



Emission surcharge on landing charges - Emission Value for turbofan engines
Emissionabhängige Landegebühren - Emissionswerte der Strahltriebwerke
Taxes d'atterrissage basées sur les émissions gazeuses - Valeurs d'émission des moteurs à réaction

Businessjet Engines < 26.7 kN rated thrust

Status: August 2025

ICAO-UID or Source	Code	Manufacturer	Engine	Remarks	Engine Emission Value
FOCA	B001	diverse	BJ-16kN	Generic, PM FOCA FOA B	0.5
Honeywell	B002	diverse	BJ>16kN	TFE731-5A, PM FOCA FOA B	1.0
FAEED222	B101	General Electric	CF700-2D	PM FOCA FOA B	0.4
FAEED221	B106	General Electric	CJ610-6	PM FOCA FOA B	0.3
Williams	B315	Williams International	FJ33-4A	uncertified manufacturer data	0.4
Williams	B300	Williams International	FJ44-1A	uncertified manufacturer data, SN from B302	0.3
Williams	B301	Williams International	FJ44-1AP	uncertified manufacturer data	0.2
Williams	B302	Williams International	FJ44-1C	uncertified manufacturer data	0.3
Williams	B305	Williams International	FJ44-2A/2C	uncertified manufacturer data	0.5
Williams	B310	Williams International	FJ44-3A	uncertified manufacturer data, SN from B302	0.7
FOCA	B311	Williams International	FJ44-4A	Report PSP 9710.5.12.7.0059, FOCA	0.8
1PW035	B071	Pratt & Whitney	JT15D-1	out of prod. Calvert SN calculation	0.3
1PW036	B072	Pratt & Whitney	JT15D-4	out of prod. Calvert SN calculation	0.4
1PW037	B073	Pratt & Whitney	JT15D-5	out of prod. Calvert SN calculation	0.5
1PW038	B074	Pratt & Whitney	JT15D-5C	out of prod. Calvert SN calculation	0.5
ZHAW	B900	diverse	MD-TJ42	EI based on SR-30, FF from MD-TJ42	0.1
PWC	B081	Pratt & Whitney	PW305	uncertified manufacturer data, PM FOCA FOA B	1.0
FOCA	B320	Pratt & Whitney	PW306D	FOCA FOA	1.4
PWC	B003	Pratt & Whitney	PW530A	uncertified manufacturer data, PM FOCA FOA B	0.4
FOCA	B005	Pratt & Whitney	PW535E	based on B003 with FOCA Turbofan FOA	0.5
FOCA	B004	Pratt & Whitney	PW545A	Ref. Durdina et al 2025, FOCA	0.6
PW	B075	Pratt & Whitney	PW545B	uncertified manufacturer data, PM from B004	0.8
FOCA	B076	Pratt & Whitney	PW545C	Data from B075. PW545C is FADEC version of PW545B	0.8
PWC	B008	Pratt & Whitney	PW615F-A	uncertified manufacturer data	0.2
FOCA	B010	Pratt & Whitney	PW617F-E	FOCA FOA B	0.5
Honeywell	B137	Honeywell	TFE731-20	uncertified manufacturer data, PM FOCA FOA B	0.8
1AS001	B051	Honeywell	TFE731-2-2B	out of prod., PM FOCA FOA B	0.6
1AS002	B052	Honeywell	TFE731-3	out of prod., PM FOCA FOA B	0.8
Honeywell	B136	Honeywell	TFE731-40	uncertified manufacturer data, PM FOCA FOA B	1.2
Honeywell	B135	Honeywell	TFE731-40-1C	uncertified manufacturer data, PM FOCA FOA B	0.9
Honeywell	B131	Honeywell	TFE731-5	uncertified manufacturer data, PM FOCA FOA B	0.9
Honeywell	B138	Honeywell	TFE731-50	uncertified manufacturer data, PM FOCA FOA B	1.7
Honeywell	B132	Honeywell	TFE731-5A	uncertified manufacturer data, PM FOCA FOA B	1.0
Honeywell	B133	Honeywell	TFE731-5B	uncertified manufacturer data, PM FOCA FOA B	1.1
FOCA	B134	Honeywell	TFE731-60-1C	Report F900 20171130 FOCA	1.5
Honeywell	B130	Honeywell	TFE738-1-1B	uncertified manufacturer data, PM FOCA FOA B	2.0

Jet Engines

Status: August 2025

ICAO-UID or Source	Code	Manufacturer	Engine	Remarks	Engine Emission Value
4AL003	J202	Rolls Royce	AE3007A	nvPM Ref. 01P06AL028	1.6
6AL005	J802	Rolls Royce	AE3007A1	nvPM Ref. 01P06AL029 Type 1	1.5
6AL006	J804	Rolls Royce	AE3007A1	nvPM Ref. 01P06AL029 Type 2	1.6
6AL007	J805	Rolls Royce	AE3007A1	nvPM Ref. 01P06AL029 LEC, Type 3	1.3

