



# TECH TIMES

2016 • VOLUME 19, ISSUE 3

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## 8TH KIA SKILL WORLD CUP 2016

### The results are in!

Team USA continued its dominance in the biennial Kia Skill World Cup Competition held in Seoul, Korea, on May 23–27, 2016.

To qualify for World Cup, our competitors were the top finishers of 16 finalists in the Kia Skill National Cup held earlier this spring in Irvine, California. At World Cup, our team of talented technicians outperformed nearly 50 countries.

**Gregory Dubs** of Gerald Kia of Naperville (Naperville, Illinois) won the gold medal and **Ben Hendricks** of Dorsch Kia (Green Bay, Wisconsin) was a silver medalist.

**Derek Eveler** of Metro Kia (Madison, Wisconsin) and **Jason Powell** of Fox Kia (Grand Rapids, Michigan) also represented their country and dealerships in the competition. *(continued page 3)*



*Greg Dubs receiving the gold medal and trophy from Tae-Hyun (Thomas) Oh, Executive Vice President & COO, Kia Motors Corp.*



*Ben Hendricks receiving the silver medal and trophy*

## TECHLINE FAQs

<b>Q</b> When TL asks me to check voltage and ground, how exactly do I do that?	<b>A</b> Refer to Technician Basics TB012 for procedure on Voltage Test.
<b>Q</b> Where do I find an overhaul manual in KGIS?	<b>A</b> Go to <b>Service Info</b> in top red navigation bar, select any year 2014 or older, select the MY 2011 but do not select a model. Look to the right side of the selection table and the bottom row to the right will have the overhaul procedures to all manual and auto transmissions.
<b>Q</b> Why did my PWA get denied?	<b>A</b> Because you installed the Engine/Transmission before Techline approved the PWA due to missing or incorrect information. Techline must give approval and close the case before you install an Engine/Transmission.
<b>Q</b> My PWA submission was kicked back by TL and they told me it was the wrong form?	<b>A</b> Please be sure to use the new form that is available in Kdealer under Fixed Ops > Warranty Form. It will be titled 'WRTY 143 Engine TL PWA Form' and have a 10/30/2015 revision date at the bottom of the form.

## LATEST TECHNICAL SERVICE BULLETINS, SERVICE ACTIONS AND CAMPAIGNS

<b>SA 238</b>	HVAC Control Unit Logic Improvement (2017MY QL)
<b>SC 129r1</b>	A/T Fluid Cooler Hose Replacement (2011MY TD)
<b>ENG 149</b>	2.4 GDI MIL On With DTC(s) P0263/ P0266/ P0269/ P0272 (2014-2015MY XMa, QF/TF, SL)
<b>CHA 065r3</b>	Combined TSB/SA: MIL On With DTC - C1212 Logic Improvement (2014-2015MY YD, 2014MY SL)
<b>SC 132r1</b>	Front Seat Belt Assembly (2013MY TD)
<b>ELE 085r1</b>	UVO Software Upgrade - Media Button Inoperative (2014-2015MY SL, YD, QF/TF, TF HEV, XMa)
<b>SA 234</b>	Service Action: Tailgate Latch Repair (2016MY UMa)
<b>GEN 082</b>	Replacement Wire Repair Connectors (All Models)

 **CAUTION**

Vehicle servicing performed by untrained persons could result in damage to the vehicle.

 **WARNING**

- Vehicle servicing performed by untrained persons could result in injury to those persons or to others.
- Always take proper and necessary safety precautions when performing any type of service on a vehicle.
- The Kia technician newsletter (Tech Times) is intended for use by professional Kia automotive technicians only. It is written to inform technicians of conditions that may occur on some vehicles. Trained Kia technicians have the equipment, tools, safety instructions, publications and expertise to help perform the job correctly.

**NOTICE**

The topics covered in this newsletter are designed to assist you with the diagnosis and repair of specific vehicle conditions. Just because a condition is described in this newsletter, do not assume that it applies to your vehicle, or that your vehicle will have that condition. In all cases, the procedures in the applicable Service Manual and/or Electrical Troubleshooting Manual or on KGIS should be performed first.

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## WORLD CUP 2016 (CONTINUED FROM PAGE 1)

### The Road to Seoul

Each member of America's World Cup team is from KMA's Central Region, where they completed their Kia training requirements at Kia University's Central Technical Training Center, led by instructors **Ray Taylor** and **Mike Rodriguez**, and supported by regional management and staff.

### The Competition

The two-day World Cup competition included a 50-minute written test and two 90-minute hands-on tests. The first hands-on station tested technicians' understanding of basic electrical, while the second station had three parts: Diagnosing a no-start concern, using the GDS Data Logger, and bench-testing a 6-speed automatic transmission.

Competitors also had time to relax and see the sights, as Kia Motors Corporation hosted a tour of the Hwaseong assembly plant and introduced competitors to Korean traditions and culture.

**Please join Kia University in congratulating these world-class technicians and their dealerships for their exceptional performance at this year's Kia Skill World Cup.**



*Left: Dan Algarin, America's World Cup team supervisor, waves the World Cup flag while Greg and Ben look on*

*Below, from l to r: John Crowe (KMA's Vice President, Service & Aftersale Operations), Jason Powell, Greg Dubs, Tae-Hyun (Thomas) Oh (KMC's Executive Vice President & COO), Ben Hendricks, Derek Eveler, and Dan Algarin (KMA's Technical Training Supervisor)*



## IN MEMORIAM



**Michael Rodriguez**, Technical Training Instructor, Chicago, IL Technical Training Center

Mike was a friend and mentor to many. He was instrumental in helping Kia technicians improve their knowledge and skills.

We'll miss you, Mike.

## NEW KIA WIRE HARNESS REPAIR KIT IV

During the week of June 6th, Kia Motors America shipped each Kia Dealership an updated Kia Wire Harness Repair Kit (version 4) part number KMAWR K4KIT. This kit provides replacement connectors and hardware for use in repairing damaged wire harnesses on Kia vehicles.

