Engines of models described herein conforming with this data sheet (which is part of Type Certificate No. E1GL) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in type certificated aircraft in accordance with the applicable portions of the Code of Federal Regulations, provided the engine is installed, operated and maintained as prescribed by the FAA-approved manufacturer's manuals or other FAA approved instructions.

Type certificate holder — Rolls-Royce Corporation
450 South Meridian Street
Indianapolis, Indiana 46255-1103

Type certificate holder record: E1GL originally issued to Detroit Diesel Allison, General Motors Corporation on 28 Apr 1976
E1GL reissued to Allison Gas Turbine Division, General Motors Corporation on 1 May 1983
E1GL reissued to Allison Engine Company on 1 Dec 1993
E1GL reissued to Rolls-Royce Corporation on 1 Sep 2000

	250-C28	250-C28B	250-C28C	250-C30 250-C30S	250-C30G
Type	Free turbine turboshaft with single stage centrifugal flow compressor, two-stage gas producer turbine, two-stage power turbine and single combustion chamber with pre-chamber.				
Shaft ratio	5.55:1	- -	- -	5.09:1	3.22:1
Ratings	See NOTE 1				
Maximum continuous:					
SHP at sea level	478	500	- -	650	- -
Gas producer rpm (estimated)	50193	50280	50135	50340	- -
Output shaft rpm	6016	- -	- -	- -	9518
Measured rated gas temp	1392°F (756°C)	1370°F (743°C)	1359°F (737°C)	1368°F (742°C)	- -
Takeoff, 5 minute:					
SHP at sea level	500	- -	- -	650	- -
Gas producer rpm (estimated)	51005	50280	50135	50340	- -
Output shaft rpm	6016	- -	- -	- -	9518
Measured rated gas temp	1430°F (777°C)	1370°F (743°C)	1359°F (737°C)	1368°F (742°C)	- -
30 minute OEI:					
SHP at sea level	500	- -	- -	650	- -
Gas producer rpm (estimated)	51005	50280	50135	50340	- -
Output shaft rpm	6016	- -	- -	- -	9518
Measured rated gas temp	1430°F (777°C)	1370°F (743°C)	1359°F (737°C)	1368°F (742°C)	- -
2½ minute OEI:	—				
SHP at sea level		550	- -	700	- -
Gas producer rpm (estimated)		51435	51165	51550	- -
Output shaft rpm		6016	- -	- -	9518
Measured rated gas temp		1425°F (774°C)	1410°F (766°C)	1424°F (773°C)	- -
Output shaft	Internal spline	- -	- -	- -	- -

"- -" indicates same as preceding model
"—" indicates not applicable

	250-C28	250-C28B	250-C28C	250-C30 250-C30S	250-C30G
Control system:	Hydro-mechanical fuel control				
Fuel pump	Single element fuel pump	- -	- -	Single element fuel pump with jet inducer	Same as –C30S
Fuel	Fuels allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications. (For other fuel info and limitations, see NOTE 10.)				
Lubricating oil	Oils allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications.				
Ignition system	See NOTE 12				
Exciter	Low Tension Capacitor Discharge Exciter. See Parts List identified in NOTE 22 for approved part numbers.				
Igniter	Shunted surface gap spark igniter. See Parts List identified in NOTE 22 for approved part numbers.				

	250-C28	250-C28B	250-C28C	250-C30 250-C30S	250-C30G
Principal dimensions:					
Length overall, in.	43.000	48.782	43.351	43.198	- -
Width, in.	21.940	25.776	21.996	- -	- -
Height, in.	25.130	25.480	- -	- -	- -
C.G. location, aft of side mount pad, centerline, in.	5.73	4.99	5.59	5.70	5.89
C.G. location, above side mount pad, centerline, in.	3.23	3.31	3.22	3.28	3.33
C.G. location, left or rights side of engine centerline looking forward, in.	0.02 (left)	0.03 (left)	0.04 (right)	0.00	- -
Weight (dry), lb.	219	238	236	253.75 252.75	254.75

	250-C30G2	250-C30M	250-C30P	250-C30R	250-C30R/1
Type	Free turbine turboshaft with single stage centrifugal flow compressor, two-stage gas producer turbine, two-stage power turbine and single combustion chamber with pre-chamber.				
Shaft ratio	3.22:1	5.09:1	- -	- -	- -
Ratings	See NOTE 1				
Maximum continuous:					
SHP at sea level	557	600	- -	- -	- -
Gas producer rpm (estimated)	49104	49235	49310	- -	48710
Output shaft rpm	9545	6016	- -	- -	- -
Measured rated gas temp	1251°F (677°C)	1320°F (716°C)	1295°F (702°C)	- -	1250°F (677°C)
Takeoff, 5 minute:				—	—
SHP at sea level	650	- -	- -		
Gas producer rpm (estimated)	50791	50110	50330		
Output shaft rpm	9545	6016	- -		
Measured rated gas temp	1352°F (733°C)	1368°F (742°C)	1337°F (725°C)		
Intermediate, 30 minute:	—	—	—		
SHP at sea level				650	- -
Gas producer rpm (estimated)				50330	49378
Output shaft rpm				6016	- -
Measured rated gas temp				1337°F (725°C)	1289°F (698°C)
Continuous OEI:		—	—	—	—
SHP at sea level	650				
Gas producer rpm (estimated)	50791				
Output shaft rpm	9545				
Measured rated gas temp	1352°F (733°C)				

