IT41505 Page 3 of 5

Make / Model VIN License 2012 Mileage Unit / Stock Color Volvo / VNL 4V4NC9EH3CN544813 Open Date / Time 4813 **Delivery Date** Complete **Engine Hours** 06-18-22 / 01:08PM Key Tag Service Writer P.O. Number 06-27-22 0.0 Engine Model / Serial # Transmission Model/Serial # Rear Axle Model / Serial # D13 / D13/963863 1100107148 / 1100107148 Memo

CORRECTION: installed 45 zerks on front top caps facing s cams and

installed longer straights on rear of top caps for better visibility and access.

> TOTAL LABOR TOTAL PARTS

Qty Part Number Description List Unit Extended 2 52065 1/8X45 GR 2 52062 1/8 PT EX 4 52144 RED GREAS

5 GREASE UNIT. CAUSE: grease

CORRECTION: greased all grease points on unit

TOTAL LABOR TOTAL PARTS

Qty Part Number Description List Unit Extended 2 229 ULTRA RED

6 REMOVE 2ND DRIVE SHAFT AND SEND OUT FOR YOKE REPLACEMENT CAUSE: slip joint

CORRECTION: pulled drive shaft out so it can be sent out for slip yoke replacement. towed unit into shop installed 2nd drive line with new bolts.

double checked ride height, everything is good at this time.

TOTAL LABOR TOTAL PARTS

Qty Part Number Description List Unit Extended 1 REBUILD REPLACE YOK

REPLACE INTERMEDIATE DRIVESHAFT.

CAUSE: intermediate shaft slip seized CORRECTION: removed and replaced intermediate drive shaft installed with new bolts

> TOTAL LABOR TOTAL PARTS

Invoice Date: 04-30-20

Work Order

Veer Date.				IT34537				
Year 2012		ake / Model		IN	License	Mileage	Unit / Stock	Page 6 of a
-	Date / Time	Volvo / VNL	4V4NC9EH	3CN544813		ivilicage	4813	
	0 / 05:49PM	Delivery Date	Complete	Engine H	lours		Service Writer	
	THE RESERVE OF THE PARTY OF THE	06-28-11	04-20-20			ney rag	Service variter	P.O. Number
	ngine Model / S		Transmiss	ion Model/S	Serial #		Rear Axle Model / S	orial#
Memo	D13 / D13/9638	863		148 / 110010		-	/	eriai#

5	1677347H	SHIM
5	1547984H	SHIM
5	1547983H	SHIM
20	26683	TIE 3/16X
1	471708	RUBBER MO
1	21870635	FUEL FILT
1	21328947V	FUEL PIPE
3	26057	3/4 STEEL
1	21937327	COOLANT F
1	23059017	EXPANSION
12	FC50	FLEET CHA
10	AXC0734	BRAKE CLE
1	FREIGHT	

4 EXHAUST FROM TURBO IS LAYING ON FRAME CHECK AND ADVISE.

CAUSE:

EXHAUST REPAIR

CORRECTION:

EXHAUST FROM DIFFUSER TO DPF ASSEMBLY WAS RUBBING AGAINST THE RIGHT FRAME RAIL. PULLED THE PIPE SECTION OUT AND SPLIT IT WHERE NEEDED TO MAKE THE REPAIR. INSPECTED PIPES AND DID NOT FIND ANY LEAKS, RUB THROUGHS OR CRACKS. CLEANED THE PIPES UP AND RE-INSTALLED THEM WITH NEW GASKETS AND CLAMPS. CLOCKED ALL THE SECTIONS TO KEEP THE EXHAUST OFF THE FRAME.

