

TECHNET TIMES

HYUNDAI | NEW THINKING.
NEW POSSIBILITIES.

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Welcome the All-New Santa Fe Sport



The 2013 Santa Fe will be built as two models. The Sport currently being launched is built with either the standard 2.4L engine or the 2.0L Turbo, seating five passengers with an emissions classification of ULEV (Ultra Low Emissions Vehicle).

Some of the key standard features available in the 2.4 liter and the 2.0 Turbo are the Power tilt-and-slide glass sunroof, Inte-

grated Memory System and the power tilt-and-telescopic steering wheel. The Technology Package offers: Driver Information System, Bluetooth hands-free phone system with integrated display and Smart cruise control.

The all glass panoramic tilting roof with a forward wind deflector, slides above the
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Welcome the All-New Santa Fe Sport

continued from page 1

roof line. The console control switches operate the front and rear travelling sunshade and also house the dome and map lights.



The Santa Fe Sport also offers heated front seats, and heated rear seats as an option. The seat heater control button has three LED lights indicating the heating level, which can be chosen by consecutive pushes on the button. The rear seat heater controls are in the rear door armrests; while the front controls are located in the front center console. The driver's seat has eight position adjustments along with the lumbar adjustment. Controls are located on the driver door interior.

The steering column stalks have been redesigned. Toggle switches have been added to both stalks. The fog lamp switch is on the light stalk; and the intermittent wiper function can be turned on or off from the switch on the wiper stalk. **NOTE:** When the fog lamps are on and the ignition is cycled off or the high beams are activated, the fog lamp switch has to be turned back to the ON position for the lamps to operate.

Some of the new Santa Fe Sport external features include:

- Manual Key Operation for PIC system for the Proximity entry with push button start
- Chrome exterior door handles
- Door Handle Unlock Light
- Rear Window Privacy Glass
- Remote Hood Release

The instructor-led 2013 Santa Fe Sport New Model Technical Training course examines these and other new features in depth. Course registration is now available. Log on to TACS and register for the course or discuss the course with your Service Manager.

Much new technology can be found on the steering wheel. The steering wheel has become the control center for several features. User Mode Settings (UMS) previously selected through the trip meter are now on the steering wheel. It bears Menu, Down (▼) and Enter buttons used to change the UMS. There are a total of 18 items that can be set and customized.

The user can select preferences without any SCAN tool devices for Auto Door Lock/Unlock, Two Turn Unlock ON/OFF, Triple turn signal, Door Lock & Unlock settings, Temperature levels and Service Interval notifications.



The User Settings are entered by depressing the top button on the lower right section on the steering wheel. Edit functions are not operational while the vehicle is moving. The UMS goes to the Menu Screen by pressing the upper button. Scroll down with the arrow button (middle) and Select option by pressing the Enter (lower button).

While we are discussing the steering wheel, note that the Santa Fe Sport offers Driver Selectable Steering Mode (DSSM) like that on the new Elantra GT as standard equipment. Drivers can select their preferred steering mode (Comfort, Normal or Sport) for a customized driving experience. Settings can be changed while driving by pressing the button to toggle between all three settings. The mode selected is indicated in the trip computer cluster. **NOTE:** DSSM Switch input cannot be monitored with the GDS and defaults to the last selected position if the system should have a fault as there is no code set for the switch input.

The system is powered with Motor Driven Power Steering (MDPS). The MDPS is controlled by the power steering control unit. It uses the steering wheel torque, steering angle input and vehicle speed to command the

motor driven assist. The brushless motor, installed in the steering column assists the steering and becomes stronger as the vehicle's speed increases and lighter when the vehicle's speed decreases.

The Santa Fe also features a new driver selectable two-stage Electronic Stability Control System (ECS). The process is as follows:

To select ESC OFF stage one, press the ESC OFF button momentarily. The ESC OFF light will illuminate and the instrument cluster LCD trip computer screen will display a message for three seconds. In this mode, Traction Control System (TCS) and ESC engine power intervention are disabled and TCS and ESC braking intervention remain active. To select Stage 2, press and hold the ESC OFF button for three seconds until you hear a chime sound. This indicates Stage 2 is enabled. The ESC light will remain on and the instrument cluster LCD trip computer display will once again display a message for three seconds after selecting ESC OFF. Engine power cut and braking intervention are both disabled but the ABS function will remain active at all times.

NOTE: After cycling the ignition OFF or re-starting the vehicle, ESC will be fully active.

