

ORDER NO	DATE 2022-08-05
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CUSTOMER NO	PAGE NO 1
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PAYMENT TERMS DUE ON RECEIPT

CUSTOMER PO A40F

INVOICE TO:

WORK SITE:

SALESMAN:
CONTACT :

SERVICE ORDER
REF:

VOLVO MODEL:A40F S/N: A40F011265 CUST UNIT: UNIT:EQ0008871
METER : 8995

SEGMENT : 1 REQUESTING CODE AND HAS COMPUTER ERROR ON DASH FIELD LABOR

SEGMENT TYPE: Chargeable

VOLVO MODEL:A40F S/N:A40F011265 CUST UNIT: UNIT:

Worksite : !

METER : 8995

WORK DESCRIPTION :
REQUESTING CODE AND HAS ERROR ON DASH

CAUSE:

Machine possibly struck by lightening several ECUs failed and several sensors shorted internally

CORRECTION:

Drove to customer location. Could not connect laptop to machine. Drove back to shop to connect to machine to make sure it wasn't a laptop issue. I was able to connect to different machine. So I returned to machine and began troubleshooting. I found I had 2 OHMS on can bus and should have 500 OHMS to 100kOhms. I began disconnecting ECUs until I could get the ohms correct. Once I unplugged EECU ohms went to 38kOhms and I was able to connect to machine but could not run any test, So I spoke with customer and ordered EECU. I installed EECU and then found I could now run the communication tests and found the ACM and the VECU was missing. Spoke with customer SO I ordered all ECUs so I had them if needed. I returned to machine and installed VECU and programmed it. I ran another information test and now IECU was missing from test so I replaced IECU and programmed and now V2ECU was missing from test. SO I installed and programmed. I am now able to see all ECUs on CAN BUS. I tried to program EECU and was not able to. I contacted Volvo and they gave me some things to check. I found that one of the lines on the can bus was high resistance to the EECU. SO I unplugged the WECU which for the satellite and the resistance went within spec. I was then able to reprogram EECU and start machine. Once all ECUs were replaced that needed replaced. I found I had about 20 active code. I began troubleshooting the codes and found the fuel pressure sensor was shorted out causing one code and then I found out the burner temp sensor was shorted out causing another code. I stopped troubleshooting to get customers approval to continue as there will be more time and parts needed.

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CUSTOMER PO

Customer approved diag for codes/ SO I returned to machine and went down the list of fault codes diagnosing each one. I found both brakes pressure sensors shorted, both steering sensors shorted, I found the steering angle sensor and bed angle sensor shorted. I found the fuel pressure and trans pressure sensor shorted. I found the tip lever sensor shorted. I got pricing together and got customer approval to replace sensors. Once sensors arrived I returned to machine location and began replacing sensors. I replaced both brake pressure sensors and verified code went inactive and it did. I replaced both steering pressure sensors and then verified that the code went inactive. I then replaced the bed angle sensor and the steering angle sensor and verified codes went inactive. I replaced fuel pressure sensor and trans pressure sensor and verified codes went inactive. I then replaced the tilt lever and verified the code for that went inactive. I then started machine and verified no active code. Now parking brake releases as it should and machine goes into gear. I closed hood and installed panels. I shut battery switch off and spoke with that machine now starts and runs and is free of faults.

COVERAGE :
laptop fee
9575HRS

ITEM / Lot ID	DESCRIPTION	QTY	B/O	PRICE(USD)CORE	TOTAL
21358126	ECU	1	0		
21063598	ECU	1	0		
11381430	ELECTRONIC UNIT	1	0		
11443400	CONTROL UNIT	1	0		
11381440	ELECTRONIC UNIT	1	0		
11381440	ELECTRONIC UNIT	1	0		
22899626	PRESSURE SENSOR	1	0		
17202581	PRESSURE	4	0		
13945653	PLANE GASKET	3	0		
955992	O-RING	1	0		
11170337	ANGLE SENSOR	1	0		
60110191	SIX POINT SOCKET SCR	2	0		
17416939	CONTROL LEVER	1	0		
11170282	ANGLE TR	1	0		
17202573	PRESSURE SENSOR	1	0		
968562	O-RING	1	0		
13945653	PLANE GASKET	1	0		
	SHOP SUPPLIES	1.00			
	FUEL/FREIGHT SURCHA	1.00			
	SHIPPING HANDLING	1.00			
	SHIPPING HANDLING	1.00			
	SHIPPING HANDLING	1.00			
	SHIPPING HANDLING	1.00			
	SHIPPING HANDLING	1.00			
	SHIPPING HANDLING	1.00			
	SHIPPING HANDLING	1.00			
	SHIPPING HANDLING	1.00			
	DIAGNOSTIC LAPTOP	1.00			

LABOR

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CUSTOMER NO	PAGE NO 3
CUSTOMER PO A40F	

ITEM Lot ID	/	DESCRIPTION	QTY	B/O	PRICE(USD)	CORE	TOTAL
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29,211.70 TOTAL

PARTS LABOR MISC.	
SALES TAX	----
INVOICE TOTAL (USD)	29,211.70

Note: