

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAD Model	Military Model	Model Spec. No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Super Ratio	Comp. Ratio	Fuel Grade (or Octane)	TC No.	No. Built	Production Period	Installations	
			Take-Off	Normal												
<u>Wright Gipsy-L320-4 cylinder in line air cooled, 4.5" Bore, 5.0" Stroke</u>																
L320, L320A	-	105	90/1950	90/1950	285	43.22	34.19	1:1	None	5.0:1	65	40	68	1930-34	CW Travel Air, Fairchild 22	
													<u>L320 Total</u>	<u>68</u>		
<u>Wright-Whirlwind 540-5 cylinder air-cooled radial-5.0" Bore, 5.5" Stroke</u>																
R540A	R540-1	-	165/2000	165/2000	-	-	-	1:1	7.05	5.1:1	73	-	-		} Stearman PT-9 Verville PT-10 Curtiss Robin J1, CW Travel Air E-4000	
R540E	R540-3	118	175/2000	175/2000	410	41.09	45.0	1:1	7.05	5.1:1	73	23				
R540E1	-	-	190/2100	190/2100	415	-	45.0	1:1	7.05:1	6.0:1	73	-				
R540D	-	102	180/2000	165/2000	405	40.63	45.0	1:1	7.09:1	5.1:1	73	23				
													<u>R540 Total</u>	<u>0</u>		
<u>Curtiss Challenger R600-6 cylinder Radial Air Cooled-5.125" Bore-4.875" Stroke</u>																
R600	-	106	185/2000	185/2000	445	42.63	41.75	1:1	None	5.2:1	65	5	42	1931-34	Command-Aire 5C-3, Curtiss Fledgling, Curtiss Robin C1, C-2, and 4C-1A, CW Sedan 15-C, C-W Travel Air C-4000	
													<u>R600 Total</u>	<u>42</u>		
<u>Wright Whirlwind R760-7 Cylinder Radial Air Cooled, 5.0" Bore - 5.5" Stroke</u>																
R760D	-	103	240/2000	240/2000	470	40.72	45	1:1	7.04:1	5.1:1	73	26	*		} Stinson SM-2AC; Waco CGC, CSO; CW Sedan 15-D, CW Travel Air 4-D, 10-D	
R760E	-	120	250/2000	250/2000	545	42.72	45	1:1	7.05:1	5.1:1	73	26	*			
R760E1	-	114	300/2250	285/2100	570	42.44	45	1:1	7.05:1	6.1:1	73	94	*			
R760E3	-	316	360/2300	345/2200	570	42.72	45	1:1	10.6:1	7.0:1	87	-				
R760F	-	583	375/2400	325/2300	635	-	45	1:1	-	6.3:1	87	-				
													(Representative Commercial Models Only are Listed)			
													* Total Commercial (all models)	1179	5/29-1/45	
R760ET	R760-1	115	235/2000	235/2000	540	42.44	45	1:1	None	6.1:1	73	126	4	12/39	St. Louis Aircraft XPT-15, YPT-15, PT-15 NAF H3N-1, -3	
R760ET	R760-2	451	235/2000	235/2000	540	42.44	45	1:1	None	6.1:1	73		80	5/37-10/37	NAF H3N-1	
R760ET	R760-4	451	235/2000	235/2000	532	42.91	45	1:1	None	6.0:1	73		1	4/38	NAF X H5N-1, H5N-1, Fairchild JK-1, F-45	
R760EZ	R760-6	243	350/2400	320/2200	570	42.44	45	1:1	9.17:1	6.3:1	80				NAF H3N-3	
R760ET	R760-8	764	235/2000	235/2000	554	42.87	45.25	1:1	None	6.1:1	73		150	7/40-3/41		
													Total Military	235		
													Commercial	1179		
													<u>760 Total</u>	<u>1414</u>		

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			Take-Off	Normal											
<u>R-975 - 9 cylinder, Air Cooled Radial, 5" Bore, 5-1/2 Stroke - Whirlwind</u>															
R-975D	-	104A	325/2000	300/2000	545	41-7/16	47	1:1	7.8:1	5.1:1		21	***		Atlantic C-9 Douglas Y1C-21 Consolidated BT6 Ford C-9 Gen. Avia. C-2B Gen. Avia. C-7A Stearman BT3, 76C3 Stearman YPT-9C Cunningham Hall PT6E North American - BT-9, -9A, 9B, 9C, 9D, Yale, NA16, NA34, NA46, NA57 Pittsairn-Larsen YG-2 (Autogiro) Kellett YG-2 Vultee BT-15 Avro Anson Curtiss-Wright 19R SNC-1, Falcon 22 Goodyear Airship K3, K4, K5, K6 Cann Car Avro Anson Koolhoven K-51, FK-56 Bellanca FN, 31-42 Lockheed 10 Beech D-17R, 18R, 18 Fokker C14W, T-8-W Ordnance Dept. Ford 4-AT-E
CR-975E	-	122B	-	330/2050	630	45-11/32	45	1.57:1	None	5.1:1	73	21	***		
R-975EC2	(Tank Engine)	295	-	400/2400				1:1	None	6.3:1	87	53395	**	1/38 - 6/45	
R-975EC3	(Tank Engine)	571	-	355/2400					None			23		1/39 - 3/39	
CR-975E1	-	167	-	365/2150	645	45-11/32	45	1.57:1	None	6.0:1	73	87	***		
CR-975E2	*	168A	-	420/2200	695	45-11/32	45	1.57:1	None	6.3:1	80	64	***		
CR-975E3	*	148A	-	440/2250	645	45-11/32	45	1.57:1	None	6.3:1	87		***		
SR-975E4	-	126D	465/2300	385/2300	685	43-15/32	45	1:1	10.15:1	7.0:1	87		***		
R-975F	-	577B	475/2400	425/2300	733	42.48	45	1:1	10.15:1	6.3:1	91	211	***		
R-975E27	R 975-7	648	400/2200	400/2200	695	42.48	45	1:1	7.8:1	6.9:1	92	438		5/36 - 3/38	
R-975E3	R 975-11	699	440/2250	420/2200	700	43.00	45.25	1:1	10.15:1	6.3:1	92	3197		9/40 - 1/44	
	R 975-24											1		5/36 - 5/36	
R975E3	R 975-26	460	450/2250	420/2200	660	43-15/32	45	1:1	10.15:1	6.3:1	87	1		11/37 - 11/37	
R-975E680	R975-28-30	680	450/2250	420/2200	700	43.00	45.25	1:1	10.15:1	6.3:1	92	850	**	10/40 - 1943	
												2877			
												57905			
												<u>975 Total</u>	<u>60782</u>		

* Direct Drive Also Available
** Includes Licensee Production
*** Total Commercial Production

V1150-12 Cyl. 60° Vee Liquid Cooled 4.5" Bore 6" Stroke (Curtiss D-12)

V1150-E		112	443/2300	435/2300	685	56-3/4	34-3/4	1:1		5.3:1	80	10	80	1931-1932	
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WAD Model	Military Model	Model Spec.No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Super Ratio	Comp. Ratio	Fuel Grade (or Octane)	TC No.	No. Built	Production Period	Installations
			Take-Off	Normal											
R-1300 (C7) - 7 cylinder, air cooled radial, 6.125" bore, 6.312" Stroke - Cyclone 7															
R1300A2		624A	600/2200	550/2150	875	44-1/4	50	1:1	7.0:1	6.45:1	87				
R1300A642		642A	600/2200	550/2150	885	46.38	50.13	1:1	7.0:1	6.45:1	100				
853C7BA1	R1300-1	853	800/2600	700/2400	1065	48.12	50.45	.5625:1	7.21:1	6.2:1	91/98		1953 *	2/49 - 2/54	Goodyear Airship ZP2M, No. American T-28A
865C7BA1	R1300-2	865	800/2600	700/2400	1067	48.12	50.45	1:1	7.21:1	6.2:1	91/96		45 *	9/49 - 1956	Goodyear Airship ZPG-1, -2, -2W (ZP2W)
871C7BA1	R1300-3	871	800/2600	700/2400	1080	49.68	50.45	1:1	7.21:1	6.2:1	91/96		1323 *	11/51- 1955	Sikorski Helicopter USMC-Hrs-3, USCG HO4S3, USA H19D, USAF H19B, Vertol (Piascki) USN HUP4
899C7BA1	R1300-4	899A	800/2600	700/2400	1092	48.12	50.45	.5625:1	7.21:1	6.2:1	91/96		50 *	1953-1957	Goodyear Airship/Z52G-1
CR1300A2		591	700/2400	600/2300	950	47.43	50.00	3:2	7.0:1	6.45:1	87				
R1300A5		597	600/2200	550/2150	1675	42.8	50.13	1:1	Two Speed	6.45:1	87				
735C7BA1		735D	800/2600	600/2400	1025	49.0	50.24	.5625:1	7.21/8.69:1	6.2:1	91/98				
744C7BA1		744F	800/2600	600/2400	1015	48.12	50.45	.5625:1	7.21:1	6.2:1	91/98				
957C7BA1		957C	800/2600	700/2400	1065	48.12	50.45	.5625:1	7.21:1	6.2:1	91/96	261	7	10/46-4/47	Frye F1; Rurel DuBois
990C7BA1		990A	800/2600	700/2400	1070	49.68	50.45	1:1	7.21:1	6.2:1	91/96	289	155*	1956-1961	MD 31, Dassault MD 316T, Hispano H-100 Sikorsky Helicopter S-55

* Includes Licensee Production

Total Commercial	170
Total Military	<u>3371</u>
Total	3541

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<u>V 1460 - 12 cylinder inverted Vee-Water Cooled - 4-7/8" Bore, 6-1/2" Stroke (Wright Tornado)</u>															
V1460	-	-	-	525/2300	925	-	-	-	-	-	-	-	4	1930	
V1460	-	-	-	480/2000	965	70-3/32	38-15/64	1:1	8.4:1	5.2	-	-	-	-	
													<u>Total 1460</u>	<u>4</u>	
<u>R-1510 14 Cylinder air cooled radial - 5" Bore, 5-1/2" Stroke (Double Row R-760 Whirlwind)</u>															
GR1510-A1		144B	680/2300	650/2300	895	49-17/32"	45"	4:3 *	5.95:1	6.25:1	87	}	34	1931-1937	
SGR1510B1		188A	700/2300	700/2300	960	49-9/16"	45"	4:3 *	5.95:1	6.25:1	87				
GR1510C2		220C	670/2400	590/2400	1025	52-3/8"	45"	4:3 *	7:1	7:1	87				
													<u>Total 1510</u>	<u>34</u>	
* Direct Drive Also Available															
<u>V-1560 12 Cylinder Inverted Vee - Water Cooled - 5" Bore - 6-5/8" Stroke (Wright Tornado)</u>															
V1560			637/2400	600/2400	960	71-5/8	29-1/2	1:1	8.78:1	5.2:1			2	1931	
													<u>Total 1560</u>	<u>2</u>	
<u>V-1570 12 Cylinder Vee - Water Cooled - 5-1/8" Bore - 6-1/4" Stroke (Curtiss Conqueror)</u>															
V1570B		113	685/2400	650/2400	890	64"	39-1/16"	1:1		7.5:1	87	}	681	1931-1937	
	V1570-59	229C	675/2450	675/2450	1000	68-27/32	39-1/4"	7:5		7.25:1	87				
SGV1570F-4S		230B	675/2450	675/2450	1180	72-43/64"	43-35/64"	7:5	9.94:1	7.25:1	87				
GV1570TS	V1570-61	247C	700/2450	700/2450	1040	-	-	7:5	Exhaust Turbo Supchgr	7.25:1	-				
													<u>Total 1570</u>	<u>681</u>	
<u>H-1640 - 12 Cylinder Double Row Non-Staggered Air Cooled Radial - 5.625" Bore, 5.500 Stroke (Curtiss Chiefan)</u>															
H1640	-	-	-	600/2200	915	52-5/16	41-1/4	1:1	-	5.2:1					
													<u>Total 1640</u>	<u>Zero</u>	