This new kit includes:

- Commonly-used wire harness connectors and hardware (heat shrink tubing, remover and crimping tools, etc.)
- "Wire Harness Repair Kit IV Update Guide", which includes tips on attaching wires and connectors to the vehicle harness.
- A vehicle application matrix and part number reference guide for all pre-wired connectors and terminals included in the kit.

By utilizing the items included in this kit, a vehicle's wire harnesses can be repaired on a vehicle instead of being replaced, resulting in faster vehicle repair and improved customer satisfaction.



**CAUTION:** UNDER NO CIRCUMSTANCES ARE SUPPLEMENTAL RESTRAINT SYSTEM (SRS) RELATED WIRE HARNESSSES TO BE REPAIRED.

SRS components include air bags, sensors, seat belt, seat belt pretensioners and related wire harnesses are usually colored yellow.



## 2016 TECHNICIAN SATISFACTION SURVEY RAFFLE 2ND QTR WINNERS

### Greetings Kia Technicians!!

The results of the Q2-2016 Technician Satisfaction Survey Raffle are in! We received 4,802 survey responses for this survey raffle! Thank you all for your valuable feedback! The overall results for Techline were again very positive with the overall satisfaction rating for Techline at 92% using a 1 to 5 point scoring system where only a score of 5 counts. Anything less than 5 is considered a failure.

We reviewed all responses and gained valuable feedback from our technicians on their Techline experiences. We will use this feedback to see how we were doing and how we can correct any issues that may be occurring, thus continuing to improve the level of service we provide to all our dealers. All Kia dealer technicians had a chance at winning 1 of 3 \$500 MasterCard gift cards each time he/she closed their Techline repair assistance (RA) case and completed the Technician Satisfaction Survey.

The 3 winners of the Q2-2016 raffle were...:

1. Michael Ludwig - IL054
2. Issac Milfraude - FL081
3. Erik Filipowicz - WI016

**Web case response time avg:** 14 minutes

**PWA case response time avg:** 9 minutes

**Phone response time avg:** 13 seconds

**Comeback Ratio:** 0.6%

**New Case Count (includes PWA cases):**

46,495 as of 7/11/2016

**Overall Satisfaction Survey Score**

(Only a score of 5 counts): 92%

Thank you all for your continued support!!

**Go Kia!!!**

Regards,

Tony Cartagena,  
Techline Communications Manager  
Kia Motors America

# JOE'S CORNER

# WHAT HAPPENS IN COOLANT STAYS IN COOLANT

## Coolant Electrolysis Testing:

Often overlooked is the cooling system. Kia recommends the following service schedule:

Type of Coolant	Scheduled Replacement
Conventional	48 months (4 years) or 60,000 miles
Long Life	96 months (8 years) or 120,000 miles

Always replace with a 50/50 mix, 50% Kia Long Life Antifreeze/Coolant, & 50% water.

**Not just any water!** The best is distilled water recommended in Kia Owner's Manual. Tap water is typically Hard Water, not so good. Well water is even worse, too many minerals and deposits.

How do you check the coolant?

### 1. Visual

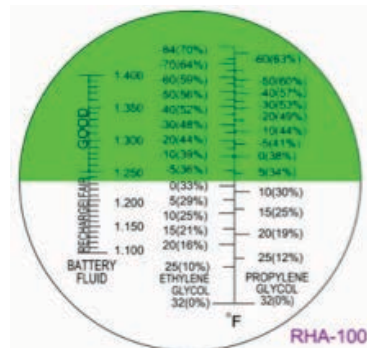
How does it look:

### 2. pH Strips

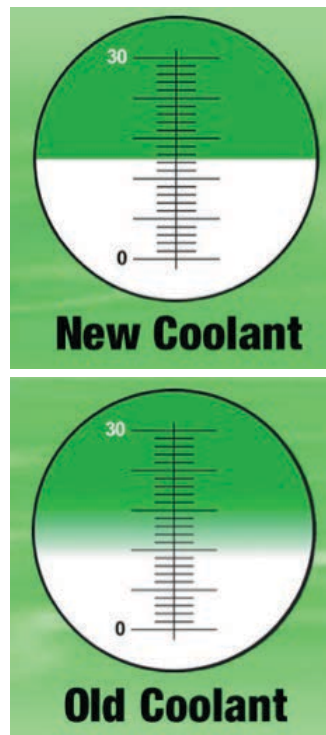
pH (acidic or alkaline)

## 3. Refractometer

Coolant Percentage/Freeze point



Specific Gravity/Concentration & Old or New



## 4. Hydrometer



Continued next page



## JOE'S CORNER WHAT HAPPENS IN COOLANT STAYS IN COOLANT (CONTINUED)

### Check for Electrolysis

Electrolysis is excessive voltage detected between the Negative battery cable and coolant in the radiator. Electrolysis is caused by acidic coolant or bad component ground..

Type of Electrolysis	
Acidic Coolant	Bad Component Ground

To check for electrolysis set your DVOM to read mV (millivolts).

Connect the negative test lead to the negative battery cable with an alligator clamp.

Connect the positive test lead alligator clamp to a small 6-inch piece of 12 awg solid copper wire and suspend the copper wire into the coolant being careful not to contact any surface in or around the radiator.

### Checking for Acidic Coolant

Condition	Reading	Result
IG OFF	< 100 mV	Coolant not acidic
all loads ON	> 100 mV & < 300 mV	Check when service is due
OFF	> 300 mV	Coolant is acidic

### Checking for Bad Ground

Condition	Reading	Result
Engine running, all loads ON	< 100 mV	System normal
	> 100 mV & < 300 mV	Check battery terminals - clean if necessary
	> 300 mV	Bad ground

If the reading is high with the engine running, turn OFF one load at a time.

When the voltage drops to an acceptable level check the grounds of the last system turned off.

Don't forget to check it when the cooling fans are on. You can use the Actuation Test in the KDS/GDS.

An easy method to check for a component ground problem is to use a long jumper wire from the negative battery cable to the ground of the component that is causing the problem.

The voltage level will drop when you ground the component with the jumper wire.

Stay tuned for my next article; How Low Can You Go (milliohms) and Take It To The Limit (mega ohm insulation resistance).

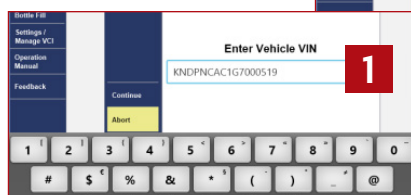
## R1234yf WARRANTY DATA TRANSMISSION OVERVIEW

The new R1234yf refrigerant is now used on the new 2017 Sportage and upcoming 2017 Optima Hybrid. Warranty data transmission is now required after performing air conditioning service using the Mahle ACX 1299 R1234yf. This data is needed before a warranty claim can be processed.

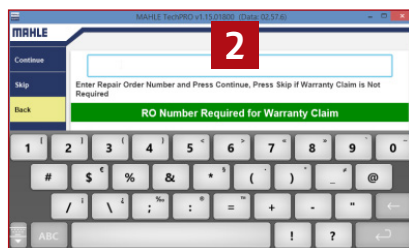
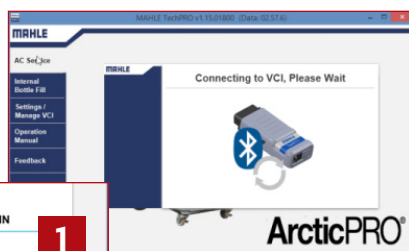
The Mahle ACX 1299 R1234yf Refrigerant equipment is designed to supply Warranty Data after an A/C service. The steps below are needed to properly submit warranty data.

### Entering VIN and RO:

- 1: The VIN must be entered into the ACX1299 either via the VCI or manually entered.



- 2: The equipment will ask for the RO Number.



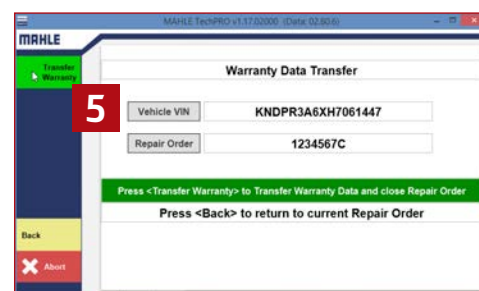
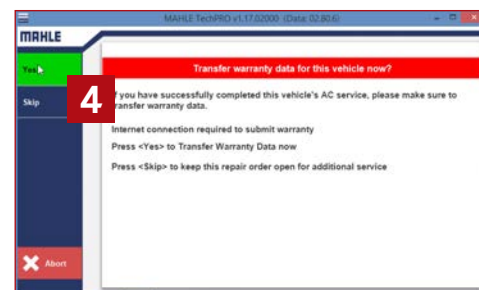
- 3: The technician is informed that a warranty case has been started.

### Transmitting Warranty Data

- 4: When an A/C service is complete, select "Yes"

- 5: Select "Transmit Warranty" to transmit Warranty Data.

**Note:** A strong WiFi connection is needed to transmit warranty data.



## 2017 FORTE (YDm) INTRODUCTION AND TECHNICAL HIGHLIGHTS



### ■ General Info

The 17MY YDm (m for Mexico) will be a facelift of YD Forte. This article is to allow technicians to know the difference between the Korea built (YD) and Mexico built (YDm) Forte, along with a new Atkinson Cycle engine used on this model.

- New VIN format: 3KPFL4A8XGE000294
- Technicians will be able to decipher KMM VIN from KMC VIN by first 3 digits (3KP v KNA), and the 11th digit will be E for KMM/ Mexico instead of 5 for Hwasung.
- New key features will include revised front/rear fascias and headlights/taillights, interior updates and new wheels
- Audio 3.0B, UVO3 (Android Auto) and AVN4 (Android Auto)
- KMM (Kia Motors Mexico) will build the YDm Forte sedan and high trim Forte 5 SX
- 4DR will be offered in a new "S" trim positioned between LX and EX trims and will be equipped with sport-tuned suspension, chrome exhaust tip, and rear deck lid spoiler

### ■ Powertrain/Drivetrain

- YDm will introduce new 2.0L MPI Atkinson Cycle
- New 2nd-Generation 6-speed automatic (6 A/T) and 7-speed dual-clutch transmission (7-DCT) only for SX Turbo Koup and 5DR (see table below)
- New Drive Mode Select on S, EX, and SX trims

The Atkinson Cycle Engine is a modified Otto-cycle engine in which the intake valve is held open longer than normal resulting in a reverse flow of intake air into the intake manifold. This reduces the compression volume since the time the air escapes the cylinder freely will be longer than the time being compressed. In other words, the compression volume is smaller than the expansion volume.

### ■ Driver Assistance Features

- Autonomous Emergency Braking (AEB)
- Forward Collision Warning System (FCWS)
- New Lane Keeping Assist System (LKAS) / Lane Departure Warning System (LDWS)
- LKAS can detect if you are veering outside your lane and displays a message on the LCD screen in instrument cluster and will apply a slight counter-steering torque to prevent the vehicle from moving out of its lane steering pull or brake pull.
- 3 different modes for LKAS/LDWS
  - Green: LKAS (Standard default, only intervenes if system detects car is leaving lane; and Active option, intervenes more frequently to keep the vehicle centered in lane)
  - White: LDWS
  - Yellow: FAIL

Engine		HP	Torque	Trans	YDm		
					4-Door	5-Door	2-Door
Nu	2.0L Atkinson (MPI)	147 HP	132 lb.ft.	6MT / 6AT	●	-	-
	2.0L GDI	164 HP/160 HP	151 lb.ft./149 lb.ft.	6AT	●	●	●
Gamma	1.6L T-GDI	201 HP	195 lb.ft.	6MT / 7DCT	-	●	●

## TEST YOUR TECH TIMES KNOWLEDGE WORDSEARCH

### Test your knowledge of the articles in this issue of Tech Times!

Locate the words listed below. Words can be located horizontally, vertically, and diagonally (in all directions).

1. Electrolysis is caused by \_\_\_\_\_ coolant (p6)

2. A pH strip determines if coolant is acidic or \_\_\_\_\_ (p5)

3. The smartphone made by Samsung runs the \_\_\_\_\_ OS (p9)

4. The new Forte features an \_\_\_\_\_ Cycle engine (p7)

5. Both high and low beams are integrated in a \_\_\_\_\_ system (p10)

6. The "Clean Air" icon denotes a \_\_\_\_\_ ionizer system (p11)

7. Team USA dominated the World Cup \_\_\_\_\_ (p1)

8. \_\_\_\_\_ can be either acidic or alkaline (p6)

9. The Atkinson \_\_\_\_\_ is a modified Otto-cycle engine (p7)

10. As recommended in the Kia manual, \_\_\_\_\_ water is preferred (p5)

11. \_\_\_\_\_ is excessive voltage detected between the negative battery cable and coolant (p6)

12. The EPA regulates substances released into the \_\_\_\_\_ (p13)

13. The 17MY YDm (m for Mexico) is a \_\_\_\_\_ of the YD Forte (p7)

14. A refractometer can test for Specific \_\_\_\_\_ in coolant (p5)

15. Kia shipped each dealership an updated Kia Wire \_\_\_\_\_ Repair Kit (p4)

16. Mike Rodriguez was \_\_\_\_\_ in helping Kia technicians improve their skills (p3)

17. The next Joe's Corner will discuss mega ohm \_\_\_\_\_ resistance (p6)

N	C	I	N	Y	C	O	E	B	R	D	L	S	S	T	A	Y	S	N	V
R	A	D	N	Y	Y	G	L	E	V	A	S	A	I	N	Q	L	S	O	M
M	I	I	C	S	A	H	Z	O	T	G	M	T	S	A	T	J	E	I	Q
T	E	L	C	T	U	I	T	N	T	N	A	I	Y	R	N	W	N	T	O
N	E	D	L	I	N	L	E	M	E	I	R	S	L	E	E	D	R	C	W
A	Q	O	A	O	N	M	A	Y	C	Q	T	F	O	G	M	I	A	N	V
L	V	I	I	L	U	H	A	T	B	N	P	A	R	I	N	S	H	U	M
O	P	L	T	R	I	Y	C	B	I	V	H	C	T	R	O	T	G	F	O
O	U	V	T	C	V	S	D	E	G	O	O	T	C	F	R	I	R	I	N
C	Z	S	W	J	S	N	T	B	T	N	N	I	E	E	I	L	A	B	D
D	N	C	L	U	S	T	E	R	Y	X	E	O	L	R	V	L	V	K	I
I	M	A	R	S	H	M	A	L	L	O	W	N	E	J	N	E	I	H	O
F	Y	Z	D	B	A	N	T	C	M	M	C	R	Z	E	E	D	T	E	N
Z	L	P	Y	I	U	L	O	F	I	A	X	K	W	N	S	V	Y	A	E
V	J	E	O	J	W	L	K	S	I	D	N	M	Q	O	D	Q	H	N	L
E	L	U	C	E	L	O	M	A	N	L	I	I	M	Z	H	R	F	D	O
S	H	U	T	T	E	R	W	T	L	I	E	C	F	O	L	R	J	R	S
Y	E	V	R	U	S	P	C	E	M	I	K	C	A	O	W	X	E	O	K
N	O	I	T	I	T	E	P	M	O	C	N	T	A	H	L	X	Q	I	H
I	B	K	E	W	I	R	E	G	X	H	R	E	A	F	R	D	X	D	U

18. The function of the cluster \_\_\_\_\_ is to clean incoming air (p11)

19. The intake valve is held open longer, resulting in reverse flow of air into the intake \_\_\_\_\_ (p7)

20. Android™ 6.0 is code-named \_\_\_\_\_ (p9)

21. Ben Hendricks of Dorsch Kia was a silver \_\_\_\_\_ (p1)

22. By electrically charging the air \_\_\_\_\_, microscopic particles can be removed (p11)

23. Certification programs educate on the effects of improper handling of refrigerants to the \_\_\_\_\_ layer (p13)

24. The R1234yf \_\_\_\_\_ was first introduced in the 2017 Sportage (p13)

25. Tech Times reports the winners of the Quarterly Technician \_\_\_\_\_ Survey Raffle (p4)

26. Low and high beams are controlled by a \_\_\_\_\_ inside the lens (p10)

27. Android™ is an OS operating on a Samsung \_\_\_\_\_ (p9)

28. The BCM and SJB activate the \_\_\_\_\_ valve that controls the shutter (p10)

29. 4,802 \_\_\_\_\_ responses were received for this raffle (p4)

30. The \_\_\_\_\_ is informed that a warranty case has been started (p4)

31 & 32. The \_\_\_\_\_ level will drop when you ground the component with the jumper \_\_\_\_\_ (p4)

**Answers are on page 13**



## ANDROID™ 6.0 UPDATE: ANDROID AUTO™ / UVO ESERVICES CONNECTIVITY ISSUES

This article provides diagnostic information in regards to:

- Android Auto™ will not launch when a Samsung® Android™ phone is connected to the vehicle.
- UVO eServices setup fails, and the the head unit displays a smartphone connection error, as shown (fig. 1).

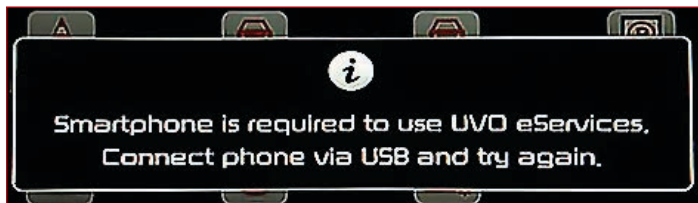


Fig. 1. Android™ error message

Some customers with Android Auto™ and UVO eServices equipped vehicles are not able to launch either feature when connecting phones to the head unit via the USB port. This issue affects mostly customers with Samsung® phones that have updated to Android™ 6.0 (Marshmallow). Refer to Table 1 for a list of affected phones.

