



GROUP
General

MODEL
All Models

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TECHNICAL SERVICE BULLETIN

SUBJECT: FUEL ECONOMY INFORMATION - ALL MODELS

*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 service bulletin provides information related to fuel economy and provides guidelines to assist in determining the actual fuel mileage obtained under normal driving conditions. It also provides information related to the Kia Fuel Economy Adjustment Program.



A new "Fuel Economy & Environment Label" has been mandated starting with 2013MY vehicles, but some manufacturers have already adopted it, early, for their 2012MY vehicles.

Highlights of the New "Fuel Economy and Environment" Label

- The new labels provide a comparison between Electric Vehicles (EV's) and Plug-in Hybrid Electric Vehicles (PHEV's) and other non-electric vehicles.
- New labels include a "QR Code" to link consumers to <http://www.fueleconomy.gov> (government website providing fuel economy information).
- New labels will assign each vehicle a rating from "1 (worst) to 10 (best)" for fuel economy & greenhouse gas emissions (GHG).
- The new labels include MPGe (miles per gallon gasoline equivalent) to convey energy consumption of a non-gasoline vehicle in terms of how many miles the vehicle could go on a given amount of an energy source that has the equivalent energy content as a gallon of gasoline.

File Under: General

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☒ Service Advisor(s) ☒ Technician(s) ☒ Body Shop Manager ☒ Fleet Repair

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For additional information regarding the new “**Fuel Economy & Environment**” label, please follow this link:

<http://www.fueleconomy.gov/feg/Find.do?action=bt1>

or use your smartphone's QR code reader app to snap this QR code:



Remember, EPA (window label) fuel economy estimates are not guarantees by manufacturers. Rather, they are intended to be used for comparison between different vehicles. Here is what the EPA says about these numbers:

The fuel economy ratings are an estimate.

The purpose of the fuel economy ratings is to provide consumers with estimates to use in comparing the gas mileage of different vehicles. It is not meant as a guarantee of the gas mileage each driver will achieve. Since no test can simulate all the possible conditions that affect fuel economy, such as climate, driver behavior, road condition, and car care habits, your actual mileage will always vary some from the estimates.

(Source: US EPA, <http://publicaccess.supportportal.com/link/portal/23002/23012/Article/16056/Why-is-my-gas-mileage-lower-than-the-EPA-rating-What-are-the-factors-that-affect-fuel-economy-And-how-do-you-determine-your-vehicle-s-fuel-economy>)

How Fuel Economy Estimates are Determined:

All new vehicles are tested by the manufacturer according to guidelines outlined by the EPA, which in turn reviews and confirms some of the manufacturers' results with their own additional testing at the National Vehicle and Fuel Emissions Laboratory (NVFEL) in Ann Arbor, Michigan. The vehicle tests are conducted according to different schedules to produce City and Highway fuel economy ratings. Here is what the EPA says about these tests:

City: *Represents urban driving, in which a vehicle is started with the engine cold and driven in stop-and-go rush hour traffic.*

Highway: *Represents a mixture of rural and Interstate highway driving with a warmed-up engine, typical of longer trips in free-flowing traffic.*

High Speed: *Represents city and highway driving at higher speeds with more aggressive acceleration and braking.*

Air Conditioning: *Account for air conditioning use under hot outside conditions (95°F sun load).*

Cold Temperature: *Tests the effects of colder outside temperatures on cold-start driving in stop-and-go traffic.*

(Source: US EPA, http://www.fueleconomy.gov/feg/fe_test_schedules.shtml)

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From these tests, the EPA develops the fuel economy ratings. However, it is impossible for one set of estimates to predict fuel economy precisely for all drivers in all environments and driving conditions. The EPA emphasizes that real world vehicle mileage depends on numerous factors, and some critical ones can be controlled by the customer. Here is what EPA says about these variable factors:

Factors that affect fuel economy.

It is essential that EPA's fuel economy estimates continue to be derived from controlled, repeatable laboratory tests to enable a standardized or "level playing field," comparison between all vehicle models. Although EPA's fuel economy tests are designed to reflect typical driving conditions and driver behavior, several factors can significantly affect how many miles per gallon (mpg) your car gets: how and where you drive; vehicle condition and maintenance; fuel variations; vehicle variations; and engine break-in.

(Source: US EPA, <http://www.fueleconomy.gov/feg/factors.shtml>)

Because some vehicles are more sensitive to these factors than others, the impact of the changes will vary from vehicle to vehicle. The nature of current hybrid technology -- the addition of a battery as a second source of on-board power, sophisticated control systems, and sometimes a smaller engine -- makes a hybrid's fuel economy more sensitive to certain factors, such as colder weather and air conditioning use.

