

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 05/13/2005	2. CONTRACT NO. (If any) DTMA1D00002	6. SHIP TO: Carl A. Heck		
3. ORDER NO. MDO0500006	4. REQUISITION/REFERENCE NO. PR600050059	a. NAME OF CONSIGNEE DOT/Maritime Administration, MAR-611		
5. ISSUING OFFICE (Address correspondence to) DOT/Maritime Administration, MAR-380 400 Seventh Street, SW., Room 7310 Washington DC 20590		b. STREET ADDRESS 400 Seventh Street, SW., Room 2119		
		c. CITY Washington	d. STATE DC	e. ZIP CODE 20590
7. TO: a. NAME OF CONTRACTOR		f. SHIP VIA		
b. COMPANY NAME Marine Design & Operations		8. TYPE OF ORDER		
c. STREET ADDRESS 357 Monroe Avenue, 2nd Floor		<input type="checkbox"/> a. PURCHASE REFERENCE YOUR:	<input type="checkbox"/> b. DELIVERY - Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
d. CITY Kenilworth	e. STATE NJ	f. ZIP CODE 07033-1124		
9. ACCOUNTING AND APPROPRIATION DATA - - X710 - 1 - 05 - 30 - - 40STW0 - 1600 - - 254T - - - - -		10. REQUISITIONING OFFICE DOT/Maritime Administration, MAR-611		

11. BUSINESS CLASSIFICATION (Check appropriate box(es))			
<input checked="" type="checkbox"/> a. SMALL	<input type="checkbox"/> b. OTHER THAN SMALL	<input checked="" type="checkbox"/> c. DISADVANTAGED	<input type="checkbox"/> d. WOMEN-OWNED
12. F.O.B. POINT Destination	14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS
13. PLACE OF			10 days % 20 days % 30 days % days %
a. INSPECTION	b. ACCEPTANCE		

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	SEE LINE ITEM DETAIL					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.		17(h) TOT. (Cont. pages)
	21. MAIL INVOICE TO: Ruby P. McPhaul				
	a. NAME DOT/Maritime Administration, MAR-330				
	b. STREET ADDRESS (or P.O. Box) 400 Seventh Street, SW., Room 7325				
	c. CITY Washington	d. STATE DC	e. ZIP CODE 20590	\$215,000.00	17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)		23. NAME (Typed) Benedict J. Burnowski TITLE: CONTRACTING/ORDERING OFFICER
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**ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION**

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IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 05/13/2005	CONTRACT NO. DTMA1D00002	ORDER NO. MDO0500006
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ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>Contractor is to purchase material and provide repair services</p> <p>Contractor is to purchase material and provide repair services to number 1 and 2 SSDGs IAW scope of work developed under TO-030.</p> <p>Contractor is to develop, submit for approval implement a test plan to ensure that each engine is fully working.</p> <p align="center"><i>Start Date</i> <i>End Date</i> 05/16/2005 09/30/2005</p> <p>Reference Requisition: PR600050059</p>	1.00	NTE	215,000.000	215,000.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17i) ⇒ \$215,000.00

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SECTION C -- DESCRIPTIONS AND SPECIFICATIONS

C.1 STATEMENT OF WORK

STALWART ENGINE OVERHAUL EFFORTS - Phase 2

SCOPE OF WORK:

#1 Prime Mover for #1 Generator

Make: Caterpillar

Model: D398

S/N 35Z00953 Engine Hrs: 65381 Last overhaul: 57054 Turbos changed: 34314 hrs

Generator

Manufacturer: KATO

Model: 600-800361111 Type: 21163

Preliminary work list:

