

	GROUP ELE	MODEL 2018-2019MY Niro (DE EV/PHEV)
	NUMBER 186 (Rev 1, 10/14/2019)	DATE September 2019
TECHNICAL SERVICE BULLETIN		
SUBJECT: SERVICE ACTION: ELECTRIC WATER PUMP INSPECTION AND REPAIR (SA394)		

★ 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.

This bulletin provides the procedure to inspect and repair the Electric Water Pump(s) (EWP) on some 2018-2019MY Niro (DE) HEV, PHEV, and EV vehicles produced between November 24, 2018 through January 30, 2019, which may exhibit a MIL ON (DTC U1116 and/or U1118) due to a coolant leak from the EWP Can Case. Follow the procedure in this bulletin to inspect and repair the EWP. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.



★ NOTICE

A Service Action is a repair program without customer notification that is performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSM approval.

Repair status for a VIN is provided on WebDCS (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information). Not completed Recall / Service Action reports are available on WebDCS (Consumer Affairs → Not Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.

This issue number is SA394.

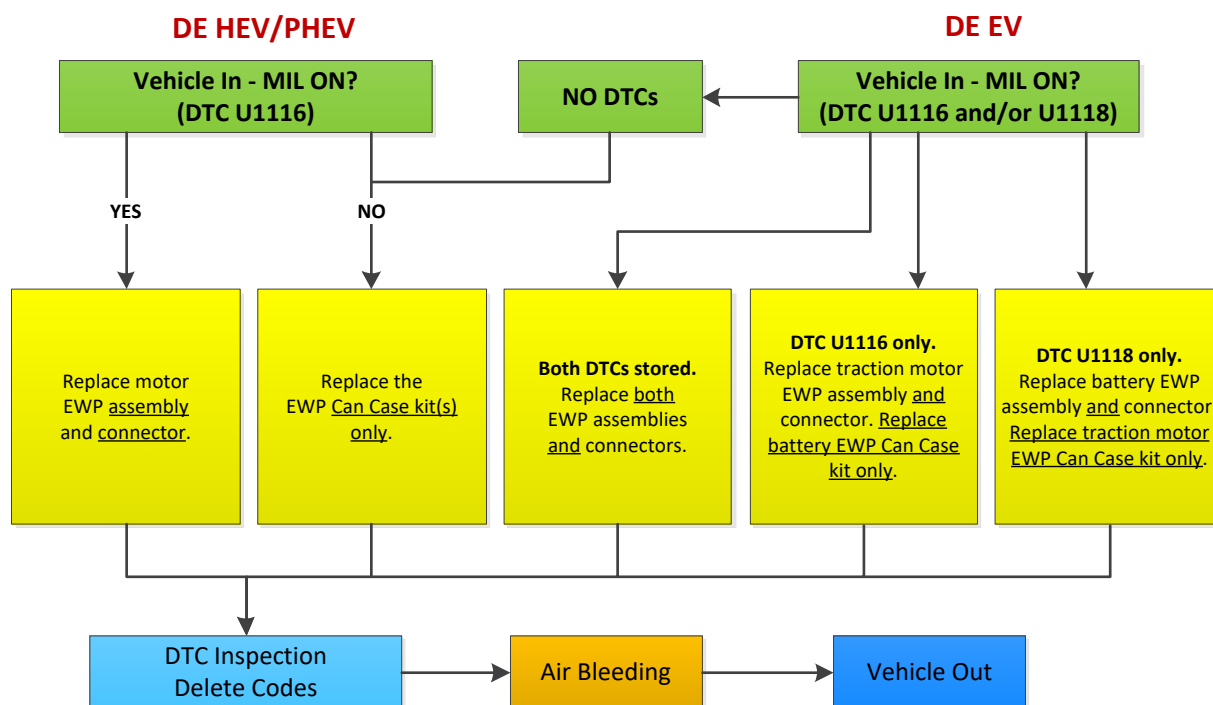
File Under: <Electrical>

Circulate To: ☒ General Manager ☒ Service Manager ☒ Parts Manager
☒ Service Advisors ☒ Technicians ☒ Body Shop Manager ☒ Fleet Repair

