

Invoice #	
Date	
Time	16:17

PO#	
Terms	COD
Due Date	11/29/2023

RO#			
RO Date	11/29/2023		
Miles	In	0.0	Out 0.0
Hours	In	0.0	Out 0.0
Service Writer			
Stock#	(63111)		
Serial#	U082075		
Yr Make Model	CHALLENGER MT 645C		
Description	CHALLENGER		
License			
Fleet#			
In Service Date	12/31/9999		

Repair Order

Customer

Memo

Customer Service Issue # 1

Com: WILL NOT GO INTO GEAR

Cause:

Fix: I pulled the machine into the facility and started a visual inspection. All power and grounds were checked, clean and secured. Inspected all accessible electrical connections and found no obvious concerns and all observed were secure. Started unit and observed code fuel rail pressure codes and a transmission shift actuator code, coming up on the instrument cluster. I went to the workshop manual and followed the instructions for the transmission calibration. Once in calibration I observed on step "two" of the calibration it would just hang up in a "loop" and not move forward. I started a tech connect case and it was noted that if any code came up the calibration would fail. I started looking into the E9150 code and found a faulty and rusty fuel pressure relief valve, located on the common rail. I replaced the valve and gasket and torque to workshop manual specifications. I started the machine and observed that the fuel pressure code now took much longer to come in, but was still there, but did give enough time for the transmission calibration: the transmission actuator code was still present.

I then took and performed the calibration once more while monitoring voltages with my DVOM, at the shift actuator. The voltages were good at the shift actuator and canbus voltages were normal, some movement was observed but not the movement expected. I looked into the machines' past history and observed the wire harnesses burned due to an exhaust leak. I removed the master fuse panel in the cab and associated panels for inspection, due to electrical flow through the master fuse panel. On the panel I observed a burned transistor and burned (overloaded) wire traces on the printed circuit board. I then left the mast fuse panel plugged and proceeded to hook up the diagnostic computer to the J1939 diagnostic ports. I observed on the canbus that all modules were present except for the auto4 module. I performed a pin point test on the auto four module and found the module to have all of its power and grounds. I removed the battery connection for resistance checks and found all grounds to be at .2 ohms or less. I attached the battery and performed a voltage drop test on the auto4 power circuits and found all voltage drops to be less than .100 mvdc, well within exceptional range. I then proceeded to attempt communication through the J1939 to the auto4 with the diagnostic computer and the auto four was failing communication. Authorization was given to proceed with repairs. I replaced the master fuse panel and auto4 controller. Communications were now restored to the auto4 and the auto4 was now on line and was able to be programmed and configured to the machine. At this time I still had a code coming up for the shift actuator. The code stated that the auto4 did not receive a position signal from the shift controller. I then once again verified the signals with a dvom and found the actuator was faulty. At this time the shift actuator was replaced and torque to specifications. I then proceeded to perform the transmission calibration through the diagnostic computer, J1939 connection, and all seven steps of the calibration went through and was successful. I reinstalled any loose panels and performed one final check for codes and the machine was clear of codes. I took the machine out for a lengthy operation test, ran the machine through all its speeds in reverse and forward and found no further concerns with the unit.

Summary:

The master fuse panel had been shorted, possibly when the other incident occurred, shorting out the auto4 and the shift actuator. The fuel rail pressure codes were created by the common rail fuel pressure relief valve.

Note:

Mech	Type	Description	Total
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Printed: 4/10/2024 9:02 AM

Customer Name	Invoice#	RO#	Date
i	0	i	11/29/2023

44068	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
40269	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
	Item	72476041-AGC	ELECTRONICS BOX
	Item	72676159-AGC	CONTROL
	Item	72450582-AGC	SEALING STRIP-L=10M
	Item	069-1088276-331	3/4" X 60' VINYL ELECTRICAL TAPE
	Item	141-4305F-331	3/8" SPLIT WIRE LOOM--10' BLK.
	Item	4347153M1-AGC	HYDRAULIC HOSE
	Item	V615881216-AGC	SEALING WASHER-X12-16X1.
	Item	V640425008-AGC	DUAL BANJO BOLT-M12X1.5
	Item	V837069409-AGC	PRESSURE VALVE
	Item	ACW4190620-AGC	CONN FITTING-M14X1.5 DIN
	Item	RY265T-812	A/C COMPRESSOR CLUTCH
	Item	72315471-AGC	SOCKET HEAD BOLT-DIN 912
	Item	4298297M93-AGC	PLATE CLAMPING
	Item	4289997M1-AGC	PRESSURE SENSOR
	Misc.	MSC	SHOP SUPPLIES

