# 2013 Accord: New Model Body Repair Information

**DISCLAIMER:** This publication contains a summary of new body and vehicle technology that may affect collision and other body repairs. Always refer to the appropriate service and body repair manuals for complete repair information. A subscription may be purchased at: techinfo.honda.com

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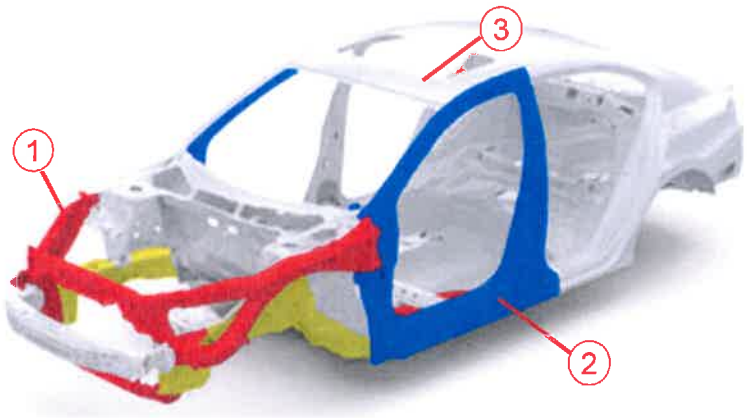
## OVERVIEW OF BODY FEATURES



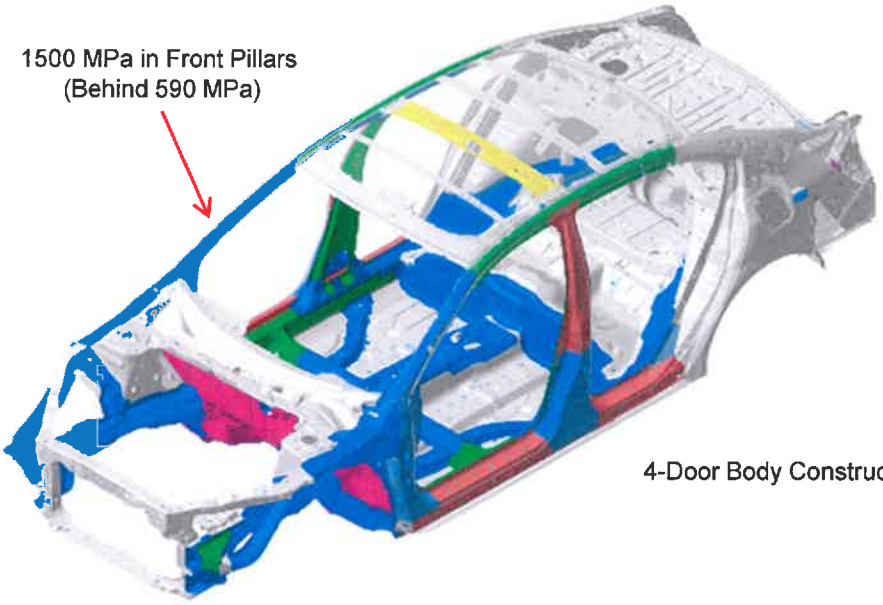

1. Next-Generation Advanced Compatibility Engineering™ (ACE™) body structure.
2. Extensive use of high tensile strength steel (55.8%), including 17.2% in grades 780, 980, and 1,500 MPa.
3. Roof panel assembly with integrated roof rail and roof arch extensions.

