



Concept CA MIEV 2

TECH TALK

Volume 208 – June, 2014

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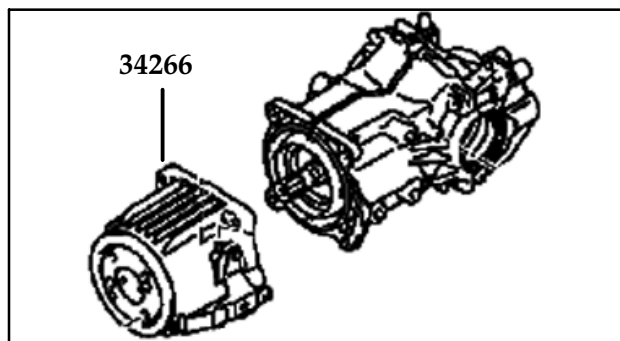
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Vehicle Technical Info

NOTE: The ✓ mark is used as a reminder, indicating an article that has been repeated from a previous issue of Tech Talk.

GROUP 25 – Propeller Shaft

4WD COUPLER DIAGNOSIS 2007 & later Outlander, 2011 & later Outlander Sport/RVR. When diagnosing affected 4WD units for noise or a binding condition, be aware the 4WD coupling (PNC 34266) and rear carrier assembly are available as individual parts. In some cases, replacing the 4WD coupling unit has resolved concerns without replacing the rear carrier assembly.



With the scan tool, the 4WD ECU data list can be monitored for "Coupling current" which can range from 0 to 3 Amps. Lower amperage (0

Amps) indicates the coupler is unlocked (i.e. 2WD mode) while higher amperage indicates the coupler is locked (i.e. in 4WD and/or accelerating). If the data is not to spec, diagnose the coupler using the service manual and replace it if diagnosis directs you to.

GROUP 33 – Front Suspension

VEHICLE DRIFTS TO LEFT OR RIGHT WHILE DRIVING — All. If a customer reports the vehicle pulls one way or the other or the steering wheel is off center, before performing an alignment, review TSB-03-33-001REV. It discusses several diagnosis and repair steps and is written to help you fully understand the customer's concerns so that you can make the correct repair.

Out of spec wheel alignment can cause steering drift, but drift can also be induced by outside forces, such as road crown, cross winds or tire issues. Make sure you understand all of the factors behind the customer's report prior to beginning repairs.

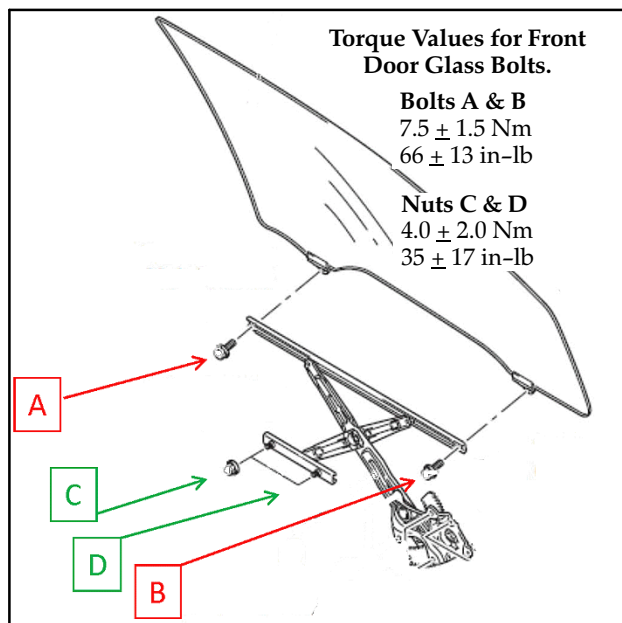
GROUP 42A – Body

FRONT WINDOW LOOSE, CROOKED, NOISEY (INC. RATTLES) 2013-14 Outlander Sport/RVR. If a customer reports that either front window is not traveling up/down correctly or there are squeaks or rattles from the area, it may be caused by loose or under-torqued window mounting bolts.

To repair this condition, use the service manual to remove the inner door panel:

1. Remove the bolts labelled A and B in the following illustration.
2. Apply a non-permanent thread locking compound (e.g. Loctite) following instructions on the container. The locking compound should be appropriate for the application.
3. Repeat steps 1 and 2 for nuts C and D.
4. Torque fasteners to the upper end of the torque specification shown in the illustration.

