GENUINE PARTS

Ford Go Further

TF Ford Kuga 2013

BODY REPAIR SUMMARY

INTRODUCTION

The purpose of this document is to provide vehicle body specialists with an overview of the Supplemental Restraint System (SRS) and important information about the body construction of the vehicle. Key vehicle body dimension information is also included.

Please note that this body repair summary is intended as an overview of the SRS and the body construction of the vehicle and as such is not comprehensive. For comprehensive information, the Workshop Manual, which is available from an Authorised Ford Dealer, should be consulted.

TF Ford Kuga

The TF generation Ford Kuga is a 5-door crossover vehicle that seats 5 people and is available in three specification levels, Ambiente, Trend and Titanium. It is available with a fuel efficient 1.6L EcoBoost turbo charged petrol engine or a 2.0L turbo charged diesel. FWD is available on the Ambiente only with a 6 speed manual transmission. Automatic transmissions are standard on Ambiente, Trend and Titanium AWD variants.

The Ford Kuga has a comprehensive array of safety equipment. ABS braking and Dynamic Stability Control (DSC) is fitted as standard across the range. Side curtain airbags are standard across the range. The innovative design of the Ford Kuga offers a high vehicle ride height as well as an elevated seat position.

The body construction incorporates crumple zones which are designed to buckle at strategically placed weak points to transfer crash loads and maintain the cabin space of the passenger cell.

Further engineered safety features include collapsible steering columns, breakaway pedals and specially designed door trims for side impact absorption.

HEALTH AND SAFETY

Appropriate repair methods and carrying out repairs correctly are particularly important for the operating safety of vehicles and for the safety of people. All relevant regulations governing Health and Safety at Work must be complied with during any repairs.

The various body areas are subject to very high forces during realignment work. Should any component suddenly become detached during this process, there is a very great danger of injury. For this reason, pulling chains and pulling shackles must be secured with arrester cables.

Note: Please refer to the TF Ford Kuga Workshop Manual (available to purchase from your Authorised Ford Dealer) for detailed instructions and precautions regarding the repair of the vehicle's Supplementry Restraint System.

Some special instructions must be followed when working on airbag systems:

Note: After disconnecting the power supply and before performing further work, a wait time of 15 minutes must be maintained. Work on airbag systems may only be performed by persons who have a relevant certificate of competency.

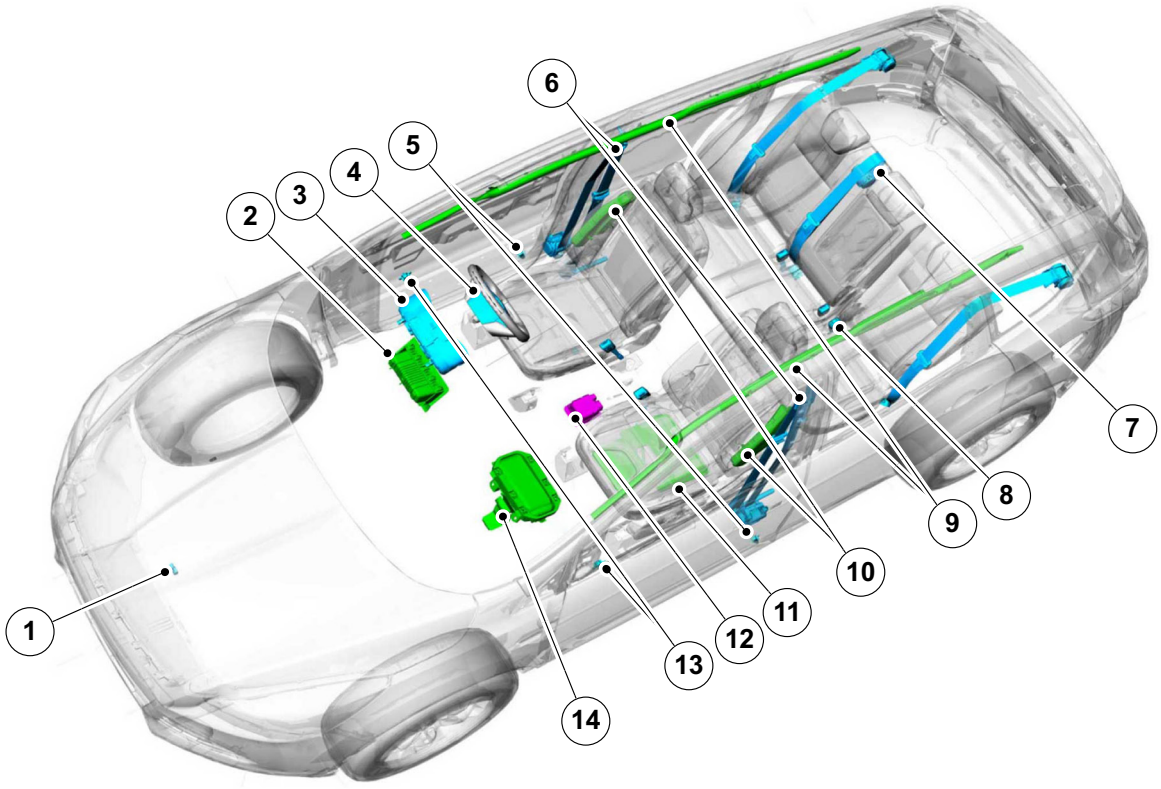
- Always stand to the side of the airbag when removing or installing an airbag.
- Always store an airbag or an airbag/steering wheel with the airbag side pointing upwards and in a safe place.
- Only install the airbag again when the vehicle is fully repaired and the complete electrical system has been tested.
- Take into account the location of side airbags.