PRODUCT	MODEL #
Samsung® Galaxy S7	SM-G930V
Samsung® Galaxy S7 Edge	SM-G935V
Samsung® Galaxy S6	SM-G920V
Samsung® Galaxy S6 Edge	SM-G925V
Samsung® Note 5	SM-N920V
Samsung® Galaxy S6 Edge +	SM-G928V
Samsung® Galaxy S5	SM-G900V
Samsung® Note 4	SM-N910V

Table 1.

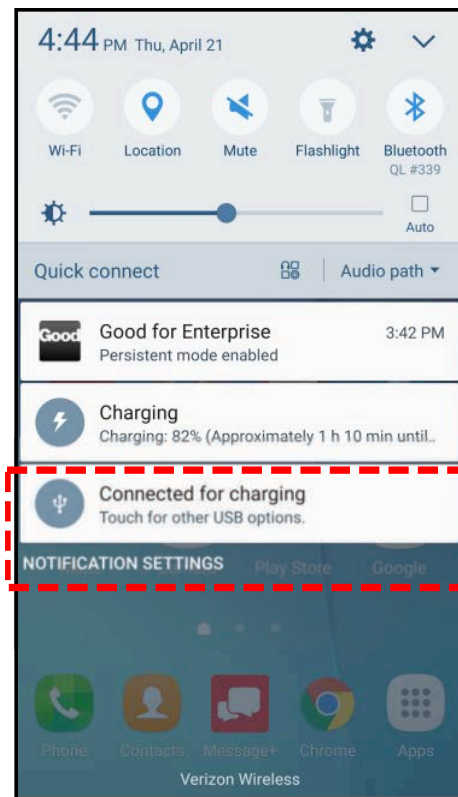
Due to requirements from certain phone carriers, the Android™ 6.0 software forces the smartphone to default to a charging mode any time the smartphone is connected to a USB port. Google® and Samsung® are aware of this issue and are working on an Android™ software update to fix the issue (**Note:** Advise customers to always update their phones to the latest available software).

Until the fix is available, to address this concern, use the procedures outlined below to enable Media Transfer Protocol (MTP) every time the phone is connected to the vehicle.

### Procedure:

1. Connect the phone to the vehicle's USB port.
2. Swipe down from the top of the screen to view the notification panel.
3. Select the "Connected for charging" notification, as shown (fig. 2.)

Fig. 2. Select "Connected for Charging"



4. Select the "Transferring media files" box (Fig. 3).
5. Launch Android Auto™ or UVO eServices from the vehicle's head unit.
6. Repeat these steps every time the phone is connected to the vehicle via USB.

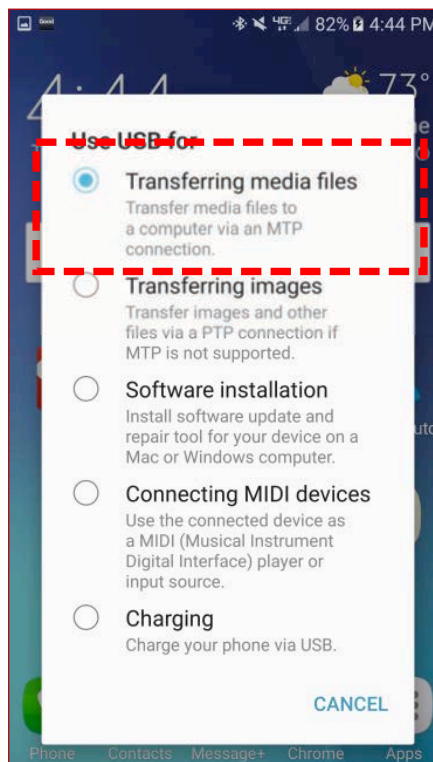


Fig. 3. Select "Transferring media files"

Android™ is a registered trademark of Google Inc. Android Auto™ is a registered trademark of Google Inc. App runs on your smartphone cellular data service. Normal data rates will apply.

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Refer to PitStop PS 452.

## BI-FUNCTION HEADLAMP OVERVIEW

The Bi-Function headlamp lighting system has both the Low and High beams integrated in a single projector type headlamp assembly. Starting with the 2016MY JFa Optima and 2017MY QL Sportage, the Bi-Function headlamp low and high beams are controlled by a shutter inside the lens. The Headlamp high beam is controlled by the BCM and SJB. They are used to activate the solenoid valve that controls shutter operation. When the system is working as a low beam, the shutter partially restricts the light beam, when the system is working as a high beam; the shutter is fully open allowing for full lighting effect (see fig. 3).

When the driver selects the high beam using the Multi-function switch, the BCM sends a signal to the SJB via B-CAN communication. The SJB then sends a ground to the Bi-Function Headlamp relay actuating the solenoid. The shutter moves to the full open (downward) position allowing for full light illumination.