	250-C30G/2	250-C30M	250-C30P	250-C30R	250-C30R/1
30 minute OEI:		—		—	—
SHP at sea level	650		650		
Gas producer rpm (estimated)	50791		50340		
Output shaft rpm	9545		6016		
Measured rated gas temp	1352°F (733°C)		1368°F (742°C)		
2½ minute OEI:		—		—	—
SHP at sea level	700		700		
Gas producer rpm (estimated)	51661		51550		
Output shaft rpm	9545		6016		
Measured rated gas temp	1411°F (766°C)		1424°F (773°C)		
Output shaft	Flanged Drive	Internal spline	- -	- -	- -
Control system:	Hydro-mechanical			Digital supervisory electronic control	
Fuel pump	Same as -C30G	Single element fuel pump with jet inducer and a 10 micron fuel filter	Same as –C28	Single element fuel pump with jet inducer and a 10 micron fuel filter	Same as -C30R
Fuel	Fuels allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications. (For other fuel info and limitations, see NOTE 10.)				
Lubricating oil	Oils allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications.				
Ignition system	See NOTE 12				
Exciter	Low tension capacitor discharge exciter. See Parts List identified in NOTE 22 for approved part numbers.				Same as -C30R
Igniter	Shunted surface gap spark igniter. See Parts List identified in NOTE 22 for approved part numbers.				Same as –C30R

	250-C30G/2	250-C30M	250-C30P	250-C30R	250-C30R/1
Principal dimensions:					
Length overall, in.	43.198	- -	- -	- -	- -
Width, in.	21.996	- -	- -	- -	- -
Height, in.	25.715	- -	24.855	25.992	25.105
C.G. Location, aft of side mount pad, centerline, in.	5.43	5.70	- -	- -	5.85
C.G. Location, above side mount pad, centerline, in.	2.63	3.28	- -	- -	3.06
C.G. Location, left or right side of engine centerline looking forward, in.	0.13 (right)	0.08 (right)	0.00	- -	- -
Weight (dry), lb.	261.75	251.75	247.75	255.75	256.75

	250-C30R/3 250-C30R/3M	250-C30U	250-C40B	250-C47B 250-C47B/8	250-C47E
Type	Free turbine turboshaft with single stage centrifugal flow compressor, two-stage gas producer turbine, two-stage power turbine and single combustion chamber with pre-chamber.				
Shaft ratio	5.09:1	- -	3.22:1	5.09:1	- -
Ratings	See NOTE 1				
Maximum continuous:					
SHP at sea level	600	- -	613	600	- -
Gas producer rpm (estimated)	48348	49245	48488	48258 48460	49601
Output shaft rpm	6016	- -	9598	6317	- -
Measured rated gas temp	1230°F (666°C) 1253°F (678°C)	1295°F (702°C)	1263°F (684°C)	1253°F (678°C) 1208°F (653°C)	1258°F (681°C)
Takeoff, 5 minute:	—				
SHP at sea level		650	715	650	700
Gas producer rpm (estimated)		50100	49791	48863 49014	50872
Output shaft rpm		6016	9598	6317	- -
Measured rated gas temp		1337°F (725°C)	1356°F (736°C)	1296°F (702°C) 1245°F (674°C)	1332°F (722°C)
Intermediate, 30 minute:		—	—	—	—
SHP at sea level	650				
Gas producer rpm (estimated)	48965				
Output shaft rpm	6016				
Measured rated gas temp	1270°F (688°C) 1298°F (703°C)				
Continuous OEI:	—	—		—	—
SHP at sea level			715		
Gas producer rpm (estimated)			49791		
Output shaft rpm			9598		
Measured rated gas temp			1356°F (736°C)		

	250-C30R/3 250-C30R/3M	250-C30U	250-C40B	250-C47B 250-C47B/8	250-C47E
30 minute OEI:	—	—		—	—
SHP at sea level			715		
Gas producer rpm (estimated)			49791		
Output shaft rpm			9598		
Measured rated gas temp			1356°F (736°C)		
2 minute OEI:	—	—		—	—
SHP at sea level			770		
Gas producer rpm (estimated)			50553		
Output shaft rpm			9598		
Measured rated gas temp			1400°F (760°C)		
30 second OEI:	—	—		—	—
SHP at sea level			820		
Gas producer rpm (estimated)			51323		
Output shaft rpm			9598		
Measured rated gas temp			1447°F (786°C)		
Output shaft	Internal spline	- -	Flanged drive	Internal spline	- -
Control system:	Digital FADEC system with Hydro-mechanical Unit (HMU)	Digital supervisory electronic control	Digital FADEC system with Hydro-mechanical Unit (HMU)	Digital FADEC system with Hydro-mechanical Unit (HMU)	Dual FADEC system with Fuel Metering Unit (FMU)
Fuel pump	Two-stage suction system, integral to HMU	Same as -C30R	Two-stage suction system, integral to HMU		Gear pump with an ejector boost stage integral to FPPU
Fuel	Fuels allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications. (For other fuel info and limitations, see NOTE 10.)				
Lubricating oil	Oils allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications.				
Ignition system	See NOTE 12				
Exciter	Solid state, high energy exciter unit. See Parts List identified in NOTE 22 for approved part numbers				
Igniter	Shunted surface gap spark igniter. See Parts List identified in NOTE 22 for approved part numbers				