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EWP Repair Flowchart:



Model	MIL ON	Repair Procedure
(DE) (HEV/PHEV)	DTC U1116	Replace the <u>hybrid motor</u> EWP assembly and EWP connector.
	<u>NO</u> DTCs	Replace the hybrid motor EWP <u>Can Case kit only</u> .
(DE) (EV)	DTC U1116 <u>and</u> U1118	Replace the <u>both</u> the battery and traction motor EWP assemblies <u>and</u> EWP connectors.
	DTC U1116	Replace the traction motor EWP assembly <u>and</u> EWP connector. Replace the battery EWP Can Case kit.
	DTC U1118	Replace the battery EWP assembly <u>and</u> EWP connector. Replace the traction motor EWP Can Case kit.
	<u>NO</u> DTCs	Replace the traction motor <u>and</u> battery EWP <u>Can Case kits only</u> .

* NOTICE

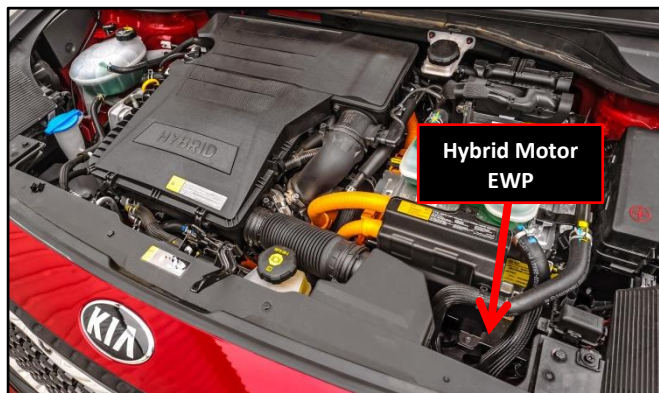
This bulletin does not apply to the combustion engine electric water pump (EWP) found on HEV/PHEV. It only applies to the hybrid motor EWP for HEV/PHEV models.

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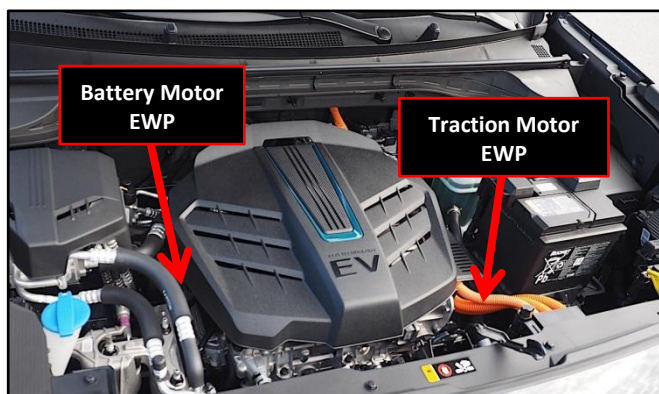
EWP Inspection and Replacement Procedure:

1. **(DE HEV/PHEV)** Remove the hybrid motor EWP assembly by referring to “Hybrid Motor System → Hybrid Motor Cooling System → Electric Water Pump (EWP) → Repair procedures” chapter in the applicable Shop Manual on KGIS.



(HEV/PHEV)

(DE EV) Remove the battery motor EWP assembly by referring to “Battery Control System → High Voltage Battery Cooling System → Motor Electric Water Pump (EWP) → Repair procedures” chapter in the applicable Shop Manual on KGIS.



(EV)

(DE EV) Remove the traction motor EWP assembly by referring to “Traction Motor System → Motor Cooling System → Motor Electric Water Pump (EWP) → Repair procedures” chapter in the applicable Shop Manual on KGIS.

