

**Format)**

Sea Trial PAR data is used for the evaluation of engine performance, on a Marine vessel, primarily during the commissioning process. This data is not valid for other uses. 3412C  
DI TA JWAC TEST SPEC 2T-9225 EFF S/N 3JK00735  
ADV PWR 1350 BHP (1007.0 BKW) @ 2300 RPM PERF REF DM2566

[Show PAR format](#)


---

<b>Air Systems</b>				
930	Inlet Air Temp @ Air Cleaner	Max		F
907	Inlet Air Restriction (Clean Filter)	Max	14.9	in. WTR
906	Inlet Air Manifold Air Temp	Max	<u>Note 13</u>	F
911	Inlet Manifold Pressure @ Rated	Min	60.4	PSI
911	Inlet Manifold Pressure @ Rated	Max	81.7	PSI
960	Turbo Compressor Outlet Pressure	Max		PSI
960	Turbo Compressor Outlet Pressure	Min		PSI
931	Turbo Compressor Outlet Temp	Max	325.0	F
<b>Jacket Water Systems</b>				
922	JW Inlet Temp (From Cooler)	Max	185	F
921	JW Pressure From Cooling System	Min	<u>Note 1</u>	PSI
933	Jacket Water Temp to Cooling System	Max	210	F
901	JW Outlet Temp (Before Reg)	Max	210	F
918	JW Outlet Press (Before Reg)	Min	<u>Note 1</u>	PSI
902	JW Temp (After Water Pump)	Max	196	F
Delta T	Jacket Water (Out-In)	Max	32	F
Delta T	Jacket Water (Out-In)	Min	14	F
919	JW Pump Outlet Pressure	Max	<u>Note 1</u>	PSI
919	JW Pump Outlet Pressure	Min	<u>Note 1</u>	PSI
920	JW Pump Inlet Pressure	Min	<u>Note 1</u>	PSI
903	Aftercooler Water Inlet Temp	Max	185	F
923	Aftercooler Water Inlet Pressure	Max	<u>Note 1</u>	PSI
923	Aftercooler Water Inlet Pressure	Min	<u>Note 1</u>	PSI
903A	Aftercooler Outlet Water Temp	Max		F
924	Aftercooler Water Outlet Pressure	Max	<u>Note 1</u>	PSI
924	Aftercooler Water Outlet Pressure	Min	<u>Note 1</u>	PSI
905	Raw Water Pump outlet Pressure	Max		PSI
905	Raw Water Pump outlet Pressure	Min		PSI
904	Raw Water Pump Inlet Pressure	Max		PSI
904	Raw Water Pump Inlet Pressure	Min	<u>Note 16</u>	PSI
<b>Engine Lubrication Systems</b>				
913	Oil Temp to Bearings	Max	235	F
914	Oil Pressure Low Idle	Max	87	PSI
914	Oil Pressure Low Idle	Min	19	PSI
914	Oil Pressure Full Load	Max	87	PSI
914	Oil Pressure Full Load	Min	40	PSI
938	Oil Cooler Water Outlet Temp	Max		F

939	Oil Cooler Water Outlet Pressure	Min		PSI
927	Oil Filter inlet Pressure	Min	<a href="#">Note 15</a>	PSI
928	Oil Filter Outlet Pressure	Min	<a href="#">Note 15</a>	PSI

### Engine Fuel Systems

917	Fuel Pressure	Max	58	PSI
917	Fuel Pressure	Min	25	PSI
961	Fuel Pump Inlet Restriction	Max	8.9	IN_HG
935	Fuel Inlet Temp	Max	95	F
935	Fuel Inlet Temp	Min	77	F
962	Fuel Outlet Temp	Max		F
	Fuel Density	Max	36.0	API
	Fuel Density	Min	34.0	API
	Full Load Static Fuel Setting	Nominal	0.630	in
	Full Load Static Fuel Setting		<a href="#">Note 10</a>	0.630
	Static Timing Degrees	Nominal	19.5	Degrees
	Static Timing Degrees Tolerance		<a href="#">Note 10</a>	19.5

### Engine Idle Speeds

910	High Idle	Max	2420	RPM
910	High Idle	Min	2400	RPM
910	Low Idle	Max	710	RPM
910	Low Idle	Min	690	RPM
910	Min Engine Speed During Reversal	Min	<a href="#">Note 7</a>	RPM

