

General Engine Data		IF07ATIH-N	IF07BTIH-N	IF07CTIH-N
Type		4 cycle, 6 Cylinder In Line, Water cooled		
Aspiration		Turbo charged, Intercooled		
Cylinder Type		Replaceable dry liner		
Bore x Stroke	mm	104 x 132		
Displacement	litre	6.728		
Compression Ratio		17.5 : 1		
Valves per Cylinder	- Intake	1		
	- Exhaust	1		
Valve Timing	- Intake	Opening: 15° BTDC - Close: 35° ABDC		
	- Exhaust	Opening: 69° BBDC - Close: ATDC		
Valves lashes at cold	- Intake mm	0.25 ±0.5		
	- Exhaust mm	0.50 ±0.5		
Combustion Type		Direct Injection		
Firing Order		1 – 5 – 3 – 6 – 2 – 4		
Rotation		Counter Clockwise, viewed from flywheel		
Dimension IF07A-B-C TIH-N (L x W x H)	± mm	1,210 x 824 x 1,554		
Dry Weight	Approx. kg	730		

Engine Rating		1,470	1,760	2,100	2,200	2,350	2,600	2,800	2,940
IF07ATIH-N	kW	127	159	180	184	189	197	197	197
IF07BTIH-N	kW	127	182	206	210	215	218	220	222
IF07CTIH-N	kW	-	-	-	-	-	238	244	246

**Power :** At flywheel according to 97/68 EC, after 50 hours running, 3% tolerance, fuel Diesel EN 590

**Test conditions :** ISO 3046/1, 25 ° Celsius air temperature, 100 kPa atmospheric pressure, 30 % relative humidity – Applicable also to DIN 6271, BS 5514, SAE J1349 Standards.

Fuel System	IF07ATIH-N	IF07BTIH-N	IF07CTIH-N
Injection Pump	StanaDyne Rotary Pump type		
Governor	Fixed speed control		
Fuel Lift Pump	Exclusive (Electric version as an Option)		
Fuel Filter	Full flow, cartridge type		
Used Fuel	Diesel fuel according EN 590		
Fuel consumption at Full Load Approx. at 2,940 rpm	230	235	229
Fuel consumption information at other Revs.	See table no. 03.400.06FCEN.03		
Standard Fuel Pump Supply Connection mm	M 16x1.5		
Standard Fuel Pump Return Connection mm	M 16x1.5		

Electrical System	24 Volts (Nominal)
Starter motor kW	4
Battery Min. capacity recommended Ah	180 (12 Volts)
Quantity per battery bank	2
Battery Cold Cranking Amperes @ -18°C	800
Charging Alternator Output Amp.	90
Engine stop device build in fuel pump	Energized to Stop

Air Induction System	IF07ATIH-N	IF07BTIH-N	IF07CTIH-N
Air Cleaner Type	Dry		
Engine Air Flow m <sup>3</sup> /min	19.0	20.0	20.3
Air Inlet Restriction Dirty kPa	6.5		
Air Inlet Restriction Clean kPa	2.0	2.0	3.0
Turbo charging pressure at full load/rated speed kPa	140	160	170
Turbo charging air inlet maximum temperature °C	55		

Cooling system with DE MAAS std heat exchanger		IF07ATIH-N	IF07BTIH-N	IF07CTIH-N
Heat Exchanger Minimum Flow	<i>l/min / kW installed</i>	0.7	0.7	0.8
Water Pump		Centrifugal type driven by belt		
Engine Radiated Heat	<i>kW</i>	See table no. 03.400.06VLEN.03		
Water Pump Capacity	<i>litre/min.</i>	158.3		
Heat Exchanger Raw water system				
Maximum Pressure	<i>kPa</i>	2,000	2,000	2,000
Flow ( <i>maximum</i> )	<i>litre/min.</i>	138	156	197
Maximum Temperature	<i>°C (°F)</i>	37.8 (100)	37.8 (100)	37.8 (100)
Thermostat, Start to Open	<i>°C</i>	83		
Fully Opened	<i>°C</i>	95		
Coolant Capacity <i>Approximately</i>	<i>litre</i>	23		
Coolant Pressure Cap	<i>kPa</i>	95		
Maximum Raw Water Supply pipe				
Std Connection Heat Exchanger IN	<i>inch</i>	1 ½" BSP		
Maximum Raw Water Discharge pipe				
Std Connection Heat Exchanger OUT	<i>inch</i>	1 ½" BSP		
Maximum Engine H <sub>2</sub> O Temperature	<i>°C</i>	103		
Pressure loss Engine Cooling Circuit	<i>kPa</i>	10		
Header tank capacity (Fresh water system)	<i>litre</i>	6.5		

Lubrication System		
Lubrication Method		Fully Forced pressure feed type
Oil Pump		Gear type driven by crankshaft
Oil Filter		Full Flow, Cartridge type
Oil pressure Range, normal	<i>kPa</i>	70 at idle 350 at maximum speed
Maximum Oil Temperature	<i>°C</i>	120 @ 2,940 rpm
Total Capacity	<i>litre</i>	12.8
Oil consumption at max. rating	<i>%</i>	0.1 (Of fuel consumption)

Exhaust System		IF07ATIH-N	IF07BTIH-N	IF07CTIH-N
Exhaust Gas Flow at max output	<i>kg/h</i>	1,375	1,460	1,485
Exhaust Gas Temperature at max rating/power	<i>°C</i>	550	600	620
Max. Allowable Back Pressure	<i>kPa</i>	7		
Minimum Exhaust Pipe Diameter	<i>mm(inch)*</i>	101.6 (4")		
Exhaust compensator with counter flange		Included		

\*Based on Nominal System. Flow analysis must be done to assure adherence to system limitations!

(Minimum exhaust pipe diameter is based on 6 metre (15 ft.) of pipe, one elbow, and a silencer. Pressure drop no greater than one half the max. allowable back pressure)

Heater System		
Wattage (Nominal)	<i>W</i>	1,500
Voltage AC	<i>V</i>	230

Miscellaneous		
Flywheel housing	<i>SAE</i>	3
Flywheel	<i>SAE</i>	11 ½
Number of teeth starter ring		125

Engine Performance Data		
All data is based on the engine operating with fuel system, lubricating oil pump, air cleaner, and alternator; not included are compressor, fan, optional equipment, and driven components. Data is based on operation at SAE standard J1394 conditions of 300ft (91,4m) altitude, 29.61 in.(752mm) Hg dry barometer, and 77°F (25°C) intake air temperature, using No.2 diesel or a fuel corresponding to ASTM-D2.		
Altitude above which output should be Limited	<i>m</i>	91.4
Correction Factor per 305m. above Altitude Limit		3 %
Temperature above which output should be Limited	<i>°C</i>	25