MARINE POWER

JOHN DEERE MARINE ENGINE RATINGS

MODEL	COOLING	RATING (HP / KW / RPM)				
		M1	M2	M3	M4	M5
4045D	H/X	75/56/2400	85/63/2500	N/A	N/A	N/A
	KEEL	75/56/2400	85/63/2500	N/A	N/A	N/A
6068D	H/X	113/84/2500	125/93/2500	N/A	N/A	N/A
	KEEL	113/84/2500	125/93/2500	N/A	N/A	N/A
4045T	H/X	105/78/2300	120/90/2400	135/101/2500	150/112/2600	N/A
	KEEL	105/78/2300	120/90/2400	135/101/2500	150/112/2600	N/A
6068T	H/X	154/115/2300	175/131/2400	200/149/2500	225/168/2600	N/A
	KEEL	154/115/2300	175/131/2400	200/149/2500	225/168/2600	N/A
6068SFM50	H/X	N/A	N/A	234/175/2400	265/198/2500	300/224/2600
	KEEL	N/A	N/A	N/A	N/A	N/A
6068SFM75	H/X	249/186/2400	280/209/2500	321/239/2600	355/265/2700	400/298/2800
	KEEL	N/A	N/A	N/A	N/A	N/A
6081A	H/X	235/175/2100	300/224/2200	330/246/2300	375/280/2400	N/A
	KEEL	235/175/2100	300/224/2200	330/246/2300	375/280/2400	N/A
6125A	H/X	341/254/1800	389/290/1900	455/339/2000	525/392/2100	N/A
	KEEL	341/254/1800	389/290/1900	455/339/2000	525/392/2100	N/A
6125S	H/X	380/283/1800	449/335/1900	526/392/2000	610/455/2100	N/A
	KEEL	N/A	N/A	N/A	N/A	N/A

MARINE ENGINE RATINGS DEFINITIONS

M1: For propulsion applications that may operate up to 24 hours a day at uninterrupted full power. These applications typically operate over 3,000 hours / year.

M2: For propulsion applications that may utilize full power up to 16 out of each 24 hours of operation. These applications typically operate at full power up to 65% of the time and accumulate as many as 3,000 hours / year

M3: For propulsion applications that may utilize full power up to 4 out of each 12 hours of operation. These applications typically operate at full power up to 35% of the time and accumulate as many as 2,000 hours / year

M4: For propulsion applications that may utilize full power up to 1 out of each 12 hours of operation. These applications typically operate at full power up to 15% of the time and accumulate as many as 800 hours / year

M5: For propulsion applications that may utilize full power up to 30 min. out of each 6 hours of operation. These applications typically operate at full power up to 8% of the time and accumulate as many as 300 hours / year

OTHER ENGINE OUTPUTS ARE AVAILABLE ON REQUEST

Specifications subject to change without notice

JOHN DEERE

MARINE POWER

ENGINE MODEL IDENTIFICATION

ENGINE MODEL	NO. OF CYLINDERS	CUBIC CAPACITY	ENGINE ASPIRATION	FUEL SYSTEM
4045D	4	4.5 Litres	Nat. Aspirated	Mechanical
6068D	6	6.8 Litres	Nat. Aspirated	Mechanical
4045T	4	4.5 Litres	Turbocharged	Mechanical
6068T	6	6.8 Litres	Turbocharged	Mechanical
6068SFM50	6	6.8 Litres	T/C + SWAC	ECU
6068SFM75	6	6.8 Litres	T/C + SWAC	ECU + HPCR
6081A	6	8.1 Litres	T/C + JWAC	ECU + HPCR
6125A	6	12.5 Litres	T/C + JWAC	ECU + EUI
6125S	6	12.5 Litres	T/C + SWAC	ECU + EUI

Nat. Aspirated = naturally aspirated (non turbo)
T/C = turbocharged
SWAC = sea water aftercooled
JWAC = engine water jacket aftercooled
ECU = Electronic control unit
HPCR = High pressure common rail
EUI = Electronic unit injector

FEATURES AND BENEFITS

- Long stroke, low speed, quiet & smooth engine
- Peak torque developed at low rpm, giving excellent fuel economy
- Watercooled exhaust manifold & turbocharged (if fitted)
- High capacity heat exchanger
- Replaceable wet sleeve liner engine
- Simple uncluttered engine design

