



VEHICLE HANDLING MANUAL

**Subaru of America, Inc.
Sales / Logistics
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INTRODUCTION

Published by the Subaru of America (SOA) Logistics Department in cooperation with Subaru Yard Operations, SOA Port Facilities, Quality Control, Risk Management and Service Departments, this manual is provided to assist in accomplishing the goal of damage free delivery to the customer.

All procedures and requirements detailed in this manual for the handling, loading, transport, unloading and storage of Subaru vehicles must be adhered to unless previously agreed upon in writing by SOA.

The manual contains information in regard to General Procedures, Truck-away Instructions, Rail Handling Instructions, Damage Notification Procedures and Current Model Vehicle Weights and Dimensions.

In addition to the instructions provided, transport personnel are to follow the procedures specified by their company at all times to prevent vehicle damage and ensure safety during loading, unloading and transport operations. Any conflict in those procedures and the instructions in this manual are to be brought to the attention of the Subaru Logistics Department for resolution.

All personnel involved with the handling of Subaru vehicles are to be fully aware of the procedures detailed in this manual.

Any suggestions or questions concerning the material presented, or requests for additional copies should be directed to:

Subaru of America, Inc.
Logistics Department
P.O. Box 6000
Cherry Hill, NJ 08034-6000
FAX (856) 488-3138

856-488-5083
grutz@subaru.com

GENERAL PROCEDURES

Personnel

- Wear clean gloves at all times.
- Clothing should be clean without any exposed buttons, zippers, belt buckles, etc. Avoid wearing rings, watches and bracelets. If worn, these must be covered.
- Protective interior vehicle coverings are to be kept in place.
- Keep tools from contacting vehicles. Do not carry tools in clothing pockets.
- Use protective covering on tie-down tool handles.
- Keep all objects off vehicle surfaces.
- No smoking, eating, drinking or lounging inside the vehicles.
- Intoxication of any kind will not be tolerated. Violators will be prosecuted.
- Cell phone use is prohibited while driving vehicles.

Minimum Operating Standards – Facilities / Terminals

Any area where Subaru vehicles are to be stored, processed, loaded or unloaded is to be completely paved and fenced with adequate lighting and proper security provided. Loading and staging areas must be clearly marked. These areas must be level and possess an adequate drainage system.

Operational fire extinguishers must be strategically located and highly visible. All personnel should be trained to know where extinguishers are located and how to use them.

Entire area must be free of trash, debris, pot holes and loose gravel. Vegetation must be controlled throughout the facility to prevent contact with vehicles and to allow an unobstructed view of the interior perimeter of the fence.

Vehicle parking bays must be clearly marked and wide enough to permit opening doors without damage to nearby vehicles. To ensure that maximum side-to-side spacing is maintained, vehicles must be parked with the left tires on the left line of the parking bays. There is to be a minimum 10” clearance between any portion of the vehicle and the nearest point of contact.

Non-authorized vehicles are prohibited from the loading and staging areas. Subaru vehicles are not to be used for shuttle purposes. All vehicles leaving the facility will be subject to inspection.

A battery-charging program must be implemented.

Vehicle Handling

- Enter and exit through the driver's door only.
- Before driving vehicles, all doors must be shut.
- Protective seat and floor covers are to remain in place at all times.
- Heating, air conditioning and all electrical controls should be in the "OFF" position with vents closed. Radios are to remain "off" at all times.
- All windows, hoods, trunk lids, tailgates, moon-roofs and doors should be closed and secured.
- Always activate the vehicle's washer unit prior to engaging the wiper system.
- Flat tires must be changed before a vehicle is moved. Under no circumstances are vehicle tires to be deflated to reduce vehicle height.
- Vehicles must be loaded and unloaded under their own power. *Never* push or pull a vehicle with another vehicle. Dead batteries are to be recharged or replaced. No vehicle is to be delivered to a dealer with a dead battery.
- Some Subaru models will be equipped with 2 cameras mounted in the overhead console, facing the windshield. These lenses must not be touched for any reason.



Vehicle Starting Procedure

1. Apply the brake.
2. **Manual Transmission:** Press the clutch pedal to the floor and move the shift lever into neutral. Hold the clutch pedal to the floor while starting the engine. The starter motor will only operate when the clutch pedal is pressed fully to the floor.
Automatic Transmission: Shift the selector lever to the “P” or “N” position (preferably “P” position). The starter will only operate with the select lever is at the “P” or “N” position.
3. Turn the ignition switch to the “ON” position. Several of the warning and indicator lights will come on momentarily.
4. Turn the ignition switch to the “START” position **without** applying the accelerator pedal. Release the key immediately after the engine has started.
****Vehicles with “Smart Start” feature:** It is imperative that the brake is **FULLY** applied when starting these vehicles. Simply apply the brake and push the Engine Start button once. If the brake is not depressed, the battery will die on the vehicle. Also, “Smart Start” vehicles contain “FOB” remotes that must be placed inside of the vehicles in order for them to start.

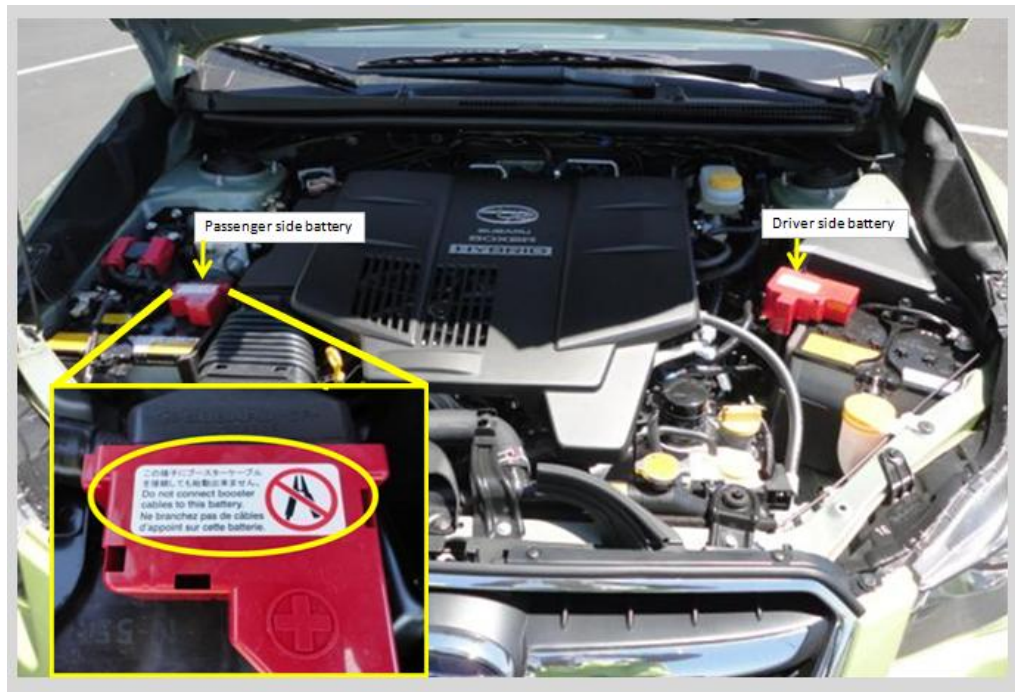


Do not operate the starter motor continuously for more than 10 seconds

If the engine does not start on TURN KEY units, try the following:

1. Turn the ignition switch to the “Lock” position and wait for at least 10 seconds. Ensure that the parking brake is firmly set. Next, turn the ignition switch to the “Start” position while applying the accelerator pedal slightly (approximately $\frac{1}{4}$ of the way down). Release the accelerator pedal as soon as the engine starts.
2. If this fails to start the engine, turn the ignition switch back to the “Lock” position and wait at least 10 seconds. Ensure that the parking brake is firmly set. Then, fully apply the accelerator pedal and turn the ignition switch to the “Start” position. If the engine starts, quickly release the accelerator pedal.

