KIN	GROUP	MODEL
	CLI	2011MY~ Optima Hybrid (TF HEV)
		2015MY~ Soul EV (PS EV)
	NUMBER	DATE
	017 (REV 4, 10/13/2014)	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.

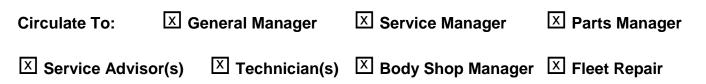
### 

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). 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 <u>ONLY</u> PVE oil purchased from Kia Chemicals (<u>www.kiachemicals.com</u>).

File Under: <Climate>



#### Page 2 of 2

### SUBJECT EV AND HYBRID A/C SYSTEM SERVICING REQUIREMENTS

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

# **\*** 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.
- <u>Warranty claims for EV or Hybrid A/C compressors that are found to be</u> <u>contaminated with non-PVE/POE oils may be subject to charge-back.</u>