



SUBARU®

Confidence in Motion

Technician Reference Booklet

**2013 XV CROSSTREK
INTRODUCTION
Self Study Training**



MSA5P001SS

September 2012

***This Technical Reference Booklet (TRB) is designed to be used in a classroom environment or as a guide for self study.
The TRB is not intended to be used as a supplement or substitute for the Subaru Service Manual. Always consult the appropriate Service Manual when performing any diagnostics, maintenance or repair to any Subaru vehicle.***

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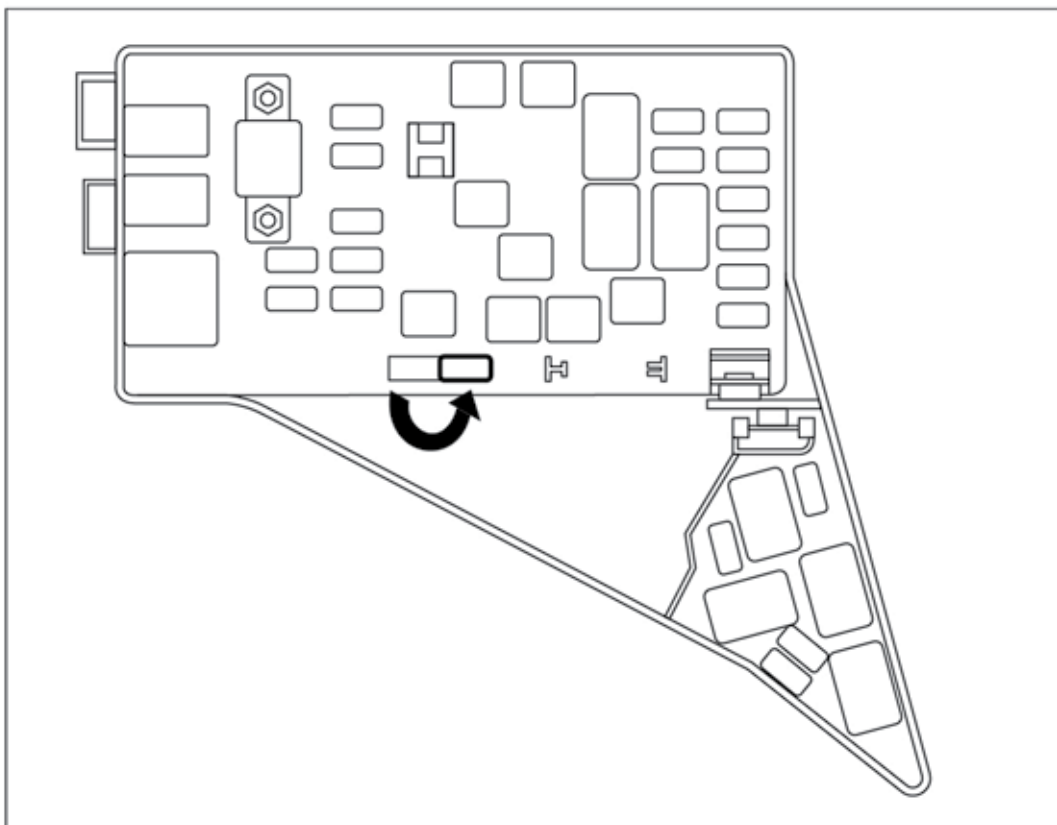
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Install during P.D.I. process

Backup fuse (20A) remains removed to prevent the battery consumption when vehicles are delivered. Install the backup fuse by following the illustration. Installing the backup fuse deactivates delivery mode.

The Backup/Power Supply fuse is located in the main fuse box (Engine compartment).



FUSE BOX (ENGINE COMPARTMENT)

2013 XV Crosstrek Introduction



2013 XV CROSSTREK

The 2013 Subaru XV Crosstrek is a new vehicle design utilizing many of the new technologies and systems introduced on the 2012 Impreza.

Classified as a compact crossover utility vehicle, the XV Crosstrek provides adventurous driving potential with symmetrical all wheel drive, high ground clearance, tight turning radius, and the lowest center of gravity of the crossover class of vehicles.