3. If this fails to start the engine, turn the ignition switch to the “Lock” position. After waiting at least 10 seconds, turn the ignition switch to the “Start” position without depressing applying the accelerator pedal.
4. If the engine still will not start, turn the ignition switch back to the “Lock” position and contact the yard office.
5. If the techniques above do not work, the vehicle may have to be jump started.
 - **Please note that the Crosstrek Hybrid models contain two batteries in the engine department. If these vehicles have dead batteries and must be jump started, do not attach the battery jump box to the battery on the passenger side. Please heed the warnings on the cable cover not to attach the jumper cables to this battery.



If the engine does not start on SMART START units, try the following:

Manual Transmission Vehicles:

1. Ensure that the shift lever is in neutral and that the clutch pedal is depressed.
2. Touch the Subaru emblem side of the access key to the push button ignition switch button. When the access key is detected a buzzer will sound in the cabin and the push button ignition switch will turn to “ON” mode.
3. Firmly depress the clutch pedal and check that the keyless access push button start system indicator light (green on the dash) turns on.
4. Push the push button ignition switch and the unit will start.

Automatic Transmission Vehicles:

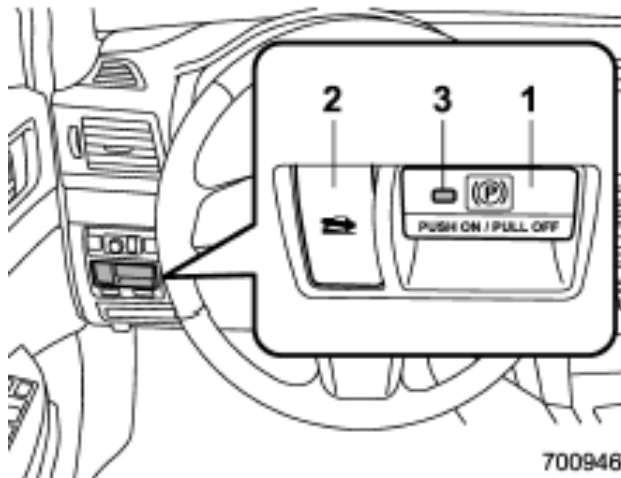
1. Ensure that the shift lever is in park and firmly depress the brake pedal.
2. Touch the Subaru emblem side of the access key to the push button ignition switch button. When the access key is detected a buzzer will sound in the cabin and the push button ignition switch will turn to “ON” mode.
3. Firmly depress the brake pedal and check that the keyless access push button start system indicator light (green on the dash) turns on.
4. Push the push button ignition switch and the unit will start.

Electronic Parking Brake

The Legacy and Outback models are equipped with an electronic parking brake system. Before driving the vehicle, make sure the parking brake has been released and the brake system warning light is turned off.

To release: Start the vehicle, apply the brake pedal and the clutch pedal (MT models) and pull the parking brake switch toward you.

Note: There is an automatic release of the parking brake when all doors are closed and the driver’s seatbelt is fastened.



- 1) Parking brake switch
- 2) Hill Holder switch
- 3) Indicator light

Loading and Unloading Procedures

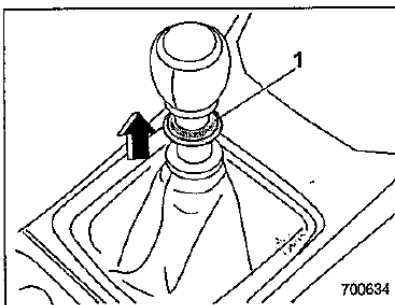
- When unlash vehicles from import vessels, lashes are removed and pushed to the edge of the deck. Please take extreme caution to ensure that the lashes do not fall under the railing, damaging the vehicles beneath.



- Verify the Vehicle Identification Number (VIN) on all documents and vehicles
- Never push or pull a vehicle with another vehicle.
- Observe all warning lights and follow instructions in the owner's manual.
 - The "check engine" light flashing while engine running is normal in all Subaru models. This indicates that vehicles are in "transport mode".
- Do not allow engines to idle for extended periods of time.
- Drive with the flashers and headlights on at all times.

A **maximum** speed of **15 MPH** in the facility or terminal and **5MPH** at ramps is to be observed at all times. A minimum of one vehicle length is to be maintained between moving vehicles.

In order to move a Manual Transmission vehicle in reverse, the "slider" (1) must be lifted and held in the raised position before the shift lever can be moved to the "R" position. The vehicle **MUST** only be placed into reverse when it is completely stopped. To change gears, fully depress the clutch pedal, move the shift lever, and gradually let up on the clutch. If it is difficult to shift into gear, put the transmission in neutral, release the clutch pedal momentarily, and then try again.



If a driver must move an unassigned vehicle in order to get to the assigned vehicle for loading, the unassigned vehicle must be returned to its original position.

Exercise extreme caution during loading and unloading operations to prevent any part of the vehicle from touching any part of the transport vehicle.

Vehicles must be properly positioned on the transport vehicle runways to prevent sidewall chafing of the tires and to permit positive engagement of the securement devices.

After the vehicle is loaded or parked, transmission select lever must be set as follows:

- **Loaded on Rail:** Neutral, parking brake set.
- **Loaded on Truck:** “Park” (automatic) or first gear (Manual), parking brake set.
- **Parking Lot:** “Park” (automatic) or first gear (Manual), parking brake set.
 - In the Tribeca model, the parking brake is a pedal located on the left front floor. Step on to set and again to release.

Placement of Keys

- **See Appendix A (Page x) for pictures of keys for all CURRENT Subaru models**
- Keys are to be placed in center console with lid left up
- For the Forester model, the key should be placed in the armrest with the cover UP to allow easy access to center console for keys. See below picture for reference. Doors are to remain unlocked.
- Never leave keys in the door.



When exiting the vehicle, ensure that the ignition system is “off”, (the key turned counter clockwise to the furthest point of rest) before removing the key. The keys

must ALWAYS be removed to ensure the cars are truly off. Instrument cluster lights, accessories and radio off. To shut the engine on smart start vehicles, place vehicle in park and push the button once.

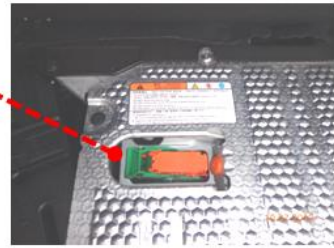
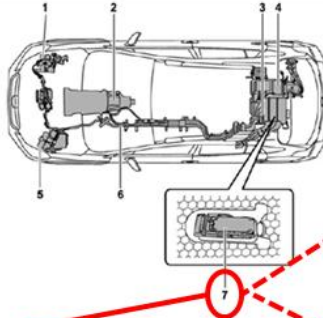
General Cautions pertaining to Hybrid Vehicles

WARNING

The hybrid system uses a high voltage (100 V or more). Always observe the following precautions. Otherwise, burns or electric shock could occur, resulting in serious injury or death.

- When inspection or repair is needed, always have it performed by your SUBARU dealer.
- Never touch, remove or disassemble the high voltage parts, high voltage cable (orange) or their connectors.
- Never touch the service disconnect plug. The service disconnect plug is used to cut off the voltage of the high voltage battery when the vehicle is inspected or serviced by a SUBARU dealer.

