Latest modification date: 980601 **CID: 10001**

Basic data

General

Configuration and number of cylinders		In line 6
Working principle		4 stroke
Bore x stroke	mm	115 x 144
Displacement	dm^3	9.0
Compression ratio		17:1
Firing order		1 - 5 - 3 - 6 - 2 - 4
Piston speed		
at 1500 r/min	m/s	7.2
at 1800 r/min	m/s	8.6
Rotation, seen from flywheel end		Counter clockwise
Moment of inertia		
with flywheel for 14” coupling	kgm^2	2.6
Number of teeths on flywheel ring gear		158
Weight approx., excl. oil and coolant		17:1
D9, incl. fan	kg	825
DC9, incl. fan, radiator and expansion tank	kg	890

Lubrication system

Oil capacity, depending on oil sump	dm^3, min	24
	max	31
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		Cyclone and centrifugal
Filtration	Micron	5 - 7
Oil filter for turbo charger		Paper
Oil cooler		Water cooled/Full flow

Injection system

Type		Direct injection
Governor		Mechanical, RSV
Optional		Electronically controlled mechanical, RSV
Fuel filter		Paper filter element

Cooling system

Coolant volume, excl. radiator	dm^3	18
Coolant temperature	°C	75 - 90
Number of thermostats		1
Opening temperature	°C	79

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 - 4.0 kW
Optional		2-pole, 24 V - 4.0 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

Latest modification date: 020423

Technical data and cooling equipment recommendation

DC9 50A, order ref 10-27

		1500 r/min		1800 r/min	
		PRP	**ESP**	**PRP**	**ESP**
Gross power	kW	228	252	251	271
Specific fuel consumption	g/kWh				
full load		194	195	198	200
3/4 load		195	195	198	197
1/2 load		198	198	204	202
Heat rejection	kW				
to cooling water		110	93	94	102
to exhaust gas		167	176	177	195
to surrounding air		22	23	23	25
Air consumption	kg/min	19	21	24	25
Exhaust flow	kg/min	20	22	25	26
Exhaust temperature	°C	465	474	425	440

		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	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
weight	kg	47	47	47	47	47	47	47	47
Coolant pump flow	dm^3/min	245	245	245	245	245	245	285	285
Coolant pressure	bar	2,5*)	2,5*)	2,5*)	2,5*)	2,5*)	2,5*)	2,5*)	2,5*)
Fan									
type		Puller	Puller	Pusher	Pusher	Puller	Puller	Pusher	Pusher
Ø	mm	711	711	711	711	711	711	711	711
power losses	kW	5	5	5	5	8	8	8	8
speed ratio		1:1.08	1:1.08	1:1.08	1:1.08	1:1.08	1:1.08	1:1.08	1:1.08
Air flow									
free air flow	m^3/s	5.2	5.2	4.4	4.4	6.5	6.5	5.5	5.5
pressure reserve	mm Wc	19	16	13	10	19	15	12	8

*) All connected components, e.g. cab heaters and converter coolers, must be designed to withstand coolant pressure up to 4 bar.