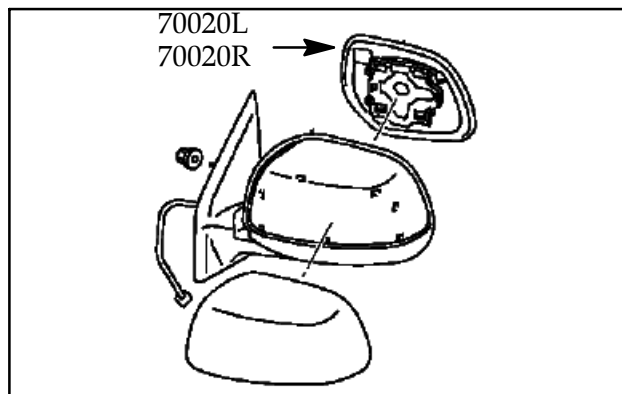
5. Test window travel then reinstall the inner door panel.
6. Test drive the vehicle on a road suitable to create any rattle or other noise and recheck window travel.



Please supply a PQR for any repairs made for this condition on vehicles produced after November, 2013.

GROUP 51 – Exterior

EXTERIOR MIRROR IMAGE DISTORTION — 2013-14 Outlander Sport/RVR. If replacing a door mirror for a distorted image, it is not necessary to replace the mirror assembly. Refer to ASA CAPS using PNC 70020L or 70020R to obtain the correct part number.



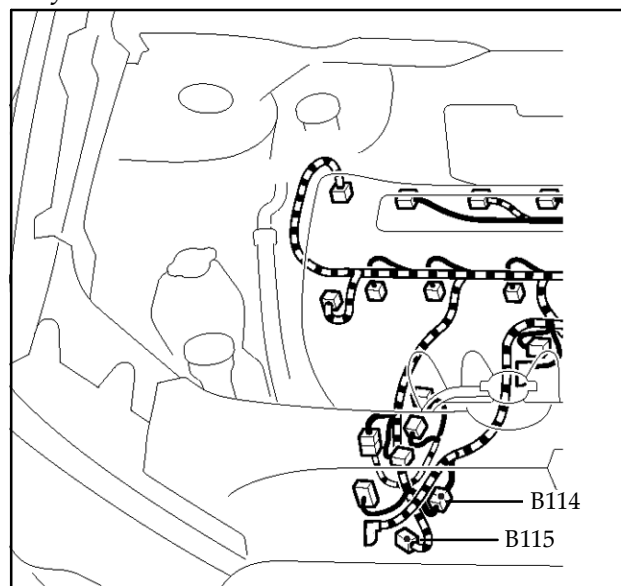
Mirror glass replacement instructions are found in the service manual under Group 51 - Exterior —> Outside Mirror —> Removal and Installation.

Claims submitted for mirror assembly replacement where replacing only the glass would repair the vehicle are subject to chargeback.

GROUP 54 – Chassis Electrical

✓ **FACTORY INSTALLED FOG LIGHT SWITCH TO BE STANDARD** — 2014 Outlander Sport/RVR. Beginning the first week of December, 2013, ALL Outlander Sport/RVRs were equipped with a combination switch assembly (turn signals, headlights) with an integral fog light switch. With this feature, installation of accessory fog lights on vehicles not equipped with them is made easier.

DIAGNOSING A NO START AFTER REPAIRS IN THE ENGINE COMPARTMENT — 2011-2014 Outlander Sport/RVR. If you've just made repairs in the engine compartment of the subject vehicle and now have a "no start" condition, be advised that connectors B114 and B115 are identical and both are in close proximity to each other on the intake side of the 4B11 engine. They can easily be cross-connected. Connector B114 contains the starter signal wire and B115 is for the compressor clutch. If these connectors are swapped, the vehicle will not start, and wire color is the only way to determine the correct connection.



If you find it necessary to disconnect B114 and B115 at the same time, use a marker or colored tape on one connector to make identification easier. Be particularly aware of this if a vehicle is towed in from an outside shop or body shop with a no start condition.