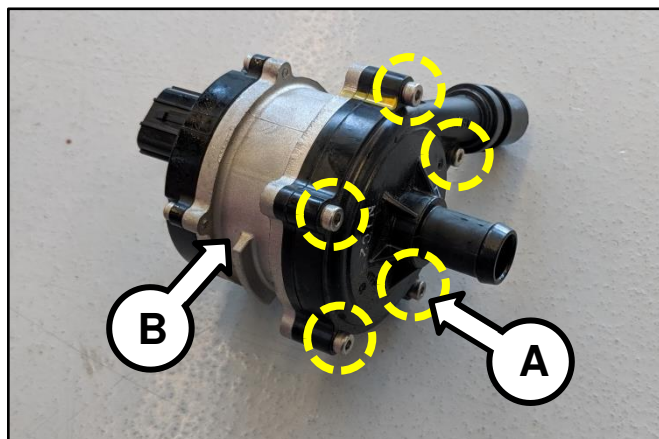
2. If replacing the EWP Can Case kit, proceed to page 3.

If replacing the EWP connector, proceed to page 5.

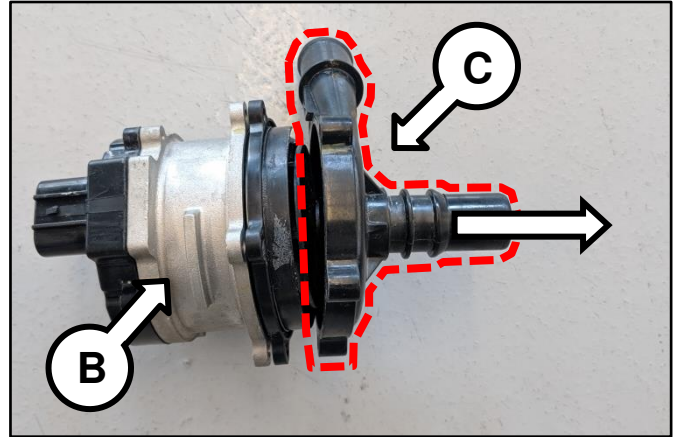
EWP Can Case Replacement Procedure:

1. Using a 3mm hex tool, remove the five (5) EWP cover bolts (A) from the EWP assembly (B).

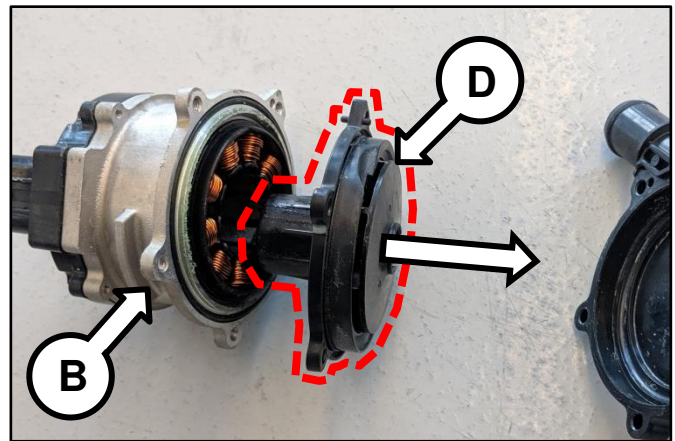
**Torque specification for bolts (A):
3.6 lb.ft. (4.9 N.m, 0.5 kgf.m)**



2. Detach the EWP cover (C) from the EWP assembly (B).



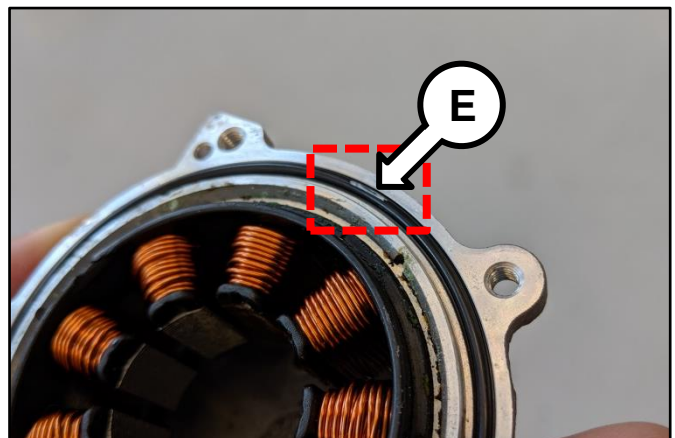
3. Remove the EWP Can Case (D) by pulling apart from the EWP Assembly (B).