1. Jacket water inlet elbow to oil cooler is cracked and must be replaced (2535)
2. Both fore and aft plus inboard to outboard jacket water outlet flex hoses need to be replaced (2533, 2532).
3. Intercooler jacket water return pipe, "O" Rings and hold down rings and clamps need to be replaced due to freeze damage (2506)
4. Intercoolers, 2 ea, require boil out and pressure testing. If they are damaged they must be replaced.
5. Turbocharger core replacements 2 ea. (2505)
6. Re-support the exhaust piping. Align the expansion joint so there is tension at rest and no compression or tension at full load. (2518 & 2505)
7. Replace the freeze damaged AMOT J/W temperature regulating valve. (#1 AMOT valve)
8. Pressure test the J/W - S/W heat exchanger for leaks resulting from freeze damage. If leaks are found the tube bundle must be removed, cleaned, repaired or replaced.
9. Replace the thermostatic control valves on the engine.
10. Replace all cylinder heads on the engine with reconditioned ones.
11. Replace the raw water and jacket water pumps on the engine with reconditioned ones.
12. Remove, test, set, reinstall all fuel pumps on the engine due to water contamination. (2530)
13. Replace a bad fuel pump.
14. Remove, repair and reinstall the governor actuator.
15. Replace all air, oil and fuel filters on the engine. Replace rusted fuel lines on the engine. (2530)
16. Clean the crankcase breather.
17. Refill the engine with water for testing.
18. Treat the water when the system is tight.
19. The underside of the head reveals a proper burn and no excessive wear on the valves. (2520)
20. Removal of the piston and connecting rod bearings revealed good bearing wear, an unscored piston skirt, a clean piston underside and freely moving rings.
21. Reinstall #6 and #8 pistons, rods and bearings after thorough cleaning. Do not remove the remaining pistons from this engine.
22. To insure no damage to the remaining heads, pistons and rods I recommend removing the fuel nozzles from the remaining cylinders and blow the engine down to remove any contaminants in the combustion chambers prior to starting the engine.

#2 Prime Mover for #2 Generator

Make: Caterpillar

Model: D398

S/N 35Z00920 Engine Hrs: 68577 Last overhaul: 59808 Turbos changed: ? hrs

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Generator
 Manufacturer: KATO
 Model: 600-800361111 Type: 21163

Preliminary Work List:

23. Jacket water inlet elbow to oil cooler is cracked and must be replaced (2536,2537, 2538)
24. Both fore and aft plus inboard to outboard jacket water outlet flex hoses need to be replaced (2528, 2529).
25. Intercooler jacket water return pipe, "O" Rings and hold down rings and clamps need to be replaced due to freeze damage (2517)
26. Intercoolers, 2 ea, require boil out and pressure testing. If they are damaged they must be replaced.
27. Turbocharger core replacements 2 ea.
28. Re-support the exhaust piping. Align the expansion joint so there is tension at rest and no compression or tension at full load.
29. Replace the freeze damaged AMOT J/W temperature regulating valve. (#2 JW Amot valve)
30. Pressure test the J/W - S/W heat exchanger for leaks resulting from freeze damage. If leaks are found the tube bundle must be removed, cleaned, repaired or replaced.
31. Replace the thermostatic control valves on the engine.
32. Replace all cylinder heads on the engine with reconditioned ones.
33. Replace the raw water and jacket water pumps on the engine with reconditioned ones.
34. Remove, test, set, reinstall all fuel pumps on the engine due to water contamination. (2530)
35. Replace a bad fuel pump.
36. Remove, repair and reinstall the governor actuator.
37. Replace all air, oil and fuel filters on the engine. Replace rusted fuel lines on the engine. (2526, 2527)
38. Clean the crankcase breather.
39. Refill the engine with water for testing .
40. Treat the water when the system is tight.
41. The underside of the head reveals a proper burn and no excessive wear on the valves. (2523)
42. Removal of the piston and connecting rod bearings revealed good bearing wear, an unscored piston skirt, a clean piston underside and freely moving rings.(#8 skirt, #8 skirt downside)
43. Reinstall #6 and #8 pistons, rods and bearings after thorough cleaning. Do not remove the remaining pistons from this engine.
44. To insure no damage to the remaining heads, pistons and rods I recommend removing the fuel nozzles from the remaining cylinders and blow the engine down to remove any contaminants in the combustion chambers prior to starting the engine.

