

CUSTOMER #: L251
UNIT# 111

INVOICE

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SERVICE ADVISOR

COLOR		YEAR	MAKE/MODEL		VIN		LICENSE		MILEAGE IN / OUT		TAG
		94	MACK RD688S		1M2P267C8RM019666				695361/695361		T111
DEL. DATE	PROD. DATE	WARR. EXP.	PROMISED		PO NO.	RATE	PAYMENT		INV. DATE		
01JAN94	DD01JAN94		10:48 16OCT18			0.00	CHG		26OCT18		
R.O. OPENED		READY		OPTIONS:							
10:48 16OCT18		17:18 26OCT18									
LINE OPCODE TECH TYPE HOURS											
A CHECK ENGINE LIGHT											
LIST								NET		TOTAL	

A CHECK ENGINE LIGHT
1201 OIL CONTROL SOLENOID
482CMACK
498CMACK

1 20705890 VALVE ASSEMBLY
1 20705791 GASKET

TOTAL LINE A: 1477.25

U
498 -- Checked operation and found several codes logged for the econovac. Went through the troubleshooting. Removed the TEM sensor and checked, found it is working and in good condition. Installed the new TEM sensor and adjusted. Removed the timing sensor and verified the pickup and teeth were clean and not damaged. Installed and adjusted the sensor. Found there was an intermittent problem with the oil control valve solenoid. Inspected and found a bad connection to the solenoid. Installed a new solenoid. Checked operation. Test drove the truck and it is working to OEM spec.

B LOW POWER -- WHITE SMOKE
1000 GENERAL REPAIR
482CMACK

0 482 -- Test drove truck and found it have low power only during engine hesitation and white smoke, this issue was resolved by check engine light repair on task A.

TOTAL LINE B:

C INSTALL EXHAUST PIPE -- CUSTOMER ORDERED
1000 PIPE
482CMACK
1 25154174 PIPE-REAR
2 1000*XLC400* 4" PREFORM GALV
1 1000*XGC400* 4" GUILLLOTINE CLAMP

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

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	94	MACK RD688S		1M2P267C8RM019666		695361/695361	T111
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01JAN94	DD01JAN94		10:48 16OCT18		0.00	CHG	26OCT18
R.O. OPENED		READY	OPTIONS:				

10:48 16OCT18 17:18 26OCT18

LINE OPCODE TECH TYPE HOURS

PARTS:

TOTAL LINE C:

0 482 -- Removed and replaced the exhaust pipe between the muffler and flex pipe. Installed new clamps and one horseshoe support clamp. Checked over for exhaust leaks. All okay.

D COOLANT GAUGE INOP

1000 WATER TEMP GAUGE / COOLANT TEMP SENSOR /
INTAKE SENSOR
482CMACK
498CMACK

- 1 25158986 WATER TEMP GAUGE
- 1 25096328 SENSOR, INLET AIR TEMP, V
- 1 20895370 SENSOR
- 4 31060 16-14 GA BUTT NON-INSULATED

PARTS:

OTHER:

TOTAL LINE D:

0
498 -- Checked operation and found the sensors were not reading properly. Found the coolant temperature sensor for the VECU was only reading 99* and would not go above that. Found the coolant temperature sensor and intake manifold sensor were hooked up backwards. Hooked all sensors up correctly and tested. Found the coolant temperature sensor was not reading correctly, it was reading 70* low. Installed a new coolant temperature sensor. It is now working correctly. Checked intake temperature and it is reading properly. Found the sensor for the gauge wiring was damaged. Repaired the wiring. Found the gauge in the truck is not reading. Installed a new gauge and tested. Found the truck is hard to get to temperature, highest temperature the module would read was 150* and verified with a temperature gun. Found that everything is working correctly.

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	2901.61

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	94	MACK RD688S	1M2P267C8RM019666		683041/683041	RM0196
DEL. DATE	PROD. DATE	WARR. EXP.	PROMISED	PO NO.	RATE	PAYMENT
01JAN94	DD01JAN94		00:00 18MAR18		0.00	CHG
R.O. OPENED	READY	OPTIONS:				
15:49 16MAR18	15:44 19MAR18					
LINE OPCODE	TECH	TYPE	HOURS	LIST	NET	TOTAL
A	RANGE SELECTOR BROKEN					
	1000 RANGE VALVE					
	477CMACK					
	1 25156647 VALVE					

PAI:

681703 477 -- Removed and replaced the shift selector and knob.
 Checked the operation and it is working as it should.