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WAD Model	Military Model	Model Spec. No.	Sea Level Ratings Take-Off Normal		Weight	Length	Diameter (Height)	Red. Gear Ratio	Super Ratio	Comp. Ratio	Fuel Grade (Or Octane)	TC No.	No. Built	Production Period	Installations
<u>R-1670 14 Cylinder 2 Row Air Cooled Radial - 5.23" Bore, 5.50" Stroke</u>															
GR1670A1	-	301	830/2400	775/2400	1160	52-25/32	45	16:11	5.75:1	6.75:1	87	-	Dev. Only	1935-36	
CR1670B2C	-	472	850/2600	750/2500	1236	53-9/16	45	16:11	7.0:1	7.0:1	87	-	Dev. Only	1936	
											<u>Total 1670</u>	Zero			
<u>R-1750 9 cylinder air cooled radial - 6" Bore, 6.875 Stroke (Predecessor of R-1820) Wright Cyclone</u>															
R-1750E	-	101	552/1900	525/1900	840	43-27/32	56-11/32	1:1	8.74:1	5.1:1	73	-	-	(Pre 1930)	
<u>V-1800 12 Cylinder Vee-Liquid Cooled - 5.625" Bore, 6.0" Stroke</u>															
SGV1800	-	179	850/2400	735/2400	1340	78-3/4	43-1/8	7:5	8.26:1	7.1	87	-	-	1934	
											<u>Total V1800</u>	Zero			
<u>R-1820 9 Cylinder Air Cooled Radial - 6.125" Bore, 6.875" Stroke</u>															
GR1820E	-	119	595/1950	575/1950	945	48-5/16	53-3/4	1.58:1*	8.74:1	5.1:1	80	61	} 721	7/30-8/35	} American C-24 Consolidated C11A, C-22 Douglas O-29A, O-38B General Avia. C-15A
GR1820E-1	-	130	652/1950	620/1950	910	48-5/16	54-11/16	1.58:1*	8.74:1	6.25:1	80	-			
GR1820E-3	-	131	600/1900	600/1900	850	40-1/2	54-11/16	1:1	12.69:1	6.25:1	87	-			
											<u>Total 1820E</u>	721			
*Also offered with direct drive															
GR1820-F1 *	-	138	700/1950	700/1950	1042	47-13/16	53-3/4	16:11	5.95:1	6.40:1	87	85	} 2859	6/32-5/43	} Pilgrim 100B
GR1820-F2 *	-	169	663/1950	663/1950	1005	48-1/8	53-3/4	16:11	7.1:1	6.40:1	87	98			
GR1820-F3 *	-	161	712/1950	634/1950	1050	47-13/16	53-3/4	16:11	8.31:1	6.40:1	87	103			
GR1820-F5 *	-	162	517/1950	517/1950	1038	50-7/8	53-3/4	8:5	10:1	6.40:1	87	-			
GR1820-F9	-	241	850/2100	780/2100	1100	48-1/8	53-3/4	16:1	7.14:1/10.1:1	6.40:1	87	-			
GR1820-F11*	-	171	673/1950	673/1950	1042	47-13/16	53-3/4	16:11	5.95:1	5.75:1	80	97			
GR1820-F21*	-	128	644/1950	644/1950	1042	47-13/16	53-3/4	16:11	5.95:1	5.30:1	73	93			
GR1820-F31*	-	174	700/1950	638/1950	1042	48-1/8	53-3/4	16:11	5.95:1	6.40:1	80	101			
GR1820-F32*	-	176	602/1950	602/1950	1030	48-1/8	53-3/4	16:11	7:1	6.40:1	80	-			
GR1820-F33*	-	178	620/1950	551/1950	1050	47-13/16	53-3/4	16:11	8.31:1	6.40:1	80	118			
GR1820-F41*	-	163	582/1950	582/1950	1030	50-7/8	53-3/4	8:5	5.95:1	6.40:1	73	102			
GR1821-F42*	-	164	546/1950	546/1950	1030	50-7/8	53-3/4	8:5	7:1	6.4:1	73	-			
GR1820-F43*	-	165	497/1950	497/1950	1038	48-1/8	53-3/4	16:11	8.31:1	6.4:1	73	-			
GR1820-F51	-	323	875/2100	735/1950	1085	47-13/16	53-3/32	16:11	5.95:1	6.40:1	87	-			
GR1820-F52*	-	277	875/2200	730/2100	1095	47.81	54.09	16:11	7:1	6.40:1	87	148			
GR1820-F53	-	284	770/2200	670/2100	1095	47.81	54.09	16:11	8.31:1	6.40:1	87	149			
GR1820-F54*	-	289	640/2100	590/2100	1095	47.81	54.09	16:11	10:1	6.40:1	91	150			
GR1820-F55*	-	291	845/2100	770/2100	1072	48-1/8	53-3/4	16:11	7.14:1/10:1	6.40:1	87	-			
GR1820-F56*	-	312	770/2200	680/2100	1095	47.81	54.09	16:11	8.83:1	6.40:1	87	159			
GR1820-F62*	-	344	900/2350	760/2100	1095	47.81	54.09	16:11	7:1	6.40:1	87	148			
GR1820-F65*	-	559	900/2350	760/2100	1107	47.81	54.12	16:11	7.14/10.0:1	6.4:1	91	198			
											<u>Total 1820F</u>	2589 (Commercial)			

* Typical model only. Variations in installation features offered.

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			Take-Off	Normal-S.L.											
SR-1820-F3	R-1820-04	-	-	675/1950	937	43-3/8	53-3/4	1:1	8.31:1	6.4:1	87	-	37	4/34-2/35	Grumman JF-3
SR-1820-F2	R-1820-08	-	-	840/1950	937	43-3/8	53-3/4	1:1	7:1	6.4:1	87	-	10	6/35-6/35	
R-1820-F5	R-1820-10	-	-	770/1950	954	43-3/8	53-3/4	1:1	7.14:1/10:1	6.4:1	87	-	1	12/34-12/34	
GR-1820-F3	R-1820-12	-	-	700/1950	1047	48-1/8	53-3/4	16:11	8.31:1	6.4:1	87	-	14	5/34-9/35	
SGR-1820-F2	R-1820-17	-	-	675/1950	1047	47-13/16	53-3/4	8:5	7.0:1	6.4:1	87	-	62	5/33-9/35	Curtiss R-4C-1, Douglas R2 D-1 Bellanca C27B, Curtiss C-30, Martin XB10M, XO-45, YB10M YB10AM, B-10, O-45
R-1820-F2	R-1820-20	-	-	691/1950	937	43-3/8	53-3/4	1:1	7:1	6.4:1	87	-	39	11/35-2/36	Grumman J2F-1
R-1820-F1	R-1820-21	-	-	670/1950	910	43-3/8	53-3/4	1:1	5.95:1	6.4:1	87	-	70	5/33-5/35	Curtiss A-12
GR-1820-F1	R-1820-23	-	-	670/1950	1042	47-13/16	53-3/4	8:5	5.95:1	6.4:1	87	-	8	1/33-7/33	Curtiss YC-30
SGR-1820-F2	R-1820-25	-	-	750/1950	1047	47-13/16	53-3/4	16:11	7.0:1	6.4:1	87	-	105	9/33-7/36	Bellanca C-27C, Douglas C-33, C-34, XC-32, XO-44, C-32, OAS, YOA-5, Kreider-Relener XC-41, XC-4, XC-31; Martin A-15
SR-1820F2S	R-1820-27	-	-	770/1950	950	43-3/8	53-3/4	1:1	7.14:1/10:1	6.4:1	87	-	2	3/34-6/34	Grumman J2F2, F2F2A, J2F-3, J2F-4
R-1820-F2A	R-1820-30	482	790/1950	750/1950	979	43.375	53.84	1:1	7.0:1	6.40:1	87	-	112	3/38-2/40	
SGR-1820-F2	R-1820-31	-	-	675/1950	1010	47-13/16	53-3/4	8:5	7.0:1	6.4:1	87	-	1	1/34-1/34	Martin YB10A
SGR-1821-F3	R-1820-33	-	-	700/1950	1047	47-13/16	53-3/4	16:11	8.31:1	6.4:1	87	-	396	2/34-5/36	Martin B-10BM, B10B
R-1820-F3A	R-1820-36	-	-	730/1950	965	43-3/8	53-3/4	1:1	8.31:	6.4:1	87	-	1	7/39-7/39	Grumman J2F-3, J2F-4
SR-1820-F2	R-1820-37	-	-	690/1950	937	43-3/8	53-3/4	1:1	7:1	6.4:1	87	-	19	5/33-10/33	Northrup YA-13, Curtiss A-12, D-40B
R-1820-F53	R-1820-75	244	785/2200	745/2200	1000	43.38	54.09	1:1	8.31:1	6.4:1	87	-	5	8/42-8/42	North Am A-27 (NA-69)
SR-1820-F3	R-1820-80	-	-	625/1950	897	43.38	53-3/4	1:1	8.3:1	6.4:1	87	-	2	12/33-1/34	
SR-1820-F2	R-1820-84	-	-	740/1950	937	43-3/8	53-3/4	1:1	7:1	6.4:1	87	-	56	1/34-7/34	
GR-1820-F1	R-1820-88	-	-	675/1950	1042	47-13/16	53-3/4	8:5	5.95:1	6.4:1	87	-	3	5/33-5/33	
GR-1820-F2	R-1820-90	-	-	750/1950	1047	47-13/16	53-3/4	16:11	7:1	6.4:1	87	-	131	2/34-10/34	Consolidated P24-3 (2 Engines); XP2Y-2 (2 Engines)
R-1820-F2	R-1820-102	-	-	690/1950	937	43-3/8	53-3/4	1:1	7:1	6.4:1	87	-	10	5/35-6/35	
												Total	-	1084 (Military)	
													-	2589 (Comm.) (1820F)	
												<u>Total 1820F</u>	-	<u>3673</u>	

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

<u>WAD Model</u>	<u>Military Model</u>	<u>Model Spec. No.</u>	<u>Sea Level Take-Off</u>	<u>Ratings Normal-S.L.</u>	<u>Weight</u>	<u>Length</u>	<u>Diameter (Height)</u>	<u>Red. Gear Ratio</u>	<u>Superch. Ratio</u>	<u>Comp. Ratio</u>	<u>Fuel Grade (or Octane)</u>	<u>TC No.</u>	<u>No. Built</u>	<u>Production Period</u>	<u>Installations</u>
GR-1820G1	-	283J	940/2200	825/2100	1198	47-3/4	54-1/4	16:11	5.95:1	6.45:1	87	-	1547	4/36-10/42	Douglas DC-2, DC-3 (Russian Built), Grumman F3F3, G-23, Vultee V-11-GB, V-11-GB-2, Martin 156, 139WC, Marchetti S-73 Douglas (Northrup) BA-2, Vultee V-11-GB, North Am. NA-50, Martin 139-WAA, Curtiss Wright 75M, Beech G3-B, Lockheed 14, Republic 2PA Brewster F2A-1, 239, Curtiss-Wright CW-21, 75-O, Martin 139WH, Douglas DC-3, Vultee V-1A Douglas DB-280 Republic 2 PA
GR-1820G2	-	314	800/2100	700/2100	1153	47-13/16	53-3/4	16:11	7:1	6.45:1	80	-			
GR-1820G3		311	875/220	780/2100	1198	47-3/4	54-1/4	16:11	8.31:1	6.45:1	87	171			
GR-1820G4	-	342B	1000/2200	810/2100	1210	47-3/4	54-1/4	16:11	8:37 & 10:1	6.45:1	87	-			
GR-1820G5	-	286T	1000/2200	850/2100	1210	47-3/4	54-1/4	16:11	7.14 & 10:1	6.45:1	87	154			
GR-1820G6	-	324D	820/2200	800/2100	1188	47-3/4	54-1/4	16:11	8.83:1	6.45:1	87	-			
GR-1820G7	-	326E	700/2200	640/2100	1198	47-3/4	54-1/4	16:11	10:1	6.45:1	87	-			
GR-1820G8	-	325	750/2200	725/2050	1163	47-3/4	54-1/4	16:11	10:1	6.45:1	87	-			
GR-1820G9	-	328A	760/2200	725/2100	1163	47-3/4	54-1/4	16:11	9.39:1	6.45:1	87	-			
GR-1820G10	-	327	1000/2200	825/2100	1163	47-3/4	54-1/4	16:11	5.95:1	6.45:1	87	-			
GR-1820G12	-	305	930/2250	850/2100	1124	47-13/16	53-3/4	16:11	7.14 & 10:1	6.45	87	-			
<u>Total Commercial Engines</u>															
R-1820G5	1820-22	542	950/2200	850/2100	1105	43.12"	54.25"	1:1	7.14:1/10.0:1	6.45:1	87	-	147	7/26-5/39	Brewster SBA-1; Curtiss XSBC-4, Northrup XBT-3, Grumman F3F-2, F3F-3, XF3F-3
R-1820G5	1820-34	N548A	950/2200	850/2100	1114	43.12"	54.25"	1:1	7.14:1/10.0:1	6.45:1	92	-	250	11/38-3/41	Brewster F2A-1, Curtiss SBC-4
R-1820G5	1820-38	EP-52	950/2200	850/2100	1114	43.12"	54.25"	1:1	7.14:1/10.0:1	6.45:1	100/130	-	24	11/39-3/40	Brewster XSBA-1; NAF SEN-1, SBA-1
R-1820G5	1820-39	674	930/2200	805/2100	1198	45-7/16"	54-1/4"	16:11	7.14:1/10:1	6.45:1	92	-	94	5/35-2/37	Boeing XB-17, B-17
GR-1820G25	1820-43	-	-	850/2100	1175	-	-	16:11	7:1	7:1	-	-	1	3/38-3/38	
GR-1820G2	1820-44	280S	1000/2200	820/2100	1198	47.25"	54.25"	.6875:1	7.0:1	6.45:1	87	-	21	12/39-3/40	Douglas R3D-1 (2 Engines); R3D-2 (2 Engines) (DC-5)
SGR-1820G12	1820-45	345J	930/2200	860/2100	1175	-	54.25"	.6875:1	7.14:1/10.0:1	6.45:1	92	-	480	6/36-9/38	Douglas B-18, B-18A, B-18M, C-33, C-38, YOA-5
Cyclone G-39	1820-47	419F	930/2200	850/2100	1178	-	54-1/4"	16:11	7:1	6.45:1	92	-	40	10/36-2/37	Curtiss Y1A-18, A-18
Cyclone G-37	1820-49	421D	975/2200	835/2100	1178	47.75"	53.95"	.6875:1	7.0:1	6.45:1	92	-	244	7/37-4/39	Curtiss A-14, North Am. O-47A, Douglas DC3
R-1820G5	1820-50	N-548C	950/2200	850/2100	1114	43.12"	54.25"	1:1	7.14:1/10:1	6.45:1	92	-	216	3/41-5/42	Grumman J2F-5
Cyclone G59	1820-51	667	1000/2200	800/2100	1200.50	45.06"	54.12"	.6875:1	5.95:1	6.45:1	100	-	259	9/37-2/40	Boeing B-17B, YB-17A, Y1B-17A, B-17A
Cyclone G71	1820-53	496A	1000/2200	850/2100	1210	45.06"	54.12"	.6875:1	7.14:1/10:1	6.45:1	100	-	658	3/38-9/39	Douglas B-18A, B-18AM, C-42, C-58, Boeing B-17B, B-18B
Cyclone G61	1820-55	604	975/2200	835/2100	1183.50	45.44"	53.95"	.6875:1	7.0:1	6.45:1	AC2-95	-	108	9/38-3/39	Douglas C-39
R-1820G3	1820-77	340-B	875/2200	840/2100	1198	47.75"	54.25"	.6875:1	8.31:1	6.45:1	87	-	3	1942-1942	North Am. P-64 (NA-68)
<u>Total</u>													2545	(Military)	
<u>(Comm)</u>													1547	(1820G)	
<u>Total 1820G</u>													4092		

