

Everglades

DIESEL INJECTION SERVICE, Inc.

243 SOUTHWEST 33rd COURT • FORT LAUDERDALE, FLORIDA 33315 • TOLL FREE (800) 843-3931
PHONE (954) 522-1780 • FAX (954) 522-1781 • EMAIL: admin@evorgladesdiesel.com

FORT LAUDERDALE,
JULY 2, 2010

WESTERN BRANCH DIESEL, INC.
3504 SHIPWRIGHT'S STREET
PORTSMOUTH VA 23703

ATTN: MARK BUTLER

IN REGARDS TO 2 ROBERT BOSCH 12 CYLINDERS MTU PUMPS ASSY WE OFFER THE
FOLLOWING ESTIMATE:

DISASSEMBLE PUMPS FOUND WORN PLUNGER & BARRELS AND CONSTANT PRESSURE
VALVES

PLUNGERS & BARRELS HAVE EROSION MARKS ON THE HELIX AREA.

FOUND TWO CAMSHAFT CENTER BEARINGS WITH SCORES.

THE CAM WAS NOT DAMAGED ON THE BEARING JOURNALS.

ALL PARTS ARE AVAILABLE IN USA.

DELIVERY TIME ONE WEEK.

PLEASE ADVISE.

SINCERELY,

BILL GONZALEZ





INSPECTION REPORT

ZF MARINE, LLC
Richard Bowles, Technical Representative
15351 SW 29th Street, Suite 300
Miramar, FL. 33327
954 441-4064 Phone, 954 447-4140 Fax

DATE: 7/13/10

Attention To:
Mark Butler
Western Branch Diesel

MODEL: BW465
ZF P/N: 3085011026
S/N: 1093

WBD Purchase Order #4B294044

DESCRIPTION
<p>A. EXTERNAL INSPECTION:</p> <p>The wooden shipping container was in good condition, the transmission was secured to the container.</p> <p>The unit was not corrosion protected.</p> <p>B. INTERNAL INSPECTION:</p> <p>Overall the transmission internal components showed normal wear patterns. The unit is in need of a standard overhaul with the additional replacement of the following:</p> <ol style="list-style-type: none">1. Oil cooler is very corroded and requires replacement (see attached photo).2. Oil pump on this unit is an older discontinued version; the factory has advised that a newer design version of the pump should be installed for improved reliability.3. The clutch housing drivers on this unit are an older discontinued version; the factory has advised that a newer design version of the driver and end disc be installed to avoid failures of the clutch drum and ensure reliability. <p>D. RECOMMENDATIONS:</p> <ol style="list-style-type: none">1. Overhaul with new seals, clutches, bearings and senders per quotation SQ24758 / 2.2. Replace oil pump and clutch housing drivers with updated versions per factory recommendations.3. Reassemble and spin-test.





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MODEL: BW465

ZF P/N: 3085011026

S/N: 1094

WBD Purchase Order #4B294044

DESCRIPTION
<p>A. EXTERNAL INSPECTION:</p> <p>The wooden shipping container was in good condition, the transmission was secured to the container. The unit was not corrosion protected and the oil dipstick handle was broken off above the tube.</p> <p>B. INTERNAL INSPECTION:</p> <p>Overall the transmission internal components showed normal wear patterns. The unit is in need of a standard overhaul with the additional replacement of the following:</p> <ol style="list-style-type: none"> 1. Oil cooler is very corroded and requires replacement (see attached photo). 2. Oil pump on this unit is an older discontinued version; the factory has advised that a newer design version of the pump should be installed for improved reliability. 3. The clutch housing drivers on this unit are an older discontinued version; the factory has advised that a newer design version of the driver and end disc be installed to avoid failures of the clutch drum and ensure reliability. 4. Disc carrier on forward pinion has moderate to severe tab indentations from clutch plates (see attached photo). <p>D. RECOMMENDATIONS:</p> <ol style="list-style-type: none"> 1. Overhaul with new seals, clutches, bearings and senders per quotation SQ24758 / 2. 2. Replace oil pump and clutch housing drivers with updated versions per factory recommendations. 3. Replace forward pinion gear. 4. Reassemble and spin-test.



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STRIB

ZF Marine Transmission Testing and Certification



Repair Order #	32132	Date:	10-15-10
Model:	ZF 41.5	Ratio:	14L
Serial Number:	1094	Spec Number:	3085011031
Tested By: (print name)	Benito NUNEZ		
Time Start:	8:00	Time Finished:	10 ^{AM}

		Procedure	
Pass	Fail	All tests must be completed and data recorded.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Start motor at 600 RPM and verify the presence of pressure in forward and reverse.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Increase the motor speed to 1500 RPM and maintain it until the internal oil temperature is 49-70 °C (120-158 ° F)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3 Reduce speed to 600 RPM. Perform 10 forward/reversing cycles. Insure that the engagement is instantaneous but soft. Confirm that the control lever moves without binding.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4 Confirm that the pump pressure is steady (max variation 0.5 bar).	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5 Record pressures at 49-70 °C (120-158 ° F) oil temperature. EW= engine wise CEW= counter engine wise Refer to Type Plate or Manual for Maximum Input RPM	