Additional control features include Hill Start Assist Control (HAC) and Downhill Brake Control. The purpose of the HAC system is to help hold the vehicle in a stationary position when either D (Drive) or R (Reverse) gear positions are selected, on an upward or downward incline of 8% or greater. The HAC applies the service brakes hydraulically using the ABS system after the vehicle has been brought to a stop using the service brake, keeping the brakes applied hydraulically for about two seconds after the operator removes their foot from the brake pedal. The brakes are released when the accelerator pedal is depressed or after two seconds. If the wheel speed sensors detect rearward rotation when in the drive

position on an uphill grade, the HAC system will gently apply the brakes. This system will also operate in reverse up a hill or in drive down a hill, as well as its normal direction, stopped up a hill. The HAC system: does not operate when the automatic transmission shift lever is in the Park or Neutral positions. The HAC remains operational even with the ESC system switched off, but will not operate if the ESC system has malfunctioned.

Downhill Brake Control (DBC) is designed to help the driver maintain vehicle control and speed on steep or slippery surfaces, downhill descents without the driver applying the brakes. When the vehicle is stationary on a downhill incline greater than 8% and the button is depressed, the brakes are applied automatically by the ESC module, limiting the downhill speed to no more than 5 mph.

The DBC system is automatically de-activated if the driver depresses the brake pedal, accelerator pedal, or the DBC switch. If the vehicle's speed should increase during descent, the DBC system will calculate the required brake hydraulic pressure for each wheel, allowing each individual wheel to meet the target vehicle speed. Under normal conditions, the stop lamp is turned on by the brake lamp switch; but in the case of the DBC, its relay activates the stop lamps. The system operates between speeds of 1-22 mph. The system will automatically be disabled at speeds above 37 mph.

The 2013 Santa Fe Sport New Model Technical Training course covers additional technology such as: Dual Flow Damper hydraulic shock absorbers, the new advanced electronic control AWD system, Active Cornering Control, Direct Electric Hydraulic Actuator Coupling description and replacement information, TPMS, SRS system, Auto Climate Control System, and more. Make time in your schedule to attend the class and keep an eye out for the upcoming companion web-course.



Matte Paint Information

Matte paint is a show car level paint effect, and requires special care to keep the appearance. If matte paint is not handled properly, it can easily be damaged at a significant cost to the dealer (before sale) or the vehicle owner (after sale).

There is a Matte Paint Owners Guide for customers included with the owner's manual package (p/n NP150-V2013-B). It has detailed care instructions for owners, and is a good reference for developing your dealership care process.

Each matte paint vehicle is equipped with part number 00232-19054, Matte Paint Car Care Kit. This kit contains enough car care chemicals and supplies for the customer to clean and protect a matte paint vehicle the day they receive the car. All they need is a chamois and a bucket.



NOTE: The normal paint warranty applies to defects in material and/or workmanship, but does not cover the matte appearance. All matte paint warranty repairs require pre-repair inspection and approval prior to initiating any warranty work. (See page 6 and 7 for details).

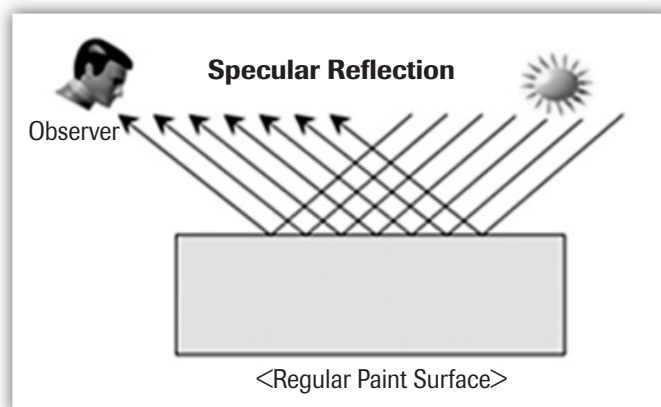
Matte Paint Background

- Matte paint and the glossy paint used on other Hyundai vehicles are almost identical. The difference is in the clearcoat, which scatters light instead of reflecting it.