STANDARD ENGINE SPECIFICATION

The following engine models are normally stocked in Australia:

4045D H/X cooled 12 & 24v
6068D H/X cooled **12v only available for this engine option**
4045T H/X cooled 12 & 24v
6068T H/X cooled 12 & 24v
6068SFM50 H/X cooled 12v
6068SFM75 H/X cooled 12v
6081A H/X cooled 12v & 24v
6125A H/X cooled 24v
6125S H/X cooled 24v

The 6068SFM50, 6068SFM75, 6081A, 6125A & 6125S engines feature an electronically controlled fuel system

All engine packages are supplied with the following:

- Single stage air cleaner
- 12 / 24 volt electrical system
- Energised to stop fuel solenoid – 4045D, 4045T & 6068T
- Energised to stop run solenoid - 6068SFM50, 6068SFM75, 6081A, 6125A & 6125S
- Water injected exhaust elbow (heat exchanger cooled builds only)
- Gear driven seawater pump (heat exchanger cooled builds only)
- Dry exhaust elbow (standard on keel cooled builds)
- Engine wiring harness
- Extension harness
- Instrument panel – supplied loose, fitted with:
  - Tachometer
  - Hourmeter
  - Oil pressure gauge
  - Engine temperature gauge
  - Engine voltmeter
  - Low oil pressure audible alarm
  - High engine temperature audible alarm
  - Low battery volts audible alarm
  - Load factor & Diagnostics module (6068SFM50, 6068SFM75, 6081A & 6125A & 6125S)
- Front engine mounting feet – supplied loose (not supplied with 6125A or 6125S)
- SAE Flywheel housing
  - 4045D/T & 6068T/S – SAE 3
  - 6081A – SAE 2
  - 6125A – SAE 1
- SAE Flywheel face
  - 4045D / T & 6068T/S – SAE 11.5
  - 6081A – SAE 11.5
  - 6125A – SAE 14
- Sump Pump
- Operators Handbook

