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Definition of Danger, Warning, Caution, and Note

The diagnosis and repair procedures in a GM Service Manual contain both general and specific Dangers, Warnings, Cautions, Notes or Importants. GM is dedicated to the presentation of service information that helps the technician to diagnose and repair the systems necessary for the proper operation of the vehicle, however, certain procedures may present a hazard to the technician if they are not followed in the recommended manner . Dangers, Warnings, Cautions and Notes or Importants are elements designed to prevent these hazards, however, not all hazards can be foreseen. This information is placed at strategic locations within the service manual. This information is designed to prevent the following from occurring:

- Serious bodily injury or death to the technician
- Damage to the vehicle
- Unnecessary vehicle repairs
- Unnecessary component replacement
- Improper repair or replacement of vehicle components.
- Any warning or caution that appears in this service category is referenced from the individual service categories.

DANGER Defined

When encountering a DANGER, you will be asked to take a necessary action or not to take a prohibited action. If a DANGER is not heeded, the following consequences may occur:

- Serious bodily injury or death to the technician
- Serious bodily injury or death to other technicians in the workplace area

WARNING Defined

When encountering a WARNING, you will be asked to take a necessary action or not to take a prohibited action. If a WARNING is not heeded, the following consequences may occur:

- Serious bodily injury to the technician
- Serious bodily injury to other technicians in the workplace area
- Serious bodily injury to the driver and/or passenger(s) of the vehicle, if the vehicle has been improperly repaired

CAUTION Defined

CAUTIONS call special attention to a necessary action or to a prohibited action. If a CAUTION is not heeded, the following consequences may occur:

- Damage to the vehicle
- Unnecessary vehicle repairs
- Unnecessary component replacement
- Improper operation or performance of the system or component under repair
- Damage to any systems or components which are dependent upon the proper operation of the system or component under repair
- Improper operation or performance of any systems or components which are dependent upon the proper operation or performance of the system or component under repair
- Damage to fasteners, basic tools, or special tools
- The leakage of coolant, lubricant, or other vital fluids

NOTE or IMPORTANT Defined

NOTE and IMPORTANT statements emphasize a necessary characteristic of a diagnostic or repair procedure. NOTE or IMPORTANT statements are designed to do the following:

- Clarify a procedure
- Present additional information for accomplishing a procedure
- Give insight into the reason or reasons for performing a procedure in the manner recommended
- Present information that will help to accomplish a procedure in a more effective manner
- Present information that gives the technician the benefit of past experience in accomplishing a procedure with greater ease

Approved Equipment for Collision Repair Warning

Warning: To avoid personal injury when exposed to welding flashes or to galvanized (Zinc Oxide) metal toxic fumes while grinding/cutting on any type of metal or sheet molded compound, you must work in a properly ventilated area, wearing an approved respirator, eye protection , earplugs, welding gloves, and protective clothing.

Batteries Produce Explosive Gases Warning

Warning: Batteries produce explosive gases. Batteries contain corrosive acid. Batteries supply levels of electrical current high enough to cause burns. Therefore, in order to reduce the risk of personal injury while working near a battery, observe the following guidelines:

- Always shield your eyes.
- Avoid leaning over the battery whenever possible.
- Do not expose the battery to open flames or sparks.
- Do not allow battery acid to contact the eyes or the skin.
- Flush any contacted areas with water immediately and thoroughly.
- Get medical help.

Battery Disconnect Warning

Warning: Unless directed otherwise, the ignition and start switch must be in the OFF or LOCK position, and all electrical loads must be OFF before servicing any electrical component. Disconnect the negative battery cable to prevent an electrical spark should a tool or equipment come in contact with an exposed electrical terminal. Failure to follow these precautions may result in personal injury and/or damage to the vehicle or its components. For Vehicles equipped with OnStar® (UE1) with Back Up Battery: The Back Up Battery is a redundant power supply to allow limited OnStar® functionality in the event of a main vehicle battery power disruption to the VCIM (OnStar®module). Do not disconnect the main vehicle battery or remove the OnStar® fuse with the ignition key in any position other than OFF. Retained accessory power (RAP) should be allowed to time out or be disabled (simply opening the driver door should disable RAP) before disconnecting power. Disconnecting power to the OnStar® module in any way while the ignition is On or with RAP activated may cause activation of the OnStar® Back-Up Battery (BUB) system and will discharge and permanently damage the back-up battery. Once the Back-Up Battery is activated it will stay on until it has completely discharged. The BUB is not rechargeable and once activated the BUB must be replaced.