TOTAL LINE A:

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	596.89

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DEL. DATE	PROD. DATE	WARR. EXP.	PROMISED		PO NO.	RATE	PAYMENT	INV. DATE	
01JAN94	DD01JAN94		00:00 31JAN18			0.00	CHG	31JAN18	
R.O. OPENED		READY		OPTIONS:					
07:16 26JAN18		14:38 31JAN18							
LINE OPCODE TECH TYPE HOURS						LIST	NET	TOTAL	
A UNIT HAS MULTIPLE LIGHT ISSUES									
300 WIRING									
515CMACK									
1023CMACK									

- 1 8413*40242R* LAMP
- 7 31980 CONNECTOR
- 1 8413*94993* RIGHT ANGLE ST/T PIG
- 1 8413*94924* RIGHT ANGLE M/C PLUGS
- 2 8413*10700* OPEN GROMMET KIT FOR
- 2 8413*1050A* LED SIGNAL STAT M/C 2 1/2
- 2 8413*94924* RIGHT ANGLE M/C PLUGS
- 6 31980 CONNECTOR
- 2 WG14-0 14 GA BLACK WIRE
- 4 8116*69167* PH TEK SCREW 10X3/4
- 2 8413*30200Y* LIGHT
- 2 8413*30700* GROMMET FOR 2" M/C
- 3 32060 NON INSUL. 12-10
- 3 8413*94902* (PL 10) M/C PIGTAIL
- 3 8413*10202R* UNIT

TOTAL LINE A: 867.55

1023 -- Found the right fender turn signal will not blink, right rear middle of box light inop, front of box lights doesn't work, middle 3 lights don't work on rear of trailer, right side trailer tongue running light inop.

Removed right fender turn signal and found the wires where connected backwards cut. Connected together the right way. Right rear middle box light. Found wiring corroded. Removed and replaced pig tail and light.

Front box lights. Tried to remove light but snapped all the bolts off. Drilled 2 inch hole and put rubber gasket and new light in. Cut and spliced new pig tail in.

Middle 3 lights. Removed lights. Found none were connected. Looked

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

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01JAN94	DD01JAN94		00:00 31JAN18			0.00	CHG	31JAN18	
R.O. OPENED		READY		OPTIONS:					

07:16 26JAN18 14:38 31JAN18

LINE OPCODE TECH TYPE HOURS

LIST NET TOTAL

for wiring and found wires have been cut off and pig tails are gone.
 Made a 3 way jumper to connect all lights together used new pig tails
 to make the 3 way jumper.
 Right side trailer tongue running light. Found wires were cut.
 Spliced wires back together.
 Checked over all lights. All okay.

B** AIR LEAKING ON MIDDLE AXLE ON PUP
 1009 FITTINGS

498 COTH

1 6635*11206BBLK100* *3/8 TUBING

2 6635*61NTA6* *AIR BRAKE-NTA NUT

2 8116*90651* A/B SLEEVE 3/8

681703

TOTAL LINE B:

498 -- Driver heard air leak from front brake valve, upon
 inspection found front brake valve is not leaking now, and needs to be
 trouble shot when it acts up.
 Any of the four brake chambers or the valve could cause the leak,
 driver will monitor and report. Also found air leak on pup under brake
 application. Found pin hole in signal line to the valve. Replace line
 with new. Rechecked. All okay.

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	1136.96

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01JAN94	DD01JAN94		00:00 10JAN18		0.00	CHG	09JAN18
R.O. OPENED		READY	OPTIONS:				
17:13 08JAN18		15:34 09JAN18					

LINE OPCODE TECH TYPE HOURS

A BOLT ON U-JOINT BY TRANSMISSION SHEARED OFF

LIST

NET

TOTAL

1300 YOKE NUT

1010CMACK

1 8235*R005977L* NUT-L.H.

4 20704741 NUT

1 25093516 SCREW MACH

OTHER:

681703 1010 -- Removed the drive shaft. Removed the yoke from transmission. Welded a nut to the bolt in order to extract it. Clean and inspect yoke. Reinstalled yoke with new bolt. Reinstall u-joint with 4 new nuts for the u-joint bolts. Reinstalled driveshaft. Checked operation. All okay.

