Bulletin No.: 14172C
Date: October 2014

Recall Bulletin

PRODUCT SAFETY RECALL

SUBJECT: **Unintended Ignition Key Rotation**

MODELS: **2003-2010 Cadillac CTS**
2011 Cadillac CTS (VIN D and Built Prior to December 13, 2010)
2004-2006 Cadillac SRX

The Parts Information section has been revised. Dealers should place orders via the Parts Workbench or EPIC using DRO or CSO. There is no need to place a CSO-3 order as stock will be available at your local PDC. Orders will process within the normal standards of service. Refer to answerbacks and/or order status inquiries for order information. Orders will continue to be monitored by GMCCA. Please discard all copies of 14172B.

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

Vehicles involved in this recall were placed on stop delivery July 2, 2014. Once the service procedure contained in this bulletin has been performed on the vehicle, the vehicle is released from stop delivery and the vehicle can be delivered to the customer.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the repair contained in this bulletin has been performed on the vehicle.

CONDITION

General Motors has decided that a defect which relates to motor vehicle safety exists in all 2003-2010 model year (MY) Cadillac CTS, 2011 MY Cadillac CTS (VIN D and Built Prior to December 13, 2010) and 2004-2006 MY Cadillac SRX vehicles. If the key ring is carrying added weight and the vehicle goes off road or experiences some other jarring event, it may unintentionally move the key away from the “run” position. If this occurs, engine power, power steering and power braking will be affected, increasing the risk of a crash. If the ignition switch is not in the run position, the air bags may not deploy if the vehicle is involved in a crash, increasing the risk of injury or fatality.

CORRECTION

Dealers are to install two 16mm outer diameter key rings and an insert in the key slot or a cover over the key head on all ignition keys.

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VEHICLES INVOLVED

All involved vehicles are identified by Vehicle Identification Number on the Investigate Vehicle History screen in GM Global Warranty Management system. Dealership service personnel should always check this site to confirm vehicle involvement prior to beginning any required inspections and/or repairs. It is important to routinely use this tool to verify eligibility because not all similar vehicles may be involved regardless of description or option content.

For dealers with involved vehicles, a listing with involved vehicles containing the complete vehicle identification number, customer name, and address information has been prepared and will be provided to U.S. and Canadian dealers through the GM GlobalConnect Recall Reports, or sent directly to export dealers. Dealers will not have a report available if they have no involved vehicles currently assigned.

The listing may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this report to the follow-up necessary to complete this recall.

PART INFORMATION

For U.S. and Canada

The pre-shipment of GMCCA components (key inserts, key cover kits and key rings) has concluded. Dealers may begin placing orders for these parts starting September 24, 2014. Dealers should place orders via the Parts Workbench or EPIC using DRO or CSO. There is no need to place a CSO-3 order as stock will be available at your local PDC. Orders will process within the normal standards of service. Refer to answerbacks and/or order status inquiries for order information. Orders will continue to be monitored by GMCCA.

Dealers should continue to order the Loctite® and 3M products from ExodusDirect by visiting their website at www.oemhelper.com or calling 844-596-9428.

For Export

If the Loctite® and 3M products cannot be obtained from ExodusDirect, please try to obtain from a regional distributor. For the parts supplied by GMCCA, customers should begin normal ordering. Orders will be monitored.

Please note, key ring orders may be fulfilled with any one of the key ring part numbers listed below, even if it is not the specific part that was ordered.

For Service Option #1 - Install Two 16mm Key Rings and an Insert in the Key Slot

Part Number	Description	Quantity/Vehicle
23279477	Key Insert (Pack of 4)	4
Obtain From ExodusDirect	Loctite Adhesive 426™	1 tube fixes approx. 125 vehicles
Obtain From ExodusDirect	Loctite Primer 770™	1 bottle fixes approx. 250 vehicles
23247262 * or 23232599 or 13598784	Key Ring (Pack of 4)	4 Rings (2 Per Key)

* Stock is now exhausted for this part number. Please direct your key ring orders to part numbers 23232599 or 13598784.