	250-C30R/3 250-C30R/3M	250-C30U	250-C40B	250-C47B 250-C47B/8	250-C47E
Principal dimensions:					
Length overall, in.	43.198	- -	- -	- -	- -
Width, in.	21.996	- -	- -	- -	- -
Height, in.	25.715	25.105	25.715	25.130	- -
C.G. location, aft of side mount pad, centerline, in.	5.86	5.89	5.44	5.86	5.73
C.G. location, above side mount pad, centerline, in.	2.95	3.33	2.46	2.95	2.51
C.G. location, left or right side of engine centerline looking forward, in.	0.13 (right)	0.00	0.14 (right)	0.13 (right)	0.49
Weight (dry), lb.	274 278 (includes CIT sensor and engine & accy harnesses)	252.75	280	278.5	290

	250-C47M				
Type	Free turbine turboshaft with single stage centrifugal flow compressor, two-stage gas producer turbine, two-stage power turbine and single combustion chamber with pre-chamber.				
Shaft ratio	5.09:1				
Ratings	See NOTE 1				
Maximum continuous:					
SHP at sea level	600				
Gas producer rpm (estimated)	48348				
Output shaft rpm	6016				
Measured rated gas temp	1253°F (678°C)				
Takeoff, 5 minute:					
SHP at sea level	650				
Gas producer rpm (estimated)	48965				
Output shaft rpm	6016				
Measured rated gas temp	1298°F (703°C)				
Intermediate, 30 minute:	—				
SHP at sea level					
Gas producer rpm (estimated)					
Output shaft rpm					
Measured rated gas temp					
Continuous OEI:	—				
SHP at sea level					
Gas producer rpm (estimated)					
Output shaft rpm					
Measured rated gas temp					

	250-C47M				
30 minute OEI:	—				
SHP at sea level					
Gas producer rpm (estimated)					
Output shaft rpm					
Measured rated gas temp					
2 minute OEI:	—				
SHP at sea level					
Gas producer rpm (estimated)					
Output shaft rpm					
Measured rated gas temp					
30 second OEI:	—				
SHP at sea level					
Gas producer rpm (estimated)					
Output shaft rpm					
Measured rated gas temp					
Output shaft	Internal spline				
Control system:	Digital FADEC system with Hydro-mechanical Unit (HMU)				
Fuel pump	Two stage suction system, integral to HMU				
Fuel	Fuels allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications. (For other fuel info and limitations, see NOTE 10.)				
Lubricating oil	Oils allowed for use are provided in the Operation and Maintenance Manual for each model. See NOTE 22 for applicable Operation and Maintenance Manual publications.				
Ignition system	See NOTE 12				
Exciter	Solid state, high energy exciter unit. See Parts List identified in NOTE 22 for approved part numbers				
Igniter	Shunted surface gap spark igniter. See Parts List identified in NOTE 22 for approved part numbers				
Principal dimensions:					
Length overall, in.	43.198				
Width, in.	21.996				
Height, in.	25.715				
C.G. location, aft of side mount pad, centerline, in.	5.86				
C.G. location, above side mount pad, centerline, in.	2.95				
C.G. location, right side of engine centerline looking forward, in.	0.13 (right)				
Weight (dry), lb.	278.5				

	250-C28 Series	250-C30 Series	250-C30R Series	250-40B	250-C47 Series	250-C30R/3 Series	250-C47E Series
Certification Basis	14 CFR Part 33 effective February 1, 1965, including Amendments 33-2, 33-3, 33-4 and Exemption No. 2087B from Part 33.69, Regulatory Docket No. 13294 issued February 24, 1975 and amended December 10, 1991, (Docket No. 26072).	--	--	Includes Special Condition SC-95-04-NE, dated 16 Nov 1995. Equivalent Level of Safety (ELOS) findings in memo to ANE-110 from ACE-115, dated 28 July 2000 approving a modified gas generator test speed parameter for 33.7 and 33.87 compliance. ELOS finding 8040-8-1-001, dated 11 May 2001 approving gas generator test speeds for 33.87 compliance.	14 CFR Part 33 effective February 1, 1965, including Amendments 33-2, 33-3, 33-4 and Exemption No. 2087B from Part 33.69, Regulatory Docket No. 13294 issued February 24, 1975 and amended December 10, 1991, (Docket No. 26072).	--	--
Production Basis	Production Certificate No. 310	--	--	--	--	--	—

Application for Type Certificate October 2, 1973
The original Type Certificate No. E1GL was issued April 28, 1976.

