

PM

Invoice Date: 10-17-23
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Year	Make / Model	VIN	License	Mileage	Unit / Stock	Color
2014	Volvo / VNM	4V4MC9EG0EN166729	92200V SD	552794		
Open Date / Time	Delivery Date	Complete	Engine Hours	Key Tag	Service Writer	P.O. Number
10-03-23 / 07:55AM	10-14-13	10-17-23			Gen*GLC	
Engine Model / Serial #	Transmission Model/Serial #		Rear Axle Model / Serial #			
VLV D13 / D13/1039276						
Memo						

1 DIAG TRANNY CUSTOMER STATES UNIT WILL NOT COME OUT OF REVERSE.
 CAUSE:
 DIAG TRANNY
 CORRECTION:
 diagnosing transmission issues. pulled into the shop and performed gear engagement tests. found transmission not shifting into 2-3 gear and will need to be pulled. started pulling transmission from unit. pulled air lines from unit. pulled connectors and drive line. pulled rear output yoke. removed all brackets around bell housing and pulled transmission bellhousing bolts. removed transmission. pulled transmission out and removed shift housing from transmission and inspected gears. found no issues with gears or Syncros. inspected upper housing. found 2-3 shift fork shaft broken. found no other damage. unit will need shift control housing. will send quote in for housing

TOTAL LABOR
 TOTAL PARTS
 TOTAL COMPUTER FEE

Qty	Part Number	Description	List	Unit	Extended
1	22106416	CYLINDER			
1	85002560	CLUTCH KI			
1	MACHINE	COMPUTER FE			

2 TRANSMISSION
 CAUSE:

Total **

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VLVD13 / D13/1039276						
Memo						

TRANSMISSION INERTIA BRAKE

CORRECTION:

pulled clutch and flywheel for inspection. do see wear on clutch and heat marks. would recommend clutch be replaced while transmission is down received new shift solenoid unit. pulled computer off old unit

and installed onto new unit. made sure to use new gaskets. installed new gaskets on air passages. installed top cover onto transmission and torqued to spec. installed new air fittings onto cover and reinstalled airline. reconnected shift connector on transmission. washed off entire transmission for reinstallation. calibrated new clutch position on unit

STARTED BY INSTALLING THE PILOT BEARING INTO THE FLYWHEEL, THEN INSTALLED FLYWHEEL INTO UNIT. MADE SURE TO USE BLUE LOCKTIGHT ON FLYWHEEL BOLTS. TORQUED BOLTS TO 44FTP. INSTALLED INSTALLATION TOOL FOR THE CLUTCH THEN INSTALLED CLUTCH INTO UNIT, MADE SURE TO BLUE LOCKTIGHT ON CLUTCH BOLTS AS WELL. REMOVED INSTALL TOOL, THEN STARTED INSTALLING THE TRANSMISSION. GOT THE TRANSMISSION ANGLED RIGHT AND GOT THE TRANSMISSION IN, USED BLUE LOCKTIGHT ON ALL TRANSMISSION BOLTS. TORQUED BOLTS TO 30FTP. INSTALLED BOTH COOLER LINES TOO TRANSMISSION COOLER, INSTALLED ROUND PIN CONNECTOR FOR THE TRANSMISSION AND SPEED SENSOR. GOT THE BATTERY CABLE LINES ALL ZIPPED TIED BACK WHERE THEY BELONG. REINSTALLED DRIVELINE WITH DRIVELINE BOLTS. LAST WAS TO INSTALL THE OLD DPF COVER WHICH WAS JUST 4 BOLTS. DID DOUBLE CHECK OF TRANSMISSION, LINES, OIL LINES, AND CONNECTORS. ALL WERE GOOD TO GO. AFTER TRANSMISSION WAS INSTALLED HOOKED UP VOLVO TODO A CLUTCH INSTALLTION PROGRAM, AFTER PROGRAMMING WAS FINISHED STARTED UNIT UP TO MOVE IT OUT THE SHOP. UNIT STILL DID NOT MOVE. UNIT HAD DIFFERENT CODES FOR SHIFTING AND COUNTERSHAFT INPUT. HAD TO REMOVE TRANSMISSION AGAIN SINCE THE CODES ARE FOR INTERNAL PROBLEMS. REMOVED BOTH TRANSMISSION COOLING LINES FROM COOLER, DISCONNECTED ALL ELECTRICAL FROM TRANSMISSION. SUPPORTED TRANSMISSION WITH JACK STAND, REMOVED ALL TRANSMISSION HOUSING BOLTS AND REMOVED TRANSMISSION FROM UNIT. pulled transmission from under unit and inspected. did notice that fluid gasket on inertia brake leaking. pulled apart and resealed. reinstalled. performed gear select procedure to make sure unit will operate correctly in truck.

TEST DROVE

reinstalled transmission with Loctite on bell housing bolts. reinstalled harness and air line on unit. reinstalled driveline. reinstalled trans cooler lines and started unit. checked oil level and was OK. performed clutch calibration and sent unit out on test drive. put all core parts away. unit ran without issue. parked on line. unit

SHOP SUPPLY

PLEASE SEE

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VLV D13 / D13/1039276		/		/		
Memo						

done

TOTAL LABOR
TOTAL PARTS

Qty	Part Number	Description	List	Unit	Extended
1	20966752	O-RING			
1	20544196	ELBOW NIP			
1	20515114	ELBOW NIP			
1	21244695	PLANE GAS			
1	20785252	SEALING K			
1	20512915	BEARING			
1	BD-P00007	DOTUNION			
1	20497205	GASKET			

- 3 REAR CRANKSHAFT SEAL REPLACE REAR CRANKSHAFT SEAL
CAUSE:
REAR CRANKSHAFT SEAL
CORRECTION:
pulled old rear main seal from unit. installed rear main seal tool and
installed new seal.

TOTAL LABOR
TOTAL PARTS

Qty	Part Number	Description	List	Unit	Extended
1	20441481	CRANKSHAF			
4	RESURFACE FLYWHEEL	RESURFACE FLY WHEEL			
	RESURFACE FLYWHEEL	TOTAL SUBLET LABOR			

Qty	Part Number	Description
1	SUBL	SUBLET LABO RESURFACE FLYWHEEL

SHOP

SLS-SVC CUST LBR TRK
SLS-PTS P&A RO MECH
SLS-SVC SUB REPAIRS

Order: 5699
n4500

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OTHER SUPPLIES-SVC
DATA PROCESSING-SVC
SALES TAX
CASH

181442

13,963.95

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WHEEL LUG NUTS NEED RETOURQUED AFTER 100 MILES.