

TEC 41

STBD. AUXILIARY ENGINE

Sergiy Kokoshko

CHIEF ENGINEER

January 31, 2023

DATE _____

Running hours or time based overhaul periods are for guidance of the part or equipment. When the indicated running hours or time based overhaul periods are met the part/equipment should be cleaned, repaired, exchanged, tested or checked for clearances all according to the manufacturer's recommendations. If parts/equipment are found to be beyond the manufacturer's recommendations, the part/equipment must be changed. When the parts/equipment have been dealt with as above and/or clearances are found within the manufacturer's recommendation's, running hours should start again from zero. Report of the maintained part/equipment should be submitted together with the relevant monthly report. It is important to plan your maintenance, as time based overhaul periods and/or running hours are for guidance. For instance, if an item is due for class survey before it has reached the running hours, maintenance should be carried out and time based overhaul periods and/or running hours should start again from zero. Running hours could also be exceeded by maximum 15% under such circumstances, such as an upcoming dry docking, where opening of relevant equipment would make a significant difference in running of the vessel. Such overruns should also be explained. CATERPILLAR recommended use Fuel Consumption to calculate overhaul intervals refer to table 3 in Maintenance Recommendations SMCS - 1000, by experience that maintenance intervals are most accurately based in fuel consumption. Caterpillar experience has shown that maintenance intervals are most accurately based on fuel consumption. Fuel consumption corresponds more accurately to the engine load. For CAT 3516B engines load factor is approximately 60%. Top-end Overhaul - 2,000 000 liters of fuel (528,000 US gallons), Second Top-end Overhaul - 4,000 000 liters of fuel (1,056 000 US gallons), Major Overhaul - 6,000 000 liters of fuel (1,584 000 US gallons). Interval between top ends/overhauls increased approximately to 10000 running hrs

AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)	TEC 41
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STBD. AUXILIARY ENGINE

Vessel:	Ocean Navigator	Month:	February 28, 2023	Total Running Hours:	9990						
Engine (Maker/Type) 9an00185	No. 2 - CATERPILLAR 3516	Power (kw)	1920	RPM:	1800						
Year Built:	2001	Last Month's Running Hours:	9590 h	Running Hours Since Last Report:	400						
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990		
Cylinder Head Overhauling	7,500	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990		
Cylinder Liner Overhauling	22,500	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990		
Fuel Pump Overhauling	7,500	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990		
Fuel Injector Timing / Valves Lash	2,000	670/670	670/670	670/670	670/670	670/670	670/670	670/670	670/670		
Crankpin Bearing Inspection	22,500	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990		
Main Bearing Inspection / Change	22,500	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990	9990/9990		
Thrust Bearing Inspection	22,500	9990	<div>RH corrected according CAT ET</div> <div>Major overhaul done before season 2019 started, at RH 21151, but ECM was not zeroed.</div> <div>Lub.Oil changed completely 03/27/2022</div> <div>All Filters (lub.oil, fuel oil, turbochargers, air filters) renewed 03/27/2022</div> <div>Coolant changed completely 03/27/2022</div>								
Turbocharger Inspection	2,000	3,320									
Turbocharger Overhauling	10,000	9990									
Crankcase Inspection	1,000	1,781									
Camshaft Drive Inspection	10,000	9990									
Foundation Bolts Check	2,000	3,249									
Air Cooler Cleaning	10,000	9990									
Starting Air Motor Overhaul	22,500	9990									
Emergency Shut Downs	1,000	26-Sep-22									
Lube Oil Change / Sample Taken	1000/3 Months	01-Sep-22									
		Last Taken On		LUBE OIL CHANGE MARCH 27, 2022							

