

INVOICE



3736 Cook Boulevard
Chesapeake, VA 23323-1604
(757) 485-0075

Invoice Number: 1131180-IN
Invoice Date: 6/8/2022
Terms: NET 30 DAYS
Sales Tax Code: VA-HR

SPIRIT CRUISE NORFOLK
109 E MAIN ST
Suite 500
Norfolk, VA 23510

Customer No: SPIRIT
Customer PO: SoN PME
Salesperson: LC

ITEM	DESCRIPTION	ORDERED	SHIP	B/O	UNIT PRICE	EXT PRICE
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PURCHASE ORDER: SoN PME

VESSEL: SPIRIT OF NORFOLK
POC: [REDACTED]
LOCATION: WATERSIDE

ENGINE MAKE & MODEL: SCANIA DI16 42M
ENGINE SERIAL: 1070163 HOURS AT COMPLETION: 10,395
ENGINE APPLICATION & POSITION: PORT MAIN DIESEL ENGINE

CUSTOMER REPORTED POTENTIAL FIRE ON PORT MAIN ENGINE ON CRUISE ON EVENING OF 5/15. IT WAS DETERMINED THAT NIGHT THAT THERE WAS NO FIRE, BUT RATHER STEAM FROM BLOWOUT OF WATER PUMP HOUSING DURING ENGINE OPERATION. CUSTOMER DISCHARGED FIRE EXTINGUISHER ONTO FRONT OF ENGINE AFTER SHUTTING UNIT DOWN. WHEN BPS PERSONNEL ARRIVED ON SITE, UNIT HAD LOST THE MAJORITY OF ITS COOLANT. A NEW WATER PUMP AND REAR HOUSING WAS ORDERED FOR TUESDAY DELIVERY, ALONG WITH A NEW THERMOSTAT ASSEMBLY. PUMP AND THERMOSTAT ASSY. WAS REPLACED AND ENGINE WAS REFILLED WITH COOLANT. DURING SHORT TEST RUN, PORT TURBOCHARGER WAS FOUND TO BE LEAKING OIL FROM THE SHAFT SEAL. TURBO WAS PROCURED AND CHANGED THE NEXT DAY. DURING VESSEL'S NEXT CRUISE, AN INCREASE IN BLOWBY WAS NOTED BY THE CUSTOMER. CUSTOMER DID NOT CONTINUE TO USE THAT ENGINE. TECH BORESCOPED THE CYLINDERS AND DROPPED THE PAN TO INSPECT THE BOTTOM END OF THE ENGINE. ALL LINERS ARE HEAVILY SCORED AND HAVE HAIRLINE CRACKING. CUSTOMER WAS SHOWN THE ISSUES AND AN OVERHAUL WAS BEGUN. NEW LINERS, PISTONS, RINGS, PINS, RETAINERS, ROD BEARINGS AND MAIN BEARINGS WERE INSTALLED IN THE ENGINE USING NEW RODS IN 4 POSITIONS. THE OTHER 4 RODS WERE QUALIFIED FOR REUSE AND INSTALLED WITH NEW BOLTS. NEW HEADS, INJECTORS MISC. SEALS AND GASKETS AND COOLANT CONNECTORS WERE INSTALLED. AFTERCOOLERS AND OIL COOLERS WERE CLEANED AND TESTED FOR LEAKS.

Continued

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ENGINE WAS REASSEMBLED, TUNED UP AND SEA TRIALED AT VARIOUS SPEEDS AND LOADS. OPERATION WAS SATISFACTORY, TEMPS AND PRESSURES WERE NORMAL. OIL WAS CHANGED AFTER VESSEL RETURNED TO THE DOCK. SAFETY PARAMETERS ON BOTH MAIN ENGINES WERE VERIFIED THROUGH SCANIA SOFTWARE AFTER SEA TRIAL. UPPER ALARM LIMIT FOR "TOO HIGH COOLANT TEMP" WAS SET TO 100 DEGREES CELSIUS ON BOTH ENGINES AND LOWER ALARM LIMIT WAS SET TO 93 DEGREES CELSIUS TO MATCH INDUSTRY STANDARD.						
SECOND TURBOCHARGER THAT WAS REQUESTED BY CUSTOMER HAS ARRIVED AND IS INCLUDED IN THIS INVOICE.						
** LABOR **						
/LABOR	5-16-22 WYATT 830A-1000A	1.50	1.50	0.00	120.000	180.00
/LABOR	5-17-22 WYATT 1230P-430P	3.50	3.50	0.00	120.000	420.00
/LABOR/OT	5-17-22 WYATT 430P-500P	0.50	0.50	0.00	180.000	90.00
/LABOR	5-18-22 WYATT 800A-430P	8.00	8.00	0.00	120.000	960.00
/LABOR	5-19-22 WYATT 1100A-430P	5.00	5.00	0.00	120.000	600.00
/LABOR/OT	5-19-22 WYATT 430P-545P	1.25	1.25	0.00	180.000	225.00
/LABOR	5-19-22 HANNA 800A-430P	8.00	8.00	0.00	120.000	960.00
/LABOR/OT	5-19-22 HANNA 430P-545P	1.25	1.25	0.00	180.000	225.00
/LABOR	5-20-22 WYATT 700A-330P	8.00	8.00	0.00	120.000	960.00
/LABOR/OT	5-20-22 WYATT 330P-500P	1.50	1.50	0.00	180.000	270.00
/LABOR/OT	5-21-22 HANNA 700A-230P	7.50	7.50	0.00	180.000	1,350.00
/LABOR/OT	5-21-22 WYATT 700A-200P	7.50	7.50	0.00	180.000	1,350.00
/LABOR	5-23-22 WYATT 1130A-430P	4.50	4.50	0.00	120.000	540.00
/LABOR	5-23-22 WYATT 700A-330P	8.00	8.00	0.00	120.000	960.00
/LABOR/OT	5-23-22 WYATT 330P-530P	2.00	2.00	0.00	180.000	360.00
/LABOR	5-23-22 HANNA 700A-330P	8.00	8.00	0.00	120.000	960.00
/LABOR/OT	5-23-22 HANNA 330P-530P	2.00	2.00	0.00	180.000	360.00
/LABOR	5-24-22 WYATT 700A-330P	8.00	8.00	0.00	120.000	960.00

Continued

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/LABOR/OT	5-24-22 WYATT 330P-530P	2.00	2.00	0.00	180.000	360.00
/LABOR	5-25-22 BELOUIN 800A-430P	8.00	8.00	0.00	120.000	960.00
/LABOR	5-25-22 WYATT 700A-330P	8.00	8.00	0.00	120.000	960.00
/LABOR/OT	5-25-22 WYATT 330P-500P	1.50	1.50	0.00	180.000	270.00
/LABOR	5-25-22 HANNA 700A-1100A	4.00	4.00	0.00	120.000	480.00
/LABOR	5-26-22 WYATT 700A-330P	8.00	8.00	0.00	120.000	960.00
/LABOR/OT	5-26-22 WYATT 330P-430P	1.00	1.00	0.00	180.000	180.00
/LABOR	5-26-22 HANNA 700A-330P	8.00	8.00	0.00	120.000	960.00
/LABOR/OT	5-26-22 HANNA 330P-430P	1.00	1.00	0.00	180.000	180.00
/TRUCKL	LOCAL TRUCK FEE, DISCOUNTED	6.00	6.00	0.00	75.000	450.00
** MATERIAL **						
1793989	ASSY, WATER PUMP	1.00	1.00	0.00	1,625.180	1,625.18
1464464	SEAL, WATER PUMP	1.00	1.00	0.00	15.340	15.34
1457411	SEAL, WATER PUMP	1.00	1.00	0.00	53.130	53.13
1431979	THERMOSTAT	1.00	1.00	0.00	158.680	158.68
1421825	GASKET, THERMOSTAT	1.00	1.00	0.00	14.290	14.29
1865317	SENSOR, TEMPERATURE (RPLS 1788	1.00	1.00	0.00	177.990	177.99
1793990	HOUSING, WATER PUMP	1.00	1.00	0.00	317.580	317.58
1498657	GASKET, WATER PUMP HOUSING	1.00	1.00	0.00	21.340	21.34
1395478	ASSY, TURBOCHARGER	2.00	2.00	0.00	3,035.580	6,071.16
1530681	GASKET, TURBO	2.00	2.00	0.00	8.100	16.20
2133242	KIT, REPAIR	1.00	1.00	0.00	590.430	590.43
1388686	GASKET	3.00	3.00	0.00	6.990	20.97
348993	O-RING	2.00	2.00	0.00	3.130	6.26
2137185	GASKET, TURBO MOUNT (RPLS 1364	3.00	3.00	0.00	19.840	59.52
R123570	GASKET, TURBO DRAIN	1.00	1.00	0.00	4.780	4.78
1725112	KIT, GASKET (CYLINDER HEAD)	8.00	8.00	0.00	79.710	637.68
1487542	TIGHT-FIT	16.00	16.00	0.00	4.000	64.00
0574374	HEAD, CYLINDER	8.00	8.00	0.00	1,233.210	9,865.68

