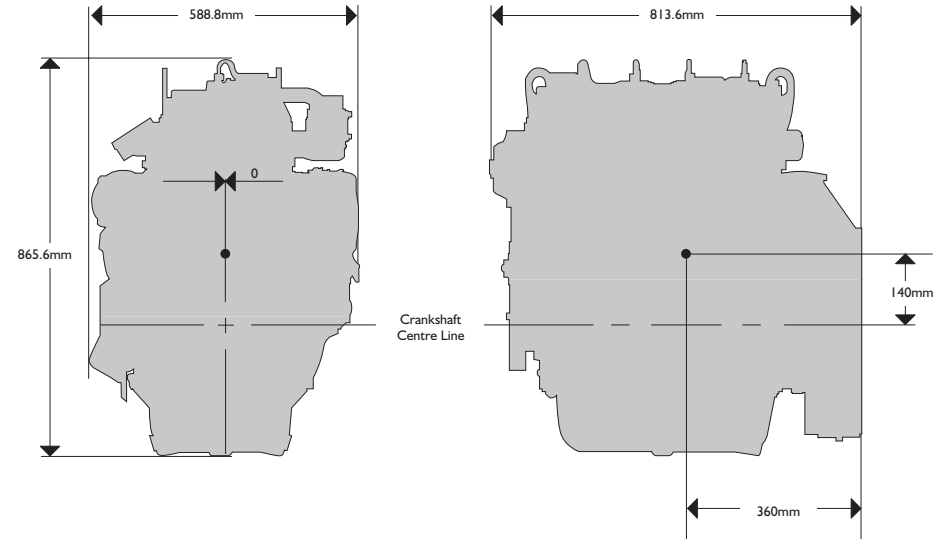




JCB NATURALLY ASPIRATED 55.3kW (74hp) & 63kW (84hp)



MOBILE MACHINERY



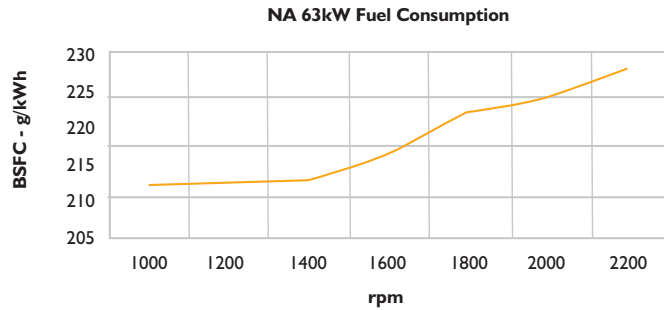
GENERAL TECHNICAL DATA

Technical Code	JCB444 NA – 55.3kW	JCB444 NA – 63kW
Thermodynamic Cycle	Diesel 4 stroke	Diesel 4 stroke
Air intake	NA	NA
Arrangement	4.4L	4.4L
Nominal Bore	mm 103	mm 103
Stroke	mm 132	mm 132
Total displacement	cm ³ 4399	cm ³ 4399
Valves per cylinder	4	4
Cooling	Liquid	Liquid
Direction of rotation (viewed from crank nose)	Clockwise	Clockwise
Compression ratio	18.6:1	18.6:1
Rotational mass moment of inertia excluding flywheel.	kgm ² 0.2255	kgm ² 0.2255
Standard flywheel inertia	kgm ² 0.4061	kgm ² 0.4061

	JCB444 NA – 55.3kW	JCB444 NA – 63kW
Maximum rating* (gross intermittent)	kW 55.3	63
At speed	rpm 2200	2200
Maximum torque	Nm 305	320
At speed	rpm 1200	1200
Maximum no load governed speed	rpm 2390	2390
Nominal idling speed	rpm 800	800
Mean Piston speed at rated speed	m/s 9.68	9.68
BMEP at maximum torque	bar 8.71	9.14
Emission Certification – EPA T2, EU Stage 2	EPA TII, EU St2	EPA TII, EU St2
Best point specific fuel consumption	g/kWhr 204	204
Minimum full load specific fuel consumption	g/kWhr –	212.5
Noise at maximum rating	dBA 1m 89	89
Minimum starting temperature without auxiliaries	°C -12	-12
Dry weight	kg 450	450

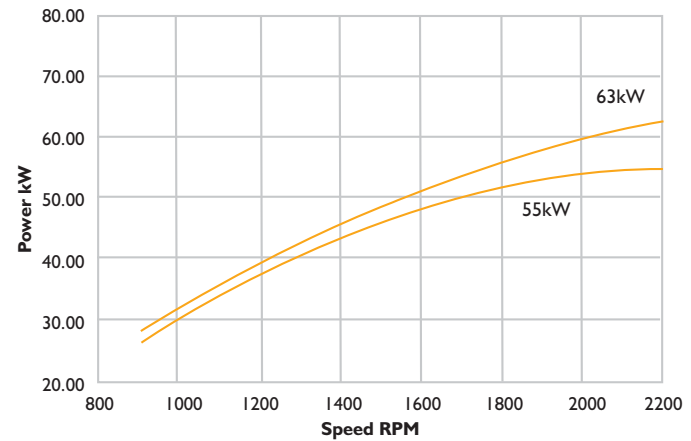
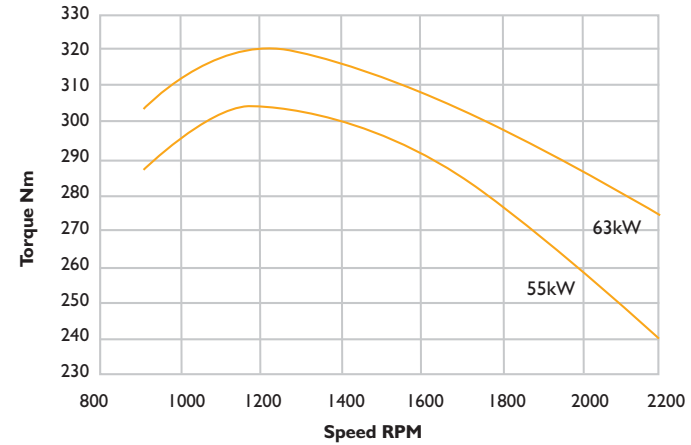


FUEL CONSUMPTION



Fuel consumption with fuel at 40°C pump inlet, at full load.