> TOTAL LABOR TOTAL PARTS

Qty	Part Number	Desc	List	Unit	Extended
1	21419712H	OILLINE			
1	21095721	GASKET			
1	21060426	V-BAND CL			
1	21021850	V-BAND CL			
1	21095726	GASKET			
1	21007187	GASKET			
1	20526428	SEALING R			
1	21545619	V-BAND CL			
1	FC50	FLEET CHA			

SHOP SUPPLIES ENVIRONMENTAL FEE

Invoice Date: 04-30-20 IT34537 Page 3 of 8 Year Make / Model VIN License Mileage Unit / Stock 2012 Color Volvo / VNI 4V4NC9EH3CN544813 4813 Open Date / Time **Delivery Date** Complete Engine Hours Key Tag Service Writer P.O. Number 03-11-20 / 05:49PM 06-28-11 04-20-20 Engine Model / Serial # Transmission Model/Serial # Rear Axle Model / Serial # D13 / D13/963863 1100107148 / 1100107148

> SPEC. STARTED PREPPING NEW PISTONS WITH NEW PINS AND SNAP RINGS. FINISHED PREPPING NEW PISTONS AND PINS WITH CONNECTING RODS. PREPPED NEW CYLINDER LINERS AND INSTALLED. WENT THROUGH OVERHAUL KIT TO SEE WHAT IS THERE AND WHAT IS NEEDED FOR GASKETS/PARTS. KIT DID NOT COME WITH OIL PAN GASKET, GOT WITH PARTS TO GET NEW ONE. GOT EVERYTHING CLEANED UP AND READY TO SPIN NEW MAIN BEARINGS IN FIRST THING TOMORROW. REMOVED MAIN BEARING CAPS AND INSPECTED. CLEANED AND PREPPED JOURNALS AND LANDS FOR NEW BEARING INSTALL. SPUN NEW MAIN BEARINGS IN AND RE-INSTALLED BEARING CAPS. TORQUED ALL BEARING CAPS TO SPECS. STARTED INSTALLING NEW PISTONS AND ROD BEARINGS. FINISHED INSTALLING NEW PISTONS WITH NEW ROD BEARINGS. TORQUED ALL TO SPECS. REMOVED OIL PUMP AND PREPPED BLOCK BOTTOM FOR NEW OIL PUMP AND FOR RE-INSTALLATION OF OIL PAN. INSTALLED NEW OIL PUMP AND TORQUED TO SPECS. CLEANED AND PREPPED WINDAGE TRAY, RE-INSTALLED TRAY AND TORQUED TO SPECS. RE-INSTALLED OIL PUMP SUMP AND PIPING WITH NEW O-RINGS. READY TO RE-INSTALL OIL PAN TOMORROW. CLEAN AND PREP OIL PAN AND ROCKER COVER, INSTALLED NEW GASKETS ON BOTH. CLEANED AND PREPPED RIGHT SIDE OF BLOCK FOR NEW OIL COOLER AND HOUSING, WAITING ON PARTS. CHASED AND CLEANED THREADS FOR CYLINDER HEAD BOLT HOLES IN BLOCK. CLEANED AND INSPECTED CYLINDER HEAD BOLTS FOR RE-USE, THEY ARE GOOD. CLEANED AND PREPPED UPPER TIMING COVER AND INSTALLED NEW GASKETS. CLEANED AND INSPECTED CAM TIMING GEAR, GOOD. CLEANED AND PREPPED TURBO, CHASED THREADED BOLT HOLES. CLEANED AND INSPECTED DIFFUSER PIPE AND EXHAUST CORRUGATED PIPE FOR RE-USE. RE-TAPPED EXHAUST MANIFOLD BOLT HOLES FOR TURBO AND EGR. PREPPED MANIFOLD AND INSPECTED. GOT EVERYTHING PREPARED FOR ENGINE RE-ASSEMBLY, WAITING ON CYLINDER HEAD. CLEANED UP AREA AND PUT THINGS AWAY. CLEANED AND PREPPED INTAKE MANIFOLD. THE BOOST PRESSURE/TEMP SENSOR WAS COMPLETELY PLUGGED, REMOVED AND INSTALLED A NEW ONE. GOT NEW CYLINDER HEAD, PREPPED IT FOR NEW INSTALL. INSTALLED INTAKE AND EXHAUST MANIFOLDS WITH NEW GASKETS AND TORQUED TO SPECS. INSTALLED CYLINDER HEAD WITH NEW HEAD GASKET, TORQUED TO SPECS. INSTALLED CAMSHAFT WITH NEW BEARINGS AND TORQUED TO SPECS. SET BASE TIMING AND INSTALLED CAMSHAFT GEAR. CLEANED BACK SUPPORT PLATE BEHIND CYLINDER HEAD AND RE-INSTALLED TOP TIMING COVER WITH NEW GASKETS. INSTALLED NEW OIL COOLER HOUSING WITH NEW GASKETS. RE-INSTALLED EGR VALVE WITH NEW GASKET, RE-INSTALLED EGR COOLER WITH NEW GASKETS, MADE COOLANT CONNECTIONS TO WATER PUMP BACK HALF AND TO THERMOSTAT HOUSING MANIFOLD. RE-INSTALLED TURBO WITH NEW GASKETS. MADE ELECTRICAL CONNECTIONS WHERE NEEDED. RE-INSTALLED AIR INTAKE HEATER WITH NEW GASKETS AND INSTALLED THE 6 INJECTORS. RE-INSTALLED THE OIL PAN WITH NEW GASKET AFTER PREPPING THE LOWER BLOCK. MADE OIL FILL AND DIPSTICK CONNECTIONS. FILLED OIL PAN WITH OIL TO FULL MARK BUT OIL, FUEL AND COOLANT FILTERS NEED CHANGED OUT A WELL AS THE AIR FILTER.

