



Automotive Solutions & Repair

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Invoice for RO

Service Advisor: Sean Kraft
 Date Created: 11/01/22 at 03:36 PM EDT
 Client: [REDACTED]
 Vehicle: 2017 Chevrolet Volt LT

Adrian, MI Phone: [REDACTED]	2017 Chevrolet Volt LT 1.5L 4Cyl ELECTRIC/GAS L3A Naturally Aspirated VIN [REDACTED] License [REDACTED] Color: Black Odometer In: 77204 / Out: 77217	RO [REDACTED] Time-In: 11/01/22 at 03:36 PM EDT Save Parts: No
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Client concerns:

- Vehicle quit running while driving. High voltage system failure message displays on dash

1 - Hybrid/EV Diagnostics And Testing		TECH: Sean Kraft Cert #M243893
<p>Note: Confirmed warning indicator on instrument panel cluster states high voltage system failure. Checked and recorded fault codes. Retrieved multiple fault codes P1E00, B1517, P0D26, P1AE6, P0C78, P0ABC, P1FFF, B1517. Checked for applicable TSB's for this concern. NO TSB's at the time of testing related to these stored codes. Performed testing per workshop manual for the stored codes. Evaluation and testing per WSM directed to replacement of the battery energy control module. The high voltage battery pack will need to be removed to perform this service. Module programming and calibration will be required after repair. Current recommendations. Replace the battery energy control module, program and calibrate the module, fill and bleed the cooling system, and re-test after repair.</p>		
Labor:	Confirmation, Testing, And Evaluation. Road test where applicable and check for confirmation of client's initial concern. Perform and record full system code scan report(code scan report attached to digital inspection worksheet). Check for related TSB's and service bulletins based off of the initial concern and/or related trouble codes. Evaluate stage 1 results and determine an action plan based off of the service bulletins, code scan report, freeze frame reports, data monitoring, and minor testing.	\$220.00
✓ Approved on 11/01/22 at 03:50 PM EDT		\$220.00

2 - Hybrid High Voltage Battery Control Module		TECH: Sean Kraft Cert #M243893
<p>Note: Removed high voltage battery and replaced the battery energy control module per workshop manual test procedures. Replaced HV battery disconnect socket and attaching cable while the battery was removed due to a clip that secures the positive lead to the socket in marginal condition. Fill and bleed HV cooling system after repair. Vehicle will now start, run, and move under it's own power. After programming the hybrid pcm2 is setting a p0606 and the check engine light is on. Further testing is required in to this concern as it is unrelated to the current repair</p>		
Labor:	Remove & Replace Hybrid High Voltage Battery Control Module	\$770.00
Parts:	General Motors MODULE,BATTERY ENERGY CONTROL (WITHOUT CALIBRATION & OPERATING SYSTEM) - 24296900	1 \$629.87
	General Motors CABLE,HIGH VOLTAGE BATTERY POSITIVE - 23283822	1 \$171.39
✓ Approved on 11/01/22 at 03:50 PM EDT		Subtotal \$1,571.26 + est. Tax \$48.08 \$1,619.34

3 - Hybrid PCM 2		TECH: Sean Kraft Cert #M243893
<p>Note: Replaced hybrid pcm2 per workshop manual testing due to setting dtc p0606(control module processor performance). Program module after replacement. p0606 dtc's are gone. Retrieved codes p2517 air conditioning refrigerant low side pressure sensor circuit low voltage, p2682 engine coolant bypass valve control circuit 1 low voltage, and p26a6 engine coolant bypass valve position sensor circuit low voltage. Visual inspection of the engine coolant bypass valve revealed severed wires approximately 1 inch from the electrical connector to the valve. It appears the wires may have been chewed in half by an animal. The visual inspection did not reveal any other damaged wires. Replaced wiring pigtail/connector and cleared all codes. Road test after repairs revealed the check engine light remains off and the vehicle drives properly.</p>		
Labor:	Remove & Replace Hybrid PCM 2 Wire connector repair/replacement	\$135.00 \$135.00
Parts:	General Motors MODULE,HYBRID POWERTRAIN CONTROL 2 (WITHOUT CALIBRATION & OPERATING SYSTEM) - 24291552	1 \$494.30
	General Motors CONNECTOR - 13578533	1 \$90.30
✓ Approved on 11/07/22 at 09:04 AM EST		Subtotal \$854.60 + est. Tax \$35.08 \$889.68

4 - Module Programming - General Motors - Update Or Programming

TECH: Sean Kraft | Cert #M243893

Note: Reprogram or update module Battery energy control module and update applicable modules required for proper operation
 Module Programming Disclaimer: This is a fairly invasive procedure. If interrupted for reasons out of our control, your module will essentially be rendered inoperative(bricked). Depending on what point a module may fail recovery could be impossible. Perform this procedure at your own risk; Mobile Medic LLC Automotive Solutions & Repair and it's technicians, are NOT responsible for any damage that may result. Mobile Medic LLC Automotive Solutions & Repair, will not reimburse any fees a Buyer expends in connection with a possible faulty/defective unit(s) that may ensue including, but not limited to Locksmith fees, diagnostic fees, rental car fees, storage fees, dealership fees, third party reprogramming fees, etc. All module programming is done per OE recommended procedures with OE service information available

