



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 <sup>3</sup>	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 <sup>2</sup>	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 <sup>3</sup> , 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



### Injection system

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

### Cooling system

Coolant volume, excl. radiator	dm <sup>3</sup>	.....	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 10-82

		1500 r/min		1800 r/min		
		PRP	ESP	PRP	ESP	
Gross power	kW	316	359	337	371	
Specific fuel consumption	g/kWh					
		full load	190	193	193	195
		3/4 load	191	190	194	193
	1/2 load	196	194	199	197	
Heat rejection	kW					
		to cooling water	123	134	126	136
		to exhaust gas	211	248	233	262
		to charge air	44	58	59	69
	to surrounding air	27	31	28	31	
Air consumption	kg/min	24	27	30	32	
Air temperature after charge air cooler	°C	43	48	48	53	
Fall of pressure, charge air cooler	Bar	0,07	0,09	0,11	0,12	
Exhaust flow	kg/min	25	28	31	33	
Exhaust temperature	°C	495	509	441	460	

		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 <sup>2</sup>	1.0	1.0	1.0	1.2	1.0	1.2	1.0	1.2
	weight	kg	55	55	55	66	55	66	55	66
Coolant pump flow	dm <sup>3</sup> /min	300	300	300	290	360	350	360	350	
Fan										
type		Pusher	Pusher	Pusher	Pusher	Pusher	Pusher	Pusher	Pusher	
Ø	mm	912	912	912	912	912	912	912	912	
power losses	kW	9	9	9	9	9	9	9	9	
number of drive belts (poly-V)		1	1	1	1	2	2	2	2	
speed ratio		1:1	1:1	1:1	1:1	1:0.8	1:0.8	1:0.8	1:0.8	
Air flow										
free air flow	m <sup>3</sup> /s	8.0	8.0	8.0	8.8	7.6	7.8	7.6	7.8	
pressure reserve	mm Wc	28	21	25	22	27	22	24	19	