Brake Fluid Irritant Warning

Warning: Brake fluid may irritate eyes and skin. In case of contact, take the following actions:

- Eye contact—rinse thoroughly with water.
- Skin contact—wash with soap and water.
- If ingested—consult a physician immediately.

Brake Fluid Warning

Warning: Use only Delco Supreme 11, GMP/N12377967 (CanadianP/N992667), or equivalent DOT3 brake fluid from a clean, sealed container. Do not use fluid from an open container that may be contaminated with water. Improper or contaminated fluid could result in damage to components, or loss of braking, with possible injury.

Collision Sectioning Warning

Warning: Sectioning should be performed only in the recommended areas. Failure to do so may compromise the structural integrity of the vehicle and cause personal injury if the vehicle is in a collision.

Cracked Window Warning

Warning: If a window is cracked but still intact, crisscross the window with masking tape in order to reduce the risk of damage or personal injury.

Defroster Outlet Warning

Warning: If broken glass falls into the defroster outlets, it can be blown into the passenger compartment and cause personal injury.

Electric Coolant Fan Warning

Warning: An electric fan under the hood can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

Exhaust Service Warning

Warning: In order to avoid being burned, do not service the exhaust system while it is still hot. Service the system when it is cool.

Eye Protection Warning

Warning: Approved safety glasses and gloves should be worn when performing this procedure to reduce the chance of personal injury.

Gasoline/Gasoline Vapors Warning

Warning: Gasoline or gasoline vapors are highly flammable. A fire could occur if an ignition source is present. Never drain or store gasoline or diesel fuel in an open container, due to the possibility of fire or explosion. Have a dry chemical (Class B) fire extinguisher nearby.

Glass and Sheet Metal Handling Warning

Warning: When working with any type of glass or sheet metal with exposed or rough edges, wear approved safety glasses and gloves in order to reduce the chance of personal injury.

Halogen Bulb Warning

Warning: Halogen bulbs contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying glass fragments. To help avoid personal injury:

- Turn off the lamp switch and allow the bulb to cool before changing the bulb.
- Leave the lamp switch OFF until the bulb change is complete.
- Always wear eye protection when changing a halogen bulb.
- Handle the bulb only by its base. Avoid touching the glass.
- Keep dirt and moisture off the bulb.
- Properly dispose of the used bulb.
- Keep halogen bulbs out of the reach of children.

Hood Hold-Open Device Warning

Warning: When a hood hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury.

Parking Brake and Drive Wheels Warning

Warning: Apply the parking brake and block the drive wheels before performing this procedure in order to prevent bodily injury.

Protective Goggles and Glove Warning

Warning: Always wear protective goggles and gloves when removing exhaust parts as falling rust and sharp edges from worn exhaust components could result in serious personal injury.

Radiator Cap Removal Warning

Warning: To avoid being burned, do not remove the radiator cap or surge tank cap while the engine is hot. The cooling system will release scalding fluid and steam under pressure if radiator cap or surge tank cap is removed while the engine and radiator are still hot.

Relieving Fuel Pressure Warning

Warning: Remove the fuel tank cap and relieve the fuel system pressure before servicing the fuel system in order to reduce the risk of personal injury. After you relieve the fuel system pressure, a small amount of fuel may be released when servicing the fuel lines, the fuel injection pump, or the connections. In order to reduce the risk of personal injury, cover the fuel system components with a shop towel before disconnection. This will catch any fuel that may leak out. Place the towel in an approved container when the disconnection is complete.

Repair Material Curing Warning

Warning: At least 24 hours are required for complete curing of repair material. The repair area should not be physically disturbed until after that time. Insufficient curing of urethane adhesive may allow unrestrained occupants to be ejected from the vehicle resulting in personal injury.

Safety Glasses and Compressed Air Warning

Warning: Wear safety glasses when using compressed air in order to prevent eye injury.

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Safety Glasses Warning

Warning: Wear safety glasses in order to avoid eye damage.

Safety Goggles and Fuel Warning

Warning: Always wear safety goggles when working with fuel in order to protect the eyes from fuel splash.

