161	[a].120	[a]-.085

[a]Faired value.

[b]Lower-surface value only.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(m) N = 2000 rpm; $\beta_{0.75R}$ = 30°.

	J	1.009	1.068	1.132	1.190	1.250	1.314	1.385	1.433	1.407	1.342	1.283	1.224	1.166	1.099	1.040
	M_x	.789	.803	.809	.817	.822	.834	.846	.847	.847	.831	.825	.819	.808	.797	.795
	α_x'	6.46	5.35	4.10	3.00	1.87	.70	-.58	-1.45	-.96	.19	1.26	2.36	3.45	4.74	5.90
	$\Delta\beta$	1.76	1.53	1.27	.98	.63	.19	-.32	-.69	-.48	-.01	.41	.79	1.11	1.41	1.64
	α_1	3.27	2.90	2.47	1.97	1.55	1.03	.54	.13	.35	.81	1.33	1.71	2.33	2.65	3.09
	c_n	.9529	.8479	.7249	.5825	.4603	.3069	.1629	.0400	.1058	.2408	.3950	.5072	.6876	.7754	.9025
	c_m	-.0754	-.0676	-.0642	-.0666	-.0777	-.0768	-.0961	-.1001	-.1005	-.0878	-.0797	-.0724	-.0708	-.0641	-.0690
	c_c	-.0243	-.0188	-.0118	-.0046	.0041	.0105	.0180	.0208	.0191	.0141	.0074	-.0004	-.0096	-.0152	-.0228
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.165	1.171	1.175	1.178	1.180	1.185	1.191	1.192	1.192	1.184	1.182	1.179	1.174	1.169	1.168
	.025	-1.217	-1.000	-.666	-.514	-.273	.013	.270	.391	.328	.135	-.133	-.380	-.654	-.802	-1.129
	.050	-1.240	-1.046	-.855	-.705	-.452	-.155	.081	.196	.137	-.045	-.293	-.591	-.831	-.909	-1.165
	.100	-1.178	-1.027	-.863	-.677	-.449	-.242	-.049	.051	-.002	-.155	-.354	-.507	-.814	-.931	-1.138
	.200	-1.165	-1.048	-.901	-.699	-.486	-.340	-.187	-.102	-.148	-.274	-.417	-.583	-.858	-.975	-1.127
	.300	-1.173	-1.028	-.912	-.700	-.509	-.422	-.291	-.210	-.252	-.371	-.480	-.556	-.864	-.978	-1.116
	.400	-1.169	-1.030	-.936	-.638	-.599	-.458	-.375	-.303	-.342	-.428	-.536	-.632	-.834	-1.003	-1.116
	.500	-1.146	-1.053	-.900	-.691	-.581	-.491	-.407	-.347	-.379	-.458	-.558	-.659	-.701	-.978	-1.116
	.600	-.597	-.601	-.590	-.740	-.650	-.603	-.507	-.477	-.497	-.576	-.622	-.671	-.795	-.512	-.557
	.700	-.383	-.331	-.351	-.451	-.708	-.682	-.641	-.602	-.626	-.665	-.716	-.549	-.403	-.341	-.331
	.800	-.215	-.198	-.231	-.226	-.245	-.287	-.533	-.620	-.593	-.356	-.265	-.245	-.235	-.217	-.201
	.900	-.042	-.028	-.022	-.024	-.034	-.049	-.057	-.065	-.062	-.056	-.048	-.033	-.024	-.029	-.033
	.950	.053	.065	.072	.072	.074	.073	.070	.068	.070	.068	.069	.072	.079	.071	.065
Lower surface	.0375	.627	.549	.447	.319	.163	-.077	-.677	-.882	-.812	-.255	.049	.229	.406	.496	.589
	.075	.494	.425	.340	.235	.112	-.057	-.218	-.798	-.668	-.151	.029	.161	.306	.378	.459
	.150	.385	.326	.257	.175	.083	-.035	-.193	-.387	-.210	-.113	.023	.120	.228	.287	.353
	.250	.297	.248	.191	.126	.054	-.031	-.156	-.218	-.191	-.091	.008	.081	.165	.214	.270
	.350	.230	.189	.141	.087	.028	-.045	-.142	-.210	-.175	-.091	-.011	.050	.118	.160	.206
	.450	.183	.147	.105	.058	.010	-.047	-.121	-.177	-.144	-.082	-.023	.031	.083	.121	.160
	.550	.124	.092	.057	.015	-.028	-.076	-.130	-.167	-.146	-.105	-.055	-.011	.039	.071	.104
	.650	.085	.061	.028	-.005	-.040	-.076	-.115	-.136	-.123	-.098	-.060	-.025	.012	.041	.069
	.750	.053	.032	.011	-.015	-.041	-.064	-.086	-.095	-.090	-.075	-.058	-.032	-.001	.021	.042
	.850	.048	.034	.024	.006	-.005	-.009	-.016	-.018	-.015	-.014	-.012	0	.023	.031	.045
	.925	.082	.074	.064	.054	.053	.061	.064	.064	.065	.060	.052	.054	.068	.071	.080
	.975	[a].110	[a].132	[a].110	[a].112	[a].130	[a].115	[a].154	[a].128	[a].090	[a].122	[a].112	[a].125	[a].136	[a].128	[a].110
	1.000	[a].139	[a].180	[a].140	[a].161	[a].187	[a].145	[a].203	[a].159	[a].150	[a].160	[a].142	[a].162	[a].167	[a].170	[a].136

[a]Paired value.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(n) N = 2160 rpm; $\beta_{0.75R}$ = 30°.

	J	1.075	1.146	1.227	1.294	1.353	1.413	1.379	1.323	1.266	1.202	1.115
	M_r	.869	.878	.889	.899	.904	.917	.907	.898	.893	.879	.873
	α_r	5.21	3.84	2.30	1.06	-.01	-1.07	-.47	.54	1.58	2.77	4.43
	$\Delta\beta$	1.28	.90	.48	.14	-.16	-.46	-.39	-.01	.28	.60	1.06
	α_i	2.65	2.21	1.48	.93	.33	-.26	.16	.68	1.22	1.72	1.84
	c_n	.7774	.6544	.4399	.2873	.0981	-.0777	.0474	.2041	.3624	.5112	.7376
	c_m	-.1081	-.1073	-.0875	-.0926	-.0826	-.0613	-.0736	-.0856	-.0905	-.0877	-.1122
	c_a	.0059	.0122	.0179	.0258	[a].0273	.0275	.0267	[a].0269	.0227	[a].0151	.0096
	c/b	Pressure coefficient, P										
Upper surface	0.000	1.203	1.207	1.213	1.218	1.221	1.228	1.222	1.218	1.215	1.208	1.205
	.025	-.519	-.382	-.121	.108	.293	.414	.347	.204	.005	-.223	-.484
	.050	-.710	-.563	-.329	-.072	.108	.227	.162	.022	-.172	-.436	-.648
	.100	-.743	-.567	-.320	-.171	-.014	.090	.033	-.091	-.249	-.422	-.667
	.200	-.807	-.635	-.441	-.264	-.148	-.057	-.106	-.215	-.340	-.506	-.731
	.300	-.834	-.675	-.470	-.327	-.245	-.172	-.217	-.291	-.390	-.535	-.761
	.400	-.864	-.715	-.530	-.421	-.298	-.239	-.268	-.367	-.453	-.588	-.804
	.500	-.893	-.736	-.583	-.471	-.367	-.307	-.336	-.430	-.516	-.637	-.835
	.600	-.926	-.799	-.658	-.566	-.474	-.409	-.447	-.506	-.594	-.709	-.887
	.700	-.475	-.901	-.735	-.654	-.573	-.508	-.540	-.623	-.704	-.758	-.690
	.800	-.365	-.346	-.435	-.740	-.672	-.627	-.650	-.725	-.652	-.337	-.365
	.900	-.330	-.281	-.215	-.203	-.162	-.147	-.154	-.195	-.197	-.215	-.301
	.950	-.315	-.251	-.191	-.176	-.128	-.097	-.111	-.162	-.171	-.191	-.270
Lower surface	.0375	.507	.358	.159	-.078	-.526	-.661	-.593	-.267	.040	.245	.439
	.075	.396	.270	.114	-.048	-.402	-.609	-.532	-.105	.027	.181	.336
	.150	.305	.206	.086	-.036	-.143	-.519	-.171	-.103	.020	.135	.257
	.250	.231	.148	.053	-.045	-.158	-.269	-.182	-.096	0	.091	.190
	.350	.171	.101	.019	-.065	-.154	-.213	-.180	-.106	-.025	.052	.137
	.450	.125	.062	-.007	-.078	-.152	-.222	-.189	-.114	-.041	.020	.093
	.550	.062	.027	-.059	-.123	-.186	-.263	-.219	-.160	-.093	-.034	.034
	.650	.012	-.038	-.095	-.150	-.206	-.308	-.244	-.180	-.121	-.071	-.010
	.750	-.040	-.082	-.128	-.175	-.183	-.316	-.213	-.191	-.151	-.107	-.055
	.850	-.070	-.090	-.120	-.147	-.130	-.181	-.116	-.151	-.128	-.103	-.068
	.925	-.087	-.084	-.100	-.119	-.094	-.077	-.073	-.118	-.101	-.086	-.073
	.975	[a]-.126	[a]-.072	[a]-.071	[a]-.083	[a]-.044	[a].005	[a]-.005	[a]-.075	[a]-.067	[a]-.069	[a]-.051
	1.000	[a]-.189	[a]-.069	[a]-.053	[a]-.062	[a]-.014	[a].045	[a].036	[a]-.051	[a]-.048	[a]-.042	[a]-.039

[a]Faired value.

[redacted]

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(o) N = 1350 rpm; $\beta_{0.75R}$ = 50°.

	J	2.283	2.435	2.582	2.755	2.865	2.996	3.057	2.948	2.823	2.688	2.506	2.382
	M_r	.685	.709	.729	.754	.774	.798	.806	.787	.763	.742	.721	.693
	α_r'	5.92	4.08	2.40	.55	-.56	-1.82	-2.38	-1.37	-.14	1.25	3.26	4.71
	$\Delta\beta$	.81	.47	.12	-.30	-.55	-.84	-.96	-.73	-.45	-.14	.31	.59
	α_i	2.39	1.93	1.51	.94	.61	.24	-.03	.41	.78	1.16	1.60	2.23
	c_n	.7738	.6269	.4933	.3064	.2010	.0774	-.0110	.1355	.2560	.3789	.5179	.7246
	c_m	-.0179	-.0240	-.0276	-.0359	-.0378	-.0442	-.0511	-.0428	-.0383	-.0308	-.0260	-.0195
	c_c												
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.123	1.133	1.141	1.151	1.159	1.170	1.174	1.165	1.155	1.146	1.138	1.127
	.025	-1.877	-1.171	-.645	-.100	.156	.361	.443	.289	.041	-.307	-.839	-1.582
	.050	-1.853	-1.205	-.731	-.248	-.025	.163	.243	.095	-.126	-.422	-.970	-1.579
	.100	-1.724	-.990	-.618	-.312	-.146	.008	.078	-.050	-.223	-.436	-.706	-1.323
	.200	-.740	-.650	-.540	-.358	-.252	-.139	-.082	-.181	-.302	-.432	-.587	-.627
	.300	-.551	-.600	-.526	-.403	-.325	-.237	-.191	-.272	-.362	-.452	-.551	-.605
	.400	-.529	-.540	-.493	-.417	-.366	-.304	-.268	-.327	-.389	-.448	-.507	-.545
	.500	-.493	-.494	-.465	-.420	-.390	-.350	-.326	-.367	-.404	-.440	-.473	-.499
	.600	-.464	-.473	-.465	-.454	-.447	-.439	-.437	-.442	-.450	-.460	-.463	-.474
	.700	-.378	-.388	-.388	-.400	-.400	-.406	-.414	-.408	-.404	-.397	-.385	-.389
	.800	-.265	-.275	-.283	-.316	-.335	-.336	-.342	-.344	-.331	-.298	-.279	-.278
	.900	-.081	-.076	-.080	-.124	-.129	-.131	-.148	-.150	-.129	-.096	-.082	-.084
	.950	.030	.041	.048	.023	.012	.013	.021	.007	.020	.045	.039	.031
Lower surface	.0375	.610	.467	.281	-.031	-.330	-.990	-1.182	-.808	-.164	.109	.349	.531
	.075	.473	.347	.198	-.025	-.174	-.610	-1.042	-.230	-.108	.072	.253	.403
	.150	.356	.256	.144	-.009	-.115	-.199	-.427	-.186	-.065	.054	.183	.301
	.250	.267	.189	.102	-.011	-.088	-.160	-.151	-.140	-.049	.034	.130	.222
	.350	.207	.139	.069	-.017	-.078	-.135	-.141	-.117	-.049	.016	.091	.171
	.450	.164	.105	.046	-.023	-.069	-.111	-.120	-.098	-.045	.001	.062	.130
	.550	.114	.064	.014	-.042	-.079	-.110	-.118	-.101	-.064	-.022	.028	.086
	.650	.081	.041	.001	-.037	-.064	-.085	-.088	-.004	-.053	-.026	.010	.060
	.750	.057	.024	-.004	-.032	-.046	-.054	-.054	-.050	-.040	-.024	.002	.041
	.850	.068	.044	.023	.013	.013	.016	.018	.019	.013	.011	.027	.060
	.925	.087	.071	.059	.083	.092	.098	.103	.104	.088	.068	.053	.082
	.975	[a].106	[a].098	[a].101	[a].156	[a].174	[a].163	[a].195	[a].187	[a].163	[a].144	[a].111	[a].118
	1.000	[b].116	[b].112	[b].127	[a].201	[a].232	[a].196	[a].244	[a].232	[a].212	[a].206	[a].156	[a].155

[a]Faired value.
[b]Lower-surface value only.

[redacted]

NACA

[redacted]

TABLE 8.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) - Continued

(p) N = 1350 rpm; $\beta_{0.75R}$ = 40°.

J	1.417	1.502	1.605	1.706	1.827	1.918	2.026	2.146	2.086	1.965	1.871	1.769	1.665	1.567	1.455
M_r	.575	.583	.597	.609	.620	.632	.646	.662	.654	.635	.624	.614	.597	.590	.579
α_r'	8.86	7.39	5.68	4.05	2.19	.85	-.68	-2.31	-1.51	.17	1.54	3.07	4.70	6.30	8.20
$\Delta\beta$	.87	.82	.69	.52	.28	.08	-.15	-.42	-.29	-.02	.19	.39	.59	.74	.85
α_i	2.83	2.64	2.21	1.77	1.30	.91	.51	.05	.30	.72	1.14	1.54	1.96	2.38	2.75
c_n	.8697	.8134	.6819	.5492	.4055	.2852	.1597	.0165	.0945	.2257	.3566	.4793	.6066	.7380	.8467
c_m	-.0222	-.0236	-.0422	-.0494	-.0531	-.0598	-.0647	-.0642	-.0645	-.0612	-.0531	-.0501	-.0462	-.0349	-.0195
c_c															
c/b	Pressure coefficient, P														
Upper surface 0.000	1.085	1.087	1.092	1.095	1.100	1.103	1.108	1.114	1.111	1.105	1.101	1.097	1.092	1.090	1.086
.025	-1.756	-2.046	-1.726	-.956	-.537	-.190	.122	.419	.258	-.044	-.394	-.776	-1.102	-2.121	-2.005
.050	-1.703	-1.876	-1.054	-.864	-.547	-.283	-.037	.291	.075	-.173	-.440	-.706	-.988	-1.498	-1.887
.100	-1.562	-1.469	-.881	-.698	-.483	-.310	-.135	.074	-.049	-.231	-.411	-.590	-.791	-1.015	-1.560
.200	-1.134	-.863	-.677	-.565	-.432	-.322	-.211	-.055	-.153	-.273	-.384	-.497	-.621	-.707	-1.030
.300	-.801	-.645	-.593	-.516	-.422	-.341	-.259	-.133	-.216	-.306	-.385	-.467	-.551	-.606	-.737
.400	-.574	-.521	-.518	-.469	-.401	-.344	-.285	-.180	-.250	-.318	-.373	-.433	-.488	-.524	-.548
.500	-.462	-.456	-.463	-.436	-.387	-.346	-.305	-.218	-.279	-.328	-.366	-.410	-.449	-.473	-.460
.600	-.370	-.399	-.435	-.426	-.391	-.371	-.346	-.275	-.324	-.362	-.382	-.410	-.427	-.430	-.384
.700	-.283	-.311	-.354	-.357	-.342	-.329	-.318	-.264	-.306	-.328	-.334	-.347	-.354	-.345	-.297
.800	-.201	-.214	-.251	-.270	-.267	-.270	-.274	-.232	-.268	-.276	-.267	-.268	-.258	-.243	-.206
.900	-.115	-.088	-.078	-.097	-.100	-.114	-.129	-.104	-.162	-.127	-.102	-.096	-.088	-.087	-.098
.950	-.073	-.013	.020	.020	.028	.018	.007	.028	.001	.009	.030	.026	.021	.005	-.043
Lower surface .0375	.729	.673	.578	.419	.227	.015	-.266	-.497	-.344	-.098	.156	.338	.507	.620	.705
.075	.576	.522	.435	.302	.154	.003	-.165	-.338	-.263	-.075	.103	.238	.375	.473	.552
.150	.438	.394	.321	.217	.110	.008	-.106	-.213	-.171	-.044	.076	.171	.276	.350	.415
.250	.331	.294	.236	.156	.078	.001	-.081	-.145	-.124	-.034	.050	.119	.165	.260	.311
.350	.258	.230	.180	.112	.051	-.007	-.071	-.112	-.103	-.034	.031	.086	.150	.199	.241
.450	.199	.178	.139	.082	.032	-.012	-.062	-.085	-.085	-.033	.019	.061	.116	.154	.187
.550	.141	.127	.095	.048	.009	-.029	-.070	-.077	-.086	-.050	-.001	.031	.077	.106	.129
.650	.091	.088	.067	.027	-.003	-.027	-.057	-.054	-.069	-.041	-.010	.014	.051	.075	.086
.750	.050	.057	.045	.015	-.004	-.027	-.042	-.027	-.048	-.034	-.010	.009	.034	.049	.047
.850	.031	.054	.054	.034	.025	.010	.006	.033	.009	.009	.023	.032	.050	.054	.037
.925	.013	.056	.069	.062	.054	.064	.069	.101	.077	.069	.064	.063	.071	.067	.032
.975	[a]-.005	[a].062	[a].073	[a].105	[a].076	[a].112	[a].130	[a].144	[a].126	[a].109	[a].093	[a].086	[a].093	[a].071	[a].024
1.000	[a]-.012	[a].068	[b].077	[a].135	[b].088	[a].144	[a].171	[a].166	[b].147	[a].130	[b].108	[b].094	[a].104	[a].072	[a].020

[a]Faired value.

[b]Lower-surface value only.

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION ($x = 0.78$) – Continued

(q) $N = 1350$ rpm; $\beta_{0.75R} = 35^{\circ}$.

J	1.109	1.187	1.287	1.389	1.492	1.589	1.685	1.789	1.734	1.633	1.539	1.442	1.335	1.257	1.160
M_x	.538	.546	.554	.567	.578	.588	.601	.612	.605	.593	.584	.572	.563	.555	.538
α_x'	9.55	8.05	6.19	4.35	2.56	.94	-.61	-2.23	-1.38	.22	1.77	3.42	5.32	6.74	8.57
$\Delta\beta$	.87	.79	.65	.46	.26	.05	-.16	-.40	-.27	-.05	.15	.36	.56	.69	.83
α_1	2.89	2.72	2.34	1.86	1.39	.96	.57	.09	.35	.74	1.14	1.66	2.12	2.51	2.79
c_n	.8571	.8112	.7020	.5611	.4212	.2931	.1742	.0290	.1073	.2256	.3477	.5025	.6372	.7534	.8262
c_m	-.0322	-.0222	-.0418	-.0509	-.0527	-.0557	-.0598	-.0601	-.0589	-.0569	-.0489	-.0502	-.0451	-.0295	-.0192
c_o															
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.074	1.076	1.079	1.082	1.086	1.089	1.093	1.096	1.094	1.091	1.088	1.084	1.081	1.079	1.074
	.025	-1.588	-1.963	-1.912	-.997	-.616	-.237	.075	.350	.212	-.067	-.405	-.854	-1.455	-1.961	-1.886
	.050	-1.501	-1.878	-1.405	-.887	-.585	-.313	-.067	.158	.040	-.183	-.441	-.758	-1.030	-1.791	-1.756
	.100	-1.404	-1.504	-.902	-.715	-.509	-.327	-.156	.012	-.076	-.237	-.413	-.629	-.824	-1.259	-1.527
	.200	-1.089	-.918	-.671	-.566	-.441	-.327	-.217	-.100	-.164	-.271	-.380	-.513	-.636	-.712	-1.002
	.300	-.859	-.665	-.589	-.514	-.425	-.342	-.262	-.171	-.218	-.301	-.384	-.478	-.562	-.599	-.717
	.400	-.647	-.519	-.514	-.462	-.400	-.336	-.279	-.211	-.249	-.308	-.369	-.436	-.495	-.513	-.538
	.500	-.517	-.451	-.465	-.431	-.387	-.342	-.299	-.248	-.277	-.319	-.367	-.411	-.454	-.461	-.450
	.600	-.401	-.387	-.432	-.419	-.391	-.364	-.335	-.296	-.319	-.353	-.380	-.407	-.429	-.416	-.374
	.700	-.306	-.303	-.351	-.350	-.336	-.321	-.306	-.282	-.299	-.319	-.334	-.347	-.356	-.335	-.290
	.800	-.226	-.211	-.257	-.267	-.266	-.267	-.266	-.252	-.261	-.273	-.271	-.268	-.264	-.236	-.206
	.900	-.144	-.094	-.098	-.102	-.102	-.119	-.131	-.129	-.132	-.131	-.115	-.105	-.099	-.092	-.112
	.950	-.106	-.033	-.002	.006	.018	.012	-.001	-.004	-.005	0	.014	.011	.003	-.006	-.065
Lower surface	.0375	.736	.685	.586	.449	.261	.045	-.211	-.481	-.322	-.090	.142	.373	.538	.631	.701
	.075	.582	.530	.442	.327	.178	.023	-.142	-.344	-.240	-.069	.089	.267	.400	.483	.547
	.150	.441	.399	.322	.234	.128	.019	-.086	-.223	-.157	-.045	.062	.190	.291	.358	.408
	.250	.333	.301	.238	.166	.086	.012	-.065	-.161	-.115	-.035	.038	.136	.212	.265	.307
	.350	.259	.230	.177	.124	.059	0	-.060	-.132	-.101	-.037	.019	.096	.158	.203	.235
	.450	.198	.178	.135	.090	.037	-.009	-.051	-.109	-.081	-.033	.008	.071	.122	.159	.181
	.550	.137	.127	.095	.058	.014	-.022	-.060	-.104	-.085	-.046	-.013	.037	.081	.107	.125
	.650	.089	.086	.065	.036	0	-.026	-.049	-.083	-.070	-.039	-.021	.021	.052	.078	.085
	.750	.044	.053	.046	.024	-.001	-.018	-.034	-.058	-.052	-.033	-.019	.013	.036	.050	.042
	.850	.020	.045	.052	.040	.024	.012	.010	-.004	-.003	.006	.010	.032	.050	.050	.019
	.925	.003	.042	.071	.066	.052	.064	.068	.060	.060	.054	.046	.061	.073	.065	.019
	.975	[a]-.015	[a].048	[a].093	[a].088	[a].076	[a].152	[a].111	[a].105	[a].113	[a].093	[a].077	[a].084	[a].100	[a].085	[a].032
	1.000	[a]-.034	[a].052	[a].110	[a].106	[a].090	[a].199	[a].137	[a].131	[a].143	[a].116	[a].097	[a].097	[a].117	[a].108	[a].039

[a]Faired value.

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Continued

(r) N = 1350 rpm; $\beta_{0.75R}$ = 25°.

J	.642	.683	.804	.885	.966	1.044	1.138	1.226	1.190	1.086	1.020	.923	.846	.752	.658
M_x	.475	.481	.491	.506	.512	.527	.535	.541	.544	.533	.526	.517	.507	.483	.496
α_x'	9.22	8.33	5.73	4.04	2.38	.82	-1.01	-2.68	-2.00	0	1.30	3.26	4.85	6.84	8.87
$\Delta\beta$	.86	.81	.64	.51	.37	.23	.05	-.11	-.04	.15	.27	.44	.57	.71	.84
α_i	3.07	2.86	2.30	1.82	1.36	.88	.50	0	.25	.68	1.10	1.60	2.08	2.61	2.97
c_n	.7912	.7551	.6254	.5059	.3831	.2522	.1446	-.0006	.0740	.1951	.3117	.4457	.5703	.7109	.7798
c_m	-.0261	-.0196	-.0465	-.0510	-.0474	-.0556	-.0611	-.0617	-.0609	-.0625	-.0532	-.0489	-.0459	-.0301	-.0159
c_o															
c/b	Pressure coefficient, P														
Upper surface															
0.000	1.058	1.059	1.062	1.066	1.067	1.071	1.073	1.075	1.076	1.073	1.071	1.068	1.066	1.060	1.063
.025	-1.443	-1.731	-1.578	-.907	-.530	-.162	.125	.404	.284	-.016	-.315	-.708	-1.043	-1.955	-1.723
.050	-1.375	-1.696	-1.013	-.788	-.524	-.249	-.028	.203	.102	-.136	-.365	-.639	-.915	-1.732	-1.664
.100	-1.292	-1.481	-.779	-.632	-.446	-.275	-.116	.054	-.019	-.198	-.331	-.535	-.734	-1.037	-1.493
.200	-1.018	-.792	-.616	-.516	-.407	-.292	-.188	-.070	-.118	-.242	-.339	-.459	-.582	-.657	-.913
.300	-.772	-.587	-.543	-.471	-.393	-.310	-.233	-.142	-.178	-.278	-.348	-.434	-.523	-.578	-.633
.400	-.554	-.482	-.476	-.427	-.373	-.312	-.256	-.183	-.208	-.287	-.339	-.399	-.467	-.494	-.486
.500	-.437	-.424	-.438	-.404	-.364	-.319	-.278	-.223	-.238	-.305	-.339	-.386	-.431	-.448	-.415
.600	-.347	-.366	-.410	-.390	-.368	-.342	-.308	-.268	-.277	-.329	-.355	-.382	-.412	-.408	-.350
.700	-.271	-.288	-.344	-.334	-.325	-.312	-.295	-.266	-.273	-.311	-.317	-.334	-.350	-.334	-.279
.800	-.211	-.201	-.257	-.259	-.261	-.268	-.265	-.247	-.245	-.273	-.268	-.267	-.271	-.244	-.203
.900	-.143	-.092	-.103	-.106	-.111	-.136	-.196	-.185	-.187	-.172	-.127	-.115	-.115	-.101	-.111
.950	-.104	-.028	-.001	.009	.009	-.008	-.015	-.012	-.004	-.025	.001	.005	-.005	-.013	-.062
Lower surface															
.0375	.722	.669	.540	.412	.216	-.017	-.267	-.543	-.383	-.149	.085	.303	.482	.608	.693
.075	.571	.519	.401	.296	.147	-.023	-.172	-.385	-.277	-.111	.047	.210	.350	.457	.540
.150	.431	.385	.290	.210	.100	-.015	-.116	-.253	-.182	-.074	.031	.146	.247	.337	.403
.250	.326	.283	.209	.151	.067	-.017	-.090	-.185	-.133	-.061	.015	.100	.177	.243	.299
.350	.248	.217	.160	.111	.044	-.021	-.076	-.148	-.107	-.056	.001	.065	.130	.184	.228
.450	.190	.168	.122	.086	.026	-.026	-.063	-.121	-.088	-.044	-.008	.046	.096	.141	.177
.550	.131	.115	.084	.053	.003	-.034	-.067	-.112	-.086	-.061	-.023	.019	.062	.098	.118
.650	.083	.079	.058	.034	-.006	-.032	-.054	-.087	-.066	-.052	-.025	.007	.012	.067	.077
.750	.039	.047	.042	.025	-.006	-.028	-.039	-.059	-.045	-.038	-.023	0	.024	.043	.040
.850	.020	.042	.054	.044	.018	.010	.011	-.001	.011	.006	.010	.026	.040	.050	.028
.925	.000	.042	.075	.069	.046	.061	.074	.071	.076	.069	.049	.054	.064	.064	.021
.975	.000	a.042	a.104	a.117	a.095	a.112	a.167	a.163	a.152	a.128	a.082	a.097	a.091	a.074	a.012
1.000	a.002	a.042	a.122	a.151	a.150	a.144	a.217	a.237	a.210	a.160	b.102	a.131	a.109	a.082	a.011

[redacted]

[a]Faired value.

[b]Lower-surface value only.

NACA

[redacted]

TABLE 8.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.85 PROPELLER BLADE SECTION (x = 0.78) – Concluded

(a) N = 1350 rpm; $\beta_{0.75R} = 20^{\circ}$.

	J	.536	.620	.707	.756	.849	.925	.987	.962	.889	.810	.722	.648	.567
	μ_x	.464	.469	.493	.487	.512	.522	.519	.520	.510	.495	.486	.478	.471
	α_x'	6.56	4.70	2.81	1.75	–.21	–1.78	–3.04	–2.53	–1.04	.61	2.48	4.09	5.87
	$\Delta\beta$	.86	.72	.56	.46	.26	.10	–.03	.02	.18	.35	.53	.67	.81
	α_i	2.63	2.12	1.64	1.20	.67	.26	.13	.06	.45	.90	1.39	1.90	2.40
	c_n	.6337	.5303	.4257	.3162	.1797	.0720	–.0355	.0168	.1222	.2405	.3591	.4799	.5862
	c_m	–.0374	–.0489	–.0497	–.0522	–.0560	–.0566	–.0547	–.0566	–.0549	–.0549	–.0506	–.0488	–.0450
	c_c													
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.055	1.057	1.062	1.061	1.067	1.070	1.069	1.069	1.066	1.063	1.061	1.059	1.057
	.025	–1.837	–.986	–.674	–.348	–.008	.256	.436	.353	.145	–.144	–.493	–.881	–1.368
	.050	–1.285	–.963	–.610	–.386	–.128	.083	.235	.162	–.005	–.232	–.491	–.767	–.951
	.100	–.785	–.701	–.507	–.363	–.183	–.030	.081	.027	–.095	–.258	–.431	–.618	–.766
	.200	–.626	–.559	–.436	–.342	–.230	–.125	–.047	–.084	–.166	–.277	–.384	–.508	–.600
	.300	–.550	–.504	–.412	–.348	–.262	–.181	–.123	–.151	–.212	–.298	–.376	–.464	–.532
	.400	–.485	–.451	–.383	–.339	–.273	–.211	–.168	–.187	–.232	–.300	–.360	–.423	–.473
	.500	–.440	–.422	–.364	–.335	–.285	–.238	–.206	–.221	–.254	–.307	–.350	–.400	–.434
	.600	–.408	–.403	–.364	–.348	–.313	–.278	–.253	–.264	–.288	–.328	–.356	–.388	–.407
	.700	–.340	–.345	–.317	–.316	–.290	–.269	–.253	–.259	–.272	–.300	–.317	–.337	–.344
	.800	–.252	–.264	–.250	–.261	–.253	–.245	–.237	–.239	–.241	–.261	–.256	–.262	–.260
	.900	–.098	–.106	–.099	–.122	–.130	–.143	–.143	–.142	–.129	–.137	–.111	–.108	–.102
	.950	.004	.004	.017	0	–.012	–.021	–.029	–.023	–.010	–.015	.007	.007	.004
Lower surface	.0375	.558	.446	.304	.112	–.135	–.351	–.602	–.468	–.263	–.027	.202	.392	.516
	.075	.412	.317	.208	.066	–.101	–.263	–.423	–.336	–.166	–.027	.133	.276	.376
	.150	.300	.224	.150	.048	–.066	–.170	–.277	–.219	–.111	–.015	.096	.194	.268
	.250	.212	.158	.103	.029	–.052	–.125	–.204	–.203	–.081	–.015	.067	.137	.193
	.350	.161	.110	.074	.012	–.052	–.109	–.168	–.135	–.075	–.022	.041	.099	.142
	.450	.121	.084	.058	.003	–.041	–.084	–.132	–.104	–.059	–.025	.029	.074	.110
	.550	.081	.048	.029	–.013	–.054	–.084	–.123	–.102	–.063	–.037	.005	.040	.069
	.650	.055	.033	.022	–.013	–.045	–.066	–.096	–.079	–.049	–.030	0	.029	.049
	.750	.031	.014	.009	–.017	–.036	–.048	–.069	–.057	–.035	–.027	–.006	.012	.027
	.850	.031	.019	.024	.005	.001	–.001	–.016	–.005	.010	.005	.015	.027	.029
	.925	.053	.048	.062	.055	.057	.062	.051	.060	.068	.059	.055	.055	.053
	.975	a.088	a.095	a.112	a.112	a.117	a.117	a.108	a.114	a.117	a.109	a.098	a.103	a.079
	1.000	a.122	a.135	a.151	a.148	a.156	a.150	a.139	a.142	a.148	a.138	a.127	a.138	a.098

[redacted]

aFaired value.

[redacted]

TABLE 9.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.582	2.477	2.329	2.208	2.089	1.945	1.840	1.700	1.658	1.752	1.888	2.000	2.131	2.246	2.358	2.531
	M_x	.642	.628	.610	.596	.586	.566	.555	.544	.543	.554	.563	.579	.592	.603	.615	.634
	α_x'	-2.54	-1.35	.41	1.91	3.46	5.43	6.93	9.02	9.66	8.23	6.24	4.67	2.91	1.43	.06	-1.96
	$\Delta\beta$	-.15	-.07	.11	.30	.43	.61	.74	.92	.85	.68	.53	.39	.24	.07	-.11	-.13
	α_i	.08	.44	.85	1.24	1.62	2.15	2.57	2.94	2.97	2.80	2.43	1.91	1.49	1.12	.73	.24
	c_n	.0210	.1190	.2306	.3339	.4368	.5785	.6851	.7821	.7906	.7507	.6510	.5129	.4016	.3035	.1984	.0652
	c_m	-.0622	-.0619	-.0566	-.0489	-.0483	-.0439	-.0302	-.0281	-.0378	-.0206	-.0342	-.0477	-.0497	-.0528	-.0605	-.0612
	c_o																
	o/b	Pressure coefficient, P															
Upper surface	0.000	1.107	1.102	1.096	1.091	1.088	1.082	1.079	1.076	1.076	1.079	1.081	1.086	1.090	1.094	1.098	1.104
	.025	.447	.237	-.045	-.358	-.672	-1.576	-1.574	-1.412	-1.287	-1.487	-1.667	-1.042	-.577	-.258	.021	.326
	.050	.214	.055	-.180	-.428	-.661	-1.104	-1.535	-1.414	[a]-1.324	-1.494	-1.578	-.825	-.583	-.352	-.130	.132
	.100	.075	-.044	-.209	-.373	-.534	-.716	-1.365	-1.410	-1.289	-1.462	-1.137	-.659	-.480	-.326	-.176	.011
	.200	-.058	-.143	-.252	-.349	-.441	-.558	-.747	-1.131	-1.133	-1.060	-.576	-.514	-.405	-.326	-.236	-.105
	.300	-.131	-.195	-.273	-.341	-.418	-.503	-.515	-.814	-.906	-.701	-.507	-.469	-.394	-.326	-.264	-.167
	.400	-.177	-.226	-.282	-.334	-.388	[a]-.444	-.440	-.564	-.665	-.492	-.451	-.425	-.372	-.319	-.278	-.204
	.500	-.215	-.253	-.291	-.327	-.367	-.412	-.399	-.416	-.484	-.395	-.411	-.392	-.355	-.319	-.292	-.236
	.600	-.258	-.285	-.310	-.336	-.363	-.392	-.366	-.331	-.363	-.338	-.383	-.378	-.357	-.332	-.313	-.273
	.700	-.267	-.284	-.296	-.301	-.319	-.334	-.302	-.258	-.272	-.273	-.320	-.326	-.314	-.306	-.303	-.275
	.800	-.237	-.248	-.255	-.242	-.249	-.252	-.218	-.188	-.199	-.198	-.238	-.249	-.248	-.254	-.262	-.243
	.900	-.181	-.191	-.120	-.096	-.099	-.140	-.091	-.104	-.128	-.100	-.094	-.098	-.099	-.109	-.162	-.187
	.950	-.002	0	-.004	.005	.002	-.008	-.017	-.066	-.095	-.047	-.012	-.001	.002	-.009	-.012	.003
Lower surface	.0375	-.513	-.287	-.051	.171	.339	.501	.596	.678	.694	.645	.557	.444	.285	.096	-.123	-.396
	.075	-.376	-.226	-.042	.115	.239	.369	.456	.533	.548	.498	.420	.324	.197	.060	-.095	-.297
	.150	-.230	-.135	-.017	.089	.174	.269	.340	.402	.418	.374	.311	.237	.148	.051	-.053	-.177
	.250	-.156	-.089	-.008	.064	.127	.199	.258	.306	.318	.280	.230	.173	.105	.036	-.035	-.120
	.350	-.123	-.075	-.011	.043	.093	.150	.194	.236	.243	.215	.176	.128	.075	.022	-.035	-.098
	.450	-.090	-.054	-.002	.040	.076	.115	.155	.185	.190	.171	.142	.107	.064	.022	-.023	-.071
	.550	-.080	-.053	-.015	.018	.049	.085	.116	.137	.140	.121	.101	.068	.034	0	-.033	-.066
	.650	-.067	-.048	-.022	.003	.024	.050	.077	.088	.086	.074	.063	.038	.013	-.015	-.039	-.060
	.750	-.039	-.027	-.013	.001	.017	.033	.051	.052	.045	.043	.043	.028	.010	-.009	-.025	-.034
	.850	.011	.020	.035	.036	.043	.052	.057	.043	.030	.043	.057	.049	.043	.034	.028	.026
	.925	.067	.069	.069	.051	.049	.046	.041	.005	-.013	.014	.045	.047	.047	.054	.060	.068
	.975	[a].115	[a].114	[a].091	[a].078	[a].087	[a].102	[a].055	[a]-.010	[a]-.036	[a].010	[a].060	[a].078	[a].045	[a].081	[a].084	[a].100
	1.000	[a].142	[a].139	[a].103	[a].087	[a].110	[a].160	[a].059	[a]-.022	[a]-.050	[a].008	[a].078	[a].095	[a].042	[a].101	[a].094	[a].118

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 9.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) - Continued

(b) N = 1350 rpm; $\beta_{0.75R} = 45^{\circ}$

	J	1.780	1.873	1.980	2.081	2.200	2.300	2.407	2.534	2.562	2.488	2.381	2.272	2.151	2.033	1.938	1.830
	M_x	.660	.672	.681	.703	.712	.728	.742	.76[illegible]	.763	.751	.736	.722	.706	.690	.679	.662
	α_x	7.81	6.45	4.94	3.57	2.01	.76	-.53	-2.00	-2.31	-1.48	-.22	1.11	2.65	4.22	5.53	7.08
	$\Delta\beta$	1.27	1.13	.86	.64	.44	.24	0	-.21	-.24	-.14	.06	.30	.52	.73	.98	1.21
	α_i	3.21	2.99	2.34	1.82	1.39	1.02	.63	.13	.01	.37	.70	1.08	1.51	2.03	2.49	3.16
	c_n	.8582	.8012	.6279	.4916	.3755	.2761	.1716	.0355	.0026	.1013	.1890	.2916	.4110	.5439	.6654	.8460
	c_m	-.0169	-.0231	-.0415	-.0528	-.0565	-.0621	-.0660	-.0732	-.0759	-.0760	-.0664	-.0603	-.0534	-.0483	-.0405	-.0247
	c_o																
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.114	1.118	1.122	1.131	1.133	1.140	1.146	1.153	1.155	1.150	1.143	1.138	1.131	1.125	1.121	1.114
	.025	-2.272	-2.086	-1.745	-.700	-.384	-.094	.170	.390	.430	.316	.116	-.150	-.521	-1.305	-1.885	-2.307
	.050	-2.082	-1.977	-1.564	-.800	-.478	-.232	-.004	.199	.237	.127	-.052	-.282	-.590	-.799	-1.757	-2.143
	.100	-1.860	-1.763	-.638	-.630	-.433	-.271	-.111	.050	.080	-.010	-.145	-.306	-.499	-.678	-.925	-1.919
	.200	-.830	-.568	-.579	-.513	-.407	-.314	-.209	-.097	-.074	-.139	-.235	-.335	-.440	-.548	-.571	-.638
	.300	-.585	-.535	-.536	-.481	-.401	-.332	-.260	-.175	-.160	-.209	-.277	-.348	-.434	-.506	-.541	-.525
	.400	-.501	-.495	-.487	-.447	-.394	-.339	-.290	-.228	-.217	-.253	-.302	-.351	-.417	-.462	-.493	-.491
	.500	-.431	-.448	-.442	-.417	-.381	-.346	-.313	-.271	-.264	-.289	-.322	-.356	-.397	-.426	-.448	-.445
	.600	-.383	-.418	-.421	-.408	-.390	-.367	-.348	-.326	-.323	-.334	-.355	-.375	-.401	-.415	-.422	-.411
	.700	-.310	-.349	-.359	-.357	-.350	-.343	-.340	-.328	-.329	-.334	-.344	-.349	-.356	-.357	-.357	-.341
	.800	-.218	-.248	-.259	-.267	-.269	-.274	-.281	-.279	-.280	-.281	-.283	-.279	-.271	-.267	-.256	-.241
	.900	-.081	-.084	-.085	-.093	-.095	-.106	-.116	-.119	-.120	-.122	-.118	-.108	-.099	-.091	-.088	-.086
	.950	-.013	.006	.012	.012	.014	.005	-.004	-.007	-.008	-.007	-.004	.004	.011	.009	.007	.001
Lower surface	.0375	.673	.600	.500	.368	.183	-.001	-.248	-.996	-1.177	-.316	-.193	.037	.251	.426	.546	.643
	.075	.526	.463	.373	.263	.121	-.011	-.175	-.294	-.471	-.292	-.142	.013	.171	.310	.412	.498
	.150	.402	.349	.278	.196	.092	.005	-.098	-.209	-.213	-.178	-.081	.016	.125	.230	.310	.377
	.250	.305	.263	.205	.142	.067	.005	-.067	-.145	-.160	-.120	-.053	.013	.089	.170	.231	.288
	.350	.237	.202	.154	.102	.043	-.002	-.061	-.118	-.130	-.098	-.052	.002	.058	.124	.174	.220
	.450	.184	.158	.116	.073	.024	-.006	-.046	-.090	-.100	-.075	-.040	-.005	.037	.091	.133	.171
	.550	.136	.114	.080	.044	.010	-.013	-.049	-.081	-.089	-.070	-.045	-.013	.015	.059	.095	.127
	.650	.090	.077	.052	.024	-.007	-.027	-.050	-.072	-.077	-.066	-.048	-.026	-.002	.034	.063	.087
	.750	.063	.058	.036	.015	-.007	-.016	-.057	-.042	-.046	-.038	-.030	-.019	-.006	.023	.043	.094
	.850	.062	[a].051	[a].038	[a].025	[a].011	[a].020	[a]0	[a].004	[a].002	[a].009	[a].004	[a].015	[a]0	[a].030	[a].041	[a].079
	.925	.051	.065	.058	.050	.048	.062	.067	.069	.066	.070	.064	.055	.041	.054	.060	.097
	.975	[a].030	[a].082	[a].078	[a].080	[a].090	[a].095	[a].114	[a].116	[a].093	[a].115	[a].110	[a].085	[a].100	[a].086	[a].080	[a].109
	1.000	[a].020	[a].090	[a].089	[a].102	[a].138	[a].110	[a].145	[a].140	[a].103	[a].138	[a].134	[a].100	[a].138	[a].105	[a].097	[a].113

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 9.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.30 PROPELLER BLADE SECTION ($x = 0.85$) – Continued

(c) $N = 1500$ rpm; $\beta_{0.75R} = 45°$.

