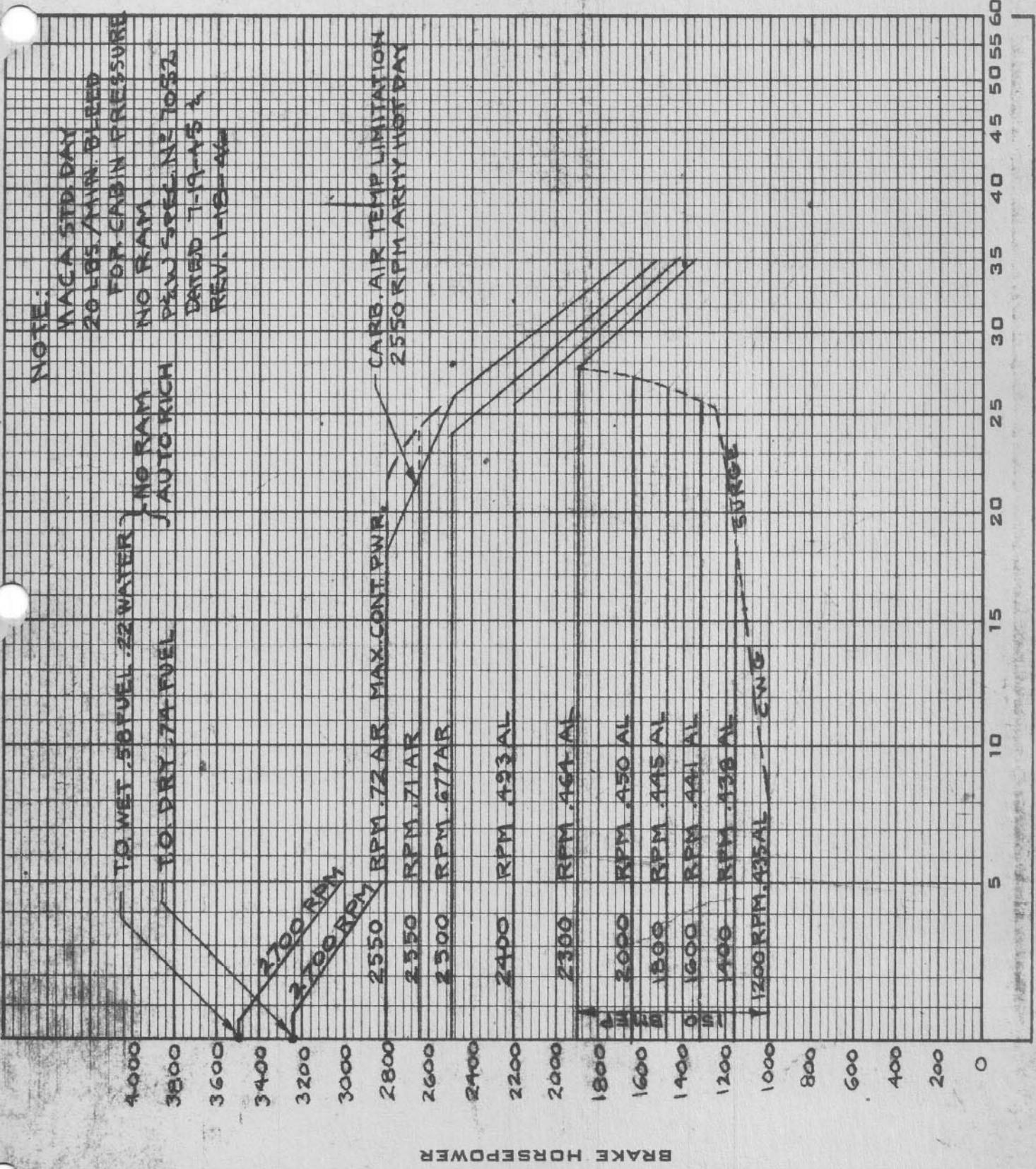