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0574374-XC	CORE, CYLINDER HEAD	8.00	8.00	0.00	291.600	2,332.80
0574374-XC	CORE, CYLINDER HEAD	8.00-	8.00-	0.00	291.600	2,332.80-
1805075	KIT, CYLINDER	8.00	8.00	0.00	1,416.500	11,332.00
2154831	ASSY, CONNECTING ROD	4.00	4.00	0.00	2,366.210	9,464.84
1437123	BUSHING, CONNECTING ROD	9.00	9.00	0.00	37.310	335.79
1531989	BEARING, CONNECTING ROD	16.00	16.00	0.00	32.750	524.00
1779130	BEARING, MAIN	5.00	5.00	0.00	46.510	232.55
1531996	BEARING, THRUST	4.00	4.00	0.00	22.930	91.72
1865675	GASKET, OIL PAN	1.00	1.00	0.00	65.330	65.33
1421457	GASKET, AFTER COOLER	2.00	2.00	0.00	49.840	99.68
1942702	INJECTOR	8.00	8.00	0.00	925.330	7,402.64
349419	O-RING	2.00	2.00	0.00	3.600	7.20
750226	O-RING	1.00	1.00	0.00	13.990	13.99
1352803	O-RING	8.00	8.00	0.00	4.170	33.36
368502	O-RING	8.00	8.00	0.00	13.990	111.92
1354790	SEAL, AFTER COOLER	4.00	4.00	0.00	25.920	103.68
1484765	GASKET	2.00	2.00	0.00	6.080	12.16
1546550	HOSE, ORANGE	2.00	2.00	0.00	72.930	145.86
1375383	GASKET	2.00	2.00	0.00	30.920	61.84
2302651	SEAL	8.00	8.00	0.00	6.280	50.24
2016583	GASKET	8.00	8.00	0.00	3.230	25.84
1361120	SCREW	8.00	8.00	0.00	6.530	52.24
2042940	GASKET (RPLS 1421424)	8.00	8.00	0.00	4.490	35.92
1512075	CONNECTOR	8.00	8.00	0.00	101.250	810.00
0812412	GASKET	24.00	24.00	0.00	1.140	27.36
0810970	O-RING	7.00	7.00	0.00	1.400	9.80
0810978	O-RING	2.00	2.00	0.00	3.230	6.46
0804661	RING	1.00	1.00	0.00	0.790	0.79
1352803	O-RING	4.00	4.00	0.00	4.170	16.68

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1745816	GASKET	4.00	4.00	0.00	44.790	179.16
1466383	GASKET	1.00	1.00	0.00	12.960	12.96
1484765	GASKET	2.00	2.00	0.00	6.080	12.16
1484766	GASKET	2.00	2.00	0.00	4.490	8.98
1509813	GASKET	1.00	1.00	0.00	33.840	33.84
0804670	O-RING	1.00	1.00	0.00	1.520	1.52
2137185	GASKET, TURBO MOUNT (RPLS 1364	2.00	2.00	0.00	19.840	39.68
1466382	GASKET	1.00	1.00	0.00	15.170	15.17
1769799	O-RING	1.00	1.00	0.00	12.710	12.71
1769798	O-RING (RPLS 168008)	1.00	1.00	0.00	9.800	9.80
1433020	BOLT, CONNECTING ROD	8.00	8.00	0.00	37.880	303.04
AEROSOLVE II	SOLVENT, DEGREASER	13.00	13.00	0.00	8.970	116.61
RAGS 10	RAGS, SHOP (10 LB)	5.00	5.00	0.00	14.190	70.95
GLOVES-10	GLOVES, SENSILITE WORK (SZ10)	3.00	3.00	0.00	2.450	7.35
GLOVES-11	GLOVES, SENSILITE WORK (SZ11)	1.00	1.00	0.00	2.520	2.52
LUBRIPLATE 105	GREASE, LUBRIPLATE 105 (10 OZ)	2.00	2.00	0.00	10.200	20.40
SCOTCHBRITE-G	PAD, SCOURING (GREEN)	1.00	1.00	0.00	1.640	1.64
BUFFDISC-COARSE	DISC, BUFF/CLEANING (3" CRSE)	8.00	8.00	0.00	3.380	27.04
PERMATEX 77B	SILICONE, RTV (ULTRA BLUE)	1.00	1.00	0.00	5.750	5.75
ANTISEIZE-HT	ANTISEIZE, NICKLE BASE (8OZ) (1.00	1.00	0.00	21.670	21.67
SPRAY NINE-32	CLEANER, SPRAY NINE (32 OZ)	1.00	1.00	0.00	7.360	7.36
PAINTMARKER-W	MARKER, WHITE PAINT	1.00	1.00	0.00	4.850	4.85
** FREIGHT **						
/FRTC	SHIPPING	1.00	1.00	0.00	347.170	347.17
/FRTC	SHIPPING	1.00	1.00	0.00	760.060	760.06
/FRTC	SHIPPING	1.00	1.00	0.00	1,014.880	1,014.88
/FRTC	SHIPPING	1.00	1.00	0.00	49.200	49.20
/FRTC	SHIPPING	1.00	1.00	0.00	46.010	46.01

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/FRTC	SHIPPING	1.00	1.00	0.00	119.220	119.22
/FRTC	SHIPPING	1.00	1.00	0.00	173.050	173.05
/FRTC	SHIPPING	1.00	1.00	0.00	54.040	54.04

SEE SERVICE REPORT(S) FOR ADDITIONAL DETAILS
Warranty: 60 days labor on workmanship or as quoted
Bay Diesel standard Terms & Conditions apply.

WIRE INFORMATION

Truist Bank
P.O. Box 2600
Norfolk, VA 23501-2600
ABA# 061000104
Bay Diesel Corp.
Acct# 203403223

ALL WORK SUBJECT TO TERMS & CONDITIONS

*15% Restocking charge on all returned items
*Special order parts are non-returnable

*Warranty: 60 days labor on workmanship or as quoted
*Invoices paid by credit card will incur a 3% convenience fee

Net Invoice: 71,762.89
Less Discount: 0.00
Freight: 0.00
Sales Tax: 3,256.37
Invoice Total: 75,019.26
Less Deposit: 0.00
Total Due: 75,019.26
ALL FUNDS IN USD



EQUIPMENT SERVICE REPORT
Diesel Engine & Generator Parts, Service, & Sales
800-215-4005

QA-2004 rev 06.2016

Work Order Number
W010294

CUSTOMER Hornblower
LOCATION "Spirit of Norfolk"
Waterside
CITY Norfolk

CONTACT [REDACTED]
TELEPHONE [REDACTED]
SCHEDULED 5/15/21
P.O. NO. [REDACTED]

EQUIP	MFGR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
Port	Scania	DI16 42M	1070163	18896	441kw	24 vdc	Tagged
Main				Parts Cat.			Out

WORK REQUESTED:
Customer reported smoke or steam coming from front of PME.

CONDITIONS FOUND & WORK PERFORMED:
BDC personnel attended vessel on evening of 5/15/22 shortly after the discrepancy occurred. The Port Main Engine had been secured and tagged out and the belt cover had already been removed. A hole in the housing behind the water pump was evident and no coolant was in the engine above the level of that hole. Coolant was noted on the deck and under the front of the engine. No signs of fire were noted and none of the rotating parts had failed. The water pump was removed and inspected. The impeller and shaft were complete and the bearings still spun freely. The housing behind the water pump that contains the volute and various coolant passages was removed and inspected. The hole that was present in the cover was found to be from rot and not from foreign object damage.

The initial report of fire on the engine is inaccurate. The steam from the coolant venting into the belt guard and being slung from the belt was misinterpreted as smoke. The engine room fans venting the steam to the outside of the vessel further masked the issue. No signs of fire or fire damage exist on or around the engine.

RECOMMENDATIONS
Replacement of the rear water pump housing, belt and thermostats was recommended by Bay Diesel personnel and was immediately authorized by customer. These parts will be ordered for Next Day Air (as availability permits) on Monday, 5/16/22.

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

T I M E	TECH	DATE	TIME	TECH	DATE	TIME	TECH	DATE	TIME
	AC	5/15/22	2000						
			2230						

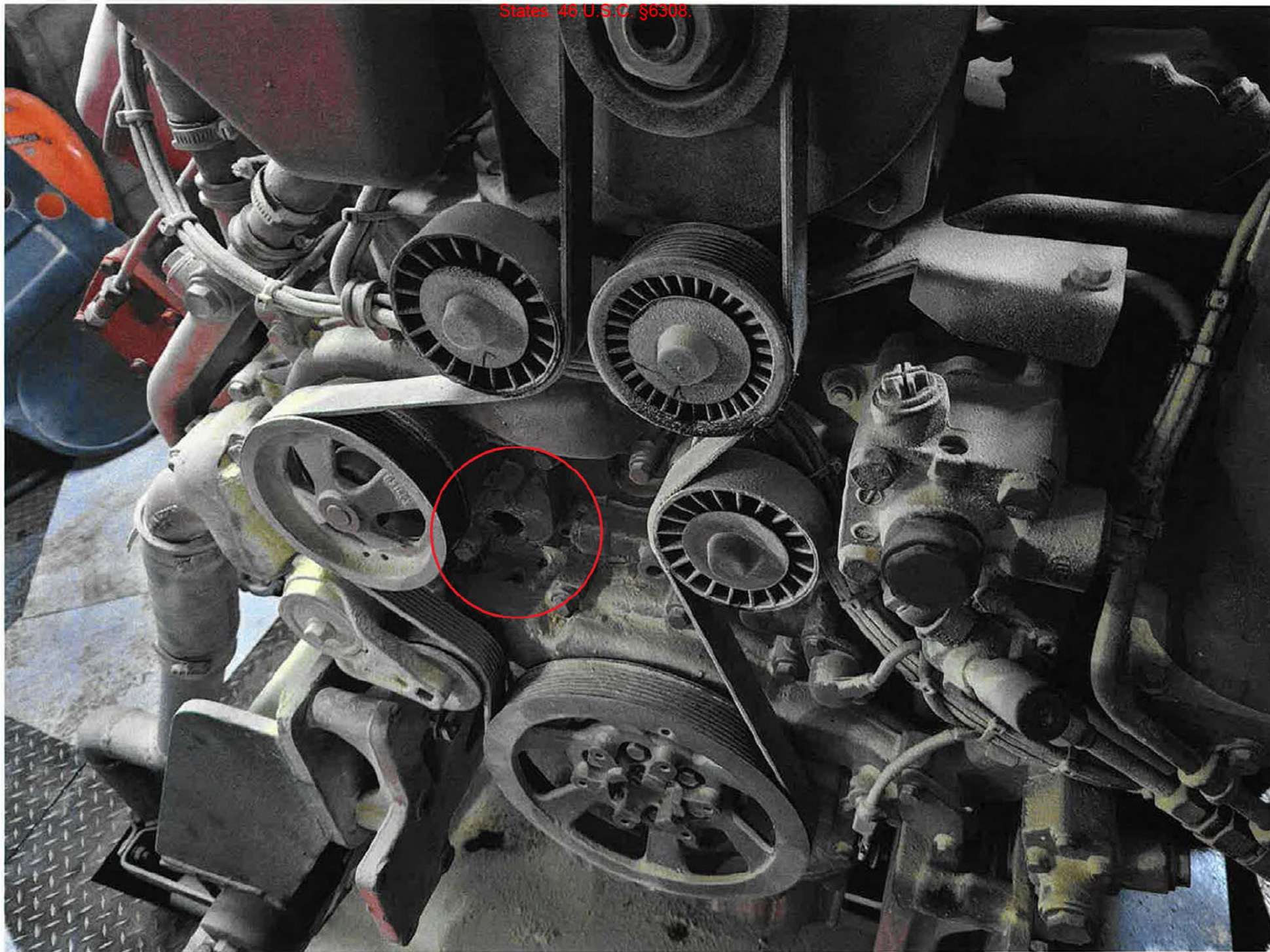
[REDACTED] **5/15/22**
DATE **OWNER REPRESENTATIVE - SIGN** **DATE**
OWNER REPRESENTATIVE - PRINT