Memo

Invoice Date: 04-30-20 IT34537 Page 4 of 8 Year Make / Model VIN License Mileage Unit / Stock Color 2012 Volvo / VNL 4V4NC9EH3CN544813 4813 Open Date / Time **Delivery Date** Complete **Engine Hours Key Tag** Service Writer P.O. Number 03-11-20 / 05:49PM 06-28-11 04-20-20 Engine Model / Serial # Transmission Model/Serial # Rear Axle Model / Serial # D13 / D13/963863 1100107148 / 1100107148 Memo

> RECORDED THE TRIM CODE OFF IT WITH THE OTHER INJECTOR TRIM CODES. RE-INSTALLED THE ROCKER SHAFT ASSEMBLY AND TORQUED TO SPECS. STARTED RUNNING COMPLETE OVERHEAD. EXHAUST BRIDGES HAVE SHIMS AND EACH WILL NEED TO BE MEASURED AND TESTED TO GET THE CORRECT ONE. FOUND THIS UNIT IS NEEDING .280, .285 AND .290 SHIMS AND WE ARE ALL OUT FROM LAST CYLINDER HEAD REPLACEMENT. FINISH SETTING OVERHEAD TO SPEC. CRANK UNIT TO PRIME OIL SYSTEM. PRIME THE FUEL SYSTEM, START UNIT. UNIT WILL RUN AND THEN DIE. PRIME FUEL SYSTEM AGAIN AND WILL START AND DIE. UNIT LOOSING FUEL PRIME. START TRACING DOWN ISSUE. FOUND THE PRIMING PUMP ON THE FUEL FILTER HOUSING HAS FAILED. REMOVED FUEL LINES AND ELECTRICAL CONNECTION FROM FILTER HOUSING. THE FUEL LINE COMING FROM THE RETURN ON THE CYLINDER HEAD TO THE FUEL FILTER HOUSING BROKE AT THE FITTING ON THE FILTER HOUSING. LINE CAN NOT BE REPAIRED. GOT WITH PARTS TO LOCATE ONE. FINISHED REMOVING FILTER HOUSING AND TRANSFERRED THE SUPPLY LINE FITTING TO THE NEW FILTER HOUSING. REMOVED THE BROKEN FUEL LINE AND INSTALLED THE NEW ONE. INSTALLED THE NEW FILTER HOUSING AND MADE ALL FUEL LINES CONNECTIONS AS WELL AS ELECTRICAL. INSTALLED NEW FUEL FILTER AND PRIMED SYSTEM UP. WAITED A FEW MINUTES AND RECHECKED PRIME, WAS STILL GOOD. BEFORE IT WOULD LOSE PRIME WITHIN A FEW MINUTES. STARTED UNIT UP AND IT RUN FINE. UNIT STILL NEEDS COOLANT FLUSH AND FINISH THE SERVICE. WILL CONTINUE TOMORROW. FINISH TYING THINGS UP FROM FUEL FILTER HOUSING REPLACEMENT. PUT SOAP IN COOLING SYSTEM AND FILL WITH WATER. RUN UNIT ON HIGH IDLE. WHILE UNIT WAS RUNNING, REMOVED BROKEN BOLTS FROM LOWER BRACKET THAT HOLDS THE RIGHT INNER SPLASH SHIELD IN PLACE. HEATED BOLTS UP AND GOT BOTH REMOVED. LET COOL DOWN AND RE-INSTALLED INNER SPLASH SHIELD UPPER BRACKET AND SPLASH SHIELD ON RIGHT SIDE. REINSTALLED RIGHT BUMPER EXTENSION AND STEPS/FAIRING. ENGINE UP TO OPERATING TEMP NOW. MOVED TO A BAY WITH A DRAIN. DRAINED WATER/SOAP, FILLED BACK UP WITH NEW WATER SOAP AND RUN AGAIN. DRAINED WATER/SOAP AND STARTED RUNNING STRAIGHT WATER THROUGH TO PURGE SOAP OUT OF SYSTEM. WATER RUNNING CLEAN OUT OF RADIATOR NOW. DRAINED WATER COMPLETELY. REMOVED EXPANSION TANK AND REPLACED WITH NEW ONE. REPLACED COOLANT FILTER ALSO. FILLED SYSTEM UP WITH COOLANT. RUN UNIT OVER TO WASH BAY TO STEAM CLEAN EVERYTHING OFF. RUN BACK OVER TO RECHECK FLUIDS AND TOP OFF. UNIT NEEDS TEST DRIVEN AND COOLANT RE-CHECKED YET. TEST DRIVE UNIT, RUNS GOOD. CHECK FLUID LEVELS AND FOR ANY LEAKS. ALL OK AT THIS TIME.