Subtotal	
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Repair Totals									
Warranty	Parts:		Labor:		Misc.:		PreTax Subtotal:		
Internal	Parts:		Labor:		Misc.:		PreTax Subtotal:		
Customer	Parts:		Labor:		Misc.:		PreTax Subtotal:		
							Sales Tax:		
							Total Due from Customer:		
Cash	Check	Check #	CC	CC Type	On Acct.	Mfg Credit	CIT	Deposit	Other
\$0.00	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

I hereby authorize the above repair work to be done along with necessary materials. You and your employees may operate vehicle/equipment for the purpose of testing, inspection or delivery at my risk. An express mechanic's lien is acknowledged on vehicle/equipment to secure the amount of repairs thereto. You are not responsible for loss of or damage to the vehicle /equipment or its contents due to collision not due to your negligence; or due to fire, theft or other casualty regardless of whether or not such fire, theft or other casualty is due to your negligence; and you and your agents are hereby released from any and all claims for such loss and damage.

UPON BREACH OR FAILURE TO PAY THIS ACCOUNT WHEN DUE THE SELLER MAY DECLARE THIS ACCOUNT TO BE DELINQUENT AND PURCHASER SHALL BE LIABLE FOR ALL COST OF COLLECTION INCLUDING A REASONABLE ATTORNEY'S FEE.

Summary of Charges

	Taxable
	Non-Taxable
	Subtotal
	Sales Tax
\$11,312.56	PAY THIS AMOUNT
\$0.00	Amount Tendered
\$0.00	Change Due
Exempt Tax Cert #:	
Expiration Date:	

Customer Signature

Date

Printed:4/10/2024 9:02 AM

Page 2 of 2 Pages

Invoice #	1
Date	
Time	14:29

PO#	
Terms	COD
Due Date	4/19/24

RO#				
RO Date	4/19/2024			
Miles	In	0.0	Out	0.0
Hours	In	0.0	Out	0.0
Service Writer				
Stock#	(63111)			
Serial#	U082075			
Yr Make Model	CHALLENGER MT 645C			
Description	CHALLENGER			
License				
Fleet#				
In Service Date	12/31/9999			

Repair Order

Customer

Memo

Customer Service Issue # 1

Com: AC IS NOT COOLING

Cause:

Fix:

Note:

Mech	Type	Description	Total
39400	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
44115	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
	Misc.	Parts: Freight	
	Item	4288672M96-AGC	PLATE CONTROL
	Misc.	MSC	SHOP SUPPLIES

Subtotal	
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Customer Name	Invoice#	RO#	Date
I	0	t	04/19/2024

Repair Totals									
Warranty	Parts:		Labor:		Misc.:		PreTax Subtotal:		
Internal	Parts:		Labor:		Misc.:		PreTax Subtotal:		
Customer	Parts:	1	Labor:		Misc.:		PreTax Subtotal:		2
							Sales Tax:		1
							Total Due from Customer:		\$1,605.06
Cash	Check	Check #	CC	CC Type	On Acct.	Mfg Credit	CIT	Deposit	Other
\$0.00	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

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Customer Signature	Date
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Summary of Charges	
	Taxable
\$0.00	Non-Taxable
	Subtotal
	Sales Tax
\$1,605.06	PAY THIS AMOUNT
\$0.00	Amount Tendered
\$0.00	Change Due
Exempt Tax Cert #:	
Expiration Date:	

HLAVINKA EQUIPMENT COMPANY

www.hlavinka.com
418 Kirkpatrick/P.O. Box 566
Taft, TX 78390
TELEPHONE: (361) 528-2554
FAX: (361) 528-3374

Invoice #		PO#	
Date		Terms	
Time	15:18	Due Date	

Repair Order

Customer

Engine Serial Number

RO#	
RO Date	7/8/2022
Miles	In 0.0 Out 0.0
Hours	In 0.0 Out 0.0
Service Writer	
Stock#	(63111)
Serial#	U082075
Yr Make Model	CHALLENGER MT 645C
Description	CHALLENGER
License	
Fleet#	
In Service Date	12/31/9999

Memo

Customer Service Issue # 1

Com: CUSTOMER STATES THAT MACHINE HAS ELECTRICAL PROBLEMS , INSURANCE JOB , FIRE DAMAGE UNDER THE CAB .