6AL008	J806	Rolls Royce	AE3007A1/1	nvPM Ref. 01P06AL029 Type 1	1.4
6AL009	J807	Rolls Royce	AE3007A1/1	nvPM Ref. 01P06AL029 Type 2	1.6
6AL010	J808	Rolls Royce	AE3007A1/1	nvPM Ref. 01P06AL029 LEC, Type 3	1.3
RR	J801	Rolls Royce	AE3007A1/3	nvPM Ref. 01P06AL030	1.4
6AL011	J809	Rolls Royce	AE3007A1/3	nvPM Ref. 01P06AL030 Type 1	1.3
6AL012	J810	Rolls Royce	AE3007A1/3	nvPM Ref. 01P06AL030 Type 2	1.5
6AL013	J811	Rolls Royce	AE3007A1/3	nvPM Ref. 01P06AL030 LEC, Type 3	1.2
6AL020	J818	Rolls Royce	AE3007A1E	nvPM Ref. 01P06AL032 LEC, Type 3	1.5
6AL014	J812	Rolls Royce	AE3007A1P	nvPM Ref. 01P06AL031 Type 1	1.4
6AL015	J813	Rolls Royce	AE3007A1P	nvPM Ref. 01P06AL031 Type 2	1.6
6AL016	J814	Rolls Royce	AE3007A1P	nvPM Ref. 01P06AL031 LEC, Type 3	1.3
10AL026	J824	Rolls Royce	AE3007A2	nvPM Ref. 01P10AL033	1.8
6AL017	J815	Rolls Royce	AE3007A3	nvPM Ref. 01P06AL034 Type 1	1.3
6AL018	J816	Rolls Royce	AE3007A3	nvPM Ref. 01P06AL034 Type 2	1.4
6AL019	J817	Rolls Royce	AE3007A3	nvPM Ref. 01P06AL034 LEC, Type 3	1.0
8AL025	J800	Rolls Royce	AE3007C	Type 1	1.1
8AL025	J819	Rolls Royce	AE3007C	RR Notice AE3007A-076; Type 1	1.1
6AL022	J820	Rolls Royce	AE3007C	RR Notice AE3007A-076, PAB fuel nozzles, Type 2	1.2
6AL023	J803	Rolls Royce	AE3007C1	RR Notice AE3007A-076, Type 1	1.2
6AL024	J822	Rolls Royce	AE3007C1	RR Notice AE3007A-076, PAB fuel nozzles, type 2	1.3
13AL027	J823	Rolls Royce	AE3007C2		1.3
1TL001	J680	Textron Lycoming	ALF 502L-2	out of prod.	1.2
1TL002	J681	Textron Lycoming	ALF 502R-3	out of prod.	0.9
1TL003	J682	Textron Lycoming	ALF 502R-5	out of prod.	1.0
1TL004	J690	Textron Lycoming	ALF 507		1.1
8HN001	J910	Honeywell	AS907-1-1A	out of production since 2011	1.7
3BR001	J850	BMW Rolls-Royce	BR700-710A1-10	out of prod.	2.6
4BR008	J858	BMW Rolls-Royce	BR700-710A1-10	20. Oct 96 or later	2.8
01P04BR013	J854	BMW Rolls-Royce	BR700-710A2-20	Max nvPM Eim = 0.6089 g/kg, Ein = 6.77 E+15 /kg	2.8
01P06BR014	J859	BMW Rolls-Royce	BR700-710C4-11	Max nvPM Eim = 0.6128 g/kg, Ein = 6.8 E+15 /kg	2.9
01P20BR015	J861	Rolls Royce	BR700-710D5-21	Max nvPM Eim = 0.1882 g/kg, Ein = 2.69 E+15 /kg	3.1
4BR002	J851	BMW Rolls-Royce	BR700-715A1-30	out of prod.	4.0
4BR005	J855	BMW Rolls-Royce	BR700-715A1-30	improved fuel injector, 29. Jun 99 or later	3.3
4BR003	J852	BMW Rolls-Royce	BR700-715B1-30	out of prod.	4.6
4BR006	J856	BMW Rolls-Royce	BR700-715B1-30	improved fuel injector, 29. Jun 99 or later	4.0
4BR004	J853	BMW Rolls-Royce	BR700-715C1-30	out of prod.	5.3
4BR007	J857	BMW Rolls-Royce	BR700-715C1-30	improved fuel injector, 29. Jun 99 or later	4.6
01P11BR016	J860	BMW Rolls-Royce	BR700-725A1-12	Max nvPM Eim = 0.2318 g/kg, Ein = 2.35 E+15 /kg	2.6
06P26RR149	J862	Rolls Royce	BR700-730B2-14	Max nvPM Eim = 0.1707 g/kg, Ein = 2.64 E+15 /kg	3.8
07P27GE229	J001	General Electric	CF34-10A16	Max. nvPM Eim = 0.0364 g/kg, Ein = 5.28E+14 /kg	2.8
11GE141	J002	General Electric	CF34-10A18		3.1
FOCA	J099	General Electric	CF34-10E2A1	nvPM Ref. 01P08GE203, test data, uncertified	2.7
8GE114	J100	General Electric	CF34-10E2A1	nvPM Ref. 01P08GE203	2.7
10GE129	J015	General Electric	CF34-10E5 (2007)		2.8
8GE115	J125	General Electric	CF34-10E5 (2004)	SAC	2.9
11GE142	J003	General Electric	CF34-10E5 (2009)		2.8
10GE130	J017	General Electric	CF34-10E5A1		3.3
8GE117	J126	General Electric	CF34-10E5A1	SAC	3.3
11GE144	J007	General Electric	CF34-10E5A1 (2009)		3.2
10GE131	J016	General Electric	CF34-10E6 (2007)		2.8
8GE116	J127	General Electric	CF34-10E6 (2004)	SAC	2.9
11GE143	J004	General Electric	CF34-10E6 (2009)	Same emissions performance as 11GE142	2.8
10GE132	J018	General Electric	CF34-10E6A1 (2007)		3.3
8GE118	J128	General Electric	CF34-10E6A1 (2004)	SAC	3.3
11GE145	J008	General Electric	CF34-10E6A1 (2009)	Same emissions performance as 11GE144	3.2
10GE133	J019	General Electric	CF34-10E7 (2007)		3.3
8GE119	J137	General Electric	CF34-10E7 (2004)	SAC	3.3
11GE146	J009	General Electric	CF34-10E7 (2009)	Same emissions performance as 11GE144	3.2
11GE147	J136	General Electric	CF34-10E7-B		3.2
1GE034	J090	General Electric	CF34-3A (old)	nvPM from 07P05GE220	1.1
07P05GE220	J091	General Electric	CF34-3A/A1/A2/B1/B2	Max nvPM Eim = 0.287 g/kg, Ein = 2.01 E+15 /kg	1.1
5GE084	J098	General Electric	CF34-3B	nvPM Ref. 01P05GE189	1.1
5GE083	J092	General Electric	CF34-8C1	Engine S/N 965202, Set SN > 0 for App Taxi	2.1
6GE096	J097	General Electric	CF34-8C1 Block 1	28. Jan 02 or later, Set SN > 0 for App Taxi	2.0
07P27GE221	J094	General Electric	CF34-8C5	Max nvPM Eim = 0.0714 g/kg, nvPM Ein = 6.07 E+14	2.1
8GE107	J138	General Electric	CF34-8C5A1	nvPM Ref. 01P08GE191	2.3
07P27GE222	J204	General Electric	CF34-8C5A1	Max nvPM Eim = 0.0833 g/kg, Ein = 6.51 E+14 /kg	2.2
8GE104	J139	General Electric	CF34-8C5A2 (2002)	nvPM Ref. 01P08GE193	2.4
07P27GE224	J222	General Electric	CF34-8C5A2 (2023)	Max. nvPM Eim = 0.1049 g/kg, Ein = 7.20E+14 /kg	2.3
8GE103	J173	General Electric	CF34-8C5A3 (2002)	nvPM Ref. 01P08GE194	2.6

07P27GE225	J223	General Electric	CF34-8C5A3, CF34-8C5/M (2023)	Max nvPM Eim = 0.1327 g/kg, Ein = 7.90E+14 /kg	2.5
8GE112	J174	General Electric	CF34-8C5B1 (2002)	nvPM Ref. 01P08GE192	2.0
07P27GE223	J221	General Electric	CF34-8C5B1 (2023)	Max. nvPM Eim = 0.044 g/kg, Ein = 4.75E+14 /kg	1.9
8GE113	J095	General Electric	CF34-8E2	nvPM Ref. 01P08GE195	1.9
8GE111	J175	General Electric	CF34-8E2A1	nvPM Ref. 01P08GE196	2.2
07P27GE226	J096	General Electric	CF34-8E5	Max. nvPM Eim = 0.0797 g/kg, Ein = 6.39E+14 /kg	2.2
07P27GE227	J093	General Electric	CF34-8E5A1	Max. nvPM Eim = 0.1135 g/kg, Ein = 7.43E+14 /kg	2.3
8GE102	J176	General Electric	CF34-8E5A2	nvPM Ref. 01P08GE199	2.6
07P27GE228	J237	General Electric	CF34-8E5A2HA	Max. nvPM Eim = 0.1428 g/kg, Ein = 8.12E+14 /kg	2.5
8GE109	J177	General Electric	CF34-8E6	nvPM Ref. 01P08GE200	2.2
8GE106	J178	General Electric	CF34-8E6A1	nvPM Ref. 01P08GE201	2.4
3GE067	J129	General Electric	CF6-45A	LEFN combustor, out of prod., taxi mode = idle	9.1
1GE005	J130	General Electric	CF6-45A2 (1979)	out of prod.	25.7
3GE068	J131	General Electric	CF6-45A2 (1987)	LEFN combustor, out of prod., taxi mode = idle	9.1
3GE069	J132	General Electric	CF6-50A	LEFN combustor, out of prod., taxi mode = idle	10.3
1GE006	J140	General Electric	CF6-50C (1979)	out of prod.	27.2
3GE070	J145	General Electric	CF6-50C (1987)	LEFN combustor, out of prod., taxi mode = idle	11.1
1GE007	J142	General Electric	CF6-50C1 (1979)	out of prod.	27.1
3GE073	J183	General Electric	CF6-50C1 (1987)	LEFN combustor, out of prod., taxi mode = idle	11.9
1GE007	J143	General Electric	CF6-50C2 (1979)		27.1
3GE074	J184	General Electric	CF6-50C2 (1987)	LEFN combustor, out of prod., taxi mode = idle	11.9
3GE078	J185	General Electric	CF6-50C2B	LEFN combustor, out of prod., taxi mode = idle	12.5
1GE008	J141	General Electric	CF6-50C2R (1979)	out of prod.	27.2
3GE072	J186	General Electric	CF6-50C2R (1987)	LEFN, 29. Jul 87 or later, out of pr., taxi = idle	11.1
3GE071	J172	General Electric	CF6-50CA	LEFN, out of prod., taxi mode = idle	11.1
3GE075	J187	General Electric	CF6-50E, -50E1	=3GE076, LEFN, out of prod., taxi mode = idle	11.9
1GE009	J144	General Electric	CF6-50E2 (1979)	out of prod.	27.1
3GE077	J188	General Electric	CF6-50E2 (1987)	LEFN, out of prod., taxi mode = idle	11.9
3GE079	J189	General Electric	CF6-50E2B	LEFN, out of prod., taxi mode = idle	12.5
1GE001	J101	General Electric	CF6-6D	out of prod.	21.8
1GE002	J103	General Electric	CF6-6D1A	out of prod.	21.8
1GE003	J102	General Electric	CF6-6K	out of prod.	21.8
1GE004	J104	General Electric	CF6-6K2	out of prod.	21.8
1GE010	J146	General Electric	CF6-80A	out of prod.	11.1
1GE011	J147	General Electric	CF6-80A1	out of prod.	11.1
1GE012	J148	General Electric	CF6-80A2	out of prod.	11.9
1GE013	J149	General Electric	CF6-80A3	out of prod.	11.9
1GE014	J150	General Electric	CF6-80C2A1 (1985)	out of prod., Calvert SN calculation	12.4
2GE036	J151	General Electric	CF6-80C2A1 (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	11.5
1GE015	J152	General Electric	CF6-80C2A2 (1985)	Replaced by J153, 1GE016, Calvert SN calculation	10.6
1GE016	J153	General Electric	CF6-80C2A2 (1985)	out of prod., Calvert SN calculation	9.7
2GE037	J157	General Electric	CF6-80C2A2 (1995)	1862M39 combustor, Set SN > 0 for App Taxi	9.3
1GE018	J133	General Electric	CF6-80C2A3	standard combustor, out of prod., Calvert SN	13.1
1GE017	J154	General Electric	CF6-80C2A3 (1985)	Replaced by J133, 1GE018, Calvert SN calculation	13.1
2GE038	J158	General Electric	CF6-80C2A3 (1995)	1862M39 combustor, Set SN > 0 for App Taxi	12.1
1GE020	J134	General Electric	CF6-80C2A5 (1985)	standard combustor, out of prod., Calvert SN	12.7
1GE019	J155	General Electric	CF6-80C2A5 (1985)	Replaced by J134, 1GE020, Calvert SN calculation	12.4
2GE039	J159	General Electric	CF6-80C2A5 (1995)	1862M39 combustor, Set SN > 0 for App Taxi	12.6
3GE056	J179	General Electric	CF6-80C2A5F	1862M39 combustor, Set SN > 0 for App Taxi	12.8
1GE021	J156	General Electric	CF6-80C2A8 (1985)	out of prod., Calvert SN calculation	11.8
2GE040	J168	General Electric	CF6-80C2A8 (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	11.5
1GE022	J160	General Electric	CF6-80C2B1 (1985)	out of prod., Calvert SN calculation	10.4
2GE041	J169	General Electric	CF6-80C2B1 (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	10.7
07P27GE218	J190	General Electric	CF6-80C2B1F	Max nvPM Eim = 0.0286 g/kg, Ein = 2.42 E+14 /kg	10.1
1GE025	J161	General Electric	CF6-80C2B2 (1985)	out of prod., Calvert SN calculation	8.8
2GE042	J171	General Electric	CF6-80C2B2 (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	9.2
2GE046	J105	General Electric	CF6-80C2B2F (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	9.2
1GE026	J165	General Electric	CF6-80C2B2F (1985)	out of prod.	8.4
2GE043	J106	General Electric	CF6-80C2B4 (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	11.2
1GE027	J162	General Electric	CF6-80C2B4 (1985)	out of prod., Calvert SN calculation	11.2
2GE047	J107	General Electric	CF6-80C2B4F (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	11.1
1GE028	J166	General Electric	CF6-80C2B4F (1985)	out of prod.	10.6
07P27GE219	J108	General Electric	CF6-80C2B5F	Max nvPM Eim = 0.0284 g/kg, Ein = 2.41 E+14 /kg	11.4
2GE044	J109	General Electric	CF6-80C2B6 (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	12.6
1GE029	J163	General Electric	CF6-80C2B6 (1985)	out of prod., Calvert SN calculation	12.4
2GE048	J110	General Electric	CF6-80C2B6F (1995)	nvPM Ref. 01P02GE188	12.4
1GE030	J167	General Electric	CF6-80C2B6F (1985)	out of prod.	12.1
2GE054	J111	General Electric	CF6-80C2B7F (1985)	out of prod.	12.1
2GE055	J112	General Electric	CF6-80C2B7F (1995)	17. Jan 95 or later, Set SN > 0 for App Taxi	12.4
8GE101	J200	General Electric	CF6-80C2B8F	1862M39 combustor, Set SN > 0 for App Taxi	12.2