Speed (not to exceed max allowed) RPM	Clutch Apply Pressure (Bar)		Pump Pressure (Bar)	
	EW	CEW	NEUTRAL	LUBRICATION (if required for troubleshooting or by factory)
600	17.2	17.2	6.5	
1500	17.2	17.9	7.2	
2500 (if attainable)	/	/	/	/
3500 (if attainable)	/	/	/	/

6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pressurés (Refer to transmission manual for pressure specifications and monitoring points.)
7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Noise (any unusual noise.)
8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Visual check of unit for leaks. (No leakage should be detected.)
9	<input checked="" type="checkbox"/>		Record Temperature at end of test: Oil Temp: (C) 50
10	<input checked="" type="checkbox"/>		Remove oil and test filter. Clean suction filter and install new lubrication filter (if applicable).

Description of failures and possible causes:

Repair Procedure:

Failure Codes:

Symptom	Location	Type	Cause
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Tested By Signature:		Date:	10-15-10
Checked By Signature:		Date:	10/15/10

Port

ZF Marine Transmission Testing and Certification



Repair Order #	32132	Date:	10-26-10
Model:	ZF 465	Ratio:	1.46
Serial Number:	1093	Spec Number:	3085 011 031
Tested By: (print name)	BRUNO NUNEZ		
Time Start:	1:00	Time Finished:	1:20

		Procedure	
Pass	Fail	All tests must be completed and data recorded.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Start motor at 600 RPM and verify the presence of pressure in forward and reverse.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 Increase the motor speed to 1500 RPM and maintain it until the internal oil temperature is 49-70 °C (120-158 ° F)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3 Reduce speed to 600 RPM. Perform 10 forward/reversing cycles. Insure that the engagement is instantaneous but soft. Confirm that the control lever moves without binding.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4 Confirm that the pump pressure is steady (max variation 0.5 bar).	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5 Record pressures at 49-70 °C (120-158 ° F) oil temperature. EW= engine wise CEW= counter engine wise Refer to Type Plate or Manual for Maximum Input RPM	

Speed (not to exceed max allowed) RPM	Clutch Apply Pressure (Bar)		Pump Pressure (Bar)	
	EW	CEW	NEUTRAL	LUBRICATION (if required for troubleshooting-or by factory)
600	18.2	18.2	6.5	
1500	18.3	18.3	6.8	
2500 (if attainable)	/	/	/	/
3500 (if attainable)	/	/	/	/

6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pressures (Refer to transmission manual for pressure specifications and monitoring points.)
7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Noise (any unusual noise.)
8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Visual check of unit for leaks. (No leakage should be detected.)
9	<input checked="" type="checkbox"/>		Record Temperature at end of test: Oil Temp: (C) 50
10	<input checked="" type="checkbox"/>		Remove oil and test filter. Clean suction filter and install new lubrication filter (if applicable).

Description of failures and possible causes:

Repair Procedure:

Failure Codes:

Symptom	Location	Type	Cause
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Tested By Signature:		Date:	10-22-10
Checked By Signature		Date:	10-22-10



Western Branch Diesel, Inc.
Detroit Diesel - Allison

(757)673-7100
(757)673-7191



Cust. Name: US Navy Panama City Date: 8/1/2011

Contact Name: Janet Coats e-mail

Equip. ID No.: B-Boat Oregon Iron Works

Work Request: R&R all fuel injectors and borescope the engine.

Qty	Labor Description	Qty	Labor Description
1	Prep Vessel for Work A/R		
12	R&R each valve cover		
12	R&R each fuel injector		
12	Borecope each cylinder bore		
1	Make adjustments as required		
1	Test run unit / Sea Trial A/R		
1	Cleanup from repairs		

Labor Total \$2,320.00

Misc Parts, Shop & Enviromental Charges **Other Charges** \$162.40

Please note that R&R stands for remove and reinstall

Qty	Part Description	Qty	Part Description
12	5500170260 O'Ring		
12	0000170660 CE Ring		

Parts as listed above **Parts Total** \$164.88

Please Note the following:

Total for the description of this quote for our repair order BBOAT82011 \$ **2,647.28**

This quotation does not include any material or labor that is not listed or described and does not include freight or sales tax. Misc. shop supplies and enviromental charges are included in the total unless otherwise stated. This quotation is good for 30 days. All shipments may be made on request (Pending material receipt) and will be FOB WBD stores (Unless otherwise stated). We thank you for the oppurtunity to quote the above in furnishing this requirement.

