



TECH TIMES

The Professional Publication for Kia Dealership Technicians & Service Staff

2012

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The IQS Guide To Assisting Customers With Troubleshooting The Kia Voice Recognition System



® Kia dealership professionals who have been reading TechTimes over the past few years know how seriously Kia Motors takes the **J.D. Power Initial Quality Survey (IQS)** period that runs

from November through January. Each year, Kia alerts our technicians to the importance of this survey season, with special emphasis on how it affects the Kia brand, your dealership's bottom line, and ultimately your own career.

The features determined to be important IQS topics may change from one year to the next. This year, TechTimes has been emphasizing the importance of helping our customers optimize their use of **Bluetooth®** Wireless Technology enabled phones in their new Kia vehicle, especially with the Kia Voice Recognition System. To make using these features as easy as possible for our customers, refer to these guidelines when troubleshooting any Voice Recognition concerns expressed by new Kia vehicle owners.

The following guidelines are general tips for

optimizing Voice Recognition performance by means of specific actions your customers can take. Also included is specific information on Voice Recognition functionality, proper use, and system limitations:



Contact List Advice

1. Do not store single-name entries (e.g., "Bob", "Mom", "Kim", etc.). Instead, always use full names (including first and last names) for all contacts (e.g., use "Jacob Stevenson" instead of "Dad").
2. Do not use abbreviations when storing names in the phone book (e.g., store names as "Lieutenant" instead of "Lt." or "Sergeant" instead of "Sgt.").
3. Do not use acronyms when storing names (e.g., use "County Finance Department" instead of "CFD").
4. Do not use special characters (e.g., "@", "hyphen -", "asterisk *", or ampersand & ", etc.).

Continued on page 4

Tech Line Tech Tips

Vehicle	Concern	Recommendation Before Calling Techline
2011MY Optima	Rear parking lamps inoperative	Perform Service Action SA080 for BCM logic improvement to correct this concern.
Various	Seat heater switch light blinking	This is usually an indication of high resistance in the seat cushion or seat back heater. Disconnect the 2-pin connector for the seat back heater. Measure resistance of the heater. It should be approx. .8-1.5 ohms. Next, with 2-pin connector still disconnected, disconnect the 4-pin connector & measure resistance of seat cushion heater. It should be approx. 1.5ohms. A seat back or seat cushion heater that measures high resistance requires replacement.
Various	How do I find the immobilizer or Smart Key Pin Code?	Use GDS or KGIS to find an immobilizer or Smart Key PIN code: Enter VIN or perform VIN Auto Detect. Once VIN is recognized, go to Vehicle Information section on GDS or KGIS (The Vehicle Information tab can be found on the KGIS homepage). Find blue search box next to PIN code and select it. GSW login and password will be required. The immobilizer PIN code will be displayed where the search box had been displayed. Important note: The new PIN code is for 2008MY and newer vehicles. Old PIN code is for 2007MY and previous vehicles.
Various	I thought a vehicle concern was fixed, but it is back with the same concern.	Retrieve previous Tech Line Case ID#. Call Tech Line and advise agent that the vehicle has returned with the same concern. Request that the original case be re-opened instead of opening a brand new case.
n/a	GDS computer is not working correctly	Contact the GDS Help Desk at 888-542-4371 (This GDS Help Desk phone number can also be found on the GDS cart).
n/a	Techline is requesting photographs	Pictures help greatly with diagnosis. Attach the photos to the webcase or email them to the Tech Line agent working the case with you.

Latest Technical Service Bulletins, Service Actions and Campaigns

ELE 050	AVN Software Update (SA 133)
ENG 126	Alternator Pulley & Tensioner Replacement
ENG 120	Rio Front Muffler Pipe Hanger Bracket Replacement
GEN 060	Hybrid Fuel Efficiency Tips & Troubleshooting Procedure
GEN 017r2	Fuel Economy Information -- All Models
TRA 044	6-speed Automatic Transaxle Inhibitor Switch Bracket Installation

TechLine 2012 Holiday Hours

Monday, December 24 – Tuesday, December 25	CLOSED
Wednesday, December 26 – Saturday, December 29	OPEN (7:00am – 2:00pm)
Monday, December 31 – Tuesday, January 1 2013	CLOSED

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.
- 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 perform the job correctly and safely.

