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APR 79 R C NEWELL, P W HERRICK N62269-78-C-0410
UNCLASSIFIED PWA-FR-10966B/C-VOL-2 NADC-79132-60-VOL-2 NL

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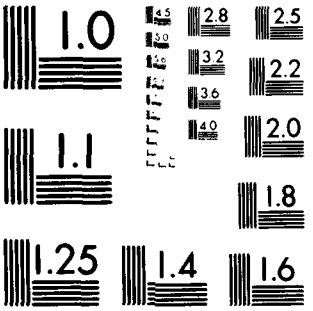

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This study develops data on P&W common core derivative engines for use in Maritime Patrol Aircraft (MPA) concept formulation studies. The study included the screening of potential P&W turbofan and turboshaft engines and the preparation of technical and planning information on three of the most promising engine candidates. Screening of P&W derivative candidates was performed utilizing an analytical MPA model using synthesized mission

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profiles to rank the candidates in terms of specific fuel consumption and take-off gross weight which translates into life cycle cost. The three derivative engines selected for further development were as follows F100 derivative (STS539), JT10D derivative (STS538) and JT10D hot rematched derivative (STS538A). Volume I contains technical data, planning data, drawings, costs, R&M, development schedules and weight estimates for each of the three turboshaft engine configurations. Volume II of this report contains the detailed performance data estimates for each of the three turboshaft engine configurations.

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PREFACE

This report covers the work performed during the Maritime Patrol Aircraft (MPA) engine study under Contract N62269-78-C-0410. The study included the screening of potential derivative engines suited to the MPA application, selecting two engines and preparing detailed preliminary information for these candidates. The final report is divided into two volumes for the convenience of the user.

Volume I contains engine analysis, cost, installation and development data. Sections I and II present a review of work performed under Tasks 1 and 2 of the contract. Section III presents information generated under Task 3 for the two candidate MPA engines, which are turboshaft derivatives of P&WA's F100 and JT10D engines.

Volume II contains the performance data as required in Attachment A of the contract for the candidate derivative engines. Table I presents the definition of terms. Table II and III contain the required data for the STS538 engine and the hot rematched STS538A (JT10D turboshaft derivative). Table IV contains the data for the STS539 (F100 turboshaft derivative) engine. These data have been expanded to include altitude and Mach Number conditions outside Attachment A requirements.

TABLE I

DEFINITION OF TERMS

ALT	Geopotential Altitude, US Standard Atmosphere, 1962 - feet
CET	Combustor Exit Temperature - ^{o}R
ESHP	Equivalent Shaft Horsepower, summation power turbine output (SHP) and ideal jet horsepower. ESHP = SHP + [Δh nozzle (ideal) x Wg nozzle - $VA^2/2gj$ x WA] x 1.4148
FNRES	Gas Generator Net Thrust - lbs.
M_N	Flight Mach Number
OPR	Overall Compressor Pressure Ratio
PTNZ	Nozzle Total Pressure - PSIA
RPM	Power Turbine Rotor Speed - REVS/MIN
SFC	Power Turbine Horsepower (SHP) Specific Fuel Consumption - lbs/hr/hp
SHP	Power Turbine Output (horsepower) delivered to gearbox
TTNZ	Nozzle Total Temperature - ^{o}R
WAT2	Total Inlet Corrected Airflow - lbs/sec

TABLE II
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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
TAKEOFF	0.	0.0	11232.	0.465	1752.	96.8	12.7	2334.
TAKEOFF	0.	0.10	11338.	0.462	1421.	96.7	12.6	2334.
TAKEOFF	0.	0.20	11586.	0.457	1109.	96.3	12.5	2334.
TAKEOFF	0.	0.30	11958.	0.449	810.	95.3	12.4	2334.
TAKEOFF	2000.	0.0	11051.	0.457	1724.	99.6	13.1	2334.
TAKEOFF	2000.	0.10	11136.	0.455	1415.	99.4	13.1	2334.
TAKEOFF	2000.	0.20	11352.	0.450	1122.	98.8	13.0	2334.
TAKEOFF	2000.	0.30	11713.	0.442	836.	97.8	12.8	2334.
TAKEOFF	5000.	0.0	10761.	0.445	1692.	103.9	13.8	2334.
TAKEOFF	5000.	0.10	10831.	0.444	1401.	103.7	13.8	2334.
TAKEOFF	5000.	0.20	11023.	0.439	1127.	103.0	13.6	2334.
TAKEOFF	5000.	0.30	11365.	0.432	865.	101.9	13.4	2334.

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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
TAKEOFF	0.	0.0	11232.	12246.	1272.	15.998	4048.
TAKEOFF	0.	0.10	11338.	12320.	1270.	15.996	4048.
TAKEOFF	0.	0.20	11586.	12491.	1267.	16.018	4048.
TAKEOFF	0.	0.30	11958.	12736.	1263.	16.066	4048.
TAKEOFF	2000.	0.0	12617.	13853.	1352.	15.083	4048.
TAKEOFF	2000.	0.10	11136.	12134.	1261.	14.951	4048.
TAKEOFF	2000.	0.20	11352.	12284.	1259.	14.980	4048.
TAKEOFF	2000.	0.30	11713.	12525.	1254.	15.024	4048.
TAKEOFF	5000.	0.0	12212.	13847.	1339.	13.639	4048.
TAKEOFF	5000.	0.10	10831.	11849.	1248.	13.488	4048.
TAKEOFF	5000.	0.20	11023.	11979.	1245.	13.515	4048.
TAKEOFF	5000.	0.30	11365.	12217.	1241.	13.560	4048.

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PRATT AND WHITNEY
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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD +31 DEG F DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
TAKEOFF	0.	0.0	12896.	0.456	1967.	102.2	13.5	2511.
TAKEOFF	0.	0.10	12086.	0.463	1499.	98.6	12.9	2478.
TAKEOFF	0.	0.20	12140.	0.460	1163.	97.4	12.7	2470.
TAKEOFF	0.	0.30	12392.	0.453	846.	95.9	12.4	2464.
TAKEOFF	2000.	0.0	12617.	0.449	1922.	104.8	13.9	2510.
TAKEOFF	2000.	0.10	11897.	0.456	1497.	101.5	13.4	2481.
TAKEOFF	2000.	0.20	11920.	0.452	1168.	100.0	13.1	2472.
TAKEOFF	2000.	0.30	12162.	0.446	865.	98.5	12.9	2466.
TAKEOFF	5000.	0.0	12212.	0.439	1896.	104.8	14.6	2510.
TAKEOFF	5000.	0.10	11593.	0.444	1484.	105.9	14.1	2483.
TAKEOFF	5000.	0.20	11605.	0.442	1182.	104.5	13.9	2475.
TAKEOFF	5000.	0.30	11836.	0.436	897.	102.8	13.6	2471.

TABLE II
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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD +31 DEG F DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
TAKEOFF	0.	0.0	12896.	14139.	1362.	16.154	4048.
TAKEOFF	0.	0.10	12086.	13177.	1352.	16.062	4048.
TAKEOFF	0.	0.20	12140.	13130.	1347.	16.070	4048.
TAKEOFF	0.	0.30	12392.	13233.	1340.	16.104	4048.
TAKEOFF	2000.	0.0	12356.	14146.	1357.	15.126	4048.
TAKEOFF	2000.	0.10	11897.	13010.	1345.	15.019	4048.
TAKEOFF	2000.	0.20	11920.	12929.	1339.	15.019	4048.
TAKEOFF	2000.	0.30	12162.	13031.	1332.	15.051	4048.
TAKEOFF	5000.	0.0	10764.	11825.	1327.	13.470	4048.
TAKEOFF	5000.	0.10	11593.	12729.	1331.	13.556	4048.
TAKEOFF	5000.	0.20	11605.	12652.	1326.	13.564	4048.
TAKEOFF	5000.	0.30	11836.	12752.	1321.	13.590	4048.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.40	12527.	0.438	524.	94.1	12.1	2334.
MAX CRUISE	0.	0.40	10047.	0.462	276.	85.3	10.7	2234.
PART POWER	0.	0.40	7803.	0.498	78.	76.5	9.4	2134.
PART POWER	0.	0.40	5828.	0.551	-74.	67.9	8.1	2034.
PART POWER	0.	0.40	4192.	0.628	-177.	59.9	7.0	1934.
PART POWER	0.	0.40	2948.	0.731	-243.	53.0	6.0	1834.
PART POWER	0.	0.40	1886.	0.915	-286.	46.0	5.1	1734.
PART POWER	0.	0.40	1020.	1.329	-300.	39.0	4.2	1634.
PART POWER	0.	0.40	252.	3.989	-285.	30.9	3.2	1534.
MAX CLIMB	0.	0.50	13266.	0.424	221.	92.6	11.8	2334.
MAX CRUISE	0.	0.50	10740.	0.445	7.	84.3	10.5	2234.
PART POWER	0.	0.50	8431.	0.476	-180.	75.8	9.3	2134.
PART POWER	0.	0.50	6386.	0.521	-309.	67.6	8.1	2034.
PART POWER	0.	0.50	4700.	0.583	-396.	60.1	7.0	1934.
PART POWER	0.	0.50	3368.	0.668	-439.	53.4	6.0	1834.
PART POWER	0.	0.50	2244.	0.807	-468.	46.7	5.1	1734.
PART POWER	0.	0.50	1309.	1.092	-466.	40.1	4.3	1634.
PART POWER	0.	0.50	544.	2.009	-436.	33.2	3.4	1534.
MAX CLIMB	0.	0.60	14180.	0.409	-90.	90.7	11.5	2334.
MAX CRUISE	0.	0.60	11602.	0.426	-292.	82.9	10.3	2234.
PART POWER	0.	0.60	9198.	0.452	-450.	74.9	9.1	2134.
PART POWER	0.	0.60	7100.	0.488	-568.	67.3	7.9	2034.
PART POWER	0.	0.60	5325.	0.538	-637.	60.2	6.9	1934.
PART POWER	0.	0.60	3887.	0.606	-666.	53.7	6.0	1834.
PART POWER	0.	0.60	2667.	0.713	-675.	47.3	5.1	1734.
PART POWER	0.	0.60	1673.	0.904	-653.	41.1	4.3	1634.
PART POWER	0.	0.60	882.	1.338	-616.	35.1	3.6	1534.
PART POWER	0.	0.60	233.	3.863	-551.	29.1	2.9	1434.

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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.40	12527.	13131.	1256.	16.149	4048.
MAX CRUISE	0.	0.40	10047.	10369.	1228.	15.861	4048.
PART POWER	0.	0.40	7803.	7923.	1204.	15.611	4048.
PART POWER	0.	0.40	5828.	5807.	1183.	15.399	4048.
PART POWER	0.	0.40	4192.	4088.	1163.	15.232	4048.
PART POWER	0.	0.40	2948.	2798.	1141.	15.106	4048.
PART POWER	0.	0.40	1888.	1714.	1122.	14.994	4048.
PART POWER	0.	0.40	1020.	844.	1108.	14.907	4048.
PART POWER	0.	0.40	252.	94.	1111.	14.830	4048.
MAX CLIMB	0.	0.50	13266.	13612.	1248.	16.236	4048.
MAX CRUISE	0.	0.50	10740.	10830.	1219.	15.958	4048.
PART POWER	0.	0.50	8431.	8319.	1193.	15.684	4048.
PART POWER	0.	0.50	6386.	6150.	1171.	15.465	4048.
PART POWER	0.	0.50	4700.	4393.	1149.	15.286	4048.
PART POWER	0.	0.50	3368.	3034.	1126.	15.160	4048.
PART POWER	0.	0.50	2244.	1900.	1106.	15.035	4048.
PART POWER	0.	0.50	1309.	980.	1089.	14.938	4048.
PART POWER	0.	0.50	544.	251.	1080.	14.861	4048.
MAX CLIMB	0.	0.60	14180.	14191.	1239.	16.352	4048.
MAX CRUISE	0.	0.60	11602.	11362.	1208.	16.055	4048.
PART POWER	0.	0.60	9198.	8781.	1182.	15.783	4048.
PART POWER	0.	0.60	7100.	6570.	1157.	15.544	4048.
PART POWER	0.	0.60	5325.	4744.	1134.	15.356	4048.
PART POWER	0.	0.60	3887.	3296.	1110.	15.215	4048.
PART POWER	0.	0.60	2667.	2090.	1089.	15.084	4048.
PART POWER	0.	0.60	1673.	1134.	1069.	14.986	4048.
PART POWER	0.	0.60	882.	395.	1052.	14.899	4048.
PART POWER	0.	0.60	233.	-187.	1044.	14.838	4048.

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STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.70	15308.	0.392	-414.	88.6	11.1	2334.
MAX CRUISE	0.	0.70	12631.	0.406	-607.	81.3	10.0	2234.
PART POWER	0.	0.70	10143.	0.426	-749.	73.8	8.8	2134.
PART POWER	0.	0.70	7935.	0.455	-849.	66.6	7.8	2034.
PART POWER	0.	0.70	6077.	0.494	-906.	60.0	6.8	1934.
PART POWER	0.	0.70	4521.	0.547	-922.	53.8	6.0	1834.
PART POWER	0.	0.70	3194.	0.627	-910.	47.6	5.1	1734.
PART POWER	0.	0.70	2109.	0.758	-879.	41.7	4.4	1634.
PART POWER	0.	0.70	1272.	0.995	-829.	36.5	3.7	1534.
PART POWER	0.	0.70	555.	1.748	-750.	30.9	3.0	1434.
MAX CLIMB	0.	0.75	15933.	0.384	-589.	87.4	10.9	2334.
MAX CRUISE	0.	0.75	13202.	0.396	-772.	80.3	9.8	2234.
PART POWER	0.	0.75	10691.	0.413	-914.	73.2	8.7	2134.
PART POWER	0.	0.75	8412.	0.439	-996.	66.2	7.7	2034.
PART POWER	0.	0.75	6495.	0.473	-1049.	59.8	6.8	1934.
PART POWER	0.	0.75	4885.	0.519	-1063.	53.8	5.9	1834.
PART POWER	0.	0.75	3491.	0.589	-1041.	47.7	5.1	1734.
PART POWER	0.	0.75	2361.	0.696	-1003.	42.0	4.4	1634.
PART POWER	0.	0.75	1492.	0.876	-948.	37.1	3.7	1534.
PART POWER	0.	0.75	737.	1.365	-863.	31.7	3.1	1434.
MAX CLIMB	0.	0.80	16611.	0.375	-762.	86.2	10.7	2334.
MAX CRUISE	0.	0.80	13823.	0.386	-945.	79.3	9.6	2234.
PART POWER	0.	0.80	11271.	0.401	-1084.	72.5	8.6	2134.
PART POWER	0.	0.80	8938.	0.423	-1150.	65.7	7.6	2034.
PART POWER	0.	0.80	6962.	0.453	-1203.	59.5	6.7	1934.
PART POWER	0.	0.80	5276.	0.493	-1211.	53.6	5.9	1834.
PART POWER	0.	0.80	3818.	0.552	-1183.	47.7	5.1	1734.
PART POWER	0.	0.80	2636.	0.641	-1134.	42.2	4.4	1634.
PART POWER	0.	0.80	1730.	0.779	-1076.	37.5	3.8	1534.
PART POWER	0.	0.80	937.	1.112	-986.	32.5	3.2	1434.

TABLE II
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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.70	15308.	14895.	1228.	16.503	4048.
MAX CRUISE	0.	0.70	12631.	11970.	1197.	16.180	4048.
PART POWER	0.	0.70	10143.	9324.	1169.	15.896	4048.
PART POWER	0.	0.70	7935.	7023.	1143.	15.643	4048.
PART POWER	0.	0.70	6077.	5131.	1118.	15.439	4048.
PART POWER	0.	0.70	4521.	3589.	1094.	15.284	4048.
PART POWER	0.	0.70	3194.	2304.	1071.	15.147	4048.
PART POWER	0.	0.70	2109.	1281.	1049.	15.029	4048.
PART POWER	0.	0.70	1272.	518.	1027.	14.943	4048.
PART POWER	0.	0.70	555.	-104.	1012.	14.870	4048.
MAX CLIMB	0.	0.75	15933.	15260.	1223.	16.581	4048.
MAX CRUISE	0.	0.75	13202.	12293.	1191.	16.256	4048.
PART POWER	0.	0.75	10691.	9624.	1162.	15.953	4048.
PART POWER	0.	0.75	8412.	7276.	1136.	15.710	4048.
PART POWER	0.	0.75	6495.	5333.	1110.	15.493	4048.
PART POWER	0.	0.75	4885.	3744.	1085.	15.323	4048.
PART POWER	0.	0.75	3491.	2411.	1062.	15.182	4048.
PART POWER	0.	0.75	2361.	1357.	1039.	15.058	4048.
PART POWER	0.	0.75	1492.	573.	1015.	14.968	4048.
PART POWER	0.	0.75	737.	-72.	997.	14.891	4048.
MAX CLIMB	0.	0.80	16611.	15659.	1218.	16.679	4048.
MAX CRUISE	0.	0.80	13823.	12634.	1185.	16.337	4048.
PART POWER	0.	0.80	11271.	9929.	1155.	16.022	4048.
PART POWER	0.	0.80	8938.	7548.	1128.	15.783	4048.
PART POWER	0.	0.80	6962.	5552.	1101.	15.550	4048.
PART POWER	0.	0.80	5276.	3902.	1076.	15.369	4048.
PART POWER	0.	0.80	3818.	2519.	1052.	15.217	4048.
PART POWER	0.	0.80	2636.	1431.	1029.	15.092	4048.
PART POWER	0.	0.80	1730.	623.	1004.	14.996	4048.
PART POWER	0.	0.80	937.	-47.	983.	14.916	4048.

TABLE II
FR 109666

PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.85	17366.	0.366	-946.	84.9	10.4	2334.
MAX CRUISE	0.	0.85	14500.	0.376	-1126.	78.3	9.4	2234.
PART POWER	0.	0.85	11898.	0.388	-1257.	71.7	8.4	2134.
PART POWER	0.	0.85	9518.	0.407	-1331.	65.2	7.5	2034.
PART POWER	0.	0.85	7450.	0.434	-1366.	59.1	6.6	1934.
PART POWER	0.	0.85	5696.	0.468	-1368.	53.4	5.8	1834.
PART POWER	0.	0.85	4171.	0.519	-1334.	47.6	5.0	1734.
PART POWER	0.	0.85	2933.	0.592	-1283.	42.3	4.3	1634.
PART POWER	0.	0.85	1990.	0.697	-1218.	37.8	3.8	1534.
PART POWER	0.	0.85	1154.	0.934	-1117.	33.1	3.2	1434.
MAX CLIMB	5000.	0.20	11016.	0.440	1131.	103.0	13.6	2334.
MAX CRUISE	5000.	0.20	8764.	0.466	834.	92.7	12.0	2234.
PART POWER	5000.	0.20	6802.	0.502	598.	83.0	10.5	2134.
PART POWER	5000.	0.20	5038.	0.558	399.	73.2	9.0	2034.
PART POWER	5000.	0.20	3535.	0.645	245.	63.7	7.7	1934.
PART POWER	5000.	0.20	2428.	0.764	139.	55.8	6.5	1834.
PART POWER	5000.	0.20	1540.	0.967	58.	48.3	5.5	1734.
PART POWER	5000.	0.20	774.	1.492	-1.	40.3	4.5	1634.
PART POWER	5000.	0.20	65.	12.741	-41.	30.5	3.3	1534.
MAX CLIMB	5000.	0.30	11389.	0.432	861.	102.1	13.5	2334.
MAX CRUISE	5000.	0.30	9079.	0.457	595.	91.9	11.8	2234.
PART POWER	5000.	0.30	7094.	0.490	382.	82.5	10.4	2134.
PART POWER	5000.	0.30	5299.	0.541	206.	73.0	9.0	2034.
PART POWER	5000.	0.30	3773.	0.619	74.	63.9	7.6	1934.
PART POWER	5000.	0.30	2626.	0.725	-13.	56.1	6.5	1834.
PART POWER	5000.	0.30	1708.	0.897	-76.	48.9	5.5	1734.
PART POWER	5000.	0.30	920.	1.302	-117.	41.2	4.5	1634.
PART POWER	5000.	0.30	246.	3.616	-135.	32.7	3.5	1534.

TABLE II
FR 109668

PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.85	17366.	16097.	1212.	16.783	4048.
MAX CRUISE	0.	0.85	14500.	12997.	1179.	16.425	4048.
PART POWER	0.	0.85	11898.	10255.	1148.	16.106	4048.
PART POWER	0.	0.85	9518.	7823.	1120.	15.837	4048.
PART POWER	0.	0.85	7450.	5761.	1093.	15.611	4048.
PART POWER	0.	0.85	5696.	4057.	1068.	15.420	4048.
PART POWER	0.	0.85	4171.	2624.	1043.	15.256	4048.
PART POWER	0.	0.85	2933.	1496.	1019.	15.117	4048.
PART POWER	0.	0.85	1990.	665.	992.	15.019	4048.
PART POWER	0.	0.85	1154.	-30.	970.	14.944	4048.
MAX CLIMB	5000.	0.20	11016.	11977.	1245.	13.521	4048.
MAX CRUISE	5000.	0.20	8764.	9416.	1219.	13.250	4048.
PART POWER	5000.	0.20	6802.	7234.	1195.	13.029	4048.
PART POWER	5000.	0.20	5038.	5304.	1175.	12.836	4048.
PART POWER	5000.	0.20	3535.	3686.	1158.	12.680	4048.
PART POWER	5000.	0.20	2428.	2509.	1138.	12.568	4048.
PART POWER	5000.	0.20	1540.	1574.	1120.	12.475	4048.
PART POWER	5000.	0.20	774.	779.	1110.	12.398	4048.
PART POWER	5000.	0.20	65.	53.	1128.	12.328	4048.
MAX CLIMB	5000.	0.30	11389.	12235.	1241.	13.553	4048.
MAX CRUISE	5000.	0.30	9079.	9631.	1214.	13.289	4048.
PART POWER	5000.	0.30	7094.	7431.	1189.	13.064	4048.
PART POWER	5000.	0.30	5299.	5476.	1168.	12.867	4048.
PART POWER	5000.	0.30	3773.	3643.	1150.	12.706	4048.
PART POWER	5000.	0.30	2626.	2634.	1130.	12.591	4048.
PART POWER	5000.	0.30	1708.	1677.	1110.	12.494	4048.
PART POWER	5000.	0.30	920.	866.	1098.	12.414	4048.
PART POWER	5000.	0.30	246.	186.	1101.	12.345	4048.

TABLE II
FR 10966B

PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	5000.	0.40	11878.	0.422	600.	100.6	13.2	2334.
MAX CRUISE	5000.	0.40	9534.	0.444	358.	90.9	11.6	2234.
PART POWER	5000.	0.40	7510.	0.474	164.	81.8	10.2	2134.
PART POWER	5000.	0.40	5671.	0.519	9.	72.7	8.9	2034.
PART POWER	5000.	0.40	4111.	0.586	-103.	64.0	7.6	1934.
PART POWER	5000.	0.40	2911.	0.676	-174.	56.5	6.5	1834.
PART POWER	5000.	0.40	1949.	0.816	-221.	49.5	5.6	1734.
PART POWER	5000.	0.40	1122.	1.116	-245.	42.2	4.6	1634.
PART POWER	5000.	0.40	451.	2.121	-246.	34.7	3.7	1534.
MAX CLIMB	5000.	0.50	12507.	0.411	341.	98.7	12.8	2334.
MAX CRUISE	5000.	0.50	10140.	0.430	122.	89.6	11.4	2234.
PART POWER	5000.	0.50	8053.	0.455	-62.	80.9	10.0	2134.
PART POWER	5000.	0.50	6159.	0.494	-201.	72.2	8.7	2034.
PART POWER	5000.	0.50	4556.	0.549	-293.	64.1	7.6	1934.
PART POWER	5000.	0.50	3292.	0.623	-347.	56.9	6.5	1834.
PART POWER	5000.	0.50	2266.	0.734	-379.	50.1	5.6	1734.
PART POWER	5000.	0.50	1381.	0.952	-389.	43.1	4.7	1634.
PART POWER	5000.	0.50	697.	1.471	-377.	36.5	3.8	1534.
PART POWER	5000.	0.50	97.	7.906	-338.	29.3	3.0	1434.
MAX CLIMB	5000.	0.60	13304.	0.397	71.	96.4	12.4	2334.
MAX CRUISE	5000.	0.60	10900.	0.413	-135.	88.0	11.1	2234.
PART POWER	5000.	0.60	8745.	0.434	-302.	79.8	9.8	2134.
PART POWER	5000.	0.60	6777.	0.466	-420.	71.6	8.6	2034.
PART POWER	5000.	0.60	5099.	0.512	-499.	63.9	7.5	1934.
PART POWER	5000.	0.60	3759.	0.571	-536.	57.0	6.5	1834.
PART POWER	5000.	0.60	2656.	0.657	-559.	50.5	5.6	1734.
PART POWER	5000.	0.60	1707.	0.812	-554.	43.8	4.7	1634.
PART POWER	5000.	0.60	979.	1.116	-535.	37.9	4.0	1534.
PART POWER	5000.	0.60	351.	2.372	-483.	31.5	3.2	1434.

TABLE II
FR 10966B

PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	5000.	0.40	11878.	12568.	1235.	13.614	4048.
MAX CRUISE	5000.	0.40	9534.	9938.	1207.	13.346	4048.
PART POWER	5000.	0.40	7510.	7706.	1181.	13.115	4048.
PART POWER	5000.	0.40	5671.	5717.	1159.	12.911	4048.
PART POWER	5000.	0.40	4111.	4059.	1140.	12.743	4048.
PART POWER	5000.	0.40	2911.	2807.	1119.	12.623	4048.
PART POWER	5000.	0.40	1949.	1815.	1098.	12.522	4048.
PART POWER	5000.	0.40	1122.	978.	1083.	12.435	4048.
PART POWER	5000.	0.40	451.	313.	1075.	12.367	4048.
MAX CLIMB	5000.	0.50	12507.	12989.	1228.	13.791	4048.
MAX CRUISE	5000.	0.50	10140.	10349.	1199.	13.431	4048.
PART POWER	5000.	0.50	8053.	8053.	1172.	13.179	4048.
PART POWER	5000.	0.50	6159.	6018.	1149.	12.963	4048.
PART POWER	5000.	0.50	4556.	4334.	1127.	12.794	4048.
PART POWER	5000.	0.50	3292.	3029.	1105.	12.667	4048.
PART POWER	5000.	0.50	2266.	1987.	1082.	12.559	4048.
PART POWER	5000.	0.50	1381.	1106.	1065.	12.466	4048.
PART POWER	5000.	0.50	697.	442.	1051.	12.394	4048.
PART POWER	5000.	0.50	97.	-122.	1051.	12.336	4048.
MAX CLIMB	5000.	0.60	13304.	13506.	1219.	13.804	4048.
MAX CRUISE	5000.	0.60	10900.	10834.	1189.	13.518	4048.
PART POWER	5000.	0.60	8745.	8482.	1160.	13.258	4048.
PART POWER	5000.	0.60	6777.	6391.	1136.	13.040	4048.
PART POWER	5000.	0.60	5099.	4645.	1113.	12.858	4048.
PART POWER	5000.	0.60	3759.	3283.	1090.	12.728	4048.
PART POWER	5000.	0.60	2656.	2177.	1066.	12.604	4048.
PART POWER	5000.	0.60	1707.	1251.	1047.	12.502	4048.
PART POWER	5000.	0.60	979.	557.	1028.	12.421	4048.
PART POWER	5000.	0.60	351.	-16.	1018.	12.361	4048.

TABLE II
FR 10966B

PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.20	10486.	0.423	1138.	110.8	14.9	2334.
MAX CRUISE	10000.	0.20	8350.	0.446	847.	99.5	13.1	2234.
PART POWER	10000.	0.20	6522.	0.478	614.	89.0	11.4	2134.
PART POWER	10000.	0.20	4938.	0.523	426.	79.1	9.9	2034.
PART POWER	10000.	0.20	3523.	0.595	272.	68.9	8.4	1934.
PART POWER	10000.	0.20	2406.	0.702	158.	59.8	7.1	1834.
PART POWER	10000.	0.20	1590.	0.857	81.	52.1	6.0	1734.
PART POWER	10000.	0.20	894.	1.199	23.	44.2	5.0	1634.
PART POWER	10000.	0.20	304.	2.649	-20.	35.6	3.9	1534.
MAX CLIMB	10000.	0.30	10767.	0.417	904.	109.4	14.7	2334.
MAX CRUISE	10000.	0.30	8625.	0.438	637.	98.5	12.9	2234.
PART POWER	10000.	0.30	6764.	0.466	425.	88.2	11.3	2134.
PART POWER	10000.	0.30	5144.	0.510	258.	78.5	9.8	2034.
PART POWER	10000.	0.30	3722.	0.575	120.	68.8	8.4	1934.
PART POWER	10000.	0.30	2584.	0.670	26.	60.0	7.1	1834.
PART POWER	10000.	0.30	1746.	0.803	-38.	52.6	6.1	1734.
PART POWER	10000.	0.30	1026.	1.079	-82.	44.9	5.0	1634.
PART POWER	10000.	0.30	427.	1.981	-106.	37.0	4.0	1534.
MAX CLIMB	10000.	0.40	11165.	0.409	675.	107.5	14.3	2334.
MAX CRUISE	10000.	0.40	9003.	0.428	428.	97.1	12.7	2234.
PART POWER	10000.	0.40	7135.	0.454	236.	87.4	11.1	2134.
PART POWER	10000.	0.40	5466.	0.492	85.	78.0	9.7	2034.
PART POWER	10000.	0.40	4029.	0.548	-37.	68.9	8.3	1934.
PART POWER	10000.	0.40	2840.	0.630	-113.	60.3	7.1	1834.
PART POWER	10000.	0.40	1956.	0.742	-163.	53.0	6.1	1734.
PART POWER	10000.	0.40	1207.	0.956	-195.	45.7	5.1	1634.
PART POWER	10000.	0.40	583.	1.529	-205.	38.2	4.1	1534.

TABLE II
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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.20	10486.	11491.	1223.	11.353	4048.
MAX CRUISE	10000.	0.20	8350.	9037.	1196.	11.093	4048.
PART POWER	10000.	0.20	6522.	6982.	1171.	10.880	4048.
PART POWER	10000.	0.20	4938.	5231.	1149.	10.701	4048.
PART POWER	10000.	0.20	3523.	3694.	1132.	10.549	4048.
PART POWER	10000.	0.20	2406.	2499.	1115.	10.433	4048.
PART POWER	10000.	0.20	1590.	1637.	1095.	10.349	4048.
PART POWER	10000.	0.20	894.	909.	1081.	10.279	4048.
PART POWER	10000.	0.20	304.	300.	1080.	10.216	4048.
MAX CLIMB	10000.	0.30	10767.	11682.	1219.	11.391	4048.
MAX CRUISE	10000.	0.30	8625.	9229.	1192.	11.129	4048.
PART POWER	10000.	0.30	6764.	7144.	1167.	10.913	4048.
PART POWER	10000.	0.30	5144.	5364.	1144.	10.733	4048.
PART POWER	10000.	0.30	3722.	3825.	1125.	10.573	4048.
PART POWER	10000.	0.30	2584.	2615.	1107.	10.455	4048.
PART POWER	10000.	0.30	1746.	1736.	1086.	10.366	4048.
PART POWER	10000.	0.30	1026.	989.	1070.	10.290	4048.
PART POWER	10000.	0.30	427.	380.	1063.	10.230	4048.
MAX CLIMB	10000.	0.40	11165.	11952.	1214.	11.447	4048.
MAX CRUISE	10000.	0.40	9003.	9483.	1186.	11.178	4048.
PART POWER	10000.	0.40	7135.	7398.	1159.	10.958	4048.
PART POWER	10000.	0.40	5466.	5575.	1136.	10.772	4048.
PART POWER	10000.	0.40	4029.	4027.	1116.	10.605	4048.
PART POWER	10000.	0.40	2840.	2777.	1096.	10.484	4048.
PART POWER	10000.	0.40	1956.	1859.	1074.	10.391	4048.
PART POWER	10000.	0.40	1207.	1092.	1056.	10.311	4048.
PART POWER	10000.	0.40	583.	468.	1045.	10.247	4048.

TABLE II
FR 109608

PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.50	11730.	0.398	445.	105.4	13.9	2334.
MAX CRUISE	10000.	0.50	9524.	0.416	221.	95.5	12.3	2234.
PART POWER	10000.	0.50	7620.	0.437	38.	86.3	10.9	2134.
PART POWER	10000.	0.50	5911.	0.470	-97.	77.3	9.5	2034.
PART POWER	10000.	0.50	4403.	0.518	-195.	68.5	8.2	1934.
PART POWER	10000.	0.50	3171.	0.586	-266.	60.4	7.1	1834.
PART POWER	10000.	0.50	2238.	0.676	-296.	53.5	6.1	1734.
PART POWER	10000.	0.50	1441.	0.838	-318.	46.5	5.1	1634.
PART POWER	10000.	0.50	779.	1.210	-315.	39.4	4.2	1534.
PART POWER	10000.	0.50	228.	3.098	-292.	32.0	3.3	1434.
MAX CLIMB	10000.	0.60	12403.	0.387	217.	102.8	13.5	2334.
MAX CRUISE	10000.	0.60	10174.	0.401	2.	93.5	12.0	2234.
PART POWER	10000.	0.60	8225.	0.419	-170.	84.9	10.6	2134.
PART POWER	10000.	0.60	6423.	0.447	-286.	76.2	9.3	2034.
PART POWER	10000.	0.60	4893.	0.486	-375.	68.2	8.1	1934.
PART POWER	10000.	0.60	3600.	0.540	-430.	60.5	7.0	1834.
PART POWER	10000.	0.60	2592.	0.612	-454.	53.8	6.1	1734.
PART POWER	10000.	0.60	1725.	0.735	-462.	47.0	5.1	1634.
PART POWER	10000.	0.60	1019.	0.978	-448.	40.5	4.3	1534.
PART POWER	10000.	0.60	455.	1.690	-414.	34.0	3.5	1434.
MAX CLIMB	10000.	0.70	13239.	0.374	-11.	99.9	12.9	2334.
MAX CRUISE	10000.	0.70	10944.	0.386	-226.	91.2	11.5	2234.
PART POWER	10000.	0.70	8930.	0.400	-379.	83.2	10.3	2134.
PART POWER	10000.	0.70	7077.	0.423	-490.	75.1	9.1	2034.
PART POWER	10000.	0.70	5465.	0.454	-568.	67.5	7.9	1934.
PART POWER	10000.	0.70	4113.	0.496	-615.	60.3	6.9	1834.
PART POWER	10000.	0.70	3020.	0.552	-626.	53.9	6.0	1734.
PART POWER	10000.	0.70	2074.	0.644	-621.	47.3	5.1	1634.
PART POWER	10000.	0.70	1307.	0.806	-599.	41.2	4.3	1534.
PART POWER	10000.	0.70	718.	1.152	-554.	35.7	3.6	1434.