GENERAL CAUTIONS



CAUTION

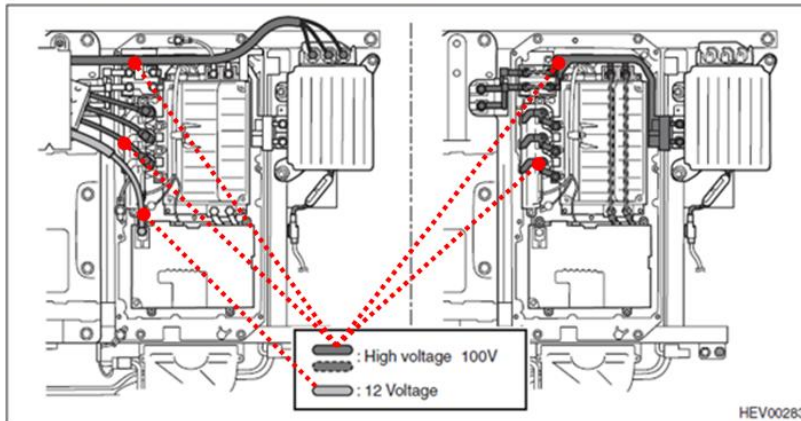
- Do not cover the high voltage battery air intake (located on the left next to the rear seat) with luggage or clothes. Do not pour water or other substances in there. Doing so may result in overheating or malfunctioning of the high voltage battery.
- In order to ensure waterproofing, be sure to install the cargo area flooring. Ensure that large amounts of water do not enter the cargo area. Doing so may result in malfunction of the hybrid system



HIGH VOLTAGE BATTERY CAUTIONS



High voltage area location
under silver panel
(Caution: DO NOT ACCESS)



⚠ WARNING	
Observe the following precautions. Otherwise, serious injury (e.g., burns or electric shock) or death may be caused.	
•	Never touch the following parts. <ul style="list-style-type: none"> - High voltage parts - High voltage cable (orange) - Electric wires exposed inside or outside the vehicle
•	If there is liquid leaking from or coating anything, do not touch it under any circumstances. The high voltage battery electrolyte is a strong alkali. If the electrolyte gets in your eyes or on your skin, it could lead to serious injury. In the event that it does get on you, immediately wash it off with a large amount of water



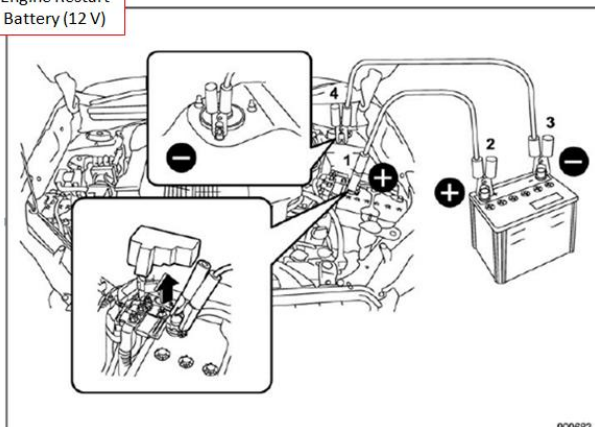
JUMP START PROCEDURE

- (1) Connect one jumper cable to the positive (+) terminal on the discharged 12 V auxiliary battery.
- (2) Connect the other end of the jumper cable to the positive (+) terminal of the booster battery.
- (3) Connect one end of the other cable to the negative (-) terminal of the booster battery.
- (4) Connect the other end of the cable to the strut mounting nut of the vehicle with the discharged 12 V auxiliary battery.

Make sure that the cables are not near any moving parts and that the cable clamps are not in contact with any other metal.

5. Start the engine of the vehicle with the booster battery and run it at moderate speed. Then start the hybrid system of the vehicle that has the discharged battery.
6. When finished, carefully disconnect the cables in exactly the reverse order.

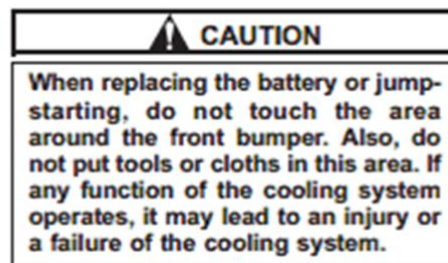
Engine Restart
Battery (12 V)



⚠ WARNING	
Observe the following precautions. Otherwise, any flames or sparks in the vicinity could cause an explosion since batteries emit highly flammable, explosive hydrogen gas. Also, electric components or the hybrid system may be damaged.	
•	Do not connect the jumper cable to the 12 V engine restart battery.
•	Do not cross connect the 12 V auxiliary battery and 12 V engine restart battery in an attempt to jump start the vehicle.

BATTERY JUMP START / REPLACE – FRONT BUMPER CAUTION

This grill location behind the front bumper fascia is a dynamic, and moving area. Use caution and do not disturb the movement.



ELECTRICAL ACCESSORIES / BATTERY DISCONNECT

- After disconnecting the negative terminal from 12 volt auxiliary battery, disconnect the ground terminal from 12V engine restart battery sensor for 12 volt engine restart battery.



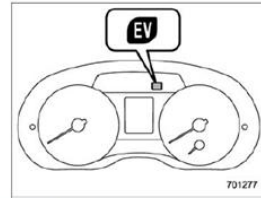
HEV VEHICLE MOVEMENT NOTES AND CAUTIONS

WARNING

Do not stop the hybrid system when the vehicle is moving. This will cause loss of power to the power steering and the brake booster, making steering and braking more difficult. It could also result in accidental activation of the "LOCK" (off) position on the ignition switch, causing the steering wheel to lock.

CAUTION

- If the hybrid system is stopped during driving, the catalyst may overheat and burn.
- When starting the hybrid system, be sure to sit in the driver's seat (except when using the remote engine start system).
- If the hybrid READY indicator light does not illuminate even after the engine has started, have the vehicle inspected by a SUBARU dealer.



EV mode lamp

If the engine is temporarily stopped by the system, the EV mode lamp on the combination meter will illuminate. This indicator light will turn off when the system restarts the engine.

CAUTION

Depending on the state of the vehicle (for example, if there is little power remaining on the high voltage battery), the engine may automatically restart. Be sure to depress the brake pedal while the vehicle is stationary.

CAUTION

Do not operate the starter motor continuously for more than 10 seconds. If the engine fails to start after operating the starter for 5 to 10 seconds, wait for 10 seconds or more before trying again.

Vehicle approach information unit (the pedestrian alert sound system)

When driving only using motor power (forward and reverse traveling), a sound will be made to alert people in the vicinity that the vehicle is in close proximity. This alert system will operate when the vehicle speed is approximately 15 mph (24 km/h) or less.

The pedestrian alert sound may be difficult for people in the surrounding area to hear in the following cases.

- The vehicle is in a noisy area.
- The vehicle is in the rain or strong wind.

It may be more difficult to hear the sound from the rear of the vehicle than from the front.

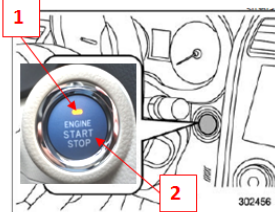
WARNING

No sound is emitted by the engine during the motor driving. Therefore, there is a possibility that the surrounding people do not notice the vehicle starting and approaching. Pay attention to your surroundings while driving.