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 Trouble-shooting Manual or on KGIS should be performed first.



Training Status Reports -- Straight to Your Inbox!

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Whether you're a professional Kia Technician or a Service, Parts, or Sales Manager, you probably already know the value of the Training Reports available on **KiaUniversity.com**. These reports are designed to assist technicians to achieve your training and certification goals, and to help dealership management track progress toward dealership training goals.

Did you also know that you can now have those training reports at your fingertips when you need them? The **KiaUniversity.com** Training Reports have a feature that will allow you to select your report criteria and actually have an updated report emailed to you on a scheduled basis to fit your needs. The instructions below will introduce (or re-introduce) this cool feature which is available to you today.

From the main **KiaUniversity.com** page, click on **Training Reports** in the left side menu, then click on **Web Reports**.

Next, click on the desired tab along the top left menu, selecting "**Parts & Service Reports**" or "**Certification**". Once the report you want to receive is displayed, Click **Subscribe** in the upper right corner of the screen.

Dealer Code IN00X Show Details

Employee JOSEPH LANDRY Certificates 2012 Service Technical Certification

Certification Report - IN00X , 11/29/2012

Dealer : Yourtown Kia
Employee : Joseph Landry

2012 Service Technical Certification					
	Maintenance Elite Total	Professional Elite Total	Senior Elite Total	Master Elite Total	
Service Technical					
JOSEPH LANDRY Exclusive Kia Technician	100%	100%	50%	0%	

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LESS THAN 1 MONTH LEFT TO GET CERTIFIED!



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5. If a name you speak is not recognized, change its listing in your Contacts to a more descriptive name (e.g., use “Grandpa Joseph” instead of “Pa Joe”).

applies to vehicles built prior to 2012 model year, as recent model year vehicles will automatically compensate for this contact storage discrepancy.

Voice Recognition Tips

The Kia Voice Recognition System may have difficulty understanding some accents or uncommon names.

- When using *Bluetooth*[®] Voice Recognition to place a call, speak in a moderate tone, with crisp, clear pronunciation.
- Be sure to say the contact name exactly as it is entered in the contacts list. If the contact list entry is “Robert Jones”, you must say “Call Robert Jones.” You cannot say “Call Bobby Jones” or “Call Bob”.
- Avoid echo problems by keeping the volume set to a moderate level.
- Be aware that open windows/sunroof or an A/C fan operating at higher speeds can interfere with *Bluetooth*[®] Voice Recognition.
- Some phones reverse first and last names when storing contacts. If you have saved a contact in your phone as “Jonathon Smith” try saying “Call Smith, Jonathon” instead of “Call Jonathon Smith”. This concern only

Contacts Sync (Phonebook Download)

The Contacts Sync feature allows you to choose whether your phone contact list will transfer to your vehicle contacts each time your phone is connected or only at the initial pairing. Follow the instructions in your owners’ material to enable or disable Contacts Syncing.

If Contacts Sync is set to **ON**, contacts stored on your phone will download each time your phone is connected. There may therefore be a delay before the system is available to place a call using Voice Recognition. The benefit of having Contacts Sync set to **ON** is that your most recently updated contacts from your phone will download every time the phone is connected, keeping your Contacts list in the vehicle current.

If Contacts Sync is set to **OFF**, your phone contacts will download only at the initial phone pairing. This allows you to make calls using voice recognition without waiting for your phone contact list to download each time your phone enabled with *Bluetooth*[®] is connected with your vehicle's *Bluetooth*[®] system.

Have any feedback for the TechTimes staff?
If you do, we want to hear it!
Please email your comments & suggestions
to ssalama@kiausa.com
or fax to (949) 468-4905
to have your voice heard!

Training Status Reports -- Straight to Your Inbox! (continued from pg. 3)

On the next screen, press the **New Subscription** button. When you see the pop up dialogue box, you can choose the format in which you want to receive the report (Excel or PDF), the frequency (once, weekly, or monthly), the day of the week or month that the report is run, and even include additional email addresses to which

The screenshot shows a training status report for 'KIA MOTORS Dealer Center - WE02'. It includes a pie chart indicating 'Deliveries 24%' and a table with columns for 'PTS (# Courses)', 'Required', and 'Achieved'. The table lists various courses and their completion status for multiple technicians.

you would like the report delivered.