	J	2.535	2.462	2.380	2.287	2.209	2.123	1.980	1.996	2.083	2.241	2.335	2.419	2.504
	M_x	.848	.833	.822	.804	.791	.779	.756	.761	.769	.796	.810	.822	.838
	α_x'	-2.01	-1.18	-.21	.92	1.90	3.01	4.94	4.72	3.54	1.50	.33	-.67	-1.66
	$\Delta\beta$	-.52	-.30	-.06	.23	.49	.79	1.29	1.23	.93	.37	.08	-.17	-.43
	α_i	.09	.30	.72	1.11	1.52	1.81	2.63	2.52	2.09	1.36	1.01	.58	.15
	c_n	.0252	.0806	.1958	.3003	.4126	.4897	.7059	.6752	.5645	.3665	.2739	.1594	.0406
	c_m	-.0986	-.0891	-.0743	-.0695	-.0686	-.0544	-.0353	-.0412	-.0508	-.0651	-.0735	-.0787	-.0937
	c_c													
	o/b	Pressure coefficient, P												
Upper surface	0.000	1.193	1.185	1.180	1.172	1.166	1.161	1.151	1.153	1.157	1.168	1.175	1.180	1.188
	.025	.454	.355	.189	-.040	-.295	-.530	-1.327	-1.275	-.797	-.189	.045	.256	.398
	.050	.262	.164	.006	-.211	-.465	-.735	-1.286	-1.217	-.817	-.357	-.133	.067	.205
	.100	.105	.020	-.107	-.250	-.444	-.674	-1.221	-1.147	-.830	-.377	-.215	-.061	.055
	.200	-.054	-.123	-.284	-.355	-.460	-.534	-1.176	-1.084	-.791	-.419	-.305	-.191	-.098
	.300	-.173	-.230	-.306	-.389	-.456	-.500	-.482	-.407	-.468	-.430	-.359	-.279	-.207
	.400	-.266	-.307	-.358	-.404	-.445	-.480	-.405	-.433	-.478	-.427	-.385	-.335	-.283
	.500	-.313	-.343	-.377	-.409	-.429	-.447	-.424	-.438	-.447	-.422	-.395	-.364	-.329
	.600	-.424	-.450	-.466	-.459	-.459	-.452	-.435	-.474	-.450	-.454	-.452	-.456	-.439
	.700	-.524	-.469	-.416	-.408	-.397	-.384	-.374	-.384	-.380	-.402	-.404	-.418	-.465
	.800	-.286	-.298	-.296	-.295	-.283	-.270	-.269	-.275	-.269	-.292	-.300	-.309	-.317
	.900	-.075	-.086	-.087	-.092	-.081	-.073	-.078	-.081	-.074	-.089	-.089	-.092	-.090
	.950	.045	.036	.033	.029	.036	.037	-.033	-.030	.036	.028	.030	.029	.030
Lower surface	.0375	-.951	-.826	-.272	-.012	.167	.309	.511	.477	.380	.092	-.090	-.492	-.917
	.075	-.905	-.648	-.186	-.021	.109	.220	.388	.359	.278	.054	-.072	-.221	-.812
	.150	-.771	-.152	-.101	-.003	.087	.164	.295	.271	.210	.048	-.030	-.138	-.233
	.250	-.101	-.116	-.069	.001	.063	.121	.225	.205	.155	.033	-.019	-.093	-.111
	.350	-.078	-.098	-.064	-.010	.040	.085	.165	.151	.113	.042	-.024	-.080	-.102
	.450	-.068	-.077	-.051	-.014	.020	.057	.140	.123	.082	.004	-.021	-.063	-.081
	.550	-.071	-.074	-.055	-.023	.004	.030	.099	.087	.051	-.009	-.006	-.063	-.079
	.650	-.072	-.070	-.059	-.037	-.012	.009	.061	.049	.027	-.024	-.017	-.063	-.073
	.750	-.044	-.045	-.041	-.028	-.012	.004	.045	.034	.018	-.019	-.028	-.041	-.044
	.850	.027	.026	.023	[a].010	[a].014	[a]0	.070	[a].015	[a].030	[a].014	[a].003	[a].010	[a].001
	.925	.052	.068	.062	.062	.055	.049	.071	.061	.057	.058	.067	.069	.075
	.975	[a].109	[a].119	[a].105	[a].114	[a].128	[a].100	[a].095	[a].097	[a].084	[a].095	[a].098	[a].105	[a].120
	1.000	[a].150	[a].148	[a].129	[a].154	[a].145	[a].141	[a].120	[a].119	[a].103	[a].115	[a].111	[a].124	[a].142

[a]Faired value.

[redacted]

[redacted]

TABLE 9.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) – Continued

(d) N = 1600 rpm; $\beta_{0.75R} = 45^{\circ}$.

J	2.523	2.473	2.427	2.368	2.318	2.259	2.179	2.108	2.062	2.085	2.152	2.210	2.260	2.335	2.392	2.467	2.499
M_x	.895	.884	.873	.863	.856	.842	.832	.822	.813	.819	.826	.839	.847	.855	.868	.881	.886
α_x'	-1.89	-1.30	-.77	-.06	.54	1.27	2.30	3.22	3.82	3.52	2.64	1.88	1.27	.34	-.36	-1.25	-1.59
$\Delta\beta$	-.85	-.58	-.32	-.01	.12	.45	.74	.99	1.15	1.07	.84	.63	.44	.14	-.14	-.54	-.73
α_i	-.19	.17	.50	.85	1.05	1.37	1.78	2.04	2.38	2.16	1.87	1.61	1.36	1.03	.73	.26	-.02
c_n	-.0516	.0477	.1374	.2316	.2852	.3710	.4826	.5523	.6452	.5826	.5065	.4355	.3671	.2800	.1981	.0703	-.0065
c_m	-.1108	-.1118	-.1044	-.0939	-.0828	-.0714	-.0737	-.0546	-.0474	-.0519	-.0588	-.0729	-.0729	-.0823	-.0973	-.1067	-.1093
c_c	.0218	.0208	.0191	.0161	.0121	.0073	-.0004				-.0023	.0035	.0076	.0118	.0168	.0199	.0210
c/b	Pressure coefficient, P																
Upper surface																	
0.000	1.217	1.211	1.205	1.199	1.196	1.190	1.185	1.180	1.176	1.179	1.182	1.188	1.192	1.195	1.202	1.208	1.211
.025	.482	.418	.338	.226	.102	-.077	-.314	-.454	-.766	-.565	-.375	-.203	-.065	.119	.266	.392	.449
.050	.295	.230	.150	.042	-.080	-.264	-.530	-.645	-.772	-.680	-.586	-.405	-.254	-.067	.078	.201	.260
.100	.139	.081	.010	-.083	-.177	-.309	-.504	-.669	-.775	-.733	-.591	-.390	-.304	-.166	-.051	.056	.108
.200	-.019	-.072	-.134	-.211	-.292	-.447	-.606	-.746	-.863	-.818	-.640	-.559	-.434	-.282	-.185	-.095	-.049
.300	-.153	-.204	-.260	-.323	-.384	-.457	-.666	-.755	-.866	-.805	-.718	-.552	-.459	-.381	-.305	-.226	-.182
.400	-.247	-.285	-.327	-.387	-.431	-.488	-.605	-.725	-.875	-.817	-.670	-.540	-.486	-.433	-.366	-.303	-.271
.500	-.325	-.368	-.408	-.445	-.467	-.490	-.360	-.349	-.278	-.334	-.362	-.456	-.491	-.467	-.438	-.388	-.351
.600	-.403	-.450	-.476	-.511	-.515	-.502	-.484	-.437	-.324	-.386	-.471	-.479	-.517	-.537	-.498	-.472	-.428
.700	-.520	-.545	-.538	-.579	-.568	-.547	-.426	-.379	-.314	-.359	-.400	-.551	-.549	-.584	-.576	-.557	-.538
.800	-.632	-.659	-.640	-.503	-.300	-.257	-.256	-.250	-.216	-.246	-.257	-.264	-.256	-.318	-.587	-.660	-.650
.900	-.066	-.050	-.043	-.038	-.049	-.057	-.047	-.048	-.023	-.049	-.050	-.055	-.061	-.048	-.040	-.049	-.058
.950	.021	.056	.072	.071	.063	.057	.062	.057	.085	.055	.057	.058	.053	.063	.069	.058	.043
Lower surface																	
.0375	-.807	-.759	-.669	-.316	-.107	.067	.242	.335	.452	.374	.275	.156	.049	-.137	-.465	-.740	-.792
.075	-.775	-.720	-.574	-.197	-.082	.038	.171	.245	.348	.275	.196	.104	.024	-.105	-.300	-.699	-.758
.150	-.694	-.618	-.181	-.104	-.037	.039	.134	.185	.273	.211	.151	.084	.030	-.046	-.130	-.557	-.669
.250	-.638	-.214	-.102	-.070	-.022	.030	.098	.138	.212	.156	.109	.061	.021	-.036	-.087	-.108	-.494
.350	-.292	-.084	-.088	-.064	-.031	.012	.068	.100	.167	.116	.076	.038	.006	-.039	-.076	-.087	-.077
.450	-.037	-.060	-.070	-.052	-.025	-.002	.044	.070	.130	.082	.049	.017	-.007	-.036	-.063	-.070	-.047
.550	-.037	-.065	-.071	-.059	-.037	-.013	.019	.041	.097	.053	.022	-.003	-.019	-.046	-.067	-.074	-.055
.650	-.052	-.073	-.074	-.063	-.048	-.032	.001	.018	.071	.026	.002	-.019	-.035	-.056	-.071	-.080	-.066
.750	-.040	-.049	-.047	-.041	-.031	-.024	-.003	.009	.059	.016	-.003	-.017	-.026	-.039	-.046	-.054	-.045
.850	-.010	.022	.029	.032	[a].010	[a].010	[a].020	[a].013	[a].066	[a].028	[a].012	[a].010	[a].012	[a].005	.026	[a]-.011	[a]-.005
.925	.047	.060	.070	.075	.078	.067	.061	.059	.101	.063	.053	.059	.066	.070	.069	.059	.056
.975	[a].090	[a].080	[a].093	[a].119	[a].138	[a].114	[a].105	[a].108	[a].160	[a].106	[a].110	[a].140	[a].153	[a].140	[a].112	[a].105	[a].098
1.000	[a].116	[a].085	[a].108	[a].141	[a].166	[a].140	[a].130	[a].131	[a].192	[a].130	[a].143	[a].200	[a].210	[a].186	[a].143	[a].136	[a].120

[a]Faired value.

[redacted]

[redacted]

TABLE 9.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) – Continued

(e) M = 0.56; $\beta_{0.75R}$ = 45°.

	J	2.143	2.183	2.220	2.258	2.297	2.330	2.365	2.392	2.415	2.445	2.480	2.511	2.534
	M_x	.896	.886	.881	.872	.864	.856	.849	.840	.836	.831	.828	.818	.815
	α_r'	2.75	2.23	1.76	1.29	.81	.39	–.03	–.36	–.62	–.98	–1.38	–1.75	–1.99
	$\Delta\beta$	.71	.57	.46	.35	.24	.15	.03	–.06	–.13	–.21	–.32	–.42	–.48
	α_i	1.79	1.66	1.55	1.35	1.19	1.00	.84	.71	.58	.48	.31	.16	.08
	c_n	.4858	.4503	.4184	.3661	.3239	.2706	.2297	.1923	.1577	.1306	.0852	.0439	.0219
	c_m	–.0852	–.0818	–.0876	–.0886	–.0870	–.0813	–.0818	–.0847	–.0872	–.0905	–.0854	–.0882	–.0898
	c_c	.0101	.0093	.0099	.0109	.0120	.0128	.0139	.0153	.0157	.0161			
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.217	1.211	1.209	1.204	1.200	1.196	1.193	1.188	1.186	1.184	1.182	1.179	1.177
	.025	–.126	–.085	–.032	.025	.087	.138	.200	.251	.290	.322	.364	.417	.442
	.050	–.340	–.296	–.229	–.162	–.096	–.044	.014	.063	.102	.133	.173	.223	.248
	.100	–.348	–.291	–.259	–.225	–.186	–.149	–.102	–.063	–.032	–.004	.028	.072	.093
	.200	–.486	–.467	–.442	–.372	–.300	–.261	–.221	–.187	–.160	–.137	–.109	–.072	–.052
	.300	–.556	–.543	–.490	–.413	–.399	–.365	–.331	–.297	–.269	–.246	–.222	–.186	–.168
	.400	–.565	–.544	–.506	–.489	–.443	–.423	–.379	–.361	–.335	–.313	–.291	–.260	–.243
	.500	–.639	–.611	–.583	–.542	–.492	–.467	–.428	–.382	–.366	–.349	–.336	–.311	–.296
	.600	–.696	–.667	–.638	–.596	–.559	–.495	–.480	–.459	–.460	–.450	–.437	–.401	–.382
	.700	–.754	–.716	–.680	–.654	–.609	–.570	–.558	–.563	–.517	–.449	–.430	–.404	–.387
	.800	–.204	–.248	–.400	–.392	–.343	–.287	–.276	–.284	–.299	–.307	–.314	–.312	–.308
	.900	–.127	–.062	–.019	–.015	–.027	–.048	–.058	–.077	–.088	–.092	–.102	–.105	–.109
	.950	–.104	–.007	.062	.080	.078	.066	.059	.046	.038	.036	.026	.022	.019
Lower surface	.0375	.215	.161	.095	.017	–.065	–.147	–.247	–.418	–.579	–.692	–.846	–.994	–1.055
	.075	.154	.112	.062	.005	–.054	–.109	–.161	–.188	–.231	–.376	–.638	–.860	–.933
	.150	.125	.094	.060	.022	–.016	–.051	–.083	–.123	–.146	–.153	–.151	–.151	–.210
	.250	.092	.071	.047	.020	–.006	–.030	–.054	–.079	–.094	–.101	–.116	–.117	–.114
	.350	.058	.040	.024	.002	–.018	–.035	–.051	–.068	–.080	–.085	–.097	–.104	–.105
	.450	.038	.025	.014	–.003	–.018	–.030	–.041	–.053	–.063	–.065	–.074	–.080	–.082
	.550	–.001	–.009	–.014	–.024	–.033	–.041	–.047	–.056	–.062	–.063	–.071	–.074	–.076
	.650	–.043	–.043	–.041	–.042	–.047	–.049	–.051	–.057	–.060	–.059	–.066	–.068	–.067
	.750	–.060	–.052	–.038	–.033	–.031	–.031	–.030	–.032	–.035	–.033	–.060	–.037	–.037
	.850	[a]–.060	[a]–.040	[a]–.012	[a]–.012	[a].010	[a].020	[a].022	[a].022	[a].013	[a].020	[a]0	[a].007	[a].010
	.925	–.037	–.004	.043	.062	.074	.079	.082	.080	.080	.081	.079	.079	.080
	.975	[a]–.086	[a].020	[a].095	[a].130	[a].125	[a].137	[a].126	[a].102	[a].134	[a].129	[a].135	[a].134	[a].148
	1.000	[a]–.088	[a].033	[a].124	[a].163	[a].151	[a].169	[a].148	[a].154	[a].166	[a].156	[a].167	[a].168	[a].188

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 9.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) - Continued

(f) M = 0.60; $\beta_{0.75R}$ = 45°.

	J	2.140	2.168	2.193	2.220	2.249	2.277	2.304	2.334	2.379	2.405	2.430	2.460	2.484	2.535
	M_x	.961	.957	.950	.943	.936	.929	.923	.917	.914	.908	.899	.893	.888	.876
	α_x'	2.80	2.43	2.11	1.76	1.39	1.05	.71	.34	-.21	-.52	-.80	-1.14	-1.43	-2.02
	$\Delta\beta$	.42	.40	.36	.30	.21	.11	.01	-.11	-.28	-.36	-.46	-.57	-.67	-.86
	α_i	1.52	1.51	1.37	1.29	1.17	1.58	.94	.84	.68	.49	.38	.24	.21	0
	c_n	.4103	.4071	.3706	.3490	.3174	.2735	.2548	.2268	.1848	.1342	.1039	.0642	.0561	.0006
	c_m	-.1027	-.1005	-.0952	-.0936	-.0981	-.0941	-.0983	-.1017	-.1045	-.1062	-.1099	-.1146	-.1170	-.1278
	c_c	.0250	.0247	.0238	.0236	.0231	.0235	.0235	.0238	.0235	.0233	.0222	.0222	.0211	.0220
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.252	1.250	1.246	1.242	1.238	1.235	1.231	1.228	1.227	1.223	1.219	1.215	1.212	1.206
	.025	.044	.046	.081	.122	.152	.189	.221	.253	.308	.340	.369	.399	.416	.467
	.050	-.156	-.155	-.113	-.065	-.034	.007	.035	.067	.120	.153	.180	.209	.225	.275
	.100	-.181	-.168	-.139	-.118	-.105	-.088	-.072	-.050	-.009	.017	.039	.062	.075	.116
	.200	-.322	-.335	-.320	-.300	-.280	-.246	-.211	-.187	[a]-.173	-.124	-.107	-.093	-.079	-.052
	.300	-.403	-.430	-.416	-.392	-.345	-.304	-.304	-.300	-.269	-.249	-.235	-.221	-.209	-.175
	.400	-.438	-.454	-.435	-.416	-.407	-.398	-.383	-.359	-.340	-.328	-.316	-.295	-.289	-.268
	.500	-.506	-.528	-.503	-.488	-.486	-.468	-.456	-.451	-.421	-.393	-.385	-.383	-.376	-.326
	.600	-.592	-.612	-.591	-.567	-.565	-.563	-.556	-.547	-.516	-.504	-.499	-.488	-.469	-.442
	.700	-.650	-.662	-.654	-.644	-.633	-.613	-.611	-.611	-.596	-.595	-.579	-.557	-.555	-.538
	.800	-.720	-.747	-.701	-.670	-.665	-.689	-.680	-.680	-.679	-.683	-.671	-.675	-.669	-.615
	.900	-.271	-.255	-.209	-.184	-.163	-.164	-.147	-.135	-.128	-.111	-.092	-.087	-.069	-.072
	.950	-.257	-.236	-.191	-.164	-.139	-.138	-.118	-.101	-.093	-.061	-.034	-.006	.036	-.069
Lower surface	.0375	.185	.141	.105	.040	-.014	-.098	-.178	-.286	-.449	-.554	-.636	-.710	-.761	-.869
	.075	.128	.096	.070	.021	-.020	-.081	-.138	-.215	-.374	-.500	-.594	-.671	-.726	-.837
	.150	.114	.088	.072	.038	.011	-.029	-.058	-.087	-.138	-.271	-.434	-.559	-.620	-.738
	.250	.088	.063	.054	.031	.012	-.018	-.040	-.062	-.087	-.104	-.111	-.180	-.244	-.488
	.350	.051	.029	.023	.001	-.014	-.037	-.052	-.067	-.080	-.089	-.092	-.088	-.081	-.058
	.450	.015	-.005	-.007	-.020	-.029	-.047	-.059	-.070	-.075	-.079	-.078	-.072	-.066	-.043
	.550	-.028	-.046	-.046	-.058	-.066	-.080	-.086	-.093	-.094	-.094	-.089	-.080	-.073	-.054
	.650	-.081	-.099	-.097	-.107	-.111	-.118	-.116	-.118	-.113	-.109	-.099	-.087	-.078	-.058
	.750	-.129	-.150	-.141	-.143	-.142	-.141	-.125	-.118	-.104	-.095	-.080	-.064	-.053	-.030
	.850	[a]-.140	[a]-.160	[a]-.141	[a]-.148	[a]-.140	[a]-.125	[a]-.102	[a]-.091	[a]-.074	[a]-.071	[a]-.043	[a]-.021	[a]-.010	[a].011
	.925	-.130	-.146	-.137	-.134	-.118	-.092	-.063	-.049	-.029	-.013	.010	.036	.058	.093
	.975	[a]-.130	[a]-.127	[a]-.127	[a]-.124	[a]-.105	[a]-.115	[a]-.037	[a]-.024	[a]0	[a].020	[a].047	[a].075	[a].136	[a].130
	1.000	[a]-.132	[a]-.113	[a]-.123	[a]-.117	[a]-.096	[a]-.099	[a]-.023	[a]-.010	[a].016	[a].037	[a].067	[a].096	[a].189	[a].148

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 9.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) - Continued

(g) $M = 0.66$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.142	2.158	2.180	2.205	2.223	2.256	2.278	2.288	2.318	2.349	2.359	2.384	2.426
	M_x	1.058	1.050	1.044	1.037	1.028	1.023	1.017	1.008	1.001	.996	.991	.981	.976
	α_r'	2.77	2.56	2.27	1.95	1.72	1.31	1.03	.91	.54	.16	.04	-.26	-.76
	$\Delta\beta$	.12	.07	-.01	-.09	-.15	-.25	-.33	-.36	-.46	-.56	-.59	-.67	-.79
	α_i	1.28	1.21	1.11	1.00	.91	.79	.65	.52	.40	.22	.09	.04	-.28
	c_n	.3474	.3265	.3006	.2703	.2465	.2148	.1761	.1406	.1084	.0606	.0252	.0097	-.0749
	c_m	-.1210	-.1263	-.1178	-.1170	-.1150	-.1118	-.1095	-.1067	-.1036	-.0895	-.0872	-.0857	-.0736
	c_c	.0386	.0390	.0401	.0407	.0406	.0409	.0412	.0409	.0401	.0373	.0367	.0363	.0339
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.312	1.306	1.302	1.298	1.292	1.289	1.285	1.280	1.275	1.273	1.269	1.264	1.261
	.025	.269	.292	.307	.321	.336	.364	.383	.393	.411	.433	.447	.463	.489
	.050	.072	.100	.120	.135	.153	.184	.203	.212	.229	.253	.268	.280	.309
	.100	.035	.056	.066	.067	.074	.089	.099	.100	.111	.128	.140	.147	.170
	.200	-.138	-.119	-.113	-.112	-.102	-.081	-.065	-.054	-.032	-.013	.001	.006	.024
	.300	-.210	-.205	-.202	-.206	-.198	-.174	-.139	-.130	-.127	-.121	-.115	-.117	-.098
	.400	-.252	-.242	-.240	-.244	-.236	-.227	-.224	-.228	-.219	-.201	-.182	-.188	-.182
	.500	-.324	-.321	-.317	-.316	-.307	-.302	-.300	-.304	-.293	-.279	-.272	-.280	-.262
	.600	-.400	-.398	-.396	-.403	-.395	-.383	-.374	-.378	-.377	-.371	-.364	-.371	-.355
	.700	-.471	-.464	-.458	-.466	-.466	-.467	-.462	-.428	-.456	-.438	-.433	-.445	-.443
	.800	-.536	-.546	-.550	-.563	-.562	-.557	-.547	-.551	-.551	-.550	-.547	-.559	-.546
	.900	-.637	-.643	-.645	-.658	-.660	-.665	-.668	-.673	-.665	-.657	-.655	-.668	-.520
	.950	-.646	-.662	-.666	-.681	-.681	-.680	-.676	-.681	-.684	-.352	-.276	-.227	-.171
Lower surface	.0375	.192	.141	.095	.036	-.008	-.079	-.141	-.200	-.257	-.308	-.351	-.411	-.468
	.075	.152	.107	.057	.007	-.036	-.100	-.150	-.198	-.249	-.299	-.341	-.399	-.449
	.150	.150	.120	.092	.051	.022	-.028	-.085	-.140	-.201	-.237	-.282	-.335	-.387
	.250	.136	.117	.092	.058	.033	-.015	-.052	-.089	-.155	-.212	-.260	-.319	-.372
	.350	.099	.084	.065	.035	.019	-.003	-.033	-.062	-.088	-.126	-.190	-.279	-.356
	.450	.072	.059	.040	.013	-.001	-.029	-.052	-.075	-.092	-.105	-.114	-.172	-.277
	.550	.038	.026	.008	-.019	-.031	-.053	-.072	-.093	-.113	-.122	-.133	-.159	-.203
	.650	-.036	-.047	-.062	-.085	-.094	-.111	-.126	-.140	-.155	-.156	-.164	-.191	-.218
	.750	-.086	-.096	-.111	-.138	-.141	-.155	-.165	-.177	-.183	-.178	-.180	-.198	-.213
	.850	[a]-.106	[a]-.121	[a]-.150	[a]-.162	[a]-.180	[a]-.188	[a]-.194	[a]-.206	[a]-.210	[a]-.200	[a]-.190	[a]-.205	[a]-.195
	.925	-.135	-.143	-.158	-.179	-.186	-.197	-.204	-.211	-.213	-.202	-.198	-.195	-.159
	.975	[a]-.163	[a]-.172	[a]-.180	[a]-.192	[a]-.210	[a]-.221	[a]-.227	[a]-.240	[a]-.240	[a]-.219	[a]-.200	[a]-.180	[a]-.126
	1.000	[a]-.180	[a]-.193	[a]-.191	[a]-.205	[a]-.229	[a]-.245	[a]-.251	[a]-.258	[a]-.253	[a]-.230	[a]-.200	[b]-.170	[b]-.108

[a]Faired value.

[b]Lower-surface value only.

[redacted]

[redacted]

TABLE 9.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.30 PROPELLER BLADE SECTION ($x = 0.85$) – Continued

(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.297	2.241	2.185	2.130	2.087	2.036	1.979	1.939	1.894	1.847	1.787	1.741
	M_x	.784	.775	.766	.760	.749	.743	.731	.731	.725	.719	.710	.704
	α_x'	-5.50	1.50	2.21	2.66	3.49	4.18	4.96	5.52	6.15	6.83	7.71	8.40
	$\Delta\beta$	.20	.37	.57	.69	.92	1.10	1.29	1.41	1.55	1.67	1.81	1.89
	α_1	.72	.90	1.05	1.22	1.35	1.53	1.65	1.82	2.05	2.15	2.27	2.21
	α_n	.2816	.3523	.4074	.4732	.5239	.5942	.6413	.7071	.7929	.8335	.8819	.8600
	α_m	-.0701	-.0596	-.0582	-.0520	-.0503	-.0436	-.0385	-.0336	-.0246	-.0198	-.0147	-.0131
	α_0												
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.163	1.159	1.156	1.153	1.149	1.147	1.142	1.141	1.139	1.136	1.133	1.131
	.025	-.004	-.194	-.363	-.512	-.598	-1.138	-1.374	-1.519	-1.676	-1.797	-1.969	-2.071
	.050	-.180	-.336	-.485	-.679	-.874	-1.103	-1.337	-1.475	-1.592	-1.697	-1.861	-1.952
	.100	-.280	-.388	-.494	-.625	-.781	-.982	-1.256	-1.400	-1.524	-1.617	-1.750	-1.829
	.200	-.338	-.404	-.470	-.522	-.571	-.572	-.589	-.939	-1.456	-1.488	-1.358	-1.067
	.300	-.354	-.400	-.446	-.476	-.512	-.527	-.489	-.461	-.541	-.666	-.822	-.838
	.400	-.376	-.405	-.436	-.453	-.478	-.489	-.480	-.451	-.426	-.439	-.547	-.564
	.500	-.392	-.405	-.428	-.434	-.451	-.458	-.456	-.439	-.417	-.392	-.391	-.402
	.600	-.387	-.391	-.406	-.407	-.415	-.418	-.412	-.397	-.382	-.358	-.329	-.323
	.700	-.367	-.363	-.371	-.365	-.368	-.367	-.358	-.345	-.332	-.310	-.276	-.258
	.800	-.290	-.285	-.287	-.278	-.278	-.274	-.263	-.251	-.243	-.227	-.198	-.183
	.900	-.095	-.090	-.092	-.083	-.083	-.079	-.073	-.071	-.072	-.068	-.063	-.067
	.950	.031	.033	.029	.034	.032	.032	.032	.029	.024	.023	.006	-.011
Lower surface	.0375	-.053	.082	.166	.256	.342	.411	.478	.526	.574	.618	.665	.689
	.075	[a]-.037	[a].071	[a].136	[a].212	[a].272	[a].323	[a].380	[a].430	[a].479	[a].521	[a].558	[a].572
	.150	-.012	.053	.093	.144	.192	.236	.280	.314	.348	.382	.416	.434
	.250	-.012	.038	.064	.104	.139	.173	.206	.233	.261	.288	.314	.327
	.350	-.025	.012	.030	.064	.091	.119	.147	.170	.192	.214	.236	.244
	.450	-.020	.010	.023	.050	.072	.096	.120	.138	.157	.177	.192	.199
	.550	-.012	.012	.023	.044	.061	.081	.099	.116	.133	.150	.162	.165
	.650	-.025	-.007	.001	.019	.031	.047	.063	.076	.090	.103	.110	.111
	.750	-.020	-.007	-.006	.009	.016	.029	.039	.079	.062	.070	.071	.066
	.850	.041	.048	.045	.054	.056	.064	.069	.076	.083	.088	.083	.072
	.925	.064	.065	.057	.059	.056	.062	.061	.066	.067	.070	.054	.037
	.975	[a].067	[a].069	[a].060	[a].060	[a].050	[a].035	[a].050	[a].050	[a].038	[a].043	[a].021	[a]-.001
	1.000	[b].065	[b].070	[b].062	[b].059	[b].047	[b].017	[b].040	[b].043	[b].021	[b].030	[b]0	[b]-.018

[a]Faired value.

[b]Lower surface only.

[redacted]

[redacted]

TABLE 9.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) - Continued

(i) One-blade propeller; M = 0.57; $\beta_{0.75R}$ = 45°.

	J	2.493	2.448	2.354	2.325	2.298	2.267	2.241	2.213	2.185	2.155	2.121	2.096	2.084	2.058	2.035	2.013
	M_x	.832	.841	.862	.868	.872	.879	.885	.892	.897	.901	.905	.912	.920	.927	.932	.939
	α_x	-1.53	-1.01	.10	.46	.79	1.17	1.50	1.85	2.21	2.60	3.04	3.37	3.53	3.88	4.19	4.49
	$\Delta\beta$	-.36	-.22	.17	.16	.24	.32	.40	.48	.57	.67	.77	.85	.88	.95	1.01	1.07
	α_i	.08	.25	.64	.71	.82	.92	1.00	1.11	1.20	1.30	1.43	1.48	1.52	1.64	1.73	1.81
	c_n	.0258	.0826	.2126	.2313	.2694	.3026	.3290	.3632	.3942	.4252	.4677	.4816	.4965	.5332	.5658	.5877
	c_m	-.0864	-.0873	-.0801	-.0791	-.0775	-.0750	-.0773	-.0761	-.0788	-.0853	-.0899	-.0873	-.0905	-.0955	-.1022	-.1072
	c_d	.0157	.0146	.0120	.0117	.0114	.0097	.0103	.0103	.0105	.0122	.0134	.0129	.0137	.0142	.0155	.0159
	o/b	Pressure coefficient, P															
Upper surface	0.000	1.185	1.189	1.199	1.203	1.204	1.208	1.211	1.214	1.217	1.220	1.222	1.225	1.230	1.233	1.236	1.239
	.025	.423	.368	.226	.189	.144	.082	.044	.001	-.044	-.076	-.126	-.145	-.156	-.174	-.193	-.207
	.050	.214	.162	.029	-.005	-.047	-.106	-.142	-.186	-.239	-.284	-.336	-.351	-.355	-.365	-.378	-.391
	.100	.007	-.038	-.143	-.160	-.193	-.237	-.254	-.271	-.283	-.295	-.358	-.390	-.404	-.428	-.450	-.464
	.200	-.111	-.151	-.254	-.280	-.307	-.324	-.346	-.408	-.434	-.443	-.474	-.497	-.506	-.514	-.525	-.541
	.300	-.196	-.233	-.334	-.343	-.352	-.402	-.411	-.431	-.475	-.496	-.521	-.528	-.533	-.548	-.565	-.583
	.400	-.273	-.310	-.372	-.391	-.427	-.451	-.477	-.493	-.525	-.548	-.580	-.587	-.590	-.601	-.612	-.623
	.500	-.319	-.346	-.393	-.418	-.442	-.481	-.503	-.522	-.537	-.560	-.583	-.597	-.602	-.612	-.616	-.621
	.600	[a]-.388	[a]-.390	[a]-.454	[a]-.478	[a]-.509	[a]-.534	[a]-.556	[a]-.583	[a]-.605	[a]-.621	[a]-.652	[a]-.635	[a]-.635	[a]-.659	[a]-.675	[a]-.680
	.700	-.402	-.453	-.539	-.550	-.597	-.614	-.653	-.665	-.699	-.716	-.715	-.686	-.686	-.729	-.756	-.771
	.800	[a]-.289	[a]-.321	[a]-.305	[a]-.284	[a]-.278	[a]-.259	[a]-.250	[a]-.240	[a]-.217	[a]-.282	[a]-.385	[a]-.350	[a]-.386	[a]-.415	[a]-.448	[a]-.456
	.900	-.091	-.081	-.037	-.022	-.012	-.010	-.019	-.048	-.082	-.118	-.155	-.177	-.201	-.229	-.254	-.272
	.950	.023	.033	.065	.074	.076	.062	.041	0	-.054	-.105	-.151	-.177	-.204	-.231	-.258	-.276
Lower surface	.0375	-.966	-.806	-.274	-.198	-.123	-.045	.012	.070	.124	.163	.207	.250	.276	.309	.347	.376
	.075	[a]-.730	[a]-.587	[a]-.171	[a]-.128	[a]-.084	[a]-.025	[a].016	[a].068	[a].113	[a].144	[a].177	[a].216	[a].236	[a].250	[a].293	[a].318
	.150	-.153	-.154	-.093	-.069	-.040	-.007	.022	.052	.081	.105	.127	.155	.172	.194	.221	.241
	.250	-.131	-.123	-.067	-.048	-.029	-.007	.013	.035	.053	.072	.086	.111	.123	.142	.164	.180
	.350	-.120	-.108	-.067	-.054	-.041	-.025	-.009	.007	.022	.036	.045	.065	.074	.090	.110	.124
	.450	-.098	-.088	-.059	-.049	-.040	-.030	-.019	-.008	.003	.012	.017	.034	.042	.054	.072	.084
	.550	-.084	-.077	-.057	-.051	-.045	-.042	-.033	-.027	-.021	-.016	-.015	-.002	.004	.014	.028	.038
	.650	-.059	-.054	-.040	-.036	-.034	-.035	-.031	-.030	-.030	-.033	-.037	-.027	-.025	-.019	-.007	.001
	.750	-.045	-.042	-.036	-.034	-.037	-.042	-.043	-.050	-.058	-.067	-.079	-.078	-.080	-.079	-.073	-.067
	.850	.029	.033	.036	.038	.032	.022	-.008	.003	-.015	-.032	-.050	-.055	-.061	-.064	-.058	-.054
	.925	.073	.074	.073	.071	.063	.047	.034	.012	-.019	-.051	-.082	-.098	-.110	-.117	-.113	-.107
	.975	[a].128	[a].122	[a].131	[a].135	[a].116	[a].058	[a].069	[a].024	[a]-.030	[a]-.078	[a]-.120	[a]-.144	[a]-.160	[a]-.178	[a]-.185	[a]-.170
	1.000	[a].158	[b].145	[a].160	[a].210	[a].145	[b].064	[a].087	[a].033	[a]-.040	[a]-.095	[a]-.150	[a]-.185	[a]-.214	[a]-.242	[a]-.267	[a]-.295

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 9.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS

OF AN NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85)

(j) One-blade propeller; M = 0.59; $\beta_{0.75R}$ = 45°.