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

<u>WAD Model</u>	<u>Military Model</u>	<u>Model Spec. No.</u>	<u>Sea Level Take-off</u>	<u>Ratings Normal-S.L.</u>	<u>Weight</u>	<u>Length</u>	<u>Diameter (Height)</u>	<u>Red. Gear Ratio</u>	<u>Superch. Ratio</u>	<u>Comp. Ratio</u>	<u>Fuel Grade (of Octane)</u>	<u>TC No.</u>	<u>No. Built</u>	<u>Production Period</u>	<u>Installations</u>
GR-1820-G102	-	335	1100/2200	900/2200	1275	48:12	55.10	*.6875	7.0:1	6.7:1	91	169	2258	1/37-10/42	Douglas DC-3, Boeing 307, Lockheed 14, 14M2, NAA-047B
GR-1820-G102A	-	567	1100/2350	900/2300	1275	48.12	55.10	*.6875	7.0:1	6.3:1	91	169			Lockheed C-56; Douglas DC-3, DC-5; Lockheed XR50-1 (2 Engines) R50-1 (2 Engines) R50-3 (2 Engines) 18 (Lode Star), 14, B-14L 414-40, 214-40
GR-1820-G103	-	338	1000/2300	860/2200	1275	48.12	55.10	.6875	8.31:1	6.7:1	91	180			Douglas DC-3
GR-1820-G103A	-	566	1000/2350	860/2300	1275	48.12	55.10	*.6875	8.31:1	6.3:1	91	180			Douglas DC-3, DC-5,
GR-1820-G104A	-	568	1100/2350	900/2300	1272	48.12	55.10	.6875	8.37:1/10:1	6.3:1	90	-			
GR-1820-G105	-	331	1100/2200	900/2200	1272	48.12	55.10	.6875	7.14:1/10:1	6.7:1	100	192			Lockheed 14, Douglas DC-3 Boeing 307, Dornier DO24K2, DO24
GR-1820-G105A	-	564	1100/2350	900/2300	1287	48.12	55.10	*.6875	7.14:1/10:1	6.3:1	91	192			Brewster 339E, 339B (F2A) Lockheed 14, Douglas DC-3 Boeing 307B, Martin 139WH Curtiss-Wright 75Q, 75H, 75AH; Vultee V-12-C; Republic 2PA-BX
GR-1820-G106	-	570	940/2350	830/2300	1260	48.12	55.10	.6875	9.39:1	6.3:1	90	-			
GR-1820-G107	-	329	1100/2300	900/2200	1275	47.75	55.10	.6875	**5.95:1	6.7:1	95	-			
GR-1820-G108A	-	565	1000/2350	860/2300	1272	48.12	55.10	.6875	8.37:1/10:1	6.3:1	90	-			
GR-1820-G109	-	330	1100/2300	870/2200	1275	47.75	55.10	.6875	7:1	-	95	-			
* .666 Reduction gear offered. ** For use with turbo supercharger.												<u>Total Commercial</u>		2258 (1820 G100)	
R-1820G133	1820-32	646	1000/2350	950/2300	1255	45.44"	54.25"	.6875	7.14:1/10:1	6.45:1	100	-	196	11/35-1/41	Douglas A-24, XBT-2, SBD-3, El Segundo SBD-1, SBD-2; Northrup XBT-2
765C9GAL	1820-52	N-765C	1000/2350	950/2300	1255	45.44"	54.25"	.6875	7.14:1/10:1	6.45:1	100	-	2640	12/40-5/43	Douglas El Segundo SBD-3 SBD-3A, SBD-4, A-24, BT-2, A-24A
Cyclone G131	1820-57	653	1060/2350	900/2200	1283	45.06"	55.12"	.666	7:1	6.7:1	100	-	117	4/39-2/40	North Am. O-47B
R-1820G102A	1820-79	567	1100/2350	900/2300	1275	48.12"	55.12"	.666	7:1	6.3:1	91	-	13	12/41-5/43	Douglas C-50, C-50C, C-50D
R-1820G102A	1820-81	567	1100/2350	900/2300	1275	48.12"	55.12"	.666	7:1	6.3:1	91	-	6	5/43-5/43	Douglas C-50B, C-50C, C-50D, C-51 (DC3)
R-1820G102A	1820-83	567	1100/2350	900/2300	1275	48.12"	55.12"	.6875	7:1	6.3:1	91	-	1	7/42-7/42	Douglas C-51 (DC3)
R-1820G102A	1820-85	567	1100/2350	900/2300	1275	48.12"	55.12"	.666	7:1	6.3:1	91	-	60	5/43-6/43	Douglas C-50, C-50A (DC3)
R-1820G102A	1820-89	567	1100/2350	900/2300	1275	48.12"	55.12"	.6875	7:1	6.3:1	91/98	-	26	12/41-9/42	Lockheed C-56, C-60, C-56B
Cyclone G111	1820-28	484	1100/2300	900/2200	1290	47.75"	55.12"	.6875	7.14:1/10.0:1	6.7:1	100	-	2	4/37-5/37	
<u>G100 Total</u>												3061 (6100 Military) 2258 (6100 Commercial) <u>5319</u>			

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAL Model	Military Model	Model Spec. No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Super Ratio	Comp. Ratio	Fuel Grade (or Octane)	TC No.	No. Built	Production Period	Installations
			Take-Off	Normal											
GR-1820G202	*	588	1200/2500	1000/2300	1290	50.04	55.10	.5625	7.0:1	6.7:1	95	-	4155	12/39-6/45	Douglas DC-3, Lockheed 18, Boeing SA307B-1
GR-1820G202A	*	702	1200/2500	1100/2400	1310	48.22	55.10	.5625	7.0:1	6.7:1	91/96	219			
GR-1820G202B	*	596	1100/2500	950/2300	1310	50.04	55.10	.5625	7.0	6.3:1	87	-			
GR-1820G203	*	592	1100/2500	950/2300	1290	50.04	55.10	.5625	8.3:1	6.7:1	95	-			
GR-1820G203A	*	593	1100/2500	950/2300	1310	50.04	55.10	.5625	8.3:1	6.7:1	90	-			
GR-1820G203B	*	703	960/2500	875/2300	1310	50.04	55.10	.5625	8.3:1	6.3:1	87	-			
GR-1820-G205	*	589	1200/2500	1000/2300	1302	50.04	55.10	.5625	7.14:1/10:1	6.7:1	95	-			
GR-1820G205A	*	704	1200/2500	1100/2400	1320	50.04	55.10	.5625	7.14:1/10:1	6.7:1	100	-			
GR-1820G205B	*	587	1100/2500	* 950/2300	1315	50.04	55.10	.5625	7.14:1/10:1	6.3:1	87	-			
Total Commercial												4155			
* Variations in Installation Equipment Offered															
Cyclone G251	R-1820-40	647	1200/2500	1000/2300	1315	48.4	55.12	.666	7.13:1/10.04:1	6.70:1	100	-	374	3/39-3/43	Douglas A24, A24B, SBD-3, SBD-5, Lockheed R-50, R-50-3 (2 engines) R-50-4, R-50-5 Brewster F2A2, F2A-2A, F2A-3, XF2A-4; Grumman XF4F-5, F4F-4B, F4F-5, F4F-5B Grumman F4F-4B
Cyc. G251-A	R-1820-40B	647	1200/2500	1000/2300	1315	48.4	55.12	.666	7.13:1/10.04:1	6.70:1	100	-	105	7/42-11/42	Grumman XF5F-1
Cyc. G253	R-1820-42	550	1200/2500	1000/2300	1320	50.04	55.12	.666	7.14:1/10:1	6.70:1	100	-	2	9/39-4/40	
	R-1820-46	623	1200/2500	1000/2300	1337	49.90	55.12	.666	7.13:1/10.09:1	7.50:1	100	-	1	10/40	
C9GC1	R-1820-48*	622	1200/2500	1200/2300	1422	57.4	55.12	.666	7.0/7.14/10.0	6.70:1	100	-	1	1/41	Brewster XFLA-4
C9GC1	R-1820-54	808	1050/2200	900/2100	1265	46.18	55.12	1.1	7.13:1/10.04:1	6.70:1	100	-	462	5/43-5/45	Grumman U2F6
Cyc. G251C	R-1820-60	647	1200/2500	1000/2300	1315	47.59	55.12	.666	7.13:1/10.04:1	6.70:1	100	-	5399	11/42-3/44	Douglas A-24, A-24B, Curtiss SBD-5
G666A	R-1820-65**	666	1200/2500	1000/2300	1315	47.59	55.12	.5625	7.00:1	6.70:1	100	*****	8422	2/40 - 8/42	Boeing B-17B, B-17C, B-17D, B-17E, B-17F, Grumman J2F5
G687	R-1820-67	687	1200/2500	1000/2300	1338	48.22	55.12	.666	7:1	6.70:1	100	-	1	8/40	Grumman XP-50
G688	R-1820-69***	688	1200/2500	1000/2300	1338	48.22	55.12	.666 ***	7:1	6.70:1	100	-	2	10/40-9/41	Grumman XP-50
C9GC1	R-1820-71	702	1200/2500	1000/2300	1310	50.04	55.10	.666	7:1	6.70:1	91/96	219	268	6/42-1/44	Douglas C-49, C-49A, C-49B, C-49C, C-49D, Lockheed C-60, C-56-E
C9GC	R-1820-73	722	1200/2500	1000/2300	1310	50.04	55.10	.666	7:1	6.70:1	95	-	118	10/40-3/41	Boeing B-17C
C9GC	R-1820-87	704	1200/2500	1000/2300	1320	50.04	55.10	.666	7.14:1/10:1	6.70:1	100	219	2422	2/42-11/43	Brewster 339-16, Douglas A-33 CW C-76, Lockheed A-29, C-63, A-29A, AT-18, C-60; Grumman F4F-4B
G200	R-1820-91	-	1200/2500	1000/2300	1320	47.64	55.12	.5625	7.14:1/10:1	6.70:1	100	-	10	10/41-6/42	Boeing B-17E
C9GC	R-1820-95	704	1200/2500	1000/2300	1320	50.04	55.10	.666	7.14:1/10:1	6.70:1	100	219	4	10/42	Curtiss P-36G (Hawk 75AB)
C9GC	R-1820-97***	-	1200/2500	1000/2300	1315	47.80	55.10	.5625	7.0:1	6.70:1	100	*****	64093	7/42 - 10/43	Boeing B-17E, B-17F, B-17G, Douglas B17F-DL, -190-DL; Vega B17F-VL, 17C-VL; Northrup N-1-25A
781C9GC1 ****	781			800/2300	1350				1:1	7.0:1	4.95:1	80	134	6/41-9/44	
795C9GC1 ****	795			675/1950	1350				1:1	7.0:1	4.92:1	80			
Total Military												81838			
Total Commercial												4155			
Total												85993			