Note: Since only a small number of vehicles will require key replacement, dealers are encouraged not to order service keys for shelf stock. If a service key is required, dealers should refer to the GM Electronic Parts Catalog (EPC) for service key part number information and order accordingly from GMCCA.

For Service Option #2 – Install Two 16mm Key Rings and a Cover over the Key Head

Part Number	Description	Quantity/Vehicle
23279476	Key Cover Kit (Includes Two Front and Rear Covers)	1
Obtain From ExodusDirect	3M™ Scotch-Weld™ DP8805NS Adhesive 3M™ Part Number 68958	1 Bottle fixes approx. 6 vehicles
Obtain From ExodusDirect	Static Mixing Nozzle for 3M™ Scotch-Weld™ Adhesives 3M™ Part Number 69043	1 nozzle per vehicle
Obtain From ExodusDirect	3M™ Performance Manual Applicator, 50mL 3M™ Part Number 08190	N/A (Usage Unlimited)
Obtain From ExodusDirect	10:1 Ratio Plunger for 3M™ Scotch-Weld™ Adhesives 3M™ Part Number 69044	N/A (Usage Unlimited)
23247262 or 23232599 or 13598784	Key Ring (Pack of 4)	4 Rings (2 Per Key)

Note: Since only a small number of vehicles will require key replacement, dealers are encouraged not to order service keys for shelf stock. If a service key is required, dealers should refer to the GM Electronic Parts Catalog (EPC) for service key part number information and order accordingly from GMCCA.

SERVICE PROCEDURE

Note: Carefully read and follow the instructions below.

- Use the key insert repair procedure to repair most customer-provided keys.
- Some keys will NOT be able to be repaired using the key insert repair. Use the two piece key cover kit to repair keys that cannot be repaired using the insert key repair.
- In the rare instance that keys cannot be repaired, order new service keys for the customer-provided keys. Do NOT order new service keys unless BOTH repair methods have been attempted.
- The new service keys may have to be modified as instructed in this bulletin.
- If the new service key has a slot design for the key ring, it MUST be repaired using the key insert or two-piece key cover repair.
- If the new service key has a round hole or square design for the key ring, no key modification is required. Install two 16mm key rings as instructed in the service procedure.
- If a customer presents additional keys for modification (more than 2 keys), perform the key insert repair or the two-piece key cover repair and route the warranty transaction for wholesale authorization.
- If a customer presents a valet key for modification, perform the key insert repair only and route the warranty transaction for wholesale authorization. Do not attempt the two-piece key cover repair. Valet keys are easily distinguish from standard keys by their gray color and the word “Valet” imprinted on them.
- Before performing the key repair, inspect the ignition lock cylinder to determine if it has two “ears” protruding from the cylinder. If the lock cylinder has ears, perform the insert repair only.

Key Insert Repair

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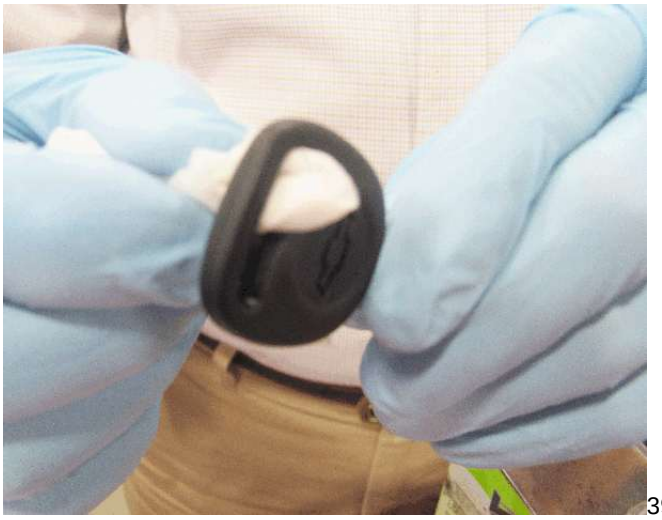
Note: Locate the four key inserts and four 16 mm rings. Two key inserts are required to modify one key. Two 16mm key rings are required for each key repair.