	J	2.513	2.468	2.425	2.377	2.335	2.298	2.258	2.219	2.183	2.148	2.108	2.074	2.043	2.018	2.002
	M_x	.860	.868	.876	.886	.895	.901	.911	.920	.931	.940	.947	.957	.964	.972	.977
	α_x'	-1.76	-1.24	-.74	-.17	.33	.79	1.28	1.77	2.23	2.69	3.21	3.66	4.08	4.42	4.64
	$\Delta\beta$	-.55	-.40	-.25	-.09	.04	.15	.27	.39	.48	.57	.65	.72	.77	.80	.82
	α_i	.03	.11	.37	.44	.57	.68	.77	.88	1.04	1.14	1.30	1.38	1.54	1.63	1.70
	α_n	.0116	.0348	.1200	.1432	.1855	.2219	.2529	.2890	.3400	.3723	.4216	.4484	.4997	.5287	.5539
	α_m	-.1155	-.1029	-.0860	-.0811	-.0811	-.0769	-.0713	-.0666	-.0768	-.0837	-.0910	-.0875	-.1032	-.1098	-.1152
	α_c	.0175	.0161	.0159	.0141	.0148	.0163	.0161	.0161	.0178	.0186	.0192	.0178	.0201	.0208	.0211
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.198	1.202	1.206	1.211	1.217	1.220	1.225	1.230	1.235	1.240	1.244	1.250	1.254	1.258	1.261
	.025	.477	.434	.386	.342	.293	.238	.186	.048	.080	.036	-.014	-.046	-.070	-.080	-.083
	.050	.253	.217	.170	.127	.083	.031	-.017	-.064	-.119	-.174	-.226	-.248	-.260	-.269	-.274
	.100	.045	.011	-.035	-.072	-.104	-.133	-.159	-.180	-.199	-.207	-.262	-.298	-.320	-.349	-.357
	.200	-.087	-.114	-.155	-.184	-.219	-.247	-.253	-.306	-.347	-.362	-.386	-.412	-.424	-.435	-.439
	.300	-.179	-.210	-.255	-.277	-.287	-.306	-.339	-.348	-.392	-.416	-.436	-.447	-.463	-.477	-.483
	.400	-.269	-.300	-.317	-.322	-.354	-.377	-.400	-.421	-.448	-.473	-.494	-.505	-.516	-.527	-.530
	.500	-.341	-.349	-.386	-.411	-.417	-.451	-.463	-.479	-.502	-.524	-.536	-.552	-.556	-.561	-.564
	.600	[a]-.433	[a]-.439	[a]-.460	[a]-.475	[a]-.485	[a]-.520	[a]-.536	[a]-.559	[a]-.571	[a]-.594	[a]-.603	[a]-.621	[a]-.622	[a]-.629	[a]-.620
	.700	-.506	-.503	-.522	-.534	-.572	-.591	-.612	-.626	-.647	-.660	-.681	-.697	-.704	-.708	-.703
	.800	[a]-.486	[a]-.421	-.331	-.355	-.323	-.306	-.240	[a]-.240	[a]-.350	[a]-.380	[a]-.425	-.284	-.433	-.471	-.484
	.900	-.062	-.039	-.045	-.015	-.038	-.070	-.096	-.119	-.153	-.191	-.223	-.259	-.305	-.327	-.359
	.950	.061	.073	.079	.071	.033	-.018	-.062	-.101	-.149	-.186	-.224	-.259	-.302	-.321	-.343
Lower surface	.0375	-.893	-.816	-.696	-.580	-.390	-.224	-.101	-.006	.073	.144	.218	.268	.311	.343	.370
	.075	[a]-.860	[a]-.763	[a]-.358	[a]-.345	[a]-.250	[a]-.143	[a]-.061	[a].015	[a].069	[a].127	[a].191	[a].235	[a].269	[a].289	[a].315
	.150	-.719	-.603	-.199	-.136	-.103	-.073	-.028	.017	.057	.099	.144	.176	.204	.226	.247
	.250	-.099	-.098	-.110	-.101	-.075	-.053	-.021	.010	.037	.069	.104	.130	.152	.171	.189
	.350	-.092	-.100	-.102	-.094	-.076	-.064	-.041	-.017	.004	.030	.059	.082	.100	.116	.132
	.450	-.080	-.084	-.086	-.082	-.072	-.067	-.051	-.034	-.018	.003	.027	.047	.063	.077	.092
	.550	-.073	-.074	-.077	-.077	-.073	-.075	-.066	-.055	-.046	-.030	-.010	.007	.021	.034	.046
	.650	-.049	-.051	-.057	-.060	-.062	-.071	-.071	-.068	-.067	-.056	-.040	-.026	-.016	-.005	.006
	.750	-.039	-.040	-.048	-.055	-.064	-.083	-.094	-.105	-.118	-.118	-.108	-.098	-.093	-.083	-.073
	.850	.040	.037	.031	.020	.004	-.019	-.039	-.057	-.079	-.086	-.082	-.076	-.073	-.064	-.057
	.925	.082	.079	.068	.051	.027	-.007	-.040	-.072	-.110	-.123	-.119	.113	-.107	-.101	-.092
	.975	[a].220	[a].125	[a].116	[a].110	[a].055	[a]-.002	[a]-.035	[a]-.087	[a]-.135	[a]-.149	[a]-.157	[a]-.148	[a]-.142	[a]-.135	[a]-.125
	1.000	[a].400	[a].160	[a].140	[a].170	[b].079	[b]0	[a]-.035	[a]-.095	[a]-.147	[b]-.166	[b]-.177	[b]-.166	[b]-.160	[b]-.155	[b]-.140

[a]Paired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 9.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) – Continued

(k) One-blade propeller; M = 0.61; $\beta_{0.75R}$ = 45°.

	J	2.365	2.334	2.317	2.281	2.254	2.233	2.213	2.183	2.162	2.134	2.123	2.098	2.083	2.053	2.039	2.020	2.001	1.977
	M_x	.913	.919	.928	.930	.937	.946	.951	.957	.963	.971	.979	.981	.990	.993	1.002	1.008	1.014	1.020
	α_x'	–.03	.35	.55	1.00	1.33	1.60	1.85	2.23	2.52	2.87	3.01	3.34	3.54	3.95	4.14	4.39	4.65	4.99
	$\Delta\beta$	–.22	–.11	–.04	.10	.20	.29	.31	.38	.41	.43	.44	.49	.51	.59	.63	.68	.75	.84
	α_1	.58	.67	.68	.77	.83	.91	.92	1.03	1.12	1.22	1.30	1.35	1.46	1.55	1.63	1.71	1.76	1.84
	c_n	.1884	.2187	.2206	.2490	.2723	.2974	.3019	.3368	.3652	.3968	.4219	.4387	.4697	.5006	.5265	.5535	.5677	.5955
	c_m	–.1121	–.1144	–.1026	–.0995	–.0978	–.0977	–.0949	–.1006	–.1003	–.1014	–.1057	–.1106	–.1168	–.1311	–.1395	–.1463	–.1444	–.1560
	c_c	.0235	.0240	.0247	.0245	.0247	.0257	.0256	.0267	.0267	.0275	.0280	.0283	.0286	.0315	.0326	.0338	.0340	.0350
	c/b	Pressure coefficient, P																	
Upper surface	0.000	1.225	1.229	1.234	1.235	1.239	1.244	1.247	1.251	1.254	1.258	1.263	1.264	1.269	1.272	1.275	1.279	1.283	1.287
	.025	.361	.327	.312	.267	.232	.210	.189	.151	.124	.100	.082	.067	.047	.030	.019	.005	–.008	–.024
	.050	.146	.117	.103	.061	.031	.010	–.009	–.045	–.075	–.104	–.131	–.147	–.162	–.174	–.180	–.186	–.195	–.202
	.100	–.066	–.077	–.077	–.105	–.124	–.134	–.137	–.150	–.156	–.159	–.168	–.187	–.215	–.236	–.248	–.258	–.270	–.282
	.200	–.182	–.199	–.198	–.215	–.223	–.245	–.271	–.300	–.313	–.320	–.325	–.328	–.343	–.357	–.362	–.369	–.377	–.382
	.300	–.259	–.261	–.260	–.297	–.310	–.311	–.321	–.352	–.366	–.376	–.382	–.381	–.389	–.400	–.407	–.415	–.423	–.428
	.400	–.365	–.336	–.339	–.345	–.361	–.368	–.370	–.385	–.397	–.401	–.406	–.406	–.409	–.412	–.409	–.404	–.400	–.392
	.500	–.364	–.381	–.382	–.399	–.410	–.417	–.420	–.436	–.446	–.452	–.457	–.456	–.462	–.466	–.466	–.466	–.469	–.469
	.600	–.641	–.619	–.599	–.588	–.568	–.550	–.531	–.519	–.501	–.485	–.467	–.451	–.437	–.425	–.409	–.392	–.377	–.361
	.700	–.571	–.570	–.569	–.584	–.588	–.596	–.599	–.613	–.614	–.618	–.625	–.626	–.632	–.638	–.636	–.634	–.635	–.634
	.800	–.719	–.713	–.706	–.724	–.725	–.725	–.723	–.736	–.742	–.744	–.744	–.742	–.744	–.751	–.748	–.747	–.746	–.741
	.900	–.131	–.138	–.145	–.173	–.187	–.209	–.228	–.280	–.302	–.354	–.417	–.469	–.549	–.715	–.768	–.776	–.777	–.771
	.950	–.084	–.103	–.115	–.143	–.158	–.181	–.199	–.240	–.253	–.290	–.319	–.339	–.373	–.512	–.605	–.672	–.750	–.767
Lower surface	.0375	–.492	–.425	–.366	–.258	–.154	–.085	–.034	.025	.074	.120	.159	.195	.222	.253	.287	.321	.348	.382
	.075	–.414	–.315	–.240	–.135	–.058	–.010	.026	.070	.107	.143	.173	.204	.224	.249	.279	.307	.328	.357
	.150	–.225	–.142	–.117	–.087	–.049	–.021	.003	.033	.061	.088	.112	.135	.151	.171	.196	.220	.237	.262
	.250	–.100	–.085	–.068	–.054	–.030	–.010	.005	.027	.048	.069	.087	.108	.119	.133	.156	.177	.189	.213
	.350	–.107	–.097	–.085	–.078	–.060	–.002	–.032	–.018	.001	.016	.032	.051	.059	.073	.091	.111	.122	.143
	.450	–.087	–.082	–.073	–.072	–.056	–.002	–.034	–.025	–.010	.004	.018	.032	.040	.050	.068	.086	.096	.115
	.550	–.095	–.095	–.090	–.093	–.083	–.073	–.066	–.059	–.045	–.035	–.023	–.010	–.004	.005	.021	.036	.045	.064
	.650	–.086	–.088	–.086	–.094	–.088	–.082	–.078	–.075	–.063	–.055	–.042	–.034	–.030	–.025	–.009	.006	.014	.031
	.750	–.095	–.105	–.111	–.128	–.133	–.136	–.139	–.141	–.132	–.126	–.119	–.109	–.103	–.098	–.085	–.070	–.062	–.047
	.850	–.028	–.039	–.046	–.066	–.074	–.083	–.091	–.100	–.098	–.099	–.100	–.092	–.094	–.096	–.084	–.070	–.066	–.049
	.925	–.019	–.035	–.048	–.076	–.092	–.110	–.119	–.128	–.122	–.123	–.121	–.114	–.115	–.118	–.107	–.094	–.092	–.077
	.975	[a]–.038	[a]–.038	[a]–.080	[a]–.118	[a]–.130	[a]–.160	[a]–.159	[a]–.191	[a]–.172	[a]–.168	[a]–.160	[a]–.150	[a]–.152	[a]–.158	[a]–.132	[a]–.120	[a]–.132	[a]–.120
	1.000	[b]–.049	[b]–.040	[b]–.100	[a]–.139	[a]–.151	[a]–.185	[a]–.180	[a]–.230	[a]–.208	[b]–.190	[b]–.180	[a]–.170	[a]–.175	[a]–.177	[a]–.150	[a]–.130	[a]–.155	[a]–.141

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 9.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-305.30 PROPELLER BLADE SECTION (x = 0.85) – Concluded

(l) One-blade propeller; M = 0.64; $\beta_{0.75R} = 45^{\circ}$.

	J	2.336	2.308	2.282	2.259	2.239	2.218	2.191	2.173	2.150	2.125	2.106	2.094	2.063	2.035	2.019
	M_x	.977	.980	.985	.991	.996	1.002	1.007	1.016	1.019	1.025	1.030	1.037	1.043	1.053	1.058
	α_r'	.32	.66	.98	1.27	1.52	1.79	2.13	2.36	2.66	2.99	3.24	3.40	3.81	4.19	4.41
	$\Delta\beta$	–.52	–.43	–.34	–.26	–.20	–.13	–.04	.02	.09	.17	.23	.26	.35	.43	.48
	α_i	.23	.30	.39	.54	.66	.79	.84	.95	1.00	1.09	1.16	1.24	1.34	1.44	1.48
	c_n	.0761	.0984	.1284	.1768	.2165	.2574	.2748	.3103	.3265	.3548	.3781	.4061	.4342	.4665	.4806
	c_m	–.1018	–.1026	–.1044	–.1114	–.1195	–.1293	–.1275	–.1322	–.1319	–.1156	–.1372	–.1398	–.1438	–.1446	–.1454
	c_c	.0326	.0331	.0343	.0361	.0384	.0402	.0402	.0398	.0393	.0392	.0390	.0388	.0375	.0362	.0356
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.261	1.263	1.266	1.270	1.273	1.276	1.279	1.285	1.286	1.290	1.293	1.298	1.302	1.308	1.312
	.025	.421	.404	.392	.358	.333	.316	.299	.271	.253	.227	.200	.183	.162	.132	.120
	.050	.210	.197	.187	.155	.132	.115	.099	.072	.051	.025	–.006	–.028	–.048	–.069	–.077
	.100	.012	–.003	–.011	–.029	–.035	–.038	–.037	–.046	–.051	–.053	–.062	–.077	–.104	–.137	–.159
	.200	–.104	–.103	–.102	–.111	–.131	–.158	–.171	–.192	–.201	–.208	–.218	–.228	–.238	–.258	–.268
	.300	–.165	–.175	–.184	–.203	–.209	–.214	–.222	–.247	–.260	–.268	–.277	–.282	–.288	–.306	–.316
	.400	–.249	–.250	–.255	–.274	–.286	–.290	–.289	–.303	–.311	–.313	–.318	–.327	–.327	–.323	–.326
	.500	–.303	–.303	–.303	–.318	–.328	–.332	–.331	–.342	–.350	–.355	–.363	–.366	–.367	–.375	–.380
	.600	–.380	–.380	–.379	–.391	–.400	–.405	–.403	–.412	–.418	–.419	–.423	–.430	–.423	–.409	–.404
	.700	–.485	–.485	–.484	–.494	–.503	–.508	–.503	–.508	–.513	–.517	–.524	–.529	–.530	–.536	–.541
	.800	–.624	–.624	–.621	–.625	–.630	–.635	–.631	–.635	–.636	–.634	–.638	–.641	–.642	–.643	–.648
	.900	–.596	–.637	–.665	–.691	–.694	–.698	–.689	–.691	–.692	–.690	–.691	–.694	–.689	–.684	–.686
	.950	–.230	–.259	–.303	–.479	–.659	–.708	–.707	–.708	–.707	–.701	–.701	–.703	–.699	–.690	–.690
Lower surface	.0375	–.376	–.346	–.305	–.235	–.174	–.123	–.069	.009	.049	.101	.155	.203	.250	.304	.315
	.075	–.333	–.304	–.267	–.198	–.123	–.062	–.005	.064	.094	.135	.179	.217	.254	.298	.308
	.150	–.310	–.279	–.226	–.138	–.075	–.038	–.005	.037	.059	.089	.122	.156	.185	.223	.228
	.250	–.260	–.177	–.125	–.076	–.041	–.020	.004	.033	.049	.073	.099	.125	.172	.181	.186
	.350	–.137	–.122	–.104	–.084	–.065	–.048	–.027	–.004	.009	.028	.049	.073	.094	.119	.123
	.450	–.140	–.122	–.102	–.083	–.065	–.052	–.034	–.015	–.005	.013	.031	.053	.075	.097	.100
	.550	–.132	–.117	–.102	–.091	–.078	–.068	–.055	–.040	–.031	–.018	–.002	.016	.034	.054	.056
	.650	–.132	–.126	–.118	–.115	–.108	–.099	–.086	–.072	–.064	–.050	–.036	–.017	.002	.022	.024
	.750	[a]–.135	[a]–.138	[a]–.131	[a]–.135	[a]–.134	[a]–.123	[a]–.118	[a]–.100	[a]–.100	[a]–.082	[a]–.072	[a]–.068	[a]–.037	[a]–.020	[a]–.017
	.850	–.138	–.150	–.151	–.162	–.161	–.158	–.145	–.136	–.129	–.118	–.107	–.092	–.075	–.057	–.056
	.925	–.141	–.156	–.164	–.183	–.186	–.185	–.173	–.164	–.159	–.148	–.140	–.125	–.107	–.090	–.090
	.975	[a]–.147	[a]–.163	[a]–.176	[a]–.198	[a]–.206	[a]–.205	[a]–.191	[a]–.181	[a]–.174	[a]–.162	[a]–.153	[a]–.144	[a]–.125	[a]–.111	[a]–.109
	1.000	[a]–.148	[a]–.166	[a]–.181	[b]–.205	[b]–.213	[b]–.211	[b]–.199	[b]–.192	[b]–.182	[b]–.170	[b]–.162	[b]–.153	[b]–.133	[b]–.121	[b]–.119

[a]Faired value.

[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 10.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.80 PROPELLER BLADE SECTION (x = 0.90)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^{\circ}$.

J	1.608	1.700	1.804	1.855	1.957	2.058	2.141	2.238	2.334	2.490	2.583	2.438	2.319	2.206	2.079	1.999	1.931	1.814	1.734	1.674
M_r	.553	.561	.576	.575	.585	.598	.619	.615	.625	.646	.654	.638	.628	.613	.599	.588	.581	.574	.567	.561
α_r'	9.77	8.68	7.16	6.43	5.01	3.65	2.57	1.34	.16	-1.67	-2.71	-1.07	.34	1.74	3.37	4.44	5.37	7.02	8.18	9.07
$\Delta\beta$	1.10	1.00	.87	.80	.65	.50	.41	.27	.11	-.10	-.20	-.04	.14	.32	.48	.58	.69	.85	.95	1.03
α_i	3.37	3.21	2.92	2.74	2.31	1.94	1.57	1.21	.69	.30	-.02	.45	.82	1.29	1.78	2.12	2.45	2.85	3.07	3.22
c_n	.7454	.7103	.6458	.6079	.5133	.4303	.3487	.2706	.1552	.0661	-.0055	.1016	.1839	.2881	.3968	.4699	.5446	.6307	.6799	.7137
c_m	-.0223	-.0167	-.0213	-.0270	-.0366	-.0400	-.0396	-.0427	-.0559	-.0557	-.0598	-.0559	-.0515	-.0389	-.0415	-.0392	-.0353	-.0244	-.0175	-.0201
c_o																				
c/b	Pressure coefficient, P																			
Upper surface																				
0.000	1.079	1.081	1.085	1.085	1.088	1.092	1.099	1.098	1.101	1.108	1.112	1.107	1.102	1.097	1.092	1.089	1.087	1.084	1.082	1.081
.025	-1.500	-1.550	-1.609	-1.769	-1.132	-.861	-.592	-.352	-.044	.196	.339	.103	-.108	-.424	-.783	-.983	-1.440	-1.667	-1.620	-1.410
.050	-1.428	-1.513	-1.550	-1.431	-.857	-.669	-.485	-.321	-.112	.073	.220	.003	-.152	-.369	-.612	-.778	-1.005	-1.570	-1.563	-1.381
.100	-1.287	-1.370	-1.264	-.876	-.668	-.542	-.421	-.315	-.176	-.038	.049	-.091	-.202	-.350	-.513	-.619	-.716	-1.164	-1.329	-1.290
.200	-.983	-.922	-.652	-.559	-.499	-.418	-.344	-.291	-.218	-.120	-.064	-.156	-.226	-.313	-.405	-.468	-.525	-.595	-.798	-.968
.300	-.739	-.624	-.489	-.494	-.457	-.402	-.355	-.312	-.256	-.181	-.139	-.206	-.257	-.327	-.398	-.438	-.474	-.490	-.549	-.678
.400	-.549	-.462	-.416	-.435	-.402	-.364	-.328	-.300	-.267	-.209	-.177	-.224	-.262	-.316	-.362	-.392	-.418	-.428	-.433	-.487
.500	-.409	-.366	-.357	-.380	-.358	-.329	-.303	-.286	-.265	-.217	-.197	-.231	-.257	-.299	-.333	-.353	-.370	-.376	-.363	-.367
.600	-.332	-.317	-.332	-.362	-.354	-.336	-.317	-.312	-.300	-.261	-.250	-.271	-.290	-.286	-.342	-.351	-.359	-.355	-.326	-.305
.700	-.264	-.256	-.273	-.303	-.302	-.291	-.278	-.279	-.286	-.255	-.250	-.261	-.272	-.285	-.298	-.302	-.304	-.293	-.264	-.240
.800	-.180	-.187	-.199	-.228	-.233	-.229	-.224	-.235	-.246	-.220	-.221	-.224	-.233	-.241	-.242	-.235	-.235	-.220	-.191	-.176
.900	-.126	-.091	-.077	-.088	-.083	-.085	-.082	-.093	-.141	-.161	-.160	-.158	-.115	-.098	-.096	-.091	-.089	-.087	-.084	-.097
.950	-.101	-.051	-.020	-.017	-.007	-.007	-.001	-.015	-.042	-.020	-.023	-.024	-.032	-.017	-.015	-.013	-.015	-.023	-.037	-.066
Lower surface																				
.0375	.667	.630	.576	.539	.456	.344	.227	.087	-.145	-.310	-.305	-.219	-.077	.120	.294	.405	.484	.560	.606	.638
.075	.516	.486	.435	.398	.329	.239	.150	.045	-.129	-.250	-.355	-.193	-.073	.069	.196	.287	.352	.419	.461	.495
.150	.374	.347	.309	.278	.225	.161	.097	.024	-.112	-.183	-.253	-.148	-.072	.036	.125	.190	.239	.292	.327	.357
.250	.285	.261	.235	.210	.169	.122	.072	.010	-.077	-.120	-.171	-.097	-.051	.020	.093	.143	.180	.221	.248	.272
.350	.216	.200	.178	.156	.120	.073	.029	-.018	-.075	-.104	-.139	-.089	-.053	-.013	.044	.097	.131	.163	.190	.198
.450	.168	.155	.139	.118	.084	.051	.022	-.011	-.060	-.078	-.107	-.066	-.041	-.010	.029	.064	.092	.122	.146	.161
.550	.105	.094	.080	.060	.038	.017	-.007	-.034	-.070	-.079	-.100	-.072	-.055	-.035	-.002	.024	.043	.066	.086	.103
.650	.067	.065	.061	.044	.032	.015	-.001	-.025	-.054	-.060	-.075	-.056	-.039	-.027	-.002	.020	.032	.050	.061	.070
.750	.031	.039	.043	.033	.027	.015	0	-.016	-.037	-.038	-.049	-.036	-.025	-.020	-.002	.015	.025	.034	.038	.039
.850	[a]-.003	[a].015	[a].034	[a].039	[a].036	[a].020	[a].015	[a].009	[a]-.002	[a].005	[a]-.002	[a].004	[a].010	[a].004	[a].008	[a].020	[a].030	.026	.013	-.002
.925	-.015	.014	.039	.044	.048	.050	.049	.043	.048	.058	.055	.056	.055	.034	.036	.041	.043	.037	.027	.002
.975	[a]-.033	[a].010	[a].037	[a].046	[a].048	[a].084	[a].073	[a].060	[a].077	[a].120	[a].094	[a].095	[a].087	[a].055	[a].050	[a].038	[a].049	[a].045	[a].030	[a].001
1.000	[a]-.047	[a].010	[a].037	[a].045	[a].047	[a].104	[a].086	[a].069	[a].089	[a].170	[a].114	[a].118	[a].105	[a].065	[a].059	[a].066	[a].052	[a].054	[a].035	[a]-.002

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 10.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.80 PROPELLER BLADE SECTION (x = 0.90) – Continued

(b) N = 1350 rpm; $\beta_{0.75R} = 45^{\circ}$.

J	1.771	1.901	1.983	2.096	2.181	2.271	2.350	2.418	2.492	2.567	2.530	2.447	2.380	2.284	2.201	2.114	2.023	1.927	1.830
M_r	.675	.691	.698	.717	.725	.735	.743	.754	.762	.775	.770	.756	.750	.736	.718	.715	.708	.690	.680
α_r,	7.64	5.79	4.66	3.15	2.05	.93	–.03	–.84	–1.69	–2.54	–2.12	–1.17	–.39	.77	1.80	2.92	4.12	5.42	6.79
$\Delta\beta$	1.41	1.17	1.09	.61	.47	.32	.13	–.04	–.19	–.28	–.24	–.11	.06	.29	.46	.61	.81	1.10	1.33
α_i	3.43	2.93	2.58	1.98	1.53	1.18	.88	.56	.34	–.05	.19	.45	.71	1.13	1.47	1.90	2.30	2.78	3.30
c_l	.7612	.6530	.5753	.4413	.3403	.2639	.1971	.1255	.0777	–.0123	.0426	.1000	.1574	.2516	.3284	.4227	.5116	.6171	.7348
c_m	–.0214	–.0249	–.0517	–.0554	–.0454	–.0492	–.0530	–.0583	–.0600	–.0728	–.0667	–.0590	–.0585	–.0516	–.0420	–.0523	–.0472	–.0346	–.0135
c_o																			
c/b	Pressure coefficient, P																		
Upper surface 0.000	1.119	1.126	1.129	1.136	1.139	1.143	1.146	1.151	1.154	1.160	1.158	1.151	1.149	1.143	1.137	1.135	1.132	1.125	1.121
.025	–2.167	–1.857	–1.579	–.900	–.538	–.262	–.049	.121	.250	.360	.313	.176	.030	–.213	–.452	–.797	–1.295	–1.798	–2.066
.050	–2.020	–1.736	–1.390	–.681	–.466	–.276	–.117	.013	.119	.214	.172	.059	–.057	–.238	–.409	–.617	–.919	–1.655	–1.948
.100	–1.632	–1.133	–.594	–.564	–.428	–.303	–.192	–.124	–.016	.060	.027	–.063	–.148	–.280	–.389	–.527	–.632	–.753	–1.708
.200	–.634	–.511	–.523	–.449	–.369	–.295	–.228	–.169	–.114	–.061	–.083	–.145	–.202	–.288	–.344	–.424	–.493	–.515	–.497
.300	–.576	–.511	–.495	–.438	–.388	–.339	–.295	–.256	–.216	–.178	–.190	–.236	–.275	–.329	–.369	–.420	–.467	–.500	–.497
.400	–.483	–.453	–.436	–.395	–.358	–.322	–.293	–.268	–.238	–.211	–.221	–.254	–.279	–.317	–.344	–.380	–.411	–.441	–.446
.500	–.415	–.416	–.405	–.375	–.352	–.329	–.309	–.293	–.273	–.258	–.263	–.285	–.302	–.326	–.341	–.366	–.385	–.407	–.411
.600	–.366	–.397	–.395	–.378	–.360	–.350	–.340	–.333	–.321	–.315	–.315	–.327	–.336	–.351	–.355	–.369	–.381	–.389	–.386
.700	–.292	–.333	–.337	–.329	–.318	–.314	–.312	–.310	–.305	–.306	–.303	–.307	–.310	–.315	–.313	–.321	–.325	–.327	–.319
.800	–.206	–.249	–.255	–.256	–.249	–.253	–.258	–.262	–.263	–.268	–.263	–.262	–.259	–.259	–.249	–.251	–.251	–.244	–.233
.900	–.077	–.090	–.093	–.094	–.084	–.091	–.095	–.097	–.100	–.105	–.102	–.100	–.097	–.096	–.083	–.090	–.090	–.084	–.083
.950	–.018	–.010	–.010	–.006	.008	.003	–.003	–.007	–.006	–.013	–.008	–.006	–.003	–.002	.010	–.001	–.006	–.005	–.008
Lower surface .0375	.623	.518	.449	.306	.179	.038	–.117	–.214	–.327	–1.156	–.953	–.260	–.181	–.004	.140	.279	.407	.507	.587
.075	.480	.385	.324	.209	.114	.009	–.103	–.212	–.277	–.509	–.261	–.246	–.154	–.018	.084	.190	.293	.376	.445
.150	.342	.267	.221	.135	.069	–.011	–.100	–.158	–.211	–.219	–.227	–.183	–.134	–.036	.050	.121	.198	.261	.317
.250	.262	.209	.168	.104	.050	–.008	–.060	–.100	–.134	–.163	–.154	–.116	–.078	–.027	.041	.094	.152	.199	.243
.350	.196	.150	.123	.072	.005	–.027	–.062	–.092	–.114	–.140	–.130	–.103	–.075	–.044	.018	.066	.111	.149	.185
.450	.154	.116	.093	.053	.005	–.022	–.049	–.068	–.084	–.107	–.096	–.076	–.057	–.031	.011	.049	.086	.115	.146
.550	.107	.077	.060	.026	–.023	–.042	–.062	–.076	–.087	–.104	–.096	–.082	–.067	–.051	–.008	.024	.055	.078	.101
.650	.081	.059	.046	.020	–.018	–.033	–.049	–.059	–.066	–.077	–.070	–.062	–.051	–.040	–.008	.017	.044	.063	.080
.750	.044	.039	.032	.011	–.013	–.023	–.034	–.039	–.041	–.048	–.044	–.040	–.035	–.030	–.011	.010	.032	.043	.057
.850	[a].025	[a].051	[a].051	[a].030	[a]0	[a].003	[a].005	[a].009	[a].007	[a].001	[a].004	[a].002	[a].007	[a].010	[a].007	[a].029	[a].043	[a].052	[a].061
.925	.034	.056	.063	.053	.036	.044	.047	.051	.056	.053	.055	.051	.051	.042	.039	.053	.069	.063	.063
.975	[a].040	[a].058	[a].071	[a].090	[a].061	[a].077	[a].078	[a].079	[a].085	[a].088	[a].082	[a].086	[a].087	[a].086	[a].079	[a].079	[a].085	[a].074	[a].062
1.000	[a].040	[a].060	[a].078	[a].110	[a].075	[a].095	[a].097	[a].090	[a].099	[a].104	[a].100	[a].107	[a].108	[a].100	[a].106	[a].093	[a].098	[a].079	[a].062

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 10.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.80 PROPELLER BLADE SECTION (x = 0.90) – Continued

(c) N = 1500 rpm: $\beta_{0.75R} = 45^{\circ}$.

	J	1.995	2.081	2.178	2.300	2.426	2.527	2.550	2.479	2.377	2.258	2.147	2.058
	M_r	.794	.806	.818	.836	.854	.869	.872	.862	.843	.824	.807	.798
	α_r'	4.49	3.35	2.09	.57	-.92	-2.09	-2.34	-1.53	-.32	1.17	2.62	3.79
	$\Delta\beta$	1.39	.92	.59	.12	-.29	-.59	-.66	-.45	-.14	.29	.73	1.12
	α_1	2.72	2.24	1.72	1.17	.56	-.03	-.14	.31	.84	1.35	1.88	2.40
	c_n	.6058	.4974	.3835	.2610	.1255	-.0077	-.0310	.0690	.1877	.3026	.4187	.5342
	c_m	-.0351	-.0418	-.0517	-.0607	-.0751	-.0903	-.0965	-.0842	-.0697	-.0578	-.0480	-.0429
	c_c	-.0146	-.0073	.0006	.0081						.0063	-.0014	-.0087
	c/b	Pressure coefficient, P											
Upper surface	0.000	1.168	1.173	1.193	1.187	1.196	1.203	1.204	1.199	1.190	1.182	1.173	1.170
	.025	-1.057	-.772	-.482	-.100	.194	.358	.395	.288	.079	-.237	-.597	-.856
	.050	-1.057	-.823	-.533	-.176	.069	.215	.249	.152	-.026	-.285	-.688	-.918
	.100	-1.019	-.811	-.497	-.261	-.065	.060	.091	.005	-.143	-.346	-.580	-.866
	.200	-.972	-.755	-.451	-.304	-.169	-.074	-.051	-.116	-.225	-.353	-.462	-.821
	.300	-.666	-.405	-.451	-.376	-.283	-.210	-.189	-.240	-.303	-.404	-.466	-.383
	.400	-.310	-.405	-.412	-.365	-.311	-.260	-.246	-.281	-.332	-.380	-.422	-.401
	.500	-.370	-.401	-.392	-.358	-.326	-.292	-.283	-.308	-.340	-.372	-.402	-.406
	.600	-.417	-.433	-.446	-.450	-.424	-.389	-.382	-.408	-.440	-.447	-.440	-.433
	.700	-.362	-.368	-.378	-.390	-.469	-.487	-.480	-.497	-.409	-.387	-.377	-.370
	.800	-.262	-.259	-.268	-.273	-.277	-.279	-.341	-.277	-.285	-.279	-.269	-.264
	.900	-.070	-.067	-.068	-.067	-.069	-.057	-.053	-.070	-.076	-.077	-.073	-.076
	.950	.021	.027	.028	.035	.033	.042	.046	.033	.028	.026	.024	.024
Lower surface	.0375	.433	.323	.171	-.046	-.608	-.853	-.904	-.810	-.209	.040	.236	.370
	.075	.320	.226	.108	-.056	-.267	-.784	-.843	-.732	-.176	.011	.156	.264
	.150	.222	.151	.065	-.064	-.163	-.714	-.796	-.197	-.136	-.032	.096	.176
	.250	.170	.117	.043	-.033	-.106	-.033	-.266	-.096	-.081	-.010	.074	.136
	.350	.110	.076	.001	-.044	-.099	-.063	-.025	-.104	-.081	-.029	.045	.093
	.450	.082	.044	-.001	-.036	-.077	-.066	-.043	-.084	-.064	-.025	.014	.066
	.550	.032	-.001	-.030	-.055	-.086	-.087	-.076	-.093	-.078	-.049	-.029	.023
	.650	.027	-.001	-.026	-.044	-.065	-.069	-.062	-.070	-.060	-.039	-.024	.004
	.750	.020	-.003	-.022	-.032	-.043	-.043	-.039	-.045	-.041	-.032	-.022	.001
	.850	[a].030	[a].006	[a].011	[a].009	[a].010	[a]0	[a].018	[a].012	[a].011	[a].011	[a]0	[a].020
	.925	.061	.048	.048	.059	.087	.074	.078	.072	.064	.057	.041	.051
	.975	[a].109	[a].112	[a].081	[a].103	[a].115	[a].133	[a].125	[a].118	[a].103	[a].104	[a].080	[a].087
	1.000	[a].140	[a].151	[a].100	[a].127	[a].140	[a].164	[a].152	[a].149	[a].115	[a].129	[a].102	[a].104

[a]Faired value.

[redacted]

[redacted]

TABLE 10.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.80 PROPELLER BLADE SECTION (x = 0.90) – Continued

(d) N = 1600 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.078	2.184	2.288	2.383	2.481	2.537	2.442	2.339	2.227	2.123
	M_x	.848	.864	.877	.892	.907	.918	.901	.880	.865	.848
	α_x'	2.99	2.02	.72	-.43	-1.57	-2.20	-1.12	-.10	1.47	2.80
	$\Delta\beta$	1.20	.77	.36	-.13	-.73	-1.09	-.49	.12	.60	1.02
	α_1	2.41	1.80	1.27	.80	.11	-.26	.40	1.05	1.57	2.08
	c_n	.5394	.4019	.2842	.1800	.0235	-.0590	.0900	.2355	.3519	.4645
	c_m	-.0526	-.0539	-.0653	-.0919	-.1066	-.1082	-.0997	-.0824	-.0602	-.0501
	c_o	-.0068	-.0001	.0077	.0146	.0181	.0204	.0163	.0122	.0041	-.0036
	o/b	Pressure coefficient, P									
Upper surface	0.000	1.192	1.200	1.207	1.215	1.223	1.228	1.219	1.208	1.200	1.192
	.025	-.605	-.369	-.064	.183	.359	.419	.281	.070	-.239	-.504
	.050	-.670	-.458	-.142	.071	.224	.282	.159	-.021	-.293	-.603
	.100	-.688	-.431	-.248	-.070	.067	.122	.007	-.154	-.352	-.605
	.200	-.691	-.510	-.320	-.178	-.067	-.019	-.117	-.246	-.438	-.610
	.300	-.790	-.605	-.408	-.303	-.217	-.174	-.257	-.355	-.486	-.691
	.400	-.800	-.550	-.412	-.353	-.289	-.258	-.317	-.396	-.418	-.547
	.500	-.287	-.309	-.405	-.367	-.337	-.304	-.344	-.379	-.383	-.321
	.600	-.363	-.423	-.460	-.441	-.418	-.389	-.406	-.450	-.427	-.452
	.700	-.362	-.518	-.485	-.486	-.474	-.471	-.463	-.487	-.531	-.411
	.800	-.244	-.225	-.326	-.581	-.568	-.581	-.575	-.550	-.233	-.256
	.900	-.046	-.032	-.026	-.040	-.080	-.088	-.067	-.033	-.044	-.053
	.950	.046	.059	.066	.069	.052	.028	.063	.064	.051	.040
Lower surface	.0375	.329	.183	-.034	-.530	-.714	-.767	-.655	-.213	.087	.258
	.075	.235	.123	-.042	-.364	-.677	-.723	-.614	-.150	.046	.177
	.150	.159	.059	-.060	-.128	-.679	-.697	-.504	-.122	.007	.114
	.250	.148	.045	-.030	-.089	-.473	-.643	-.050	-.072	.003	.086
	.350	.085	.014	-.044	-.089	-.015	-.473	-.070	-.074	-.021	.048
	.450	.064	.013	-.032	-.070	-.013	.034	-.063	-.058	-.018	.031
	.550	.033	-.022	-.058	-.087	-.058	.001	-.087	-.077	-.021	-.003
	.650	.021	-.020	-.047	-.067	-.058	-.022	-.070	-.060	-.017	-.007
	.750	.011	-.017	-.036	-.040	-.047	-.027	-.049	-.042	-.009	-.014
	.850	[a].024	[a].002	[a].006	[a].023	[a].002	[a].007	[a].008	[a].013	[a].014	[a].009
	.925	.061	.061	.067	.095	.066	.060	.075	.074	.061	.048
	.975	[a].146	[a].118	[a].128	[a].138	[a].134	[a].105	[a].135	[a].123	[a].106	[a].100
	1.000	[a].209	[a].150	[a].165	[a].160	[a].169	[a].133	[a].170	[a].145	[a].133	[a].132

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 10.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-304.80 PROPELLER BLADE SECTION (x = 0.90) – Continued

(e) N = 0.56 rpm; $\beta_{0.75R}$ = 45°.

	J	2.115	2.147	2.179	2.214	2.255	2.288	2.325	2.349	2.384	2.426	2.457	2.493	2.541
	M_x	.940	.928	.919	.910	.903	.892	.883	.878	.870	.864	.858	.851	.839
	α_x'	2.91	2.49	2.09	1.64	1.13	.72	.27	–.01	–.44	–.94	–1.29	–1.71	–2.24
	$\Delta\beta$	.84	.73	.62	.49	.36	.26	.14	.06	–.07	–.21	–.31	–.43	–.57
	α_i	1.91	1.85	1.73	1.68	1.49	1.28	1.06	.90	.73	.53	.39	.20	–.16
	c_n	.4242	.4132	.3858	.3758	.3332	.2868	.2361	.2003	.1629	.1197	.0871	.0445	–.0355
	c_m	–.0746	–.0782	–.0824	–.0882	–.0859	–.0801	–.0782	–.0791	–.0774	–.0733	–.0760	–.0816	–.0765
	c_o	.0106	.0107	.0116	.0119	.0116	.0111	.0120						
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.241	1.234	1.229	1.224	1.221	1.215	1.210	1.207	1.203	1.200	1.197	1.194	1.188
	.025	–.201	–.174	–.147	–.104	–.045	.007	.073	.120	.181	.242	.281	.326	.390
	.050	–.309	–.286	–.241	–.186	–.129	–.086	–.031	.009	.060	.112	.145	.184	.241
	.100	–.322	–.283	–.260	–.244	–.220	–.195	–.150	–.117	–.074	–.029	.001	.036	.086
	.200	–.390	–.383	–.382	–.362	–.329	–.297	–.254	–.225	–.181	–.138	–.114	–.088	–.050
	.300	–.490	–.474	–.459	–.447	–.417	–.364	–.337	–.312	–.288	–.257	–.233	–.203	–.157
	.400	–.541	–.502	–.490	–.485	–.441	–.390	–.361	–.347	–.317	–.295	–.275	–.248	–.207
	.500	–.572	–.543	–.518	–.485	–.445	–.432	–.378	–.369	–.319	–.301	–.292	–.277	–.246
	.600	–.565	–.547	–.533	–.506	–.479	–.453	–.430	–.391	–.382	–.389	–.395	–.388	–.343
	.700	–.587	–.578	–.569	–.548	–.530	–.504	–.467	–.472	–.489	–.491	–.463	–.395	–.347
	.800	–.394	–.518	–.550	–.544	–.519	–.467	–.423	–.436	–.338	–.241	–.268	–.284	–.271
	.900	–.107	–.067	–.040	–.039	–.024	–.020	.001	.015	–.026	–.048	–.061	–.068	–.090
	.950	–.085	–.028	.030	.075	.097	.100	.091	.067	.054	.051	.041	.031	.018
Lower surface	.0375	.243	.190	.141	.084	.017	–.055	–.157	–.298	–.498	–.667	–.755	–.849	–.995
	.075	.180	.136	.096	.053	.001	–.054	–.115	–.147	–.197	–.461	–.645	–.771	–.913
	.150	.098	.064	.033	.001	–.030	–.064	–.094	–.121	–.137	–.120	–.109	–.195	–.486
	.250	.085	.060	.039	.016	–.004	–.026	–.050	–.068	–.083	–.088	–.089	–.081	–.061
	.350	.042	.024	.007	–.008	–.023	–.038	–.054	–.068	–.076	–.085	–.090	–.093	–.088
	.450	.025	.011	–.001	–.012	–.020	–.030	–.041	–.053	–.057	–.063	–.068	–.072	–.071
	.550	–.027	–.037	–.045	–.005	–.052	–.058	–.063	–.070	–.071	–.075	–.080	–.081	–.082
	.650	–.046	–.051	–.054	–.053	–.050	–.049	–.051	–.055	–.055	–.056	–.058	–.060	–.057
	.750	–.078	–.071	–.065	–.054	–.041	–.034	–.030	–.033	–.030	–.030	–.032	–.031	–.003
	.850	[a]–.080	[a]–.055	[a]–.054	[a]–.011	[a].005	[a].020	[a].027	[a].024	[a].025	[a].030	[a]0	[a].028	.005
	.925	–.072	–.028	.009	.045	.074	.092	.099	.097	.093	.089	.088	.088	.010
	.975	[a]–.072	[a]–.005	[a].059	[a].095	[a].130	[a].149	[a].144	[a].132	[a].144	[a].143	[a].155	[a].140	[a].062
	1.000	[a]–.076	[a].008	[a].074	[a].125	[a].155	[a].182	[a].164	[a].148	[a].110	[a].172	[a].196	[a].168	[a].125

[a]Faired value.