OTHER ENGINE SPECIFICATIONS ARE AVAILABLE ON REQUEST

Specifications subject to change without notice

4045D MARINE ENGINE

HEAT EXCHANGER SIDE

SERVICE SIDE

6068D MARINE ENGINE

HEAT EXCHANGER / FLYWHEEL END

SERVICE SIDE / FLYWHEEL END

4045T MARINE ENGINE

HEAT EXCHANGER / TURBO SIDE

SERVICE SIDE

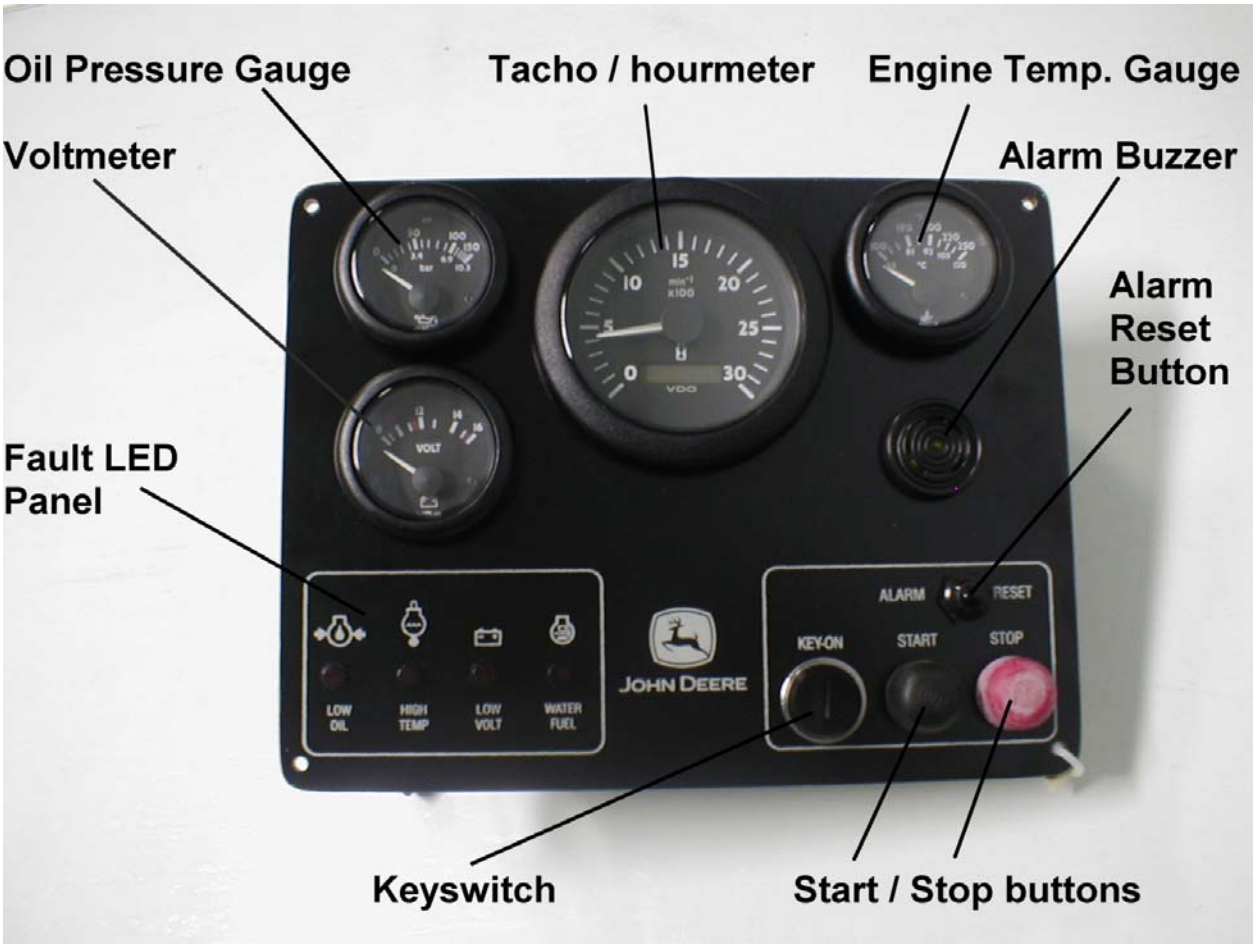
Specifications subject to change without notice