POWER AND TORQUE CURVES



Fuel stop power (gross intermittent) shown.
Performance measured according to ISO 14396 after 50 hours running without fan.

FUEL SYSTEM

	JCB444 NA – 55.3kW	JCB444 NA – 63kW
Injection system	Rotary Mechanical	Rotary Mechanical
Fuel maximum intake restriction	mbar 100	100
Fuel maximum intake temperature	°C 50	50
Engine Pre Filter	Micron 30	30
Engine Main Filter	Micron 5	5



JCB NATURALLY ASPIRATED 55.3kW (74hp) & 63kW (84hp)



EXHAUST SYSTEM

		JCB444 NA – 55.3kW	JCB444 NA – 63kW
Maximum allowable back pressure	mbar	150	150
Maximum exhaust temperature at full rated speed	°C	671	671
Exhaust flow at maximum output	kg/h	300	302

LUBRICATION SYSTEM

		JCB444 NA – 55.3kW	JCB444 NA – 63kW
Lubricating oil pressure	bar	4.6	4.6
Maximum oil temperature at full rated speed: continuous.	°C	125	125
Maximum oil temperature at full rated speed: intermittent.	°C	135	135
Engine angularity limits in continuous operation:			
Maximum front up and front down	deg	35	35
Maximum right hand and left hand	deg	35	35
Total system capacity – including pipes, filters etc	Ltrs	14	14
Minimum recommended oil grade	API	CF4	CF4
Oil filter maintenance service schedule	Hours	500	500
Oil consumption at maximum rating	% of fuel consumption	0.1	0.1

COOLING SYSTEM

		JCB444 NA – 55.3kW	JCB444 NA – 63kW
Coolant capacity – Engine only	Ltrs	7	7
Water pump flow at rated speed	ltr/min	200	200
Heat to reject by heat exchanger at maximum power	kW	38.6est	42.9
Thermostat Temperature	°C	90	90
Cooling liquid maximum temperature	°C	110	110
Minimum and Maximum pressure in the cooling circuit	kPa (bar)	1 bar max - min	1 bar max - min
Coolant Specification Approved (JCB HP High Performance)		ASTM D6210	ASTM D6210

ELECTRICAL SYSTEM

		JCB444 NA – 55.3kW	JCB444 NA – 63kW
Type (ETR - Energised To Run)		Negative Ground, ETR	Negative Ground, ETR
Standard (Starter & Alternator)	V	12	12
Option.	V	24	24
Minimum Cranking Speed	rpm	100	100
Battery – minimum capacity recommended, not included		145Ah.	145Ah.
Battery – minimum cold cranking capacity recommended, not included		850 CCA	850 CCA

AIR INDUCTION

		JCB444 NA – 55.3kW	JCB444 NA – 63kW
Maximum allowable air intake restriction with clean air filter	mbar	25	25
Maximum allowable restriction with dirty air filter	mbar	85	85
Air requirement for combustion at 100% rated speed	g/s	81	81
Turbocharging pressure at full rated speed	bar	–	–
Turbocharging air maximum temperature - engine inlet	°C	–	–
Cooled charge air at inlet manifold	°C	–	–
Heat rejected to intercooler at maximum power	kW	–	–
Intercooler system max pressure drop	mbar	–	–



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STANDARD CONFIGURATION

	JCB444 NA – 55.3kW	JCB444 NA – 63kW
Flywheel housing	SAE 3	3
Intake manifold location	Left hand rear	Left hand rear
Exhaust manifold/ Turbocharger location	Right hand	Right hand
Turbocharger	NA	NA
Fan transmission ratios.	0.85, 1.1, 1.16 or 1.25:1	0.85, 1.1, 1.16 or 1.25:1
Distance between fan – crankshaft centres	mm 262 or 356	262 or 356
Main Fuel Filter & Pre Filter	Included	Included
Fuel pump	Included	Included
Oil filter	qty 1 left side	1 left side
Oil Sump	Pressed dual skin	Pressed dual skin
Oil vapours blow-by circuit	Closed	Closed
Oil heat exchanger	Left side	Left side
Oil filler position	Top and left hand side	Top and left hand side
Starter motor	12v, 4.2kW	12v, 4.2kW.
Alternator	12v, 95A	12v, 95A
Engine stop	Electrical	Electrical
Power Take off Heavy Duty (OEM Spec)	Standard: 60kW. RHS.	Standard: 60kW. RHS.
Power Take off Light Duty	Standard: 10kW. LHS.	Standard: 10kW. LHS.
Power Take off Crank nose	Standard: 60kW.	Standard: 60kW.
Finish	Lacquered	Lacquered
Owners Manual	Included	Included

OPTIONAL EQUIPMENT

Pusher & Puller Fans, AVM's, Hydraulic Pumps, 24 Volt Electrics, Water In Fuel Sensor.
 Grid Heater Matrix for improved cold starting.
 Flywheel Options: 10", 11", 11.5", W300, Voith and ZF.
 Long dipstick.