[redacted]

[redacted]

TABLE 10.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.80 PROPELLER BLADE SECTION (x = 0.90) - Continued

(f) M = 0.60; $\beta_{0.75R}$ = 45°.

	J	2.145	2.176	2.217	2.253	2.268	2.300	2.334	2.350	2.379	2.420	2.449	2.481	2.520
	M_x	.990	.980	.977	.971	.960	.956	.947	.936	.929	.924	.918	.914	.903
	α_x'	2.52	2.12	1.60	1.15	.97	.57	.16	-.03	-.38	-.86	-1.20	-1.57	-2.01
	$\Delta\beta$	.41	.38	.34	.18	.12	-.01	-.15	-.22	-.34	-.51	-.64	-.77	-.92
	α_i	1.65	1.44	1.28	1.05	.93	.80	.72	.59	.50	.30	.19	.06	-.11
	c_n	.3690	.3226	.2861	.2342	.2074	.1800	.1600	.1310	.1106	.0684	.0435	.0145	-.0258
	c_m	-.1025	-.0879	-.0808	-.0742	-.0748	-.0725	-.0741	-.0799	-.0846	-.0919	-.0992	-.1027	-.1058
	c_c	.0236	.0221	.0213	.0212	.0203	.0195	.0192	.0197	.0197	.0194	.0185	.0184	.0178
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.269	1.263	1.261	1.258	1.252	1.250	1.244	1.238	1.235	1.232	1.229	1.226	1.221
	.025	-.030	.001	.049	.100	.132	.159	.189	.221	.245	.300	.328	.358	.392
	.050	-.143	-.099	-.045	.002	.028	.051	.075	.102	.124	.170	.196	.221	.251
	.100	-.155	-.140	-.118	-.095	-.081	-.066	-.050	-.029	-.013	.028	.048	.070	.095
	.200	-.264	-.258	-.234	-.202	-.187	-.176	-.163	-.145	-.133	-.102	-.085	-.068	-.048
	.300	-.382	-.366	-.348	-.327	-.312	-.292	-.276	-.268	-.262	-.239	-.226	-.213	-.198
	.400	-.429	-.399	-.386	-.369	-.363	-.354	-.340	-.329	-.317	-.289	-.276	-.272	-.271
	.500	-.495	-.484	-.452	-.418	-.414	-.413	-.413	-.412	-.403	-.376	-.365	-.354	-.334
	.600	-.527	-.507	-.487	-.464	-.465	-.462	-.462	-.467	-.466	-.460	-.452	-.432	-.402
	.700	-.560	-.549	-.535	-.515	-.513	-.511	-.510	-.512	-.510	-.510	-.500	-.495	-.466
	.800	-.609	-.601	-.588	-.576	-.581	-.583	-.584	-.586	-.590	-.589	-.583	-.580	-.570
	.900	-.605	-.415	-.320	-.296	-.205	-.155	-.131	-.117	-.104	-.087	-.078	-.070	-.056
	.950	-.270	-.179	-.148	-.116	-.095	-.069	-.051	-.035	-.013	.009	.034	.049	.072
Lower surface	.0375	.135	.079	.019	-.070	-.186	-.285	-.373	-.457	-.513	-.604	-.663	-.720	-.799
	.075	.094	.054	.012	-.050	-.100	-.191	-.305	-.415	-.470	-.557	-.611	-.666	-.740
	.150	.042	.011	-.021	-.061	-.094	-.111	-.131	-.281	-.385	-.556	-.624	-.678	-.720
	.250	.041	.021	.001	-.024	-.048	-.061	-.068	-.070	-.068	-.239	-.354	-.528	-.629
	.350	0	-.013	-.027	-.046	-.064	-.073	-.077	-.081	-.074	-.040	-.021	-.031	-.045
	.450	-.017	-.026	-.036	-.050	-.066	-.072	-.076	-.084	-.080	-.056	-.036	-.014	0
	.550	-.074	-.078	-.086	-.095	-.108	-.111	-.114	-.120	-.117	-.098	-.083	-.062	-.049
	.650	-.087	-.091	-.097	-.103	-.116	-.117	-.118	-.122	-.118	-.100	-.084	-.067	-.052
	.750	-.132	-.138	-.143	-.151	-.161	-.157	-.144	-.134	-.119	-.094	-.074	-.057	-.041
	.850	[a]-.155	[a]-.162	[a]-.159	[a]-.163	[a]-.165	[a]-.150	[a]-.140	[a]-.118	[a]-.092	[a]-.060	[a]-.043	[a]-.029	[a]-.009
	.925	-.160	-.144	-.139	-.136	-.135	-.101	-.070	-.052	-.031	-.001	.021	.038	.059
	.975	[a]-.164	[a]-.072	[a]-.080	[a]-.065	[a]-.071	[a]-.040	[a]-.013	[a].006	[a].029	[a].058	[a].086	[a].103	[a].130
	1.000	[a]-.165	[a].002	[a]-.033	[a].028	[a]-.020	[a]-.005	[a].013	[a].038	[a].058	[a].084	[a].122	[a].135	[a].169

[a]Faired value.

[redacted]

NACA

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TABLE 10.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-304.80 PROPELLER BLADE SECTION (x = 0.90) – Concluded

(g) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

J	2.132	2.146	2.170	2.188	2.215	2.238	2.262	2.291	2.307	2.346	2.364	2.442
M_x	1.093	1.085	1.078	1.067	1.059	1.052	1.045	1.037	1.030	1.020	1.010	.991
α_x'	2.68	2.50	2.19	1.96	1.63	1.34	1.04	.68	.49	.02	-.20	-1.12
$\Delta\beta$	.01	-.03	-.10	-.16	-.24	-.31	-.38	-.46	-.51	-.63	-.69	-.92
α_i	1.40	1.34	1.23	1.13	1.03	.94	.82	.61	.60	.39	.19	-.30
c_n	.3116	.2987	.2729	.2523	.2310	.2103	.1845	.1355	.1335	.0871	.0439	-.0684
c_m	-.1059	-.1075	-.1047	-.1054	-.1054	-.1042	-.1042	-.1013	-.1045	-.1018	-.1009	-.0810
c_o	.0310	.0308	.0321	.0319	.0320	.0316	.0322	.0324	.0324	.0336	.0342	.0301
	c/b	Pressure coefficient, P										
Upper surface	0.000	1.334	1.330	1.325	1.317	1.312	1.308	1.303	1.298	1.293	1.287	1.281	1.269
	.025	.146	.160	.175	.202	.221	.233	.260	.281	.291	.331	.349	.374
	.050	.045	.043	.082	.109	.128	.136	.161	.178	.187	.221	.236	.242
	.100	.010	.014	.016	.027	.032	.034	.047	.055	.060	.086	.097	.107
	.200	-.101	-.102	-.102	-.092	-.086	-.084	-.068	-.057	-.053	-.031	-.023	-.021
	.300	-.216	-.221	-.225	-.219	-.218	-.215	-.193	-.179	-.178	-.156	-.150	-.161
	.400	-.277	-.280	-.281	-.271	-.263	-.259	-.248	-.242	-.243	-.236	-.229	-.225
	.500	-.328	-.335	-.336	-.328	-.324	-.323	-.312	-.297	-.296	-.292	-.292	-.308
	.600	-.384	-.391	-.394	-.388	-.388	-.388	-.379	-.375	-.372	-.365	-.365	-.380
	.700	-.425	-.434	-.440	-.438	-.442	-.446	-.442	-.436	-.434	-.429	-.428	-.442
	.800	-.479	-.492	-.501	-.501	-.506	-.511	-.509	-.505	-.506	-.514	-.517	-.538
	.900	-.520	-.538	-.550	-.552	-.558	-.507	-.567	-.565	-.570	-.583	-.589	-.620
	.950	-.533	-.548	-.578	-.559	-.566	-.573	-.572	-.569	-.574	-.586	-.591	-.261
Lower surface	.0375	.199	.156	.092	.021	-.044	-.092	-.145	-.200	-.228	-.309	-.356	-.502
	.075	.155	.119	.071	.025	-.030	-.079	-.139	-.194	-.220	-.293	-.338	-.484
	.150	.090	.056	.009	-.020	-.058	-.096	-.149	-.212	-.238	-.315	-.364	-.505
	.250	.092	.074	.046	.026	-.002	-.036	-.079	-.146	-.173	-.256	-.304	-.448
	.350	.059	.041	.013	-.004	-.024	-.041	-.067	-.102	-.117	-.217	-.282	-.439
	.450	.037	.021	.005	-.016	-.032	-.045	-.056	-.075	-.078	-.121	-.198	-.400
	.550	-.012	-.029	-.056	-.028	-.043	-.091	-.099	-.109	-.109	-.114	-.133	-.363
	.650	-.020	-.036	-.061	-.031	-.044	-.091	-.094	-.102	-.100	-.102	-.108	-.236
	.750	-.070	-.085	-.106	-.113	-.124	-.133	-.136	-.140	-.139	-.144	-.151	-.157
	.850	[a]-.110	[a]-.120	[a]-.150	[a]-.180	[a]-.180	[a]-.155	[a]-.147	[a]-.157	[a]-.151	[a]-.168	[a]-.173	[a]-.120
	.925	-.106	-.123	-.142	-.150	-.160	-.167	-.169	-.171	-.170	-.173	-.178	-.122
	.975	[a]-.038	[a]-.106	[a]-.058	[a]-.062	[a]-.050	[a]-.119	[a]-.138	[a]-.152	[a]-.140	[a]-.148	[a]-.140	[a]-.060
	1.000	[a].039	[a]-.088	[a].050	[a].030	[a].060	[a]-.060	[a]-.095	[a]-.113	[a]-.100	[a]-.106	[a]-.096	[a].030

[a]Faired value.

[redacted]

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TABLE 11.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95)

(a) N = 1140 rpm; $\beta_{0.75R}$ = 45°.

	J	1.780	1.882	2.017	2.138	2.250	2.361	2.502	2.582	2.455	2.312	2.188	2.062	1.952	1.842	1.699
	M_r	.601	.613	.620	.634	.639	.656	.666	.677	.664	.646	.633	.625	.612	.604	.590
	α_r'	7.25	5.82	4.01	2.44	1.05	-.29	-1.91	-2.80	-1.38	.30	1.81	3.42	4.87	6.38	8.41
	$\Delta\beta$	.94	.80	.58	.43	.26	.07	-.13	-.22	-.08	.15	.36	.52	.69	.85	1.05
	α_i	3.60	3.04	2.34	1.81	1.30	.79	.23	-.01	.50	1.02	1.54	2.05	2.66	3.21	3.57
	c_n	.5778	.4871	.3742	.2897	.2084	.1281	.0368	-.0019	.0806	.1645	.2477	.3287	.4264	.5159	.5729
	c_m	-.0283	-.0360	-.0374	-.0342	-.0364	-.0406	-.0444	-.0472	-.0414	-.0414	-.0356	-.0354	-.0403	-.0330	-.0330
	c_c															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.090	1.095	1.099	1.103	1.106	1.112	1.115	1.120	1.115	1.108	1.104	1.100	1.094	1.092	1.087
	.025	-1.564	-1.436	-.647	-.397	-.138	.069	.294	.377	.207	-.023	-.272	-.524	-.930	-1.646	-1.408
	.050	-1.433	-.979	-.635	-.448	-.262	-.100	.085	.158	.015	-.167	-.353	-.544	-.715	-1.304	-1.372
	.100	-.947	-.564	-.460	-.344	-.227	-.128	-.015	.042	-.063	-.183	-.289	-.406	-.464	-.517	-.734
	.200	-.459	-.420	-.348	-.279	-.208	-.150	-.084	-.046	-.114	-.183	-.240	-.315	-.387	-.466	-.644
	.300	-.388	-.365	-.313	-.264	-.216	-.178	-.133	-.100	-.150	-.200	-.240	-.294	-.342	-.406	-.425
	.400	-.392	-.333	-.292	-.257	-.222	-.192	-.159	-.137	-.167	-.205	-.238	-.280	-.317	-.369	-.365
	.500	-.314	-.298	-.263	-.232	-.208	-.184	-.164	-.143	-.164	-.193	-.220	-.254	-.319	-.333	-.319
	.600	-.298	-.291	-.264	-.240	-.222	-.205	-.191	-.173	-.189	-.211	-.232	-.261	-.317	-.320	-.299
	.700	-.269	-.263	-.247	-.227	-.214	-.202	-.194	-.179	-.191	-.206	-.220	-.245	-.258	-.293	-.264
	.800	-.218	-.216	-.204	-.191	-.183	-.176	-.175	-.161	-.169	-.178	-.184	-.205	-.215	-.245	-.215
	.900	-.098	-.093	-.084	-.072	-.070	-.063	-.065	-.059	-.062	-.067	-.070	-.086	-.093	-.123	-.110
	.950	-.039	-.030	-.022	-.014	-.014	-.010	-.018	-.010	-.011	-.015	-.009	-.027	-.028	-.065	-.059
Lower surface	.0375	.525	.462	.332	.206	.049	-.087	-.289	-.466	-.192	-.028	.136	.265	.359	.349	.235
	.075	.390	.337	.233	.139	.027	-.071	-.216	-.265	-.148	-.021	.086	.183	.288	.345	.433
	.150	.278	.235	.158	.097	.024	-.037	-.128	-.155	-.085	-.003	.059	.120	.199	.232	.305
	.250	.206	.173	.115	.073	.024	-.020	-.082	-.094	-.050	.002	.044	.082	.139	.158	.222
	.350	.166	.141	.091	.063	.024	-.008	-.053	-.060	-.028	.011	.030	.061	.106	.114	.167
	.450	.130	.110	.072	.016	.017	-.005	-.040	-.045	-.022	.007	.022	.042	.079	.081	.163
	.550	.087	.073	.044	.023	-.003	-.021	-.045	-.046	-.030	-.010	.008	.028	.058	.056	.093
	.650	.065	.055	.028	.012	-.008	-.018	-.039	-.037	-.025	-.011	.003	.014	.041	.031	.068
	.750	.035	.027	.011	-.001	-.016	-.020	-.034	-.031	-.025	-.016	-.005	.007	.027	.013	.040
	.850	.056	.051	.042	.036	.025	.022	.012	.021	.019	.025	.030	.019	.034	.017	.040
	.925	.035	.034	.032	.034	.032	.034	.034	.041	.040	.038	.035	.028	.036	.015	.024
	.975	[a]0	[a].048	[a].034	[a].035	[a].032	[a].035	[a].036	[a].043	[a].038	[a].043	[a].045	[a].034	[a].050	[a].018	[a].010
	1.000	[a].030	[a].054	[a].034	[a].034	[a].030	[a].034	[a].035	[a].042	[a].035	[a].045	[a].052	[a].037	[a].057	[a].011	[a].002

[a]Faired value.

[redacted]

NACA

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TABLE 11.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) – Continued

(b) N = 1350 rpm; $\beta_{0.75R}$ = 45°.

J	1.706	1.886	1.984	2.097	2.198	2.293	2.415	2.541	2.589	2.477	2.353	2.248	2.148	2.014	1.910	1.796
M_r	.693	.711	.720	.737	.747	.760	.774	.792	.798	.781	.764	.753	.739	.728	.710	.699
α_r'	8.31	5.77	4.45	2.97	1.69	.52	-.92	-2.35	-2.88	-1.63	-.19	1.07	2.32	4.05	5.44	7.02
$\Delta\beta$	1.55	1.27	.97	.68	.49	.28	-.05	-.28	-.35	-.18	.13	.39	.59	.65	1.21	1.45
α_i	3.69	3.17	2.63	2.10	1.64	1.28	.74	.13	-.12	.50	.93	1.47	1.84	2.55	3.06	3.39
c_n	.5929	.5110	.4226	.3368	.2645	.2071	.1200	.0213	.0194	.0806	.1510	.2374	.2968	.4116	.4903	.5458
c_m	-.0342	-.0379	-.0390	-.0382	-.0403	-.0426	-.0488	-.0593	-.0655	-.0487	-.0479	-.0436	-.0380	-.0387	-.0383	-.0375
c_o																
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.126	1.133	1.137	1.144	1.148	1.153	1.159	1.167	1.170	1.162	1.155	1.151	1.145	1.141	1.133	1.129
	.025	-2.083	-1.678	-1.259	-.533	-.280	-.015	.199	.363	.413	.282	.084	-.149	-.390	-.944	-1.607	-1.901
	.050	-1.968	-1.618	-.872	-.634	-.413	-.167	-.016	.131	.180	.058	-.111	-.301	-.503	-.755	-1.490	-1.824
	.100	-.477	-.351	-.372	-.376	-.332	-.217	-.095	.017	.053	-.037	-.163	-.279	-.360	-.368	-.301	-.436
	.200	-.535	-.414	-.402	-.338	-.276	-.222	-.149	-.082	-.059	-.115	-.192	-.254	-.310	-.396	-.422	-.439
	.300	-.473	-.388	-.367	-.316	-.273	-.238	-.190	-.144	-.129	-.168	-.218	-.254	-.296	-.354	-.386	-.407
	.400	-.419	-.364	-.341	-.300	-.267	-.243	-.208	-.175	-.165	-.193	-.231	-.254	-.285	-.331	-.359	-.379
	.500	-.364	-.330	-.309	-.272	-.247	-.230	-.205	-.182	-.175	-.195	-.225	-.238	-.265	-.301	-.328	-.344
	.600	-.341	-.330	-.315	-.283	-.264	-.248	-.235	-.220	-.217	-.230	-.249	-.258	-.279	-.307	-.328	-.335
	.700	-.304	-.310	-.301	-.275	-.259	-.254	-.245	-.238	-.236	-.242	-.256	-.254	-.268	-.292	-.308	-.308
	.800	-.238	-.250	-.245	-.223	-.212	-.217	-.212	-.211	-.212	-.213	-.218	-.215	-.222	-.240	-.251	-.248
	.900	-.116	-.108	-.104	-.085	-.075	-.081	-.076	-.081	-.085	-.085	-.090	-.083	-.089	-.103	-.114	-.117
	.950	-.056	-.034	-.026	-.009	-.003	-.009	-.007	-.010	-.013	-.010	-.016	-.010	-.011	-.026	-.038	-.046
Lower surface	.0375	.264	.322	.267	.213	.132	-.036	-.180	-.948	-1.142	-.218	-.094	.058	.174	.244	.332	.251
	.075	.455	.358	.271	.179	.086	-.028	-.148	-.181	-.501	-.194	-.083	.031	.125	.255	.339	.411
	.150	.322	.248	.182	.117	.053	-.015	-.086	-.131	-.115	-.125	-.054	.021	.076	.169	.232	.289
	.250	.230	.176	.126	.080	.036	-.007	-.053	-.091	-.097	-.077	-.033	.016	.049	.116	.165	.206
	.350	.173	.133	.091	.055	.021	.004	-.030	-.057	-.067	-.047	-.016	.020	.031	.085	.121	.155
	.450	.130	.105	.069	.039	.013	-.001	-.026	-.047	-.055	-.040	-.017	.008	.019	.061	.093	.117
	.550	.094	.072	.042	.022	.002	-.020	-.035	-.052	-.060	-.047	-.034	.016	.004	.038	.063	.085
	.650	.065	.052	.024	.009	-.006	-.023	-.034	-.045	-.050	-.042	-.034	.010	-.005	.023	.043	.062
	.750	.035	.027	.009	.001	-.015	-.024	-.029	-.034	-.038	-.035	-.033	-.023	-.013	.006	.023	.036
	.850	.038	.052	.031	.017	.033	.027	.024	.023	.022	.020	.020	.026	.008	.029	.041	.052
	.925	.019	.039	.028	.025	.032	.040	.044	.048	.047	.042	.040	.033	.021	.028	.034	.036
	.975	[a].002	[a].020	[a].022	[a].030	[a].024	[a].040	[a].050	[a].066	[a].050	[a].055	[a].050	[a].038	[a].045	[a].010	[a].029	[a].020
	1.000	[a]-.002	[a].009	[a].020	[a].030	[a].018	[a].038	[a].051	[a].072	[a].050	[a].059	[a].057	[a].035	[a].059	[a].001	[a].020	[a].007

[a]Faired value.

[redacted]

[redacted]

TABLE 11.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-304.40 PROPELLER BLADE SECTION ($x = 0.95$) – Continued

(c) $N = 1500$ rpm; $\beta_{0.75R} = 45^{\circ}$.

J	2.007	2.108	2.187	2.299	2.402	2.504	2.550	2.468	2.345	2.256	2.136	2.048
M_x	.815	.828	.837	.854	.868	.884	.891	.876	.858	.842	.830	.818
α_x'	4.14	2.83	1.83	.45	-.77	-1.94	-2.45	-1.53	-.10	.97	2.47	3.60
$\Delta\beta$	1.45	.93	.55	.07	-.39	-.63	-.77	-.51	-.10	.24	.79	1.24
α_1	2.65	2.29	1.86	1.29	.81	.17	-.08	.43	1.08	1.55	2.04	2.27
c_n	.4277	.3684	.2984	.2081	.1316	.0277	-.0135	.0690	.1742	.2481	.3290	.3658
c_m	-.0428	-.0439	-.0432	-.0494	-.0562	-.0747	-.0791	-.0670	-.0537	-.0502	-.0459	-.0497
c_c												
c/b	Pressure coefficient, P											
Upper surface												
0.000	1.177	1.183	1.187	1.195	1.203	1.211	1.214	1.206	1.198	1.189	1.184	1.179
.025	-.847	-.428	-.191	.035	.241	.385	.429	.332	.138	-.051	-.341	-.543
.050	-.904	-.718	-.493	-.200	.004	.147	.192	.095	-.094	-.290	-.643	-.758
.100	-.480	-.461	-.344	-.244	-.100	.018	.054	-.022	-.172	-.285	-.426	-.471
.200	[a]-.375	-.308	-.275	-.245	-.168	-.096	-.075	-.119	-.210	-.151	[a]-.352	[a]-.347
.300	-.315	-.325	-.286	-.269	-.223	-.180	-.166	-.192	-.247	-.260	-.334	-.334
.400	-.332	-.324	-.283	-.276	-.247	-.221	-.210	-.228	-.259	-.261	-.324	-.338
.500	-.316	-.295	-.276	-.253	-.231	-.215	-.202	-.218	-.242	-.237	-.294	-.311
.600	-.344	-.320	-.287	-.305	-.296	-.287	-.273	-.288	-.300	-.280	-.322	-.336
.700	-.333	-.309	-.282	-.307	-.315	-.340	-.341	-.327	-.309	-.279	-.313	-.325
.800	-.267	-.242	-.215	-.240	-.237	-.243	-.233	-.239	-.239	-.214	-.246	-.257
.900	-.098	-.075	-.046	-.065	-.060	-.064	-.057	-.061	-.066	-.046	-.078	-.091
.950	-.013	.010	.038	.015	.021	.021	.029	.024	.017	.038	.004	-.006
Lower surface												
.0375	[a].430	[a].360	.158	-.031	-.406	-.790	-.823	-.726	-.107	.078	.131	.127
.075	.277	.207	.120	-.027	-.101	-.726	-.761	-.630	-.089	-.028	-.005	.045
.150	.190	.141	.086	-.012	-.079	-.457	-.680	-.033	-.048	.052	.096	.155
.250	.136	.102	.068	-.002	-.050	.009	-.026	-.040	-.025	.048	.065	.111
.350	.108	.083	.053	.005	-.031	-.017	.024	-.034	-.011	.050	.047	.089
.450	.088	.065	.045	.001	-.028	-.030	-.007	-.033	-.011	.039	.030	.069
.550	.046	.034	.028	-.022	-.040	-.049	-.035	-.044	-.028	.014	.012	.034
.650	.029	.020	.021	-.022	-.037	-.047	-.038	-.042	-.028	.011	.002	.019
.750	.005	.001	.004	-.030	-.037	-.044	-.037	-.039	-.033	.025	-.016	-.003
.850	[a].012	[a].010	[a].015	[a]-.011	[a]-.002	[a].000	[a].005	[a]-.001	[a]-.005	.053	[a].007	[a].009
.925	.034	.041	.061	.043	.050	.054	.061	.054	.045	.067	.032	.034
.975	[a].059	[a].069	[a].094	[a].073	[a].065	[a].075	[a].081	[a].089	[a].072	[a].075	[a].057	[a].031
1.000	[a].070	[a].082	[a].110	[a].091	[a].071	[a].087	[a].091	[a].110	[a].087	[a].077	[a].070	[a].041

[a]Faired value.

[redacted]

[redacted]

TABLE 11.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) - Continued

(d) N = 1600 rpm; $\beta_{0.75R}$ = 45°.

	J	2.073	2.173	2.292	2.375	2.471	2.515	2.435	2.343	2.241	2.122
	M_x	.880	.897	.913	.924	.938	.948	.932	.915	.899	.883
	α_x'	3.28	1.99	.53	-.44	-1.56	-2.05	-1.14	-.07	1.16	2.64
	$\Delta\beta$	1.28	.85	.34	-.12	-.75	-1.05	-.50	.07	.58	1.07
	α_i	2.67	2.10	1.55	1.08	.37	.03	.64	1.18	1.77	2.27
	c_n	.4284	.3387	.2497	.1755	.0594	.0058	.1039	.1903	.2852	.3671
	c_m	-.0503	-.0456	-.0606	-.0667	-.0834	-.0973	-.0806	-.0637	-.0593	-.0500
	c_o	-.0007	.0030	.0100	.0133	.0168	.0190	.0156	.0121	.0076	.0007
	c/b	Pressure coefficient, P									
Upper surface	0.000	1.208	1.217	1.226	1.232	1.240	1.245	1.236	1.227	1.219	1.210
	.025	-.304	-.140	.095	.257	.396	.456	.345	.206	.003	-.237
	.050	-.564	-.450	-.172	.075	.156	.217	.104	-.040	-.293	-.519
	.100	-.336	-.364	-.209	-.091	.031	.090	-.011	-.136	-.264	-.358
	.200	-.613	-.456	-.284	-.245	-.100	-.042	-.126	-.203	-.358	-.555
	.300	-.491	-.398	-.304	-.246	-.203	-.212	-.232	-.267	-.329	-.438
	.400	-.446	-.376	-.304	-.275	-.263	-.232	-.265	-.284	-.307	-.368
	.500	-.372	-.377	-.305	-.275	-.277	-.263	-.244	-.288	-.299	-.298
	.600	-.264	-.323	-.322	-.290	-.281	-.302	-.276	-.297	-.299	-.317
	.700	-.327	-.361	-.383	-.366	-.344	-.369	-.353	-.369	-.383	-.393
	.800	-.220	-.322	-.436	-.438	-.419	-.427	-.431	-.437	-.398	-.246
	.900	-.019	-.044	-.025	-.076	-.174	-.229	-.161	-.035	-.056	-.058
	.950	.045	.038	.060	.060	.041	.031	.048	.062	.046	.026
Lower surface	.0375	.182	.121	-.019	-.229	-.580	-.661	-.555	-.240	.063	.128
	.075	.260	.125	-.014	-.162	-.542	-.613	-.521	-.072	.042	.175
	.150	.182	.082	-.004	-.030	-.455	-.561	-.410	-.055	.032	.113
	.250	.133	.053	-.004	-.040	-.307	-.454	-.009	-.034	.019	.077
	.350	.107	.036	0	-.027	.022	-.304	0	-.021	.021	.058
	.450	.090	.025	-.003	-.027	.019	-.015	-.019	-.021	.011	.042
	.550	.055	.002	-.027	-.046	-.023	.011	-.047	-.038	-.014	.015
	.650	.038	-.011	-.035	-.052	-.045	-.018	-.057	-.044	-.025	.000
	.750	.021	-.024	-.041	-.052	-.058	-.042	-.061	-.044	-.031	-.017
	.850	.066	-.030	.018	.010	.005	.005	.006	.018	.024	.033
	.925	.061	-.037	.039	.039	.033	.030	.033	.049	.042	.036
	.975	[a].061	[a]-.001	[a].068	[a].042	[a].030	[a].039	[a].040	[a].064	[a].058	[a].076
	1.000	[a].052	[a].023	[a].090	[a].049	[a].032	[a].040	[a].042	[a].065	[a].060	[a].095

[a]Faired value.

[redacted]

[redacted]

TABLE 11.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) - Continued

(e) M = 0.56 rpm; $\beta_{0.75R}$ = 45°.

	J	2.141	2.170	2.195	2.213	2.241	2.262	2.293	2.320	2.354	2.383	2.422	2.460	2.488	2.551
	M_r	.966	.961	.950	.942	.934	.929	.921	.909	.906	.899	.890	.882	.876	.867
	α_r'	2.41	2.03	1.73	1.51	1.16	.89	.53	.19	-.20	-.56	-1.01	-1.44	-1.75	-2.46
	$\Delta\beta$	.77	.67	.57	.51	.41	.34	.24	.15	.02	-.09	-.23	-.35	-.45	-.65
	α_i	2.07	1.97	1.93	1.85	1.72	1.56	1.41	1.24	1.08	.94	.73	.50	.39	.14
	c_n	.3342	.3184	.3097	.2981	.2774	.2510	.2277	.2006	.1739	.1523	.1184	.0813	.0639	.0226
	c_m	-.0669	-.0658	-.0677	-.0653	-.0647	-.0627	-.0628	-.0649	-.0631	-.0622	-.0655	-.0668	-.0669	-.0751
	c_c	.0136	.0134	.0124	.0116	.0113	.0108	.0113	.0113	.0117	.0117	.0125	.0135	.0126	.0133
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.255	1.252	1.246	1.242	1.237	1.234	1.230	1.224	1.222	1.219	1.214	1.209	1.207	1.202
	.025	.007	.021	.016	.049	.064	.091	.123	.154	.192	.224	.288	.306	.301	.380
	.050	-.279	-.269	-.263	-.252	-.222	-.175	-.129	-.092	-.049	-.011	.051	.073	.089	.146
	.100	-.280	-.273	-.257	-.243	-.231	-.214	-.197	-.178	-.147	-.119	-.064	-.042	-.027	.021
	.200	-.347	-.332	-.331	-.335	-.335	-.319	-.273	-.237	-.217	-.252	-.155	-.140	-.131	-.098
	.300	-.364	-.348	-.350	-.356	-.356	-.330	-.327	-.305	-.269	-.263	-.222	-.214	-.205	-.176
	.400	-.372	-.365	-.371	-.369	-.361	-.340	-.318	-.306	-.286	-.278	-.246	-.244	-.237	-.212
	.500	-.378	-.371	-.372	-.367	-.355	-.331	-.320	-.307	-.283	-.273	-.238	-.240	-.239	-.221
	.600	-.393	-.387	-.389	-.383	-.369	-.347	-.340	-.319	-.301	-.304	-.291	-.303	-.302	-.279
	.700	-.450	-.442	-.444	-.434	-.421	-.411	-.398	-.387	-.385	-.388	-.357	-.353	-.340	-.311
	.800	-.508	-.500	-.500	-.496	-.491	-.440	-.466	-.452	-.418	-.385	-.280	-.272	-.272	[a]-.290
	.900	-.231	-.235	-.202	-.171	-.150	-.113	-.080	-.068	-.056	-.051	-.046	-.079	-.096	-.098
	.950	-.102	-.070	-.041	-.019	-.002	.025	.035	.033	.029	.015	.028	.007	-.007	-.013
Lower surface	.0375	.147	.124	.091	.060	.008	-.032	-.084	-.161	-.306	-.417	-.588	-.702	-.780	-.886
	.075	.120	.094	.063	.037	-.001	-.026	-.062	-.088	-.095	-.230	-.388	-.607	-.704	-.815
	.150	.075	.059	.038	.023	-.005	-.019	-.042	-.062	-.079	-.086	-.045	-.041	-.069	-.374
	.250	.042	.031	.017	.006	-.014	-.021	-.036	-.048	-.058	-.072	-.051	-.062	-.064	-.031
	.350	.021	.021	.011	.002	-.013	-.016	-.025	-.034	-.042	-.054	-.034	-.052	-.059	-.049
	.450	.004	.002	-.006	-.013	-.025	-.024	-.030	-.036	-.041	-.051	-.029	-.050	-.057	-.076
	.550	-.031	-.035	-.042	-.045	-.054	-.050	-.054	-.054	-.057	-.065	-.043	-.062	-.076	-.068
	.650	-.057	-.060	-.063	-.064	-.069	-.061	-.061	-.058	-.058	-.065	-.042	-.057	-.067	-.065
	.750	-.099	-.096	-.094	-.088	-.085	-.071	-.065	-.059	-.056	-.060	-.036	-.053	-.059	-.057
	.850	-.062	-.057	-.049	-.041	-.035	-.017	-.014	.002	.008	.004	.029	.012	.002	.005
	.925	-.095	-.085	-.066	-.048	-.030	0	.022	.032	.041	.039	.060	.040	.033	.035
	.975	[a]-.057	[a]-.027	[a].002	[a].050	[a].015	[a].085	[a].069	[a].073	[a].075	[a].056	[a].077	[a].057	[a].060	[a].108
	1.000	[a].005	[a].084	[a].105	[a].105	[a].125	[a].145	[a].131	[a].107	[a].098	[a].064	[a].085	[a].064	[a].078	[a].120

[a]Faired value.

[redacted]

[redacted]

TABLE 11.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) - Continued

(f) M = 0.60 rpm; $\beta_{0.75R}$ = 45°.

	J	2.131	2.148	2.182	2.210	2.240	2.259	2.289	2.312	2.341	2.382	2.413	2.439	2.472	2.518	2.543
	M_x	1.035	1.026	1.016	1.008	.999	.989	.982	.975	.968	.963	.956	.950	.942	.933	.927
	α_x'	2.42	2.20	1.79	1.45	1.10	.87	.54	.25	-.08	-.58	-.91	-1.20	-1.30	-2.05	-2.34
	$\Delta\beta$	.42	.39	.34	.28	.19	.12	.01	-.09	-.23	-.41	-.55	-.68	-.83	-1.01	-1.10
	α_i	1.93	1.82	1.71	1.62	1.43	1.30	1.12	1.00	.84	.73	.64	.48	.38	.18	.04
	c_n	.3106	.2932	.2765	.2590	.2306	.2090	.1806	.1610	.1361	.1177	.1039	.0774	.0613	.0297	.0068
	c_m	-.0892	-.0872	-.0863	-.0838	-.0815	-.0764	-.0761	-.0772	-.0812	-.0878	-.0929	-.0918	-.0952	-.0955	-.0924
	c_o	.0223	.0233	.0236	.0236	.0231	.0212	.0212	.0201	.0217	.0203	.0192	.0195	.0181	.0170	.0154
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.297	1.291	1.285	1.280	1.274	1.268	1.264	1.260	1.256	1.253	1.249	1.246	1.242	1.236	1.233
	.025	.175	.185	.194	.211	.276	.249	.272	.295	.323	.350	.369	.396	.416	.437	.469
	.050	-.114	-.114	-.105	-.080	-.001	-.017	.016	.046	.078	.110	.130	.155	.174	.197	.227
	.100	-.141	-.132	-.113	-.092	-.043	-.078	-.066	-.050	-.032	-.010	.006	.029	.046	.068	.093
	.200	-.232	-.230	-.223	-.208	-.157	-.194	-.183	-.171	-.155	-.119	-.105	-.086	-.078	-.068	-.050
	.300	-.273	-.275	-.268	-.253	-.204	-.242	-.237	-.230	-.232	-.277	-.311	-.328	-.358	-.371	-.377
	.400	-.284	-.290	-.288	-.278	-.235	-.276	-.279	-.276	-.276	-.278	-.280	-.272	-.269	-.258	-.240
	.500	-.307	-.314	-.312	-.305	-.262	-.300	-.292	-.284	-.287	-.293	-.297	-.284	-.285	-.279	-.261
	.600	-.314	-.325	-.321	-.313	-.269	-.308	-.302	-.297	-.298	-.299	-.298	-.291	-.295	-.285	-.266
	.700	-.370	-.380	-.378	-.367	-.323	-.362	-.360	-.360	-.361	-.357	-.354	-.346	-.345	-.334	-.319
	.800	-.422	-.433	-.431	-.419	-.380	-.423	-.420	-.421	-.423	-.419	-.422	-.417	-.417	-.409	-.403
	.900	-.426	-.471	-.475	-.467	-.430	-.473	-.465	-.452	-.436	-.417	-.399	-.353	-.295	-.199	-.123
	.950	-.490	-.500	-.495	-.476	-.398	-.307	-.214	-.167	-.129	-.120	-.079	.010	.033	.046	.064
Lower surface	.0375	.200	.160	.118	.070	.027	-.096	-.205	-.267	-.333	-.411	-.484	-.537	-.604	-.677	-.718
	.075	.159	.126	.093	.058	.057	-.015	-.127	-.214	-.296	-.328	-.359	-.383	-.413	-.426	-.430
	.150	.121	.094	.069	.052	.053	-.014	-.061	-.108	-.199	-.293	-.367	-.424	-.496	-.569	-.606
	.250	.077	.061	.045	[a].040	[a].054	[a]-.003	-.016	-.005	-.024	-.127	-.225	-.288	-.370	-.455	-.502
	.350	.063	.047	.039	.034	.060	-.008	-.004	-.003	.006	.025	.024	.020	-.012	-.063	-.114
	.450	.032	.019	.014	.011	.039	-.007	-.017	-.017	-.015	-.004	.007	.023	.028	.034	.045
	.550	-.005	-.017	-.023	-.027	.003	-.043	-.049	-.048	-.050	-.045	-.038	-.021	-.013	-.002	.017
	.650	[a]-.046	[a]-.061	[a]-.074	[a]-.071	[a]-.041	[a]-.091	[a]-.098	[a]-.093	[a]-.093	-.071	-.067	-.051	-.041	-.029	-.009
	.750	-.093	-.107	-.111	-.111	-.078	-.122	-.122	-.120	-.114	-.098	-.087	-.067	-.053	-.038	-.018
	.850	[a]-.116	[a]-.130	[a]-.130	[a]-.125	[a]-.090	[a]-.130	[a]-.123	[a]-.115	[a]-.107	[a]-.081	[a]-.057	[a]-.030	[a]-.016	[a].002	[a].004
	.925	-.109	-.119	-.121	-.117	-.081	-.110	-.085	-.069	-.050	-.023	-.001	.022	.043	.059	.080
	.975	[a]-.115	[a]-.127	[a]-.125	[a]-.121	[a]-.080	[a]-.105	[a]-.074	[a]-.040	[a]-.015	[a].027	[a].041	[a].054	[a].090	[a].095	[a].126
	1.000	[a]-.113	[a]-.130	[a]-.131	[a]-.127	[a]-.085	[a]-.105	[a]-.075	[a]-.025	[a].002	[a].055	[a].069	[a].067	[a].110	[a].110	[a].145

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 11.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-304.40 PROPELLER BLADE SECTION (r = 0.95) – Continued

(g) M = 0.65; $\beta_{0.75R}$ = 45°.