6068T MARINE ENGINE

HEAT EXCHANGER / TURBO SIDE

SERVICE SIDE

4045D, 4045T, 6068D & 6068T ENGINE INSTRUMENT PANEL



Specifications subject to change without notice

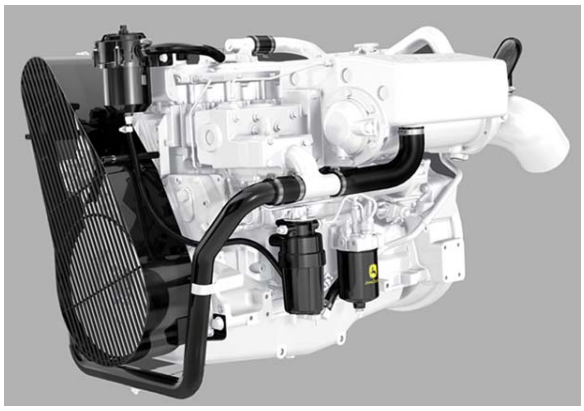
6068SFM50 MARINE ENGINE

HEAT EXCHANGER / TURBO SIDE

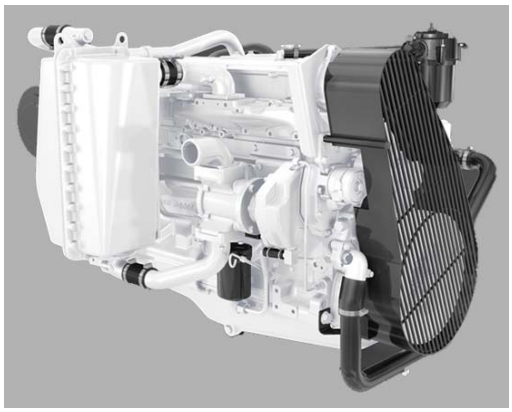
AFTERCOOLER SIDE

6068SFM75 MARINE ENGINE

HEAT EXCHANGER / TURBO SIDE



AFTERCOOLER SIDE



6081A MARINE ENGINE

AFTERCOOLER / OIL COOLER SIDE

SERVICE SIDE

Specifications subject to change without notice

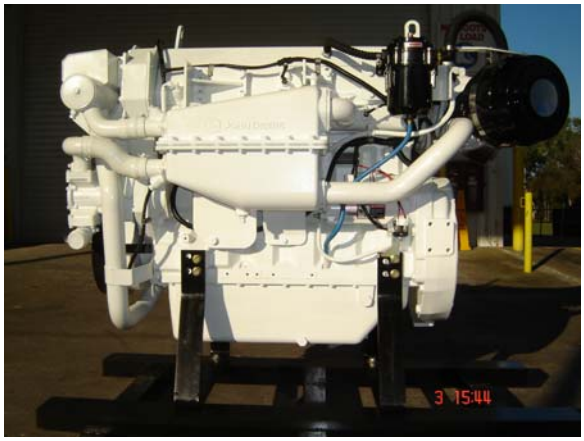
6125A MARINE ENGINE

INLET MANIFOLD SIDE

SERVICE SIDE

6125S MARINE ENGINE

INLET MANIFOLD SIDE



SERVICE SIDE

6068S, 6081A, 6125A & 6125S ENGINE INSTRUMENT PANEL

Specifications subject to change without notice

OPTIONAL ACCESSORIES

CLOSED CRANKCASE BREATHER

ANTI VIBRATION MOUNTS

AUXILIARY DRIVE PULLEY

DRY EXHAUST ELBOW

HELMVIEW PANEL UPGRADE

TRANSMISSION PACKAGE

OTHER ENGINE ACCESSORIES ARE AVAILABLE ON REQUEST

Specifications subject to change without notice

When reviewing engine choices for a vessel, many people naturally are quick to focus on horsepower ratings. While horsepower is definitely important, it is not a complete representation of the amount of power your vessel will deliver in the water. You should also be aware of the amount of torque each engine offers, along with the horsepower at various rpms.

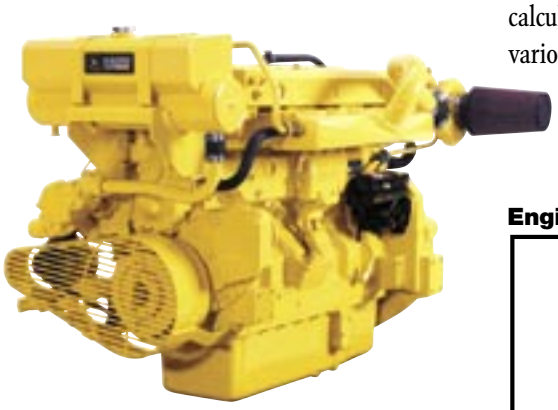
Understanding Power Curves

On a traditional power curve chart, there is a line representing the engine crankshaft power, which the operator perceives as throttle response. However, on a marine engine power curve chart, there is an additional line representing propeller power. The propeller curve illustrates how much calculated power the propeller demands at various rpm ratings – or "power in the water." The difference between the two power curves is referred to as reserve power.

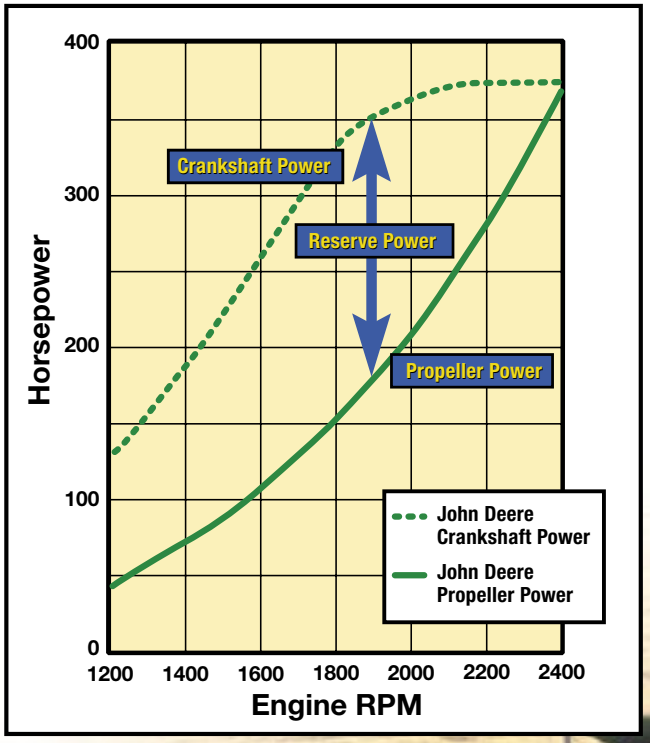
For those vessel owners who aren't engine experts, picture this: you're sitting in your car at a red light. At this point, your car is at idle. When the light turns green, you press on the accelerator to give your car the gas and you expect your car to accelerate. As you begin to accelerate, the engine delivers as much horsepower as needed to overcome the resistance.