# New Model Body Technology

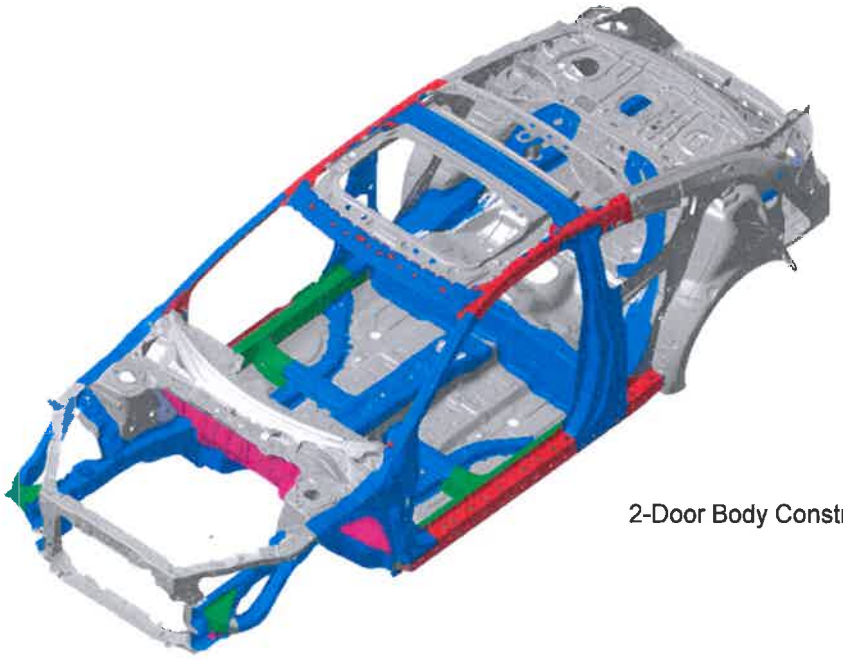
**BODY CONSTRUCTION AND HIGH STRENGTH STEEL CONTENT**

- Steel parts are color-coded based on their tensile strength in megapascals (MPa).
- High strength steel is defined as any steel with a tensile strength of 340 MPa or higher.
- Steel repair and welding procedures vary depending on the tensile strength of the parts involved.

NOTE: These illustrations are for general reference only. Some body parts, such as the front pillars, are constructed from multiple layers of different tensile strength steels. Always refer to the body repair manual body construction section for specific steel tensile strength information.