TABLE II
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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.50	11730.	12337.	1207.	11.516	4048.
MAX CRUISE	10000.	0.50	9524.	9838.	1178.	11.250	4048.
PART POWER	10000.	0.50	7620.	7718.	1150.	11.013	4048.
PART POWER	10000.	0.50	5911.	5863.	1126.	10.819	4048.
PART POWER	10000.	0.50	4403.	4262.	1105.	10.658	4048.
PART POWER	10000.	0.50	3171.	2973.	1084.	10.518	4048.
PART POWER	10000.	0.50	2238.	2020.	1061.	10.431	4048.
PART POWER	10000.	0.50	1441.	1216.	1041.	10.340	4048.
PART POWER	10000.	0.50	779.	564.	1026.	10.272	4048.
PART POWER	10000.	0.50	228.	39.	1022.	10.213	4048.
MAX CLIMB	10000.	0.60	12403.	12787.	1200.	11.615	4048.
MAX CRUISE	10000.	0.60	10174.	10264.	1169.	11.331	4048.
PART POWER	10000.	0.60	8225.	8103.	1140.	11.082	4048.
PART POWER	10000.	0.60	6423.	6172.	1115.	10.867	4048.
PART POWER	10000.	0.60	4893.	4555.	1091.	10.712	4048.
PART POWER	10000.	0.60	3600.	3220.	1069.	10.570	4048.
PART POWER	10000.	0.60	2592.	2202.	1045.	10.466	4048.
PART POWER	10000.	0.60	1725.	1344.	1024.	10.371	4048.
PART POWER	10000.	0.60	1019.	665.	1006.	10.296	4048.
PART POWER	10000.	0.60	455.	139.	993.	10.240	4048.
MAX CLIMB	10000.	0.70	13239.	13350.	1192.	11.750	4048.
MAX CRUISE	10000.	0.70	10944.	10748.	1160.	11.434	4048.
PART POWER	10000.	0.70	8930.	8537.	1130.	11.185	4048.
PART POWER	10000.	0.70	7077.	6559.	1103.	10.971	4048.
PART POWER	10000.	0.70	5465.	4874.	1078.	10.784	4048.
PART POWER	10000.	0.70	4113.	3491.	1054.	10.629	4048.
PART POWER	10000.	0.70	3020.	2407.	1029.	10.521	4048.
PART POWER	10000.	0.70	2074.	1488.	1007.	10.416	4048.
PART POWER	10000.	0.70	1307.	764.	987.	10.330	4048.
PART POWER	10000.	0.70	718.	230.	967.	10.279	4048.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.75	13697.	0.368	-140.	98.3	12.6	2334.
MAX CRUISE	10000.	0.75	11384.	0.378	-344.	90.0	11.3	2234.
PART POWER	10000.	0.75	9346.	0.390	-498.	82.2	10.1	2134.
PART POWER	10000.	0.75	7447.	0.410	-605.	74.4	8.9	2034.
PART POWER	10000.	0.75	5797.	0.438	-672.	67.0	7.8	1934.
PART POWER	10000.	0.75	4405.	0.475	-718.	60.1	6.8	1834.
PART POWER	10000.	0.75	3261.	0.524	-726.	53.8	6.0	1734.
PART POWER	10000.	0.75	2272.	0.603	-711.	47.4	5.1	1634.
PART POWER	10000.	0.75	1473.	0.736	-682.	41.4	4.3	1534.
PART POWER	10000.	0.75	861.	0.992	-638.	36.2	3.7	1434.
MAX CLIMB	10000.	0.80	14215.	0.361	-265.	96.7	12.4	2334.
MAX CRUISE	10000.	0.80	11869.	0.369	-466.	88.7	11.1	2234.
PART POWER	10000.	0.80	9783.	0.380	-617.	81.2	9.9	2134.
PART POWER	10000.	0.80	7849.	0.398	-720.	73.6	8.8	2034.
PART POWER	10000.	0.80	6140.	0.423	-784.	66.5	7.7	1934.
PART POWER	10000.	0.80	4715.	0.455	-819.	59.9	6.8	1834.
PART POWER	10000.	0.80	3523.	0.497	-832.	53.6	5.9	1734.
PART POWER	10000.	0.80	2490.	0.565	-807.	47.4	5.1	1634.
PART POWER	10000.	0.80	1655.	0.673	-773.	41.7	4.3	1534.
PART POWER	10000.	0.80	1021.	0.864	-729.	36.7	3.7	1434.
MAX CLIMB	10000.	0.85	14764.	0.354	-389.	95.1	12.1	2334.
MAX CRUISE	10000.	0.85	12395.	0.361	-592.	87.4	10.9	2234.
PART POWER	10000.	0.85	10252.	0.371	-742.	80.1	9.7	2134.
PART POWER	10000.	0.85	8293.	0.385	-836.	72.9	8.6	2034.
PART POWER	10000.	0.85	6527.	0.407	-902.	65.9	7.6	1934.
PART POWER	10000.	0.85	5057.	0.435	-934.	59.5	6.7	1834.
PART POWER	10000.	0.85	3806.	0.472	-936.	53.4	5.8	1734.
PART POWER	10000.	0.85	2725.	0.529	-911.	47.3	5.0	1634.
PART POWER	10000.	0.85	1853.	0.618	-870.	41.8	4.3	1534.
PART POWER	10000.	0.85	1190.	0.762	-822.	37.1	3.7	1434.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.75	13697.	13627.	1188.	11.807	4048.
MAX CRUISE	10000.	0.75	11384.	11019.	1155.	11.496	4048.
PART POWER	10000.	0.75	9346.	8783.	1123.	11.234	4048.
PART POWER	10000.	0.75	7447.	6764.	1096.	11.011	4048.
PART POWER	10000.	0.75	5797.	5053.	1071.	10.827	4048.
PART POWER	10000.	0.75	4405.	3635.	1046.	10.661	4048.
PART POWER	10000.	0.75	3261.	2507.	1021.	10.541	4048.
PART POWER	10000.	0.75	2272.	1560.	998.	10.439	4048.
PART POWER	10000.	0.75	1473.	814.	977.	10.350	4048.
PART POWER	10000.	0.75	861.	265.	955.	10.291	4048.
MAX CLIMB	10000.	0.80	14215.	13958.	1183.	11.886	4048.
MAX CRUISE	10000.	0.80	11869.	11317.	1150.	11.565	4048.
PART POWER	10000.	0.80	9783.	9034.	1118.	11.293	4048.
PART POWER	10000.	0.80	7849.	6984.	1089.	11.062	4048.
PART POWER	10000.	0.80	6140.	5223.	1064.	10.870	4048.
PART POWER	10000.	0.80	4715.	3784.	1038.	10.707	4048.
PART POWER	10000.	0.80	3523.	2611.	1013.	10.567	4048.
PART POWER	10000.	0.80	2490.	1633.	990.	10.464	4048.
PART POWER	10000.	0.80	1655.	864.	967.	10.372	4048.
PART POWER	10000.	0.80	1021.	299.	943.	10.305	4048.
MAX CLIMB	10000.	0.85	14764.	14305.	1178.	11.978	4048.
MAX CRUISE	10000.	0.85	12395.	11634.	1144.	11.642	4048.
PART POWER	10000.	0.85	10252.	9294.	1112.	11.356	4048.
PART POWER	10000.	0.85	8293.	7232.	1083.	11.129	4048.
PART POWER	10000.	0.85	6527.	5413.	1057.	10.916	4048.
PART POWER	10000.	0.85	5057.	3939.	1030.	10.746	4048.
PART POWER	10000.	0.85	3806.	2722.	1005.	10.608	4048.
PART POWER	10000.	0.85	2725.	1705.	981.	10.491	4048.
PART POWER	10000.	0.85	1853.	912.	958.	10.397	4048.
PART POWER	10000.	0.85	1190.	328.	932.	10.326	4048.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNKES	WAT2	OPR	CET
MAX CLIMB	15000.	0.30	10028.	0.404	920.	116.9	16.0	2334.
MAX CRUISE	15000.	0.30	8161.	0.421	673.	106.0	14.1	2234.
PART POWER	15000.	0.30	6434.	0.447	459.	94.8	12.3	2134.
PART POWER	15000.	0.30	4960.	0.482	295.	84.6	10.7	2034.
PART POWER	15000.	0.30	3654.	0.536	162.	74.5	9.2	1934.
PART POWER	15000.	0.30	2556.	0.617	60.	64.7	7.8	1834.
PART POWER	15000.	0.30	1737.	0.732	-5.	56.4	6.6	1734.
PART POWER	15000.	0.30	1090.	0.931	-50.	48.7	5.5	1634.
PART POWER	15000.	0.30	523.	1.491	-80.	40.4	4.5	1534.
MAX CLIMB	15000.	0.40	10429.	0.397	729.	115.2	15.6	2334.
MAX CRUISE	15000.	0.40	8451.	0.413	486.	104.0	13.8	2234.
PART POWER	15000.	0.40	6739.	0.436	293.	93.6	12.1	2134.
PART POWER	15000.	0.40	5217.	0.468	145.	83.6	10.6	2034.
PART POWER	15000.	0.40	3890.	0.515	26.	74.0	9.1	1934.
PART POWER	15000.	0.40	2781.	0.585	-62.	64.8	7.8	1834.
PART POWER	15000.	0.40	1921.	0.684	-112.	56.7	6.6	1734.
PART POWER	15000.	0.40	1244.	0.845	-147.	49.3	5.6	1634.
PART POWER	15000.	0.40	658.	1.242	-165.	41.5	4.5	1534.
PART POWER	15000.	0.40	187.	3.270	-164.	33.5	3.6	1434.
MAX CLIMB	15000.	0.50	10938.	0.387	535.	112.9	15.2	2334.
MAX CRUISE	15000.	0.50	8914.	0.402	307.	102.2	13.4	2234.
PART POWER	15000.	0.50	7151.	0.422	122.	92.1	11.8	2134.
PART POWER	15000.	0.50	5592.	0.450	-11.	82.6	10.4	2034.
PART POWER	15000.	0.50	4216.	0.491	-114.	73.4	9.0	1934.
PART POWER	15000.	0.50	3068.	0.550	-189.	64.7	7.7	1834.
PART POWER	15000.	0.50	2174.	0.630	-230.	57.0	6.6	1734.
PART POWER	15000.	0.50	1452.	0.757	-255.	49.9	5.6	1634.
PART POWER	15000.	0.50	831.	1.034	-262.	42.4	4.6	1534.
PART POWER	15000.	0.50	343.	1.920	-250.	35.4	3.7	1434.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.30	10028.	10986.	1199.	9.516	4048.
MAX CRUISE	15000.	0.30	8161.	8818.	1169.	9.281	4048.
PART POWER	15000.	0.30	6434.	6853.	1144.	9.066	4048.
PART POWER	15000.	0.30	4960.	5215.	1120.	8.897	4048.
PART POWER	15000.	0.30	3654.	3788.	1100.	8.749	4048.
PART POWER	15000.	0.30	2556.	2609.	1082.	8.627	4048.
PART POWER	15000.	0.30	1737.	1745.	1063.	8.542	4048.
PART POWER	15000.	0.30	1090.	1070.	1044.	8.475	4048.
PART POWER	15000.	0.30	523.	488.	1035.	8.415	4048.
MAX CLIMB	15000.	0.40	10429.	11292.	1194.	9.574	4048.
MAX CRUISE	15000.	0.40	8451.	8999.	1165.	9.319	4048.
PART POWER	15000.	0.40	6739.	7060.	1137.	9.106	4048.
PART POWER	15000.	0.40	5217.	5379.	1114.	8.932	4048.
PART POWER	15000.	0.40	3890.	3937.	1092.	8.778	4048.
PART POWER	15000.	0.40	2781.	2754.	1073.	8.652	4048.
PART POWER	15000.	0.40	1921.	1857.	1052.	8.567	4048.
PART POWER	15000.	0.40	1244.	1158.	1032.	8.494	4048.
PART POWER	15000.	0.40	658.	564.	1020.	8.430	4048.
PART POWER	15000.	0.40	187.	99.	1016.	8.381	4048.
MAX CLIMB	15000.	0.50	10938.	11662.	1188.	9.641	4048.
MAX CRUISE	15000.	0.50	8914.	9327.	1158.	9.380	4048.
PART POWER	15000.	0.50	7151.	7334.	1130.	9.153	4048.
PART POWER	15000.	0.50	5592.	5624.	1104.	8.976	4048.
PART POWER	15000.	0.50	4216.	4145.	1082.	8.821	4048.
PART POWER	15000.	0.50	3068.	2930.	1061.	8.690	4048.
PART POWER	15000.	0.50	2174.	2006.	1039.	8.597	4048.
PART POWER	15000.	0.50	1452.	1271.	1018.	8.519	4048.
PART POWER	15000.	0.50	831.	653.	1002.	8.450	4048.
PART POWER	15000.	0.50	343.	181.	992.	8.401	4048.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	15000.	0.60	11516.	0.378	345.	109.9	14.7	2334.
MAX CRUISE	15000.	0.60	9447.	0.390	121.	99.7	13.0	2234.
PART POWER	15000.	0.60	7665.	0.406	-52.	90.4	11.5	2134.
PART POWER	15000.	0.60	6059.	0.429	-173.	81.4	10.1	2034.
PART POWER	15000.	0.60	4636.	0.464	-264.	72.7	8.8	1934.
PART POWER	15000.	0.60	3442.	0.511	-330.	64.5	7.6	1834.
PART POWER	15000.	0.60	2485.	0.576	-364.	57.1	6.5	1734.
PART POWER	15000.	0.60	1711.	0.674	-375.	50.3	5.6	1634.
PART POWER	15000.	0.60	1045.	0.868	-372.	43.3	4.7	1534.
PART POWER	15000.	0.60	541.	1.310	-357.	37.0	3.9	1434.
MAX CLIMB	15000.	0.70	12211.	0.367	146.	106.5	14.0	2334.
MAX CRUISE	15000.	0.70	10108.	0.376	-71.	97.0	12.5	2234.
PART POWER	15000.	0.70	8284.	0.389	-236.	88.3	11.1	2134.
PART POWER	15000.	0.70	6622.	0.408	-347.	79.9	9.8	2034.
PART POWER	15000.	0.70	5137.	0.436	-431.	71.7	8.6	1934.
PART POWER	15000.	0.70	3885.	0.474	-482.	64.1	7.5	1834.
PART POWER	15000.	0.70	2869.	0.524	-506.	57.1	6.5	1734.
PART POWER	15000.	0.70	2024.	0.599	-511.	50.5	5.5	1634.
PART POWER	15000.	0.70	1301.	0.736	-499.	43.8	4.7	1534.
PART POWER	15000.	0.70	757.	0.996	-475.	38.1	3.9	1434.
MAX CLIMB	15000.	0.75	12598.	0.361	45.	104.6	13.7	2334.
MAX CRUISE	15000.	0.75	10493.	0.369	-168.	95.6	12.2	2234.
PART POWER	15000.	0.75	8629.	0.380	-331.	87.2	10.9	2134.
PART POWER	15000.	0.75	6929.	0.398	-436.	79.0	9.6	2034.
PART POWER	15000.	0.75	5423.	0.422	-520.	71.1	8.5	1934.
PART POWER	15000.	0.75	4140.	0.456	-568.	63.8	7.4	1834.
PART POWER	15000.	0.75	3087.	0.500	-587.	57.0	6.4	1734.
PART POWER	15000.	0.75	2197.	0.565	-588.	50.4	5.5	1634.
PART POWER	15000.	0.75	1448.	0.679	-569.	44.0	4.7	1534.
PART POWER	15000.	0.75	877.	0.886	-541.	38.5	3.9	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTN2	PTN2	RPM
MAX CLIMB	15000.	0.60	11516.	12068.	1181.	9.738	4048.
MAX CRUISE	15000.	0.60	9447.	9677.	1150.	9.455	4048.
PART POWER	15000.	0.60	7665.	7671.	1120.	9.220	4048.
PART POWER	15000.	0.60	6059.	5922.	1094.	9.036	4048.
PART POWER	15000.	0.60	4636.	4404.	1071.	8.875	4048.
PART POWER	15000.	0.60	3442.	3152.	1048.	8.733	4048.
PART POWER	15000.	0.60	2485.	2173.	1025.	8.628	4048.
PART POWER	15000.	0.60	1711.	1400.	1002.	8.549	4048.
PART POWER	15000.	0.60	1045.	750.	984.	8.477	4048.
PART POWER	15000.	0.60	541.	270.	967.	8.420	4048.
MAX CLIMB	15000.	0.70	12211.	12536.	1174.	9.848	4048.
MAX CRUISE	15000.	0.70	10108.	10108.	1142.	9.549	4048.
PART POWER	15000.	0.70	8284.	8061.	1110.	9.300	4048.
PART POWER	15000.	0.70	6622.	6265.	1083.	9.109	4048.
PART POWER	15000.	0.70	5137.	4692.	1058.	8.934	4048.
PART POWER	15000.	0.70	3885.	3398.	1034.	8.793	4048.
PART POWER	15000.	0.70	2869.	2373.	1010.	8.682	4048.
PART POWER	15000.	0.70	2024.	1540.	986.	8.589	4048.
PART POWER	15000.	0.70	1301.	848.	966.	8.508	4048.
PART POWER	15000.	0.70	757.	342.	946.	8.448	4048.
MAX CLIMB	15000.	0.75	12598.	12789.	1171.	9.912	4048.
MAX CRUISE	15000.	0.75	10493.	10359.	1137.	9.607	4048.
PART POWER	15000.	0.75	8629.	8271.	1105.	9.350	4048.
PART POWER	15000.	0.75	6929.	6443.	1077.	9.155	4048.
PART POWER	15000.	0.75	5423.	4851.	1051.	8.969	4048.
PART POWER	15000.	0.75	4140.	3531.	1026.	8.822	4048.
PART POWER	15000.	0.75	3087.	2477.	1002.	8.708	4048.
PART POWER	15000.	0.75	2197.	1608.	978.	8.608	4048.
PART POWER	15000.	0.75	1448.	899.	957.	8.527	4048.
PART POWER	15000.	0.75	877.	374.	935.	8.464	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	15000.	0.80	13032.	0.355	-55.	102.8	13.4	2334.
MAX CRUISE	15000.	0.80	10899.	0.362	-270.	94.1	12.0	2234.
PART POWER	15000.	0.80	9006.	0.372	-426.	86.0	10.7	2134.
PART POWER	15000.	0.80	7300.	0.386	-538.	78.2	9.5	2034.
PART POWER	15000.	0.80	5740.	0.408	-613.	70.6	8.3	1934.
PART POWER	15000.	0.80	4411.	0.438	-657.	63.4	7.3	1834.
PART POWER	15000.	0.80	3322.	0.476	-674.	56.8	6.4	1734.
PART POWER	15000.	0.80	2388.	0.533	-670.	50.3	5.5	1634.
PART POWER	15000.	0.80	1607.	0.628	-642.	44.1	4.6	1534.
PART POWER	15000.	0.80	1010.	0.791	-613.	38.8	4.0	1434.
MAX CLIMB	15000.	0.85	13489.	0.349	-162.	100.8	13.0	2334.
MAX CRUISE	15000.	0.85	11340.	0.355	-374.	92.6	11.7	2234.
PART POWER	15000.	0.85	9420.	0.363	-532.	84.8	10.5	2134.
PART POWER	15000.	0.85	7661.	0.376	-638.	77.2	9.3	2034.
PART POWER	15000.	0.85	6070.	0.395	-708.	69.8	8.2	1934.
PART POWER	15000.	0.85	4706.	0.421	-752.	62.9	7.2	1834.
PART POWER	15000.	0.85	3577.	0.454	-765.	56.5	6.3	1734.
PART POWER	15000.	0.85	2599.	0.503	-758.	50.2	5.4	1634.
PART POWER	15000.	0.85	1781.	0.582	-727.	44.2	4.6	1534.
PART POWER	15000.	0.85	1157.	0.710	-693.	39.0	4.0	1434.
MAX CLIMB	20000.	0.30	9041.	0.397	892.	123.0	17.1	2334.
MAX CRUISE	20000.	0.30	7633.	0.407	692.	113.9	15.5	2234.
PART POWER	20000.	0.30	6063.	0.429	489.	102.0	13.5	2134.
PART POWER	20000.	0.30	4695.	0.459	319.	90.8	11.8	2034.
PART POWER	20000.	0.30	3524.	0.503	195.	80.4	10.1	1934.
PART POWER	20000.	0.30	2504.	0.572	94.	69.9	8.6	1834.
PART POWER	20000.	0.30	1697.	0.674	23.	60.4	7.2	1734.
PART POWER	20000.	0.30	1103.	0.831	-22.	52.4	6.1	1634.
PART POWER	20000.	0.30	598.	1.194	-55.	44.2	5.0	1534.
PART POWER	20000.	0.30	182.	2.946	-71.	35.6	3.9	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.80	13032.	13080.	1167.	9.988	4048.
MAX CRUISE	15000.	0.80	10899.	10614.	1132.	9.668	4048.
PART POWER	15000.	0.80	9006.	8504.	1100.	9.411	4048.
PART POWER	15000.	0.80	7300.	6660.	1070.	9.194	4048.
PART POWER	15000.	0.80	5740.	5024.	1044.	9.010	4048.
PART POWER	15000.	0.80	4411.	3666.	1019.	8.856	4048.
PART POWER	15000.	0.80	3322.	2581.	994.	8.735	4048.
PART POWER	15000.	0.80	2388.	1678.	970.	8.629	4048.
PART POWER	15000.	0.80	1607.	949.	948.	8.551	4048.
PART POWER	15000.	0.80	1010.	405.	925.	8.479	4048.
MAX CLIMB	15000.	0.85	13489.	13370.	1163.	10.064	4048.
MAX CRUISE	15000.	0.85	11340.	10888.	1128.	9.736	4048.
PART POWER	15000.	0.85	9420.	8746.	1095.	9.466	4048.
PART POWER	15000.	0.85	7661.	6856.	1065.	9.246	4048.
PART POWER	15000.	0.85	6070.	5197.	1038.	9.058	4048.
PART POWER	15000.	0.85	4706.	3806.	1012.	8.893	4048.
PART POWER	15000.	0.85	3577.	2691.	986.	8.767	4048.
PART POWER	15000.	0.85	2599.	1752.	962.	8.653	4048.
PART POWER	15000.	0.85	1781.	996.	939.	8.567	4048.
PART POWER	15000.	0.85	1157.	435.	915.	8.495	4048.
MAX CLIMB	20000.	0.30	9041.	9993.	1183.	7.880	4048.
MAX CRUISE	20000.	0.30	7633.	8329.	1148.	7.693	4048.
PART POWER	20000.	0.30	6063.	6521.	1121.	7.498	4048.
PART POWER	20000.	0.30	4695.	4974.	1097.	7.323	4048.
PART POWER	20000.	0.30	3524.	3687.	1076.	7.194	4048.
PART POWER	20000.	0.30	2504.	2581.	1058.	7.079	4048.
PART POWER	20000.	0.30	1697.	1721.	1040.	6.991	4048.
PART POWER	20000.	0.30	1103.	1098.	1021.	6.929	4048.
PART POWER	20000.	0.30	598.	575.	1007.	6.873	4048.
PART POWER	20000.	0.30	182.	151.	1005.	6.830	4048.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNKES	WAT2	OPR	CET
MAX CLIMB	20000.	0.40	9457.	0.388	738.	121.7	16.8	2334.
MAX CRUISE	20000.	0.40	7929.	0.399	537.	112.1	15.1	2234.
PART POWER	20000.	0.40	6329.	0.419	345.	100.5	13.3	2134.
PART POWER	20000.	0.40	4947.	0.446	193.	89.9	11.6	2034.
PART POWER	20000.	0.40	3732.	0.487	78.	79.7	10.0	1934.
PART POWER	20000.	0.40	2697.	0.546	-11.	69.8	8.5	1834.
PART POWER	20000.	0.40	1864.	0.634	-70.	60.6	7.2	1734.
PART POWER	20000.	0.40	1242.	0.764	-106.	52.9	6.1	1634.
PART POWER	20000.	0.40	717.	1.039	-129.	45.1	5.0	1534.
PART POWER	20000.	0.40	287.	1.981	-134.	37.2	4.0	1434.
MAX CLIMB	20000.	0.50	9937.	0.380	591.	119.6	16.4	2334.
MAX CRUISE	20000.	0.50	8293.	0.390	381.	109.6	14.7	2234.
PART POWER	20000.	0.50	6681.	0.407	196.	98.7	12.9	2134.
PART POWER	20000.	0.50	5254.	0.431	60.	88.5	11.3	2034.
PART POWER	20000.	0.50	4008.	0.467	-44.	78.8	9.8	1934.
PART POWER	20000.	0.50	2949.	0.517	-121.	69.4	8.4	1834.
PART POWER	20000.	0.50	2080.	0.590	-171.	60.7	7.1	1734.
PART POWER	20000.	0.50	1426.	0.695	-197.	53.3	6.1	1634.
PART POWER	20000.	0.50	871.	0.899	-211.	45.9	5.1	1534.
PART POWER	20000.	0.50	414.	1.455	-207.	38.4	4.1	1434.
MAX CLIMB	20000.	0.60	10533.	0.370	444.	117.1	15.9	2334.
MAX CRUISE	20000.	0.60	8754.	0.379	224.	106.8	14.2	2234.
PART POWER	20000.	0.60	7088.	0.394	50.	96.4	12.5	2134.
PART POWER	20000.	0.60	5662.	0.414	-77.	87.0	11.0	2034.
PART POWER	20000.	0.60	4372.	0.444	-171.	77.8	9.6	1934.
PART POWER	20000.	0.60	3262.	0.486	-242.	68.9	8.3	1834.
PART POWER	20000.	0.60	2360.	0.545	-278.	60.8	7.1	1734.
PART POWER	20000.	0.60	1657.	0.627	-299.	53.6	6.1	1634.
PART POWER	20000.	0.60	1057.	0.778	-304.	46.5	5.1	1534.
PART POWER	20000.	0.60	573.	1.117	-294.	39.6	4.2	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.40	9457.	10345.	1177.	7.938	4048.
MAX CRUISE	20000.	0.40	7929.	8545.	1143.	7.736	4048.
PART POWER	20000.	0.40	6329.	6707.	1116.	7.532	4048.
PART POWER	20000.	0.40	4947.	5154.	1091.	7.360	4048.
PART POWER	20000.	0.40	3732.	3822.	1069.	7.221	4048.
PART POWER	20000.	0.40	2697.	2707.	1049.	7.101	4048.
PART POWER	20000.	0.40	1864.	1827.	1030.	7.011	4048.
PART POWER	20000.	0.40	1242.	1181.	1009.	6.945	4048.
PART POWER	20000.	0.40	717.	645.	994.	6.887	4048.
PART POWER	20000.	0.40	287.	214.	986.	6.844	4048.
MAX CLIMB	20000.	0.50	9937.	10741.	1171.	8.021	4048.
MAX CRUISE	20000.	0.50	8293.	8797.	1138.	7.789	4048.
PART POWER	20000.	0.50	6681.	6944.	1109.	7.570	4048.
PART POWER	20000.	0.50	5254.	5355.	1083.	7.400	4048.
PART POWER	20000.	0.50	4008.	3998.	1060.	7.255	4048.
PART POWER	20000.	0.50	2949.	2866.	1039.	7.134	4048.
PART POWER	20000.	0.50	2080.	1958.	1019.	7.036	4048.
PART POWER	20000.	0.50	1426.	1287.	996.	6.969	4048.
PART POWER	20000.	0.50	871.	727.	978.	6.907	4048.
PART POWER	20000.	0.50	414.	279.	966.	6.860	4048.
MAX CLIMB	20000.	0.60	10533.	11222.	1164.	8.121	4048.
MAX CRUISE	20000.	0.60	8754.	9113.	1131.	7.856	4048.
PART POWER	20000.	0.60	7088.	7209.	1101.	7.631	4048.
PART POWER	20000.	0.60	5662.	5624.	1073.	7.453	4048.
PART POWER	20000.	0.60	4372.	4231.	1049.	7.304	4048.
PART POWER	20000.	0.60	3262.	3052.	1027.	7.169	4048.
PART POWER	20000.	0.60	2360.	2123.	1005.	7.075	4048.
PART POWER	20000.	0.60	1657.	1409.	982.	6.996	4048.
PART POWER	20000.	0.60	1057.	815.	962.	6.929	4048.
PART POWER	20000.	0.60	573.	350.	946.	6.878	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.70	11176.	0.360	287.	113.7	15.3	2334.
MAX CRUISE	20000.	0.70	9302.	0.368	65.	103.6	13.6	2234.
PART POWER	20000.	0.70	7629.	0.379	-106.	94.1	12.0	2134.
PART POWER	20000.	0.70	6131.	0.396	-224.	85.0	10.6	2034.
PART POWER	20000.	0.70	4792.	0.421	-307.	76.4	9.3	1934.
PART POWER	20000.	0.70	3646.	0.454	-367.	68.2	8.1	1834.
PART POWER	20000.	0.70	2695.	0.500	-401.	60.5	7.0	1734.
PART POWER	20000.	0.70	1936.	0.563	-415.	53.7	6.0	1634.
PART POWER	20000.	0.70	1279.	0.677	-408.	46.8	5.1	1534.
PART POWER	20000.	0.70	759.	0.894	-394.	40.4	4.2	1434.
MAX CLIMB	20000.	0.75	11528.	0.355	206.	111.8	14.9	2334.
MAX CRUISE	20000.	0.75	9618.	0.362	-16.	101.9	13.3	2234.
PART POWER	20000.	0.75	7924.	0.372	-185.	92.7	11.8	2134.
PART POWER	20000.	0.75	6408.	0.386	-301.	84.0	10.5	2034.
PART POWER	20000.	0.75	5046.	0.408	-380.	75.8	9.2	1934.
PART POWER	20000.	0.75	3860.	0.439	-444.	67.7	8.0	1834.
PART POWER	20000.	0.75	2882.	0.479	-470.	60.3	6.9	1734.
PART POWER	20000.	0.75	2096.	0.534	-480.	53.6	6.0	1634.
PART POWER	20000.	0.75	1413.	0.629	-471.	46.9	5.1	1534.
PART POWER	20000.	0.75	869.	0.805	-450.	40.8	4.3	1434.
MAX CLIMB	20000.	0.80	11903.	0.350	126.	109.7	14.5	2334.
MAX CRUISE	20000.	0.80	9971.	0.356	-95.	100.3	13.0	2234.
PART POWER	20000.	0.80	8247.	0.364	-266.	91.4	11.6	2134.
PART POWER	20000.	0.80	6706.	0.377	-381.	83.0	10.3	2034.
PART POWER	20000.	0.80	5315.	0.396	-463.	74.9	9.0	1934.
PART POWER	20000.	0.80	4097.	0.423	-516.	67.2	7.9	1834.
PART POWER	20000.	0.80	3092.	0.458	-541.	60.0	6.8	1734.
PART POWER	20000.	0.80	2265.	0.507	-547.	53.5	5.9	1634.
PART POWER	20000.	0.80	1555.	0.587	-536.	47.0	5.0	1534.
PART POWER	20000.	0.80	983.	0.731	-509.	40.9	4.2	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMUSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.70	11176.	11700.	1158.	8.233	4048.
MAX CRUISE	20000.	0.70	9302.	9480.	1124.	7.943	4048.
PART POWER	20000.	0.70	7629.	7564.	1092.	7.702	4048.
PART POWER	20000.	0.70	6131.	5914.	1063.	7.517	4048.
PART POWER	20000.	0.70	4792.	4481.	1038.	7.363	4048.
PART POWER	20000.	0.70	3646.	3277.	1014.	7.225	4048.
PART POWER	20000.	0.70	2695.	2303.	990.	7.116	4048.
PART POWER	20000.	0.70	1936.	1544.	966.	7.029	4048.
PART POWER	20000.	0.70	1279.	908.	946.	6.962	4048.
PART POWER	20000.	0.70	759.	416.	926.	6.899	4048.
MAX CLIMB	20000.	0.75	11528.	11953.	1154.	8.295	4048.
MAX CRUISE	20000.	0.75	9618.	9689.	1120.	7.994	4048.
PART POWER	20000.	0.75	7924.	7751.	1087.	7.746	4048.
PART POWER	20000.	0.75	6408.	6084.	1058.	7.554	4048.
PART POWER	20000.	0.75	5046.	4632.	1032.	7.397	4048.
PART POWER	20000.	0.75	3860.	3387.	1007.	7.243	4048.
PART POWER	20000.	0.75	2882.	2395.	983.	7.136	4048.
PART POWER	20000.	0.75	2096.	1615.	958.	7.047	4048.
PART POWER	20000.	0.75	1413.	959.	937.	6.973	4048.
PART POWER	20000.	0.75	869.	451.	917.	6.912	4048.
MAX CLIMB	20000.	0.80	11903.	12221.	1151.	8.366	4048.
MAX CRUISE	20000.	0.80	9971.	9931.	1115.	8.058	4048.
PART POWER	20000.	0.80	8247.	7955.	1083.	7.796	4048.
PART POWER	20000.	0.80	6706.	6262.	1052.	7.595	4048.
PART POWER	20000.	0.80	5315.	4778.	1025.	7.424	4048.
PART POWER	20000.	0.80	4097.	3513.	1000.	7.277	4048.
PART POWER	20000.	0.80	3092.	2498.	975.	7.162	4048.
PART POWER	20000.	0.80	2265.	1685.	951.	7.068	4048.
PART POWER	20000.	0.80	1555.	1008.	928.	6.988	4048.
PART POWER	20000.	0.80	983.	482.	907.	6.927	4048.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.85	12275.	0.345	42.	107.5	14.2	2334.
MAX CRUISE	20000.	0.85	10326.	0.349	-185.	98.4	12.7	2234.
PART POWER	20000.	0.85	8600.	0.356	-350.	90.0	11.3	2134.
PART POWER	20000.	0.85	7031.	0.367	-465.	81.9	10.0	2034.
PART POWER	20000.	0.85	5609.	0.384	-539.	74.1	8.9	1934.
PART POWER	20000.	0.85	4359.	0.407	-592.	66.7	7.8	1834.
PART POWER	20000.	0.85	3314.	0.438	-615.	59.7	6.8	1734.
PART POWER	20000.	0.85	2452.	0.480	-623.	53.3	5.9	1634.
PART POWER	20000.	0.85	1705.	0.549	-603.	46.9	5.0	1534.
PART POWER	20000.	0.85	1111.	0.666	-573.	41.1	4.2	1434.
MAX CLIMB	25000.	0.40	8320.	0.385	723.	126.9	17.9	2334.
MAX CRUISE	25000.	0.40	7219.	0.390	557.	119.3	16.4	2234.
PART POWER	25000.	0.40	5920.	0.403	387.	108.5	14.6	2134.
PART POWER	25000.	0.40	4636.	0.427	231.	96.7	12.7	2034.
PART POWER	25000.	0.40	3539.	0.461	116.	85.8	11.0	1934.
PART POWER	25000.	0.40	2587.	0.513	32.	75.2	9.4	1834.
PART POWER	25000.	0.40	1814.	0.587	-33.	65.3	7.9	1734.
PART POWER	25000.	0.40	1215.	0.700	-70.	56.6	6.6	1634.
PART POWER	25000.	0.40	744.	0.904	-96.	48.7	5.5	1534.
PART POWER	25000.	0.40	342.	1.505	-107.	40.3	4.4	1434.
MAX CLIMB	25000.	0.50	8777.	0.376	609.	125.2	17.5	2334.
MAX CRUISE	25000.	0.50	7593.	0.381	436.	117.3	16.0	2234.
PART POWER	25000.	0.50	6200.	0.394	263.	106.2	14.2	2134.
PART POWER	25000.	0.50	4899.	0.415	118.	95.0	12.3	2034.
PART POWER	25000.	0.50	3778.	0.445	16.	84.7	10.7	1934.
PART POWER	25000.	0.50	2808.	0.488	-62.	74.7	9.2	1834.
PART POWER	25000.	0.50	2001.	0.552	-116.	65.2	7.8	1734.
PART POWER	25000.	0.50	1380.	0.642	-150.	56.9	6.6	1634.
PART POWER	25000.	0.50	878.	0.801	-165.	49.3	5.6	1534.
PART POWER	25000.	0.50	454.	1.196	-170.	41.4	4.5	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.85	12275.	12469.	1148.	8.440	4048.
MAX CRUISE	20000.	0.85	10326.	10147.	1111.	8.112	4048.
PART POWER	20000.	0.85	8600.	8174.	1078.	7.850	4048.
PART POWER	20000.	0.85	7031.	6453.	1047.	7.641	4048.
PART POWER	20000.	0.85	5609.	4947.	1019.	7.471	4048.
PART POWER	20000.	0.85	4359.	3652.	993.	7.314	4048.
PART POWER	20000.	0.85	3314.	2602.	968.	7.192	4048.
PART POWER	20000.	0.85	2452.	1757.	943.	7.086	4048.
PART POWER	20000.	0.85	1705.	1055.	920.	7.007	4048.
PART POWER	20000.	0.85	1111.	515.	898.	6.943	4048.
MAX CLIMB	25000.	0.40	8320.	9205.	1165.	6.536	4048.
MAX CRUISE	25000.	0.40	7219.	7869.	1125.	6.371	4048.
PART POWER	25000.	0.40	5920.	6350.	1094.	6.198	4048.
PART POWER	25000.	0.40	4636.	4882.	1068.	6.026	4048.
PART POWER	25000.	0.40	3539.	3663.	1046.	5.894	4048.
PART POWER	25000.	0.40	2587.	2630.	1026.	5.788	4048.
PART POWER	25000.	0.40	1814.	1803.	1007.	5.697	4048.
PART POWER	25000.	0.40	1215.	1177.	988.	5.636	4048.
PART POWER	25000.	0.40	744.	691.	970.	5.583	4048.
PART POWER	25000.	0.40	342.	284.	960.	5.540	4048.
MAX CLIMB	25000.	0.50	8777.	9611.	1159.	6.614	4048.
MAX CRUISE	25000.	0.50	7593.	8170.	1119.	6.430	4048.
PART POWER	25000.	0.50	6200.	6541.	1088.	6.237	4048.
PART POWER	25000.	0.50	4899.	5058.	1062.	6.061	4048.
PART POWER	25000.	0.50	3778.	3823.	1038.	5.930	4048.
PART POWER	25000.	0.50	2808.	2775.	1016.	5.816	4048.
PART POWER	25000.	0.50	2001.	1920.	996.	5.724	4048.
PART POWER	25000.	0.50	1380.	1274.	975.	5.652	4048.
PART POWER	25000.	0.50	878.	765.	956.	5.600	4048.
PART POWER	25000.	0.50	454.	344.	943.	5.553	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	25000.	0.60	9338.	0.366	496.	123.0	17.0	2334.
MAX CRUISE	25000.	0.60	8016.	0.371	311.	114.4	15.5	2234.
PART POWER	25000.	0.60	6539.	0.383	138.	103.4	13.7	2134.
PART POWER	25000.	0.60	5230.	0.400	2.	92.9	12.0	2034.
PART POWER	25000.	0.60	4074.	0.426	-92.	83.2	10.5	1934.
PART POWER	25000.	0.60	3068.	0.463	-163.	73.7	9.0	1834.
PART POWER	25000.	0.60	2234.	0.515	-209.	64.9	7.7	1734.
PART POWER	25000.	0.60	1576.	0.588	-233.	57.0	6.6	1634.
PART POWER	25000.	0.60	1045.	0.708	-244.	49.8	5.6	1534.
PART POWER	25000.	0.60	591.	0.973	-241.	42.3	4.6	1434.
MAX CLIMB	25000.	0.70	9975.	0.357	386.	120.1	16.4	2334.
MAX CRUISE	25000.	0.70	8513.	0.361	184.	111.1	14.9	2234.
PART POWER	25000.	0.70	6983.	0.370	9.	100.5	13.1	2134.
PART POWER	25000.	0.70	5639.	0.384	-119.	90.7	11.6	2034.
PART POWER	25000.	0.70	4446.	0.405	-207.	81.6	10.1	1934.
PART POWER	25000.	0.70	3399.	0.436	-271.	72.7	8.8	1834.
PART POWER	25000.	0.70	2523.	0.477	-311.	64.4	7.6	1734.
PART POWER	25000.	0.70	1823.	0.534	-330.	57.0	6.5	1634.
PART POWER	25000.	0.70	1246.	0.625	-334.	50.0	5.5	1534.
PART POWER	25000.	0.70	756.	0.806	-323.	43.0	4.6	1434.
MAX CLIMB	25000.	0.75	10326.	0.352	351.	118.5	16.1	2334.
MAX CRUISE	25000.	0.75	8784.	0.355	119.	109.2	14.5	2234.
PART POWER	25000.	0.75	7246.	0.363	-58.	99.0	12.9	2134.
PART POWER	25000.	0.75	5873.	0.376	-181.	89.5	11.3	2034.
PART POWER	25000.	0.75	4660.	0.395	-266.	80.7	10.0	1934.
PART POWER	25000.	0.75	3590.	0.422	-329.	72.2	8.7	1834.
PART POWER	25000.	0.75	2686.	0.459	-365.	64.1	7.5	1734.
PART POWER	25000.	0.75	1960.	0.509	-381.	56.9	6.4	1634.
PART POWER	25000.	0.75	1357.	0.588	-383.	50.0	5.5	1534.
PART POWER	25000.	0.75	847.	0.739	-368.	43.2	4.6	1434.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	25000.	0.60	9338.	10099.	1151.	6.710	4048.
MAX CRUISE	25000.	0.60	8016.	8489.	1113.	6.499	4048.
PART POWER	25000.	0.60	6539.	6764.	1082.	6.288	4048.
PART POWER	25000.	0.60	5230.	5277.	1054.	6.107	4048.
PART POWER	25000.	0.60	4074.	4011.	1029.	5.970	4048.
PART POWER	25000.	0.60	3068.	2931.	1006.	5.848	4048.
PART POWER	25000.	0.60	2234.	2057.	984.	5.751	4048.
PART POWER	25000.	0.60	1576.	1383.	962.	5.680	4048.
PART POWER	25000.	0.60	1045.	851.	940.	5.620	4048.
PART POWER	25000.	0.60	591.	408.	925.	5.570	4048.
MAX CLIMB	25000.	0.70	9975.	10644.	1144.	6.833	4048.
MAX CRUISE	25000.	0.70	8513.	8853.	1106.	6.585	4048.
PART POWER	25000.	0.70	6983.	7061.	1074.	6.352	4048.
PART POWER	25000.	0.70	5639.	5544.	1044.	6.166	4048.
PART POWER	25000.	0.70	4446.	4245.	1018.	6.021	4048.
PART POWER	25000.	0.70	3399.	3129.	994.	5.893	4048.
PART POWER	25000.	0.70	2523.	2221.	971.	5.789	4048.
PART POWER	25000.	0.70	1823.	1512.	947.	5.709	4048.
PART POWER	25000.	0.70	1246.	943.	925.	5.644	4048.
PART POWER	25000.	0.70	756.	475.	906.	5.591	4048.
MAX CLIMB	25000.	0.75	10326.	10939.	1141.	6.904	4048.
MAX CRUISE	25000.	0.75	8784.	9045.	1103.	6.635	4048.
PART POWER	25000.	0.75	7246.	7236.	1069.	6.388	4048.
PART POWER	25000.	0.75	5873.	5693.	1039.	6.201	4048.
PART POWER	25000.	0.75	4660.	4374.	1012.	6.048	4048.
PART POWER	25000.	0.75	3590.	3241.	988.	5.919	4048.
PART POWER	25000.	0.75	2686.	2308.	964.	5.811	4048.
PART POWER	25000.	0.75	1960.	1579.	940.	5.729	4048.
PART POWER	25000.	0.75	1357.	988.	917.	5.659	4048.
PART POWER	25000.	0.75	847.	506.	898.	5.603	4048.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	25000.	0.80	10694.	0.346	275.	116.7	15.8	2334.
MAX CRUISE	25000.	0.80	9068.	0.350	52.	107.2	14.2	2234.
PART POWER	25000.	0.80	7500.	0.357	-123.	97.3	12.6	2134.
PART POWER	25000.	0.80	6131.	0.368	-247.	88.4	11.1	2034.
PART POWER	25000.	0.80	4894.	0.384	-332.	79.8	9.8	1934.
PART POWER	25000.	0.80	3795.	0.408	-390.	71.6	8.5	1834.
PART POWER	25000.	0.80	2866.	0.441	-424.	63.7	7.4	1734.
PART POWER	25000.	0.80	2112.	0.485	-438.	56.7	6.4	1634.
PART POWER	25000.	0.80	1482.	0.553	-437.	49.9	5.5	1534.
PART POWER	25000.	0.80	951.	0.678	-415.	43.4	4.6	1434.
MAX CLIMB	25000.	0.85	11041.	0.342	212.	114.5	15.4	2334.
MAX CRUISE	25000.	0.85	9367.	0.344	-15.	105.1	13.8	2234.
PART POWER	25000.	0.85	7805.	0.350	-193.	95.8	12.3	2134.
PART POWER	25000.	0.85	6402.	0.359	-315.	87.0	10.9	2034.
PART POWER	25000.	0.85	5132.	0.374	-398.	78.7	9.6	1934.
PART POWER	25000.	0.85	4012.	0.395	-454.	70.8	8.4	1834.
PART POWER	25000.	0.85	3060.	0.423	-487.	63.3	7.3	1734.
PART POWER	25000.	0.85	2277.	0.462	-496.	56.5	6.3	1634.
PART POWER	25000.	0.85	1614.	0.521	-493.	49.8	5.4	1534.
PART POWER	25000.	0.85	1062.	0.624	-471.	43.5	4.6	1434.
MAX CLIMB	30000.	0.50	7604.	0.374	595.	130.1	18.6	2334.
MAX CRUISE	30000.	0.50	6731.	0.375	455.	123.5	17.2	2234.
PART POWER	30000.	0.50	5692.	0.383	311.	114.3	15.6	2134.
PART POWER	30000.	0.50	4534.	0.400	169.	102.2	13.6	2034.
PART POWER	30000.	0.50	3492.	0.428	65.	90.7	11.7	1934.
PART POWER	30000.	0.50	2647.	0.463	-12.	80.5	10.1	1834.
PART POWER	30000.	0.50	1903.	0.518	-70.	70.1	8.6	1734.
PART POWER	30000.	0.50	1305.	0.602	-108.	60.7	7.2	1634.
PART POWER	30000.	0.50	857.	0.731	-125.	52.7	6.1	1534.
PART POWER	30000.	0.50	479.	1.016	-133.	44.7	5.0	1434.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	25000.	0.80	10694.	11242.	1137.	6.981	4048.
MAX CRUISE	25000.	0.80	9068.	9239.	1099.	6.687	4048.
PART POWER	25000.	0.80	7500.	7399.	1066.	6.434	4048.
PART POWER	25000.	0.80	6131.	5857.	1034.	6.239	4048.
PART POWER	25000.	0.80	4894.	4515.	1006.	6.081	4048.
PART POWER	25000.	0.80	3795.	3355.	981.	5.945	4048.
PART POWER	25000.	0.80	2866.	2402.	957.	5.834	4048.
PART POWER	25000.	0.80	2112.	1648.	932.	5.746	4048.
PART POWER	25000.	0.80	1482.	1037.	909.	5.672	4048.
PART POWER	25000.	0.80	951.	543.	889.	5.621	4048.
MAX CLIMB	25000.	0.85	11041.	11506.	1134.	7.054	4048.
MAX CRUISE	25000.	0.85	9367.	9439.	1096.	6.744	4048.
PART POWER	25000.	0.85	7805.	7598.	1061.	6.481	4048.
PART POWER	25000.	0.85	6402.	6022.	1029.	6.279	4048.
PART POWER	25000.	0.85	5132.	4649.	1001.	6.115	4048.
PART POWER	25000.	0.85	4012.	3471.	975.	5.977	4048.
PART POWER	25000.	0.85	3060.	2499.	949.	5.858	4048.
PART POWER	25000.	0.85	2277.	1723.	925.	5.770	4048.
PART POWER	25000.	0.85	1614.	1085.	901.	5.689	4048.
PART POWER	25000.	0.85	1062.	574.	880.	5.630	4048.
MAX CLIMB	30000.	0.50	7604.	8425.	1148.	5.400	4048.
MAX CRUISE	30000.	0.50	6731.	7338.	1104.	5.257	4048.
PART POWER	30000.	0.50	5692.	6093.	1068.	5.103	4048.
PART POWER	30000.	0.50	4534.	4749.	1040.	4.940	4048.
PART POWER	30000.	0.50	3492.	3584.	1017.	4.812	4048.
PART POWER	30000.	0.50	2647.	2657.	994.	4.709	4048.
PART POWER	30000.	0.50	1903.	1858.	974.	4.619	4048.
PART POWER	30000.	0.50	1305.	1231.	955.	4.548	4048.
PART POWER	30000.	0.50	857.	772.	935.	4.502	4048.
PART POWER	30000.	0.50	479.	392.	920.	4.461	4048.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	30000.	0.60	8104.	0.365	516.	128.1	18.1	2334.
MAX CRUISE	30000.	0.60	7139.	0.366	364.	121.1	16.7	2234.
PART POWER	30000.	0.60	6011.	0.373	211.	111.4	15.0	2134.
PART POWER	30000.	0.60	4813.	0.388	72.	99.8	13.1	2034.
PART POWER	30000.	0.60	3769.	0.410	-28.	89.2	11.4	1934.
PART POWER	30000.	0.60	2867.	0.442	-97.	79.2	9.9	1834.
PART POWER	30000.	0.60	2099.	0.488	-147.	69.5	8.4	1734.
PART POWER	30000.	0.60	1474.	0.556	-177.	60.6	7.1	1634.
PART POWER	30000.	0.60	1002.	0.656	-188.	53.1	6.0	1534.
PART POWER	30000.	0.60	600.	0.857	-193.	45.5	5.0	1434.
MAX CLIMB	30000.	0.70	8685.	0.355	440.	125.6	17.6	2334.
MAX CRUISE	30000.	0.70	7623.	0.356	273.	118.2	16.1	2234.
PART POWER	30000.	0.70	6377.	0.362	107.	108.1	14.4	2134.
PART POWER	30000.	0.70	5151.	0.374	-28.	97.2	12.6	2034.
PART POWER	30000.	0.70	4084.	0.392	-122.	87.2	11.0	1934.
PART POWER	30000.	0.70	3145.	0.419	-186.	77.8	9.6	1834.
PART POWER	30000.	0.70	2348.	0.456	-232.	68.8	8.2	1734.
PART POWER	30000.	0.70	1691.	0.510	-255.	60.5	7.0	1634.
PART POWER	30000.	0.70	1179.	0.587	-264.	53.2	6.0	1534.
PART POWER	30000.	0.70	744.	0.731	-261.	46.0	5.0	1434.
MAX CLIMB	30000.	0.75	9010.	0.350	401.	124.2	17.2	2334.
MAX CRUISE	30000.	0.75	7879.	0.351	225.	116.5	15.8	2234.
PART POWER	30000.	0.75	6575.	0.357	53.	106.1	14.1	2134.
PART POWER	30000.	0.75	5345.	0.367	-80.	95.7	12.4	2034.
PART POWER	30000.	0.75	4268.	0.383	-171.	86.2	10.8	1934.
PART POWER	30000.	0.75	3298.	0.408	-234.	77.0	9.4	1834.
PART POWER	30000.	0.75	2486.	0.440	-277.	68.3	8.1	1734.
PART POWER	30000.	0.75	1814.	0.488	-296.	60.3	7.0	1634.
PART POWER	30000.	0.75	1281.	0.555	-305.	53.2	6.0	1534.
PART POWER	30000.	0.75	827.	0.677	-299.	46.1	5.0	1434.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	30000.	0.60	8104.	8894.	1141.	5.496	4048.
MAX CRUISE	30000.	0.60	7139.	7684.	1098.	5.331	4048.
PART POWER	30000.	0.60	6011.	6327.	1062.	5.155	4048.
PART POWER	30000.	0.60	4813.	4939.	1033.	4.980	4048.
PART POWER	30000.	0.60	3769.	3772.	1008.	4.843	4048.
PART POWER	30000.	0.60	2867.	2793.	985.	4.737	4048.
PART POWER	30000.	0.60	2099.	1977.	963.	4.644	4048.
PART POWER	30000.	0.60	1474.	1329.	943.	4.571	4048.
PART POWER	30000.	0.60	1002.	852.	921.	4.523	4048.
PART POWER	30000.	0.60	600.	453.	903.	4.474	4048.
MAX CLIMB	30000.	0.70	8685.	9432.	1133.	5.616	4048.
MAX CRUISE	30000.	0.70	7623.	8088.	1091.	5.423	4048.
PART POWER	30000.	0.70	6377.	6583.	1056.	5.216	4048.
PART POWER	30000.	0.70	5151.	5165.	1025.	5.031	4048.
PART POWER	30000.	0.70	4084.	3977.	998.	4.889	4048.
PART POWER	30000.	0.70	3145.	2964.	974.	4.774	4048.
PART POWER	30000.	0.70	2348.	2124.	951.	4.675	4048.
PART POWER	30000.	0.70	1691.	1451.	929.	4.600	4048.
PART POWER	30000.	0.70	1179.	939.	906.	4.542	4048.
PART POWER	30000.	0.70	744.	517.	886.	4.493	4048.
MAX CLIMB	30000.	0.75	9010.	9727.	1130.	5.683	4048.
MAX CRUISE	30000.	0.75	7879.	8293.	1088.	5.473	4048.
PART POWER	30000.	0.75	6575.	6715.	1052.	5.250	4048.
PART POWER	30000.	0.75	5345.	5292.	1021.	5.061	4048.
PART POWER	30000.	0.75	4268.	4096.	993.	4.916	4048.
PART POWER	30000.	0.75	3298.	3052.	969.	4.795	4048.
PART POWER	30000.	0.75	2486.	2201.	944.	4.694	4048.
PART POWER	30000.	0.75	1814.	1518.	921.	4.618	4048.
PART POWER	30000.	0.75	1281.	987.	898.	4.555	4048.
PART POWER	30000.	0.75	827.	551.	877.	4.504	4048.

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100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	30000.	0.80	9343.	0.346	364.	122.6	16.9	2334.
MAX CRUISE	30000.	0.80	8138.	0.346	176.	114.4	15.4	2234.
PART POWER	30000.	0.80	6789.	0.351	-1.	104.2	13.7	2134.
PART POWER	30000.	0.80	5551.	0.360	-133.	94.2	12.1	2034.
PART POWER	30000.	0.80	4460.	0.374	-223.	85.1	10.6	1934.
PART POWER	30000.	0.80	3481.	0.395	-285.	76.3	9.3	1834.
PART POWER	30000.	0.80	2638.	0.425	-324.	67.8	8.0	1734.
PART POWER	30000.	0.80	1945.	0.466	-341.	60.1	6.9	1634.
PART POWER	30000.	0.80	1389.	0.525	-349.	53.1	5.9	1534.
PART POWER	30000.	0.80	913.	0.630	-339.	46.2	5.0	1434.
MAX CLIMB	30000.	0.85	9695.	0.341	324.	120.8	16.5	2334.
MAX CRUISE	30000.	0.85	8409.	0.341	125.	112.3	15.0	2234.
PART POWER	30000.	0.85	7026.	0.345	-56.	102.2	13.4	2134.
PART POWER	30000.	0.85	5785.	0.353	-187.	92.8	11.8	2034.
PART POWER	30000.	0.85	4666.	0.365	-276.	83.8	10.4	1934.
PART POWER	30000.	0.85	3669.	0.384	-335.	75.4	9.1	1834.
PART POWER	30000.	0.85	2808.	0.410	-374.	67.3	7.9	1734.
PART POWER	30000.	0.85	2087.	0.446	-389.	59.7	6.8	1634.
PART POWER	30000.	0.85	1509.	0.496	-394.	53.0	5.9	1534.
PART POWER	30000.	0.85	1009.	0.585	-383.	46.1	4.9	1434.
MAX CLIMB	35000.	0.50	6430.	0.374	557.	133.8	19.5	2334.
MAX CRUISE	35000.	0.50	5800.	0.373	449.	128.7	18.3	2234.
PART POWER	35000.	0.50	5063.	0.376	332.	121.4	16.9	2134.
PART POWER	35000.	0.50	4166.	0.387	213.	110.5	15.0	2034.
PART POWER	35000.	0.50	3237.	0.410	104.	98.0	12.9	1934.
PART POWER	35000.	0.50	2454.	0.442	28.	86.6	11.1	1834.
PART POWER	35000.	0.50	1792.	0.489	-30.	75.7	9.4	1734.
PART POWER	35000.	0.50	1237.	0.562	-70.	65.2	7.9	1634.
PART POWER	35000.	0.50	818.	0.674	-92.	56.3	6.6	1534.
PART POWER	35000.	0.50	484.	0.892	-102.	48.0	5.4	1434.