Note: If the key slot is too small or large for the insert, use the two-piece key cover repair. If the head of the insert does not cover the entire slot, the key insert repair cannot be used.

1. Test fit the customer-provided key. Insert a key insert into the front slot of the key and insert a second key insert into the back slot of the key. Ensure the key insert fits flush into the slot of both sides of the key.
2. Remove the inserts from the front and back key slots.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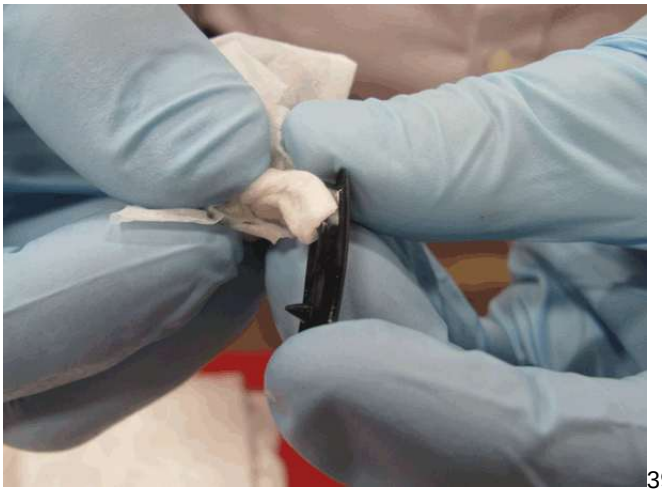
Caution: Do NOT use petroleum-based cleaning products to clean the key or key covers.

3. Clean the head and slot of the keys using a shop towel and isopropyl alcohol.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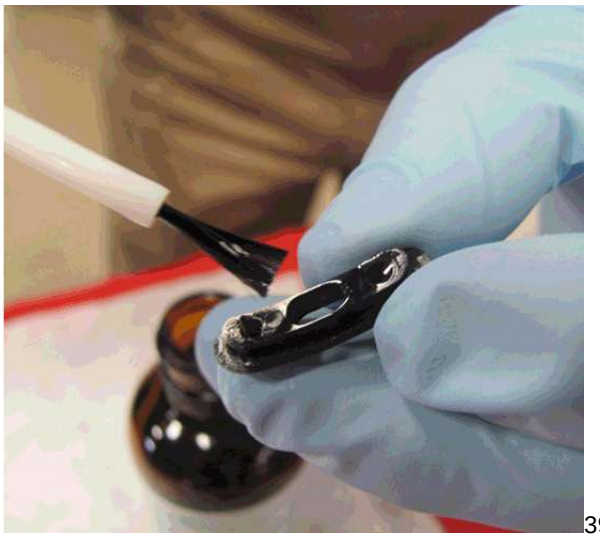
4. Clean the key inserts using a shop towel and isopropyl alcohol.

Caution: Allow the primer to dry for 5 minutes BEFORE proceeding to step 7 to ensure the adhesive will provide a strong bond between the key insert and the slot of the key.

Note: The adhesive for this repair begins to cure quickly. It is essential that both keys are repaired promptly. Ensure all of the required tools, parts and supplies are on your work bench BEFORE attempting to apply primer and adhesive to the key slots and key inserts. The following items should be on the work bench:

