

# INSTALLATION GUIDELINES

## AAE GM EPS RACK



## REPLACING GM EPS RACK WITH AAE REMANUFACTURED UNIT

### STEP 1

When selecting a replacement steering unit keep in mind that GM uses RPO codes which refer to specific options or modifications. Each RPO (Regular Production Option) code is a combination of three alphanumeric characters such as NJ1, FX3, etc.

You can find specific application information at [www.showmetheparts.com/crp/](http://www.showmetheparts.com/crp/).

### STEP 2

When installing a GM EPS rack, the power steering control module has to be programmed. See below for hardware and software required to perform the programming procedure:

#### HARDWARE: COMPATIBLE J2534 PASS-THRU DEVICE

- There are many different J2534 devices available in the market from manufacturers such as Snap-On, Bosch, Autel, Denso, etc.
- AAE suggests CarDAQ-Plus 3 or MongoosePro GM 2 from Drew Technologies
- For more information visit [www.drewtech.com](http://www.drewtech.com)

#### SOFTWARE: GM SPS (SERVICE PROGRAMING SYSTEM)

- The SPS application is part of the TIS2Web system.
- SPS is used to update the flash calibration files which are stored in the power steering control module.
- The cost for programming with SPS is **\$40 per vehicle (VIN)** and includes 24 months access.

For subscription information, visit [www.acdelcotds.com/subscriptions](http://www.acdelcotds.com/subscriptions) and look under "Programming".

*Note: Service Repair Manual Information provided by GM should always be reviewed for the appropriate programming and set-up procedures.*

### STEP 3

Before programming a newly installed steering rack GM recommends to install EL-49642 SPS Programming Support Tool which helps to maintain stable battery voltage. If the EL-49642 tool is not available, connect a fully charged 12V jumper or booster pack disconnected from the AC voltage supply. Do not connect a battery charger.

### STEP 4

During the programming procedure, always follow the SPS prompts for the correct ignition switch position.

### STEP 5

- Start SPS and select the option to "Reprogram ECU"
- Perform the following in order to program the Power Steering Control Module:
  - Under "Select Controller" choose "**K43 Power Steering Control Module**"
  - Under "Select Function / Sequence" choose "**Programming**"
- Follow the prompts to continue with the programming procedure
- If no errors were detected you will see "**Action Complete**" notification

1

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### STEP 6

- Next perform the following to check and complete any additional calibrations:
  - Under "Select Controller" choose "**K43 Power Steering Control Module**"
  - Under "Select Function / Sequence" choose "**Setup**"
  - Proceed to next screen for any "**Special Functions**" required for the particular model, such as Power Steering Torque Sensor Learn, Software Endstop Learn, Steering Angle Sensor Centering, etc.
- A green check in the "Special Function Session Log" means procedure is complete

### STEP 7

Clear Diagnostic Trouble Codes (DTC) after programming is complete. Test drive to confirm normal operation of EPS gear.

## AAE GM EPS PART NUMBERS

AAE Part No.	Description	OE Cross References	GM Model(s)
ER4111	REMAN ELECTRIC RACK & PINION	84368395	Silverado   Sierra
ER4113	REMAN ELECTRIC RACK & PINION	84368393	Silverado   Sierra
ER1011	REMAN ELECTRIC RACK & PINION	20857570	Equinox   Terrain
ER1085	REMAN ELECTRIC RACK & PINION	84037522	Equinox   Terrain
ER64101	REMAN ELECTRIC RACK & PINION	22985119	Equinox   Terrain
ER1015	REMAN ELECTRIC RACK & PINION	39032955	Cruze   Verano
ER1083	REMAN ELECTRIC RACK & PINION	13413955	Cruze   Volt
ER1084	REMAN ELECTRIC RACK & PINION	13372110	Verano
ER1103	REMAN ELECTRIC RACK & PINION	13337583	Malibu
ER1105	REMAN ELECTRIC RACK & PINION	22943369	Malibu   LaCrosse   Impala   Regal
ER1106	REMAN ELECTRIC RACK & PINION	22943370	Malibu   LaCrosse   Impala   Regal
ER1107	REMAN ELECTRIC RACK & PINION	22943371	Malibu

GM Service Bulletins listed below contain recommendations and instructions on EPS related fault codes (DTCs):

DTCs	Link to GM Bulletin
C0544, U0415	<a href="https://static.nhtsa.gov/odi/tsbs/2014/SB-10050239-9970.pdf">https://static.nhtsa.gov/odi/tsbs/2014/SB-10050239-9970.pdf</a>
C056D-39	<a href="https://static.nhtsa.gov/odi/tsbs/2014/MC-10126312-9999.pdf">https://static.nhtsa.gov/odi/tsbs/2014/MC-10126312-9999.pdf</a>
U0100, U0121, U0126, U140, U0073, U0077, U0415, U2099, C0800, C044B_56, C0544_5A	<a href="https://static.nhtsa.gov/odi/tsbs/2014/MC-10112095-9999.pdf">https://static.nhtsa.gov/odi/tsbs/2014/MC-10112095-9999.pdf</a>

*For Electric Power Steering related questions contact AAE Tech Support Hotline at 1-800-654-7565 (Press 2 for EPS)*