Cause:

Fix: WIRING HARNESS HAD CAUGHT ON FIRE UNDER THE CAB AND NEEDED TO BE REPLACED. HAD TO REMOVE CAB OFF TRACTOR TO GET TO IT, WHILE TAKING OFF THE CAB, I HAD TO REMOVE FREON FROM A/C SYSTEM AND DISCONNECT A/C LINES, ALSO HAD TO REMOVE SOME HYDRAULIC LINES AND ELECTRONIC WIRING AS WELL AS THE CAB MOUNTING BOLTS. AFTER REMOVAL OF THE CAB, I FOUND THAT THERE WAS EVEN MORE DAMAGE CAUSED BY THE FIRE. THE CABLES GOING TO THE BATTERY HAD MELTED AND THE BATTERIES THEMSELVES HAD GOTTEN DAMAGED. THE FIRE MELTED THE LOCKING DOOR THAT COVERS THE BATTERIES. ALSO, THE FUEL TANK THAT IS RIGHT UNDER THE BATTERIES HAD GOTTEN BURNT AND MELTED AND NEEDED TO BE REPLACED. THE SPEED DETECTOR WAS DAMAGED AND ALSO NEEDED TO BE REPLACED. THE CAB AIR SUSPENSION ACCUMULATORS WERE DAMAGED AND THE HAD TO BE REPLACED. THE SENSOR TO THE EXHAUST STACK WAS ALSO DAMAGED AND HAD TO BE REPLACED. THE OIL LEVEL SENSOR ALSO HAD GOTTEN DAMAGED AND HAD TO BE REPLACED. AFTER REPLACING THE HARNESS AND THESE OTHER PARTS THAT WERE DAMAGED AND PUTTING THE CAB BACK TOGETHER AND FILLING THE TRACTOR BACK WITH ALL FLUIDS, I FOUND THAT AFTER STARTING THE TRACTOR UP, THERE WERE MORE ISSUES WITH IT. THE PARK LOCK WOULD NOT DISENGAGE, SO THE TRACTOR WOULD NOT GO INTO DRIVE OR REVERSE AND ALSO THERE WERE A COUPLE OF WARNING LIGHTS POPPING UP ON THE DASH AND SOME FUNCTIONS WERE NOT SHOWING AT ALL. SO I THEN HOOKED UP THE SCAN TOOL AND DID UPDATES, A RE-FLASH AND CONFIGURATION TO SEE IF THAT WOULD HELP AND IT DID NOT. I THEN TESTED THE AUTO 5 CONTROLLERS AND FOUND THAT THEY WERE NOT RESPONDING CORRECTLY AND NEEDED TO BE PLACED. AFTER THEY WERE REPLACED AND CONFIGURED, MORE FUNCTIONS STARTED RESPONDING, THEN I WAS ABLE TO DO FURTHER DIAGNOSTICS ON THE OTHER ISSUES. I FOUND THAT THE PARK LOCK PRESSURE SENSOR AND THE STEERING PRESSURE SENSORS WERE NOT WORKING CORRECTLY AND NOT REACHING THE PROPER BAR PRESSURE FOR THE TRACTOR PARKING BRAKE TO DISENGAGE AND NOT SHOWING THE RIGHT PRESSURES ON THE STEERING SENSORS FOR THE LIGHTS TO GO OFF ON THE DASH. SO, I REPLACED THOSE ALSO AND THE MACHINE STARTED WORKING CORRECTLY. THE AUTO 5 CONTROLLERS AND THE PRESSURE SENSORS WERE COLLATERAL DAMAGE DUE TO THE FIRE CAUSING THEM TO GET FIRED AND NOT WORK CORRECTLY. RAN AND TEST DROVE TRACTOR FOR A FEW HOURS, AND IT IS NOW WORKING CORRECTLY WITH NO FURTHER ISSUES.