Sergiy Kokoshko
CHIEF ENGINEER

February 28, 2023
DATE

Running hours or time based overhaul periods are for guidance of the part or equipment. When the indicated running hours or time based overhaul periods are met the part/equipment should be cleaned, repaired, exchanged, tested or checked for clearances all according to the manufacturer's recommendations. If parts/equipment are found to be beyond the manufacturer's recommendations, the part/equipment must be changed. When the parts/equipment have been dealt with as above and/or clearances are found within the manufacturer's recommendation's, running hours should start again from zero. Report of the maintained part /equipment should be submitted together with the relevant monthly report. It is important to plan your maintenance, as time based overhaul periods and/or running hours are for guidance. For instance, if an item is due for class survey before it has reached the running hours, maintenance should be carried out and time based overhaul periods and/or running hours should start again from zero. Running hours could also be exceeded by maximum 15% under such circumstances, such as an upcoming dry docking, where opening of relevant equipment would make a significant difference in running of the vessel. Such overruns should also be explained. CATERPILLAR recommended use Fuel Consumption to calculate overhaul intervals refer to table 3 in Maintenance Recommendations SMCS - 1000, by experience that maintenance intervals are most accurately based in fuel consumption. Caterpillar experience has shown that maintenance intervals are most accurately based on fuel consumption. Fuel consumption corresponds more accurately to the engine load. For CAT 3516B engines load factor is approximately 60%. Top-end Overhaul - 2,000 000 liters of fuel (528,000 US gallons) ,Second Top-end Overhaul - 4,000 000 liters of fuel (1,056 000 US gallons) , Major Overhaul - 6,000 000 liters of fuel (1,584 000 US gallons). Interval between top ends/overhauls increased approximately to 10000 running hrs

AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)	TEC 41
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STBD. AUXILIARY ENGINE

Vessel:	Ocean Navigator	Month:	March 31, 2023	Total Running Hours:	10199 / 309697						
Engine (Maker/Type) 9an00185	No. 2 - CATERPILLAR 3516	Power (kw)	1920	RPM:	1800						
Year Built:	2001	Last Month's Running Hours:	9990 h	Running Hours Since Last Report:	209						
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199		
Cylinder Head Overhauling	7,500	149	149	149	149	149	149	149	149		
Cylinder Liner Overhauling	22,500	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199		
Fuel Pump Overhauling	7,500	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199		
Fuel Injector Timing / Valves Lash	2,000	149	149	149	149	149	149	149	149		
Crankpin Bearing Inspection	22,500	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199		
Main Bearing Inspection / Change	22,500	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199	10199/10199		
Thrust Bearing Inspection	22,500	10077	RH corrected according CAT ET Major overhaul done before season 2019 started, at RH 21151, but ECM was not zeroed. Lub.Oil changed completely 03/27/2022 All Filters (lub.oil, fuel oil, turbochargers, air filters) renewed 03/25/2022 Coolant changed completely 03/27/2022 TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected All shutdowns tested 03/25/2022								
Turbocharger Inspection	2,000	149									
Turbocharger Overhauling	10,000	149									
Crankcase Inspection	1,000	149									
Camshaft Drive Inspection	10,000	149									
Foundation Bolts Check	2,000	149									
Air Cooler Cleaning	10,000	149									
Starting Air Motor Overhaul	22,500	10199									
Emergency Shut Downs	1,000	25-Mar-23									
Lube Oil Change / Sample Taken	1000/3 Months	01/Sep/22									
			Last Taken On		LUBE OIL CHANGE MARCH 27, 2022						

Tiniakov Valerii
CHIEF ENGINEER

March 31, 2023
DATE

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AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)	TEC 41
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STBD. AUXILIARY ENGINE

