

J70UM

Engine JOHN DEERE , 4045TF120
Alternator LEROY SOMER , LSA442VS45

STANDARD FEATURES

- Mechanical governor
- Mechanically welded chassis with antivibration suspension
- Power circuit breaker
- Radiator for wiring T° of 50°C [122°F] max with mechanical fan
- Protective grille for fan and rotating parts
- 9dB(A) silencer supplied separately
- Charged DC starting battery with electrolyte
- 12 V charging alternator and starter
- Supplied with oil and coolant -30°C
- User manual and commissioning guide



Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions	Weight
240MONO	67 / 67	61 / 61	279	Length: 1870mm [74in] Width: 994mm [39in] Height: 1360mm [54in]	1240kg [2734 lbs] Net 1430kg [3153 lbs] Gross



POWER DEFINITION

PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046-1 –

ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

TERM OF USE

Standard reference conditions 25 °C Air Inlet Temp, 3800 m A.S.L. 60 % relative humidity. All engine performance data based on the above mentioned maximum continuous ratings.

Type	dB(A)@1m	dB(A)@7m	Dimensions	Weight	Tank
 M129	77	67	Length: 2554mm [101in] Width: 1170mm [46in] Height: 1680mm [66in]	1630kg [3594lbs] Net 1830kg [4034lbs] Gross	190 L
 M129-DW	77	67	Length: 2602mm [102in] Width: 1170mm [46in] Height: 1900mm [75in]	2049kg [4517lbs] Net 2554kg [5631lbs] Gross	505 L





ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	JOHN DEERE 4045TF120 , 4-strokes, Turbo , [N/A] 4 X
	Cylinder Arrangement	L
	Displacement	4.48L [273.4C.I.]
	Bore and Stroke	106mm [4.2in.] X 127mm [5.0in.]
	Compression ratio	17 : 1
	Rated RPM	1800 Rpm
	Piston Speed	7.62m/s [25.0ft./s]
	Max. stand by Power at rated RPM	78kW [105BHP]
	Frequency regulation, steady state	+/- 2.5%
	BMEP	11bar [159psi]
	Governor : type	MECA
EXHAUST SYSTEM	Exhaust temperature	520°C [968°F]
	Exhaust gas flow	220L/s [466cfm]
	Max back pressure	750mm CE [30in. WG]
FUEL SYSTEM	110% (Stand By power)	20.5L/h [5.4gal/hr]
	100% (of the Prime Power)	19L/h [5.0gal/hr]
	75% (of the Prime Power)	14.5L/h [3.8gal/hr]
	50% (of the Prime Power)	10.5L/h [2.8gal/hr]
	Max. fuel pump flow	112L/h [29.6gal/hr]
OIL SYSTEM	Total oil capacity w/filters	13.5L [3.6gal]
	Oil Pressure low idle	1bar [14.5psi]
	Oil Pressure rated RPM	5bar [72.5psi]
	Oil consumption 100% load	0.02L/h [0.005gal/hr]
	Oil capacity carter	12.5L [3.3gal]
THERMAL BALANCE	Heat rejection to exhaust	63kW [3582Btu/mn]
	Radiated heat to ambient	9kW [512Btu/mn]
	Heat rejection to coolant	39kW [2218Btu/mn]
AIR INTAKE	Max. intake restriction	625mm CE [25in. WG]
	Engine air flow	88L/s [186cfm]
COOLANT SYSTEM	Radiator & engine capacity	23.6L [6.2gal]
	Max water temperature	105°C [221°F]
	Outlet water temperature	93°C [199°F]
	Fan power	3 kW
	Fan air flow w/o restriction	N/A
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Gencool
	Thermostat	82-94 °C
EMISSIONS LEVEL	PM	N/A
	CO	N/A
	Nox	N/A
	HC	N/A

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ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer	LEROY SOMER
	Type	LSA442VS45
	Number of phase	1
	Power factor (Cos Phi)	1
	Altitude	< 1000 m
	Overspeed	2250 rpm
	Pole : number	4
	Exciter type	SHUNT
	Insulation : class, temperature rise	H / H
	Voltage regulator	R230
	Total harmonics (TGH/THC)	< 2%
	Wave form : NEMA = TIF – TGH/THC	< 50
	Wave form : CEI = FHT – TGH/THC	< 2%
	Bearing : number	1
	Coupling	Direct
	Voltage regulation 0 to 100% load	+/- 0.5%
	Recovery time (20% Volt dip) ms	500 ms
SkVA with 90% of nominal sustained voltage (at 0.4PF)	N/A	
OTHER DATAS	Continuous nominal rating @ 40°C	87 kVA
	Standby rating @ 27°C	96 kVA
	Efficiencies @ 4/4 load	91 %
	Air flow	0.44m3/s [932.30cfm]
	Short circuit ratio;50 (Kcc)	0.33
	Direct axis synchro reactance unsaturated (Xd)	377 %
	Quadra axis synchro reactance unsaturated (Xq)	226 %
	Open circuit time constant;50 (T'do)	2555 ms
	Direct axis transient reactance saturated (X'd)	14.7 %
	Short circuit transient time constant (T'd)	100 ms
	Direct axis subtransient reactance saturated (X''d)	8.8 %
	Subtransient time constant (T''d)	10 ms
	Quadra axis subtransient reactance saturated (X''q)	10.8 %
	Zero sequence reactance unsaturated (Xo)	0.9 %
	Negative sequence reactance saturated (X2)	9.9 %
	Armature time constant (Ta)	15 ms
	No load excitation current (io)	0.5 A
	Full load excitation current (ic)	2.1 A
	Full load excitation voltage (uc)	38 V
	Recovery time (Delta U = 20% transitoire)	500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	238.2 kVA	
Transient dip (4/4 charge) – PF : 1.8 AR	17.8 %	
No load losses	2.72 kW	
Heat rejection	10.25 kW	

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CONTROL PANEL

Standard



NEXYS

Specifications :

Frequency meter, Ammeter, Voltmeter
Alarms and faults Oil pressure, water temperature,
Overcrank, Overspeed (>60 kVA), Min/max alternator,
Low fuel level, Emergency stop
Engine parameters Hours counter, Engine speed,
Battery voltage, Fuel level, Air preheating

Option



TELYS

Specifications :

Frequency meter, Ammeter, Voltmeter
Alarms and faults Oil pressure, water temperature, No
start-up, Overspeed, Min/max alternator, Min/max
battery voltage, Low fuel level, Emergency stop
Engine parameters Hours counter, Oil pressure, Water
temperature, Engine speed, Battery voltage, Fuel level