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US STANDARD ATMOSPHERE, 1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	30000.	0.80	9343.	10033.	1127.	5.763	4048.
MAX CRUISE	30000.	0.80	8138.	8492.	1085.	5.526	4048.
PART POWER	30000.	0.80	6789.	6857.	1049.	5.289	4048.
PART POWER	30000.	0.80	5551.	5424.	1017.	5.094	4048.
PART POWER	30000.	0.80	4460.	4214.	988.	4.944	4048.
PART POWER	30000.	0.80	3481.	3163.	962.	4.819	4048.
PART POWER	30000.	0.80	2638.	2285.	938.	4.716	4048.
PART POWER	30000.	0.80	1945.	1584.	914.	4.637	4048.
PART POWER	30000.	0.80	1389.	1034.	890.	4.568	4048.
PART POWER	30000.	0.80	913.	581.	870.	4.515	4048.
MAX CLIMB	30000.	0.85	9695.	10348.	1123.	5.844	4048.
MAX CRUISE	30000.	0.85	8409.	8697.	1081.	5.584	4048.
PART POWER	30000.	0.85	7026.	7014.	1045.	5.331	4048.
PART POWER	30000.	0.85	5785.	5576.	1012.	5.132	4048.
PART POWER	30000.	0.85	4666.	4337.	983.	4.975	4048.
PART POWER	30000.	0.85	3669.	3273.	956.	4.849	4048.
PART POWER	30000.	0.85	2808.	2377.	931.	4.739	4048.
PART POWER	30000.	0.85	2087.	1653.	907.	4.656	4048.
PART POWER	30000.	0.85	1509.	1085.	883.	4.585	4048.
PART POWER	30000.	0.85	1009.	612.	861.	4.525	4048.
MAX CLIMB	35000.	0.50	6430.	7205.	1139.	4.361	4048.
MAX CRUISE	35000.	0.50	5800.	6402.	1093.	4.254	4048.
PART POWER	35000.	0.50	5063.	5491.	1052.	4.133	4048.
PART POWER	35000.	0.50	4166.	4432.	1020.	4.005	4048.
PART POWER	35000.	0.50	3237.	3367.	995.	3.876	4048.
PART POWER	35000.	0.50	2454.	2499.	973.	3.780	4048.
PART POWER	35000.	0.50	1792.	1781.	952.	3.699	4048.
PART POWER	35000.	0.50	1237.	1191.	933.	3.632	4048.
PART POWER	35000.	0.50	818.	756.	914.	3.584	4048.
PART POWER	35000.	0.50	484.	417.	898.	3.549	4048.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	35000.	0.60	6889.	0.365	507.	132.4	19.1	2334.
MAX CRUISE	35000.	0.60	6181.	0.363	385.	126.7	17.9	2234.
PART POWER	35000.	0.60	5369.	0.366	259.	118.9	16.4	2134.
PART POWER	35000.	0.60	4404.	0.376	132.	107.8	14.5	2034.
PART POWER	35000.	0.60	3450.	0.396	28.	95.8	12.5	1934.
PART POWER	35000.	0.60	2645.	0.424	-42.	85.1	10.8	1834.
PART POWER	35000.	0.60	1958.	0.464	-95.	74.7	9.2	1734.
PART POWER	35000.	0.60	1384.	0.524	-127.	64.9	7.8	1634.
PART POWER	35000.	0.60	946.	0.612	-146.	56.5	6.6	1534.
PART POWER	35000.	0.60	587.	0.775	-150.	48.6	5.5	1434.
MAX CLIMB	35000.	0.70	7416.	0.355	460.	130.5	18.6	2334.
MAX CRUISE	35000.	0.70	6628.	0.354	323.	124.2	17.3	2234.
PART POWER	35000.	0.70	5720.	0.356	183.	115.8	15.8	2134.
PART POWER	35000.	0.70	4676.	0.365	50.	104.5	13.9	2034.
PART POWER	35000.	0.70	3708.	0.381	-50.	93.3	12.1	1934.
PART POWER	35000.	0.70	2883.	0.404	-115.	83.4	10.5	1834.
PART POWER	35000.	0.70	2164.	0.437	-162.	73.7	9.0	1734.
PART POWER	35000.	0.70	1563.	0.486	-192.	64.5	7.6	1634.
PART POWER	35000.	0.70	1098.	0.554	-207.	56.5	6.5	1534.
PART POWER	35000.	0.70	715.	0.673	-207.	49.0	5.5	1434.
MAX CLIMB	35000.	0.75	7702.	0.351	435.	129.2	18.3	2334.
MAX CRUISE	35000.	0.75	6874.	0.349	293.	122.7	17.0	2234.
PART POWER	35000.	0.75	5906.	0.351	144.	113.9	15.4	2134.
PART POWER	35000.	0.75	4835.	0.359	7.	102.8	13.6	2034.
PART POWER	35000.	0.75	3861.	0.373	-88.	92.1	11.8	1934.
PART POWER	35000.	0.75	3016.	0.394	-154.	82.5	10.3	1834.
PART POWER	35000.	0.75	2284.	0.424	-200.	73.1	8.9	1734.
PART POWER	35000.	0.75	1667.	0.467	-225.	64.2	7.6	1634.
PART POWER	35000.	0.75	1185.	0.527	-239.	56.4	6.5	1534.
PART POWER	35000.	0.75	786.	0.630	-238.	49.1	5.4	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	35000.	0.60	6889.	7668.	1132.	4.457	4048.
MAX CRUISE	35000.	0.60	6181.	6756.	1086.	4.329	4048.
PART POWER	35000.	0.60	5369.	5748.	1046.	4.190	4048.
PART POWER	35000.	0.60	4404.	4601.	1013.	4.040	4048.
PART POWER	35000.	0.60	3450.	3511.	987.	3.904	4048.
PART POWER	35000.	0.60	2645.	2625.	964.	3.806	4048.
PART POWER	35000.	0.60	1958.	1882.	942.	3.718	4048.
PART POWER	35000.	0.60	1384.	1281.	922.	3.651	4048.
PART POWER	35000.	0.60	946.	830.	901.	3.600	4048.
PART POWER	35000.	0.60	587.	473.	882.	3.564	4048.
MAX CLIMB	35000.	0.70	7416.	8195.	1125.	4.574	4048.
MAX CRUISE	35000.	0.70	6628.	7165.	1079.	4.421	4048.
PART POWER	35000.	0.70	5720.	6030.	1039.	4.256	4048.
PART POWER	35000.	0.70	4676.	4786.	1007.	4.084	4048.
PART POWER	35000.	0.70	3708.	3682.	979.	3.942	4048.
PART POWER	35000.	0.70	2883.	2779.	954.	3.839	4048.
PART POWER	35000.	0.70	2164.	2010.	931.	3.748	4048.
PART POWER	35000.	0.70	1563.	1364.	909.	3.674	4048.
PART POWER	35000.	0.70	1098.	911.	887.	3.617	4048.
PART POWER	35000.	0.70	715.	535.	866.	3.577	4048.
MAX CLIMB	35000.	0.75	7702.	8477.	1121.	4.640	4048.
MAX CRUISE	35000.	0.75	6874.	7388.	1076.	4.474	4048.
PART POWER	35000.	0.75	5906.	6172.	1036.	4.292	4048.
PART POWER	35000.	0.75	4835.	4892.	1003.	4.109	4048.
PART POWER	35000.	0.75	3861.	3786.	974.	3.968	4048.
PART POWER	35000.	0.75	3016.	2861.	949.	3.858	4048.
PART POWER	35000.	0.75	2284.	2081.	925.	3.764	4048.
PART POWER	35000.	0.75	1667.	1443.	903.	3.690	4048.
PART POWER	35000.	0.75	1185.	956.	880.	3.630	4048.
PART POWER	35000.	0.75	786.	566.	858.	3.566	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	35000.	0.80	8004.	0.346	411.	127.8	18.0	2334.
MAX CRUISE	35000.	0.80	7130.	0.344	261.	121.1	16.7	2234.
PART POWER	35000.	0.80	6098.	0.346	103.	111.9	15.0	2134.
PART POWER	35000.	0.80	5003.	0.353	-33.	101.0	13.2	2034.
PART POWER	35000.	0.80	4016.	0.365	-130.	90.7	11.6	1934.
PART POWER	35000.	0.80	3165.	0.384	-194.	81.5	10.1	1834.
PART POWER	35000.	0.80	2413.	0.411	-238.	72.4	8.7	1734.
PART POWER	35000.	0.80	1781.	0.449	-263.	63.8	7.5	1634.
PART POWER	35000.	0.80	1277.	0.502	-271.	56.3	6.4	1534.
PART POWER	35000.	0.80	863.	0.589	-272.	49.1	5.4	1434.
MAX CLIMB	35000.	0.85	8320.	0.342	366.	126.2	17.7	2334.
MAX CRUISE	35000.	0.85	7396.	0.339	228.	119.3	16.3	2234.
PART POWER	35000.	0.85	6298.	0.341	62.	109.7	14.7	2134.
PART POWER	35000.	0.85	5193.	0.347	-77.	99.3	12.9	2034.
PART POWER	35000.	0.85	4201.	0.357	-173.	89.5	11.4	1934.
PART POWER	35000.	0.85	3319.	0.374	-236.	80.4	9.9	1834.
PART POWER	35000.	0.85	2551.	0.398	-278.	71.7	8.6	1734.
PART POWER	35000.	0.85	1903.	0.431	-302.	63.4	7.4	1634.
PART POWER	35000.	0.85	1382.	0.477	-310.	56.1	6.3	1534.
PART POWER	35000.	0.85	943.	0.554	-306.	49.0	5.4	1434.
MAX CLIMB	40000.	0.50	5078.	0.376	446.	133.7	19.6	2334.
MAX CRUISE	40000.	0.50	4590.	0.374	362.	128.8	18.4	2234.
PART POWER	40000.	0.50	4010.	0.377	268.	121.5	17.0	2134.
PART POWER	40000.	0.50	3309.	0.388	173.	110.8	15.1	2034.
PART POWER	40000.	0.50	2557.	0.412	85.	97.9	13.0	1934.
PART POWER	40000.	0.50	1931.	0.446	24.	86.4	11.1	1834.
PART POWER	40000.	0.50	1398.	0.496	-22.	75.1	9.4	1734.
PART POWER	40000.	0.50	955.	0.575	-53.	64.5	7.8	1634.
PART POWER	40000.	0.50	618.	0.700	-72.	55.2	6.5	1534.
PART POWER	40000.	0.50	350.	0.959	-79.	46.6	5.3	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	35000.	0.80	8004.	8773.	1118.	4.712	4048.
MAX CRUISE	35000.	0.80	7130.	7616.	1073.	4.531	4048.
PART POWER	35000.	0.80	6098.	6314.	1033.	4.330	4048.
PART POWER	35000.	0.80	5003.	5008.	1000.	4.142	4048.
PART POWER	35000.	0.80	4016.	3884.	970.	3.992	4048.
PART POWER	35000.	0.80	3165.	2953.	943.	3.879	4048.
PART POWER	35000.	0.80	2413.	2154.	919.	3.781	4048.
PART POWER	35000.	0.80	1781.	1505.	896.	3.705	4048.
PART POWER	35000.	0.80	1277.	1001.	873.	3.647	4048.
PART POWER	35000.	0.80	863.	598.	850.	3.595	4048.
MAX CLIMB	35000.	0.85	8320.	9079.	1115.	4.789	4048.
MAX CRUISE	35000.	0.85	7396.	7848.	1069.	4.592	4048.
PART POWER	35000.	0.85	6298.	6458.	1030.	4.371	4048.
PART POWER	35000.	0.85	5193.	5134.	996.	4.173	4048.
PART POWER	35000.	0.85	4201.	4006.	965.	4.021	4048.
PART POWER	35000.	0.85	3319.	3044.	938.	3.902	4048.
PART POWER	35000.	0.85	2551.	2232.	913.	3.803	4048.
PART POWER	35000.	0.85	1903.	1568.	889.	3.721	4048.
PART POWER	35000.	0.85	1382.	1050.	865.	3.658	4048.
PART POWER	35000.	0.85	943.	627.	843.	3.607	4048.
MAX CLIMB	40000.	0.50	5078.	5699.	1139.	3.437	4048.
MAX CRUISE	40000.	0.50	4590.	5075.	1093.	3.353	4048.
PART POWER	40000.	0.50	4010.	4356.	1051.	3.256	4048.
PART POWER	40000.	0.50	3309.	3525.	1019.	3.155	4048.
PART POWER	40000.	0.50	2557.	2663.	994.	3.051	4048.
PART POWER	40000.	0.50	1931.	1969.	972.	2.973	4048.
PART POWER	40000.	0.50	1398.	1389.	953.	2.909	4048.
PART POWER	40000.	0.50	955.	920.	935.	2.856	4048.
PART POWER	40000.	0.50	618.	570.	918.	2.817	4048.
PART POWER	40000.	0.50	350.	299.	904.	2.788	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	40000.	0.60	5445.	0.367	409.	132.5	19.2	2334.
MAX CRUISE	40000.	0.60	4893.	0.365	313.	126.8	18.0	2234.
PART POWER	40000.	0.60	4255.	0.368	213.	119.1	16.5	2134.
PART POWER	40000.	0.60	3494.	0.378	111.	108.0	14.6	2034.
PART POWER	40000.	0.60	2726.	0.398	26.	95.7	12.6	1934.
PART POWER	40000.	0.60	2060.	0.426	-29.	84.9	10.8	1834.
PART POWER	40000.	0.60	1530.	0.470	-73.	74.2	9.2	1734.
PART POWER	40000.	0.60	1071.	0.535	-98.	64.3	7.7	1634.
PART POWER	40000.	0.60	718.	0.633	-112.	55.5	6.5	1534.
PART POWER	40000.	0.60	433.	0.822	-117.	47.4	5.3	1434.
MAX CLIMB	40000.	0.70	5869.	0.357	374.	130.6	18.7	2334.
MAX CRUISE	40000.	0.70	5251.	0.355	266.	124.4	17.4	2234.
PART POWER	40000.	0.70	4541.	0.357	155.	116.1	15.9	2134.
PART POWER	40000.	0.70	3710.	0.367	47.	104.8	14.0	2034.
PART POWER	40000.	0.70	2938.	0.383	-32.	93.5	12.1	1934.
PART POWER	40000.	0.70	2269.	0.408	-87.	83.2	10.5	1834.
PART POWER	40000.	0.70	1695.	0.443	-125.	73.3	9.0	1734.
PART POWER	40000.	0.70	1215.	0.495	-148.	63.9	7.6	1634.
PART POWER	40000.	0.70	842.	0.570	-161.	55.7	6.4	1534.
PART POWER	40000.	0.70	534.	0.707	-160.	48.0	5.4	1434.
MAX CLIMB	40000.	0.75	6099.	0.353	356.	129.4	18.4	2334.
MAX CRUISE	40000.	0.75	5447.	0.350	243.	123.0	17.1	2234.
PART POWER	40000.	0.75	4689.	0.352	124.	114.3	15.5	2134.
PART POWER	40000.	0.75	3835.	0.361	13.	103.0	13.7	2034.
PART POWER	40000.	0.75	3053.	0.375	-65.	92.2	11.9	1934.
PART POWER	40000.	0.75	2377.	0.397	-118.	82.3	10.3	1834.
PART POWER	40000.	0.75	1788.	0.429	-154.	72.7	8.9	1734.
PART POWER	40000.	0.75	1299.	0.475	-176.	63.7	7.5	1634.
PART POWER	40000.	0.75	912.	0.541	-185.	55.7	6.4	1534.
PART POWER	40000.	0.75	593.	0.656	-184.	48.2	5.3	1434.

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STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	40000.	0.60	5445.	6073.	1132.	3.514	4048.
MAX CRUISE	40000.	0.60	4893.	5359.	1086.	3.414	4048.
PART POWER	40000.	0.60	4255.	4565.	1045.	3.304	4048.
PART POWER	40000.	0.60	3494.	3658.	1012.	3.184	4048.
PART POWER	40000.	0.60	2726.	2779.	987.	3.075	4048.
PART POWER	40000.	0.60	2080.	2068.	964.	2.996	4048.
PART POWER	40000.	0.60	1530.	1473.	943.	2.924	4048.
PART POWER	40000.	0.60	1071.	991.	924.	2.871	4048.
PART POWER	40000.	0.60	718.	629.	904.	2.831	4048.
PART POWER	40000.	0.60	433.	345.	887.	2.799	4048.
MAX CLIMB	40000.	0.70	5869.	6501.	1124.	3.609	4048.
MAX CRUISE	40000.	0.70	5251.	5691.	1079.	3.488	4048.
PART POWER	40000.	0.70	4541.	4799.	1038.	3.358	4048.
PART POWER	40000.	0.70	3710.	3807.	1006.	3.219	4048.
PART POWER	40000.	0.70	2938.	2926.	978.	3.108	4048.
PART POWER	40000.	0.70	2269.	2190.	954.	3.021	4048.
PART POWER	40000.	0.70	1695.	1577.	931.	2.949	4048.
PART POWER	40000.	0.70	1215.	1078.	911.	2.891	4048.
PART POWER	40000.	0.70	842.	698.	889.	2.844	4048.
PART POWER	40000.	0.70	534.	396.	870.	2.811	4048.
MAX CLIMB	40000.	0.75	6099.	6731.	1121.	3.662	4048.
MAX CRUISE	40000.	0.75	5447.	5870.	1075.	3.530	4048.
PART POWER	40000.	0.75	4689.	4915.	1035.	3.386	4048.
PART POWER	40000.	0.75	3835.	3890.	1002.	3.238	4048.
PART POWER	40000.	0.75	3053.	3001.	974.	3.125	4048.
PART POWER	40000.	0.75	2377.	2260.	948.	3.036	4048.
PART POWER	40000.	0.75	1788.	1632.	926.	2.962	4048.
PART POWER	40000.	0.75	1299.	1125.	904.	2.901	4048.
PART POWER	40000.	0.75	912.	736.	882.	2.855	4048.
PART POWER	40000.	0.75	593.	424.	862.	2.818	4048.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	UPK	UET
MAX CLIMB	40000.	0.80	6339.	0.348	338.	128.0	18.1	2334.
MAX CRUISE	40000.	0.80	5654.	0.345	219.	121.5	16.8	2234.
PART POWER	40000.	0.80	4843.	0.347	93.	112.3	15.2	2134.
PART POWER	40000.	0.80	3966.	0.355	-19.	101.2	13.3	2034.
PART POWER	40000.	0.80	3175.	0.368	-97.	90.8	11.7	1934.
PART POWER	40000.	0.80	2495.	0.387	-149.	81.3	10.2	1834.
PART POWER	40000.	0.80	1893.	0.415	-185.	72.1	8.7	1734.
PART POWER	40000.	0.80	1389.	0.456	-204.	63.4	7.5	1634.
PART POWER	40000.	0.80	990.	0.514	-213.	55.7	6.4	1534.
PART POWER	40000.	0.80	655.	0.612	-210.	48.3	5.3	1434.
MAX CLIMB	40000.	0.85	6592.	0.343	319.	126.5	17.8	2334.
MAX CRUISE	40000.	0.85	5867.	0.341	193.	119.6	16.4	2234.
PART POWER	40000.	0.85	5003.	0.342	61.	110.1	14.8	2134.
PART POWER	40000.	0.85	4116.	0.348	-52.	99.5	13.0	2034.
PART POWER	40000.	0.85	3323.	0.359	-130.	89.5	11.4	1934.
PART POWER	40000.	0.85	2617.	0.377	-182.	80.2	10.0	1834.
PART POWER	40000.	0.85	2002.	0.402	-216.	71.4	8.6	1734.
PART POWER	40000.	0.85	1487.	0.437	-235.	63.0	7.4	1634.
PART POWER	40000.	0.85	1072.	0.488	-241.	55.6	6.3	1534.
PART POWER	40000.	0.85	723.	0.571	-239.	48.3	5.3	1434.
MAX CLIMB	45000.	0.50	3945.	0.378	345.	132.7	19.4	2334.
MAX CRUISE	45000.	0.50	3547.	0.378	277.	127.3	18.2	2234.
PART POWER	45000.	0.50	3075.	0.382	203.	119.5	16.7	2134.
PART POWER	45000.	0.50	2507.	0.395	126.	108.2	14.7	2034.
PART POWER	45000.	0.50	1920.	0.422	59.	95.2	12.6	1934.
PART POWER	45000.	0.50	1437.	0.459	12.	83.7	10.8	1834.
PART POWER	45000.	0.50	1021.	0.517	-23.	72.3	9.0	1734.
PART POWER	45000.	0.50	673.	0.615	-46.	61.1	7.4	1634.
PART POWER	45000.	0.50	423.	0.769	-57.	52.1	6.1	1534.
PART POWER	45000.	0.50	207.	1.190	-62.	42.6	4.9	1434.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	40000.	0.80	6339.	6969.	1118.	3.720	4048.
MAX CRUISE	40000.	0.80	5654.	6059.	1072.	3.577	4048.
PART POWER	40000.	0.80	4843.	5031.	1032.	3.417	4048.
PART POWER	40000.	0.80	3966.	3980.	999.	3.265	4048.
PART POWER	40000.	0.80	3175.	3078.	970.	3.144	4048.
PART POWER	40000.	0.80	2495.	2333.	943.	3.053	4048.
PART POWER	40000.	0.80	1893.	1694.	919.	2.975	4048.
PART POWER	40000.	0.80	1389.	1175.	897.	2.913	4048.
PART POWER	40000.	0.80	990.	775.	874.	2.864	4048.
PART POWER	40000.	0.80	655.	451.	853.	2.826	4048.
MAX CLIMB	40000.	0.85	6592.	7217.	1115.	3.782	4048.
MAX CRUISE	40000.	0.85	5867.	6246.	1069.	3.626	4048.
PART POWER	40000.	0.85	5003.	5149.	1029.	3.451	4048.
PART POWER	40000.	0.85	4116.	4082.	995.	3.290	4048.
PART POWER	40000.	0.85	3323.	3178.	964.	3.167	4048.
PART POWER	40000.	0.85	2617.	2406.	938.	3.071	4048.
PART POWER	40000.	0.85	2002.	1755.	913.	2.991	4048.
PART POWER	40000.	0.85	1487.	1227.	890.	2.926	4048.
PART POWER	40000.	0.85	1072.	815.	866.	2.877	4048.
PART POWER	40000.	0.85	723.	479.	845.	2.833	4048.
MAX CLIMB	45000.	0.50	3945.	4423.	1141.	2.695	4048.
MAX CRUISE	45000.	0.50	3547.	3917.	1095.	2.629	4048.
PART POWER	45000.	0.50	3075.	3336.	1055.	2.552	4048.
PART POWER	45000.	0.50	2507.	2663.	1024.	2.467	4048.
PART POWER	45000.	0.50	1920.	1994.	1001.	2.388	4048.
PART POWER	45000.	0.50	1437.	1459.	979.	2.327	4048.
PART POWER	45000.	0.50	1021.	1010.	961.	2.277	4048.
PART POWER	45000.	0.50	673.	642.	947.	2.236	4048.
PART POWER	45000.	0.50	423.	365.	931.	2.208	4048.
PART POWER	45000.	0.50	207.	168.	925.	2.184	4048.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	45000.	0.60	4231.	0.369	315.	131.4	19.0	2334.
MAX CRUISE	45000.	0.60	3785.	0.368	237.	125.4	17.8	2234.
PART POWER	45000.	0.60	3267.	0.372	158.	117.2	16.2	2134.
PART POWER	45000.	0.60	2646.	0.384	77.	105.4	14.2	2034.
PART POWER	45000.	0.60	2054.	0.407	14.	93.3	12.3	1934.
PART POWER	45000.	0.60	1556.	0.439	-28.	82.5	10.5	1834.
PART POWER	45000.	0.60	1127.	0.488	-61.	71.7	8.9	1734.
PART POWER	45000.	0.60	767.	0.567	-79.	61.3	7.4	1634.
PART POWER	45000.	0.60	504.	0.683	-89.	52.8	6.2	1534.
PART POWER	45000.	0.60	277.	0.956	-90.	44.1	5.0	1434.
MAX CLIMB	45000.	0.70	4554.	0.359	286.	129.4	18.5	2334.
MAX CRUISE	45000.	0.70	4061.	0.358	200.	123.0	17.2	2234.
PART POWER	45000.	0.70	3480.	0.361	111.	114.1	15.6	2134.
PART POWER	45000.	0.70	2818.	0.372	28.	102.4	13.6	2034.
PART POWER	45000.	0.70	2216.	0.391	-32.	91.1	11.8	1934.
PART POWER	45000.	0.70	1703.	0.418	-72.	81.0	10.2	1834.
PART POWER	45000.	0.70	1254.	0.458	-101.	70.9	8.7	1734.
PART POWER	45000.	0.70	880.	0.521	-116.	61.3	7.3	1634.
PART POWER	45000.	0.70	600.	0.608	-125.	53.2	6.1	1534.
PART POWER	45000.	0.70	357.	0.793	-122.	45.1	5.0	1434.
MAX CLIMB	45000.	0.75	4730.	0.355	271.	128.2	18.3	2334.
MAX CRUISE	45000.	0.75	4211.	0.353	181.	121.6	16.9	2234.
PART POWER	45000.	0.75	3595.	0.356	87.	112.3	15.3	2134.
PART POWER	45000.	0.75	2922.	0.366	3.	100.9	13.4	2034.
PART POWER	45000.	0.75	2314.	0.382	-56.	90.1	11.6	1934.
PART POWER	45000.	0.75	1787.	0.407	-96.	80.2	10.1	1834.
PART POWER	45000.	0.75	1331.	0.442	-123.	70.5	8.6	1734.
PART POWER	45000.	0.75	947.	0.497	-137.	61.3	7.3	1634.
PART POWER	45000.	0.75	655.	0.574	-144.	53.4	6.1	1534.
PART POWER	45000.	0.75	404.	0.726	-141.	45.5	5.0	1434.

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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	45000.	0.60	4231.	4714.	1133.	2.756	4048.
MAX CRUISE	45000.	0.60	3785.	4137.	1088.	2.673	4048.
PART POWER	45000.	0.60	3267.	3497.	1049.	2.585	4048.
PART POWER	45000.	0.60	2646.	2761.	1018.	2.488	4048.
PART POWER	45000.	0.60	2054.	2088.	993.	2.407	4048.
PART POWER	45000.	0.60	1556.	1540.	971.	2.345	4048.
PART POWER	45000.	0.60	1127.	1078.	951.	2.289	4048.
PART POWER	45000.	0.60	767.	703.	934.	2.249	4048.
PART POWER	45000.	0.60	504.	435.	915.	2.218	4048.
PART POWER	45000.	0.60	277.	210.	904.	2.193	4048.
MAX CLIMB	45000.	0.70	4554.	5037.	1126.	2.827	4048.
MAX CRUISE	45000.	0.70	4061.	4391.	1081.	2.730	4048.
PART POWER	45000.	0.70	3480.	3667.	1042.	2.624	4048.
PART POWER	45000.	0.70	2818.	2881.	1010.	2.517	4048.
PART POWER	45000.	0.70	2216.	2199.	984.	2.431	4048.
PART POWER	45000.	0.70	1703.	1637.	960.	2.365	4048.
PART POWER	45000.	0.70	1254.	1159.	939.	2.309	4048.
PART POWER	45000.	0.70	880.	772.	920.	2.265	4048.
PART POWER	45000.	0.70	600.	489.	899.	2.228	4048.
PART POWER	45000.	0.70	357.	253.	885.	2.204	4048.
MAX CLIMB	45000.	0.75	4730.	5212.	1123.	2.868	4048.
MAX CRUISE	45000.	0.75	4211.	4528.	1078.	2.762	4048.
PART POWER	45000.	0.75	3595.	3755.	1039.	2.646	4048.
PART POWER	45000.	0.75	2922.	2955.	1006.	2.533	4048.
PART POWER	45000.	0.75	2314.	2266.	979.	2.445	4048.
PART POWER	45000.	0.75	1767.	1691.	955.	2.377	4048.
PART POWER	45000.	0.75	1331.	1206.	932.	2.318	4048.
PART POWER	45000.	0.75	947.	812.	912.	2.273	4048.
PART POWER	45000.	0.75	655.	518.	891.	2.236	4048.
PART POWER	45000.	0.75	404.	276.	874.	2.209	4048.

TABLE II
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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	45000.	0.80	4916.	0.350	256.	126.8	17.9	2334.
MAX CRUISE	45000.	0.80	4370.	0.348	162.	120.0	16.6	2234.
PART POWER	45000.	0.80	3713.	0.351	62.	110.3	14.9	2134.
PART POWER	45000.	0.80	3025.	0.359	-23.	99.2	13.1	2034.
PART POWER	45000.	0.80	2413.	0.374	-82.	88.8	11.4	1934.
PART POWER	45000.	0.80	1879.	0.396	-120.	79.3	9.9	1834.
PART POWER	45000.	0.80	1409.	0.428	-146.	69.9	8.5	1734.
PART POWER	45000.	0.80	1019.	0.475	-160.	61.1	7.2	1634.
PART POWER	45000.	0.80	712.	0.544	-164.	53.4	6.1	1534.
PART POWER	45000.	0.80	454.	0.669	-161.	45.8	5.0	1434.
MAX CLIMB	45000.	0.85	5113.	0.345	242.	125.3	17.6	2334.
MAX CRUISE	45000.	0.85	4532.	0.343	142.	116.1	16.2	2234.
PART POWER	45000.	0.85	3837.	0.346	37.	108.2	14.5	2134.
PART POWER	45000.	0.85	3142.	0.353	-49.	97.5	12.7	2034.
PART POWER	45000.	0.85	2526.	0.365	-107.	87.6	11.2	1934.
PART POWER	45000.	0.85	1974.	0.385	-146.	78.3	9.7	1834.
PART POWER	45000.	0.85	1498.	0.414	-171.	69.4	8.4	1734.
PART POWER	45000.	0.85	1097.	0.454	-184.	60.9	7.1	1634.
PART POWER	45000.	0.85	779.	0.513	-187.	53.5	6.1	1534.
PART POWER	45000.	0.85	507.	0.619	-182.	46.0	5.0	1434.

TABLE II
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PRATT AND WHITNEY
STS-538 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	45000.	0.80	4916.	5394.	1120.	2.911	4048.
MAX CRUISE	45000.	0.80	4370.	4670.	1074.	2.798	4048.
PART POWER	45000.	0.80	3713.	3843.	1035.	2.670	4048.
PART POWER	45000.	0.80	3025.	3024.	1003.	2.551	4048.
PART POWER	45000.	0.80	2413.	2330.	974.	2.460	4048.
PART POWER	45000.	0.80	1879.	1748.	949.	2.390	4048.
PART POWER	45000.	0.80	1409.	1253.	926.	2.330	4048.
PART POWER	45000.	0.80	1019.	852.	905.	2.281	4048.
PART POWER	45000.	0.80	712.	548.	883.	2.246	4048.
PART POWER	45000.	0.80	454.	299.	865.	2.215	4048.
MAX CLIMB	45000.	0.85	5113.	5587.	1116.	2.960	4048.
MAX CRUISE	45000.	0.85	4532.	4812.	1071.	2.835	4048.
PART POWER	45000.	0.85	3837.	3933.	1032.	2.695	4048.
PART POWER	45000.	0.85	3142.	3104.	999.	2.571	4048.
PART POWER	45000.	0.85	2526.	2405.	969.	2.478	4048.
PART POWER	45000.	0.85	1974.	1806.	943.	2.404	4048.
PART POWER	45000.	0.85	1498.	1304.	919.	2.342	4048.
PART POWER	45000.	0.85	1097.	895.	897.	2.291	4048.
PART POWER	45000.	0.85	779.	581.	875.	2.254	4048.
PART POWER	45000.	0.85	507.	321.	856.	2.221	4048.

TABLE III
FR 10966B

PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
TAKEOFF	0.	0.0	14297.	0.437	1782.	97.5	12.7	2535.
TAKEOFF	0.	0.10	14440.	0.434	1448.	97.4	12.7	2535.
TAKEOFF	0.	0.20	14740.	0.430	1136.	96.9	12.6	2535.
TAKEOFF	0.	0.30	15182.	0.424	832.	95.9	12.4	2535.
TAKEOFF	2000.	0.0	14078.	0.429	1758.	100.4	13.2	2535.
TAKEOFF	2000.	0.10	14142.	0.428	1442.	100.1	13.2	2535.
TAKEOFF	2000.	0.20	14402.	0.424	1146.	99.4	13.0	2535.
TAKEOFF	2000.	0.30	14841.	0.418	860.	98.4	12.8	2535.
TAKEOFF	5000.	0.0	13614.	0.420	1717.	104.5	13.9	2535.
TAKEOFF	5000.	0.10	13686.	0.419	1421.	104.2	13.8	2535.
TAKEOFF	5000.	0.20	13931.	0.415	1151.	103.5	13.7	2535.
TAKEOFF	5000.	0.30	14338.	0.409	886.	102.4	13.5	2535.

TABLE III
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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
TAKEOFF	0.	0.0	14297.	15336.	1379.	15.911	4048.
TAKEOFF	0.	0.10	14440.	15448.	1376.	15.908	4048.
TAKEOFF	0.	0.20	14740.	15671.	1373.	15.929	4048.
TAKEOFF	0.	0.30	15182.	15983.	1369.	15.970	4048.
TAKEOFF	2000.	0.0	14078.	15127.	1368.	14.858	4048.
TAKEOFF	2000.	0.10	14142.	15166.	1367.	14.864	4048.
TAKEOFF	2000.	0.20	14402.	15357.	1364.	14.888	4048.
TAKEOFF	2000.	0.30	14841.	15678.	1359.	14.931	4048.
TAKEOFF	5000.	0.0	13614.	14676.	1354.	13.392	4048.
TAKEOFF	5000.	0.10	13686.	14722.	1353.	13.396	4048.
TAKEOFF	5000.	0.20	13931.	14912.	1350.	13.426	4048.
TAKEOFF	5000.	0.30	14338.	15213.	1346.	13.466	4048.

TABLE III
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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD +31 DEG F DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
TAKEOFF	0.	0.0	16410.	0.430	2000.	103.0	13.6	2726.
TAKEOFF	0.	0.10	15411.	0.436	1530.	99.4	13.0	2690.
TAKEOFF	0.	0.20	15474.	0.433	1193.	98.2	12.8	2682.
TAKEOFF	0.	0.30	15757.	0.427	868.	96.6	12.5	2675.
TAKEOFF	2000.	0.0	16047.	0.424	1967.	105.7	14.0	2726.
TAKEOFF	2000.	0.10	15108.	0.429	1520.	102.2	13.5	2691.
TAKEOFF	2000.	0.20	15150.	0.427	1198.	100.8	13.2	2685.
TAKEOFF	2000.	0.30	15436.	0.422	889.	99.2	13.0	2678.
TAKEOFF	5000.	0.0	15439.	0.416	1919.	109.8	14.7	2726.
TAKEOFF	5000.	0.10	14699.	0.420	1513.	106.7	14.2	2698.
TAKEOFF	5000.	0.20	14682.	0.418	1202.	105.0	13.9	2689.
TAKEOFF	5000.	0.30	14949.	0.413	919.	103.3	13.6	2683.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD +31 DEG F DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
TAKEOFF	0.	0.0	16410.	17683.	1476.	16.057	4048.
TAKEOFF	0.	0.10	15411.	16530.	1465.	15.973	4048.
TAKEOFF	0.	0.20	15474.	16495.	1459.	15.985	4048.
TAKEOFF	0.	0.30	15757.	16622.	1452.	16.008	4048.
TAKEOFF	2000.	0.0	16047.	17327.	1466.	15.002	4048.
TAKEOFF	2000.	0.10	15108.	16241.	1455.	14.925	4048.
TAKEOFF	2000.	0.20	15150.	16190.	1452.	14.935	4048.
TAKEOFF	2000.	0.30	15436.	16331.	1444.	14.959	4048.
TAKEOFF	5000.	0.0	15439.	16734.	1452.	13.535	4048.
TAKEOFF	5000.	0.10	14699.	15865.	1444.	13.470	4048.
TAKEOFF	5000.	0.20	14682.	15750.	1439.	13.470	4048.
TAKEOFF	5000.	0.30	14949.	15890.	1433.	13.496	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.40	15856.	0.414	542.	94.6	12.2	2535.
MAX CRUISE	0.	0.40	13046.	0.433	309.	86.4	10.9	2435.
PART POWER	0.	0.40	10502.	0.459	118.	78.5	9.7	2335.
PART POWER	0.	0.40	8200.	0.495	-35.	70.6	8.5	2235.
PART POWER	0.	0.40	6197.	0.548	-144.	63.1	7.4	2135.
PART POWER	0.	0.40	4621.	0.614	-211.	56.5	6.5	2035.
PART POWER	0.	0.40	3321.	0.706	-267.	50.3	5.6	1935.
PART POWER	0.	0.40	2168.	0.875	-296.	43.7	4.8	1835.
PART POWER	0.	0.40	1263.	1.203	-304.	37.8	4.0	1735.
PART POWER	0.	0.40	424.	2.711	-287.	30.6	3.2	1635.
MAX CLIMB	0.	0.50	16730.	0.403	240.	93.0	11.9	2535.
MAX CRUISE	0.	0.50	13880.	0.419	37.	85.3	10.7	2435.
PART POWER	0.	0.50	11269.	0.441	-154.	77.7	9.5	2335.
PART POWER	0.	0.50	8886.	0.473	-276.	70.2	8.4	2235.
PART POWER	0.	0.50	6832.	0.517	-374.	63.0	7.4	2135.
PART POWER	0.	0.50	5172.	0.572	-426.	56.8	6.5	2035.
PART POWER	0.	0.50	3782.	0.649	-459.	50.7	5.6	1935.
PART POWER	0.	0.50	2565.	0.778	-475.	44.5	4.8	1835.
PART POWER	0.	0.50	1597.	1.006	-470.	38.8	4.1	1735.
PART POWER	0.	0.50	750.	1.665	-434.	32.6	3.3	1635.
MAX CLIMB	0.	0.60	17824.	0.391	-71.	91.0	11.5	2535.
MAX CRUISE	0.	0.60	14911.	0.404	-263.	83.8	10.4	2435.
PART POWER	0.	0.60	12185.	0.423	-423.	76.5	9.3	2335.
PART POWER	0.	0.60	9747.	0.449	-539.	69.5	8.2	2235.
PART POWER	0.	0.60	7607.	0.485	-620.	62.8	7.3	2135.
PART POWER	0.	0.60	5846.	0.530	-657.	56.8	6.4	2035.
PART POWER	0.	0.60	4357.	0.592	-679.	51.0	5.6	1935.
PART POWER	0.	0.60	3040.	0.691	-681.	45.0	4.8	1835.
PART POWER	0.	0.60	2007.	0.850	-656.	39.6	4.1	1735.
PART POWER	0.	0.60	1144.	1.186	-613.	34.4	3.5	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.40	15856.	16479.	1362.	16.043	4048.
MAX CRUISE	0.	0.40	13046.	13403.	1333.	15.798	4048.
PART POWER	0.	0.40	10502.	10659.	1307.	15.582	4048.
PART POWER	0.	0.40	8200.	8213.	1284.	15.393	4048.
PART POWER	0.	0.40	6197.	6118.	1264.	15.242	4048.
PART POWER	0.	0.40	4621.	4491.	1242.	15.134	4048.
PART POWER	0.	0.40	3321.	3157.	1219.	15.028	4048.
PART POWER	0.	0.40	2168.	1990.	1202.	14.941	4048.
PART POWER	0.	0.40	1263.	1087.	1186.	14.874	4048.
PART POWER	0.	0.40	424.	266.	1187.	14.815	4048.
MAX CLIMB	0.	0.50	16730.	17098.	1353.	16.125	4048.
MAX CRUISE	0.	0.50	13880.	14002.	1323.	15.887	4048.
PART POWER	0.	0.50	11269.	11183.	1296.	15.638	4048.
PART POWER	0.	0.50	8886.	8680.	1272.	15.458	4048.
PART POWER	0.	0.50	6832.	6541.	1250.	15.289	4048.
PART POWER	0.	0.50	5172.	4844.	1227.	15.174	4048.
PART POWER	0.	0.50	3782.	3438.	1204.	15.070	4048.
PART POWER	0.	0.50	2565.	2221.	1184.	14.971	4048.
PART POWER	0.	0.50	1597.	1271.	1166.	14.897	4048.
PART POWER	0.	0.50	750.	460.	1156.	14.841	4048.
MAX CLIMB	0.	0.60	17824.	17857.	1343.	16.231	4048.
MAX CRUISE	0.	0.60	14911.	14704.	1312.	15.978	4048.
PART POWER	0.	0.60	12185.	11797.	1284.	15.738	4048.
PART POWER	0.	0.60	9747.	9242.	1259.	15.533	4048.
PART POWER	0.	0.60	7607.	7035.	1235.	15.357	4048.
PART POWER	0.	0.60	5846.	5254.	1211.	15.233	4048.
PART POWER	0.	0.60	4357.	3765.	1186.	15.115	4048.
PART POWER	0.	0.60	3040.	2468.	1166.	15.004	4048.
PART POWER	0.	0.60	2007.	1474.	1145.	14.931	4048.
PART POWER	0.	0.60	1144.	662.	1127.	14.871	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.70	19136.	0.377	-402.	88.7	11.1	2535.
MAX CRUISE	0.	0.70	16126.	0.388	-582.	82.0	10.1	2435.
PART POWER	0.	0.70	13340.	0.403	-731.	75.3	9.0	2335.
PART POWER	0.	0.70	10769.	0.424	-822.	68.6	8.0	2235.
PART POWER	0.	0.70	8535.	0.453	-893.	62.3	7.1	2135.
PART POWER	0.	0.70	6668.	0.489	-922.	56.6	6.3	2035.
PART POWER	0.	0.70	5043.	0.538	-925.	51.0	5.6	1935.
PART POWER	0.	0.70	3636.	0.612	-907.	45.4	4.8	1835.
PART POWER	0.	0.70	2508.	0.723	-872.	40.3	4.2	1735.
PART POWER	0.	0.70	1600.	0.913	-822.	35.7	3.6	1635.
MAX CLIMB	0.	0.75	19911.	0.369	-571.	87.5	10.9	2535.
MAX CRUISE	0.	0.75	16829.	0.379	-754.	81.0	9.9	2435.
PART POWER	0.	0.75	13983.	0.393	-890.	74.5	8.9	2335.
PART POWER	0.	0.75	11365.	0.412	-980.	68.1	7.9	2235.
PART POWER	0.	0.75	9050.	0.438	-1038.	61.9	7.1	2135.
PART POWER	0.	0.75	7158.	0.468	-1074.	56.6	6.3	2035.
PART POWER	0.	0.75	5432.	0.513	-1061.	50.9	5.5	1935.
PART POWER	0.	0.75	3973.	0.576	-1036.	45.5	4.8	1835.
PART POWER	0.	0.75	2793.	0.669	-991.	40.6	4.2	1735.
PART POWER	0.	0.75	1849.	0.818	-934.	36.1	3.6	1635.
MAX CLIMB	0.	0.80	20749.	0.362	-747.	86.3	10.7	2535.
MAX CRUISE	0.	0.80	17563.	0.371	-924.	79.9	9.7	2435.
PART POWER	0.	0.80	14675.	0.382	-1061.	73.7	8.7	2335.
PART POWER	0.	0.80	12000.	0.399	-1144.	67.5	7.8	2235.
PART POWER	0.	0.80	9614.	0.423	-1193.	61.5	7.0	2135.
PART POWER	0.	0.80	7642.	0.450	-1219.	56.2	6.2	2035.
PART POWER	0.	0.80	5853.	0.489	-1204.	50.8	5.5	1935.
PART POWER	0.	0.80	4340.	0.543	-1172.	45.5	4.8	1835.
PART POWER	0.	0.80	3103.	0.620	-1120.	40.7	4.2	1735.
PART POWER	0.	0.80	2129.	0.735	-1062.	36.5	3.6	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.70	19136.	18736.	1332.	16.358	4048.
MAX CRUISE	0.	0.70	16126.	15495.	1300.	16.090	4048.
PART POWER	0.	0.70	13340.	12538.	1270.	15.835	4048.
PART POWER	0.	0.70	10769.	9878.	1244.	15.631	4048.
PART POWER	0.	0.70	8535.	7594.	1219.	15.440	4048.
PART POWER	0.	0.70	6668.	5722.	1193.	15.297	4048.
PART POWER	0.	0.70	5043.	4123.	1168.	15.173	4048.
PART POWER	0.	0.70	3636.	2764.	1146.	15.062	4048.
PART POWER	0.	0.70	2508.	1696.	1123.	14.975	4048.
PART POWER	0.	0.70	1600.	858.	1100.	14.908	4048.
MAX CLIMB	0.	0.75	19911.	19260.	1326.	16.439	4048.
MAX CRUISE	0.	0.75	16829.	15940.	1293.	16.151	4048.
PART POWER	0.	0.75	13983.	12940.	1263.	15.898	4048.
PART POWER	0.	0.75	11365.	10238.	1236.	15.681	4048.
PART POWER	0.	0.75	9050.	7888.	1210.	15.490	4048.
PART POWER	0.	0.75	7158.	5991.	1183.	15.327	4048.
PART POWER	0.	0.75	5432.	4312.	1159.	15.206	4048.
PART POWER	0.	0.75	3973.	2914.	1136.	15.088	4048.
PART POWER	0.	0.75	2793.	1811.	1112.	15.001	4048.
PART POWER	0.	0.75	1849.	948.	1088.	14.934	4048.
MAX CLIMB	0.	0.80	20749.	19815.	1319.	16.526	4048.
MAX CRUISE	0.	0.80	17563.	16397.	1287.	16.228	4048.
PART POWER	0.	0.80	14675.	13356.	1256.	15.962	4048.
PART POWER	0.	0.80	12000.	10608.	1228.	15.739	4048.
PART POWER	0.	0.80	9614.	8201.	1202.	15.544	4048.
PART POWER	0.	0.80	7642.	6240.	1175.	15.378	4048.
PART POWER	0.	0.80	5853.	4508.	1150.	15.243	4048.
PART POWER	0.	0.80	4340.	3072.	1126.	15.122	4048.
PART POWER	0.	0.80	3103.	1925.	1101.	15.029	4048.
PART POWER	0.	0.80	2129.	1043.	1075.	14.955	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.85	21637.	0.355	-927.	85.0	10.4	2535.
MAX CRUISE	0.	0.85	18379.	0.362	-1110.	78.8	9.5	2435.
PART POWER	0.	0.85	15426.	0.372	-1230.	72.8	8.6	2335.
PART POWER	0.	0.85	12662.	0.388	-1305.	66.7	7.7	2235.
PART POWER	0.	0.85	10240.	0.407	-1363.	61.1	6.9	2135.
PART POWER	0.	0.85	8188.	0.431	-1378.	55.9	6.1	2035.
PART POWER	0.	0.85	6319.	0.465	-1360.	50.6	5.4	1935.
PART POWER	0.	0.85	4732.	0.512	-1319.	45.4	4.7	1835.
PART POWER	0.	0.85	3454.	0.575	-1265.	40.9	4.1	1735.
PART POWER	0.	0.85	2429.	0.666	-1198.	36.8	3.6	1635.
MAX CLIMB	5000.	0.20	13908.	0.416	1153.	103.5	13.7	2535.
MAX CRUISE	5000.	0.20	11365.	0.435	874.	94.0	12.2	2435.
PART POWER	5000.	0.20	9126.	0.461	642.	85.1	10.8	2335.
PART POWER	5000.	0.20	7112.	0.499	454.	76.4	9.5	2235.
PART POWER	5000.	0.20	5289.	0.557	301.	67.6	8.2	2135.
PART POWER	5000.	0.20	3839.	0.634	186.	59.7	7.1	2035.
PART POWER	5000.	0.20	2737.	0.734	101.	53.0	6.1	1935.
PART POWER	5000.	0.20	1777.	0.917	34.	46.1	5.2	1835.
PART POWER	5000.	0.20	955.	1.343	-13.	38.9	4.3	1735.
PART POWER	5000.	0.20	208.	4.538	-45.	30.3	3.2	1635.
MAX CLIMB	5000.	0.30	14323.	0.410	887.	102.3	13.5	2535.
MAX CRUISE	5000.	0.30	11741.	0.428	630.	93.1	12.0	2435.
PART POWER	5000.	0.30	9477.	0.452	421.	84.5	10.7	2335.
PART POWER	5000.	0.30	7433.	0.487	252.	76.1	9.4	2235.
PART POWER	5000.	0.30	5591.	0.539	116.	67.6	8.1	2135.
PART POWER	5000.	0.30	4093.	0.609	23.	59.8	7.0	2035.
PART POWER	5000.	0.30	2962.	0.698	-38.	53.3	6.1	1935.
PART POWER	5000.	0.30	1966.	0.854	-96.	46.6	5.2	1835.
PART POWER	5000.	0.30	1119.	1.190	-126.	39.7	4.3	1735.
PART POWER	5000.	0.30	384.	2.622	-138.	32.1	3.4	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.85	21637.	20392.	1313.	16.625	4048.
MAX CRUISE	0.	0.85	18379.	16894.	1280.	16.305	4048.
PART POWER	0.	0.85	15426.	13807.	1249.	16.045	4048.
PART POWER	0.	0.85	12662.	10984.	1220.	15.816	4048.
PART POWER	0.	0.85	10240.	8539.	1193.	15.595	4048.
PART POWER	0.	0.85	8188.	6515.	1166.	15.429	4048.
PART POWER	0.	0.85	6319.	4716.	1140.	15.280	4048.
PART POWER	0.	0.85	4732.	3225.	1116.	15.154	4048.
PART POWER	0.	0.85	3454.	2051.	1090.	15.053	4048.
PART POWER	0.	0.85	2429.	1133.	1063.	14.980	4048.
MAX CLIMB	5000.	0.20	13908.	14892.	1351.	13.430	4048.
MAX CRUISE	5000.	0.20	11365.	12057.	1323.	13.198	4048.
PART POWER	5000.	0.20	9126.	9596.	1297.	12.998	4048.
PART POWER	5000.	0.20	7112.	7420.	1275.	12.833	4048.
PART POWER	5000.	0.20	5289.	5479.	1257.	12.696	4048.
PART POWER	5000.	0.20	3839.	3950.	1239.	12.587	4048.
PART POWER	5000.	0.20	2737.	2795.	1217.	12.502	4048.
PART POWER	5000.	0.20	1777.	1798.	1200.	12.429	4048.
PART POWER	5000.	0.20	955.	955.	1190.	12.370	4048.
PART POWER	5000.	0.20	208.	194.	1202.	12.316	4048.
MAX CLIMB	5000.	0.30	14323.	15199.	1346.	13.468	4048.
MAX CRUISE	5000.	0.30	11741.	12330.	1318.	13.233	4048.
PART POWER	5000.	0.30	9477.	9851.	1291.	13.032	4048.
PART POWER	5000.	0.30	7433.	7650.	1268.	12.861	4048.
PART POWER	5000.	0.30	5591.	5693.	1249.	12.715	4048.
PART POWER	5000.	0.30	4093.	4125.	1230.	12.609	4048.
PART POWER	5000.	0.30	2962.	2954.	1207.	12.531	4048.
PART POWER	5000.	0.30	1966.	1924.	1189.	12.445	4048.
PART POWER	5000.	0.30	1119.	1062.	1177.	12.383	4048.
PART POWER	5000.	0.30	384.	324.	1178.	12.330	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	5000.	0.40	14919.	0.401	620.	100.8	13.2	2535.
MAX CRUISE	5000.	0.40	12284.	0.418	395.	92.0	11.8	2435.
PART POWER	5000.	0.40	9978.	0.440	202.	83.7	10.5	2335.
PART POWER	5000.	0.40	7862.	0.472	50.	75.4	9.3	2235.
PART POWER	5000.	0.40	6019.	0.516	-69.	67.5	8.1	2135.
PART POWER	5000.	0.40	4475.	0.577	-148.	60.1	7.0	2035.
PART POWER	5000.	0.40	3274.	0.654	-201.	53.7	6.1	1935.
PART POWER	5000.	0.40	2235.	0.782	-234.	47.2	5.2	1835.
PART POWER	5000.	0.40	1350.	1.033	-250.	40.6	4.4	1735.
PART POWER	5000.	0.40	616.	1.758	-246.	33.9	3.6	1635.
MAX CLIMB	5000.	0.50	15695.	0.391	355.	98.9	12.9	2535.
MAX CRUISE	5000.	0.50	13001.	0.406	143.	90.5	11.5	2435.
PART POWER	5000.	0.50	10625.	0.426	-26.	82.5	10.3	2335.
PART POWER	5000.	0.50	8475.	0.453	-157.	74.8	9.1	2235.
PART POWER	5000.	0.50	6559.	0.491	-262.	67.2	8.0	2135.
PART POWER	5000.	0.50	4957.	0.542	-329.	60.2	7.0	2035.
PART POWER	5000.	0.50	3690.	0.606	-367.	54.0	6.1	1935.
PART POWER	5000.	0.50	2585.	0.708	-391.	47.7	5.3	1835.
PART POWER	5000.	0.50	1648.	0.893	-392.	41.5	4.5	1735.
PART POWER	5000.	0.50	914.	1.279	-380.	35.8	3.7	1635.
MAX CLIMB	5000.	0.60	16641.	0.380	87.	96.6	12.4	2535.
MAX CRUISE	5000.	0.60	13921.	0.392	-115.	88.9	11.2	2435.
PART POWER	5000.	0.60	11479.	0.408	-272.	81.3	10.0	2335.
PART POWER	5000.	0.60	9250.	0.431	-396.	74.0	8.9	2235.
PART POWER	5000.	0.60	7243.	0.463	-477.	66.7	7.9	2135.
PART POWER	5000.	0.60	5563.	0.505	-534.	60.1	6.9	2035.
PART POWER	5000.	0.60	4204.	0.558	-556.	54.1	6.1	1935.
PART POWER	5000.	0.60	3013.	0.639	-563.	48.1	5.2	1835.
PART POWER	5000.	0.60	2019.	0.771	-554.	42.2	4.5	1735.
PART POWER	5000.	0.60	1240.	1.009	-533.	37.0	3.8	1635.