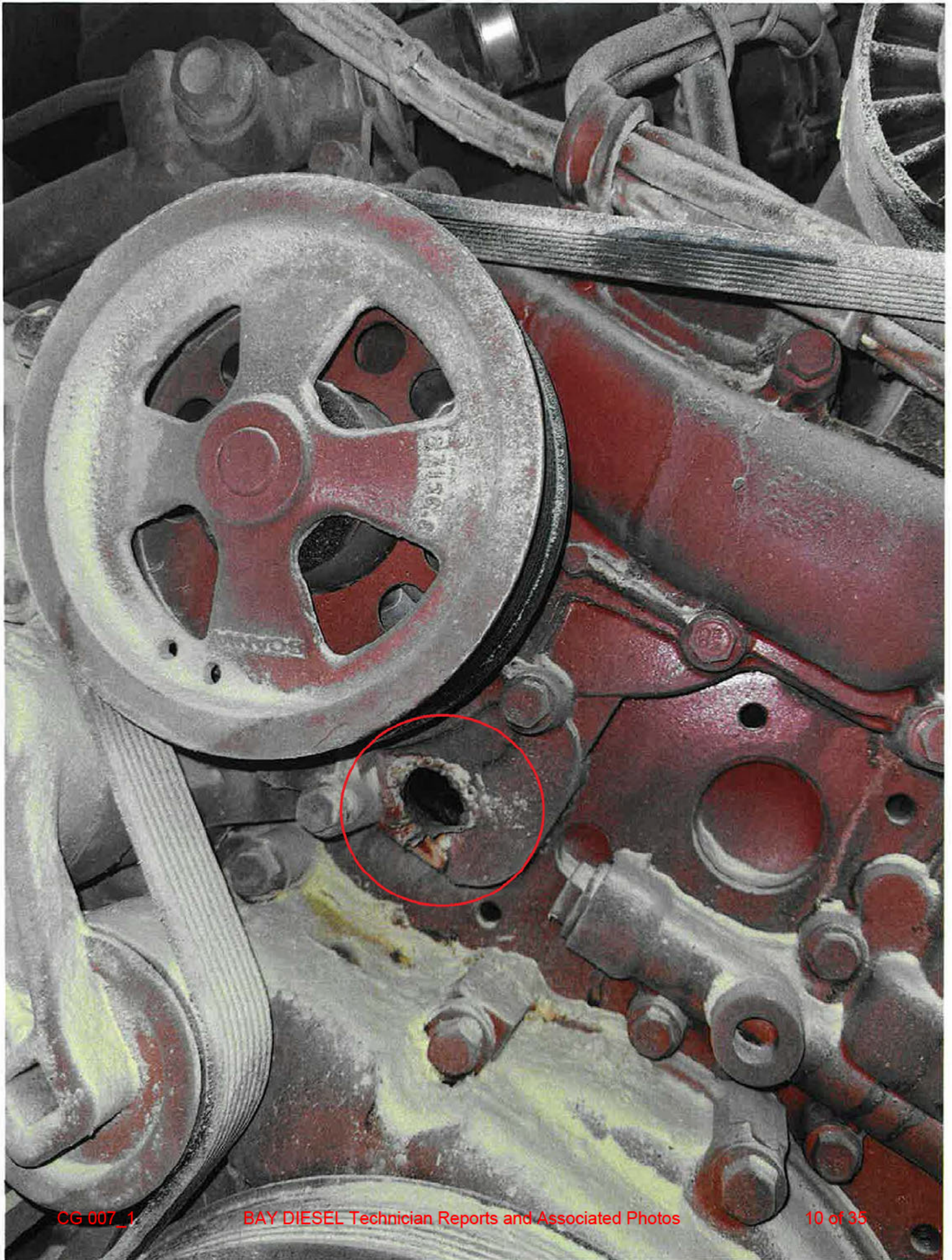
3736 COOK BOULEVARD
CHESAPEAKE, VA 23323
(757) 485-0075
(757) 485-0232 FAX

3024 WENTWORTH AVENUE NW
ROANOKE, VA 24021
(540) 613-0921
FAX (540) 301-3602

700 SEMMES AVENUE
RICHMOND, VA 23224
(804) 230-3495
FAX (804) 230-3497







BAY D ESEL000001



EQUIPMENT SERVICE REPORT
Diesel Engine & Generator Parts, Service, & Sales
 800-215-4005

QA-2004 rev 06.2016

Work Order Number

13010294

CUSTOMER

City Cruises

LOCATION

Waterside Dock
 "Spirit of Norfolk"

CITY

Norfolk, VA

CONTACT

TELEPHONE

SCHEDULED

P.O. NO.

EQUIP	MFR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
PME	Scania	D116 042M	1070163				10391

WORK REQUESTED:	RECOMMENDATIONS
Install Water Pump and T-Stats, test	
	- Replace left bank turbo
	- Replace both turbo supply lines (oil)
CONDITIONS FOUND & WORK PERFORMED: Cleaned mating surfaces on block. Installed water pump and mounting plate (as assembly) with new seals. Removed old thermostat, cleaned housing, installed new w/new seals. Connected water lines and filled coolant, bleeding air while filling. Installed customer supplied belt. Checked fluid levels and started engine. Water pump and assembly is not leaking at this time, however, found a damaged turbo supply line on left bank turbo. Shut engine down, assessed turbochargers, LB turbo has excessive oil on compressor side, supply line is cut. RB turbo looks ok, but evidence of oil on supply line as well. Recommend replacing LB turbo and both supply lines.	

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

TIME	TECH	DATE	TIME	TECH	DATE	TIME	TECH	DATE	TIME
		5/17/22	1230						

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1004 HOLLY SPRINGS AVE
 RICHMOND, VA 23224
 (804) 230-3495
 FAX (804) 230-3497

STATEMENT OF WORK REPORT

QA-2004 rev 06.2016



Diesel Engine & Generator Parts, Service, & Sales

800-215-4005

Work Order Number

1210294

CUSTOMER

City Cruises

CONTACT

LOCATION

Waterside Dock

TELEPHONE

CITY

"Spirit of Norfolk"

SCHEDULED

Norfolk, VA

P.O. NO.

EQUIP	MFR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
PME	Scania	D116 042M	1070163				10391

WORK REQUESTED:	RECOMMENDATIONS
Replace LD Turbo, Install upgraded turbo supply lines	
CONDITIONS FOUND & WORK PERFORMED: Removed old LD turbocharger; exhaust piping bolts broke off, replaced with new. Cleaned mating surfaces, installed new turbo with gaskets. Clockwise turbo to correct orientation, tightened all bolts. Installed new turbo supply lines with gaskets. Installed turbo drain pipe with new gaskets. Installed air filter. Started engine to test, witnessed by customer. No leaks found at water pump or turbos. Engine runs well, stack appears clear. Customer is satisfied with repairs.	