Next, press **Subscribe** and you're done!

Your report will be run and emailed to you according to your selection.

Check out the sample report shown here. Of course, if you're a technician, the report will only reflect your own training record.

So visit **KiaUniversity.com** right now to check out this great feature and many others designed to help you achieve your training and certification goals!

The screenshot shows a web form titled 'Schedule Information For Training Report Retailer Detail'. It has options to 'Deliver this report as: Excel' or 'PDF'. There is a field for 'Additional Email' and a 'Schedule details' section with radio buttons for 'Monthly', 'Weekly', and 'Once'. The 'Monthly' option is selected, and a dropdown menu shows 'Reports Run Every Month' with 'Calendar Day' set to '1'. There are 'Subscribe' and 'Close' buttons at the bottom.

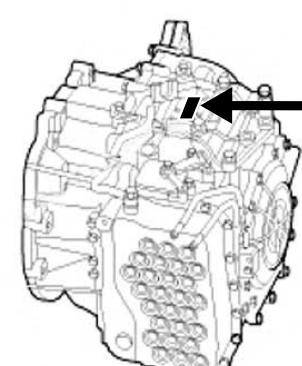
Forte Transmission Identification

All 2011-2013MY Forte (TD) Koups and sedans, 4 & 5-door, use a similar 6-speed automatic transmission. However, there are slight variances between the transmissions.

The main difference between these transmissions is the final drive gear ratio. The Koup transmission final drive is geared at 3.195 and the Sedan is geared at 2.885. Due to this,

the transmissions are not interchangeable. If the wrong transmission is installed it will cause a harsh shift concern and may not set any DTC's, making it difficult to diagnose the root cause of the concern.

The transmission version can be determined by locating the Identification tag on top of the transmission and using the ID chart shown below:



Identification Tag:

EA	A	N	A	□	000001
1	2	3	4	5	6

3: Final gear ratio

- N: 2.885 (Theta-II 2.0/2.4 MPI, 4/5 Door)
- R: 3.195 (Theta-II 2.0/2.4 MPI, 2 Door)

*Check and verify correct **Final Gear Ratio** before replacing / installing new transmission.*

1: Model
- EA = A6MF1

2: Production Year
- A = 2010, B = 2011, C = 2012, D=2013...

4: Detailed Classification
- A: Theta-II 2.0 MPI, 4/5 Door
- B: Theta-II 2.4 MPI, 4/5 Door
- A: Theta-II 2.0 MPI, 2 Door
- B: Theta-II 2.4 MPI, 2 Door

5: Spare

6: Transaxle Production Sequence Number - 000001 ~ 999999

Refer to the electronic parts catalog for the most accurate and up-to-date parts information.

The Mass Air Flow Sensor

In 2010, Kia Motors stopped using Mass Air Flow (MAF) sensors in new vehicles. So what was a MAF? A Mass Air Flow Sensor (MAF) uses a sensing element in a housing located between the air cleaner and the throttle body to measure the quantity of the air entering the engine. The

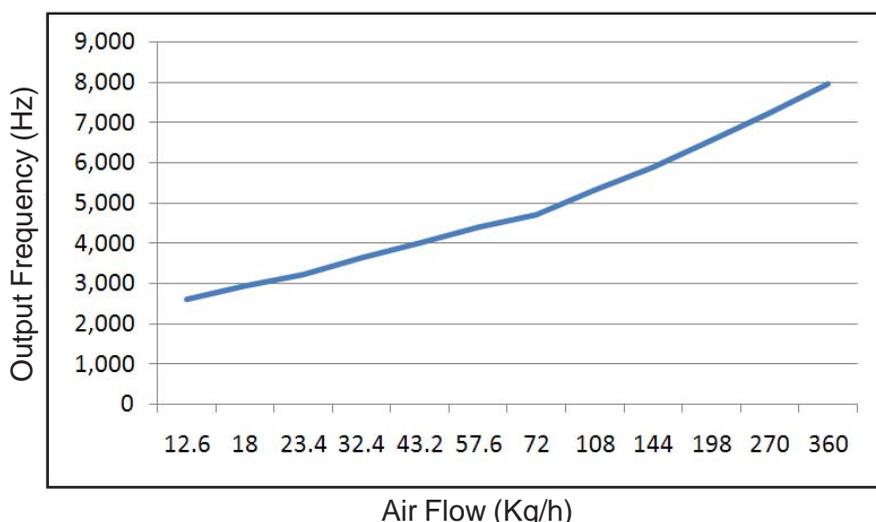
ECM/PCM uses this information to determine the amount of fuel to inject and the ignition timing for all engine operating conditions.