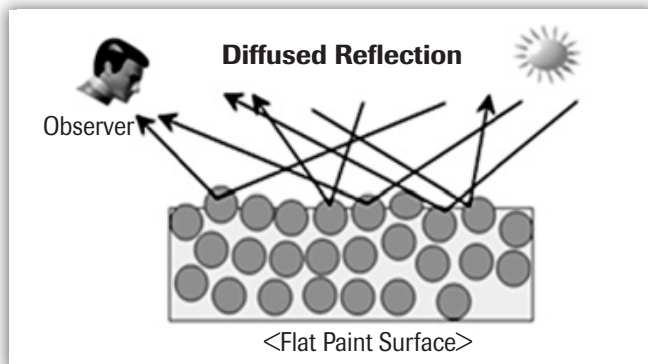
Clear Regular Paint	◀ Oven Dry
Regular Base	◀ Middle Dry
Undercoat	◀ Oven Dry
Electrophoretic Deposition	◀ Oven Dry

Clear Flat Paint	◀ Oven Dry
Regular Base	◀ Middle Dry
Undercoat	◀ Oven Dry
Electrophoretic Deposition	◀ Oven Dry

- Regular gloss paint reflects more than 90% of the light uniformly. Owners use wax and other products to give it a mirror-like finish, where reflections are clearly distinguishable



- Matte paint reflects about 20% of the light uniformly. The other 80% is diffused randomly. The reflection of an object is not recognizable in matte paint.



Matte Paint Arrival Inspection

- Matte paint should be inspected immediately upon arrival. Any damage to the matte appearance after the transportation claim window has closed will not be covered under warranty.
- The Plastic Protection Film (PPF) should be removed and any damage to the paint should be photographed as the plastic is removed.
- Matte paint is unique to each car. It has a general uniform flat or matte appearance. When inspected close enough though, the matte appearance can take on a lightly mottled appearance. It has small patterns in it. It also has dirt marks, or bumps in the surface. These are normal characteristics of matte paint, and are not considered repair conditions.
- The inspection should focus on damage to the sheet metal, and any paint spots with a higher gloss level than the surrounding panels. Expect some gloss difference from adjacent panels, but very little gloss change within a panel.
- If there are gloss changes within a panel, or any other paint conditions you find needing repair, see the pre-repair requirements for warranty coverage section. Paint repairs that have not been inspected and approved by HMA prior to the start of the repair may not be covered under warranty.
- Viewing the surface at approximately 60 degrees reveals less gloss than when viewing from a flatter angle along the surface. Looking directly down on the hood, and across the roof from a standing position causes the glossiness of the two locations to appear different. View the surface from the same angle during the inspection.



Matte Paint Cleaning and Handling in the Dealership

- Matte paint must not be rubbed with fabrics or abrasives that could polish the paint.
- All chemicals and cleaners used should be products designed to be used for matte paint finishes.
- Normal solvent cleaners can be used only IF there is no rubbing and the cloths used are soft enough for use with matte finishes (some exceptions apply – so test very carefully). Clean with an appropriate car wash solution or spot clean an alcohol and water solution (see below).
- Pressure washing is a great way to clean the paint. Keep the pressure under 2500 PSI, use a fan tip, however, keep the fan tip 10” or more from the paint.
- Pressure washing hoses may cause damage to the paint if allowed to slide on the vehicle. Take care to carefully reposition your hoses as you move the pressure washing gun around the vehicle.
- Do not use automatic wash equipment or any machine operated equipment that touches the paint. The repetitive motion will cause polish or burnish marks in the paint.
- After washing, dry the paint with a damp, clean chamois. Do not let water spots form. Pull the chamois across the paint with a light pressure.
- If your dealership normally applies a wax, use a wax developed specifically for matte paint.
- If your dealership does not use a wax, fingerprints and dust can be removed with an alcohol based window cleaner or a mix of alcohol and water (10% to 50% mix ratios are OK) with a microfiber cloth. Additionally, there are cleaners available specifically for matte paint.
- Do NOT use dry terrycloth, it may cause a burnish mark on the paint. Damp terrycloth will be OK if used with very light pressure (test very carefully before using).

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Matte Paint Dealer Information

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- The following manufacturers have products specifically formulated for matte paint. Used properly, they are effective. There are other brands that have not been evaluated, so test a small area below the rocker sill before using on a visible area.
 - Swissvax brand Opaque products
www.swissvax.us/usa/matt-paint.html
 - Dr. Beasley's brand Matte series
www.drbeasleys.com/shop-drbeasleys/products/matte-car-care.html
 - Chemical Guys brand Meticulous Matte products
<http://www.chemicalguys.com>

Dos and Don'ts

- **DO NOT** position the car where it will receive excessive customer contact or fingerprints.
- **DO NOT** allow anyone to lean against the matte paint.
- **REMEMBER:** Matte paint is a "show car" level paint finish; take care of it accordingly.

