

**CRITICAL EQUIPMENT MAINTENANCE SHEET**

Vessel: Ocean Intervention Equipment Description: PORT MAIN ENGINE Make: CATERPILLAR Model: 3516B WITH EUI OPTION Serial Number: 9AN00144 Reference: OPERATION & Maint. Manual	DATE: December 18, 2020 Hours: 20,167 F/O CONSUMPTION: 827,643			
	<b>Maintenance Item:</b>	<b>Interval</b>	<b>Last Done</b>	<b>Next Due</b>
	Air Starter Lubricator Oil Level - Check	Daily	12/18/2020	12/19/2020
	Air Reciever Moisture & Sediment - Drain	Daily	12/18/2020	12/19/2020
Coolant Level - Check	Daily	12/18/2020	12/19/2020	
Air Cleaner Element Indicator - Check	Daily	12/18/2020	12/19/2020	
Engine Oil Filter Differential Pressure - Check	Daily	12/18/2020	12/19/2020	
Engine Oil Level - Check	Daily	12/18/2020	12/19/2020	
Fuel Filter Differential Pressure - Check	Daily	12/18/2020	12/19/2020	
Leaks, Loose Connections, Vibrations - Check	Daily	12/18/2020	12/19/2020	
Instrument Panel - Inspect	Daily	12/18/2020	12/19/2020	
Magnetic Pickups - Clean/Inspect	1000 Hours	19,486	20,486	
Engine Oil Filters & Fuel Filters - Change	1000 Hours	19,486	20,486	
Engine Oil Sample - Obtain	500 Hours	20,047	20,547	
Batteries - Check	1000 Hours	20,167	21,167	
Coolant Additive - Test/Add	1000 Hours	19,690	20,690	
Hoses & Clamps - Inspect/Replace	1000 Hours	20,161	21,161	
Engine - Clean	1000 Hours	20,154	21,154	
Crankcase Filters - Change	4000 Hours	16,682	20,682	
Engine Crankcase Breather - Clean	1000 Hours	19,486	20,486	
Engine Oil - Change	1000 Hours	19,486	20,486	
Engine Protective Devices - Check	1000 Hours	19,486	20,486	
Crankshaft Vibration Damper - Inspect	2000 Hours	19,486	21,486	
Engine Mounts - Check	2000 Hours	20,106	22,106	
Turbocharger - Inspect	2000 Hours	18,727	20,727	
Engine Valve Lash - Inspect/Adjust	4000 Hours	19,580	23,580	
Fuel Injectors - Inspect/Adjust	4000 Hours	19,580	23,580	
Gear Train - Inspect	4000 Hours	12,136	16,136	
CAM Shaft - Inspect	4000 Hours	16,682	20,682	
Inspect CAT Control Box	4000 Hours	17,456	21,456	
Air Filters - Replace	5000 Hours	18,727	23,727	
Air Starter - Inspect	6000 Hours	20,161	26,161	
Water Pump - Inspect	6000 Hours	16,682	22,682	
Cooling Water Temp. Regulator - Inspect/Replace	10000 Hours	16,682	26,682	
Hours Last Engine Top End - Overhaul	7500 Hours	7,106	14,606	
Replace main bearings, all fasteners, rebuild gear train	22500 Hours	0	22,500	
Engine Top End - Overhaul (First)	512,500 Gallons	215,625	728,125	
Engine Top End - Overhaul (Second)	1,025,000 Gallons	0	1,025,000	
Engine Top End - Overhaul (Third)	1,537,000 Gallons	0	1,537,500	
Engine Major Overhaul Considered	1,537,500 Gallons	0	1,537,500	
Change Wire Harness Every 2nd End Frame Overhaul		0		

