



JOHN DEERE

4045DF158

PowerTECH

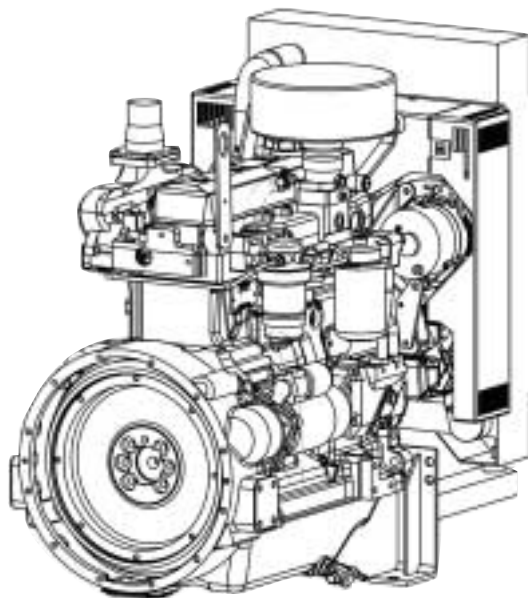
SPECIFICATIONS

For Gen Set Applications

TA LUFT approved @ 1500 rpm

EPA - CARB Tier 1 Certified @ 1800 rpm

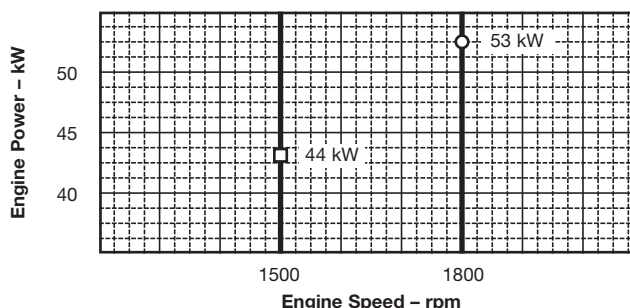
Power Units



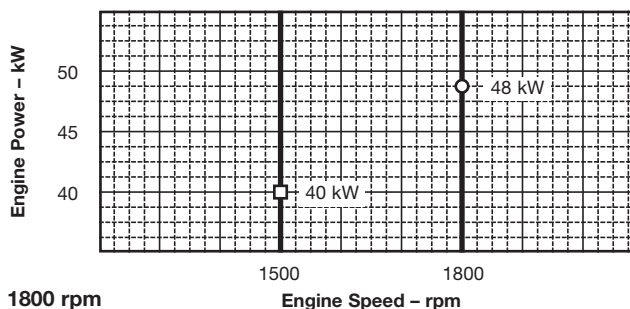
PERFORMANCE DATA

Speed (Hz)	Generator Efficiency %	Fan Power kW	Power Factor	Calculated Gen Set rating					
				Prime			Standby		
				kW net	kVA	kWe	kW net	kVA	kWe
1500 (50)	88-92	1.5	0.8	38.5	42-45	34-36	42.5	46-49	37-39
1800 (60)	88-92	2	0.8	46	50-54	40-42	51	56-59	45-47

STANDBY POWER



PRIME POWER



Performance Data

	1500 rpm	1800 rpm
Gross Rated Power (without fan)		
Prime = PRP - kW (hp)	40 (54)	48 (64)
Standby = LTP - kW (hp)	44 (59)	53 (71)
Rated Speed - rpm	1500	1800
Low Idle Speed - rpm	No	No
BMEP		
Prime = PRP - kPa (psi)	711 (103)	711 (103)
Standby = LTP - kPa (psi)	782 (113)	785 (114)
Friction Power @ Rated Speed - kW (hp)	10 (13)	13 (17)
Altitude Capability - m (ft)		
Prime	900 (3000)	1525 (5000)
Standby	300 (1000)	1525 (5000)
Air: Fuel Ratio		
Prime = PRP	18.6 : 1	19.5 : 1
Standby = LTP	18.3 : 1	19.1 : 1
Noise		
Prime = PRP - dB(A) @ 1 m	91.5	94.0
Standby = LTP - dB(A) @ 1 m	91.5	94.0

STANDBY POWER is the nominal engine power available at varying load factors for up to 500 hours per year. This rating conforms to ISO 8528-1 "limited time running power (LTP)". The calculated generator set rating range for standby applications is based on minimum engine power (nominal -5%) to provide 100% meet-or-exceed performance for assembled standby generator sets.