(Source: US EPA, <http://publicaccess.supportportal.com/link/portal/23002/23012/Article/16056/Why-is-my-gas-mileage-lower-than-the-EPA-rating-What-are-the-factors-that-affect-fuel-economy-And-how-do-you-determine-your-vehicle-s-fuel-economy>)

What the Customer Can Do to Improve Fuel Mileage:

- Keep the vehicle properly maintained by following the normal maintenance schedule, including more frequent maintenance under severe usage conditions (if applicable), as described in the Kia Owner's Manual for the specific model. This will ensure that the following fuel economy related points are covered:
 - Use the recommended grade of engine oil and filter, transaxle oil, and engine coolant.
 - Keep the tires properly inflated and rotated.
- If the Malfunction Indicator Light (otherwise known as the Check Engine Light or Service Engine Light) is illuminated, this may indicate a condition that could reduce fuel economy. Take the vehicle to the nearest Kia dealer for evaluation.
- Use the recommended octane of fuel per the Kia Owner's Manual recommendation for the specific model.
- Avoid short trips and driving in cold weather, when possible. Engines operate less efficiently when cold.
- Remove excessive weight from the trunk and cargo areas. Also avoid carrying additional items/ cargo on your roof rack (this will increase wind resistance while adding weight to the vehicle).
- Always observe the speed limit. Using cruise control on the highway will help maintain a constant speed.

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- Avoid excessive idling whenever possible.
- Use Active ECO® (if equipped) to help improve fuel efficiency by controlling several vehicle components. When activated, it optimizes engine and transmission operations to maximize fuel economy for most drivers. On other vehicles, the EcoMinder® (if equipped) indicator will illuminate when the vehicle is operated in a manner that achieves maximum fuel economy.
- Avoid hilly or unpaved roads whenever possible.
- In All-Wheel Drive (AWD) or Four Wheel (4WD) drive vehicles, use AWD Lock or 4WD Mode only when conditions require it.
- Apply the accelerator smoothly and begin slowing well before approaching a stop or a slow down area.

For more fuel efficiency tips, please refer to the following resources:

- The Kia vehicle owner's manual
- The Kia Fuel Economy brochure, *"Getting More out of Every Gallon"* (pictured to the right) P/N UN120-KU-002, available for order in packs of 50 through Archway at (866) 542-6268



- Kia's Fuel Economy video on the Kia University Tech Videos website:

<http://www.kutechvideos.com>

or use your smartphone's QR code reader app to snap this QR code. (To view the video once the website is open, select "Consumer Info", then select "Fuel Economy").



- The website of the EPA, where you can learn details of the many factors affecting fuel economy: <http://www.fueleconomy.gov/feg/drive.shtml>

How to Monitor a Vehicle's Fuel Economy

The best indicator of average fuel economy is the Average MPG readout in the tripmeter (if equipped). Immediately after refueling, reset this readout following the instructions in the owner's manual. The Average MPG readout may climb and fall significantly at first. This is normal. Judge fuel economy after a significant portion of fuel has been consumed (e.g. when fuel gauge reaches ½).

SUBJECT:**FUEL ECONOMY INFORMATION - ALL MODELS****How to Manually Calculate a Vehicle's Fuel Economy**

Use the vehicle's trip odometer to calculate MPG by following these steps:

Step 1	Fill the vehicle's gas tank completely and re-set the trip odometer.	Note: Sometimes it's easy to get the main odometer and trip odometer readings confused, especially if the vehicle is new..
Step 2	When it's time to re-fuel • Filling the tank completely • Writing down the number of gallons it took to fill the tank • Writing down the mileage on the trip odometer • Re-setting the trip odometer	Example: It took 9.5 gallons to completely fill the tank, and the trip odometer reads 335 miles.
Step 3	Divide the number of miles driven by the number of gallons it took to fill the tank. The result is the vehicle's MPG for that driving period.	Example: 335 miles divided by 9.5 gallons = 35.5 Miles Per Gallon.

(Source: US EPA, <http://www.fueleconomy.gov/mpg/MPG.do?action=calcMPG>)

For vehicles not equipped with a trip odometer, the odometer can be used to calculate MPG.

For instructions, follow the link above.

***NOTICE**

For greatest accuracy in calculating average MPG, one of these methods should be repeated during the course of a several gas tanks worth of driving to account for differences in gas stations and fuel dispensers.