### Engine Exhaust System

908	Exhaust Back Pressure	Max	26.9	in. WTR
912	Exhaust Stack Temperature (see note 6)	Max	886.3	F
909	Crankshaft Endplay		<a href="#">Note 11</a>	MM
932	Crankcase Pressure	Max	<a href="#">Note 7</a>	in. WTR
932	Crankcase Pressure	Min	<a href="#">Note 7</a>	in. WTR
	Crankcase Blow by Rate	Max		CU FT/HP.H
	Differential Temp Between Cyl	Max	<a href="#">Note 2</a>	F
	Differential Temp Between Manf. Sect.	Max	<a href="#">Note 2</a>	F

### Heat Rejection

	Total Cooling System (see note 5)	Max	54,140.1	BTU/MIN
	A/C System (see note 5)	Max	9,724.8	BTU/MIN

### Engine Coolant Pump Flow Rate

	Water Ext Resist	L/min	<a href="#">Note 4</a>	FT
--	------------------	-------	------------------------	----

### Auxiliary Water System

	Water Ext Resist	L/min	<a href="#">Note 4</a>	FT
--	------------------	-------	------------------------	----

### Fuel Rate Specifications

ENGINE RATED FUEL RATE :	<b>RPM</b>	<b>Max</b>	<b>GAL/HR</b>	<b>Min</b>	<b>GAL/HR</b>
	2,300		72.8		65.9
	2,250		70.1		63.5
	2,200		67.5		61.1

**Fuel curve data for Sea Trial is unavailable at this time**

### Additional Data

Rated BSFC	Max	0.382	LB/HP.H
Rated BSFC	Min	0.343	LB/HP.H
Torque Check Torque	Nominal	3,043	LB/FT
Torque Check Speed	Nominal	2200	RPM
Torque Check Fuel Rate	Nominal	64.3	GAL/HR

### Marine Gear

915	Marine Gear Oil Temp	Min	<a href="#">Note 3</a>
915	Marine Gear Oil Temp	Max	<a href="#">Note 3</a>
916	Marine Gear Oil Pressure	Min	<a href="#">Note 3</a>
916	Marine Gear Oil Pressure	Max	<a href="#">Note 3</a>
925	Marine Gear Cooler Inlet Water Temp	Max	<a href="#">Note 3</a>
926	Marine Gear Cooler Outlet Water Temp	Max	<a href="#">Note 3</a>

**Note 1** This value is based upon external restriction, which are not known when engine is built. Data to be evaluated during Sea Trial by Certified Marine Analyst.

**Note 2** A temperature differential greater than 50 degree C bank to bank, or port to port within a bank, should be evaluated for possible problems. Only on large engines that have individual exhaust Pyrometers in each cylinder head as an option. Bank to bank is measured just before turbochargers on the larger engines that have the pyrometers installed as an option.

**Note 3** Obtain specifications from gear manufacture before conducting Sea Trial.

**Note 4** Obtain specifications for pump from TMI or manufacture.

**Note 5** Size system to allow for 5% overload factor

**Note 6** Allow for +/- 8% for normal operation. For Bollard pull test, calculate the exhaust temp, based on engine RPM, using zone 4 curve in the Performance data section of TMI with +/- 8% tolerance.

**Note 7** Obtain specification from A & I guide.

**Note 8** Obtain tolerance from engine manual, sisweb, or facture print.

**Note 9** Obtain tolerance from Test Spec in TMI.

**Note 10** Engine is EUI; this setting is controlled by the ECM.

**Note 11** Tolerance is in TMI under Physical data.

**Note 12** Consult TMI for pump curve data to calculate max restriction that will allow system to meet, or exceed, minimum flow requirements.

**Note 13** Unless otherwise specified, use the following maximum inlet manifold air temperatures: SCAC or SWAC w/84.2 deg F water Max IMAT = 125.6 deg F; SCAC w/109.4 deg F water Max IMAT = 150.8 deg F; JWAC @ 210.2 deg F engine outlet Max IMAT = 230 deg F

**Note 14** Unless otherwise specified, 3500 and 3600 engines are designed not to exceed Max IMAT provided that the engine cooling system is configured to meet, or exceed, minimum flow, and the Aftercooler max inlet temperature is not exceeded.

**Note 15** The pressure drop should not exceed 5 PSI across filter and housing at rated speed.

**Note 16** Unless otherwise specified, the pump inlet pressure must exceed 11.16 PSI absolute (-3.48 gage).