TOTAL LABOR TOTAL PARTS TOTAL FREIGHT

Qty Part Number

Desc

List

Unit Extended

Year A	Make / Model		IT41505				Page 2 of
2012	Volvo / VNL	The second name of the second	/IN	License	Mileage	Unit / Stock	ock Color ter P.O. Number
Open Date / Time	The state of the s	4V4NC9EH	13CN544813		1	Diacy Stock	
06-18-22 / 01:08PM	Delivery Date	Complete	Engine H		Key Tag	Service Writer	
		06-27-22	0.0		ney rug	Selaice Atlitel	P.O. Number
Engine Model /	Serial #	Transmiss	ion Model/S	erial #	D.	ar Axle Model / S	
D13 / D13/96	3863	1100107	148 / 1100107	7148	Re	ar Axie Model / S	erial #
memo							

3 23254673	INSULATOR
1 877071	3" 36GR
1 877061	3/" 60GR
2 996457	FLANGE SC
2 990941	FLANGE NU
2 450830	M8X1.25X3
4 453510	M10 FW
2 454508	M8 LW
6 373907	7/16 SAE

2 AIR LEAK POSSIBLY COMING FROM LEVELING VALVE. CHECK AND ADVISE CAUSE: air leak CORRECTION:

air leak is from leveling valve and the rod is bent when unit dumps all air out of trucks suspension it is not resting down in normal position due to 2nd drive line carrier bearing to power divider slip joint seized up causing it to stay to high even on ride height and then intermediate drive shaft slip joint is started to swell up and cause the same issue the intermediate drive shaft will need replaced and 2nd drive shaft will need rebuilt. installed new valve zip tied up all air lines adjusted ride height several time due to it being severely off installed leveling valve rod in middle adjustment on lower cross beam and adjusted it down on the frame bracket so if it ever needs adjustment it will have enough to adjust it at lower cross frame for leveling rod.

TOTAL LABOR TOTAL PARTS

Qty Part Number	Description	List		Extended
1 85144423 1 22379948	KIT CONTROL R		*******	

3 OIL LEAK FROM REAR OF ENGINE. CHECK AND ADVISE.

CAUSE: oil leak

CORRECTION: found upper timing cover leaking down the side of trans to bottom of the flywheel housing. unit will need updated cover and cam sensor due to leaking as well as valve cover gaskets.