* two speed, two stage gear driven supercharger

** For use with turbosupercharger

*** Reverse rotation propeller shaft

**** For installation in model T-1 Heavy Tank. Used Grade 80 Motor Fuel

***** Includes Licensee Production

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAD Model	Military Model	Model Spec. No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Super Ratio	Comp. Ratio	Fuel Grade (or Octane)	TC No.	No. Built	Production Period	Installations	
			Take-Off	Normal												
806C9HC1	R-1820-56	806	1300/2600	1200/2500	1333	47.56	55.12	.666	7.134:1/10.04:1	6.55:1	100	-	2186	10/42-5/44	Eastern FM-2	
806C9HC1	R-1820-56W	806	1300/2600	1200/2500	1333	47.56	55.12	.666	7.134:1/10.04:1	6.55:1	100	-	3621	4/44 - 1/45	Ryan XPR-1, FR-1	
806C9HC1	R-1820-56WA	806	1350/2700	1200/2500	1341	47.56	55.12	.666	7.134:1/10.04:1	6.55:1	100	-	1162	12/44-10/45	Eastern FM-2	
805C9HC1	R-1820-62	805	1300/2600	1200/2500	1331	46.07	55.12	.666	7.0:1	6.55:1	100	-	550	3/43-2/45	Curtiss XSC-1, SC-1	
805C9HC1	R-1820-62A	805	1350/2700	1200/2500	1339	46.07	55.12	.666	7.0:1	6.55:1	100	-	428	1/45-10/45	Curtiss SC-1	
806C9HC3	R-1820-66	806	1300/2600	1200/2500	1333	47.56	55.12	.666	7.134:1/10.04:1	6.55:1	100	-	760	11/43-6/44	Douglas SBD-6	
806C9HC2	R-1820-70	805	1300/2600	1200/2500	1315	46.07	55.12	.5625	7.0:1	6.55:1	100	-	6	1/44 - 3/44	Eastern XF-2H-1	
806C9HC7	R-1820-72A	806	1350/2700	1200/2500	1333	47.56	55.12	.666	7.134:1/10.04:1	6.55:1	100	-	40	7/44 - 9/44	Eastern FM-2	
806C9HC7	R-1820-72WA	806	1350/2700	1200/2700	1341	47.56	55.12	.666	7.134:1/10.04:1	6.55:1	100	-	270	12/44-5/45	Ryan F 21	
794C9HC1	R-1820-93	794	1350/2700	1200/2500	1330	47.77	55.12	.5625	7.01:1	6.55:1	100	-	40	2/43 - 10/43	Boeing B-17F	
													Total C9HC Commercial	0		
													Total C9HC Military	9063		
														9063		
736C9HD2	-	736	1425/2700	1275/2500	1381	49.10	54.95	.5625	7.21:1/8.69:1	6.80:1	100/130	243	20	2/46-4/46	Douglas DC-4	
736C9HD3	-	736	1425/2700	1275/2500	1376	49.10	54.95	.5625	7.21:1/8.69:1	6.80:1	100/130	243	8	9/46-12/46	-	
740C9HD1	-	740	1425/2700	1275/2500	1368	49.10	54.95	.5625	7.21:1	6.80:1	100/130	243	-	-	Douglas DC-4	
826C9HD3	-	826	1425/2700	1275/2500	1380	48.50	54.95	.666	7.21:1/10.14:1	6.80:1	100/130	-	16	1957-58	Grueman (SA-16)	
977C9HD1	-	977	1425/2700	1275/2500	1349	48.50	54.95	1:1	7.21:1/10.14:1	6.80:1	100/130	243	205	1955-1961	Pisasecki Helicopter PH-42, Vertol 44A, 44B	
977C9HD2	-	977	1425/2700	1275/2500	1349	48.50	54.95	1:1	7.21:1/8.69:1	6.80:1	100/130	243	47	1958-60	Vertol 44A, 44B	
977C9HD3	-	977	1025/2700	1275/2500	1348	48.50	54.95	1:1	7.21:1	6.80:1	100/130	243	-	-	Vertol 44A, 44B	
987C9HD1	-	987	1425/2700	1275/2500	1371	48.50	54.95	1:1	7.21:1/10.14:1	6.80:1	100/130	243	21	1954-58	Learstar Mark I	
													Total C9HD Commercial	322		
826C9HD1	R-1820-74W	826	1425/2700	1275/2500	1400	47.69	54.95	.666	7.21:1/10.14:1	6.80	100/130	-	12	10/45-3/46	Eastern FM-2, Ryan FR-2, Columbia XJL-1, Grueman XJR 2F-1	
826C9HD2	R-1820-76	826	1425/2700	1275/2500	1360	47.69	54.95	.666	7.21:1/10.14:1	6.80	100/130	-	27	10/45-8/46	Curtiss-Columbia SC-2 SC-2, JLI Columbia, JR271 Grueman	
826C9HD3 6 5	R-1820-76A&B	826	1425/2700	1275/2500	1380	47.69	54.95	.666	7.21:1/10.14:1	6.80	100/130	-	1506	4/49-1954	Grueman SA-16, UFI	
834C9HD1	R-1820-78	834	1100/2500	1000/2300	1353	47.69	54.95	.666	7.21:1/10.14:1	6.30	91	-	4	3/46 - 7/46	SN 201 North American	
856C9HD1	R-1820-86	896	1425/2700	1275/2500	1385	48.50	54.95	.666	7.21:1/10.14:1	6.80	100/130	-	1035	1953-1957	North American T-28B	
826C9HD4	R-1820-101	826	1425/2700	1275/2500	1400	47.69	54.95	.5625	7.21:1/10.14:1	6.80	100/130	-	40	9/49-7/50	-	
863C9HD1	R-1820-103	863	1425/2700	1275/2500	1350	48.50	54.95	1:1	7.21:1/10.14:1	6.80	100/130	-	971	11/50-1957	Pisasecki Helicopter USAF-H-21B USA-H--21C, Vertol 42A, 42B	
													Total C9HD Military	3595		
													Total Commercial	322		
													Total C9HD	3917		

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAD Model	Military Model	Model Spec. No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Super Ratio	Comp. Ratio	Fuel Grade (or Octane)	TC No.	No. Built	Production Period	Installations
			Take-Off	Normal											
968C9HE1	-	968	1475/2800	1275/2500	1390	48.50	54.95	.5625	7.21:1	6.80:1	100/130	259	3	1950-1953	Douglas Super DC-3
968C9HE2	-	968	1475/2800	1275/2500	1395	48.50	54.95	.5625	7.21:1	6.80:1	100/130	259	11	1950	"
982C9HE1	-	982	1525/2800	1275/2500	1455	50.07	55.75	.5625	7.21:1	6.80:1	115/145	259	13	1955-1956	Hurel-Dubois HD321, HD-323
982C9HE2	-	982	1525/2800	1275/2500	1455	50.07	55.75	.5625	7.21:1	6.80:1	100/130	259	25	1957-1960	"
989C9HE1	-	989	1525/2800	1275/2500	1398	52.00	55.75	1:1	7.21:1	6.80:1	115/145	259	481	1955-1961	Sikorsky Helicopter S58
989C9HE2	-	989	1525/2800	1275/2500	1406	52.00	55.75	1:1	7.21:1	6.80:1	115/145	259	280	1956-1963	"
998C9HE1	-	998	1525/2800	1275/2500	1401	52.00	55.75	1:1	7.21:1	6.80:1	115/145	259	2	1959	Sikorsky S58A-B, -C
998C9HE2	-	998	1525/2800	1275/2500	1419	52.00	55.75	1:1	7.21:1	6.80:1	115/145	259	11	1962-1963	"
													Total C9HE Commercial	826	
													(including licensee production)		
866C9HE1	R-1820-80	866	1475/2800	1275/2500	1404	48.50	54.95	.5625	7.21:1	6.80:1	100/130	259	289	1950-1956	Douglas RAD-8, -8Z
	R-1820-82	867	1525/2800	1275/2500	1469	50.10	55.74	.5625	7.21:1	6.80:1	115/145	-	2256	1952-1958	Grumman S2F
	R-1820-82A	867	1525/2800	1275/2500	1479	50.10	55.74	.5625	7.21:1	6.80:1	115/145	-	462	1960-1963	WF-2, S2F3, Grumman, SA-16
	R-1820-82WA	941	1675/2800 *	1275/2500	1484	50.10	55.74	.5625	7.21:1	6.80:1	115/145	-	266	1959-1960	WF-2
	R-1820-84	895	1525/2800	1275/2500	1405	52.00	55.74	.5625	7.21:1	6.80:1	115/145	-	1494	1954-1958	Sikorsky Helicopter
	R-1820-84A	895	1525/2800	1275/2500	1419	52.00	55.74	.5625	7.21:1	6.80:1	115/145	-	176	1959-1961	USAF-H-34, USA-H-34,
	R-1820-84B	895	1525/2800	1275/2500	1427	52.00	55.74	.5625	7.21:1	6.80:1	115/145	-	215	1957-1961	USMC-HUa, USN-HSS
	R-1820-84C	895	1525/2800	1275/2500	1419	52.00	55.74	.5625	7.21:1	6.80:1	115/145	-	108	1961-1962	
	R-1820-84D	895	1525/2800	1275/2500	1427	52.00	55.74	.5625	7.21:1	6.80:1	115/145	-	6	1961-1962	
													Total C9HE Military	5272	
													(including licensee production)		
													Total Commercial	826	
													Total C9HE	6098	

* Water injection for take-off

HISTORICAL ENGINE SUMMARY

(BEGINNING (1930))

WAD Model	Military Model	Model Spec. No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Super Ratio	Comp. Ratio	Fuel Grade (or Octane)	TC No.	No. Built	Production Period	Installations
			Take-Off	Normal											

Wright Typhoon - Marine Engine - 12 Cylinder, Liquid Cooled, 60° Vee, 5.75" Bore, 6.25" Stroke - 1947 cu in. disp.

TM-6	-	-	-	500/1900	1950	88-5/16	41	1:1	None	4.8:1	Motor	-	} 83	1930-32	
TM-6	-	390	-	600/2000	1950	88-5/16	37	1:1	None	5.3:1	73	-			
TM-6	-	390	-	650/2000	1950	88-5/16	37	1:1	None	6.5:1	87	-			

Total Typhoon 83

GW2120 - 12 Cylinder 2-Row Liquid Cooled Radial - 6.125" Bore, 6" Stroke

GW2120	-	231	1000/2400	955/2400	1440	56-29/32	48-13/16	16:11	8.7:1	6.5:1	87	-	-	-	
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Total 2120 - Zero

2160 - Tornado - 42 Cylinder Liquid Cooled Radial - 4.25" Bore, 3.75" Stroke

Tornado 617	R-2160-1	617	2350/4150	2000/3800	4140 *	97.5	37	.222:1	4.20:1	7.0:1	100	-	-	-	} Hughes D-2 Lockheed XP-58, MX-2 Republic XP-69
Tornado 689	R-2160-3	689	2350/4150	2000/3800	2735	95.07	36.5	.25:1	4.20:1	7.0:1	100	-	-	-	
788T42AAL	R-2160-5	788	2350/4150	2000/3800	2735	95.07	36.5	.25:1	4.20:1	7.0:1	100	-	-	-	

Total 2160 - Zero

* Includes turbo-supercharger, intercooler, coolant radiator and coolant.

** Alternate Tornado designs included extended shaft with offset gearbox, co-axial propeller shafts, 2-speed reduction gear, 2-speed and 2 stage superchargers.

2170 - Cyclone 14 (Short Stroke) - Air Cooled Radial - 6.125" Bore, 5.25 Stroke

771C14DA1	-	771	1500/2900	1300/2500	1700	67.20	47:00	.5625	5.95:1/8.20:1	6.85:1	100	-	-	-	
778C14DA1	-	778	1500/2900	1300/2500	1805	77.20	47:00	.5625	*	6.85:1	100	-	-	-	

* Two stage. 5.95:1 single speed second stage, 5.95:1 & 8.20:1 two speed first stage.