Pay attention to the following points:

- Disconnect the battery negative clamp and cover the battery terminal.
- Disconnect the electrical connector at the airbag control module.
- If welding is to be performed directly near a control module, it must be removed beforehand.
- Never connect the negative cable of the welder near an airbag or a control module.
- Connect the negative cable of the welder close to the location of the weld.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

Component location



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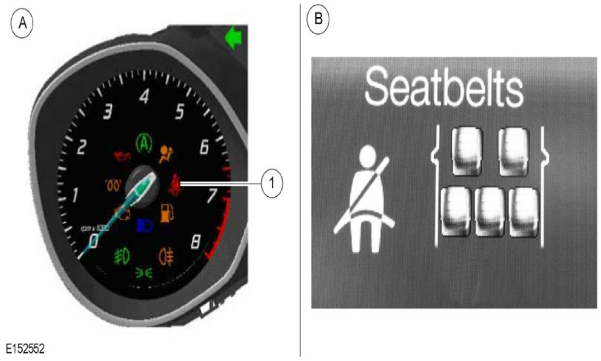
Item	Description
1	Front impact sensor
2	Knee air bag
3	Instrument cluster with airbag telltale and belt warning display
4	Driver Air bag
5	Acceleration sensor
6	Safety belt retractor
7	Safety belt retractor
8	Safety belt switch
9	Side air curtain
10	Side air bag
11	Seat occupant sensor (passenger side only)
12	RCM (restraints control module)
13	Pressure sensor
14	Front passenger airbag

General Overview

The RCM conducts a self-diagnosis as soon as the ignition is switched on. All components of the safety restraint system are checked, except the front safety belt buckle switches and the seat occupancy sensor on the passenger side. If a fault is present, the airbag telltale is activated.



Pressure sensors which are designed to react fast, are used in the front doors of this vehicle. Because of the higher ride height of the vehicle, the force appears above the rocker panel and its kinetic energy is firstly directed into the doors. Only then do the side impact sensors detect a movement.

If there is a side impact, the door outer skin is pressed in and an excess pressure is produced in the door. If the pressure change exceeds a certain value, then the sensor transmits a corresponding signal to the air bag control module.

The sensor requires a suitable location against any situations when misapplication would occur. The front door could accidentally be opened against a bollard, or a ball could be kicked against a door. In order that no undesirable triggering can occur, a threshold value has been defined which lies above these cases of incorrect use; in addition, the triggering signal must be confirmed by the accelerometer in the side impact sensor or at the RCM (restraints control module).

Use of the pressure sensors has achieved a saving in time of 2 milliseconds.

Pressure sensor and accelerometer

SRS COMPONENT REPLACEMENT IN THE EVENT OF DEPLOYMENT

CAUTION

Safety with SRS components is paramount.

Note: Please refer to the TF Ford Kuga Workshop Manual (available from your Authorised Ford Dealer) for detailed instructions and precautions regarding the repair of the vehicle's Supplementry Restraint System.

When any deployable device (driver airbag, passenger airbag, side airbag, safety belt pretensioner, etc.) or combination of devices are deployed and/or the Restraint Control Module (RCM) has stored Diagnostic Trouble Codes (DTC's) in memory, the repair of the vehicle's Supplemental Restraint System (SRS) is to include the removal of all deployed devices and the installation of new deployable devices.

For further assistance on DTC's contact your Authorised Ford Dealer.

When any damage to the impact sensor mounting points or mounting hardware has occurred, repair or install new mounting points and mounting hardware as needed.

During the repair process, inspect the entire vehicle for damage, including the following components:

- Steering column and clock spring.
- Instrument panel knee bolsters and mounting points.
- Instrument panel braces and brackets.
- Instrument panel and mounting points.
- Seats and seat mounting points.
- Safety belts, safety belt buckles and safety belt retractors, SRS wiring, wiring harnesses, and connectors.

After a collision where the front airbag(s) and seat belt tensioners have deployed, replace the following components:

- RCM unit.
- Deployed airbag module(s).
- Seat belt pretensioners.
- Seat belt outer lap tensioners.
- Front impact severity sensor

After a collision where the side airbag(s) have deployed, replace the following components:

- RCM unit.
- Deployed side airbag module(s).
- B-pillar side impact sensor(s).
- Seat trim(s).

Airbag Reconnect Checklist

The checklist below should be completed following diagnosis or repair of any airbag system concern:

- All restraint system diagnostic tools removed?
- All in-seat harness connectors connected?
- All airbag modules connected?
- Safety belt pretensioner connectors connected?
- RCM connected?
- All sensors (front and side impact sensors) connected?
- Battery connected?

BODY CONSTRUCTION

The body consists of the following:

High-Strength Low Alloy (HSLA), ultra high-strength steel (UHSS) and mild steels

Roof outer panel constructed of mild steel

Steel hood

Steel luggage compartment lid

Body side outer panels constructed of mild steel

Dual-phase steel (DP) in select body structure components

Bolted, removable front fenders, hinged doors and hood

Dent resistant steel fenders

Ultra high-strength steel (UHSS) front and rear bumper beam

Underbody components constructed of mild, dual-phase and high-strength steels

Mastic pads used on floor pan for sound deadening

For recommended metal repair guidelines and recommendations, refer to the following illustrations and:

For additional information, refer to the TF Ford Kuga Workshop Manual.