Vessel:	Ocean Navigator	Month:	April 30, 2023		Total Running Hours:		10597 h / 324110 gal				
Engine (Maker/Type) 9an00185	No. 2 - CATERPILLAR 3516	Power (kw)	1920		RPM:		1800				
Year Built:	2001	Last Month's Running Hours:	10199 h / 309697 gal		Running Hours Since Last Report:		398				
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597		
Cylinder Head Overhauling	7,500	547	75 / 547	547	547	547	547	547	547		
Cylinder Liner Overhauling	22,500	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597		
Fuel Pump Overhauling	7,500	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597		
Fuel Injector Timing / Valves Lash	2,000	547	547	547	547	547	547	547	547		
Crankpin Bearing Inspection	22,500	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597		
Main Bearing Inspection / Change	22,500	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597	10597/10597		
Thrust Bearing Inspection	22,500	10597	<div>RH corrected according CAT ET</div> <div>Major overhaul done before season 2019 started, at RH 21151, but ECM was not zeroed.</div> <div>Lub.Oil changed completely 03/27/2022</div> <div>All Filters (lub.oil, fuel oil, turbochargers, air filters) renewed 03/25/2022</div> <div>Coolant changed completely 03/27/2022</div> <div>TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected</div> <div>All shutdowns tested 03/25/2022</div>								
Turbocharger Inspection	2,000	547									
Turbocharger Overhauling	10,000	547									
Crankcase Inspection	1,000	547									
Camshaft Drive Inspection	10,000	547									
Foundation Bolts Check	2,000	547									
Air Cooler Cleaning	10,000	547									
Starting Air Motor Overhaul	22,500	10597									
Emergency Shut Downs	1,000	25-Mar-23									
Lube Oil Change / Sample Taken	1000/3 Months	01/Sep/22									
			Last Taken On		LUBE OIL CHANGE MARCH 27, 2022						

Tiniakov Valerii
CHIEF ENGINEER

April 30, 2023
DATE

Running hours or time based overhaul periods are for guidance of the part or equipment. When the indicated running hours or time based overhaul periods are met the part/equipment should be cleaned, repaired, exchanged, tested or checked for clearances all according to the manufacturer's recommendations. If parts/equipment are found to be beyond the manufacturer's recommendations, the part/equipment must be changed. When the parts/equipment have been dealt with as above and/or clearances are found within the manufacturer's recommendation's, running hours should start again from zero. Report of the maintained part /equipment should be submitted together with the relevant monthly report. It is important to plan your maintenance, as time based overhaul periods and/or running hours are for guidance. For instance, if an item is due for class survey before it has reached the running hours, maintenance should be carried out and time based overhaul periods and/or running hours should start again from zero. Running hours could also be exceeded by maximum 15% under such circumstances, such as an upcoming dry docking, where opening of relevant equipment would make a significant difference in running of the vessel. Such overruns should also be explained. CATERPILLAR recommended use Fuel Consumption to calculate overhaul intervals refer to table 3 in Maintenance Recommendations SMCS - 1000, by experience that maintenance intervals are most accurately based in fuel consumption. Caterpillar experience has shown that maintenance intervals are most accurately based on fuel consumption. Fuel consumption corresponds more accurately to the engine load. For CAT 3516B engines load factor is approximately 60%. Top-end Overhaul - 2,000 000 liters of fuel (528,000 US gallons) , Second Top-end Overhaul - 4,000 000 liters of fuel (1,056 000 US gallons) , Major Overhaul - 6,000 000 liters of fuel (1,584 000 US gallons). Interval between top ends/overhauls increased approximately to 10000 running hrs

AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)	TEC 41
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STBD. AUXILIARY ENGINE

Vessel:	Ocean Navigator	Month:	May 31, 2023	Total Running Hours:	11238 h / 347465 gal						
Engine (Maker/Type)	9an00185 No. 2 - CATERPILLAR 3516	Power (kw)	1920	RPM:	1800						
Year Built:	2001	Last Month's Running Hours:	10597 h / 324110 gal	Running Hours Since Last Report:	641						
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238		
Cylinder Head Overhauling	7,500	758	758	758	758	758	758	758	758		
Cylinder Liner Overhauling	22,500	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238		
Fuel Pump Overhauling	7,500	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238		
Fuel Injector Timing / Valves Lash	2,000	758	758	758	758	758	758	758	758		
Crankpin Bearing Inspection	22,500	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238		
Main Bearing Inspection / Change	22,500	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238	11238/11238		
Thrust Bearing Inspection	22,500	11238	RH corrected according CAT ET Lub.Oil changed completely 03/27/2022 All Filters (lub.oil, fuel oil, turbochargers, air filters) renewed 05/25/2023 Coolant changed completely 03/27/2022 TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected All shutdowns tested 03/29/2023								
Turbocharger Inspection	2,000	758									
Turbocharger Overhauling	10,000	758									
Crankcase Inspection	1,000	758									
Camshaft Drive Inspection	10,000	758									
Foundation Bolts Check	2,000	758									
Air Cooler Cleaning	10,000	758									
Starting Air Motor Overhaul	22,500	11238									
Emergency Shut Downs	1,000	29-Mar-23									
Lube Oil Change / Sample Taken	1000/3 Months	18-Apr-23									
			Last Taken On	16-Apr-23	LUBE OIL CHANGE MARCH 27, 2022						