GROUP 55 – Heater, A/C & Ventilation

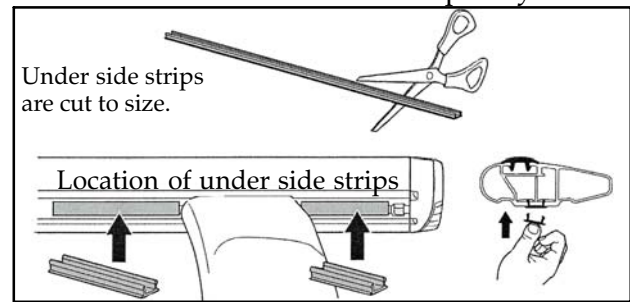
HVAC DOES NOT BLOW COLD — 2013-14 Outlander Sport/RVR built prior to the middle of October, 2013. If a customer reports the air conditioning does not blow cold or is not cold enough, perform normal diagnostics, including checks for refrigerant leaks. Before checking for leaks, confirm the system is charged enough to allow A/C operation and recharge if necessary. With the system operating, use an electronic leak detector to check for leaks at Schrader valves and hose connections to the evaporator at the engine compartment bulkhead. If there are no signs of leakage, turn the blower fan to medium speed and use the detector to check for traces of refrigerant in the air flow from the air outlets and from the evaporator drain. If the connections are tight and you detect leakage from the vents or drain, you may have a leaking evaporator unit. Please submit PQRs on issues with A/C evaporator leakage on units built after October 2013.

GROUP 66 – Accessories

WHISTLING NOISE HEARD WHEN DRIVING — 2014 Outlander. Some drivers may report a shrill, flute-like noise heard when driving vehicles with the accessory roof rack (MZ314636) starting at 35 mph (56 kph). The noise may be from an incorrectly installed, sized (cut) and/or missing rubber filler strip, located on the upper or lower surface of the crossbar.

The kit includes two filler strips. Use one full length filler strip for the top surface and cut the other strip as described on page 8 of the

installation instructions (see illustration below). Make sure the strips are properly inserted and fill the channels in the cross bar completely.



Filler strips are not available separately. When installing the roof rack, place any excess filler strip in the glovebox and advise the customer what they are.

✓ REMOTE ENGINE START REGISTRATION

— All with factory remote engine start option. The remote engine start registration instructions chart has been updated and is available on the MDL: service >> service tech resources >> Service Related Items >> Technical Worksheets.

It is important to pay attention when instructed to complete a step within a given time. If you do not complete the required action within that time, the procedure will not complete successfully and you must start over. Some of these time sensitive actions can be difficult to complete, unless you give them your full attention.

A video of the procedure is located on the MDL. From the MDL main page, select: service —> systems —> Techline —> Techline Videos. Though it is listed separately under several models, all links open the same video (GS-Remote Engine Starter). The video also applies to Outlander Sport. The page is in the process of being updated with the latest information.

MEDIC Information

MEDIC Hotline (800) 846-7575

Call the MEDIC Hotline for ALL MEDIC & Scan Tool hardware or software issues. Call TECHLINE for vehicle technical issues.

As of 6/09/14: Total Hits - 6265 Reflash Database - N13112

MEDIC 3 Version - 3.2

MEDIC 3 Update - 256

MUT-III Version - 30.0

Raider Scan Tool Version - 6.0

Tips From the Toolman

ELECTRICAL INSULATION GLOVES SERVICE REMINDER

The important information on pages 4 and 5, reminding dealers to have i-MiEV electrical insulation gloves inspected and, if necessary, recertified or replaced, was sent to dealers April 7, 2014.



Mitsubishi Motors North America, Inc.

6400 Katella Avenue
Cypress, CA 90630
Telephone: 714-372-6000
www.mitsubishicars.com

Date: May, 2014

Subject: Electrical Insulation Gloves

Dear Service Manager,

As a certified i-MiEV dealer, you were shipped an i-MiEV Special Tool kit. Included in this kit is a pair of electrical insulation gloves, MB992648-01. While servicing an i-MiEV, these gloves are essential in protecting the Technician from a potentially fatal electric shock. We would like to reiterate the importance of properly maintaining these gloves and adhering to the following guidelines:

- Inspect the gloves for holes and cracks before every use. Do not use the gloves if a defect is found.
- Always use the leather protector and gloves together. Never use either piece separately as they do not provide adequate protection from electric shock.
- Do not expose the gloves to petroleum products. Hand soaps and detergents may contain petroleum products that will damage your gloves.