4. Remove the stator o-ring and replace with the new supplied o-ring (E) from the Can Case kit.

★ NOTICE

The new stator o-ring from the Can Case kit will have a white marking.



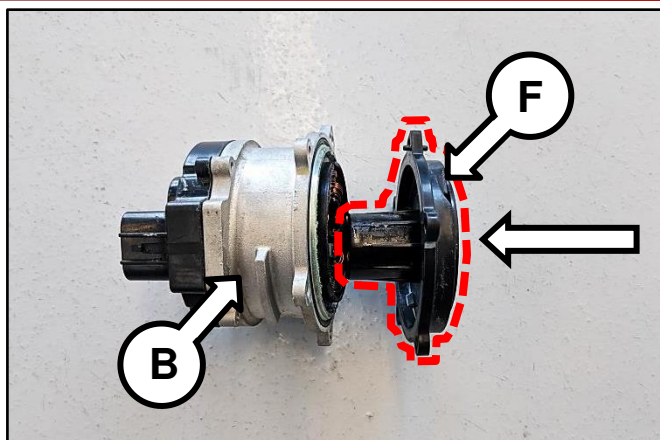
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5. Insert the new supplied Can Case (F) from the Can Case kit into the EWP assembly.

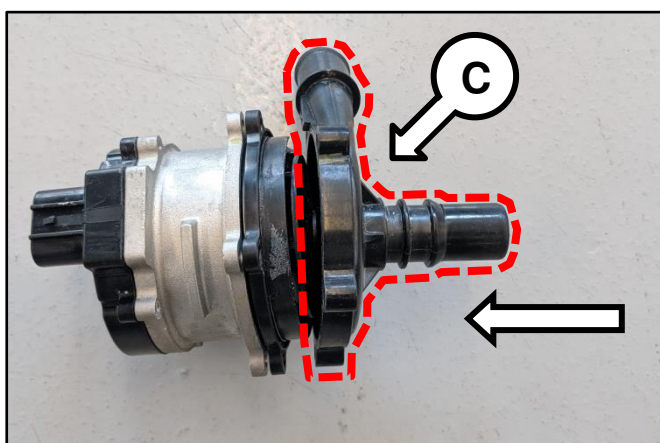
★ NOTICE

Ensure to align the pin from the Can Case to the EWP assembly housing.



6. Reassemble the EWP cover and torque the five (5) retaining cover bolts from step 1 to specification.

Torque specification for bolts:
3.6 lb.ft. (4.9 N.m, 0.5 kgf.m)



7. If only replacing the EWP Can Case and o-rings, replace all removed parts in the reverse order of removal and follow the recommended procedures outlined on the “EWP Repair Flowchart” on page 2.

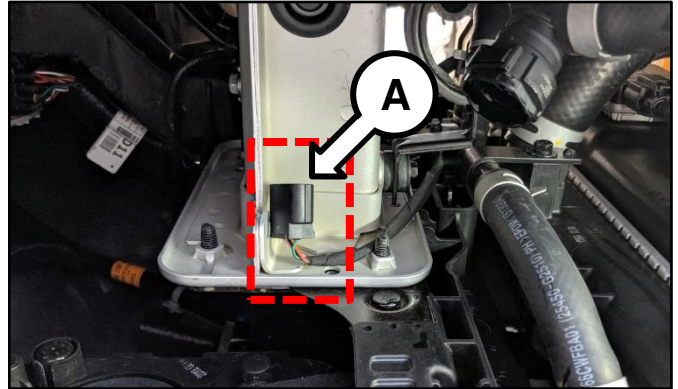
If also replacing the EWP connector, proceed to the EWP Wiring Connector Repair Procedure outlined on page 5 **before** re-installing the EWP assembly.