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

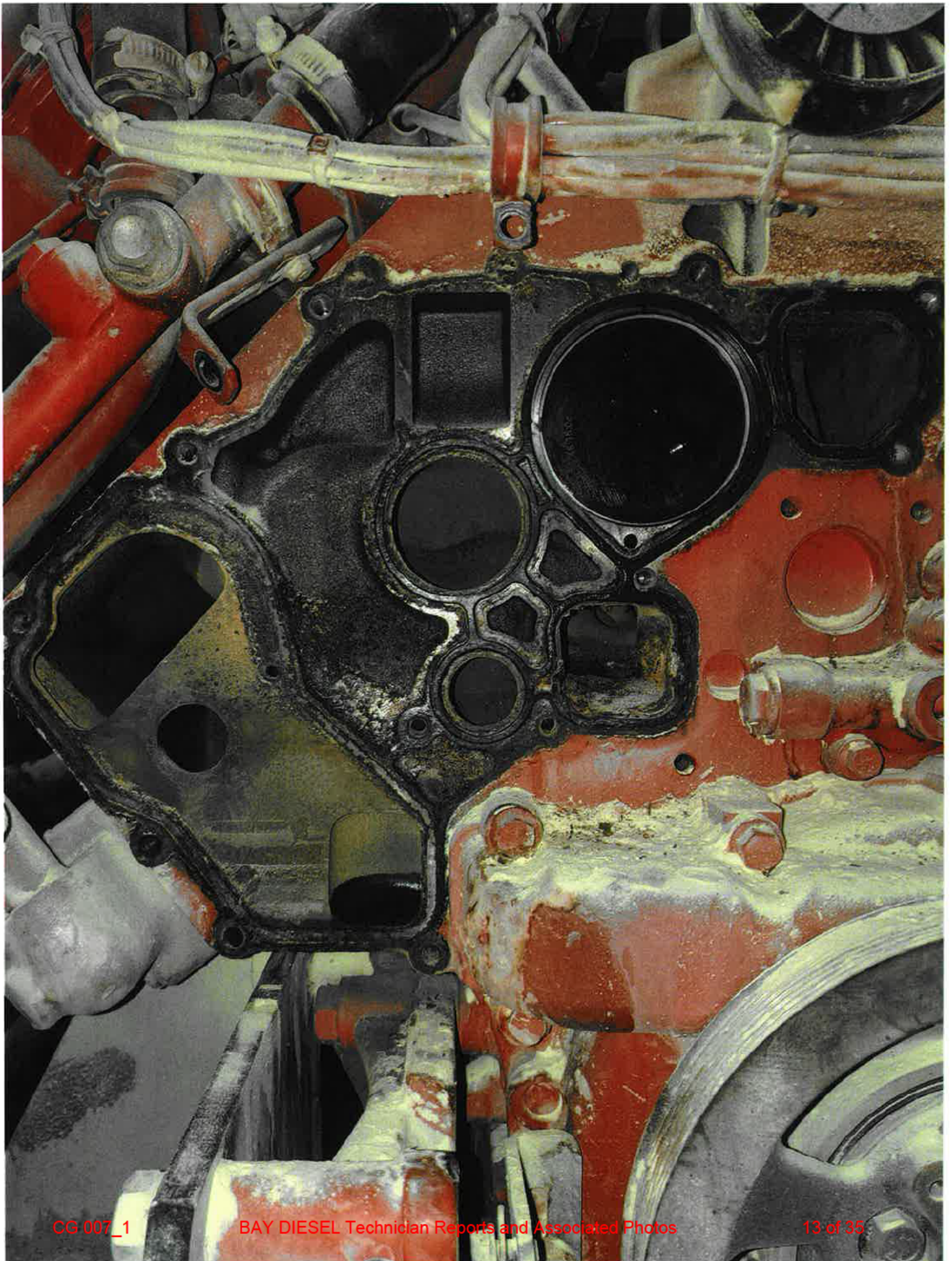
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	1/19/22	0800						

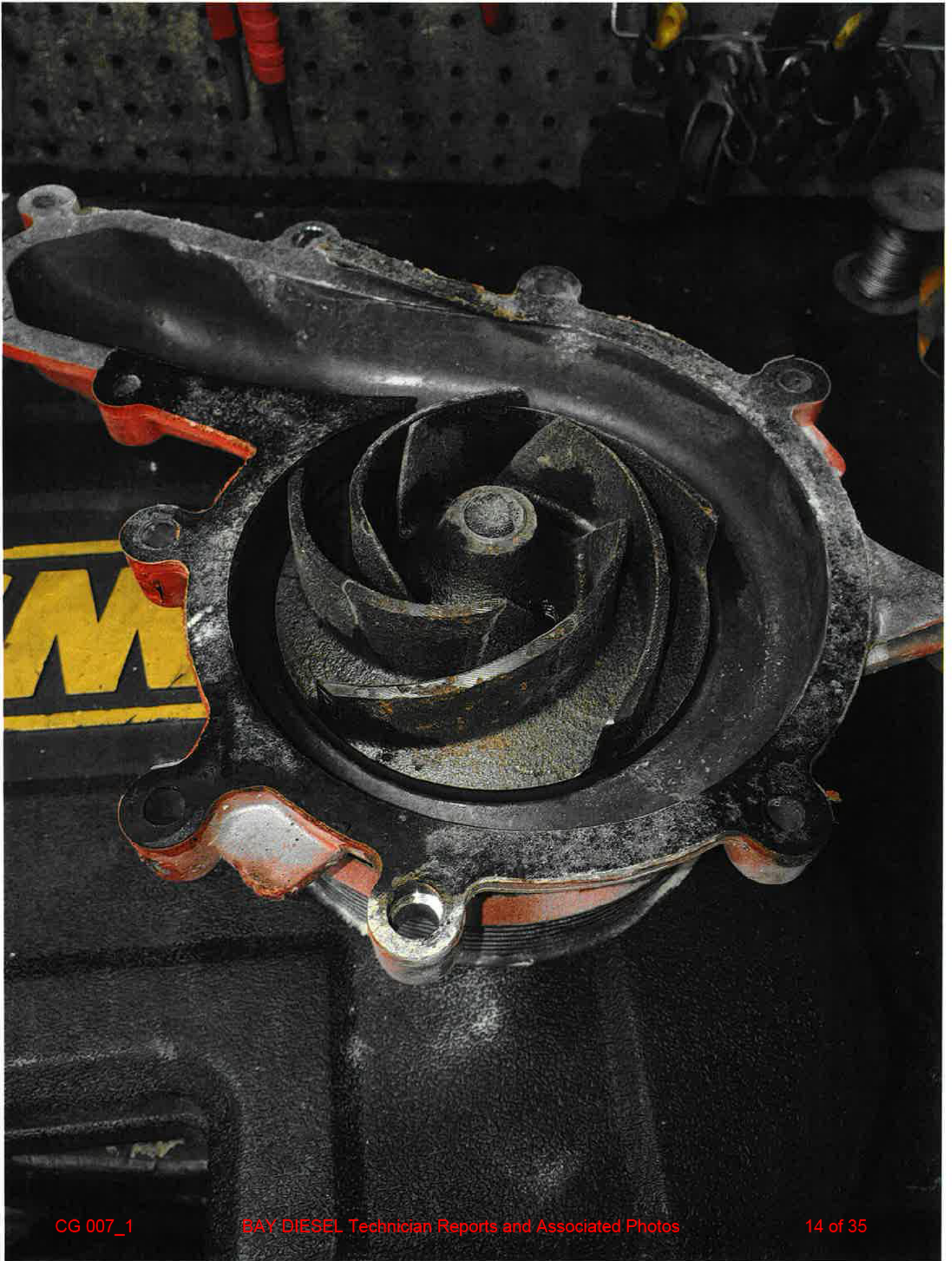
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	5/18/22							
OWNER REPRESENTATIVE - SIGN	DATE		OWNER REPRESENTATIVE - SIGN	DATE		OWNER REPRESENTATIVE - PRINT	DATE	