### Diagnostics

DTC	DESCRIPTION
B251B00	Bi-Function Head Lamp RH Circuit Short to Ground
B251C00	Bi-Function Head Lamp LH Circuit Short to Ground

Fig. 3. Low/High Beam Illumination

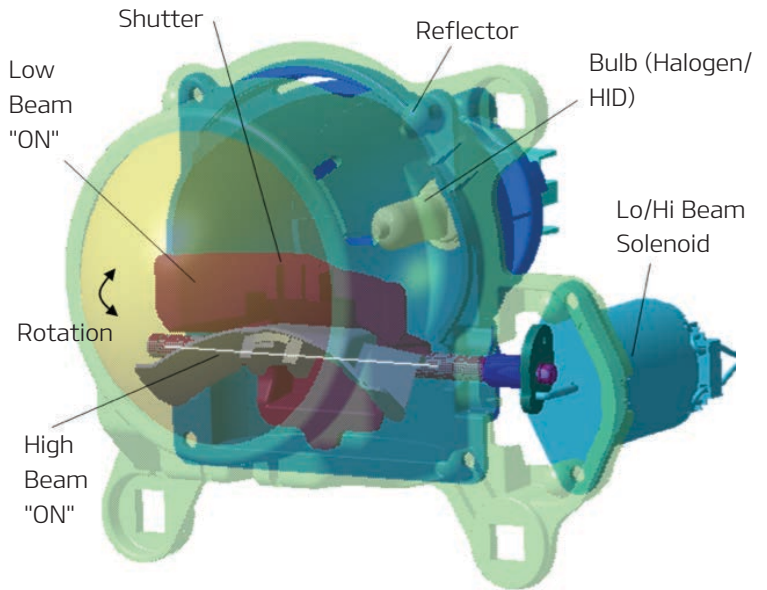
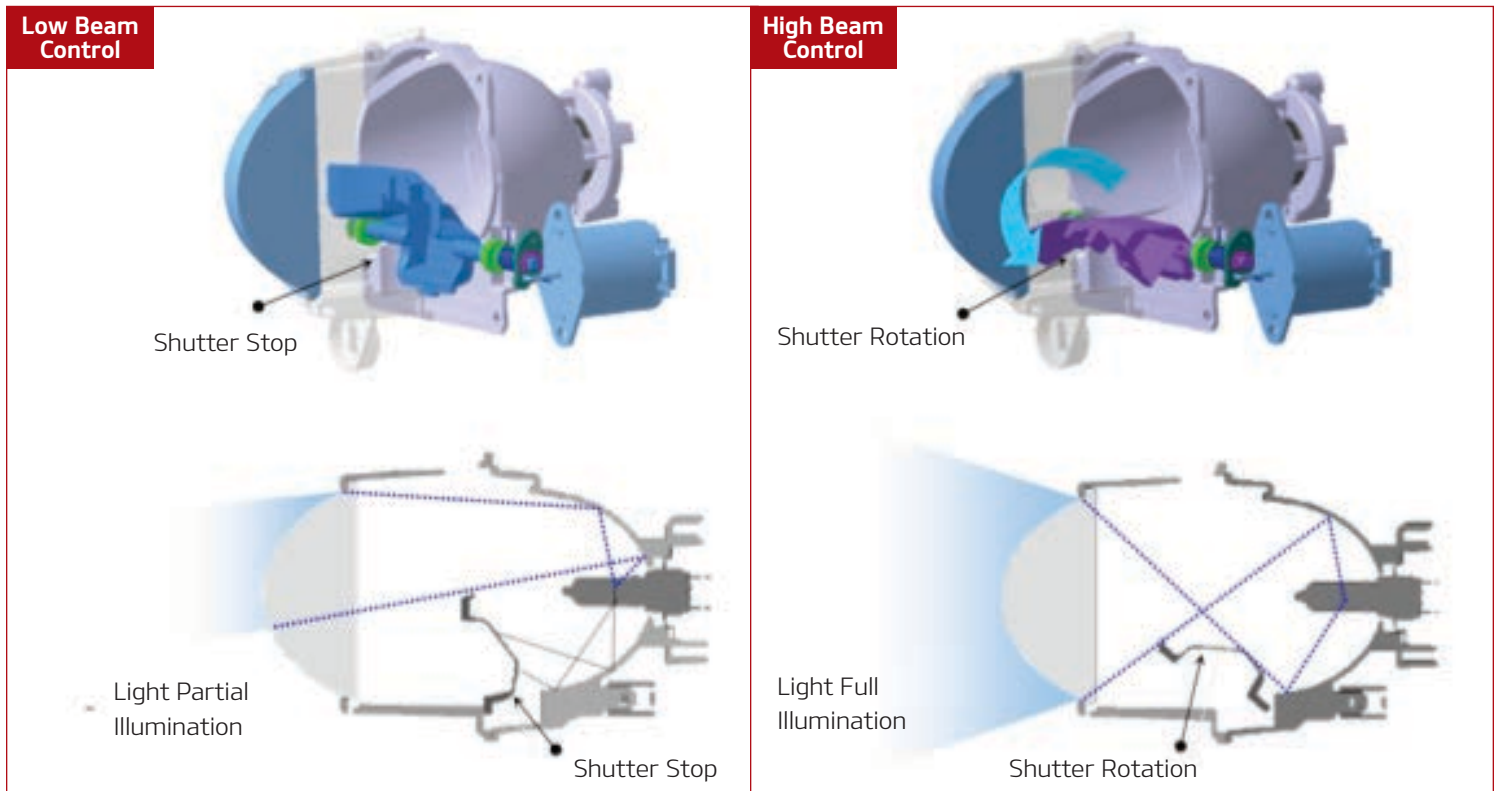
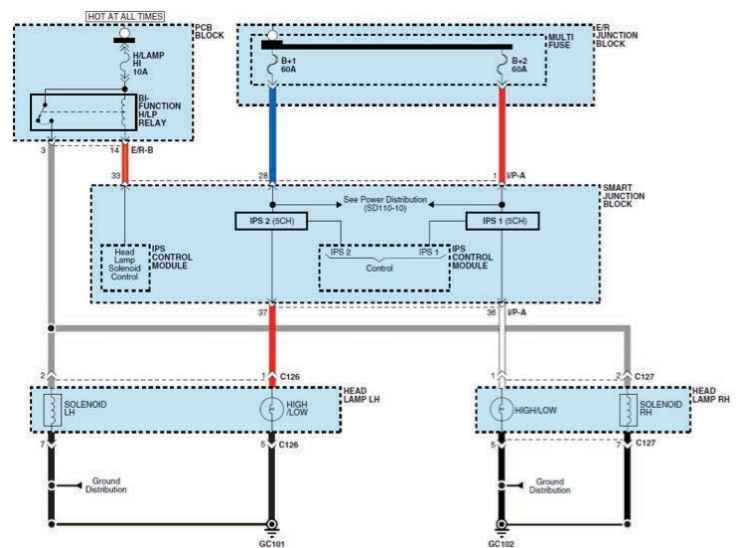


Fig. 1. Bi-function projector assembly

Fig. 2. Bi-function headlamp ETM



## KIA CLEAN AIR CLUSTER IONIZER



Fig. 1. "Clean Air" Logo on climate control display

Have you ever wondered why certain Kia models have the words "Clean Air" above the climate control display/screen (Fig. 1)? This "Clean Air" logo denotes that the vehicle is fitted with the Cluster Ionizer system.