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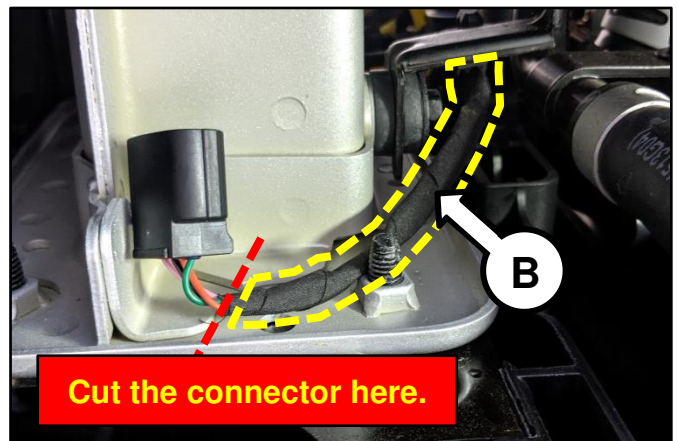
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EWP Wiring Connector Repair Procedure:

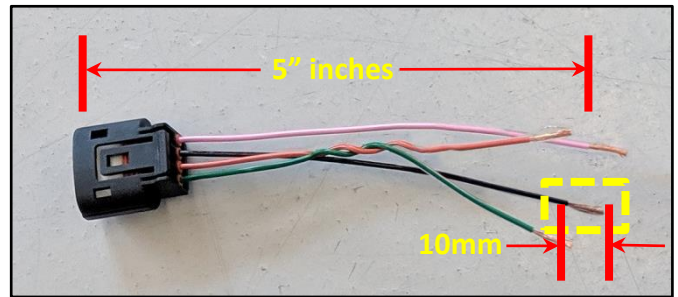
1. Locate the EWP wiring harness and connector (A). Niro (DE PHEV) is shown.



2. Cut off the existing connector from the harness where shown (red dotted line) and discard the connector. Then remove the insulation tape (B) from the harness.



- 3a. Take the new connector pigtail from the supplied kit and cut the pigtail to about 5" inches in length. Then strip insulation 10mm (0.4" inches) from the end of each wire as shown.
- 3b. Strip the insulation wire ends from the cut wire harness from step 2.

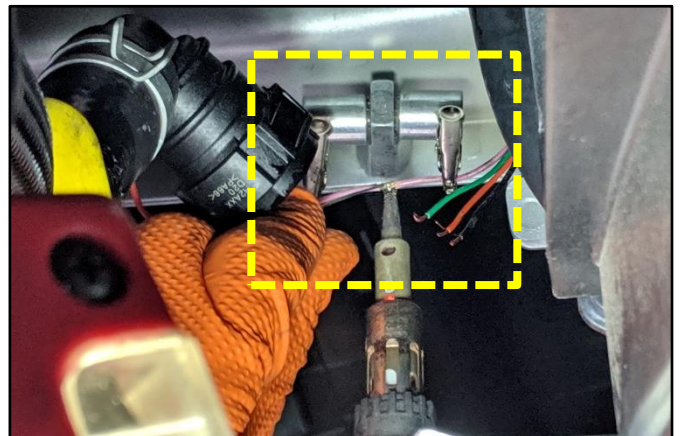


4. Follow the instructions below to solder the new connector to harness:

1. Slip the PVC shrink tube over one of the wires (pink wire shown).
2. Join the two wires by twisting the ends together.
3. Solder the two wires together.

* NOTICE

A Lisle 55000 magnetized wire holder tool was used to help hold wires in place (as shown).



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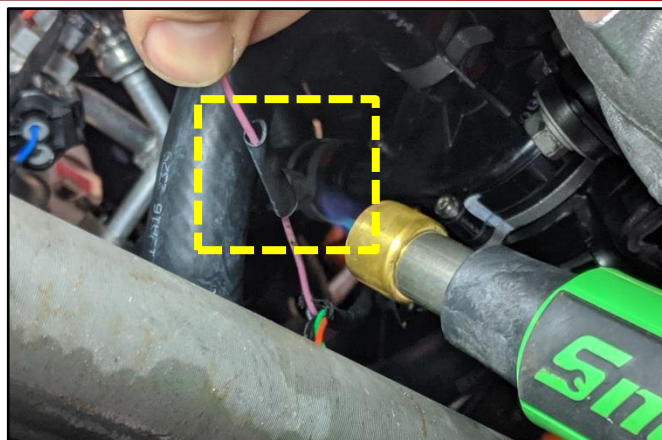
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5. Using a heat gun or flame gun, carefully apply heat to the shrink tube over the soldered area of the wire.