4-Door Body Construction



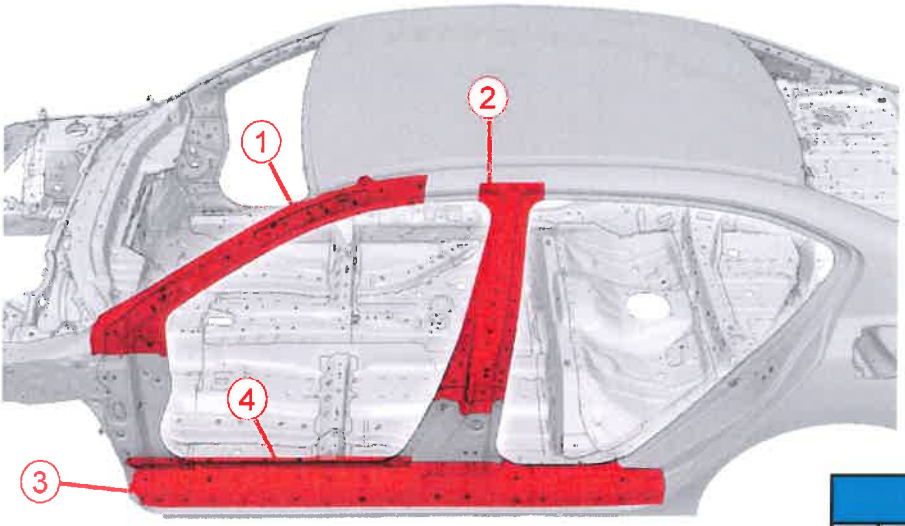
2-Door Body Construction


Steel Tensile Strength Legend

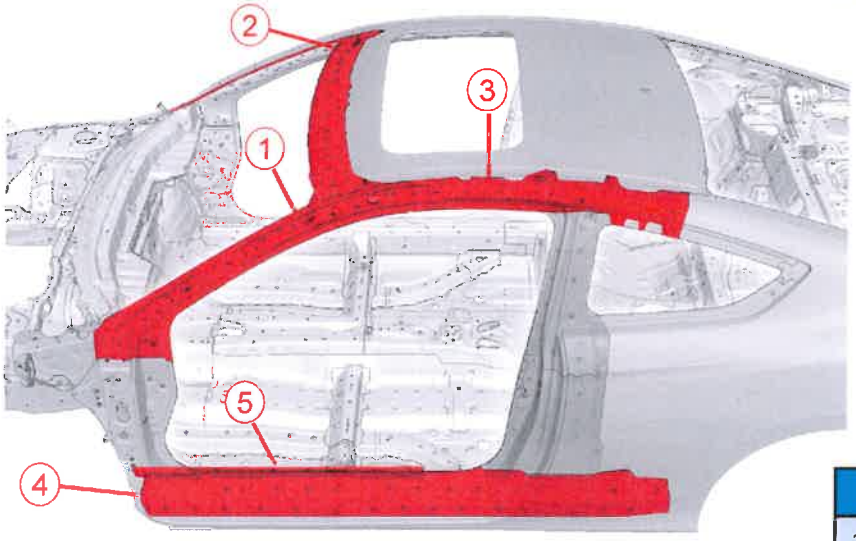
**1,500 MPa (HOT STAMP) STEEL LOCATIONS**

1,500 MPa steel is stronger than ordinary steel, so it can help protect vehicle occupants while reducing overall vehicle weight to improve fuel efficiency.

The numbered parts in the diagrams below are constructed of 1,500 MPa steel:




| 4-Door Models | |
|---|---|
| 1 | Front Inner Upper Pillar |
| 2 | Center Pillar Upper Stiffener |
| 3 | Side Sill Stiffener |
| 4 | Inside Sill Reinforcement |

