



Service Bulletin

File in Section: -

Bulletin No.: PIP4843C

Date: April, 2014

PRELIMINARY INFORMATION

Subject: (EREV) Drive Motor Generator Control Module (PIM) Part Restriction

Models: 2011-2014 Chevrolet Volt
2014 Cadillac ELR

This PI was superseded to update model list. Please discard PIP4843B.

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition/Concern

As part of our ongoing quality improvement process, effective November 1st, 2010 the (Drive Motor Generator Control Module, also known as PIM) for the EREV, part number 12643810 is being placed on restriction through the GM TAC (Technical Assistance Center).

Note: If the part is being ordered for a non-warrantable concern (i.e. collision, theft, fire, etc.) proceed directly to step 5 below (Valid VIN and proof of ownership required).

IMPORTANT NOTE: When replacing TPIM it will be necessary to order seal kit part number 24258145

Recommendation/Instructions

1. Please have a Volt technician follow the procedures below prior to contacting TAC.
IMPORTANT Note: Do NOT erase DTCs in any of the modules (especially on intermittent concerns) and do NOT attempt to reprogram software!
2. Please complete the customer questionnaire at the bottom of this document with as much information as possible and as accurately as possible so that it can be e-mailed to TAC.
3. Check and record all diagnostic codes in all modules on the vehicle.
4. Be sure to record what module the DTC came from and any symptom codes associated with the DTCs (see latest version of bulletin 07-07-30-010A for snapshot information).
5. If DTCs are set in any of the modules below, please save the captured data for later use.
Engine Control Module
Hybrid Control Module
Hybrid Control Module 2
Motor Control Module 1 & 2
Transmission Control Module
Auxiliary Transmission Fluid Pump Control Module
6. Once the above information has been obtained, please review all P.I and TSB information and all available S.I. diagnostics.
7. If diagnostics lead to PIM replacement, contact TAC @ 877-446-8227 (U.S.) or in Canada 1-800-263-7740 (English) or 1-800-263-7960 (French) to review case details. Please have as much stored DTC and snapshot information as possible prior to contacting TAC.
8. After reviewing the diagnosis, if component replacement is needed, TAC will arrange for ordering of the new component and request that it be shipped overnight.

Note: After reviewing the diagnosis, if component replacement is needed, GM Goodwrench TAC will arrange for ordering of the part(s). When this occurs, record the last 9 digits of the TAC case # to be used by the parts department (in conjunction with the part #) as the CONTROL NUMBER to track shipment of the part. It is not necessary to call TAC for part tracking information.

9. Prior to PIM replacement take resistance measurements of the module (see chart below)

Voltec TPIM Replacement Confirmation Measurement

Complete this form and return to Technical Assistance prior to ordering a new TPIM.
 To be completed only when replacing a TPIM for Motor 1 or Motor 2 inverter problems.
 This measurement should be done after disabling high voltage while the TPIM is in the vehicle.
 Remove ALL 5 high voltage connections to the TPIM prior to measurement.
 See accompanying photographs for phase locations and identification.

TPIM Part Number _____ Serial Number _____

Step 1: Using a Digital Multi Meter, measure the resistance (Ohms) between the following:



Ohms	U1	V1	W1	U2	V2	W2	
DC+							← Normally between 100 kOhms and 1 Mohm
DC-							← Normally between 10 kOhms and 500 kOhms

Ohms	U1	V1	W1	U2	V2	W2	
DC+							← Normally between 100 kOhms and 1 Mohm
DC-							← Normally between 10 kOhms and 500 kOhms

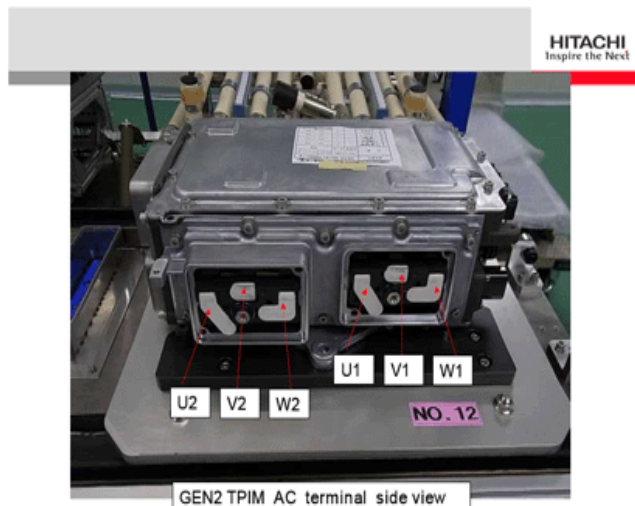
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Step 2: Using a Digital Multi-Meter on the Diode setting, measure the following in volts (V):