Let's look at the two types of MAF sensor that have seen use on Kia vehicles, the **Frequency Type (digital)** and **Voltage Type (analog)** MAF sensors.



Frequency (digital) Type MAF Sensors

The frequency type MAF is another example of a pull down circuit. The sensor is supplied with B+ and ground, and the signal side of the sensor pulls the 5-volt signal line to ground. The frequency changes with the air flow and is typically between 600 Hz and 11,000 Hz.



Air Flow (kg/h)	Output Frequency (Hz)
12.6	2,617
18.0	2,958
23.4	3,241
32.4	3,653
43.2	4,024
57.6	4,399
72.0	4,704
108.0	5,329
144.0	5,897
198.0	6,553
270.0	7,240
360.0	7,957
486.0	8,738

2010 Optima 2.7L Current Data (Normal Operation)

Sensor Name	Value	Unit
<input checked="" type="checkbox"/> Air Flow Rate from Mass Air Flow Sensor	4.5	kg/h
<input checked="" type="checkbox"/> Engine Coolant Temperature Sensor	197	F
<input checked="" type="checkbox"/> Engine Speed	0	RPM

Key ON Engine OFF

Sensor Name	Value	Unit
<input checked="" type="checkbox"/> Air Flow Rate from Mass Air Flow Sensor	32.1	kg/h
<input checked="" type="checkbox"/> Engine Coolant Temperature Sensor	194	F
<input checked="" type="checkbox"/> Engine Speed	2080	RPM

2000 RPM

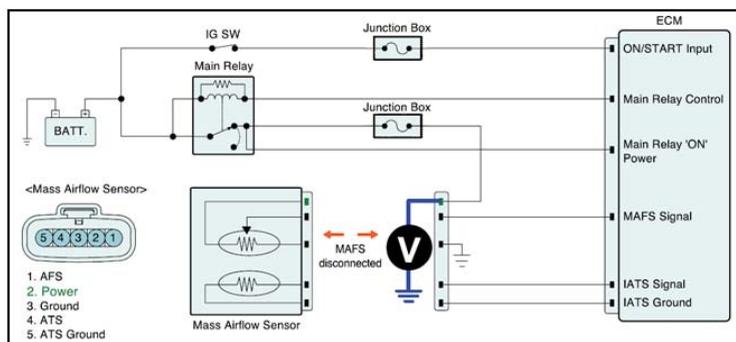
Sensor Name	Value	Unit
<input checked="" type="checkbox"/> Air Flow Rate from Mass Air Flow Sensor	11.5	kg/h
<input checked="" type="checkbox"/> Engine Coolant Temperature Sensor	194	F
<input checked="" type="checkbox"/> Engine Speed	640	RPM

Idle

Sensor Name	Value	Unit
<input checked="" type="checkbox"/> Air Flow Rate from Mass Air Flow Sensor	47.2	kg/h
<input checked="" type="checkbox"/> Engine Coolant Temperature Sensor	198	F
<input checked="" type="checkbox"/> Engine Speed	3000	RPM

3000 RPM

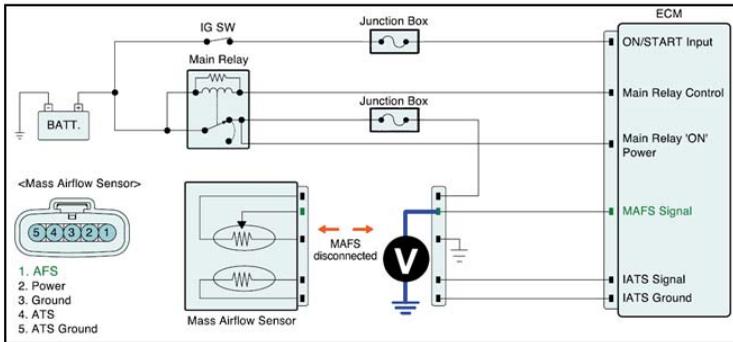
Testing the circuit (Harness side) Key ON engine OFF:



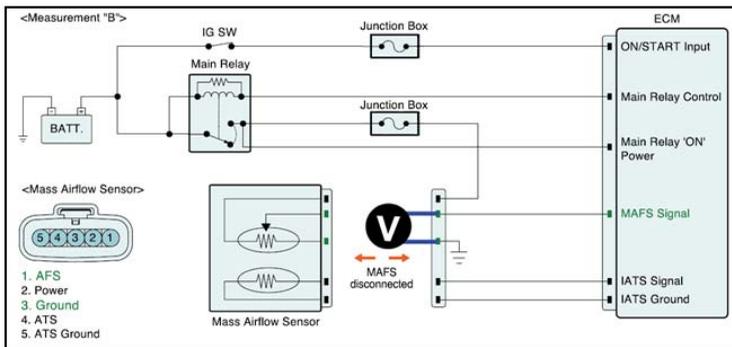
≈12.6 Vdc

Continued on next page

The Mass Air Flow Sensor (continued)



≈5.0 Vdc

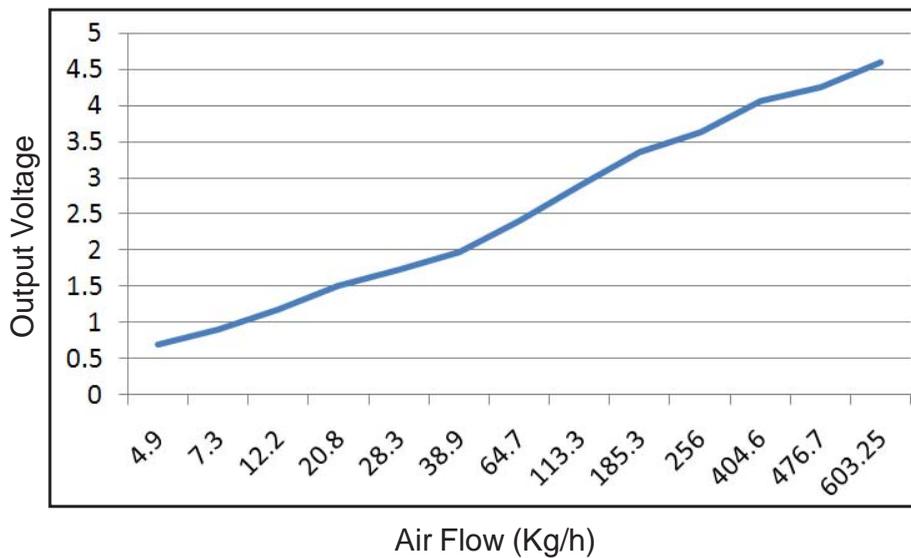


≈5.0 Vdc



Voltage (analog) Type MAF Sensors

The analog type is a voltage divider circuit. The sensor is supplied B+ and ground and the MAF sensor generates the signal voltage. The signal voltage is typically between 0.70 Vdc and 4.6 Vdc.