TOTAL LABOR

4 INSTALL 45 DEGREE GREASE ZERKS AT THE TIP OF THE KINGPIN CAUSE: grease zerks

Work Order Invoice Date: 04-30-20 IT34537 Year Make / Model Page 7 of 8 VIN 2012 License Volvo / VNL Mileage Unit / Stock Color 4V4NC9EH3CN544813 Open Date / Time **Delivery Date** 4813 Complete 03-11-20 / 05:49PM **Engine Hours Key Tag** Service Writer P.O. Number 06-28-11 04-20-20 Engine Model / Serial # Transmission Model/Serial # Rear Axle Model / Serial # D13 / D13/963863 1100107148 / 1100107148 Memo

> SLS-SVC CUST LABOR SLS-PTS P&A RO MECH OTHER SUPPLIES-SVC FREIGHT-PTS SALES TAX CASH

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CUSTOMER INVOICE Work Order IT34537

Invoice Date: 04-30-20

Year	N	lake / Model	1	INI	License		T	Page 1 of	
2012		Volvo / VNL	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	VIN		Mileage	Unit / Stock	Color	
Open D	ata / Time	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO I	4V4NC9EH3CN544813 763147		4813				
	ate / Time	Delivery Date	Complete	Engine H	ours	Key Tag Service Writer		P.O. Number	DO Number
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Memo	D13 / D13/963	3863	The state of the s	148 / 1100107			/	Cital W	

1 OIL IN THE COOLANT CHECK AND ADVISE CAUSE:

LINER CAVITATION AND O RING FAILURE CORRECTION:

BROUGHT UNIT IN AND STARTED LOOKING FOR ANY OBVIOUS SIGNS OF FAILURE.
COOLANT HAS THICK OIL IN RESERVOIR. RESERVOIR IS APPROX. 15 MONTHS
SINCE REPLACEMENT AND SHOWS SIGNS OF BULGING AND SEVERE DISCOLORATION.
REMOVED AIR FILTER HOUSING AND AIR INTAKE. HOOKED UP WATER BOTTLE TO
PRESSURE RELEASE HOSE AND RUN ENGINE AT HIGH IDLE TO CHECK FOR
HEAD/GASKET ISSUES. DID FIND REALLY SMALL BUBBLES THAT ONLY APPEARED
WHEN ACCELERATED FULLY. BUBBLES HAD THE APPEARANCE OF FIZZ IN THE
WATER. CONFERRED WITH JON ABOUT FINDINGS SO FAR, HE ASKED ME TO HOOK A
PRESSURE GAUGE UP TO THE COOLANT RESERVOIR AND CHECK THE PRESSURE AT
HIGH IDLE OR FULL ACCELERATION. RUN UNIT OUTSIDE AND SET IT TO FULL
ACCELERATION. WAITING ON RESULTS AT THIS TIME. CALLED KEVIN AT NATT
THIS MORNING, GAVE HISTORY ON UNIT AND WHAT HAS BEEN CURRENTLY DONE
AND TESTED. HE FEELS THAT LINER CAVITATION IS CAUSING THE OIL IN
COOLANT ISSUE.

TOTAL LABOR

2 REPLACE REAR DRIVE AXLE BRAKES AND CHECK DRUMS
CAUSE:

REAR AXLE BRAKES CRACKED

CORRECTION:

INSPECTED BRAKES AND FOUND THAT THEY ARE CRACKED. ALSO THE DRUMS ARE HEAT CRACKED. REPLACE REAR DRIVE AXLE BRAKE SHOES AND DRUMS.

TOTAL LABOR

Work Order Invoice Date: 07-08-22 IT41505 Year Page 4 of 5 Make / Model VIN License 2015 Mileage Unit / Stock Color Volvo / VNL 4V4NC9EH3CN544813 4813 Open Date / Time Complete Engine Hours **Delivery Date** Key Tag Service Writer P.O. Number 06-18-22 / 01:08 PM 06-27-22 0.0 Engine Model / Serial # Transmission Model/Serial # Rear Axie Model / Serial # D13 / D13/963863 1100107148 / 1100107148 Memo Qty Part Number Description List Unit Extended 8 85107600 SCREW 1 85142310 PROPELLER SHOP SUPPLIES ENVIRONMENTAL FEE SLS-SVC CUST LABOR SLS-PTS P&A RO MECH OTHER SUPPLIES-SVC SALES TAX

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186510 CASH

WHEEL LUG NUTS NEED RETOURQUED AFTER 100 MILES.