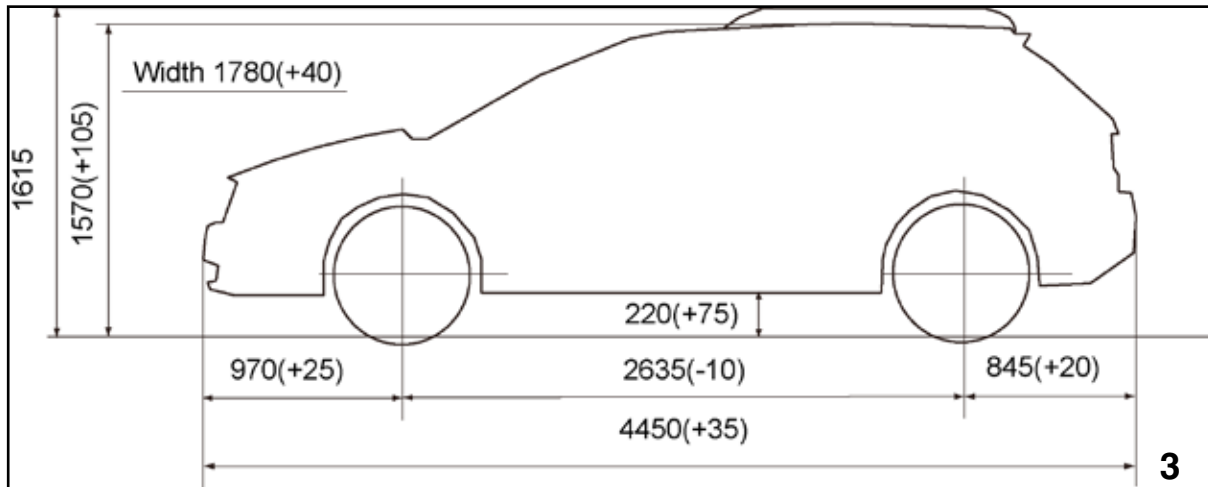
XV Crosstrek is equipped with the FB 2.0 liter engine with a Continuously Variable Transmission (Generation 2) or a 5 speed manual transmission. Incline Start Assist is standard equipment for both transmission types.

- Horse power 148 @ 6200 RPM
- Torque 145 LB-FT @ 4200 RPM
- Compression Ratio: 10.5 to 1
- Type of fuel required: Regular 87 Octane
- Fuel Capacity: 15.9 gallons
- Models include the 2.0i Limited and 2.0i Premium.

Dimensions

Compared to the Impreza 5-door model, the XV Crosstrek model has extended ground clearance by 75mm. The extension of the ground clearance is achieved by changes in suspension geometry (+50mm) and by adopting a bigger size tire (+25mm).

Also, tread is extended by 20mm.



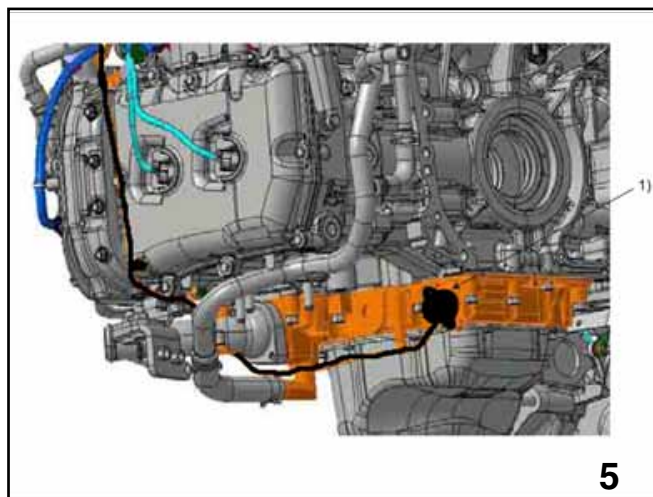
DIMENSIONS OF 2013 XV CROSSTREK

Engine features include:

- Chain Driven Valve System
- Dual Variable Valve Timing
- Port Fuel Injection
- Water Cooled EGR
- Oil Level Switch



ENGINE



OIL LEVEL SWITCH

CVT Fluid (CVTF)