Item	Steel Type	Color
1	Mild Steel	Yellow
2	Bake Hardened Steel (BH)	Light Blue
3	Solid Solution Strength	Pink
4	High Strength Low Alloy (HSLA)	Dark Blue
5	Dual Phase (DP) 500, 600 Class Steel	Green
6	Dual Phase (DP) 700, 800, 900, 1000 Class Steel	Fuchsia
7	Laminate Steel	Teal
8	Ultra High Strength Steel (UHSS) Martensitic, Boron	Red
9	Transformation Induced Plasticity Steel (TRIP)	Gold
10	Aluminum	Purple

Steel Type Legend

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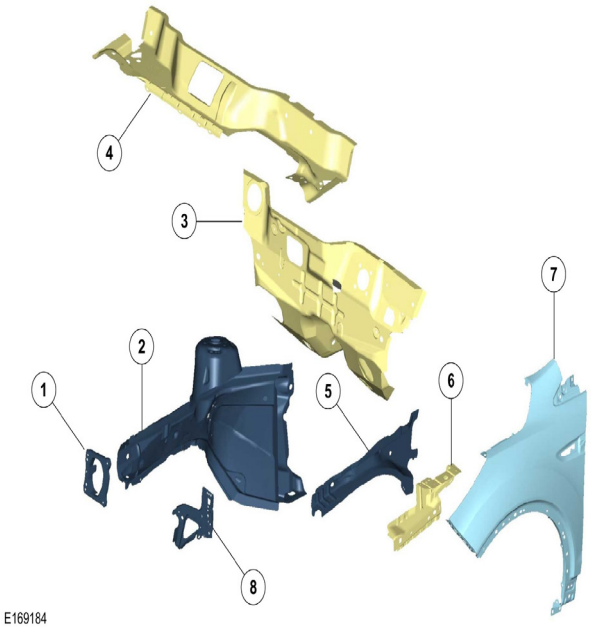
Front Structure Components

NOTE: LH (left-hand) side shown, RH (right-hand) side similar.



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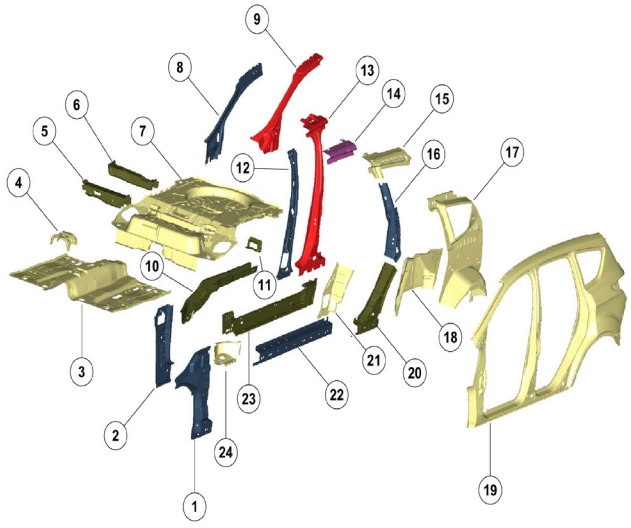
Item	Description	Steel Type
1	Bumper bracket	High-Strength Low Alloy (HSLA) steel
2	Frame rail and apron assembly	High-Strength Low Alloy (HSLA) steel
3	Dash panel	Mild steel
4	Plenum	Mild steel
5	Fender support	High-Strength Low Alloy (HSLA) steel
6	Fender apron reinforcement	Mild steel
7	Fender	Bake Hardened Steel (BH)
8	Fender apron bracket	High-Strength Low Alloy (HSLA) steel

Floor and Body Side Components

NOTE: LH side shown, RH side similar.



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Item	Description	Steel Type
1	A-pillar	High-Strength Low Alloy (HSLA) steel
2	A-pillar inner reinforcement	High-Strength Low Alloy (HSLA) steel
3	Front floor pan	Mild steel
4	Floor pan reinforcement	Mild steel
5	Front floor crossmember (forward)	Dual Phase Steel (DP) 600 steel
6	Front floor crossmember (rear)	Dual Phase Steel (DP) 600 steel
7	Rear floor pan	Mild steel
8	Windshield pillar inner	High-Strength Low Alloy (HSLA) steel
9	Windshield pillar outer	Boron steel
10	Rear frame rail	Dual Phase Steel (DP) 500 steel

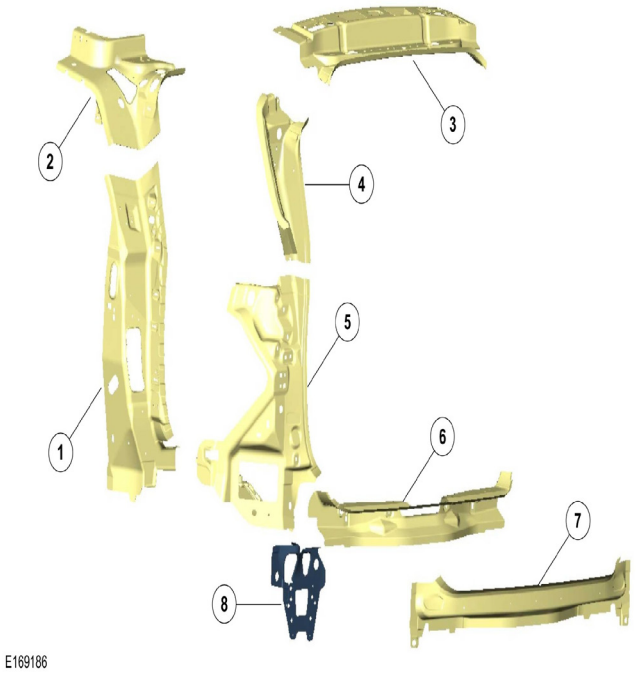
Floor and Body Side Components

NOTE: LH side shown, RH side similar.