PRIME POWER is the nominal power an engine is capable of delivering with a variable load for an unlimited number of hours per year. This rating conforms to ISO 8528-1 "prime power (PRP)".

Fuel Consumption - l/h

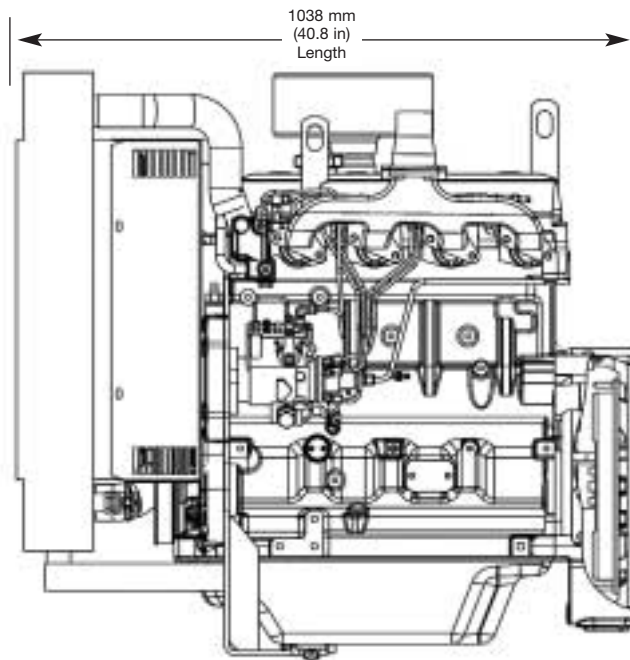
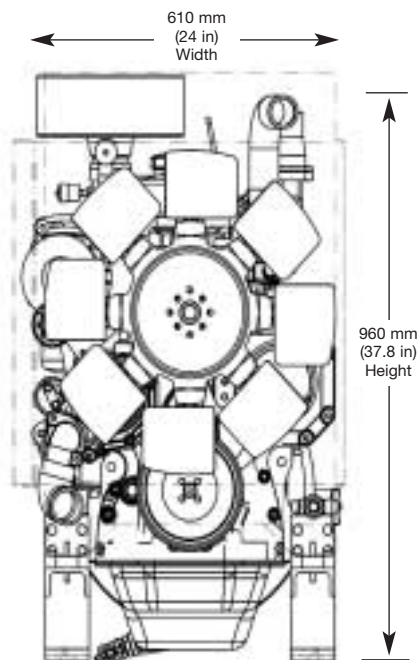
	1500 rpm		1800 rpm	
	Prime = PRP	Standby = LTP	Prime = PRP	Standby = LTP
25% Power	3.5	3.5	4.5	4.5
50% Power	5.5	6.0	7.0	7.5
75% Power	8.0	8.5	10.0	10.5
100% Power	10.5	11.5	12.5	13.5

Photographs may show non standard equipment.

Rated power guaranteed within + or -5% at SAE J1995 and ISO 3046.