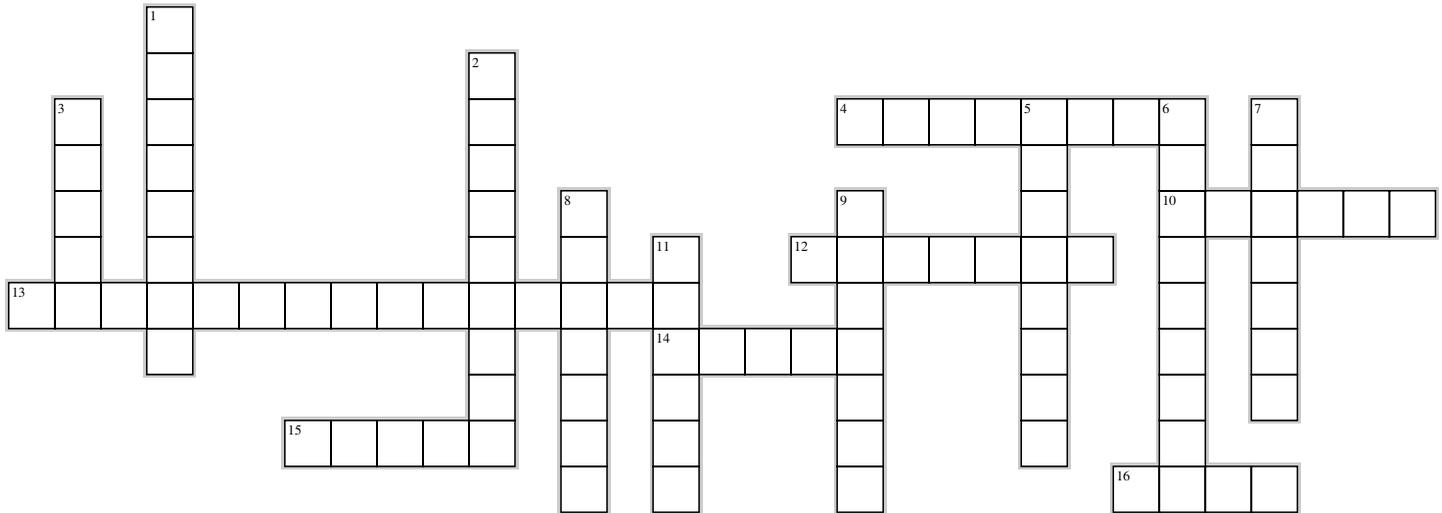


Air Flow (kg/h)	Output Voltage (V)
4.9	0.70
7.3	0.90
12.2	1.18
20.8	1.51
28.3	1.73
38.9	1.97
64.7	2.40
113.3	2.90
185.3	3.35
256.0	3.64
404.6	4.07
476.7	4.25
603.25	4.6

Continued on page 12

TechTimes Article Crossword Puzzle

Test your knowledge of the articles in this issue of TechTimes by completing this crossword puzzle! Answers on page 12.



Across

4. When placing a call using the Kia Voice Recognition System, customers should be advised to say the name they wish to dial exactly as it is entered in the _____ list.
10. Ventilated seats available in some Kia models use a separate _____ motor attached to the seat assembly not the vehicle's A/C System, to cycle air through the seating surfaces.
12. When using Voice Recognition, customers should first lower the noise level in the cabin by turning down the climate control system fan speed, and closing the windows and _____.
13. Because of slight variances in the different transmissions used in Kia Forte vehicles, the transmissions are not _____.
14. KiaUniversity.com users can use the Subscribe Report feature on the website to have reports delivered as either an _____ file or as a PDF.
15. When Contacts Sync is set to ON, customers may experience a _____ before being able to place a call using Voice Recognition.
16. The main difference between the automatic transmissions of Forte vehicles is the final drive _____ ratio.

Down:

1. To be ASE Certified within Kia University by December 31, 2012, Technicians must log into myASE.com to input/update their KUID on the _____ Identification screen.
2. The two types of MAF sensors that were used in Kia vehicles were _____ Type and Voltage Type.
3. When repairing a loose or sagging panorama sunroof trim seal on an Optima vehicle, it is important to first _____ off the affected portion of the seal and trim molding to ensure a good bond when adhesive is applied.
5. When using Voice Recognition to place a call, customers should avoid using abbreviations or _____ of longer or official names.
6. Kia dealership Technicians and Managers can now _____ to Web Reports on KiaUniversity.com to have them delivered by email in a format and schedule of your choosing.
7. In 2010, Kia Motors _____ using Mass Air Flow (MAF) sensors in new vehicles.
8. Vehicles equipped with ventilated front seats draw _____ air from the vehicle interior through the seating surfaces.
9. November is the start of the J.D.Power Initial _____ Survey period.
11. KiaUniversity.com users can have reports delivered to them on a one-time, monthly, or _____ basis.

ASE Certification Update

Beginning December 10th, 2012 the ASE web page myASE.com will be accessible for you to your Kia University KU ID. We have coordinated with ASE to include your KUID to identify those that have successfully completed their ASE Certification.

We strongly encourage you follow the steps below to log into your myASE.com Employer Information Screen and verify that your KUID has been updated. If you have not updated your KUID, please do so before the December 31, 2012 Certification Deadline to ensure that you will be ASE Certified within Kia University. ***It's important to remember to log into your profile page at the link above and enter KIA as your Employer Information***, as we will be using this to match your records with **KiaUniversity.com**.