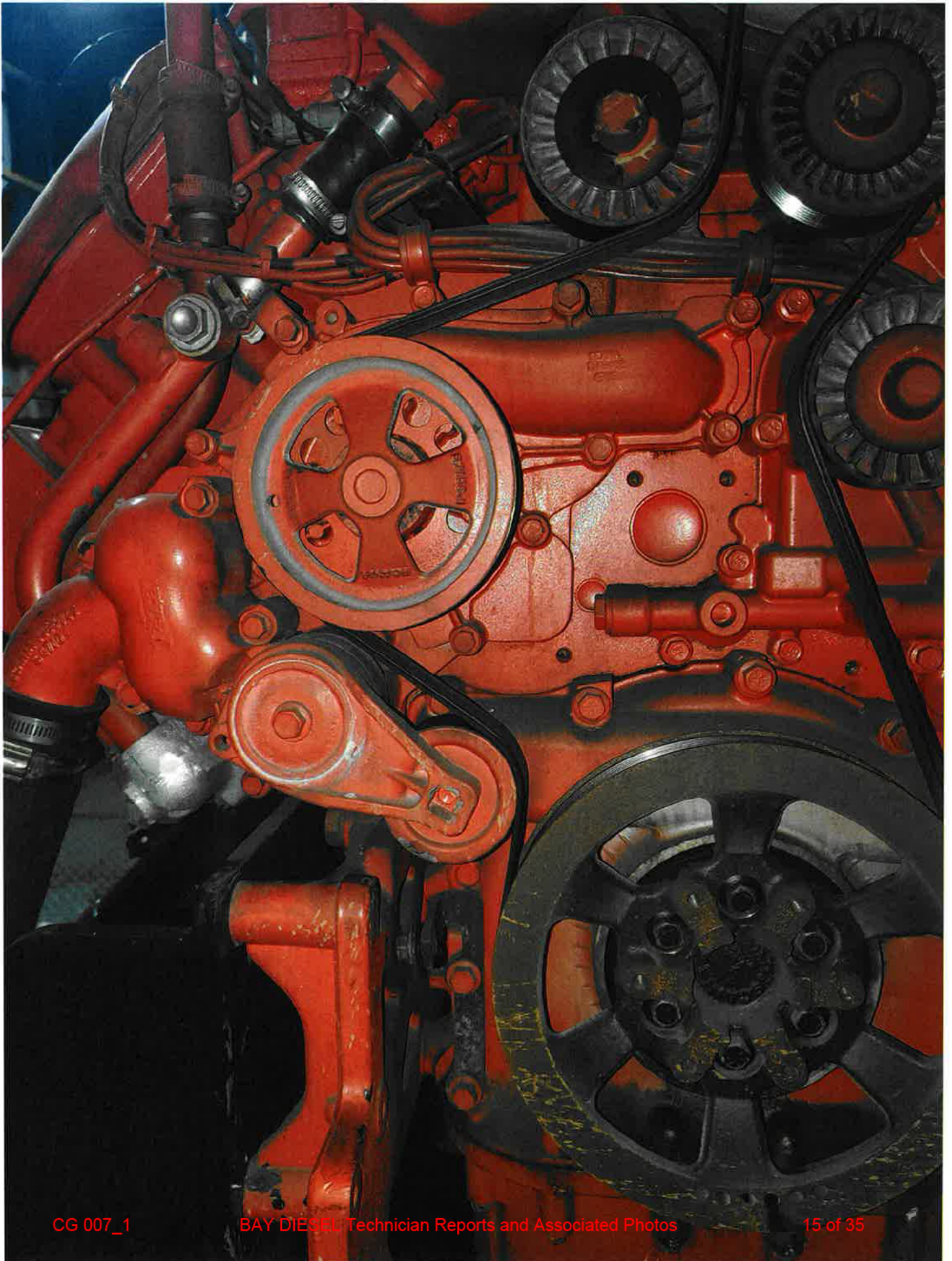
373 CHESAPEAKE, VA 23323
(757) 485-0075
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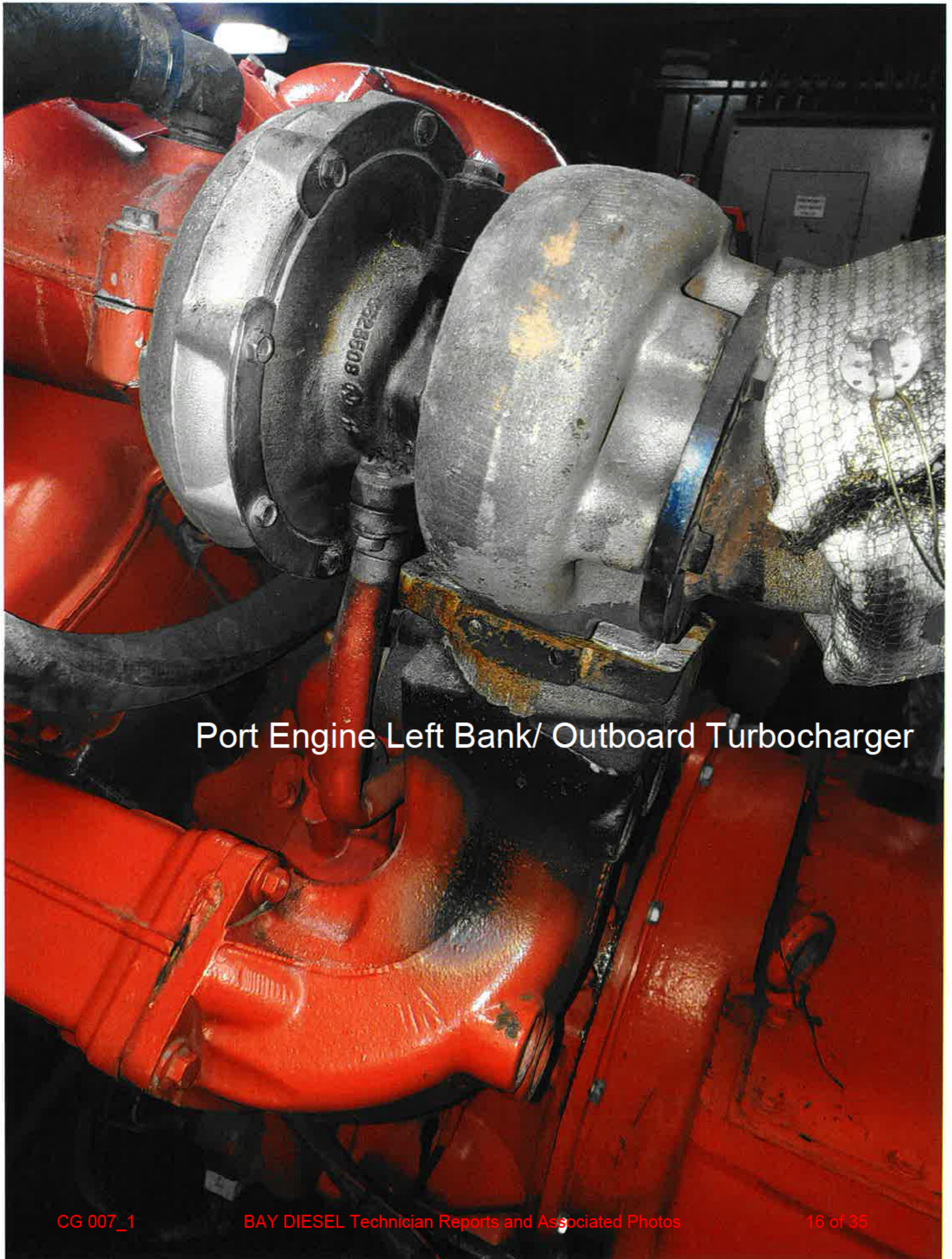
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FAX (804) 230-3497