Labor:	Reprogram or update module	\$175.00
✓ Approved on 11/01/22 at 03:50 PM EDT		\$175.00

RO Fees

Fees:	Hazardous Waste Disposal	\$2.98
	NON-CASH ADJUSTMENT - As an incentive to our customers we provide a 3.5% cash discount on all cash transactions. Non cash tractions will incur a 3.5% non cash adjustment on your final transaction.	\$0.00
<i>Subtotal</i>		\$2.98

ALL PARTS NEW UNLESS OTHERWISE STATED.

A finance charge of 1.5%/mo (18% annual rate) will be charged on all past due accounts. All parts are new unless otherwise specified.

As an incentive to our customers we provide a 3.5% cash discount on all cash transactions. Non cash tractions will incur a 3.5% non cash adjustment on your final transaction.

YOU ARE ENTITLED BY LAW TO THE RETURN OF ALL PARTS REPLACED, EXCEPT THOSE WHICH ARE TOO HEAVY OR LARGE, AND THOSE REQUIRED TO BE SENT BACK TO THE MANUFACTURER OR DISTRIBUTOR BECAUSE OF WARRANTY WORK OR AN EXCHANGE AGREEMENT. YOU ARE ENTITLED TO INSPECT THE PARTS WHICH CANNOT BE RETURNED TO YOU.

TEARDOWN ESTIMATE: I understand that my vehicle will be reassembled within 7 days of the date shown above if I choose not to authorize the service recommended. All Vehicles left over 48 hrs after repairs are completed WILL INCUR a \$50.00 PER DAY STORAGE FEE.

Standard warranty on parts & labor is 36 months from invoice date or 36,000 miles - whichever comes first unless it is otherwise noted. Warranty does not cover incidental loss/damage or towing. High performance or modified vehicles voids all warranties. Warranty work must be performed in our shop (If you are more than 35 miles from our facility please call 1-877-230-0369), unless you have received prior written authorization from Automotive Solutions & Repair. No parts or labor warranty against defects in materials, fitment, or longevity of any customer supplied parts or incidental damage that may result if the supplied part(s) fail. Vehicles with modified suspensions voids all warranties on mounts, steering, suspension, differentials, transfer case, and driveline components. No warranties on parts or labor for custom builds or performance modifications. Brake pads and rotors warranted from defects in materials or workmanship for 24 months from invoice date or 24,000 miles - whichever comes first. Brake warranties are subject to inspection. Standard shift transmission/transaxle clutch repairs warranted from defects in materials and workmanship for 12 months from invoice date or 12,000 miles at our discretion per teardown inspection. If teardown is needed and **Component** failure is do to abuse, neglect, or poor driving habits the customer is responsible for teardown and re-assembly cost. Clutch components are normal wear items and longevity can be drastically reduced based on driving style and habits. Air conditioning and cooling system service is warranted from leakage at the fitting connected to perform necessary service and components being replaced for 3 years from invoice date or 36,000 miles - whichever comes first. This warranty does not cover any other leaks in the air conditioning or cooling system. Used engines, transmissions, and axles are warranted for 12 months from invoice date or 12,000 miles - whichever comes first unless otherwise noted. Warranty on replacement of used parts does not cover any external fluids leaks, gaskets, seals, or electronic components. Misuse of the vehicle or neglect can void all warranties and is subject to our inspection. Used control modules and electronic parts are as-is with no part or labor warranty. All warranty policies do not cover the replacement of warranted parts failing as a result of non warranted parts failure. All warranty policies do not cover incidental damage as a result of warranted parts failing.

Customers are responsible for following proper maintenance schedules. Customers are responsible for checking & maintaining all fluid levels. Improper maintenance intervals may void warranties.

Re-torque lugnuts after 100 miles.

Engine oil level should be checked once a week. Engine oil filter is warranted for 5,000 miles or 5 months whichever comes first against leakage. We will check the engine oil level and top it off at no charge at any time for 5,000 miles with the full synthetic oil when oil and filter changes are probide through us, unless you have a noted oil leak or noted oil consumption issue that has not been repaired.

- CERTIFICATION -

ALL REPAIRS AND PARTS LISTED WERE FURNISHED IN COMPLIANCE WITH MICHIGAN REPAIR ACT (p.a. 300)

X _____

Total Repair Order & Signature:

X

Total Jobs:	\$2,820.86
Total Fees:	\$2.98
Subtotal:	\$2,823.84
Taxes:	\$83.15
Grand Total:	\$2,906.99
BALANCE DUE:	\$2,906.99