3GE058	J113	General Electric	CF6-80C2B8FA	1862M39 combustor, Set SN > 0 for App Taxi	12.4
2GE049	J114	General Electric	CF6-80C2D1F (1995)	1862M39 combustor, 17. Jan 95 or later, SN > 0 A T	12.7
1GE031	J170	General Electric	CF6-80C2D1F (1985)	out of prod.	12.7
2GE050	J115	General Electric	CF6-80E1A1 (1995)	1862M39 combustor, 17. Jan 95 or later, SN > 0 A T	13.2
1GE032	J180	General Electric	CF6-80E1A1 (1992)	Set SN > 0 for App Taxi	15.4
2GE051	J116	General Electric	CF6-80E1A2 (1995)	1862M39 combustor, 17. Jan 95 or later, SN > 0 A T	13.8
1GE033	J181	General Electric	CF6-80E1A2 (1992)	Set SN > 0 for App Taxi	16.2
5GE085	J124	General Electric	CF6-80E1A3	standard combustor, Set SN > 0 for App Taxi	19.3
4GE081	J117	General Electric	CF6-80E1A4 (1996)	16. Mrz 96 or later, Set SN > 0 for App Taxi	15.0
4GE080	J182	General Electric	CF6-80E1A4 (1995)	standard combustor, Set SN > 0 for App Taxi	18.1
1CM001	J010	CFM International	CFM56-2A	out of prod.	4.6
1CM002	J013	CFM International	CFM56-2B-1	out of prod.	3.9
1CM003	J012	CFM International	CFM56-2-C5	out of prod.	3.9
1CM004	J020	CFM International	CFM56-3-B1	out of prod., -3C-1 and -3B-2 for B737-300	3.6
1CM005	J021	CFM International	CFM56-3B-2	out of prod., -3C1 for B737-300 and -400	4.2
1CM007	J022	CFM International	CFM56-3C-1	out of prod.	4.8
1CM006	J023	CFM International	CFM56-3C-1 (rerated)	rerated, out of prod., -3-B1 for B737-500	3.2
1CM008	J030	CFM International	CFM56-5-A1		4.5
1CM009	J040	CFM International	CFM56-5A3		5.1
4CM035	J076	CFM International	CFM56-5A4	Calvert SN calculation	3.9
4CM036	J047	CFM International	CFM56-5A5	Calvert SN calculation	4.4
2CM012	J060	CFM International	CFM56-5B1	out of prod., Set SN > 0 for App Taxi	7.8
2CM016	J050	CFM International	CFM56-5B1/2	DAC, out of prod., Calvert SN calculation	5.3
3CM020	J055	CFM International	CFM56-5B1/2P	DAC II	5.0
8CM052	J058	CFM International	CFM56-5B1/3	nvPM Ref. 01P08CM102	5.8
3CM023	J064	CFM International	CFM56-5B1/P	Calvert SN calculation	7.1
3CM023/8CM052	J995	CFM International	CFM56-5B1/P/3	Engine intermix	6.4
2CM013	J061	CFM International	CFM56-5B2	out of prod., Set SN > 0 for App Taxi	8.5
2CM017	J051	CFM International	CFM56-5B2/2	DAC, out of prod., Calvert SN calculation	5.8
4CM037	J078	CFM International	CFM56-5B2/2P	DAC II	5.8
8CM053	J059	CFM International	CFM56-5B2/3	nvPM Ref. 01P08CM103	6.3
3CM024	J065	CFM International	CFM56-5B2/P	Calvert SN calculation	7.7
4CM038	J062	CFM International	CFM56-5B3/2P	DAC II	6.4
8CM054	J054	CFM International	CFM56-5B3/3	nvPM Ref. 01P08CM104	6.9
3CM025	J066	CFM International	CFM56-5B3/P	Calvert SN calculation	8.4
2CM014	J063	CFM International	CFM56-5B4	out of prod., Set SN > 0 for App Taxi	5.9
2CM018	J052	CFM International	CFM56-5B4/2	DAC, out of prod., Calvert SN calculation	3.8
3CM021	J056	CFM International	CFM56-5B4/2P	DAC II	3.8
8CM055	J085	CFM International	CFM56-5B4/3	nvPM Ref. 01P08CM105	4.5
3CM026	J067	CFM International	CFM56-5B4/P	Calvert SN calculation	5.6
3CM026/3CM021	J990	CFM International	CFM56-5B4/P/2P Intermix	Engine Intermix	4.8
3CM026/8CM055	J991	CFM International	CFM56-5B4/P/3 Intermix	Engine Intermix	5.1
8CM056	J086	CFM International	CFM56-5B5/3	nvPM Ref. 01P08CM106	3.0
3CM027	J068	CFM International	CFM56-5B5/P	Calvert SN calculation	3.7
3CM027/8CM056	J994	CFM International	CFM56-5B5/P/3 Intermix	Engine Intermix	3.4
2CM019	J053	CFM International	CFM56-5B6/2	DAC, out of prod., Calvert SN calculation	3.2
3CM022	J057	CFM International	CFM56-5B6/2P	DAC II	3.0
8CM057	J087	CFM International	CFM56-5B6/3	nvPM Ref. 01P08CM107	3.4
3CM028	J069	CFM International	CFM56-5B6/P	Calvert SN calculation	4.2
3CM028/3CM022	J993	CFM International	CFM56-5B6/P/2P Intermix	Engine Intermix	3.6
8CM057/3CM028	J992	CFM International	CFM56-5B6/P/3 Intermix	Engine Intermix	3.8
8CM058	J088	CFM International	CFM56-5B7/3	nvPM Ref. 01P08CM108	4.5
6CM044	J077	CFM International	CFM56-5B7/P	Engine S/N 779-194/1, Calvert SN calculation	5.6
8CM059	J089	CFM International	CFM56-5B8/3	nvPM Ref. 01P08CM109	2.9
7CM048	J079	CFM International	CFM56-5B8/P	SAC Engine S/N 779-194/1, Calvert SN calculation	3.4
7CM050	J026	CFM International	CFM56-5B9/2P	DAC, Calvert SN calculation	2.8
8CM060	J024	CFM International	CFM56-5B9/3	nvPM Ref. 01P08CM110	3.4
7CM049	J025	CFM International	CFM56-5B9/P	SAC Engine S/N 779-194/1, Calvert SN calculation	3.9
1CM010	J041	CFM International	CFM56-5C2		7.1
7CM045	J027	CFM International	CFM56-5C2/P	SAC Engine S/N 740/105, Calvert SN calculation	6.2
1CM011	J042	CFM International	CFM56-5C3		7.8
7CM046	J028	CFM International	CFM56-5C3/P	SAC Engine S/N 740-105, Calvert SN calculation	6.9
2CM015	J043	CFM International	CFM56-5C4		8.7
7CM047	J029	CFM International	CFM56-5C4/P	SAC Engine S/N 740-105, Calvert SN calculation	7.6
3CM029	J070	CFM International	CFM56-7B18	Calvert SN calculation	3.5