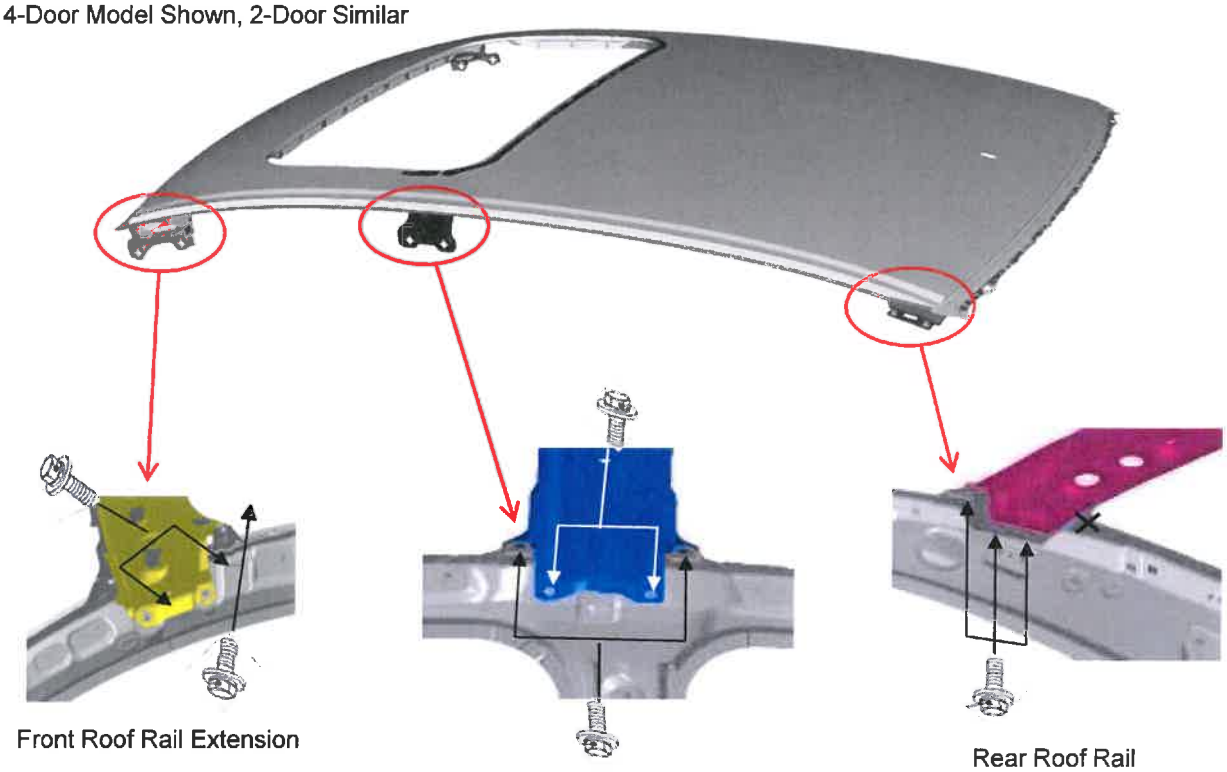



| 2-Door Models | |
|---|---|
| 1 | Front Inner Upper Pillar |
| 2 | Front Roof Rail Lower |
| 3 | Roof Side Stiffener |
| 4 | Side Sill Stiffener |
| 5 | Inside Sill Reinforcement |

## ROOF PANEL ATTACHMENT

The roof rail and roof arch extensions are integrated into the roof panel assembly. Previously, these were separate parts. The roof panel bolts and spot welds must be removed and installed to the inner pillar and roof rail structure using a specific procedure. Refer to the body repair manual section titled "Roof Panel Removal and Installation" for complete information.

4-Door Model Shown, 2-Door Similar



Front Roof Rail Extension

Roof Arch Extension

Rear Roof Rail

## TOWING AND LIFTING PRECAUTIONS

- Flat bed towing equipment is the preferred method to transport this vehicle.
- Front wheel lift towing equipment may also be used to tow this vehicle.

For more information, refer to "Emergency Towing" in the owner's manual.

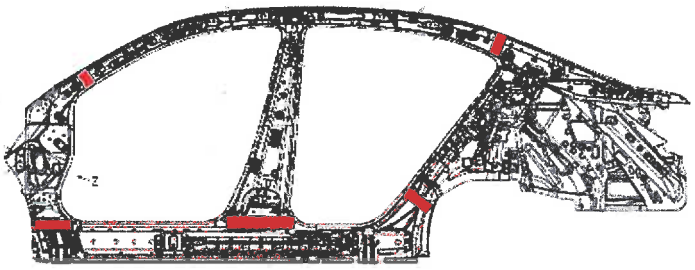
- Lift or jack only at the specified points to avoid damaging the vehicle.
- Do not lift or tow this vehicle by its bumpers, or serious damage will result.

For more information, refer to "Lift and Support Points" in the service or body repair manual.

### ACOUSTIC SEPARATOR LOCATIONS

Separators constructed of plastic and urethane foam are installed in multiple locations to reduce road noise intrusion into the cabin.

- Factory-installed separator foam is expanded during the primer and paint baking process.
- Use care to avoid separator foam damage. The original foam cannot be restored if damaged.
- Replacement plastic separators are available as service parts. These will not produce foam, even if heated. To seal the new separator, apply urethane sealer around the separator to fill in the gap with the panel.



= Acoustic Foam Separator Location
(4-door model shown, 2-door similar)

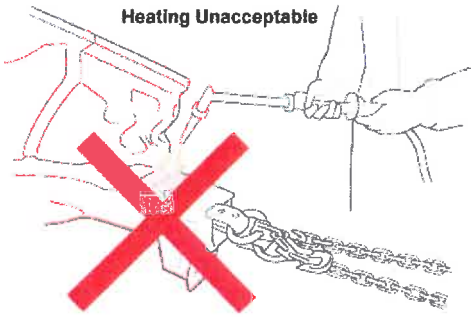
## Body Repair Information

NOTE: The following content is intended only to highlight new/special concerns. No body repairs should be attempted without first referring to the appropriate body repair manual for complete information.