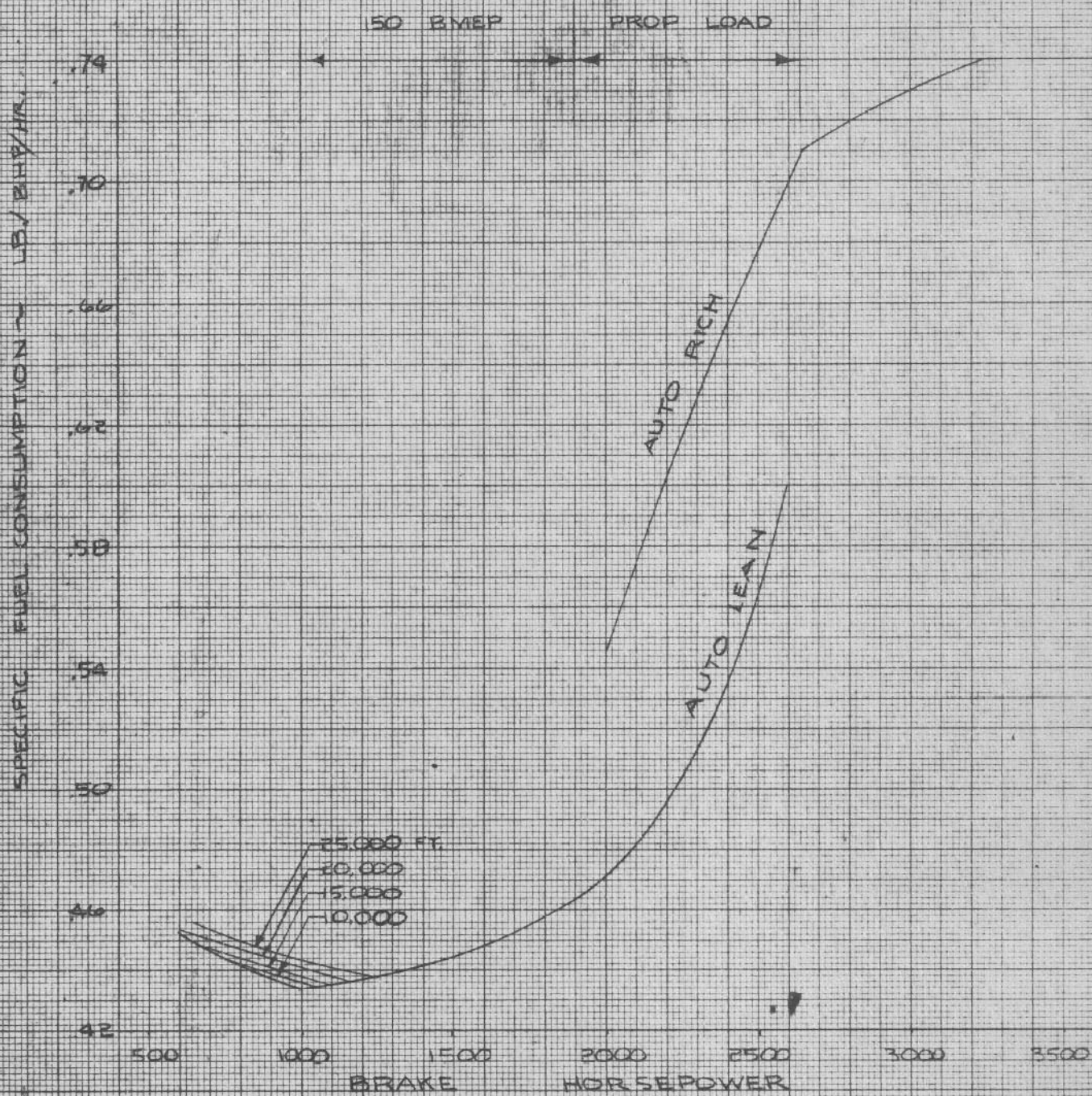