8CM061	J044	CFM International	CFM56-7B18/3	Tech Insertion	2.7
3CM030	J071	CFM International	CFM56-7B20	Calvert SN calculation	3.8
4CM039	J080	CFM International	CFM56-7B20/2	DAC, Calvert SN calculation	2.8
8CM062	J045	CFM International	CFM56-7B20/3	nvPM Ref. 01P11CM111	3.0
11CM067	J031	CFM International	CFM56-7B20E	nvPM Ref. 01P11CM111	3.0
3CM031	J072	CFM International	CFM56-7B22	Calvert SN calculation	4.6
4CM040	J081	CFM International	CFM56-7B22/2	DAC, Calvert SN calculation	3.1
8CM063	J046	CFM International	CFM56-7B22/3	nvPM Ref. 01P11CM112	3.5
11CM068	J032	CFM International	CFM56-7B22E	nvPM Ref. 01P11CM112	3.5
11CM069	J033	CFM International	CFM56-7B22E/B1	nvPM Ref. 01P11CM113	3.5
3CM032	J073	CFM International	CFM56-7B24	Calvert SN calculation	5.1
4CM041	J082	CFM International	CFM56-7B24/2	DAC, Calvert SN calculation	3.5
8CM064	J048	CFM International	CFM56-7B24/3	nvPM Ref. 01P11CM114	4.0
11CM070	J034	CFM International	CFM56-7B24E	nvPM Ref. 01P11CM114	4.0
8CM051	J074	CFM International	CFM56-7B26	Calvert SN calculation	6.1
4CM042	J083	CFM International	CFM56-7B26/2	DAC, Calvert SN calculation	4.2
8CM065	J049	CFM International	CFM56-7B26/3	nvPM Ref. 01P22FC001	4.8
11CM072	J036	CFM International	CFM56-7B26E	nvPM Ref. 01P11CM116	4.8
11CM073	J037	CFM International	CFM56-7B26E/B1	nvPM Ref. 01P11CM117	4.8
11CM074	J038	CFM International	CFM56-7B26E/B2	nvPM Ref. 01P11CM118	4.8
11CM076	J240	CFM International	CFM56-7B26E/B2F	nvPM Ref. 01P11CM120	4.8
11CM075	J039	CFM International	CFM56-7B26E/F	nvPM Ref. 01P11CM119	4.8
3CM034	J075	CFM International	CFM56-7B27	Calvert SN calculation	6.7
4CM043	J084	CFM International	CFM56-7B27/2	DAC, Calvert SN calculation	4.6
8CM066	J035	CFM International	CFM56-7B27/3	nvPM Ref. 01P11CM121	5.2
11CM080	J244	CFM International	CFM56-7B27AE	nvPM Ref. 01P11CM124	5.2
11CM077	J241	CFM International	CFM56-7B27E	nvPM Ref. 01P11CM121	5.2
11CM078	J242	CFM International	CFM56-7B27E/B1	nvPM Ref. 01P11CM122	5.2
11CM082	J245	CFM International	CFM56-7B27E/B1F	nvPM Ref. 01P11CM126	5.2
11CM079	J243	CFM International	CFM56-7B27E/B3	nvPM Ref. 01P11CM123	5.2
FOCA	J357	AO 'Aviadgatel'	D-18T	based on J354, Calvert SN calculation	15.9
1AA001	J750	AO 'Aviadgatel'	D-30-2	out of prod.	17.4
1AA002	J751	AO 'Aviadgatel'	D-30-KP-2	out of prod.	13.3
1AA003	J752	AO 'Aviadgatel'	D-30-KU	out of prod., Calvert SN calculation	9.0
1AA004	J753	AO 'Aviadgatel'	D-30-KU-154	out of prod., Calvert SN calculation	10.8
1ZM001	J700	ZMKB	D-36	For YK-42, updated, Calvert SN calculation	3.6
13ZM002	J703	ZMKB	D-36 ser. 4A	Series 4A, Calvert SN calculation	3.5
FOCA	J701	ZMKB	D-436-148 F1	Calvert SN calculation	2.3
13ZM003	J704	ZMKB	D-436-148 F1	CAEP/4 Nox compliant version, Calvert SN	2.3
FOCA	J702	ZMKB	D-436-148 F2	Calvert SN calculation	2.5
13ZM004	J705	ZMKB	D-436-148 F2	CAEP/4 Nox compliant version, Calvert SN	2.5
07P27GE239	J205	General Electric	GE90-110B1	Max nvPM Eim = 0.014 g/kg, Ein = 3.45 E+14 /kg	28.8
7GE098	J206	General Electric	GE90-113B	SN corrected for aromatics content, DAC	33.0
07P27GE240	J207	General Electric	GE90-115B	Max nvPM Eim = 0.0162 g/kg, Ein = 3.46 E+14 /kg	32.9
2GE052	J118	General Electric	GE90-76B (1995)	DAC I, out of prod., SN TO, CL, AP estimated	21.3
3GE062	J119	General Electric	GE90-76B (1997)	DAC II, 19. Jun 97 or later, out of prod	19.7
6GE087	J191	General Electric	GE90-76B (2000)	DAC II, 12. Jan 00 or later, Data equal 5GE086	19.4
9GE124	J208	General Electric	GE90-76B (2007)	PEC (Performance Enhanced Combustor)	19.0
3GE059	J120	General Electric	GE90-77B (1995)	DAC I, out of prod.	21.3
3GE063	J121	General Electric	GE90-77B (1997)	DAC II, 19. Jun 97 or later, out of prod.	20.0
6GE088	J123	General Electric	GE90-77B (2000)	DAC II, 12. Jan 00 or later	19.7
9GE125	J209	General Electric	GE90-77B (2007)	PEC (Performance Enhanced Combustor)	19.4
2GE053	J122	General Electric	GE90-85B (1995)	DAC I, out of prod., SN TO, CL, AP estimated	25.7
3GE064	J192	General Electric	GE90-85B (1997)	DAC II, 19. Jun 97 or later, out of prod.	24.5
6GE089	J193	General Electric	GE90-85B (2000)	DAC II, 12. Jan 00 or later	24.2
9GE126	J260	General Electric	GE90-85B (2007)	PEC (Performance Enhanced Combustor)	23.3
3GE060	J194	General Electric	GE90-90B (1995)	DAC I, out of prod.	29.4
3GE065	J195	General Electric	GE90-90B (1997)	DAC II, 19. Jun 97 or later, out of prod.	28.5
6GE090	J198	General Electric	GE90-90B (2000)	DAC II, 12. Jan 00 or later	27.9
9GE127	J261	General Electric	GE90-90B (2007)	PEC (Performance Enhanced Combustor)	26.6
3GE061	J196	General Electric	GE90-92B (1995)	DAC I, out of prod.	31.2
3GE066	J197	General Electric	GE90-92B (1997)	DAC II, 19. Jun 97 or later, SN around 0	30.2
8GE100	J199	General Electric	GE90-94B (2000)	DAC II, 12. Jan 00 or later	30.6
9GE128	J262	General Electric	GE90-94B (2007)	PEC (Performance Enhanced Combustor)	28.5
FOCA	J263	General Electric	GE9X	Assumed Values	18.8
11GE134	J270	General Electric	GENx-1B54		5.2
12GE148	J276	General Electric	GENx-1B54/P1		5.6
07P27GE230	J283	General Electric	GENx-1B54/P2	Max. nvPM Eim = 0.0058 g/kg, Ein = 2.45 E+14 /kg	5.6
11GE135	J271	General Electric	GENx-1B58		6.3
12GE149	J277	General Electric	GENx-1B58/P1		6.7
07P27GE231	J284	General Electric	GENx-1B58/P2	Max. nvPM Eim = 0.0058 g/kg, Ein = 2.45 E+14 /kg	6.6