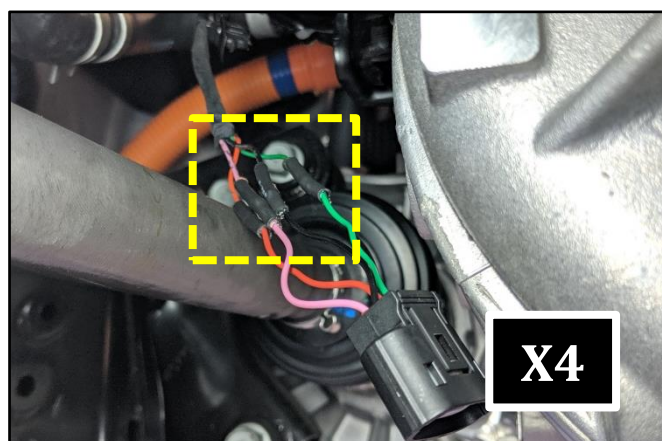
CAUTION

Use caution not to damage the wires or connector when using any source of heat.



6. Repeat steps 4 and 5 for the remaining three (3) wires. Four wires (4) total.

Note: Sample image is from (EV) model.



7. Tape the connector wire harness using insulation adhesive tape supplied in the EWP connector kit.



8. Reassemble and reinstall all removed parts in the reverse order of removal.

* NOTICE

After reassembly, be sure to follow the recommended procedures outlined on the "EWP Repair Flowchart" on page 2.

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AFFECTED VEHICLE RANGE:

Model	Production Date Range
Niro (DE) HEV/PHEV	November 27, 2018 through January 25, 2019
Niro (DE) EV	November 24, 2018 through January 26, 2019

REQUIRED PART:

Part Name	Part Number	Figure
Can Case Kit Niro (DE) HEV/PHEV	*36900 2B209QQK	
Can Case Kit Niro (DE) EV	*36910 0E659QQK	
EWP Connector kit	36910 G2912QQK	
Motor EWP Niro (DE) HEV/PHEV	36910 2B100QQK	
Traction Motor EWP Niro (DE) EV	36910 0E650QQK	
Battery EWP Niro (DE) EV	375W5 Q4000QQK	

*Note: Parts are interchangeable and may be substituted based on availability.

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WARRANTY INFORMATION:

N Code: N99 C Code: C99

Claim Type	Model	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
V	(DE) HEV PHEV	36910 2B100		(SA394) Replace the hybrid motor EWP assembly and EWP connector.	190055R0	1.5 M/H	36910 2B100QQK	1
					36910 G2912QQK			
	(DE) HEV PHEV			(SA394) Replace the hybrid motor EWP <u>Can Case kit only.</u>	190055R1	1.2 M/H	36900 2B209QQK	1
V	(DE) EV	36910 2B100		(SA394) Replace <u>both</u> of the battery and traction motor EWP assemblies <u>and</u> EWP connectors.	190055R2	1.8 M/H	36910 0E650QQK	1
							375W5 Q4000QQK	
							36910 G2912QQK	2
	(DE) EV			(SA394) Replace the traction motor EWP assembly <u>and</u> EWP connector. Replace the battery EWP Can Case kit.	190055R3	1.7 M/H	36910 0E650QQK	1
							36910 G2912QQK	
							36910 0E659QQK	
	(DE) EV			(SA394) Replace the battery EWP assembly <u>and</u> EWP connector. Replace the traction motor EWP Can Case kit.	190055R4	1.7 M/H	375W5 Q4000QQK	1
							36910 G2912QQK	
							36910 0E659QQK	
	(DE) EV			(SA394) Replace the traction motor EWP assembly <u>and</u> battery EWP <u>Can Case kit only.</u>	190055R5	1.4 M/H	36910 0E650QQK	1
							36910 0E659QQK	

Note: When necessary, sublet code 'X1' can be used to submit reimbursement to "top off" coolant up to a maximum of \$12.15. Sublet code 'X2' can be used to submit a rental expense when necessary (up to 3 days maximum), supporting documentation will be required at time of claim entry.

★ NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference **SA394** when accessing the WebDCS system.