PUSH BUTTON / OPERATION INDICATOR

DASH INDICATORS

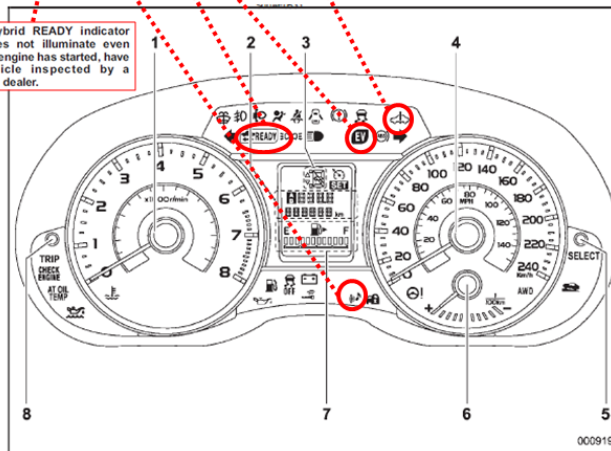
Mark	Name	Page
	Hybrid fail lamp	3- e67-30
	Vehicle approach information unit warning light	3- e67-30
	Hybrid READY indicator light	3- e67-31
	EV mode lamp	3- e67-31



- 1) Operation indicator
- 2) Push-button ignition switch

Power status	Indicator color	Operation
OFF	Tuned off	Power is tuned off.
ACC	Orange	The following systems can be used: audio and accessory power outlet.
ON	Orange (while hybrid system is stopped)	All electrical systems can be used.
	Tuned off (while hybrid system is running)	

• If the hybrid READY indicator light does not illuminate even after the engine has started, have the vehicle inspected by a SUBARU dealer.



CAUTION

- When the push-button ignition switch is left in "ON" or "ACC" for a long time, it may result in 12 V auxiliary battery discharge.
- Do not spill drinks or other liquids on the push-button ignition switch. It may cause a malfunction.
- Do not touch the push-button ignition switch with a hand soiled with oil or other contaminants. It may cause a malfunction.

WARNING

Never drive the vehicle if the indicator on the push-button ignition switch flashes in green after the hybrid system has started. The steering is still locked, and it may result in an accident.

HEV VEHICLE MOVEMENT NOTES AND CAUTIONS

TRUCK-AWAY INSTRUCTIONS



Please note: At Lafayette when entering the facility, drivers must obtain a Motor Pool Gate Pass from the security office or their on-site dispatcher.

Car Carrier Truck Equipment

All truck-away equipment must allow various Subaru vehicles to be carried in a safe and secure manner.

Equipment must be designed to allow entry and exit of the vehicles without contacting any metal surfaces of the car carrier truck.

Vehicles must not be loaded in any position that would require the driver to enter or exit by any means other than the front driver's side door.

Trucks must be equipped with both "T" and "S" tie-down hooks or soft tie-downs (straps).

Vehicles in "lower" positions must be protected against damage from fluid leakage or hot exhaust from a vehicle loaded in an "upper" position.

The maximum permitted distance to "jump" a vehicle between deck sections is 4". For distances greater than 4" jumper plates or skids must be used.

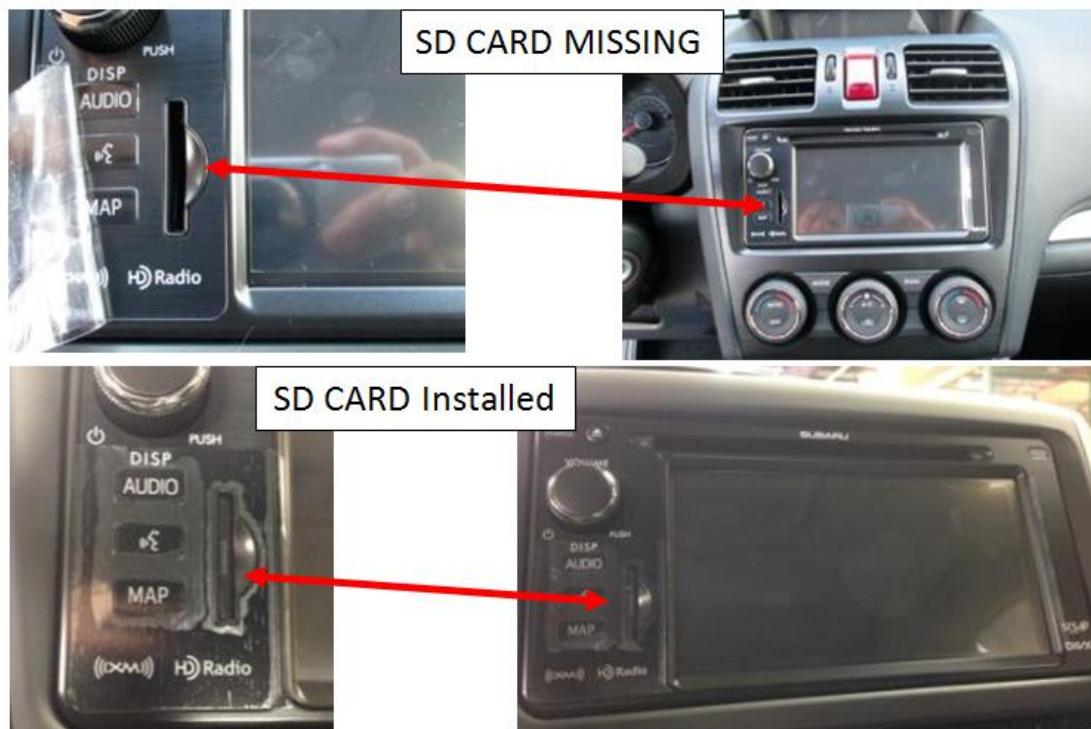
All truck away equipment must be in excellent working condition. Periodic inspections must to determine if repair or replacement is required.

Exterior/ Interior Inspection Process

- Do not remove plastic wrap during initial inspection unless there is an indication of damage - plastic wrap is torn, dirty or scratched. The condition of the plastic wrap must be described on the delivery receipt. If damage is found under "undisturbed" plastic wrap, the repair is NOT recoverable as transportation damage. Such damage must be inspected

by your District Parts and Service Manager for coverage determination. (See New Vehicle Care in Section 3.2.)

- Check all body panels, trim and paint finish for scratches, dents or fluid damage.
- Check the bodyline of the vehicle, paying careful attention to the fit of the hood with the fenders and the front bumper. Also, notice the clearance between the taillights and the rear bumper. Wider than normal clearances and/or too close tolerances between body panels should be noted on the delivery receipt with a statement of possible hidden damage (undercarriage).
- Check all glass for cracks, scratches or chips.
- Check all tires, including the spare, for cuts or punctures.
- Check under the hood for any missing equipment or evidence of leaking fluids.
- Inspect all trim panels, upholstery, carpets, dash, sun visors, headliner and door trim.
- Check for tool kit, jack, wheel covers, keys and Owner Information Kit (OIK) and, if applicable, the Navigation DVD and SD Cards (see pictures below).