11GE136	J272	General Electric	GENx-1B64		8.6
12GE150	J278	General Electric	GENx-1B64/P1		9.0
07P27GE232	J285	General Electric	Genx-1B64/P2	Max. nvPM Eim = 0.0058 g/kg, Ein = 2.45 E+14 /kg	8.7
11GE137	J273	General Electric	GENx-1B67		9.8
12GE151	J279	General Electric	GENx-1B67/P1		10.2
07P27GE233	J286	General Electric	Genx-1B67/P2	Max. nvPM Eim = 0.0058 g/kg, Ein = 2.45 E+14 /kg	9.8
11GE138	J274	General Electric	GENx-1B70		11.5
13GE163	J287	General Electric	Genx-1B70/72/P2	nvPM Ref. 01P17GE208	12.6
07P27GE234	J288	General Electric	Genx-1B70/75/P2	Max nvPM Eim = 0.0058 g/kg, Ein = 2.45 E+14 /kg	11.4
12GE152	J280	General Electric	GENx-1B70/P1		12.0
13GE161	J289	General Electric	Genx-1B70/P2	nvPM Ref. 01P17GE210	12.6
12GE155	J281	General Electric	GENx-1B74/75/P1		15.3
07P27GE235	J290	General Electric	GENx-1B74/75/P2	Max nvPM Eim = 0.0058 g/kg, Ein = 2.45 E+14 /kg	14.4
12GE156	J282	General Electric	GENx-1B75/P1		16.1
01P17GE212	J291	General Electric	GENx-1B75/P2	Max. nvPM Eim = 0.0069 g/kg, Ein = 1.91E+14 /kg	16.4
01P17GE213	J294	General Electric	GENx-1B76/P2	Max nvPM Eim = 0.0069 g/kg, Ein = 1.9 E+14 /kg	17.2
11GE139	J275	General Electric	GENx-2B67		11.1
07P27GE238	J293	General Electric	GENx-2B67/P	Max nvPM Eim = 0.0058 g/kg, Ein = 2.45 E+14 /kg	10.0
13GE157	J292	General Electric	GENx-2B67B		11.1
9EA001	J250	Engine Alliance	GP7270		17.7
11HN003	J913	Honeywell	HTF7000		1.4
11HN005	J912	Honeywell	HTF7250G	nvPM Ref. 01P11HN012	1.5
14HN009	J917	Honeywell	HTF7350	nvPM Ref. 01P14HN011	1.5
14HN006	J914	Honeywell	HTF7500E (A1)	nvPM Ref. 01P14HN014	1.3
14HN007	J915	Honeywell	HTF7500E (A2)	nvPM Ref. 01P14HN015	1.4
14HN008	J916	Honeywell	HTF7500E (A3)	nvPM Ref. 01P14HN016	1.6
18HN010	J918	Honeywell	HTF7700L	nvPM Ref. 01P18HN013	1.6
1PW001	J300	Pratt & Whitney	JT3D-3B	out of prod., Calvert SN calculation	11.0
1PW002	J301	Pratt & Whitney	JT3D-7	out of prod., with 14-7 SN=18,	11.6
1PW002	J302	Pratt & Whitney	JT3D-7A	out of prod. Calvert SN calculation	11.6
1PW008	J315	Pratt & Whitney	JT8D-11	out of prod., Calvert SN calculation	7.5
1PW010	J316	Pratt & Whitney	JT8D-15 (1980)	1.1.1984 or later, out of prod., Calvert SN	4.1
1PW009	J341	Pratt & Whitney	JT8D-15 (1976)	Smoke fix, out of prod. Jun 80, Calvert SN	8.8
1PW011	J317	Pratt & Whitney	JT8D-15A	out of prod., Calvert SN calculation	3.6
1PW013	J318	Pratt & Whitney	JT8D-17 (1980)	1.1.1984 or later, out of prod., Calvert SN	4.6
1PW012	J342	Pratt & Whitney	JT8D-17 (1976)	Smoke fix, out of prod. Jun 80, Calvert SN	9.0
1PW014	J319	Pratt & Whitney	JT8D-17A	out of prod., Calvert SN calculation	5.7
1PW015	J321	Pratt & Whitney	JT8D-17AR	out of prod., Calvert SN calculation	5.0
1PW016	J320	Pratt & Whitney	JT8D-17R	out of prod., Calvert SN calculation	5.6
1PW017	J330	Pratt & Whitney	JT8D-209	out of prod. Calvert SN calculation	5.1
1PW018	J331	Pratt & Whitney	JT8D-217 (1983)	out of prod. Calvert SN calculation	6.0
4PW068	J343	Pratt & Whitney	JT8D-217 (1999)	E-Kit 5/1999 or later, out of prod., Calvert SN	4.6
1PW018	J332	Pratt & Whitney	JT8D-217A	out of prod. Calvert SN calculation	6.0
4PW069	J344	Pratt & Whitney	JT8D-217A	E-Kit 5/1999 or later, out of prod., Calvert SN	4.6
1PW018	J333	Pratt & Whitney	JT8D-217C (1983)	out of prod. Calvert SN calculation	6.0
4PW070	J345	Pratt & Whitney	JT8D-217C (1999)	E-Kit 5/1999 or later, Set SN > 0 for Taxi	4.2
1PW019	J334	Pratt & Whitney	JT8D-219 (1983)	46-16B combustor, Calvert SN calculation	6.1
4PW071	J346	Pratt & Whitney	JT8D-219 (1999)	E-Kit 5/1999 or later, out of prod., SN > 0 Taxi	4.6
8PW085	J347	Pratt & Whitney	JT8D-7 series	Emission reduction, out of prod., Calvert SN	3.3
1PW004	J311	Pratt & Whitney	JT8D-7A	out of prod., Calvert SN calculation	6.3
1PW004	J312	Pratt & Whitney	JT8D-7B	out of prod., Calvert SN calculation	6.3
1PW007	J313	Pratt & Whitney	JT8D-9	1/1984 or later, out of prod., Calvert SN	3.5
1PW006	J348	Pratt & Whitney	JT8D-9 series	Smoke fix, out of prod., Calvert SN calculation	6.5
1PW007	J314	Pratt & Whitney	JT8D-9A	Calvert SN calculation	3.5
8PW088	J370	Pratt & Whitney	JT9D-20	out of prod.	40.1
1PW032	J371	Pratt & Whitney	JT9D-20J	out of prod., Calvert SN calculation	51.5
1PW033	J354	Pratt & Whitney	JT9D-59A	out of prod., also for An-124 (D-18T), Calvert SN	15.9
8PW086	J350	Pratt & Whitney	JT9D-7	out of prod.	39.6
1PW034	J355	Pratt & Whitney	JT9D-70A	out of prod.	18.8
8PW087	J351	Pratt & Whitney	JT9D-7A	out of prod.	40.1
1PW022	J352	Pratt & Whitney	JT9D-7F (1975)	Mod V combustor, out of prod., Calvert SN	34.4
1PW023	J356	Pratt & Whitney	JT9D-7F (1980)	Mod VI combustor, 1980 or later, out of prod.	47.7
1PW024	J369	Pratt & Whitney	JT9D-7J	out of prod., Calvert SN calculation	51.5
1PW025	J353	Pratt & Whitney	JT9D-7Q	out of prod.	18.8
1PW026	J361	Pratt & Whitney	JT9D-7R4D	out of prod., Calvert SN calculation	13.1
1PW027	J363	Pratt & Whitney	JT9D-7R4E	out of prod., Calvert SN calculation	14.5
1PW028	J364	Pratt & Whitney	JT9D-7R4E1 (H)	out of prod., Calvert SN calculation	13.1
1PW029	J366	Pratt & Whitney	JT9D-7R4G2	out of prod., Calvert SN calculation	14.3
1PW030	J367	Pratt & Whitney	JT9D-7R4H1	out of prod., Calvert SN calculation	15.7
PW	J368	Pratt & Whitney	JT9D-7R4H2	Calvert SN calculation	16.8
FOCA	J792	Kuznetsov	KUS-N-8-211	HC Taxi from J791, Calvert SN calculation	14.1

