



2013 Accord: Body Repair Information

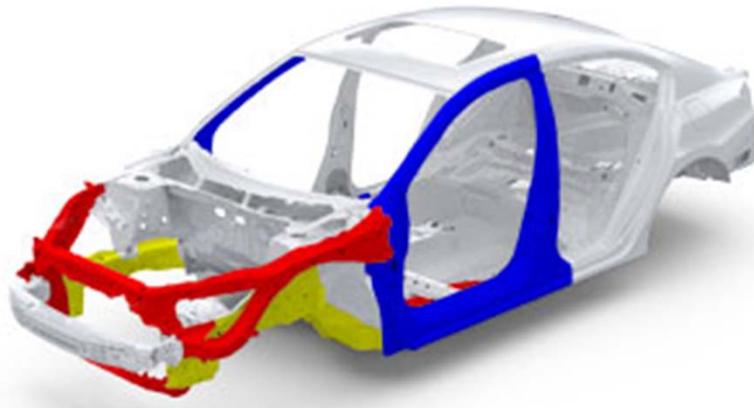
(Supersedes original publication issued **September 2013**. Revision includes 2016 model info)

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



2013–15 models have these body features:

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

For the 2016 model year, a minor model change (MMC) added or upgraded these body features:

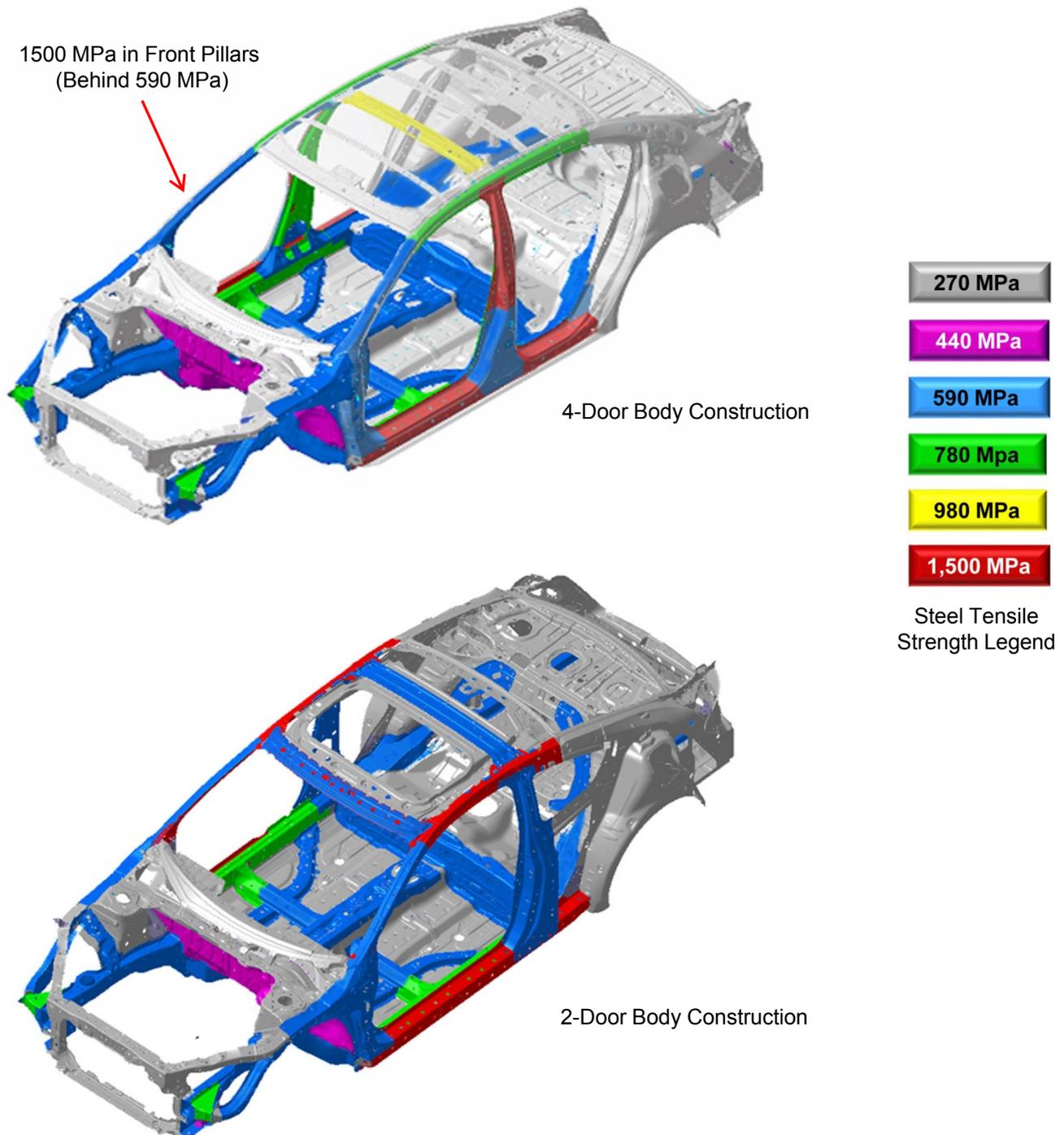
- Introduction of the Honda Sensing™ suite of advanced safety and driver-assistive technologies, including: Adaptive Cruise Control, Lane Keeping Assist System, Road Departure Mitigation, and Collision Mitigation Braking System™ with pedestrian sensing capability
- Aluminum hood panel on 4-door models for weight reduction and improved fuel efficiency