Loading Procedures

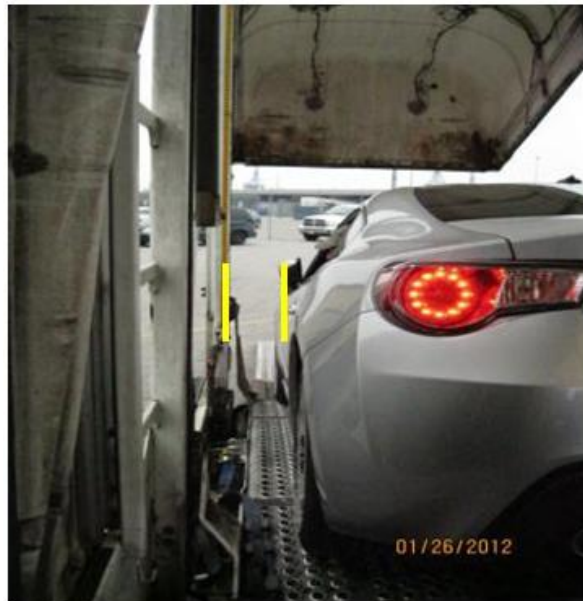
Prior to loading:

- Inspect the truck to insure that the vehicle pathway is clear of loose chains hanging from upper decks
- Jump skids or plates are properly positioned
- Deck sections are positioned to avoid vehicle contact during loading
- Verify that the Monroney label applied to the vehicle matches the actual VIN plate
 - Monroney labels are applied to the left rear window except for the BRZ, which will have labels applied to the right front window
- Verify that all accessories and equipment listed on the monroney label are present in/ on vehicle
- Verify that the shipping destination matches the load sheet information

Vehicles must never be transported in a manner that allows the vehicle to exceed 15 degrees from horizontal. During loading, unloading, and all other handling situations other than transporting, never position a vehicle to exceed 25 degrees from horizontal.

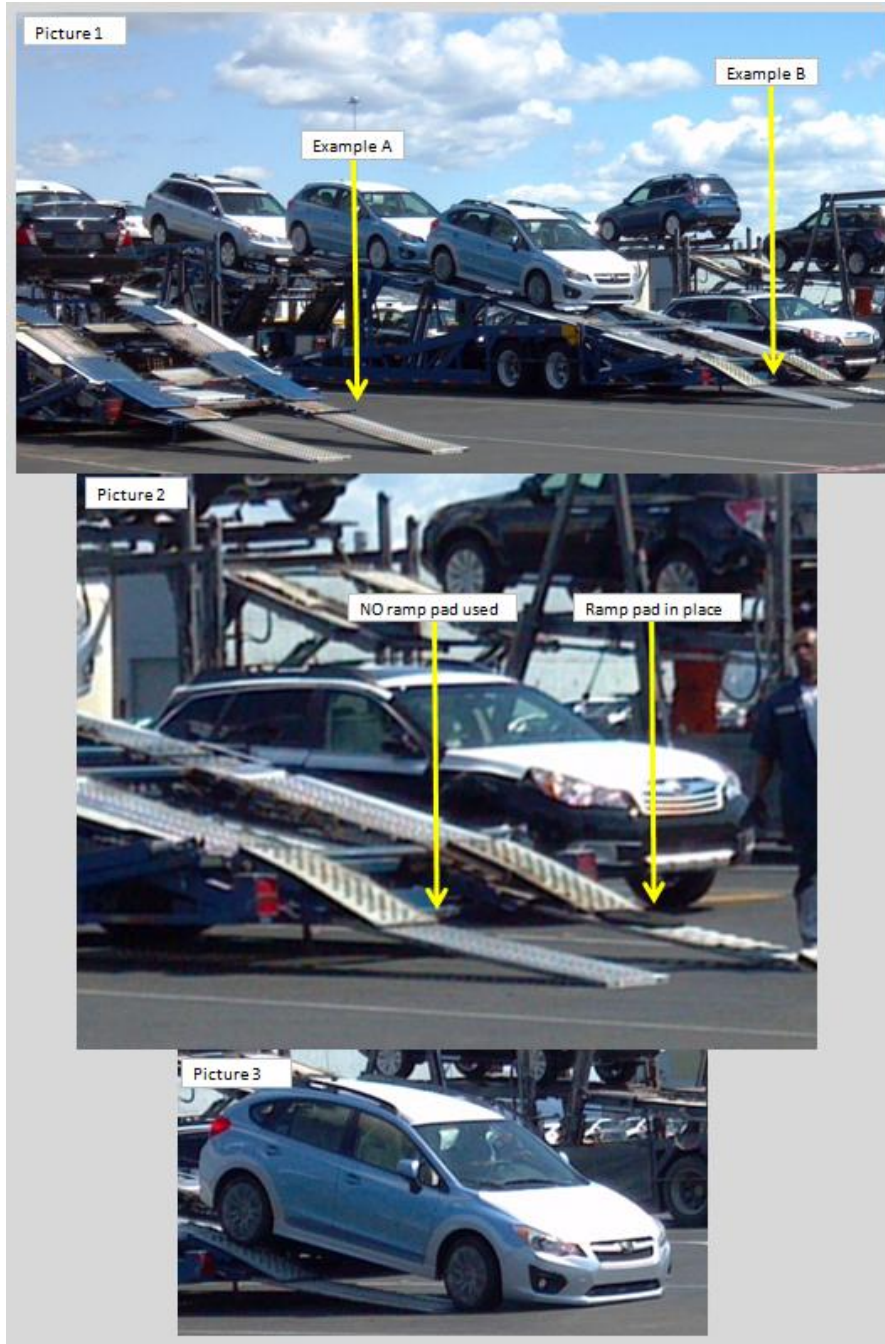
A minimum of 2" clearance must be maintained between all vehicle components and the car carrier trailer.

Special caution should be taken when entering and exiting vehicles to ensure that the door does not touch any part of the carrier.



At all times, avoid chain contact with the vehicle.

The Subaru BRZ and Impreza models are extremely low to the ground and thus are susceptible to under bumper damages during the transport process. We are aware that there are 2 styles of trailers/ ramps utilized on car carrier trucks. One ramp has a more gradual incline (picture 1, example A), while the other has a more drastic “drop” to the ground (picture 1, example B). Picture 1 example B style ramp configuration causes the front end of vehicles to come extremely close to the ground (picture 3), especially the BRZ and Impreza models. If using Example B style of ramp, ramp pads or steel plates MUST be used to avoid having the front bumper hit the ramp (see picture 2).



Particular caution is to be taken with the loading of each specific model listed:

WRX Model:

Ensure loading ramps are fully extended for proper clearance of both front and rear bumper “ground effects”. Please take extreme caution.

WRX STI Model:

Models without the NAVI system have an antenna that must be retracted down for transport. However, if equipped with the NAVI system, the non-retracting antenna will be placed in the tire tool kit located in the spare tire area.

BRZ Model:

The rear bumper (which is under the exhaust tailpipes, and runs the length of the rear bumper) of this model decreases the rear height clearance. Extreme caution must be taken when loading the BRZ. Also note that when checking for floor mats, which are located in the trunk of the BRZ, drivers may come across a locked trunk. The trunk release switch is on the dash located to the left of the steering wheel. The release must be pressed and held for a few seconds, as a quick press will not release the trunk. If the trunk does not open from the switch on the dash, the keys must be used to open the trunk (likely because the trunk release cancel option has been activated). The lock cylinder is found on the bottom right side of the trunk lift handle. For BRZs with the auto start, the key is found within the keyless entry remote itself. A button on the side of the remote must be pushed to release the key from within the device (see pics below for reference).



Tie-Down Procedures

Chains:

When tightening chains, draw the vehicle down 1.5 to 2 inches, always keeping the top of the tire visible. **Never draw the tire up into the wheel well, even if the 1.5-inch draw has not been achieved.**

Check tightness as follows:

Prior to tie-down, measure distance between wheel center and the wheel arch.