Model	Added to TC		Model	Added to TC		Model	Added to TC
250-C28	28 Apr 1976		250-C30R	15 Jul 1983		250-C47M	14 May 1997
250-C28B	28 Feb 1978		250-C30G	2 Mar 1989		250-C30R/3	10 Jun 1997
250-C28C	28 Feb 1978		250-C30U	28 Aug 1989		250-C30L	Deleted 17 Mar 2000
250-C30	28 Mar 1978		250-C30G/2	4 Mar 1992		250-C30R/3M	24 Sep 2001
250-C30P	15 Sep 1981		250-C30R/1	31 Mar 1994		250-C47B/8	15 Nov 2013
250-C30S	15 Jun 1982		250-C47B	19 Jan 1996		250-C47E	2 Sep 2014
250-C30M	7 Jan 1983		250-C40B	22 Feb 1996			
250-C30L	15 Jul 1983						

This table indicates the CFR Part 33 paragraphs which meet higher Amendment levels.

Engine Models	250-C30 250-C30G 250-C30G/2 250-C30R/3 250-C30R/3M 250-C40B 250-C47B 250-C47B/8 250-C47M	250-C30G/2 250-C40B	250-C30R/3 250-C30R/3M 250-C40B 250-C47B 250-C47B/8 250-C47M	250-C47E
CFR Part 33 and Amendment Levels	Amendment 33-6 33.17(b) 33.67(a) 33.68(a),(b) 33.71(a), (b) - except oil strainers are not incorporated ahead of scavenge pump	Amendment 33-12 33.7 and 33.87 - As related to the Continuous OEI ratings	Amendment 33-15 33.28 - As related to the FADEC system 33.27 33.75 33.89 33.91	Amendment 33-6 33.14 33.62 33.77 33.88 Amendment 33-9 33.4 Amendment 33-10 33.15 33.17 33.25 33.27 33.66 33.68 33.89 33.94 Amendment 33-18 33.85 Amendment 33-21 33.90 Amendment 33-24 33.75 Amendment 33-26 33.5 33.28 33.29 33.67 Amendment 33-27 33.71 – except oil strainers are not incorporated ahead of scavenge pump 33.91 Amendment 33-28 33.19 Amendment 33-30 33.7

NOTE 1 The engine ratings, unless otherwise specified, are based on static sea level standard conditions. Compressor inlet air (dry) 59°F, 29.92 in Hg. Compressor inlet bell attached (250-C28, -C28C, -C30, -C40 and -C47 Series) to provide suitable air approach conditions. No external accessory loads and no bleed air offtake.

Measured rated gas temperature is indicated by the average of the 4 gas temperature thermocouples.

NOTE 2 **Maximum allowable temperatures:**

	250-C28	250-C28B	250-C28C	250-C30 250-C30S	250-C30G
Measured gas temperature					
2½ minute OEI	—	1490°F (810°C)	- -	1518°F (826°C)	- -
30 minute OEI	1450°F (788°C)	1455°F (791°C)	- -	1468°F (798°C)	- -
Takeoff, 5 minute	1450°F (788°C)	1455°F (791°C)	- -	1414°F (768°C)	- -
Maximum continuous	1430°F (777°C)	1455°F (791°C)	- -	1414°F (768°C)	- -
Maximum transient (not to exceed 6 seconds for C28, C28B, C28C; not to exceed 12 seconds for C30, C30S, C30G)	1475°F (802°C) to 1600°F (871°C)	1490°F (810°C) to 1600°F (871°C)	- -	1518°F (826°C) to 1662°F (906°C)	- -
Starting (not to exceed 10 seconds)	1475°F (802°C) to 1700°F (927°C)	1490°F (810°C) to 1700°F (927°C)	- -	1518°F (826°C) to 1700°F (927°C)	- -
Starting (momentary peak of one second maximum)	1700°F (927°C)	- -	- -	- -	- -
Oil temperature (gearbox inlet)	–65°F (–54°C) to 225°F (107°C)	- -	- -	- -	- -

	250-C30G/2	250-C30M	250-C30P	250-C30R	250-C30R/1
Measured gas temperature					
2½ minute OEI	1518°F (826°C)	—	1518°F (826°C)	—	—
30 minute OEI	1468°F (798°C)	—	1468°F (798°C)	—	—
Continuous OEI	1414°F (768°C)	—	—	—	—
Takeoff, 5 minute	1414°F (768°C)	- -	- -	—	—
Intermediate, 30 minute	—	—	—	1445°F (785°C)	- -
Maximum continuous	1320°F (716°C)	- -	1320°F (716°C)	- -	- -
Maximum transient (not to exceed 12 seconds)	1518°F (826°C) to 1662°F (906°C)	1414°F (768°C) to 1600°F (871°C)	- -	1445°F (785°C) to 1600°F (871°C)	1445°F (785°C) to 1600°F (871°C)
Starting (not to exceed 10 seconds)	1518°F (826°C) to 1700°F (927°C)	- -	- -	1445°F (785°C) to 1700°F (927°C)	- -
Starting (momentary peak of one second maximum)	1700°F (927°C)	- -	- -	- -	- -
Oil temperature (gearbox inlet)	–65°F (–54°C) to 225°F (107°C)	- -	- -	- -	- -

