This bulletin provides the procedure to inspect the Air Conditioner (A/C) and replace the A/C compressor, Evaporator Temperature Sensor (ETS), and/or External Control Valve (ECV), depending on the inspection results on some 2017-2019MY Sportage (QL) vehicles, produced from December 1, 2015 through July 7, 2017, which may exhibit intermittent poor air conditioning performance. Follow the procedure outlined in this bulletin to inspect and, if necessary, replace the A/C compressor, ETS, and/or ECV. Refer to the flowchart outlined on page 2 for the procedure order.
SUBJECT: REDUCED PERFORMANCE OR INOPERATIVE AIR CONDITIONING

* NOTICE

Other causes and/or remedies not described in this bulletin for an A/C operation concern must be performed per the technician’s discretion. For more information and service procedures, refer to the applicable Shop Manual on KGIS.

A/C Inspection and Repair Flowchart:

A/C System Malfunction

A/C Compressor Pulley Inspection

Marks Aligned

A/C Compressor Operational

Intermittent/Unable to duplicate concern.

Replace the A/C Compressor

Marks Not Aligned

A/C Compressor Seized or Leaking

ECV / ETS Inspection Procedure

Abnormal Vent Temperature 50°F (10°C) and higher.

Vehicles Produced from 07/08/17 – 01/04/19

A/C Compressor Only

Page 5

Normal Vent Temperature 41-50°F (5-10°C)

Vehicle Produced from 12/10/15 – 07/17

Replace the ETS and A/C Compressor

Pages 5 and 6

Vehicle Produced from 12/1/16 – 07/2017

Replace ETS ONLY

Page 6

Vehicle Produced from 12/10/15 – 11/30/16

Replace ETS and if applicable ECV

Pages 5 and 6

Vehicle Produced from 12/10/15 – 7/17

Replace the ETS

Pages 5 and 6

Vehicle Produced from 12/1/16 – 07/2017

Replace ETS ONLY

Page 6

Vehicles Produced from 07/08/17 – 01/04/19

A/C Compressor Only

Page 5

Replace the ETS

Pages 5 and 6

Replace ETS and if applicable ECV

Pages 5 and 6

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Compressor Inspection Procedure:

1. Raise the vehicle on a lift and remove the engine under cover to access the A/C compressor (A).

2. Check the mark alignment of the A/C compressor pulley.
   
   If the mark is aligned (√) as shown, proceed to next step.
   
   If the marks are not aligned (✕) as shown, skip to page 5 and replace the A/C compressor.

3. Inspect the compressor for refrigerant leakage. If there is trace of a leak present (B), proceed to page 5 and replace the A/C compressor.
   
   If no leak is present, proceed to page 4 and inspect the ECV and ETS.
ECV / ETS Inspection Procedure:

1. Start the engine and let it idle.

2. Turn the A/C temperature to the lowest temperature, set the fan speed to high, and vent mode to “face”.

3. Wait five (5) minutes and then measure the air temperature at a center vent using a temperature gauge.

   **Abnormal Temperature:** 50°F (10°C) and higher.

   **Normal Temperature:** 41-50°F (5-10°C)

**Note:** A/C temperature reading may vary slightly based on ambient temperature.

Note: When connecting gauges, if the compressor is inoperative, there will be no significant difference between high and low pressure reading (as shown). Pressure difference will be within 2-3 bar (29-44 psi).

If the A/C compressor operates normally during engine idle, replace the ETS and if applicable, replace the ECV (pages 5 and 6) (pages 5 and 6).

If the A/C compressor is not operating normally during engine idle, replace the compressor and if applicable, replace the ETS (page 6).
SUBJECT: REDUCED PERFORMANCE OR INOPERATIVE AIR CONDITIONING

* IMPORTANT

BEFORE replacing the Compressor, ECV, and/or ETS: If the air conditioning system malfunctions intermittently during engine idle, check the vehicle production date and apply the following service procedure.

<table>
<thead>
<tr>
<th>Compressor Inspection Results</th>
<th>Production Date</th>
<th>Replace Part</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks not aligned, seized or leaking</td>
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<td>Compressor</td>
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<table>
<thead>
<tr>
<th>ECV / ETS Inspection Results</th>
<th>Production Date</th>
<th>Replace Part(s)</th>
<th>Page(s)</th>
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<tbody>
<tr>
<td>Abnormal</td>
<td>12/10/2015 – 07/07/2017</td>
<td>Compressor and ETS</td>
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<td>07/08/2017 – 01/04/2019</td>
<td>Compressor</td>
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<tr>
<td>Normal</td>
<td>12/10/2015 – 11/30/2016</td>
<td>ECV and ETS</td>
<td>5-6</td>
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<tr>
<td></td>
<td>12/01/2016 – 07/07/2017</td>
<td>ETS</td>
<td>6</td>
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A/C Compressor Replacement Procedure:
1. Record the customer’s radio presets and then disconnect the negative (-) battery terminal.
2. Replace the A/C Compressor by referring to “Heating, Ventilation and Air Conditioning → Air conditioning System → Compressor → Repair procedures” chapter in the applicable Shop manual on KGIS.
3. Restore the radio presets and verify proper operation of the A/C.

Electronic Control Valve (ECV) Replacement Procedure:
1. Evacuate refrigerant from the A/C system.
2. Disconnect the ECV connector (A).
3. Remove the snap ring (B).

4. Remove and discard the ECV.

5. Apply a small amount of Pag Oil FD46Xg compressor oil onto the three (3) O-rings of the new ECV and install the new ECV in the reverse order of removal.

6. Reinstall all removed components in the reverse order of removal.

7. Recharge the A/C system to the correct refrigerant specifications.

   **Refrigerant Specification:**
   
   $1.21 \pm 0.055 \text{ lb. (19.4 } \pm 0.88 \text{ oz., 550g } \pm 25\text{g)}$

8. If no other components needs to be replaced, verify proper operation of the A/C.

**Evaporator Temperature Sensor (ETS) Replacement Procedure:**

1. Replace the Evaporator Temperature Sensor by referring to the “Heating, Ventilation and Air Conditioning → Air conditioning System → Evaporator Temperature Sensor → Repair procedures” chapter in the applicable Shop manual on KGIS.

2. If no other components needs to be replaced, verify proper operation of the A/C.

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**AFFECTED VEHICLE RANGE:**

<table>
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<tr>
<th>Model</th>
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**REQUIRED PART:**

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<td>97701 D9001FFF</td>
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<td>Electronic Control Valve (ECV)</td>
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<td>Evaporator Temperature Sensor (ETS)</td>
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<td>UM016 CH113W3</td>
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*Note: When ordering an “FFF” part, a “QQK” part may be temporarily supplied instead of “FFF” until the “QQK” supply is exhausted.

**WARRANTY INFORMATION:**

**N Code:** I14  **C Code:** ZZ5

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<th>Op Time</th>
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*Note: Op Time includes evacuate and recharge of the A/C refrigerant. Use sublet code ‘NPNOTHER’ for PAG oil for a maximum of $5.00.*

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