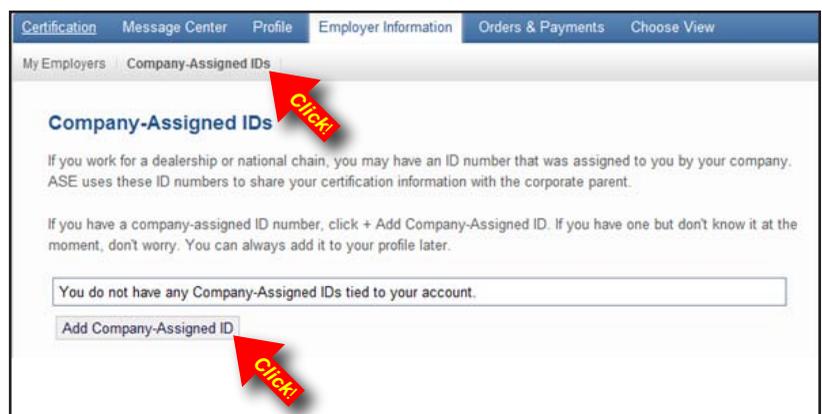
1. Create a **myASE** account (or log into your existing account) on the ASE homepage – www.ase.com.



2. Go to the “**Employer Information**” tab.



3. Click on the sub-navigation link – “**Company-Assigned IDs**” and click on the “**Add Company-Assigned ID**” button.



4. Select **Kia** from the drop-down list under “**Company**”, and enter your KUID in the “**Company Assigned ID**” field.

Note: Your 4-digit KUID can be found on your profile page at KiaUniversity.com.



ASE Certification Update (continued)

5. Once you have entered your information, you will see your Company-Assigned ID successfully added to your profile. You can modify your existing record using the “**Edit**” or “**Delete**” links.

Company	Company-Assigned ID		
KIA	9999	Edit	Delete

Remember to finish this process by the December 31, 2012 deadline to ensure that you are properly ASE certified through Kia University!

Understanding Ventilated Seat Operation



Some Sorento, Optima and Sportage vehicles are optionally equipped with ventilated front seats. These seats improve occupant comfort by drawing the ambient air of the vehicle interior through the seating surfaces.

Some customers may mistakenly believe that ventilated front seats are air conditioned, and may therefore feel that the seat is not getting cold enough. However, the function of these seats is entirely unrelated to the vehicle's climate control system. They are actually designed to push the ambient air of the vehicle cabin through the seat with a separate blower motor that is attached to the seat assembly.

If a new owner complains about the ventilated seats not getting "cold enough", it is important to remind them that this feature *is not intended* to work in conjunction with the air conditioning system in the vehicle. The blower motor fan dedicated to the ventilated seats function is only moving air at ambient temperature from inside the cabin of the vehicle to ventilate the driver or passenger seat.

The blue button on the power switch only identifies ventilated air and should not be confused with A/C operation.

When the seat heaters are selected, the blower motor does not operate, and the seat cushion and seat back are heated by a separate system instead.



Optima Panorama Sunroof Trim Seal Loose

Some Optima vehicles produced from start of production to October 24, 2012 and equipped with the Panorama Sunroof option, may exhibit a loose or sagging side trim seal, as shown in the image to the right.

A portion of the side trim seal may become detached and caught under the sunroof, as it is closed, causing poor appearance and improper sealing.



To correct this condition, follow the procedure outlined below:

1. With the sunroof open, clean off portion of the side seal and trim molding area that is sagging or has become loose using General Purpose Adhesive Cleaner (3M™, P/N 08984). Ensure the seal is free of any dirt or oil. A clean, dry surface is key to a good bond.
2. Apply a thin uniform coat of black weather-strip adhesive (pictured below) on each surface **being careful not to bond the surfaces together at this time**. Allow adhesive to dry until tacky to the touch.



3. Carefully push the side trim seal back into the sunroof side trim and apply pressure for several seconds to ensure that it is properly positioned.
4. Clean off any excess adhesive and allow a minimum of 30 minutes for the adhesive to cure.
5. After allowing the adhesive to cure, cycle the panorama sunroof through its full motion to ensure the seal is seated properly.