6,103.89

CUSTOMER INVOICE Work Order IT38232

Invoice Date: 05-27-21

Dage 1 of 3

Year	M	lake / Model	V	IN	License	Mileage	Unit / Stock	Color
2012		Volvo / VNL		3CN544813		821102	4813	
Open D	ate / Time	Delivery Date	Complete	Engine H	ours	Key Tag	Service Writer	P.O. Number
05-12-21	/02:37PM		05-26-21				03H 03H	
En	gine Model /	Serial #	Transmiss	ion Model/S	erial#	Re	Rear Axle Model / Serial #	
	D13 / D13/963	3863	1100107	148 / 1100107	7148		/	
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1 TRANSMISSION WON'T SHIFT PROPERLY CODES CAUSE:

TRANSMISSION INTERNAL FAILURE.

CORRECTION:

CHECKED CODES. FOUND UNIT HAS CODES FOR THE BRIDGE CABLE AND INPUT SHAFT SPEED FIRST AND REVERSE ENGAGEMENT AND 2 AND 3 ENGAGEMENT. RAN TEST ON ENGAGEMENT ISSUE AND CLUTCH TEST AND IT FAILED ENGAGEMENT TEST AND CLUTCH TEST WAS OK NEEDS A TRANSMISSON REPLACED HAS INTERNAL ISSUES FURTHER IN TRANSMISSION. BROUGHT UNIT IN TO SHOP. REMOVED DRIVE LINE AND PTO. REMOVED CABLES AND ELECTRICAL CONNECTIONS. PULLED BELL HOUSING BOLTS THEN REMOVED TRANSMISSION FROM TRUCK. STARTED SWAPPING PARTS FROM OLD TRANSMISSION TO USED TRANSMISSION HAD TO ORDER SOME GASKETS. SWAPPED THE TECU THEN FOUND THE OIL FILTER HOUSING WOULD NOT WORK BECAUSE THE FITTINGS WERE DIFFERENT FOR THE PTO. SWAPPED FILTER HOUSING TO USED TRANSMISSION INSTALLED NEW FILTER. FOUND THE SEAL IN THE PTO THAT THE SPRING HAD CAME APART SO SENT PTO OUT TO HAVE THE SEAL REPLACED. INSTALLED NEW FLYWHEEL AND CLUTCH IN TRUCK. INSTALLED TRANSMISSION INTO TRUCK. REINSTALLED DRIVE LINE, CABLES AND ELECTRICAL CONNECTIONS. INSTALLED PTO IN TRUCK. FILLED TRANSMISSION THEN CALIBRATED CLUTCH AND TRANSMISSION. RAN UNIT AROUND THE LOT PUULED BACK IN THEN RECHECKED FOR ANY LEAKS, NO LEAKS TOPPED OFF FLUID LEVEL. SENT UNIT ON ROAD TEST THEN RECHECKED UNIT FOR LEAKS AND FLUID LEVEL.

TOTAL LABOR TOTAL PARTS TOTAL FREIGHT

Qty Part Number

Description List Unit Extended

2012 Make / Model		1134537				Page 5 of 8
Open Date / Time	4V4NC9EH	IN Lie 3CN544813	cense	Mileage	Unit / Stock	Color
03-11-20 / 05-49PM	Complete	Engine Hours	I V	To a	4813	
Engine Model / Serial #	04-20-20			ey Tag	Service Writer	P.O. Number
D13 / D13/963863	1100107	ion Model/Serial : 148 / 1100107148	#	Re	ar Axle Model / Se	erial #
			-		/	