The function of the cluster ionizer is to clean the incoming air when using the A/C or heater systems.

The cluster ionizer works by electrically charging the air molecules. An air ionizer uses ions to remove microscopic particles from the air. Air ionizers create negatively charged ions using electricity. Opposites attract, so the negative ions flood the inside of the vehicle and seek out positively charged particles, such as dust, bacteria, pollen, smoke and many other allergens.

The most important factor to consider is that the cluster ionizer system works automatically. When the blower motor is switched ON, "ION" mode is started to check hardware.

With the Ignition ON, the ionizer activates the "CLEAN" mode (for approx. 13min), the cluster ionizer generates negative and positive ions to help clean odors from the air.

In "ION" mode (approx. 17min), the cluster ionizer generates negative ions and helps clean inside air. It then repeats the "CLEAN" mode (for approx. 13min).

System diagnosis can be performed by pressing the climate control "MODE" switch 4 times within 2 seconds while pressing the "OFF" switch. The system can display two faults codes:

DISPLAY	FAIL DESCRIPTION
00	Normal Operation
50	Cluster Ion Generator Fault

Codes may vary by model (2016 SL Sportage shown).

*Continued next page*



Fig. 2. Cluster ionizer location (by blower motor)



# KIA CLEAN AIR CLUSTER IONIZER (CONTINUED)

Fig. 3 (right). Cluster Ionizer "Clean Air" process

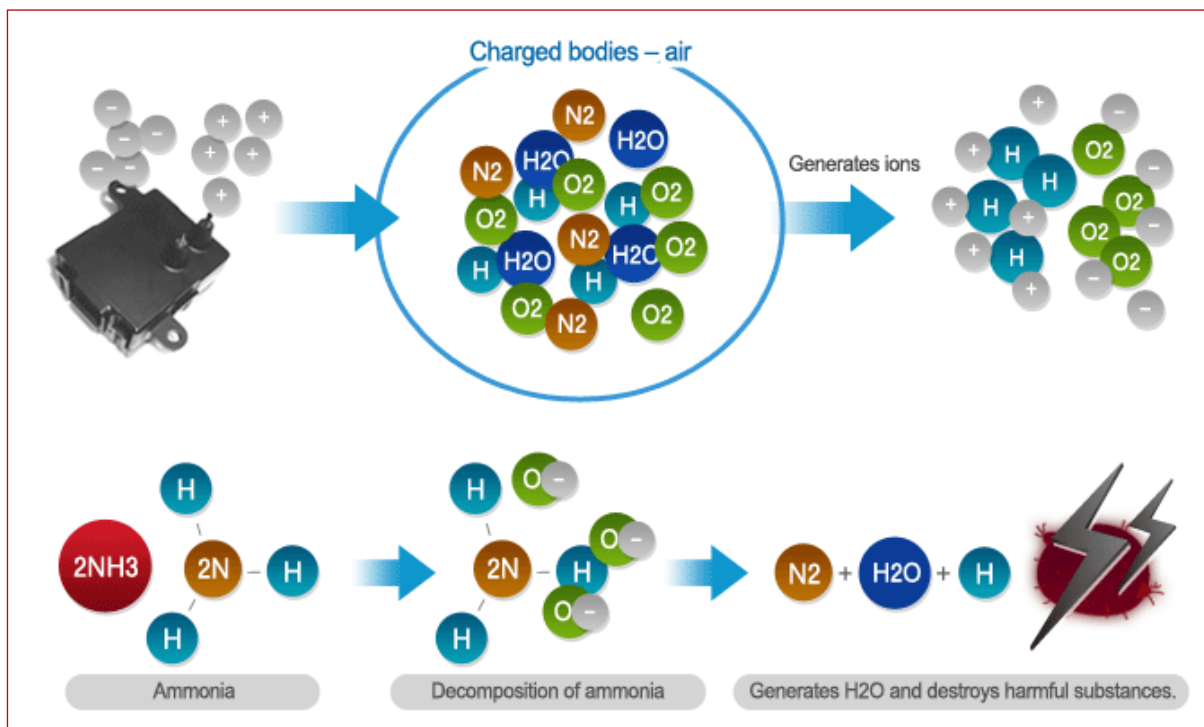
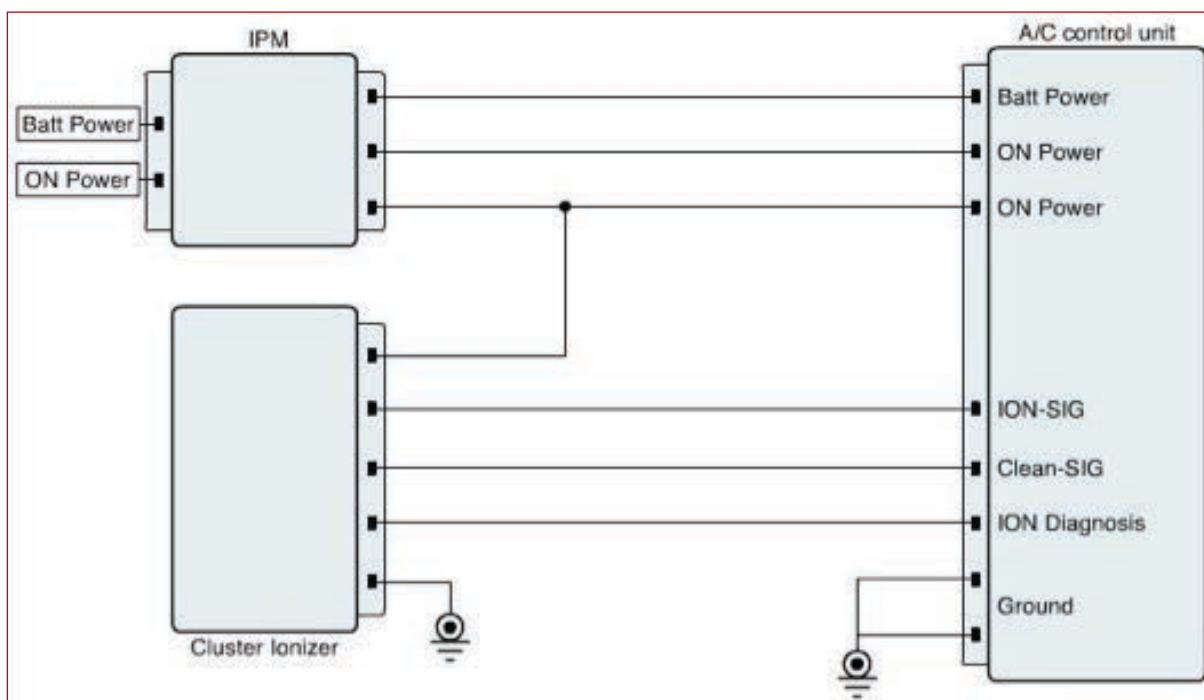