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.

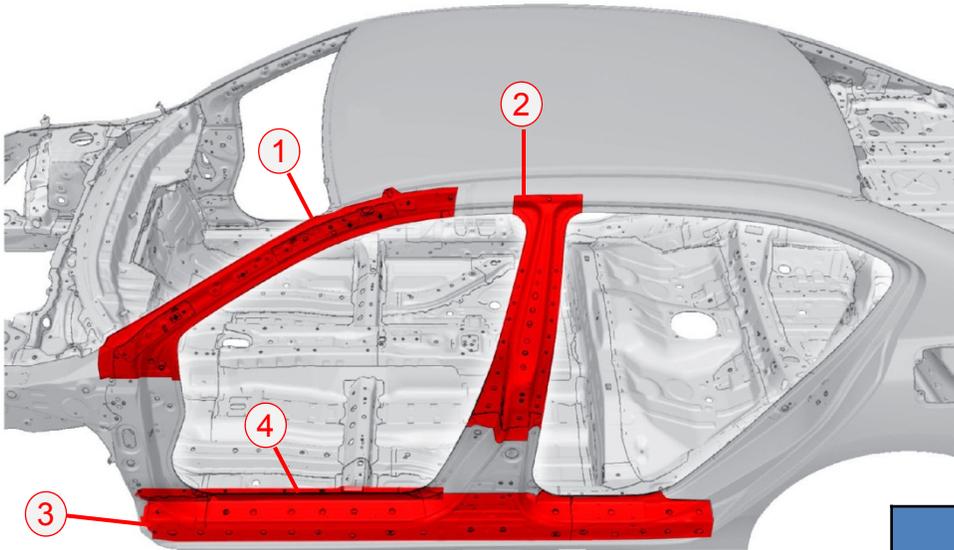
NOTE: These illustrations are for general reference only. Some body parts, such as the front pillars, are constructed from multiple layers of different tensile strength steels. Always refer to the body repair manual body construction section for specific steel tensile strength information.