F. POWER PLANT DATA

All power plant data contained herein are calculated for the Pratt & Whitney Model TSB3-G engine to be supplied in accordance with Pratt & Whitney Specification 7052 dated July 19, 1945, and revised January 18, 1946, including curves T-984, sheets 1 and 2 revised 12-27-45 and 12-6-45 respectively, and Appendix "A" dated January 18, 1946.



CALC.	2-8-46	REVISED	DATE	POWER AVAILABLE NACA STD. DAY	377-10 -33
TRAC.	<i>Mr. Linsky 2-1</i>				P&W T5B3-G ENG. WITH G.E. B4 TURBO BOEING AIRCRAFT COMPANY
CHECK				SEATTLE	
APPR.	<i>Michael 7/14</i>				65
APPR.					



CALC	EWJ	2/2/45	REVISED	DATE
CHECK			Holtbrook	12/12/45
APR			NS	2/1/46
APR				
TRAC	Holtbrook	2/8/46		

ENGINE FUEL CONSUMPTION
 P&W R-4360 SPEC 705Z

BOEING AIRCRAFT COMPANY
 SEATTLE WASHINGTON

377-10
 -38
 D-1582
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 OF

CONTRACT NO.

PRATT & WHITNEY AIRCRAFT
 Division United Aircraft Corporation
 East Hartford 8, Connecticut, U. S. A.



A.T.C. No. — See Special Notes
 Fuel Grade — 115/145

Model — Wasp Major TSB3-G
 Spec. No. 7052

WASP MAJOR TSB3-G ENGINE SPECIFICATION

A Single Stage, Single Speed Engine
 Suitable for Use with Exhaust Driven Supercharger

GUARANTEED DYNAMOMETER PERFORMANCE

Power Curve No. T-984

BHP	Metric		BHP	English	
	RPM	ALT. meters		RPM	ALT. feet
Take-off Power					
3550	2700	150	3500	2700	500
3295	2700	215	3250	2700	700
Normal Rated Power					
2685	2550	1675	2650	2550	5500
Stand-by Power					
2840	2550	1070	2800	2550	3500
Maximum continuous power for use with one or more engines out of operation and in meeting requirements for aircraft certification					

DESCRIPTION AND DIMENSIONS

Installation Drawing No. 97801

Type — 28 Cylinder Air-Cooled Radial

146 mm	Bore	5.75 inches
152.5 mm	Stroke	6.00 inches
71.5 liters	Total Displacement	4363 cu. inches
6.70:1	Compression Ratio	6.70:1
6.375:1	Impeller Gear Ratio	6.375:1
.381	Propeller Gear Ratio	.381
Clockwise	Propeller Shaft Rotation, viewed from antipropeller end	Clockwise
60-A	Propeller Shaft Spline SAE No.	60-A
1359 mm	Engine Diameter, Maximum	53.50 inches
2457 mm	Engine Length, Maximum	96.75 inches
See Installation Drawing	Approximate Center of Gravity	See Installation Drawing
115/145	Fuel Knock Value C.F.R. Method, F3 Lean, F4 Rich	115/145
100	Oil Grade S.U.S. at 210 F	100
11.2 grams/BHP/hr	Oil Consumption Maximum @ Normal Rated Power and Speed	.025 lb/BHP/hr
6.7 grams/BHP/hr	@ 1850 B.H.P. and 2270 R.P.M.	.015 lb/BHP/hr

DRY WEIGHT

1574 kgs.

Including Standard Accessory Equipment

3470 lbs.

MODEL WASP MAJOR T9B3-G
 PROP. GEAR RATIO .361
 FUEL GRADE 115/145 DATE 7-19-45

PERFORMANCE WITH GUAR. BSFC

B.H.P. BRAKE SPECIFIC CONS.