After tie-down, measure the same distance.

If difference is less than 2 inches = acceptable.

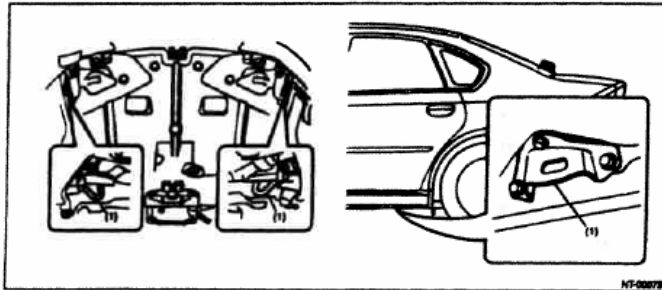
If difference is 2 inches or more, loosen until the difference is less than 2 inches.

Tie-down chains must be secured at all four points and with equal amounts of tension to avoid undercarriage damage.

Chain direction at tie-down

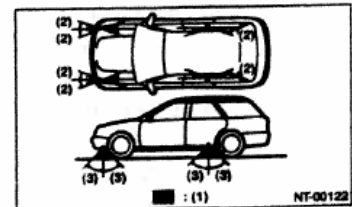
Legacy Model – “T” hook must be used in the rear tie-down. “S” hooks can be used in the front tie-down bracket only.

• TIE-DOWN LOCATION



(1) Hook for tie-down

• Chain pulling range at tie-down condition

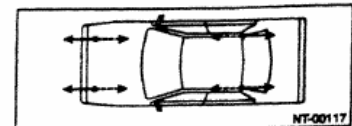


- (1) Chain pulling range at tie-down condition
- (2) 20°
- (3) 45°

• Chain direction at tie-down condition

NOTE:

Pull the chains LH and RH in the same direction, but front and rear side in the counter direction. Pull all the chains in a same moment.

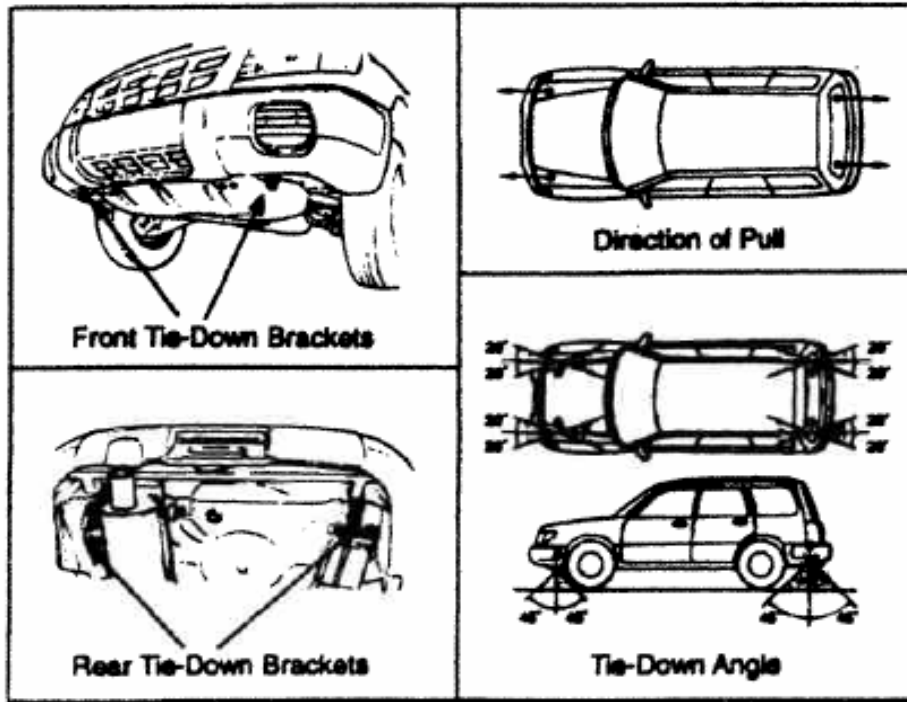


Front Tie-Down Brackets

“S” hook can be used in the front tie-down brackets only.

Rear Tie-Down Brackets

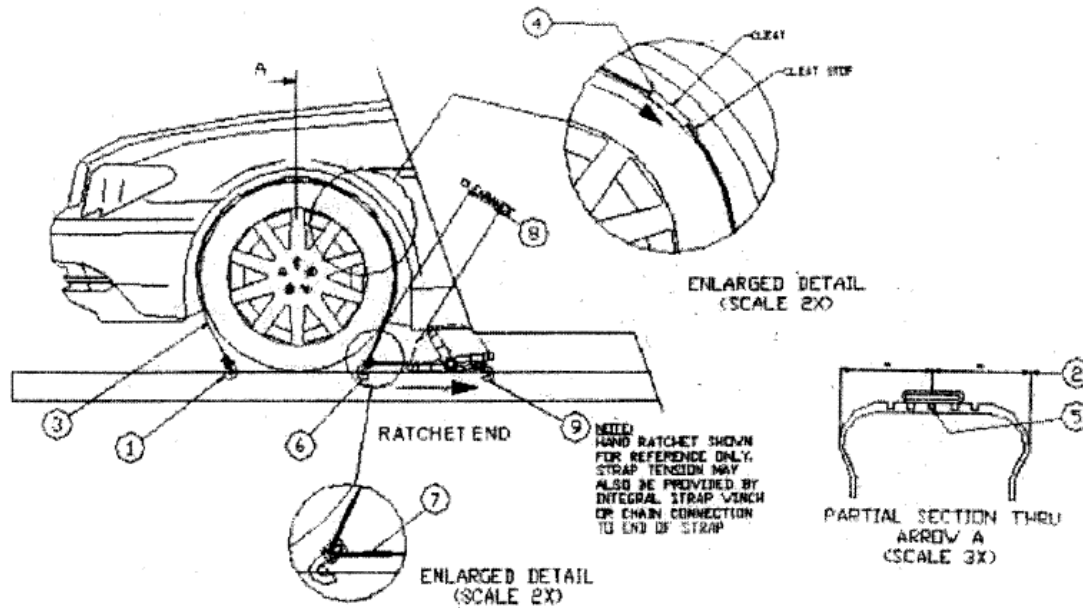
For Outback, Legacy, BRZ models, the rear tie down slots are just ahead of the rear wheels on the side rails.



Soft Tie-

Tie Down Straps:

When using the soft tie-down, steps 1 and 6 are critical for proper tensioning of the system. Both connection points must be as far under the tire as possible in order to achieve the “wrap-around” effect that locks the tire in place.



1. Lock-in the first connection point (1) as far under the front of the tire as possible.
2. Place strap over tire, ensuring that the three rubber cleats are centered across the width of the tire.
3. Ensure that any slack between the first connection point (1) and the cleats has been removed.
4. Check that the cleats are pushed as far towards the ratchet end as the cleat stops will allow.
5. Position the cleats to ensure that the dimples are securely inserted into the tire tread.
6. Lock-in the second connection (6) as far under the back of the tire as possible.
7. Make sure that the protective sleeve is evenly spaced through the roller idler.
8. When locking in the third connection point (9), allow enough room for the tensioning and full release of the ratchet. (Ratchet does not need to be in line with connection points 1 and 6.)
9. Hand tension the strap before cranking the ratchet.