	J	2.135	2.161	2.184	2.210	2.228	2.254	2.279	2.306	2.336	2.398	2.460
	M_r	1.122	1.113	1.103	1.097	1.084	1.075	1.068	1.060	1.051	1.032	1.015
	α_r°	2.48	2.15	1.86	1.54	1.32	1.00	.69	.37	.01	-.72	-1.44
	$\Delta\beta$	-.09	-.17	-.24	-.32	-.37	-.44	-.52	-.59	-.68	-.86	-1.04
	α_i	1.43	1.34	1.22	1.13	1.00	.89	.82	.67	.45	.08	-.29
	c_n	.2306	.2155	.1955	.1826	.1613	.1435	.1323	.1077	.0723	.0129	-.0468
	c_m	-.0619	-.0635	-.0649	-.0647	-.0660	-.0683	-.0719	-.0769	-.0804	-.0786	-.0761
	c_c	.0215	.0229	.0230	.0234	.0241	.0252	.0254	.0267	.0269	.0279	.0272
	c/b	Pressure coefficient, P										
Upper surface	0.000	1.354	1.348	1.342	1.337	1.329	1.323	1.318	1.313	1.307	1.295	1.284
	.025	.305	.316	.332	.338	.353	.362	.372	.397	.419	.449	.492
	.050	.020	.025	.037	.046	.070	.093	.099	.118	.131	.099	.100
	.100	-.016	.002	.030	.039	.052	.052	.057	.073	.083	.099	.138
	.200	-.101	-.104	-.060	-.098	-.095	-.098	-.093	-.076	-.062	-.029	.005
	.300	-.164	-.166	-.160	-.160	-.156	-.156	-.153	-.136	-.130	-.130	-.108
	.400	-.198	-.203	-.200	-.202	-.200	-.204	-.199	-.184	-.180	-.187	-.177
	.500	-.220	-.230	-.231	-.236	-.238	-.243	-.238	-.225	-.226	-.237	-.222
	.600	-.233	-.241	-.243	-.248	-.249	-.256	-.254	-.242	-.246	-.263	-.248
	.700	-.283	-.293	-.297	-.300	-.301	-.307	-.305	-.299	-.308	-.327	-.316
	.800	-.335	-.345	-.347	-.349	-.350	-.358	-.357	-.355	-.367	-.387	-.380
	.900	[a]-.308	[a]-.337	[a]-.358	[a]-.328	[a]-.355	[a]-.385	[a]-.389	[a]-.402	[a]-.425	[a]-.448	[a]-.431
	.950	-.211	-.237	-.259	-.285	-.318	-.354	-.376	-.403	-.440	-.469	-.426
Lower surface	.0375	.231	.181	.116	.055	-.006	-.066	-.103	-.156	-.214	-.333	-.440
	.075	.044	.021	-.003	-.032	-.066	-.106	-.128	-.160	-.205	-.319	-.412
	.150	.151	.118	.089	.058	.018	-.036	-.074	-.123	-.178	-.279	-.365
	.250	.125	.098	.072	.047	.015	-.030	-.062	-.098	-.142	-.233	-.308
	.350	.094	.070	.052	.036	.020	-.014	-.040	-.079	-.126	-.204	-.249
	.450	.072	.054	.040	.026	.017	-.001	-.013	-.041	-.103	-.186	-.229
	.550	.029	.013	.002	-.011	-.017	-.028	-.030	-.026	-.076	-.185	-.232
	.650	.013	-.002	-.013	-.024	-.031	-.040	-.027	-.006	.017	-.025	-.027
	.750	-.042	-.055	-.067	-.077	-.084	-.095	-.095	-.087	-.091	-.143	-.187
	.850	[a]-.070	[a]-.085	[a]-.091	[a]-.105	[a]-.115	[a]-.124	[a]-.123	[a]-.119	[a]-.123	[a]-.145	[a]-.152
	.925	-.069	-.083	-.092	-.101	-.107	-.117	-.117	-.112	-.118	-.118	-.056
	.975	[a]-.059	[a]-.085	[a]-.092	[a]-.099	[a]-.115	[a]-.115	[a]-.121	[a]-.114	[a]-.115	[a]-.095	[a]-.005
	1.000	[a]-.052	[a]-.085	[a]-.092	[a]-.098	[a]-.118	[a]-.115	[a]-.122	[a]-.115	[a]-.115	[a]-.085	[a]-.015

[a]Faired value.

[redacted]

[redacted]

TABLE 11.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) - Continued

(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.508	2.468	2.392	2.353	2.286	2.243	2.176	2.129	2.082	2.024	1.975	1.928	1.861	1.815	1.764	1.697
	M_x	.878	.872	.859	.853	.842	.837	.830	.821	.814	.804	.797	.792	.783	.779	.772	.765
	α_x'	-1.98	-1.53	-.65	-.19	.61	1.13	1.96	2.56	3.16	3.92	4.57	5.20	6.11	6.75	7.47	8.44
	$\Delta\beta$	-.64	-.50	-.26	-.13	.12	.29	.60	.82	1.07	1.36	1.60	1.82	2.10	2.25	2.38	2.48
	α_i	.05	.27	.54	.79	1.09	1.33	1.58	1.76	2.05	2.35	2.69	2.99	3.45	3.68	3.99	4.03
	c_n	.0090	.0529	.1032	.1519	.2090	.2532	.2997	.3342	.3861	.4381	.5000	.5587	.6439	.6877	.7374	.7439
	c_m	-.0754	-.0700	-.0623	-.0564	-.0519	-.0486	-.0447	-.0438	-.0420	-.0424	-.0446	-.0423	-.0342	-.0356	-.0328	-.0283
	c_o																
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.236	1.220	1.198	1.195	1.189	1.187	1.184	1.180	1.177	1.172	1.169	1.167	1.163	1.161	1.158	1.155
	.025	.387	.337	.257	.169	.035	-.079	-.238	-.351	-.481	-.652	-.959	-1.121	-1.284	-1.382	-1.492	-1.594
	.050	.192	.147	.071	-.008	-.125	-.229	-.394	-.546	-.684	-.735	-.968	-1.119	-1.280	-1.372	-1.468	-1.552
	.100	-.005	-.044	-.107	-.169	-.255	-.323	-.412	-.460	-.678	-.870	-.935	-1.068	-1.223	-1.310	-1.398	-1.475
	.200	-.104	-.126	-.165	-.198	-.242	-.274	-.313	-.343	-.358	-.354	-.353	-.500	-1.010	-1.153	-1.294	-1.167
	.300	-.158	-.175	-.204	-.224	-.250	-.272	-.297	-.317	-.334	-.343	-.329	-.317	-.317	-.344	-.394	-.430
	.400	-.206	-.218	-.238	-.249	-.266	-.280	-.297	-.312	-.326	-.342	-.343	-.339	-.337	-.341	-.332	-.338
	.500	-.235	-.246	-.261	-.267	-.280	-.292	-.304	-.315	-.326	-.344	-.353	-.360	-.370	-.375	-.374	-.370
	.600	-.294	-.301	-.307	-.306	-.311	-.316	-.322	-.328	-.336	-.349	-.358	-.364	-.370	-.370	-.366	-.363
	.700	-.326	-.327	-.324	-.313	-.313	-.316	-.315	-.319	-.324	-.334	-.343	-.349	-.356	-.365	-.349	-.348
	.800	-.240	-.242	-.244	-.238	-.241	-.243	-.243	-.245	-.249	-.261	-.269	-.278	-.284	-.284	-.281	-.278
	.900	-.079	-.083	-.090	-.087	-.090	-.093	-.094	-.097	-.100	-.111	-.123	-.134	-.142	-.149	-.147	-.148
	.950	.014	.012	.002	.004	.003	0	-.001	-.005	-.007	-.020	-.031	-.042	-.051	-.058	-.059	-.059
Lower surface	.0375	-.826	-.783	-.572	-.205	-.068	.017	.114	.117	.254	.315	.381	.431	.488	.528	.564	.589
	.075	-.726	-.656	-.169	-.123	-.035	.024	.091	.137	.196	.243	.295	.336	.384	.417	.450	.470
	.150	-.342	-.041	-.079	-.052	.001	.037	.080	.109	.151	.183	.218	.245	.279	.302	.329	.342
	.250	-.055	-.104	-.113	-.087	-.064	-.045	-.016	.004	.035	.061	.098	.128	.164	.187	.207	.218
	.350	-.056	-.072	-.070	-.051	-.033	-.019	0	.016	.037	.056	.079	.097	.119	.136	.153	.159
	.450	-.013	-.017	-.016	-.002	.019	.032	.048	.059	.080	.090	.113	.129	.147	.161	.174	.176
	.550	-.083	-.083	-.079	-.068	-.057	-.047	-.036	-.027	-.012	0	.017	.029	.046	.057	.068	.069
	.650	-.019	-.021	-.023	-.012	.004	.005	.013	.020	.037	.044	.058	.068	.080	.090	.099	.098
	.750	-.028	-.031	-.034	-.028	-.021	-.017	-.014	-.010	.001	.007	.019	.028	.038	.044	.051	.047
	.850	.012	.008	.002	.005	.009	.010	.009	.008	.012	.020	.028	.032	.038	.043	.047	.039
	.925	.054	.048	.040	.041	.038	.034	.030	.027	.029	.027	.033	.037	.038	.039	.062	.027
	.975	[a].089	[a].083	[a].080	[a].082	[a].060	[a].054	[a].046	[a].043	[a].050	[a].050	[a].070	[a].070	[a].042	[a].040	[a].058	[a].038
	1.000	[a].105	[a].108	[a].097	[a].108	[a].072	[a].064	[a].055	[a].052	[a].062	[a].070	[a].070	[a].092	[a].046	[a].040	[a].050	[a].045

[a]Faired value.

[redacted]

[redacted]

TABLE 11.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) – Continued

(i) One-blade propeller; M = 0.56; $\beta_{0.75R}$ = 45°.

J	2.440	2.410	2.383	2.361	2.297	2.250	2.228	2.208	2.170	2.144	2.119	2.102	2.073	2.052	2.031	2.013	1.993	1.971	1.949	1.930	1.908	1.883
M_x	.893	.899	.906	.911	.925	.933	.943	.948	.954	.962	.969	.978	.983	.992	.999	1.005	1.012	1.020	1.028	1.035	1.044	1.053
α_x'	-1.21	-.86	-.55	-.29	.48	1.05	1.32	1.57	2.04	2.37	2.68	2.90	3.28	3.55	3.82	4.06	4.33	4.62	4.91	5.17	5.47	5.81
$\Delta\beta$	-.39	-.19	-.09	0	.23	.37	.45	.51	.65	.76	.84	.90	.99	1.06	1.12	1.17	1.23	1.28	1.34	1.38	1.43	1.49
α_i	.37	.49	.53	.67	.97	1.24	1.33	1.42	1.56	1.68	1.76	1.95	2.10	2.22	2.40	2.45	2.55	2.67	2.68	2.75	2.76	2.88
c_n	.0706	.0929	.1016	.1271	.1848	.2352	.2548	.2710	.2948	.3197	.3352	.3710	.3958	.4171	.4494	.4581	.4745	.4955	.4981	.5106	.5148	.5339
c_m	-.0720	-.0734	-.0723	-.0665	-.0651	-.0643	-.0655	-.0669	-.0692	-.0687	-.0657	-.0753	-.0813	-.0871	-.0968	-.0967	-.0991	-.1053	-.1003	-.0981	-.1004	-.1008
c_d	.0129	.0132	.0132	.0130	.0126	.0125	.0127	.0139	.0137	.0140	.0136	.0151	.0161	.0167	.0187	.0184	.0181	.0190	.0185	.0178	.0175	.0177
	c/b	Pressure coefficient, P																				
Upper surface	0.000	1.215	1.219	1.222	1.225	1.232	1.237	1.242	1.245	1.248	1.253	1.257	1.262	1.265	1.270	1.274	1.278	1.282	1.287	1.292	1.297	1.302	1.308
	.025	.326	.310	.283	.262	.197	.141	.123	.099	.067	.047	.029	.005	-.015	-.032	-.046	-.059	-.074	-.083	-.115	-.114	-.117	-.122
	.050	.131	.116	.089	.068	.003	-.060	-.076	-.106	-.151	-.179	-.199	-.219	-.232	-.240	-.245	-.241	-.247	-.246	-.267	-.266	-.268	-.264
	.100	-.082	-.074	-.100	-.119	-.175	-.207	-.212	-.225	-.254	-.277	-.296	-.317	-.331	-.341	-.343	-.340	-.348	-.348	-.369	-.370	-.371	-.366
	.200	-.152	-.173	-.182	-.191	-.208	-.268	-.283	-.297	-.315	-.326	-.341	-.364	-.376	-.389	-.395	-.393	-.401	-.401	-.419	-.421	-.429	-.432
	.300	-.202	-.213	-.227	-.229	-.273	-.276	-.293	-.310	-.322	-.331	-.343	-.364	-.378	-.397	-.403	-.402	-.413	-.415	-.433	-.433	-.437	-.437
	.400	-.240	-.243	-.243	-.249	-.271	-.304	-.301	-.315	-.333	-.339	-.343	-.355	-.364	-.378	-.384	-.381	-.392	-.393	-.407	-.409	-.414	-.414
	.500	-.214	-.213	-.226	-.228	-.256	-.272	-.271	-.280	-.296	-.301	-.301	-.309	-.312	-.318	-.329	-.326	-.336	-.334	-.343	-.342	-.344	-.342
	.600	-.285	-.279	-.272	-.276	-.310	-.321	-.328	-.337	-.355	-.362	-.363	-.368	-.368	-.375	-.377	-.369	-.376	-.375	-.383	-.383	-.385	-.382
	.700	-.369	-.372	-.378	-.371	-.381	-.399	-.399	-.406	-.425	-.433	-.435	-.441	-.439	-.443	-.443	-.434	-.440	-.439	-.447	-.446	-.444	-.441
	.800	-.288	-.364	-.415	-.417	-.428	-.443	-.439	-.446	-.458	-.467	-.470	-.477	-.478	-.480	-.480	-.471	-.474	-.472	-.478	-.476	-.473	-.449
	.900	-.070	-.056	-.045	-.048	-.094	-.149	-.180	-.234	-.271	-.336	-.417	-.495	-.533	-.551	-.555	-.546	-.549	-.546	-.553	-.551	-.547	-.542
	.950	.026	.036	.047	.053	.050	.026	.008	-.020	-.045	-.076	-.033	-.157	-.224	-.327	-.473	-.524	-.552	-.536	-.562	-.546	-.559	-.553
Lower surface	.0375	-.674	-.625	-.550	-.482	-.211	-.070	-.017	.027	.076	.117	.158	.197	.234	.274	.300	.330	.350	.375	.410	.433	.452	.485
	.075	-.612	-.571	-.473	-.294	-.077	-.016	.020	.051	.083	.112	.143	.173	.203	.234	.257	.281	.299	.320	.348	.368	.385	.415
	.150	.003	.007	-.016	-.036	-.032	.007	.031	.051	.071	.091	.113	.134	.157	.181	.198	.219	.231	.248	.271	.287	.300	.325
	.250	-.088	-.092	-.101	-.100	-.080	-.060	-.049	-.042	-.030	-.016	-.002	.011	.028	.046	.060	.078	.087	.102	.119	.134	.147	.171
	.350	-.062	-.058	-.061	-.057	-.042	-.028	-.016	-.011	-.003	.006	.017	.025	.039	.052	.063	.078	.085	.097	.112	.123	.135	.154
	.450	-.012	-.008	-.005	-.007	.004	.018	.027	.030	.035	.042	.052	.059	.071	.082	.092	.107	.111	.123	.135	.146	.155	.173
	.550	-.077	-.073	-.072	-.071	-.066	-.059	-.053	-.055	-.052	-.051	-.044	-.040	-.031	-.024	-.016	-.003	-.001	.009	.020	.030	.038	.054
	.650	-.018	-.017	-.019	-.018	-.017	-.014	-.010	-.015	-.017	-.016	-.012	-.010	-.008	.005	.012	.025	.029	.037	.047	.055	.064	.077
	.750	-.032	-.031	-.036	-.037	-.042	-.046	-.046	-.056	-.064	-.069	-.071	-.076	-.074	-.069	-.062	-.050	-.047	-.038	-.030	-.021	-.013	0
	.850	.013	.016	.010	.007	-.002	-.015	-.019	-.035	-.047	-.056	-.059	-.065	-.066	-.066	-.066	-.056	-.058	-.054	-.047	-.041	-.035	-.024
	.925	.061	.064	.058	.053	.034	.010	0	-.026	-.050	-.067	-.075	-.081	-.080	-.076	-.073	-.063	-.062	-.057	-.050	-.043	-.037	-.029
	.975	[a]-.101	[a]-.092	[a]-.092	[a]-.087	[a]-.075	[a]-.031	[a]-.018	[a]-.023	[a]-.046	[a]-.082	[a]-.092	[a]-.098	[a]-.094	[a]-.087	[a]-.080	[a]-.078	[a]-.068	[a]-.055	[a]-.050	[a]-.043	[a]-.027	[a]-.026
	1.000	[a]-.120	[a]-.106	[a]-.111	[a]-.105	[b]-.102	[b]-.047	[b]-.035	[b]-.021	[b]-.038	[b]-.090	[b]-.102	[b]-.109	[a]-.102	[a]-.095	[a]-.083	[a]-.085	[a]-.071	[a]-.052	[a]-.050	[a]-.042	[a]-.020	[a]-.022

[a]Paired value.

[b]Lower surface only.

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NACA

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TABLE 11.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN

NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) – Continued

(j) One-blade propeller; M = 0.59; $\beta_{0.75R}$ = 45°.

	J	2.336	2.245	2.221	2.192	2.172	2.148	2.119	2.098	2.076	2.057	2.032	2.013	1.992	1.970	1.951	1.929
	M_x	.952	.978	.985	.991	.998	1.004	1.010	1.017	1.025	1.030	1.038	1.045	1.051	1.058	1.066	1.073
	α_r'	.01	1.11	1.40	1.76	2.01	2.32	2.69	2.95	3.24	3.49	3.81	4.06	4.34	4.63	4.89	5.19
	$\Delta\beta$	–.03	.32	.40	.49	.55	.61	.68	.73	.78	.81	.86	.88	.91	.94	.97	1.01
	α_i	.69	1.09	1.31	1.43	1.60	1.72	1.85	1.95	2.04	2.09	2.23	2.35	2.44	2.46	2.54	2.60
	c_n	.1316	.2094	.2516	.2723	.3039	.3284	.3506	.3681	.3848	.3929	.4171	.4384	.4523	.4594	.4713	.4797
	c_m	–.0759	–.0755	–.0736	–.0755	–.0837	–.0891	–.0915	–.0931	–.0943	–.0987	–.0936	–.0983	–.1025	–.1012	–.1025	–.1032
	c_c	.0158	.0183	.0186	.0193	.0209	.0217	.0219	.0220	.0222	.0205	.0209	.0211	.0213	.0210	.0211	.0209
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.248	1.262	1.266	1.270	1.274	1.277	1.280	1.285	1.290	1.293	1.299	1.303	1.308	1.312	1.316	1.321
	.025	.293	.206	.185	.166	.142	.125	.103	.088	.074	.061	.042	.023	.009	–.002	–.021	–.024
	.050	.098	.008	–.018	–.044	–.075	–.099	–.121	–.133	–.141	–.148	–.157	–.164	–.167	–.166	–.174	–.170
	.100	–.066	–.118	–.126	–.141	–.164	–.185	–.209	–.221	–.230	–.238	–.248	–.256	–.258	–.258	–.268	–.262
	.200	–.159	–.224	–.238	–.244	–.255	–.264	–.280	–.292	–.303	–.312	–.322	–.332	–.337	–.339	–.349	–.343
	.300	–.242	–.268	–.274	–.284	–.295	–.305	–.316	–.328	–.339	–.346	–.357	–.368	–.372	–.372	–.384	–.378
	.400	–.255	–.286	–.292	–.302	–.314	–.322	–.324	–.328	–.354	–.340	–.346	–.354	–.359	–.357	–.371	–.363
	.500	–.237	–.262	–.260	–.264	–.272	–.276	–.274	–.278	–.281	–.281	–.288	–.290	–.291	–.289	–.298	–.290
	.600	–.290	–.307	–.305	–.313	–.321	–.326	–.325	–.327	–.329	–.330	–.335	–.339	–.340	–.336	–.346	–.339
	.700	–.368	–.382	–.376	–.382	–.393	–.397	–.397	–.398	–.398	–.398	–.401	–.401	–.401	–.396	–.405	–.397
	.800	–.428	–.442	–.437	–.437	–.447	–.453	–.453	–.453	–.454	–.453	–.455	–.453	–.452	–.445	–.453	–.444
	.900	–.284	–.469	–.489	–.491	–.500	–.507	–.510	–.510	–.511	–.512	–.512	–.512	–.511	–.504	–.510	–.504
	.950	.004	–.110	–.163	–.260	–.380	–.498	–.518	–.520	–.523	–.522	–.524	–.523	–.530	–.514	–.523	–.515
Lower surface	.0375	–.374	–.113	–.017	.038	.088	.128	.184	.220	.253	.275	.312	.344	.372	.392	.413	.439
	.075	–.342	–.034	.024	.057	.089	.119	.164	.194	.219	.238	.265	.294	.318	.334	.352	.377
	.150	–.031	.002	.032	.055	.078	.099	.120	.137	.162	.176	.195	.214	.231	.246	.258	.280
	.250	–.035	–.028	–.008	.009	.022	.037	.062	.078	.089	.102	.121	.138	.155	.167	.176	.196
	.350	–.038	–.024	–.008	.004	.012	.021	.042	.052	.044	.072	.087	.101	.115	.126	.131	.149
	.450	–.016	–.001	.014	.026	.033	.040	.052	.058	.056	.081	.086	.088	.094	.100	.103	.120
	.550	–.062	–.057	–.046	–.037	–.035	–.028	–.014	–.005	.001	.008	.020	.033	.045	.056	.059	.073
	.650	–.042	–.039	–.029	–.020	–.016	–.009	.004	.013	.022	.027	.032	.035	.039	.046	.046	.061
	.750	–.072	–.094	–.089	–.084	–.083	–.079	–.067	–.058	–.052	–.047	–.040	–.031	–.023	–.012	–.012	0
	.850	–.038	–.068	–.071	–.075	–.087	–.092	–.084	–.078	–.076	–.070	–.064	–.055	–.049	–.039	–.039	–.028
	.925	–.016	–.076	–.082	–.084	–.089	–.095	–.089	–.086	–.087	–.046	–.080	–.069	–.063	–.053	–.055	–.044
	.975	[a].005	[a]–.081	[a]–.097	[a]–.095	[a]–.090	[a]–.093	[a]–.088	[a]–.093	[a]–.090	[a].012	[a]–.088	[a]–.078	[a]–.066	[a]–.056	[a]–.060	[a]–.055
	1.000	[b].016	[b]–.085	[b]–.107	[b]–.103	[a]–.093	[a]–.090	[a]–.087	[a]–.100	[a]–.090	[a].016	[a]–.091	[a]–.080	[a]–.070	[a]–.059	[a]–.065	[a]–.058

[a]Faired value.

[b]Lower surface only.

[redacted]

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[redacted]

TABLE 11.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) – Continued

(k) One-blade propeller; $M = 0.61$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.434	2.353	2.320	2.266	2.239	2.212	2.188	2.163	2.137	2.117	2.090	2.073	2.049	2.025	2.003	1.983	1.965	1.946
	M_x	.957	.977	.991	1.004	1.012	1.019	1.025	1.033	1.041	1.048	1.051	1.062	1.069	1.072	1.080	1.086	1.093	1.100
	α_x'	-1.14	-.19	.20	.85	1.18	1.52	1.81	2.13	2.46	2.71	3.06	3.28	3.59	3.90	4.19	4.46	4.70	4.95
	$\Delta\beta$	-.66	-.28	-.24	.14	.21	.30	.35	.39	.42	.45	.52	.56	.62	.70	.78	.85	.92	1.00
	α_i	.18	.43	.63	.96	1.14	1.18	1.39	1.48	1.53	1.66	1.83	1.89	1.98	2.09	2.18	2.25	2.34	2.43
	c_n	.0335	.0835	.1206	.1842	.2171	.2245	.2639	.2832	.2900	.3145	.3448	.3545	.3703	.3887	.4058	.4190	.4332	.4516
	c_m	-.0912	-.0777	-.0765	-.0807	-.0815	-.0837	-.0800	-.0822	-.0863	-.0853	-.0869	-.0877	-.0889	-.0909	-.0913	-.0937	-.0943	-.0964
	c_c	.0184	.0194	.0208	.0235	.0242	.0237	.0236	.0232	.0230	.0227	.0226	.0221	.0221	.0213	.0214	.0211	.0208	.0208
	c/b	Pressure coefficient, P																	
Upper surface	0.000	1.250	1.261	1.269	1.278	1.282	1.287	1.290	1.295	1.301	1.310	1.307	1.314	1.320	1.321	1.326	1.330	1.334	1.339
	.025	.407	.353	.322	.278	.257	.237	.220	.196	.183	.177	.157	.145	.136	.099	.099	.086	.068	.047
	.050	.210	.155	.126	.081	.059	.034	.013	-.021	-.038	-.046	-.065	-.074	-.080	-.092	-.099	-.102	-.108	-.112
	.100	.037	-.006	-.031	-.056	-.066	-.078	-.090	-.113	-.125	-.131	-.151	-.160	-.168	-.179	-.186	-.192	-.200	-.210
	.200	-.097	-.108	-.129	-.165	-.179	-.190	-.197	-.209	-.214	-.220	-.238	-.247	-.253	-.264	-.272	-.276	-.279	-.287
	.300	-.184	-.203	-.213	-.225	-.231	-.242	-.246	-.256	-.260	-.264	-.278	-.285	-.294	-.303	-.309	-.313	-.318	-.325
	.400	-.252	-.251	-.262	-.266	-.267	-.275	-.280	-.288	-.288	-.289	-.295	-.298	-.304	-.310	-.315	-.318	-.321	-.325
	.500	-.234	-.236	-.228	-.233	-.234	-.240	-.242	-.245	-.246	-.244	-.247	-.247	-.253	-.255	-.254	-.255	-.253	-.257
	.600	-.282	-.277	-.273	-.285	-.285	-.292	-.296	-.300	-.301	-.297	-.298	-.297	-.300	-.302	-.303	-.303	-.302	-.304
	.700	-.346	-.346	-.345	-.353	-.353	-.356	-.363	-.367	-.369	-.364	-.366	-.362	-.364	-.364	-.361	-.360	-.357	-.360
	.800	-.412	-.405	-.406	-.410	-.410	-.410	-.413	-.417	-.419	-.414	-.417	-.413	-.415	-.415	-.412	-.408	-.406	-.406
	.900	-.344	-.424	-.444	-.453	-.476	-.459	-.464	-.470	-.474	-.471	-.477	-.473	-.476	-.478	-.474	-.472	-.470	-.468
	.950	.009	-.072	-.171	-.397	-.459	-.474	-.479	-.482	-.485	-.481	-.485	-.481	-.485	-.486	-.480	-.479	-.475	-.477
Lower surface	.0375	-.623	-.466	-.358	-.245	-.179	-.099	-.026	.038	.085	.117	.167	.199	.225	.261	.297	.323	.357	.386
	.075	-.517	-.365	-.272	-.138	-.040	.024	.069	.108	.140	.164	.200	.226	.248	.295	.307	.327	.357	.380
	.150	-.466	-.302	-.192	-.022	.012	.034	.061	.087	.111	.129	.158	.178	.193	.215	.233	.247	.270	.287
	.250	-.374	-.140	-.007	-.027	-.020	-.007	.010	.028	.045	.058	.080	.094	.105	.124	.145	.160	.183	.200
	.350	.012	.020	-.010	-.025	-.017	-.008	.005	.016	.028	.040	.057	.070	.078	.093	.111	.123	.141	.154
	.450	.049	.013	-.002	0	.009	.018	.029	.040	.049	.058	.073	.085	.091	.104	.120	.129	.140	.142
	.550	-.020	-.051	-.059	-.054	-.046	-.039	-.030	-.021	-.011	-.003	.029	.020	.025	.034	.048	.058	.072	.083
	.650	-.024	-.044	-.044	-.039	-.033	-.027	-.021	-.013	-.007	.001	.031	.023	.027	.037	.050	.058	.069	.075
	.750	-.059	-.096	-.100	-.100	-.094	-.088	-.082	-.074	-.067	-.059	-.051	-.039	-.035	-.027	-.014	-.006	.006	.015
	.850	-.026	-.062	-.089	-.110	-.108	-.104	-.101	-.095	-.091	-.084	-.077	-.066	-.063	-.057	-.044	-.036	-.024	-.016
	.925	.007	-.053	-.079	-.112	-.116	-.116	-.113	-.107	-.104	-.096	-.089	-.079	-.077	-.052	-.058	-.049	-.038	-.029
	.975	[a].050	[a]-.046	[a]-.070	[a]-.110	[a]-.120	[a]-.127	[a]-.127	[a]-.110	[a]-.110	[a]-.107	[a]-.103	[a]-.083	[a]-.084	[a]-.039	[a]-.066	[a]-.054	[a]-.045	[a]-.031
	1.000	[b].077	[b]-.043	[b]-.066	[a]-.108	[a]-.122	[a]-.134	[a]-.135	[a]-.111	[a]-.110	[a]-.112	[a]-.107	[a]-.085	[a]-.087	[a]-.030	[a]-.070	[a]-.055	[a]-.048	[a]-.032

[a]Faired value.

[b]Lower surface only.

[redacted]

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TABLE 11.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF AN NACA 16-304.40 PROPELLER BLADE SECTION (x = 0.95) - Concluded

(i) One-blade propeller; M = 0.64; $\beta_{0.75R}$ = 45°.

	J	2.319	2.279	2.246	2.212	2.185	2.167	2.154	2.130	2.111	2.087	2.069	2.049	2.032	2.013
	M_r	1.041	1.055	1.065	1.074	1.082	1.088	1.096	1.102	1.109	1.117	1.124	1.131	1.137	1.144
	α_α'	.21	.69	1.10	1.52	1.85	2.08	2.24	2.55	2.79	3.10	3.33	3.59	3.81	4.06
	$\Delta\beta$	-.63	-.51	-.42	-.32	-.24	-.19	-.15	-.08	-.02	.04	.10	.16	.21	.25
	α_i	.37	.55	.70	.81	.96	1.09	1.23	1.32	1.43	1.52	1.66	1.71	1.82	1.88
	c_n	.0700	.1042	.1329	.1539	.1819	.2074	.2316	.2481	.2684	.2835	.3100	.3171	.3397	.3516
	c_m	-.0823	-.0802	-.0789	-.0774	-.0770	-.0754	-.0739	-.0749	-.0769	-.0782	-.0818	-.0819	-.0825	-.1090
	c_c	.0274	.0264	.0260	.0251	.0249	.0247	.0245	.0242	.0237	.0236	.0230	.0223	.0229	.0223
	c/b	Pressure coefficient, P													
Upper surface	0.000	1.300	1.310	1.316	1.323	1.327	1.326	1.329	1.340	1.343	1.350	1.355	1.360	1.365	1.370
	.025	.405	.382	.358	.346	.330	.317	.303	.291	.279	.291	.253	.244	.231	.218
	.050	.214	.189	.161	.147	.128	.110	.091	.073	.057	.051	.035	.029	.020	.014
	.100	.056	.040	.025	.023	.013	.004	-.008	-.022	-.036	-.040	-.056	-.063	-.073	-.079
	.200	-.052	-.073	-.092	-.093	-.105	-.112	-.119	-.126	-.136	-.137	-.151	-.155	-.166	-.174
	.300	-.138	-.142	-.154	-.156	-.165	-.172	-.177	-.184	-.190	-.187	-.200	-.205	-.214	-.218
	.400	-.197	-.207	-.217	-.213	-.219	-.221	-.223	-.226	-.228	-.223	-.230	-.231	-.240	-.246
	.500	-.201	-.202	-.203	-.196	-.199	-.195	-.194	-.194	-.194	-.187	-.187	-.188	-.194	-.194
	.600	-.246	-.249	-.249	-.241	-.242	-.242	-.242	-.242	-.239	-.234	-.233	-.232	-.236	-.240
	.700	-.316	-.317	-.314	-.302	-.304	-.305	-.305	-.303	-.305	-.297	-.294	-.292	-.294	-.294
	.800	-.370	-.369	-.364	-.352	-.351	-.352	-.352	-.351	-.353	-.344	-.342	-.338	-.340	-.340
	.900	-.422	-.425	-.421	-.411	-.409	-.408	-.408	-.408	-.410	-.403	-.401	-.398	-.399	-.400
	.950	-.436	-.431	-.430	-.420	-.417	-.417	-.416	-.416	-.418	-.411	-.409	-.405	-.407	-.408
Lower surface	.0375	-.255	-.167	-.108	-.052	-.008	.043	.097	.146	.201	.204	.228	.257	.292	.325
	.075	-.232	-.160	-.099	-.036	.016	.070	.116	.153	.195	.230	.265	.290	.313	.340
	.150	-.193	-.122	-.059	-.004	.035	.070	.093	.116	.144	.171	.200	.218	.246	.264
	.250	-.167	-.117	-.070	-.009	.020	.043	.062	.080	.102	.123	.139	.156	.168	.183
	.350	-.150	-.101	-.039	-.004	.009	.023	.038	.053	.073	.093	.109	.124	.134	.147
	.450	-.092	-.006	.012	.028	.035	.047	.058	.069	.084	.100	.115	.118	.134	.150
	.550	-.046	-.029	-.035	-.025	-.019	-.010	0	.009	.021	.037	.069	.063	.071	.080
	.650	-.011	-.017	-.023	-.013	-.007	.001	.009	.016	.028	.044	.056	.067	.074	.086
	.750	-.068	-.076	-.078	-.068	-.063	-.055	-.047	-.040	-.029	-.015	.033	.007	.013	.021
	.850	-.091	-.103	-.103	-.092	-.086	-.079	-.073	-.067	-.057	-.043	-.032	-.021	-.016	-.009
	.925	-.111	-.125	-.124	-.112	-.107	-.100	-.092	-.085	-.076	-.062	-.051	-.040	-.035	-.028
	.975	[a]-.125	[a]-.140	[a]-.135	[a]-.123	[a]-.119	[a]-.113	[a]-.105	[a]-.095	[a]-.085	[a]-.073	[a]-.055	[a]-.055	[a]-.045	[a]-.035
	1.000	[a]-.130	[a]-.148	[a]-.143	[a]-.128	[a]-.125	[a]-.120	[a]-.110	[a]-.100	[a]-.090	[a]-.078	[a]-.055	[a]-.060	[a]-.050	[a]-.043

[a]Faired value.

[redacted]

[redacted]

TABLE 12.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF

THE BLADE SECTION AT THE 0.975 RADIUS

(a) N = 1140 rpm; $\beta_{0.75R}$ = 45°.

	J	1.769	1.931	2.102	2.291	2.488	2.578	2.374	2.200	2.018	1.840
	M_x	.593	.609	.627	.648	.663	.672	.655	.638	.620	.602
	α_x'	7.29	5.07	2.84	.51	-1.78	-2.78	-.48	1.61	3.92	6.31
	$\Delta\beta$	.96	.73	.48	.19	-.12	-.24	.04	.35	.58	.87
	α_i	4.36	3.26	2.20	1.32	.48	.15	.78	1.65	2.60	3.72
	c_n	.5127	.3794	.2565	.1552	.0561	.0174	.0810	.1935	.3029	.4371
	c_m	-.0451	-.0494	-.0365	-.0333	-.0311	-.0377	-.0337	-.0324	-.0377	-.0484
	c_c										
	c/b	Pressure coefficient, P									
Upper surface	0.000	1.091	1.096	1.102	1.109	1.115	1.118	1.112	1.106	1.099	1.093
	.025	-1.470	-.774	-.456	-.193	.073	.203	-.003	-.282	-.581	-1.054
	.050	-1.191	-.578	-.326	-.156	.029	.124	-.028	-.215	-.413	-.675
	.100	-.601	-.426	-.276	-.173	-.046	.012	-.095	-.208	-.334	-.472
	.200	-.385	-.308	-.213	-.153	-.077	-.049	-.109	-.169	-.249	-.343
	.300	-.327	-.261	-.179	-.133	-.077	-.062	-.106	-.144	-.208	-.287
	.400	-.312	-.250	-.180	-.143	-.096	-.092	-.122	-.149	-.206	-.276
	.500	-.301	-.246	-.182	-.146	-.105	-.103	-.129	-.154	-.206	-.272
	.600	-.299	-.248	-.186	-.154	-.113	-.116	-.139	-.161	-.208	-.270
	.700	-.303	-.259	-.201	-.173	-.134	-.138	-.157	-.178	-.224	-.281
	.800	-.273	-.232	-.177	-.149	-.112	-.120	-.137	-.154	-.196	-.249
	.900	-.200	-.162	-.116	-.089	-.062	-.067	-.080	-.095	-.132	-.180
	.950	-.140	-.104	-.061	-.043	-.024	-.029	-.031	-.044	-.078	-.126
Lower surface	.0375	.455	.347	.181	.006	-.172	-.327	-.126	.085	.251	.401
	.075	.335	.249	.128	.004	-.103	-.183	-.067	.063	.180	.289
	.150	.224	.167	.084	.009	-.059	-.113	-.047	.045	.116	.191
	.250	.150	.110	.057	.002	-.042	-.075	-.034	.031	.079	.128
	.350	.122	.094	.053	.021	-.011	-.034	-.015	.036	.067	.102
	.450	.090	.067	.038	.006	-.016	-.034	-.015	.023	.048	.080
	.550	.075	.058	.033	.007	-.008	-.023	-.011	.021	.041	.065
	.650	.075	.062	.039	.024	.005	-.005	.005	.035	.049	.053
	.750	.055	.044	.026	.011	.003	-.004	-.002	.021	.032	.040
	.850	.036	.034	.024	.019	.015	.013	.005	.021	.023	.030
	.925	.017	.019	.022	.021	.027	.030	.018	.023	.019	.022
	975	[a]-.006	[a].008	[a].019	[a].028	[a].039	[a].052	[a].035	[a].027	[a].017	[a].010
	1.000	[a]-.012	[a].007	[a].019	[a].032	[a].047	[a].065	[a].045	[a].028	[a].015	[a].010

[a]Faired value.

[redacted]

[redacted]

TABLE 12.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE BLADE SECTION AT THE 0.975 RADIUS – Continued

(b) N = 1350 rpm; $\beta_{0.75R} = 45^{\circ}$.