### USE OF HEAT DURING BODY STRAIGHTENING AND REPAIR

When you are doing body straightening and repair procedures:

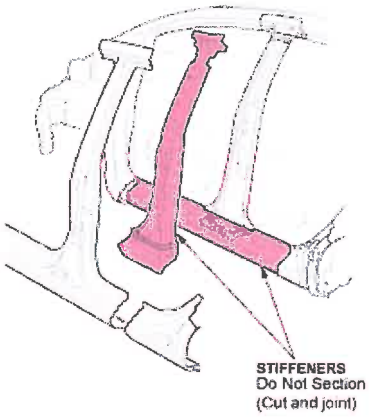
- DO NOT apply heat to any body part during straightening. This may compromise the internal structure and strength of high-strength steel parts.
- Any part that has heat applied to it during straightening MUST be replaced with new parts.
- Ignoring these instructions may significantly reduce occupant protection in any subsequent collision.




### SECTIONING (CUT AND JOINT) GUIDELINES

Because of body structure improvements for collision safety and rigidity, the materials, steel thickness, and internal reinforcements have become very specific. Follow these guidelines to avoid an unsafe repair:

- Avoid sectioning (cut and joint) except for outer panels and floor panels unless a specific procedure is provided in the body repair manual.
- Replace body structural components as assemblies that match the replacement parts configuration.

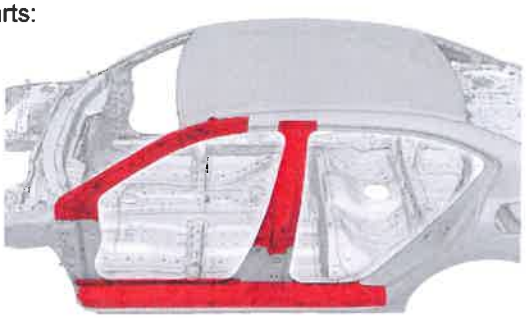


## Welding Precautions and Information

**REPAIRING 1,500 MPa STEEL PARTS**

Observe these precautions when repairing 1,500 MPa steel parts:

- NEVER attempt to straighten damaged 1,500 MPa steel parts because they may crack.
- 1,500 MPa steel parts MUST be replaced at factory seams using squeeze-type resistance spot welding (STRSW).
- MIG brazed joints should be used ONLY in locations not accessible by a spot welder.
- To assure adequate weld tensile strength, always set the spot welder to the specifications provided in the body repair manual.



**Important Information**

Parts made of Ultra High Strength Steel (UHSS/1,500MPa/ USIBOR) must be installed as a complete part. No sectioning allowed. Ultra High Strength Steel requires special welding equipment, procedures, and settings. See the welding section of the appropriate body repair manual. Failure to use the proper equipment or follow the proper procedures can result in an unsafe repair.

- NEVER perform MAG welding on 1,500 MPa steel. The heat generated during welding will significantly reduce the strength and structural integrity of 1,500 MPa steel parts.
- This photo shows tensile strength test results of welded 1,500 MPa steel. The 1,500 MPa steel fractured first, because the welding heat reduced its strength to far below 590 MPa.
- For more information, refer to "Hot Stamp (1,500 MPa) Parts Welding Specifications" in the body repair manual.


Tensile Test Results of Welded 1,500 MPa Steel

**MIG BRAZING GUIDELINES FOR 1,500 MPa STEEL PARTS**

Refer to the body repair manual for complete information:

- MIG brazed joint locations are specified in the body repair manual.
- A single, or double, hole MIG braze may be specified in the body repair manual depending on the tensile strength of the parts being joined.
- The size and number of holes is critical to achieving adequate joint strength.
- A pulsed MIG welder MUST be used. Refer to the equipment manufacturer's instructions for welder voltage and current setup.
- Photos at right show the difference in results between pulsed and non-pulsed MIG brazing.