NOTE 2 (cont) Maximum allowable temperatures

	250-C30R/3 250-C30R/3M	250-C30U	250-C40B	250-C47B 250-C47B/8	250-C47E
Measured gas temperature					
30 second OEI	—	—	1600°F (871°C)	—	—
2 minute OEI	—	—	1521°F (827°C)	—	—
30 minute OEI	—	—	1468°F (798°C)	—	—
Intermediate, 30 minute	1475°F (802°C)	—	—	—	—
Continuous OEI	—	—	1435°F (779°C)	—	—
Takeoff, 5 minute	—	1445°F (785°C)	1435°F (779°C)	- -	- -
Maximum continuous	1320°F (716°C)	- -	1340°F (727°C)	- -	- -
Maximum transient (not to exceed 12 seconds)	1475°F (801°C) to 1662°F (906°C)	1445°F (785°C) to 1600°F (871°C)	1468°F (798°C) to 1662°F (906°C)	1435°F (779°C) to 1600°F (906°C)	1435°F (779°C) to 1662°F (906°C)
Starting (not to exceed 10 seconds)	1550°F (843°C) to 1700°F (927°C)	1445°F (785°C) to 1700°F (927°C)	1550°F (843°C) to 1700°F (927°C)	- -	- -
Starting (momentary peak of one second maximum)	1700°F (927°C)	- -	- -	- -	- -
Oil temperature (gearbox inlet, except –C47E gearbox outlet)	–65°F (–54°C) to 225°F (107°C)	- -	- -	- -	-40°F (-40°C) to 240°F (116°C)

	250-C47M				
Measured gas temperature					
30 second OEI	—				
2 minute OEI	—				
30 minute OEI	—				
Intermediate, 30 minute	—				
Continuous OEI	—				
Takeoff, 5 minute	1435°F (779°C)				
Maximum continuous	1340°F (727°C)				
Maximum transient (not to exceed 12 seconds)	1435°F (779°C) to 1662°F (906°C)				
Starting (not to exceed 10 seconds)	1550°F (843°C) to 1700°F (927°C)				
Starting (momentary peak of one second maximum)	1700°F (927°C)				
Oil temperature (gearbox inlet)	–65°F (–54°C) to 225°F (107°C)				

NOTE 3 Fuel inlet and oil pressure limits

(a) Fuel inlet pressure (See Note 22 for applicable Installation Design Manual):

	Minimum pressure at fuel inlet connection to the engine					Maximum fuel inlet pressure
	Sea level	6000 ft	10000 ft	15000 ft	20000 ft	
250-C28, -C28B, -C28C, -C30P	Ambient minus 9 in Hg	Ambient minus 5.5 in Hg	Ambient minus 3.5 in Hg	Ambient minus 1.0 in Hg	Ambient plus 1.5 in Hg	25 psig
250-C30, -C30G, -C30G/2, -C30M, -C30R, -C30R/1, -C30R/3, -C30R/3M,-C30S, -C30U 250-C40B 250-C47B, -C47B/8, -C47M	*Minimum allowable fuel inlet pressure varies as a function of fuel type, fuel temperature and altitude. Tables, curves and methods for determining the minimum fuel pressure are included in the Installation Design Manuals: See NOTE 22 for applicable Installation Design Manual for each engine.					25 psig
250-C47E						50 psig

(b) Operating oil gauge pressures:

	Operating oil gauge pressure (psig)						Minimum oil pump inlet pressure
	47,884 rpm (94%) gas generator speed and above	40,234 rpm (79.0%) gas generator speed to 47,884 rpm	Below 40,234 rpm (79.0%) gas generator speed	47,940 rpm (94%) gas generator speed and above	40,290 rpm (79.0%) gas generator speed to 47,940 rpm	Below 40,290 rpm (79.0%) gas generator speed	
250-C28 Series:	115 – 130	90 – 130	50 – 130	—	—	—	5 in Hg absolute
250-C30 Series, 250-C40B and 250-C47 Series:	—	—	—	115 to 130	90 to 130	50 to 130	5 in Hg absolute

* No fuel inlet depression allowed with aviation gasoline fuel specified in the Operation and Maintenance Manual (See NOTE 22).

NOTE 4 - The following accessory drive mounting provisions are available:

250-C28 Series

	Direction of rotation *	Speed ratio to turbine	Max shaft torque (in-lb)		Max accessory pad overhung moment (in-lb)
			Continuous	Static	
Driven by gas producer turbine:					
Tachometer	CC	0.0825	7	50	4
Starter-generator	C	0.2351	550**	1100	150
Driven by power turbine:					
Tachometer	CC	0.1257	7	50	4
Power take-off	C	0.180	5868***	10000	100
Spare	C	0.3600	79	395	150

* C - Clockwise viewing drive pad CC - Counterclockwise

** The maximum generator load is 12 horsepower.

*** The sum of the torques extracted in any combination from the front and rear power output drives shall not exceed the torque values specified in NOTE 7. The value given in the above table represents the 2½ minute limited maximum total torque.