Fig. 4. Electrical overview



The illustration and chart diagram (Fig. 4) provides a quick an electrical overview and voltages when the system is operating correctly (2016 Sportage 2.4 Liter system diagram shown).

SIGNALS	ION MODE (-Ion Activation)	CLEAN MODE (+ Ion Activation)	OFF
Ion Signal	HI 12 volts	LOW 0 volts	LOW 0 volts
Clean Signal	HI 12 volts	HI 12 volts	LOW 0 volts

\*For diagnostic procedure, refer to DTC guide.

# EPA SECTION 609 TRAINING CERTIFICATION AND KIA DEALER TECHNICIANS

Have you ever heard the term “Section 609” when discussing training related to vehicle Air Conditioning (A/C) Servicing?

Section 609 refers to any person who repairs or services motor vehicle air conditioning (A/C) systems which must be properly trained and certified under section 609 of the Clean Air Act by an Environmental Protection Agency (EPA)-approved program.

This means that all KIA dealer technicians servicing A/C systems must be certified to handle R134a used on all current KIA models and the newest R1234yf vehicle A/C refrigerant first introduced in the 2017 Sportage. As a matter of fact, R1234yf is set to completely replace R134a by the year 2018 on all vehicles sold in the USA.

The EPA-approved technician training and certification programs provide education on the proper use of A/C servicing equipment, the applicable regulatory requirements, the importance of refrigerant recovery, as well as the effects of improper handling of refrigerants on the ozone layer and climate. To be certified, KIA technicians must be trained by an EPA-approved program and pass a test demonstrating their knowledge in these areas.

While there are several companies and educational programs approved by the EPA to train and certify technicians under section 609 of the Clean Air Act, Kia University recommends taking the training program from ASE (ASE.com) or MACS (macsw.org).



This program can be found by visiting the ASE website at: <http://www.asecampus.com>

The ASE Section 609 Training Program has been completely updated to reflect new EPA requirements including information on R1234yf.

To earn certification, technicians must review the training material and then pass a test demonstrating knowledge of that material.

The Refrigerant Recovery Program was designed to meet the training and testing requirements of Section 609 of the Clean Air Act, as defined by the EPA.

**Having ASE A7 Heating and Air Conditioning certification does NOT satisfy the EPA Section 609 requirements for refrigerant recovery and recycling.**

The ASE A7 Heating and Air Conditioning certification test was designed to test a broader range of knowledge. Therefore, it does not provide what the EPA requires for “certification” in refrigerant recovery and recycling.

Failure to comply with the Section 609 Certification requirements could cost you and your dealer as much as \$27,500 per day, per violation. Dealer technicians who violate the provisions of the Clean Air Act may be fined, lose their certification, and may be required to appear in Federal court.

## PUZZLE SOLUTION

The solutions to the puzzle on page 8.

- |           |             |            |             |               |            |                |            |          |               |                  |                 |              |             |             |                  |                |             |              |                 |              |              |           |                 |                  |             |                |              |            |                |             |          |
|-----------|-------------|------------|-------------|---------------|------------|----------------|------------|----------|---------------|------------------|-----------------|--------------|-------------|-------------|------------------|----------------|-------------|--------------|-----------------|--------------|--------------|-----------|-----------------|------------------|-------------|----------------|--------------|------------|----------------|-------------|----------|
| 1. ACIDIC | 2. ALKALINE | 3. ANDROID | 4. ATKINSON | 5. BIFUNCTION | 6. CLUSTER | 7. COMPETITION | 8. COOLANT | 9. CYCLE | 10. DISTILLED | 11. ELECTROLYSIS | 12. ENVIRONMENT | 13. FACELIFT | 14. GRAVITY | 15. HARNESS | 16. INSTRUMENTAL | 17. INSULATION | 18. IONIZER | 19. MANIFOLD | 20. MARSHMALLOW | 21. MEDALIST | 22. MOLECULE | 23. OZONE | 24. REFRIGERANT | 25. SATISFACTION | 26. SHUTTER | 27. SMARTPHONE | 28. SOLENOID | 29. SURVEY | 30. TECHNICIAN | 31. VOLTAGE | 32. WIRE |
|-----------|-------------|------------|-------------|---------------|------------|----------------|------------|----------|---------------|------------------|-----------------|--------------|-------------|-------------|------------------|----------------|-------------|--------------|-----------------|--------------|--------------|-----------|-----------------|------------------|-------------|----------------|--------------|------------|----------------|-------------|----------|