FOCA	J790	Kuznetsov	KUS-NK-8-4	HC taxi estimated, Calvert SN calculation	14.1
FOCA	J791	Kuznetsov	KUS-NK-8-6	Calvert SN calculation	21.3
20CM088	J925	CFM International	LEAP-1A24	nvPM Ref. 01P20CM127	2.3
20CM089	J930	CFM International	LEAP-1A26	nvPM Ref. 01P20CM128	3.5
20CM092	J932	CFM International	LEAP-1A29	nvPM Ref. 01P20CM130	5.4
20CM090	J935	CFM International	LEAP-1A35	nvPM Ref. 01P20CM132	7.8
20CM094	J933	CFM International	LEAP-1B21	nvPM Ref. 01P20CM133	4.1
20CM095	J934	CFM International	LEAP-1B23	nvPM Ref. 01P20CM134	4.6
20CM096	J938	CFM International	LEAP-1B25	nvPM Ref. 01P20CM135	5.4
20CM098	J939	CFM International	LEAP-1B27	nvPM Ref. 01P20CM136	6.3
20CM101	J940	CFM International	LEAP-1B28	nvPM Ref. 01P20CM140	7.8
1RR001	J660	Rolls Royce	M45H-01	out of prod.	4.0
FOCA	J014	diverse	Miljets < 26.7 kN	AEDC-TR-72-64, AFAPL-TR-76-20, AB 0.84 kg/s 22 kN	0.4
FOCA	J011	diverse	Miljets > 26.7kN	AESO Report No 4, 1985, Afterburner 4.46 kg/s	21.9
1KK001	J713	KKBM	NK-8-2U	out of prod., Calvert SN calculation	19.1
1KK002	J714	KKBM	NK-8-2U	14. Jun 90 or later, NOx from J713, SN J713	19.7
1KK003	J710	KKBM	NK-86	out of prod., Calvert SN calculation	21.8
1KK004	J712	KKBM	NK-86A	out of prod., SN from J710	22.0
1KK005	J711	KKBM	NK-86MA	Calvert SN calculation	4.6
FAAEED204	J900	BMW Rolls-Royce	Olympus 593 Mk610	Concorde Engine, Calvert SN calculation	50.0
07P27GE241	J268	General Electric	Passport20-19BB1A	Max nvPM Ein = 0.024 g/kg, Ein = 1.4 E+14 /kg	5.2
1AA005	J780	AO 'Aviadgatel'	PS-90A	out of prod., Calvert SN calculation	11.6
13AA006	J783	AO 'Aviadgatel'	PS-90A	CAEP/6 Nox compliant version	8.3
FOCA	J781	AO 'Aviadgatel'	PS-90A1	Combustor 194-03-800	9.8
13AA007	J784	AO 'Aviadgatel'	PS-90A1	CAEP/6 Nox compliant version	9.8
FOCA	J782	AO 'Aviadgatel'	PS-90A2	Combustor 93-03-800	7.9
13AA008	J785	AO 'Aviadgatel'	PS-90A2	CAEP/6 Nox compliant version	7.9
01P18PW148	J492	Pratt & Whitney	PW1122G-JM Block C	nvPM Ref. 01P18PW148	2.6
01P22PW158	J468	Pratt & Whitney	PW1122G-JM Block D	nvPM Ref.01P22PW158	2.9
01P18PW150	J493	Pratt & Whitney	PW1124G-JM Block C	nvPM Ref. 01P18PW150	2.6
01P22PW160	J469	Pratt & Whitney	PW1124G-JM Block D	nvPM Ref. 01P22PW160	2.9
15PW105	J474	Pratt & Whitney	PW1127G-JM Block C	nvPM Ref. 01P18PW153	3.2
01P18PW153	J494	Pratt & Whitney	PW1127G-JM Block C	nvPM Ref. 01P18PW151	3.1
01P22PW163	J500	Pratt & Whitney	PW1127G-JM Block D	nvPM Ref. 01P22PW163	3.4
01P18PW154	J495	Pratt & Whitney	PW1129G-JM Block C	nvPM Ref. 01P18PW154	3.6
01P22PW164	J479	Pratt & Whitney	PW1129G-JM Block D	nvPM Ref. 01P22PW164	4.0
15PW106	J475	Pratt & Whitney	PW1130G-JM (134 kN)	nvPM Ref. 01P18PW155	4.0
01P18PW155	J496	Pratt & Whitney	PW1133GA-JM Block C	nvPM Ref.01P18PW155	4.7
01P22PW166	J497	Pratt & Whitney	PW1133GA-JM Block D	nvPM Ref. 01P22PW166	5.3
01P18PW157	J476	Pratt & Whitney	PW1133G-JM Block C	nvPM Ref. 01P18PW157	4.7
01P22PW167	J478	Pratt & Whitney	PW1133G-JM Block D	nvPM Ref. 01P22PW167	5.3
21PW139	J498	Pratt & Whitney	PW1215G	nvPM Ref. 01P22PW168	2.2
21PW140	J499	Pratt & Whitney	PW1217G	nvPM Ref. 01P22PW169	2.9
01P22PW172	J488	Pratt & Whitney	PW1428G-JM Block C	nvPM Ref. 01P22PW172	4.0
01P22PW178	J467	Pratt & Whitney	PW1428G-JM Block D	nvPM Ref. 01P22PW178	4.0
01P22PW175	J466	Pratt & Whitney	PW1431G-JM Block C	nvPM Ref. 01P22PW175	4.1
01P22PW181	J489	Pratt & Whitney	PW1431G-JM Block D	nvPM Ref. 01P22PW181	4.6
01P20PW186	J483	Pratt & Whitney	PW1519G Block C	nvPM Ref. 01P20PW186	2.7
01P20PW184	J482	Pratt & Whitney	PW1521G Block C	nvPM Ref. 01P20PW184	3.1
01P20PW183	J481	Pratt & Whitney	PW1524G Block C	nvPM Ref. 01P20PW183	3.9
01P20PW182	J480	Pratt & Whitney	PW1525G Block C	nvPM Ref. 01P20PW182	3.9
01P20PW187	J484	Pratt & Whitney	PW1919G Block C	nvPM Ref. 01P20PW187	2.8
01P20PW188	J485	Pratt & Whitney	PW1921G Block C	nvPM Ref. 01P20PW188	3.2
01P20PW189	J486	Pratt & Whitney	PW1922G Block C	nvPM Ref. 01P20PW189	3.5
01P20PW191	J487	Pratt & Whitney	PW1923G Block C	nvPM Ref. 01P20PW191	3.5
4PW072	J431	Pratt & Whitney	PW2037	Calvert SN calculation	8.1
4PW073	J432	Pratt & Whitney	PW2040	Calvert SN calculation	10.0
PW	J402	Pratt & Whitney	PW2041	SN from J432	11.3
7PW077	J306	Pratt & Whitney	PW306A	Annular combustor, Calvert SN calculation	1.5
7PW078	J303	Pratt & Whitney	PW306B	Annular combustor, Calvert SN calculation	1.5
11PW100	J005	Pratt & Whitney	PW307A (2007)	nvPM Ref. 01P16PW143 Talon II	1.0
16PW114	J006	Pratt & Whitney	PW307A (2012)	nvPM Ref. 01P16PW143 Design Change vs J005	1.2
8PW091	J307	Pratt & Whitney	PW307A (2005)	nvPM Ref. 01P16PW143 Talon II, revised 8PW090	1.2
15PW109	J477	Pratt & Whitney	PW307D	nvPM Ref. 01P15PW144	1.4
7PW079	J304	Pratt & Whitney	PW308A	nvPM Ref 01P07PW145	1.3
7PW080	J305	Pratt & Whitney	PW308C BS 1047	nvPM Ref. 01P07PW146	1.4
14PW103	J308	Pratt & Whitney	PW308C BS 1289	nvpm Ref. 01P14PW147	1.4
1PW042	J410	Pratt & Whitney	PW4056	reduced em., out of prod., Calvert SN calculation	12.0
1PW043	J412	Pratt & Whitney	PW4060	reduced em., out of prod., Calvert SN calculation	14.1
12PW101	J413	Pratt & Whitney	PW4060 Phase 3	Phase 3	13.3
12PW102	J414	Pratt & Whitney	PW4062 Phase 3	Phase 3	14.6