- Rubber gloves and shop towels
- Adhesive
- Key inserts
- Two rings for each key
- Spring clamp with rubber ends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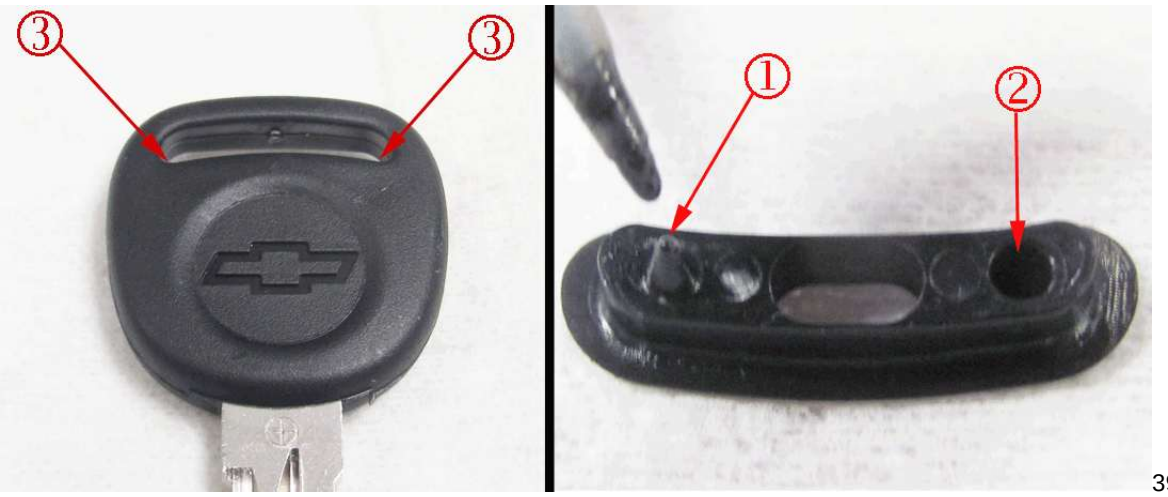
5. Apply the primer to the front and back key slot of the two keys.
6. Apply the primer to the four inserts.



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7. Apply adhesive to the corners (3) of the key slots.
8. Apply adhesive to the post (1) and hole (2) of each insert.

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9. Insert a front and back insert to the key slot of each key.
10. Clean the body of the keys with a shop towel.
11. Clean the hole of each key with a shop towel and screwdriver.

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12. Clamp the two key insert to the key slot using a spring clamp with rubber ends.

13. Remove the clamp from the key assembly after allowing the adhesive to dry for 5 minutes.

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14. Install two 16 mm key rings to the key assembly. Attach the first 16 mm ring to the key hole. Attach the second 16 mm ring to the first 16 mm ring. Refer to photograph.

15. Make a copy to the owner manual supplement on the last page of this bulletin and insert it into the vehicle's owner manual.

Two-Piece Key Cover Repair

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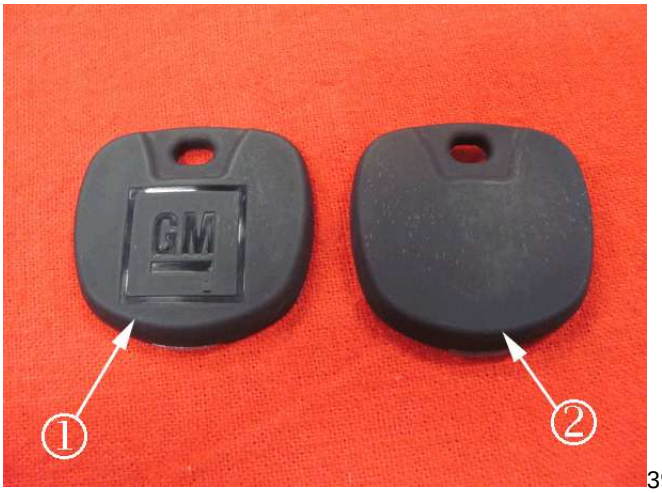
Note: Locate the four key covers and four 16 mm rings. A front and back cover are required to modify one key. Two 16mm key rings are required for each key repair.



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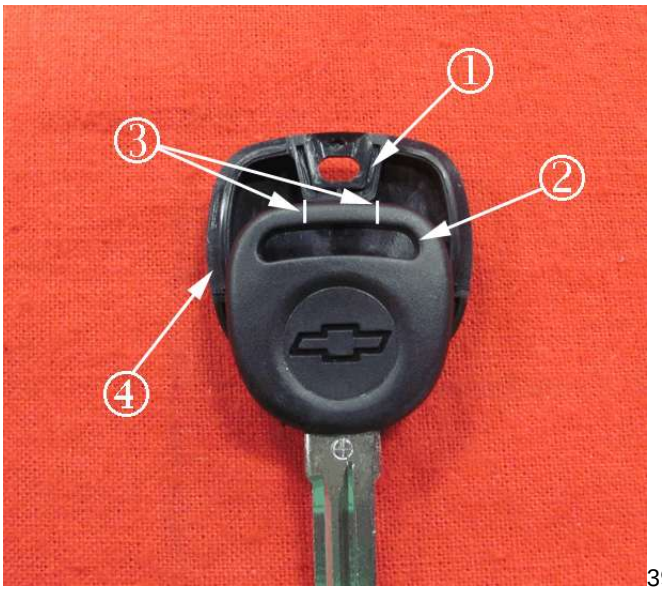
Note: There is a front and back key cover. The front key cover has a GM logo on it (1). The back key cover is blank (2).