Item	Description	Steel Type
11	Rear bumper bracket	Dual Phase Steel (DP) 500 steel
12	B-pillar inner	High-Strength Low Alloy (HSLA) steel
13	B-pillar outer	Boron steel
14	Roof reinforcement	Dual Phase Steel (DP) 780 steel
15	Liftgate hinge reinforcement	Mild steel
16	Upper body support to wheel house	High-Strength Low Alloy (HSLA) steel
17	Inner body side panel	Mild steel
18	Outer wheel house	Mild steel
19	Outer body uni-side	Mild steel
20	Lower body support to wheel house	Dual Phase Steel (DP) 600 steel
21	Lower body panel reinforcement	Mild steel
22	Rocker panel reinforcement	High-Strength Low Alloy (HSLA) steel
23	Floor inner side member	Dual Phase Steel (DP) 600 steel
24	Floor side member filler	Mild steel

Rear Components

NOTE: LH side shown, RH side similar.



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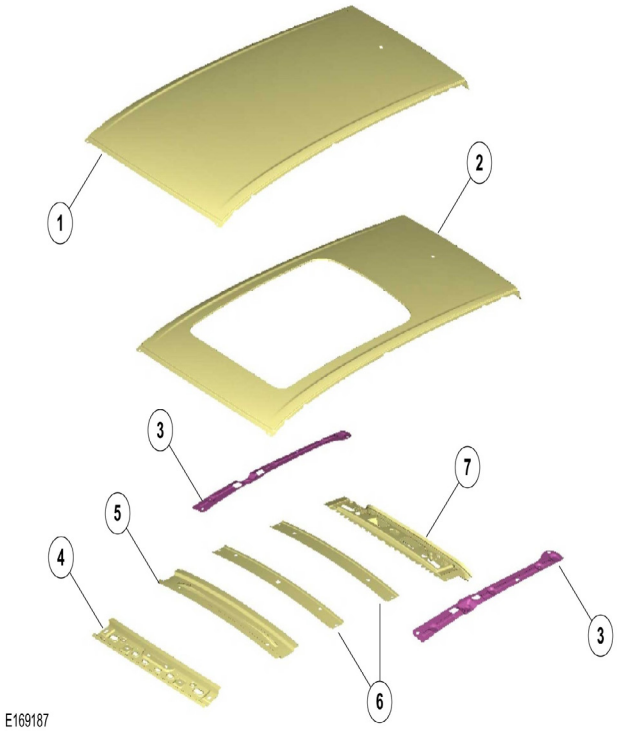
Item	Description	Steel Type
1	Rear corner lower panel	Mild steel
2	Rear corner upper panel	Mild steel
3	Roof rear header panel	Mild steel
4	Drain trough panel	Mild steel
5	Rear opening reinforcement	Mild steel
6	Rear lower panel reinforcement	Mild steel
7	Rear lower back panel	Mild steel
8	Rear bumper anchor plate	High-Strength Low Alloy (HSLA) steel

Roof Panel(s)



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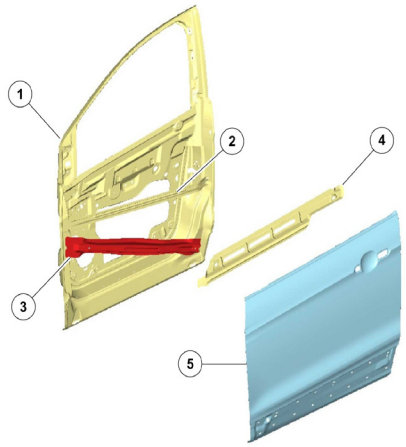
Item	Description	Steel Type
1	Roof panel without roof opening panel	Mild steel
2	Roof panel with roof opening panel	Mild steel
3	Roof panel reinforcement	Dual Phase Steel (DP) 780 steel
4	Windshield header assembly	High-Strength Low Alloy (HSLA) 350 steel
5	Roof bow (less moonroof)	Mild steel
6	Roof bow	Mild steel
7	Rear header assembly	Mild steel

Front Door

NOTE: LH side shown, RH side similar.



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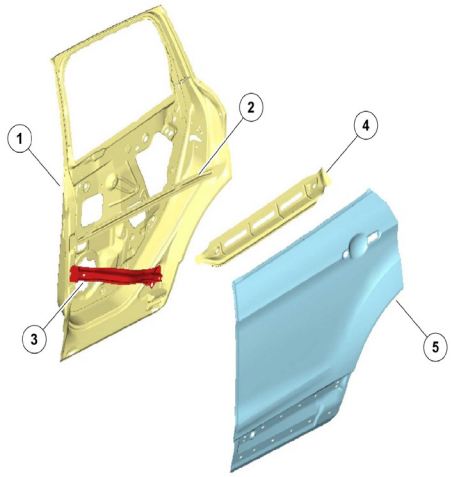
Item	Description	Steel Type
1	Front door shell assembly	Mild steel
2	Front door anti-flutter beam	Mild steel
3	Front door intrusion beam	Boron steel
4	Front door outer panel reinforcement	Mild steel
5	Front door outer panel	Bake Hardened Steel (BH) 250 steel

Rear Door

NOTE: LH side shown, RH side similar.

