



Latest modification date: 030401

Basic data

General

Configuration and number of cylinders	.....	6 in-line
Working principle	.....	4 stroke
Bore x stroke	mm	127 x 154
Displacement	dm ³	11,70
Compression ratio	.....	16:1
Firing order	.....	1 - 5 - 3 - 6 - 2 - 4
Piston speed		
at 1500 r/min	m/s	7,70
at 1800 r/min	m/s	9,24
Rotation, seen from flywheel end	.....	Counter clockwise
Moment of inertia		
with flywheel for 14" coupling	kgm ²	2,74
Number of teeth on flywheel ring gear	.....	158
Weight approx., excl. oil and coolant		
with fan, radiator and expansion tank	kg	1065

Lubrication system

Oil capacity	dm ³ , min	28
	max	33
Oil consumption	g/kWh	< 0,3
Oil change intervals	h	400
Oil grade	.....	CE or CF acc. to API CCMC D5 Acea E3-96
Oil Pressure		
Normal	bar	3 - 6
Minimum permitted	bar	0,7
Oil temperature		
Maximum permitted	°C	120
Oil cleaner	.....	Paper and centrifugal
Filtration	Micron	5 - 7
Oil filter for turbo charger	Paper
Oil cooler	Water cooled/Full flow



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Injection system

Type	Electronic Unit Injectors
Governor		Scania Engine Management System (EMS)
Fuel filter	.....	Paper filter element

Cooling system

Coolant volume, excl. radiator	dm ³	22
Coolant temperature	°C	75 - 85
Number of thermostats	.....	1
Opening temperature	°C	75

Intake system

Permissible pressure drop in intake system with cleaned or new filter	mmWc	300
Permissible pressure drop in intake system with blocked (dirty) filter	mmWc	500

Electrical system, optional equipment

Type	.....	1-pole, 24 V, DC
Optional	.....	2-pole, 24 V, DC
Starter, standard equipment	.....	1-pole, 24 V - 6.7 kW
Optional	.....	2-pole, 24 V - 6.7 kW
Alternator, standard equipment	.....	1-pole, 28 V - 65 A
Optional	.....	2-pole, 28 V - 65 A
	.....	1-pole, 28 V - 90 A
Stop solenoid, optional equipment		
Needed power to pull	A	39
Needed power to hold	A	0.46



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Technical data and cooling equipment recommendation

DC12 54A, order ref 10-80

		1500 r/min		1800 r/min	
		PRP	ESP	PRP	ESP
Gross power	kW	273	316	303	337
Specific fuel consumption	g/kWh				
full load		190	190	193	193
3/4 load		193	191	195	194
1/2 load		199	196	200	199
Heat rejection	kW				
to cooling water		113	123	117	126
to exhaust gas		181	211	207	233
to charge air		34	44	49	59
to surrounding air		24	27	25	28
Air consumption	kg/min	21	24	28	30
Air temperature after charge air cooler	°C	39	43	44	48
Fall of pressure, charge air cooler	Bar	0,07	0,07	0,11	0,11
Exhaust flow	kg/min	22	25	29	31
Exhaust temperature	°C	480	495	427	441

		1500 r/min				1800 r/min			
		PRP		ESP		PRP		ESP	
		Air-on temp.		Air-on temp.		Air-on temp.		Air-on temp.	
		35 °C	50 °C	35 °C	50 °C	35 °C	50 °C	35 °C	50 °C
Radiator									
front area	m ²	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2
weight	kg	55	55	55	55	55	55	55	66
Coolant pump flow	dm ³ /min	300	300	300	300	360	360	360	350
Fan									
type		Pusher	Pusher	Pusher	Pusher	Pusher	Pusher	Pusher	Pusher
Ø	mm	912	912	912	912	787	912	787	912
power losses	kW	9	9	9	9	12	9	12	9
number of drive belts (poly-V)		1	1	1	1	1	1	1	2
speed ratio		1:1	1:1	1:1	1:1	1:1.08	1:0.8	1:1.08	1:0.8
Air flow									
free air flow	m ³ /s	8.0	8.0	8.0	8.0	7.3	7.6	7.3	7.8
pressure reserve	mm Wc	42	36	33	25	22	25	22	25