		107 1100
	1 20824906	071
	1 20541940	OIL PUMP
	1 85132267	SEALING S
	1 85138502	OIL COOLE
2	0 26683	ENGINE OV
	1 20541940	TIE 3/16X
	1 22275838	SEALING S
	5 21092243	SEALING R
	1 24027	SEALING R
	1 22275838	PERMATEX
	1 21508089	SEALING R
	6 21509801	COVER
	1 85020273	
	1 20523738	CYLINDER COVER
1	1 22422785	SENSOR
:	2 20551483	SEALING R
1	1 20430678	RUBBER MO
1	1547252	
1	975697	SEALING R O-RING
1	21021925	CONNECTIO
2	1547254	SEALING R
1	21434720	CONNECTIO
1	20542204	HOSE
1	21599158	OIL RETUR
2	502612	#12 HD SI
7		RUBBER MO
2		SEALING R
1	1547252	SEALING R
1	21532258	SEALING R
1	994441	FLANGE SC
1	20550690	CHARGE AI
1	82194	ULTRA GRE
2	AXC0734	BRAKE CLE
1	85143382	INJECTOR
1	21715813	AIR FILTE
1	33721	Spin-On F
1	33651MP	Cartridge
2	51791MP	LUBE FILT
1	51660	Spin-On L
40	1300CJ4QT	DELVAC MO
1	WASH	WINDSHIEL
1	229	ULTRA RED
5	1677347H	shim

CUSTOMER INVOICE Work Order IT41505

Invoice Date: 07-08-22

Page 1 of			7			IAI T	1/	ake / Model	M	Year	
Color	Unit / Stock 4813	ge	Mileag	nse	Licer	VIN		/olvo / VNL		2012	
		-	1			3CN544813	4V4NC9EH		Date / Time	Onen F	
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MULTIPLE TANK STRAPS FOR FAIRINGS BROKEN. CHECK AND ADVISE CAUSE: fuel tank straps

CORRECTION: removed rear fuel tank fairings and found both middle position fuel

tank straps are broken inspected the rest of straps all are in good condition.

removed broken tank straps had to heat top bolts with torch to get them out also had to heat the t that the bolt goes through to get the bolt out to install in new straps cleaned up bolts with wire wheel used anti seize on bolts installed new straps with new insulators installed left side faring and got it all adjusted went to right side to get it installed and adjusted and rear bracket would not even let the fairing close tried taking it apart to fix it the best i could and it just deuterated and all bolts broke.

cut weld on bracket so i could remove swollen rust jacket between the two metals got everything straightened out and rewelded and painted bracket let paint dry installed bracket on right rear fairing fuel tank strap hung fairing and adjusted bracket removed fairing and tightened up bracket where it needed to be installed fairing also installed safety strap on right front fairing.

TOTAL LABOR TOTAL PARTS

	rt Number	Description	List	Unit	Extended
2 21	487084	STRAP			
4 23	254684	INSULATOR			
1 23	254682	INSULATOR			

Invoice Date: 05-27-21

Memo

IT38232

	. 05-27-21		11	38232				Dogo 3 of 5
Year	M	ake / Model	VII	VIN		Mileage	I I I I I I I I I I I I I I I I I I I	Page 2 of 3
2012	-	Volvo / VNL	4V4NC9EH3	CN544813	License	821102	Unit / Stock 4813	Color
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Engine Model / Serial #		Transmissio	Transmission Model/Serial #		Rear Axle Model / Serial #			
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3	20852765	seal
1	GENATO2612DUSD	TRANS
1	85021773	FLYWHEEL
1	85002560	CLUTCH KI
1	20785252	
1	20779040	OIL FILTE
1	20483578	
1	PT055342	RESEAL
	NBSN331L	16-14 BUT
	MVBVISHIFT75W80PAIL	VOLVO I-S
	85107600	SCREW
7	26682	TIE 5/16X
12	26683	TIE 3/16X
1	27920	4GA 1/4 M
1	26984	1/2X6 SHR
1	FREIGHT	

SHOP SUPPLIES ENVIRONMENTAL FEE

SLS-SVC CUST LABOR SLS-PTS P&A RO MECH OTHER SUPPLIES-SVC FREIGHT-PTS SALES TAX

186510 CASH

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Year	M	ake / Model		IT34537				Page 2 of
2012		Volvo / VNL		IN	License	Mileage	Unit / Stock	Color
Open D	ate / Time	The same of the sa	4V4NC9EH	3CN544813			4813	
	/ 05:49PM	Delivery Date	Complete	Engine H	Hours	Key Tag	Service Writer	DO Number
		06-28-11	04-20-20		-	ney rag	service writer	P.O. Number
Engine Model / Serial # D13 / D13/963863		Transmiss	ion Model/S	Serial #	R	ar Axle Model / S	arial #	
		1100107148 / 1100107148		- No	/ Axie Middel / S	crial n		