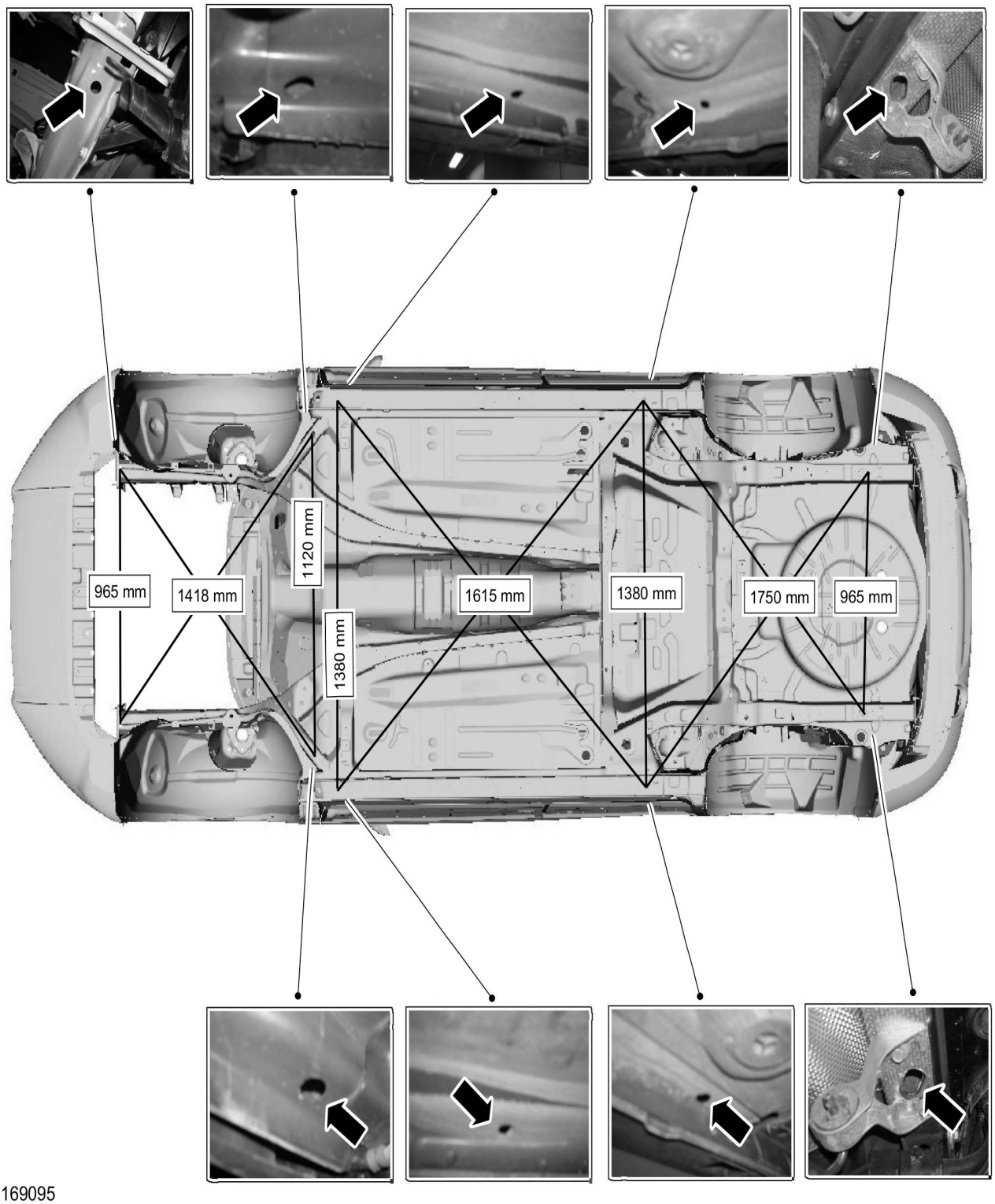


E169189

Item	Description	Steel Type
1	Rear door shell assembly	Mild steel
2	Rear door anti-flutter beam	Mild steel
3	Rear door intrusion beam	Boron steel
4	Rear door outer panel reinforcement	Mild steel
5	Rear door outer panel	Bake Hardened Steel (BH) 250 steel

Under Body Measurements

NOTE: All measurements are on center unless otherwise indicated.



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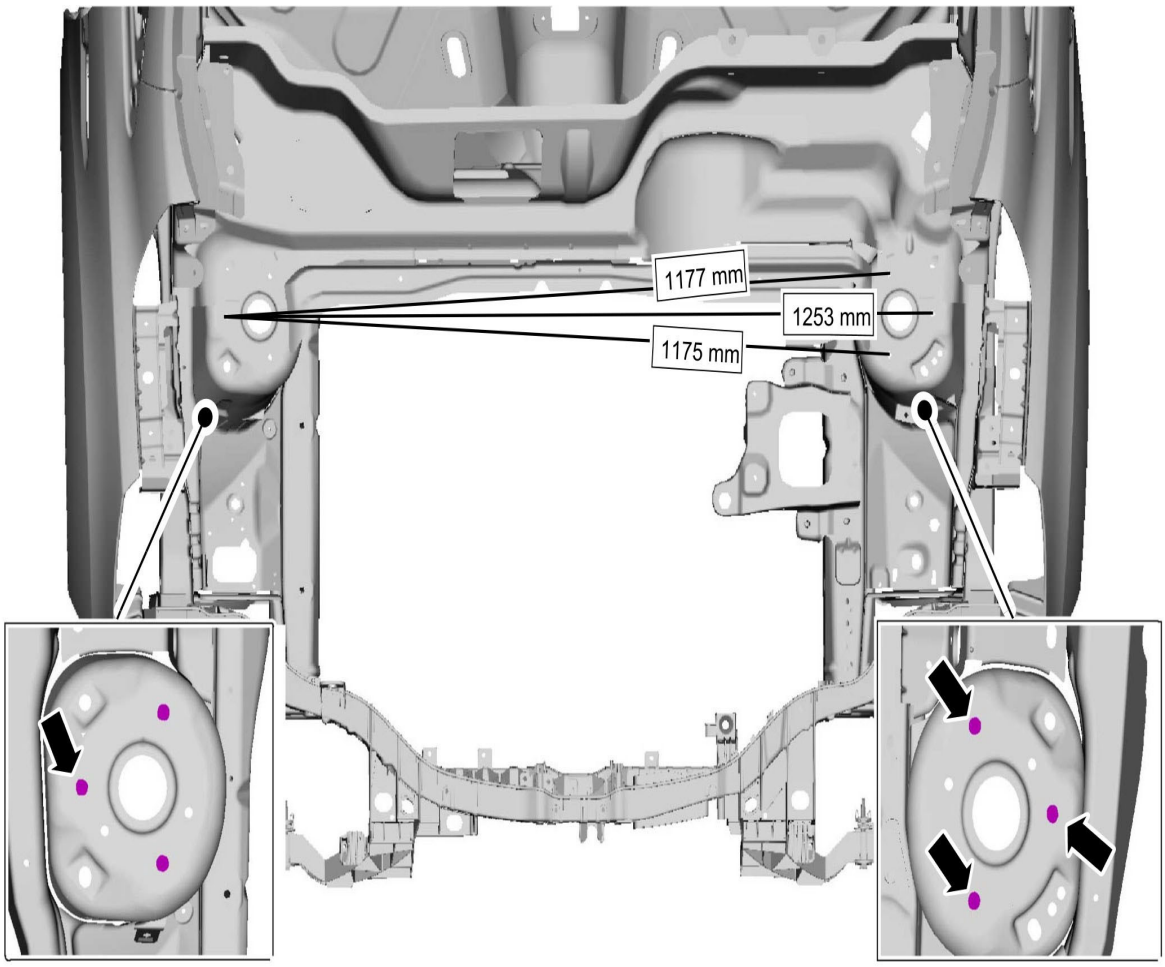
Under Hood Dimensions