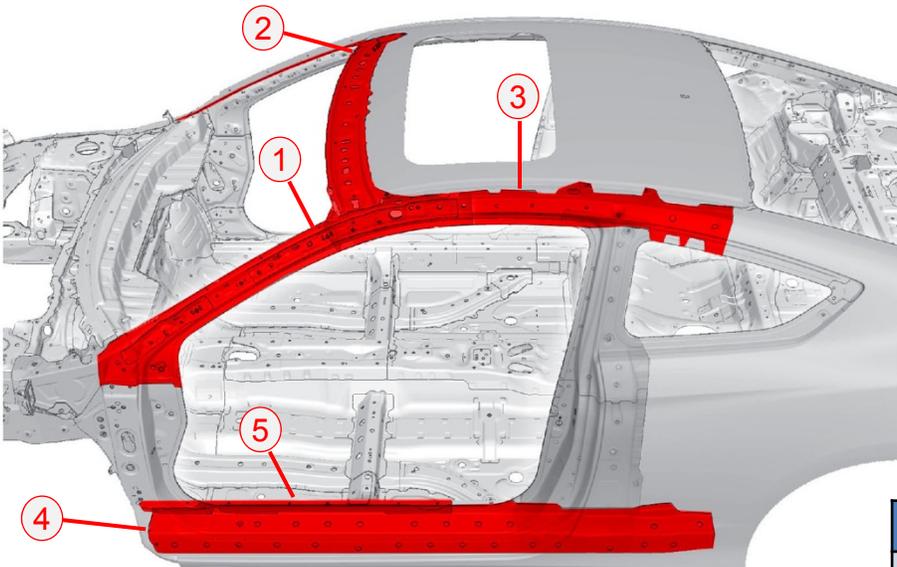
1,500 MPa (HOT STAMP) STEEL LOCATIONS

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

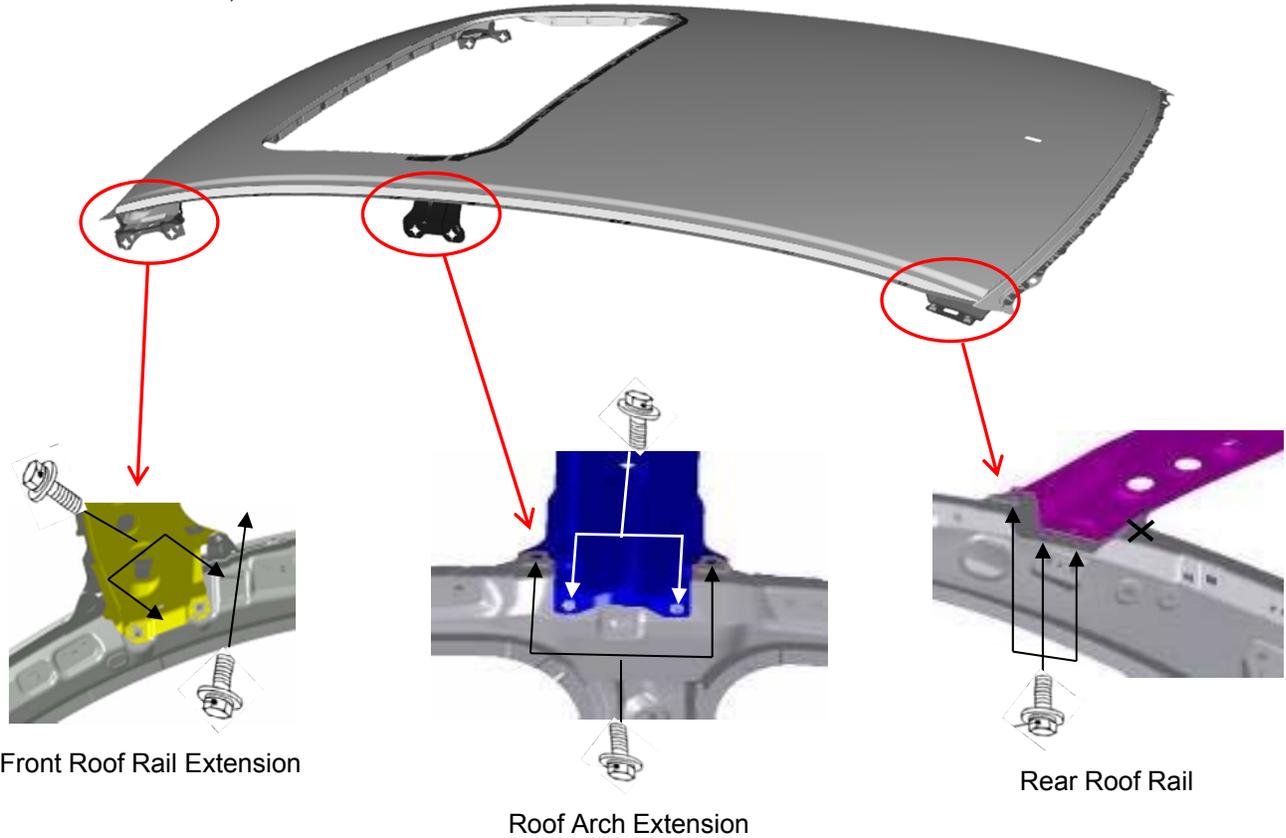


2-Door Models	
1	Front Inner Upper Pillar
2	Front Roof Rail Lower
3	Roof Side Stiffener
4	Side Sill Stiffener
5	Inside Sill Reinforcement

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

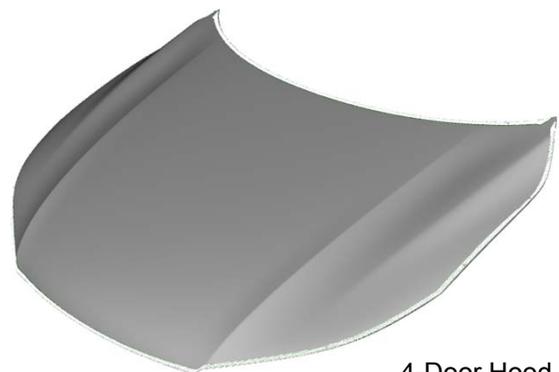


ALUMINUM PARTS & REPAIRABILITY

Beginning with 2016 models, the hood on 4-door models is constructed from aluminum alloy.