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Sensing and Diagnostic Module Handling Warning

Warning: Be careful when you handle a sensing and diagnostic module (SDM). Do not strike or jolt the SDM. Before applying power to the SDM:

- Remove any dirt, grease, etc. from the mounting surface
- Position the SDM horizontally on the mounting surface
- Point the arrow on the SDM toward the front of the vehicle
- Tighten all of the SDM fasteners and SDM bracket fasteners to the specified torque value

Failure to follow the correct procedure could cause air bag deployment, personal injury, or unnecessary SIR system repairs.

Sensing and Diagnostic Module Voltage after Ignition is Turned Off Warning

Warning: The sensing and the diagnosis module (SDM) can maintain sufficient voltage to deploy the airbags and pretensioners for up to 1 minute after the ignition has been turned OFF and the fuse has been removed. If the airbags and pretensioners are not disconnected, do not begin service until one minute has been passed after disconnecting power to the SDM. Failure to do so may cause personal injury.

Servicing the SIR System Warning

Warning: When performing service on or around the SIR components or the SIR wiring, follow the procedures listed below in order to temporarily disable the SIR system. Failure to follow the procedures could result in the following:

- Air bag deployment
- Personal injury
- Otherwise unneeded SIR system repairs

SIR Inflator Module Handling and Storage Warning

- Warning:** When carrying an undeployed inflator module:
- Do not carry the inflator module by the wires or connector.
 - Make sure the air bag opening points away from you.
 - When storing an undeployed inflator module:
 - Make sure the air bag opening points away from the surface on which the inflator module rests.
 - Provide free space for the air bag to expand in case of an accidental deployment.
 - When storing a steering column, do not rest the column with the air bag opening facing down and the column vertical. Lay the column on its side.
- Failure to observe these guidelines may result in personal injury.

SIR Seatbelt Pretensioner Handling Warning

- Warning:** When carrying an undeployed inflatable restraint seat belt retractor pretensioner:
- Do not carry the seat belt pretensioner by the seat belt webbing or pigtail connector, if equipped.
 - Carry the seat belt pretensioner by the housing, keeping hands and fingers away from the seat belt webbing.
 - Make sure the opening, from which the seat belt webbing extends, faces downward and the seat belt webbing hangs freely.
- Failure to observe these guidelines may result in personal injury.

SIR Warning

Warning: This vehicle is equipped with a Supplemental Inflatable Restraint (SIR) System. Failure to follow the correct procedure could cause the following conditions:

- Air bag deployment
- Personal injury
- Unnecessary SIR system repairs

In order to avoid the above conditions, observe the following guidelines:

- Refer to SIR Component Views in order to determine if you are performing service on or near the SIR components or the SIR wiring.
- If you are performing service on or near the SIR components or the SIR wiring, disable the SIR system. Refer to Disabling the SIR System.

Torque-to-Yield Fastener Warning

Warning: This component is equipped with torque-to-yield fasteners. Install a NEW torque-to-yield fastener when installing this component. Failure to replace the torque-to-yield fastener could cause bodily injury and damage to the vehicle or component.

Brake Fluid Damage to Electrical Connections Caution

Caution: Brake fluid will damage electrical connections and painted surfaces. Use shop cloths, suitable containers, and fender covers to prevent brake fluid from contacting these areas. Always re-seal and wipe off brake fluid containers to prevent spills.

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Brake Fluid Effects on Paint and Electrical Components Caution

Caution: Avoid spilling brake fluid onto painted surfaces, electrical connections, wiring, or cables. Brake fluid will damage painted surfaces and cause corrosion to electrical components. If any brake fluid comes in contact with painted surfaces, immediately flush the area with water. If any brake fluid comes in contact with electrical connections, wiring, or cables, use a clean shop cloth to wipe away the fluid.

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Catalytic Converter Movement Caution

Caution: To prevent internal damage to the flexible coupling of the catalytic converter assembly, the converter must be supported. The vertical movement at the rear of the catalytic converter assembly must not exceed 6 degrees up or down.

Clearcoat/Ultraviolet Screeners Caution

Caution: Removing more than 0.5 mils of the clearcoat can result in early paint failure. The clearcoat contains ultraviolet screeners. Do not finesse sand more than what is required to remove the defect.

Component Fastener Tightening Caution

Caution: Replacement components must be the correct part number for the application. Components requiring the use of the thread locking compound, lubricants, corrosion inhibitors, or sealants are identified in the service procedure. Some replacement components may come with these coatings already applied. Do not use these coatings on components unless specified. These coatings can affect the final torque, which may affect the operation of the component. Use the correct torque specification when installing components in order to avoid damage.