Total 2170 - Zero

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAD Model	Military Model	Model Spec. No.	Sea Level Take-Off	Ratings Normal	Weight	Length	Diameter (Height)	Red. Gear Ratio	Superch. Ratio	Comp. Ratio	Fuel Grade (or Octane)	T.C. No.	Number Built	Production Period	Installations
<u>R-2600 14 Cylinder Air Cooled Radial - 6.125" Bore, 6.312" Stroke - (Cyclone 14)</u>															
GR2600A2	-	332	1550/2400	1200/2100	1935	62.06"	55"	16:9	7.4:1	7.1:1	91/96	176	}		Boeing 314, A-314
GR2600A2A	-	579	1600/2400	1350/2300	1935	62.06"	55"	16:9	7:1	6.85:1	95	176			Boeing 314
GR2600A3A	-	584D	1600/2400	1350/2300	1935	62.06"	55"	16:9	7:1	6.3:1	90				Brewster 340, Douglas DB7A, DB7B, Short Brothers - Stirling,
GR2600A5B*	-	700D	1600/2400	1350/2300	1950	62.06"	55"	.5625	7.14:1/10:1	6.3:1	90				Vultee 72, Martin M-1878-1
GR2600B2	-	585	1700/2500	1500/2400	1965	63.10"	54.26"	.4375	7.03:1	6.9:1	95	176	}	5/37-1/46	Boeing SA-3078
GR2600B5	-	586	1700/2500	1500/2400	1980	63.10"	54.26"	.5625	7.06:1/10.02:1	6.85:1	95	176			
709C14AC1	-	709	1600/2400	1350/2300	1935	62.06"	55"	.5625	7:1	7.1:1	122/145	176			
742C148B1	-	742	1900/2800	1600/2400	2090	66.16"	54.08"	.4375	7.07:1	6.9:1	100/130	248			
742C148B2	-	742	1900/2800	1600/2400	2090	66.16"	54.08"	.4375	7.07:1	6.9:1	100/130	248			
												Total:			
<u>* Military Engine for British</u>															
	2600-1	-	1500/2300	1125/2100	1998	65"	55"	3:2	7.4:1	6.85:1	100/130	-	1	2/37-2/37	
	2600-2	462	1500/2300	1200/2100	1875	65.38"	55"	3:2	7:1	6.85:1	100	-	1	4/37-4/37	
GR2600A71	2600-3	538M	1600/2300	1280/2300	1940	65"	55"	16:9	7.14:1/10:1	6.9:1	100	-	164	4/39-2/40	Douglas A-20A, A-20E, B-23; BD-1, C-67
	2600-4	476	1200/2100	1500/2300	1930	62.06"	55"	16:9	7.14:1/10:1	6.85:1	100	-	3	4/38-10/38	Lockheed 29
GR2600A79	2600-5	524F	1600/2400	1280/2300	2045	65"	55"	16:9	7.14:1/10:1*	6.85:1	100	-	3	3/40-6/40	Martin PBM-1 (2 Engines), PBM-2 (2 Engines); XPBM-1 (2 Engines)
GR2600A71	2600-6	543C	1600/2400	1350/2300	1935	62.06"	55"	16:9	7.14:1/10:1	6.85:1	100	-	55	2/39-6/40	Martin PBM-2
	2606-6A	678A	1600/2400	1350/2300	1970	62.06"	55"	16:9*	7.14:1/10:1	6.85:1	100	-	24	5/41-8/41	Douglas A20, A-20D, F-3, O-53, 412
GR2600B657-3	2600-7	657C	1700/2500	1500/2400	1965	63.1"	54.26"	16:9	7.06:1	6.85:1	100	-	217	3/40-9/41	Curtiss A-25, SB2C-1, SB2C1B, SB2C-2, SBN-1; Brewster SB2A-1, SB2A-2, SBA-3, SB2A; Grumman TBF-1, TBF, TBM-1; Can Car Spin 1
GR2600B698	2600-8	698C	1700/2600 & 2800	1500/2400	1995	64.91"	54.26"	.5625	7.06:1/10.06:1	6.9:1	100	-	11,410	4/40-5/44	Brewster XSB2A; Grumman TBF, TBF-1, XTBF-1; Curtiss SXB1C-1, SB2C-1
GR2600B698	2600-8A	698C	1700/2600	1500/2400	1995	64.91"	56.26"	.5625	7.06:1/10.06:1	6.9:1	100	-	233	2/41-9/42	Curtiss Wright C46, Lockheed D-56, North American B-25, B-25A, B-25B, B-25C, B-25D
GR2600B655	2600-9	655C	1700/2600	1500/2400	1980	63.1"	54.26"	16:9	7.06:1/10.06:1	6.9:1	100	-	522	4/41-12/41	Grumman XTBF-1, TBF, TBF-1, TBF-1B, TBF2, TBM-1, TBM-2; Consolidated PB2Y-4, XPB2Y-4
GR2600B676	2600-10	676H	1700/2600 & 2800	1500/2400	2115	74.91"	54.26"	.5625	Two Stage ***	6.9:1	100	-	9	5/41-5/42	Boeing A-20C, Douglas A-20A, A-20B, A-20E, P-70, F-3, BD1, BD2
GR2600A71	2600-11	538M	1600/2300	1280/2300	1940	65"	55"	16:9	7.14:1/10:1	6.9:1	100	-	3,258	2/40-11/42	Martin PBM-3 (2 engines), SC, JR, JS
GR2600B766	2600-12	766C	1700/2800	1500/2400	1991	64.91"	54.26"	.4375	7.06:1/10.06:1	6.1:1	100	-	1,461	4/41-9/44	

* Also available in single speed.

** Also available with alternates: (1) 16.7 Red. Gr. Ratio; (2) 2:1 Red. Gr. Ratio Ht. 1990 lbs. Total Dry Weight

*** Main Stage 7:1; Auxiliary Stage 5.898:1 & 8.519:1

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAD Model	Military Model	Model Spec. No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Superch. Ratio	Comp. Ratio	Fuel Grade (or Octane)	T.C. No.	Number Built	Production Period	Installations
			Take-Off	Normal											
GR2600B655	2600-13	655C	1700/2600	1500/2400	2000	63.1"	54.26"	16:9	7.06:1/10.06:1	6.9:1 5625	100	-	13,494	4/41-1/44	Brewster SB2A-4, Vega O-56, P-37, Vultee A-31A, A-35, A-35A, XA-35A; Martin A-30A; North Am. B-25C, B-25D, Northrup A-35, Lockheed B-37; Short Bros, Stirling
813C14BB1	2600-14	777B	1800/2800	1600/2400	2173	77.51"	54.26"	.4375	Two Stage***	6.9:1	100	-	1	7/43-7/43	Grumman XF7F, XF7F-1
789C14BB1	2600-15	789	1800/2800	1600/2400	2045	63.1"	54.26"	16:7	7.07:1	6.9:1	100/130	-	1	6/42-6/42	Martin XB-33, B-33; Grumman XF6F-2; F7F-1
GR2600B676	2600-16	676H	1700/2600 & 2800	1500/2400	2127	74.91"	54.26"	.4375	Two Stage***	6.9:1	100	-	2	12/41-4/42	Grumman XF6F, F6F, F6F-1, F6F1-B, XF6F-1
GR2600A5B-5	2600-17A		1700/2500	1500/2400	1980	63.1"	54.26"	16:9	7.07:1	6.9:1	100/130	-	4	6/41-7/41	Curtiss C-55
GR2600A5B-5	2600-19	807	1600/2400	1350/2300	1969	62.2"	55.1"	.5625	7.14:1/10:1	6.3:1	100	-	639	7/42-12/43	Northrup (Vultee) 72, A-31; Vega B-37; Martin A-30; Vultee A-31, -31A, 31C, A-35, A-35A
776C14BB1	2600-20	H776B	1900/2800	1600/2400	2045	66.08"	54.08"	.5625	7.06:1/10.06:1	6.9:1	100	-	14,620	2/43-10/45	Eastern TBM-3, Grumman TB-3, Curtiss Columbus SB2C-3, -4, Canadian Fairchild SBF-2; Can Car SBW-2, -2B
776C14BB4	2600-22	H776B	1900/2800	1600/2400	2056	66.08"	54.08"	.4375	7.06:1/10.06:1	6.9:1	100	-	880	3/43-7/44	Martin PBH-30
GR2600A5B-0	2600-23	807	1600/2400	1350/2300	1969	58.32"	55.1"	.5625	7.14:1/10:1	6.3:1	100	-	10,342	3/42-11/44	Douglas A-20C, DB7B, BB7C; Boeing DB7B
GR2600B655	2600-29	655C	1700/2800	1500/2400	2000	63.1"	54.26"	16:9	7.06:1/10.06:1	6.9:1	100	-	18,784	6/43-7/45	Douglas A-20H, North Am B-25G, -25H, -25J, -PBJ-1H
GR2600B655	2600-31	655C	1700/2600	1500/2400	2000	63.1"	54.26"	16:9	7.06:1/10.06:1	6.9:1	100	-	360	8/43-4/45	British M-33C
													<u>Total:</u>	<u>76,488</u>	(military)
														<u>Total C14 - 85,309</u>	

*** Main Stage 7:1; Auxiliary Stage 5.898:1 & 8.519:1

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAD Model	Military Model	Model Spec. No.	Sea Level Ratings		Weight	Length	Diameter (Height)	Red. Gear Ratio	Superch. Ratio	Comp. Ratio	Fuel Grade (or Octane)	T.C. No.	Number Built	Production Period	Installations
			Take-Off	Normal											
R-3350 18 Cylinder Air Cooled Radial 6.125" Bore 6.312" Stroke															
739C18BA2	-	739E	2200/2800	2000/2400	2595	76.26"	55.78"	.4375:1	6.06:1	6.5:1	100/130	218	232	9/45-6/46	Lockheed 49
745C18BA1	-	745	2200/2800	2000/2400	2628	76.26"	55.78"	.4375:1	6.06:1	6.5:1	100/130	218	149	10/45-1/46	Lockheed 49
745C18BA3	-	745G	2200/2800	2000/2400	2842	76.13"	55.78"	.4375:1	6.46:1/8.67:1	6.5:1	100/130	218	41	6/46	Lockheed 49, 149
745C18BD1	-	749E	2500/2800	2100/2400	2915	78.52"	55.62"	.4375:1	6.46:1/8.67:1	6.5:1	100/130	218	939	2/46-10/52	Lockheed 649, 749, C-121A, BC-121B
956C18CA1	-	956F	2700/2900	2300/2600	2962	78.47"	55.62"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	270	83	11/50-4/52	Lockheed 1049
975C18CB1	-	975	2800/2900	2400/2600	3065	78.47"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	270	64	1/52-11/52	Lockheed 1049
972TC18DA1	-	972G	3250/2900	2600/2600	3581	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	272	596	1/52-2/55	Lockheed 1049B (R7V-1), 1049C, D, E, F (C121C)
972TC18DA2	-	972G	3250/2900	2600/2600	3573	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	272	374	8/52-12/54	Douglas DC7
972TC18DA3	-	972G	3250/2900	2700/2600	3604	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	272	614	10/54-8/58	Lockheed 1049B, C, G, H
972TC18DA4	-	972G	3250/2900	2700/2600	3596	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	272	642	11/54-1/58	Douglas DC7
988TC18EA1	-	988G	3400/2900	2800/2600	3645	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	287	903	10/55-9/58	Douglas DC7-B, -C
988TC18EA2	-	988G	3400/2900	2800/2600	3745	89.53"	56.59"	.355:1	6.46:1/8.67:1	6.7:1	115/145	287	283	6/56-11/58	Lockheed 1649A
988TC18EA3	-	988G	3400/2900	2800/2600	3645	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	287	294	1/56-7/58	Lockheed 1049C, D, G, H
988TC18EA4	-	988G	3400/2900	2800/2600	3675	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	287	159	9/57-7/58	Douglas DC7-B, -C
988TC18EA6	-	988G	3400/ 900	2800/2600	3675	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	287	80	12/57-12/58	Lockheed 1049C, D, G, H
981TC18EA1	-	981	3700/2900	2800/2600	3651	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	287	203	1/56-4/59	Canadair CL-28
Total C18 Commercial:													5,656		
GR3350A33	3350-1	-	1800/2200	1410/2100	2500	71.50"	55.14"	2:1	6.41:1/8.86:1	6.8:1	100/130	-	2	3/38-4/34 ³²	
GR3350	3350-2	474C	1800/2200	1500/2100	2500	77-1/4"	54"	2:1	6.41:1	6.8:1	100	-	1	4/38-4/38	
GR3350A677	3350-4	N677A	2000/2400	1700/2300	2450	71.5"	55.12"	16:7	6.41:1/8.86:1	6.85:1	100	-	7	5/39-11/40	Consolidated XPB3Y-1, XP4Y-1, Martin XPB2M-1, (4 Engines)
GR3350A77	3350-5	656	2000/2400	1620/2300	2450	71.5"	55.12"	16:7	6.41:1/8.86:1	6.85:1	100	-	7	7/39-8/41	Douglas XB-19
779C18BB1	3350-8	N779F	2400/2600	2100/2400	2796	77.8"	54.12"	.4375:1	6.46:1/8.67:1	6.5:1	100/130	-	4	12/41-8/42	Douglas B-19, SB2D-1, XSB2D-1; Curtiss XSB3C-1, SB3C-1, Boeing PBB-1, XPBB-1; Martin PBM-4, PBM-4B; Consolidated XP4Y-1, Vega XP2V1
812C18BB1	3350-10	N812	2300/2800 2250/2600	2100/2400	2595	78.35"	54.13"	.4375:1	6.06:1	6.7:1	100	-	2	2/43-5/43	Boeing XPBB-1
670C18H1	3350-13	670J	2200/2800	2000/2400	2668	76.26"	55.78"	.35:1	6.06:1	6.85:1	100	-	50	1/42-7/43	Boeing XB-29, B-29, YB-29, Consolidated XB-32, YB-32, B-32, SB-32
779C18BB2	3350-14	N779F	2300/2800	2100/2400	2731	77.8"	54.12"	.5625:1	6.06:1	6.5:1	100/130	-	2	1/41-3/41	Douglas XSB2D-1, SB2D-1, B7D-1
798C18BB1	3350-16	798B	2300/2800	2100/2400	2745	100.12"	54.13"	.4516:1	6.06:1	6.7:1	100	-	1	4/42-4/44	Curtiss XF14C-1
784C18BB1	3350-17	784A	2300/2800	2100/2400	2745	100.12"	54.26"	.35:1	6.09:1	6.7:1	100	-	1	3/43-3/43	Curtiss XP-62, P-62, XF14C-1
711C18BA3	3350-18	711	2200/2600	2000/2400	2632	78.35"	55.12"	.4375:1	6.08:1/8.52:1	6.85:1	100	-	12	12/42-5/43	Martin XPB2M-1R
787C18BA1	3350-19	787C	2200/2800	2000/2400	2757	76.26"	55.78"	.35:1	6.06:1	6.85:1	100/130	-	31	12/42-9/44	Boeing B-29
670C18BA2	3350-21	670J	2200/2800	2000/2400	2668	76.26"	55.78"	.35:1	6.06:1	6.85:1	100	-	147	11/42-4/44	Boeing B-29, XB-29, YB-29, C-97; Consolidated XB32, YB32
670C18BA3	3350-23	670J	2200/2800	2000/2400	2646	76.26"	55.78"	.35:1	6.06:1	6.85:1	100	-	1265	2/43-3/44	Boeing B-29; Consolidated YB-32, B-82