FUEL ECONOMY ADJUSTMENT PROGRAM FAQ

The following question and answer section will further explain the fuel economy adjustment program as launched in November 2012 and what Kia is doing to satisfy our customers. For the most up-to-date information, follow this link: <https://kiampginfo.com/>.

General Questions:

What is the issue?

Kia Motors America has announced corrections to the fuel economy ratings for approximately 300,000 Kia vehicles. An internal review has concluded that a set of procedural misinterpretations and errors at the joint Hyundai/Kia technical centers led to overstated miles per gallon (MPG) ratings for 2011-2012 model year Optima Hybrids, and 2012-2013 model year Rios, Souls, Sportages, and certain 2012-2013 Sorentos equipped with GDI engines. Gasoline-powered Optima, Forte and Sedona models, as well as Sorentos with MPI engines, are not affected.

We deeply regret these errors and sincerely apologize to our valued customers.

How did this happen?

In 2009 Kia and Hyundai's joint testing facility created a new team of engineers to improve MPG testing procedures. One of the first things they attempted to do was increase test accuracy and repeatability by creating additional protocols, which complied with EPA guidelines, for Kia engineers to follow in every test to enhance reliability. What we learned from the EPA is that some of those new procedures do not comply with their interpretation and industry practices and led to overstated MPG ratings.

How long have you known about this?

The EPA alerted our U.S. technical center in the first quarter of this year to some fuel economy discrepancies they observed while evaluating coast down testing for some of our vehicles. The joint Hyundai/Kia technical operations here in the U.S. and in Korea conducted an internal review throughout the spring and summer to understand the basis of these discrepancies and to re-test certain vehicles prior to today's announcement.

What are you doing about it?

We are taking the following steps to immediately address these errors:

- We are correcting the fuel economy ratings for the affected model year vehicles and re-labeling 2012 model year vehicles currently in dealer inventories;
- We are compensating all current and former owners of affected vehicles to cover added fuel costs associated with the MPG ratings adjustments; and

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How long will it take you to re-label cars in showrooms?

This process is already underway. These labels are being printed and distributed now. Our dealers are making every effort to re-label vehicles in inventory as quickly as possible.

Why is the Soul fuel rating adjustment so much larger than the others?

The Soul received powertrain enhancements for the 2012 model year which improved fuel efficiency. Human error caused the selection of certain incorrect data for the coast down calculations that year requiring greater EPA fuel economy adjustments for the Soul than other affected Kia vehicles.

Still, due to the 2012 model year improvements, many Soul models continue to achieve an EPA stated 30 miles per gallon on the highway.

What about the Rio?

The 2012 Rio was also affected by the same human error as the Soul, but the impact was less than for the Soul. Even after the corrections the Rio's highway rating is 36 MPG.

Assessment of Impact:

Are sales and deliveries being disrupted? How about the long term?

No, sales and deliveries are not being disrupted. Current and future dealer vehicle inventories are being updated with corrected fuel economy ratings and we are addressing the issue directly with current and previous vehicle owners.

Does this call Kia's dedication to fuel economy into question?

No. We always have and will continue to offer some of the most fuel-efficient vehicles in the market and on the road.

Is Kia facing penalties or other investigations?

Not that we are aware of at this time.

How is "fuel economy" regulated here in the U.S.?

This is a complicated process. For a full description please refer to the EPA's website – <http://www.fueleconomy.gov>.

Why don't you test your vehicles here in the U.S.?

We have a comprehensive global research and development facility in Korea. The same engineering variability and interpretive issues would apply, regardless of where the tests are conducted. The issue really is "how," not "where."

Does this prove that self-certification doesn't work?

The federal government employs a self-certification model while other countries have adopted other processes. Our understanding is both models have worked well over time. We are fully committed to complying with the testing protocols and procedures adopted by the jurisdiction in which we operate.

Customer Program:***Is my vehicle affected? If so, how do I get compensated?***

If you purchased an affected vehicle either new or used on or prior to November 2, 2012, regardless of whether you still own it, you are eligible for reimbursement for your added fuel costs associated with the MPG ratings adjustments for the miles you've driven the vehicle.

NOTE: Vehicles are reported sold at varying times so the initial website database may not initially include vehicles sold on or immediately preceding November 2nd. Kia will be updating the website periodically with additional eligible VINs so customers who recently purchased affected vehicles should check back in a week or so. Of course, if any issues arise in the meantime, a customer can contact the Kia Fuel Economy Ratings Adjustment Program Center at 855.912.5648 for assistance.

How are affected customers being compensated?