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PRATT AND WHITNEY
STS-536A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	5000.	0.40	14919.	15633.	1339.	13.517	4048.
MAX CRUISE	5000.	0.40	12284.	12730.	1311.	13.292	4048.
PART POWER	5000.	0.40	9978.	10212.	1284.	13.083	4048.
PART POWER	5000.	0.40	7862.	7945.	1260.	12.906	4048.
PART POWER	5000.	0.40	6019.	5996.	1239.	12.753	4048.
PART POWER	5000.	0.40	4475.	4389.	1218.	12.637	4048.
PART POWER	5000.	0.40	3274.	3152.	1195.	12.546	4048.
PART POWER	5000.	0.40	2235.	2094.	1175.	12.469	4048.
PART POWER	5000.	0.40	1350.	1205.	1160.	12.402	4048.
PART POWER	5000.	0.40	616.	479.	1152.	12.349	4048.
MAX CLIMB	5000.	0.50	15695.	16194.	1331.	13.589	4048.
MAX CRUISE	5000.	0.50	13001.	13233.	1302.	13.351	4048.
PART POWER	5000.	0.50	10625.	10663.	1274.	13.146	4048.
PART POWER	5000.	0.50	8475.	8375.	1249.	12.968	4048.
PART POWER	5000.	0.50	6559.	6361.	1227.	12.805	4048.
PART POWER	5000.	0.50	4957.	4707.	1205.	12.680	4048.
PART POWER	5000.	0.50	3690.	3416.	1181.	12.586	4048.
PART POWER	5000.	0.50	2585.	2302.	1159.	12.496	4048.
PART POWER	5000.	0.50	1648.	1374.	1142.	12.425	4048.
PART POWER	5000.	0.50	914.	660.	1125.	12.369	4048.
MAX CLIMB	5000.	0.60	16641.	16863.	1322.	13.686	4048.
MAX CRUISE	5000.	0.60	13921.	13878.	1291.	13.434	4048.
PART POWER	5000.	0.60	11479.	11248.	1262.	13.217	4048.
PART POWER	5000.	0.60	9250.	8888.	1236.	13.022	4048.
PART POWER	5000.	0.60	7243.	6805.	1212.	12.863	4048.
PART POWER	5000.	0.60	5563.	5084.	1189.	12.725	4048.
PART POWER	5000.	0.60	4204.	3718.	1164.	12.627	4048.
PART POWER	5000.	0.60	3013.	2537.	1142.	12.535	4048.
PART POWER	5000.	0.60	2019.	1569.	1122.	12.455	4048.
PART POWER	5000.	0.60	1240.	823.	1101.	12.393	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.20	13175.	0.400	1156.	111.2	15.0	2535.
MAX CRUISE	10000.	0.20	10727.	0.419	880.	100.6	13.3	2435.
PART POWER	10000.	0.20	8657.	0.442	657.	91.0	11.7	2335.
PART POWER	10000.	0.20	6832.	0.474	477.	82.0	10.3	2235.
PART POWER	10000.	0.20	5169.	0.522	324.	72.9	9.0	2135.
PART POWER	10000.	0.20	3764.	0.589	206.	64.1	7.7	2035.
PART POWER	10000.	0.20	2701.	0.677	121.	56.7	6.7	1935.
PART POWER	10000.	0.20	1832.	0.814	58.	49.8	5.7	1835.
PART POWER	10000.	0.20	1070.	1.107	8.	42.5	4.7	1735.
PART POWER	10000.	0.20	428.	2.119	-25.	34.8	3.8	1635.
MAX CLIMB	10000.	0.30	13531.	0.395	922.	109.9	14.7	2535.
MAX CRUISE	10000.	0.30	11065.	0.413	668.	99.6	13.1	2435.
PART POWER	10000.	0.30	8961.	0.434	462.	90.2	11.6	2335.
PART POWER	10000.	0.30	7110.	0.464	300.	81.5	10.2	2235.
PART POWER	10000.	0.30	5424.	0.507	164.	72.6	8.9	2135.
PART POWER	10000.	0.30	3997.	0.568	62.	64.2	7.7	2035.
PART POWER	10000.	0.30	2897.	0.647	-6.	57.0	6.6	1935.
PART POWER	10000.	0.30	1987.	0.771	-55.	50.1	5.7	1835.
PART POWER	10000.	0.30	1214.	1.009	-92.	43.1	4.8	1735.
PART POWER	10000.	0.30	574.	1.662	-110.	36.1	3.9	1635.
MAX CLIMB	10000.	0.40	14028.	0.388	692.	108.0	14.4	2535.
MAX CRUISE	10000.	0.40	11527.	0.405	463.	98.2	12.8	2435.
PART POWER	10000.	0.40	9411.	0.423	265.	89.3	11.4	2335.
PART POWER	10000.	0.40	7489.	0.451	127.	80.7	10.1	2235.
PART POWER	10000.	0.40	5765.	0.490	3.	72.2	8.8	2135.
PART POWER	10000.	0.40	4317.	0.543	-84.	64.2	7.6	2035.
PART POWER	10000.	0.40	3180.	0.611	-133.	57.2	6.6	1935.
PART POWER	10000.	0.40	2228.	0.714	-178.	50.5	5.7	1835.
PART POWER	10000.	0.40	1420.	0.901	-202.	43.9	4.8	1735.
PART POWER	10000.	0.40	768.	1.318	-207.	37.5	4.0	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.20	13175.	14199.	1326.	11.260	4048.
MAX CRUISE	10000.	0.20	10727.	11449.	1299.	11.037	4048.
PART POWER	10000.	0.20	8657.	9155.	1273.	10.851	4048.
PART POWER	10000.	0.20	6832.	7167.	1250.	10.697	4048.
PART POWER	10000.	0.20	5169.	5379.	1231.	10.560	4048.
PART POWER	10000.	0.20	3764.	3888.	1213.	10.452	4048.
PART POWER	10000.	0.20	2701.	2771.	1192.	10.371	4048.
PART POWER	10000.	0.20	1832.	1865.	1173.	10.305	4048.
PART POWER	10000.	0.20	1070.	1078.	1160.	10.247	4048.
PART POWER	10000.	0.20	428.	421.	1158.	10.202	4048.
MAX CLIMB	10000.	0.30	13531.	14467.	1322.	11.296	4048.
MAX CRUISE	10000.	0.30	11065.	11704.	1295.	11.072	4048.
PART POWER	10000.	0.30	8961.	9378.	1268.	10.880	4048.
PART POWER	10000.	0.30	7110.	7369.	1244.	10.724	4048.
PART POWER	10000.	0.30	5424.	5562.	1224.	10.582	4048.
PART POWER	10000.	0.30	3997.	4055.	1205.	10.470	4048.
PART POWER	10000.	0.30	2897.	2907.	1184.	10.388	4048.
PART POWER	10000.	0.30	1987.	1966.	1164.	10.321	4048.
PART POWER	10000.	0.30	1214.	1173.	1148.	10.259	4048.
PART POWER	10000.	0.30	574.	525.	1140.	10.213	4048.
MAX CLIMB	10000.	0.40	14028.	14834.	1316.	11.346	4048.
MAX CRUISE	10000.	0.40	11527.	12047.	1289.	11.125	4048.
PART POWER	10000.	0.40	9411.	9705.	1260.	10.917	4048.
PART POWER	10000.	0.40	7489.	7638.	1236.	10.767	4048.
PART POWER	10000.	0.40	5765.	5797.	1215.	10.617	4048.
PART POWER	10000.	0.40	4317.	4276.	1194.	10.499	4048.
PART POWER	10000.	0.40	3180.	3102.	1172.	10.423	4048.
PART POWER	10000.	0.40	2228.	2122.	1151.	10.340	4048.
PART POWER	10000.	0.40	1420.	1302.	1134.	10.276	4048.
PART POWER	10000.	0.40	768.	652.	1120.	10.229	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.50	14674.	0.380	461.	105.7	14.0	2535.
MAX CRUISE	10000.	0.50	12119.	0.394	242.	96.2	12.5	2435.
PART POWER	10000.	0.50	9963.	0.411	71.	87.9	11.1	2335.
PART POWER	10000.	0.50	8030.	0.434	-61.	79.8	9.9	2235.
PART POWER	10000.	0.50	6264.	0.467	-167.	71.8	8.7	2135.
PART POWER	10000.	0.50	4736.	0.514	-241.	64.1	7.6	2035.
PART POWER	10000.	0.50	3546.	0.571	-284.	57.4	6.6	1935.
PART POWER	10000.	0.50	2551.	0.653	-313.	51.0	5.7	1835.
PART POWER	10000.	0.50	1685.	0.797	-324.	44.6	4.9	1735.
PART POWER	10000.	0.50	991.	1.081	-318.	38.5	4.1	1635.
MAX CLIMB	10000.	0.60	15472.	0.371	234.	103.0	13.5	2535.
MAX CRUISE	10000.	0.60	12901.	0.382	25.	94.2	12.1	2435.
PART POWER	10000.	0.60	10719.	0.396	-141.	86.4	10.8	2335.
PART POWER	10000.	0.60	8655.	0.417	-256.	78.5	9.6	2235.
PART POWER	10000.	0.60	6849.	0.444	-351.	71.0	8.5	2135.
PART POWER	10000.	0.60	5276.	0.482	-411.	63.8	7.5	2035.
PART POWER	10000.	0.60	4012.	0.529	-448.	57.4	6.5	1935.
PART POWER	10000.	0.60	2932.	0.596	-459.	51.2	5.7	1835.
PART POWER	10000.	0.60	2011.	0.705	-462.	45.1	4.9	1735.
PART POWER	10000.	0.60	1268.	0.897	-447.	39.4	4.1	1635.
MAX CLIMB	10000.	0.70	16444.	0.360	-5.	99.9	12.9	2535.
MAX CRUISE	10000.	0.70	13861.	0.369	-204.	92.0	11.7	2435.
PART POWER	10000.	0.70	11562.	0.381	-356.	84.4	10.5	2335.
PART POWER	10000.	0.70	9482.	0.397	-471.	77.2	9.4	2235.
PART POWER	10000.	0.70	7555.	0.421	-548.	70.0	8.3	2135.
PART POWER	10000.	0.70	5917.	0.451	-601.	63.3	7.3	2035.
PART POWER	10000.	0.70	4571.	0.488	-626.	57.2	6.4	1935.
PART POWER	10000.	0.70	3405.	0.541	-631.	51.3	5.6	1835.
PART POWER	10000.	0.70	2400.	0.624	-624.	45.3	4.8	1735.
PART POWER	10000.	0.70	1604.	0.754	-595.	40.1	4.2	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTN2	PTN2	RPM
MAX CLIMB	10000.	0.50	14674.	15302.	1309.	11.411	4048.
MAX CRUISE	10000.	0.50	12119.	12459.	1281.	11.174	4048.
PART POWER	10000.	0.50	9963.	10097.	1252.	10.978	4048.
PART POWER	10000.	0.50	8030.	8018.	1226.	10.812	4048.
PART POWER	10000.	0.50	6264.	6147.	1203.	10.660	4048.
PART POWER	10000.	0.50	4736.	4556.	1182.	10.536	4048.
PART POWER	10000.	0.50	3546.	3334.	1158.	10.446	4048.
PART POWER	10000.	0.50	2551.	2324.	1135.	10.366	4048.
PART POWER	10000.	0.50	1685.	1459.	1117.	10.298	4048.
PART POWER	10000.	0.50	991.	777.	1100.	10.246	4048.
MAX CLIMB	10000.	0.60	15472.	15879.	1302.	11.504	4048.
MAX CRUISE	10000.	0.60	12901.	13020.	1271.	11.254	4048.
PART POWER	10000.	0.60	10719.	10629.	1241.	11.040	4048.
PART POWER	10000.	0.60	8655.	8434.	1215.	10.872	4048.
PART POWER	10000.	0.60	6849.	6532.	1190.	10.712	4048.
PART POWER	10000.	0.60	5276.	4908.	1167.	10.585	4048.
PART POWER	10000.	0.60	4012.	3621.	1143.	10.482	4048.
PART POWER	10000.	0.60	2932.	2543.	1120.	10.404	4048.
PART POWER	10000.	0.60	2011.	1634.	1099.	10.326	4048.
PART POWER	10000.	0.60	1268.	918.	1079.	10.269	4048.
MAX CLIMB	10000.	0.70	16444.	16562.	1293.	11.610	4048.
MAX CRUISE	10000.	0.70	13861.	13693.	1260.	11.350	4048.
PART POWER	10000.	0.70	11562.	11197.	1230.	11.131	4048.
PART POWER	10000.	0.70	9482.	8984.	1201.	10.941	4048.
PART POWER	10000.	0.70	7555.	6980.	1176.	10.781	4048.
PART POWER	10000.	0.70	5917.	5302.	1151.	10.641	4048.
PART POWER	10000.	0.70	4571.	3948.	1126.	10.534	4048.
PART POWER	10000.	0.70	3405.	2797.	1102.	10.442	4048.
PART POWER	10000.	0.70	2400.	1821.	1080.	10.354	4048.
PART POWER	10000.	0.70	1604.	1069.	1058.	10.297	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.75	17009.	0.354	-127.	98.4	12.7	2535.
MAX CRUISE	10000.	0.75	14381.	0.363	-323.	90.6	11.4	2435.
PART POWER	10000.	0.75	12058.	0.373	-474.	83.4	10.3	2335.
PART POWER	10000.	0.75	9902.	0.388	-578.	76.3	9.2	2235.
PART POWER	10000.	0.75	7962.	0.408	-656.	69.4	8.2	2135.
PART POWER	10000.	0.75	6276.	0.435	-707.	62.9	7.2	2035.
PART POWER	10000.	0.75	4888.	0.468	-726.	57.0	6.4	1935.
PART POWER	10000.	0.75	3669.	0.515	-725.	51.2	5.6	1835.
PART POWER	10000.	0.75	2629.	0.586	-705.	45.5	4.8	1735.
PART POWER	10000.	0.75	1795.	0.694	-685.	40.3	4.2	1635.
MAX CLIMB	10000.	0.80	17630.	0.349	-251.	96.8	12.4	2535.
MAX CRUISE	10000.	0.80	14966.	0.356	-446.	89.3	11.2	2435.
PART POWER	10000.	0.80	12586.	0.365	-593.	82.3	10.1	2335.
PART POWER	10000.	0.80	10380.	0.378	-691.	75.4	9.0	2235.
PART POWER	10000.	0.80	8403.	0.397	-765.	68.8	8.1	2135.
PART POWER	10000.	0.80	6684.	0.420	-814.	62.5	7.1	2035.
PART POWER	10000.	0.80	5234.	0.449	-829.	56.8	6.3	1935.
PART POWER	10000.	0.80	3959.	0.491	-825.	51.0	5.5	1835.
PART POWER	10000.	0.80	2872.	0.552	-799.	45.5	4.8	1735.
PART POWER	10000.	0.80	1999.	0.642	-770.	40.5	4.1	1635.
MAX CLIMB	10000.	0.85	18287.	0.343	-376.	95.1	12.1	2535.
MAX CRUISE	10000.	0.85	15594.	0.349	-572.	87.9	10.9	2435.
PART POWER	10000.	0.85	13160.	0.357	-717.	81.2	9.9	2335.
PART POWER	10000.	0.85	10933.	0.368	-821.	74.6	8.9	2235.
PART POWER	10000.	0.85	8880.	0.384	-885.	68.1	7.9	2135.
PART POWER	10000.	0.85	7091.	0.406	-927.	62.0	7.0	2035.
PART POWER	10000.	0.85	5608.	0.431	-943.	56.5	6.3	1935.
PART POWER	10000.	0.85	4267.	0.468	-931.	50.8	5.5	1835.
PART POWER	10000.	0.85	3139.	0.519	-904.	45.4	4.8	1735.
PART POWER	10000.	0.85	2232.	0.593	-863.	40.6	4.1	1635.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.75	17009.	16958.	1288.	11.674	4048.
MAX CRUISE	10000.	0.75	14381.	14045.	1255.	11.406	4048.
PART POWER	10000.	0.75	12058.	11523.	1223.	11.178	4048.
PART POWER	10000.	0.75	9902.	9246.	1195.	10.990	4048.
PART POWER	10000.	0.75	7962.	7230.	1169.	10.818	4048.
PART POWER	10000.	0.75	6276.	5508.	1143.	10.669	4048.
PART POWER	10000.	0.75	4888.	4121.	1117.	10.559	4048.
PART POWER	10000.	0.75	3669.	2928.	1093.	10.463	4048.
PART POWER	10000.	0.75	2629.	1931.	1070.	10.383	4048.
PART POWER	10000.	0.75	1795.	1143.	1047.	10.304	4048.
MAX CLIMB	10000.	0.80	17630.	17393.	1283.	11.747	4048.
MAX CRUISE	10000.	0.80	14966.	14440.	1249.	11.469	4048.
PART POWER	10000.	0.80	12586.	11865.	1217.	11.233	4048.
PART POWER	10000.	0.80	10380.	9545.	1188.	11.042	4048.
PART POWER	10000.	0.80	8403.	7498.	1161.	10.865	4048.
PART POWER	10000.	0.80	6684.	5749.	1135.	10.708	4048.
PART POWER	10000.	0.80	5234.	4308.	1109.	10.593	4048.
PART POWER	10000.	0.80	3959.	3067.	1084.	10.489	4048.
PART POWER	10000.	0.80	2872.	2034.	1061.	10.404	4048.
PART POWER	10000.	0.80	1999.	1220.	1037.	10.327	4048.
MAX CLIMB	10000.	0.85	18287.	17846.	1278.	11.829	4048.
MAX CRUISE	10000.	0.85	15594.	14860.	1243.	11.539	4048.
PART POWER	10000.	0.85	13160.	12231.	1211.	11.295	4048.
PART POWER	10000.	0.85	10933.	9885.	1180.	11.086	4048.
PART POWER	10000.	0.85	8880.	7776.	1153.	10.908	4048.
PART POWER	10000.	0.85	7091.	5967.	1127.	10.749	4048.
PART POWER	10000.	0.85	5608.	4499.	1100.	10.623	4048.
PART POWER	10000.	0.85	4267.	3205.	1075.	10.515	4048.
PART POWER	10000.	0.85	3139.	2141.	1051.	10.422	4048.
PART POWER	10000.	0.85	2232.	1307.	1026.	10.352	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	15000.	0.30	12520.	0.385	935.	117.2	16.0	2535.
MAX CRUISE	15000.	0.30	10400.	0.398	698.	106.9	14.3	2435.
PART POWER	15000.	0.30	8451.	0.417	490.	96.8	12.7	2335.
PART POWER	15000.	0.30	6725.	0.443	332.	87.2	11.2	2235.
PART POWER	15000.	0.30	5206.	0.480	205.	78.1	9.7	2135.
PART POWER	15000.	0.30	3887.	0.532	100.	69.2	8.4	2035.
PART POWER	15000.	0.30	2798.	0.604	25.	60.8	7.2	1935.
PART POWER	15000.	0.30	1977.	0.702	-23.	53.8	6.2	1835.
PART POWER	15000.	0.30	1279.	0.876	-61.	46.8	5.3	1735.
PART POWER	15000.	0.30	671.	1.306	-84.	39.4	4.3	1635.
MAX CLIMB	15000.	0.40	12989.	0.378	742.	115.3	15.7	2535.
MAX CRUISE	15000.	0.40	10798.	0.391	518.	105.3	14.0	2435.
PART POWER	15000.	0.40	8818.	0.408	322.	95.5	12.4	2335.
PART POWER	15000.	0.40	7073.	0.432	178.	86.3	11.0	2235.
PART POWER	15000.	0.40	5509.	0.465	63.	77.4	9.6	2135.
PART POWER	15000.	0.40	4152.	0.512	-28.	68.8	8.3	2035.
PART POWER	15000.	0.40	3045.	0.574	-91.	60.9	7.2	1935.
PART POWER	15000.	0.40	2182.	0.659	-124.	54.0	6.2	1835.
PART POWER	15000.	0.40	1464.	0.797	-157.	47.4	5.3	1735.
PART POWER	15000.	0.40	828.	1.111	-168.	40.4	4.4	1635.
MAX CLIMB	15000.	0.50	13618.	0.370	548.	113.1	15.2	2535.
MAX CRUISE	15000.	0.50	11297.	0.383	329.	103.0	13.6	2435.
PART POWER	15000.	0.50	9293.	0.398	152.	93.7	12.1	2335.
PART POWER	15000.	0.50	7512.	0.418	24.	85.1	10.7	2235.
PART POWER	15000.	0.50	5904.	0.448	-81.	76.6	9.4	2135.
PART POWER	15000.	0.50	4527.	0.487	-162.	68.5	8.2	2035.
PART POWER	15000.	0.50	3367.	0.540	-214.	60.9	7.1	1935.
PART POWER	15000.	0.50	2467.	0.609	-245.	54.4	6.2	1835.
PART POWER	15000.	0.50	1691.	0.722	-261.	47.8	5.3	1735.
PART POWER	15000.	0.50	1026.	0.946	-263.	41.2	4.4	1635.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.30	12520.	13498.	1301.	9.425	4048.
MAX CRUISE	15000.	0.30	10400.	11085.	1271.	9.220	4048.
PART POWER	15000.	0.30	8451.	8902.	1244.	9.029	4048.
PART POWER	15000.	0.30	6725.	7014.	1220.	8.882	4048.
PART POWER	15000.	0.30	5206.	5377.	1198.	8.757	4048.
PART POWER	15000.	0.30	3887.	3971.	1179.	8.646	4048.
PART POWER	15000.	0.30	2798.	2827.	1160.	8.560	4048.
PART POWER	15000.	0.30	1977.	1974.	1139.	8.500	4048.
PART POWER	15000.	0.30	1279.	1253.	1120.	8.443	4048.
PART POWER	15000.	0.30	671.	634.	1111.	8.398	4048.
MAX CLIMB	15000.	0.40	12989.	13870.	1295.	9.476	4048.
MAX CRUISE	15000.	0.40	10798.	11386.	1265.	9.265	4048.
PART POWER	15000.	0.40	8818.	9171.	1237.	9.067	4048.
PART POWER	15000.	0.40	7073.	7268.	1212.	8.915	4048.
PART POWER	15000.	0.40	5509.	5590.	1190.	8.786	4048.
PART POWER	15000.	0.40	4152.	4152.	1170.	8.671	4048.
PART POWER	15000.	0.40	3045.	2996.	1149.	8.581	4048.
PART POWER	15000.	0.40	2182.	2109.	1127.	8.524	4048.
PART POWER	15000.	0.40	1464.	1373.	1107.	8.458	4048.
PART POWER	15000.	0.40	828.	734.	1094.	8.411	4048.
MAX CLIMB	15000.	0.50	13618.	14361.	1288.	9.539	4048.
MAX CRUISE	15000.	0.50	11297.	11737.	1259.	9.311	4048.
PART POWER	15000.	0.50	9293.	9510.	1230.	9.115	4048.
PART POWER	15000.	0.50	7512.	7582.	1203.	8.965	4048.
PART POWER	15000.	0.50	5904.	5863.	1180.	8.826	4048.
PART POWER	15000.	0.50	4527.	4411.	1158.	8.704	4048.
PART POWER	15000.	0.50	3367.	3210.	1136.	8.611	4048.
PART POWER	15000.	0.50	2467.	2290.	1113.	8.540	4048.
PART POWER	15000.	0.50	1691.	1508.	1092.	8.479	4048.
PART POWER	15000.	0.50	1026.	849.	1076.	8.427	4048.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	15000.	0.60	14309.	0.362	358.	110.1	14.7	2535.
MAX CRUISE	15000.	0.60	11954.	0.372	147.	100.5	13.1	2435.
PART POWER	15000.	0.60	9909.	0.385	-25.	91.8	11.7	2335.
PART POWER	15000.	0.60	8082.	0.402	-144.	83.6	10.4	2235.
PART POWER	15000.	0.60	6425.	0.427	-239.	75.6	9.2	2135.
PART POWER	15000.	0.60	4990.	0.460	-307.	68.0	8.1	2035.
PART POWER	15000.	0.60	3782.	0.504	-349.	60.8	7.1	1935.
PART POWER	15000.	0.60	2805.	0.561	-372.	54.4	6.1	1835.
PART POWER	15000.	0.60	1979.	0.649	-375.	48.2	5.3	1735.
PART POWER	15000.	0.60	1274.	0.807	-371.	42.0	4.5	1635.
MAX CLIMB	15000.	0.70	15145.	0.353	158.	106.6	14.0	2535.
MAX CRUISE	15000.	0.70	12737.	0.361	-50.	97.7	12.6	2435.
PART POWER	15000.	0.70	10653.	0.371	-208.	89.6	11.3	2335.
PART POWER	15000.	0.70	8759.	0.386	-320.	81.9	10.1	2235.
PART POWER	15000.	0.70	7050.	0.406	-407.	74.4	9.0	2135.
PART POWER	15000.	0.70	5541.	0.433	-469.	67.2	7.9	2035.
PART POWER	15000.	0.70	4270.	0.468	-501.	60.5	6.9	1935.
PART POWER	15000.	0.70	3232.	0.514	-510.	54.4	6.1	1835.
PART POWER	15000.	0.70	2328.	0.582	-513.	48.3	5.3	1735.
PART POWER	15000.	0.70	1572.	0.694	-497.	42.5	4.5	1635.
MAX CLIMB	15000.	0.75	15607.	0.348	56.	104.7	13.7	2535.
MAX CRUISE	15000.	0.75	13189.	0.355	-149.	96.2	12.3	2435.
PART POWER	15000.	0.75	11077.	0.364	-304.	88.4	11.1	2335.
PART POWER	15000.	0.75	9149.	0.377	-414.	80.9	9.9	2235.
PART POWER	15000.	0.75	7409.	0.395	-496.	73.7	8.8	2135.
PART POWER	15000.	0.75	5860.	0.420	-555.	66.7	7.8	2035.
PART POWER	15000.	0.75	4559.	0.451	-585.	60.3	6.9	1935.
PART POWER	15000.	0.75	3476.	0.490	-597.	54.3	6.0	1835.
PART POWER	15000.	0.75	2523.	0.551	-586.	48.3	5.2	1735.
PART POWER	15000.	0.75	1737.	0.647	-567.	42.7	4.5	1635.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.60	14309.	14879.	1281.	9.626	4048.
MAX CRUISE	15000.	0.60	11954.	12218.	1251.	9.387	4048.
PART POWER	15000.	0.60	9909.	9947.	1220.	9.177	4048.
PART POWER	15000.	0.60	8082.	7977.	1193.	9.017	4048.
PART POWER	15000.	0.60	6425.	6217.	1168.	8.871	4048.
PART POWER	15000.	0.60	4990.	4719.	1145.	8.748	4048.
PART POWER	15000.	0.60	3782.	3479.	1121.	8.649	4048.
PART POWER	15000.	0.60	2805.	2491.	1098.	8.571	4048.
PART POWER	15000.	0.60	1979.	1672.	1075.	8.509	4048.
PART POWER	15000.	0.60	1274.	982.	1056.	8.449	4048.
MAX CLIMB	15000.	0.70	15145.	15487.	1274.	9.726	4048.
MAX CRUISE	15000.	0.70	12737.	12765.	1241.	9.467	4048.
PART POWER	15000.	0.70	10653.	10465.	1210.	9.255	4048.
PART POWER	15000.	0.70	8759.	8431.	1181.	9.085	4048.
PART POWER	15000.	0.70	7050.	6628.	1155.	8.931	4048.
PART POWER	15000.	0.70	5541.	5062.	1130.	8.795	4048.
PART POWER	15000.	0.70	4270.	3772.	1106.	8.692	4048.
PART POWER	15000.	0.70	3232.	2739.	1081.	8.616	4048.
PART POWER	15000.	0.70	2328.	1850.	1058.	8.536	4048.
PART POWER	15000.	0.70	1572.	1125.	1037.	8.475	4048.
MAX CLIMB	15000.	0.75	15607.	15815.	1269.	9.784	4048.
MAX CRUISE	15000.	0.75	13189.	13081.	1236.	9.518	4048.
PART POWER	15000.	0.75	11077.	10755.	1204.	9.301	4048.
PART POWER	15000.	0.75	9149.	8688.	1175.	9.123	4048.
PART POWER	15000.	0.75	7409.	6858.	1148.	8.967	4048.
PART POWER	15000.	0.75	5860.	5258.	1123.	8.825	4048.
PART POWER	15000.	0.75	4559.	3943.	1097.	8.717	4048.
PART POWER	15000.	0.75	3476.	2866.	1072.	8.626	4048.
PART POWER	15000.	0.75	2523.	1944.	1049.	8.553	4048.
PART POWER	15000.	0.75	1737.	1196.	1027.	8.489	4048.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	15000.	0.80	16125.	0.343	-45.	102.8	13.4	2535.
MAX CRUISE	15000.	0.80	13698.	0.349	-250.	94.7	12.1	2435.
PART POWER	15000.	0.80	11543.	0.357	-402.	87.2	10.9	2335.
PART POWER	15000.	0.80	9587.	0.368	-518.	80.0	9.7	2235.
PART POWER	15000.	0.80	7793.	0.385	-587.	73.0	8.7	2135.
PART POWER	15000.	0.80	6202.	0.407	-644.	66.2	7.7	2035.
PART POWER	15000.	0.80	4868.	0.433	-675.	59.9	6.8	1935.
PART POWER	15000.	0.80	3735.	0.469	-681.	54.1	6.0	1835.
PART POWER	15000.	0.80	2738.	0.522	-666.	48.2	5.2	1735.
PART POWER	15000.	0.80	1919.	0.603	-641.	42.8	4.5	1635.
MAX CLIMB	15000.	0.85	16666.	0.338	-153.	100.8	13.0	2535.
MAX CRUISE	15000.	0.85	14241.	0.343	-353.	93.2	11.8	2435.
PART POWER	15000.	0.85	12036.	0.350	-505.	85.9	10.6	2335.
PART POWER	15000.	0.85	10049.	0.359	-612.	78.9	9.6	2235.
PART POWER	15000.	0.85	8197.	0.374	-696.	72.1	8.5	2135.
PART POWER	15000.	0.85	6576.	0.393	-738.	65.6	7.6	2035.
PART POWER	15000.	0.85	5192.	0.417	-763.	59.6	6.7	1935.
PART POWER	15000.	0.85	4012.	0.449	-768.	53.8	5.9	1835.
PART POWER	15000.	0.85	2970.	0.495	-750.	48.1	5.1	1735.
PART POWER	15000.	0.85	2118.	0.562	-722.	42.8	4.4	1635.
MAX CLIMB	20000.	0.30	11244.	0.378	903.	123.2	17.1	2535.
MAX CRUISE	20000.	0.30	9669.	0.386	716.	114.8	15.6	2435.
PART POWER	20000.	0.30	7893.	0.402	522.	103.9	13.8	2335.
PART POWER	20000.	0.30	6317.	0.425	358.	93.6	12.2	2235.
PART POWER	20000.	0.30	4938.	0.456	234.	83.9	10.7	2135.
PART POWER	20000.	0.30	3734.	0.500	136.	74.5	9.2	2035.
PART POWER	20000.	0.30	2719.	0.562	55.	65.5	7.9	1935.
PART POWER	20000.	0.30	1924.	0.648	3.	57.5	6.8	1835.
PART POWER	20000.	0.30	1290.	0.784	-34.	50.3	5.8	1735.
PART POWER	20000.	0.30	743.	1.076	-60.	42.9	4.8	1635.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.80	16125.	16187.	1265.	9.852	4048.
MAX CRUISE	15000.	0.80	13698.	13441.	1231.	9.577	4048.
PART POWER	15000.	0.80	11543.	11071.	1198.	9.353	4048.
PART POWER	15000.	0.80	9587.	8970.	1168.	9.158	4048.
PART POWER	15000.	0.80	7793.	7101.	1141.	9.009	4048.
PART POWER	15000.	0.80	6202.	5463.	1115.	8.861	4048.
PART POWER	15000.	0.80	4868.	4116.	1089.	8.741	4048.
PART POWER	15000.	0.80	3735.	3000.	1063.	8.649	4048.
PART POWER	15000.	0.80	2738.	2041.	1040.	8.572	4048.
PART POWER	15000.	0.80	1919.	1270.	1017.	8.505	4048.
MAX CLIMB	15000.	0.85	16666.	16560.	1261.	9.919	4048.
MAX CRUISE	15000.	0.85	14241.	13819.	1226.	9.642	4048.
PART POWER	15000.	0.85	12036.	11396.	1193.	9.407	4048.
PART POWER	15000.	0.85	10049.	9274.	1161.	9.216	4048.
PART POWER	15000.	0.85	8197.	7332.	1133.	9.035	4048.
PART POWER	15000.	0.85	6576.	5681.	1107.	8.900	4048.
PART POWER	15000.	0.85	5192.	4295.	1081.	8.779	4048.
PART POWER	15000.	0.85	4012.	3137.	1055.	8.678	4048.
PART POWER	15000.	0.85	2970.	2142.	1031.	8.592	4048.
PART POWER	15000.	0.85	2118.	1346.	1008.	8.522	4048.
MAX CLIMB	20000.	0.30	11244.	12212.	1284.	7.794	4048.
MAX CRUISE	20000.	0.30	9669.	10394.	1248.	7.636	4048.
PART POWER	20000.	0.30	7893.	8388.	1221.	7.466	4048.
PART POWER	20000.	0.30	6317.	6635.	1196.	7.313	4048.
PART POWER	20000.	0.30	4938.	5135.	1173.	7.195	4048.
PART POWER	20000.	0.30	3734.	3844.	1153.	7.098	4048.
PART POWER	20000.	0.30	2719.	2766.	1134.	7.009	4048.
PART POWER	20000.	0.30	1924.	1935.	1115.	6.948	4048.
PART POWER	20000.	0.30	1290.	1278.	1095.	6.898	4048.
PART POWER	20000.	0.30	743.	717.	1082.	6.855	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.40	11714.	0.372	752.	121.7	16.8	2535.
MAX CRUISE	20000.	0.40	10030.	0.379	560.	113.0	15.3	2435.
PART POWER	20000.	0.40	8200.	0.395	375.	102.2	13.5	2335.
PART POWER	20000.	0.40	6610.	0.415	227.	92.4	12.0	2235.
PART POWER	20000.	0.40	5207.	0.443	114.	83.1	10.5	2135.
PART POWER	20000.	0.40	3973.	0.483	24.	74.0	9.1	2035.
PART POWER	20000.	0.40	2928.	0.538	-44.	65.3	7.8	1935.
PART POWER	20000.	0.40	2103.	0.613	-88.	57.6	6.7	1835.
PART POWER	20000.	0.40	1446.	0.726	-115.	50.7	5.8	1735.
PART POWER	20000.	0.40	878.	0.951	-132.	43.7	4.8	1635.
MAX CLIMB	20000.	0.50	12327.	0.364	602.	119.8	16.4	2535.
MAX CRUISE	20000.	0.50	10473.	0.372	403.	110.5	14.8	2435.
PART POWER	20000.	0.50	8626.	0.385	226.	100.4	13.2	2335.
PART POWER	20000.	0.50	7000.	0.403	92.	91.0	11.7	2235.
PART POWER	20000.	0.50	5554.	0.428	-12.	82.0	10.3	2135.
PART POWER	20000.	0.50	4283.	0.463	-92.	73.3	9.0	2035.
PART POWER	20000.	0.50	3206.	0.510	-148.	65.1	7.8	1935.
PART POWER	20000.	0.50	2345.	0.573	-182.	57.8	6.7	1835.
PART POWER	20000.	0.50	1655.	0.663	-205.	51.2	5.8	1735.
PART POWER	20000.	0.50	1052.	0.834	-214.	44.3	4.9	1635.
MAX CLIMB	20000.	0.60	13047.	0.355	453.	117.2	15.9	2535.
MAX CRUISE	20000.	0.60	11025.	0.363	245.	107.0	14.3	2435.
PART POWER	20000.	0.60	9149.	0.374	75.	98.1	12.7	2335.
PART POWER	20000.	0.60	7473.	0.390	-50.	89.1	11.3	2235.
PART POWER	20000.	0.60	5984.	0.412	-141.	80.7	10.0	2135.
PART POWER	20000.	0.60	4680.	0.440	-216.	72.6	8.8	2035.
PART POWER	20000.	0.60	3564.	0.479	-263.	64.8	7.6	1935.
PART POWER	20000.	0.60	2652.	0.531	-293.	57.8	6.6	1835.
PART POWER	20000.	0.60	1913.	0.603	-304.	51.4	5.7	1735.
PART POWER	20000.	0.60	1266.	0.732	-305.	44.9	4.9	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTN2	PTN2	RPM
MAX CLIMB	20000.	0.40	11714.	12622.	1278.	7.850	4048.
MAX CRUISE	20000.	0.40	10030.	10675.	1243.	7.675	4048.
PART POWER	20000.	0.40	8200.	8613.	1215.	7.497	4048.
PART POWER	20000.	0.40	6610.	6852.	1189.	7.346	4048.
PART POWER	20000.	0.40	5207.	5332.	1166.	7.224	4048.
PART POWER	20000.	0.40	3973.	4013.	1145.	7.118	4048.
PART POWER	20000.	0.40	2928.	2911.	1125.	7.030	4048.
PART POWER	20000.	0.40	2103.	2054.	1104.	6.963	4048.
PART POWER	20000.	0.40	1446.	1379.	1083.	6.912	4048.
PART POWER	20000.	0.40	878.	805.	1067.	6.868	4048.
MAX CLIMB	20000.	0.50	12327.	13145.	1271.	7.921	4048.
MAX CRUISE	20000.	0.50	10473.	11006.	1237.	7.723	4048.
PART POWER	20000.	0.50	8626.	8926.	1208.	7.536	4048.
PART POWER	20000.	0.50	7000.	7137.	1181.	7.385	4048.
PART POWER	20000.	0.50	5554.	5576.	1157.	7.257	4048.
PART POWER	20000.	0.50	4283.	4226.	1134.	7.146	4048.
PART POWER	20000.	0.50	3206.	3100.	1113.	7.056	4048.
PART POWER	20000.	0.50	2345.	2214.	1091.	6.989	4048.
PART POWER	20000.	0.50	1655.	1511.	1069.	6.930	4048.
PART POWER	20000.	0.50	1052.	908.	1051.	6.882	4048.
MAX CLIMB	20000.	0.60	13047.	13749.	1263.	8.012	4048.
MAX CRUISE	20000.	0.60	11025.	11413.	1230.	7.786	4048.
PART POWER	20000.	0.60	9149.	9301.	1199.	7.587	4048.
PART POWER	20000.	0.60	7473.	7468.	1171.	7.431	4048.
PART POWER	20000.	0.60	5984.	5874.	1146.	7.303	4048.
PART POWER	20000.	0.60	4680.	4494.	1122.	7.183	4048.
PART POWER	20000.	0.60	3564.	3337.	1099.	7.089	4048.
PART POWER	20000.	0.60	2652.	2405.	1076.	7.011	4048.
PART POWER	20000.	0.60	1913.	1665.	1053.	6.955	4048.
PART POWER	20000.	0.60	1266.	1026.	1034.	6.901	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.70	13820.	0.347	295.	113.8	15.3	2535.
MAX CRUISE	20000.	0.70	11679.	0.353	85.	104.3	13.7	2435.
PART POWER	20000.	0.70	9769.	0.363	-79.	95.4	12.3	2335.
PART POWER	20000.	0.70	8059.	0.375	-196.	87.1	10.9	2235.
PART POWER	20000.	0.70	6525.	0.393	-283.	79.2	9.7	2135.
PART POWER	20000.	0.70	5158.	0.417	-349.	71.5	8.6	2035.
PART POWER	20000.	0.70	3989.	0.449	-391.	64.2	7.5	1935.
PART POWER	20000.	0.70	3025.	0.490	-412.	57.6	6.6	1835.
PART POWER	20000.	0.70	2223.	0.547	-418.	51.4	5.7	1735.
PART POWER	20000.	0.70	1524.	0.643	-410.	45.2	4.9	1635.
MAX CLIMB	20000.	0.75	14243.	0.342	214.	111.8	14.9	2535.
MAX CRUISE	20000.	0.75	12077.	0.348	6.	102.7	13.4	2435.
PART POWER	20000.	0.75	10128.	0.356	-158.	94.0	12.0	2335.
PART POWER	20000.	0.75	8402.	0.368	-274.	86.0	10.7	2235.
PART POWER	20000.	0.75	6832.	0.383	-356.	78.3	9.6	2135.
PART POWER	20000.	0.75	5427.	0.406	-420.	70.9	8.4	2035.
PART POWER	20000.	0.75	4237.	0.433	-464.	63.9	7.4	1935.
PART POWER	20000.	0.75	3242.	0.470	-478.	57.5	6.5	1835.
PART POWER	20000.	0.75	2397.	0.521	-483.	51.3	5.6	1735.
PART POWER	20000.	0.75	1670.	0.604	-468.	45.3	4.8	1635.
MAX CLIMB	20000.	0.80	14698.	0.338	133.	109.8	14.5	2535.
MAX CRUISE	20000.	0.80	12492.	0.343	-79.	100.9	13.1	2435.
PART POWER	20000.	0.80	10517.	0.350	-240.	92.6	11.8	2335.
PART POWER	20000.	0.80	8756.	0.360	-354.	84.8	10.5	2235.
PART POWER	20000.	0.80	7167.	0.374	-434.	77.4	9.4	2135.
PART POWER	20000.	0.80	5729.	0.394	-495.	70.3	8.3	2035.
PART POWER	20000.	0.80	4492.	0.419	-532.	63.4	7.3	1935.
PART POWER	20000.	0.80	3465.	0.451	-547.	57.2	6.4	1835.
PART POWER	20000.	0.80	2589.	0.496	-547.	51.2	5.6	1735.
PART POWER	20000.	0.80	1829.	0.567	-530.	45.3	4.8	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.70	13820.	14358.	1256.	8.113	4048.
MAX CRUISE	20000.	0.70	11679.	11886.	1222.	7.865	4048.
PART POWER	20000.	0.70	9769.	9740.	1190.	7.657	4048.
PART POWER	20000.	0.70	8059.	7875.	1161.	7.493	4048.
PART POWER	20000.	0.70	6525.	6239.	1134.	7.354	4048.
PART POWER	20000.	0.70	5158.	4804.	1109.	7.230	4048.
PART POWER	20000.	0.70	3989.	3602.	1085.	7.127	4048.
PART POWER	20000.	0.70	3025.	2628.	1061.	7.047	4048.
PART POWER	20000.	0.70	2223.	1834.	1036.	6.982	4048.
PART POWER	20000.	0.70	1524.	1156.	1015.	6.924	4048.
MAX CLIMB	20000.	0.75	14243.	14681.	1252.	8.169	4048.
MAX CRUISE	20000.	0.75	12077.	12182.	1217.	7.917	4048.
PART POWER	20000.	0.75	10128.	9991.	1185.	7.698	4048.
PART POWER	20000.	0.75	8402.	8111.	1155.	7.528	4048.
PART POWER	20000.	0.75	6832.	6443.	1127.	7.388	4048.
PART POWER	20000.	0.75	5427.	4974.	1102.	7.258	4048.
PART POWER	20000.	0.75	4237.	3749.	1077.	7.145	4048.
PART POWER	20000.	0.75	3242.	2753.	1052.	7.066	4048.
PART POWER	20000.	0.75	2397.	1920.	1028.	6.993	4048.
PART POWER	20000.	0.75	1670.	1224.	1006.	6.938	4048.
MAX CLIMB	20000.	0.80	14698.	15029.	1248.	8.235	4048.
MAX CRUISE	20000.	0.80	12492.	12477.	1213.	7.966	4048.
PART POWER	20000.	0.80	10517.	10260.	1180.	7.743	4048.
PART POWER	20000.	0.80	8756.	8345.	1149.	7.567	4048.
PART POWER	20000.	0.80	7167.	6661.	1121.	7.422	4048.
PART POWER	20000.	0.80	5729.	5162.	1095.	7.288	4048.
PART POWER	20000.	0.80	4492.	3899.	1069.	7.175	4048.
PART POWER	20000.	0.80	3465.	2874.	1044.	7.087	4048.
PART POWER	20000.	0.80	2589.	2017.	1019.	7.014	4048.
PART POWER	20000.	0.80	1829.	1293.	997.	6.952	4048.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.85	15144.	0.333	48.	107.5	14.2	2535.
MAX CRUISE	20000.	0.85	12930.	0.338	-164.	99.0	12.8	2435.
PART POWER	20000.	0.85	10942.	0.344	-324.	91.1	11.5	2335.
PART POWER	20000.	0.85	9154.	0.352	-438.	83.6	10.3	2235.
PART POWER	20000.	0.85	7524.	0.364	-518.	76.4	9.2	2135.
PART POWER	20000.	0.85	6044.	0.382	-574.	69.5	8.2	2035.
PART POWER	20000.	0.85	4775.	0.405	-608.	62.9	7.2	1935.
PART POWER	20000.	0.85	3714.	0.433	-621.	56.9	6.3	1835.
PART POWER	20000.	0.85	2791.	0.473	-618.	51.0	5.5	1735.
PART POWER	20000.	0.85	2004.	0.533	-598.	45.3	4.8	1635.
MAX CLIMB	25000.	0.40	10309.	0.367	732.	127.0	17.9	2535.
MAX CRUISE	25000.	0.40	9067.	0.371	576.	120.0	16.6	2435.
PART POWER	25000.	0.40	7633.	0.382	417.	110.4	14.9	2335.
PART POWER	25000.	0.40	6159.	0.399	266.	99.4	13.1	2235.
PART POWER	25000.	0.40	4875.	0.424	152.	89.3	11.5	2135.
PART POWER	25000.	0.40	3755.	0.458	65.	79.7	10.0	2035.
PART POWER	25000.	0.40	2797.	0.505	-3.	70.3	8.6	1935.
PART POWER	25000.	0.40	2004.	0.574	-47.	61.6	7.3	1835.
PART POWER	25000.	0.40	1407.	0.666	-82.	54.3	6.3	1735.
PART POWER	25000.	0.40	901.	0.835	-101.	47.2	5.3	1635.
MAX CLIMB	25000.	0.50	10862.	0.360	616.	125.3	17.5	2535.
MAX CRUISE	25000.	0.50	9526.	0.364	454.	117.9	16.1	2435.
PART POWER	25000.	0.50	7978.	0.374	292.	108.0	14.5	2335.
PART POWER	25000.	0.50	6475.	0.390	150.	97.5	12.7	2235.
PART POWER	25000.	0.50	5170.	0.411	47.	87.9	11.2	2135.
PART POWER	25000.	0.50	4028.	0.441	-33.	78.8	9.8	2035.
PART POWER	25000.	0.50	3028.	0.483	-93.	69.8	8.5	1935.
PART POWER	25000.	0.50	2210.	0.541	-134.	61.5	7.3	1835.
PART POWER	25000.	0.50	1582.	0.618	-156.	54.5	6.3	1735.
PART POWER	25000.	0.50	1050.	0.750	-169.	47.6	5.3	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.85	15144.	15349.	1244.	8.299	4048.
MAX CRUISE	20000.	0.85	12930.	12783.	1208.	8.022	4048.
PART POWER	20000.	0.85	10942.	10553.	1175.	7.794	4048.
PART POWER	20000.	0.85	9154.	8609.	1143.	7.610	4048.
PART POWER	20000.	0.85	7524.	6884.	1114.	7.456	4048.
PART POWER	20000.	0.85	6044.	5349.	1088.	7.320	4048.
PART POWER	20000.	0.85	4775.	4060.	1062.	7.203	4048.
PART POWER	20000.	0.85	3714.	3006.	1036.	7.111	4048.
PART POWER	20000.	0.85	2791.	2111.	1011.	7.032	4048.
PART POWER	20000.	0.85	2004.	1367.	988.	6.968	4048.
MAX CLIMB	25000.	0.40	10309.	11209.	1264.	6.453	4048.
MAX CRUISE	25000.	0.40	9067.	9743.	1225.	6.310	4048.
PART POWER	25000.	0.40	7633.	8099.	1192.	6.163	4048.
PART POWER	25000.	0.40	6159.	6444.	1165.	6.015	4048.
PART POWER	25000.	0.40	4875.	5034.	1142.	5.896	4048.
PART POWER	25000.	0.40	3755.	3828.	1120.	5.800	4048.
PART POWER	25000.	0.40	2797.	2810.	1100.	5.717	4048.
PART POWER	25000.	0.40	2004.	1982.	1081.	5.657	4048.
PART POWER	25000.	0.40	1407.	1361.	1060.	5.602	4048.
PART POWER	25000.	0.40	901.	845.	1042.	5.563	4048.
MAX CLIMB	25000.	0.50	10862.	11708.	1257.	6.521	4048.
MAX CRUISE	25000.	0.50	9526.	10129.	1218.	6.365	4048.
PART POWER	25000.	0.50	7978.	8355.	1186.	6.201	4048.
PART POWER	25000.	0.50	6475.	6672.	1158.	6.047	4048.
PART POWER	25000.	0.50	5170.	5248.	1133.	5.928	4048.
PART POWER	25000.	0.50	4028.	4022.	1111.	5.827	4048.
PART POWER	25000.	0.50	3028.	2966.	1090.	5.740	4048.
PART POWER	25000.	0.50	2210.	2115.	1070.	5.669	4048.
PART POWER	25000.	0.50	1582.	1473.	1047.	5.620	4048.
PART POWER	25000.	0.50	1050.	936.	1027.	5.576	4048.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	25000.	0.60	11545.	0.352	502.	123.1	17.0	2535.
MAX CRUISE	25000.	0.60	10047.	0.355	329.	115.1	15.6	2435.
PART POWER	25000.	0.60	8393.	0.365	165.	105.1	13.9	2335.
PART POWER	25000.	0.60	6873.	0.378	33.	95.3	12.3	2235.
PART POWER	25000.	0.60	5541.	0.397	-63.	86.3	10.9	2135.
PART POWER	25000.	0.60	4357.	0.423	-135.	77.6	9.6	2035.
PART POWER	25000.	0.60	3336.	0.457	-192.	69.2	8.3	1935.
PART POWER	25000.	0.60	2480.	0.505	-220.	61.4	7.2	1835.
PART POWER	25000.	0.60	1811.	0.567	-242.	54.7	6.2	1735.
PART POWER	25000.	0.60	1236.	0.671	-244.	48.0	5.3	1635.
MAX CLIMB	25000.	0.70	12313.	0.343	392.	120.2	16.5	2535.
MAX CRUISE	25000.	0.70	10652.	0.347	202.	111.7	15.0	2435.
PART POWER	25000.	0.70	8910.	0.355	36.	101.9	13.4	2335.
PART POWER	25000.	0.70	7379.	0.365	-89.	92.9	11.9	2235.
PART POWER	25000.	0.70	5994.	0.381	-180.	84.3	10.6	2135.
PART POWER	25000.	0.70	4758.	0.403	-245.	76.2	9.3	2035.
PART POWER	25000.	0.70	3702.	0.431	-295.	68.4	8.1	1935.
PART POWER	25000.	0.70	2800.	0.469	-322.	61.0	7.1	1835.
PART POWER	25000.	0.70	2086.	0.519	-334.	54.6	6.2	1735.
PART POWER	25000.	0.70	1462.	0.599	-333.	48.2	5.3	1635.
MAX CLIMB	25000.	0.75	12738.	0.339	337.	118.5	16.1	2535.
MAX CRUISE	25000.	0.75	10984.	0.342	137.	109.8	14.6	2435.
PART POWER	25000.	0.75	9217.	0.349	-30.	100.3	13.1	2335.
PART POWER	25000.	0.75	7641.	0.359	-149.	91.5	11.7	2235.
PART POWER	25000.	0.75	6248.	0.373	-243.	83.3	10.4	2135.
PART POWER	25000.	0.75	5004.	0.392	-306.	75.5	9.2	2035.
PART POWER	25000.	0.75	3912.	0.418	-351.	67.9	8.0	1935.
PART POWER	25000.	0.75	2986.	0.452	-375.	60.8	7.0	1835.
PART POWER	25000.	0.75	2242.	0.496	-386.	54.5	6.1	1735.
PART POWER	25000.	0.75	1588.	0.567	-381.	48.1	5.2	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	25000.	0.60	11545.	12317.	1249.	6.607	4048.
MAX CRUISE	25000.	0.60	10047.	10547.	1211.	6.429	4048.
PART POWER	25000.	0.60	8393.	8654.	1179.	6.248	4048.
PART POWER	25000.	0.60	6873.	6959.	1150.	6.090	4048.
PART POWER	25000.	0.60	5541.	5509.	1124.	5.966	4048.
PART POWER	25000.	0.60	4357.	4247.	1100.	5.861	4048.
PART POWER	25000.	0.60	3336.	3172.	1077.	5.764	4048.
PART POWER	25000.	0.60	2480.	2295.	1055.	5.698	4048.
PART POWER	25000.	0.60	1811.	1615.	1032.	5.638	4048.
PART POWER	25000.	0.60	1236.	1043.	1011.	5.595	4048.
MAX CLIMB	25000.	0.70	12313.	12993.	1241.	6.719	4048.
MAX CRUISE	25000.	0.70	10652.	11020.	1203.	6.508	4048.
PART POWER	25000.	0.70	8910.	9027.	1171.	6.309	4048.
PART POWER	25000.	0.70	7379.	7321.	1140.	6.145	4048.
PART POWER	25000.	0.70	5994.	5823.	1113.	6.013	4048.
PART POWER	25000.	0.70	4758.	4514.	1088.	5.903	4048.
PART POWER	25000.	0.70	3702.	3410.	1064.	5.803	4048.
PART POWER	25000.	0.70	2800.	2491.	1041.	5.725	4048.
PART POWER	25000.	0.70	2086.	1776.	1016.	5.665	4048.
PART POWER	25000.	0.70	1462.	1163.	994.	5.614	4048.
MAX CLIMB	25000.	0.75	12738.	13362.	1237.	6.783	4048.
MAX CRUISE	25000.	0.75	10984.	11274.	1199.	6.553	4048.
PART POWER	25000.	0.75	9217.	9248.	1166.	6.343	4048.
PART POWER	25000.	0.75	7641.	7503.	1136.	6.182	4048.
PART POWER	25000.	0.75	6248.	5991.	1107.	6.038	4048.
PART POWER	25000.	0.75	5004.	4677.	1081.	5.926	4048.
PART POWER	25000.	0.75	3912.	3544.	1057.	5.825	4048.
PART POWER	25000.	0.75	2986.	2604.	1033.	5.744	4048.
PART POWER	25000.	0.75	2242.	1862.	1008.	5.679	4048.
PART POWER	25000.	0.75	1588.	1224.	986.	5.626	4048.