HISTORICAL ENGINE SUMMARY

(BEGINNING 1930)

WAD Model	Military Model	Model Spec. No.	Sea Level Ratings Take-Off	Normal	Weight	Length	Diameter (Height)	Red. Gear Ratio	Superch. Ratio	Comp. Ratio	Fuel Grade (or Octane)	T.C. No.	Number Built	Production Period	Installations
670C18BA4	3350-23A	670J	2200/2800	2000/2400	2646	76.26"	55.78"	.35:1	6.06:1	6.85:1	100	-	22,486*	1/44-9/45	Boeing B-29, C-97, Consolidated-Vultee B-32
825C18BD1	R3350-24W	825	2500/2900	2100/2400	2822	80.58"	54.13"	.4375:1	6.46:1/8.67:1	6.5:1	100/130	-	694	4/45-1/48	Lockheed P2V-2, Curtiss-Columbus XBT2C Douglas XBT2D-1 Douglas AD-1
836C18CA1	R3350-26W	836	2700/2900	2100/2400	2822	80.58"	54.13"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	304	1/47-6/48	Crusman XT83F Lockheed P2V-3, Douglas AD-2
836C18CA1	R3350-26WA	836E	2700/2900	2300/2600	2848	80.81"	55.62"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	3,446*	7/48-11/56	Douglas AD-2, 3, 4, 5, 6 Martin M270 Douglas AD-7
836C18CA2	R3350-26WB	836E	2700/2900	2300/2600	2953	81.23"	55.62"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	559	3/50-12/51	
856C18DA1	R3350-30W	856	3250/2900	2600/2600	3408	91.80"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	1,348	11/51-3/54	Lockheed P2V4, 5, 6
856TC18DB1	R3350-30WA	856C	3500/2900	2600/2600	3520	91.8"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	61	9/52-4/53	Lockheed P2V5
-	R3350-30WB	-	3500/2900	2600/2600	3520	91.8"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	1,316	8/53-1961	Lockheed P2V-7, Martin P5M-2
878TC18EA1	R3350-32W	878D	3700/2900	2800/2600	3560	91.8"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	32	3/50-1/51	Boeing B-29
861C18CA2	-	861B	2700/2900	2300/2600	2980	78.54"	55.62"	.4375:1	6.46:1	6.7:1	115/145	-	1,640	6/52-9/57	WV-2, WV-3, C1216
872TC18DA1	3350-34	872	3250/2900	2600/2600	3641	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	58	8/42-10/44	Lockheed C-69, Model 49
711C18BA2	3350-35	711H	2200/2800	2000/2400	2707	76.26"	55.78"	.4375:1	6.61:1/8.81:1	6.85:1	100/130	-	181	10/44-9/45	Lockheed C-69
711C18BA4	3350-35A	711H	2200/2800	2000/2400	2663**	76.26"	55.78"	.4375:1	6.06:1	6.85:1	100/130	-	6	8/42-9/45	Vultee YA-31C
670C18BA2	3350-37	-	2200/2800	2000/2400	2670	76.26"	55.12"	16:7	6.06:1	6.85:1	100/130	-	1	3/43-3/43	
787C18BA	3350-39	-	2200/2800	2000/2400	2670	76.26"	55.12"	16:7	6.06:1	6.85:1	100/130	-	26	1/43-8/44	Boeing B-29
787C18BA3	3350-41	787C	2200/2800	2000/2400	2725	76.26"	55.78"	.35:1	6.06:1	6.85:1	100/130	-	8	10/43-11/44	Beech KA-38
802C18BB1	3350-43	802	2200/2800	2100/2400	2610	78.35"	54.12"	16:7	6.09:1/8.52:1	6.7:1	100/130	-	6,958*	1/44-11/45	Boeing B-29, Consolidated Vultee B-32
787C18BA6	3350-57	787C	2200/2800	2000/2400	2758	76.26"	55.78"	.35:1	6.06:1	6.85:1	100/130	-	407*	1/45-9/45	Boeing B-29
787C18BA6	3350-57A	787	2200/2800	2000/2400	2757	76.26"	55.12"	.35:1	6.06:1	6.85:1	100/130	-	376	10/44-6/45	Boeing B-29
787C18BA7	3350-59	787C	2200/2800	2000/2400	2726	76.26"	55.78"	.35:1	6.06:1	6.85:1	100/130	-	8	3/46-9/46	Boeing B-29
787C18BC5	B3350-65	824A	2500/2800	2100/2400	2856	75.80"	55.78"	.35:1	6.61:1	6.85:1	100/130	-	9	12/48-1/49	Lockheed C121A, BC121B
744C18BD1	R3350-75	749	2500/2800	2100/2400	2915	78.52"	55.62"	.4375:1	6.46:1/8.67:1	6.5:1	100/130	-	15	11/49-4/50	Lockheed C121A, BC121B
744C18DD1	YR3350-75	749	2500/2800	2100/2400	2915	78.52"	55.62"	.4375:1	6.46:1/8.67:1	6.5:1	100/130	-	1	4/50	
858C18DA1	R3350-77	858	3250/2900	2600/2600	3528	91.80"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	All Grades	-	2,395*	9/51-1954	Fairchild C119
868TC18DB1	R3350-85	868	3500/2900	2600/2600	3472	90.80"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	24	1/55-3/55	Fairchild C119
868TC18DB2	R3350-89	868	3500/2900	2600/2600	3472	90.80"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-	4653	5/55-8/56	Lockheed C121
923TC18DA2	R3350-91	923B	3250/2900	2600/2600	3690	89.53"	56.59"	.4375:1	6.46:1/8.67:1	6.7:1	115/145	-			

Total: 44,536

Total C18, TC18: 50,192

* Includes licensee production.

** Without two-speed supercharger.

XR4090 Cyclone C22 22 Cylinder Double Row Air Cooled 6.125" Bore 6.312" Stroke

790C22AA1	790A	3000/2800	2400/2600	3230	91.0"	58.0"	.333	5:1	6.85:1	100	-	-	-	-	-
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TURBO-JETS; RAM JETS, TURBO PROPS

(PRODUCTION)

WAD Model	Military Model	Model Spec.	Sea Level Ratings		Weight (Dry)	Length	Diameter	Air Flow Lb/Sec.	Installation	Fuel	No. Built	Production Period
			Max.	Normal								
870TJ31A1	YJ65W1	870B	7220/8300	6400/8000	2595	115	37.5	117	Republic F-84F	JP-4	292	4-52 to 11-53
902TJ31AA1	YJ65W1A	902	7220/8300	6400/8000	2595	115	37.5	117	Republic F-84F	JP-4	41.9	5-53 to 4-54
879TJ31AA1	YJ65W2	879	7220/8300	6350/8000	2735	108	37.5	117	Douglas A4D-1, NAA FJ-3	JP-4	23	8-53 to 4-54
884TJ31AA1	YJ65W3	884C	7220/8300	6350/8000	2785	115	37.5	117	Republic F-84F, RF-84F	JP-4	3343 *	3-54 to 1955
890TJ31BA1	J65W4	N890A	7700/8300	6780/8030	2750	108	37.5	125	Douglas A4D-1 NAA FJ3	JP-4	484	1-55 to 10-55
-	J65W4	N890A	7700/8300	6780/8030	2750	108	37.5	125	Douglas A4D-1 NAA FJ3	JP-4	119	6-54 to 9-54
-	J65W4A	N890A	7700/8300	6780/8030	2750	108	37.5	125	Douglas A4D-1 NAA FJ3	JP-4	195	10-54 to 2-55
890TJ31BA1	J65W4B	N890A	7700/8300	6780/8070	2750	108	37.5	125	NAA FJ4	JP-4	188	12-55 to 5-56
881TJ31AA1	J65W5	881A	7220/8300	6350/8000	2750	110	37.5	117	Martin B-59A/B, RB-57A	JP-4	1126	7-53 to 8-56
898TJ31BB1	J65W6	N898	11000/8300	6660/8000	3485	184	37.5	125	Grumman F9F (Test) LAC XF104, CVA SSM-N-9	JP-4	3	3-55 to 4-55
898TJ31BB1	X565W6	N898	11000/8300	6660/8000	3485	184	37.5	125		JP-4	16	9-55 to 12-55
892TJ31BA1	J65W7	892E	7800/8300	6870/8000	2795	114.83	37.5	125	Republic FB4F, RFB4F	JP-4	2192 *	4-54 to 7-56
917TJ31BB1	YJ65W14	N917A	10000/8300	6470/8000	3535	181.14	37.5	125	Grumman F11F-1	JP-4	12	2-55 to 9-55
880TJ31BA3	J65W16	N890A	7700/8300	6780/8030	2742	112.9	37.5	125	NAA FJ-3, FJ-4	JP-4	55	6-55 to 10-55
890TJ31BA3	J65W16A	N890C	7700/8300	6780/8030	2742	112.9	37.5	125	NAA FJ-3, FJ-4	JP-4	1288	12-55 to 12-58
927TJ31BB1	YJ65W18	N927	10500/8300	6470/8030	3485	181.14	37.5	125		JP-4	47	2-56 to 6-56
927TJ31BB1	J65W18	N927C	10500/8300	6470/8030	3485	181.14	37.5	125	Grumman F 11F-1 Chance-Vought Regulus	JP-4	221	3-56 to 10-57
Total											10,023	

* Includes Licensee Production

880TJ32CB1	YJ67W1	880A	21500/6175	11700/6175	5100	250.3"	45"	225		JP-4	13	7-55 to 9-56
	<u>48" Ram Jet</u>											
901WRJ48AB1	XRJ47W5	901C	12095 at 45000 ft. at 2.75 Mo		994		48" Dia.	235	Navajo (SM-64)	JP-5	23	4-56 to 11-56
924WRJ48AB1	XRJ47W9	924	9684 at 50,000 ft. at 2.75 Mo		985		48" Dia.	185	Navajo (SM-64)	JP-5	36	8-56 to 3-57

Turbo Prop

			RPM	PROP. SH. HP.	Jet Thr	Weight						
875TP51AA1	YT49W1	875E	8000	9000	3450	4466		107	B-47	JP-4	13	8-53 to 9-55

Turbo Superchargers

WAD Model	Military Model	Model Spec.	Ratings			Altitude	Weight	No Built	Production Period	Installation
			Air Flow # Sec.	RPM	Outlet Pressure "Hg					
800TSBA1	WT9-2	800	147	23000	31.67	26800	108	997	1942-1945	Curtiss X SC-1, SC-1
800TSBA2	WT9-4	800	147	24000	31.67	26800	108	8	1942-1944	Eastern XF-2M-1
822TSBC1	WT10-2	822	168	24000	31.67	28100	108	-	-	-
822TSBC2	WT10-4	822	168	24000	31.67	28100	108	-	-	-

TURBOJETS, TURBOPROPS, RAMJETS

(DEVELOPMENT ONLY)