Chief Engineer: James Stinson





**CRITICAL EQUIPMENT MAINTENANCE SHEET**

Vessel: Ocean Intervention Equipment Description: PORT MAIN ENGINE Make: CATERPILLAR Model: 3516B WITH EUI OPTION Serial Number: 9AN00144 Reference: OPERATION & Maint. Manual Maintenance Item:	DATE: <b>November 2020</b> Hours: <b>20,098</b> F/O CONSUMPTION: <b>824,777</b>			
	<b>Interval</b>	<b>Last Done</b>	<b>Next Due</b>	
	Air Starter Lubricator Oil Level - Check	Daily	11/30/2020	12/1/2020
	Air Reciever Moisture & Sediment - Drain	Daily	11/30/2020	12/1/2020
Air Cleaner Element Indicator - Check	Daily	11/30/2020	12/1/2020	
Engine Oil Filter Differential Pressure - Check	Daily	11/30/2020	12/1/2020	
Engine Oil Level - Check	Daily	11/30/2020	12/1/2020	
Fuel Filter Differential Pressure - Check	Daily	11/30/2020	12/1/2020	
Leaks, Loose Connections, Vibrations - Check	Daily	11/30/2020	12/1/2020	
Instrument Panel - Inspect	Daily	11/30/2020	12/1/2020	
Magnetic Pickups - Clean/Inspect	1000 Hours	19,486	20,486	
Engine Oil Filters & Fuel Filters - Change	1000 Hours	19,486	20,486	
Engine Oil Sample - Obtain	500 Hours	20,047	20,547	
Batteries - Check	1000 Hours	19,975	20,975	
Coolant Additive - Test/Add	1000 Hours	19,690	20,690	
Hoses & Clamps - Inspect/Replace	1000 Hours	18,488	19,488	
Engine - Clean	1000 Hours	19,486	20,486	
Crankcase Filters - Change	4000 Hours	16,682	20,682	
Engine Crankcase Breather - Clean	1000 Hours	19,486	20,486	
Engine Oil - Change	1000 Hours	19,486	20,486	
Engine Protective Devices - Check	1000 Hours	19,486	20,486	
Crankshaft Vibration Damper - Inspect	2000 Hours	19,486	21,486	
Engine Mounts - Check	2000 Hours	20,106	22,106	
Turbocharger - Inspect	2000 Hours	18,727	20,727	
Engine Valve Lash - Inspect/Adjust	4000 Hours	19,580	23,580	
Fuel Injectors - Inspect/Adjust	4000 Hours	19,580	23,580	
Gear Train - Inspect	4000 Hours	12,136	16,136	
CAM Shaft - Inspect	4000 Hours	16,682	20,682	
Inspect CAT Control Box	4000 Hours	17,456	21,456	
Air Filters - Replace	5000 Hours	18,727	23,727	
Air Starter - Inspect	6000 Hours	13,348	19,348	
Water Pump - Inspect	6000 Hours	16,682	22,682	
Cooling Water Temp. Regulator - Inspect/Replace	10000 Hours	16,682	26,682	
Hours Last Engine Top End - Overhaul	7500 Hours	7,106	14,606	
Replace main bearings, all fasteners, rebuild gear train	22500 Hours	0	22,500	
Engine Top End - Overhaul (First)	512,500 Gallons	215,625	728,125	
Engine Top End - Overhaul (Second)	1,025,000 Gallons	0	1,025,000	
Engine Top End - Overhaul (Third)	1,537,000 Gallons	0	1,537,500	
Engine Major Overhaul Considered	1,537,500 Gallons	0	1,537,500	
Change Wire Harness Every 2nd End Frame Overhaul		0		

Chief Engineer: Joe DeMelo



**Maintenance Procedure Worksheet** (to be filed with SMS Report)

Describe any problems in the space provided below; enter into the Maintenance Worksheet.

*\*Read this entire procedure before starting work.\**

**Maintenance**

Regular scheduled maintenance can be found in the critical equipment maintenance folder that is located in the ISM folder, Procedures for all scheduled maintenance can be found in the Caterpillar operation and maintenance manual pages 75 - 116 and can be found in the engine control room, all maintenance items have been highlighted in the manual for convenience.

**Basic Job Steps**

	Complete?
Generate JSEA if applicable, produce 5x5 card	Yes
Ensure that the engine has had sufficient time to cool down before starting any work	Yes
Secure air valve to air starter (close) if needed	Yes
Lock out / tag out air starter if needed	Yes

**Problems Encountered**

	Resolved?

Maintainer: Engineering Dept.