Note:

Mech	Type	Description	Total
37254	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
36749	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
26760	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
44115	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
44068	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
44264	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
39400	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
40269	Labor	RETAIL LABOR-SHOP	RETAIL LABOR-SHOP
	Item	4284238M93-AGC	FUEL TANK-N042 AUXILIARY

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Customer Name	Invoice#	RO#	Date
I	0	67289	07/08/2022

Item	ACW7162290-AGC	LOCKING PLUG-13MM
Item	72637663-AGC	DOOR GLASS, RH-H48181803
Item	3784666M1-AGC	HELMET
Item	4285429M1-AGC	SEAL
Item	4286381M1-AGC	PROTECTIVE STRIP
Item	4296076M97-AGC	SUPPORT
Item	4296077M97-AGC	SUPPORT
Item	4297489M2-AGC	HYDR. HOSE
Item	4298765M91-AGC	BATTERY CABLE
Item	4348225M91-AGC	HARNESS
Item	4349075M2-AGC	SPACER
Item	4349613M93-AGC	LEVER
Item	4355810M94-AGC	LOCATOR
Item	4355811M92-AGC	LOCATOR
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Item	4290534M6-AGC	SUPPORT, LH
Misc.	Parts: Freight	
Item	4295702M2-AGC	SPACER-X 17-20 X 69 MM
Item	4295703M1-AGC	SPACER-X 20-38 X 63 MM
Item	4295703M1-AGC	SPACER-X 20-38 X 63 MM
Item	4287836M96-AGC	HARNESS
Item	4292374M1-AGC	SUPPORT
Item	4294812M2-AGC	BATTERY CABLE
Item	4294999M1-AGC	BATTERY CABLE
Item	4298766M91-AGC	NEG BATTERY CABLE
Item	4295702M2-AGC	SPACER-X 17-20 X 69 MM
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Item	4291756M97-AGC	TRANS HARNESS
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Item	4299526M1-AGC	ACCUMULATOR
Item	4299528M2-AGC	CABIN SUSPENSION
Item	4298596M1-AGC	STIRRUP
Item	4299524M92-AGC	AIR SUSPENSION
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Misc.	Parts: Freight	
Item	923-T120R-331	DPBT-6834228 NYLON CABLE TIE BLACK 120# 15" L
Item	923-T30R-331	NYLON CABLE TIE BLACK 30# 6" L
Item	V837086231-AGC	SENSOR
Item	4295711M2-AGC	ADJUSTING SHIM-X 16,5-30
Item	3014255X1-AGC	SCREW 12 POINTS-M12 X 60
Item	3014499X1-AGC	HEX HEAD BOLT-M12 X 65 I
Item	391112X1-AGC	HEX HEAD BOLT-M12 X 50 I
Item	385363X1-AGC	FLAT WASHER-M12 ZN
Item	4290101M96-AGC	HARNESS
Item	1440350X1-AGC	CAPSCREW-M6 X 20 (1.0) I