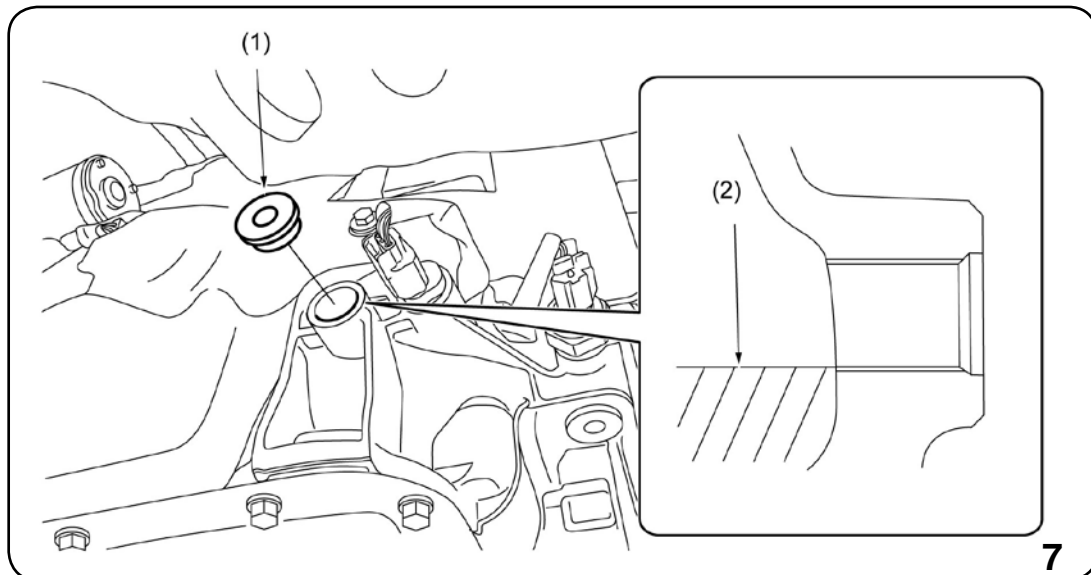


CVT GENERATION 2

CVTF Level inspection

- 1) Idle the engine to raise CVTF temperature to 35 - 45°C (95 - 113°F) on Subaru Select Monitor.
- 2) Set the vehicle on a lift.
- 3) Operate the select lever in P --> R --> N --> D and D--> N--> R --> P to circulate the CVTF with the engine idling.
- 4) With the engine running, lift up the vehicle and remove the filler plug.

CVTF is at the specified level when it reaches the filler plug hole lower section.



(1) FILLER PLUG
(2) CVTF LEVEL

Note: CVTF level changes along with CVTF temperature. When inspecting CVTF level, observe the specified CVTF temperature.

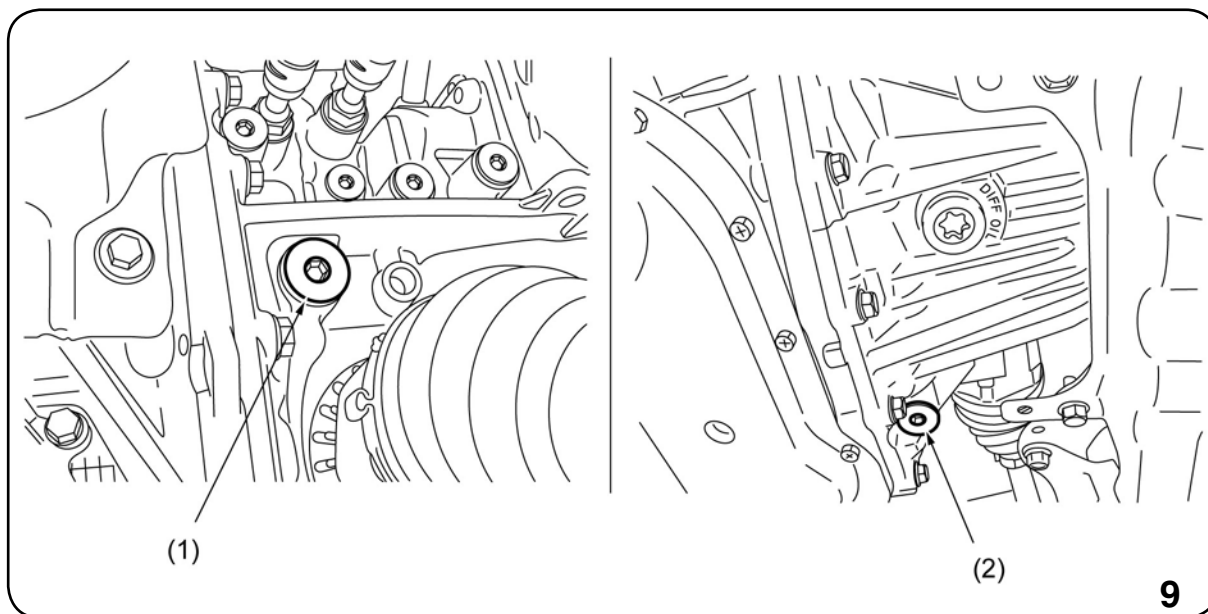
Caution: Pay special attention to the following operation when the engine is at idle.