J	1.950	2.038	2.130	2.221	2.301	2.379	2.468	2.570	2.539	2.430	2.379	2.272	2.181	2.117	2.079	1.992	1.952
M_T	.752	.753	.758	.767	.779	.787	.800	.814	.810	.792	.771	.772	.760	.753	.751	.743	.741
α_T'	4.82	3.66	2.49	1.35	.39	-.54	-1.56	-2.70	-2.36	-1.13	-.54	.74	1.85	2.65	3.14	4.26	4.79
$\Delta\theta$	1.09	.83	.63	.45	.17	.05	-.18	-.33	-.29	-.09	.05	.34	.53	.65	.72	.95	1.09
α_i	3.48	2.91	2.25	1.71	1.37	.96	.60	.10	.27	.65	1.09	1.50	1.92	2.35	2.58	3.17	3.43
c_n	.4062	.3381	.2629	.2003	.1600	.1123	.0713	.0123	.0323	.0768	.1271	.1768	.2252	.2729	.2984	.3689	.4009
c_m	-.0441	-.0413	-.0366	-.0347	-.0334	-.0281	-.0396	-.0462	-.0434	-.0399	-.0366	-.0318	-.0344	-.0370	-.0390	-.0482	-.0443
c_o																	
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.150	1.150	1.152	1.156	1.161	1.164	1.170	1.172	1.175	1.167	1.158	1.158	1.153	1.150	1.150	1.146	1.145
	.025	-1.105	-.803	-.520	-.311	-.170	-.022	.082	.210	.175	.056	-.085	-.217	-.365	-.545	-.641	-.973	-1.146
	.050	-.850	-.466	-.365	-.240	-.150	-.047	.025	.126	.097	.005	-.095	-.181	-.275	-.386	-.420	-.482	-.742
	.100	-.401	-.387	-.317	-.248	-.193	-.124	-.079	-.007	-.029	-.094	-.159	-.213	-.274	-.329	-.359	-.419	-.421
	.200	-.318	-.287	-.245	-.204	-.175	-.137	-.122	-.082	-.095	-.131	-.162	-.186	-.220	-.252	-.270	-.319	-.338
	.300	-.275	-.247	-.213	-.180	-.160	-.130	-.127	-.101	-.109	-.133	-.152	-.169	-.195	-.219	-.232	-.276	-.294
	.400	-.271	-.243	-.215	-.186	-.169	-.146	-.148	-.132	-.137	-.152	-.165	-.176	-.203	-.219	-.230	-.272	-.287
	.500	-.269	-.243	-.217	-.191	-.175	-.151	-.156	-.143	-.148	-.161	-.171	-.181	-.206	-.222	-.232	-.272	-.287
	.600	-.275	-.250	-.225	-.200	-.185	-.163	-.168	-.158	-.163	-.173	-.184	-.193	-.215	-.230	-.240	-.279	-.294
	.700	-.291	-.268	-.244	-.220	-.208	-.187	-.194	-.188	-.192	-.198	-.208	-.214	-.237	-.250	-.259	-.296	-.312
	.800	-.263	-.242	-.219	-.195	-.184	-.164	-.172	-.166	-.170	-.177	-.184	-.189	-.211	-.223	-.233	-.268	-.282
	.900	-.184	-.167	-.144	-.124	-.114	-.095	-.106	-.106	-.108	-.111	-.113	-.120	-.138	-.150	-.159	-.189	-.201
	.950	-.115	-.099	-.078	-.060	-.051	-.032	-.048	-.047	-.049	-.049	-.048	-.057	-.073	-.084	-.093	-.120	-.130
Lower surface	.0375	.326	.251	.151	.049	-.039	-.128	-.203	-.891	-.707	-.232	-.108	-.010	.068	.167	.206	.285	.313
	.075	.237	.176	.102	.032	-.028	-.070	-.141	-.137	-.136	-.132	-.064	-.010	.043	.116	.143	.203	.225
	.150	.155	.114	.063	.018	-.018	-.046	-.095	-.114	-.119	-.094	-.048	-.010	.019	.067	.087	.126	.140
	.250	.100	.070	.035	.006	-.023	-.035	-.070	-.094	-.091	-.069	-.042	-.014	.005	.038	.052	.076	.085
	.350	.082	.060	.033	.013	-.004	-.008	-.035	-.056	-.053	-.038	-.019	-.001	.009	.032	.045	.061	.068
	.450	.060	.042	.018	-.004	-.018	-.017	-.043	-.059	-.056	-.043	-.029	-.018	-.007	.018	.026	.038	.046
	.550	.050	.034	.013	.004	-.015	-.012	-.033	-.046	-.044	-.034	-.023	-.014	-.008	.013	.021	.030	.034
	.650	.056	.039	.014	.006	-.003	.002	-.018	-.027	-.027	-.019	-.010	-.004	.001	.013	.024	.037	.041
	.750	.034	.026	.012	-.003	-.008	-.001	-.017	-.024	-.024	-.020	-.015	-.011	-.008	.011	.017	.021	.020
	.850	.021	.016	.006	0	0	.010	-.001	-.001	-.005	-.006	-.007	-.006	-.008	.003	.008	.006	.006
	.925	.006	.006	.001	.002	.006	.023	.016	.022	.018	.011	.006	.002	-.005	-.001	.001	-.004	-.005
	.975	[a].005	[a].014	[a].000	[a].017	[a].028	[a].048	[a].036	[a].051	[a].037	[a].024	[a].017	[a].011	[a]-.001	[a]-.006	[a]-.007	[a]-.010	[a]-.011
	1.000	[a].007	[a].023	[a].000	[a].027	[a].043	[a].063	[a].046	[a].067	[a].047	[a].031	[a].025	[a].017	[a].003	[a]-.007	[a]-.012	[a]-.011	[a]-.013

[a]Faired value.

[redacted]

NACA

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TABLE 12.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS

OF THE BLADE SECTION AT THE 0.975 RADIUS – Continued

(o) N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.141	2.205	2.281	2.364	2.439	2.489	2.540	2.524	2.466	2.415	2.328	2.251	2.184
	M_x	.847	.854	.866	.876	.886	.893	.901	.896	.890	.879	.869	.856	.847
	α_x'	2.35	1.55	.62	–.36	–1.23	–1.80	–2.37	–2.19	–1.53	–.96	.06	.99	1.81
	$\Delta\beta$	.77	.47	.13	–.19	–.44	–.60	–.76	–.71	–.53	–.36	–.06	.25	.56
	α_i	2.54	2.12	1.60	1.13	.79	.54	.28	.24	.51	.87	1.29	1.70	2.10
	c_n	.2968	.2474	.1877	.1323	.0932	.0639	.0329	.0287	.0603	.1026	.1503	.1990	.2458
	c_m	–.0442	–.0426	–.0402	–.0438	–.0484	–.0547	–.0578	–.0579	–.0539	–.0454	–.0397	–.0401	–.0390
	c_o													
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.192	1.195	1.201	1.207	1.212	1.215	1.220	1.217	1.213	1.208	1.203	1.196	1.192
	.025	–.561	–.414	–.207	–.038	.088	.149	.212	.199	.134	.055	–.085	–.247	–.437
	.050	–.527	–.329	–.180	–.065	.029	.076	.128	.116	.064	.003	–.099	–.207	–.334
	.100	–.366	–.318	–.241	–.162	–.096	–.063	–.026	–.037	–.072	–.112	–.184	–.256	–.323
	.200	–.266	–.242	–.209	–.174	–.146	–.130	–.124	–.128	–.037	–.153	–.184	–.213	–.243
	.300	–.236	–.217	–.192	–.168	–.155	–.143	–.139	–.142	–.150	–.158	–.175	–.194	–.219
	.400	–.238	–.221	–.200	–.182	–.176	–.169	–.162	–.168	–.174	–.176	–.188	–.204	–.224
	.500	–.241	–.226	–.207	–.188	–.185	–.177	–.170	–.176	–.183	–.185	–.193	–.209	–.227
	.600	–.256	–.242	–.226	–.211	–.209	–.227	–.200	–.207	–.210	–.208	–.215	–.229	–.243
	.700	–.290	–.278	–.265	–.255	–.264	–.268	–.277	–.280	–.271	–.256	–.255	–.263	–.277
	.800	–.254	–.240	–.226	–.214	–.220	–.218	–.221	–.225	–.223	–.215	–.217	–.229	–.242
	.900	–.158	–.145	–.130	–.114	–.113	–.110	–.105	–.111	–.107	–.112	–.119	–.131	–.147
	.950	–.078	–.063	–.047	–.032	–.028	–.023	–.018	–.023	–.028	–.028	–.037	–.051	–.068
Lower surface	.0375	.163	.081	–.025	–.099	–.498	–.617	–.697	–.713	–.638	–.352	–.103	.008	.099
	.075	.112	.050	–.022	–.076	–.156	–.485	–.609	–.619	–.460	–.099	–.060	.003	.065
	.150	.069	.030	–.014	–.052	–.071	–.043	–.326	–.289	–.077	–.078	–.043	–.002	.035
	.250	.038	.010	–.025	–.046	–.065	–.052	–.026	–.028	–.061	–.061	–.041	–.010	.014
	.350	.037	.017	–.005	–.018	–.035	–.031	–.013	–.022	–.038	–.029	–.016	.003	.019
	.450	.018	–.005	–.022	–.031	–.045	–.046	–.039	–.046	–.051	–.041	–.030	–.017	–.003
	.550	.012	–.005	–.019	–.025	–.037	–.038	–.039	–.044	–.042	–.038	–.036	–.014	–.004
	.650	.024	.007	–.007	–.011	–.020	–.022	–.024	–.030	–.027	–.020	–.014	–.004	.005
	.750	.011	–.003	–.013	–.014	–.020	–.021	–.023	–.028	–.027	–.021	–.018	–.011	–.011
	.850	.010	.001	–.003	.001	.001	.004	.003	–.002	–.005	–.003	–.007	–.005	–.008
	.925	.002	.002	.001	.013	.022	.027	.030	.025	.019	.017	.006	.004	–.002
	.975	[a].002	[a].005	[a].005	[a].025	[a].037	[a].047	[a].052	[a].048	[a].034	[a].031	[a].017	[a].012	[a].002
	1.000	[a].002	[a].006	[a].007	[a].030	[a].045	[a].057	[a].062	[a].062	[a].042	[a].037	[a].023	[a].017	[a].006

[a]Faired value.

[redacted]

[redacted]

TABLE 12.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF

THE BLADE SECTION AT THE 0.975 RADIUS – Continued

(d) N = 1600 rpm; $\beta_{0.75R}$ = 45°.

	J	2.059	2.110	2.213	2.327	2.409	2.538	2.490	2.370	2.314	2.267	2.167
	M_r	.887	.894	.905	.922	.937	.958	.945	.928	.919	.911	.897
	α_r'	3.39	2.74	1.45	.08	–.68	–2.34	–1.81	–.43	.23	1.25	2.02
	$\Delta\beta$	1.35	1.13	.70	.15	–.36	–1.25	–.90	–.10	.22	.47	.88
	α_i	3.33	2.97	2.21	1.59	.82	–.10	.31	1.09	1.50	1.77	2.41
	c_n	.3906	.3471	.2594	.1861	.0968	–.0123	.0371	.1271	.1748	.2065	.2826
	c_m	–.0497	–.0491	–.0484	–.0486	–.0652	–.0805	–.0769	–.0535	–.0480	–.0503	–.0469
	c_d	.0004	.0019	.0049	.0065	.0084	.0105	.0091	.0071	.0066	.0059	.0034
	x/b	Pressure coefficient, P										
Upper surface	0.000	1.212	1.216	1.222	1.230	1.239	1.250	1.243	1.234	1.229	1.225	1.217
	.025	–.613	–.474	–.311	–.069	.097	.277	.214	.036	–.053	–.159	–.378
	.050	–.595	–.511	–.288	–.088	.037	.189	.135	–.010	–.077	–.153	–.404
	.100	–.512	–.459	–.296	–.198	–.107	.026	–.020	–.143	–.192	–.237	–.357
	.200	–.397	–.368	–.269	–.205	–.180	–.105	–.139	–.185	–.202	–.221	–.280
	.300	–.374	–.303	–.254	–.205	–.179	–.159	–.180	–.189	–.197	–.214	–.254
	.400	–.326	–.274	–.242	–.205	–.190	–.207	–.217	–.201	–.207	–.219	–.249
	.500	–.279	–.267	–.232	–.239	–.216	–.243	–.208	–.224	–.228	–.249	–.249
	.600	–.292	–.278	–.249	–.226	–.215	–.244	–.196	–.220	–.226	–.235	–.264
	.700	–.375	–.371	–.348	–.317	–.305	–.297	–.275	–.313	–.322	–.333	–.337
	.800	–.311	–.296	–.350	–.344	–.328	–.303	–.299	–.340	–.345	–.342	–.282
	.900	–.126	–.171	–.132	–.106	–.261	–.334	–.320	–.128	–.102	–.114	–.151
	.950	–.098	–.078	–.046	–.007	–.002	–.019	–.010	0	–.013	–.028	–.060
Lower surface	.0375	.212	.176	.061	–.088	–.427	–.621	–.575	–.332	–.107	–.028	.121
	.075	.169	.129	.036	–.057	–.371	–.555	–.504	–.153	–.066	–.025	.079
	.150	.101	.074	.016	–.042	–.158	–.270	–.260	–.064	–.049	–.020	.042
	.250	.052	.036	–.003	–.043	–.032	–.374	–.305	–.065	–.049	–.032	.014
	.350	.045	.032	.008	–.014	–.023	–.312	–.035	–.032	–.020	–.009	.020
	.450	.023	.014	–.016	–.035	–.051	–.174	–.009	–.050	–.039	–.030	–.001
	.550	.029	.008	–.018	–.033	–.048	–.013	–.019	–.045	–.035	–.028	–.003
	.650	.025	.017	–.012	–.027	–.044	–.009	–.028	–.040	–.031	–.024	–.001
	.750	.009	0	–.021	–.032	–.049	–.029	–.042	–.047	–.037	–.030	–.011
	.850	.008	0	–.011	–.014	–.027	–.019	–.023	–.028	–.020	–.016	–.006
	.925	–.004	–.004	–.006	.001	–.002	.012	.009	–.003	0	–.001	–.003
	.975	[a]–.012	[a].007	[a].002	[a].012	[a].021	[a].048	[a].076	[a].020	[a].019	[a].013	[a].001
	1.000	[a]–.017	[a].018	[a].005	[b].017	[b].033	[b].068	[b].106	[b].032	[b].028	[a].020	[a].003

[a]Faired value.

[b]Lower-surface value only.

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[redacted]

TABLE 12.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF

THE BLADE SECTION AT THE 0.975 RADIUS - Continued

(e) $M = 0.56$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.151	2.176	2.221	2.240	2.276	2.293	2.326	2.362	2.400	2.416	2.462	2.505	2.539
	M_x	.980	.969	.959	.954	.944	.936	.931	.922	.913	.901	.895	.886	.879
	α_r'	2.22	1.91	1.36	1.12	.69	.48	.09	-.34	-.78	-.97	-1.49	-1.98	-2.36
	$\Delta\beta$	.73	.65	.48	.41	.30	.24	.13	-.02	-.17	-.23	-.37	-.52	-.63
	α_i	2.51	2.36	2.22	2.02	1.72	1.58	1.42	1.04	.91	.80	.53	.35	.14
	c_n	.2932	.2771	.2584	.2355	.2016	.1855	.1665	.1223	.1068	.0945	.0626	.0413	.0168
	c_m	-.0741	-.0687	-.0670	-.0628	-.0696	-.0587	-.0484	-.0531	-.0533	-.0534	-.0542	-.0556	-.0556
	c_c	.0143	.0115	.0102	.0089	.0084	.0075	.0059	.0073	.0075	.0074	.0072	.0077	.0076
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.263	1.257	1.251	1.248	1.242	1.238	1.235	1.230	1.226	1.220	1.217	1.212	1.208
	.025	-.181	-.187	-.170	-.145	-.085	-.055	-.030	.034	.070	.095	.134	.174	.210
	.050	-.221	-.216	-.173	-.139	-.094	-.074	-.059	-.013	.015	.034	.065	.096	.125
	.100	-.225	-.226	-.205	-.196	-.185	-.183	-.176	-.076	-.111	-.096	-.070	-.043	-.020
	.200	-.247	-.241	-.243	-.248	-.218	-.194	-.193	-.178	-.161	-.153	-.135	-.121	-.108
	.300	-.229	-.236	-.231	-.225	-.208	-.207	-.202	-.183	-.172	-.162	-.148	-.137	-.128
	.400	-.237	-.243	-.235	-.227	-.213	-.205	-.202	-.196	-.192	-.186	-.172	-.159	-.148
	.500	-.267	-.275	-.265	-.258	-.245	-.242	-.241	-.215	-.196	-.192	-.180	-.172	-.163
	.600	-.284	-.290	-.279	-.270	-.250	-.244	-.231	-.213	-.213	-.215	-.208	-.196	-.186
	.700	-.359	-.366	-.355	-.344	-.330	-.324	-.314	-.303	-.302	-.300	-.277	-.251	-.233
	.800	-.397	-.408	-.394	-.370	-.366	-.358	-.346	-.332	-.296	-.248	-.220	-.206	-.194
	.900	-.440	-.464	-.444	-.411	-.350	-.244	-.145	-.093	-.096	-.104	-.104	-.108	-.109
	.950	-.347	-.216	-.119	-.055	-.015	.002	.003	0	-.011	-.018	-.022	-.026	-.031
Lower surface	.0375	.128	.100	.058	.016	-.059	-.086	-.136	-.301	-.430	-.513	-.605	-.700	-.782
	.075	.094	.073	.048	.020	-.027	-.053	-.068	-.102	-.195	-.290	-.450	-.574	-.667
	.150	.056	.040	.019	-.002	-.031	-.045	-.058	-.063	-.057	-.052	-.041	-.051	-.104
	.250	.014	.003	-.009	-.023	-.036	-.045	-.053	-.059	-.060	-.062	-.057	-.052	-.047
	.350	.024	.015	.007	-.001	-.011	-.017	-.024	-.026	-.029	-.033	-.032	-.031	-.033
	.450	-.024	-.014	-.019	-.027	-.034	-.038	-.044	-.044	-.045	-.047	-.046	-.047	-.048
	.550	-.006	-.025	-.027	-.031	-.037	-.040	-.044	-.042	-.040	-.042	-.041	-.062	-.043
	.650	-.018	-.034	-.036	-.035	-.038	-.041	-.041	-.038	-.033	-.033	-.030	-.029	-.030
	.750	-.028	-.062	-.055	-.051	-.050	-.048	-.047	-.042	-.033	-.032	-.026	-.025	-.025
	.850	-.056	-.062	-.055	-.045	-.042	-.037	-.031	-.020	-.011	-.008	-.002	0	.001
	.925	-.094	-.095	-.079	-.056	-.038	-.021	-.009	.006	.016	.018	.025	.029	.029
	.975	[a]-.130	[a]-.125	[a]-.082	[a]-.068	[a]-.039	[a]-.005	[a].012	[a].032	[a].033	[a].038	[a].048	[a].054	[a].057
	1.000	[a]-.147	[b]-.142	[b]-.089	[b]-.076	[b]-.041	[b].005	[b].022	[b].045	[a].043	[a].050	[a].061	[a].074	[a].075

[a]Faired value.
[b]Lower surface only.

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[redacted]

TABLE 12.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF

THE BLADE SECTION AT THE 0.975 RADIUS – Continued

(f) $M = 0.62$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.169	2.232	2.258	2.283	2.305	2.340	2.382	2.415	2.468	2.502
	M_x	1.078	1.053	1.045	1.037	1.028	1.018	1.007	.998	.985	.972
	α_x'	2.00	1.22	.90	.60	.34	–.08	–.57	–.95	–1.56	–1.94
	$\Delta\beta$	.41	.22	.12	.02	–.08	–.33	–.32	–.59	–.84	–.97
	α_1	1.52	1.36	1.23	1.13	1.00	.78	.60	.34	.08	–.15
	c_n	.1790	.1661	.1516	.1365	.1268	.0942	.0842	.0423	.0106	–.0161
	c_m	–.0569	–.0621	–.0635	–.0640	–.0660	–.0676	–.0734	–.0718	–.0730	–.0760
	c_c	.0163	.0175	.0178	.0174	.0175	.0175	.0176	.0157	.0156	.0136
	c/b	Pressure coefficient, P									
Upper surface	0.000	1.325	1.308	1.303	1.298	1.292	1.286	1.279	1.274	1.266	1.258
	.025	.054	.065	.081	.101	.127	.164	.193	.220	.258	.283
	.050	.035	.046	.059	.072	.091	.118	.136	.157	.182	.200
	.100	–.017	–.025	–.025	–.028	–.025	–.017	–.010	.003	.025	.040
	.200	–.098	–.127	–.125	–.125	–.118	–.082	–.096	–.090	–.087	–.089
	.300	–.110	–.139	–.142	–.149	–.149	–.140	–.145	–.147	–.151	–.155
	.400	–.133	–.161	–.164	–.172	–.174	–.176	–.182	–.183	–.185	–.190
	.500	–.158	–.186	–.186	–.191	–.196	–.199	–.211	–.219	–.225	–.228
	.600	–.177	–.198	–.196	–.197	–.198	–.201	–.218	–.224	–.226	–.235
	.700	–.239	–.264	–.262	–.263	–.261	–.259	–.271	–.274	–.289	–.305
	.800	–.277	–.302	–.300	–.299	–.298	–.294	–.299	–.299	–.310	–.320
	.900	–.322	–.350	–.349	–.350	–.348	–.345	–.347	–.345	–.341	–.336
	.950	–.388	–.411	–.409	–.413	–.412	–.409	–.403	–.363	–.259	–.157
Lower surface	.0375	.127	.004	–.043	–.099	–.149	–.216	–.288	–.359	448	–.529
	.075	.106	.012	–.028	–.081	–.127	–.190	–.257	–.316	–.395	–.471
	.150	.077	.006	–.025	–.069	–.103	–.136	[a]–.210	[a]–.255	[a]–.335	[a]–.393
	.250	.046	–.004	–.024	–.060	–.095	–.139	–.179	–.214	–.271	–.322
	.350	.042	.004	.006	–.003	–.024	–.075	–.139	–.182	–.232	–.276
	.450	.027	–.006	–.006	–.006	.001	.005	–.057	–.096	–.187	–.239
	.550	.014	–.023	–.025	–.029	–.022	–.005	.004	.004	–.060	–.091
	.650	.021	–.016	–.020	–.028	–.029	–.021	–.018	–.009	.001	–.002
	.750	–.023	–.061	–.065	–.073	–.074	–.060	–.055	–.057	–.038	–.031
	.850	–.046	–.085	–.090	–.098	–.101	–.098	–.097	–.083	–.060	–.044
	.925	–.088	–.125	–.129	–.134	–.137	–.132	–.132	–.108	–.077	–.037
	.975	[a]–.022	[a]–.159	[a]–.162	[a]–.167	[a]–.166	[a]–.155	[a]–.157	[a]–.128	[a]–.080	[a]–.020
	1.000	[a]–.011	[a]–.178	[a]–.182	[a]–.183	[a]–.182	[a]–.167	[a]–.169	[a]–.139	[a]–.082	[a]–.010

[a]Faired value.

[redacted]

[redacted]

TABLE 12.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE BLADE SECTION AT THE 0.975 RADIUS - Continued

(g) $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.141	2.157	2.179	2.196	2.224	2.251	2.268	2.299	2.321	2.338	2.375	2.416	2.432
	M_x	1.152	1.143	1.139	1.129	1.117	1.108	1.094	1.088	1.078	1.068	1.057	1.046	1.042
	α_x'	2.35	2.15	1.87	1.66	1.32	.99	.78	.41	.15	-.05	-.49	-.97	-1.15
	$\Delta\beta$	-.14	-.19	-.25	-.30	-.38	-.46	-.51	-.60	-.66	-.71	-.82	-.94	-.98
	α_1	1.60	1.57	1.45	1.35	1.15	1.05	.89	.76	.60	.45	.19	-.09	-.19
	c_n	.1875	.1823	.1677	.1574	.1348	.1232	.1035	.0890	.0700	.0523	.0223	-.0106	-.0223
	c_m	-.0535	-.0555	-.0536	-.0524	-.0519	-.0519	-.0542	-.0547	-.0538	-.0457	-.0508	-.0417	-.0411
	c_c	.0171	.0177	.0177	.0180	.0175	.0179	.0180	.0178	.0182	.0185	.0188	.0191	.0192
	c/b	Pressure coefficient, P												
Upper surface	0.000	1.376	1.369	1.366	1.359	1.351	1.345	1.335	1.331	1.325	1.318	1.311	1.303	1.301
	.025	.106	.104	.107	.107	.119	.129	.149	.170	.194	.217	.233	.252	.272
	.050	.057	.064	.074	.084	.100	.107	.119	.135	.153	.169	.178	.190	.205
	.100	.016	.020	.023	.026	.035	.036	.035	.039	.039	.044	.039	.040	.051
	.200	-.053	-.054	-.054	-.063	-.068	-.072	-.073	-.067	-.060	-.052	-.053	-.052	-.043
	.300	-.068	-.074	-.078	-.088	-.097	-.100	-.103	-.103	-.099	-.095	-.103	-.110	-.104
	.400	-.092	-.099	-.105	-.114	-.122	-.127	-.135	-.134	-.133	-.132	-.145	-.153	-.147
	.500	-.119	-.127	-.133	-.142	-.151	-.154	-.162	-.161	-.163	-.166	-.179	-.189	-.186
	.600	-.135	-.143	-.149	-.156	-.166	-.170	-.179	-.177	-.178	-.183	-.195	-.204	-.199
	.700	-.194	-.202	-.208	-.217	-.225	-.229	-.236	-.236	-.239	-.246	-.260	-.270	-.265
	.800	-.230	-.242	-.247	-.255	-.262	-.265	-.271	-.269	-.274	-.283	-.299	-.310	-.306
	.900	-.270	-.288	-.294	-.302	-.306	-.308	-.311	-.308	-.313	-.322	-.341	-.352	-.350
	.950	-.334	-.345	-.351	-.358	-.362	-.364	-.368	-.364	-.370	-.381	-.400	-.414	-.411
Lower surface	.0375	.225	.198	.175	.132	.070	.034	-.022	-.061	-.109	-.151	-.215	-.278	-.304
	.075	.198	.178	.160	.132	.084	.054	0	-.037	-.081	-.121	-.181	-.232	-.249
	.150	.148	.127	.110	.081	.040	.016	-.026	-.053	-.081	-.103	-.132	-.157	-.159
	.250	.096	.079	.065	.040	.007	-.011	-.045	-.065	-.087	-.108	-.146	-.183	-.195
	.350	.084	.071	.056	.036	.008	-.009	-.045	-.063	-.080	-.097	-.130	-.158	-.169
	.450	.063	.053	.041	.025	.007	-.007	-.038	-.059	-.082	-.103	-.137	-.166	-.170
	.550	.042	.031	.019	.006	-.010	-.012	-.031	-.048	-.075	-.105	-.147	-.179	-.186
	.650	.051	.039	.028	.013	-.003	-.007	-.016	-.018	-.034	-.063	-.119	-.158	-.167
	.750	.007	-.006	-.016	-.031	-.047	-.051	-.057	-.054	-.052	-.065	-.124	-.177	-.191
	.850	-.013	-.026	-.041	-.055	-.071	-.075	-.084	-.081	-.080	-.078	-.105	-.162	-.180
	.925	-.050	-.065	-.076	-.090	-.105	-.109	-.116	-.114	-.115	-.114	-.123	-.166	-.172
	.975	[a]-.074	[a]-.088	[a]-.097	[a]-.113	[a]-.130	[a]-.131	[a]-.138	[a]-.138	[a]-.124	[a]-.139	[a]-.149	[a]-.177	[a]-.167
	1.000	[a]-.091	[a]-.099	[a]-.109	[a]-.126	[a]-.143	[a]-.144	[a]-.152	[a]-.152	[a]-.150	[a]-.153	[a]-.164	[a]-.185	[a]-.165

[a]Faired value.

[redacted]

NACA

[redacted]

TABLE 12.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF

THE BLADE SECTION AT THE 0.975 RADIUS – Continued

(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^{\circ}$.

	J	2.480	2.409	2.367	2.308	2.260	2.190	2.123	2.077	2.005	1.948	1.887	1.850	1.811	1.761	1.729
	M_x	.921	.908	.897	.889	.881	.869	.857	.853	.841	.833	.826	.820	.815	.812	.809
	α_x'	-1.70	-.89	-.40	.30	.88	1.74	2.57	3.16	4.09	4.84	5.66	6.17	6.71	7.40	7.86
	$\Delta\beta$	-.58	-.34	-.19	.02	.21	.53	.87	1.11	1.48	1.77	2.05	2.18	2.30	2.43	2.48
	α_i	.07	.41	.69	.95	1.15	1.51	1.76	1.94	2.38	2.83	3.30	3.55	3.83	4.06	4.26
	c_n	.0119	.0645	.1081	.1510	.1816	.2342	.2765	.3055	.3742	.4419	.5200	.5568	.6045	.6355	.6703
	c_m	-.0691	-.0622	-.0562	-.0499	-.0477	-.0450	-.0443	-.0469	-.0482	-.0523	-.0582	-.0613	-.0646	-.0646	-.0664
	c_c															
	c/b	Pressure coefficient, P														
Upper surface	0.000	1.230	1.224	1.217	1.213	1.209	1.203	1.197	1.195	1.189	1.185	1.182	1.180	1.177	1.175	1.174
	.025	.259	.183	.115	.027	-.068	-.220	-.366	-.461	-.638	-.827	-1.016	-1.107	-1.204	-1.265	-1.362
	.050	.136	.065	.009	-.064	-.143	-.267	-.411	-.567	-.707	-.880	-1.037	-1.114	-1.193	-1.246	-1.335
	.100	-.079	-.137	-.173	-.226	-.281	-.356	-.402	-.415	-.585	-.743	-.931	-1.010	-1.090	-1.138	-1.220
	.200	-.191	-.196	-.199	-.218	-.235	-.274	-.311	-.337	-.374	-.439	-.499	-.556	-.618	-.657	-.744
	.300	-.238	-.200	-.201	-.209	-.219	-.249	-.271	-.285	-.304	-.332	-.386	-.425	-.479	-.510	-.497
	.400	-.179	-.184	-.185	-.193	-.202	-.229	-.245	-.261	-.282	-.303	-.334	-.358	-.378	-.386	-.389
	.500	-.178	-.195	-.195	-.199	-.205	-.226	-.239	-.254	-.279	-.299	-.329	-.348	-.366	-.377	-.387
	.600	-.242	-.248	-.265	-.285	-.288	-.291	-.298	-.311	-.338	-.363	-.394	-.413	-.428	-.438	-.451
	.700	-.268	-.279	-.283	-.285	-.284	-.290	-.296	-.310	-.337	-.366	-.399	-.420	-.437	-.445	-.455
	.800	-.308	-.292	-.264	-.256	-.255	-.266	-.274	-.288	-.318	-.348	-.380	-.400	-.415	-.424	-.435
	.900	-.145	-.181	-.177	-.174	-.176	-.191	-.204	-.219	-.246	-.277	-.315	-.339	-.361	-.375	-.385
	.950	-.031	-.052	-.047	-.047	-.051	-.070	-.084	-.095	-.119	-.146	-.178	-.198	-.216	-.228	-.238
Lower surface	.0375	-.671	-.634	-.524	-.213	-.116	-.015	.077	.136	.214	.283	.348	.377	.413	.433	.471
	.075	-.607	-.579	-.213	-.108	-.060	.001	.063	.101	.157	.206	.256	.279	.307	.323	.353
	.150	-.502	-.251	-.088	-.082	-.052	-.018	.021	.048	.085	.119	.154	.169	.192	.203	.227
	.250	-.322	-.053	-.080	-.069	-.052	-.033	-.008	.016	.042	.065	.087	.097	.113	.122	.138
	.350	-.015	-.059	-.063	-.054	-.041	-.029	-.012	.006	.026	.044	.062	.068	.080	.085	.099
	.450	-.021	-.058	-.052	-.043	-.033	-.023	-.009	0	.015	.031	.046	.050	.061	.065	.077
	.550	-.035	-.055	-.046	-.038	-.030	-.023	-.011	-.005	.008	.022	.035	.039	.048	.050	.053
	.650	-.056	-.068	-.056	-.049	-.041	-.037	-.027	-.024	-.009	.006	.016	.018	.025	.027	.037
	.750	-.054	-.060	-.048	-.045	-.040	-.037	-.030	-.029	-.018	-.008	.001	.004	.011	.012	.020
	.850	-.005	-.014	-.007	-.009	-.007	-.009	-.005	-.004	.001	.010	.015	.016	.019	.018	.025
	.925	.022	.014	.015	.007	.002	-.005	-.008	-.014	-.015	-.012	-.011	-.014	-.012	-.013	-.008
	.975	[a].043	[a].020	[a].026	[a].013	[a].005	[a]-.005	[a]-.012	[a]-.025	[a]-.041	[a]-.045	[a]-.048	[a]-.039	[a]-.037	[a]-.038	[a]-.039
	1.000	[a].054	[a].021	[a].030	[a].014	[a].005	[a]-.005	[a]-.016	[a]-.032	[a]-.053	[a]-.060	[a]-.069	[a]-.055	[a]-.054	[a]-.050	[a]-.060

[a]Faired value.

[redacted]

[redacted]

TABLE 12.— PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE BLADE SECTION AT THE 0.975 RADIUS — Continued

(1) One-blade propeller; $M = 0.57$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.365	2.336	2.311	2.283	2.256	2.240	2.200	2.174	2.160	2.121	2.101	2.086	2.055	2.033	2.014	1.998
	M_r	.933	.940	.946	.952	.959	.969	.975	.987	.991	.998	1.004	1.014	1.018	1.025	1.032	1.043
	α_r'	-.37	-.03	.27	.60	.93	1.12	1.61	1.93	2.11	2.60	2.85	3.04	3.44	3.73	3.97	4.18
	$\Delta\beta$	-.01	.09	.18	.27	.36	.42	.55	.65	.70	.84	.91	.96	1.06	1.13	1.18	1.23
	α_i	.77	.88	1.04	1.12	1.28	1.33	1.51	1.62	1.70	1.82	1.96	1.99	2.06	2.20	2.33	2.39
	c_n	.1223	.1410	.1652	.1774	.2003	.2081	.2345	.2548	.2632	.2861	.3058	.3148	.3268	.3481	.3668	.3765
	c_m	-.0506	-.0569	-.0615	-.0624	-.0619	-.0632	-.0633	-.0680	-.0738	-.0764	-.0756	-.0759	-.0767	-.0775	-.0796	-.0793
	c_o	.0067	.0080	.0085	.0096	.0105	.0114	.0129	.0143	.0148	.0153	.0150	.0150	.0148	.0148	.0146	.0146
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.237	1.241	1.243	1.247	1.251	1.257	1.260	1.267	1.270	1.275	1.277	1.283	1.286	1.290	1.294	1.301
	.025	.095	.063	.034	.015	-.015	-.038	-.063	-.080	-.089	-.107	-.114	-.123	-.130	-.153	-.164	-.170
	.050	-.009	-.039	-.063	-.084	-.115	-.142	-.168	-.185	-.198	-.235	-.249	-.259	-.261	-.276	-.282	-.280
	.100	-.205	-.220	-.222	-.217	-.210	-.197	-.193	-.204	-.223	-.253	-.260	-.270	-.274	-.289	-.293	-.290
	.200	-.207	-.201	-.185	-.182	-.220	-.234	-.238	-.229	-.231	-.256	-.263	-.273	-.277	-.290	-.295	-.294
	.300	-.214	-.210	-.228	-.221	-.212	-.226	-.240	-.243	-.242	-.251	-.252	-.258	-.259	-.268	-.272	-.267
	.400	-.186	-.181	-.177	-.190	-.185	-.188	-.201	-.207	-.207	-.212	-.212	-.216	-.216	-.228	-.234	-.231
	.500	-.202	-.220	-.215	-.212	-.225	-.223	-.232	-.234	-.238	-.248	-.247	-.250	-.253	-.263	-.265	-.261
	.600	-.241	-.248	-.260	-.262	-.271	-.276	-.284	-.288	-.292	-.303	-.301	-.302	-.304	-.314	-.317	-.315
	.700	[a]-.285	[a]-.285	[a]-.300	-.292	[a]-.305	[a]-.323	[a]-.330	[a]-.338	[a]-.343	[a]-.353	[a]-.355	[a]-.345	[a]-.343	[a]-.355	[a]-.360	[a]-.355
	.800	-.332	-.333	-.340	-.350	-.356	-.362	-.373	-.381	-.386	-.401	-.401	-.402	-.403	-.412	-.412	-.410
	.900	-.137	-.259	-.372	-.436	-.469	-.484	-.491	-.499	-.506	-.520	-.518	-.518	-.513	-.518	-.515	-.508
	.950	.003	.007	-.003	-.031	-.081	-.163	-.236	-.374	-.463	-.505	-.506	-.506	-.503	-.507	-.504	-.498
Lower surface	.0375	-.359	-.287	-.219	-.167	-.103	-.048	-.007	.040	.071	.117	.151	.181	.223	.250	.278	.303
	.075	-.215	-.114	-.068	-.047	-.023	.006	.029	.058	.079	.110	.136	.160	.193	.214	.235	.258
	.150	-.068	-.075	-.069	-.059	-.044	-.028	-.015	.003	.016	.033	.053	.069	.096	.113	.134	.137
	.250	-.070	-.066	-.058	-.049	-.042	-.034	-.027	-.013	-.005	.001	.016	.027	.048	.058	.074	.093
	.350	-.065	-.060	-.055	-.049	-.044	-.039	-.036	-.029	-.023	-.021	-.011	-.006	.007	.014	.027	.048
	.450	-.047	-.044	-.039	-.035	-.030	-.027	-.025	-.018	-.014	-.012	-.003	.003	.017	.020	.029	.044
	.550	-.046	-.045	-.041	-.038	-.036	-.034	-.033	-.029	-.026	-.026	-.018	-.015	-.004	-.002	.006	.018
	.650	-.057	-.056	-.054	-.053	-.053	-.056	-.055	-.053	-.051	-.052	-.045	-.038	-.026	-.025	-.016	-.004
	.750	-.057	-.057	-.057	-.059	-.063	-.071	-.074	-.074	-.076	-.080	-.073	-.068	-.057	-.056	-.048	-.037
	.850	-.019	-.021	-.026	-.032	-.040	-.051	-.053	-.054	-.055	-.063	-.058	-.059	-.054	-.056	-.048	-.038
	.925	.004	-.004	-.017	-.036	-.058	-.080	-.087	-.090	-.090	-.094	-.087	-.087	-.080	-.083	-.076	-.067
	.975	[a].040	[a].003	[a]-.020	[a]-.040	[a]-.073	[a]-.105	[a]-.120	[a]-.120	[a]-.120	[a]-.125	[a]-.110	[a]-.113	[a]-.100	[a]-.108	[a]-.100	[a]-.105
	1.000	[b].058	[b].005	[b]-.020	[b]-.043	[b]-.080	[b]-.115	[b]-.145	[b]-.140	[a]-.133	[a]-.140	[a]-.120	[a]-.128	[a]-.115	[a]-.120	[a]-.113	[a]-.125

[a]Faired value.
[b]Lower surface only.