Authorized Signature: Mark F. Butler / Contracts **Date:** 8/1/2011

Acceptance Signature: _____ **Date:** _____

Purchase Order Number: _____

CUSTOMER PARTS QUOTATION
QUOTE#: Q1715824

WESTERN BRANCH DIESEL, INC
3504 SHIPWRIGHT ST.
PORTSMOUTH VA 23703

PAGE 1
OE0057
5/02/12
CUSTOMER COPY

(757) 673-7000 FAX (

03159
FOR: SEAWARD SERVICES INC
1850 SE 17TH ST SUITE 300
FT LAUDERDALE FL 33316
CONTACT:

PHONE: (954) 922-1688
FAX: (954) 922-2688

THIS QUOTE IS VALID THROUGH 5/31/12 UNLESS
MANUFACTURER HAS A MAJOR PRICE CHANGE.

ITEM	DESCRIPTION	GROUP/SER	QTY	SELL	EXT	WEIGHT	EXT
28	0030947404 AIR FILTER ELEMENT	P05	4	1772.06	7088.24	16.720	66.880
28	5205305069 SPEED TRANSMITTER	Q10	1	1425.06	1425.06	.598	.598

TOTALS 5 8513.30 67.478

(TOTAL DOES NOT INCLUDE APPLICABLE TAXES) TAX NOT INCLUDED



MAHLE
10/03-H
W2
165P

629



1001 3801 W 3552
1001 3801 W 3552

2540831



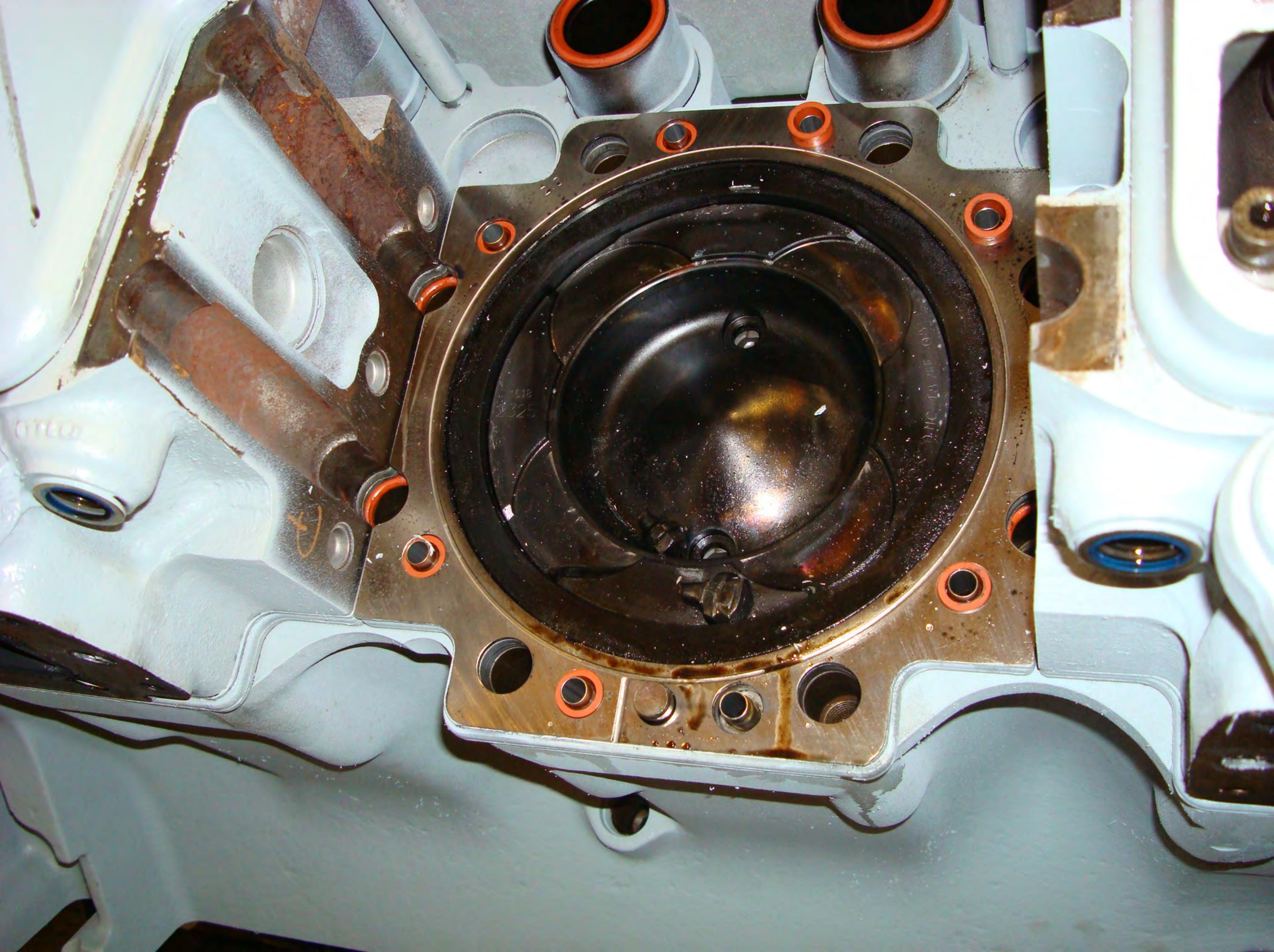
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UNITED STATES OF AMERICA







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