Pricing:

Parts:

JACKET WATER AFTERCOOLER GROUP

Item #	Quantity	Ref #	Part #	Description	Price ea.	Extended
1.	12	1	5H6733	Seal	\$5.17	\$62.04
2.	8	6	5H7704	Seal	\$8.34	\$66.72
3.	8	8	4L8337	Seal	\$8.49	\$67.92
4.	8	14	9F4446	Seal	\$ 3.61	\$ 28.88
5.	16	15	2H2665	Seal	\$ 3.35	\$ 53.60
6.	2	18	6L6491	Pipe	\$ 356.00	\$ 712
7.	4	22	2N5693	Gasket	\$37.35	\$149.4
8.	8	27	6L6489	Gasket	\$1.24	\$9.92
9.	1	26	3N4365	Front Core Assy.	\$ 2850	\$ 2850
10.	1	26	3N4366	Rear Core Assy.	\$ 2850	\$ 2850
						\$6850.48

TURBOCHARGERS

Item #	Quantity	Ref #	Part #	Description	Price ea.	Extended
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Please Note: The Turbocharger part number existing on these units is 8N2955. These have been replaced by 8N8458

1.	4		8N8458	Turbocharger	\$1777.12	\$7108.48
2.	4			Core Deposit	\$2217.33	\$8868.52
3.	8	2	6L3005	Clamp	\$19.80	\$158.4
4.	4	3	2N6737	Coupling	\$507.09	\$2028.36
5.	8	4	8L3598	Gasket	\$9.51	\$76.08
6.	2	16	5L3773	Gasket	\$25.93	\$51.86
7.	4	18	1S4810	Gasket	\$.66	\$2.64
8.	4	21	9H6067	Seal	\$3.11	\$12.44
9.	4		6L4714	Air Filter		\$ 80.67 \$322.68
						\$18629.46

**WATER PUMP GROUP
RAW**

Item #	Quantity	Ref #	Part #	Description	Price ea.	Extended
1.		2	OR7721	Raw Water Pump	\$1853.89	\$3707.78
2.		2		Core Deposit	\$963.67	\$1927.34
3.		2	6V3743	Gaskets	\$278.2	\$556.40
						\$6191.52

JACKET WATER SYSTEM

Item #	Quantity	Ref #	Part #	Description	Price ea.	Extended
4.		2	OR0804	Jacket Water Pump	\$872.13	\$1744.26
5.		2		Core Deposit	\$1326.49	\$2653
6.		2	6V3743	Gaskets	\$278.2	\$556.4
7.		2	14 4L8121	Gasket	\$1.94	\$3.88
8.		2	17 5N3050	Elbow	\$479.30	\$958.60
9.		4	20 4L8606	Gasket	\$3.56	\$14.24
10.		8	1 9N2894	Temp Regulator	\$32.55	\$260.40
11.		2	19 2N0741	Housing Gasket	\$6.69	\$13.38
						\$6204.16

OIL SYSTEM

Item #	Quantity	Ref #	Part #	Description	Price ea.	Extended
1.		2	6V3739	Gasket Kit	\$146.73	\$293.46
2.		32	6B6224	Ferrule	\$2.79	\$89.28
3.		24	7B2420	Ferrule	\$2.33	\$55.92
4.		12	1R0659	Oil Filter	\$6.23	\$74.76
						\$513.42

FUEL SYSTEM

Item #	Quantity	Ref #	Part #	Description	Price ea.	Extended
1.		2	2N3583	Gasket	\$4.34	\$8.68
2.		2	2N3584	Gasket	\$4.61	\$9.22
3.		4	8N1831	Fuel Nozzle	\$37.32	\$895.68

