



GROUP  
CLI

MODEL  
2011MY~  
Optima Hybrid (TF HEV)  
2015MY~  
Soul EV (PS EV)

NUMBER  
017 (REV 4, 10/13/2014)

DATE  
August 2011

## TECHNICAL SERVICE BULLETIN

SUBJECT: EV AND HYBRID A/C SYSTEM SERVICING REQUIREMENTS

### ★ NOTICE

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

The Soul Electric Vehicle (EV) and the Optima Hybrid use an A/C compressor that is driven by a high-voltage electric motor rather than by a belt. Both the motor and compressor are in one housing with a mix of refrigerant and oil flowing through both sections. Because the oil flows through the motor windings, it must have a high electrical resistivity (low conductivity). To achieve this, the EV and Hybrid vehicle's A/C system uses a special lubricant, either Polyvinyl Ether (PVE) or Polyolester (POE) oil. Conventional PAG oil cannot be intermixed with PVE or POE oil.

### ⚠ WARNING

**PAG oil is not sufficiently resistive and would permanently damage the electric A/C compressor. Use of the incorrect lubricant may cause severe personal injury or death from electrical shock.**

To service an EV or Hybrid vehicle A/C system, one of the following Recovery, Recycle, and Recharge (RRR) machines is required:

- A **DEDICATED** machine: a standard, non-SAE J2788-compliant RRR Machine (once dedicated, this can then only be used on PVE and POE A/C systems). Always keep the oil injection reservoir filled with PVE oil purchased from Kia Chemicals ([www.kiachemicals.com](http://www.kiachemicals.com)). **NOTE: At this time, only PVE oil is available from Kia Chemicals.**
- A **HOSE-FLUSHING** machine: an SAE J2788-compliant RRR machine (this can service all PAG, PVE, and POE A/C systems). When servicing an EV or Hybrid A/C system, use **ONLY** PVE oil purchased from Kia Chemicals ([www.kiachemicals.com](http://www.kiachemicals.com)).

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Service Advisor(s)  Technician(s)  Body Shop Manager  Fleet Repair

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For information regarding the purchase of either of these machines, contact Snap-on Business Solutions at (888) 542-1011 or go to [www.kiaspecialtools.com](http://www.kiaspecialtools.com).

**\* NOTICE**

- POE and PVE oils are compatible so if a DEDICATED machine has already been purchased, it can be used with either oil type.
- Prior to using the RRR machine, make sure it is properly calibrated per the manufacturer's instructions.
- Warranty claims for EV or Hybrid A/C compressors that are found to be contaminated with non-PVE/POE oils may be subject to charge-back.