**CRITICAL EQUIPMENT MAINTENANCE SHEET**

Vessel: Ocean Intervention Equipment Description: PORT MAIN ENGINE Make: CATERPILLAR Model: 3516B WITH EUI OPTION Serial Number: 9AN00144 Reference: OPERATION & Maint. Manual Maintenance Item:	DATE: <b>October 2020</b> Hours: <b>19,410</b> F/O CONSUMPTION: <b>792,546</b>			
	<b>Interval</b>	<b>Last Done</b>	<b>Next Due</b>	
	Air Starter Lubricator Oil Level - Check	Daily	10/31/2020	11/1/2020
	Air Reciever Moisture & Sediment - Drain	Daily	10/31/2020	11/1/2020
Coolant Level - Check	Daily	10/31/2020	11/1/2020	
Air Cleaner Element Indicator - Check	Daily	10/31/2020	11/1/2020	
Engine Oil Filter Differential Pressure - Check	Daily	10/31/2020	11/1/2020	
Engine Oil Level - Check	Daily	10/31/2020	11/1/2020	
Fuel Filter Differential Pressure - Check	Daily	10/31/2020	11/1/2020	
Leaks, Loose Connections, Vibrations - Check	Daily	10/31/2020	11/1/2020	
Instrument Panel - Inspect	Daily	10/31/2020	11/1/2020	
Magnetic Pickups - Clean/Inspect	1000 Hours	18,488	19,488	
Engine Oil Filters & Fuel Filters - Change	1000 Hours	18,488	19,488	
Engine Oil Sample - Obtain	500 Hours	18,988	19,488	
Batteries - Check	1000 Hours	19,975	20,975	
Coolant Additive - Test/Add	1000 Hours	18,572	19,572	
Hoses & Clamps - Inspect/Replace	1000 Hours	18,488	19,488	
Engine - Clean	1000 Hours	18,488	19,488	
Crankcase Filters - Change	4000 Hours	16,682	20,682	
Engine Crankcase Breather - Clean	1000 Hours	18,488	19,488	
Engine Oil - Change	1000 Hours	18,488	19,488	
Engine Protective Devices - Check	1000 Hours	18,488	19,488	
Crankshaft Vibration Damper - Inspect	2000 Hours	16,682	18,682	
Engine Mounts - Check	2000 Hours	18,488	20,488	
Turbocharger - Inspect	2000 Hours	18,727	20,727	
Engine Valve Lash - Inspect/Adjust	4000 Hours	16,682	20,682	
Fuel Injectors - Inspect/Adjust	4000 Hours	16,682	20,682	
Gear Train - Inspect	4000 Hours	12,136	16,136	
CAM Shaft - Inspect	4000 Hours	16,682	20,682	
Inspect CAT Control Box	4000 Hours	17,456	21,456	
Air Filters - Replace	5000 Hours	18,727	23,727	
Air Starter - Inspect	6000 Hours	13,348	19,348	
Water Pump - Inspect	6000 Hours	16,682	22,682	
Cooling Water Temp. Regulator - Inspect/Replace	10000 Hours	16,682	26,682	
Hours Last Engine Top End - Overhaul	7500 Hours	7,106	14,606	
Replace main bearings, all fasteners, rebuild gear train	22500 Hours	0	22,500	
Engine Top End - Overhaul (First)	512,500 Gallons	215,625	728,125	
Engine Top End - Overhaul (Second)	1,025,000 Gallons	0	1,025,000	
Engine Top End - Overhaul (Third)	1,537,000 Gallons	0	1,537,500	
Engine Major Overhaul Considered	1,537,500 Gallons	0	1,537,500	
Change Wire Harness Every 2nd End Frame Overhaul		0		

Chief Engineer: Joe DeMelo





**Maintenance Procedure Worksheet** (to be filed with SMS Report)

Describe any problems in the space provided below; enter into the Maintenance Worksheet.

*\*Read this entire procedure before starting work.\**

**Maintenance**

Regular scheduled maintenance can be found in the critical equipment maintenance folder that is located in the ISM folder, Procedures for all scheduled maintenance can be found in the Caterpillar operation and maintenance manual pages 75 - 116 and can be found in the engine control room, all maintenance items have been highlighted in the manual for convenience.

**Basic Job Steps**

Complete?

Generate JSEA if applicable, produce 5x5 card	Yes
Ensure that the engine has had sufficient time to cool down before starting any work	Yes
Secure air valve to air starter (close) if needed	Yes
Lock out / tag out air starter if needed	Yes

**Problems Encountered**

Resolved?

Maintainer: Engineering Dept.