NOTE 4 (cont) - The following accessory drive mounting provisions are available:

250-C30 Series, 250-C40B and 250-C47 Series

	Direction of rotation *	Speed ratio to turbine	Max shaft torque (in-lb)		Max accessory pad overhung moment (in-lb)
			Continuous	Static	
Driven by gas producer turbine:					
Tachometer	CC	0.0825	7	50	4
Starter-generator	C	0.2351	550**	1100	150
Spare	CC	0.2351	550****	1100	150
Driven by power turbine:					
Tachometer	CC	0.1370	7	50	4
Tachometer (250-C30G, -C30G/2 and -C40B only)	CC	0.2168	4	32	4
Power take-off	C	0.1963	7524***	10000	100
Power take-off (250-C30G only)	C	0.3105	4765***	6321	100
Power take-off (250-C30G/2 only):					
Front drive (2½ minute OEI limit maximum)	CC	0.3105	4846***	6443	380 ******
Rear drive	C	0.3105	330*****	330	10
Power take-off (250-C40B only):					
Front drive (30 second OEI limit maximum)	CC	0.3105	5544*****	6443	380 ******
Front drive (30 minute OEI limit maximum)	CC	0.3105	5184*****	6443	380 ******
Rear drive	C	0.3105	330*****	330	10
Power take-off (250-C47B, -C47B/8, -C47E only):					
Front drive	CC	0.1963	7524 ***	10000	969
Rear drive	C	0.1963	7524 ***	10000	100
Power take-off (250-C30R/3M and -C47M only):					
Front drive	CC	0.1963	7524*****	10000	100
Rear drive	C	0.1963	7524*****	10000	100
Spare (250-C30P, -C30R, -C30R/1, -C30R/3, -C30R/3M, and –C47E)	C	0.3925	79	395	150

* C - Clockwise viewing drive pad CC - Counterclockwise

** The maximum generator load is 12 horsepower.

*** The sum of the torques extracted in any combination from the front and rear power take-off drives shall not exceed the torque values specified in NOTE 7. The value given in the above table represents the 2½-minute OEI limited maximum total torque applicable to Models 250-C30, -C30S, -C30G and -C30G/2.

**** The maximum accessory load is 6 horsepower.

***** The sum of the torques extracted in any combination from the front and rear power take-off drives shall not exceed the torque values specified in NOTE 7.

****** The max overhung moment applies to the shaft flange, not the pad, for the -C30G/2 and -C40B.

NOTE 5 - Model Descriptions

250-C28	Basic Model
250-C28B	Similar to C28 except compressor and turbine changes, which result in an increased power rating and the addition of an inlet particle separator.
250-C28C	Identical to C28B except without particle separator
250-C28C(AG)	This variant of the Model 250-C28C incorporates an oil impending bypass filter, the same as in the Model 250-C30, and a rear engine mount incorporating two swivel balls offset so as to allow the attachment of a single mounting strut.
250-C30	Similar to C28C except compressor and turbine changes, which result in an increased power rating.
250-C30(HU)	This variant of the Model 250-C30 incorporates a new 284 pph max fuel flow setting on the fuel control. This also incorporates the bleed valve accumulator and turbine nozzle flow area modifications for improved acceleration surge margin.
250-C30G	Similar to C30S but with 9518 rpm power takeoff shaft speed.
250-C30G/2	Similar to C30G but with 9545 rpm power takeoff shaft speed at 100% power turbine speed of 30737 rpm; continuous OEI rating added; flanged power takeoff drive system used in place of spline drive system.
250-C30M	Similar to C30 but with no 2½ or 30 min OEI ratings and adapted for torque tube mounting.
250-C30P	Similar to C30 except for a different fuel pump and a lower Max Cont rating.
250-C30P(BO)	This variant of the Model 250-C30P has minor tubing changes to the fuel and compressor and incorporates a fuel control with a new 379 pph max fuel flow setting.
250-C30P(WO)	This variant of the Model 250-C30P does not include the fuel control heater kit.
250-C30R	Similar to C30P but with inducer fuel pump and filter.
250-C30R/1	Similar to C30R but with 7% increased engine airflow due to increased impeller blade height. Inducer bleed port is double the C30R capacity. Also, a compressor bleed valve is utilized.
250-C30R/3	Similar to C47M, but with Intermediate Power Rating. The military Intermediate Rating on the engine is used in the military applications and is equivalent to the FAA Takeoff Rating with the exception of the time limit, which is 30 minutes for the Intermediate Rating. This engine is for military use only.
250-C30R/3M	Similar to C30R/3 but with an acceleration bleed valve and accumulator. Declared flight envelope increased to 20000 ft. This engine is for military use only.
250-C30S	Similar to C30 except compressor production changes, which result in 5 percent new or overhaul performance margin.
250-C30U	Similar to C30R but with 5 min. takeoff rating and reduced life limits on certain critical parts.
250-C40B	Similar to C30G/2 but with 9598 rpm output shaft speed at 100% power turbine speed of 30,908 rpm, no 2½ min. OEI rating, but 30 sec OEI and 2 min OEI ratings added and single channel Full Authority Digital Electronic Control (FADEC) system with manual backup and C30R/1 flow path changes.
250-C47B	Similar to C30P but with 6317 rpm output shaft speed at 100% power turbine speed of 32,183 rpm and C30R/1 flow path changes. Single channel FADEC system with manual backup similar to the 250-C40B.
250-C47B/8	Similar to C47B but includes power enhancement kit
250-C47E	Similar to C47B/8 but includes Dual Channel FADEC and is rated to 700 shp takeoff power
250-C47M	Similar to C47B but with 6016 rpm output shaft speed at 100% power turbine speed of 30,650 rpm

There may be a number of variants of a given engine Model (distinguished by different part numbers), which incorporate minor modifications to tailor the engine for particular airframe applications.

