



**JOHN DEERE**

# 4045TF158

**POWER TECH**

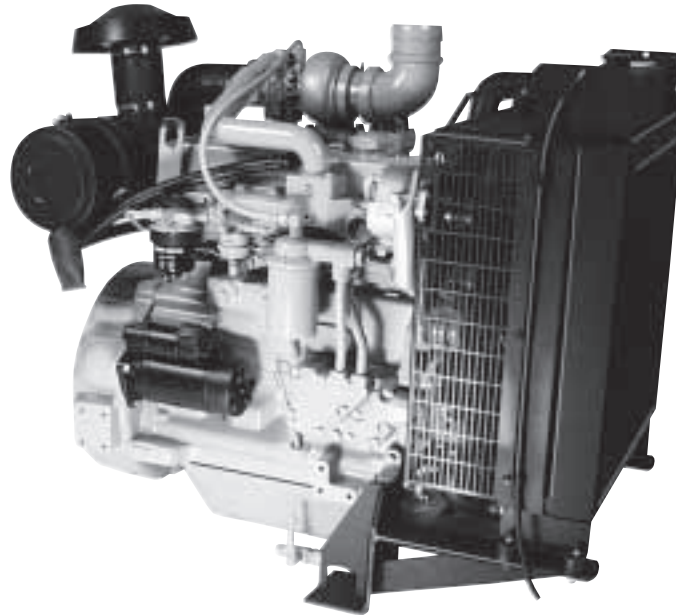
SPECIFICATIONS

For Gen Set Applications

TA LUFT approved @ 1500 rpm

EPA - CARB Tier 1 Certified @ 1800 rpm

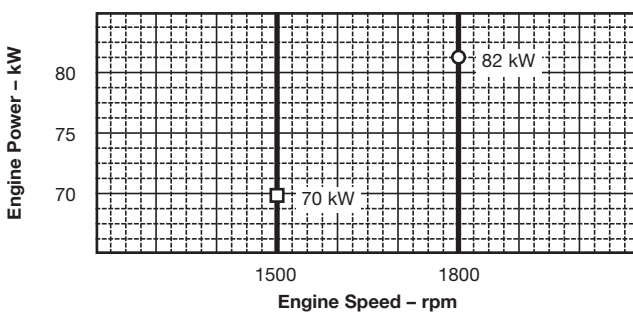
Power Units



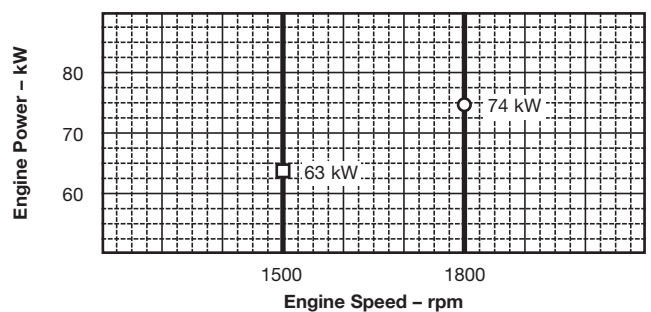
## PERFORMANCE DATA

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	2.5	0.8	60.5	66-70	53-56	67.5	74-78	59-62
1800 (60)	88-92	3	0.8	71	79-83	63-66	79	87-91	69-73

## STANDBY POWER



## PRIME POWER



### Performance Data

	1500 rpm	1800 rpm
Gross Rated Power (without fan)		
Prime = PRP - kW (hp)	63 (84)	74 (100)
Standby = LTP - kW (hp)	70 (94)	82 (110)
Rated Speed - rpm	1500	1800
Low Idle Speed - rpm	No	No
BMEP		
Prime = PRP - kPa (psi)	1120 (162)	1103 (160)
Standby = LTP - kPa (psi)	1244 (180)	1215 (176)
Friction Power @ Rated Speed - kW (hp)	10 (13)	13 (17)
Altitude Capability		
Prime - m (ft)	3500 (11500)	3800 (12500)
Standby - m (ft)	2700 (9000)	3000 (10000)
Air: Fuel Ratio		
Prime = PRP	21.7 : 1	25.3 : 1
Standby = LTP	20.4 : 1	23.8 : 1
Noise		
Prime = PRP - dB(A) @ 1 m	92.3	92.5
Standby = LTP - dB(A) @ 1 m	93.1	93.3