Matte Paint Repairs

- Matte Paint repairs are very similar to any other refinish repair (repainting). There are no repairs that involve buffing or polishing. If it is necessary to correct a polish or burnish mark, it will require repainting.



- Matte Paint is unique to each car. It has a general uniform flat or matte appearance. When inspected close enough though, the matte appearance can take on a lightly mottled appearance. It has small patterns in it. It also has dirt marks, or bumps in the surface. These are normal characteristics of matte paint, and are not considered repair conditions.
- Attached is a reprint of a PPG matte paint refinish procedure. Each paint company has instructions for their materials. Your bodyshop should follow the instructions for the brand of refinish materials they are using.
- When selecting a bodyshop, choose one that has successfully repaired matte finish paint. The painters should be trained for the paint they are using (and certified by the paint brand to use those products). While the matte paint uses a refinish procedure very similar to glossy paint, the painter may require additional spray-outs and test material to get the correct matte finish.
- Due to the natural variation in gloss levels, it may sometimes be necessary to refinish the adjacent panels (e.g.: The drivers door repair may also involve the rear quarter and the front fender to get gloss and color variations blended). Panels should be repaired entirely, edge to edge.
- Target Gloss: 20% +/- 5%. Spec is an invisible difference with the surrounding panels.

Pre-Repair Requirements for Warranty Coverage

- Warranty repairs must be pre-approved by following the process before the start of the repair.
- Use the Hyundai Matte Paint Inspection Form found at www.HyundaiDealer.com under "Documents and Resources", then "Forms" for Service. The form has been converted to a PDF and allows the data typed into the form to be saved. In addition to using paint condition description codes, photos can also be attached.
- Use the Hyundai Matte Paint Inspection Form to document all possible warranty conditions related to the Matte Finish Paint. Use this form and complete the following:
 1. The Service Advisor or Service Manager must provide: Dealer Name, Dealer Code, Mileage, Dealer Representative, Date, RO#, VIN, and Customer Name.
 2. Next, review the Grid Coordinates. Determine on the diagram where the condition is located on the vehicle. Then locate the first coordinate by

identifying the letter at the top of the grid and then the number to the left of the grid. For example, a paint condition located on the left front bumper below the headlamp would be identified as location “B1”.

3. Then click on “Show Paint Codes” to display the two-letter codes used to describe the condition. Enter the appropriate two-letter code. Enter conditions found on additional Grid locations in the blanks below the Grid Diagram.
4. To upload photos, click on “Yes”. In most instances, photos are required. Up to four photos can be included.
5. Next, fill in the sections: “Condition:” & “Customer Statement and Paint Code Condition:”. Once these basic fields are filled, go to the bottom of the form and “Save Form” then “Print Form” for your dealer record. Attach the printed form to the Repair Order. Then click on “E-Mail the Completed Form”. If all the required fields are

completed, the form will be automatically sent to Hyundai Service Engineering. The form and photos can also be manually emailed to: MatteFinishPaint@hmausa.com.

6. Finally, call the Hyundai Techline at 1-800- 325-6604. Indicate that the Hyundai Matte Paint Inspection Form has been completed and give the Techline Agent the required information to open a case. The Techline Agent will then issue a Case Number and forward the case to Hyundai Service Engineering. When the E-Mailed Inspection Form and the Techline Case are received, the warranty review process will begin.
7. Under normal conditions, the process will be completed the next day. Contact Techline with your case number and RO number to get the warranty results.

Look for specific instructions from the manufacturer for the type of matte clearcoat used in your repair facility

These reproductions of the Hyundai Matte Paint Inspection Form are for reference only. The form is found at www.HyundaiDealer.com under “Documents and Resources”, then “Forms” for Service.

Hyundai Assurance | CAR CARE

Hyundai Matte Paint Inspection Form

INSTRUCTIONS

*required field

Dealer Name: _____ Dealer Code: _____ Mileage: _____
 Dealer Representative: _____ Date: _____ RO #: _____
 VIN: _____ Customer Name: _____

Grid Coordinates: _____ Paint Condition/Code: _____ **Clear Paint Codes**

AK - Alkaline Water Sports	BS - Bee Spots	FM - Foreign Material	OP - Orange Peel
AR - Acid Rain	CC - Corrosion	GS - Glossy Surface	OS - Over Spray
BC - Bumper Chipping	CH - Chipping	LP - License Plate (F&R)	SM - Swirl/Buff Marks
BD - Bird Droppings	DO - Dent/Ding	MA - Molding/Accessories	SS - Scratches

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										

If multiple grid locations are present, indicate them by grid coordinate.