NOTE 6 The ejector tube assembly for the Model 250-C28B is airframe mounted.

NOTE 7 The maximum allowable torque as measured by the torquemeter for below standard inlet air temperature and/or ram conditions are as follows:

	Maximum torque (lb-ft)									
	For 2 sec	For 10 sec	For 16 sec	At 30 sec OEI power	At 2 min OEI power	At 2½ min OEI power	At 30 min OEI/ Interm power	At Con OEI power	At Takeoff power	At Max con power
250-C28	—	480	—	—	—	—	463	—	463	417
250-C28B	—	499	—	—	—	489	463	—	463	463
250-C28C	—	612	—	—	—	489	463	—	463	463
250-C30, -C30S	—	—	877	—	—	627	590	—	590	590
250-C30P	686	637	—	—	—	627	590	—	590	524
250-C30M, -C30U, -C47B, -C47B/8, -C47M, -C47E	686	637	—	—	—	—	—	—	590	524
250-C30R, -C30R/1, -C30R/3, -C30R/3M	686	637	—	—	—	—	590	—	590	524
250-C30G	—	—	521	—	—	398	373	—	373	373
250-C30G/2	—	—	521	—	—	404	393	372	372	307
250-C40B	—	—	521	462	444	—	432	409	409	338

NOTE 8 - Maximum and minimum turbine rotor speeds

	Output shaft speed				Gas producer speed	
	Max transient (up to 15 sec)	Maximum sustained	Min transient (up to 15 sec)	Minimum sustained	Max transient (up to 10 sec)	Maximum sustained
250-C28, -C28B, -C28C: 100% output shaft speed = 6016 rpm 100% gas producer speed = 50940 rpm	Varies linearly from 115% at autorotation to 105% at takeoff	Varies linearly from 113% at autorotation to 103% at takeoff	—	—	105%	104%
250-C30, -C30M, -C30P, -C30S, -C30R, -C30R/1, -C30R/3, -C30R/3M, -C30U, -C47M: 100% output shaft speed = 6016 rpm 100% gas producer speed = 51000 rpm	119.0% (7159 rpm)	107.1% (6443 rpm)	71.8% (4319 rpm)	91.5% (5505 rpm)	106%	105%
250-C30G: 100% output shaft speed = 9518 rpm 100% gas producer speed = 51000 rpm	119.0% (11326 rpm)	107.1% (10194 rpm)	71.8% (6834 rpm)	91.5% (8715 rpm)	106%	105%
250-C30G/2: 100% output shaft speed = 9545 rpm 100% gas producer speed = 51000 rpm	118.7% (11326 rpm)	106.8% (10194 rpm)	71.6% (6834 rpm)	91.3% (8715 rpm)	106%	105%
250-C40B: 100% output shaft speed = 9598 rpm 100% gas producer speed = 51000 rpm	118.0% (11326 rpm)	106.3% (10194 rpm)	71.2% (6834 rpm)	90.7% (8715 rpm)	106%	105%
250-C47B, -C47B/8, -C47E: 100% output shaft speed = 6317 rpm 100% gas producer speed = 51000 rpm	113.3% (7159 rpm)	102.1% (6449 rpm)	68.4% (4319 rpm)	87.1% (5505 rpm)	106%	105%

NOTE 9 External air bleed may not exceed 4.5 percent for the Models 250-C28, 250-C30 Series, 250-C40 Series and 250-C47 Series and 4.0 percent for the Models 250-C28B and 250-C28C.

NOTE 10 Approved emergency fuels for each of the 250 engine models are provided in the Operation and Maintenance manuals (See Note 22). The Model 250-C28 Series and 250-C30P are limited to the amount of fuel required to operate the engine for not over 6 hours during any overhaul period.

Emergency use of aviation gasoline is permitted in Models 250-C30, -C30S, -C30M, -C30R, -C30G, -C30U and -30G/2 and -C30R/1 for a maximum of 6 hours during any overhaul period provided aircraft boost pumps are available and turned on.

Emergency use of aviation gasoline is permitted in Model 250-C30R/3, -C30R/3M, -C40B, -C47B, -C47B/8, -C47E, and -C47M for a maximum of 6 hours during any overhaul period. It is not necessary to purge the unused fuel from the system before refueling with different type fuels. No fuel control adjustment is required when switching fuels.

Fuels containing Tri-Cresyl-Phosphate additives shall not be used. The approved anti-icing additives are provided in the Operation and Maintenance Manual for each engine model (See Note 24).