2PW060	J415	Pratt & Whitney	PW4074		18.1
10PW096	J403	Pratt & Whitney	PW4074D (2010)	Floatwall, 2010 and later	20.3
3PW063	J434	Pratt & Whitney	PW4074D (1996)	out of prod., Calvert SN calculation	20.0
2PW061	J416	Pratt & Whitney	PW4077		19.3
10PW097	J404	Pratt & Whitney	PW4077D (2010)	Floatwall	21.8
3PW064	J435	Pratt & Whitney	PW4077D (1996)	Calvert SN calculation	21.5
8PW089	J418	Pratt & Whitney	PW4084		23.2
10PW098	J405	Pratt & Whitney	PW4084D (2010)	Floatwall, 2010 and later	26.5
3PW065	J436	Pratt & Whitney	PW4084D (1996)	Calvert SN calculation	26.7
10PW099	J406	Pratt & Whitney	PW4090 (2010)	Floatwall, 2010 or later	31.1
3PW066	J437	Pratt & Whitney	PW4090 (1996)	Calvert SN calculation	31.6
5PW076	J419	Pratt & Whitney	PW4098	Calvert SN calculation	32.3
1PW045	J420	Pratt & Whitney	PW4152	out of prod., Calvert SN calculation	10.4
1PW047	J422	Pratt & Whitney	PW4156	out of prod., Calvert SN calculation	12.0
1PW048	J424	Pratt & Whitney	PW4158	out of prod., Calvert SN calculation	12.9
7PW081	J423	Pratt & Whitney	PW4164 (2000)	Talon II combustor, Calvert SN calculation	12.1
1PW049	J425	Pratt & Whitney	PW4164 (1993)	Floatwall	17.2
9PW092	J470	Pratt & Whitney	PW4164-1D	Talon IIB Combustor	12.9
1PW050	J426	Pratt & Whitney	PW4168 (1993)	Floatwall	19.7
5PW075	J427	Pratt & Whitney	PW4168 (2000)	Talon II, Calvert SN calculation	13.9
9PW093	J471	Pratt & Whitney	PW4168-1D	Talon IIB Combustor	14.8
7PW082	J421	Pratt & Whitney	PW4168A (2000)	Talon II combustor, Calvert SN calculation	13.9
4PW067	J428	Pratt & Whitney	PW4168A (1993)	Floatwall	19.7
9PW094	J472	Pratt & Whitney	PW4168A-1D	Talon IIB Combustor	14.8
9PW095	J473	Pratt & Whitney	PW4170	Talon IIB Combustor	15.5
1PW051	J430	Pratt & Whitney	PW4256	out of prod., Calvert SN calculation	13.0
1PW052	J440	Pratt & Whitney	PW4460	out of prod., Calvert SN calculation	14.1
1PW053	J450	Pratt & Whitney	PW4x50	Phase 3, out of prod., Calvert SN calculation	9.7
1PW054	J451	Pratt & Whitney	PW4x52	Phase 3 combustor	10.4
1PW055	J452	Pratt & Whitney	PW4x56	Phase 3 combustor	12.2
5PW074	J429	Pratt & Whitney	PW4x58 (1999)	Talon II	10.3
1PW056	J453	Pratt & Whitney	PW4x58 (1993)	Phase 3	13.3
1PW057	J454	Pratt & Whitney	PW4x60	Phase 3 combustor	14.5
1PW058	J441	Pratt & Whitney	PW4x62 (1987)	out of prod., Calvert SN calculation	15.5
1PW059	J456	Pratt & Whitney	PW4x62 (1993)	Phase 3, 19. Jan 93 or later	15.9
7PW083	J460	Pratt & Whitney	PW6122A	Talon II comb., Dec. 2003 or later	3.2
7PW084	J461	Pratt & Whitney	PW6124A	Talon II comb., Dec 2003 or later	4.2
05P25PW205	J442	Pratt & Whitney	PW812D	Talon x combustor	3.0
05P25PW206	J443	Pratt & Whitney	PW812GA	Talon X combustor	2.9
19PW127	J490	Pratt & Whitney	PW814GA	nvPM Ref. 01P22PW141 Talon X	3.2
19PW128	J491	Pratt & Whitney	PW815GA	nvPM Ref. 01P22PW142 Talon X	3.4
1RR002	J501	Rolls Royce	RB211-22B	Package 1 comb., out of prod.	39.7
1RR005	J510	Rolls Royce	RB211-524B	Phase 2, out of prod., SN from 1RR004	16.9
1RR005	J511	Rolls Royce	RB211-524B2	Phase 2, Calvert SN calculation	16.9
1RR005	J512	Rolls Royce	RB211-524B3	Calvert SN calculation	16.9
1RR005	J513	Rolls Royce	RB211-524B4	Calvert SN calculation	16.9
1RR006	J514	Rolls Royce	RB211-524C2	out of prod.	65.6
1RR008	J503	Rolls Royce	RB211-524D4	Phase 2, out of prod., Calvert SN calculation	20.1
1RR010	J516	Rolls Royce	RB211-524G	out of prod., Calvert SN calculation	21.1
4RR036	J505	Rolls Royce	RB211-524G-T	Calvert SN calculation	12.5
1RR011	J517	Rolls Royce	RB211-524H	out of prod., Calvert SN calculation	24.5
4RR037	J506	Rolls Royce	RB211-524H-T	Calvert SN calculation	14.0
1RR012	J520	Rolls Royce	RB211-535C	out of prod., Calvert SN calculation	9.3
1RR013	J507	Rolls Royce	RB211-535E4	out of prod. April 91, superseded	13.6
3RR028	J508	Rolls Royce	RB211-535E4	out of prod. Mai 99, Calvert SN calculation	11.7
5RR038	J522	Rolls Royce	RB211-535E4	Phase 5, Mai 99 or later, Calvert SN calculation	7.5
3RR034	J509	Rolls Royce	RB211-535E4B	out of prod., Calvert SN calculation	14.8
5RR039	J523	Rolls Royce	RB211-535E4B	Phase 5, Mai 99 or later, Calvert SN calculation	8.9
11PJ001	J951	PowerJet S.A.(Snecma)	Sam146-1S17	nvPM Ref. 01P11PJ003	2.7
11PJ002	J950	PowerJet S.A.(Snecma)	Sam146-1S18	nvPM Ref. 01P11PJ004	2.9
4RR035	J553	Rolls Royce	SPEY 555	Transply IIF, out of prod., Calvert SN calculation	2.2
1RR016	J550	Rolls Royce	SPEY Mk511	Transply IIF, out of prod., Calvert SN calculation	3.7
8RR043	J554	Rolls Royce	SPEY Mk511	out of prod. Aug. 85, Calvert SN calculation	14.1
1RR016	J551	Rolls Royce	SPEY Mk511-8	Transply IIF, out of prod., Calvert SN calculation	3.7
1RR018	J552	Rolls Royce	SPEY Mk555 (1984)	Transply II, Nov. 84 or later, Calvert SN	2.9
1RR017	J555	Rolls Royce	SPEY Mk555 (1973)	out of prod., Calvert SN calculation	9.4
6RR042	J653	BMW Rolls-Royce	TAY 611-8C (2002)	22. Jan 02 or later, Transply IIF	2.6
11RR048	J654	Rolls Royce	TAY 611-8C (2011)	Improved 2011 to meet CAEP/6 Nox standard	2.5
3RR031	J560	Rolls Royce	TAY 650	Pedhead combustor, Calvert SN calculation	2.6
3RR032	J561	Rolls Royce	TAY 651 (1997)	Pedhead combustor, Jun. 97 or later, Calvert SN	2.8
3RR033	J562	Rolls Royce	TAY 651 (1988)	Transply, out of prod., Calvert SN calculation	3.0