Front Differential Gear Oil

Gear Oil level inspection

NOTE: Immediately after removing the overflow drain plug, remaining gear oil (approx. 8 cc) may come out of the overflow pipe. This is not included in the specified amount. When removing the overflow drain plug, make sure the gear oil flows out of the overflow drain plug hole by filling with gear oil.

- 1) Lift up the vehicle.
- 2) Remove the filler plug.
- 3) Remove the overflow drain plug.
- 4) Fill in the differential gear oil through the filler hole up to where the oil flows out of the overflow drain hole.
- 5) When the flow of the differential gear oil turns into a narrow stream, install a new gasket and the overflow drain plug.
Tightening torque: 50 Nm (5.1 kgf-m, 36.9 ft-lb)
- 6) Install a new gasket and the filler plug.
Tightening torque: 50 Nm (5.1 kgf-m, 36.9 ft-lb)



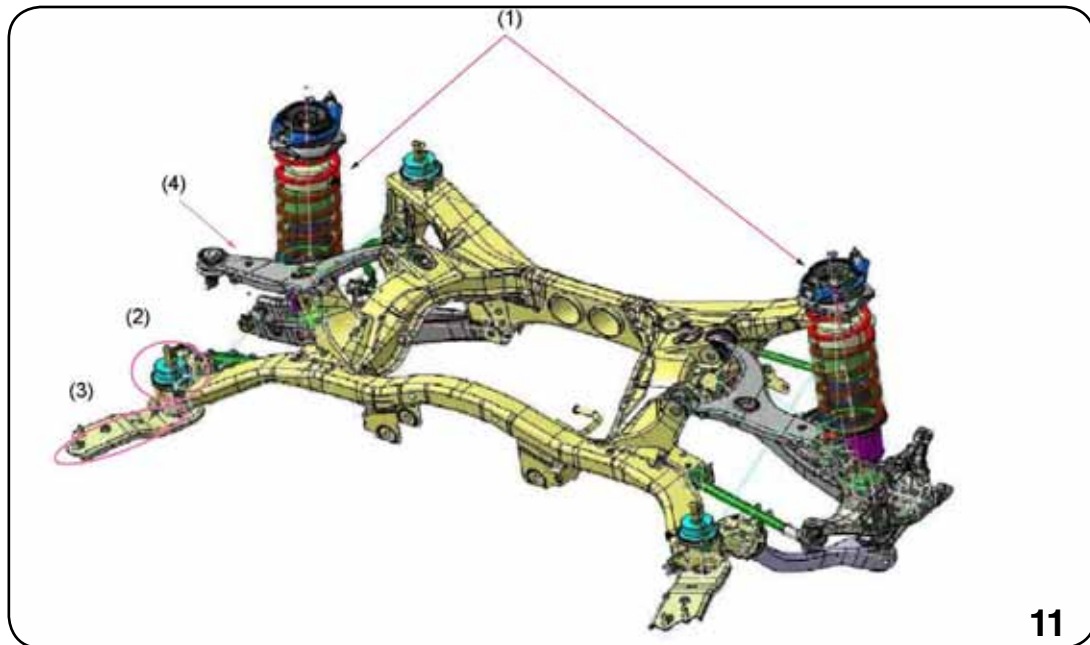
(1) FILLER PLUG
(2) OVERFLOW DRAIN CHECK PLUG

Note: Towing Capacity and maximum tongue weight:

1,500 lbs. \ 200 lbs.

Suspension

The front and rear suspension of the XV Crosstrek is designed to support and control the additional weight and increased ground clearance.