[redacted]

NACA

[redacted]

TABLE 12.- PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF

THE BLADE SECTION AT THE 0.975 RADIUS - Continued

(j) One-blade propeller; $M = 0.59$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.326	2.295	2.283	2.249	2.220	2.206	2.161	2.147	2.119	2.100	2.073	2.052	2.026	2.010	1.996	1.972	1.951	1.932
	M_x	.970	.977	.984	.991	.998	1.006	1.010	1.020	1.028	1.035	1.043	1.050	1.054	1.064	1.073	1.077	1.084	1.092
	α_x	.09	.45	.58	1.01	1.37	1.54	2.10	2.27	2.62	2.86	3.21	3.48	3.82	4.03	4.21	4.53	4.81	5.06
	$\Delta\beta$	0	.12	.16	.31	.41	.45	.59	.63	.69	.74	.80	.83	.87	.90	.91	.94	.98	1.02
	α_1	.65	.72	.71	.98	1.08	1.20	1.26	1.40	1.50	1.61	1.63	1.73	1.84	1.89	2.01	2.03	2.13	2.18
	c_n	.1029	.1129	.1100	.1526	.1694	.1881	.1974	.2194	.2368	.2523	.2577	.2723	.2871	.2994	.3165	.3168	.3316	.3419
	c_m	-.0556	-.0534	-.0477	-.0583	-.0634	-.0611	-.0651	-.0655	-.0676	-.0668	-.0696	-.0690	-.0712	-.0724	-.0734	-.0744	-.0762	-.0764
	c_c	.0108	.0120	.0131	.0148	.0163	.0149	.0166	.0157	.0159	.0156	.0146	.0150	.0153	.0150	.0153	.0151	.0153	.0150
	c/b	Pressure coefficient, P																	
Upper surface	0.000	1.258	1.261	1.266	1.270	1.274	1.276	1.280	1.286	1.292	1.295	1.302	1.307	1.309	1.316	1.321	1.326	1.329	1.334
	.025	.131	.106	.093	.057	.041	.028	-.017	-.027	-.038	-.051	-.057	-.062	-.069	-.070	-.075	-.078	-.092	-.105
	.050	.022	-.006	-.019	-.063	-.099	-.132	-.183	-.188	-.192	-.197	-.199	-.198	-.199	-.195	-.195	-.193	-.195	-.197
	.100	-.146	-.142	-.135	-.133	-.121	-.102	-.146	-.160	-.171	-.183	-.190	-.195	-.202	-.202	-.208	-.206	-.210	-.214
	.200	-.162	-.162	-.166	-.192	-.199	-.190	-.101	-.197	-.203	-.216	-.222	-.227	-.233	-.232	-.235	-.232	-.237	-.239
	.300	-.219	-.196	-.188	-.199	-.207	-.203	-.219	-.215	-.209	-.212	-.214	-.215	-.218	-.215	-.216	-.213	-.220	-.221
	.400	-.174	-.186	-.180	-.179	-.183	-.180	-.201	-.199	-.194	-.196	-.199	-.199	-.202	-.202	-.203	-.200	-.207	-.206
	.500	-.197	-.198	-.201	-.205	-.207	-.203	-.223	-.222	-.217	-.218	-.220	-.220	-.223	-.224	-.225	-.221	-.226	-.226
	.600	-.245	-.239	-.243	-.253	-.255	-.249	-.272	-.274	-.270	-.270	-.271	-.270	-.274	-.271	-.272	-.274	-.277	-.278
	.700	-.277	-.275	-.271	-.283	-.285	-.281	-.301	-.302	-.300	-.300	-.299	-.297	-.301	-.290	-.298	-.294	-.299	-.302
	.800	-.338	-.344	-.340	-.349	-.351	-.347	-.370	-.369	-.369	-.370	-.370	-.367	-.370	-.367	-.367	-.365	-.369	-.374
	.900	-.423	-.449	-.450	-.461	-.461	-.454	-.474	-.475	-.473	-.472	-.469	-.466	-.464	-.457	-.455	-.449	-.449	-.450
	.950	-.078	-.127	-.198	-.329	-.412	-.436	-.470	-.473	-.473	-.472	-.472	-.470	-.470	-.464	-.463	-.458	-.460	-.461
Lower surface	.0375	-.278	-.215	-.174	-.135	-.111	-.066	-.009	.036	.087	.126	.158	.187	.223	.256	.283	.302	.323	.348
	.075	-.221	-.163	-.118	-.031	0	.032	.059	.088	.101	.146	.167	.190	.216	.243	.264	.278	.293	.312
	.150	-.248	-.163	-.158	-.167	-.155	-.130	-.118	-.102	-.077	-.060	-.042	-.024	.001	.027	.046	.061	.075	.093
	.250	-.048	-.068	-.072	-.071	-.061	-.041	-.036	-.025	-.008	.004	.016	.028	.042	.046	.073	.081	.090	.102
	.350	-.048	-.050	-.048	-.048	-.043	-.027	-.028	-.018	-.004	.004	.014	.023	.034	.050	.060	.069	.074	.084
	.450	.022	-.059	-.055	-.051	-.044	-.029	-.030	-.021	-.006	.002	.011	.020	.029	.044	.054	.062	.066	.075
	.550	-.061	-.059	-.057	-.053	-.049	-.035	-.040	-.031	-.019	-.012	-.004	.003	.011	.025	.033	.041	.045	.052
	.650	-.081	-.079	-.076	-.073	-.065	-.051	-.055	-.047	-.036	-.029	-.021	-.014	-.007	.007	.015	.021	.024	.030
	.750	-.113	-.111	-.112	-.113	-.109	-.097	-.103	-.096	-.084	-.078	-.071	-.064	-.057	-.044	-.036	-.029	-.026	-.021
	.850	-.091	-.094	-.096	-.108	-.109	-.100	-.108	-.104	-.094	-.088	-.081	-.082	-.068	-.055	-.048	-.042	-.039	-.035
	.925	-.086	-.100	-.104	-.114	-.113	-.106	-.116	-.114	-.106	-.100	-.094	-.087	-.080	-.067	-.061	-.055	-.051	-.046
	.975	[a]-.076	[a]-.105	[a]-.117	[a]-.122	[a]-.120	[a]-.111	[a]-.130	[a]-.120	[a]-.116	[a]-.111	[a]-.109	[a]-.084	[a]-.095	[a]-.084	[a]-.075	[a]-.066	[a]-.064	[a]-.060
	1.000	[b]-.065	[b]-.110	[b]-.125	[a]-.126	[a]-.122	[a]-.115	[a]-.138	[a]-.128	[a]-.121	[a]-.117	[a]-.116	[a]-.083	[a]-.104	[a]-.091	[a]-.082	[a]-.073	[a]-.070	[a]-.068

[a]Faired value.
[b]Lower surface only.

[redacted]

[redacted]

TABLE 12.– PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE BLADE SECTION AT THE 0.975 RADIUS – Continued

(k) One-blade propeller; $M = 0.61$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.326	2.293	2.260	2.253	2.221	2.185	2.172	2.149	2.116	2.105	2.080	2.058	2.030	2.016	1.995	1.977	1.960	1.922
	M_r	1.013	1.018	1.022	1.033	1.039	1.044	1.053	1.060	1.067	1.075	1.084	1.090	1.095	1.106	1.114	1.119	1.126	1.127
	α_r'	.09	.48	.88	.96	1.35	1.80	1.96	2.25	2.66	2.80	3.12	3.40	3.77	3.95	4.22	4.46	4.69	5.19
	$\Delta\beta$	–.16	–.02	.12	.15	.25	.34	.36	.39	.45	.48	.54	.59	.69	.74	.82	.88	.95	1.12
	α_i	.55	.66	.74	.93	1.06	1.17	1.20	1.26	1.37	1.41	1.54	1.61	1.68	1.80	1.88	1.96	2.03	2.14
	c_n	.0868	.1026	.1135	.1458	.1658	.1839	.1890	.1997	.2165	.2229	.2439	.2523	.2665	.2835	.2961	.3071	.3152	.3339
	c_m	–.0610	–.0596	–.0599	–.0547	–.0556	–.0567	–.0615	–.0598	–.0605	–.0619	–.0617	–.0625	–.0662	–.0655	–.0667	–.0675	–.0716	–.0733
	c_c	.0167	.0169	.0171	.0168	.0170	.0166	.0170	.0166	.0163	.0164	.0157	.0168	.0154	.0161	.0161	.0148	.0158	.0147
	c/b	Pressure coefficient, P																	
Upper surface	0.000	1.283	1.286	1.288	1.295	1.299	1.302	1.308	1.313	1.317	1.322	1.329	1.333	1.336	1.342	1.348	1.352	1.356	1.357
	.025	.183	.157	.130	.118	.094	.078	.071	.065	.053	.053	.041	.038	.017	.009	.002	–.010	–.024	–.049
	.050	.071	.041	.009	–.010	–.052	–.088	–.099	–.104	–.112	–.110	–.122	–.123	–.130	–.129	–.124	–.126	–.130	–.140
	.100	–.101	–.101	–.101	–.089	–.079	–.076	–.082	–.093	–.111	–.117	–.132	–.135	–.145	–.149	–.152	–.157	–.162	–.175
	.200	–.112	–.128	–.146	–.149	–.157	–.156	–.150	–.144	–.151	–.153	–.166	–.169	–.176	–.179	–.182	–.186	–.190	–.203
	.300	–.179	–.177	–.183	–.175	–.180	–.181	–.178	–.171	–.172	–.166	–.171	–.171	–.174	–.174	–.175	–.175	–.178	–.188
	.400	–.170	–.159	–.157	–.146	–.151	–.155	–.152	–.148	–.151	–.145	–.151	–.150	–.152	–.149	–.150	–.151	–.154	–.163
	.500	–.187	–.180	–.187	–.177	–.182	–.185	–.182	–.178	–.182	–.176	–.180	–.178	–.181	–.181	–.183	–.183	–.183	–.191
	.600	–.224	–.227	–.234	–.227	–.232	–.235	–.233	–.231	–.235	–.230	–.232	–.230	–.233	–.232	–.232	–.234	–.236	–.246
	.700	–.241	–.244	–.255	–.249	–.256	–.260	–.256	–.254	–.258	–.255	–.257	–.255	–.256	–.255	–.255	–.255	–.255	–.265
	.800	–.300	–.304	–.312	–.307	–.314	–.322	–.318	–.315	–.320	–.317	–.320	–.320	–.321	–.319	–.317	–.320	–.320	–.328
	.900	–.416	–.420	–.428	–.423	–.426	–.431	–.428	–.426	–.429	–.424	–.425	–.422	–.422	–.417	–.412	–.412	–.409	–.415
	.950	–.404	–.414	–.423	–.418	–.420	–.424	–.421	–.418	–.423	–.419	–.420	–.418	–.419	–.415	–.411	–.412	–.409	–.417
Lower surface	.0375	–.239	–.192	–.153	–.105	–.070	–.032	0	.042	.082	.125	.160	.193	.223	.260	.288	.319	.347	.374
	.075	–.213	–.174	–.138	–.087	–.015	.045	.076	.107	.125	.154	.176	.199	.219	.249	.270	.295	.318	.339
	.150	–.205	–.168	–.131	–.074	–.038	–.019	–.004	.016	.030	.051	.066	.084	.081	.124	.142	.165	.184	.205
	.250	–.166	–.110	–.061	–.034	–.028	–.017	–.005	.010	.020	.036	.045	.058	.068	.086	.097	.113	.127	.138
	.350	–.061	–.024	–.038	–.038	–.037	–.026	–.015	–.001	.007	.021	.027	.037	.045	.061	.071	.084	.095	.102
	.450	–.008	–.024	–.036	–.023	–.023	–.015	–.005	.009	.015	.028	.032	.041	.049	.064	.073	.085	.095	.102
	.550	–.034	–.046	–.053	–.043	–.039	–.032	–.025	–.012	–.008	.003	.008	.016	.023	.037	.045	.055	.064	.070
	.650	–.061	–.068	–.072	–.060	–.056	–.051	–.042	–.031	–.027	–.017	–.012	–.005	0	.013	.021	.030	.039	.042
	.750	–.101	–.103	–.106	–.095	–.089	–.085	–.077	–.066	–.067	–.052	–.048	–.042	–.036	–.023	–.014	–.006	.001	.005
	.850	–.105	–.107	–.110	–.099	–.094	–.089	–.080	–.070	–.065	–.056	–.051	–.045	–.040	–.028	–.019	–.012	–.003	–.001
	.925	–.136	–.137	–.142	–.130	–.125	–.121	–.111	–.102	–.098	–.086	–.083	–.078	–.034	–.060	–.050	–.043	–.035	–.032
	.975	[a]–.175	[a]–.169	[a]–.175	[a]–.155	[a]–.157	[a]–.150	[a]–.125	[a]–.140	[a]–.128	[a]–.113	[a]–.113	[a]–.120	[a]–.028	[a]–.095	[a]–.083	[a]–.073	[a]–.072	[a]–.065
	1.000	[a]–.200	[a]–.190	[a]–.195	[a]–.169	[a]–.175	[a]–.168	[a]–.135	[a]–.160	[a]–.143	[a]–.128	[a]–.128	[a]–.140	[a]–.025	[a]–.115	[a]–.100	[a]–.090	[a]–.090	[a]–.080

[a]Faired value.

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TABLE 12.— PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF

THE BLADE SECTION AT THE 0.975 RADIUS — Concluded

(i) One-blade propeller; $M = 0.65$; $\beta_{0.75R} = 45^{\circ}$.

	J	2.343	2.321	2.303	2.273	2.251	2.232	2.212	2.175	2.165	2.141	2.122	2.101	2.080	2.061	2.041	2.026
	M_r	1.067	1.073	1.082	1.086	1.093	1.104	1.110	1.112	1.125	1.131	1.138	1.140	1.148	1.161	1.168	1.175
	α_r'	-.11	.15	.36	.72	.99	1.22	1.46	1.92	2.05	2.35	2.59	2.85	3.12	3.37	3.62	3.82
	$\Delta\beta$	-.73	-.66	-.61	-.53	-.46	-.40	-.35	-.24	-.21	-.14	-.09	-.03	.03	.09	.15	.19
	α_i	.25	.32	.40	.49	.61	.70	.76	.91	.99	1.08	1.14	1.25	1.38	1.48	1.61	1.65
	c_n	.0381	.0490	.0619	.0765	.0968	.1094	.1206	.1435	.1571	.1700	.1810	.1971	.2181	.2316	.2523	.2600
	c_m	-.0569	-.0542	-.0548	-.0550	-.0546	-.0539	-.0540	-.0563	-.0566	-.0599	-.0590	-.0596	-.0618	-.0631	-.0636	-.0658
	c_o	.0175	.0184	.0182	.0183	.0185	.0180	.0181	.0178	.0176	.0176	.0181	.0180	.0178	.0179	.0179	.0177
	c/b	Pressure coefficient, P															
Upper surface	0.000	1.318	1.321	1.328	1.330	1.334	1.342	1.346	1.347	1.356	1.360	1.366	1.367	1.372	1.382	1.388	1.393
	.025	.262	.248	.243	.221	.209	.202	.188	.165	.156	.147	.148	.145	.138	.134	.113	.116
	.050	.152	.138	.132	.106	.091	.082	.070	.049	.041	.029	.028	.015	-.004	-.010	-.028	-.021
	.100	-.018	-.016	-.006	-.007	.002	.014	.019	.005	-.006	-.020	-.022	-.031	-.043	-.045	-.061	-.056
	.200	-.058	-.063	-.062	-.079	-.081	-.077	-.078	-.084	-.082	-.084	-.080	-.081	-.090	-.093	-.107	-.102
	.300	-.125	-.125	-.120	-.128	-.126	-.120	-.119	-.123	-.118	-.116	-.106	-.100	-.103	-.101	-.112	-.105
	.400	-.127	-.123	-.115	-.119	-.112	-.104	-.103	-.107	-.103	-.103	-.093	-.084	-.083	-.080	-.085	-.074
	.500	-.161	-.160	-.151	-.153	-.145	-.135	-.131	-.135	-.131	-.131	-.119	-.106	-.098	-.098	-.111	-.104
	.600	-.189	-.190	-.181	-.185	-.177	-.165	-.159	-.165	-.164	-.167	-.158	-.150	-.150	-.150	-.162	-.154
	.700	-.221	-.220	-.209	-.212	-.200	-.184	-.180	-.187	-.188	-.192	-.187	-.181	-.180	-.178	-.188	-.181
	.800	-.277	-.273	-.263	-.265	-.257	-.247	-.248	-.256	-.255	-.258	-.253	-.247	-.246	-.244	-.253	-.246
	.900	-.358	-.361	-.350	-.358	-.353	-.342	-.341	-.350	-.348	-.350	-.344	-.336	-.334	-.332	-.340	-.330
	.950	-.361	-.362	-.352	-.361	-.357	-.346	-.342	-.352	-.351	-.353	-.346	-.340	-.338	-.336	-.343	-.334
Lower surface	.0375	-.192	-.151	-.110	-.075	-.038	-.002	.032	.057	.088	.118	.152	.197	.242	.274	.314	.342
	.075	-.177	-.152	-.120	-.091	-.054	-.017	.022	.062	.108	.151	.186	.216	.245	.267	.295	.319
	.150	-.164	-.146	-.118	-.087	-.054	-.023	.010	.042	.074	.095	.117	.141	.161	.177	.196	.215
	.250	-.140	-.126	-.101	-.085	-.057	-.031	-.005	.021	.039	.051	.072	.096	.114	.126	.140	.157
	.350	-.119	-.112	-.094	-.084	-.060	-.031	-.003	.013	.026	.033	.050	.070	.086	.098	.107	.124
	.450	-.113	-.102	-.081	-.064	-.026	.003	.017	.022	.033	.042	.059	.076	.091	.100	.107	.121
	.550	-.122	-.106	-.077	-.048	-.018	-.005	0	.003	.013	.018	.033	.050	.065	.074	.078	.092
	.650	-.086	-.075	-.048	-.037	-.030	-.020	-.015	-.015	-.006	.001	.015	.030	.042	.051	.054	.067
	.750	-.084	-.074	-.062	-.070	-.064	-.054	-.048	-.046	-.038	-.032	-.019	-.004	.009	.018	.020	.035
	.850	-.056	-.068	-.063	-.073	-.069	-.056	-.050	-.049	-.039	-.034	-.021	-.005	.007	.016	.018	.030
	.925	-.090	-.104	-.099	-.108	-.102	-.089	-.081	-.079	-.070	-.065	-.052	-.042	-.025	-.017	-.015	-.003
	.975	[a]-.132	[a]-.167	[a]-.162	[a]-.175	[a]-.161	[a]-.136	[a]-.128	[a]-.125	[a]-.127	[a]-.105	[a]-.103	[a]-.095	[a]-.067	[a]-.075	[a]-.070	[a]-.062
	1.000	[b]-.175	[b]-.270	[b]-.230	[b]-.285	[b]-.235	[b]-.200	[b]-.185	[b]-.180	[b]-.210	[b]-.150	[b]-.160	[b]-.180	[b]-.125	[b]-.170	[b]-.175	[b]-.150

[a]Faired value.
[b]Lower surface only.

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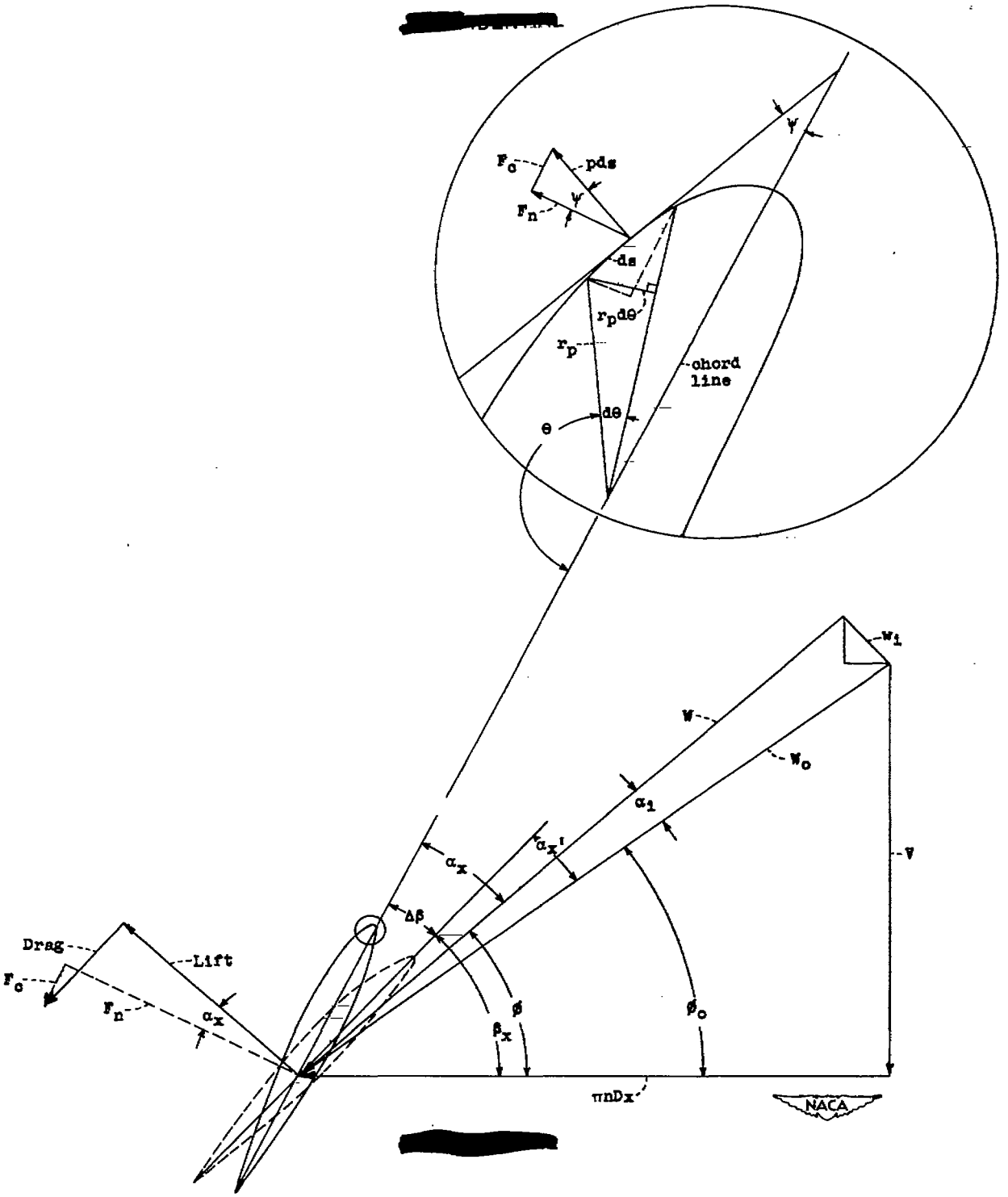

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Figure 1.- Vector diagram of the velocities and forces acting on a blade section.

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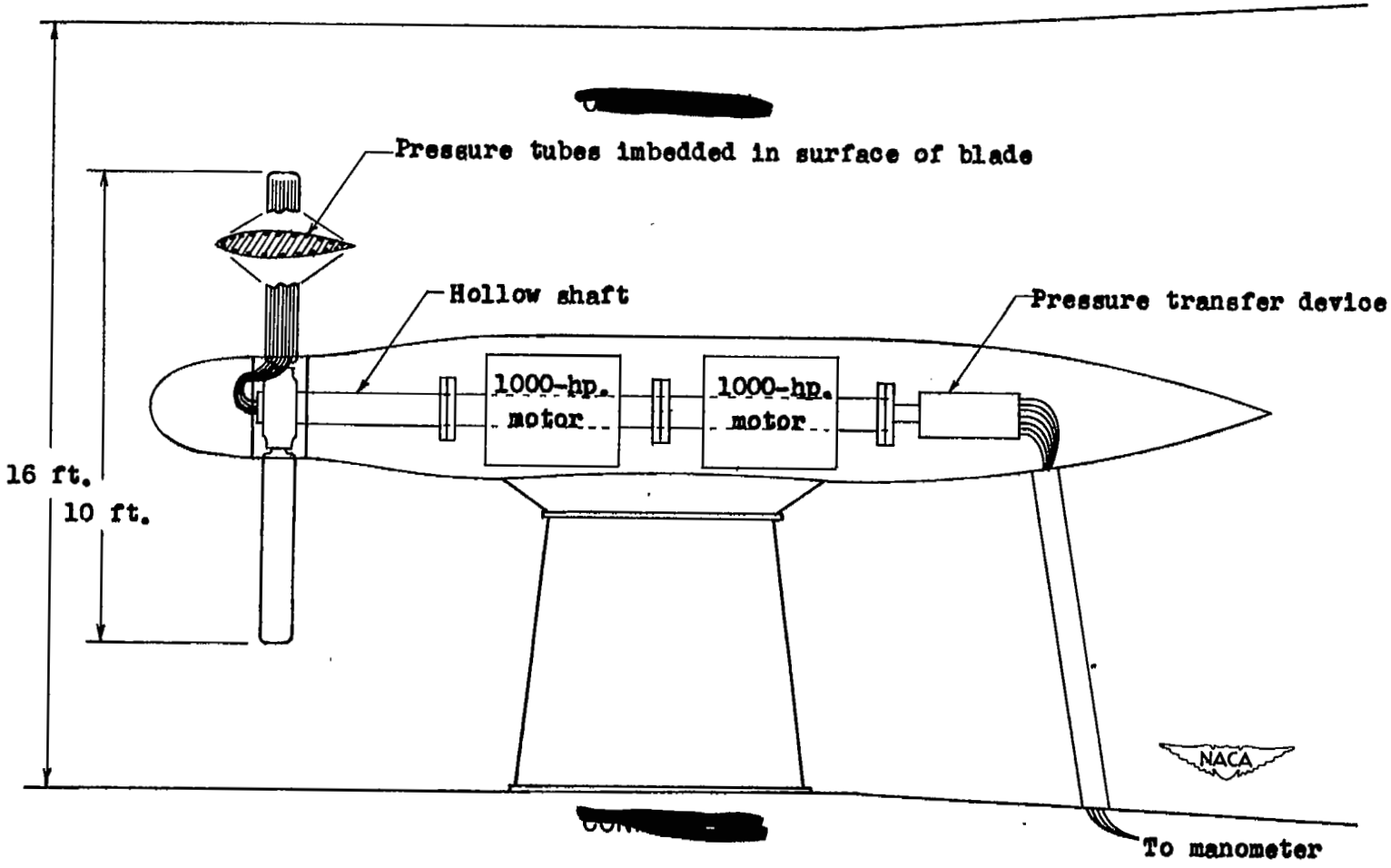

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Figure 2.- Diagram of the apparatus used to obtain pressure distributions on the sections of operating propellers.

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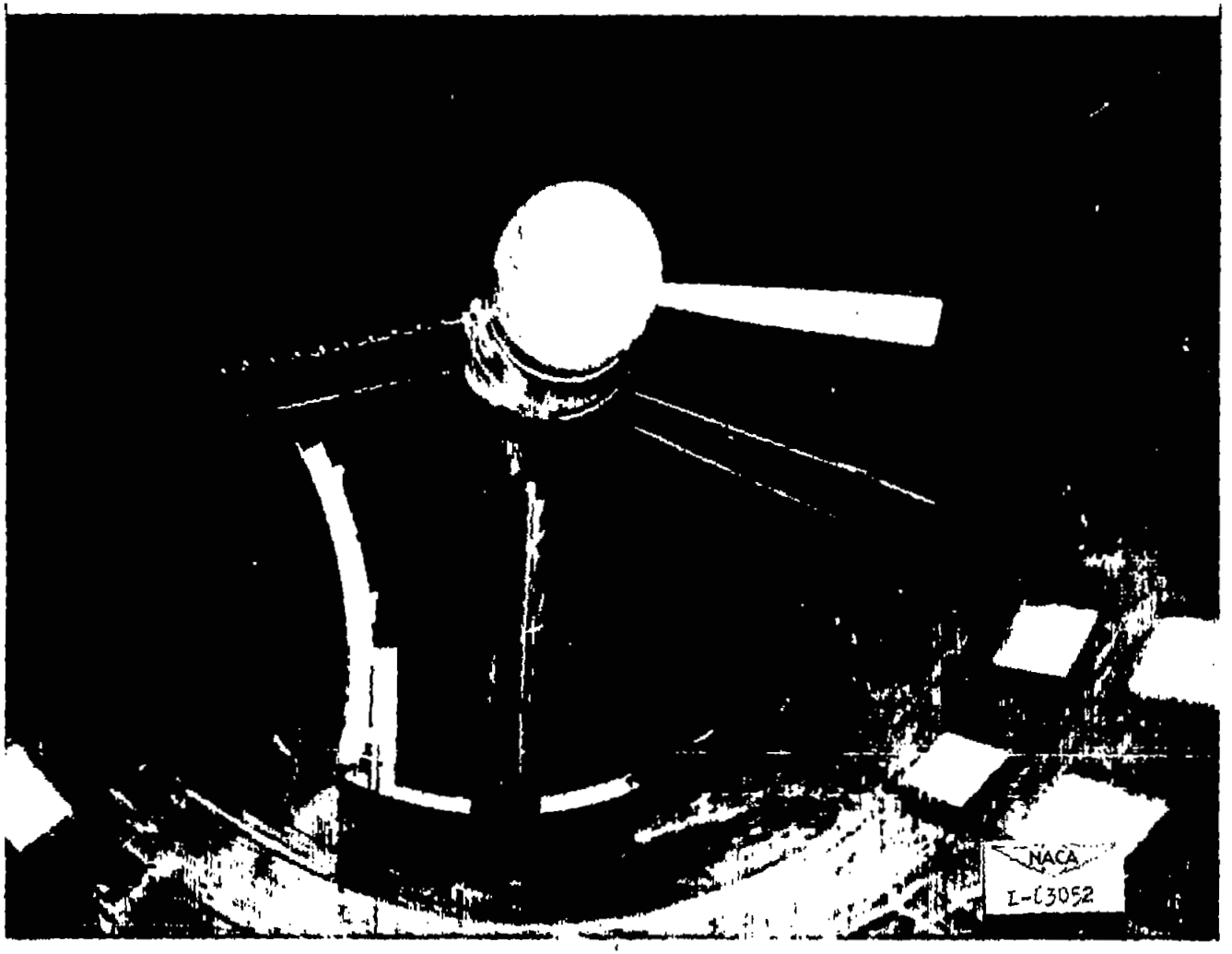

Figure 3.- Propeller dynamometer with the one-blade propeller installed.

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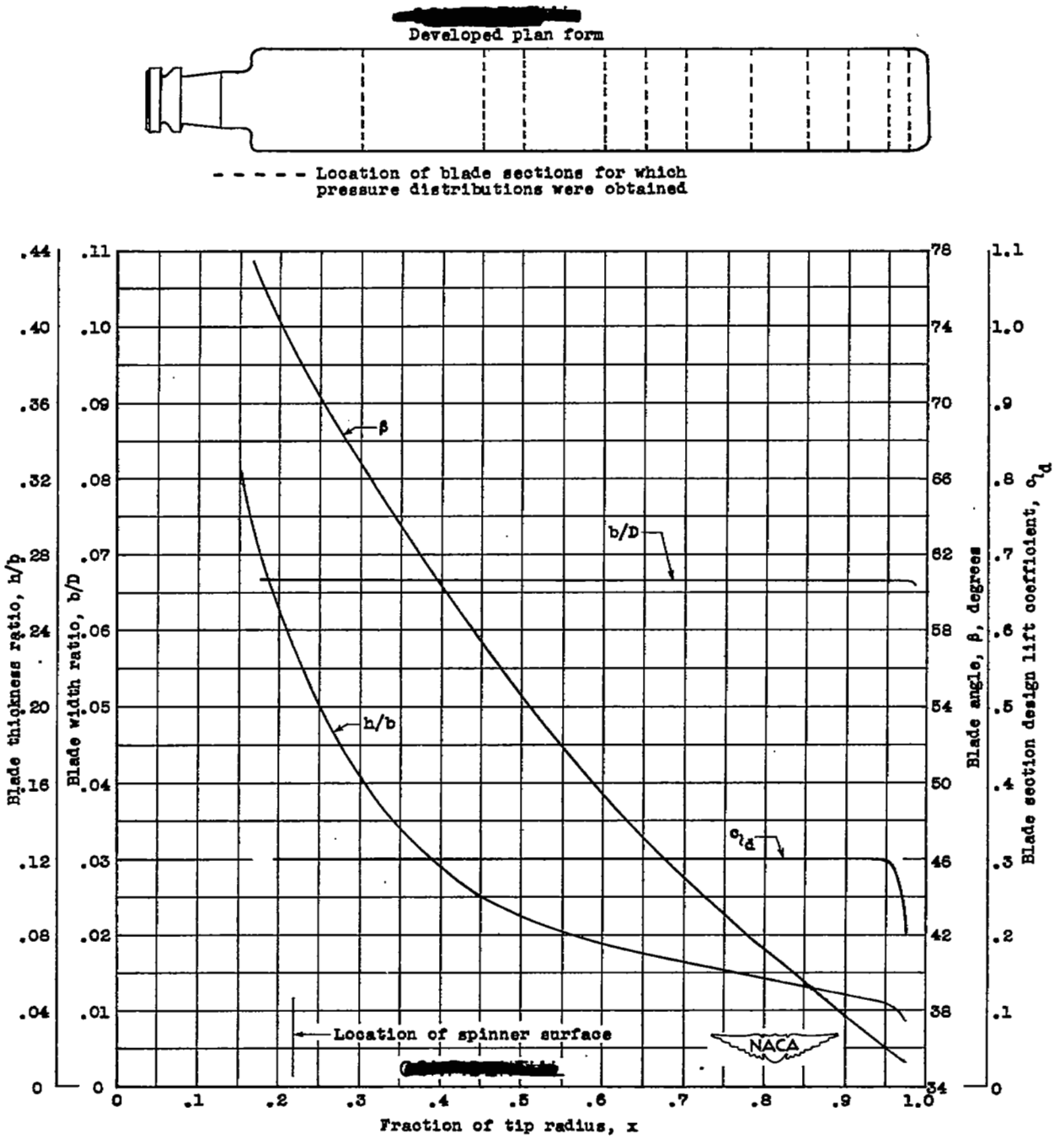

Figure 4.- Blade-form curves for the NACA 10-(3)(066)-033 propeller.

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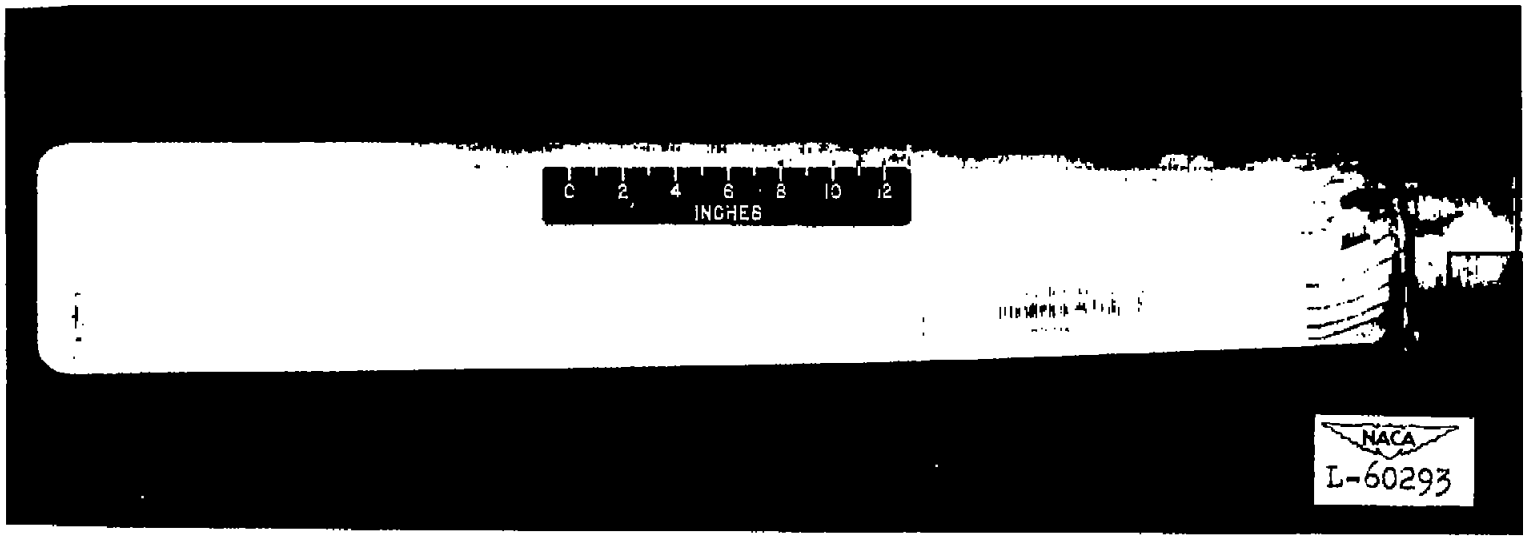

Figure 5.- The NACA 10-(3)(066)-033 propeller blade containing pressure tubes.

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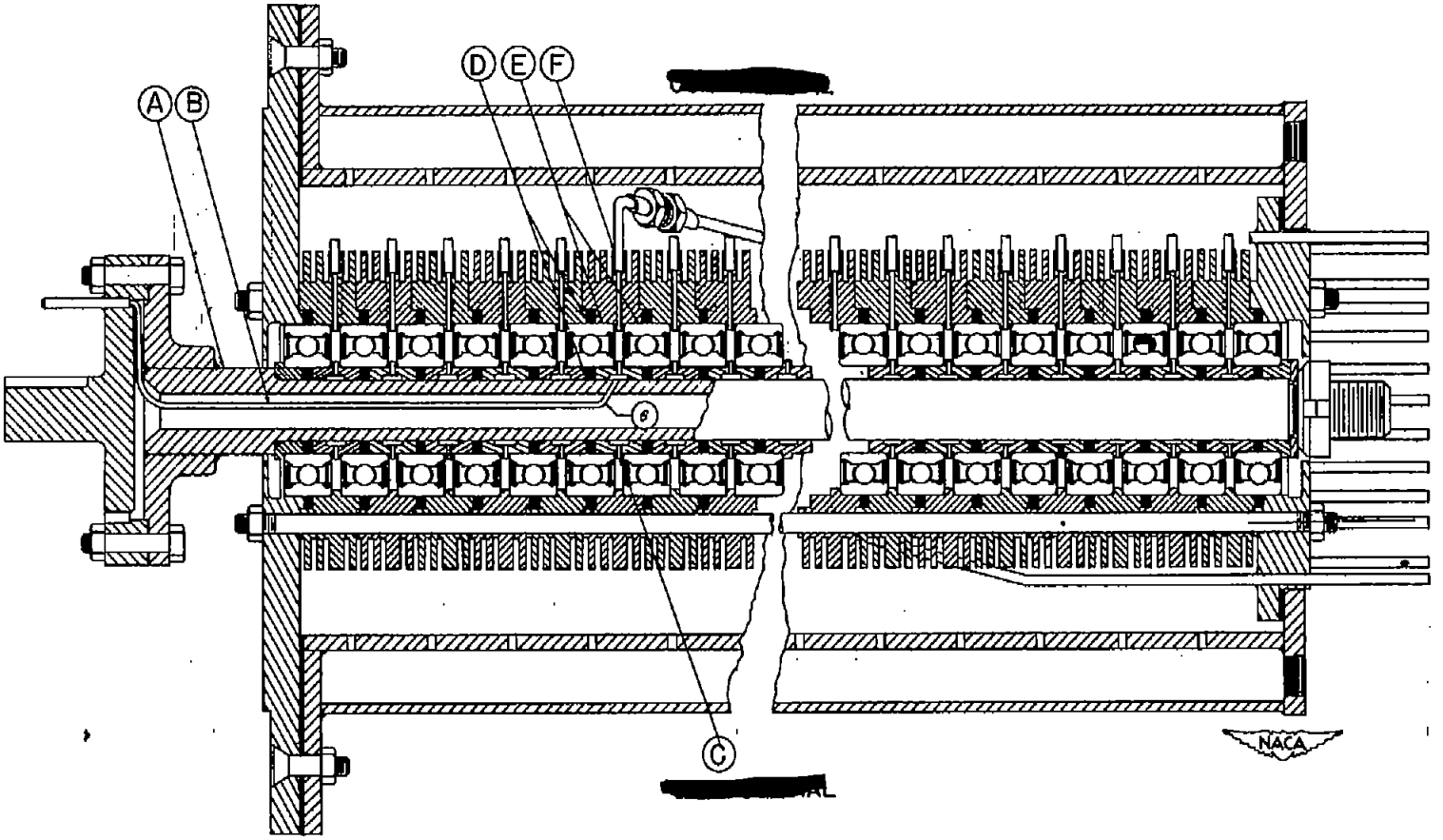

Ⓐ Hollow shaft

Ⓑ Rotating pressure tubes

Ⓒ Rotating spacer

Ⓓ "O" Ring gaskets

Ⓔ Two Synthe-Seal ball bearings

Ⓕ Stationary spacer

Figure 6.- Details of the 30-chamber pressure-transfer device.

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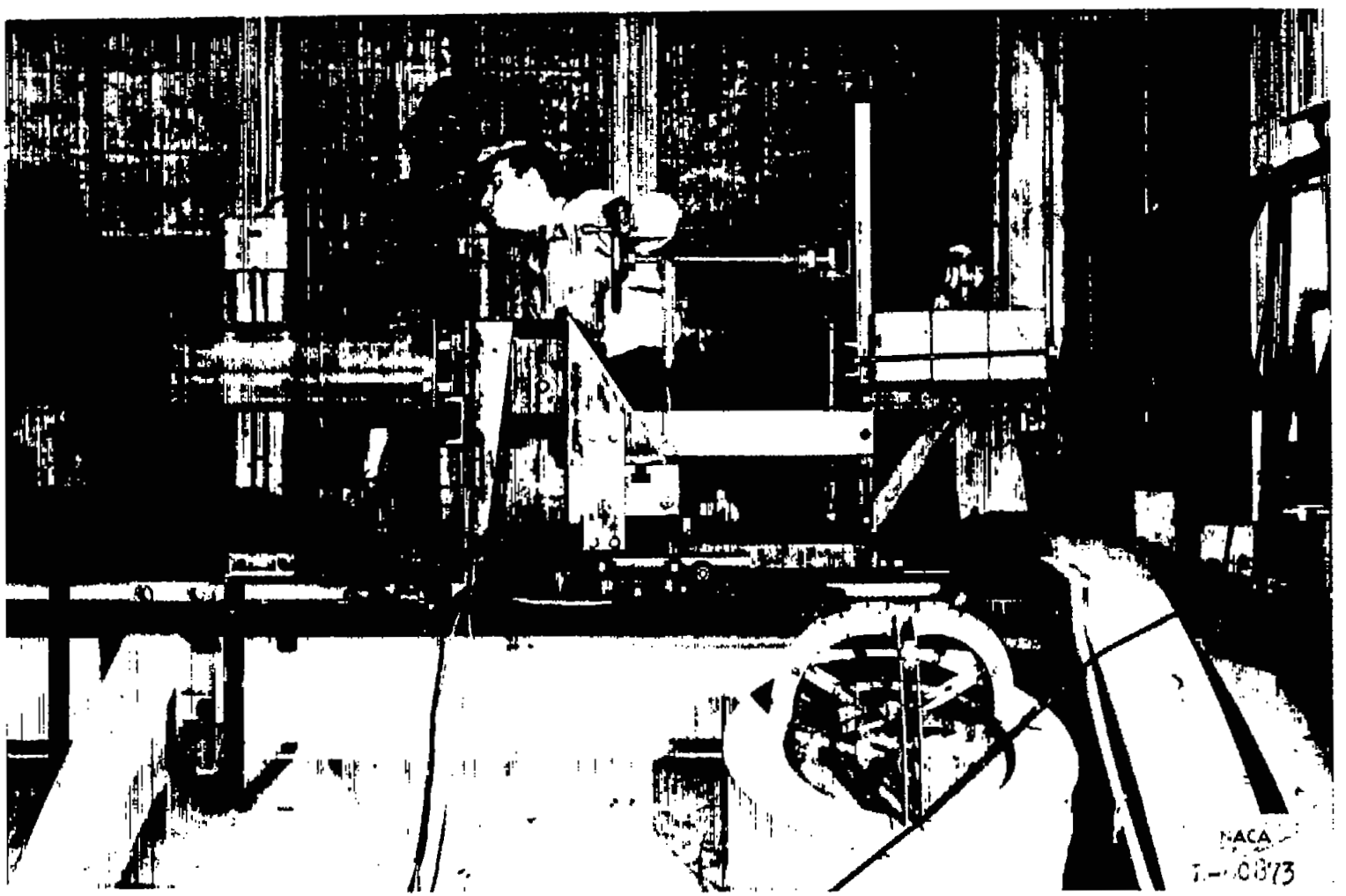

Figure 7.- The optical deflectometer mounted on top of the tunnel test section.