<u>Type</u>	<u>WAD Model</u>	<u>Military Model</u>	<u>Rating</u>		<u>Weight</u>	<u>Description</u>	<u>Date</u>
			<u>Max.</u>	<u>Normal</u>			
Turbojet	TJ1A1	XJ51-W-1	6000/8100	-	2800	Single Spool, axial flow, variable nozzle	Design only 1945-46
Turbojet	TJ7	XJ59-W-1	12000/6000	-	3300	Two spool, axial flow, concentric shaft - rig tests only	1949
Turbojet	TJ6	XJ61-W-1	11000/6600	-	3000	Two spool, axial flow, concentric shaft - rig tests only	1948
Turbojet	862TJ14A1	XJ59-W-3	12000/6600	10000/6600	3875	Two spool, axial flow, concentric shaft - rig tests only	1949
Turbojet	TJ37A1	-	4850/9900	4130/9400	990	Single spool, axial flow, (Bristol Orpheus)	1957-58
Turbojet	TJ38A1	-	12500/6375	12500/6375	3946	Two spool, axial flow, concentric shaft (Bristol Olympos)	1957-58
Dual Cycle	922DC32AA1	YJ67-3/XRJ55W-1	22100/6350	12150/6350	7886	Two spool, axial flow turbojet with afterburner-Ramjet (Turbojet Bypassed)	1955-1957
Turboprop	851GTAB1	XT35-W-3	8900 HP/7200	7500 HP/7080	5950	Single spool with 3 stage centrifugal compressor- some full scale testing	1945-48
Turboprop	876TF51CA1	YT47-W-1	11400/7700	10000/7500	4832	Two spool, concentric shaft, axial flow	Design only

<u>WAD Model</u>	<u>Cooling Medium</u>	<u>Rating</u>	<u>Fuel</u>
<u>Rotating Combustion Engines *</u>			
RC1-60	Liquid	90-125/5000	Gasoline
RC2-60	Liquid	180-250/5000	Gasoline
RC4-60	Liquid	360-500/5000	Gasoline
RC1-1920	Liquid	900-1125/1580	Gasoline
RC2-8.6	Liquid	50-70/12000	Gasoline
RC1-60	Liquid	60-90/5000	MultiFuel
RC1-60	Air	110-140/6000	Gasoline
RC1-4.3	Air	3/3600	Gasoline

This list represents Rotating Combustion engines which have been designed, built, and tested at WAD through various stages of development. Power ratings are shown as ranges of power to encompass the potential levels of ratings for a given engine size as appropriate to the various industrial, automotive, aircraft, and other applications.

* Engines listed are typical test engines only. Designs have been completed on a variety of engines of higher and lower rating over a displacement range from 4.3 to 90 cubic inches and having industrial, automotive, and aircraft applications.

<u>DIESEL ENGINES - 12 CYLINDER VEE, LIQUID COOLED, 5-3/8" BORE, 6-1/4" Stroke</u>										
<u>Model</u>	<u>Rating</u>	<u>Basic * Weight</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>	<u>Fuel</u>	<u>No. Built</u>	<u>Production Period</u>		
12V142A-D	900 Hp/2300	3700	78	45.2	54.4	Diesel #1 or #2	18	1960-61	For MC 3- 250 KW	
12V142A-2	250 KW/1800					Diesel #1 or #2	2	1961-62	Marine Generator Set	
12V142B-4	1050KW/1800					Diesel #1 or #2	1	1962-63		(for dual MC-6 1050 KW Marine Generator Set)
12V142B-5		(LH Rotation)								
		(RH Rotation)				Diesel #1 or #2				

* Weight and dimensions shown are for a single basic engine only.

June 23, 1965

07075

CC: Messrs. H. Jones, C. Brautigan, R. Johnson

June 23, 1965

Rev. Boardman C. Reed, Rector
The Church of the Saviour
P. O. Box 417
Hanford, California

Dear Rev. Reed:

In reference to your letter of June 10 about the Wright Whirlwind Engine, I looked up the enginal engine serial number records today from the beginning through the 1927 period. The early records do little to clarify the model details, but the following summary may be of interest. The Wright serial numbers were assigned ahead of time and covered the other engines in production at the time, so they are not clear cut by model and gears, as you suggest.

		<u>Wright Serial No.</u>
The first	R1 Radial was----- and 4 engines were released to production and 3 actually built.	5733
The first	J3 Radial were bought by the US Navy (50 engines). This was also called the Lawrence Engine.	6322 to 6371
The first	P1 was----- (3/31/25) and it was recon- ditioned 8/20/25.	6477
The first	P2 was----- and built 6/27/25.	6479
The first	Exp J4 was----- and was later rebuilt as Serial Number 6922.	6486
The first	Production J4 was----- and 155 were built for the USN between 11/17/24 and 7/31/25.	6491

