DOOSAN INFRACORE INDUSTRIAL ENGINE

SU244NA

Type	emission	Rated RPM	Ratings (kWm/PS)	
			Gross Engine Output	Net Engine Output
-	n/a	2600	36.5/49.6	35.0/47.6

◎ GENERAL ENGINE DATA

► Engine Model	SU244NA
► Engine Type	4-Cycle, In-line, Diesel, Water cooled, N/A
► Bore x stroke	Ø87 x 102.4 mm
► Displacement	2.435 liters
► Compression ratio	22 : 1
► Rotation	Counter clockwise viewed from Flywheel
► Firing order	1-3-4-2
► Injection timing	18˚ BTDC
► Dry weight	207kg (with Fan)
► Dimension (L x W x H)	766 x 510 x 723 mm
► Flywheel housing	SAE No.4
► Flywheel	Clutch No.7-1/2
► Number of teeth on flywheel	89

◎ EXHAUST SYSTEM

► Max. Back Pressure	9.8kPa
► Cooling method	Fresh water forced circulation
► Coolant capacity (Engine Only)	3.9 liters
► Coolant flow rate	liters / min
► Pressure Cap	90kPa
► Water Temperature	
-. Maximum for standby and Prime	110℃
-. Before start of full load	40℃
► Water pump	Centrifugal type driven by belt
► Thermostat Type and Range	Wax – pellet type
	Opening temp. 71℃ , Full open temp. 85℃
► Cooling fan	Suction type, Plyproplene , Dia : Ø400mm , 7 blade
► Max. external coolant system restriction	Not Available

This is normally attained after a running period of about 100 hours and Image shown may not be actual engine.

◎ LUBRICATION SYSTEM

Force-feed lubrication by gear pump

► Lub. Method	Fully forced pressure feed type
► Oil pump	Gear type driven by crank-shaft gear
► Oil filter	Full flow, cartridge type
► Oil capacity	Max. 9.7 liters
► Lub oil pressure	Idle Speed : Min 70 kPa
	Governed Speed : Min 245kPa
► Maximum oil temperature	121℃
► Angularity limit	Front down 30 deg , Front up 30 deg
	Side to side 30 deg
► Lubrication oil	SAE 10W-30 or SAE 15W-40(Above -10℃)

◎ FUEL SYSTEM

Bosch type in-line pump

► Injection pump	K-type mini pump
► Governor	Mechnical centrifugal
► Feed pump	Diaphragm type pump
► Injection nozzle	Throttle type
► Opening pressure	14.7 ~ 15.7Mpa
► Fuel filter	Full flow, cartridge type
► Fuel feed pump capacity	24 liters / hr
► Used fuel	Diesel fuel oil
► Voltage regulator	Built-in type IC regulator
► Starting motor	12V x 1.7 kW
► Battery Voltage	12V
► Battery Capacity	80AH(recommended)
► Starting aid (Option)	Glow plug

◎ VALVE SYSTEM

► Type	Overhead valve type	
► Number of valve	Intake 1, exhaust 1 per cylinder	
► Valve lashes at cold	Intake 0.25mm , Exhaust 0.30mm	
► Valve timing	Open	Close
-. Intake valve	8 deg. BTDC	38 deg. ABDC
-. Exhaust valve	42 deg. BBDC	8 deg. ATDC

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◎ PERFORMANCE DATA — SU244NA

► Governed Engine speed	rpm	2600
► Engine Idle Speed	rpm	1000
► Over speed limit	rpm	2800
► Gross Eng. Power(Stand by)	kWm	36.5
efficiency 90%	kWe	32.9
	kVA	41.1
	PS	49.6
► BMEP	Mpa	7.1
► Mean Piston Speed	m/s	8.9
► Specific fuel consumption	L/hr	11.1

The all data and the specific fuel consumption are based on ISO 3046/1, Standard reference conditions are in accordance with 298 K(25° Celsius) air temperature, 100kPa(1000mbar) air pressure, 60% relative humidity, 110m(361ft) altitude.
Operation At Elevated Temperature And Altitude: The engine may be operated at :
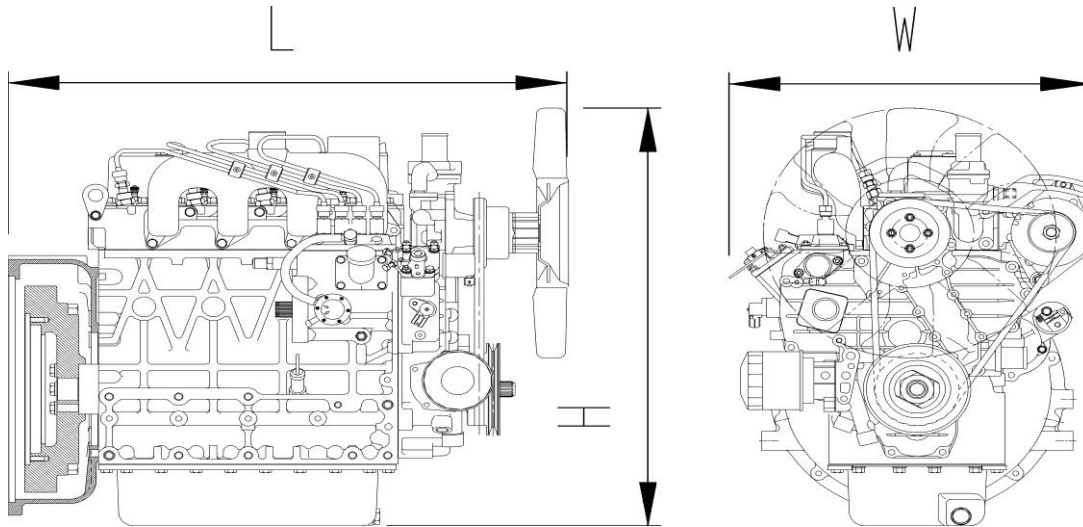1800 rpm & 1500rpm up to 750~ 1000m and 30°C without power deration
For sustained operation above these conditions, derate by 3% per 304m , and 2% per 11 °C

◎ Engine Data with Dry Type Exhaust Manifold

► Intake Air Flow	m³/min	2.53
► Exh. gas temp. after turbo.	°C	530
► Exhaust Gas Flow	m³/min	2.65

◎ ENGINE DIMENSION

Designation	Length(L)	Width(W)	Height(H)	Dry weight
Value	766mm	510mm	723mm	214kg

◎ CONVERSION TABLE

in. = mm x 0.0394
PS = kW x 1.3596
psi = kg/cm2 x 14.2233
in3 = lit. x 61.02
hp = PS x 0.98635
lb = kg x 2.20462
kW = Kcal/sec x 0.239

lb/ft = N.m x 0.737
U.S. gal = lit. x 0.264
kW = 0.2388 kcal/s
lb/PS.h = g/kW.h x 0.00162
cfm = m3 /min x 35.336
Mpa = Pa x 1000 = bar x 10

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