Photos Included: ☐ Yes ☐ No

Page 1 of 2

Conditions:

Customer Statement and Paint Code Condition:

Inspector: Recommended as a warranty repair? If not, why?

Inspector: Required corrective action:

Inspector: Limitations on scope of agreed work:

Warranty: HMM Warranty Codes (if applicable):

☒ The Dealer Representative indicated above agrees that this form has been completed with all of the required information in order to qualify for warranty coverage.

Save Form **Print Form** **E-Mail The Completed Form**

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ABS Pump Self Check Noise

The Anti-lock Brake System (ABS) performs a hydraulic pump self-check test during the first acceleration after each ignition switch cycle. During this test, the ABS computer tests the pump modulator valves, solenoids, and motor for proper operation. This test occurs at a vehicle speed between 0 and 25 mph for all vehicle models. During this test, a slight noise (which customers may describe as a rattle, groan, growl, gurgling, or buzz) may be heard and a mild vibration may



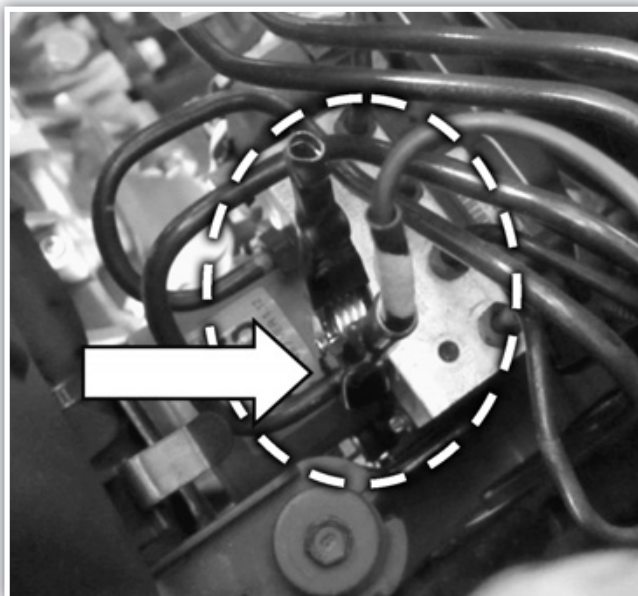
be felt through the brake pedal. The noise and vibration last approximately one second. If any system faults are found, the system disables the anti-lock braking function and will illuminate the ABS warning lamp and set a diagnostic trouble code (DTC). This test is performed on all Hyundai models equipped with ABS/ESC.

The purpose of this bulletin is to emphasize that this noise is the result of a normal function self-check test and cannot be eliminated by replacing the Hydraulic Electronic Control Unit (HECU). This bulletin also provides a procedure to confirm the noise is a result of the self-check test using chassis ears. Note: The HECU interactive pump self-diagnostic test and related activation noise does not affect the ABS operation.

Use this procedure to verify that the noise heard comes from the ABS system self-check test:

- To reproduce the self-check diagnostic noise, start the engine and accelerate the vehicle. A short “buzz” type noise will be heard between 0 and 25 mph. The noise varies in duration, and can last up to about one second. The noise is very quiet and most of the time will not be noticeable. If it is not heard, shut off the ignition, and continue to step 2 to install chassis ears, part # J39570.

- To amplify the noise, install a chassis ears clip onto one of the hard lines directly installed onto the HECU.



- Plug the other end of the clip into the chassis ears control box. Note which port is used (plug is installed into port #1 on the image shown).





- Using the selection knob, shown in the photo on the left, choose the same port number into which the clip plug was installed (#1 is selected on the image shown). Turn the volume knob to power the unit ON. Be sure the volume is turned loud enough to hear the noise clearly.
- While listening with the chassis ears, start the engine, and accelerate the vehicle to at least 25 mph to hear the self-check pump noise.

NOTE: For information on obtaining special service tools, please contact SPX by calling 1-800-345-2233.