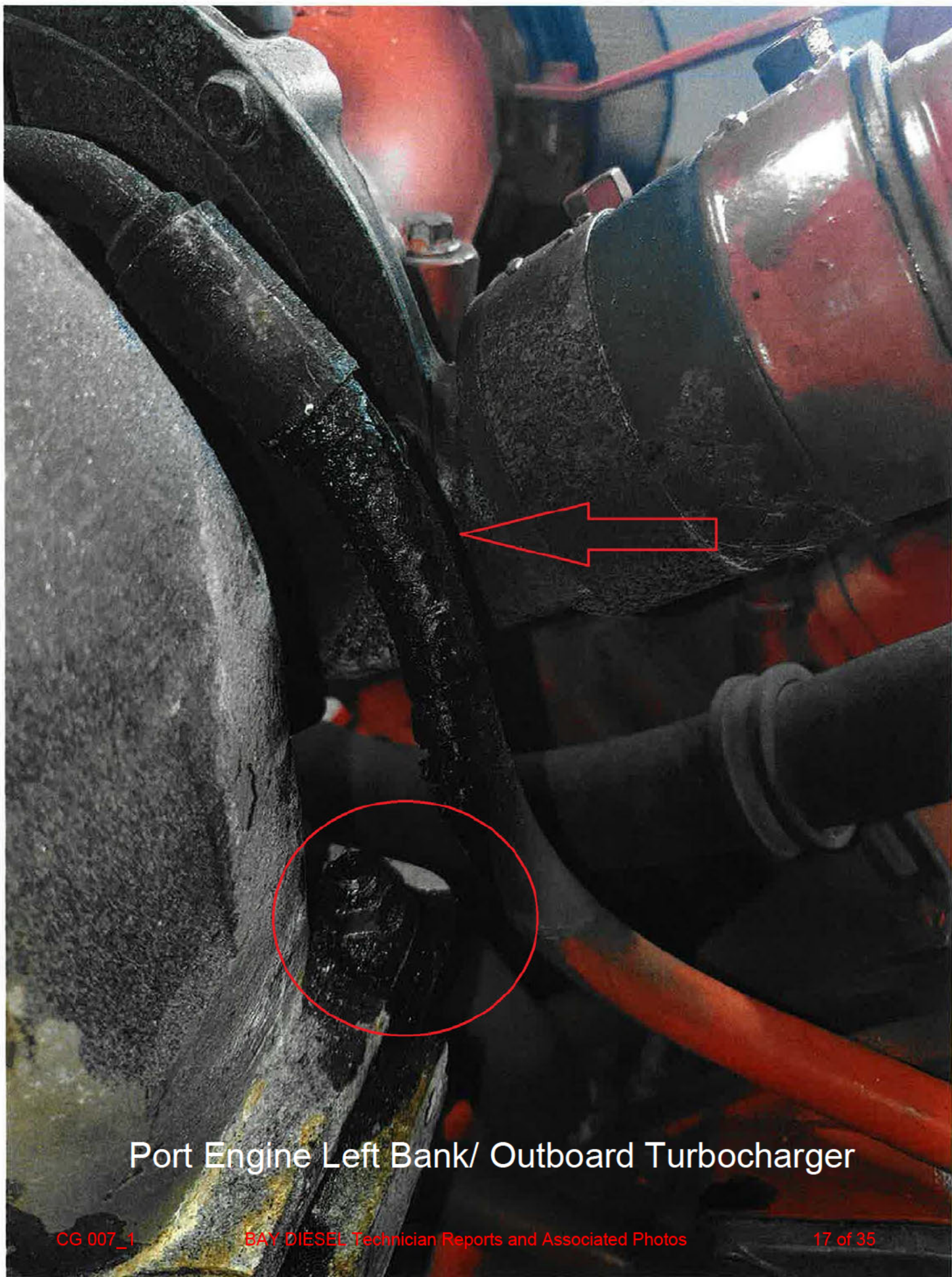




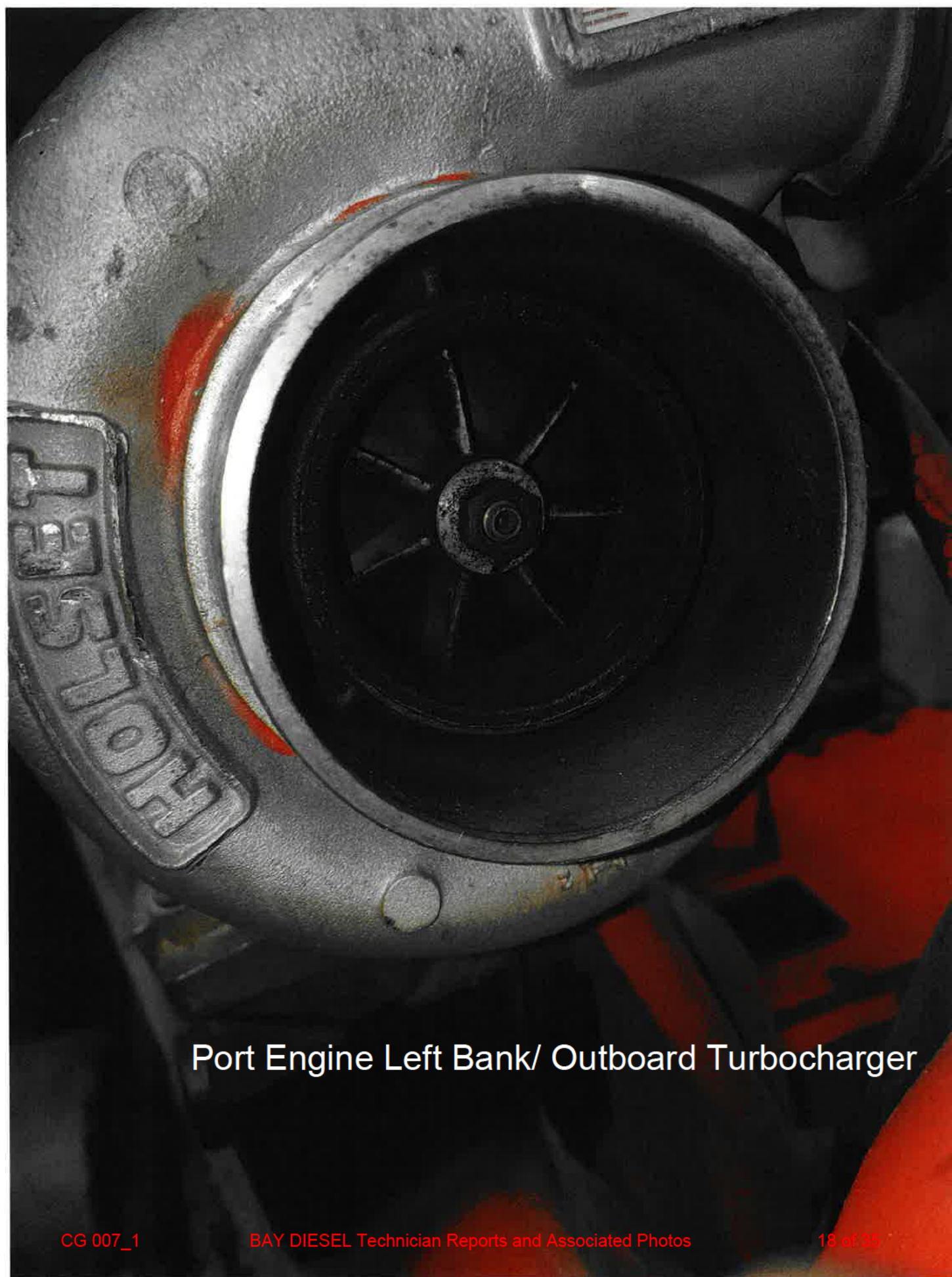




Port Engine Left Bank/ Outboard Turbocharger



Port Engine Left Bank/ Outboard Turbocharger

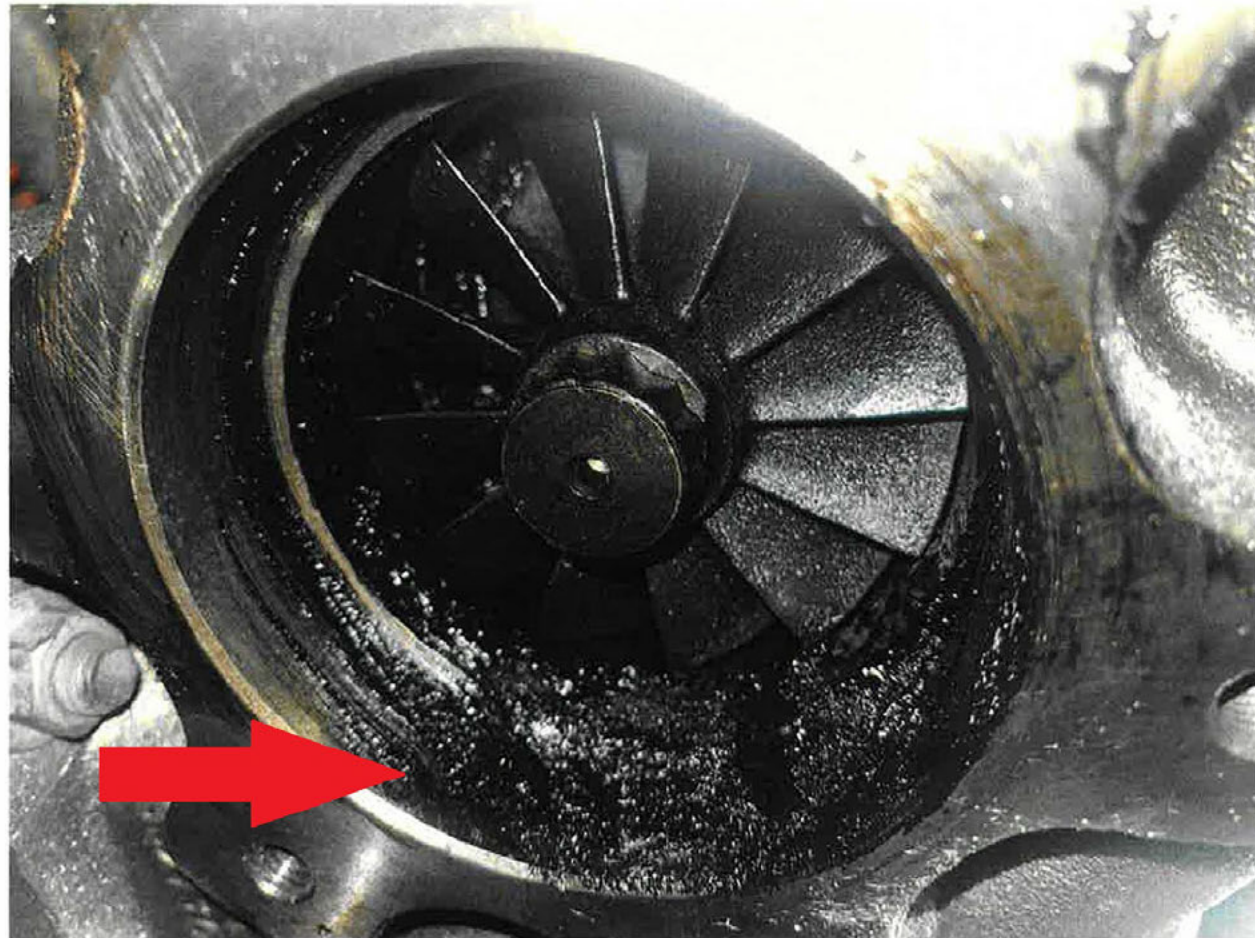


Port Engine Left Bank/ Outboard Turbocharger

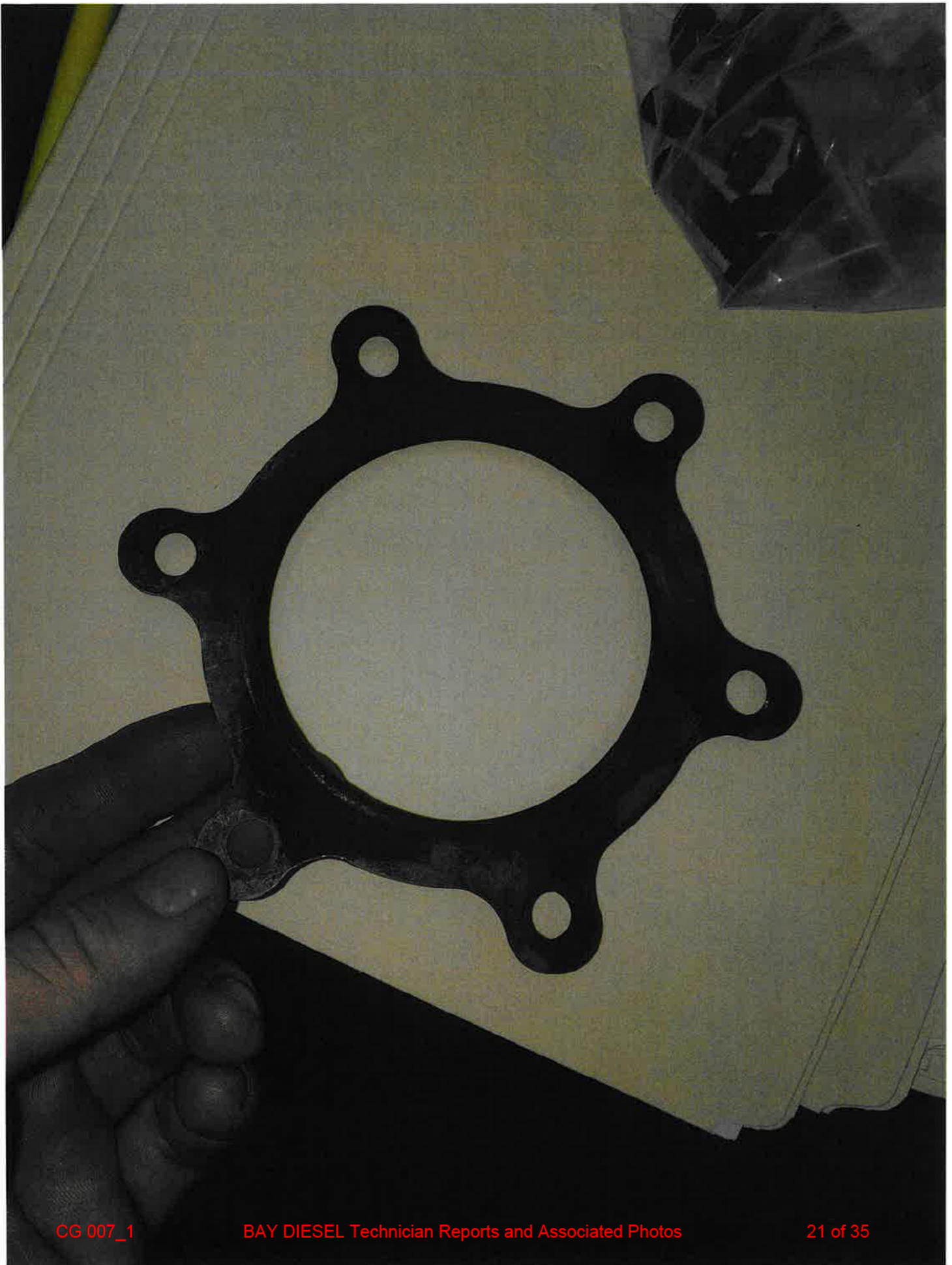


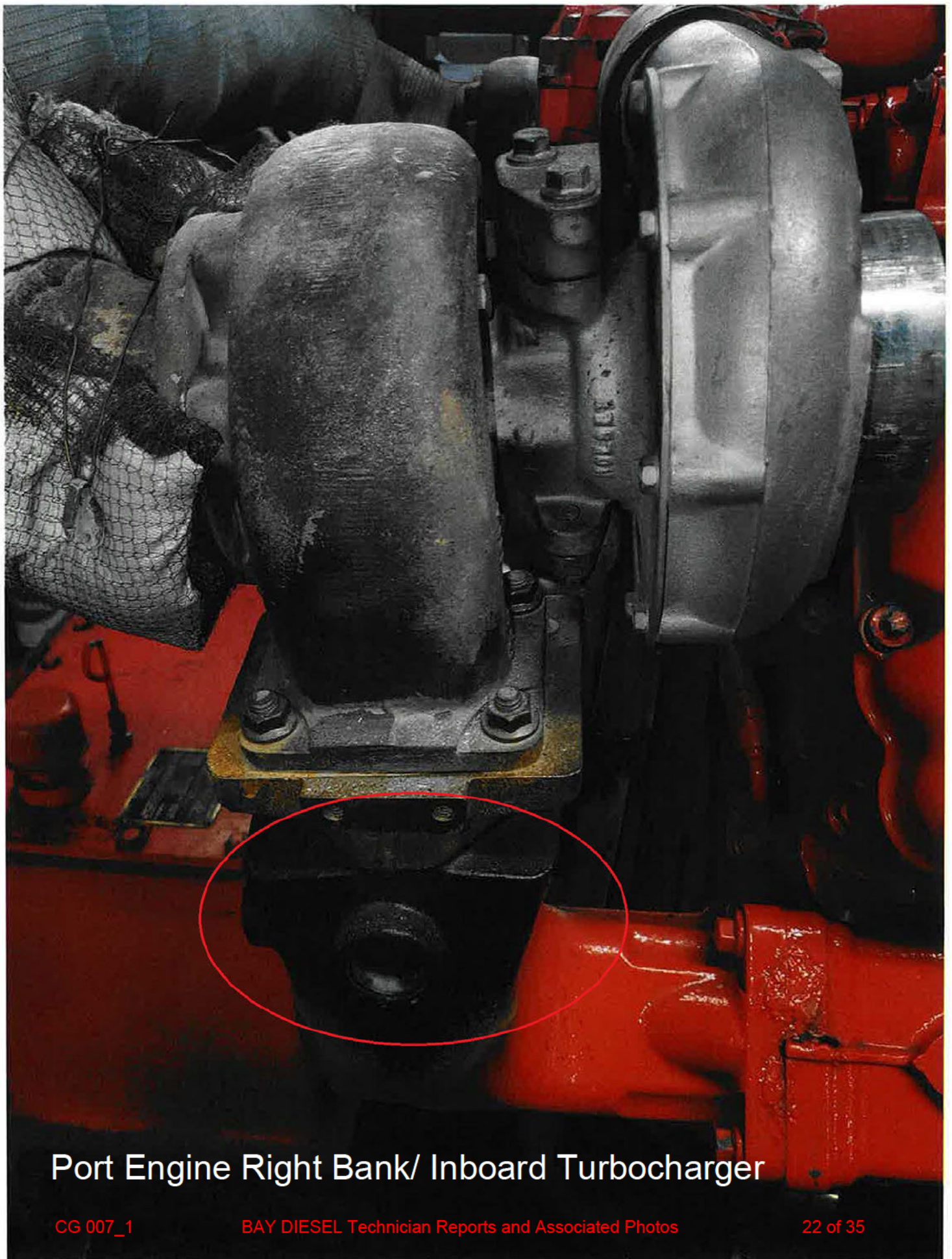
Port Engine Left Bank/ Outboard Turbocharger

Port Engine Left Bank Outboard Turbocharger



BAY DIESEL000041





Port Engine Right Bank/ Inboard Turbocharger



EQUIPMENT SERVICE REPORT
Diesel Engine & Generator Parts, Service, & Sales
800-215-4005

Work Order Number
10294

CUSTOMER Hornblower
 LOCATION Waterside
"Spirit of Norfolk"
 CITY Norfolk

CONTACT [REDACTED]
 TELEPHONE [REDACTED]
 SCHEDULED [REDACTED]
 P.O. NO. [REDACTED]

EQUIP	MFGR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
PME	Scania	D11G042M	1070163				

WORK REQUESTED:	RECOMMENDATIONS
Diag excessive blow by / Smoke in Crankcase	Remove all running gear, Rocker boxes, Intake manifolds, Exhaust tank, Remove No 3 Main Bearings & Inspect The bearings has some debris Embedded. The Crankshaft felt good. Remove NO 2 & 3 Left & Right Heads. 124 L&R are still holding the Exhaust on. Bore both Astercoiders to BDC to be cleaned.