NOTE: All measurements are on center unless otherwise indicated.



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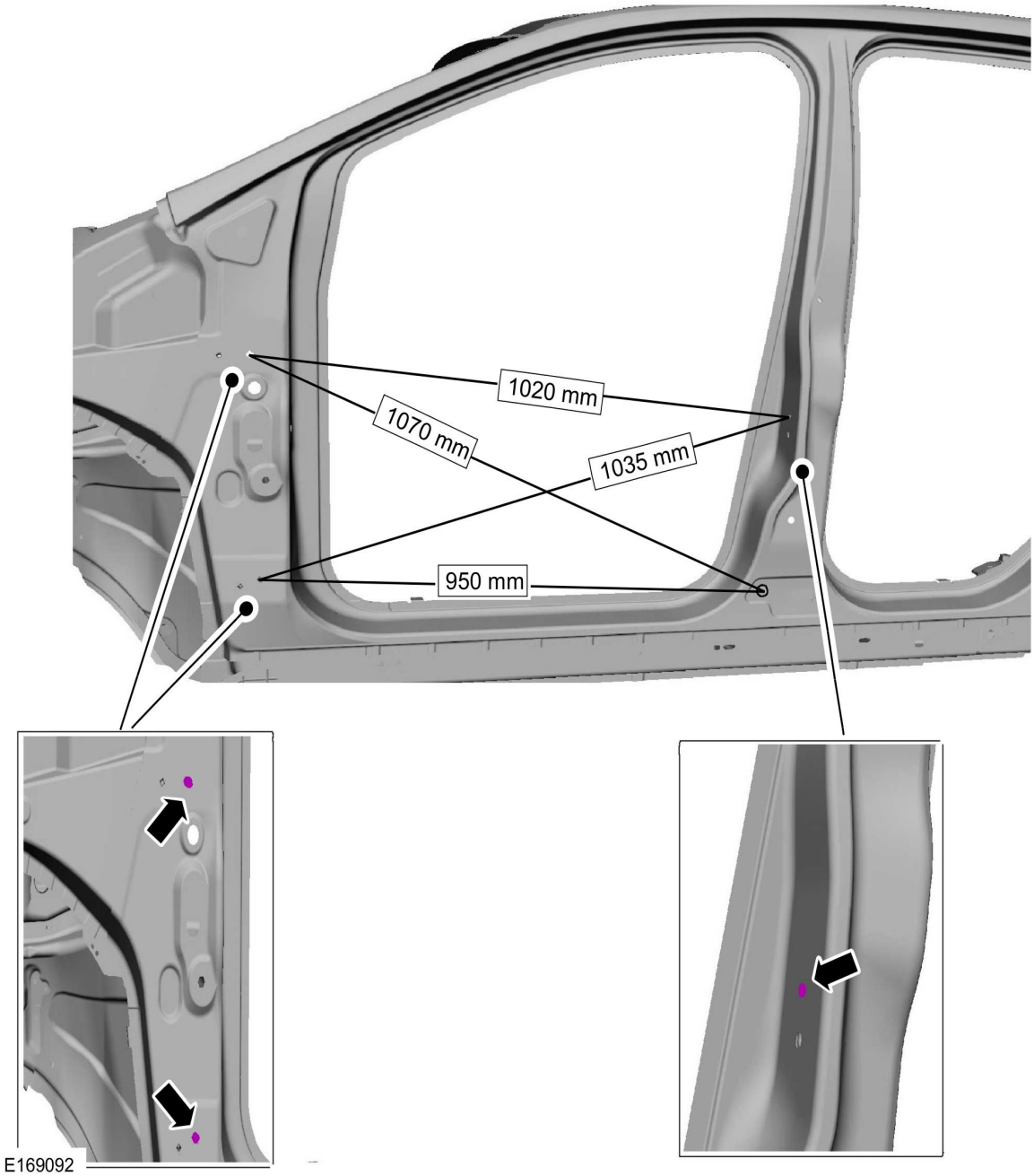
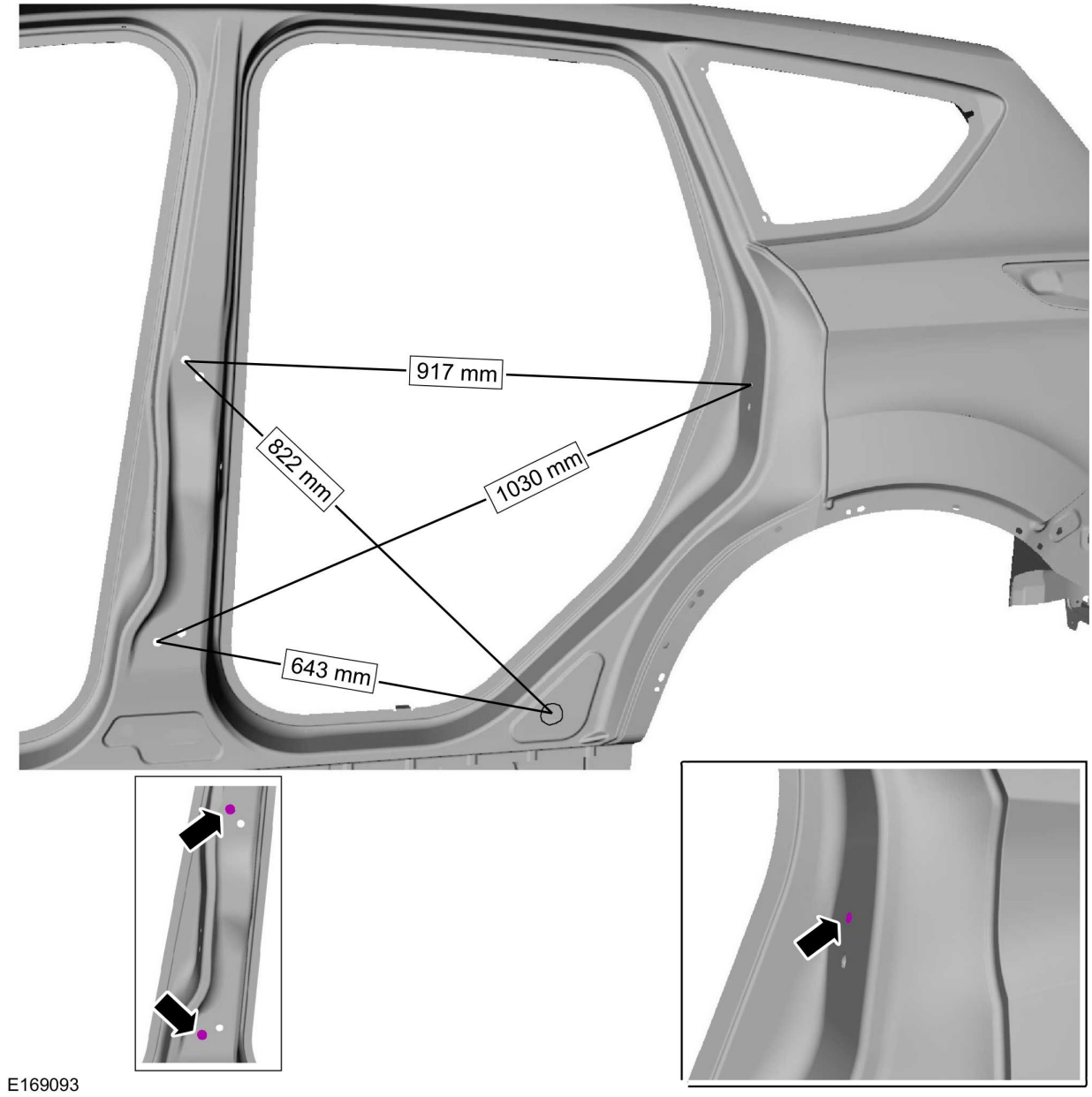
Front Door Opening Dimensions