Tiniakov Valerii
CHIEF ENGINEER

May 31, 2023
DATE

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AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)	TEC 41
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STBD. AUXILIARY ENGINE

Vessel:		Ocean Navigator		Month:		June 30, 2023		Total Running Hours:		11917 h / 370190 gal	
Engine (Maker/Type) 9an00185		No. 2 - CATERPILLAR 3516		Power (kw)		1920		RPM:		1800	
Year Built:		2001		Last Month's Running Hours:		11238 h / 347465 gal		Running Hours Since Last Report:		679	
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917		
Cylinder Head Overhauling	7,500	1,437	1,437	1,437	1,437	1,437	1,437	1,437	1,437		
Cylinder Liner Overhauling	22,500	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917		
Fuel Pump Overhauling	7,500	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917		
Fuel Injector Timing / Valves Lash	2,000	1,437	1,437	1,437	1,437	1,437	1,437	1,437	1,437		
Crankpin Bearing Inspection	22,500	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917		
Main Bearing Inspection / Change	22,500	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917	11917/11917		
Thrust Bearing Inspection	22,500	11917	RH corrected according CAT ET Lub.Oil changed completely 03/27/2022 All Filters (lub.oil, fuel oil, turbochargers, air filters) renewed 05/25/2023 Coolant changed completely 03/27/2022 TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected All shutdowns tested 06/03/2023								
Turbocharger Inspection	2,000	1,437									
Turbocharger Overhauling	10,000	1,437									
Crankcase Inspection	1,000	1,437									
Camshaft Drive Inspection	10,000	1,437									
Foundation Bolts Check	2,000	1,437									
Air Cooler Cleaning	10,000	1,437									
Starting Air Motor Overhaul	22,500	11917									
Emergency Shut Downs	1,000	3-Jun-23									
Lube Oil Change / Sample Taken	1000/3 Months	18-Apr-23									
				Last Taken On	16-Apr-23	LUBE OIL CHANGE MARCH 27, 2022					

Tiniakov Valerii
CHIEF ENGINEER

June 30, 2023
DATE

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AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)	TEC 41
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STBD. AUXILIARY ENGINE

Vessel:	Ocean Navigator	Month:	July 31, 2023	Total Running Hours:	12613 h / 392124 gal						
Engine (Maker/Type) 9an00185	No. 2 - CATERPILLAR 3516	Power (kw)	1920	RPM:	1800						
Year Built:	2001	Last Month's Running Hours:	11917 h / 370190 gal	Running Hours Since Last Report:	696						
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613		
Cylinder Head Overhauling	10,000	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133		
Cylinder Liner Overhauling	22,500	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613		
Fuel Pump/ Injector change	10,000	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133		
Fuel Injector Timing / Valves Lash	2,000	1135/1135	1135/1135	1135/1135	1135/1135	1135/1135	1135/1135	1135/1135	1135/1135		
Crankpin Bearing Inspection	22,500	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613		
Main Bearing Inspection / Change	22,500	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613	12613/12613		
Thrust Bearing Inspection	22,500	12613	RH corrected according CAT ET Lub.Oil changed completely 03/27/2022 Coolant changed completely 03/27/2022 TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected								
Turbocharger Inspection	2,000	1,437									
Turbocharger Overhauling	10,000	1,437									
Crankcase Inspection	1,000	24									
Camshaft Drive Inspection	10,000	38									
Foundation Bolts Check	2,000	1,437									
Air Cooler Cleaning	10,000	1,437									
Starting Air Motor Overhaul	22,500	12613									
Emergency Shut Downs	1,000	13-Jul-23									
Lube Oil Change / Sample Taken	1000/3 Months	10-Jul-23									
			Last Taken On	10-Jul-23	LUBE OIL CHANGE MARCH 27, 2022						