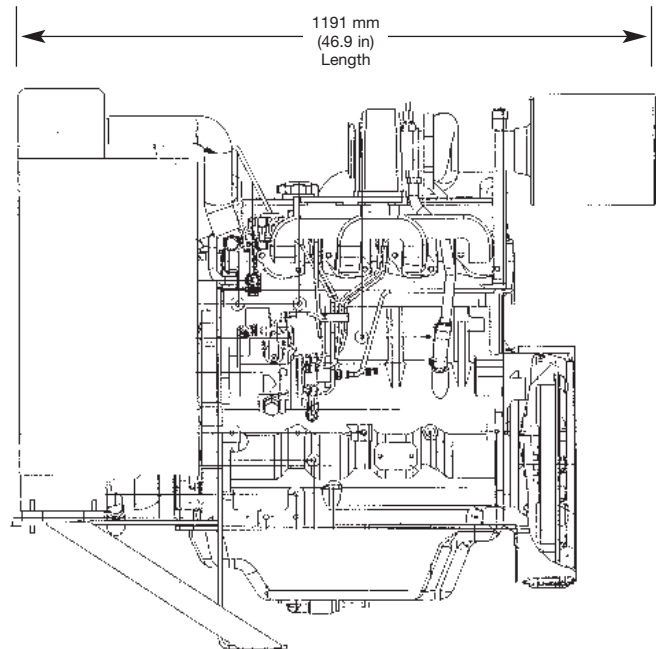
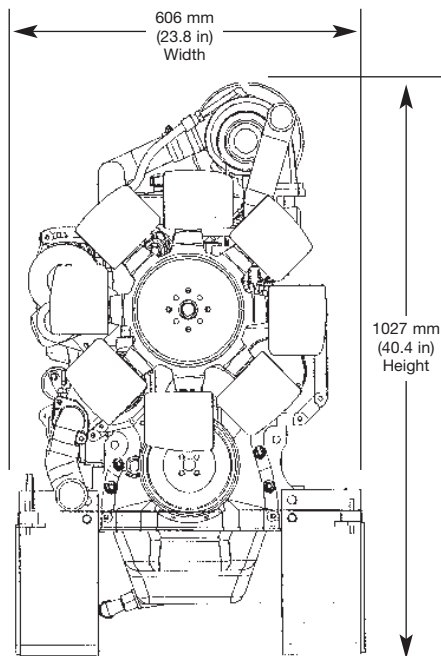
**STANDBY POWER** is the nominal engine power available at varying load factors for up to 500 hours per year. This rating conforms to ISO 8528-1 "limited time running power (LTP)". The calculated generator set rating range for standby applications is based on minimum engine power (nominal -5%) to provide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

Photographs may show non standard equipment.



# Power Unit Specification Data



Fuel Consumption – l/h	1500 rpm		1800 rpm	
	Prime = PRP	Standby = LTP	Prime = PRP	Standby = LTP
25% Power	5.0	5.5	6.5	7.0
50% Power	8.5	9.0	10.0	11.5
75% Power	12.0	13.5	14.5	16.0
100% Power	16.0	18.0	19.0	20.5

## General Data

Model	4045TF158
Number of cylinders	4
Bore and Stroke – mm (in.)	106 x 127 (4.19 x 5.00)
Displacement – dm <sup>3</sup> (in <sup>3</sup> )	4.5 (276)
Compression Ratio	17.0 : 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	Turbocharged
Engine Crankcase Vent System	Open
Engine Crankcase Pressure – kPa (in.H <sub>2</sub> O)	0.5 (2)

## Physical Data

Length – mm (in.)	1191 (46.9)
Width – mm (in.)	606 (23.8)
Height – mm (in.)	1027 (40.4)
Weight, dry – kg (lb)	505 (1114)
(Includes flywheel housing, flywheel, & electrics)	
Center of gravity location	
From Rear Face of block (X-axis) – mm (in.)	263 (10.3)
Right of Crankshaft (Y-axis) – mm (in.)	-10 (-0.4)
Above Crankshaft (Z-axis) – mm (in.)	145 (5.6)

## 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

Specifications and design subject to change without notice.

## 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 <sub>2</sub> O)	6.25 (25)	6.25 (25)
Clean Air Cleaner – kPa (in. H <sub>2</sub> O)	3 (12)	3 (12)
Engine Air Flow		
Prime = PRP – m <sup>3</sup> /min (ft <sup>3</sup> /min)	4.4 (155)	5.8 (205)
Standby = LTP – m <sup>3</sup> /min (ft <sup>3</sup> /min)	4.6 (162)	6.0 (212)

## Exhaust System

	1500 rpm	1800 rpm
Exhaust Flow		
Prime = PRP – m <sup>3</sup> /min (ft <sup>3</sup> /min)	11.3 (399)	14.5 (512)
Standby = LTP – m <sup>3</sup> /min (ft <sup>3</sup> /min)	12.2 (431)	15.5 (547)
Exhaust Temperature		
Prime = PRP – °C (°F)	515 (959)	501 (934)
Standby = LTP – °C (°F)	538 (1000)	527 (981)
Max. Allow. Back Pressure – kPa (in.H <sub>2</sub> O)	7.5 (30)	7.5 (30)
Recommended Exhaust Pipe Dia – mm (in.)	101.6 (4)	101.6 (4)

## 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)	12 (12.7)	12 (12.7)
Engine Angularity Limits (continuous)		
Any Direction – degrees	20	20