June 23, 1965

The first	Production J3 was----- and was sent to Cuba in a Vought airplane on 9/9/24. Later Prod. J3 was----- and was sent to Peru in a Boeing airplane 9/20/24.	6647 6650
The first	J4 Commercial was shipped to Huff Daland on 2/5/25 and last of 12 shipped to same place on 4/15/25. Others followed to Travelair, Curtiss, Vought Fairchild, Canadian Government, Peru Government and Fokker. (3 engines)	6654
	J4 rebuilt as J4B was shipped on loan to Heinhel.	6672
	J4A for USN started 9/11/25 and ended with serial 6912 on 4/26/26.	7773
	J4A was installed in the Wright Bellanca (WB2 you mentioned) and was flown for a 50-hour test in the airplane 9/23/25.	6918
	Exp J4A was reconditioned and sold to Ryan.	6922
	J4B's were sold to miscellaneous manufacturers between 3/26/26 and 6/12/26 including Fokker, Laird, Ryan, Russia, Canadian Vickers, Buhl Heinhel, Travelair, Pitcairn. These included serial no. 7016, 7017, 7018, 7019, 7020, 7021, 7022, 7023, 7024, 7025, 7026, 7027, 7028, 7029, 7030, 7031, 7032, 7033, 7034, 7035, 7036, 7037, 7038, 7039, 7040, 7041, 7042, 7043, 7044, 7045, 7046, 7047, 7048, 7049, 7050, 7051, 7052, 7053, 7054, 7055, 7056, 7057, 7058, 7059, 7060, 7061, 7062, 7063, 7064, 7065, 7066, 7067, 7068, 7069, 7070, 7071, 7072, 7073, 7074, 7075, 7076, 7077, 7078, 7079, 7080, 7081, 7082, 7083, 7084, 7085, 7086, 7087, 7088, 7089, 7090, 7091, 7092, 7093, 7094, 7095, 7096, 7097, 7098, 7099, 7100, 7101, 7102, 7103, 7104, 7105, 7106, 7107, 7108, 7109, 7110, 7111, 7112, 7113, 7114, 7115, 7116, 7117, 7118, 7119, 7120, 7121, 7122, 7123, 7124, 7125, 7126, 7127, 7128, 7129, 7130, 7131, 7132, 7133, 7134, 7135, 7136, 7137, 7138, 7139, 7140, 7141, 7142, 7143, 7144, 7145, 7146, 7147, 7148, 7149, 7150, 7151, 7152, 7153, 7154, 7155, 7156, 7157, 7158, 7159, 7160, 7161, 7162, 7163, 7164, 7165, 7166, 7167, 7168, 7169, 7170, 7171, 7172, 7173, 7174, 7175, 7176, 7177, 7178, 7179, 7180, 7181, 7182, 7183, 7184, 7185, 7186, 7187, 7188, 7189, 7190, 7191, 7192, 7193, 7194, 7195, 7196, 7197, 7198, 7199, 7200, 7201, 7202, 7203, 7204, 7205, 7206, 7207, 7208, 7209, 7210, 7211, 7212, 7213, 7214, 7215, 7216, 7217, 7218, 7219, 7220, 7221, 7222, 7223, 7224, 7225, 7226, 7227, 7228, 7229, 7230, 7231, 7232, 7233, 7234, 7235, 7236, 7237, 7238, 7239, 7240, 7241, 7242, 7243, 7244, 7245, 7246, 7247, 7248, 7249, 7250, 7251, 7252, 7253, 7254, 7255, 7256, 7257, 7258, 7259, 7260, 7261, 7262, 7263, 7264, 7265, 7266, 7267, 7268, 7269, 7270, 7271, 7272, 7273, 7274, 7275, 7276, 7277, 7278, 7279, 7280, 7281, 7282, 7283, 7284, 7285, 7286, 7287, 7288, 7289, 7290, 7291, 7292, 7293, 7294, 7295, 7296, 7297, 7298, 7299, 7300, 7301, 7302, 7303, 7304, 7305, 7306, 7307, 7308, 7309, 7310, 7311, 7312, 7313, 7314, 7315, 7316, 7317, 7318, 7319, 7320, 7321, 7322, 7323, 7324, 7325, 7326, 7327, 7328, 7329, 7330, 7331, 7332, 7333, 7334, 7335, 7336, 7337, 7338, 7339, 7340, 7341, 7342, 7343, 7344, 7345, 7346, 7347, 7348, 7349, 7350, 7351, 7352, 7353, 7354, 7355, 7356, 7357, 7358, 7359, 7360, 7361, 7362, 7363, 7364, 7365, 7366, 7367, 7368, 7369, 7370, 7371, 7372, 7373, 7374, 7375, 7376, 7377, 7378, 7379, 7380, 7381, 7382, 7383, 7384, 7385, 7386, 7387, 7388, 7389, 7390, 7391, 7392, 7393, 7394, 7395, 7396, 7397, 7398, 7399, 7400, 7401, 7402, 7403, 7404, 7405, 7406, 7407, 7408, 7409, 7410, 7411, 7412, 7413, 7414, 7415, 7416, 7417, 7418, 7419, 7420, 7421, 7422, 7423, 7424, 7425, 7426, 7427, 7428, 7429, 7430, 7431, 7432, 7433, 7434, 7435, 7436, 7437, 7438, 7439, 7440, 7441, 7442, 7443, 7444, 7445, 7446, 7447, 7448, 7449, 7450, 7451, 7452, 7453, 7454, 7455, 7456, 7457, 7458, 7459, 7460, 7461, 7462, 7463, 7464, 7465, 7466, 7467, 7468, 7469, 7470, 7471, 7472, 7473, 7474, 7475, 7476, 7477, 7478, 7479, 7480, 7481, 7482, 7483, 7484, 7485, 7486, 7487, 7488, 7489, 7490, 7491, 7492, 7493, 7494, 7495, 7496, 7497, 7498, 7499, 7500, 7501, 7502, 7503, 7504, 7505, 7506, 7507, 7508, 7509, 7510, 7511, 7512, 7513, 7514, 7515, 7516, 7517, 7518, 7519, 7520, 7521, 7522, 7523, 7524, 7525, 7526, 7527, 7528, 7529, 7530, 7531, 7532, 7533, 7534, 7535, 7536, 7537, 7538, 7539, 7540, 7541, 7542, 7543, 7544, 7545, 7546, 7547, 7548, 7549, 7550, 7551, 7552, 7553, 7554, 7555, 7556, 7557, 7558, 7559, 7560, 7561, 7562, 7563, 7564, 7565, 7566, 7567, 7568, 7569, 7570, 7571, 7572, 7573, 7574, 7575, 7576, 7577, 7578, 7579, 7580, 7581, 7582, 7583, 7584, 7585, 7586, 7587, 7588, 7589, 7590, 7591, 7592, 7593, 7594, 7595, 7596, 7597, 7598, 7599, 7600, 7601, 7602, 7603, 7604, 7605, 7606, 7607, 7608, 7609, 7610, 7611, 7612, 7613, 7614, 7615, 7616, 7617, 7618, 7619, 7620, 7621, 7622, 7623, 7624, 7625, 7626, 7627, 7628, 7629, 7630, 7631, 7632, 7633, 7634, 7635, 7636, 7637, 7638, 7639, 7640, 7641, 7642, 7643, 7644, 7645, 7646, 7647, 7648, 7649, 7650, 7651, 7652, 7653, 7654, 7655, 7656, 7657, 7658, 7659, 7660, 7661, 7662, 7663, 7664, 7665, 7666, 7667, 7668, 7669, 7670, 7671, 7672, 7673, 7674, 7675, 7676, 7677, 7678, 7679, 7680, 7681, 7682, 7683, 7684, 7685, 7686, 7687, 7688, 7689, 7690, 7691, 7692, 7693, 7694, 7695, 7696, 7697, 7698, 7699, 7700, 7701, 7702, 7703, 7704, 7705, 7706, 7707, 7708, 7709, 7710, 7711, 7712, 7713, 7714, 7715, 7716, 7717, 7718, 7719, 7720, 7721, 7722, 7723, 7724, 7725, 7726, 7727, 7728, 7729, 7730, 7731, 7732, 7733, 7734, 7735, 7736, 7737, 7738, 7739, 7740, 7741, 7742, 7743, 7744, 7745, 7746, 7747, 7748, 7749, 7750, 7751, 7752, 7753, 7754, 7755, 7756, 7757, 7758, 7759, 7760, 7761, 7762, 7763, 7764, 7765, 7766, 7767, 7768, 7769, 7770, 7771, 7772, 7773, 7774, 7775, 7776, 7777, 7778, 7779, 7780, 7781, 7782, 7783, 7784, 7785, 7786, 7787, 7788, 7789, 7790, 7791, 7792, 7793, 7794, 7795, 7796, 7797, 7798, 7799, 7800, 7801, 7802, 7803, 7804, 7805, 7806, 7807, 7808, 7809, 7810, 7811, 7812, 7813, 7814, 7815, 7816, 7817, 7818, 7819, 7820, 7821, 7822, 7823, 7824, 7825, 7826, 7827, 7828, 7829, 7830, 7831, 7832, 7833, 7834, 7835, 7836, 7837, 7838, 7839, 7840, 7841, 7842, 7843, 7844, 7845, 7846, 7847, 7848, 7849, 7850, 7851, 7852, 7853, 7854, 7855, 7856, 7857, 7858, 7859, 7860, 7861, 7862, 7863, 7864, 7865, 7866, 7867, 7868, 7869, 7870, 7871, 7872, 7873, 7874, 7875, 7876, 7877, 7878, 7879, 7880, 7881, 7882, 7883, 7884, 7885, 7886, 7887, 7888, 7889, 7890, 7891, 7892, 7893, 7894, 7895, 7896, 7897, 7898, 7899, 7900, 7901, 7902, 7903, 7904, 7905, 7906, 7907, 7908, 7909, 7910, 7911, 7912, 7913, 7914, 7915, 7916, 7917, 7918, 7919, 7920, 7921, 7922, 7923, 7924, 7925, 7926, 7927, 7928, 7929, 7930, 7931, 7932, 7933, 7934, 7935, 7936, 7937, 7938, 7939, 7940, 7941, 7942, 7943, 7944, 7945, 7946, 7947, 7948, 7949, 7950, 7951, 7952, 7953, 7954, 7955, 7956, 7957, 7958, 7959, 7960, 7961, 7962, 7963, 7964, 7965, 7966, 7967, 7968, 7969, 7970, 7971, 7972, 7973, 7974, 7975, 7976, 7977, 7978, 7979, 7980, 7981, 7982, 7983, 7984, 7985, 7986, 7987, 7988, 7989, 7990, 7991, 7992, 7993, 7994, 7995, 7996, 7997, 7998, 7999, 8000, 8001, 8002, 8003, 8004, 8005, 8006, 8007, 8008, 8009, 8010, 8011, 8012, 8013, 8014, 8015, 8016, 8017, 8018, 8019, 8020, 8021, 8022, 8023, 8024, 8025, 8026, 8027, 8028, 8029, 8030, 8031, 8032, 8033, 8034, 8035, 8036, 8037, 8038, 8039, 8040, 8041, 8042, 8043, 8044, 8045, 8046, 8047, 8048, 8049, 8050, 8051, 8052, 8053, 8054, 8055, 8056, 8057, 8058, 8059, 8060, 8061, 8062, 8063, 8064, 8065, 8066, 8067, 8068, 8069, 8070, 8071, 8072, 8073, 8074, 8075, 8076, 8077, 8078, 8079, 8080, 8081, 8082, 8083, 8084, 8085, 8086, 8087, 8088, 8089, 8090, 8091, 8092, 8093, 8094, 8095, 8096, 8097, 8098, 8099, 8100, 8101, 8102, 8103, 8104, 8105, 8106, 8107, 8108, 8109, 8110, 8111, 8112, 8113, 8114, 8115, 8116, 8117, 8118, 8119, 8120, 8121, 8122, 8123, 8124, 8125, 8126, 8127, 8128, 8129, 8130, 8131, 8132, 8133, 8134, 8135, 8136, 8137, 8138, 8139, 8140, 8141, 8142, 8143, 8144, 8145, 8146, 8147, 8148, 8149, 8150, 8151, 8152, 8153, 8154, 8155, 8156, 8157, 8158, 8159, 8160, 8161, 8162, 8163, 8164, 8165, 8166, 8167, 8168, 8169, 8170, 8171, 8172, 8173, 8174, 8175, 8176, 8177, 8178, 8179, 8180, 8181, 8182, 8183, 8184, 8185, 8186, 8187, 8188, 8189, 8190, 8191, 8192, 8193, 8194, 8195, 8196, 8197, 8198, 8199, 8200, 8201, 8202, 8203, 8204, 8205, 8206, 8207, 8208, 8209, 8210, 8211, 8212, 8213, 8214, 8215, 8216, 8217, 8218, 8219, 8220, 8221, 8222, 8223, 8224, 8225, 8226, 8227, 8228, 8229, 8230, 8231, 8232, 8233, 8234, 8235, 8236, 8237, 8238, 8239, 8240, 8241, 8242, 8243, 8244, 8245, 8246, 8247, 8248, 8249, 8250, 8251, 8252, 8253, 8254, 8255, 8256, 8257, 8258, 8259, 8260, 8261, 8262, 8263, 8264, 8265, 8266, 8267, 8268, 8269, 8270, 8271, 8272, 8273, 8274, 8275, 8276, 8277, 8278, 8279, 8280, 8281, 8282, 8283, 8284, 8285, 8286, 8287, 8288, 8289, 8290, 8291, 8292, 8293, 8294, 8295, 8296, 8297, 8298, 8299, 8300, 8301, 8302, 8303, 8304, 8305, 8306, 8307, 8308, 8309, 8310, 8311, 8312, 8313, 8314, 8315, 8316, 8317, 8318, 8319, 8320, 8321, 8322, 8323, 8324, 8325, 8326, 8327, 8328, 8329, 8330, 8331, 8332, 8333, 8334, 8335, 8336, 8337, 8338, 8339, 8340, 8341, 8342, 8343, 8344, 8345, 8346, 8347, 8348, 8349, 8350, 8351, 8352, 8353, 8354, 8355, 8356, 8357, 8358, 8359, 8360, 8361, 8362, 8363, 8364, 8365, 8366, 8367, 8368, 8369, 8370, 8371, 8372, 8373, 8374, 8375, 8376, 8377, 8378, 8379, 8380, 8381, 8382, 8383, 8384, 8385, 8386, 8387, 8388, 8389, 8390, 8391, 8392, 8393, 8394, 8395, 8396, 8397, 8398, 8399, 8400, 8401, 8402, 8403, 8404, 8405, 8406, 8407, 8408, 8409, 8410, 8411, 8412, 8413, 8414, 8415, 8416, 8417, 8418, 8419, 8420, 8421, 8422, 8423, 8424, 8425, 8426, 8427, 8428, 8429, 8430, 8431, 8432, 8433, 8434, 8435, 8436, 8437, 8438, 8439, 8440, 8441, 8442, 8443, 8444, 8445, 8446, 8447, 8448, 8449, 8450, 8451, 8452, 8453, 8454, 8455, 8456, 8457, 8458, 8459, 8460, 8461, 8462, 8463, 8464, 8465, 8466, 8467, 8468, 8469, 8470, 8471, 8472, 8473, 8474, 8475, 8476, 8477, 8478, 8479, 8480, 8481, 8482, 8483, 8484, 8485, 8486, 8487, 8488, 8489, 8490, 8491, 8492, 8493, 8494, 8495, 8496, 8497, 8498, 8499, 8500, 8501, 8502, 8503, 8504, 8505, 8506, 8507, 8508, 8509, 8510, 8511, 8512, 8513, 8514, 8515, 8516, 8517, 8518, 8519, 8520, 8521, 8522, 8523, 8524, 8525, 8526, 8527, 8528, 8529, 8530, 8531, 8532, 8533, 8534, 8535, 8536, 8537, 8538, 8539, 8540, 8541, 8542, 8543, 8544, 8545, 8546, 8547, 8548, 8549, 8550, 8551, 8552, 8553, 8554, 8555, 8556, 8557, 8558, 8559, 8560, 8561, 8562, 8563, 8564, 8565, 8566, 8567, 8568, 8569, 8570, 8571, 8572, 8573, 8574, 8575, 8576, 8577, 8578, 8579, 8580, 8581, 8582, 8583, 8584, 8585, 8586, 8587, 8588, 8589, 8590, 8591, 8592, 8593, 8594, 8595, 8596, 8597, 8598, 8599, 8600, 8601, 8602, 8603, 8604, 8605, 8606, 8607, 8608, 8609, 8610, 8611, 8612, 8613, 8614, 8615, 8616, 8617, 8618, 8619, 8620, 8621, 8622, 8623, 8624, 8625, 8626, 8627, 8628, 8629, 8630, 8631, 8632, 8633, 8634, 8635, 8636, 8637, 8638, 8639, 8640, 8641, 8642, 8643, 8644, 8645, 8646, 8647, 8648, 8649, 8650, 8651, 8652, 8653, 8654, 8655, 8656, 8657, 8658, 8659, 8660, 8661, 8662, 8663, 8664, 8665, 8666, 8667, 8668, 8669, 8670, 8671, 8672, 8673, 8674, 8675, 8676, 8677, 8678, 8679, 8680, 8681, 8682, 8683, 8684, 8685, 8686, 8687, 8688, 8689, 8690, 8691, 8692, 8693, 8694, 8695, 8696, 8697, 8698, 8699, 8700, 8701, 8702, 8703, 8704, 8705, 8706, 8707, 8708, 8709, 8710, 8711, 8712, 8713, 8714, 8715, 8716, 8717, 8718, 8719, 8720, 8721, 8722, 8723, 8724, 8725, 8726, 8727, 8728, 8729, 8730, 8731, 8732, 8733, 8734, 8735, 8736, 8737, 8738, 8739, 8740, 8741, 8742, 8743, 8744, 8745, 8746, 8747, 8748, 8749, 8750, 8751, 8752, 8753, 8754, 8755, 8756, 8757, 8758, 8759, 8760, 8761, 8762, 8763, 8764, 8765, 8766, 8767, 8768, 8769, 8770, 8771, 8772, 8773, 8774, 8775, 8776, 8777, 8778, 8779, 8780, 8781, 8782, 8783, 8784, 8785, 8786, 8787, 8788, 8789, 8790, 8791, 8792, 8793, 8794, 8795, 8796, 8797, 8798, 8799, 8800, 8801, 8802, 8803, 8804, 8805, 8806, 8807, 8808, 8809, 8810, 8811, 8812, 8813, 8814, 8815, 8816, 8817, 8818, 8819, 8820, 8821, 8822, 8823, 8824, 8825, 8826, 8827, 8828, 8829, 8830, 8831, 8832, 8833, 8834, 8835, 8836, 8837, 8838, 8839, 8840, 8841, 8842, 8843, 8844, 8845, 8846, 8847, 8848, 8849, 8850, 8851, 8852, 8853, 8854, 8855, 8856, 8857, 8858, 8859, 8860, 8861, 8862, 8863, 8864, 8865, 8866, 8867, 8868, 8869, 8870, 8871, 8872, 8873, 8874, 8875, 8876, 8877, 8878, 8879, 8880, 8881, 8882, 8883, 8884, 8885, 8886, 8887, 8888, 8889, 8890, 8891, 8892, 8893, 8894, 8895, 8896, 8897, 8898	

June 23, 1965

The first P2 Geared was----- 7233
 and built 4/30/26.

The first J5C was----- 7239
 and was shipped to Atlantic
 Airplane Co. as a mockup on
 7/15/26.

The second batch of Commercial J4B
 started with----- 7240
 and were shipped to Fokker,
 Ryan, and Argentina, Boeing,
 Fairchild, Ford, Travelair
 between 10/8/26 and 2/2/27.
 (Total 25 engines)

J5----- 7280
 was shipped to the USN on
 8/12/26 followed by 4 others
 ending 11/20/26.

J5----- 7284
 was shipped to the Army on
 9/18/26 and ended 10/1/27.
 (total 10 engines)

J5C----- 7303
 was shipped to miscellaneous
 commercial customers 10/10/26
 to 4/30/27. (Total of 48
 engines through serial no.
 7351)

J5A----- 7352
 were shipped to the USN between
 4/8/27 and 3/13/28 for a total
 of 220 engines. These included
 serial no. 7416, 7417 and 7418
 directed from the USN to Kingsford
 Smith for his flight from
 California to Australia.

Whirlwind engine----- 7668
 was the 1000 Whirlwind shipped
 on 8/4/27.

Rev. Boardman C. Reed

- 4 -

June 23, 1965

The engine (8539) you asked about was shipped to Buhl Aircraft on 6/22/28.

In reply to other specific questions, I will send you photos when we get them out of the books for the Smithsonian. Will send you more serial number data as years and models on my next trip to the office. (I am retired now and only go in once in a while on my hobby (Wright Engine History). J5 engines were built from 1926 to 1929. I don't know Lindbergh's serial number at home, but did find the detailed engineering inspection report on the engine at about 90 hours (after return from Europe and at about 300 hours after his trip around the U. S.). I sent a copy of this report to the Smithsonian. We have absolutely no J4-J5 parts or nameplates.

Mr. Meyer, Propulsion Curator, is the man who will write the Whirlwind series for the Smithsonian. We would prefer to have his summary published before any other partial Whirlwind story is put out, and we are working with him toward that end. I am sure he would be glad to have you review it.

Sincerely,

Robert E. Johnson
Consultant

REJ:cm