Repairability Issues:

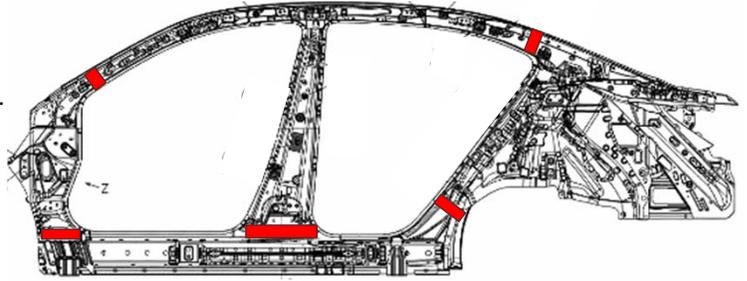
- Minor damage to the aluminum hood may be repaired by body shops that have dedicated aluminum repair facilities and tools.
- To prevent galvanic corrosion, some fasteners for aluminum parts are considered one-time use and must be replaced if removed as specified in the electronic service manual or body 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)

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.



Body Repair Information

NOTE: The following content is intended only to highlight new/special concerns. No body repairs should be attempted without first referencing 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, follow these guidelines:

- **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.



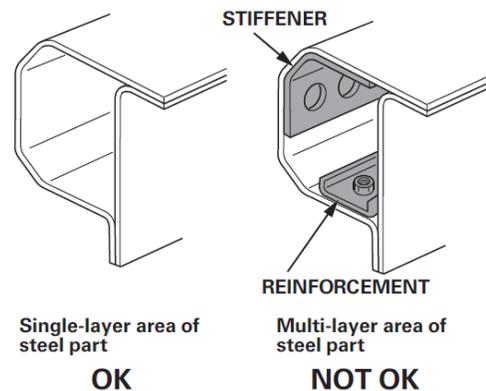
Do not heat during straightening

SECTIONING (CUT AND JOINT) GUIDELINES

Various high-strength steel materials with different sheet thicknesses and strengths are applied in many places that vary by body design in order to increase collision safety performance, body stiffness, and weight reduction. Stiffening members inside each part (patch, stiffener, etc.) are also specified in detail.

Follow these guidelines to avoid an unsafe repair:

- Sectioning (cut and joint) should usually be avoided except for mild steel outer panels and floor panels unless a specific procedure is provided in the body repair manual.
- However, depending on the type of vehicle damage, steel parts with a tensile strength ≤ 780 MPa may be sectioned provided **all** of the following conditions are met:
 - Sectioning must be done in a single-layer area of the part.
 - Multi-layer internal steel reinforcements and stiffeners must not be cut.
 - The repair is not in a load-bearing area such as engine, transmission, or suspension mounting points.
- Replace body structural components such as stiffeners, reinforcements, and other multi-layered steel parts as assemblies that match the replacement parts configuration.
- Approved welding methods are listed in the table on the right.
- Refer to the body repair manual section “Parts Sectioning (Cut and Joint) Guidelines” for complete information.



Sectioning Area Examples

Steel Part Tensile Strength (MPa)	Welding Method		
	Spot Weld	MAG Welding	
		Plug	Butt
<590	○	○	○
590	○	○	○
780	○	○	○
980	○	○	X
1500	○	X	X

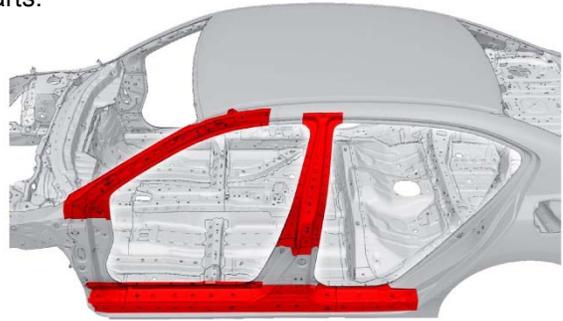
Welding Methods for Steel Parts
(○ = Approved X = Not Approved)