Oleksandr Gerliga
CHIEF ENGINEER

July 31, 2023
DATE

Running hours or time based overhaul periods are for guidance of the part or equipment. When the indicated running hours or time based overhaul periods are met the part/equipment should be cleaned, repaired, exchanged, tested or checked for clearances all according to the manufacturer's recommendations. If parts/equipment are found to be beyond the manufacturer's recommendations, the part/equipment must be changed. When the parts/equipment have been dealt with as above and/or clearances are found within the manufacturer's recommendation's, running hours should start again from zero. Report of the maintained part /equipment should be submitted together with the relevant monthly report. It is important to plan your maintenance, as time based overhaul periods and/or running hours are for guidance. For instance, if an item is due for class survey before it has reached the running hours, maintenance should be carried out and time based overhaul periods and/or running hours should start again from zero. Running hours could also be exceeded by maximum 15% under such circumstances, such as an upcoming dry docking, where opening of relevant equipment would make a significant difference in running of the vessel. Such overruns should also be explained. CATERPILLAR recommended use Fuel Consumption to calculate overhaul intervals refer to table 3 in Maintenance Recommendations SMCS - 1000, by experience that maintenance intervals are most accurately based in fuel consumption. Caterpillar experience has shown that maintenance intervals are most accurately based on fuel consumption. Fuel consumption corresponds more accurately to the engine load. For CAT 3516B engines load factor is approximately 60%. Top-end Overhaul - 2,000 000 liters of fuel (528,000 US gallons) ,Second Top-end Overhaul - 4,000 000 liters of fuel (1,056 000 US gallons) , Major Overhaul - 6,000 000 liters of fuel (1,584 000 US gallons). Interval between top ends/overhauls increased approximately to 10000 running hrs

AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)								TEC 41		
STBD. AUXILIARY ENGINE										
Vessel:		Ocean Navigator		Month:		August 31, 2023		Total Running Hours:		13267 h / 413962 gal
Engine (Maker/Type)		9an00185 No. 2 - CATERPILLAR 3516		Power (kw)		1920		RPM:		1800
Year Built:		2001		Last Month's Running Hours:		12613 h / 392124 gal		Running Hours Since Last Report:		654
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S	
Piston Overhauling	22,500	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	
Cylinder Head Overhauling	10,000	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	
Cylinder Liner Overhauling	22,500	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	
Fuel Pump/ Injector change	10,000	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	2133/2133	
Fuel Injector Timing / Valves Lash	2,000	413/413	413/413	413/413	413/413	413/413	413/413	413/413	413/413	
Crankpin Bearing Inspection	22,500	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	
Main Bearing Inspection / Change	22,500	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	13267/13267	
Thrust Bearing Inspection	22,500	13267								
Turbocharger Inspection	2,000	2,091								
Turbocharger Overhauling	10,000	2,091								
Crankcase Inspection	1,000	654								
Camshaft Drive Inspection	10,000	692								
Foundation Bolts Check	2,000	693								
Air Cooler Cleaning	10,000	693								
Starting Air Motor Overhaul	22,500	13267								
Emergency Shut Downs	1,000	13-Jul-23								
Lube Oil Change / Sample Taken	1000/3 Months	10-Jul-23								
				Last Taken On		10-Jul-23		LUBE OIL CHANGE MARCH 27, 2022		

RH corrected according CAT ET

Lub.Oil changed completely 03/27/2022

Lub.Oil analyzes dated 07/25/2023

Coolant changed completely 03/27/2022

TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected

Oleksandr Gerliga

CHIEF ENGINEER

August 31, 2023

DATE

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AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)
TEC 41
STBD. AUXILIARY ENGINE