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PRATT AND WHITNEY
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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	25000.	0.80	13183.	0.334	280.	116.7	15.8	2535.
MAX CRUISE	25000.	0.80	11329.	0.337	70.	107.8	14.3	2435.
PART POWER	25000.	0.80	9551.	0.344	-98.	98.7	12.8	2335.
PART POWER	25000.	0.80	7963.	0.352	-218.	90.3	11.4	2235.
PART POWER	25000.	0.80	6536.	0.364	-307.	82.2	10.2	2135.
PART POWER	25000.	0.80	5255.	0.382	-367.	74.7	9.0	2035.
PART POWER	25000.	0.80	4137.	0.405	-411.	67.4	7.9	1935.
PART POWER	25000.	0.80	3186.	0.435	-433.	60.5	6.9	1835.
PART POWER	25000.	0.80	2408.	0.475	-440.	54.3	6.0	1735.
PART POWER	25000.	0.80	1727.	0.536	-433.	48.1	5.2	1635.
MAX CLIMB	25000.	0.85	13603.	0.330	217.	114.5	15.4	2535.
MAX CRUISE	25000.	0.85	11687.	0.333	2.	105.6	13.9	2435.
PART POWER	25000.	0.85	9898.	0.338	-166.	96.9	12.5	2335.
PART POWER	25000.	0.85	8289.	0.345	-287.	88.8	11.2	2235.
PART POWER	25000.	0.85	6842.	0.356	-374.	81.1	10.0	2135.
PART POWER	25000.	0.85	5538.	0.371	-433.	73.8	8.8	2035.
PART POWER	25000.	0.85	4382.	0.392	-474.	66.7	7.8	1935.
PART POWER	25000.	0.85	3403.	0.419	-494.	60.1	6.8	1835.
PART POWER	25000.	0.85	2594.	0.453	-499.	54.1	6.0	1735.
PART POWER	25000.	0.85	1881.	0.507	-490.	48.0	5.2	1635.
MAX CLIMB	30000.	0.50	9398.	0.358	601.	130.1	18.6	2535.
MAX CRUISE	30000.	0.50	8402.	0.359	469.	124.0	17.3	2435.
PART POWER	30000.	0.50	7259.	0.364	338.	115.9	15.8	2335.
PART POWER	30000.	0.50	5959.	0.377	202.	105.0	14.0	2235.
PART POWER	30000.	0.50	4757.	0.397	93.	94.2	12.3	2135.
PART POWER	30000.	0.50	3735.	0.423	18.	84.6	10.7	2035.
PART POWER	30000.	0.50	2842.	0.458	-46.	75.0	9.3	1935.
PART POWER	30000.	0.50	2087.	0.509	-88.	66.0	8.0	1835.
PART POWER	30000.	0.50	1488.	0.580	-114.	58.0	6.8	1735.
PART POWER	30000.	0.50	1015.	0.688	-128.	50.9	5.8	1635.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	25000.	0.80	13183.	13742.	1233.	6.852	4048.
MAX CRUISE	25000.	0.80	11329.	11529.	1195.	6.600	4048.
PART POWER	25000.	0.80	9551.	9487.	1161.	6.382	4048.
PART POWER	25000.	0.80	7963.	7727.	1130.	6.213	4048.
PART POWER	25000.	0.80	6536.	6185.	1101.	6.069	4048.
PART POWER	25000.	0.80	5255.	4837.	1074.	5.953	4048.
PART POWER	25000.	0.80	4137.	3680.	1049.	5.847	4048.
PART POWER	25000.	0.80	3186.	2719.	1025.	5.762	4048.
PART POWER	25000.	0.80	2408.	1949.	1000.	5.696	4048.
PART POWER	25000.	0.80	1727.	1290.	977.	5.638	4048.
MAX CLIMB	25000.	0.85	13603.	14079.	1230.	6.919	4048.
MAX CRUISE	25000.	0.85	11687.	11789.	1192.	6.652	4048.
PART POWER	25000.	0.85	9898.	9730.	1157.	6.427	4048.
PART POWER	25000.	0.85	8289.	7946.	1124.	6.249	4048.
PART POWER	25000.	0.85	6842.	6386.	1095.	6.102	4048.
PART POWER	25000.	0.85	5538.	5017.	1067.	5.981	4048.
PART POWER	25000.	0.85	4382.	3826.	1042.	5.871	4048.
PART POWER	25000.	0.85	3403.	2842.	1017.	5.784	4048.
PART POWER	25000.	0.85	2594.	2045.	991.	5.713	4048.
PART POWER	25000.	0.85	1881.	1360.	968.	5.651	4048.
MAX CLIMB	30000.	0.50	9398.	10229.	1245.	5.316	4048.
MAX CRUISE	30000.	0.50	8402.	9029.	1202.	5.193	4048.
PART POWER	30000.	0.50	7259.	7696.	1165.	5.066	4048.
PART POWER	30000.	0.50	5959.	6214.	1136.	4.925	4048.
PART POWER	30000.	0.50	4757.	4880.	1111.	4.805	4048.
PART POWER	30000.	0.50	3735.	3775.	1088.	4.717	4048.
PART POWER	30000.	0.50	2842.	2819.	1066.	4.633	4048.
PART POWER	30000.	0.50	2087.	2027.	1046.	4.568	4048.
PART POWER	30000.	0.50	1488.	1409.	1026.	4.518	4048.
PART POWER	30000.	0.50	1015.	928.	1005.	4.481	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	30000.	0.60	10003.	0.350	521.	128.1	18.1	2535.
MAX CRUISE	30000.	0.60	8925.	0.350	379.	121.8	16.8	2435.
PART POWER	30000.	0.60	7657.	0.356	237.	113.0	15.3	2335.
PART POWER	30000.	0.60	6302.	0.367	102.	102.5	13.5	2235.
PART POWER	30000.	0.60	5068.	0.384	3.	92.2	11.9	2135.
PART POWER	30000.	0.60	4021.	0.407	-69.	83.1	10.5	2035.
PART POWER	30000.	0.60	3100.	0.437	-126.	74.1	9.1	1935.
PART POWER	30000.	0.60	2313.	0.480	-162.	65.6	7.8	1835.
PART POWER	30000.	0.60	1687.	0.537	-184.	58.0	6.7	1735.
PART POWER	30000.	0.60	1180.	0.623	-193.	51.2	5.8	1635.
MAX CLIMB	30000.	0.70	10715.	0.341	446.	125.7	17.6	2535.
MAX CRUISE	30000.	0.70	9515.	0.342	288.	118.8	16.2	2435.
PART POWER	30000.	0.70	8105.	0.347	133.	109.5	14.7	2335.
PART POWER	30000.	0.70	6705.	0.357	2.	99.5	13.0	2235.
PART POWER	30000.	0.70	5468.	0.370	-93.	90.1	11.5	2135.
PART POWER	30000.	0.70	4367.	0.389	-161.	81.4	10.1	2035.
PART POWER	30000.	0.70	3407.	0.415	-212.	73.0	8.9	1935.
PART POWER	30000.	0.70	2591.	0.449	-244.	65.0	7.7	1835.
PART POWER	30000.	0.70	1924.	0.496	-261.	57.9	6.6	1735.
PART POWER	30000.	0.70	1378.	0.563	-264.	51.3	5.7	1635.
MAX CLIMB	30000.	0.75	11099.	0.337	409.	124.2	17.2	2535.
MAX CRUISE	30000.	0.75	9827.	0.337	241.	117.0	15.9	2435.
PART POWER	30000.	0.75	8353.	0.342	80.	107.6	14.3	2335.
PART POWER	30000.	0.75	6932.	0.351	-51.	97.9	12.7	2235.
PART POWER	30000.	0.75	5692.	0.363	-143.	89.0	11.3	2135.
PART POWER	30000.	0.75	4569.	0.380	-210.	80.5	10.0	2035.
PART POWER	30000.	0.75	3585.	0.404	-258.	72.4	8.7	1935.
PART POWER	30000.	0.75	2747.	0.434	-289.	64.6	7.6	1835.
PART POWER	30000.	0.75	2060.	0.476	-302.	57.7	6.6	1735.
PART POWER	30000.	0.75	1493.	0.535	-306.	51.2	5.7	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	30000.	0.60	10003.	10803.	1237.	5.402	4048.
MAX CRUISE	30000.	0.60	8925.	9495.	1194.	5.263	4048.
PART POWER	30000.	0.60	7657.	8011.	1158.	5.115	4048.
PART POWER	30000.	0.60	6302.	6467.	1128.	4.961	4048.
PART POWER	30000.	0.60	5068.	5107.	1102.	4.842	4048.
PART POWER	30000.	0.60	4021.	3976.	1078.	4.745	4048.
PART POWER	30000.	0.60	3100.	2997.	1055.	4.658	4048.
PART POWER	30000.	0.60	2313.	2179.	1034.	4.591	4048.
PART POWER	30000.	0.60	1687.	1537.	1011.	4.535	4048.
PART POWER	30000.	0.60	1180.	1028.	990.	4.495	4048.
MAX CLIMB	30000.	0.70	10715.	11476.	1229.	5.514	4048.
MAX CRUISE	30000.	0.70	9515.	10005.	1187.	5.346	4048.
PART POWER	30000.	0.70	8105.	8350.	1151.	5.171	4048.
PART POWER	30000.	0.70	6705.	6758.	1120.	5.010	4048.
PART POWER	30000.	0.70	5468.	5396.	1092.	4.884	4048.
PART POWER	30000.	0.70	4367.	4213.	1067.	4.781	4048.
PART POWER	30000.	0.70	3407.	3200.	1043.	4.691	4048.
PART POWER	30000.	0.70	2591.	2358.	1020.	4.617	4048.
PART POWER	30000.	0.70	1924.	1682.	996.	4.558	4048.
PART POWER	30000.	0.70	1378.	1141.	973.	4.516	4048.
MAX CLIMB	30000.	0.75	11099.	11833.	1225.	5.577	4048.
MAX CRUISE	30000.	0.75	9827.	10269.	1183.	5.393	4048.
PART POWER	30000.	0.75	8353.	8534.	1147.	5.204	4048.
PART POWER	30000.	0.75	6932.	6919.	1116.	5.038	4048.
PART POWER	30000.	0.75	5692.	5554.	1086.	4.909	4048.
PART POWER	30000.	0.75	4569.	4350.	1060.	4.802	4048.
PART POWER	30000.	0.75	3585.	3316.	1036.	4.709	4048.
PART POWER	30000.	0.75	2747.	2453.	1012.	4.631	4048.
PART POWER	30000.	0.75	2060.	1762.	989.	4.573	4048.
PART POWER	30000.	0.75	1493.	1201.	965.	4.523	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	30000.	0.80	11509.	0.333	373.	122.6	16.9	2535.
MAX CRUISE	30000.	0.80	10150.	0.333	192.	115.0	15.5	2435.
PART POWER	30000.	0.80	8612.	0.338	25.	105.6	13.9	2335.
PART POWER	30000.	0.80	7192.	0.345	-103.	96.3	12.4	2235.
PART POWER	30000.	0.80	5933.	0.355	-195.	87.8	11.1	2135.
PART POWER	30000.	0.80	4781.	0.371	-260.	79.4	9.8	2035.
PART POWER	30000.	0.80	3770.	0.393	-305.	71.6	8.6	1935.
PART POWER	30000.	0.80	2917.	0.420	-338.	64.2	7.5	1835.
PART POWER	30000.	0.80	2211.	0.456	-348.	57.5	6.5	1735.
PART POWER	30000.	0.80	1616.	0.508	-349.	51.1	5.6	1635.
MAX CLIMB	30000.	0.85	11932.	0.329	334.	120.8	16.5	2535.
MAX CRUISE	30000.	0.85	10472.	0.329	143.	112.9	15.1	2435.
PART POWER	30000.	0.85	8894.	0.333	-29.	103.5	13.6	2335.
PART POWER	30000.	0.85	7470.	0.339	-157.	94.7	12.1	2235.
PART POWER	30000.	0.85	6185.	0.348	-250.	86.4	10.8	2135.
PART POWER	30000.	0.85	5019.	0.362	-313.	78.5	9.6	2035.
PART POWER	30000.	0.85	3981.	0.381	-358.	70.9	8.4	1935.
PART POWER	30000.	0.85	3099.	0.406	-384.	63.7	7.4	1835.
PART POWER	30000.	0.85	2369.	0.438	-395.	57.2	6.4	1735.
PART POWER	30000.	0.85	1745.	0.484	-394.	50.9	5.6	1635.
MAX CLIMB	35000.	0.50	7937.	0.357	561.	133.8	19.5	2535.
MAX CRUISE	35000.	0.50	7226.	0.356	461.	129.1	18.4	2435.
PART POWER	35000.	0.50	6394.	0.359	354.	122.5	17.1	2335.
PART POWER	35000.	0.50	5449.	0.366	244.	113.5	15.5	2235.
PART POWER	35000.	0.50	4365.	0.383	134.	101.6	13.5	2135.
PART POWER	35000.	0.50	3430.	0.406	54.	90.8	11.8	2035.
PART POWER	35000.	0.50	2636.	0.437	-5.	80.8	10.2	1935.
PART POWER	35000.	0.50	1950.	0.481	-50.	71.0	8.7	1835.
PART POWER	35000.	0.50	1387.	0.546	-79.	61.9	7.4	1735.
PART POWER	35000.	0.50	957.	0.639	-96.	54.2	6.3	1635.

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STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	30000.	0.80	11509.	12215.	1222.	5.646	4048.
MAX CRUISE	30000.	0.80	10150.	10534.	1179.	5.442	4048.
PART POWER	30000.	0.80	8612.	8720.	1144.	5.238	4048.
PART POWER	30000.	0.80	7192.	7106.	1111.	5.070	4048.
PART POWER	30000.	0.80	5933.	5721.	1081.	4.936	4048.
PART POWER	30000.	0.80	4781.	4489.	1054.	4.824	4048.
PART POWER	30000.	0.80	3770.	3432.	1030.	4.731	4048.
PART POWER	30000.	0.80	2917.	2554.	1005.	4.645	4048.
PART POWER	30000.	0.80	2211.	1849.	980.	4.586	4048.
PART POWER	30000.	0.80	1616.	1264.	957.	4.534	4048.
MAX CLIMB	30000.	0.85	11932.	12601.	1218.	5.720	4048.
MAX CRUISE	30000.	0.85	10472.	10791.	1176.	5.496	4048.
PART POWER	30000.	0.85	8894.	8925.	1140.	5.279	4048.
PART POWER	30000.	0.85	7470.	7303.	1106.	5.105	4048.
PART POWER	30000.	0.85	6185.	5890.	1075.	4.965	4048.
PART POWER	30000.	0.85	5019.	4647.	1048.	4.851	4048.
PART POWER	30000.	0.85	3981.	3562.	1023.	4.750	4048.
PART POWER	30000.	0.85	3099.	2663.	998.	4.668	4048.
PART POWER	30000.	0.85	2369.	1935.	972.	4.603	4048.
PART POWER	30000.	0.85	1745.	1327.	949.	4.548	4048.
MAX CLIMB	35000.	0.50	7937.	8720.	1236.	4.286	4048.
MAX CRUISE	35000.	0.50	7226.	7848.	1190.	4.197	4048.
PART POWER	35000.	0.50	6394.	6856.	1149.	4.097	4048.
PART POWER	35000.	0.50	5449.	5756.	1114.	3.989	4048.
PART POWER	35000.	0.50	4365.	4531.	1088.	3.872	4048.
PART POWER	35000.	0.50	3430.	3504.	1065.	3.784	4048.
PART POWER	35000.	0.50	2636.	2648.	1043.	3.711	4048.
PART POWER	35000.	0.50	1950.	1920.	1023.	3.649	4048.
PART POWER	35000.	0.50	1367.	1334.	1004.	3.600	4048.
PART POWER	35000.	0.50	957.	893.	984.	3.565	4048.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	35000.	0.60	8496.	0.349	512.	132.5	19.1	2535.
MAX CRUISE	35000.	0.60	7686.	0.348	397.	127.1	18.0	2435.
PART POWER	35000.	0.60	6802.	0.350	281.	120.3	16.6	2335.
PART POWER	35000.	0.60	5739.	0.357	162.	110.6	14.9	2235.
PART POWER	35000.	0.60	4630.	0.372	59.	99.3	13.1	2135.
PART POWER	35000.	0.60	3679.	0.392	-17.	89.2	11.5	2035.
PART POWER	35000.	0.60	2854.	0.419	-70.	79.6	10.0	1935.
PART POWER	35000.	0.60	2139.	0.457	-111.	70.2	8.6	1835.
PART POWER	35000.	0.60	1554.	0.510	-136.	61.7	7.3	1735.
PART POWER	35000.	0.60	1101.	0.585	-148.	54.4	6.3	1635.
MAX CLIMB	35000.	0.70	9136.	0.341	467.	130.5	18.6	2535.
MAX CRUISE	35000.	0.70	8236.	0.340	336.	124.6	17.4	2435.
PART POWER	35000.	0.70	7232.	0.342	208.	117.2	16.0	2335.
PART POWER	35000.	0.70	6068.	0.348	81.	107.1	14.3	2235.
PART POWER	35000.	0.70	4939.	0.361	-21.	96.5	12.6	2135.
PART POWER	35000.	0.70	3966.	0.377	-91.	87.1	11.1	2035.
PART POWER	35000.	0.70	3107.	0.400	-141.	78.1	9.7	1935.
PART POWER	35000.	0.70	2375.	0.431	-178.	69.5	8.4	1835.
PART POWER	35000.	0.70	1754.	0.475	-198.	61.3	7.2	1735.
PART POWER	35000.	0.70	1273.	0.534	-208.	54.4	6.2	1635.
MAX CLIMB	35000.	0.75	9483.	0.337	444.	129.2	18.3	2535.
MAX CRUISE	35000.	0.75	8538.	0.336	307.	123.2	17.1	2435.
PART POWER	35000.	0.75	7463.	0.337	169.	115.3	15.7	2335.
PART POWER	35000.	0.75	6255.	0.344	37.	105.2	14.0	2235.
PART POWER	35000.	0.75	5130.	0.354	-60.	95.2	12.3	2135.
PART POWER	35000.	0.75	4134.	0.369	-130.	86.0	10.9	2035.
PART POWER	35000.	0.75	3255.	0.391	-179.	77.2	9.5	1935.
PART POWER	35000.	0.75	2505.	0.419	-213.	68.9	8.3	1835.
PART POWER	35000.	0.75	1872.	0.458	-232.	61.1	7.1	1735.
PART POWER	35000.	0.75	1373.	0.509	-240.	54.3	6.1	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	35000.	0.60	8496.	9285.	1228.	4.374	4048.
MAX CRUISE	35000.	0.60	7686.	8281.	1183.	4.264	4048.
PART POWER	35000.	0.60	6802.	7214.	1141.	4.147	4048.
PART POWER	35000.	0.60	5739.	5978.	1107.	4.022	4048.
PART POWER	35000.	0.60	4630.	4730.	1080.	3.904	4048.
PART POWER	35000.	0.60	3679.	3687.	1055.	3.809	4048.
PART POWER	35000.	0.60	2854.	2803.	1032.	3.735	4048.
PART POWER	35000.	0.60	2139.	2049.	1012.	3.668	4048.
PART POWER	35000.	0.60	1554.	1444.	991.	3.615	4048.
PART POWER	35000.	0.60	1101.	985.	969.	3.578	4048.
MAX CLIMB	35000.	0.70	9136.	9927.	1220.	4.480	4048.
MAX CRUISE	35000.	0.70	8236.	8797.	1175.	4.348	4048.
PART POWER	35000.	0.70	7232.	7581.	1134.	4.212	4048.
PART POWER	35000.	0.70	6068.	6223.	1100.	4.066	4048.
PART POWER	35000.	0.70	4939.	4951.	1072.	3.939	4048.
PART POWER	35000.	0.70	3966.	3890.	1045.	3.842	4048.
PART POWER	35000.	0.70	3107.	2974.	1022.	3.762	4048.
PART POWER	35000.	0.70	2375.	2206.	999.	3.691	4048.
PART POWER	35000.	0.70	1754.	1571.	977.	3.636	4048.
PART POWER	35000.	0.70	1273.	1087.	954.	3.594	4048.
MAX CLIMB	35000.	0.75	9483.	10272.	1216.	4.541	4048.
MAX CRUISE	35000.	0.75	8538.	9077.	1171.	4.398	4048.
PART POWER	35000.	0.75	7463.	7770.	1130.	4.246	4048.
PART POWER	35000.	0.75	6255.	6357.	1096.	4.088	4048.
PART POWER	35000.	0.75	5130.	5093.	1067.	3.962	4048.
PART POWER	35000.	0.75	4134.	4007.	1040.	3.861	4048.
PART POWER	35000.	0.75	3255.	3072.	1016.	3.777	4048.
PART POWER	35000.	0.75	2505.	2289.	992.	3.705	4048.
PART POWER	35000.	0.75	1872.	1644.	970.	3.647	4048.
PART POWER	35000.	0.75	1373.	1145.	946.	3.603	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	35000.	0.80	9850.	0.333	421.	127.8	18.0	2535.
MAX CRUISE	35000.	0.80	8856.	0.331	277.	121.6	16.8	2435.
PART POWER	35000.	0.80	7703.	0.333	129.	113.3	15.3	2335.
PART POWER	35000.	0.80	6461.	0.339	-4.	103.3	13.6	2235.
PART POWER	35000.	0.80	5323.	0.348	-102.	93.7	12.1	2135.
PART POWER	35000.	0.80	4318.	0.361	-171.	84.9	10.7	2035.
PART POWER	35000.	0.80	3419.	0.381	-219.	76.4	9.3	1935.
PART POWER	35000.	0.80	2649.	0.406	-251.	68.4	8.1	1835.
PART POWER	35000.	0.80	1998.	0.441	-268.	60.8	7.0	1735.
PART POWER	35000.	0.80	1480.	0.486	-275.	54.2	6.1	1635.
MAX CLIMB	35000.	0.85	10233.	0.329	397.	126.2	17.7	2535.
MAX CRUISE	35000.	0.85	9186.	0.327	246.	119.8	16.4	2435.
PART POWER	35000.	0.85	7948.	0.329	87.	111.0	14.9	2335.
PART POWER	35000.	0.85	6688.	0.334	-47.	101.4	13.3	2235.
PART POWER	35000.	0.85	5540.	0.341	-145.	92.2	11.8	2135.
PART POWER	35000.	0.85	4516.	0.353	-213.	83.7	10.4	2035.
PART POWER	35000.	0.85	3592.	0.371	-260.	75.4	9.2	1935.
PART POWER	35000.	0.85	2806.	0.393	-290.	67.8	8.0	1835.
PART POWER	35000.	0.85	2137.	0.424	-306.	60.5	7.0	1735.
PART POWER	35000.	0.85	1598.	0.464	-311.	54.1	6.0	1635.
MAX CLIMB	40000.	0.50	6269.	0.359	450.	133.7	19.6	2535.
MAX CRUISE	40000.	0.50	5718.	0.358	371.	129.3	18.5	2435.
PART POWER	40000.	0.50	5063.	0.360	286.	122.6	17.2	2335.
PART POWER	40000.	0.50	4321.	0.367	199.	113.8	15.6	2235.
PART POWER	40000.	0.50	3455.	0.385	112.	101.7	13.6	2135.
PART POWER	40000.	0.50	2702.	0.409	47.	90.7	11.8	2035.
PART POWER	40000.	0.50	2068.	0.441	-2.	80.4	10.2	1935.
PART POWER	40000.	0.50	1515.	0.488	-39.	70.3	8.7	1835.
PART POWER	40000.	0.50	1064.	0.559	-62.	60.9	7.3	1735.
PART POWER	40000.	0.50	723.	0.662	-75.	53.1	6.2	1635.

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MARITIME PATROL AIRCRAFT ENGINE STUDY P&WA DERIVATIVE ENGINES. --ETC(U)
APR 79 R C NEWELL, P W HERRICK N62269-78-C-0410
UNCLASSIFIED PWA-FR-10966B/C-VOL-2 NADC-79132-60-VOL-2 NL

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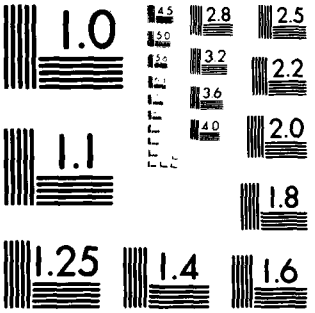

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	35000.	0.80	9850.	10635.	1212.	4.608	4048.
MAX CRUISE	35000.	0.80	8856.	9370.	1167.	4.451	4048.
PART POWER	35000.	0.80	7703.	7963.	1127.	4.282	4048.
PART POWER	35000.	0.80	6461.	6509.	1092.	4.118	4048.
PART POWER	35000.	0.80	5323.	5228.	1062.	3.985	4048.
PART POWER	35000.	0.80	4318.	4134.	1034.	3.881	4048.
PART POWER	35000.	0.80	3419.	3180.	1009.	3.793	4048.
PART POWER	35000.	0.80	2649.	2380.	985.	3.721	4048.
PART POWER	35000.	0.80	1998.	1720.	962.	3.661	4048.
PART POWER	35000.	0.80	1480.	1204.	938.	3.613	4048.
MAX CLIMB	35000.	0.85	10233.	11012.	1209.	4.679	4048.
MAX CRUISE	35000.	0.85	9186.	9671.	1163.	4.509	4048.
PART POWER	35000.	0.85	7948.	8153.	1123.	4.320	4048.
PART POWER	35000.	0.85	6688.	6674.	1088.	4.148	4048.
PART POWER	35000.	0.85	5540.	5383.	1057.	4.012	4048.
PART POWER	35000.	0.85	4516.	4269.	1028.	3.904	4048.
PART POWER	35000.	0.85	3592.	3291.	1003.	3.812	4048.
PART POWER	35000.	0.85	2806.	2478.	978.	3.738	4048.
PART POWER	35000.	0.85	2137.	1801.	954.	3.674	4048.
PART POWER	35000.	0.85	1598.	1269.	929.	3.626	4048.
MAX CLIMB	40000.	0.50	6269.	6897.	1236.	3.378	4048.
MAX CRUISE	40000.	0.50	5718.	6220.	1190.	3.308	4048.
PART POWER	40000.	0.50	5063.	5436.	1148.	3.228	4048.
PART POWER	40000.	0.50	4321.	4571.	1113.	3.143	4048.
PART POWER	40000.	0.50	3455.	3592.	1087.	3.052	4048.
PART POWER	40000.	0.50	2702.	2764.	1065.	2.979	4048.
PART POWER	40000.	0.50	2068.	2080.	1043.	2.920	4048.
PART POWER	40000.	0.50	1515.	1492.	1024.	2.869	4048.
PART POWER	40000.	0.50	1064.	1022.	1007.	2.829	4048.
PART POWER	40000.	0.50	723.	674.	988.	2.801	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	40000.	0.60	6715.	0.351	413.	132.5	19.2	2535.
MAX CRUISE	40000.	0.60	6083.	0.350	322.	127.2	18.1	2435.
PART POWER	40000.	0.60	5387.	0.351	230.	120.5	16.7	2335.
PART POWER	40000.	0.60	4556.	0.359	136.	110.9	15.0	2235.
PART POWER	40000.	0.60	3665.	0.374	52.	99.4	13.2	2135.
PART POWER	40000.	0.60	2887.	0.395	-8.	88.8	11.5	2035.
PART POWER	40000.	0.60	2237.	0.423	-53.	79.2	10.0	1935.
PART POWER	40000.	0.60	1665.	0.463	-85.	69.7	8.5	1835.
PART POWER	40000.	0.60	1200.	0.520	-106.	61.0	7.3	1735.
PART POWER	40000.	0.60	837.	0.603	-114.	53.4	6.2	1635.
MAX CLIMB	40000.	0.70	7229.	0.343	380.	130.6	18.7	2535.
MAX CRUISE	40000.	0.70	6524.	0.341	276.	124.9	17.5	2435.
PART POWER	40000.	0.70	5735.	0.343	174.	117.5	16.1	2335.
PART POWER	40000.	0.70	4815.	0.350	72.	107.4	14.4	2235.
PART POWER	40000.	0.70	3911.	0.362	-11.	96.6	12.7	2135.
PART POWER	40000.	0.70	3129.	0.379	-67.	87.0	11.1	2035.
PART POWER	40000.	0.70	2441.	0.404	-108.	77.8	9.7	1935.
PART POWER	40000.	0.70	1856.	0.436	-138.	69.0	8.3	1835.
PART POWER	40000.	0.70	1358.	0.484	-154.	60.7	7.1	1735.
PART POWER	40000.	0.70	976.	0.547	-162.	53.6	6.1	1635.
MAX CLIMB	40000.	0.75	7508.	0.339	363.	129.4	18.4	2535.
MAX CRUISE	40000.	0.75	6765.	0.337	254.	123.4	17.2	2435.
PART POWER	40000.	0.75	5924.	0.338	144.	115.7	15.8	2335.
PART POWER	40000.	0.75	4965.	0.345	37.	105.5	14.1	2235.
PART POWER	40000.	0.75	4064.	0.356	-42.	95.3	12.4	2135.
PART POWER	40000.	0.75	3263.	0.372	-98.	85.9	10.9	2035.
PART POWER	40000.	0.75	2559.	0.394	-138.	77.0	9.5	1935.
PART POWER	40000.	0.75	1960.	0.423	-166.	68.5	8.2	1835.
PART POWER	40000.	0.75	1452.	0.466	-181.	60.5	7.1	1735.
PART POWER	40000.	0.75	1054.	0.522	-186.	53.6	6.1	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTN4	PTN2	RPM
MAX CLIMB	40000.	0.60	6715.	7351.	1228.	3.448	4048.
MAX CRUISE	40000.	0.60	6083.	6566.	1182.	3.362	4048.
PART POWER	40000.	0.60	5387.	5724.	1140.	3.269	4048.
PART POWER	40000.	0.60	4556.	4754.	1106.	3.170	4048.
PART POWER	40000.	0.60	3665.	3750.	1079.	3.075	4048.
PART POWER	40000.	0.60	2887.	2898.	1056.	3.001	4048.
PART POWER	40000.	0.60	2237.	2199.	1033.	2.937	4048.
PART POWER	40000.	0.60	1665.	1596.	1013.	2.885	4048.
PART POWER	40000.	0.60	1200.	1115.	993.	2.842	4048.
PART POWER	40000.	0.60	837.	748.	973.	2.814	4048.
MAX CLIMB	40000.	0.70	7229.	7872.	1220.	3.535	4048.
MAX CRUISE	40000.	0.70	6524.	6983.	1174.	3.430	4048.
PART POWER	40000.	0.70	5735.	6025.	1133.	3.322	4048.
PART POWER	40000.	0.70	4815.	4948.	1099.	3.206	4048.
PART POWER	40000.	0.70	3911.	3927.	1071.	3.102	4048.
PART POWER	40000.	0.70	3129.	3074.	1045.	3.024	4048.
PART POWER	40000.	0.70	2441.	2339.	1022.	2.959	4048.
PART POWER	40000.	0.70	1856.	1726.	999.	2.903	4048.
PART POWER	40000.	0.70	1358.	1216.	979.	2.858	4048.
PART POWER	40000.	0.70	976.	832.	956.	2.824	4048.
MAX CLIMB	40000.	0.75	7508.	8152.	1216.	3.584	4048.
MAX CRUISE	40000.	0.75	6765.	7209.	1170.	3.470	4048.
PART POWER	40000.	0.75	5924.	6183.	1129.	3.350	4048.
PART POWER	40000.	0.75	4965.	5056.	1095.	3.222	4048.
PART POWER	40000.	0.75	4064.	4042.	1066.	3.121	4048.
PART POWER	40000.	0.75	3263.	3169.	1040.	3.039	4048.
PART POWER	40000.	0.75	2559.	2418.	1016.	2.971	4048.
PART POWER	40000.	0.75	1960.	1793.	993.	2.914	4048.
PART POWER	40000.	0.75	1452.	1275.	971.	2.867	4048.
PART POWER	40000.	0.75	1054.	878.	948.	2.833	4048.