For additional information, please review the attached instruction sheet originally provided with the gloves.

United States Occupational Safety and Health Administration Regulations (OSHA) section 1910.137 et seq. also require that these gloves be inspected after twelve months from the original inspection date printed on the glove. Additional inspections are required every six months of use thereafter. The gloves must be inspected and certified by an accredited laboratory. For information on how and where to get your gloves certified, please visit <http://www.nail4pet.org>.

If your gloves fail the inspection or you would rather purchase new gloves, they can be ordered from Bosch Automotive Service Solutions (formerly SPX) at 1-888-727-6672. If sourced locally, ensure you purchase gloves with an OSHA rating of Class 0 (1000V).

Sincerely,

Service Technical Resources

SALISBURY

by Honeywell

A Honeywell Safety Products Company

NOTE: THESE INSTRUCTIONS ARE FOR THE ACTUAL USERS OF THESE GLOVES, SLEEVES AND PROTECTORS

Rubber Insulating Gloves and Sleeves & Leather Protectors.

Rubber insulating gloves and sleeves, when in good condition and properly used within specified voltage limits, will protect the user from electric shocks which can cause burns or other serious physical injury, or death.



WARNING

Do not use leather protectors alone for protection against electric shock. Serious injury or death will result. Always use rubber insulating gloves in the proper voltage class.

Use and Care Instructions

Proper use and care of rubber insulating gloves and sleeves are essential to user safety. Do not wear rings, watches, jewelry and sharp objects on your hands or arms - they will cause damage to the rubber gloves and sleeves.

Wear leather protectors over rubber insulating gloves to protect the gloves from physical damage. To maintain an adequate flashover distance between the end of the protector cuff and the end of the rubber glove cuff, the rubber glove should be longer than the protector by at least one inch multiplied by the rubber glove's Class number, but not less than one-half inch for Class 00 and 0 gloves.

Where the finger dexterity needed to manipulate small equipment and parts requires use of rubber insulating gloves without leather protectors, extra care must be taken by the user to prevent puncture, abrasion and other damage to the gloves. Except for Class 00 and Class 0 gloves, rubber insulating gloves used without leather protectors must be one Class higher than that required for the voltage involved, and must not be used at the higher voltage until given an inspection and electrical retest using the procedures in the most recent edition of ASTM Standard F496 (Specification for In-Service Care of Insulating Gloves and Sleeves).

To assure their continued integrity, rubber insulating gloves and sleeves must be inspected on their inside and outside surfaces at least once a day, and more frequently when used without leather protectors or if the user suspects that the rubber glove may have been snagged or otherwise damaged while in use. Inspections should be performed using the inspections procedures described in the latest edition of ASTM Standard F1236 (Guide for Visual Inspection of Electrical Protective Rubber Products) looking for physical damage (punctures, cuts and abrasions), chemical deterioration (swelling, softness, hardening, stickiness) ozone deterioration and other irregularities.



WARNING

Do not use rubber gloves or sleeves showing any of these irregularities. Their ability to protect against electric shock has been compromised, exposing the user to the risk of serious injury or death.

Leather protectors must also be inspected when inspecting the rubber gloves. Metal particles, imbedded wire, abrasive material or any substance that could physically damage the rubber glove must be removed before using the protector.

Rubber insulating gloves must be retested electrically at least once every six (6) months (and rubber insulating sleeves at least once every twelve (12) months) using the test procedures described in the most recent editions of ASTM Standard F496.

Rubber insulating gloves can be damaged by many chemicals, especially petroleum-based products (oils, gasoline, hydraulic fluid) solvents, hand creams, pastes and salves. If contact is made with these or other chemical products, the contaminant should be wiped off immediately.

To clean, rubber insulating gloves should be washed with a mild soap, rinsed thoroughly with clean water and air dried.

Rubber insulating gloves and sleeves should be stored in a protective bag when not being used.