Exterior Trim Emblem Removal Caution

Caution: Use a plastic, flat-bladed tool to prevent paint damage when removing an emblem/name plate.

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Fastener Caution

Caution: Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Do not use paints, lubricants, or corrosion inhibitors on fasteners, or fastener joint surfaces, unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems. When using fasteners that are threaded directly into plastic, use extreme care not to strip the mating plastic part(s). Use hand tools only, and do not use any kind of impact or power tools. Fastener should be hand tightened, fully seated, and not stripped.

Fuel Tank Strap Fastener Caution

Caution: Tighten the strap fasteners by steps, alternating between the fasteners, until the specified torque is reached. A failure to tighten the strap fasteners as specified will cause the bottom of the tank to flex upward. This will result in the fuel gauge indicating that there is fuel remaining in the tank when the tank is empty.

Ignition OFF When Disconnecting Battery Caution

Caution: Always turn the ignition OFF when connecting or disconnecting battery cables, battery chargers, or jumper cables. Failing to do so may damage the Powertrain Control Module (PCM) or other electronic components.

Installing Hoses without Twists or Bends Caution

Caution: The inlet and outlet hoses must not be twisted during installation. Do not bend or distort the inlet or outlet hoses to make installation easier. Failure to follow these procedures could result in component damage.

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Liftgate Assist Rod Caution

Caution: Apply pressure only at the end of the liftgate/hood assist rod that you are removing or attaching. Do NOT apply pressure to the middle of the rod because damage or bending will result.

Steering Column in Lock Position Caution

Caution: With wheels of the vehicle facing straight ahead, secure the steering wheel utilizing steering column anti-rotation pin, steering column lock, or a strap to prevent rotation. Locking of the steering column will prevent damage and a possible malfunction of the SIR system. The steering wheel must be secured in position before disconnecting the following components:

- The steering column
- The steering shaft coupling
- The intermediate shaft(s)

After disconnecting these components, do not rotate the steering wheel or move the front tires and wheels. Failure to follow this procedure may cause the SIR coil assembly to become un-centered and cause possible damage to the SIR coil. If you think the SIR coil has become un-centered, refer to your specific SIR coil’s centering procedure to re-center SIR Coil.

Steering Wheel in the Full Turn Position Caution

Caution: Do not hold the steering wheel in the full turn position longer than 5 seconds, as damage to the steering pump may result.

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Steering Wheel Straight and Column Locked Caution

Caution: With wheels of the vehicle facing straight ahead, secure the steering wheel utilizing steering column anti-rotation pin, steering column lock, or a strap to prevent rotation. Locking of the steering column will prevent damage and a possible malfunction of the SIR system. The steering wheel must be secured in position before disconnecting the following components:

- The steering column
- The intermediate shaft(s)
- The steering gear

After disconnecting these components, do not rotate the steering wheel or move the front tires and wheels. Failure to follow this procedure may cause the SIR coil assembly to become un-centered and cause possible damage to the SIR coil. If you think the SIR coil has become un-centered, refer to your specific SIR coil’s centering procedure to re-center SIR Coil.

Tape Corners of Panel Caution

Caution: When removing body panels, apply tape to corners of panel and adjacent surfaces to help prevent paint damage.

Torque-to-Yield Fastener Caution

Caution: This component is equipped with torque-to-yield fasteners. Install a NEW torque-to-yield fastener when installing this component. Failure to replace the torque-to-yield fastener could cause damage to the vehicle or component.

Vehicle Lifting and Jacking Caution

- Caution:** Perform the following steps before beginning any vehicle lifting or jacking procedure:
- Remove or secure all of the vehicle contents in order to avoid any shifting or any movement that may occur during the vehicle lifting or jacking procedure.
 - The lifting equipment or the jacking equipment weight rating must meet or exceed the weight of the vehicle and any vehicle contents.
 - The lifting equipment or the jacking equipment must meet the operational standards of the lifting equipment or jacking equipment manufacturer.
 - Perform the vehicle lifting or jacking procedure on a clean, hard, dry, level surface.
 - Perform the vehicle lifting or jacking procedure only at the identified lift points. DO NOT allow the lifting equipment or jacking equipment to contact any other vehicle components.

Failure to perform the previous steps could result in damage to the lifting equipment or the jacking equipment, the vehicle, and/or the vehicle contents.

Windshield Installation Caution

Caution: Do not use spacers when installing a windshield. The stress caused by the spacers may damage the windshield.