

# J120U

Engine JOHN DEERE , 6068TF220  
Alternator LEROY SOMER , LSA442S7

## 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
480/277	117 / 146	106 / 133	176	Length: 2370mm [93in] Width: 1114mm [44in] Height: 1480mm [58in]	1570kg [3461 lbs] Net 1910kg [4211 lbs] Gross
440/254	117 / 146	106 / 133	192		
380/220	117 / 146	106 / 133	222		
230/115	117 / 146	106 / 133	367		
220/127	117 / 146	106 / 133	383		
208/120	115 / 144	105 / 131	400		
600/347	117 / 146	106 / 133	140		



## 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, 2300 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
 M226	80	68.9	Length: 3508mm [138in] Width: 1200mm [47in] Height: 1830mm [72in]	2160kg [4762lbs] Net 2500kg [5512lbs] Gross	340 L
 M226-DW	80	68.9	Length: 3560mm [140in] Width: 1200mm [47in] Height: 2182mm [86in]	2560kg [5644lbs] Net 3443kg [7591lbs] Gross	868 L





## ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	JOHN DEERE 6068TF220 , 4-strokes, Turbo , [N/A] 6 X
	Cylinder Arrangement	L
	Displacement	6.72L [410.1C.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	127kW [170BHP]
	Frequency regulation, steady state	+/- 2.5%
	BMEP	12.6bar [183psi]
Governor : type	MECA	
EXHAUST SYSTEM	Exhaust temperature	540°C [1004°F]
	Exhaust gas flow	[N/A]
	Max back pressure	750mm CE [30in. WG]
FUEL SYSTEM	110% (Stand By power )	34.5L/h [9.1gal/hr]
	100% (of the Prime Power)	32L/h [8.5gal/hr]
	75% (of the Prime Power)	24L/h [6.3gal/hr]
	50% (of the Prime Power)	16L/h [4.2gal/hr]
	Max. fuel pump flow	112L/h [29.6gal/hr]
OIL SYSTEM	Total oil capacity w/filters	21.5L [5.7gal]
	Oil Pressure low idle	1bar [14.5psi]
	Oil Pressure rated RPM	5bar [72.5psi]
	Oil consumption 100% load	0.032L/h [0.008gal/hr]
	Oil capacity carter	20.6L [5.4gal]
THERMAL BALANCE	Heat rejection to exhaust	110kW [6255Btu/mn]
	Radiated heat to ambient	16kW [910Btu/mn]
	Heat rejection to coolant	68kW [3866Btu/mn]
AIR INTAKE	Max. intake restriction	625mm CE [25in. WG]
	Engine air flow	179L/s [379cfm]
COOLANT SYSTEM	Radiator & engine capacity	27.3L [7.2gal]
	Max water temperature	105°C [221°F]
	Outlet water temperature	93°C [199°F]
	Fan power	5 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	LSA442S7
	Number of phase	3
	Power factor (Cos Phi)	0.8
	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	155 kVA
	Standby rating @ 27°C	170 kVA
	Efficiencies @ 4/4 load	91.8 %
	Air flow	0.44m <sup>3</sup> /s [932.30cfm]
	Short circuit ratio;50 (Kcc)	0.33
	Direct axis synchro reactance unsaturated (Xd)	363 %
	Quadra axis synchro reactance unsaturated (Xq)	218 %
	Open circuit time constant;50 (T'do)	2734 ms
	Direct axis transient reactance saturated (X'd)	13.2 %
	Short circuit transient time constant (T'd)	100 ms
	Direct axis subtransient reactance saturated (X''d)	7.9 %
	Subtransient time constant (T''d)	10 ms
	Quadra axis subtransient reactance saturated (X''q)	9.6 %
	Zero sequence reactance unsaturated (Xo)	0.7 %
	Negative sequence reactance saturated (X2)	8.8 %
	Armature time constant (Ta)	15 ms
	No load excitation current (io)	0.5 A
	Full load excitation current (ic)	1.9 A
	Full load excitation voltage (uc)	36 V
	Recovery time (Delta U = 20% transitoire)	500 ms
	Motor start (Delta = 20% perm. Or 50% trans.)	300.7 kVA
	Transient dip (4/4 charge) – PF : 1.8 AR	16.6 %
	No load losses	2.96 kW
Heat rejection	10.68 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