Salisbury by Honeywell
4090 Azalea Dr., P.O. Box 70729, Charleston SC 29405

CVIR Success

Heritage Mitsubishi, Longview, TX

*A dealer who increased his service business using the
Computerized Vehicle Inspection Report.*



(L-R): Chris Willadson (Service Manager, Jermy Thomas (Technician), Jay Feliciano (Technician), Apryl Taylor (Parts Counterperson), Linda Williams (Warranty Administrator)

Chris Willadson, Service Manager at Heritage Mitsubishi in Longview, TX, has been doing vehicle inspection reports since he was a technician. This is when he learned that taking the time to do a thorough inspection of every vehicle he worked on, and presenting it to the customer, would generate a fair number of additional hours. Soon, other technicians in the shop were following suit. As the service manager for Heritage over the past four years, his technicians have been doing 27 point inspection reports on all customer vehicles. Knowing that organized vehicle inspections increase business, it comes as no surprise that he quickly instituted the Computerized Vehicle Inspection Report (CVIR) when it was first made available a little more than 2 years ago. It took a while for his techs to come around, but they're glad they did. According to Chris, CVIR has a direct impact on revenue, with the average maintenance repair order increasing about 20% since CVIR was instituted for every vehicle.

As each CVIR is completed, the customer is contacted by an advisor to discuss the results. How they're contacted depends on their preference. Many prefer a phone call, especially if there's something that requires urgent attention. Many customers like the face to face interaction, and can ask questions about the report and the vehicle, and get immediate feedback. However, most Heritage customers like to receive the CVIR via email. They can print it, digest it, and determine how and when to make the vehicle available for further repairs. Chris says that between 30% and 35% of customers who are informed of needed repairs return to have them addressed within 60 days.

Chris says that CVIR is better than the written report, because it saves time and is more detailed. The technicians at Heritage feel being able to import battery and DTC data directly into the report as being a key feature. They can complete a report in about 5-7 minutes, and because the report is a Mitsubishi product, technicians, and customers, are confident they have accurate information. He also uses it to advise customers of upcoming maintenance, complete with the price. Customers appreciate knowing what costs they have upcoming and can plan for it.

Even in this small market, customers respond just like any other, and they have come to embrace CVIR. They appreciate the professional appearance provided by CVIR as well as its thoroughness, with everything in a logical order. Chris uses a color printer to further enhance the report's appearance. The color also draws their attention straight to those items that require immediate attention.

Other than vehicle maintenance, the category that Heritage has seen the greatest increase in is tire sales. Using the authorized Mitsubishi program through Tire Rack, Chris reports that tire sales are \$5,000 to \$6000 per month. He adds, "Having the tire condition printed out on the CVIR, combined with a factory authorized tire program is a great tool."

Each customer is presented with a printed color copy of their CVIR when they pick up the vehicle, even if the they elected to have the reported items repaired. Like the customers of many other Mitsubishi dealers, if a customer's copy isn't available when they're ready to leave, they ask for it. They've come to expect, and depend, on this valuable tool as much as the dealers do.

Training News

Technical Training Schedule June — July, 2014

Always check the MDL for schedule updates. Mobile Training does not appear on these calendars. Contact your District Parts & Service Manager for information about mobile training in your area.

East Zone - N.J. Tech Training Center

June						July					
M	T	W	Th	F		M	T	W	Th	F	
2	3	4	5	6		30	1	2	3	4	
9	10	11	12	13		7	8	9	10	11	
16	17	18	19	20		14	15	16	17	18	
23	24	25	26	27		21	22	23	24	25	
30						28	29	30	31	1	

East Zone - Atlanta Tech Training Center

June						July					
M	T	W	Th	F		M	T	W	Th	F	
2	3	4	5	6		30	1	2	3	4	
9	10	11	12	13		7	8	9	10	11	
16	17	18	19	20		14	15	16	17	18	
23	24	25	26	27		21	22	23	24	25	
30						28	29	30	31	1	

West Zone-Dallas Tech Training Center

June						July					
M	T	W	Th	F		M	T	W	Th	F	
2	3	4	5	6		30	1	2	3	4	
9	10	11	12	13		7	8	9	10	11	
16	17	18	19	20		14	15	16	17	18	
23	24	25	26	27		21	22	23	24	25	
30						28	29	30	31	1	

California Technical Training Center

June						July					
M	T	W	Th	F		M	T	W	Th	F	
2	3	4	5	6		30	1	2	3	4	
9	10	11	12	13		7	8	9	10	11	
16	17	18	19	20		14	15	16	17	18	
23	24	25	26	27		21	22	23	24	25	
30						28	29	30	31	1	