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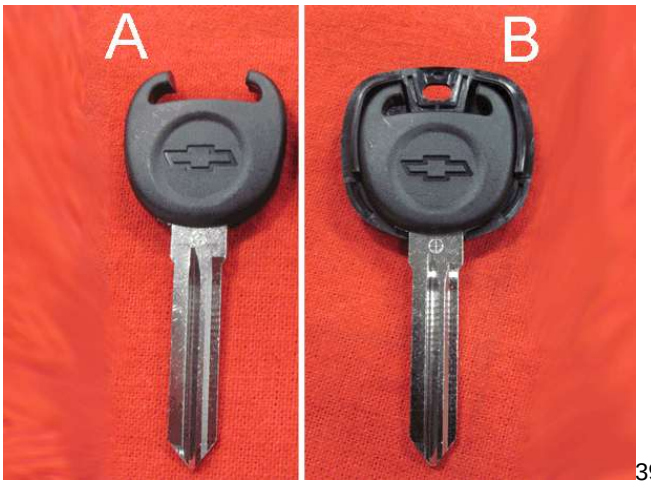
1. Test fit the customer-provided key into the back key cover.

   1.1 Ensure the body of the key fits into the back key cover. The body of the key may require some filing to fit into the cover. Use a file to remove the material from the body of the key.

   1.2 Align the back cover boss (1) with the slot (2) of the customer-provided key.

   1.3 Using a pen or knife mark the top portion of the slot (3) that must be cut in order for the customer-provided key to fit inside of the back cover.



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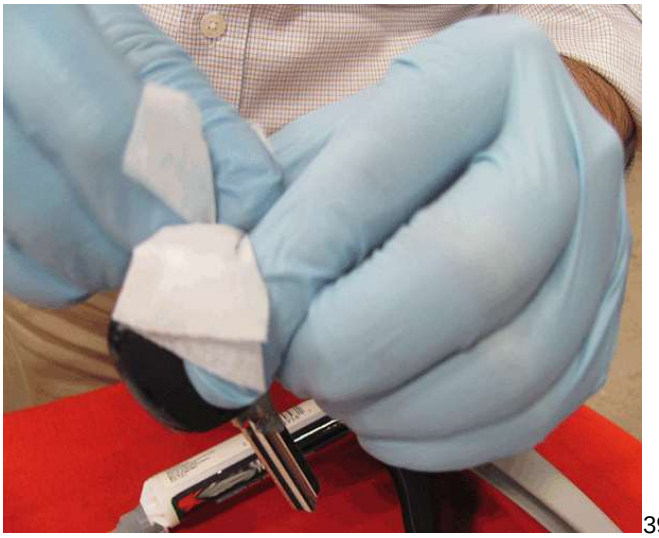
1.4 Using a knife or box cutter, cut out a notch (A) in the slot of the key.

1.5 The back cover boss must fit inside of the notched area of the key (B).

1.6 Remove the key from the back cover.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Caution: Do NOT use petroleum-based cleaning products to clean the key or key covers.

2. Clean the head and slot of the keys using a shop towel and isopropyl alcohol.
3. Clean the front and back key covers using a shop towel and isopropyl alcohol.