1RR019	J650	Rolls Royce	TAY MK611-8	Calvert SN calculation	2.8
1RR020	J651	Rolls Royce	TAY MK620-15	out of prod. Oct. 89, Calvert SN calculation	2.8
1RR021	J652	Rolls Royce	TAY MK650-15	out of prod., Calvert SN calculation	2.9
11RR055	J691	Rolls Royce	Trent 1000-A	Phase 5 Tiled, revised 2012	17.3
12RR061	J697	Rolls Royce	Trent 1000-A2	Phase 5 Tiled	17.3
19RR085	J720	Rolls Royce	Trent 1000-AE3	nvPM Ref. 02P23RR126	17.5
11RR056	J692	Rolls Royce	Trent 1000-C	Phase 5 Tiled, revised 2012	20.9
12RR062	J698	Rolls Royce	Trent 1000-C2	Phase 5 Tiled	20.7
19RR086	J721	Rolls Royce	Trent 1000-CE3	nvPM Ref. 02P23RR127	20.9
11RR057	J693	Rolls Royce	Trent 1000-D	Phase 5 Tiled, revised 2012	20.9
19RR087	J722	Rolls Royce	Trent 1000-D3	nvPM Ref. 02P23RR128	20.9
11RR058	J694	Rolls Royce	Trent 1000-E	Phase 5 Tiled, revised 2012	12.2
12RR064	J683	Rolls Royce	Trent 1000-E2	Phase 5 Tiled	12.2
11RR059	J695	Rolls Royce	Trent 1000-G	Phase 5 Tiled, revised 2012	19.1
12RR065	J684	Rolls Royce	Trent 1000-G2	Phase 5 Tiled	19.1
19RR088	J723	Rolls Royce	Trent 1000-G3	nvPM Ref. 02P23RR129	19.3
11RR060	J696	Rolls Royce	Trent 1000-H	Phase 5 Tiled, revised 2012	14.2
12RR066	J685	Rolls Royce	Trent 1000-H2	Phase 5 Tiled	14.3
19RR089	J724	Rolls Royce	Trent 1000-H3	nvPM Ref. 02P23RR130	14.6
12RR067	J687	Rolls Royce	Trent 1000-J2	Phase 5 Tiled	23.5
19RR090	J725	Rolls Royce	Trent 1000-J3	nvPM Ref. 02P23RR131	23.6
19RR091	J726	Rolls Royce	Trent 1000-K3	nvPM Ref. 02P23RR132	23.6
12RR069	J686	Rolls Royce	Trent 1000-L2	Phase 5 Tiled	20.7
19RR092	J727	Rolls Royce	Trent 1000-L3	nvPM Ref. 02P23RR133	22.0
19RR093	J728	Rolls Royce	Trent 1000-M3	nvPM Ref. 02P23RR134	25.0
19RR094	J729	Rolls Royce	Trent 1000-N3	nvPM Ref. 02P23RR135	25.0
19RR095	J730	Rolls Royce	Trent 1000-P3	nvPM Ref. 02P23RR136	20.9
19RR096	J731	Rolls Royce	Trent 1000-Q3	nvPM Ref. 02P23RR137	23.6
19RR097	J732	Rolls Royce	Trent 1000-R3	nvPM Ref. 02P23RR138	26.2
RR	J666	Rolls Royce	Trent 500	Manufacturer data, not certified, SN from J668	15.2
8RR044	J668	Rolls Royce	Trent 553-61	Phase 5 tiled combustor, 2005 or later	14.4
6RR041	J667	Rolls Royce	Trent 556-61	out of prod. 2004	16.1
8RR045	J669	Rolls Royce	Trent 556-61	Phase 5 tiled combustor, higher thrust	16.2
02P23RR139	J733	Rolls Royce	Trent 7000-68	nvPM Ref. 02P23RR139	17.4
02P23RR140	J734	Rolls Royce	Trent 7000-70	nvPM Ref. 02P23RR140	18.7
19RR098	J735	Rolls Royce	Trent 7000-72		21.7
3RR029	J570	Rolls Royce	Trent 768	ITC, Calvert SN calculation	15.7
14RR070	J571	Rolls Royce	Trent 768	nvPM Ref. 01P14RR101	15.4
14RR071	J575	Rolls Royce	Trent 772	nvPM Ref. 01P14RR102	17.7
3RR030	J673	Rolls Royce	Trent 772	ITC, Calvert SN calculation	17.8
2RR024	J674	Rolls Royce	Trent 875	Calvert SN calculation	17.6
2RR025	J675	Rolls Royce	Trent 877	Calvert SN calculation	18.7
2RR026	J676	Rolls Royce	Trent 884	Calvert SN calculation	22.7
2RR027	J677	Rolls Royce	Trent 890	Calvert SN calculation	26.1
2RR027	J678	Rolls Royce	Trent 892	Calvert SN calculation	26.4
5RR040	J679	Rolls Royce	Trent 895	Calvert SN calculation	28.0
8RR046	J670	Rolls Royce	Trent 970-84 (2006)	Phase 5 tiled	16.8
18RR081	J589	Rolls Royce	Trent 970-84 (2016)	nvPM Ref. 01P18RR103	16.8
18RR082	J590	Rolls Royce	Trent 970B-84		18.6
9RR047	J671	Rolls Royce	Trent 972 (2006)	FOCA update	17.3
9RR047	J665	Rolls Royce	Trent 972-84 (2006)	Phase5 Tiled Combustor	17.3
18RR083	J591	Rolls Royce	Trent 972-84 (2016)	nvPM Ref. 01P18RR104	17.7
3RR048	J672	Rolls Royce	Trent 972B	Estimated Data	18.9
18RR084	J592	Rolls Royce	Trent 972E-84 (16.11.20	nvPM Ref. 01P18RR105	17.7
14RR076	J584	Rolls Royce	Trent XWB-75 (16.11.20	nvPM Ref. 01P18RR121 New aircraft from 2017	14.5
14RR072	J580	Rolls Royce	Trent XWB-75 (29.1.201	nvPM Ref. 01P18RR121, New aircraft pre 2017	14.8
07P27RR150	J593	Rolls Royce	Trent XWB-75EP	Max nvPM Eim = 0.119 g/kg, Ein = 1.3 E+15 /kg	15.5
14RR078	J585	Rolls Royce	Trent XWB-79 (16.11.20	nvPM Ref. 01P18RR123 New aircraft from 2017	16.8
14RR073	J581	Rolls Royce	Trent XWB-79 (29.1.201	nvPM Ref. 01P18RR123 New aircraft pre 2017	17.2
14RR077	J586	Rolls Royce	Trent XWB-79B (16.11.2	nvPM Ref. 01P18RR123 New aircraft from 2017	16.8
14RR074	J582	Rolls Royce	Trent XWB-79B (29.1.20	nvPM Ref. 01P18RR123 New aircraft pre 2017	17.2
07P27RR151	J596	Rolls Royce	Trent XWB-79BEP	Max nvPM Eim = 0.1194 g/kg, Ein = 1.3E+15 /kg	17.8
07P27RR152	J594	Rolls Royce	Trent XWB-79EP	Max nvPM Eim = 0.1194 g/kg, Ein = 1.3 E+15 /kg	17.8
18RR079	J587	Rolls Royce	Trent XWB-84 (16.11.20	nvPM Ref. 01P18RR124 New aircraft from 2017	19.9
14RR075	J583	Rolls Royce	Trent XWB-84 (29.1.201	nvPM Ref. 01P18RR124 New aircraft pre 2017	20.2
07P27RR153	J595	Rolls Royce	Trent XWB-84EP	Max nvPM Eim = 0.1201 g/kg, Ein = 1.31 E+15 /kg	21.0
18RR080	J588	Rolls Royce	Trent XWB-97	nvPM Ref. 01P21RR125	28.5
2CM015	J999	diverse	unknown	Adapted from 2CM015	8.7
1IA001	J210	Intl Aero Engines	V2500-A1	out of prod., Calvert SN calculation	7.7
3IA006	J212	Intl Aero Engines	V2522-A5 (1992)	nvPM Ref. 01P10IA019	4.7
3IA007	J213	Intl Aero Engines	V2524-A5 (1992)	nvPM Ref. 01P10IA020, Increased thrust	5.3

3IA007	J214	Intl Aero Engines	V2524-A5 (1992)	nvPM Ref. 01P10IA020	5.3
1IA002	J215	Intl Aero Engines	V2525-D5	Calvert SN calculation	5.4
1IA003	J220	Intl Aero Engines	V2527-A5	nvPM Ref. 01P10IA021	5.4
10IA013	J218	Intl Aero Engines	V2527-A5 SelectOne	nvPM Ref. 01P10IA021, SelectOne package upgrade	5.1
8IA010	J217	Intl Aero Engines	V2527E-A5	nvPM Ref. 01P10IA021	5.4
8IA009	J216	Intl Aero Engines	V2527M-A5	nvPM Ref. 01P10IA021	5.4
1IA004	J225	Intl Aero Engines	V2528-D5	Calvert SN calculation	6.7
1IA005	J230	Intl Aero Engines	V2530-A5	nvPM Ref. 01P10IA024	7.7
14IA018	J211	Intl Aero Engines	V2531-E5 SelectOne	nvPM Ref. 01P14IA026	7.5
3IA008	J235	Intl Aero Engines	V2533-A5	nvPM Ref. 01P10IA025	8.6