Please observe the following once vehicles are tied down and secured to the Car Carrier Truck:

The following minimum clearances must be maintained:

- 2" between vehicle undercarriage and the trailer
- 3" bumper to bumper or trailer
- 4" between the roof, hood or deck lid and the top deck

When adjusting decks after loading, be aware of vehicle locations to avoid vehicle contact with upper decks.

Unused tie-down chains must be secured in a manner to prevent vehicle contact.

Proper tools must be used when connecting/disconnecting tie-down chains from vehicles. Tools should have a protective covering on the handles.

Inspect all vehicles for proper tie-down after loading, prior to transporting.

Stow and secure skids so they will not touch vehicles.

Prior to departure, the driver should check the load height to ensure that the loaded vehicles will not be exposed to damage from overhead obstruction while in transit.

Vehicle tires are never to be deflated to reduce trailer heights.

Outgate Procedures

As each vehicle is loaded, the driver will place the adhesive backed barcode (found in the vehicle's center console) for each unit in the appropriate box found on the Bill of Lading or out-gate document. If a bar code cannot be found, the driver must record the vehicle's VIN in the appropriate box (the VIN is found on the vehicle's dashboard). If adhesive backed barcodes are not used at a particular port (i.e. Richmond and Vancouver) the carrier will simply collect the port processor generated release document from each vehicle.

Then, out-gate documents are scanned by the Port Processor. Upon exiting all facilities, the driver must present the Bill of Lading / out-gate document with barcodes (or hand-written VINs) to the Security officer. The Security Officer will confirm that the number of barcodes match the number of vehicles loaded. Drivers will not be permitted to exit a Subaru processing facility without the completed documents.

On the Road

During transport, all tie-downs are to be inspected periodically, making any necessary adjustments.

On-time delivery is of prime concern to SOA. Drivers need to promptly report transportation delays to the dispatcher. Such reports should include the location, cause and expected length of the delay.

Unloading

Vehicles shall not be positioned to exceed 25 degrees from horizontal.

A minimum of 2" clearance must be maintained between all vehicle components and the trailer.

Chain contact with any part of the vehicle must be avoided at all times.

Damage Notification Procedure

If a vehicle sustains major damage during transportation, the Transport Carrier is to notify SOA immediately (within one business day of the incident) by calling the Logistics Department at **856-488-8681** or emailing **vehicle_claims@subaru.com**. The Transport Carrier will then hold the vehicle and await instructions from SOA Logistics regarding the disposition of the vehicle.

Under Subaru policy dealers are instructed to accept a damaged vehicle, note the damage on the delivery receipt and mark the delivery receipt "accept for storage only". However, in the event that a dealer refuses delivery of a vehicle for any reason, immediately contact the SOA Logistics Department. The driver should not leave the dealership without first obtaining new delivery instructions for the vehicle.

All delivery receipts should be signed and dated by **both** the driver and dealership personnel. After hours and weekend deliveries are not permitted without prior written authorization from the dealer.

RAIL HANDLING

Rail Car Equipment

The only securement that may be used for Subaru vehicles, without prior approval, is the Thrall Wedge Chock or the Holden Grate Lock Chock. Chains are never to be used without prior approval obtained from the SOA Logistics Department.

Railcars must be maintained in a manner that provides damage free transportation. Railroads servicing SOA origin locations are responsible for prepping railcars, including the inspection, maintenance, and replacement of defective and/or missing equipment before rail cars are placed for loading as follows:

- Chocks (and tie-down devices if approved) are to be inspected and lubricated. Defective devices are to be repaired or replaced.
- Hinged decks are to be inspected for proper operation. Hinges are to be lubricated and the decks locked in the raised position.
- Accumulated snow, ice or debris is to be removed from all decks of the rail cars and loading ramp.
- End doors are to be inspected for proper operation and repaired as required. Under no circumstances are rail cars with missing or inoperative end doors to be spotted for loading.
- All side shielding must be in place and secured.
- The interior of rail cars must be clean and free from rust particles and flaking paint.
- If the cleaning and preparation of rail cars is performed at the loading site, all debris must be removed from the adjacent driveways, apron, and ramp area.
- Painting of railcars is prohibited in parking areas.

If railcar problems are found, the railcar will not be loaded and the rail carrier will be contacted immediately.

Rail carriers have the responsibility to provide and maintain portable bridge plates of sufficient length and quantity to allow safe loading and unloading.

Under no circumstances is salt to be used to melt snow or ice, to ease movement of securement devices or to gain traction on rail car decks or loading ramps.

Preparation for Loading

When spotting multi-level equipment for loading, rail cars with a difference in height of 3" or more are not to be coupled together.

Bridge plates are to be placed in the direction of travel, except when a small height variance (less than 3") exists between multi-levels. In these cases the bridge plates are to be attached to the high side.

When placed for loading or unloading, rail car couplers must not be compressed or extended beyond measurements listed below. Compressed couplers cause bridge plates to be improperly seated, reducing the loading height clearances.

Bridge Plate Measurement

Distance between Multilevel cars

53"	38 to 46"
56"	41 to 49"
Adjustable bridge Plates	38 to 56"

Measurement is taken from the back of a bridge plate hinge support (barrel ring) of one rail car to the deck of the adjacent multi-level. For practical purposes, this measurement is from the back of the hinge support to the approximate center of the innermost lower locking pin hole of Radial type end-enclosures and to the bottom door track of Panel type end-enclosures.

Failure to leave couplers in their normal extended position will expose vehicles to roof and undercarriage damage, as well as the risk of coupler "push-out".

Hand brakes are to be set on all rail cars spotted for loading. If more than 2 strokes of the brake handle can be obtained with application of moderate pressure, the brake is not fully set.

Failure to set brakes properly will expose vehicles to major damage and may cause injury to loading/unloading personnel, should the rail car movement cause the bridge plates to fall.

The ramp and portable bridge plates are to be positioned such that no part of the vehicle, except the tires, will contact the ground, ramp or rail car structure.

Loading Procedure

Extreme care is to be taken to prevent damage from contact with the overhead structures, coupler housings and the sides of rail cars. A minimum of one vehicle length is to be maintained between moving vehicles at all times. Speeds must be kept at 5 MPH or less when driving on loading/unloading ramps or through rail cars. Speed must be reduced when passing from one rail car to another.