Note: The adhesive for this repair begins to cure quickly. It is essential that both keys are repaired promptly. Ensure all of the required tools, parts and supplies are on your work bench BEFORE attempting to assemble the key covers over the key. The following items should be on the work bench:

- Adhesive
- A front and back key cover for each key
- File
- Shop towels and rubber gloves
- Two rings for each key

- Spring clamp with rubber ends

Note: Use a small flat bladed screwdriver to separate the two covers. Insert the screwdriver into the key blade opening of the cover. Turn the screw driver to separate the two covers.

4. Assemble the front and back key cover over the key. Ensure the front and back cover fit over the key and that the two covers snap together.
   - If the key covers fit over the key and snap together correctly, proceed to step 5.
   - If the key covers do NOT fit over the key, file more material off the body of the key. Re-assemble the key covers over the key to ensure proper cover fit. Clean the key and covers BEFORE applying the adhesive.

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5. Dispense a small amount of adhesive to ensure the mixed adhesive is blue or green (not white or brown) in color. Then apply a bead of adhesive to the inside of the front and back key cover. Ensure a bead of adhesive is applied to the whole perimeter of the cover.

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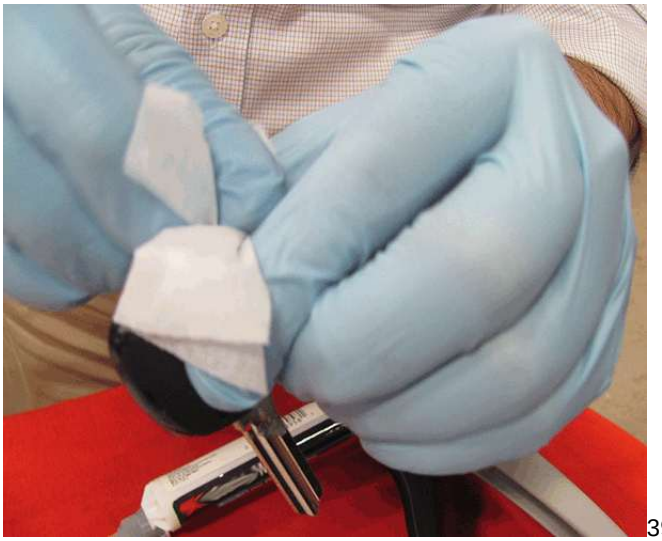
6. Press the front and back key cover over the key.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7. Remove excess adhesive from the body of the key using a shop towel and isopropyl alcohol.
8. Remove excess adhesive from the hole of the front and back key cover using a shop towel and small screwdriver.

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9. Clamp the two covers together using a spring clamp with rubber ends.
10. Allow the adhesive to dry for 30 minutes before removing the spring clamp from the key assembly.

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11. Install two 16 mm key rings to the key assembly. Attach the first 16 mm ring to the key hole. Attach the second 16 mm ring to the first 16mm ring. Refer to photograph.
12. Make a copy to the owner manual supplement on the last page of this bulletin and insert it into the vehicle's owner manual.

Note: Do not re-attach the fob or any other keys to the second 16 mm ring. Instruct the customer not to attach the fob or any other keys to the second ring for approximately 24-hours to allow the adhesive to reach maximum holding strength. Customers are to refer to the revised owner's manual insert for proper attachment instructions.

COURTESY TRANSPORTATION – For U.S. and Canada

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranties. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product program is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

WARRANTY TRANSACTION INFORMATION

Submit a transaction using the table below. All transactions should be submitted as a ZFAT transaction type, unless noted otherwise.

Labor Code	Description	Labor Time	Net Item
9100756	Install Key Insert and Key Rings (Two Keys)	0.4	*
9100885	Install Key Cover and Key Rings (Two Keys) Add: 0.1-0.3 to Modify Key to Fit Key Cover	0.4	**
9100886	Insert Test Fit Unsuccessful – Repair Not Workable Install Key Cover and Key Rings (Two Keys) Add: 0.1-0.3 to Modify Key to Fit Key Cover (If Required)	0.5	**
9100887	Service Keys (Round Hole or Square Design) Add: 0.1-0.3 to Modify Key to Fit Key Cover (If Required) Includes: Insert Test Fit, Key Cover Repair and Cutting Two Keys - Service Key Modification Not Required	0.8	N/A
9100888	Service Keys (Slot Design) Add: 0.1-0.3 to Modify Key to Fit Key Cover if required Includes: Insert Test Fit, Key Cover Repair and Cutting Two Keys - Service Key Modification Required	1.2	N/A
9100955	Purchase 3M Applicator Gun and Plunger (One Time Purchase For Canada and Export Only)	N/A	***

Note: Most keys will NOT require much filing to fit into the key covers. The 0.4 base time includes time to perform minor filing for correct key-to-cover fit. **Only use the add time for repairs that require a substantial amount of filing time**.