Welding Precautions and Information

REPAIRING 1,500 MPa STEEL PARTS

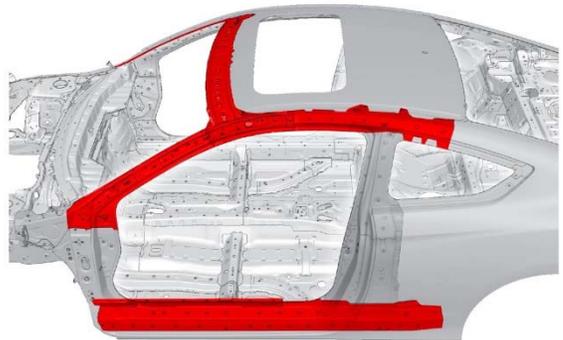
Observe these precautions when repairing 1,500 MPa steel parts:

- **Never** attempt to straighten damaged 1,500 MPa steel parts; they may crack.
- 1,500 MPa steel parts **must** be replaced at factory seams using squeeze-type resistance spot welding (STRSW). **Do not section these parts!**
- MIG brazed joints should be used **only** in locations not accessible by a spot welder.
- To assure adequate weld tensile strength, always manually 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** do MAG welding on 1,500 MPa steel. The heat generated during MAG welding will significantly reduce the strength and structural integrity of 1,500 MPa steel parts.
- The photo on the right shows tensile strength test results of MAG 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 “Repair Guidelines for High-Strength Steel Parts” in the body repair manual.

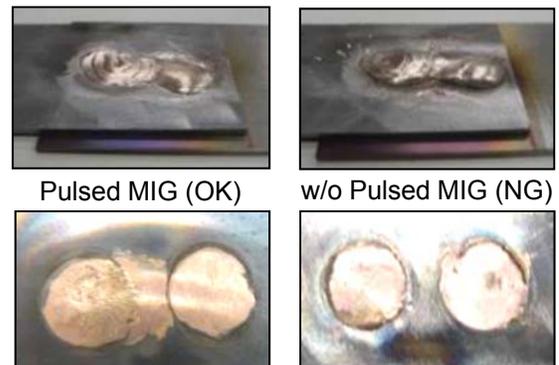


Tensile Test Results of MAG-Welded 1,500 MPa Steel

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 are critical to achieving adequate joint strength.
- A MIG welder with pulse control **must** be used. Refer to the equipment manufacturer’s instructions for welder voltage and current setup.
- The photos on the right show the difference in results between pulsed and non-pulsed MIG brazing.



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 requirements as follows:

- **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 (CO₂). It is considered active because the CO₂ undergoes a limited reaction with the molten weld pool.
- For MAG welding, 80/20 shielding gas (C20) is preferred. However, 75/25 (C25) is acceptable

The body repair manual specifies the weld types and locations for each body pane as follows:

- The welding wire used must have a tensile strength equal to or greater than the lowest tensile strength of the parts being welded. The conversion chart on the right shows the relationship of steel tensile strength (MPa) to the minimum welding wire tensile strength (ksi).
- Typical ER70S-6 MIG wire has a minimum tensile strength of 70 ksi (483 MPa). It can be used when welding up to 440 MPa steel parts. Refer to the diagrams shown below:

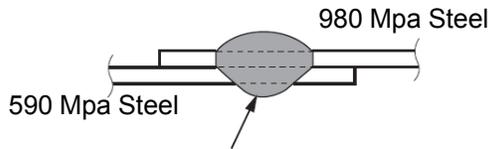
Important Information

Parts made of High-Strength Steel (590-980 MPa) must often be installed as a complete part. Section only according to published repair information and guidelines. 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.

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

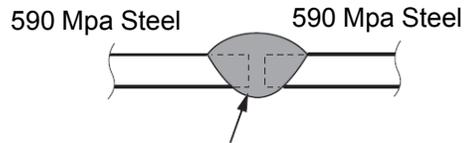
(1,000 psi = 1 ksi)

MAG Plug Welds



Wire tensile strength must be: ≥590 Mpa (≥86 ksi)

MAG Butt Welds



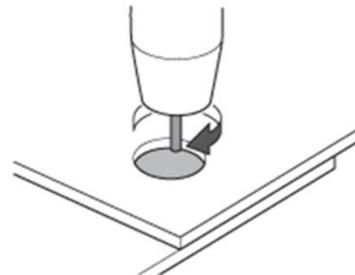
Wire tensile strength must be: ≥590 Mpa (≥86 ksi)

MAG PLUG WELDING GUIDELINES

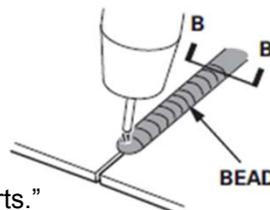
- MAG plug welding may be done when joining body components to 590–980 MPa steel parts.
- Follow the recommendations described in the basic body repair manual “Repair Guidelines for High-Strength Steel Parts” and “MAG Welding Conditions for High-Strength Steel (Except 1,500 MPa) Parts.”