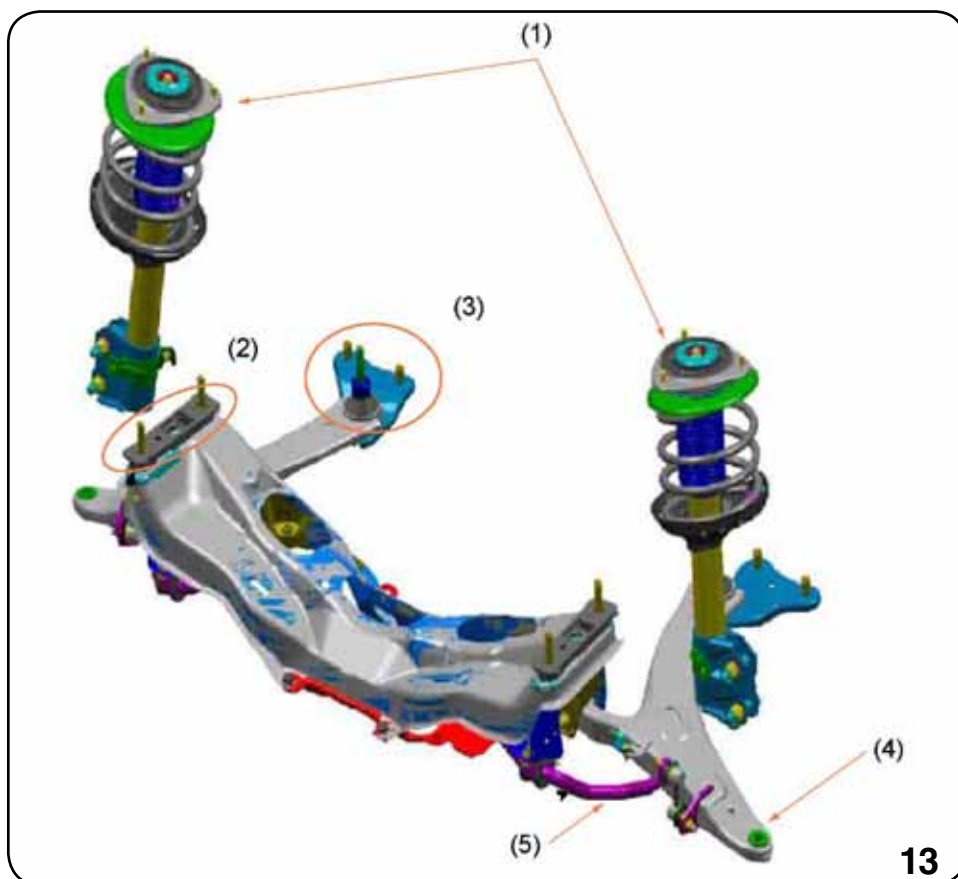
REAR SUSPENSION

Rear Suspension

- (1) Rear Strut: Exclusive part for XV Crosstrek to cope with the raised body
- (2) Cross member: Addition of spacer to raise body
- (3) Plate & Stopper: Exclusive parts for XV Crosstrek to raise body
- (4) Front Arm: Exclusive parts for XV Crosstrek to cope with extended tread
- (5) Stabilizer: Exclusive part for XV Crosstrek to cope with extended tread