NOTE: All measurements are on center unless otherwise indicated.



Rear Door Opening Dimensions

NOTE: All measurements are on center unless otherwise indicated.



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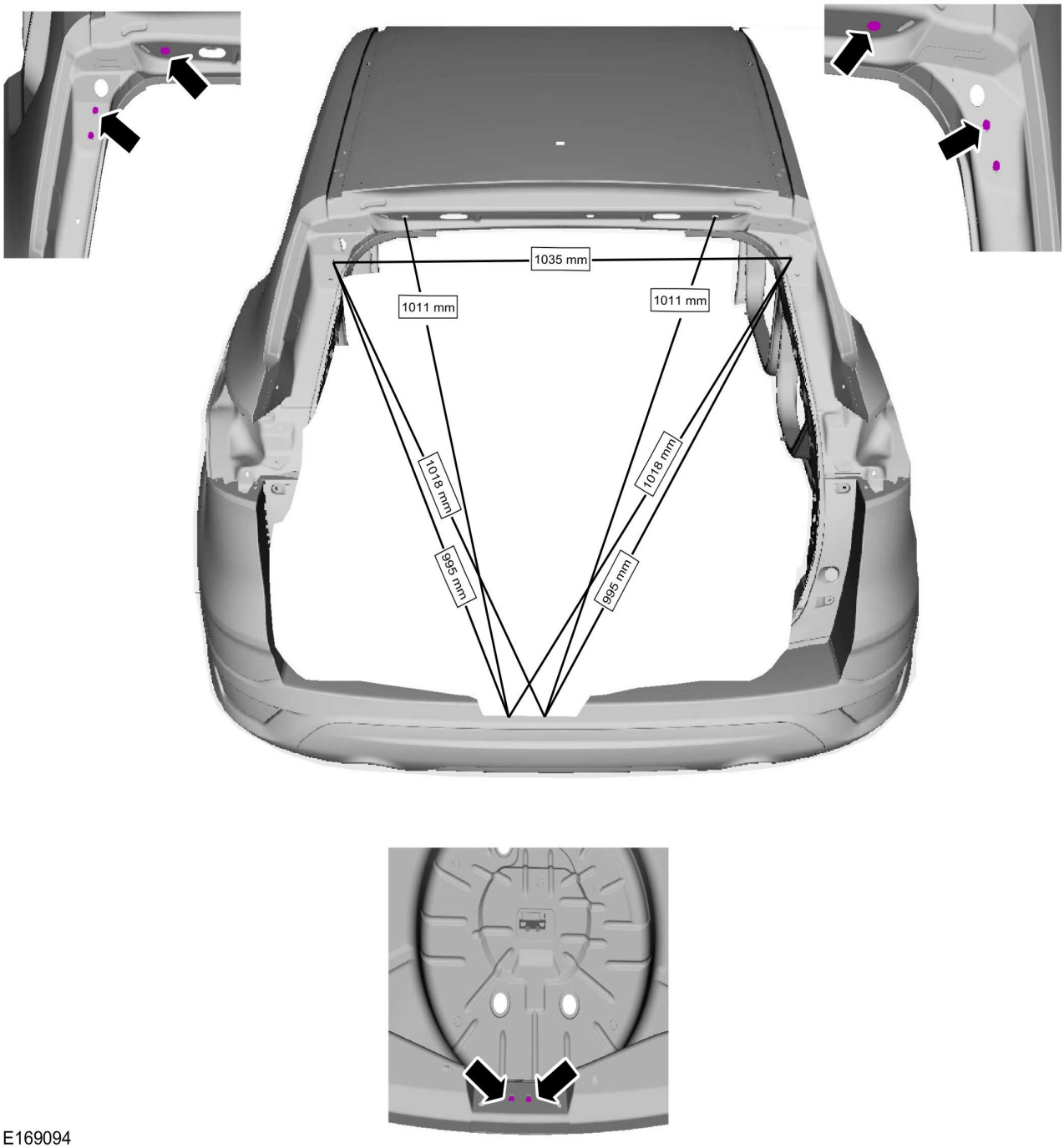
Liftgate Opening Dimensions