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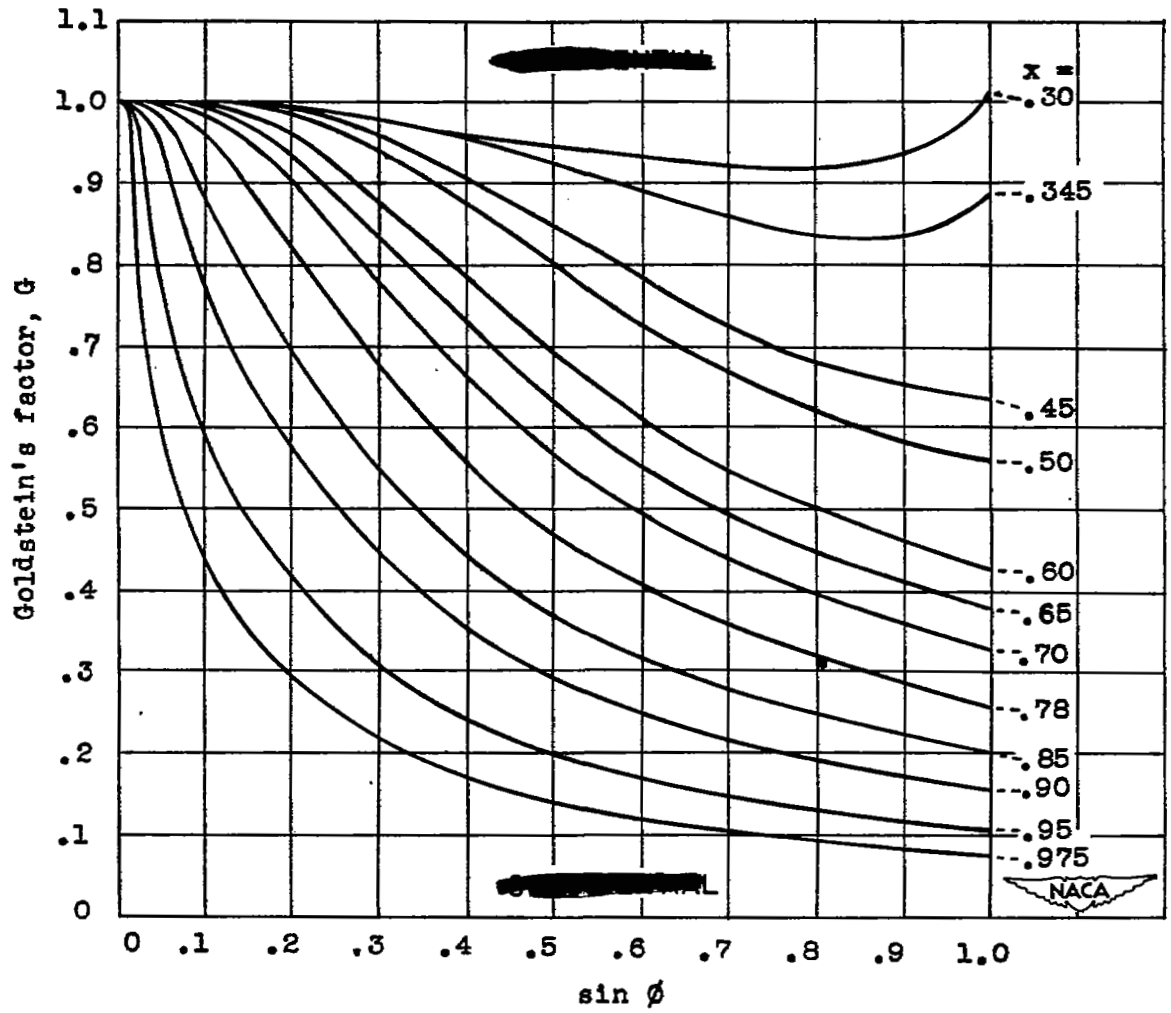


Figure 8.- Goldstein's induced-velocity correction factor for a two-blade propeller.

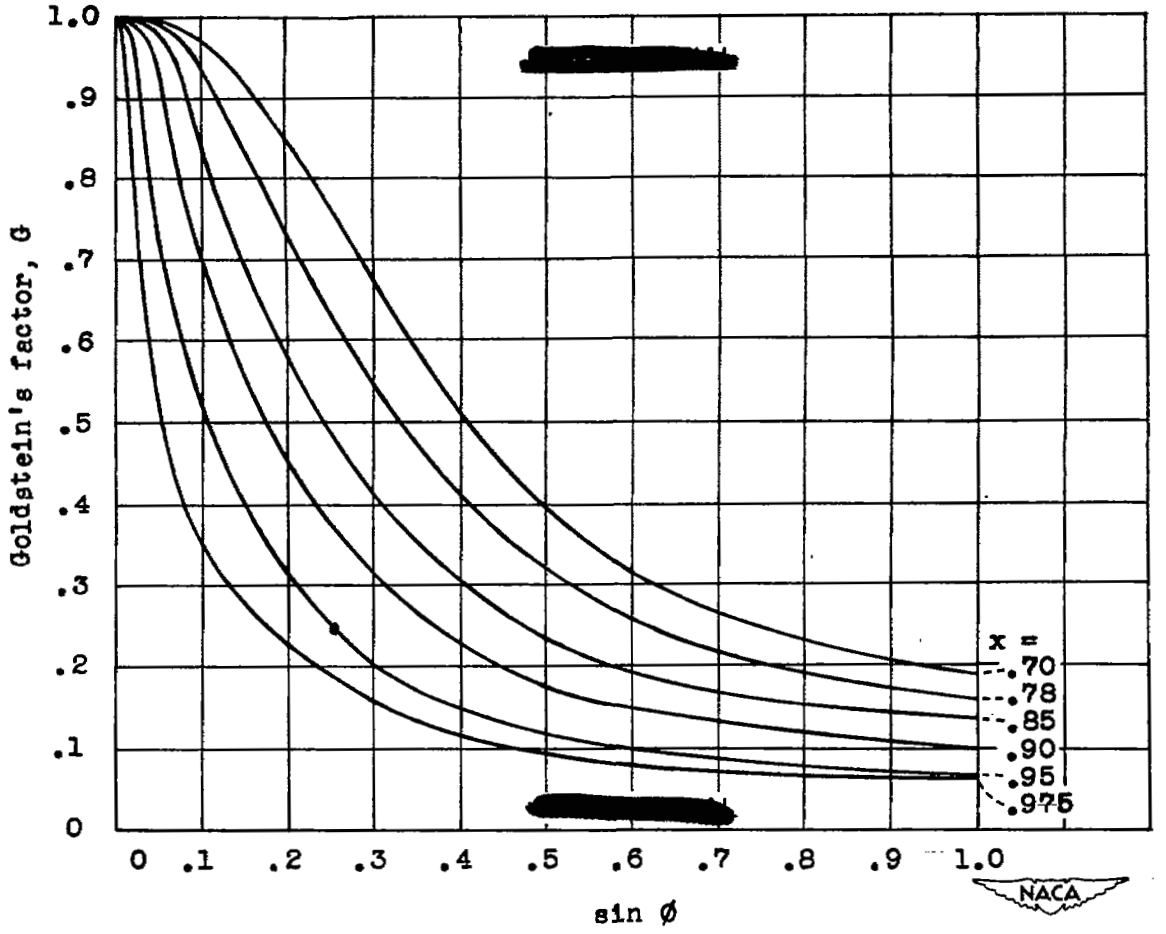


Figure 9.- Goldstein's induced-velocity correction factor for a one-blade propeller. (Extrapolated values.)

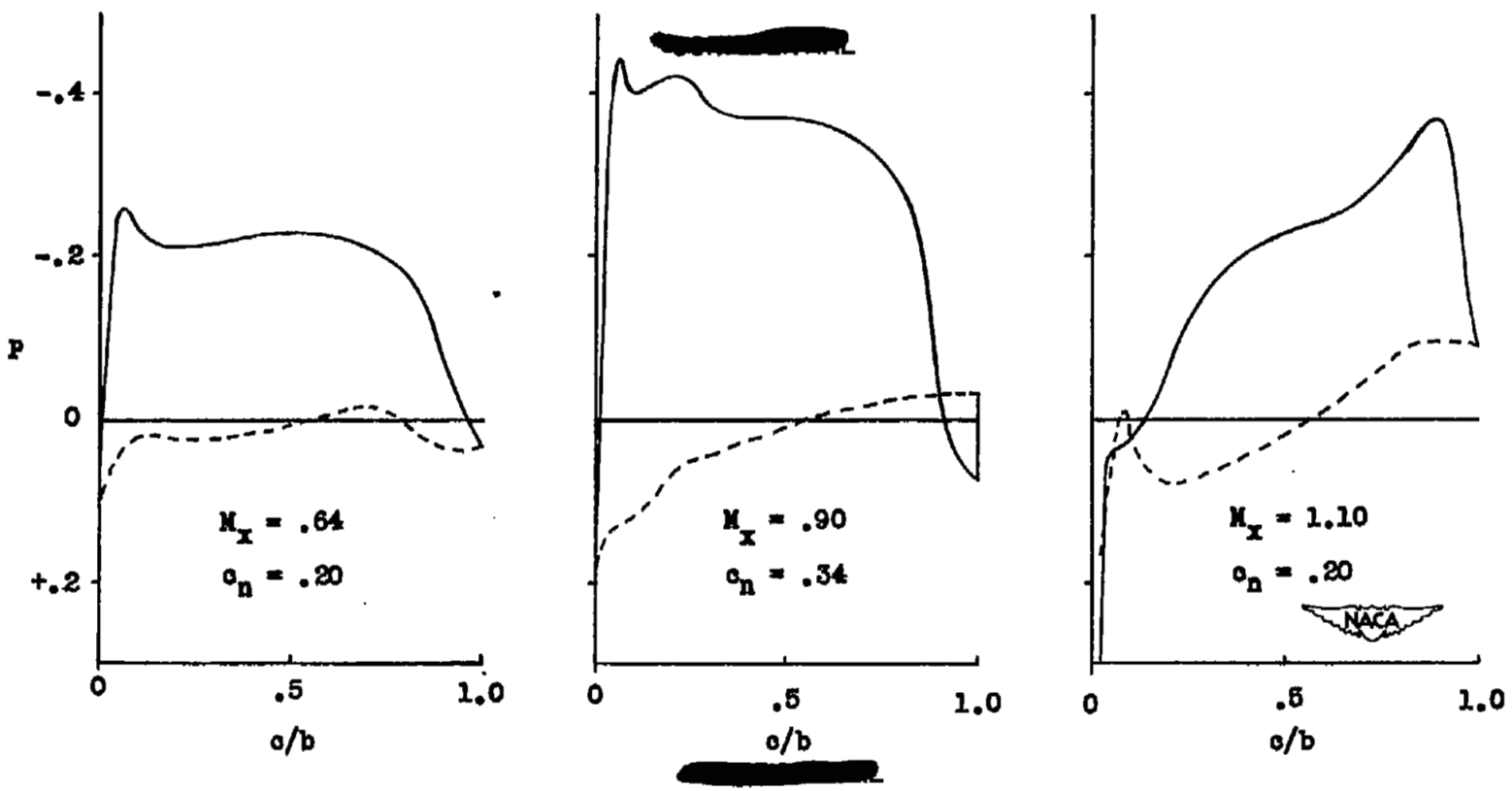


Figure 10.- Typical pressure distributions along the chord of the NACA 16-304.40 blade section located at the 0.95 radius. $\alpha_x = 0.6$ (approx.).

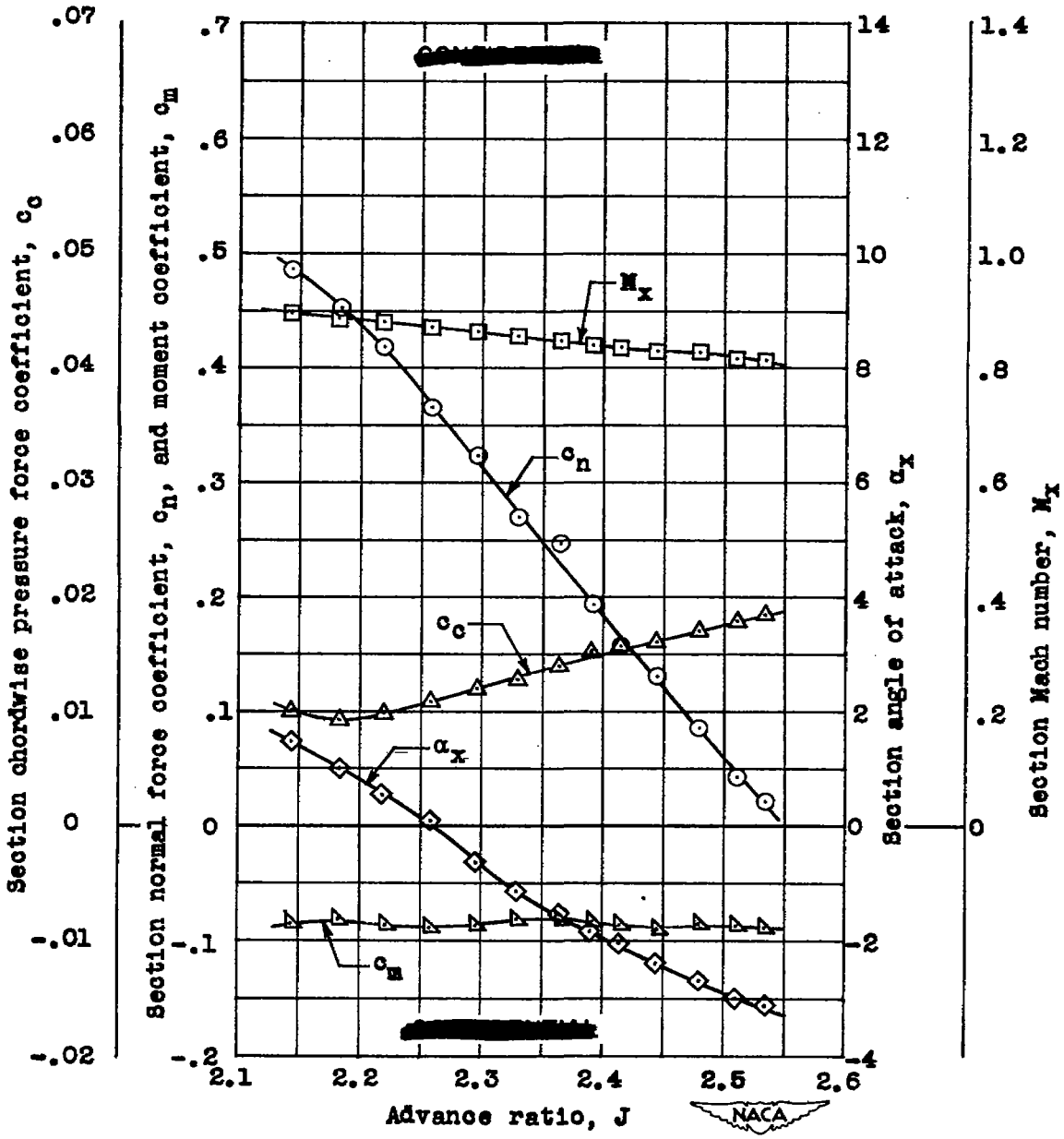


Figure 11.- Variation of section normal-force coefficient, moment coefficient, chordwise-pressure-force coefficient, angle of attack, and Mach number with advance ratio for the blade section at the 0.85 radius, from table 9(e). $\beta_{0.75R} = 45^{\circ}$; M = 0.56.

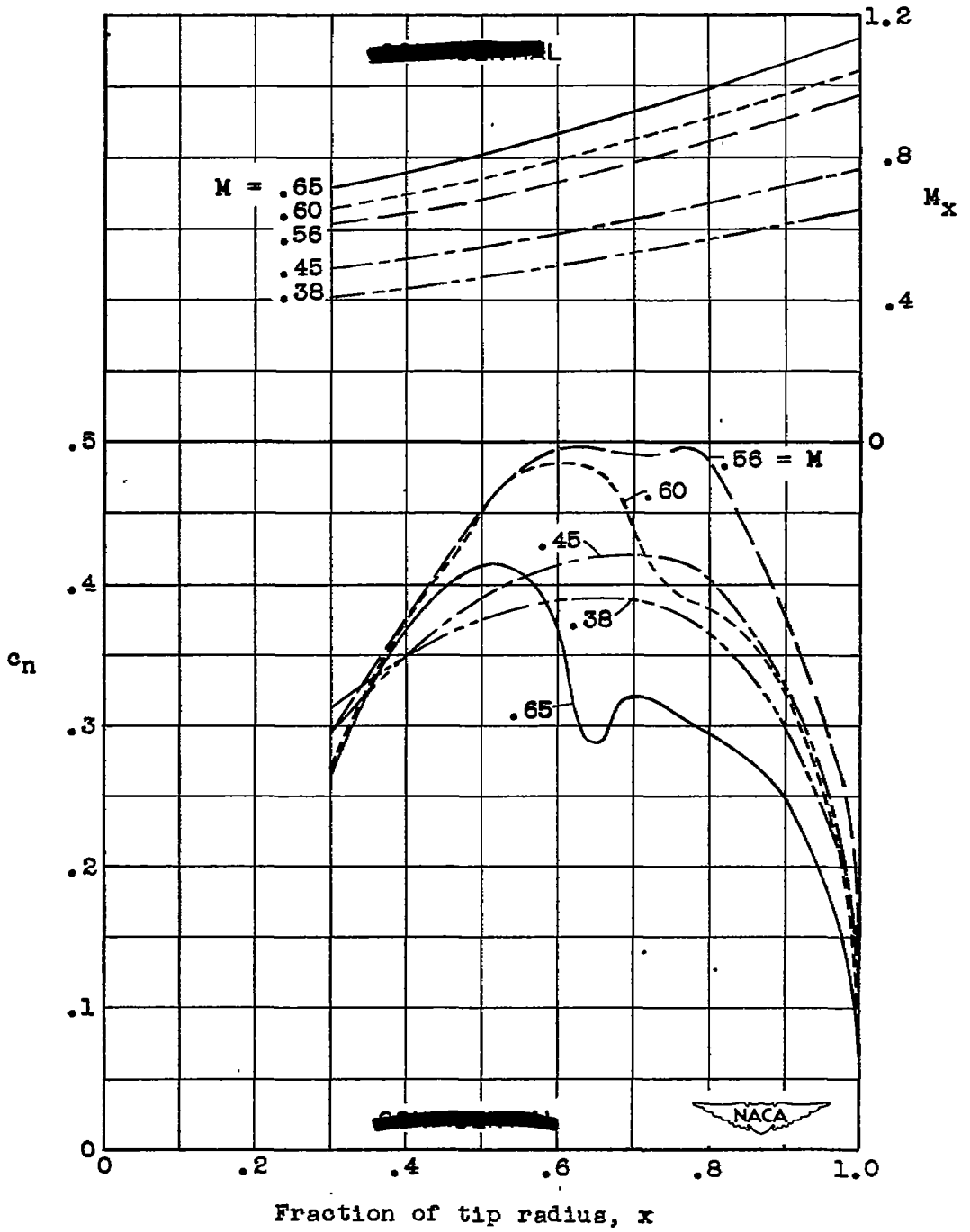


Figure 12.- Variation of the normal-force coefficient and section Mach number along the blade radius. $\beta_{0.75R} = 45^{\circ}$; $J = 2.2$.

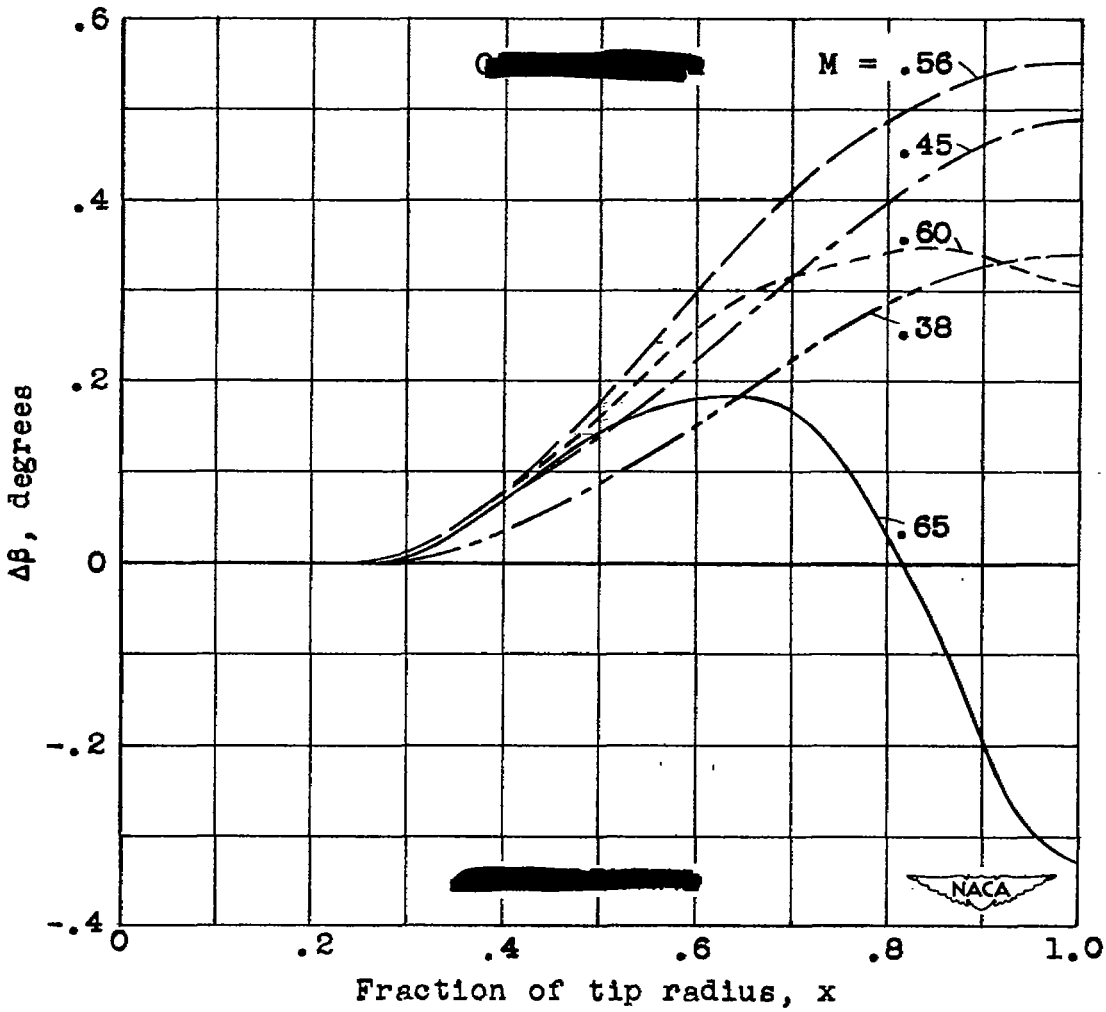
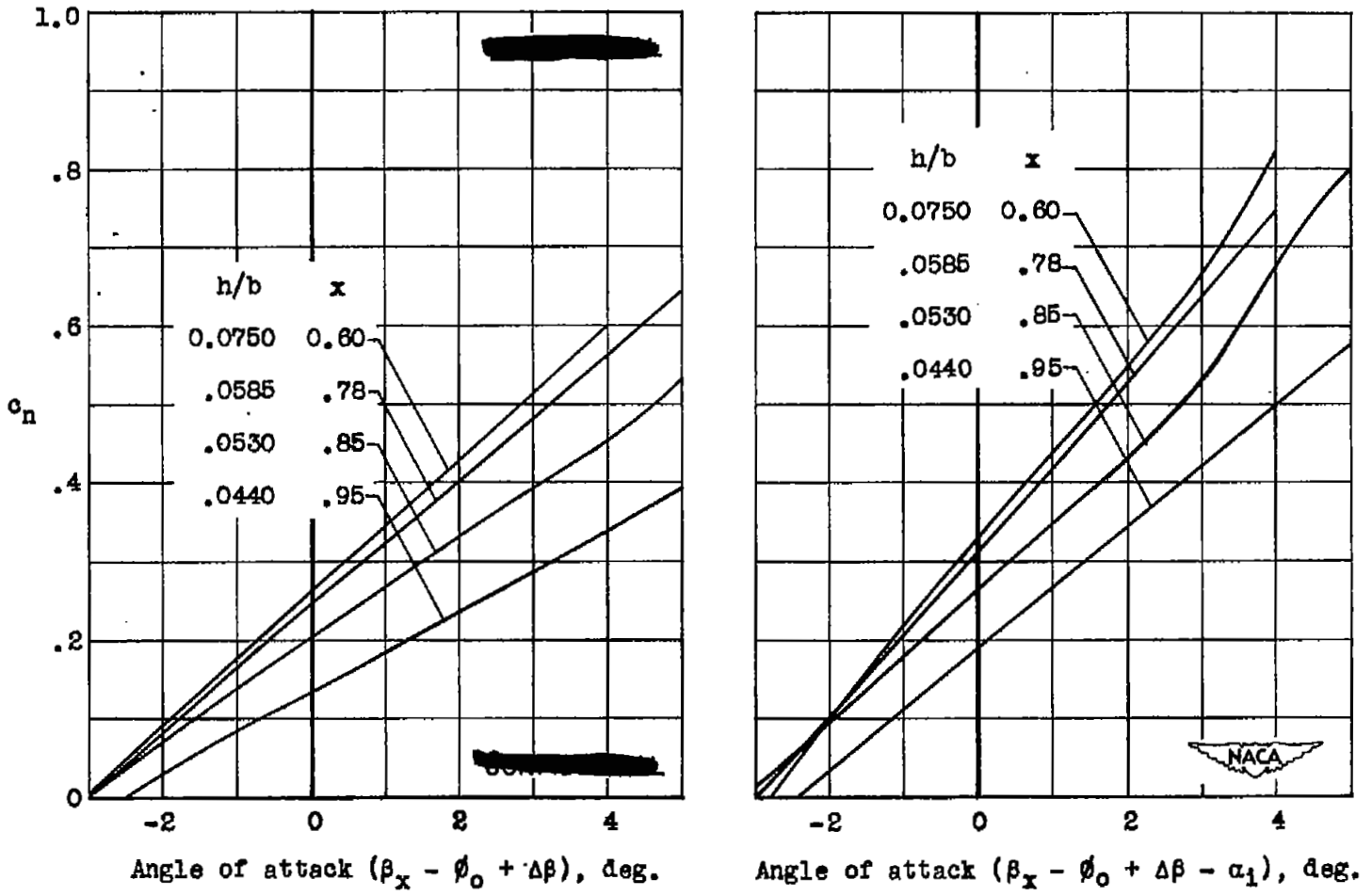


Figure 13.- Variation of the blade deflection $\Delta\beta$ along the blade radius. $\beta_{0.75R} = 45^{\circ}$; $J = 2.2$.



(a) No correction for the induced angle.

(b) Correction applied for the induced angle assuming an optimum loading.

Figure 14.- The effect of the induced-angle correction on the slopes of the normal-force-coefficient curves. $\beta_{0.75R} = 45^{\circ}$; $M_x = 0.65$.

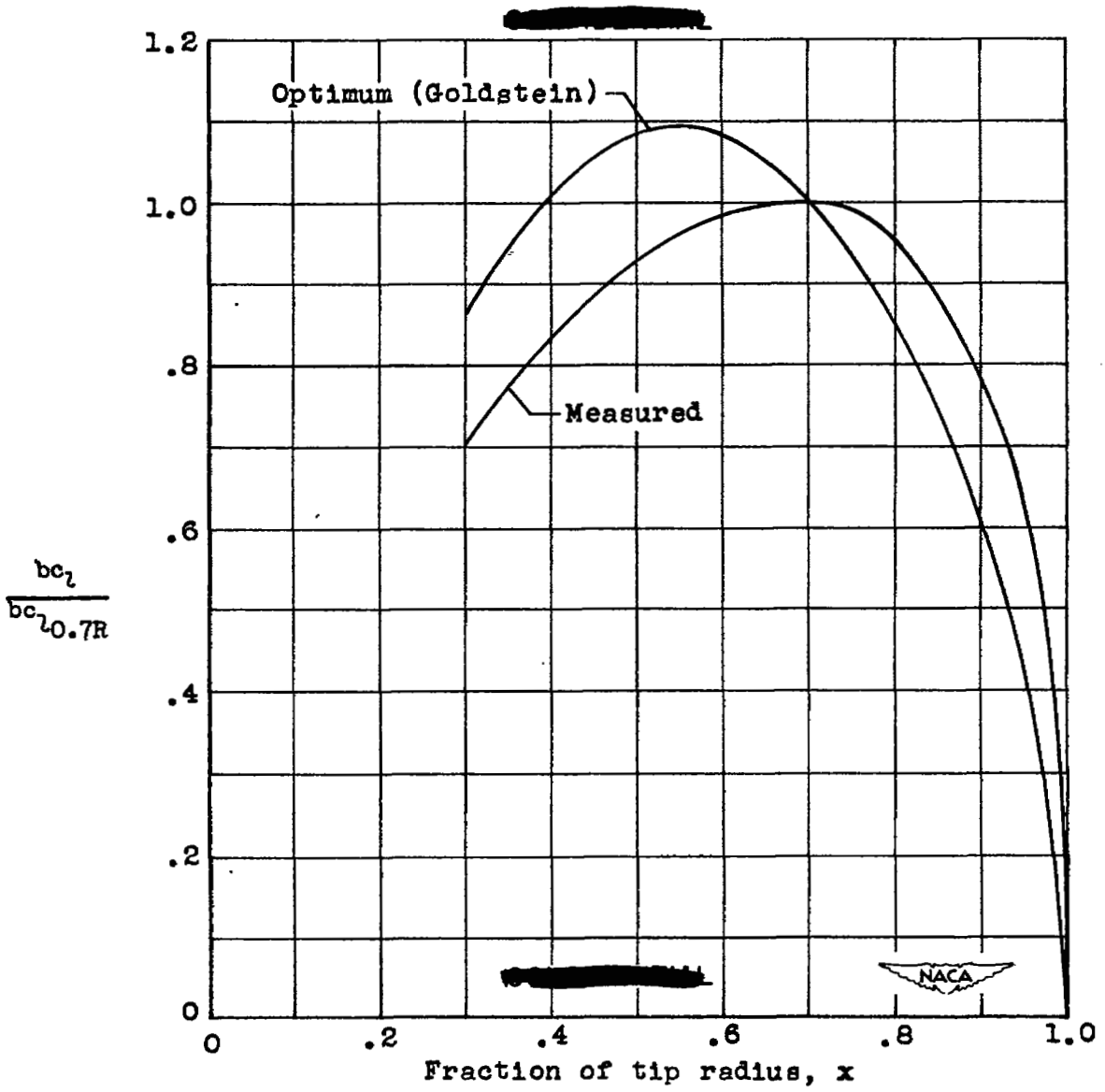


Figure 15.- Comparison of a measured loading curve with the optimum loading for the same condition of operation. $\beta_{0.75R} = 45^{\circ}$; $J = 2.2$; $M = 0.45$.

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Table 1.– Ordinates for the Blade-Section at the 0.975 Radius of the NACA 10–(3)(066)–033 Propeller 19

Table 2.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16–316.25 Propeller Blade Section ($x = 0.30$)

(a) $N = 1140$ rpm; $\beta_{0.75R} = 45^\circ$ 20
(b) $N = 1350$ rpm; $\beta_{0.75R} = 45^\circ$ 21
(c) $N = 1500$ rpm; $\beta_{0.75R} = 45^\circ$ 22
(d) $M = 0.56$; $\beta_{0.75R} = 45^\circ$ 23
(e) $M = 0.60$; $\beta_{0.75R} = 45^\circ$ 24
(f) $M = 0.65$; $\beta_{0.75R} = 45^\circ$ 25

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(a) $N = 1140$ rpm; $\beta_{0.75R} = 45^\circ$ 26
(b) $N = 1350$ rpm; $\beta_{0.75R} = 45^\circ$ 27
(c) $N = 1500$ rpm; $\beta_{0.75R} = 45^\circ$ 28
(d) $N = 1600$ rpm; $\beta_{0.75R} = 45^\circ$ 29
(e) $M = 0.56$; $\beta_{0.75R} = 45^\circ$ 30
(f) $M = 0.60$; $\beta_{0.75R} = 45^\circ$ 31
(g) $M = 0.65$; $\beta_{0.75R} = 45^\circ$ 32

Table 4.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16–308.94 Propeller Blade Section ($x = 0.50$)

(a) $N = 1140$ rpm; $\beta_{0.75R} = 45^\circ$ 33
(b) $N = 1350$ rpm; $\beta_{0.75R} = 45^\circ$ 34
(c) $N = 1500$ rpm; $\beta_{0.75R} = 45^\circ$ 35

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Table 4.– Continued Page

(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 36
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 37
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 38
(g) M = 0.65; $\beta_{0.75R} = 45^\circ$ 39

Table 5.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16–307.50 Propeller Blade Section (x = 0.60)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 40
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 41
(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 42
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 43
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 44
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 45
(g) M = 0.65; $\beta_{0.75R} = 45^\circ$ 46

Table 6.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16–307.00 Propeller Blade Section (x = 0.65)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 47
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 48
(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 49
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 50
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 51
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 52
(g) M = 0.66; $\beta_{0.75R} = 45^\circ$ 53
(h) N = 1140 rpm; $\beta_{0.75R} = 30^\circ$ 54
(i) N = 1350 rpm; $\beta_{0.75R} = 30^\circ$ 55
(j) N = 1500 rpm; $\beta_{0.75R} = 30^\circ$ 56
(k) N = 1600 rpm; $\beta_{0.75R} = 30^\circ$ 57
(l) N = 1800 rpm; $\beta_{0.75R} = 30^\circ$ 58
(m) N = 2000 rpm; $\beta_{0.75R} = 30^\circ$ 59

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Table 6.– Continued

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(n) N = 2160 rpm; $\beta_{0.75R} = 30^\circ$ 60
(o) N = 1350 rpm; $\beta_{0.75R} = 50^\circ$ 61
(p) N = 1350 rpm; $\beta_{0.75R} = 40^\circ$ 62
(q) N = 1350 rpm; $\beta_{0.75R} = 35^\circ$ 63
(r) N = 1350 rpm; $\beta_{0.75R} = 25^\circ$ 64
(s) N = 1350 rpm; $\beta_{0.75R} = 20^\circ$ 65

Table 7.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16–306.62 Propeller Blade Section (x = 0.70)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 66
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 67
(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 68
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 69
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 70
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 71
(g) M = 0.65; $\beta_{0.75R} = 45^\circ$ 72
(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 73
(i) One-blade propeller; M = 0.57; $\beta_{0.75R} = 45^\circ$ 74
(j) One-blade propeller; M = 0.59; $\beta_{0.75R} = 45^\circ$ 75
(k) One-blade propeller; M = 0.61; $\beta_{0.75R} = 45^\circ$ 76
(l) One-blade propeller; M = 0.64; $\beta_{0.75R} = 45^\circ$ 77

Table 8.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16–305.85 Propeller Blade Section (x = 0.78)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 78
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 79

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Table 8.– Continued

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(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 80
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 81
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 82
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 83
(g) M = 0.65; $\beta_{0.75R} = 45^\circ$ 84
(h) N = 1140 rpm; $\beta_{0.75R} = 30^\circ$ 85
(i) N = 1350 rpm; $\beta_{0.75R} = 30^\circ$ 86
(j) N = 1500 rpm; $\beta_{0.75R} = 30^\circ$ 87
(k) N = 1600 rpm; $\beta_{0.75R} = 30^\circ$ 88
(l) N = 1800 rpm; $\beta_{0.75R} = 30^\circ$ 89
(m) N = 2000 rpm; $\beta_{0.75R} = 30^\circ$ 90
(n) N = 2160 rpm; $\beta_{0.75R} = 30^\circ$ 91
(o) N = 1350 rpm; $\beta_{0.75R} = 50^\circ$ 92
(p) N = 1350 rpm; $\beta_{0.75R} = 40^\circ$ 93
(q) N = 1350 rpm; $\beta_{0.75R} = 35^\circ$ 94
(r) N = 1350 rpm; $\beta_{0.75R} = 25^\circ$ 95
(s) N = 1350 rpm; $\beta_{0.75R} = 20^\circ$ 96

Table 9.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16–305.30 Propeller Blade Section ($x = 0.85$)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 97
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 98
(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 99
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 100
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 101
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 102
(g) M = 0.66; $\beta_{0.75R} = 45^\circ$ 103
(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 104

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Table 9.– Continued Page

(i) One-blade propeller; M = 0.57; $\beta_{0.75R} = 45^\circ$ 105
(j) One-blade propeller; M = 0.59; $\beta_{0.75R} = 45^\circ$ 106
(k) One-blade propeller; M = 0.61; $\beta_{0.75R} = 45^\circ$ 107
(l) One-blade propeller; M = 0.64; $\beta_{0.75R} = 45^\circ$ 108

Table 10.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16-304.80 Propeller Blade Section (x = 0.90)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 109
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 110
(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 111
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 112
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 113
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 114
(g) M = 0.65; $\beta_{0.75R} = 45^\circ$ 115

Table 11.– Pressure Coefficients and Aerodynamic Characteristics of an NACA 16-304.40 Propeller Blade Section (x = 0.95)

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 116
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 117
(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 118
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 119
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 120
(f) M = 0.60; $\beta_{0.75R} = 45^\circ$ 121
(g) M = 0.65; $\beta_{0.75R} = 45^\circ$ 122
(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 123

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Table 11.– Continued

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(i) One-blade propeller; M = 0.56; $\beta_{0.75R} = 45^\circ$ 124
(j) One-blade propeller; M = 0.59; $\beta_{0.75R} = 45^\circ$ 125
(k) One-blade propeller; M = 0.61; $\beta_{0.75R} = 45^\circ$ 126
(l) One-blade propeller; M = 0.64; $\beta_{0.75R} = 45^\circ$ 127

Table 12.– Pressure Coefficients and Aerodynamic Characteristics of the Blade Section at the 0.975 Radius

(a) N = 1140 rpm; $\beta_{0.75R} = 45^\circ$ 128
(b) N = 1350 rpm; $\beta_{0.75R} = 45^\circ$ 129
(c) N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 130
(d) N = 1600 rpm; $\beta_{0.75R} = 45^\circ$ 131
(e) M = 0.56; $\beta_{0.75R} = 45^\circ$ 132
(f) M = 0.62; $\beta_{0.75R} = 45^\circ$ 133
(g) M = 0.65; $\beta_{0.75R} = 45^\circ$ 134
(h) One-blade propeller; N = 1500 rpm; $\beta_{0.75R} = 45^\circ$ 135
(i) One-blade propeller; M = 0.57; $\beta_{0.75R} = 45^\circ$ 136
(j) One-blade propeller; M = 0.59; $\beta_{0.75R} = 45^\circ$ 137
(k) One-blade propeller; M = 0.61; $\beta_{0.75R} = 45^\circ$ 138
(l) One-blade propeller; M = 0.65; $\beta_{0.75R} = 45^\circ$ 139

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