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PRATT AND WHITNEY
STS-536A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNKES	WAT2	OPR	CET
MAX CLIMB	40000.	0.80	7801.	0.335	346.	128.1	18.1	2535.
MAX CRUISE	40000.	0.80	7019.	0.333	232.	121.9	16.9	2435.
PART POWER	40000.	0.80	6116.	0.334	113.	113.7	15.4	2335.
PART POWER	40000.	0.80	5131.	0.340	6.	103.7	13.7	2235.
PART POWER	40000.	0.80	4221.	0.349	-73.	93.9	12.1	2135.
PART POWER	40000.	0.80	3411.	0.363	-130.	84.8	10.7	2035.
PART POWER	40000.	0.80	2686.	0.384	-169.	76.1	9.4	1935.
PART POWER	40000.	0.80	2071.	0.411	-196.	67.9	8.1	1835.
PART POWER	40000.	0.80	1554.	0.447	-210.	60.2	7.0	1735.
PART POWER	40000.	0.80	1142.	0.497	-213.	53.6	6.0	1635.
MAX CLIMB	40000.	0.85	8107.	0.331	328.	126.5	17.8	2535.
MAX CRUISE	40000.	0.85	7285.	0.329	209.	120.1	16.5	2435.
PART POWER	40000.	0.85	6317.	0.330	82.	111.5	15.0	2335.
PART POWER	40000.	0.85	5306.	0.335	-28.	101.7	13.4	2235.
PART POWER	40000.	0.85	4387.	0.343	-108.	92.3	11.9	2135.
PART POWER	40000.	0.85	3564.	0.356	-163.	83.6	10.5	2035.
PART POWER	40000.	0.85	2829.	0.374	-201.	75.3	9.2	1935.
PART POWER	40000.	0.85	2198.	0.398	-225.	67.4	8.0	1835.
PART POWER	40000.	0.85	1668.	0.430	-238.	60.0	6.9	1735.
PART POWER	40000.	0.85	1236.	0.473	-242.	53.5	6.0	1635.
MAX CLIMB	45000.	0.50	4871.	0.361	348.	132.7	19.4	2535.
MAX CRUISE	45000.	0.50	4419.	0.361	284.	127.7	18.3	2435.
PART POWER	45000.	0.50	3907.	0.363	215.	121.0	16.9	2335.
PART POWER	45000.	0.50	3277.	0.373	146.	111.1	15.2	2235.
PART POWER	45000.	0.50	2605.	0.392	78.	99.1	13.2	2135.
PART POWER	45000.	0.50	2029.	0.419	30.	88.2	11.5	2035.
PART POWER	45000.	0.50	1528.	0.455	-7.	77.6	9.9	1935.
PART POWER	45000.	0.50	1099.	0.511	-34.	67.3	8.3	1835.
PART POWER	45000.	0.50	756.	0.594	-50.	58.0	7.0	1735.
PART POWER	45000.	0.50	495.	0.725	-59.	50.0	5.8	1635.

TABLE III
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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	40000.	0.80	7801.	8445.	1212.	3.637	4048.
MAX CRUISE	40000.	0.80	7019.	7447.	1166.	3.514	4048.
PART POWER	40000.	0.80	6116.	6339.	1126.	3.379	4048.
PART POWER	40000.	0.80	5131.	5183.	1091.	3.248	4048.
PART POWER	40000.	0.80	4221.	4156.	1061.	3.141	4048.
PART POWER	40000.	0.80	3411.	3272.	1034.	3.056	4048.
PART POWER	40000.	0.80	2686.	2502.	1010.	2.984	4048.
PART POWER	40000.	0.80	2071.	1862.	986.	2.924	4048.
PART POWER	40000.	0.80	1554.	1337.	963.	2.876	4048.
PART POWER	40000.	0.80	1142.	929.	940.	2.842	4048.
MAX CLIMB	40000.	0.85	8107.	8749.	1208.	3.694	4048.
MAX CRUISE	40000.	0.85	7285.	7692.	1162.	3.560	4048.
PART POWER	40000.	0.85	6317.	6499.	1122.	3.411	4048.
PART POWER	40000.	0.85	5306.	5309.	1088.	3.271	4048.
PART POWER	40000.	0.85	4387.	4272.	1056.	3.161	4048.
PART POWER	40000.	0.85	3564.	3376.	1028.	3.074	4048.
PART POWER	40000.	0.85	2829.	2597.	1003.	3.001	4048.
PART POWER	40000.	0.85	2198.	1944.	979.	2.940	4048.
PART POWER	40000.	0.85	1668.	1408.	955.	2.890	4048.
PART POWER	40000.	0.85	1236.	981.	931.	2.850	4048.
MAX CLIMB	45000.	0.50	4871.	5355.	1238.	2.650	4048.
MAX CRUISE	45000.	0.50	4419.	4800.	1193.	2.592	4048.
PART POWER	45000.	0.50	3907.	4186.	1151.	2.527	4048.
PART POWER	45000.	0.50	3277.	3459.	1119.	2.459	4048.
PART POWER	45000.	0.50	2605.	2702.	1094.	2.388	4048.
PART POWER	45000.	0.50	2029.	2070.	1072.	2.333	4048.
PART POWER	45000.	0.50	1528.	1531.	1052.	2.287	4048.
PART POWER	45000.	0.50	1099.	1078.	1035.	2.248	4048.
PART POWER	45000.	0.50	756.	722.	1019.	2.218	4048.
PART POWER	45000.	0.50	495.	456.	1003.	2.197	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	45000.	0.60	5219.	0.353	318.	131.4	19.0	2535.
MAX CRUISE	45000.	0.60	4707.	0.352	245.	125.8	17.9	2435.
PART POWER	45000.	0.60	4136.	0.355	172.	118.6	16.5	2335.
PART POWER	45000.	0.60	3455.	0.364	97.	108.3	14.7	2235.
PART POWER	45000.	0.60	2766.	0.381	32.	96.9	12.8	2135.
PART POWER	45000.	0.60	2177.	0.404	-13.	86.6	11.2	2035.
PART POWER	45000.	0.60	1663.	0.435	-46.	76.7	9.6	1935.
PART POWER	45000.	0.60	1219.	0.482	-70.	67.0	8.2	1835.
PART POWER	45000.	0.60	862.	0.548	-84.	58.3	6.9	1735.
PART POWER	45000.	0.60	584.	0.651	-90.	50.6	5.8	1635.
MAX CLIMB	45000.	0.70	5611.	0.345	290.	129.5	18.5	2535.
MAX CRUISE	45000.	0.70	5046.	0.344	208.	123.4	17.3	2435.
PART POWER	45000.	0.70	4406.	0.346	127.	115.6	15.9	2335.
PART POWER	45000.	0.70	3666.	0.355	47.	105.0	14.1	2235.
PART POWER	45000.	0.70	2973.	0.368	-13.	94.5	12.4	2135.
PART POWER	45000.	0.70	2359.	0.387	-57.	84.8	10.8	2035.
PART POWER	45000.	0.70	1827.	0.414	-89.	75.6	9.4	1935.
PART POWER	45000.	0.70	1365.	0.452	-109.	66.5	8.0	1835.
PART POWER	45000.	0.70	991.	0.505	-121.	58.4	6.9	1735.
PART POWER	45000.	0.70	692.	0.584	-125.	51.1	5.8	1635.
MAX CLIMB	45000.	0.75	5825.	0.341	277.	128.2	18.3	2535.
MAX CRUISE	45000.	0.75	5232.	0.339	190.	122.0	17.0	2435.
PART POWER	45000.	0.75	4548.	0.342	103.	113.7	15.5	2335.
PART POWER	45000.	0.75	3782.	0.350	21.	103.2	13.8	2235.
PART POWER	45000.	0.75	3081.	0.361	-39.	93.1	12.1	2135.
PART POWER	45000.	0.75	2466.	0.379	-81.	83.8	10.6	2035.
PART POWER	45000.	0.75	1918.	0.403	-112.	74.8	9.2	1935.
PART POWER	45000.	0.75	1450.	0.437	-131.	66.2	8.0	1835.
PART POWER	45000.	0.75	1064.	0.485	-141.	58.3	6.8	1735.
PART POWER	45000.	0.75	754.	0.553	-144.	51.2	5.8	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	45000.	0.60	5219.	5707.	1230.	2.704	4048.
MAX CRUISE	45000.	0.60	4707.	5073.	1185.	2.633	4048.
PART POWER	45000.	0.60	4136.	4387.	1144.	2.561	4048.
PART POWER	45000.	0.60	3455.	3596.	1112.	2.480	4048.
PART POWER	45000.	0.60	2766.	2822.	1086.	2.405	4048.
PART POWER	45000.	0.60	2177.	2178.	1062.	2.348	4048.
PART POWER	45000.	0.60	1663.	1628.	1041.	2.301	4048.
PART POWER	45000.	0.60	1219.	1162.	1023.	2.260	4048.
PART POWER	45000.	0.60	862.	795.	1004.	2.228	4048.
PART POWER	45000.	0.60	584.	514.	986.	2.205	4048.
MAX CLIMB	45000.	0.70	5611.	6101.	1222.	2.769	4048.
MAX CRUISE	45000.	0.70	5046.	5392.	1177.	2.686	4048.
PART POWER	45000.	0.70	4406.	4618.	1137.	2.599	4048.
PART POWER	45000.	0.70	3666.	3756.	1104.	2.506	4048.
PART POWER	45000.	0.70	2973.	2979.	1076.	2.430	4048.
PART POWER	45000.	0.70	2359.	2310.	1052.	2.368	4048.
PART POWER	45000.	0.70	1827.	1743.	1029.	2.317	4048.
PART POWER	45000.	0.70	1365.	1262.	1009.	2.274	4048.
PART POWER	45000.	0.70	991.	880.	988.	2.240	4048.
PART POWER	45000.	0.70	692.	582.	968.	2.215	4048.
MAX CLIMB	45000.	0.75	5825.	6316.	1218.	2.808	4048.
MAX CRUISE	45000.	0.75	5232.	5565.	1173.	2.716	4048.
PART POWER	45000.	0.75	4548.	4734.	1133.	2.619	4048.
PART POWER	45000.	0.75	3782.	3841.	1100.	2.520	4048.
PART POWER	45000.	0.75	3081.	3056.	1071.	2.442	4048.
PART POWER	45000.	0.75	2466.	2386.	1046.	2.380	4048.
PART POWER	45000.	0.75	1918.	1804.	1023.	2.326	4048.
PART POWER	45000.	0.75	1450.	1318.	1001.	2.283	4048.
PART POWER	45000.	0.75	1064.	926.	980.	2.248	4048.
PART POWER	45000.	0.75	754.	619.	959.	2.221	4048.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	45000.	0.80	6050.	0.337	263.	126.8	17.9	2535.
MAX CRUISE	45000.	0.80	5428.	0.335	172.	120.5	16.7	2435.
PART POWER	45000.	0.80	4700.	0.337	76.	111.8	15.1	2335.
PART POWER	45000.	0.80	3920.	0.344	-3.	101.7	13.4	2235.
PART POWER	45000.	0.80	3204.	0.355	-65.	91.7	11.9	2135.
PART POWER	45000.	0.80	2580.	0.370	-106.	82.8	10.4	2035.
PART POWER	45000.	0.80	2018.	0.393	-135.	74.1	9.1	1935.
PART POWER	45000.	0.80	1539.	0.423	-153.	65.8	7.9	1835.
PART POWER	45000.	0.80	1142.	0.465	-162.	58.1	6.8	1735.
PART POWER	45000.	0.80	823.	0.524	-165.	51.3	5.8	1635.
MAX CLIMB	45000.	0.85	6289.	0.333	249.	125.3	17.6	2535.
MAX CRUISE	45000.	0.85	5629.	0.331	154.	118.6	16.3	2435.
PART POWER	45000.	0.85	4848.	0.333	53.	109.6	14.7	2335.
PART POWER	45000.	0.85	4056.	0.339	-30.	99.7	13.1	2235.
PART POWER	45000.	0.85	3341.	0.348	-90.	90.4	11.6	2135.
PART POWER	45000.	0.85	2706.	0.361	-131.	81.8	10.2	2035.
PART POWER	45000.	0.85	2130.	0.382	-159.	73.4	8.9	1935.
PART POWER	45000.	0.85	1634.	0.409	-178.	65.3	7.8	1835.
PART POWER	45000.	0.85	1231.	0.445	-186.	58.1	6.7	1735.
PART POWER	45000.	0.85	895.	0.497	-187.	51.3	5.7	1635.

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PRATT AND WHITNEY
STS-538A TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	45000.	0.80	6050.	6538.	1214.	2.848	4048.
MAX CRUISE	45000.	0.80	5428.	5747.	1169.	2.749	4048.
PART POWER	45000.	0.80	4700.	4854.	1129.	2.638	4048.
PART POWER	45000.	0.80	3920.	3949.	1096.	2.541	4048.
PART POWER	45000.	0.80	3204.	3143.	1066.	2.456	4048.
PART POWER	45000.	0.80	2580.	2466.	1040.	2.393	4048.
PART POWER	45000.	0.80	2018.	1871.	1016.	2.336	4048.
PART POWER	45000.	0.80	1539.	1376.	994.	2.293	4048.
PART POWER	45000.	0.80	1142.	975.	972.	2.256	4048.
PART POWER	45000.	0.80	823.	659.	950.	2.228	4048.
MAX CLIMB	45000.	0.85	6289.	6775.	1211.	2.892	4048.
MAX CRUISE	45000.	0.85	5629.	5930.	1165.	2.785	4048.
PART POWER	45000.	0.85	4848.	4972.	1126.	2.665	4048.
PART POWER	45000.	0.85	4056.	4046.	1092.	2.558	4048.
PART POWER	45000.	0.85	3341.	3244.	1061.	2.473	4048.
PART POWER	45000.	0.85	2706.	2554.	1033.	2.406	4048.
PART POWER	45000.	0.85	2130.	1947.	1010.	2.351	4048.
PART POWER	45000.	0.85	1634.	1435.	987.	2.302	4048.
PART POWER	45000.	0.85	1231.	1030.	963.	2.265	4048.
PART POWER	45000.	0.85	895.	699.	941.	2.234	4048.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
TAKEOFF	0.	0.0	15846.	0.416	1962.	107.2	18.3	2589.
TAKEOFF	0.	0.10	15942.	0.415	1600.	107.0	18.2	2589.
TAKEOFF	0.	0.20	16212.	0.411	1265.	106.2	18.0	2589.
TAKEOFF	0.	0.30	16695.	0.405	930.	105.1	17.7	2589.
TAKEOFF	2000.	0.0	15387.	0.412	1930.	109.6	18.8	2589.
TAKEOFF	2000.	0.10	15467.	0.410	1583.	109.4	18.7	2589.
TAKEOFF	2000.	0.20	15769.	0.407	1252.	108.7	18.6	2589.
TAKEOFF	2000.	0.30	16210.	0.401	944.	107.5	18.3	2589.
TAKEOFF	5000.	0.0	14740.	0.405	1852.	113.5	19.6	2589.
TAKEOFF	5000.	0.10	14806.	0.404	1542.	113.2	19.6	2589.
TAKEOFF	5000.	0.20	15081.	0.400	1236.	112.5	19.4	2589.
TAKEOFF	5000.	0.30	15491.	0.395	951.	111.2	19.1	2589.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
TAKEOFF	0.	0.0	15846.	16996.	1323.	15.974	5838.
TAKEOFF	0.	0.10	15942.	17063.	1322.	15.980	5836.
TAKEOFF	0.	0.20	16212.	17259.	1320.	16.016	5832.
TAKEOFF	0.	0.30	16695.	17597.	1316.	16.056	5826.
TAKEOFF	2000.	0.0	15387.	16547.	1316.	14.929	5874.
TAKEOFF	2000.	0.10	15487.	16617.	1315.	14.931	5873.
TAKEOFF	2000.	0.20	15769.	16815.	1312.	14.947	5868.
TAKEOFF	2000.	0.30	16210.	17133.	1308.	14.999	5860.
TAKEOFF	5000.	0.0	14740.	15879.	1304.	13.429	5930.
TAKEOFF	5000.	0.10	14806.	15933.	1303.	13.448	5928.
TAKEOFF	5000.	0.20	15081.	16131.	1300.	13.462	5923.
TAKEOFF	5000.	0.30	15491.	16430.	1296.	13.509	5913.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD +31 DEG F DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
TAKEOFF	0.	0.0	16993.	0.416	2047.	108.8	18.6	2759.
TAKEOFF	0.	0.10	16458.	0.418	1608.	106.7	18.2	2736.
TAKEOFF	0.	0.20	16738.	0.415	1270.	106.0	18.0	2736.
TAKEOFF	0.	0.30	17196.	0.409	936.	104.8	17.7	2735.
TAKEOFF	2000.	0.0	16581.	0.411	2013.	111.5	19.2	2764.
TAKEOFF	2000.	0.10	16001.	0.414	1586.	109.2	18.7	2738.
TAKEOFF	2000.	0.20	16265.	0.410	1263.	108.4	18.5	2736.
TAKEOFF	2000.	0.30	16710.	0.405	948.	107.2	18.2	2737.
TAKEOFF	5000.	0.0	15721.	0.406	1923.	114.9	20.0	2762.
TAKEOFF	5000.	0.10	15297.	0.407	1558.	112.9	19.6	2742.
TAKEOFF	5000.	0.20	15554.	0.404	1252.	112.1	19.4	2741.
TAKEOFF	5000.	0.30	15970.	0.399	963.	110.8	19.0	2740.

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STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD +31 DEG F DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
TAKEOFF	0.	0.0	16993.	18259.	1416.	16.033	6063.
TAKEOFF	0.	0.10	16458.	17621.	1409.	15.987	6001.
TAKEOFF	0.	0.20	16738.	17821.	1406.	16.017	5996.
TAKEOFF	0.	0.30	17196.	18131.	1401.	16.059	5986.
TAKEOFF	2000.	0.0	16581.	17857.	1410.	14.961	6109.
TAKEOFF	2000.	0.10	16001.	17168.	1402.	14.930	6041.
TAKEOFF	2000.	0.20	16265.	17356.	1399.	14.957	6034.
TAKEOFF	2000.	0.30	16710.	17665.	1394.	14.998	6024.
TAKEOFF	5000.	0.0	15721.	16971.	1399.	13.480	6154.
TAKEOFF	5000.	0.10	15297.	16479.	1392.	13.465	6100.
TAKEOFF	5000.	0.20	15554.	16657.	1389.	13.479	6094.
TAKEOFF	5000.	0.30	15970.	16953.	1384.	13.519	6082.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.40	17368.	0.398	599.	103.5	17.4	2589.
MAX CRUISE	0.	0.40	14530.	0.412	362.	95.5	15.7	2489.
PART POWER	0.	0.40	11951.	0.431	159.	87.5	14.1	2389.
PART POWER	0.	0.40	9594.	0.456	-4.	79.5	12.5	2289.
PART POWER	0.	0.40	7495.	0.490	-135.	71.5	11.0	2189.
PART POWER	0.	0.40	5630.	0.538	-230.	63.3	9.5	2089.
PART POWER	0.	0.40	3985.	0.612	-297.	54.6	8.0	1989.
PART POWER	0.	0.40	2554.	0.744	-325.	45.2	6.5	1889.
PART POWER	0.	0.40	1335.	1.044	-313.	34.8	4.9	1789.
MAX CLIMB	0.	0.50	18234.	0.388	267.	101.5	16.9	2589.
MAX CRUISE	0.	0.50	15279.	0.402	53.	93.7	15.3	2489.
PART POWER	0.	0.50	12604.	0.419	-141.	85.9	13.7	2389.
PART POWER	0.	0.50	10148.	0.442	-289.	78.0	12.2	2289.
PART POWER	0.	0.50	7964.	0.473	-400.	70.3	10.7	2189.
PART POWER	0.	0.50	6013.	0.516	-465.	62.3	9.3	2089.
PART POWER	0.	0.50	4301.	0.582	-504.	53.9	7.8	1989.
PART POWER	0.	0.50	2835.	0.694	-517.	45.2	6.4	1889.
PART POWER	0.	0.50	1591.	0.925	-465.	35.7	5.0	1789.
PART POWER	0.	0.50	393.	2.210	-319.	20.3	2.8	1689.
MAX CLIMB	0.	0.60	19291.	0.377	-73.	99.1	16.3	2589.
MAX CRUISE	0.	0.60	16205.	0.390	-281.	91.4	14.7	2489.
PART POWER	0.	0.60	13394.	0.405	-455.	83.9	13.2	2389.
PART POWER	0.	0.60	10817.	0.426	-585.	76.2	11.8	2289.
PART POWER	0.	0.60	8518.	0.454	-670.	68.7	10.4	2189.
PART POWER	0.	0.60	6480.	0.493	-713.	61.1	9.0	2089.
PART POWER	0.	0.60	4691.	0.550	-732.	53.0	7.6	1989.
PART POWER	0.	0.60	3152.	0.646	-713.	44.8	6.3	1889.
PART POWER	0.	0.60	1887.	0.823	-647.	36.3	5.0	1789.
PART POWER	0.	0.60	772.	1.374	-498.	25.3	3.4	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.40	17368.	18060.	1310.	16.117	5815.
MAX CRUISE	0.	0.40	14530.	14949.	1281.	15.881	5558.
PART POWER	0.	0.40	11951.	12155.	1253.	15.665	5289.
PART POWER	0.	0.40	9594.	9641.	1227.	15.478	4999.
PART POWER	0.	0.40	7495.	7429.	1204.	15.311	4691.
PART POWER	0.	0.40	5630.	5490.	1183.	15.167	4351.
PART POWER	0.	0.40	3985.	3803.	1167.	15.035	3950.
PART POWER	0.	0.40	2554.	2361.	1160.	14.926	3459.
PART POWER	0.	0.40	1335.	1159.	1169.	14.833	2786.
MAX CLIMB	0.	0.50	18234.	18645.	1303.	16.200	5801.
MAX CRUISE	0.	0.50	15279.	15430.	1274.	15.962	5547.
PART POWER	0.	0.50	12604.	12540.	1246.	15.724	5277.
PART POWER	0.	0.50	10148.	9936.	1220.	15.521	4988.
PART POWER	0.	0.50	7964.	7654.	1196.	15.344	4683.
PART POWER	0.	0.50	6013.	5656.	1175.	15.201	4346.
PART POWER	0.	0.50	4301.	3926.	1159.	15.066	3953.
PART POWER	0.	0.50	2835.	2469.	1149.	14.937	3489.
PART POWER	0.	0.50	1591.	1277.	1151.	14.856	2880.
PART POWER	0.	0.50	393.	197.	1230.	14.752	1356.
MAX CLIMB	0.	0.60	19291.	19336.	1295.	16.309	5782.
MAX CRUISE	0.	0.60	16205.	15988.	1266.	16.044	5527.
PART POWER	0.	0.60	13394.	12979.	1238.	15.798	5260.
PART POWER	0.	0.60	10817.	10270.	1212.	15.581	4971.
PART POWER	0.	0.60	8518.	7901.	1188.	15.400	4668.
PART POWER	0.	0.60	6480.	5839.	1167.	15.247	4337.
PART POWER	0.	0.60	4691.	4059.	1150.	15.097	3954.
PART POWER	0.	0.60	3152.	2564.	1138.	14.969	3499.
PART POWER	0.	0.60	1887.	1378.	1134.	14.873	2954.
PART POWER	0.	0.60	772.	401.	1164.	14.795	2001.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.70	20565.	0.366	-441.	96.3	15.7	2589.
MAX CRUISE	0.	0.70	17325.	0.377	-638.	88.9	14.2	2489.
PART POWER	0.	0.70	14320.	0.391	-781.	81.5	12.7	2389.
PART POWER	0.	0.70	11600.	0.410	-893.	74.1	11.3	2289.
PART POWER	0.	0.70	9166.	0.434	-968.	66.8	10.0	2189.
PART POWER	0.	0.70	7040.	0.468	-996.	59.6	8.7	2089.
PART POWER	0.	0.70	5142.	0.518	-977.	51.9	7.4	1989.
PART POWER	0.	0.70	3529.	0.598	-930.	44.2	6.1	1889.
PART POWER	0.	0.70	2221.	0.736	-851.	36.6	4.9	1789.
PART POWER	0.	0.70	1163.	1.035	-706.	28.3	3.7	1689.
MAX CLIMB	0.	0.75	21264.	0.360	-625.	94.7	15.3	2589.
MAX CRUISE	0.	0.75	17918.	0.370	-811.	87.5	13.8	2489.
PART POWER	0.	0.75	14854.	0.383	-967.	80.2	12.4	2389.
PART POWER	0.	0.75	12048.	0.401	-1068.	73.0	11.1	2289.
PART POWER	0.	0.75	9550.	0.424	-1121.	65.9	9.7	2189.
PART POWER	0.	0.75	7357.	0.455	-1147.	58.7	8.5	2089.
PART POWER	0.	0.75	5399.	0.502	-1112.	51.2	7.2	1989.
PART POWER	0.	0.75	3740.	0.575	-1049.	43.8	6.0	1889.
PART POWER	0.	0.75	2401.	0.697	-954.	36.5	4.9	1789.
PART POWER	0.	0.75	1335.	0.939	-817.	29.0	3.8	1689.
MAX CLIMB	0.	0.80	22029.	0.354	-821.	93.1	14.9	2589.
MAX CRUISE	0.	0.80	18569.	0.364	-1002.	85.9	13.5	2489.
PART POWER	0.	0.80	15398.	0.376	-1144.	78.8	12.1	2389.
PART POWER	0.	0.80	12517.	0.392	-1242.	71.7	10.8	2289.
PART POWER	0.	0.80	9938.	0.414	-1281.	64.7	9.5	2189.
PART POWER	0.	0.80	7677.	0.443	-1291.	57.8	8.3	2089.
PART POWER	0.	0.80	5669.	0.486	-1251.	50.5	7.1	1989.
PART POWER	0.	0.80	3959.	0.554	-1168.	43.3	5.9	1889.
PART POWER	0.	0.80	2589.	0.661	-1063.	36.4	4.8	1789.
PART POWER	0.	0.80	1502.	0.863	-919.	29.3	3.8	1689.

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STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	0.	0.70	20565.	20129.	1287.	16.426	5757.
MAX CRUISE	0.	0.70	17325.	16635.	1257.	16.141	5505.
PART POWER	0.	0.70	14320.	13465.	1230.	15.897	5235.
PART POWER	0.	0.70	11600.	10635.	1204.	15.664	4946.
PART POWER	0.	0.70	9166.	8149.	1180.	15.455	4640.
PART POWER	0.	0.70	7040.	6027.	1158.	15.284	4316.
PART POWER	0.	0.70	5142.	4182.	1141.	15.139	3936.
PART POWER	0.	0.70	3529.	2654.	1127.	15.007	3504.
PART POWER	0.	0.70	2221.	1456.	1119.	14.896	3011.
PART POWER	0.	0.70	1163.	552.	1123.	14.827	2339.
MAX CLIMB	0.	0.75	21264.	20555.	1282.	16.506	5742.
MAX CRUISE	0.	0.75	17916.	16966.	1253.	16.216	5489.
PART POWER	0.	0.75	14854.	13723.	1225.	15.935	5220.
PART POWER	0.	0.75	12048.	10825.	1199.	15.696	4932.
PART POWER	0.	0.75	9550.	8300.	1175.	15.496	4631.
PART POWER	0.	0.75	7357.	6122.	1153.	15.306	4306.
PART POWER	0.	0.75	5399.	4243.	1136.	15.160	3928.
PART POWER	0.	0.75	3740.	2692.	1122.	15.026	3504.
PART POWER	0.	0.75	2401.	1486.	1112.	14.919	3024.
PART POWER	0.	0.75	1335.	584.	1111.	14.833	2414.
MAX CLIMB	0.	0.80	22029.	21007.	1278.	16.584	5727.
MAX CRUISE	0.	0.80	18569.	17309.	1249.	16.279	5472.
PART POWER	0.	0.80	15398.	13979.	1221.	15.996	5201.
PART POWER	0.	0.80	12517.	11013.	1195.	15.741	4915.
PART POWER	0.	0.80	9938.	8429.	1171.	15.537	4615.
PART POWER	0.	0.80	7677.	6206.	1149.	15.345	4290.
PART POWER	0.	0.80	5669.	4295.	1131.	15.184	3916.
PART POWER	0.	0.80	3959.	2720.	1116.	15.054	3498.
PART POWER	0.	0.80	2589.	1505.	1105.	14.942	3033.
PART POWER	0.	0.80	1502.	601.	1100.	14.854	2463.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	0.	0.85	22831.	0.348	-1022.	91.4	14.6	2589.
MAX CRUISE	0.	0.85	19268.	0.357	-1204.	84.4	13.2	2489.
PART POWER	0.	0.85	15990.	0.368	-1335.	77.4	11.8	2389.
PART POWER	0.	0.85	13005.	0.384	-1417.	70.4	10.5	2289.
PART POWER	0.	0.85	10348.	0.404	-1447.	63.6	9.3	2189.
PART POWER	0.	0.85	8029.	0.431	-1454.	56.8	8.1	2089.
PART POWER	0.	0.85	5966.	0.470	-1410.	49.8	6.9	1989.
PART POWER	0.	0.85	4197.	0.532	-1299.	42.8	5.8	1889.
PART POWER	0.	0.85	2795.	0.627	-1192.	36.2	4.8	1789.
PART POWER	0.	0.85	1681.	0.797	-1039.	29.6	3.8	1689.
MAX CLIMB	5000.	0.20	15063.	0.401	1240.	112.5	19.4	2589.
MAX CRUISE	5000.	0.20	12601.	0.416	974.	103.6	17.5	2489.
PART POWER	5000.	0.20	10416.	0.434	750.	95.2	15.8	2389.
PART POWER	5000.	0.20	8440.	0.457	547.	86.8	14.0	2289.
PART POWER	5000.	0.20	6640.	0.490	384.	78.3	12.4	2189.
PART POWER	5000.	0.20	5042.	0.535	249.	69.7	10.8	2089.
PART POWER	5000.	0.20	3620.	0.604	126.	60.5	9.1	1989.
PART POWER	5000.	0.20	2379.	0.723	41.	50.7	7.5	1889.
PART POWER	5000.	0.20	1279.	0.991	-29.	39.2	5.6	1789.
MAX CLIMB	5000.	0.30	15490.	0.395	954.	111.2	19.1	2589.
MAX CRUISE	5000.	0.30	12981.	0.410	710.	102.6	17.2	2489.
PART POWER	5000.	0.30	10750.	0.427	496.	94.3	15.5	2389.
PART POWER	5000.	0.30	8713.	0.449	316.	85.9	13.8	2289.
PART POWER	5000.	0.30	6879.	0.480	170.	77.6	12.2	2189.
PART POWER	5000.	0.30	5241.	0.523	54.	69.1	10.6	2089.
PART POWER	5000.	0.30	3784.	0.587	-37.	60.2	9.0	1989.
PART POWER	5000.	0.30	2516.	0.696	-107.	50.6	7.4	1889.
PART POWER	5000.	0.30	1410.	0.928	-144.	39.8	5.7	1789.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTN2	PTN2	RPM
MAX CLIMB	0.	0.85	22831.	21462.	1274.	16.670	5708.
MAX CRUISE	0.	0.85	19268.	17662.	1244.	16.344	5452.
PART POWER	0.	0.85	15990.	14242.	1217.	16.054	5182.
PART POWER	0.	0.85	13005.	11197.	1191.	15.798	4895.
PART POWER	0.	0.85	10348.	8552.	1167.	15.582	4594.
PART POWER	0.	0.85	8029.	6287.	1144.	15.373	4273.
PART POWER	0.	0.85	5966.	4339.	1126.	15.194	3906.
PART POWER	0.	0.85	4197.	2742.	1111.	15.080	3486.
PART POWER	0.	0.85	2795.	1514.	1098.	14.954	3042.
PART POWER	0.	0.85	1681.	604.	1090.	14.864	2507.
MAX CLIMB	5000.	0.20	15063.	16119.	1300.	13.469	5922.
MAX CRUISE	5000.	0.20	12601.	13376.	1271.	13.260	5648.
PART POWER	5000.	0.20	10416.	10976.	1243.	13.082	5390.
PART POWER	5000.	0.20	8440.	8819.	1216.	12.909	5112.
PART POWER	5000.	0.20	6640.	6889.	1191.	12.771	4813.
PART POWER	5000.	0.20	5042.	5194.	1169.	12.652	4488.
PART POWER	5000.	0.20	3620.	3693.	1152.	12.533	4107.
PART POWER	5000.	0.20	2379.	2405.	1141.	12.444	3650.
PART POWER	5000.	0.20	1279.	1272.	1148.	12.355	3004.
MAX CLIMB	5000.	0.30	15490.	16434.	1297.	13.514	5913.
MAX CRUISE	5000.	0.30	12981.	13650.	1267.	13.304	5648.
PART POWER	5000.	0.30	10750.	11196.	1239.	13.109	5386.
PART POWER	5000.	0.30	8713.	8989.	1212.	12.941	5108.
PART POWER	5000.	0.30	6879.	7027.	1187.	12.792	4811.
PART POWER	5000.	0.30	5241.	5299.	1164.	12.668	4488.
PART POWER	5000.	0.30	3784.	3778.	1146.	12.556	4115.
PART POWER	5000.	0.30	2516.	2468.	1136.	12.452	3660.
PART POWER	5000.	0.30	1410.	1345.	1138.	12.366	3056.