CONDITIONS FOUND & WORK PERFORMED:	
Service Engine Pulled Valve Covers Four Sign of Moisture Under Valve Covers but the oil was not fully emulsified. Drained oil at bottom of pan & Found coolant in the oil pan. Drained all oil to Remove Oil Pan. Once Pan was removed I found No 2 LB cylinder was leaking coolant above the piston & going past the rings into the crankcase. While Under the Engine I found that all of the liners have significant scoring of the liner & transfer of Piston Skirt material to the Liners. Began Disassembly Of engine to perform an Overhaul.	

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

T I M E	TECH	DATE	TIME	TECH	DATE	TIME	TECH	DATE	TIME
		THU 5/19/22	0800 1700		5/19/22	1130 1700			
			5/19/22 DATE						

3736 COOK BOULEVARD
 CHESAPEAKE, VA 23323
 (757) 485-0075
 (757) 485-0232 FAX

3024 WENTWORTH AVENUE NW
 ROANOKE, VA 24021
 (540) 613-0921
 FAX (540) 301-3602

1004 HOLLY SPRINGS AVE
 RICHMOND, VA 23224
 (804) 230-3495
 FAX (804) 230-3497

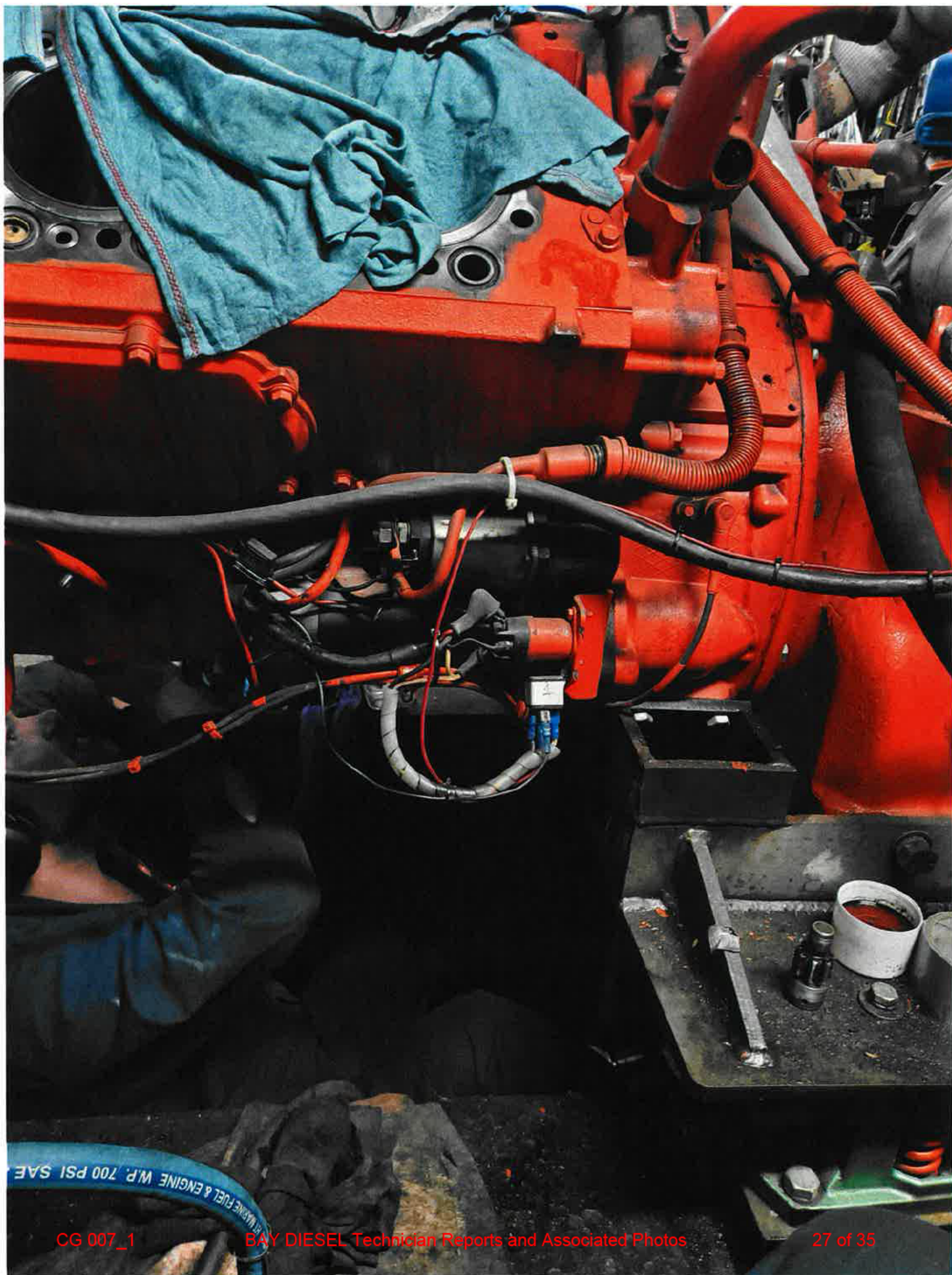
of a marine casualty investigation shall be admissible as evidence in any proceeding, other than an administrative proceeding initiated by the United States, 46 U.S.C. §6308.