FUEL .580
 WATER .220

T.O. WITH WATER .750

T.O. WITHOUT WATER .720

STAND-BY POWER .710

NORMAL .650

90% .580

80% .540

75% .510

ESTIMATED

TAKE-OFF WITH WATER

TAKE-OFF WITHOUT WATER

2700 R.P.M.

2700 RPM

2400

2200

2000

1800

1600

1400

1200

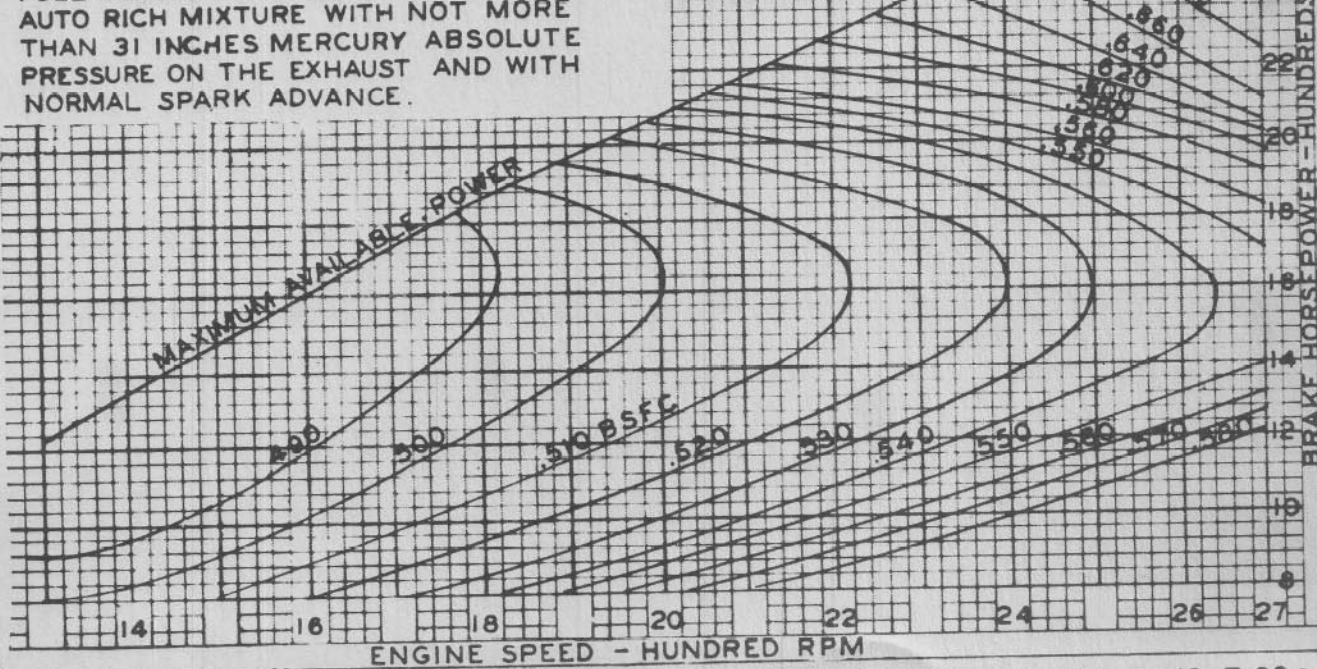
STAND-BY POWER

NORMAL RATED POWER

2350

THESE CURVES SHOW ESTIMATED SPECIFIC FUEL CONSUMPTION OBTAINABLE WITH AUTO RICH MIXTURE WITH NOT MORE THAN 31 INCHES MERCURY ABSOLUTE PRESSURE ON THE EXHAUST AND WITH NORMAL SPARK ADVANCE.

T.O. WITH H₂O-.580 BSFC
 AIR DRY - T.O. 750



NOTE:

LINE REPRESENT POWER CHARACTERISTICS OF THE ENGINE WITHOUT AID FROM THE EXHAUST TURBINE, AND ARE BASED ON STANDARD ALTITUDE ATMOSPHERIC TEMPERATURE AND PRESSURE IN THE CARBURETOR PROPER AND STANDARD ALTITUDE ATMOSPHERIC PRESSURE ON EXHAUST.

ALTITUDE - THOUSAND FEET

PRATT & WHITNEY AIRCRAFT

Division United Aircraft Corporation
East Hartford 8, Connecticut, U. S. A.

Spec. No. 7052
Appendix A

WASP MAJOR TSB3-G ENGINE SPECIFICATION

APPENDIX A

for Boeing Model 377 Airplane

1. No manifold pressure regulator shall be supplied.
2. Engine Starter shall be installed on pad number one.
3. When operating on a Pratt and Whitney Aircraft test stand at normal rated manifold pressure and normal rated speed with grade 1120 oil at 85 psi oil pressure and an oil inlet temperature of 85°C it is estimated that the oil flow will not exceed 350 pounds per minute and the heat rejection will not exceed 10,500 BTU per minute.
4. We agree to make every effort to have the use of 130 F carburetor air temperature for operations above 2200 H.P. with automatic rich mixture approved by the C.A.A.
5. We agree to transmit final engine acceptance test sheets for prototype flight testing upon request but not necessarily in advance of engine delivery.
6. A torquemeter shall be supplied.

Date: 1-18-46

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