Automatic Transaxles				Manual Transaxles			
Days	Code	Prerequisites		Days	Code	Prerequisites	
40/50 Series Diagnosis & Repair	3	AT2T	ATFT1 or ATFWE or ATFB	Manual Transaxles & Transfer Cases	3	MTT	No Prerequisites
50 Series 5-speed Diagnosis & Repair	1	AT3	AT2T	Twin Clutch Sportronic Shift Transmission	2	TC-SST	AESP, ES1, ES2, STV3, MED2, MED3, ATFWE, MTT
CVT Diagnosis & Repair	2	CVTT	ATFT1 or ATFWE or ATFB	Vehicle Specific			
Brakes				Eclipse Spyder Convertible Top (Top Stack)	1	SP3	No Prerequisites
Antilock Brakes	2	ABS2	ES1	2014 Outlander Technology	1	141	ES1, MED2, MED3, STV3
Electrical Systems				Mitsubishi Electric Vehicle Technician Training	2	MEVTT	AESP, ES1, ES2, STV3, MED2, MED3, 120
Electrical Systems 2	3	ES2	ES1	Vehicle Diagnostics			
Electrical Systems 3	2	ES3	ES1	Advanced Electronic Service Procedures	-	AESP	No Prerequisites
Engine Performance				Advanced Safety & Convenience Features	1	ASCF	ES1, MED2, MED3, STV3
Advanced Emission Diagnosis	3	AED	ES1, STV3, MFIT2	MEDIC II	1	MED2	No Prerequisites
Engine Technology & Diagnosis	3	EN1	No Prerequisites	Scan Tool Viewer (MUT-III)	1	STV3	No Prerequisites
Multiport Fuel Injection	4	MFIT2	ES1, STV3				
Heating & A/C Systems							
Climate Control	2	CC1	MACW, ES1, MED2, MED3, STV3				

NEWS:

New Climate Control Curriculum: Launched May 20, Climate Control (CC1) updates the previous MAC and AAC courses. CC1 includes fixed orifice tube systems and electric vehicle heating and A/C systems. Prior to enrolling in CC1, technicians must successfully complete the web-based Basics of Climate Control course (MACW).

Technical Repair Quiz #3 for 2014 (TQ0314) was posted to the Mitsubishiacademy.com website during the week of June 9. Technical Repair Quizzes measure Service Technician and Shop Foreman knowledge of recently published technical information and repair techniques. Technicians must successfully complete all quizzes for 2014 to qualify for DiamondPro Certification. Printable copies of the quizzes are located in two places (Mitsubishi Dealer Link and the Mitsubishi Academy).



TECHLINE

(800) 446-6064



HOURS:

Monday — Friday

6:30 – 11:30 am & 12:30 – 3:30 pm

All times are Pacific Time

NOTE: Techline is closed every THURSDAY from 9:30 – 10:30 A.M (Pacific) for a staff meeting.

REMINDER: Techline will be closed July 4th for Independence Day



Bulletin Review

The following information was recently released:

Number	Title	Vehicles	Subject
SC-14-001REV	2012-13 Outlander Sport/RVR KOS ECU Service Campaign - Unable to Start in Low Temperature Conditions - Revised	2012-13 Outlander Sport	Revises the campaign instructions to include remote start registration procedure.
TSB-14-00-004	Technical Specifications	2014 i-MiEV	Provides technical specs for 2014.
TSB-14-00-005	New Model Service Information and Features	2014 i-MiEV	Provides information on new and updated features for 2014.
TSB-14-21-001	Updated Clutch Pedal and Master Cylinder Removal & Installation Procedure - SMR	2008-14 Lancer Evolution	Revises the service manual with updated instructions consistent with SR-13-009REVII
TSB-14-37-002	Rattle Noise from Steering Column	2011-12 Outlander Sport	Provides instructions for disassembly of EPS motor and instructs technicians regarding grease application.
TSB-14-54-007	Introduction to MapCare™ and Map Update Purchase for MMCS Navigation	All 2007 & later with MMCS Navigation	Advises that customers can download map updates directly from HERE, including purchase of updates for older models.

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The information contained in this bulletin is subject to change. For the latest version of this document, go to the Mitsubishi Dealer Link, MEDIC, or the Mitsubishi Service Information website (www.mitsubishitechinfo.com)