

# J280UC3

Tiers 3

Engine JOHN DEERE , 6090HF485-315  
Alternator LEROY SOMER , LSA462L9

## STANDARD FEATURES

- Electronic 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	280 / 350	255 / 318	421	Length: 2900mm [114in] Width: 1300mm [51in] Height: 1720mm [68in]	2340kg [5159 lbs] Net 2750kg [6063 lbs] Gross
440/254	280 / 350	255 / 318	459		
380/220	280 / 350	255 / 318	532		
240/120	280 / 350	255 / 318	842		
230/115	280 / 350	255 / 318	879		
220/127	280 / 350	255 / 318	919		
208/120	280 / 350	255 / 318	972		
600/347	280 / 350	255 / 318	337		



## 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, 1500 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
 M227	83.5	73.5	Length: 4004mm [158in] Width: 1380mm [54in] Height: 2145mm [84in]	3290kg [7253lbs] Net 3700kg [8157lbs] Gross	390 L
 M227-DW	83.5	73.5	Length: 4056mm [160in] Width: 1380mm [54in] Height: 2340mm [92in]	3755kg [8278lbs] Net 4725kg [10417lbs] Gross	950 L





## ENGINE SPECIFICATIONS

STANDARD FEATURES	Manufacturer / Model	JOHN DEERE 6090HF485-315 , 4-strokes, Turbo , Air/Water SC 6 X
	Cylinder Arrangement	L
	Displacement	9L [549.2C.I.]
	Bore and Stroke	118.4mm [4.7in.] X 136mm [5.4in.]
	Compression ratio	16 : 1
	Rated RPM	1800 Rpm
	Piston Speed	8.16m/s [26.8ft./s]
	Max. stand by Power at rated RPM	315.00kW [422BHP]
	Frequency regulation, steady state	+/- 0.5%
	BMEP	23.33bar [338psi]
	Governor : type	ELEC
EXHAUST SYSTEM	Exhaust temperature	472°C [882°F]
	Exhaust gas flow	916.67L/s [1943cfm]
	Max back pressure	1000mm CE [39in. WG]
FUEL SYSTEM	110% (Stand By power )	76.82L/h [20.3gal/hr]
	100% (of the Prime Power)	67.88L/h [17.9gal/hr]
	75% (of the Prime Power)	51.29L/h [13.6gal/hr]
	50% (of the Prime Power)	35.06L/h [9.3gal/hr]
	Max. fuel pump flow	240.00L/h [63.4gal/hr]
OIL SYSTEM	Total oil capacity w/filters	35L [9.2gal]
	Oil Pressure low idle	1.9bar [27.5psi]
	Oil Pressure rated RPM	2.6bar [37.7psi]
	Oil consumption 100% load	0.17L/h [0.045gal/hr]
	Oil capacity carter	34L [9.0gal]
THERMAL BALANCE	Heat rejection to exhaust	238.17kW [13542Btu/mn]
	Radiated heat to ambient	38.41kW [2184Btu/mn]
	Heat rejection to coolant	N/A
AIR INTAKE	Max. intake restriction	375mm CE [15in. WG]
	Engine air flow	378.33L/s [802cfm]
COOLANT SYSTEM	Radiator & engine capacity	40L [10.6gal]
	Max water temperature	110.00°C [230°F]
	Outlet water temperature	93°C [199°F]
	Fan power	17.33 kW
	Fan air flow w/o restriction	7m <sup>3</sup> /s [14834cfm]
	Available restriction on air flow	20mm CE [0.8in. WG]
	Type of coolant	Gencool
	Thermostat	82-94 °C
EMISSIONS LEVEL	PM	0.08 gr/bhp/h
	CO	0.38 gr/bhp/h
	HC/Nox	2.78 gr/bhp/h

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## ALTERNATOR SPECIFICATIONS

GENERAL  DATAS	Manufacturer	LEROY SOMER
	Type	LSA462L9
	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)	< 4%
	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	+/- 1%
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	343 kVA
	Standby rating @ 27°C	375 kVA
	Efficiencies @ 4/4 load	93.2 %
	Air flow	0.51m3/s [1080.62cfm]
	Short circuit ratio;50 (Kcc)	0.49
	Direct axis synchro reactance unsaturated (Xd)	290 %
	Quadra axis synchro reactance unsaturated (Xq)	174 %
	Open circuit time constant;50 (T'do)	2180 ms
	Direct axis transient reactance saturated (X'd)	13.3 %
	Short circuit transient time constant (T'd)	105 ms
	Direct axis subtransient reactance saturated (X''d)	8 %
	Subtransient time constant (T''d)	10 ms
	Quadra axis subtransient reactance saturated (X''q)	9.9 %
	Zero sequence reactance unsaturated (Xo)	0.4 %
	Negative sequence reactance saturated (X2)	8.9 %
	Armature time constant (Ta)	16 ms
	No load excitation current (io)	1.1 A
	Full load excitation current (ic)	3.8 A
	Full load excitation voltage (uc)	34 V
	Recovery time (Delta U = 20% transitoire)	< 500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	840 kVA	
Transient dip (4/4 charge) – PF : 1.8 AR	14.5 %	
No load losses	6.6 kW	
Heat rejection	19 kW	



## 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

