

Unclassified
CONFIDENTIAL

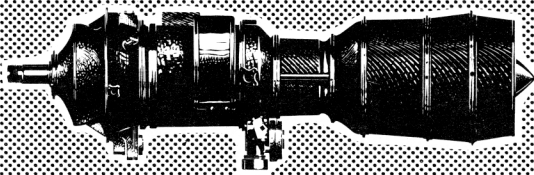
D2
Wright Aero.
YT47-W-1

Deleted
4/1/55; Add No. 3
15 Jul 55

Aircraft Engine Characteristics Summary

TURBO-PROP..... YT 47-W-1

(TP-51CA1)



Wright Aero
Spec. 876
20 Jul 51
(Not approved)

FEATURES

The YT-47-W-1 is a twin-spool turbo-prop engine incorporating an annular combustion chamber, fixed area jet nozzles and anti-icing provisions. Low strategic material content.

AVAILABILITY

Engine Mock-up Inspection	Jul 1954
Experimental Engine	Dec 1954
Mock-up for Airplane.....	Sep 1954
Installation Engine.....	May 1955
50 Hr. Preliminary Rating Test...	May 1955
150 Hr. Qualification Test	May 1956

PROCUREMENT

NUMBER TO BE DELIVERED DURING FISCAL YEAR

CONTRACTUAL

Letter Contract AF-18488 covers initial engineering and development of YT47-W-1 and YT49-W-1 engines with the ultimate aim a production version turbo-prop engine which incorporates the desirable features of the J65-W-1.

STATUS

Experimental, design phase nearing completion.

GENERAL

Compressor: Axial, twin-spool, (One low pressure, 10-stage; one high pressure, 5-stage)	Oil: Synthetic
Max Design Pressure Ratio/SLS:12:1	Ignition:.....Bendix-Scintilla igniter plugs
Combustion Chamber:.....Single, annular with vaporizer burners	Power Control:.....Hamilton Standard
Turbine:.....(2) Axial, one three-stage drives low pressure compressor; one single-stage drives high press. compressor)	T.O. Rated Power Airflow:120 lb/sec
Exhaust Nozzle: Fixed area	Red. Gear Ratio:..... 0.143
T.O. Rated Power Turb. Inlet Temp: -----	Prop. Shaft Size:..... SAE-80 (CW rotation)
Fuel: JP-4	

SIZE & WEIGHT

Length:	166.8 in.
Diameter:	42.0 in.
Weight (dry):	4859 lb

UTILIZATION

Planned as possible installation in B-47 type aircraft.

Classification cancelled or changed to Unclassified
 AUTH: AG 001 H J K L M N O P Q R S T U V W X Y Z
 By A. R. Robertson 1 Jan 68
 Signature and Grade 1 Aug 67

15 DECEMBER 1952

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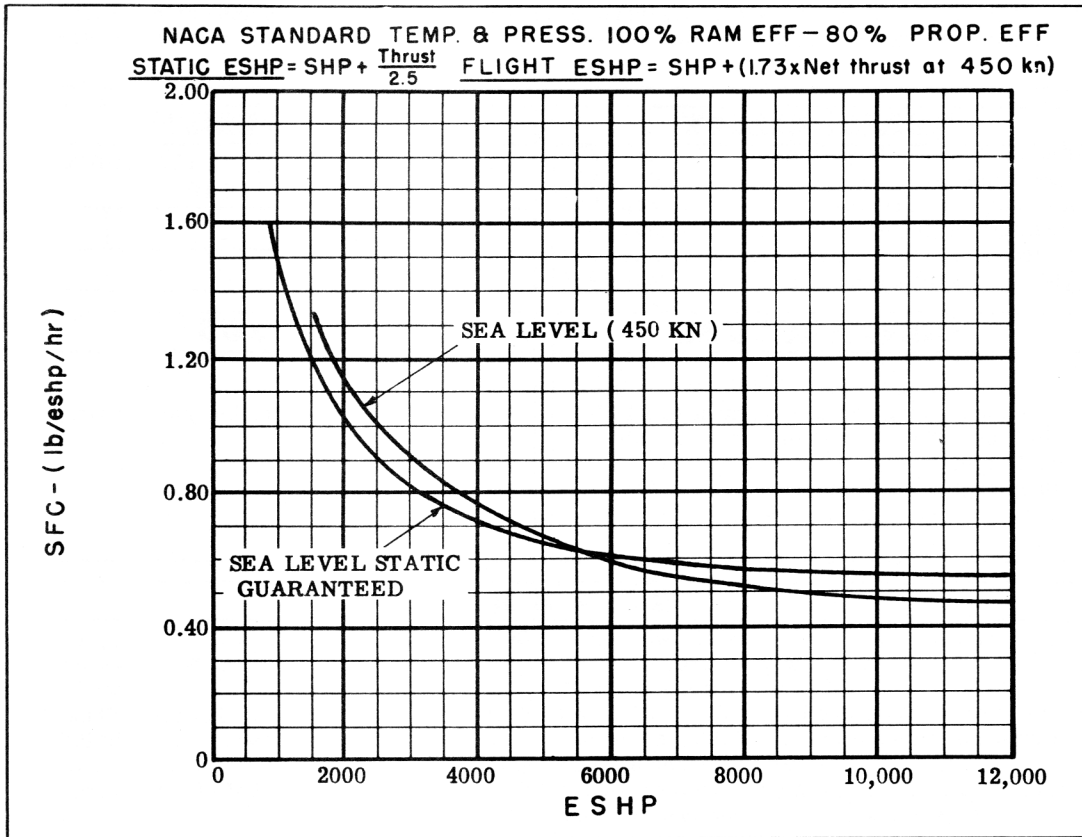
YT47-W-1

2nd Ed addn # 13

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Performance

GUARANTEED RATINGS AT STANDARD SEA LEVEL STATIC CONDITIONS				
RATING	RPM	SHP	JET THRUST (lb)	FUEL CONS. (lb/hr)
Take-off (5 min)	7700	11,400	3050	6380
Military (30 min)	7700	11,400	3050	6380
Normal (cont)	7500	10,000	2750	5750
Cruise (80% norSHP)	7200	8000	2330	4900
Cruise (60% norSHP)	6880	6000	1900	4010
GUARANTEED OPERATING LIMITS				
Maximum Altitude.....	55,000	ft	Max Starting Altitude.....	30,000
Military Ram Power Rating.....	14,000	shp	Normal Ram Power Rating.....	13,636
EST. PERFORMANCE AT 35000 FT 100% RAM EFF - 80% PROP EFFICIENCY				
RATING	AIRSPEED 450 KN		MAX AIRSPEED KN	
	ESHP	SFC(lb/eshp/hr)	ESHP	SFC(lb/eshp/hr)
Military (30 min)	7100	0.420		
Normal (cont)	6560	0.405		



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