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STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	5000.	0.40	16087.	0.388	670.	109.5	18.7	2589.
MAX CRUISE	5000.	0.40	13516.	0.402	440.	101.1	16.9	2489.
PART POWER	5000.	0.40	11213.	0.418	245.	92.9	15.2	2389.
PART POWER	5000.	0.40	9106.	0.439	84.	84.7	13.5	2289.
PART POWER	5000.	0.40	7208.	0.467	-48.	76.5	12.0	2189.
PART POWER	5000.	0.40	5520.	0.507	-136.	68.4	10.4	2089.
PART POWER	5000.	0.40	4006.	0.566	-212.	59.5	8.9	1989.
PART POWER	5000.	0.40	2709.	0.663	-265.	50.4	7.3	1889.
PART POWER	5000.	0.40	1581.	0.859	-267.	40.3	5.7	1789.
MAX CLIMB	5000.	0.50	16850.	0.380	389.	107.3	18.1	2589.
MAX CRUISE	5000.	0.50	14202.	0.392	169.	99.1	16.4	2489.
PART POWER	5000.	0.50	11815.	0.406	-17.	91.2	14.8	2389.
PART POWER	5000.	0.50	9611.	0.426	-161.	83.2	13.2	2289.
PART POWER	5000.	0.50	7627.	0.452	-272.	75.2	11.6	2189.
PART POWER	5000.	0.50	5872.	0.488	-357.	67.2	10.2	2089.
PART POWER	5000.	0.50	4305.	0.541	-407.	58.7	8.7	1989.
PART POWER	5000.	0.50	2950.	0.627	-425.	50.0	7.2	1889.
PART POWER	5000.	0.50	1803.	0.786	-417.	40.7	5.7	1789.
PART POWER	5000.	0.50	835.	1.203	-346.	29.9	4.1	1689.
MAX CLIMB	5000.	0.60	17818.	0.370	92.	104.7	17.5	2589.
MAX CRUISE	5000.	0.60	15059.	0.381	-117.	96.9	15.9	2489.
PART POWER	5000.	0.60	12538.	0.394	-285.	89.1	14.3	2389.
PART POWER	5000.	0.60	10236.	0.411	-424.	81.3	12.7	2289.
PART POWER	5000.	0.60	8152.	0.435	-521.	73.5	11.3	2189.
PART POWER	5000.	0.60	6297.	0.468	-573.	65.8	9.8	2089.
PART POWER	5000.	0.60	4668.	0.514	-609.	57.7	8.4	1989.
PART POWER	5000.	0.60	3246.	0.589	-607.	49.3	7.0	1889.
PART POWER	5000.	0.60	2042.	0.722	-557.	40.6	5.7	1789.
PART POWER	5000.	0.60	1086.	1.003	-486.	31.6	4.3	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	5000.	0.40	16087.	16862.	1291.	13.573	5900.
MAX CRUISE	5000.	0.40	13516.	14016.	1262.	13.353	5639.
PART POWER	5000.	0.40	11213.	11497.	1233.	13.154	5380.
PART POWER	5000.	0.40	9106.	9226.	1206.	12.979	5101.
PART POWER	5000.	0.40	7208.	7207.	1181.	12.822	4805.
PART POWER	5000.	0.40	5520.	5446.	1158.	12.702	4490.
PART POWER	5000.	0.40	4006.	3878.	1140.	12.578	4112.
PART POWER	5000.	0.40	2709.	2551.	1128.	12.461	3673.
PART POWER	5000.	0.40	1581.	1428.	1127.	12.383	3107.
MAX CLIMB	5000.	0.50	16850.	17400.	1285.	13.657	5882.
MAX CRUISE	5000.	0.50	14202.	14473.	1255.	13.420	5627.
PART POWER	5000.	0.50	11815.	11871.	1226.	13.205	5368.
PART POWER	5000.	0.50	9611.	9514.	1199.	13.023	5090.
PART POWER	5000.	0.50	7627.	7426.	1174.	12.863	4794.
PART POWER	5000.	0.50	5872.	5600.	1151.	12.717	4478.
PART POWER	5000.	0.50	4305.	4001.	1132.	12.592	4111.
PART POWER	5000.	0.50	2950.	2646.	1119.	12.486	3688.
PART POWER	5000.	0.50	1803.	1520.	1114.	12.389	3162.
PART POWER	5000.	0.50	835.	612.	1130.	12.329	2390.
MAX CLIMB	5000.	0.60	17818.	18060.	1277.	13.749	5862.
MAX CRUISE	5000.	0.60	15059.	15027.	1247.	13.499	5611.
PART POWER	5000.	0.60	12538.	12302.	1218.	13.279	5352.
PART POWER	5000.	0.60	10236.	9850.	1191.	13.072	5074.
PART POWER	5000.	0.60	8152.	7675.	1166.	12.898	4778.
PART POWER	5000.	0.60	6297.	5783.	1143.	12.762	4464.
PART POWER	5000.	0.60	4668.	4140.	1123.	12.623	4108.
PART POWER	5000.	0.60	3246.	2742.	1109.	12.507	3689.
PART POWER	5000.	0.60	2042.	1597.	1102.	12.429	3190.
PART POWER	5000.	0.60	1086.	717.	1105.	12.348	2547.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.20	13838.	0.392	1206.	118.9	20.9	2589.
MAX CRUISE	10000.	0.20	11694.	0.404	967.	110.0	18.9	2489.
PART POWER	10000.	0.20	9710.	0.421	750.	101.1	17.0	2389.
PART POWER	10000.	0.20	7931.	0.441	564.	92.4	15.2	2289.
PART POWER	10000.	0.20	6330.	0.468	404.	83.8	13.5	2189.
PART POWER	10000.	0.20	4892.	0.505	272.	75.1	11.8	2089.
PART POWER	10000.	0.20	3597.	0.561	167.	65.9	10.1	1989.
PART POWER	10000.	0.20	2477.	0.650	72.	56.2	8.4	1889.
PART POWER	10000.	0.20	1498.	0.822	3.	45.5	6.6	1789.
PART POWER	10000.	0.20	559.	1.450	-45.	30.5	4.4	1689.
MAX CLIMB	10000.	0.30	14229.	0.387	962.	117.6	20.5	2589.
MAX CRUISE	10000.	0.30	12039.	0.399	729.	108.9	18.6	2489.
PART POWER	10000.	0.30	10000.	0.414	533.	100.0	16.7	2389.
PART POWER	10000.	0.30	8184.	0.434	361.	91.5	15.0	2289.
PART POWER	10000.	0.30	6547.	0.459	217.	83.0	13.3	2189.
PART POWER	10000.	0.30	5070.	0.494	103.	74.4	11.6	2089.
PART POWER	10000.	0.30	3753.	0.547	13.	65.4	10.0	1989.
PART POWER	10000.	0.30	2601.	0.630	-58.	55.9	8.3	1889.
PART POWER	10000.	0.30	1612.	0.783	-111.	45.8	6.6	1789.
PART POWER	10000.	0.30	717.	1.225	-122.	32.9	4.7	1689.
MAX CLIMB	10000.	0.40	14774.	0.380	722.	115.8	20.1	2589.
MAX CRUISE	10000.	0.40	12512.	0.391	498.	107.2	18.2	2489.
PART POWER	10000.	0.40	10419.	0.406	315.	98.6	16.4	2389.
PART POWER	10000.	0.40	8539.	0.424	160.	90.2	14.7	2289.
PART POWER	10000.	0.40	6852.	0.447	26.	81.9	13.0	2189.
PART POWER	10000.	0.40	5326.	0.480	-76.	73.4	11.4	2089.
PART POWER	10000.	0.40	3957.	0.529	-138.	64.7	9.8	1989.
PART POWER	10000.	0.40	2770.	0.605	-192.	55.5	8.2	1889.
PART POWER	10000.	0.40	1756.	0.739	-224.	45.6	6.6	1789.
PART POWER	10000.	0.40	869.	1.074	-212.	34.4	4.8	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.20	13838.	14898.	1282.	11.271	6007.
MAX CRUISE	10000.	0.20	11694.	12491.	1252.	11.089	5745.
PART POWER	10000.	0.20	9710.	10286.	1223.	10.915	5475.
PART POWER	10000.	0.20	7931.	8336.	1195.	10.765	5206.
PART POWER	10000.	0.20	6330.	6600.	1169.	10.630	4919.
PART POWER	10000.	0.20	4892.	5062.	1145.	10.515	4609.
PART POWER	10000.	0.20	3597.	3696.	1125.	10.422	4256.
PART POWER	10000.	0.20	2477.	2519.	1111.	10.325	3842.
PART POWER	10000.	0.20	1498.	1504.	1106.	10.248	3314.
PART POWER	10000.	0.20	559.	546.	1144.	10.171	2340.
MAX CLIMB	10000.	0.30	14229.	15202.	1279.	11.315	6000.
MAX CRUISE	10000.	0.30	12039.	12738.	1248.	11.116	5737.
PART POWER	10000.	0.30	10000.	10486.	1219.	10.946	5468.
PART POWER	10000.	0.30	8184.	8499.	1191.	10.789	5201.
PART POWER	10000.	0.30	6547.	6731.	1165.	10.649	4916.
PART POWER	10000.	0.30	5070.	5160.	1141.	10.532	4606.
PART POWER	10000.	0.30	3753.	3777.	1120.	10.432	4259.
PART POWER	10000.	0.30	2601.	2579.	1105.	10.338	3850.
PART POWER	10000.	0.30	1612.	1562.	1099.	10.250	3347.
PART POWER	10000.	0.30	717.	665.	1120.	10.185	2542.
MAX CLIMB	10000.	0.40	14774.	15615.	1273.	11.373	5987.
MAX CRUISE	10000.	0.40	12512.	13073.	1243.	11.163	5726.
PART POWER	10000.	0.40	10419.	10769.	1214.	10.985	5461.
PART POWER	10000.	0.40	8539.	8726.	1185.	10.826	5195.
PART POWER	10000.	0.40	6852.	6909.	1159.	10.675	4910.
PART POWER	10000.	0.40	5326.	5295.	1135.	10.546	4601.
PART POWER	10000.	0.40	3957.	3878.	1115.	10.457	4258.
PART POWER	10000.	0.40	2770.	2656.	1099.	10.357	3856.
PART POWER	10000.	0.40	1756.	1627.	1090.	10.266	3369.
PART POWER	10000.	0.40	869.	755.	1102.	10.201	2662.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.50	15476.	0.372	481.	113.5	19.5	2589.
MAX CRUISE	10000.	0.50	13097.	0.383	271.	105.0	17.7	2489.
PART POWER	10000.	0.50	10961.	0.396	93.	96.8	16.0	2389.
PART POWER	10000.	0.50	9008.	0.412	-52.	88.6	14.3	2289.
PART POWER	10000.	0.50	7242.	0.434	-172.	80.4	12.7	2189.
PART POWER	10000.	0.50	5652.	0.464	-260.	72.2	11.1	2089.
PART POWER	10000.	0.50	4232.	0.508	-310.	63.8	9.6	1989.
PART POWER	10000.	0.50	2988.	0.576	-336.	54.8	8.0	1889.
PART POWER	10000.	0.50	1941.	0.692	-349.	45.7	6.5	1789.
PART POWER	10000.	0.50	1048.	0.945	-318.	35.5	4.9	1689.
MAX CLIMB	10000.	0.60	16338.	0.363	233.	110.8	18.9	2589.
MAX CRUISE	10000.	0.60	13855.	0.373	30.	102.5	17.1	2489.
PART POWER	10000.	0.60	11623.	0.384	-137.	94.5	15.4	2389.
PART POWER	10000.	0.60	9571.	0.399	-272.	86.5	13.8	2289.
PART POWER	10000.	0.60	7702.	0.419	-372.	78.5	12.2	2189.
PART POWER	10000.	0.60	6035.	0.446	-443.	70.6	10.7	2089.
PART POWER	10000.	0.60	4557.	0.485	-489.	62.5	9.3	1989.
PART POWER	10000.	0.60	3262.	0.544	-500.	54.0	7.8	1889.
PART POWER	10000.	0.60	2159.	0.644	-486.	45.3	6.4	1789.
PART POWER	10000.	0.60	1249.	0.838	-439.	36.2	5.0	1689.
MAX CLIMB	10000.	0.70	17344.	0.353	-18.	107.5	18.1	2589.
MAX CRUISE	10000.	0.70	14764.	0.362	-222.	99.6	16.4	2489.
PART POWER	10000.	0.70	12401.	0.372	-379.	91.8	14.8	2389.
PART POWER	10000.	0.70	10231.	0.385	-503.	84.1	13.2	2289.
PART POWER	10000.	0.70	8259.	0.403	-594.	76.3	11.8	2189.
PART POWER	10000.	0.70	6492.	0.427	-645.	68.6	10.3	2089.
PART POWER	10000.	0.70	4942.	0.461	-680.	60.9	8.9	1989.
PART POWER	10000.	0.70	3575.	0.513	-672.	52.8	7.5	1889.
PART POWER	10000.	0.70	2411.	0.598	-636.	44.6	6.2	1789.
PART POWER	10000.	0.70	1474.	0.748	-578.	36.5	4.9	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.50	15476.	16135.	1267.	11.449	5969.
MAX CRUISE	10000.	0.50	13097.	13479.	1236.	11.233	5708.
PART POWER	10000.	0.50	10961.	11127.	1207.	11.037	5452.
PART POWER	10000.	0.50	9006.	9013.	1179.	10.866	5185.
PART POWER	10000.	0.50	7242.	7127.	1152.	10.708	4901.
PART POWER	10000.	0.50	5652.	5459.	1128.	10.575	4595.
PART POWER	10000.	0.50	4232.	4002.	1107.	10.472	4256.
PART POWER	10000.	0.50	2988.	2745.	1091.	10.379	3859.
PART POWER	10000.	0.50	1941.	1700.	1081.	10.283	3392.
PART POWER	10000.	0.50	1048.	841.	1084.	10.215	2768.
MAX CLIMB	10000.	0.60	16338.	16753.	1260.	11.538	5945.
MAX CRUISE	10000.	0.60	13855.	13991.	1229.	11.309	5689.
PART POWER	10000.	0.60	11623.	11548.	1199.	11.104	5437.
PART POWER	10000.	0.60	9571.	9340.	1171.	10.920	5169.
PART POWER	10000.	0.60	7702.	7368.	1145.	10.761	4883.
PART POWER	10000.	0.60	6035.	5638.	1121.	10.623	4579.
PART POWER	10000.	0.60	4557.	4132.	1099.	10.497	4245.
PART POWER	10000.	0.60	3262.	2843.	1082.	10.395	3859.
PART POWER	10000.	0.60	2159.	1769.	1070.	10.304	3406.
PART POWER	10000.	0.60	1249.	915.	1068.	10.232	2843.
MAX CLIMB	10000.	0.70	17344.	17457.	1252.	11.657	5916.
MAX CRUISE	10000.	0.70	14764.	14585.	1221.	11.401	5666.
PART POWER	10000.	0.70	12401.	12017.	1191.	11.184	5413.
PART POWER	10000.	0.70	10231.	9700.	1163.	10.987	5144.
PART POWER	10000.	0.70	8259.	7637.	1137.	10.813	4859.
PART POWER	10000.	0.70	6492.	5831.	1112.	10.672	4558.
PART POWER	10000.	0.70	4942.	4269.	1090.	10.532	4227.
PART POWER	10000.	0.70	3575.	2935.	1073.	10.424	3845.
PART POWER	10000.	0.70	2411.	1830.	1060.	10.331	3411.
PART POWER	10000.	0.70	1474.	970.	1053.	10.249	2895.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	10000.	0.75	17901.	0.348	-150.	105.7	17.7	2589.
MAX CRUISE	10000.	0.75	15264.	0.356	-351.	98.0	16.1	2489.
PART POWER	10000.	0.75	12839.	0.365	-510.	90.4	14.5	2389.
PART POWER	10000.	0.75	10605.	0.378	-628.	82.8	13.0	2289.
PART POWER	10000.	0.75	8569.	0.395	-711.	75.1	11.5	2189.
PART POWER	10000.	0.75	6755.	0.416	-760.	67.6	10.1	2089.
PART POWER	10000.	0.75	5153.	0.449	-779.	60.0	8.7	1989.
PART POWER	10000.	0.75	3751.	0.497	-766.	52.1	7.4	1889.
PART POWER	10000.	0.75	2556.	0.575	-721.	44.2	6.1	1789.
PART POWER	10000.	0.75	1596.	0.708	-651.	36.5	4.9	1689.
MAX CLIMB	10000.	0.80	18517.	0.343	-288.	104.0	17.3	2589.
MAX CRUISE	10000.	0.80	15794.	0.350	-480.	96.3	15.7	2489.
PART POWER	10000.	0.80	13299.	0.359	-638.	88.9	14.1	2389.
PART POWER	10000.	0.80	10990.	0.371	-751.	81.3	12.7	2289.
PART POWER	10000.	0.80	8893.	0.387	-829.	73.8	11.2	2189.
PART POWER	10000.	0.80	7034.	0.408	-879.	66.5	9.9	2089.
PART POWER	10000.	0.80	5382.	0.438	-887.	59.0	8.5	1989.
PART POWER	10000.	0.80	3942.	0.482	-870.	51.4	7.3	1889.
PART POWER	10000.	0.80	2713.	0.552	-818.	43.8	6.0	1789.
PART POWER	10000.	0.80	1724.	0.671	-732.	36.3	4.9	1689.
MAX CLIMB	10000.	0.85	19169.	0.338	-426.	102.1	16.8	2589.
MAX CRUISE	10000.	0.85	16381.	0.344	-623.	94.6	15.3	2489.
PART POWER	10000.	0.85	13789.	0.352	-774.	87.2	13.8	2389.
PART POWER	10000.	0.85	11414.	0.363	-867.	79.9	12.3	2289.
PART POWER	10000.	0.85	9248.	0.378	-958.	72.5	10.9	2189.
PART POWER	10000.	0.85	7312.	0.398	-987.	65.3	9.6	2089.
PART POWER	10000.	0.85	5626.	0.426	-1003.	58.0	8.3	1989.
PART POWER	10000.	0.85	4129.	0.467	-960.	50.6	7.1	1889.
PART POWER	10000.	0.85	2871.	0.531	-906.	43.2	5.9	1789.
PART POWER	10000.	0.85	1863.	0.636	-821.	36.2	4.8	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	10000.	0.75	17901.	17830.	1248.	11.721	5898.
MAX CRUISE	10000.	0.75	15264.	14902.	1217.	11.457	5652.
PART POWER	10000.	0.75	12839.	12266.	1187.	11.225	5400.
PART POWER	10000.	0.75	10605.	9894.	1159.	11.022	5131.
PART POWER	10000.	0.75	8569.	7777.	1133.	10.844	4845.
PART POWER	10000.	0.75	6755.	5931.	1108.	10.691	4544.
PART POWER	10000.	0.75	5153.	4336.	1086.	10.555	4215.
PART POWER	10000.	0.75	3751.	2978.	1068.	10.438	3839.
PART POWER	10000.	0.75	2556.	1857.	1055.	10.341	3409.
PART POWER	10000.	0.75	1596.	991.	1046.	10.263	2913.
MAX CLIMB	10000.	0.80	18517.	18239.	1244.	11.789	5881.
MAX CRUISE	10000.	0.80	15794.	15232.	1213.	11.523	5637.
PART POWER	10000.	0.80	13299.	12526.	1183.	11.278	5384.
PART POWER	10000.	0.80	10990.	10086.	1155.	11.068	5114.
PART POWER	10000.	0.80	8893.	7915.	1128.	10.880	4827.
PART POWER	10000.	0.80	7034.	6029.	1104.	10.711	4528.
PART POWER	10000.	0.80	5382.	4400.	1082.	10.574	4199.
PART POWER	10000.	0.80	3942.	3016.	1064.	10.447	3829.
PART POWER	10000.	0.80	2713.	1878.	1049.	10.344	3406.
PART POWER	10000.	0.80	1724.	1004.	1039.	10.272	2925.
MAX CLIMB	10000.	0.85	19169.	18668.	1240.	11.868	5863.
MAX CRUISE	10000.	0.85	16381.	15584.	1209.	11.582	5620.
PART POWER	10000.	0.85	13789.	12790.	1179.	11.332	5365.
PART POWER	10000.	0.85	11414.	10285.	1150.	11.107	5095.
PART POWER	10000.	0.85	9248.	8058.	1124.	10.913	4810.
PART POWER	10000.	0.85	7312.	6120.	1100.	10.753	4509.
PART POWER	10000.	0.85	5626.	4459.	1078.	10.591	4182.
PART POWER	10000.	0.85	4129.	3049.	1060.	10.479	3811.
PART POWER	10000.	0.85	2871.	1893.	1044.	10.364	3397.
PART POWER	10000.	0.85	1863.	1012.	1032.	10.280	2937.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	15000.	0.30	12928.	0.379	958.	124.1	22.1	2589.
MAX CRUISE	15000.	0.30	11039.	0.389	742.	115.4	20.1	2489.
PART POWER	15000.	0.30	9243.	0.403	554.	106.3	18.1	2389.
PART POWER	15000.	0.30	7612.	0.420	393.	97.4	16.2	2289.
PART POWER	15000.	0.30	6157.	0.441	254.	88.6	14.4	2189.
PART POWER	15000.	0.30	4837.	0.470	143.	79.8	12.7	2089.
PART POWER	15000.	0.30	3654.	0.513	53.	70.8	11.0	1989.
PART POWER	15000.	0.30	2611.	0.580	-15.	61.3	9.3	1889.
PART POWER	15000.	0.30	1718.	0.691	-68.	51.3	7.6	1789.
PART POWER	15000.	0.30	921.	0.946	-93.	39.6	5.7	1689.
MAX CLIMB	15000.	0.40	13431.	0.373	750.	122.3	21.6	2589.
MAX CRUISE	15000.	0.40	11458.	0.383	548.	113.6	19.7	2489.
PART POWER	15000.	0.40	9603.	0.395	370.	104.7	17.7	2389.
PART POWER	15000.	0.40	7937.	0.411	217.	96.0	15.9	2289.
PART POWER	15000.	0.40	6427.	0.431	95.	87.4	14.1	2189.
PART POWER	15000.	0.40	5068.	0.458	-8.	78.8	12.4	2089.
PART POWER	15000.	0.40	3845.	0.498	-86.	69.9	10.8	1989.
PART POWER	15000.	0.40	2766.	0.559	-135.	60.7	9.1	1889.
PART POWER	15000.	0.40	1847.	0.659	-171.	51.1	7.5	1789.
PART POWER	15000.	0.40	1043.	0.870	-184.	40.3	5.7	1689.
MAX CLIMB	15000.	0.50	14060.	0.366	550.	119.9	21.0	2589.
MAX CRUISE	15000.	0.50	12026.	0.374	348.	111.5	19.1	2489.
PART POWER	15000.	0.50	10079.	0.386	182.	102.6	17.2	2389.
PART POWER	15000.	0.50	8351.	0.400	41.	94.2	15.5	2289.
PART POWER	15000.	0.50	6781.	0.419	-74.	85.8	13.8	2189.
PART POWER	15000.	0.50	5361.	0.444	-164.	77.4	12.1	2089.
PART POWER	15000.	0.50	4088.	0.480	-227.	68.8	10.5	1989.
PART POWER	15000.	0.50	2968.	0.535	-263.	59.9	8.9	1889.
PART POWER	15000.	0.50	2012.	0.623	-286.	50.7	7.3	1789.
PART POWER	15000.	0.50	1185.	0.799	-274.	40.6	5.7	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.30	12928.	13921.	1261.	9.426	6090.
MAX CRUISE	15000.	0.30	11039.	11766.	1229.	9.244	5825.
PART POWER	15000.	0.30	9243.	9758.	1200.	9.083	5557.
PART POWER	15000.	0.30	7612.	7959.	1171.	8.941	5288.
PART POWER	15000.	0.30	6157.	6372.	1144.	8.810	5014.
PART POWER	15000.	0.30	4837.	4956.	1118.	8.702	4717.
PART POWER	15000.	0.30	3654.	3704.	1096.	8.608	4388.
PART POWER	15000.	0.30	2611.	2613.	1078.	8.527	4012.
PART POWER	15000.	0.30	1718.	1689.	1066.	8.451	3565.
PART POWER	15000.	0.30	921.	880.	1071.	8.391	2933.
MAX CLIMB	15000.	0.40	13431.	14315.	1256.	9.473	6073.
MAX CRUISE	15000.	0.40	11458.	12080.	1224.	9.292	5812.
PART POWER	15000.	0.40	9603.	10011.	1194.	9.124	5545.
PART POWER	15000.	0.40	7937.	8175.	1165.	8.970	5282.
PART POWER	15000.	0.40	6427.	6541.	1138.	8.841	5007.
PART POWER	15000.	0.40	5068.	5089.	1113.	8.724	4713.
PART POWER	15000.	0.40	3845.	3802.	1090.	8.623	4386.
PART POWER	15000.	0.40	2766.	2688.	1072.	8.542	4014.
PART POWER	15000.	0.40	1847.	1748.	1059.	8.465	3579.
PART POWER	15000.	0.40	1043.	942.	1059.	8.394	2992.
MAX CLIMB	15000.	0.50	14060.	14806.	1250.	9.546	6052.
MAX CRUISE	15000.	0.50	12026.	12495.	1218.	9.344	5798.
PART POWER	15000.	0.50	10079.	10338.	1188.	9.172	5531.
PART POWER	15000.	0.50	8351.	8445.	1159.	9.014	5272.
PART POWER	15000.	0.50	6781.	6753.	1132.	8.875	4997.
PART POWER	15000.	0.50	5361.	5247.	1106.	8.751	4702.
PART POWER	15000.	0.50	4088.	3921.	1083.	8.647	4380.
PART POWER	15000.	0.50	2968.	2777.	1065.	8.561	4015.
PART POWER	15000.	0.50	2012.	1813.	1051.	8.476	3591.
PART POWER	15000.	0.50	1185.	1004.	1047.	8.412	3041.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	15000.	0.60	14832.	0.357	350.	117.0	20.3	2589.
MAX CRUISE	15000.	0.60	12681.	0.365	149.	108.7	18.4	2489.
PART POWER	15000.	0.60	10673.	0.375	-14.	100.2	16.7	2389.
PART POWER	15000.	0.60	8863.	0.388	-145.	92.0	15.0	2289.
PART POWER	15000.	0.60	7211.	0.405	-249.	83.9	13.3	2189.
PART POWER	15000.	0.60	5717.	0.428	-321.	75.7	11.7	2089.
PART POWER	15000.	0.60	4388.	0.460	-382.	67.4	10.2	1989.
PART POWER	15000.	0.60	3217.	0.509	-409.	58.8	8.7	1889.
PART POWER	15000.	0.60	2207.	0.586	-403.	50.0	7.2	1789.
PART POWER	15000.	0.60	1357.	0.729	-383.	40.8	5.7	1689.
MAX CLIMB	15000.	0.70	15761.	0.348	140.	113.8	19.5	2589.
MAX CRUISE	15000.	0.70	13460.	0.355	-54.	105.5	17.7	2489.
PART POWER	15000.	0.70	11384.	0.364	-218.	97.5	16.0	2389.
PART POWER	15000.	0.70	9466.	0.375	-341.	89.5	14.4	2289.
PART POWER	15000.	0.70	7718.	0.390	-438.	81.5	12.8	2189.
PART POWER	15000.	0.70	6139.	0.411	-505.	73.6	11.3	2089.
PART POWER	15000.	0.70	4734.	0.440	-544.	65.6	9.8	1989.
PART POWER	15000.	0.70	3502.	0.482	-558.	57.4	8.4	1889.
PART POWER	15000.	0.70	2443.	0.548	-543.	49.1	7.0	1789.
PART POWER	15000.	0.70	1552.	0.666	-500.	40.6	5.6	1689.
MAX CLIMB	15000.	0.75	16267.	0.343	34.	111.9	19.1	2589.
MAX CRUISE	15000.	0.75	13910.	0.350	-163.	103.8	17.3	2489.
PART POWER	15000.	0.75	11775.	0.358	-321.	95.9	15.6	2389.
PART POWER	15000.	0.75	9800.	0.369	-444.	88.1	14.0	2289.
PART POWER	15000.	0.75	7997.	0.383	-535.	80.2	12.5	2189.
PART POWER	15000.	0.75	6369.	0.402	-597.	72.4	11.0	2089.
PART POWER	15000.	0.75	4930.	0.429	-631.	64.7	9.6	1989.
PART POWER	15000.	0.75	3662.	0.469	-638.	56.7	8.2	1889.
PART POWER	15000.	0.75	2572.	0.530	-615.	48.6	6.8	1789.
PART POWER	15000.	0.75	1658.	0.636	-567.	40.4	5.5	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.60	14832.	15396.	1243.	9.638	6028.
MAX CRUISE	15000.	0.60	12681.	12957.	1211.	9.419	5772.
PART POWER	15000.	0.60	10673.	10733.	1181.	9.231	5515.
PART POWER	15000.	0.60	8863.	8764.	1152.	9.066	5257.
PART POWER	15000.	0.60	7211.	6998.	1124.	8.918	4982.
PART POWER	15000.	0.60	5717.	5433.	1094.	8.797	4690.
PART POWER	15000.	0.60	4388.	4056.	1076.	8.672	4368.
PART POWER	15000.	0.60	3217.	2873.	1056.	8.574	4009.
PART POWER	15000.	0.60	2207.	1881.	1042.	8.500	3592.
PART POWER	15000.	0.60	1357.	1064.	1035.	8.424	3082.
MAX CLIMB	15000.	0.70	15761.	16085.	1235.	9.744	5999.
MAX CRUISE	15000.	0.70	13460.	13495.	1204.	9.515	5744.
PART POWER	15000.	0.70	11384.	11193.	1173.	9.305	5494.
PART POWER	15000.	0.70	9406.	9120.	1144.	9.127	5235.
PART POWER	15000.	0.70	7718.	7265.	1116.	8.967	4959.
PART POWER	15000.	0.70	6139.	5623.	1091.	8.828	4665.
PART POWER	15000.	0.70	4734.	4194.	1068.	8.709	4349.
PART POWER	15000.	0.70	3502.	2969.	1048.	8.602	3996.
PART POWER	15000.	0.70	2443.	1945.	1032.	8.515	3589.
PART POWER	15000.	0.70	1552.	1113.	1023.	8.444	3106.
MAX CLIMB	15000.	0.75	16267.	16451.	1232.	9.807	5982.
MAX CRUISE	15000.	0.75	13910.	13796.	1200.	9.564	5729.
PART POWER	15000.	0.75	11775.	11438.	1169.	9.350	5481.
PART POWER	15000.	0.75	9800.	9308.	1140.	9.163	5221.
PART POWER	15000.	0.75	7997.	7404.	1112.	8.998	4945.
PART POWER	15000.	0.75	6369.	5721.	1087.	8.854	4651.
PART POWER	15000.	0.75	4930.	4266.	1064.	8.728	4338.
PART POWER	15000.	0.75	3662.	3016.	1043.	8.617	3984.
PART POWER	15000.	0.75	2572.	1973.	1027.	8.527	3565.
PART POWER	15000.	0.75	1658.	1131.	1017.	8.450	3111.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WA12	OPR	CET
MAX CLIMB	15000.	0.80	16804.	0.339	-74.	110.0	18.6	2589.
MAX CRUISE	15000.	0.80	14383.	0.345	-272.	102.0	16.9	2489.
PART POWER	15000.	0.80	12195.	0.352	-452.	94.3	15.3	2389.
PART POWER	15000.	0.80	10154.	0.362	-549.	86.5	13.7	2289.
PART POWER	15000.	0.80	8296.	0.376	-637.	78.9	12.2	2189.
PART POWER	15000.	0.80	6619.	0.394	-693.	71.2	10.8	2089.
PART POWER	15000.	0.80	5140.	0.419	-725.	63.6	9.4	1989.
PART POWER	15000.	0.80	3831.	0.456	-721.	55.8	8.0	1889.
PART POWER	15000.	0.80	2709.	0.512	-692.	47.9	6.7	1789.
PART POWER	15000.	0.80	1774.	0.608	-637.	40.1	5.5	1689.
MAX CLIMB	15000.	0.85	17373.	0.334	-186.	108.0	18.1	2589.
MAX CRUISE	15000.	0.85	14900.	0.339	-388.	100.2	16.5	2489.
PART POWER	15000.	0.85	12636.	0.346	-543.	92.6	14.9	2389.
PART POWER	15000.	0.85	10536.	0.355	-662.	85.0	13.4	2289.
PART POWER	15000.	0.85	8608.	0.368	-742.	77.4	11.9	2189.
PART POWER	15000.	0.85	6883.	0.385	-792.	69.9	10.5	2089.
PART POWER	15000.	0.85	5358.	0.408	-821.	62.5	9.1	1989.
PART POWER	15000.	0.85	4014.	0.442	-811.	54.9	7.8	1889.
PART POWER	15000.	0.85	2855.	0.495	-775.	47.3	6.6	1789.
PART POWER	15000.	0.85	1893.	0.581	-711.	39.7	5.4	1689.
MAX CLIMB	20000.	0.30	11717.	0.372	941.	131.5	23.8	2589.
MAX CRUISE	20000.	0.30	9997.	0.382	743.	122.1	21.7	2489.
PART POWER	20000.	0.30	8467.	0.392	566.	113.0	19.6	2389.
PART POWER	20000.	0.30	7011.	0.407	413.	103.6	17.6	2289.
PART POWER	20000.	0.30	5712.	0.426	284.	94.5	15.7	2189.
PART POWER	20000.	0.30	4542.	0.451	179.	85.4	13.8	2089.
PART POWER	20000.	0.30	3501.	0.486	84.	76.4	12.1	1989.
PART POWER	20000.	0.30	2569.	0.539	19.	66.9	10.3	1889.
PART POWER	20000.	0.30	1755.	0.626	-32.	56.8	8.5	1789.
PART POWER	20000.	0.30	1050.	0.793	-68.	45.7	6.7	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	15000.	0.80	16804.	16834.	1228.	9.877	5962.
MAX CRUISE	15000.	0.80	14383.	14106.	1196.	9.622	5713.
PART POWER	15000.	0.80	12195.	11691.	1165.	9.396	5466.
PART POWER	15000.	0.80	10154.	9501.	1136.	9.203	5205.
PART POWER	15000.	0.80	8296.	7548.	1108.	9.031	4929.
PART POWER	15000.	0.80	6619.	5823.	1083.	8.881	4636.
PART POWER	15000.	0.80	5140.	4335.	1059.	8.745	4323.
PART POWER	15000.	0.80	3831.	3060.	1039.	8.635	3972.
PART POWER	15000.	0.80	2709.	1998.	1023.	8.539	3577.
PART POWER	15000.	0.80	1774.	1147.	1011.	8.460	3119.
MAX CLIMB	15000.	0.85	17373.	17230.	1225.	9.952	5941.
MAX CRUISE	15000.	0.85	14900.	14438.	1192.	9.680	5696.
PART POWER	15000.	0.85	12636.	11952.	1161.	9.449	5450.
PART POWER	15000.	0.85	10536.	9700.	1132.	9.243	5187.
PART POWER	15000.	0.85	8608.	7687.	1105.	9.067	4909.
PART POWER	15000.	0.85	6883.	5925.	1079.	8.911	4618.
PART POWER	15000.	0.85	5358.	4400.	1055.	8.767	4306.
PART POWER	15000.	0.85	4014.	3101.	1035.	8.651	3956.
PART POWER	15000.	0.85	2855.	2016.	1018.	8.548	3565.
PART POWER	15000.	0.85	1893.	1155.	1005.	8.468	3120.
MAX CLIMB	20000.	0.30	11717.	12719.	1244.	7.806	6246.
MAX CRUISE	20000.	0.30	9997.	10746.	1212.	7.645	5914.
PART POWER	20000.	0.30	8467.	9005.	1181.	7.494	5648.
PART POWER	20000.	0.30	7011.	7382.	1152.	7.361	5372.
PART POWER	20000.	0.30	5712.	5955.	1123.	7.246	5102.
PART POWER	20000.	0.30	4542.	4690.	1097.	7.148	4816.
PART POWER	20000.	0.30	3501.	3571.	1073.	7.051	4504.
PART POWER	20000.	0.30	2569.	2592.	1052.	6.980	4157.
PART POWER	20000.	0.30	1755.	1745.	1038.	6.916	3744.
PART POWER	20000.	0.30	1050.	1021.	1033.	6.855	3219.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.40	12132.	0.367	774.	129.4	23.3	2589.
MAX CRUISE	20000.	0.40	10384.	0.375	574.	120.2	21.2	2489.
PART POWER	20000.	0.40	8793.	0.385	410.	111.3	19.2	2389.
PART POWER	20000.	0.40	7296.	0.399	265.	102.1	17.2	2289.
PART POWER	20000.	0.40	5960.	0.417	146.	93.2	15.4	2189.
PART POWER	20000.	0.40	4751.	0.440	50.	84.3	13.6	2089.
PART POWER	20000.	0.40	3671.	0.472	-32.	75.4	11.8	1989.
PART POWER	20000.	0.40	2710.	0.522	-86.	66.2	10.1	1889.
PART POWER	20000.	0.40	1871.	0.601	-124.	56.4	8.4	1789.
PART POWER	20000.	0.40	1151.	0.747	-146.	45.9	6.7	1689.
MAX CLIMB	20000.	0.50	12668.	0.360	603.	126.7	22.6	2589.
MAX CRUISE	20000.	0.50	10876.	0.367	412.	117.9	20.6	2489.
PART POWER	20000.	0.50	9215.	0.377	250.	109.1	18.7	2389.
PART POWER	20000.	0.50	7675.	0.389	110.	100.2	16.8	2289.
PART POWER	20000.	0.50	6280.	0.405	4.	91.5	15.0	2189.
PART POWER	20000.	0.50	5019.	0.427	-82.	82.8	13.2	2089.
PART POWER	20000.	0.50	3889.	0.457	-154.	74.0	11.5	1989.
PART POWER	20000.	0.50	2892.	0.502	-196.	65.2	9.9	1889.
PART POWER	20000.	0.50	2019.	0.572	-220.	55.8	8.2	1789.
PART POWER	20000.	0.50	1272.	0.699	-228.	45.8	6.6	1689.
MAX CLIMB	20000.	0.60	13336.	0.352	437.	123.6	21.8	2589.
MAX CRUISE	20000.	0.60	11496.	0.359	246.	115.2	19.9	2489.
PART POWER	20000.	0.60	9727.	0.368	90.	106.4	18.0	2389.
PART POWER	20000.	0.60	8125.	0.379	-41.	97.9	16.2	2289.
PART POWER	20000.	0.60	6666.	0.393	-140.	89.4	14.5	2189.
PART POWER	20000.	0.60	5349.	0.412	-226.	81.0	12.8	2089.
PART POWER	20000.	0.60	4161.	0.439	-287.	72.5	11.2	1989.
PART POWER	20000.	0.60	3113.	0.480	-316.	63.9	9.6	1889.
PART POWER	20000.	0.60	2202.	0.541	-330.	54.9	8.0	1789.
PART POWER	20000.	0.60	1422.	0.649	-322.	45.5	6.5	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.40	12132.	13063.	1239.	7.861	6205.
MAX CRUISE	20000.	0.40	10384.	11044.	1207.	7.680	5897.
PART POWER	20000.	0.40	8793.	9246.	1176.	7.530	5635.
PART POWER	20000.	0.40	7296.	7582.	1147.	7.391	5363.
PART POWER	20000.	0.40	5960.	6120.	1118.	7.272	5097.
PART POWER	20000.	0.40	4751.	4818.	1092.	7.168	4811.
PART POWER	20000.	0.40	3671.	3666.	1067.	7.069	4500.
PART POWER	20000.	0.40	2710.	2664.	1047.	6.996	4157.
PART POWER	20000.	0.40	1871.	1800.	1031.	6.927	3752.
PART POWER	20000.	0.40	1151.	1070.	1024.	6.863	3248.
MAX CLIMB	20000.	0.50	12668.	13487.	1234.	7.920	6157.
MAX CRUISE	20000.	0.50	10876.	11423.	1201.	7.736	5878.
PART POWER	20000.	0.50	9215.	9547.	1170.	7.573	5618.
PART POWER	20000.	0.50	7675.	7837.	1140.	7.423	5352.
PART POWER	20000.	0.50	6280.	6324.	1112.	7.304	5087.
PART POWER	20000.	0.50	5019.	4975.	1085.	7.195	4803.
PART POWER	20000.	0.50	3889.	3780.	1061.	7.092	4490.
PART POWER	20000.	0.50	2892.	2752.	1040.	7.015	4154.
PART POWER	20000.	0.50	2019.	1865.	1024.	6.944	3758.
PART POWER	20000.	0.50	1272.	1120.	1015.	6.878	3273.
MAX CLIMB	20000.	0.60	13336.	14016.	1228.	6.002	6114.
MAX CRUISE	20000.	0.60	11496.	11892.	1194.	7.803	5858.
PART POWER	20000.	0.60	9727.	9907.	1163.	7.632	5596.
PART POWER	20000.	0.60	8125.	8136.	1133.	7.477	5338.
PART POWER	20000.	0.60	6666.	6562.	1105.	7.349	5074.
PART POWER	20000.	0.60	5349.	5156.	1078.	7.224	4789.
PART POWER	20000.	0.60	4161.	3913.	1054.	7.116	4479.
PART POWER	20000.	0.60	3113.	2846.	1032.	7.034	4145.
PART POWER	20000.	0.60	2202.	1934.	1015.	6.957	3757.
PART POWER	20000.	0.60	1422.	1172.	1004.	6.890	3292.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.70	14153.	0.344	272.	120.2	21.0	2589.
MAX CRUISE	20000.	0.70	12202.	0.350	80.	111.9	19.1	2489.
PART POWER	20000.	0.70	10346.	0.357	-79.	103.4	17.3	2389.
PART POWER	20000.	0.70	8668.	0.367	-205.	95.2	15.6	2289.
PART POWER	20000.	0.70	7132.	0.380	-301.	87.0	13.9	2189.
PART POWER	20000.	0.70	5733.	0.397	-376.	78.8	12.3	2089.
PART POWER	20000.	0.70	4473.	0.422	-422.	70.5	10.7	1989.
PART POWER	20000.	0.70	3371.	0.457	-444.	62.3	9.2	1889.
PART POWER	20000.	0.70	2414.	0.510	-440.	53.8	7.8	1789.
PART POWER	20000.	0.70	1592.	0.602	-423.	44.9	6.3	1689.
MAX CLIMB	20000.	0.75	14614.	0.340	189.	118.4	20.5	2589.
MAX CRUISE	20000.	0.75	12603.	0.345	-8.	110.1	18.7	2489.
PART POWER	20000.	0.75	10692.	0.352	-165.	101.7	16.9	2389.
PART POWER	20000.	0.75	8905.	0.361	-287.	93.6	15.2	2289.
PART POWER	20000.	0.75	7385.	0.373	-383.	85.6	13.6	2189.
PART POWER	20000.	0.75	5943.	0.389	-453.	77.5	12.0	2089.
PART POWER	20000.	0.75	4640.	0.412	-495.	69.4	10.5	1989.
PART POWER	20000.	0.75	3516.	0.445	-514.	61.4	9.0	1889.
PART POWER	20000.	0.75	2532.	0.495	-509.	53.1	7.6	1789.
PART POWER	20000.	0.75	1689.	0.579	-483.	44.6	6.2	1689.
MAX CLIMB	20000.	0.80	15100.	0.335	105.	116.4	20.0	2589.
MAX CRUISE	20000.	0.80	13012.	0.340	-95.	108.2	18.3	2489.
PART POWER	20000.	0.80	11070.	0.346	-255.	100.0	16.5	2389.
PART POWER	20000.	0.80	9292.	0.355	-377.	92.1	14.9	2289.
PART POWER	20000.	0.80	7653.	0.366	-468.	84.1	13.3	2189.
PART POWER	20000.	0.80	6167.	0.381	-533.	76.2	11.7	2089.
PART POWER	20000.	0.80	4831.	0.403	-570.	68.3	10.2	1989.
PART POWER	20000.	0.80	3666.	0.434	-585.	60.4	8.8	1889.
PART POWER	20000.	0.80	2656.	0.480	-575.	52.3	7.5	1789.
PART POWER	20000.	0.80	1787.	0.557	-540.	44.1	6.1	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.70	14153.	14660.	1220.	8.107	6079.
MAX CRUISE	20000.	0.70	12202.	12409.	1187.	7.891	5828.
PART POWER	20000.	0.70	10346.	10325.	1156.	7.700	5570.
PART POWER	20000.	0.70	8668.	8481.	1125.	7.535	5318.
PART POWER	20000.	0.70	7132.	6829.	1097.	7.392	5062.
PART POWER	20000.	0.70	5733.	5353.	1070.	7.263	4768.
PART POWER	20000.	0.70	4473.	4054.	1046.	7.153	4460.
PART POWER	20000.	0.70	3371.	2944.	1024.	7.061	4129.
PART POWER	20000.	0.70	2414.	2002.	1006.	6.977	3750.
PART POWER	20000.	0.70	1592.	1218.	994.	6.908	3298.
MAX CLIMB	20000.	0.75	14614.	15021.	1217.	8.170	6062.
MAX CRUISE	20000.	0.75	12603.	12696.	1183.	7.938	5812.
PART POWER	20000.	0.75	10692.	10555.	1152.	7.741	5557.
PART POWER	20000.	0.75	8965.	8664.	1122.	7.572	5304.
PART POWER	20000.	0.75	7385.	6967.	1093.	7.420	5038.
PART POWER	20000.	0.75	5943.	5454.	1066.	7.286	4754.
PART POWER	20000.	0.75	4646.	4125.	1042.	7.172	4447.
PART POWER	20000.	0.75	3516.	2992.	1020.	7.074	4117.
PART POWER	20000.	0.75	2532.	2033.	1002.	6.988	3742.
PART POWER	20000.	0.75	1689.	1237.	989.	6.911	3300.
MAX CLIMB	20000.	0.80	15100.	15395.	1213.	8.238	6044.
MAX CRUISE	20000.	0.80	13012.	12982.	1180.	7.994	5793.
PART POWER	20000.	0.80	11070.	10802.	1148.	7.785	5542.
PART POWER	20000.	0.80	9292.	8857.	1117.	7.606	5290.
PART POWER	20000.	0.80	7653.	7108.	1089.	7.451	5023.
PART POWER	20000.	0.80	6167.	5557.	1063.	7.314	4738.
PART POWER	20000.	0.80	4831.	4196.	1038.	7.195	4432.
PART POWER	20000.	0.80	3666.	3037.	1016.	7.089	4103.
PART POWER	20000.	0.80	2656.	2061.	998.	6.999	3732.
PART POWER	20000.	0.80	1787.	1252.	984.	6.923	3292.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	20000.	0.85	15619.	0.331	17.	114.3	19.6	2589.
MAX CRUISE	20000.	0.85	13452.	0.335	-183.	106.2	17.8	2489.
PART POWER	20000.	0.85	11462.	0.341	-344.	98.2	16.1	2389.
PART POWER	20000.	0.85	9632.	0.349	-469.	90.4	14.5	2289.
PART POWER	20000.	0.85	7947.	0.359	-560.	82.6	12.9	2189.
PART POWER	20000.	0.85	6406.	0.374	-618.	74.8	11.4	2089.
PART POWER	20000.	0.85	5030.	0.394	-650.	67.1	10.0	1989.
PART POWER	20000.	0.85	3828.	0.423	-659.	59.3	8.6	1889.
PART POWER	20000.	0.85	2769.	0.465	-646.	51.5	7.3	1789.
PART POWER	20000.	0.85	1899.	0.535	-607.	43.6	6.0	1689.
MAX CLIMB	25000.	0.40	10757.	0.362	758.	136.0	25.0	2589.
MAX CRUISE	25000.	0.40	9335.	0.368	592.	127.4	22.9	2489.
PART POWER	25000.	0.40	7944.	0.377	435.	118.1	20.8	2389.
PART POWER	25000.	0.40	6651.	0.389	300.	108.7	18.7	2289.
PART POWER	25000.	0.40	5461.	0.404	186.	99.3	16.7	2189.
PART POWER	25000.	0.40	4402.	0.424	93.	90.2	14.8	2089.
PART POWER	25000.	0.40	3448.	0.451	15.	81.0	12.9	1989.
PART POWER	25000.	0.40	2598.	0.492	-44.	71.6	11.2	1889.
PART POWER	25000.	0.40	1844.	0.556	-83.	61.8	9.4	1789.
PART POWER	25000.	0.40	1199.	0.664	-111.	51.3	7.6	1689.
MAX CLIMB	25000.	0.50	11308.	0.355	629.	133.8	24.4	2589.
MAX CRUISE	25000.	0.50	9752.	0.362	459.	124.8	22.2	2489.
PART POWER	25000.	0.50	8327.	0.369	304.	115.8	20.2	2389.
PART POWER	25000.	0.50	6973.	0.380	176.	106.6	18.2	2289.
PART POWER	25000.	0.50	5745.	0.394	67.	97.5	16.2	2189.
PART POWER	25000.	0.50	4645.	0.412	-20.	88.6	14.4	2089.
PART POWER	25000.	0.50	3648.	0.437	-89.	79.6	12.6	1989.
PART POWER	25000.	0.50	2760.	0.475	-138.	70.5	10.9	1889.
PART POWER	25000.	0.50	1978.	0.532	-167.	61.0	9.2	1789.
PART POWER	25000.	0.50	1308.	0.628	-183.	51.0	7.5	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	20000.	0.85	15619.	15785.	1210.	8.309	6024.
MAX CRUISE	20000.	0.85	13452.	13287.	1176.	8.057	5773.
PART POWER	20000.	0.85	11462.	11052.	1144.	7.836	5526.
PART POWER	20000.	0.85	9632.	9051.	1114.	7.645	5273.
PART POWER	20000.	0.85	7947.	7256.	1085.	7.479	5005.
PART POWER	20000.	0.85	6406.	5660.	1059.	7.339	4720.
PART POWER	20000.	0.85	5030.	4267.	1034.	7.216	4415.
PART POWER	20000.	0.85	3828.	3081.	1012.	7.107	4088.
PART POWER	20000.	0.85	2789.	2086.	993.	7.010	3717.
PART POWER	20000.	0.85	1899.	1267.	979.	6.928	3293.
MAX CLIMB	25000.	0.40	10757.	11682.	1224.	6.458	6369.
MAX CRUISE	25000.	0.40	9335.	10027.	1190.	6.316	6013.
PART POWER	25000.	0.40	7944.	8430.	1158.	6.174	5720.
PART POWER	25000.	0.40	6651.	6974.	1128.	6.049	5450.
PART POWER	25000.	0.40	5461.	5657.	1099.	5.939	5177.
PART POWER	25000.	0.40	4402.	4503.	1071.	5.844	4902.
PART POWER	25000.	0.40	3448.	3479.	1046.	5.758	4604.
PART POWER	25000.	0.40	2598.	2581.	1023.	5.684	4278.
PART POWER	25000.	0.40	1844.	1798.	1005.	5.624	3902.
PART POWER	25000.	0.40	1199.	1138.	994.	5.567	3449.
MAX CLIMB	25000.	0.50	11308.	12168.	1218.	6.525	6319.
MAX CRUISE	25000.	0.50	9752.	10361.	1185.	6.367	5976.
PART POWER	25000.	0.50	8327.	8722.	1152.	6.215	5704.
PART POWER	25000.	0.50	6973.	7204.	1122.	6.086	5437.
PART POWER	25000.	0.50	5745.	5849.	1093.	5.969	5168.
PART POWER	25000.	0.50	4645.	4656.	1065.	5.867	4895.
PART POWER	25000.	0.50	3646.	3593.	1040.	5.778	4596.
PART POWER	25000.	0.50	2760.	2664.	1017.	5.702	4273.
PART POWER	25000.	0.50	1978.	1861.	998.	5.639	3903.
PART POWER	25000.	0.50	1308.	1185.	985.	5.580	3468.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	25000.	0.60	11916.	0.348	508.	130.8	23.6	2589.
MAX CRUISE	25000.	0.60	10280.	0.354	324.	121.8	21.5	2489.
PART POWER	25000.	0.60	8794.	0.361	174.	113.1	19.5	2389.
PART POWER	25000.	0.60	7371.	0.370	45.	104.0	17.6	2289.
PART POWER	25000.	0.60	6096.	0.383	-56.	95.3	15.7	2189.
PART POWER	25000.	0.60	4937.	0.399	-136.	86.6	13.9	2089.
PART POWER	25000.	0.60	3896.	0.422	-201.	77.9	12.2	1989.
PART POWER	25000.	0.60	2961.	0.455	-240.	69.0	10.6	1889.
PART POWER	25000.	0.60	2143.	0.507	-260.	59.9	8.9	1789.
PART POWER	25000.	0.60	1441.	0.590	-265.	50.4	7.3	1689.
MAX CLIMB	25000.	0.70	12603.	0.340	377.	127.0	22.6	2589.
MAX CRUISE	25000.	0.70	10913.	0.345	191.	118.4	20.6	2489.
PART POWER	25000.	0.70	9338.	0.351	38.	109.9	18.7	2389.
PART POWER	25000.	0.70	7853.	0.360	-90.	101.2	16.9	2289.
PART POWER	25000.	0.70	6512.	0.370	-187.	92.7	15.1	2189.
PART POWER	25000.	0.70	5286.	0.385	-261.	84.3	13.4	2089.
PART POWER	25000.	0.70	4176.	0.406	-315.	75.8	11.7	1989.
PART POWER	25000.	0.70	3195.	0.436	-346.	67.3	10.2	1889.
PART POWER	25000.	0.70	2338.	0.480	-360.	58.6	8.6	1789.
PART POWER	25000.	0.70	1595.	0.553	-354.	49.6	7.1	1689.
MAX CLIMB	25000.	0.75	12983.	0.337	310.	125.0	22.1	2589.
MAX CRUISE	25000.	0.75	11273.	0.341	123.	116.6	20.2	2489.
PART POWER	25000.	0.75	9640.	0.346	-33.	108.1	18.3	2389.
PART POWER	25000.	0.75	8119.	0.354	-159.	99.6	16.5	2289.
PART POWER	25000.	0.75	6742.	0.364	-252.	91.3	14.8	2189.
PART POWER	25000.	0.75	5474.	0.378	-323.	82.9	13.1	2089.
PART POWER	25000.	0.75	4333.	0.398	-377.	74.6	11.5	1989.
PART POWER	25000.	0.75	3326.	0.426	-404.	66.3	9.9	1889.
PART POWER	25000.	0.75	2445.	0.467	-415.	57.8	8.4	1789.
PART POWER	25000.	0.75	1681.	0.534	-401.	49.0	7.0	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	25000.	0.60	11916.	12697.	1212.	6.616	6255.
MAX CRUISE	25000.	0.60	10280.	10775.	1179.	6.429	5939.
PART POWER	25000.	0.60	8794.	9072.	1146.	6.271	5683.
PART POWER	25000.	0.60	7371.	7477.	1115.	6.128	5416.
PART POWER	25000.	0.60	6096.	6078.	1086.	6.006	5155.
PART POWER	25000.	0.60	4937.	4830.	1058.	5.899	4881.
PART POWER	25000.	0.60	3896.	3726.	1032.	5.801	4585.
PART POWER	25000.	0.60	2961.	2760.	1009.	5.722	4264.
PART POWER	25000.	0.60	2143.	1931.	990.	5.654	3900.
PART POWER	25000.	0.60	1441.	1234.	976.	5.590	3472.
MAX CLIMB	25000.	0.70	12603.	13261.	1206.	6.713	6183.
MAX CRUISE	25000.	0.70	10913.	11271.	1172.	6.511	5906.
PART POWER	25000.	0.70	9338.	9464.	1139.	6.337	5654.
PART POWER	25000.	0.70	7853.	7802.	1108.	6.181	5394.
PART POWER	25000.	0.70	6512.	6338.	1078.	6.051	5137.
PART POWER	25000.	0.70	5286.	5027.	1050.	5.937	4862.
PART POWER	25000.	0.70	4176.	3864.	1025.	5.834	4564.
PART POWER	25000.	0.70	3195.	2861.	1002.	5.749	4248.
PART POWER	25000.	0.70	2338.	2003.	982.	5.672	3893.
PART POWER	25000.	0.70	1595.	1281.	967.	5.605	3472.
MAX CLIMB	25000.	0.75	12983.	13568.	1203.	6.768	6149.
MAX CRUISE	25000.	0.75	11273.	11550.	1168.	6.560	5893.
PART POWER	25000.	0.75	9640.	9675.	1135.	6.374	5637.
PART POWER	25000.	0.75	8119.	7976.	1104.	6.213	5381.
PART POWER	25000.	0.75	6742.	6479.	1075.	6.081	5126.
PART POWER	25000.	0.75	5474.	5130.	1047.	5.962	4850.
PART POWER	25000.	0.75	4333.	3937.	1021.	5.852	4551.
PART POWER	25000.	0.75	3326.	2913.	998.	5.762	4237.
PART POWER	25000.	0.75	2445.	2037.	978.	5.681	3883.
PART POWER	25000.	0.75	1681.	1303.	963.	5.614	3468.

