

J77K

Motor type 4045TF120
Alternator type LSA432L65

GENERAL CHARACTERISTICS

- Mechanic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring temperature of 48/50°C max with
- Protective grille for fan and rotating parts
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 12 V charge alternator and starter
- Delivered with oil and coolant -30°C
- Manual for use and installation



J77K : JOHN DEERE, 4045TF 120 - LEROY SOMER, LSA432L65

Voltage (V)	Voltage Code	Power ESP		Power PRP		Standby Amps
		kWe	kVA	kWe	kVA	
415/240	T51A1	61	76	55	69	106
400/230	T51A2	62	77	56	70	111
380/220	T51A3	62	77	56	70	117
240/120	T51C1	62	77	56	70	185
230/115	T51C2	62	77	56	70	193
220/110	T51C3	62	77	56	70	202
220/127	T52B4	62	77	56	70	202
200/115	T51B2	62	77	56	70	222

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.

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.

TERMS OF USE

Standard reference conditions 25°C Air Inlet Temp, 1000 m A.S.L. 60 % relative humidity. All engine performance data based on the above mentioned maximum continuous ratings.



ENGINE SPECIFICATIONS

	Description	4045TF120
GENERAL CHARACTERISTICS	Motor model	JOHN DEERE
	Cylinder arrangement	L
	Number of cylinders	4
	Bore (mm)	106
	Stroke (mm)	127
	Displacement (C.I.)	4.48
	Compression ratio	17 : 1
	Speed (RPM)	1500
	Pistons speed (m/s)	6.35
	Maximum stand-by power at rated RPM (kW)	68
	Governor type	Mechanical
	Frequency regulation (%)	+/- 2.5%
	BMEP (bar)	10.89
EXHAUST	Exhaust gas flow (L/s)	176
	Exhaust gas temperature (°C)	545
	Max. exhaust back pressure (mm CE)	750
FUEL	Consumption @ 110% load (L/h)	17.5
	Consumption @ 100% load (L/h)	16
	Consumption @ 75% load (L/h)	12
	Consumption @ 50% load (L/h)	8.5
	Maximum fuel pump flow (L/hr)	108
OIL SYSTEM	Oil capacity (L)	13.5
	Min. oil pressure (bar)	1
	Max. oil pressure (bar)	5
	Oil consumption 100% load (L/h)	0.016
HEAT BALANCE	Carter oil capacity (L)	12.5
	Heat rejection to exhaust (kW)	54
	Radiated heat to ambient (kW)	8
AIR INTAKE	Heat rejection to coolant (kW)	35
	Intake air flow (L/s)	66
	Max. intake restriction (mm CE)	625
COOLING SYSTEM	Radiator & Engine capacity (L)	23.6
	Max water temperature (°C)	105
	Outlet water temperature (°C)	93
	Fan power (kW)	2
	Fan air flow w/o restriction (m3/s)	2.53
	Available restriction on air flow (mm CE)	20
	Type of coolant	Gencool
Thermostat (°C)	82-94	
EMISSIONS	Emission HC (mg/Nm3)	150
	Emission Nox (mg/Nm3)	3800
	Emission CO (mg/Nm3)	190
	Emissions PM (mg/Nm3)	60

ALTERNATOR SPECIFICATIONS

GENERAL CHARACTERISTICS	Description	LSA 43.2 L65
	Alternator brand	LEROY SOMER
	Number of phase	3
	Altitude (m)	0 à 1000
	Overspeed (rpm)	2250
	Number of pole	4
	Excitation system	SHUNT
	Insulation class	H
	Regulation	R230
	#Taux d'harmonique à vide TGH/THC	< 2%
	#Taux d'harmonique en charge TGH/THC	< 2%
	Wave form : CEI=FHT-(TGH/THC)	< 2%
	Wave form : NEMA=TIF-(TGH/THC)	< 50
	Number of bearing	1
	Coupling	Direct
	#Régulation de tension à régime établi (%)	+/- 0.5%
	Air flow (m3/s)	0.27
POWERS	Power factor (Cos Phi)	0.8
	Continuous Nominal Rating 40°C (kVA)	70
	Standby Nominal Rating 40°C (kVA)	74
	Standby Rating 27°C (kVA)	77
	Efficiencies 4/4 load (%)	89.7
REACTANCES (R) - TIME CONSTANT(CT)	Short circuit ratio (Kcc)	0.37
	Direct axis synchro reactance unsaturated (Xd) (%)	310
	Quadra axis synchro reactance unsaturated (Xq) (%)	186
	Open circuit time constant (T'do) (ms)	1354
	Direct axis transient reactance saturated (X'd) (%)	11.4
	Short circuit transient time constant (T'd) (ms)	50
	Direct axis subtransient reactance saturated (X''d) (%)	5.7
	Subtransient time constant (T''d) (ms)	5
	Quadra axis subtransient reactance saturated (X''q)	7.1
	Zero sequence reactance unsaturated (Xo) (%)	0.8
	Negative sequence reactance saturated (X2) (%)	6.4
Armature time constant (Ta) (ms)	8	
OTHER CHARACTERISTICS	No load excitation current (io) (A)	0.4
	Full load excitation current (ic) (A)	1.6
	Full load excitation voltage (uc) (V)	29
	Recovery time (Delta U = 20% transitoire) (ms)	500
	Motor start (Delta U = 20% perm. or 50% trans.)	184
	Transient dip (4/4 charge) - PF : 0,8 AR (%)	15
	No load losses (W)	1210
	Heat rejection (W)	6370

DIMENSIONS AND NOISE LEVELS

DIMENSIONS COMPACT VERSION	Length (mm)	1870
	Width (mm)	994
	Height (mm)	1360
	Tank capacity (L)	180
	Dry weight (kg)	1110
DIMENSIONS CANOPIED VERSION	Canopy	M128
	Length (mm).	2300
	Width (mm).	1060
	Height (mm).	1680
	Tank capacity (L).	180
	Dry weight (kg).	1530
NOISE LEVEL	dB(A) @1m (50Hz)	75.6
	dB(A) @7m (50Hz)	66
	dB(A) @15m (50Hz)	62
	LWa (50Hz)	92

CONTAINMENT

DIMENSIONS COMPACT VERSION	Length (mm)	2344
	Width (mm)	1060
	Height (mm)	1579
	Tank capacity (L)	390
	Dry weight (kg)	1344
DIMENSIONS CANOPIED VERSION	Canopy	M128 DW
	Length (mm).	2344
	Width (mm).	1060
	Height (mm).	1900
	Tank capacity (L).	390
	Dry weight (kg).	1717
NOISE LEVEL	dB(A) @1m (50Hz)	75.6
	dB(A) @7m (50Hz)	66
	dB(A) @15m (50Hz)	62
	LWa (50Hz)	92

CONTROL PANELS

DESCRIPTION OF STANDARD CONTROL PANEL



The NEXYS is a versatile control unit allowing operation in manual or automatic mode. Equipped with an LCD screen, the user-friendly NEXYS offers high-quality basic functions to guarantee simple, reliable operation of your generating set.

Offers the following functions:

Standard electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, engine speed, battery voltage, fuel level.

DESCRIPTION OF CONTROL PANEL AS OPTION



The highly versatile TELYS control unit is complex yet accessible, thanks to the particular attention paid to optimising its ergonomics and ease of use. With its large display screen, buttons and scroll wheel, it places the accent on simplicity and communication.

The TELYS offers the following functions:

Electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, oil pressure,