5/18/22 9:27 PM

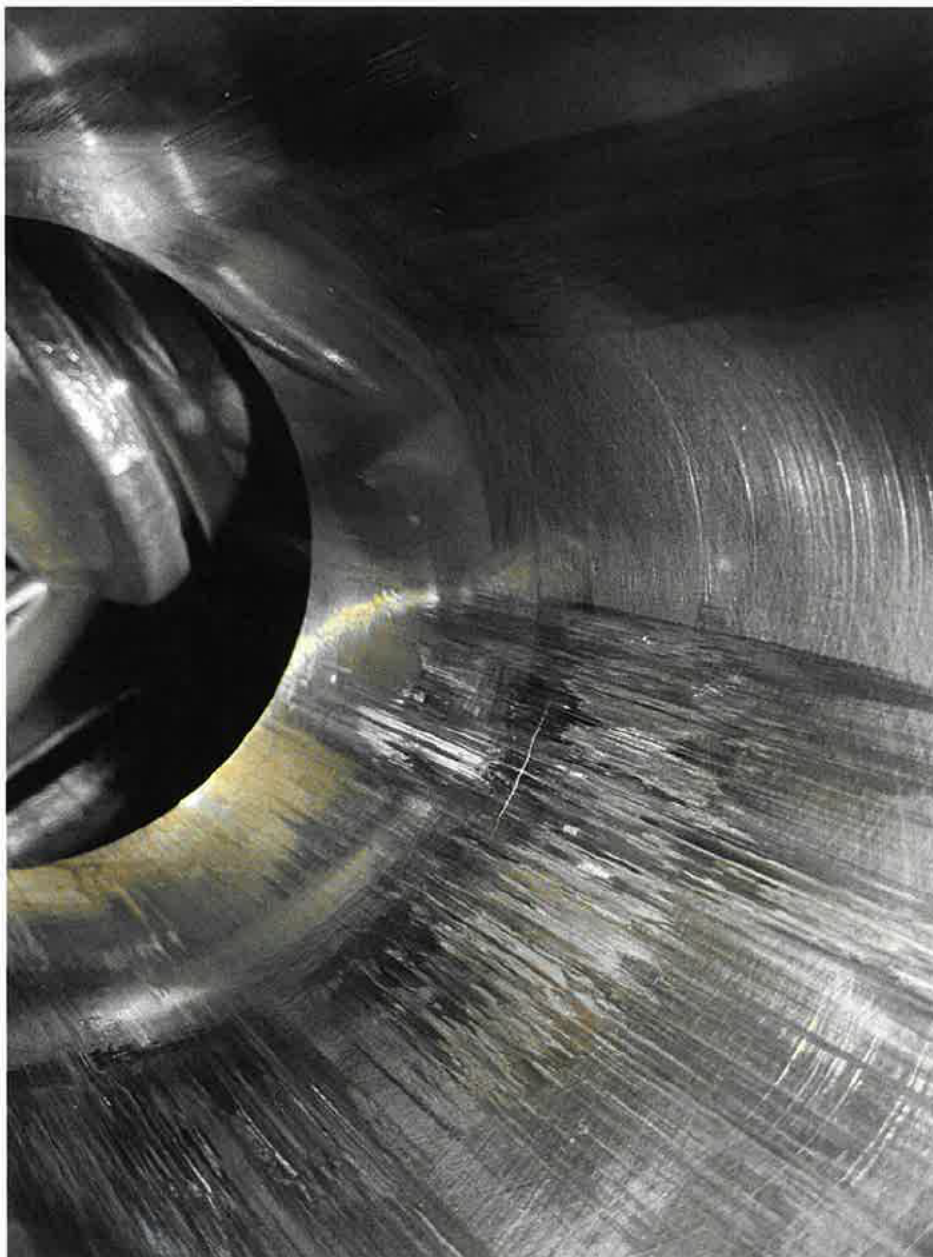


**Port
Engine
Left Bank/
Outboard**











EQUIPMENT SERVICE REPORT
Diesel Engine & Generator Parts, Service, & Sales
 800-215-4005

Work Order Number
 WOL294

CUSTOMER Hornblower
 LOCATION Waterside
 CITY "Spirit of Norfolk"
Norfolk

CONTACT [Redacted]
 TELEPHONE [Redacted]
 SCHEDULED [Redacted]
 P.O. NO. [Redacted]

EQUIP	MFGR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
PME	Scania	D116042M	1070163				10,345

WORK REQUESTED:	RECOMMENDATIONS
Overhaul PME	
CONDITIONS FOUND & WORK PERFORMED:	
Picked up Pistons from Shop brought to boat Cleaned liner bore. Installed liners. Secured shaft. To get the main bearing caps down we had to pull the engine mount off of the front to get to the side bolts. Had to remove the ECM & starter as well to get to side bolts. Installed new main bearings & thrust washers. Removed cam follower cables & followers. Covered engine & cleaned up engine room	

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

T	TECH	DATE	TIME	TECH	DATE	TIME	TECH	DATE	TIME
I M E	[Redacted]	Sat 5/21/22	0700	[Redacted]	5/21/22	0700	[Redacted]	[Redacted]	[Redacted]
			1430			1430			

TECHNICIAN - PRINT 5/21/22 DATE [Redacted] DATE [Redacted]
 OWNER REPRESENTATIVE - PRINT

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EQUIPMENT CASE REPORT
Diesel Engine & Generator Parts, Service, & Sales
 800-215-4005

QA-2004 rev 06.2016

Work Order Number

W010294

CUSTOMER Hornblower
 LOCATION Water Side
"Spirit of Norfolk"
 CITY Norfolk

CONTACT [Redacted]
 TELEPHONE
 SCHEDULED
 P.O. NO.

EQUIP	MFR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
PME	Scania	DI 16 042M	1070163				10,375

WORK REQUESTED:	RECOMMENDATIONS
Overhaul PME	Main Bearing - 90 NM + 90°
	Main Bearing Side bolts - 180 NM
	ROD Bolts - 50 NM + 90°
CONDITIONS FOUND & WORK PERFORMED:	Liner Protection Min -
Ringer up Piston. Install Piston, Torque 4 rods	Liner Protection Max -
to Spec. Remove Front mounts to install Main	Tappet shaft - 59 NM
beams Side bolts. Torque Mains to Spec.	
Cleanse Misc parts. Went back to Shop to pickup	
Parts that came in. Pick up Heads & bowls to engine room.	
Cleanse Bolts & Covers. Cleanse Cam Packets. Pick up	
for Cylinder Heads.	

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

T	TECH	DATE	TIME	TECH	DATE	TIME	TECH	DATE	TIME
E	[Redacted]	MON 5/23/22	0700 1730	[Redacted]					

TECHNICIAN - PRINT
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EQUIPMENT SERVICE REPORT
Diesel Engine & Generator Parts, Service, & Sales
 800-215-4005

QA-2004 rev 05.2016

Work Order Number
 W010294

CUSTOMER Hambler
 LOCATION Waterside
"Spirit of Norfolk"
 CITY _____

CONTACT _____
 TELEPHONE _____
 SCHEDULED _____
 P.O. NO. _____

EQUIP	MFGR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
PME	Scania	DI16042M	1070163				10,395

WORK REQUESTED:	RECOMMENDATIONS
Overhaul PME	Piston Cooling Jets - 23 NM Head - 60 NM - 150 NM - 250 NM + 90° Injectors - 20 NM + 75° Oil Cooler - Rocker Brackets - 40 NM + 60° Rockers - 105 NM Thrust - Rocker Box - 26 NM EXH Valve - 0.70 MM INT Valve - 0.45 MM Valve Locknut - 35 NM Injector Locknut - 39 NM
CONDITIONS FOUND & WORK PERFORMED:	
Installed Piston Cooling Jets, Installed Heads, Installed Injectors, Pistons, Rocker bearing bracket, Rockers, Rocker boxes, Installed Oil Cooler. Ran tune up, Cleaned Oil Pan, Installed Injector Harness, Checked Thrust on Crank.	

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

T	TECH	DATE	TIME	TECH	DATE	TIME	TECH	DATE	TIME
E		Tue 5/24/22	0700 1730	C. Wynn		0700			

 DATE 5/24/22
 DATE _____

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P.O. NO.

DATE _____

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EQUIPMENT SERVICE REPORT
Diesel Engine & Generator Parts, Service, & Sales
 800-215-4005

QA-2004 rev 06.2016

Work Order Number

W010294

CUSTOMER Hornblower
 LOCATION Waterside
"Spirit of Norfolk"
 CITY _____

CONTACT _____
 TELEPHONE _____
 SCHEDULED _____
 P.O. NO. _____

EQUIP	MFGR	MODEL NUMBER	SERIAL NUMBER	SPEC - AR - CPL	KW/HP	VOLTAGE	HOURS
PME	Scania	DI 16042M	1070163				10,395
SME	Scania	DI 16042M	1070216				10,420

WORK REQUESTED:	RECOMMENDATIONS
PME Overhaul Engine	Engine is good to go back into service.
CONDITIONS FOUND & WORK PERFORMED:	Crew should keep eye on RB turbo on PME
Filter Oil, Replace Filters, Sea trial engine.	Just as a precaution
RB turbo had some oil at the bottom of the compressor housing but it went away. The oil did not come back. The oil was more like a residue however we are going to order a Turbo to replace it with. All pressures & temps were normal & engine had a clear exhaust. Change oil & filters after sea trial.	Until the replacement goes on.
Change Alarms on Both Main engines for upper alarm limit at too high coolant temp to 100°C Lower alarm limit at too high coolant temp to 93°C	

QTY	PART NUMBER	DESCRIPTION	WHSE	QTY	PART NUMBER	DESCRIPTION	WHSE

TIME	TECH	DATE	TIME	TECH	DATE	TIME	TECH	DATE	TIME
0700		5/26/22	0700		5/26/22	0700			

TECHNICIAN - PRINT

OWNER REPRESENTATIVE - PRINT

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Port Engine Right Bank/ Inboard Turbocharger