Vessel:	Ocean Navigator	Month:	September 30, 2023		Total Running Hours:		13953 h / 435346 gal.				
Engine (Maker/Type)	9an00185 No. 2 - CATERPILLAR 3516	Power (kw)	1920		RPM:		1800				
Year Built:	2001	Last Month's Running Hours:	13267 h / 413962 gal.		Running Hours Since Last Report:		686				
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953		
Cylinder Head Overhauling	10,000	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819		
Cylinder Liner Overhauling	22,500	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953		
Fuel Pump/ Injector change	10,000	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819	2819/2819		
Fuel Injector Timing / Valves Lash	2,000	1099/1099	1099/1099	1099/1099	1099/1099	1099/1099	1099/1099	1099/1099	1099/1099		
Crankpin Bearing Inspection	22,500	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953		
Main Bearing Inspection / Change	22,500	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953	13953/13953		
Thrust Bearing Inspection	22,500	13953	<div>Lube oil changed completely 03/27/2022 Last lube oil analysis report dated 07/26/2023 Coolant changed completely 03/27/2022 TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected</div>								
Turbocharger Inspection	2000-4000	2,777									
Turbocharger Overhauling	10,000	2,777									
Camshaft Drive Inspection	10,000	1,379									
Foundation Bolts Check	2,000	1,379									
Air Cooler Cleaning	10,000	1,379									
Starting Air Motor Overhaul	22,500	13953									
Emergency Shut Downs	1,000	1-Sep-23									
Lube Oil Change / Sample Taken	1000/3 Months	27-Mar-23	/	Last Taken On	24-Sep-23						

Oleksandr Gerliga

CHIEF ENGINEER

September 30, 2023

DATE

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AUXILIARY ENGINE MONTHLY RUNNING HOURS (MED-SPEED ENG.)	TEC 41
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STBD. AUXILIARY ENGINE

Vessel:	Ocean Navigator	Month:	October 31, 2023	Total Running Hours:	14329 h / 446807 gal.						
Engine (Maker/Type)	No. 2 - CATERPILLAR 3516	Power (kw)	1920	RPM:	1800						
Year Built:	2001	Last Month's Running Hours:	13953 h / 435346 gal.	Running Hours Since Last Report:	376						
DESCRIPTION	LIMIT	1P/2S	3P/4S	5P/6S	7P/8S	9P/10S	11P/12S	13P/14S	15P/16S		
Piston Overhauling	22,500	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329		
Cylinder Head Overhauling	10,000	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195		
Cylinder Liner Overhauling	22,500	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329		
Fuel Pump/ Injector change	10,000	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195	3195/3195		
Fuel Injector Timing / Valves Lash	2,000	1475/1475	1475/1475	1475/1475	1475/1475	1475/1475	1475/1475	1475/1475	1475/1475		
Crankpin Bearing Inspection	22,500	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329		
Main Bearing Inspection / Change	22,500	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329	14329/14329		
Thrust Bearing Inspection	22,500	14329	RH corrected according CAT ET Lube oil changed completely 03/27/2022 Last lube oil analysis report dated 10/04/2023 Coolant changed completely 03/27/2022 TOP -1 done in March 2023 (10050r/h / 304472 gal), ECM corrected								
Turbocharger Inspection	2000-4000	3,153									
Turbocharger Overhauling	10,000	3,153									
Crankcase Inspection	1,000	325									
Camshaft Drive Inspection	10,000	1,755									
Foundation Bolts Check	2,000	1,755									
Air Cooler Cleaning	10,000	1,755									
Starting Air Motor Overhaul	22,500	14329									
Emergency Shut Downs	1,000	6-Oct-23									
Lube Oil Change / Sample Taken	1000/3 Months	27-Mar-23	/	Last Taken On	23-Oct-23						

Oleksandr Gerliga
CHIEF ENGINEER

October 31, 2023
DATE

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