Note: Since usage of the 3M applicator gun and plunger is unlimited, their acquisition from ExodusDirect or a regional distributor is considered a one-time purchase. This means that GM will reimburse the dealer only once for their purchase. Any additional guns and plungers purchased will be a dealer expense and not covered by this recall. All U.S. dealers received a 3M applicator gun and plunger as part of the parts pre-shipment at no charge.

Note: If a customer presents additional keys for modification (more than 2 keys), perform either repair. For a valet key modification, perform the key insert repair only. Route the warranty transaction for wholesale authorization.

* The amount identified in “Net Item” should represent the actual sum total of the cost for the Loctite adhesive and primer needed to perform the required repairs, not to exceed $0.21 USD, $0.23 CAD.

** The amount identified in “Net Item” should represent the actual sum total of the cost for the 3M adhesive and nozzle needed to perform the required repairs, not to exceed $3.08 USD, $3.48 CAD.

*** For Canada and Export Only: The amount identified in “Net Item” should represent the actual sum total of the cost for the 3M applicator gun and plunger needed to perform the required repairs, not to exceed $65.00 CAD. The 3M applicator gun and plunger are also used to perform the same repair on vehicles involved in safety recalls 14299 and 14350. If a transaction has already been submitted under either one of those recalls for the purchase of the 3M applicator gun and plunger, do not attempt to submit another transaction under this recall as it will be rejected.

CUSTOMER NOTIFICATION – For U.S. and Canada

General Motors will notify customers of this recall on their vehicle.

CUSTOMER NOTIFICATION – For Export

Letters will be sent to known owners of record located within areas covered by the U.S. National Traffic and Motor Vehicle Safety Act.

DEALER RECALL RESPONSIBILITY – For U.S. and Export (U.S. States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The U.S. National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the U.S. National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

DEALER RECALL RESPONSIBILITY – All

All unsold new vehicles in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this recall bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin.

In summary, whenever a vehicle subject to this recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.

We Support Voluntary Technician Certification

REPRODUCE LOCALLY - INSERT IN VEHICLE'S OWNER MANUAL

Supplement to the Owner Manual

This information is in addition to and/or replaces information located under "Keys" found in Section 2 of your owner manual.

⚠ WARNING

If the key is unintentionally rotated while the vehicle is running, the ignition could be moved out of the RUN position. This could be caused by heavy items hanging from the key ring, or by large or long items attached to the key ring that could be contacted by the driver or steering wheel. If the ignition moves out of the RUN position,

(Continued)

WARNING (Continued)

the engine will shut off, braking and steering power assist may be impacted, and airbags may not deploy. To reduce the risk of unintentional rotation of the ignition key, do not change the way the ignition key and Remote Keyless Entry (RKE) transmitter, if equipped, are connected to the provided key rings.

The ignition key and key rings, and RKE transmitter, if equipped, are designed to work together as a system to reduce the risk of unintentionally moving the key out of the RUN position. The ignition key has a small hole to allow attachment of the provided key ring. It is important that any replacement ignition keys have a small hole. See your dealer if a replacement key is required.

The combination and size of the rings that came with your keys were specifically selected for your vehicle. The rings are connected to the key like two links of a chain to reduce the risk of unintentionally moving the key out of the RUN position. Do not add any additional items to the ring attached to the ignition key. Attach additional items only to the second ring, and limit added items to a few essential keys or small, light items no larger than an RKE transmitter.

Litho in U.S.A.
Part No. 23259399

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