TOTAL PARTS

269.81

Qty	Part Number	Desc	List	Unit	Extended
6 3 2 2 1	7485 AXC0734 NBFMKIT-4709EN/S 3922X 3338	3IN SCOTC BRAKE CLE SHOE BOX DRUM WHEEL NUT			

3 PERFORM ENGINE OVERHAUL.

CAUSE:

Invoice Date: 04.30.3

ENGINE OVERHAUL

CORRECTION:

DRAINED OIL AND COOLANT. STARTED REMOVING EGR COMPONENTS AND BRACKETRY. REMOVED CHARGE AIR PIPING. TURBO BY-PASS CONNECTION IS RUSTED AND CANNOT BE SEPARATED WITHOUT DAMAGE, LINE AND FITTING TO VALVE NEED REPLACED. REMOVED TURBO, EGR VALVE AND HOT PIPE, EGR COOLER AND INTAKE PIPING AND HEATER AND ROCKER COVER. REMOVE ROCKER SHAFT ASSEMBLY AND INSPECTED, DID NOT SEE ANY OBVIOUS ISSUES. REMOVED INJECTORS, THE CRAB HOLD DOWNS ON #3 AND #5 WERE BROKEN AND BOTH INJECTORS HAD RUST BUILDUP ON THEM. FOUND BROKEN PIECES OF CRAB HOLD DOWNS NEAR EACH RESPECTIVE CYLINDER AND RECOVERED THEM. STARTED REMOVAL OF CAMSHAFT. REMOVE CAM BEARING CAPS, TOP TIMING COVER, CAM GEAR AND CAMSHAFT. FINISH REMOVING SMALL COMPONENTS TO BE ABLE TO REMOVE CYLINDER HEAD. REMOVE CYLINDER HEADBOLTS AND HEAD. INSPECTED CYLINDER HEAD AND FOUND #3 AND #5 EXHAUST VALVES (CAM SIDE) BURNT, GOT WITH JON TO INSPECT AS WELL. JON HAD ME REMOVE VALVES IN QUESTION TO INSPECT THE VALVE SEATS. CYLINDER HEAD NEEDS REPLACED/REMANED. PUT VALVES BACK IN CYLINDER HEAD. STARTED REMOVAL OF OIL COOLER. REMOVED ENGINE OIL COOLER HOUSING, SEPARATED OIL COOLER FROM HOUSING. HAD JON TAKE A LOOK AT COMPONENTS AND THIS UNIT NEEDS HOUSING UPDATE WITH NEW OIL COOLER AND SHIELD. CLEANED RIGHT SIDE OF ENGINE, PUT CYLINDER HEAD ON PALLET AWAITING FURTHER INSTRUCTIONS BASED ON APPROVAL. REMOVED OIL PAN, SUMP AND OIL CROSSOVER TUBES. REMOVED BLOCK STIFFENER PLATE. CLEANED UNDERNEATH AND AROUND UNIT. READY TO PULL PISTONS AND LINERS. STARTED PULLING PISTONS AND LINERS. GOT PULLED TO ANOTHER JOB. FINISHED REMOVING PISTONS AND LINERS. HAVING JON ALSO TAKE A LOOK AT LINER SEALS. APPEARS TO HAVE FAILURE ON CYLINDERS 2-5. GETTING BLOCK PREPPED FOR OVERHAUL. CLEANED AND PREPPED ENGINE BLOCK DECK AND CYLINDER BORES. THERE IS CLEAR EVIDENCE OF OIL GETTING INTO THE COOLANT THROUGH THE LINER SEALS FAILING IN CYLINDERS 3, 4 AND 5. PREPPED NEW LINERS AND MEASURED LINER PROTRUSION, ALL LINERS ARE IN