MAG BUTT WELDING GUIDELINES

- MAG butt welding may be done **only** on steel parts with a tensile strength of 780 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 basic body repair manual “Repair Guidelines for High-Strength Steel Parts” and “MAG Welding Conditions for High-Strength Steel (Except 1,500 MPa) Parts.”



MAG Plug Welding



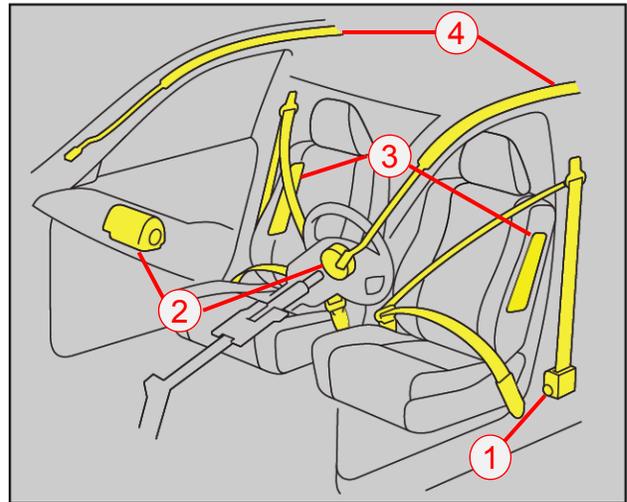
MAG Butt Welding

Airbag System Components and Repairs

AIRBAG SYSTEM COMPONENTS

The airbag system in this vehicle includes the following components that may deploy in a collision:

1. Driver and front passenger seat belt tensioners (may deploy independently from any airbags).
2. Driver and front passenger SRS airbags.
3. Side airbags mounted in the outer driver and front passenger seat-backs.
4. Left and right side curtain airbags mounted above the side windows under the headliner.



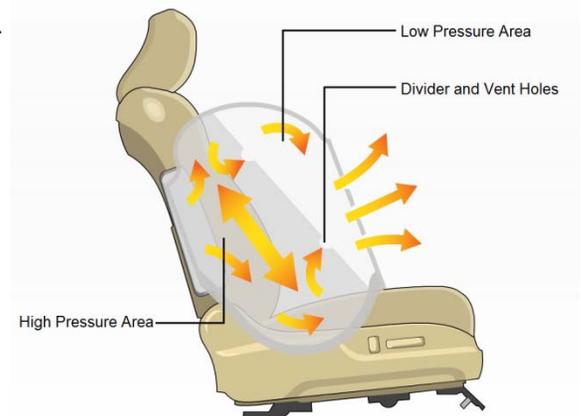
SMARTVENT™ SIDE AIRBAGS

This vehicle is equipped with SmartVent side airbag construction:

- This airbag design helps mitigate the risk of excessive airbag deployment force and risk of injury to smaller seat occupants.
- Eliminates the need for the Occupant Position Detection System (OPDS) sensor in the front passenger's seatback.

As with all side airbags, the following service precautions apply:

- Special seat covers and/or breakaway thread are used to insure proper deployment path.
- Damaged front seat covers should be replaced, not repaired.
- Do not install non-factory seat covers, because they may alter the airbag's intended deployment path.



SmartVent Side Airbag

AIRBAG SYSTEM INDICATORS

There are two indicators used for the airbag system.

Supplemental Restraint System (SRS) Indicator

When you turn the ignition to ON, this indicator should come on and then turn off after about 6 seconds.

- If the SRS indicator does not go off or does not come on at all, there is a problem with the system.
- DTCs must be read and cleared using the HDS (or equivalent) scan tool. Contact a Honda dealer for assistance if necessary.
- If a vehicle is sent to the dealer for airbag system repair or troubleshooting, include a copy of the repair estimate with part numbers and the source for any replaced airbag system parts.



SRS Indicator

PASSENGER AIRBAG OFF Indicator

The indicator comes on to alert you that the passenger's front airbag has been turned off.

- This occurs when the front passenger's weight sensors detect about 65 lb. (29 kg) or less, the weight of an infant or small child on the seat.
- If the indicator comes on with no front passenger and no objects on the seat or with an adult occupying the seat, something may be interfering with the seat weight sensors or there may be a problem with the system. Contact a Honda dealer for assistance if necessary.