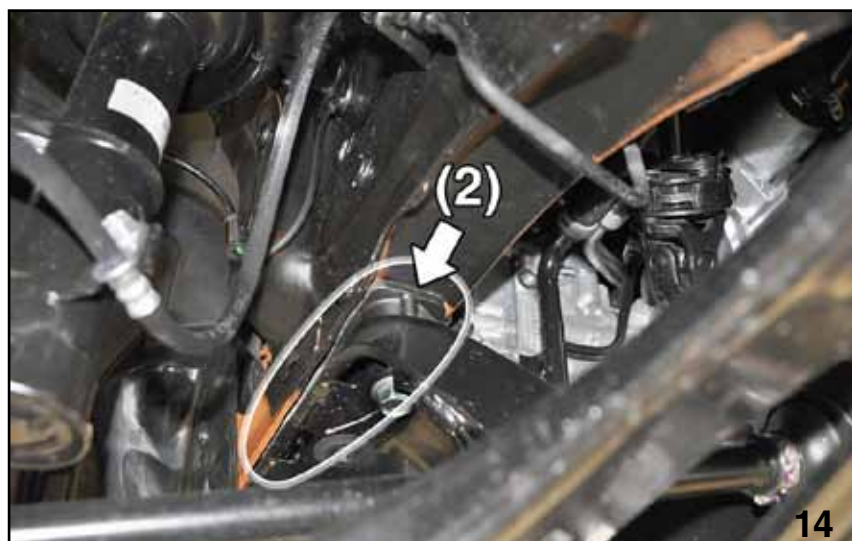


REAR SUSPENSION



FRONT SUSPENSION

- (1) Front Strut: Exclusive part for XV Crosstrek to cope with the raised body
- (2) Cross Member: Addition of spacer to raise body
- (3) Plate & Stopper: Exclusive parts for XV Crosstrek to raise body
- (4) Front Arm: Exclusive parts for XV Crosstrek to cope with extended tread
- (5) Stabilizer: Exclusive part for XV Crosstrek to cope with extended tread



CROSS MEMBER

Additional items modified to accommodate the high ground clearance:

- Larger Brake Calipers
- Drive Shaft Assembly
- Drive Axles
- CVT gear select cable

New systems introduced on the 2012 Impreza that are equipped on the 2013 XV Crosstrek:

- Electronic power Steering
- Occupant Detection System
- Immobilizer registration and servicing
- Charging System
- Brake Override
- FB 2.0 Liter Engine
- Continuously Variable Transmission Generation 2

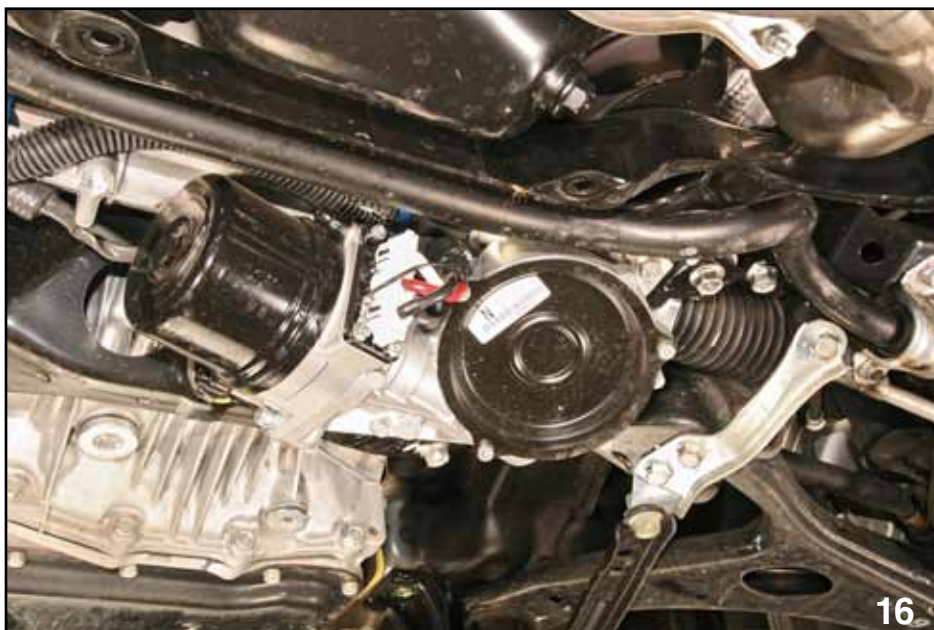
Details on these systems can be reviewed in the 2012 Impreza Introduction Technical Reference Booklet (MSA5P1921C).

Electronic Power Steering (EPS)

The following descriptions of the Electronic Power Steering (EPS) and the Supplemental Restraint System (SRS) are provided to show identification of the EPS and the SRS. (This may be helpful for non-service personnel)

The steering rack mounted Electronic Power Steering (EPS) is the same type installed on the 2012 Impreza. Power assist is determined by vehicle speed and the amount of deflection between the tires and the steering wheel.

The EPS will remain active for 10 seconds after the ignition switch has been turned off. Allow the system to turn completely off before performing any service work.



EPS MOTOR

NOTE: Always wait at least 10 seconds after the engine is turned off to turn the ignition on or high battery drain will occur. Always consult the appropriate Subaru Service Manual before performing any service work to the EPS.