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STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	25000.	0.80	13403.	0.333	249.	122.9	21.6	2589.
MAX CRUISE	25000.	0.80	11655.	0.336	54.	114.7	19.7	2489.
PART POWER	25000.	0.80	9961.	0.341	-104.	106.2	17.9	2389.
PART POWER	25000.	0.80	8406.	0.348	-229.	97.9	16.1	2289.
PART POWER	25000.	0.80	6989.	0.358	-327.	89.8	14.4	2189.
PART POWER	25000.	0.80	5681.	0.371	-395.	81.6	12.8	2089.
PART POWER	25000.	0.80	4498.	0.390	-439.	73.3	11.2	1989.
PART POWER	25000.	0.80	3466.	0.415	-468.	65.3	9.7	1889.
PART POWER	25000.	0.80	2559.	0.454	-473.	57.0	8.3	1789.
PART POWER	25000.	0.80	1773.	0.516	-456.	48.5	6.8	1689.
MAX CLIMB	25000.	0.85	13861.	0.329	184.	120.8	21.1	2589.
MAX CRUISE	25000.	0.85	12039.	0.332	-14.	112.6	19.2	2489.
PART POWER	25000.	0.85	10301.	0.336	-176.	104.3	17.4	2389.
PART POWER	25000.	0.85	8714.	0.343	-303.	96.2	15.7	2289.
PART POWER	25000.	0.85	7245.	0.351	-398.	88.1	14.1	2189.
PART POWER	25000.	0.85	5899.	0.364	-467.	80.1	12.5	2089.
PART POWER	25000.	0.85	4679.	0.381	-509.	72.0	10.9	1989.
PART POWER	25000.	0.85	3610.	0.405	-529.	64.1	9.5	1889.
PART POWER	25000.	0.85	2680.	0.441	-531.	56.1	8.1	1789.
PART POWER	25000.	0.85	1867.	0.499	-505.	47.8	6.7	1689.
MAX CLIMB	30000.	0.50	9677.	0.354	615.	138.3	25.7	2589.
MAX CRUISE	30000.	0.50	8668.	0.356	485.	132.1	24.1	2489.
PART POWER	30000.	0.50	7416.	0.363	341.	122.7	21.8	2389.
PART POWER	30000.	0.50	6280.	0.372	222.	113.5	19.8	2289.
PART POWER	30000.	0.50	5202.	0.384	116.	103.9	17.7	2189.
PART POWER	30000.	0.50	4239.	0.400	33.	94.6	15.7	2089.
PART POWER	30000.	0.50	3369.	0.421	-35.	85.3	13.8	1989.
PART POWER	30000.	0.50	2589.	0.452	-87.	76.0	12.0	1889.
PART POWER	30000.	0.50	1897.	0.500	-121.	66.4	10.2	1789.
PART POWER	30000.	0.50	1298.	0.576	-142.	56.2	8.4	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	25000.	0.80	13403.	13915.	1200.	6.835	6124.
MAX CRUISE	25000.	0.80	11655.	11839.	1164.	6.611	5875.
PART POWER	25000.	0.80	9961.	9897.	1131.	6.416	5619.
PART POWER	25000.	0.80	8406.	8162.	1100.	6.249	5368.
PART POWER	25000.	0.80	6989.	6618.	1070.	6.103	5110.
PART POWER	25000.	0.80	5681.	5232.	1043.	5.980	4834.
PART POWER	25000.	0.80	4498.	4009.	1018.	5.873	4535.
PART POWER	25000.	0.80	3466.	2962.	994.	5.773	4222.
PART POWER	25000.	0.80	2559.	2069.	974.	5.690	3871.
PART POWER	25000.	0.80	1773.	1322.	958.	5.618	3467.
MAX CLIMB	25000.	0.85	13861.	14286.	1196.	6.905	6101.
MAX CRUISE	25000.	0.85	12039.	12123.	1161.	6.670	5854.
PART POWER	25000.	0.85	10301.	10129.	1128.	6.464	5601.
PART POWER	25000.	0.85	8714.	8354.	1096.	6.286	5352.
PART POWER	25000.	0.85	7245.	6761.	1067.	6.135	5094.
PART POWER	25000.	0.85	5899.	5338.	1039.	6.003	4817.
PART POWER	25000.	0.85	4679.	4082.	1014.	5.890	4520.
PART POWER	25000.	0.85	3610.	3009.	990.	5.791	4206.
PART POWER	25000.	0.85	2680.	2100.	970.	5.702	3859.
PART POWER	25000.	0.85	1867.	1337.	954.	5.632	3452.
MAX CLIMB	30000.	0.50	9677.	10525.	1208.	5.321	6437.
MAX CRUISE	30000.	0.50	8668.	9316.	1168.	5.204	6130.
PART POWER	30000.	0.50	7416.	7857.	1136.	5.067	5788.
PART POWER	30000.	0.50	6280.	6562.	1104.	4.951	5523.
PART POWER	30000.	0.50	5202.	5354.	1075.	4.842	5246.
PART POWER	30000.	0.50	4239.	4298.	1046.	4.752	4977.
PART POWER	30000.	0.50	3369.	3359.	1019.	4.670	4691.
PART POWER	30000.	0.50	2569.	2532.	995.	4.599	4376.
PART POWER	30000.	0.50	1897.	1814.	975.	4.541	4032.
PART POWER	30000.	0.50	1298.	1202.	959.	4.487	3623.

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STS-539. TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	30000.	0.60	10364.	0.345	535.	136.7	25.2	2589.
MAX CRUISE	30000.	0.60	9127.	0.349	384.	129.0	23.2	2489.
PART POWER	30000.	0.60	7832.	0.355	235.	119.9	21.1	2389.
PART POWER	30000.	0.60	6634.	0.363	116.	110.8	19.1	2289.
PART POWER	30000.	0.60	5510.	0.374	13.	101.5	17.1	2189.
PART POWER	30000.	0.60	4503.	0.388	-64.	92.6	15.2	2089.
PART POWER	30000.	0.60	3588.	0.407	-125.	83.5	13.4	1989.
PART POWER	30000.	0.60	2771.	0.435	-172.	74.4	11.6	1889.
PART POWER	30000.	0.60	2047.	0.478	-200.	65.2	9.9	1789.
PART POWER	30000.	0.60	1415.	0.546	-209.	55.4	8.2	1689.
MAX CLIMB	30000.	0.70	11088.	0.337	451.	133.9	24.4	2589.
MAX CRUISE	30000.	0.70	9664.	0.342	279.	125.4	22.3	2489.
PART POWER	30000.	0.70	8323.	0.346	129.	116.6	20.3	2389.
PART POWER	30000.	0.70	7050.	0.353	6.	107.7	18.3	2289.
PART POWER	30000.	0.70	5871.	0.363	-91.	98.7	16.4	2189.
PART POWER	30000.	0.70	4815.	0.375	-167.	90.1	14.6	2089.
PART POWER	30000.	0.70	3847.	0.392	-222.	81.3	12.9	1989.
PART POWER	30000.	0.70	2980.	0.418	-261.	72.5	11.2	1889.
PART POWER	30000.	0.70	2218.	0.456	-283.	63.6	9.5	1789.
PART POWER	30000.	0.70	1557.	0.514	-288.	54.3	7.9	1689.
MAX CLIMB	30000.	0.75	11448.	0.334	407.	132.1	23.9	2589.
MAX CRUISE	30000.	0.75	9964.	0.337	223.	123.4	21.8	2489.
PART POWER	30000.	0.75	8596.	0.342	75.	114.8	19.9	2389.
PART POWER	30000.	0.75	7278.	0.348	-49.	105.9	17.9	2289.
PART POWER	30000.	0.75	6076.	0.357	-147.	97.2	16.1	2189.
PART POWER	30000.	0.75	4988.	0.368	-222.	88.7	14.3	2089.
PART POWER	30000.	0.75	3992.	0.385	-276.	80.1	12.6	1989.
PART POWER	30000.	0.75	3097.	0.409	-309.	71.4	10.9	1889.
PART POWER	30000.	0.75	2314.	0.444	-327.	62.7	9.3	1789.
PART POWER	30000.	0.75	1633.	0.499	-328.	53.7	7.8	1689.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	30000.	0.60	10364.	11185.	1199.	5.415	6402.
MAX CRUISE	30000.	0.60	9127.	9705.	1163.	5.269	6065.
PART POWER	30000.	0.60	7832.	8185.	1130.	5.116	5761.
PART POWER	30000.	0.60	6634.	6820.	1098.	4.990	5501.
PART POWER	30000.	0.60	5510.	5565.	1068.	4.874	5230.
PART POWER	30000.	0.60	4503.	4467.	1039.	4.780	4966.
PART POWER	30000.	0.60	3588.	3488.	1012.	4.695	4679.
PART POWER	30000.	0.60	2771.	2628.	986.	4.617	4369.
PART POWER	30000.	0.60	2047.	1884.	967.	4.554	4028.
PART POWER	30000.	0.60	1415.	1251.	951.	4.502	3626.
MAX CLIMB	30000.	0.70	11088.	11857.	1192.	5.523	6338.
MAX CRUISE	30000.	0.70	9664.	10145.	1157.	5.344	6005.
PART POWER	30000.	0.70	8323.	8568.	1123.	5.181	5735.
PART POWER	30000.	0.70	7050.	7115.	1091.	5.039	5474.
PART POWER	30000.	0.70	5871.	5807.	1061.	4.918	5211.
PART POWER	30000.	0.70	4815.	4658.	1031.	4.813	4949.
PART POWER	30000.	0.70	3847.	3631.	1005.	4.724	4662.
PART POWER	30000.	0.70	2980.	2730.	981.	4.643	4352.
PART POWER	30000.	0.70	2218.	1955.	959.	4.573	4015.
PART POWER	30000.	0.70	1557.	1300.	942.	4.511	3623.
MAX CLIMB	30000.	0.75	11448.	12182.	1189.	5.584	6296.
MAX CRUISE	30000.	0.75	9964.	10381.	1154.	5.383	5973.
PART POWER	30000.	0.75	8596.	8776.	1119.	5.218	5720.
PART POWER	30000.	0.75	7278.	7273.	1087.	5.069	5457.
PART POWER	30000.	0.75	6076.	5938.	1057.	4.942	5200.
PART POWER	30000.	0.75	4988.	4759.	1028.	4.832	4938.
PART POWER	30000.	0.75	3992.	3706.	1001.	4.737	4650.
PART POWER	30000.	0.75	3097.	2782.	977.	4.657	4341.
PART POWER	30000.	0.75	2314.	1991.	955.	4.584	4007.
PART POWER	30000.	0.75	1633.	1324.	938.	4.520	3618.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	30000.	0.80	11823.	0.330	360.	130.0	23.3	2589.
MAX CRUISE	30000.	0.80	10293.	0.333	174.	121.4	21.3	2489.
PART POWER	30000.	0.80	8883.	0.337	20.	112.9	19.4	2389.
PART POWER	30000.	0.80	7526.	0.343	-106.	104.1	17.5	2289.
PART POWER	30000.	0.80	6295.	0.351	-203.	95.6	15.7	2189.
PART POWER	30000.	0.80	5172.	0.362	-278.	87.2	14.0	2089.
PART POWER	30000.	0.80	4143.	0.377	-329.	78.7	12.3	1989.
PART POWER	30000.	0.80	3223.	0.400	-362.	70.3	10.7	1889.
PART POWER	30000.	0.80	2416.	0.433	-376.	61.8	9.1	1789.
PART POWER	30000.	0.80	1715.	0.484	-370.	53.0	7.6	1689.
MAX CLIMB	30000.	0.85	12205.	0.327	310.	127.7	22.8	2589.
MAX CRUISE	30000.	0.85	10649.	0.329	125.	119.3	20.8	2489.
PART POWER	30000.	0.85	9186.	0.333	-37.	110.9	18.9	2389.
PART POWER	30000.	0.85	7794.	0.338	-166.	102.3	17.1	2289.
PART POWER	30000.	0.85	6526.	0.345	-260.	93.9	15.3	2189.
PART POWER	30000.	0.85	5359.	0.355	-332.	85.6	13.6	2089.
PART POWER	30000.	0.85	4302.	0.370	-384.	77.3	12.0	1989.
PART POWER	30000.	0.85	3354.	0.391	-413.	69.0	10.4	1889.
PART POWER	30000.	0.85	2523.	0.422	-423.	60.7	8.9	1789.
PART POWER	30000.	0.85	1802.	0.469	-415.	52.2	7.4	1689.
MAX CLIMB	35000.	0.50	7983.	0.356	556.	140.2	26.7	2589.
MAX CRUISE	35000.	0.50	7413.	0.354	473.	137.2	25.5	2489.
PART POWER	35000.	0.50	6558.	0.357	364.	130.2	23.7	2389.
PART POWER	35000.	0.50	5559.	0.366	252.	120.3	21.4	2289.
PART POWER	35000.	0.50	4664.	0.375	155.	110.9	19.3	2189.
PART POWER	35000.	0.50	3815.	0.389	73.	101.0	17.1	2089.
PART POWER	35000.	0.50	3059.	0.408	9.	91.3	15.1	1989.
PART POWER	35000.	0.50	2378.	0.434	-41.	81.5	13.1	1889.
PART POWER	35000.	0.50	1777.	0.474	-80.	71.7	11.2	1789.
PART POWER	35000.	0.50	1248.	0.537	-103.	61.4	9.3	1689.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTN2	PTN2	RPM
MAX CLIMB	30000.	0.80	11823.	12510.	1186.	5.644	6252.
MAX CRUISE	30000.	0.80	10293.	10652.	1151.	5.436	5953.
PART POWER	30000.	0.80	8883.	8991.	1116.	5.258	5702.
PART POWER	30000.	0.80	7526.	7442.	1084.	5.101	5443.
PART POWER	30000.	0.80	6295.	6077.	1053.	4.969	5188.
PART POWER	30000.	0.80	5172.	4862.	1024.	4.853	4923.
PART POWER	30000.	0.80	4143.	3780.	998.	4.755	4637.
PART POWER	30000.	0.80	3223.	2833.	973.	4.667	4327.
PART POWER	30000.	0.80	2416.	2026.	952.	4.592	3994.
PART POWER	30000.	0.80	1715.	1346.	934.	4.529	3610.
MAX CLIMB	30000.	0.85	12205.	12835.	1184.	5.707	6206.
MAX CRUISE	30000.	0.85	10649.	10941.	1148.	5.492	5932.
PART POWER	30000.	0.85	9186.	9213.	1113.	5.302	5683.
PART POWER	30000.	0.85	7794.	7621.	1080.	5.135	5425.
PART POWER	30000.	0.85	6526.	6221.	1050.	4.999	5174.
PART POWER	30000.	0.85	5359.	4965.	1021.	4.880	4906.
PART POWER	30000.	0.85	4302.	3854.	994.	4.774	4619.
PART POWER	30000.	0.85	3354.	2885.	970.	4.684	4313.
PART POWER	30000.	0.85	2523.	2060.	948.	4.606	3981.
PART POWER	30000.	0.85	1802.	1365.	930.	4.537	3599.
MAX CLIMB	35000.	0.50	7983.	8752.	1202.	4.271	6487.
MAX CRUISE	35000.	0.50	7413.	8048.	1157.	4.200	6253.
PART POWER	35000.	0.50	6558.	7032.	1120.	4.102	5930.
PART POWER	35000.	0.50	5559.	5876.	1088.	3.996	5599.
PART POWER	35000.	0.50	4664.	4857.	1057.	3.900	5333.
PART POWER	35000.	0.50	3815.	3912.	1028.	3.815	5052.
PART POWER	35000.	0.50	3059.	3087.	1001.	3.743	4771.
PART POWER	35000.	0.50	2378.	2358.	975.	3.681	4469.
PART POWER	35000.	0.50	1777.	1724.	953.	3.624	4138.
PART POWER	35000.	0.50	1248.	1179.	935.	3.578	3756.

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US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	35000.	0.60	8623.	0.347	506.	139.5	26.2	2589.
MAX CRUISE	35000.	0.60	7918.	0.346	408.	135.4	24.9	2489.
PART POWER	35000.	0.60	6903.	0.350	282.	127.1	22.9	2389.
PART POWER	35000.	0.60	5890.	0.357	169.	117.9	20.8	2289.
PART POWER	35000.	0.60	4931.	0.366	72.	108.3	18.6	2189.
PART POWER	35000.	0.60	4049.	0.378	-5.	98.8	16.6	2089.
PART POWER	35000.	0.60	3257.	0.395	-66.	89.4	14.6	1989.
PART POWER	35000.	0.60	2540.	0.419	-110.	79.9	12.7	1889.
PART POWER	35000.	0.60	1907.	0.456	-143.	70.3	10.9	1789.
PART POWER	35000.	0.60	1354.	0.512	-160.	60.5	9.1	1689.
MAX CLIMB	35000.	0.70	9364.	0.338	467.	138.2	25.7	2589.
MAX CRUISE	35000.	0.70	8457.	0.338	339.	132.5	24.1	2489.
PART POWER	35000.	0.70	7312.	0.343	199.	123.5	22.0	2389.
PART POWER	35000.	0.70	6253.	0.348	83.	114.5	19.9	2289.
PART POWER	35000.	0.70	5245.	0.356	-14.	105.3	17.9	2189.
PART POWER	35000.	0.70	4320.	0.367	-87.	96.1	15.9	2089.
PART POWER	35000.	0.70	3493.	0.381	-147.	87.1	14.1	1989.
PART POWER	35000.	0.70	2735.	0.403	-187.	77.9	12.3	1889.
PART POWER	35000.	0.70	2064.	0.436	-214.	68.7	10.5	1789.
PART POWER	35000.	0.70	1480.	0.485	-225.	59.2	8.6	1689.
MAX CLIMB	35000.	0.75	9764.	0.334	445.	137.2	25.3	2589.
MAX CRUISE	35000.	0.75	8739.	0.334	302.	130.7	23.6	2489.
PART POWER	35000.	0.75	7547.	0.339	158.	121.6	21.5	2389.
PART POWER	35000.	0.75	6457.	0.343	40.	112.7	19.5	2289.
PART POWER	35000.	0.75	5416.	0.351	-57.	103.6	17.5	2189.
PART POWER	35000.	0.75	4477.	0.361	-132.	94.7	15.6	2089.
PART POWER	35000.	0.75	3617.	0.375	-186.	85.7	13.8	1989.
PART POWER	35000.	0.75	2842.	0.395	-228.	76.8	12.0	1889.
PART POWER	35000.	0.75	2151.	0.425	-251.	67.8	10.3	1789.
PART POWER	35000.	0.75	1550.	0.472	-259.	58.5	8.6	1689.

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STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	35000.	0.60	8623.	9397.	1193.	4.360	6472.
MAX CRUISE	35000.	0.60	7918.	8529.	1150.	4.272	6215.
PART POWER	35000.	0.60	6903.	7318.	1114.	4.149	5871.
PART POWER	35000.	0.60	5890.	6140.	1081.	4.034	5587.
PART POWER	35000.	0.60	4931.	5051.	1050.	3.931	5314.
PART POWER	35000.	0.60	4049.	4073.	1021.	3.843	5042.
PART POWER	35000.	0.60	3257.	3213.	994.	3.765	4763.
PART POWER	35000.	0.60	2540.	2452.	969.	3.700	4460.
PART POWER	35000.	0.60	1907.	1792.	946.	3.640	4132.
PART POWER	35000.	0.60	1354.	1228.	928.	3.591	3759.
MAX CLIMB	35000.	0.70	9364.	10153.	1184.	4.480	6444.
MAX CRUISE	35000.	0.70	8457.	9024.	1143.	4.354	6152.
PART POWER	35000.	0.70	7312.	7650.	1108.	4.207	5817.
PART POWER	35000.	0.70	6253.	6415.	1075.	4.080	5555.
PART POWER	35000.	0.70	5245.	5270.	1043.	3.968	5289.
PART POWER	35000.	0.70	4320.	4252.	1014.	3.875	5022.
PART POWER	35000.	0.70	3493.	3355.	986.	3.789	4749.
PART POWER	35000.	0.70	2735.	2557.	961.	3.718	4447.
PART POWER	35000.	0.70	2064.	1866.	938.	3.656	4122.
PART POWER	35000.	0.70	1480.	1279.	919.	3.602	3753.
MAX CLIMB	35000.	0.75	9764.	10556.	1180.	4.547	6422.
MAX CRUISE	35000.	0.75	8739.	9274.	1140.	4.397	6114.
PART POWER	35000.	0.75	7547.	7841.	1105.	4.241	5797.
PART POWER	35000.	0.75	6457.	6568.	1071.	4.109	5540.
PART POWER	35000.	0.75	5416.	5388.	1040.	3.991	5275.
PART POWER	35000.	0.75	4477.	4351.	1010.	3.891	5014.
PART POWER	35000.	0.75	3617.	3428.	983.	3.808	4737.
PART POWER	35000.	0.75	2842.	2611.	957.	3.729	4438.
PART POWER	35000.	0.75	2151.	1904.	934.	3.665	4114.
PART POWER	35000.	0.75	1550.	1304.	915.	3.608	3747.

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NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	35000.	0.80	10173.	0.329	421.	136.1	24.9	2589.
MAX CRUISE	35000.	0.80	9017.	0.331	267.	128.6	23.1	2489.
PART POWER	35000.	0.80	7795.	0.334	120.	119.6	21.0	2389.
PART POWER	35000.	0.80	6675.	0.339	-4.	110.9	19.0	2289.
PART POWER	35000.	0.80	5609.	0.345	-103.	101.9	17.1	2189.
PART POWER	35000.	0.80	4643.	0.354	-176.	93.2	15.2	2089.
PART POWER	35000.	0.80	3754.	0.368	-230.	84.4	13.5	1989.
PART POWER	35000.	0.80	2953.	0.387	-268.	75.6	11.7	1889.
PART POWER	35000.	0.80	2240.	0.416	-269.	66.7	10.1	1789.
PART POWER	35000.	0.80	1622.	0.459	-294.	57.7	8.5	1689.
MAX CLIMB	35000.	0.85	10572.	0.326	395.	134.4	24.5	2589.
MAX CRUISE	35000.	0.85	9300.	0.327	231.	126.3	22.5	2489.
PART POWER	35000.	0.85	8070.	0.330	77.	117.6	20.5	2389.
PART POWER	35000.	0.85	6904.	0.334	-50.	108.9	18.6	2289.
PART POWER	35000.	0.85	5808.	0.340	-148.	100.1	16.7	2189.
PART POWER	35000.	0.85	4815.	0.348	-221.	91.6	14.9	2089.
PART POWER	35000.	0.85	3901.	0.361	-276.	82.9	13.1	1989.
PART POWER	35000.	0.85	3073.	0.379	-313.	74.3	11.5	1889.
PART POWER	35000.	0.85	2339.	0.405	-332.	65.6	9.8	1789.
PART POWER	35000.	0.85	1700.	0.446	-331.	56.8	8.3	1689.
MAX CLIMB	40000.	0.50	6264.	0.358	437.	139.2	26.6	2589.
MAX CRUISE	40000.	0.50	5795.	0.357	374.	135.9	25.4	2489.
PART POWER	40000.	0.50	5115.	0.361	287.	128.8	23.6	2389.
PART POWER	40000.	0.50	4339.	0.369	196.	119.2	21.3	2289.
PART POWER	40000.	0.50	3623.	0.380	121.	109.5	19.1	2189.
PART POWER	40000.	0.50	2951.	0.394	57.	99.5	17.0	2089.
PART POWER	40000.	0.50	2357.	0.414	6.	89.8	14.9	1989.
PART POWER	40000.	0.50	1825.	0.443	-33.	80.1	12.9	1889.
PART POWER	40000.	0.50	1358.	0.485	-64.	70.4	11.1	1789.
PART POWER	40000.	0.50	941.	0.554	-61.	59.8	9.1	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	35000.	0.80	10173.	10961.	1176.	4.615	6396.
MAX CRUISE	35000.	0.80	9017.	9518.	1137.	4.447	6072.
PART POWER	35000.	0.80	7795.	8044.	1102.	4.283	5778.
PART POWER	35000.	0.80	6675.	6728.	1068.	4.139	5523.
PART POWER	35000.	0.80	5609.	5519.	1036.	4.015	5262.
PART POWER	35000.	0.80	4643.	4455.	1007.	3.911	5003.
PART POWER	35000.	0.80	3754.	3503.	979.	3.823	4725.
PART POWER	35000.	0.80	2953.	2664.	953.	3.743	4425.
PART POWER	35000.	0.80	2240.	1940.	931.	3.676	4102.
PART POWER	35000.	0.80	1622.	1328.	911.	3.617	3739.
MAX CLIMB	35000.	0.85	10572.	11349.	1172.	4.686	6357.
MAX CRUISE	35000.	0.85	9300.	9762.	1135.	4.501	6030.
PART POWER	35000.	0.85	8070.	8263.	1099.	4.325	5759.
PART POWER	35000.	0.85	6904.	6892.	1065.	4.170	5502.
PART POWER	35000.	0.85	5808.	5651.	1033.	4.042	5246.
PART POWER	35000.	0.85	4815.	4560.	1003.	3.935	4989.
PART POWER	35000.	0.85	3901.	3582.	975.	3.839	4712.
PART POWER	35000.	0.85	3073.	2719.	950.	3.756	4411.
PART POWER	35000.	0.85	2339.	1976.	927.	3.684	4089.
PART POWER	35000.	0.85	1700.	1351.	908.	3.626	3728.
MAX CLIMB	40000.	0.50	6264.	6867.	1205.	3.355	6429.
MAX CRUISE	40000.	0.50	5795.	6297.	1161.	3.303	6190.
PART POWER	40000.	0.50	5115.	5487.	1123.	3.223	5869.
PART POWER	40000.	0.50	4339.	4586.	1091.	3.137	5549.
PART POWER	40000.	0.50	3623.	3773.	1061.	3.063	5275.
PART POWER	40000.	0.50	2951.	3026.	1032.	2.997	4991.
PART POWER	40000.	0.50	2357.	2378.	1005.	2.940	4707.
PART POWER	40000.	0.50	1825.	1809.	981.	2.891	4402.
PART POWER	40000.	0.50	1358.	1316.	958.	2.845	4072.
PART POWER	40000.	0.50	941.	888.	942.	2.811	3677.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	40000.	0.60	6760.	0.349	409.	138.5	26.2	2589.
MAX CRUISE	40000.	0.60	6190.	0.349	324.	134.2	24.8	2489.
PART POWER	40000.	0.60	5393.	0.353	224.	126.0	22.8	2389.
PART POWER	40000.	0.60	4589.	0.360	134.	116.6	20.6	2289.
PART POWER	40000.	0.60	3835.	0.370	58.	107.1	18.5	2189.
PART POWER	40000.	0.60	3140.	0.383	-5.	97.5	16.4	2089.
PART POWER	40000.	0.60	2514.	0.401	-51.	88.0	14.5	1989.
PART POWER	40000.	0.60	1958.	0.427	-89.	78.6	12.6	1889.
PART POWER	40000.	0.60	1460.	0.465	-112.	69.0	10.7	1789.
PART POWER	40000.	0.60	1027.	0.526	-126.	59.1	8.9	1689.
MAX CLIMB	40000.	0.70	7338.	0.340	371.	137.2	25.6	2589.
MAX CRUISE	40000.	0.70	6616.	0.341	271.	131.4	24.0	2489.
PART POWER	40000.	0.70	5718.	0.345	161.	122.5	21.9	2389.
PART POWER	40000.	0.70	4889.	0.351	69.	113.6	19.8	2289.
PART POWER	40000.	0.70	4085.	0.360	-7.	104.2	17.8	2189.
PART POWER	40000.	0.70	3359.	0.371	-68.	95.0	15.8	2089.
PART POWER	40000.	0.70	2700.	0.387	-112.	85.9	13.9	1989.
PART POWER	40000.	0.70	2108.	0.410	-145.	76.7	12.1	1889.
PART POWER	40000.	0.70	1583.	0.445	-165.	67.5	10.4	1789.
PART POWER	40000.	0.70	1125.	0.497	-174.	57.9	8.7	1689.
MAX CLIMB	40000.	0.75	7651.	0.336	354.	136.3	25.3	2589.
MAX CRUISE	40000.	0.75	6837.	0.337	243.	129.7	23.5	2489.
PART POWER	40000.	0.75	5906.	0.341	130.	120.7	21.5	2389.
PART POWER	40000.	0.75	5050.	0.346	36.	111.9	19.4	2289.
PART POWER	40000.	0.75	4227.	0.354	-41.	102.7	17.4	2189.
PART POWER	40000.	0.75	3482.	0.365	-100.	93.7	15.5	2089.
PART POWER	40000.	0.75	2803.	0.380	-144.	84.7	13.7	1989.
PART POWER	40000.	0.75	2192.	0.402	-176.	75.7	11.9	1889.
PART POWER	40000.	0.75	1651.	0.434	-194.	66.6	10.2	1789.
PART POWER	40000.	0.75	1182.	0.483	-202.	57.3	8.5	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	40000.	0.60	6760.	7372.	1196.	3.428	6416.
MAX CRUISE	40000.	0.60	6190.	6674.	1153.	3.360	6162.
PART POWER	40000.	0.60	5393.	5721.	1118.	3.262	5819.
PART POWER	40000.	0.60	4589.	4787.	1085.	3.170	5531.
PART POWER	40000.	0.60	3835.	3929.	1054.	3.088	5258.
PART POWER	40000.	0.60	3140.	3158.	1025.	3.016	4982.
PART POWER	40000.	0.60	2514.	2481.	998.	2.958	4701.
PART POWER	40000.	0.60	1958.	1887.	973.	2.903	4400.
PART POWER	40000.	0.60	1460.	1370.	951.	2.859	4067.
PART POWER	40000.	0.60	1027.	929.	933.	2.818	3683.
MAX CLIMB	40000.	0.70	7338.	7964.	1167.	3.523	6389.
MAX CRUISE	40000.	0.70	6616.	7067.	1146.	3.424	6100.
PART POWER	40000.	0.70	5718.	5990.	1112.	3.308	5771.
PART POWER	40000.	0.70	4889.	5021.	1078.	3.209	5510.
PART POWER	40000.	0.70	4085.	4109.	1047.	3.120	5237.
PART POWER	40000.	0.70	3359.	3306.	1018.	3.043	4971.
PART POWER	40000.	0.70	2700.	2596.	990.	2.979	4691.
PART POWER	40000.	0.70	2108.	1971.	965.	2.921	4389.
PART POWER	40000.	0.70	1583.	1430.	943.	2.873	4060.
PART POWER	40000.	0.70	1125.	971.	925.	2.830	3681.
MAX CLIMB	40000.	0.75	7651.	8278.	1183.	3.573	6370.
MAX CRUISE	40000.	0.75	6837.	7264.	1143.	3.458	6063.
PART POWER	40000.	0.75	5906.	6145.	1108.	3.337	5754.
PART POWER	40000.	0.75	5050.	5142.	1075.	3.231	5495.
PART POWER	40000.	0.75	4227.	4209.	1044.	3.137	5227.
PART POWER	40000.	0.75	3482.	3387.	1014.	3.059	4962.
PART POWER	40000.	0.75	2803.	2657.	987.	2.991	4682.
PART POWER	40000.	0.75	2192.	2015.	962.	2.931	4379.
PART POWER	40000.	0.75	1651.	1461.	939.	2.880	4052.
PART POWER	40000.	0.75	1182.	992.	920.	2.834	3681.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	40000.	0.80	7972.	0.332	335.	135.1	24.9	2589.
MAX CRUISE	40000.	0.80	7058.	0.333	215.	127.7	23.0	2489.
PART POWER	40000.	0.80	6102.	0.337	100.	118.8	21.0	2389.
PART POWER	40000.	0.80	5218.	0.342	2.	110.0	19.0	2289.
PART POWER	40000.	0.80	4378.	0.349	-76.	101.1	17.0	2189.
PART POWER	40000.	0.80	3612.	0.359	-134.	92.2	15.1	2089.
PART POWER	40000.	0.80	2914.	0.373	-178.	83.4	13.4	1989.
PART POWER	40000.	0.80	2282.	0.393	-208.	74.5	11.6	1889.
PART POWER	40000.	0.80	1724.	0.424	-224.	65.7	10.0	1789.
PART POWER	40000.	0.80	1241.	0.470	-229.	56.6	8.3	1689.
MAX CLIMB	40000.	0.85	8285.	0.328	316.	133.5	24.4	2589.
MAX CRUISE	40000.	0.85	7290.	0.330	186.	125.5	22.4	2489.
PART POWER	40000.	0.85	6323.	0.333	68.	116.9	20.5	2389.
PART POWER	40000.	0.85	5403.	0.337	-33.	108.1	18.5	2289.
PART POWER	40000.	0.85	4539.	0.344	-111.	99.3	16.6	2189.
PART POWER	40000.	0.85	3753.	0.352	-170.	90.7	14.8	2089.
PART POWER	40000.	0.85	3030.	0.365	-213.	82.0	13.0	1989.
PART POWER	40000.	0.85	2375.	0.385	-240.	73.3	11.4	1889.
PART POWER	40000.	0.85	1800.	0.414	-256.	64.6	9.7	1789.
PART POWER	40000.	0.85	1301.	0.456	-258.	55.8	8.2	1689.
MAX CLIMB	45000.	0.50	4831.	0.360	330.	137.0	26.1	2589.
MAX CRUISE	45000.	0.50	4408.	0.361	274.	132.6	24.8	2489.
PART POWER	45000.	0.50	3815.	0.368	204.	124.2	22.7	2389.
PART POWER	45000.	0.50	3229.	0.377	139.	114.8	20.5	2289.
PART POWER	45000.	0.50	2671.	0.390	80.	105.0	18.3	2189.
PART POWER	45000.	0.50	2165.	0.407	34.	95.2	16.2	2089.
PART POWER	45000.	0.50	1715.	0.429	-4.	85.6	14.2	1989.
PART POWER	45000.	0.50	1312.	0.462	-32.	76.0	12.3	1889.
PART POWER	45000.	0.50	950.	0.518	-52.	65.8	10.4	1789.
PART POWER	45000.	0.50	636.	0.615	-64.	55.1	8.4	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	40000.	0.80	7972.	8597.	1179.	3.626	6344.
MAX CRUISE	40000.	0.80	7058.	7459.	1141.	3.497	6022.
PART POWER	40000.	0.80	6102.	6307.	1105.	3.370	5734.
PART POWER	40000.	0.80	5218.	5268.	1071.	3.256	5477.
PART POWER	40000.	0.80	4378.	4313.	1040.	3.157	5214.
PART POWER	40000.	0.80	3612.	3471.	1010.	3.076	4952.
PART POWER	40000.	0.80	2914.	2720.	983.	3.003	4672.
PART POWER	40000.	0.80	2282.	2059.	958.	2.942	4370.
PART POWER	40000.	0.80	1724.	1491.	935.	2.888	4044.
PART POWER	40000.	0.80	1724.	1491.	935.	2.888	4044.
PART POWER	40000.	0.80	1241.	1013.	916.	2.841	3676.
MAX CLIMB	40000.	0.85	8285.	8905.	1175.	3.684	6307.
MAX CRUISE	40000.	0.85	7290.	7660.	1138.	3.537	5983.
PART POWER	40000.	0.85	6323.	6486.	1102.	3.403	5716.
PART POWER	40000.	0.85	5403.	5403.	1068.	3.281	5460.
PART POWER	40000.	0.85	4539.	4423.	1036.	3.179	5201.
PART POWER	40000.	0.85	3753.	3558.	1006.	3.093	4942.
PART POWER	40000.	0.85	3030.	2784.	979.	3.017	4660.
PART POWER	40000.	0.85	2375.	2104.	954.	2.954	4357.
PART POWER	40000.	0.85	1800.	1521.	931.	2.897	4031.
PART POWER	40000.	0.85	1301.	1032.	912.	2.848	3666.
MAX CLIMB	45000.	0.50	4831.	5284.	1211.	2.624	6320.
MAX CRUISE	45000.	0.50	4408.	4773.	1169.	2.575	6063.
PART POWER	45000.	0.50	3815.	4077.	1135.	2.511	5723.
PART POWER	45000.	0.50	3229.	3402.	1103.	2.449	5439.
PART POWER	45000.	0.50	2671.	2771.	1073.	2.390	5155.
PART POWER	45000.	0.50	2165.	2212.	1045.	2.342	4874.
PART POWER	45000.	0.50	1715.	1723.	1019.	2.298	4585.
PART POWER	45000.	0.50	1312.	1293.	995.	2.261	4270.
PART POWER	45000.	0.50	950.	915.	976.	2.229	3911.
PART POWER	45000.	0.50	636.	593.	963.	2.201	3485.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	45000.	0.60	5205.	0.352	301.	136.1	25.7	2589.
MAX CRUISE	45000.	0.60	4690.	0.353	234.	130.5	24.1	2489.
PART POWER	45000.	0.60	4035.	0.360	155.	121.6	22.0	2389.
PART POWER	45000.	0.60	3422.	0.368	90.	112.4	19.9	2289.
PART POWER	45000.	0.60	2838.	0.379	31.	102.9	17.8	2189.
PART POWER	45000.	0.60	2310.	0.394	-12.	93.5	15.8	2089.
PART POWER	45000.	0.60	1836.	0.415	-46.	84.2	13.8	1989.
PART POWER	45000.	0.60	1412.	0.444	-73.	74.8	12.0	1889.
PART POWER	45000.	0.60	1031.	0.493	-89.	64.9	10.1	1789.
PART POWER	45000.	0.60	702.	0.577	-97.	54.7	8.3	1689.
MAX CLIMB	45000.	0.70	5628.	0.343	274.	134.6	25.1	2589.
MAX CRUISE	45000.	0.70	4995.	0.346	190.	127.6	23.3	2489.
PART POWER	45000.	0.70	4301.	0.351	107.	118.7	21.2	2389.
PART POWER	45000.	0.70	3647.	0.358	40.	109.5	19.1	2289.
PART POWER	45000.	0.70	3032.	0.368	-17.	100.3	17.1	2189.
PART POWER	45000.	0.70	2481.	0.381	-61.	91.3	15.2	2089.
PART POWER	45000.	0.70	1976.	0.400	-92.	82.2	13.3	1989.
PART POWER	45000.	0.70	1528.	0.426	-116.	73.2	11.6	1889.
PART POWER	45000.	0.70	1128.	0.468	-131.	63.8	9.8	1789.
PART POWER	45000.	0.70	780.	0.540	-134.	54.0	8.1	1689.
MAX CLIMB	45000.	0.75	5856.	0.339	259.	133.5	24.7	2589.
MAX CRUISE	45000.	0.75	5159.	0.342	168.	125.8	22.8	2489.
PART POWER	45000.	0.75	4445.	0.347	84.	116.9	20.8	2389.
PART POWER	45000.	0.75	3774.	0.353	13.	108.0	18.7	2289.
PART POWER	45000.	0.75	3141.	0.363	-43.	98.9	16.8	2189.
PART POWER	45000.	0.75	2575.	0.375	-86.	90.1	14.9	2089.
PART POWER	45000.	0.75	2058.	0.392	-118.	81.2	13.1	1989.
PART POWER	45000.	0.75	1593.	0.417	-140.	72.3	11.3	1889.
PART POWER	45000.	0.75	1180.	0.456	-152.	63.1	9.6	1789.
PART POWER	45000.	0.75	822.	0.522	-153.	53.6	8.0	1689.

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PRATT AND WHITNEY
STS-539 TURBOSHAFT ENGINE ESTIMATED PERFORMANCE
US STANDARD ATMOSPHERE,1962 100 PERCENT RAM RECOVERY
100 PERCENT GEAR EFFICIENCY
NO BLEED OR HORSEPOWER EXTRACTION
STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTNZ	PTNZ	RPM
MAX CLIMB	45000.	0.60	5205.	5663.	1202.	2.680	6308.
MAX CRUISE	45000.	0.60	4690.	5037.	1162.	2.617	6027.
PART POWER	45000.	0.60	4035.	4262.	1128.	2.540	5692.
PART POWER	45000.	0.60	3422.	3556.	1096.	2.472	5424.
PART POWER	45000.	0.60	2838.	2895.	1066.	2.408	5145.
PART POWER	45000.	0.60	2310.	2314.	1037.	2.357	4871.
PART POWER	45000.	0.60	1838.	1804.	1011.	2.311	4566.
PART POWER	45000.	0.60	1412.	1353.	987.	2.271	4272.
PART POWER	45000.	0.60	1031.	960.	967.	2.238	3917.
PART POWER	45000.	0.60	702.	627.	953.	2.207	3505.
MAX CLIMB	45000.	0.70	5628.	6089.	1194.	2.747	6280.
MAX CRUISE	45000.	0.70	4995.	5312.	1155.	2.664	5967.
PART POWER	45000.	0.70	4301.	4483.	1121.	2.575	5665.
PART POWER	45000.	0.70	3647.	3729.	1089.	2.501	5403.
PART POWER	45000.	0.70	3032.	3035.	1059.	2.433	5130.
PART POWER	45000.	0.70	2481.	2430.	1030.	2.376	4863.
PART POWER	45000.	0.70	1976.	1890.	1003.	2.330	4575.
PART POWER	45000.	0.70	1528.	1419.	979.	2.285	4266.
PART POWER	45000.	0.70	1128.	1008.	958.	2.246	3920.
PART POWER	45000.	0.70	780.	662.	943.	2.215	3517.
MAX CLIMB	45000.	0.75	5856.	6314.	1190.	2.784	6258.
MAX CRUISE	45000.	0.75	5159.	5456.	1152.	2.669	5936.
PART POWER	45000.	0.75	4445.	4603.	1118.	2.598	5653.
PART POWER	45000.	0.75	3774.	3823.	1085.	2.515	5388.
PART POWER	45000.	0.75	3141.	3112.	1055.	2.447	5121.
PART POWER	45000.	0.75	2575.	2491.	1026.	2.388	4856.
PART POWER	45000.	0.75	2058.	1939.	999.	2.337	4571.
PART POWER	45000.	0.75	1593.	1453.	975.	2.292	4261.
PART POWER	45000.	0.75	1180.	1033.	954.	2.253	3916.
PART POWER	45000.	0.75	822.	680.	938.	2.221	3521.

TABLE IV
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RATING	ALT	MN	SHP	SFC	FNRES	WAT2	OPR	CET
MAX CLIMB	45000.	0.80	6084.	0.335	244.	132.0	24.3	2589.
MAX CRUISE	45000.	0.80	5331.	0.338	146.	123.9	22.3	2489.
PART POWER	45000.	0.80	4602.	0.342	60.	115.2	20.3	2389.
PART POWER	45000.	0.80	3905.	0.348	-13.	106.3	18.3	2289.
PART POWER	45000.	0.80	3258.	0.357	-69.	97.4	16.4	2189.
PART POWER	45000.	0.80	2675.	0.368	-111.	88.7	14.6	2089.
PART POWER	45000.	0.80	2143.	0.384	-143.	80.0	12.8	1989.
PART POWER	45000.	0.80	1663.	0.408	-164.	71.3	11.1	1889.
PART POWER	45000.	0.80	1236.	0.444	-174.	62.3	9.4	1789.
PART POWER	45000.	0.80	868.	0.505	-174.	53.1	7.8	1689.
MAX CLIMB	45000.	0.85	6305.	0.331	228.	130.2	23.6	2589.
MAX CRUISE	45000.	0.85	5512.	0.334	125.	121.9	21.8	2489.
PART POWER	45000.	0.85	4771.	0.338	35.	113.4	19.9	2389.
PART POWER	45000.	0.85	4046.	0.343	-39.	104.5	17.9	2289.
PART POWER	45000.	0.85	3385.	0.351	-96.	95.9	16.0	2189.
PART POWER	45000.	0.85	2783.	0.361	-139.	87.4	14.3	2089.
PART POWER	45000.	0.85	2232.	0.376	-170.	78.8	12.5	1989.
PART POWER	45000.	0.85	1736.	0.399	-190.	70.2	10.9	1889.
PART POWER	45000.	0.85	1295.	0.432	-198.	61.4	9.2	1789.
PART POWER	45000.	0.85	917.	0.487	-197.	52.5	7.7	1689.

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STANDARD DAY

RATING	ALT	MN	SHP	ESHP	TTN2	PTN2	RPM
MAX CLIMB	45000.	0.80	6084.	6537.	1186.	2.824	6230.
MAX CRUISE	45000.	0.80	5331.	5605.	1150.	2.717	5905.
PART POWER	45000.	0.80	4602.	4732.	1114.	2.621	5640.
PART POWER	45000.	0.80	3905.	3921.	1082.	2.535	5375.
PART POWER	45000.	0.80	3258.	3194.	1051.	2.463	5113.
PART POWER	45000.	0.80	2675.	2556.	1022.	2.401	4848.
PART POWER	45000.	0.80	2143.	1987.	995.	2.347	4563.
PART POWER	45000.	0.80	1663.	1488.	971.	2.300	4255.
PART POWER	45000.	0.80	1236.	1057.	950.	2.260	3912.
PART POWER	45000.	0.80	868.	697.	933.	2.225	3521.
MAX CLIMB	45000.	0.85	6305.	6751.	1183.	2.867	6191.
MAX CRUISE	45000.	0.85	5512.	5764.	1147.	2.750	5878.
PART POWER	45000.	0.85	4771.	4869.	1111.	2.647	5626.
PART POWER	45000.	0.85	4046.	4026.	1078.	2.556	5360.
PART POWER	45000.	0.85	3385.	3281.	1047.	2.479	5102.
PART POWER	45000.	0.85	2783.	2622.	1018.	2.414	4839.
PART POWER	45000.	0.85	2232.	2036.	991.	2.357	4553.
PART POWER	45000.	0.85	1736.	1523.	966.	2.308	4246.
PART POWER	45000.	0.85	1295.	1081.	945.	2.266	3906.
PART POWER	45000.	0.85	917.	713.	928.	2.229	3522.

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