TechNet *Tips*

PDI Forms

There are currently four PDI forms in use for Pre-Delivery Inspections on Hyundai vehicles. The table below shows the model applications. The forms are easily distinguished from each other. The

title section of the forms bears either: Blue Link, HEV or Equus, respectively. The non-Blue Link form lists no specific title other than “Pre-Delivery Inspection”

PDI FORM	APPLICABLE VEHICLES
Sonata Hybrid	Sonata Hybrid ONLY
EQUUS	EQUUS ONLY
Models equipped with BlueLink	3.8 Genesis Sedan with Technology package or 5.0 models Sonata Genesis Coupe [3.8 Grand Touring, 3.8 Track & 2.0T Premium] Azera Santa Fe Elantra GT Veloster
Models without BlueLink	3.8 Genesis Sedan with standard or premium package Genesis Coupe [3.8 R-Spec, 2.0T & 2.0T R-Spec] Accent [4 or 5 door] Elantra Sedan/Coupe Tucson

KNOWLEDGE IS POWER

GET CERTIFIED



Tau 5.0 litre V-8

PLATINUM

Platinum Challenge 3

GOLD

Body Electrical 3

Automatic Trans 2

Chassis

Engine Management 3

Automatic Trans - Web

Body Electrical - Web

Chassis - Web

Manual Transmission 2

Engine Management - Web

Manual Trans - Web

SILVER

Special Service Tools 3

Engine Technology 2

Automotive Electrical 3

Special Service Tools - Web

Engine Technology - Web

Diagnostic Strategies 2

Automotive Electrical - Web

Diagnostic Strategies - Web

BRONZE

Hyundai Technician Orientation

Hyundai Technician Orientation - Web

THE **TECS** CERTIFICATION PATHWAY



NEW
THINKING.
NEW
POSSIBILITIES.

Available on



www.HyundaiTACS.com

New Bluetooth Support Site Under Development

In the coming months, Hyundai will be launching an enhanced version of the Bluetooth Support website. The new site will retain all of the functionality of the current site, but with added features. More graphics will be added.

Pairing instructions for various models, audio and NAV systems will be identified with photos of the models and systems, which will link to that system's specific pairing

instructions. For most systems and models, pairing instructions will be provided in text and video versions. In most cases, fewer clicks will be required to access needed information.

Keep an eye out for the launch of the revised site which will be announced in TechNet Times, the Hyundai Flash Drive online newsletter and at HMAService.com.



BLUETOOTH® WIRELESS TECHNOLOGY GENERAL INFO

Hyundai's Bluetooth® wireless technology system is a wireless technology that allows hands-free use of cellular phones in equipped vehicles. Hyundai's Bluetooth® wireless technology offers important advantages and benefits:

CONVENIENCE, SAFETY, SECURITY & LEGAL COMPLIANCE

Compatibility and performance may vary based on your phone, the phone's software version coverage, and your wireless carrier. If your vehicle is not equipped with factory installed Bluetooth® system but uses an overhead center console mounted system, click here to view the compatibility list.

SELECT YOUR BLUETOOTH® WIRELESS TECHNOLOGY EQUIPPED VEHICLE YEAR

Select Year
Select Year
2009
2010
2011
2012
2013

[Click here](#) for further information on Bluetooth®

The Bluetooth® wireless technology word mark is a registered trademark of the Bluetooth SIG, Inc. Other trademarks and trade names are the property of their respective owners.

SELECT YOUR BLUETOOTH® WIRELESS TECHNOLOGY EQUIPPED VEHICLE YEAR

2012

SELECT VEHICLE

Accent Elantra Equus Genesis

SELECT SYSTEM

AUDIO

Touch Screen NAV

Hyundai Assurance Car Care



Assurance

CAR CARE

As a brand, Hyundai Assurance has developed great value and recognition within the automotive industry identified with a family of cutting edge products that include: America's Best Warranty, Roadside Assistance and Guaranteed Trade-In Value. Hyundai is now introducing a new member to the family: Hyundai Assurance Car Care.

The new Hyundai Assurance Car Care branding covers, and effectively replaces, the following brands:

- Hyundai Genuine Parts & Service
- Hyundai Genuine Accessories

TECHNET TIDBIT

On a 2013 Santa Fe or Elantra GT, if the vehicle operator sets the maintenance reminder different than the recommended schedule, he or she may receive two different reminders (one from the trip computer and one from the BlueLink system).

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TechNet Times is published monthly by Hyundai Motor America's National Service Training & Support Department for Hyundai Dealership Technicians. The subjects covered in this publication are often one of a kind items, but they may help you to solve similar incidents. In all cases, the diagnostic procedures recommended in the Shop Manuals should always be performed first.

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