Volts	U1	V1	W1	U2	V2	W2	
DC+							← Normally between 0.2 V and 0.7 V

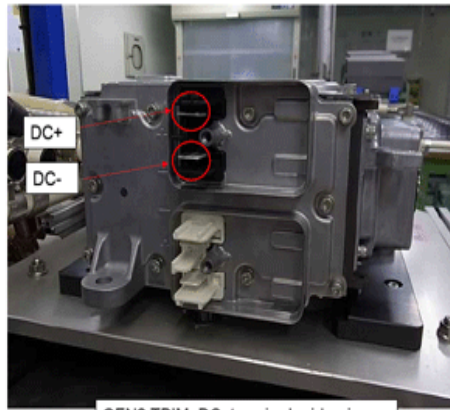
Volts	U1	V1	W1	U2	V2	W2	
DC-							← Normally between 0.2 V and 0.7 V

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GEN2 TPIM AC terminal side view

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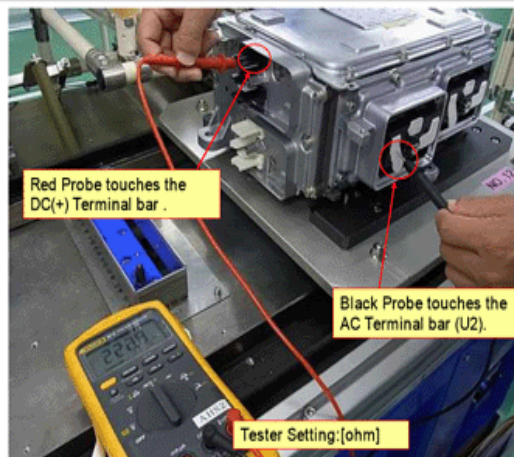


GEN2 TPIM DC terminal side view

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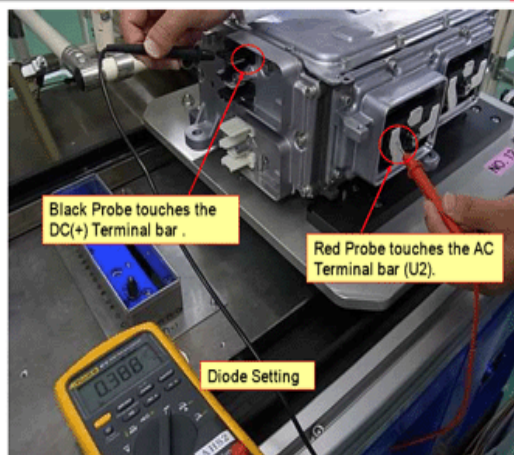
1. Resistance measurement with Digital Tester. (DC+ and U2)



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2. Diode forward voltage measurement with a Digital Tester.



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Driving Condition Customer Questionnaire

Please have the customer answer as many questions below and as accurately as possible. What was the weather like during the event? (Circle) Sunny, Rain, Snow, Overcast

What was the temperature outside at the time of the event?

Below 0F-32F (-17C-0C) 32-60F (0C-15C) Above 60F (15C) Exact if possible _____

Were there any sounds at the time of concern? Y/N

If yes what type?

Were there any odors at the time of concern? Y/N

If yes what type and from what area of the vehicle?

What were the driving conditions during the concern?

Highway

City

Combination

Estimate driving distance from starting point until the concern occurred.

Mileage ___ Kilometers ___

AND

Had the vehicle been driven from a cold start or had the vehicle already been driven and warm when the concern occurred.

What type of event was this?

Shutdown while driving? No go from initial start? No Go after driven?

If the event is a shutdown, please answer the following questions:

Was the engine running when the event occurred?

What type of road were you driving on when the event happened? (Circle one)

Paved, Gravel, Mud, Other _____

Were you accelerating or decelerating at the time? How aggressive was this?

How long has it been since the vehicle was previously driven? (Circle one)

<1 hour 2-5 hours 5-8 hours >8 hours

Approximately what temperature was the vehicle stored at prior to this drive cycle? (Circle one)

Below 0F-32F (-17C-0C) 32-60F (0C-15C) Above 60F (15C) Exact if possible _____

What gear were you in when the event occurred? (Circle one)

Park, Reverse, Neutral, Drive, Manual Shifting

How fast were you going when the event occurred? (Circle one)

Stopped 0-10 mph (0-16kph) 10-30mph (16-48kph) 30-50mph (48-80kph) above 50mph (80kph)

If the event is a no crank:

What % of driving is highway?

What % of driving is city?

Does the vehicle sit for extended periods of time? If so, record number of days.

Parts Information

Model Year	Part Number	Description	Qty
2011-2014	12643810	T6 Power Inverter Module	1
2011-2014	24258145	Seal Kit	1

Warranty Information

For vehicles repaired under warranty use:

Labor Operation	Description	Labor Time
5010240	Drive Motor Generator Power Inverter Module Replacement	Use Published Labor Operation Time

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.