Customer Name	Invoice#	RO#	Date
	0	67289	07/08/2022

Item	ACW1044750-AGC	HEX BOLT-ISO4017 M8X1.25
Misc.	Parts: Freight	DP8T-6849202
Misc.	Parts: Freight	DPIP-3567452
Item	124-62032-331	HOSE CLAMP 1-9/16"-2-1/2" RANGE 1/2" WID
Item	4278306M1-AGC	SHOCK ABSORBER
Item	ACW0775910-AGC	HEX. FLANGE BOLT-EN1665
Item	390734X1-AGC	PLAIN WASHER-X 10-21 X 2
Item	4276408M1-AGC	CONNECTOR-(+) M10
Item	390972X1-AGC	PLAIN WASHER-M8 ZN
Item	4274518M1-AGC	NEGATIVE CABLE
Item	391038X1-AGC	FLAT WASHER-M6 ZN
Item	4291020M2-AGC	SWITCH
Item	4291029M4-AGC	COVER
Item	4278758M1-AGC	GASKET
Item	4290720M1-AGC	LOCK
Item	4276409M1-AGC	CONNECTOR-(-) M8
Item	4274946M1-AGC	POSITIVE CABLE
Item	4278306M1-AGC	SHOCK ABSORBER
Item	4274753M3-AGC	STUD BOLT-M8X40
Item	339169X1-AGC	HEX NUT-M8 (1.25) ISO 8
Item	4287082M3-AGC	PIPE
Item	339228X1-AGC	HEX HEAD BOLT-M8 X 12 (1
Item	3581131M1-AGC	CLIP-X 20 MM / M8 ZN
Item	4281082M1-AGC	CLIP-X 10 X 15,1 MM
Item	72314880-AGC	WASHER PUMP-12V
Item	3582443M1-AGC	GASKET-ID=6.6 X 11 X 10M
Item	4288215M1-AGC	SUPPORT
Item	339168X1-AGC	HEX HEAD BOLT-M8 X 50 (1
Item	339169X1-AGC	HEX NUT-M8 (1.25) ISO 8
Item	4289198M4-AGC	HOSE FLEXIBLE-LG 2020
Item	339123X1-AGC	HEX HEAD BOLT-M8 X 20 (1
Item	339169X1-AGC	HEX NUT-M8 (1.25) ISO 8
Item	3011642X1-AGC	SCREW 12 POINTS-M16 X 35
Misc.	Parts: Freight	
Item	3015459X1-AGC	STUD BOLT-M6 X 18 ISO 8.
Item	339123X1-AGC	HEX HEAD BOLT-M8 X 20 (1
Item	4282089M2-AGC	SPEED DETECTOR
Item	4293932M2-AGC	HINGE
Item	4297411M2-AGC	GASKET
Item	4297413M2-AGC	JOINT
Item	4296516M91-AGC	HINGE
Item	4296492M1-AGC	HINGE
Item	339761X1-AGC	HEX HEAD BOLT-M8X1.25X25
Item	391025X1-AGC	TOOTH WASHER-M8 ZN
Item	4351552M1-AGC	WASHER-X 8,4-20 X 4 MM
Item	4348438M92-AGC	LATCH
Item	BSKYDEF-26-850	2.5gal Def
Item	79022729-AGC	COOLANT-EG CN 1G
Item	79035449-AGC	OIL-821XL PLUS 2.5G
Misc.	Service: Fuel	DIESEL
Item	DEF-25-850	2.5 GAL DEF
Item	3787500M95-AGC	UNIT-FRN CMD
Item	4272209M1-AGC	DECAL

Customer Name	Invoice#	RO#	Date
	0	67289	07/08/2022

Item	72488031-AGC	PRESSURE SENSOR
Item	4297134M1-AGC	VALVE
Misc.	Parts: Freight	
Item	3906566M91-AGC	ELECTROVALVE
Misc.	Parts: Freight	DPIP-3582505
Item	4301386M94-AGC	CALCULATOR-AUTO 5 - CAN
Item	WWF BW-850	WINDSHIELD FLUID BUG WASH
Item	ACX2770930-AGC	PRESSURE SENSOR-250 BARS
Misc.	Parts: Freight	
Item	72622558-AGC	OIL LEVEL SENSOR
Misc.	Parts: Freight	
Item	ACX2770930-AGC	PRESSURE SENSOR-250 BARS
Misc.	Parts: Freight	
Item	SP11211-812	WWF BUG WASH
Item	339244X1-AGC	HEX HEAD BOLT-M6X1.0X55

Subtotal	
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Repair Totals									
Warranty	Parts:		Labor:		Misc.:		PreTax Subtotal:		
Internal	Parts:		Labor:		Misc.:		PreTax Subtotal:		
Customer	Parts:		Labor:		Misc.:		PreTax Subtotal:		
							Sales Tax:		
							Total Due from Customer:		\$43,273.70
Cash	Check	Check #	CC	CC Type	On Acct.	Mfg Credit	CIT	Deposit	Other
\$0.00	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

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Summary of Charges

	Taxable
	Non-Taxable
	Subtotal
	Sales Tax
\$43,273.70	PAY THIS AMOUNT
\$0.00	Amount Tendered
\$0.00	Change Due
Exempt Tax Cert #:	
Expiration Date:	

Customer Signature

Date

Printed:7/11/2023 11:47 AM