PASSENGER AIRBAG OFF Indicator

AIRBAG SYSTEM REPAIRS REQUIRED AFTER DEPLOYMENT

To restore proper function and allow DTCs to be cleared, the airbag system **must** be repaired as specified in the electronic service manual. Refer to "Component Replacement/Inspection After Deployment" for complete information.

- **Do not** install used, refurbished, or modified airbag system parts!
- When making airbag system repairs, only use new genuine replacement parts, which are manufactured to the same standards and quality as the original parts.
- To ensure the correct replacement airbag system parts are installed, provide the VIN when ordering parts. Compare the part numbers on the new and removed parts to make sure they match.

AIRBAG SYSTEM ELECTRICAL REPAIRS

Except when doing electrical inspections that require battery power, always turn the ignition to OFF, disconnect the negative battery cable, then wait at least 3 minutes before starting work.

- For easier identification, electrical connectors that contain only airbag system wiring are yellow in color.
- Many harnesses that contain primarily airbag wiring are also wrapped in yellow tape.
- Airbag system wiring that runs in a common harness, such as a floor harness, is generally not marked.
- **Never** attempt to modify, splice, or repair airbag system wiring. If any part of the airbag system wiring is damaged, replace the affected wiring harness(es).

NOTE: Refer to the electronic service manual for complete restraint systems operation, diagnostic, and repair information.



Airbag System Connectors & Harness (Yellow)

Electrical Repair Information

TIRE PRESSURE MONITORING SYSTEM (TPMS)

This vehicle is equipped with an indirect TPMS. It uses the VSA wheel speed sensors to monitor and compare tire characteristics while driving to determine if one or more tires are significantly underinflated.

The low tire pressure/TPMS indicator blinks and/or comes on if:

- The air pressure is too low in one or more tires.
- The system requires calibration or is calibrating.
- The compact spare tire is mounted.
- There is a TPMS problem.



Low Tire Pressure/TPMS Indicator

TPMS calibration must be started every time you:

- Adjust the pressure in one or more tires
- Rotate the tires
- Replace one or more tires
- Replace or update the VSA-modulator control unit.

Refer to “TPMS Calibration ” in the service or owner’s manual for complete information.

- Contact a Honda dealer for assistance if necessary.

REPLACEABLE HEADLIGHT BRACKETS

If any of the headlight assembly attachment brackets are broken, replacement brackets are available as service parts.

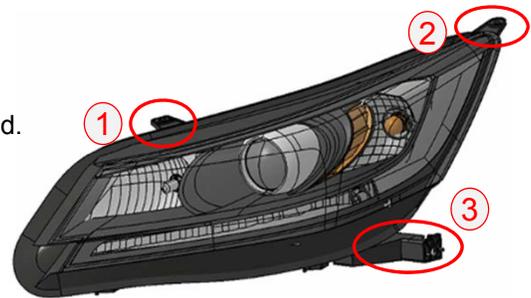
A broken headlight assembly can be repaired using service brackets provided it meets the following criteria:

- No damage to the headlight assembly
- Sealing of the headlight lens and headlight housing is maintained.

These service brackets are available:

1. Upper front bracket
2. Upper rear bracket
3. Lower bracket

Refer to “Headlight Bracket Replacement” in the body repair manual for complete information.

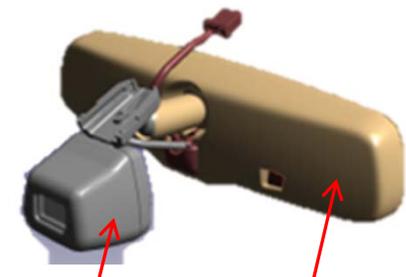


Service Headlight Brackets

AUTO HIGH BEAM SYSTEM

Touring models are equipped with this system. It uses a dedicated camera, mounted under a cover in front of the rearview mirror, to monitor the area ahead of the vehicle and automatically changes the low beam headlights to high beams when necessary.

- The camera is separate from the multipurpose camera used for Honda Sensing™ (FCW/LDW/LKAS) functions.
- A green Auto High Beam indicator lights up in the gauge control module when the system is operational
- If the windshield area around the camera is dirty, the auto high beam system may not operate.
- Do not attach objects, decals, or tint film in the area around the camera.
- Warning messages will appear for system problems.