Supplemental Restraint System

SRS airbag front seat passenger (Occupant Detection System) utilizes an Electrostatic Capacitance Sensor system. This system judges front seat passenger weight by monitoring the voltage drop created by the front seat passenger's electrostatic potential.

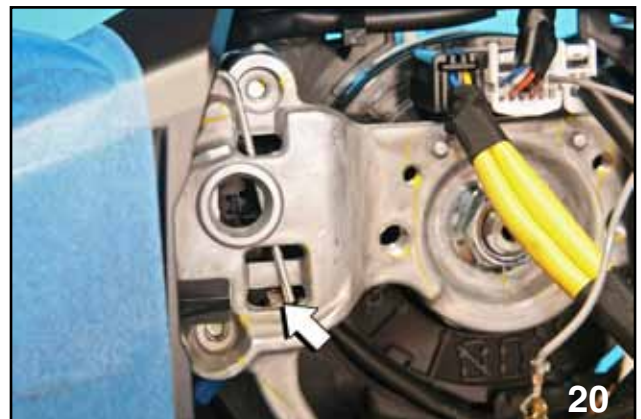
Note: The sensor is equipped with a water detection circuit that will place the front passenger airbag into an off status until the front seat cushion is dry.



ELECTROSTATIC CAPACITANCE SENSOR SYSTEM



BACK SIDE OF DRIVER AIRBAG MODULE



RELEASING DRIVER AIRBAG MODULE

The driver side airbag is equipped with a spring clip attachment mechanism. Three clips must be disengaged before the airbag module can be removed.

The XV Crosstrek is equipped with rollover activation of the curtain airbags and seatbelt pretensioners.

Audio and Navigation

The XV Crosstrek is equipped with the following Audio or Navigation upgrades.

Premium	Premium with Navigation option
AM/FM Stereo w/ Single-disc CD Player /	Navigation System: Fujitsu-TEN
MP3/WMA Capability, 6 Speakers	Touch-Screen GPS Navigation System
Radio Broadcast Data System (RBDS)	AM/FM Stereo HD Radio™ w/ Single-Disc CD
Bluetooth® Audio Steaming connectivity	Player / MP#/WMA File Capability
Bluetooth® Hands-Free Phone Connectivity	Radio Broadcast Data System (RBDS)
iPod® Control Capability	Map: SD Card
USB Port	Navigation Screen: 6.1" LCD
3.5mm auxiliary Input Jack	Voice Activated Controls & Navigation
	Bluetooth® Audio Streaming Connectivity
	Bluetooth® Hands-Free Phone Connectivity
	iPod® Control Capability
	iTunes® Tagging Capability
	USB Port
	SMS Text Messaging Capability
	XM® Satellite Radio (Subscription Required)
	XM NavTraffic® (Subscription Required)
	3.5mm Auxiliary Input Jack
	6 Speakers
	Roof Mounted Audio & Satellite Antenna
	Rear-Vision Camera



PREMIUM RADIO

Limited	Limited with Navigation option
Audio System: Display Type	Navigation System: Fujitsu-TEN
AM/FM Stereo HD Radio™ w/ Single-Disc CD Player / MP#/WMA File Capability	Touch-Screen GPS Navigation System
Display Screen: 4.3" LCD	AM/FM Stereo HD Radio™ w/ Single-Disc CD Player / MP#/WMA File Capability
Radio Broadcast Data System (RBDS)	Radio Broadcast Data System (RBDS)
Bluetooth® Audio Streaming Connectivity	Map: SD Card
Bluetooth® Hands-Free Phone Connectivity	Navigation Screen: 6.1" LCD
iPod® Control Capability	Voice Activated Controls & Navigation
iTunes® Tagging Capability	Bluetooth® Audio Streaming Connectivity
USB Port	Bluetooth® Hands-Free Phone Connectivity
3.5mm auxiliary Input Jack	iPod® Control Capability
Rear Vision Camera	iTunes® Tagging Capability
6 Speakers	USB Port
	SMS Text Messaging Capability
	XM® Satellite Radio (Subscription Required)
	XM NavTraffic® (Subscription Required)
	3.5mm Auxiliary Input Jack
	6 Speakers
	Roof Mounted Audio & Satellite Antenna
	Rear-Vision Camera



LIMITED RADIO