On your vessel, the power curve line representing engine crankshaft power would move upward from left to right. As you throttle forward, the engine is delivering horsepower to overcome the resistance of the water and load. Once the vessel achieves momentum, the amount of power demanded from the engine decreases. The power that is needed is then represented by the propeller curve. John Deere engines typically have more reserve power so your vessel can accelerate quickly. You will achieve your desired cruising speed faster and at a lower rpm.

More Power in the Water



Engine Acceleration Capabilities



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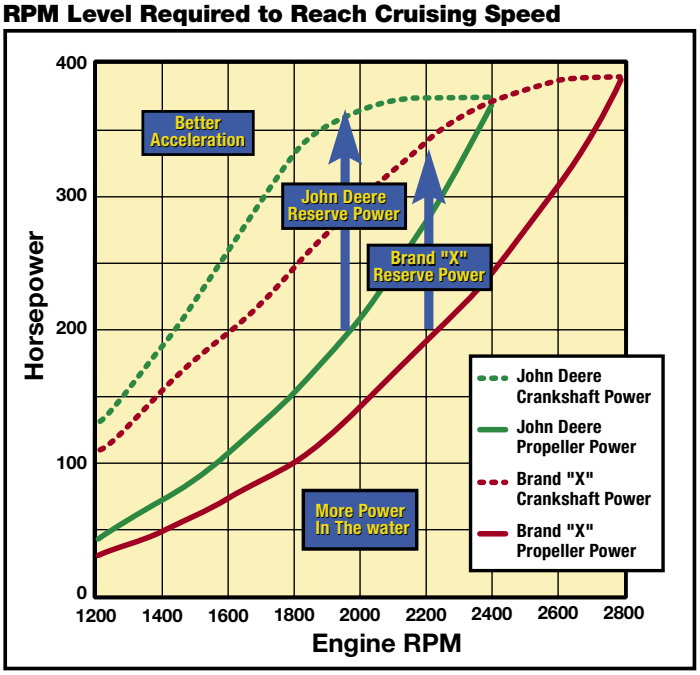
As you examine the chart, you will notice the John Deere marine engine produces more crankshaft horsepower and more propeller horsepower than the brand "X" engine. At any given engine speed, the John Deere engine produces more "power in the water." For any given propeller horsepower demanded by the hull, the John Deere engine will produce the same horsepower as the brand "X" engine, but at a ***significantly*** lower engine speed.

John Deere 6081AFM vs Brand "X"

RPM Level Required to Reach Cruising Speed



The John Deere engine develops its power more quickly and is able to cruise faster at a lower rpm than the brand "X" engine.

Whenever a vessel experiences increased resistance, whether it be a head current, increased passenger or cargo load, the reserve power is what allows the vessel to maintain its speed. John Deere marine engines have a higher torque rating than most competitive models, and therefore offer more reserve power. So how does that benefit you? It gives your vessel the ability to maintain speed regardless of load. Competitive engines with lower torque ratings have less reserve power to utilize during times of increased resistance, and tend to lose speed. Bottomline – the reserve power John Deere marine engines offer gives you more power in the water.

The John Deere marine engine delivers more crankshaft power along the rpm band as compared to the brand "X" engine. This translates into quicker acceleration, an ability that can be attributed to the higher torque rating of John Deere marine engines. Eventually, the brand "X" engine will reach the same speed; it will just take more time, fuel and engine wear to achieve it.

The brand "X" engine may have more horsepower, but it develops that level of horsepower later and at a much higher rpm. When operating your vessel, you typically accelerate to the point at which you reach your desired cruising speed, and then you pull the throttle back. When the engines are throttled back, the John Deere engine develops more power in the water and is able to cruise faster at a lower rpm. That ability translates into lower fuel consumption, lower vibration, lower noise and longer engine life.

With John Deere marine engines, you can improve your boating experience with better acceleration, high reserve power and more power in the water – and usually at a lower rpm.

JOHN DEERE

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