DESCRIPTION	TOTALS
LABOR AMOUNT	---
PARTS AMOUNT	---
GAS, OIL, LUBE	---
SUBLET AMOUNT	---
MISC. CHARGES	---
TOTAL CHARGES	---
LESS INSURANCE	---
SALES TAX	---
PLEASE PAY THIS AMOUNT	291.10

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	94	MACK RD688S		1M2P267C8RM019666			667437/667437		T111
DEL. DATE	PROD. DATE	WARR. EXP.	PROMISED		PO NO.	RATE	PAYMENT	INV. DATE	
01JAN94	DD01JAN94		13:42 02JUN17			0.00	CHG	26JUN17	
R.O. OPENED		READY		OPTIONS:					

13:42 02JUN17 13:54 26JUN17

LINE OPCODE TECH TYPE HOURS

A ENGINE HAS AN INTERMITTANT MISS WHEN ENGINE IS WARMED UP -- EML LIGHT

IS ON

1201 INJECTION PUMP / TIMING SENSOR / FLYWHEEL

SENSOR

515CMACK

1005CMACK

- 1 9854*228451GALLON* BULLDOG HD PREMIX 50/50
- 2 25014495 TERMINAL
- 2 25088933 SEAL, ELEC. CABLE-METRIC
- 2 3679*23846* TERM- BOWMA SEAL 16-14 GA
- 4 WG14-9 14 GA WHITE WIRE
- 4 WG14-0 14 GA BLACK WIRE
- 1 4119*313GC5205X* REMAN IP VMAC P8500 95 40 4
- CORE CHARGE C
- 1 FRT FREIGHT
- 5 980AX20 CONTACT
- 2 980AX26 CONTACT
- 1 20705961 TEM SENSOR
- 1 20705837 SENSOR PICK-UP
- 1 4119*313GC5205X* CORE RETURN 2
- 1 M3328 BLACK & GREY MACK BULLDOG HAT
- 1 20791291 PRESSURE SWITCH

PARTS:

0

515 -- Hooked computer to unit to check the codes. Found the EML light is on for low coolant level. Inspected the coolant level and coolant level sensor. Found the coolant is low and the level sensor wiring is broken and damaged.

Cut the wiring back to good wires and made a new harness up to the sensor.

Topped off the coolant. Checked operation, all okay.

Found bad coolant leak from water pump. Checked the engine for a miss and wiggled the wiring to the pump.

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

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01JAN94	DD01JAN94		13:42 02JUN17						
R.O. OPENED		READY		OPTIONS:		0.00	CHG	26JUN17	

13:42 02JUN17 13:54 26JUN17

LINE OPCODE TECH TYPE HOURS

Got the pump to miss, one time by wiggling the wiring. Tapped on the back of the pump. Found the engine will consistently miss while tapping on the back of the injection pump.
 Ordered new pump for the truck. Removed the old injection pump.
 Cleaned all gasket surfaces. Transferred the drive gear to the new pump and torque to spec.
 Transferred all fittings to the new pump. Installed the pump on the engine.
 Reconnected all fuel lines and injection lines and primed the fuel system. Set the injection timing to spec. Reinstalled the gear cover.
 Re-pinned the connector for the injection pump. Reconnected all electrical to the pump. Ran the engine to check operation, all okay.
 Steamed the engine off. Test drove to check for leaks, none found.
 515 -- Truck returned and was loping and missing. Inspected the engine speed sensor in the flywheel and the engine timing sensor in the injection pump. Found the sensor in the injection pump is faulty.
 Removed and replaced the engine speed sensor.
 Checked operation, unit does not miss anymore but still lopes.
 Removed and cleaned the flywheel sensor and rechecked operation, unit still lopes.
 Wiggled the wiring going into the flywheel sensor and could make the truck run smooth. Unit needs the flywheel sensor.
 1005 -- Remove and replace flywheel sensor and flywheel. Started and ran truck. All ok.

DESCRIPTION	TOTALS
LABOR AMOUNT	---
PARTS AMOUNT	---
GAS, OIL, LUBE	---
SUBLET AMOUNT	---
MISC. CHARGES	---
TOTAL CHARGES	---
LESS INSURANCE	---
SALES TAX	---
PLEASE PAY THIS AMOUNT	4798.32