Pulsed MIG (OK)

w/o Pulsed MIG (Bad)

## MAG WELDING SPECIFICATIONS FOR 590-980 MPa HIGH-STRENGTH STEEL PARTS

NOTE: In this publication and the body repair manuals, gas metal arc welding (GMAW) is referred to by its subtypes depending on the welding/brazing requirements:

- MIG welding/brazing = Metal inert gas welding or brazing where 100% Argon (Ar) shielding gas is used. Argon is inert and does not react with the molten weld pool or brazing operation.
- MAG welding = Metal active gas welding where the shielding gas being used contains a mixture of 80% Argon (Ar) and 20% Carbon Dioxide ($CO_2$). It is considered active because the $CO_2$ undergoes a limited reaction with the molten weld pool.

**Important Information**

Parts made of High Strength Steel (590-980 MPa) must be installed as a complete part. No sectioning is allowed unless a procedure is provided in the body repair manual. This high-strength steel requires special welding equipment, procedures and settings. See the welding section of the appropriate body repair manual. Failure to use the proper equipment or follow the proper procedures can result in an unsafe repair.

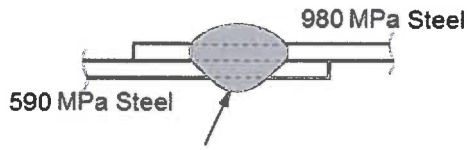
The body repair manual specifies the weld types and locations for each body panel:

- The welding wire used must have a tensile strength equal to, or greater than, the lowest tensile strength of the parts being welded. This conversion chart shows the relationship of steel tensile strength (MPa) to the minimum welding wire tensile strength (ksi).
- Refer to the diagrams shown below:

| Steel Tensile (MPa) | Wire Tensile (ksi) |
|---|---|
| 590 | ≥86 |
| 780 | ≥113 |
| 980 | ≥142 |

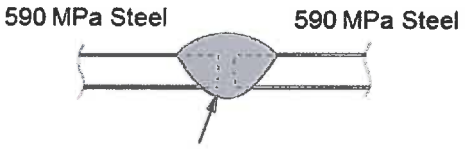
(1,000 psi = 1 ksi)

**MAG Plug Welds**




Welding Wire Tensile Strength Must Be:
≥590 MPa (≥86 ksi)

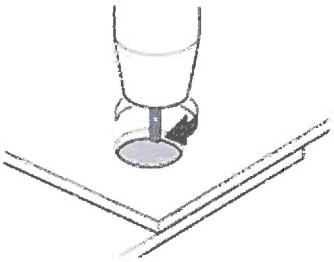
**MAG Butt Welds**




Welding Wire Tensile Strength Must Be:
≥590 MPa (≥86 ksi)

### MAG PLUG WELDING GUIDELINES

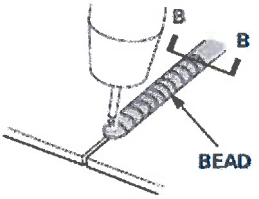
- MAG plug welding may be done when joining body components to 590-980 MPa steel parts.
- Follow the recommendations described in the body repair manual section "MAG welding specifications for high-strength steel parts 590 MPa and higher."



MAG Plug Welding

### MAG BUTT WELDING GUIDELINES

- MAG butt welding may be done only on steel parts with a tensile strength of 590 MPa and lower.
- Welding speed is critical to achieve the correct weld strength and minimize the heat affected zone (HAZ).
- Follow the recommendations described in the body repair manual section "MAG welding specifications for high-strength steel parts 590 MPa and higher."




MAG Butt Welding