NOTE 11 Pneumatic accumulator(s), double check valve(s) or other attenuating devices can be incorporated for compatibility with the rotor system of the particular model rotorcraft in which the engine is to be installed, except for electronically controlled Model 250-C30R, -C30U, -C30R/1, -C40B, -C47B, -C47B/8, -C47E, -C47M, -C30R/3 and -C30R/3M.

NOTE 12 Model 250-C30, -C30S and -C30G engines are equipped with dual ignition. The all other models have a single ignition system. A dual ignition kit is available for the Model 250-C28B and -C28C engines. Exemption No. 2087B (from Part 33.69), dated December 10, 1991, permits the type certification of the engines on this type certificate data sheet with single ignition for use in all rotorcraft, regardless of whether the rotorcraft is certificated under Part 6 or Part 7 of the CAR, or Part 27 or Part 29 of Title 14 of CFR and regardless of whether the rotorcraft is designated as Category A or Category B.

NOTE 13 Life limits established for critical rotating components are published in the corresponding Rolls-Royce Operation and Maintenance Manual. Distributor Information Letters (DIL) 190 and 202 establish acceptable crack limits suitable for return to service of first stage and second stage turbine wheels, respectively, in time continued (repaired) engines.

NOTE 14 Engines produced under this type certificate are approved for operation with unprotected inlets having been tested in accordance with Group I and Group II Foreign Objects Ingestion criteria of FAA Advisory Circular AC 33-1B.

NOTE 15 A press-to-test indicator lamp for the N2 overspeed control system is an installation requirement. The Models 250-C30R, -C30U and -C30R/1 require a second press-to-test indicator for the digital overspeed control.

NOTE 16 A magnetic oil drain plug (chip detector) indicator lamp is an installation requirement.

NOTE 17 Compliance with Rolls-Royce Alert Commercial Engine Bulletin CEB-A-73-3018 (Disarm N2 Electronic Overspeed Control System) and any subsequent FAA approved revisions are an installation requirement for the Model 250-C30M and -C30P engines.

NOTE 18 - Fuel Control maximum fuel flow stop settings

	Maximum fuel flow stop setting (pph)	Available maximum fuel flow stop setting for field use (pph)
250-C28	375	—
250-C28B, -C28C	360	293
250-C30 Series	440	284, 313, 353 and 379
250-C40B, -C47B, -C47B/8, -C47M,-C30R/3, -C30R/3M, -C47E	500	—

NOTE 19 Applicable to the Model 250-C40B and -C47M engines: Operational use of the on-line software loader in the field is prohibited.

Applicable to the Model 250-C47B, -C47B/8 engine: Operational use of the on-line loader in the field is approved for Software Version 5.201 or later FAA approved Software Version per applicable FAA approved Commercial Engine Bulletin.

Applicable to the 250-C30R/3 engine: Operational use of the on-line loader in the field is approved for Software Version 7.102 or later FAA approved Software Version per applicable FAA approved Commercial Engine Bulletin.

Applicable to the 250-C30R/3M engine: Operational use of the on-line loader in the field is approved for Software Version 8.00 or later FAA approved Software Version per applicable FAA approved Commercial Engine Bulletin.

NOTE 20 Applicable to the 250-C30R/3M engine. The engine ECU incorporates an N2 overspeed system with a trip point of 124%, which exceeds the main rotor speed limit of the application aircraft. Therefore, the decision to install and operate the 250-C30R/3M in this application is the responsibility of the installation authority.

NOTE 21 Applicable to the Model 250-C47B, -C47B/8 and -C47M engines fitted with the EMC-35R control system: Dispatch with an inoperative ECU reversionary channel is approved for up to 150 flight hours before maintenance action is required. A one-time ferry flight with other faults is permitted under certain conditions. See each engine's Operation and Maintenance Manual for applicable instructions (See Note 22).

NOTE 22 - Applicable Documents Table

APPLICABLE DOCUMENTS TABLE			
MODEL 250	**PARTS LIST**	**OMM**	**IDM**
C28	4246	16W2	16W5
C28B	4258	16W2	16W5
C28C	4261	16W2	16W5C
C28C(AG)	4261	16W2	16W5C
C30	4260	14W2	14W5
C30(BO)	Same as 4275 except incorporates Installation Bulletin 3011	14W2	14W5P
C30(HU)	4260	14W2	14W5
C30(WO)	4275	14W2	14W5P
C30G	4301	14W2	14W5G
C30G/2	4306	14W2	14W5G/2
C30M	4276	14W2	14W5M
C30P	4275	14W2	14W5P
C30R	4279	14W2RU	14W5LR
C30R/1	4307	14W2LRU	14W5R/1
C30R/3	4314	CSP21003	CSP24005
C30R/3M	4323	CSP21006	CSP24007
C30S	4277	14W2	14W5 + Suppl A
C30U	4302	14W2RU	14W5U
C40B	4310	CSP21000	CSP24001
C47B	4311	CSP21001	CSP24002
C47B/8	10071	CSP21001	CSP24002
C47E	10063	CSP21011	CSP24037
C47M	4313	CSP21004	CSP24003

.... END....