Power Units Specification Data



General Data

Model	4045DF158
Number of cylinders	4
Bore and Stroke – mm (in.)	106 x 127 (4.19 x 5.00)
Displacement – dm ³ (in ³)	4.5 (276)
Compression Ratio	17.6 : 1
Valves per Cylinder – Intake/Exhaust	1 / 1
Firing Order	1-3-4-2
Combustion System	Direct Injection
Engine type	In-line, 4-cycle
Aspiration	Natural
Charge Air Cooling System	Natural
Engine Crankcase Vent System	Open
Engine Crankcase Pressure – kPa (in.H ₂ O)	0.5 (2)

Physical Data

Length – mm (in.)	1038 (40.8)
Width – mm (in.)	610 (24)
Height – mm (in.)	960 (37.8)
Weight, dry – kg (lb)	493 (1087)
(Includes flywheel housing, flywheel, & electrics)	
Center of gravity location	
From Rear Face of block (X-axis) – mm (in.)	270 (10.8)
Right of Crankshaft (Y-axis) – mm (in.)	-7 (-0.2)
Above Crankshaft (Z-axis) – mm (in.)	82 (3.2)

Electrical Data

Recommended Battery Capacity (CCA)	
12 Volt System – Amp	640
24 Volt System – Amp	570
Maximum Allowable Starting Circuit Resistance	
12 Volt System – Ohm	0.0012
24 Volt System – Ohm	0.002
Starter Rolling Current-12 Volt System	
At 0°C (32°F) – Amp	780
At -30°C (-22°F) – Amp	1000
Starter Rolling Current – 24 Volt System	
At 0°C (32°F) – Amp	600
At -30°C (-22°F) – Amp	700

Air System

	1500 rpm	1800 rpm
Maximum Allowable Temperature Rise		
Ambient Air to Engine Inlet – °C (°F)	8 (15)	8 (15)
Maximum Air Intake Restriction		
Dirty Air Cleaner – kPa (in. H ₂ O)	6.25 (25)	6.25 (25)
Clean Air Cleaner – kPa (in. H ₂ O)	3 (12)	3 (12)
Engine Air Flow		
Prime = PRP – m ³ /min (ft ³ /min)	2.4 (85)	3.0 (107)
Standby = LTP – m ³ /min (ft ³ /min)	2.6 (93)	3.3 (117)
Recommended Intake Pipe Dia – mm (in.)	76.2 (3)	76.2 (3)

Exhaust System

	1500 rpm	1800 rpm
Exhaust Flow		
Prime = PRP – m ³ /min (ft ³ /min)	7.1 (251)	9.0 (318)
Standby = LTP – m ³ /min (ft ³ /min)	7.3 (258)	9.0 (318)
Exhaust Temperature		
Prime = PRP – °C (°F)	537 (999)	571 (1060)
Standby = LTP – °C (°F)	565 (1049)	595 (1103)
Max. Allow. Back Pressure – kPa (in.H ₂ O)	7.5 (30)	7.5 (30)
Recommended Exhaust Pipe Dia – mm (in.)	63.5 (2.5)	63.5 (2.5)

Cooling System

	1500 rpm	1800 rpm
Thermostat Start to open – °C (°F)	82 (180)	82 (180)
Power unit coolant capacity – L (qt)	17.5 (18.5)	17.5 (18.5)
Minimum Air to Boil temperature – °C (°F)	47 (117)	47 (117)

Fuel System

	1500 rpm	1800 rpm
Fuel Injection Pump	Stanadyne	Stanadyne
Governor Regulation	5%	5%
Governor Type	Mechanical	Mechanical
Total Fuel Flow		
Prime = PRP – kg/h (lb/h)	93 (205)	96 (212)
Standby = LTP – kg/h (lb/h)	93 (205)	96 (212)
Maximum Fuel Transfer Pump Suction – m (ft)	0.9 (3)	0.9 (3)
Fuel Filter Micron Size @ 98% Efficiency	8	8

Lubrication System

	1500 rpm	1800 rpm
Oil Pressure at Rated Speed – kPa (psi)	345 (50)	345 (50)
Oil Pressure at Low Idle – kPa (psi)	105 (15)	105 (15)
In Pan Oil Temperature – °C (°F)	115 (240)	115 (240)
Total Engine Oil Capacity with filter – L (qt)	8.5 (9)	8.5 (9)
Engine Angularity Limits (continuous)		
Any Direction – degrees	20	20

Specifications and design subject to change without notice.



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