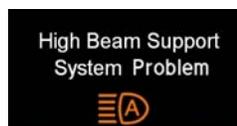


Auto High Beam Camera

Rearview Mirror



Auto High Beam Indicator



Auto High Beam Warning Messages

SYSTEMS THAT MAY REQUIRE DEALER ASSISTANCE WITH AIMING

Some models may be equipped with one or more of the following systems that require aiming after collision repairs. Special tools are required to complete the aiming procedures. Contact a Honda dealer for assistance.

LaneWatch™:

LaneWatch uses a camera and the center display to help drivers recognize objects in the blind spot of the passenger side door mirror.

The LaneWatch camera must be aimed after one or more of the following procedures are done:

- LaneWatch camera removal or replacement
- Door mirror removal or replacement
- Door panel removal or replacement
- Door panel body repair

LaneWatch does not set DTCs. Troubleshooting and camera aiming are done using the navigation system or center display self-diagnostics. LaneWatch does not have a malfunction indicator.



LaneWatch Camera

Forward Collision Warning and Lane Departure Warning (FCW/LDW):

The multipurpose camera unit must be re-aimed in these instances:

- The camera unit is removed or replaced.
- The windshield is removed or replaced.

If the aiming is incomplete, the FCW and LDW indicators come on and blink. The FCW and LDW warning messages may also appear.



LDW Indicator



FCW/CMBS Indicator



Adaptive Cruise Control (ACC) and Collision Mitigating Braking System (CMBS):

The millimeter wave radar for the ACC/CMBS must be re-aimed if:

- The radar unit is removed or replaced.
- The radar unit's mounting area was damaged.
- If the aiming process is not completed, or the electronic service manual procedure is not followed, the ACC indicator changes to amber and a warning message may also appear.



Lane Keeping Assist System (LKAS) System:

The multipurpose camera unit must be re-aimed in these instances:

- The camera/control unit is removed or replaced.
- The windshield is removed or replaced.
- If the aiming is not done or is not completed, the LKAS indicator changes to amber and blinks. A warning message may also appear.



Windshield Replacement On FCW/LDW/LKAS-Equipped Vehicles:

- Windshield damage within the multipurpose camera unit's field of vision can cause any these systems to operate abnormally.
- Only a genuine Honda replacement windshield should be installed. Installing an aftermarket replacement windshield may also cause abnormal operation.

ELECTRICAL PIGTAIL AND CONNECTOR REPAIR

- Disconnect the vehicle's battery before doing any welding or electrical repairs. Refer to "12 Volt Battery Terminal Disconnection and Reconnection" in the electronic service manual for more information.
- Certain front and rear electrical connectors subject to collision damage may be repaired using pigtails and connectors listed in the ELECTRICAL CONNECTORS illustrations in the parts catalog (example shown here).
- Pigtails attach to the vehicle wiring using special crimp-and-seal terminal joints. After crimping, the joints are heated using a heat gun to seal out the environment.
- Repair pigtails come in a limited range of colors that usually do not match the vehicle's wiring. Pay close attention during repairs to ensure correct locations.
- Vehicle wiring schematics service information can be found in the electrical wiring diagrams (EWD).
- If wiring is damaged and a repair pigtail or connector is not available, replace the affected harness.
- **Never** attempt to modify, splice, or repair airbag system wiring.

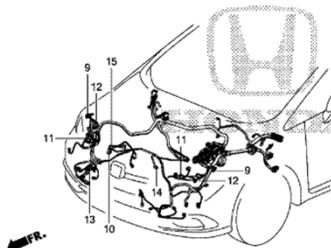
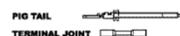


FIG. NO.	ILLUSTRATION	LOCATION	COUPLER		TERMINAL JOINT
			SIZE	REF. No.	
9		FIL. TURN	0.5	2	16
10		HORN	0.5	5	16
11		HEADLIGHT (HORN)	1.25	4	17
12		HEADLIGHT (LOW)	0.5	3	16
12		HEADLIGHT (LOW)	1.25	4	17
13		WASHER MOTOR	1.25	1	17
14		RADIATOR FAN MOTOR	1.25	6	17
14		RADIATOR FAN MOTOR	2.0	7	18
15		CONDENSER FAN MOTOR	1.25	8	17

ELECTRICAL GROUND WIRE PROTECTION

- Painting over electrical ground locations may cause electrical systems, such as vehicle stability assist (VSA), to malfunction and set DTCs that may be difficult to diagnose.
- Protect the ground wire and the ground wire mounting hole threads with a bolt or silicone plug when priming or painting.