Kia has developed a comprehensive reimbursement program for affected current and former vehicle owners to cover the additional fuel costs associated with the MPG rating adjustments for the miles the vehicle is driven. Affected vehicle owners will be compensated for the total miles the vehicle is driven during their ownership period. You will be able to receive compensation at various intervals during your ownership.

How will my compensation be calculated?

After registering online, customers will be instructed to visit your preferred Kia dealership to have your mileage and vehicle ownership validated.

Once completed, the reimbursement amount will be calculated using the average fuel price as published by the U.S. Energy Information Administration (<http://www.eia.gov/petroleum/gasdiesel/>) in your area plus an additional 15% allowance, and actual miles driven.

For example:

- You've driven 10,000 miles in your 2011 Optima Hybrid.
- Your original combined MPG rating was 37 MPG and your new combined MPG rating is 36 MPG (a difference of 1 MPG).
- Under the original combined MPG rating, you would have expected to use 270.3 gallons of gasoline for 10,000 miles of driving (10,000 divided by 37).

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- Under the new combined MPG rating, you can expect to use 277.8 gallons of gasoline for 10,000 miles of driving (10,000 divided by 36).
- There is a difference of 7.5 additional gallons of gasoline (277.8 gallons minus 270.3 gallons).
- You will be reimbursed for 7.5 gallons of gasoline at the average fuel price in your area plus an additional 15% allowance as referenced above.

Do I have a limited time to register someplace to get my compensation or will the company contact me?

Yes, you will need to register online before December 1, 2013 in order to participate in the reimbursement program.

What is my VIN number and how can I find it to check to see if my car is eligible?

VIN stands for vehicle identification number and is a unique 17-character number, containing both numbers and letters, to identify your vehicle. Your VIN can be found by looking at the dashboard on the driver's side of the vehicle. The easiest way to view it is to stand outside the vehicle on the driver's side and look at the corner of the dashboard where it meets the windshield. VINs are also listed on insurance cards/policies and vehicle registration documentation.

Where can I find the nearest Kia dealership?

You can find your nearest Kia dealership by visiting the Dealer Locator section of <http://www.Kia.com>.

I live a long way from a Kia dealership – do I have to go there to have my vehicle mileage confirmed?

Once you have determined online whether your vehicle is affected and you have registered for the reimbursement program, we ask you to go to your preferred Kia dealership for vehicle ownership and mileage verification as part of the reimbursement process. Registration for the reimbursement program must occur by December 1, 2013.

How soon will I get compensated?

We will do everything we can to ensure prompt and proper reimbursement. Once you have registered for the program and visited your dealer for ownership and mileage verification, we expect you will receive compensation within fifteen business days.

I bought my car used – do I qualify?

Yes, if it's an affected vehicle purchased before November 2, 2012.

What if I bought my Kia outside the United States – is it still affected?

The fuel economy ratings in question affect only vehicles sold in North America. All Kia cars sold in other regions of the world have been properly certified with correct fuel economy ratings by each respective certification agency. If you purchased your vehicle in Canada, please visit the

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website for Canadian residents at <http://www.kiafuelconsumption.ca> to verify vehicle eligibility and to register for reimbursement.

Is there something my dealer can install/fix so I get better fuel economy?

No. This issue is not about a technical or mechanical issue that can be fixed by a dealer but about testing procedures that impact fuel economy reporting. For additional information about how to maximize the fuel economy performance of your vehicle (tips for driving more efficiently and keeping your car in shape), visit <http://www.fueleconomy.gov>.

Can I return my affected vehicle?

The reimbursement program is designed to compensate affected vehicle owners for the difference in fuel economy ratings and does not include the return of affected vehicles. Kia is concerned with your satisfaction with your purchase. If you have any other issues with your vehicle which require assistance, please contact the Kia Consumer Assistance Center at 800.333.4Kia(4542).

What if I've sold an affected vehicle?

You are eligible for reimbursement of the added fuel costs you incurred during your period of ownership based upon your state of residency and the miles driven.

Is my vehicle now worth less?

Although fuel economy is one of many factors used to determine resale value, we believe your vehicle will maintain resale value stability even with these fuel economy ratings adjustments. In relation to that, it's important to remember that Kia vehicles remain among the most fuel-efficient on the market and on the road today, even with these fuel economy adjustments, and will be supported by being industry leaders in safety and quality.

What can I do to get better fuel economy?

Fuel economy is impacted by a number of real-world driving factors. For information on how to maximize your fuel economy when driving, visit <http://www.fueleconomy.gov/feg/drive.shtml>.