NOTE: All measurements are on center unless otherwise indicated.



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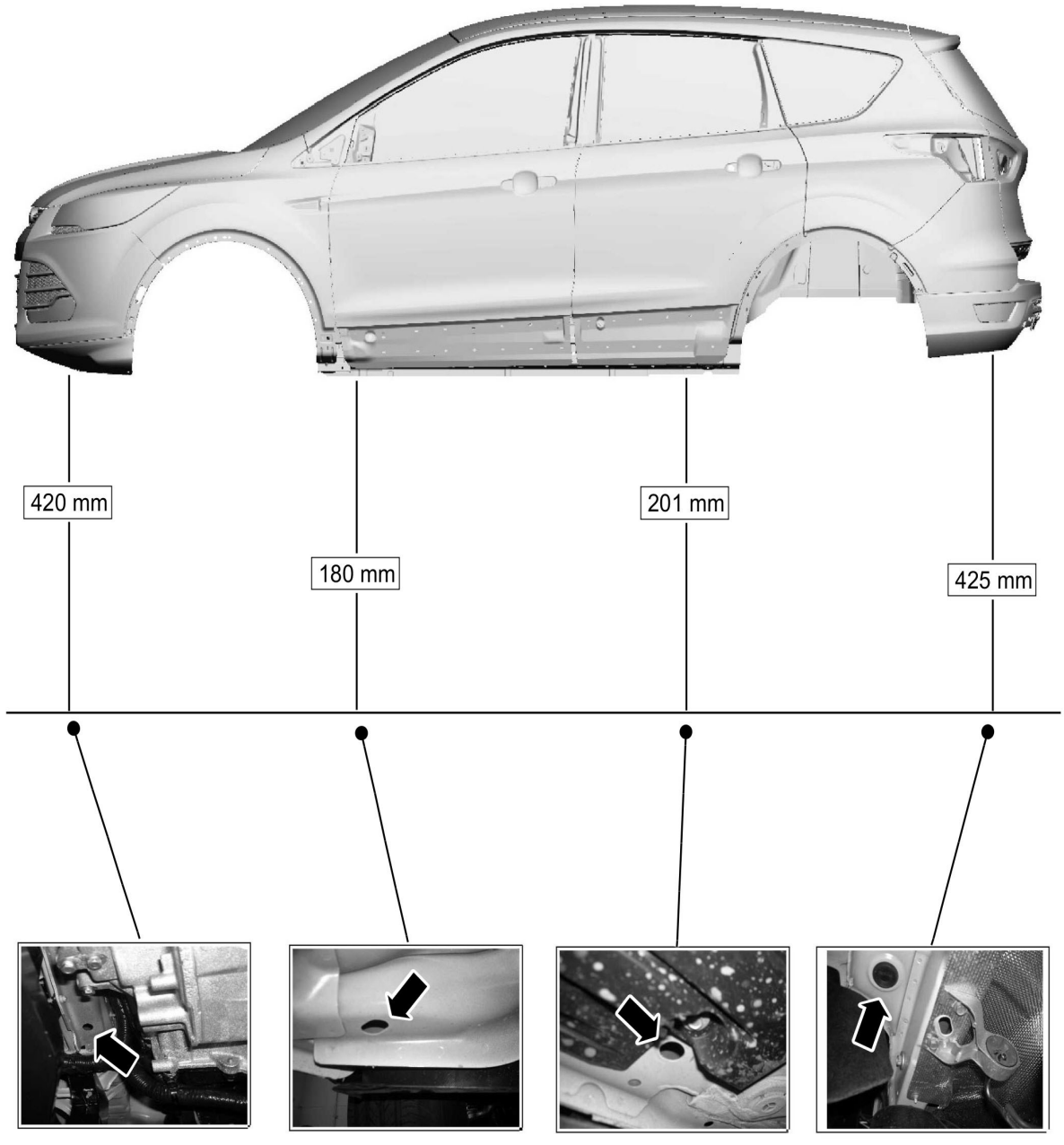
Datum Height Dimensions

NOTE: All other measurements are on center.



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