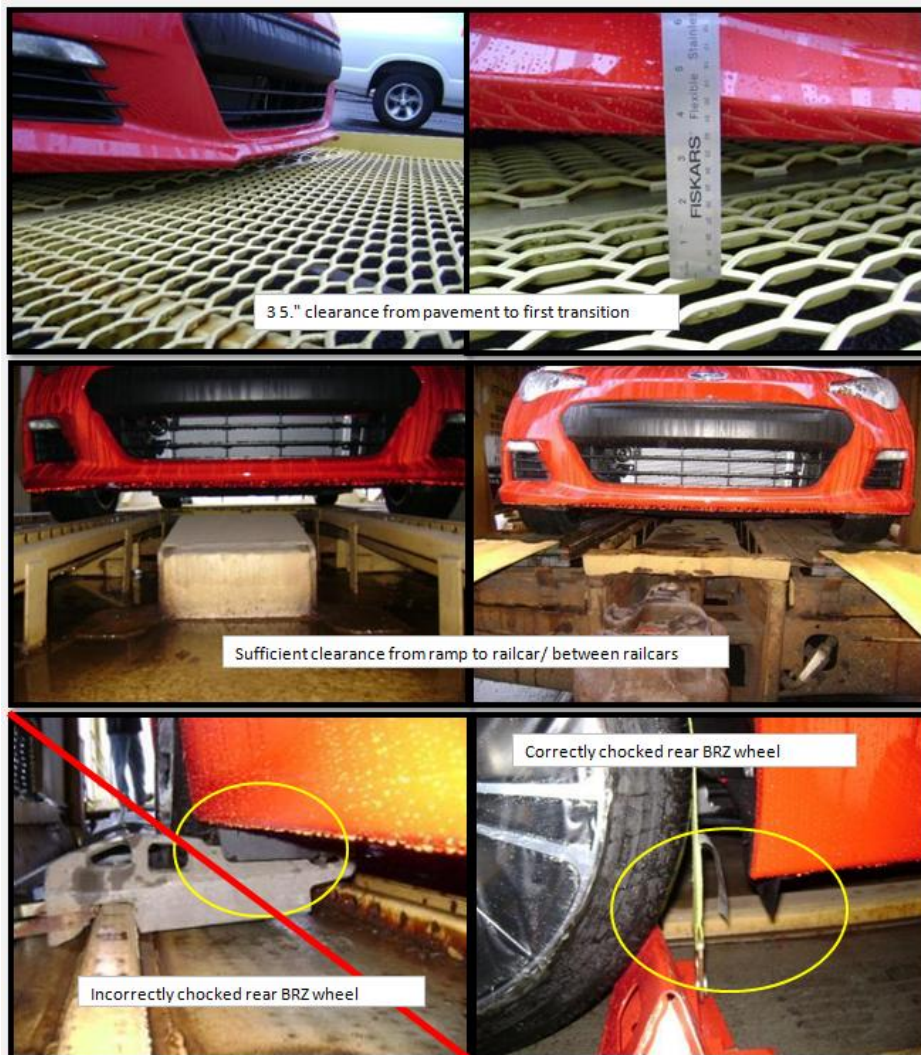
Vehicles are to be positioned with regard to the securement device. This usually requires the tire to be placed approximately 2" from the chock track or centered over the tie-down channel.

Forester, Outback and Tribeca models are to be loaded on Bi-level rail cars only.

The BRZ model can be placed on a B or C deck only.

WRX STI model must not be loaded on bi level rail cars.

For the BRZ model please be aware that there is only about 3 ½" of clearance under the front spoiler when moving the vehicle from the pavement to the first transition. From testing the loading process, Subaru has seen that there is sufficient under car clearance from the ramp to the railcar and also between railcars. Also, testing has shown that there is decent clearance when chocking the front wheels. Be aware, however that when chocking the rear wheels, caution should be used to ensure that the chock is not touching the air flaps. See pictures below for reference.

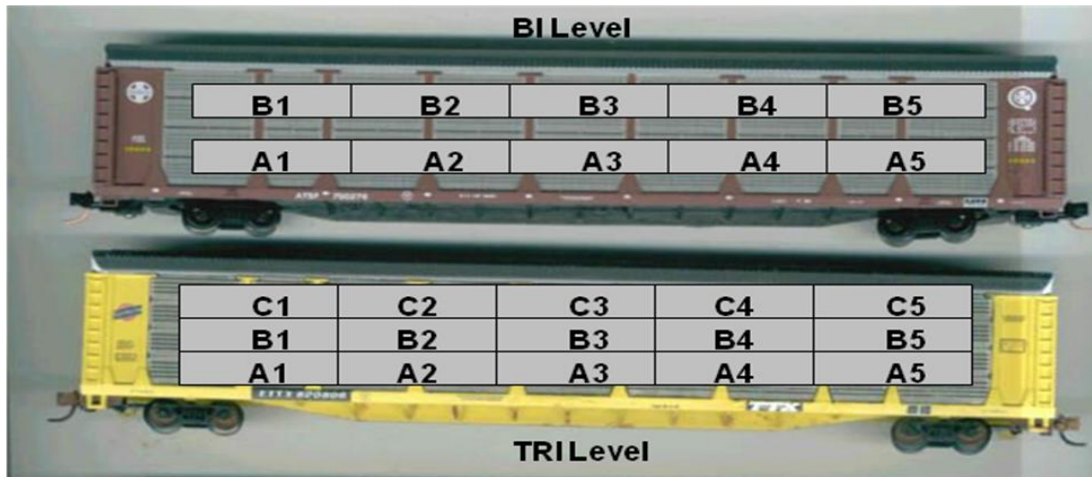


Only the Legacy, Impreza, WRX and STI models can be loaded on a Tri-level rail car. For Legacy models only load four units on A deck leaving position A5 empty. To prevent left front door paint chips on vehicles, it is necessary to place your hand at the top of the “full framed door window” when entering and exiting the vehicle.

Vehicles are to be uniformly positioned on each deck to maximize the distance between vehicles and end-enclosures. Vehicles must not extend beyond the rail car’s striker plate. At the closest point, vehicles must be at least 3” apart.

When loading rail cars with hinged “B” decks, vehicles loaded on the “A” deck must be properly secured before lowering and locking the hinged deck. Extreme care should be used to insure that no part of the hinged deck rests on any part of the roof of the vehicles loaded on “A” deck.

The description for the location of vehicles on multi-level cars is shown below. The number one position is the first vehicle to be driven onto the deck and then follow in sequence.



Vehicles must not be spotted with tires resting on opening between deck plates.

All vehicles must be in NEUTRAL with the emergency brake applied.

Inspect each vehicle on the multi-level to insure that proper loading and securement procedures have been followed.

Tie-down Procedures

Thrall Wedge Chock - Vehicles to be chocked are to be positioned so that the sides of the tires are no closer than ½” from the chock tie-down track. The ideal vehicle position allows the chock harness or strap to extend vertically from the attachment point on the chock over the centerline of the tire. This usually requires the tire to be placed approximately 2” from the track.



There is to be at least 3" of clearance above all vehicles. This is very critical at the A-1 and A-5 positions.

Vehicles are to be uniformly spaced on each deck and must be no less than 3" apart at their closest point of contact.

Installation Procedures

- Remove one set of chocks from the storage area.
- Be careful not to make contact with the Vehicle.
- Place chocks on tie-down track with one chock on each side of the tire, then slide chocks up tight to tire.
- Lock chock in place, if the chock is more than 1 ¼" away from the tire, unlock chock and move it closer to the tire.
- Remove all twists or knots from the harness or strap
- Place the harness or strap over the tire. Make certain that the harness laps over the top of the tire and is not contacting any part of the vehicle. Chock straps should pull in direct vertical alignment with the centerline of the tire.
- Remove all slack or excess harness.
- Use a ½" drive ratchet to tighten the ratchet on the chock until the harness is tight.
- DO NOT over tighten the strap assembly. The tire must not be compressed over ½ of an inch (24 FT-LBX)
- Inspect chock-locking pins to insure that they are fully engaged.
- Unused chocks and harnesses are to be properly stored.

Any modification to these procedures must be in writing and have both the carriers' and SOA's approval.

Holden Grate Lock Chock - A minimum of four chocks are used for each vehicle, one at each of the four tires. No tools are needed.

Chocks are to be placed on the outboard side of each of the vehicle's four tires.



Double chock vehicles located in A1, A5, B1 and B5 positions.

The lateral restraint paddle is always to be placed to the inside tire wall. The chocks are color coded to indicate which side the lateral restraint paddle is located: Red is the right side and Lime is the left side.

Remove the chock from the storage pan located at the bottom of the side panel. The chock is released from the storage pan by rotating the handle upwards until it is horizontal with the multi-level deck.

Place the chock on the deck and adjust the height to the highest possible setting that will provide at least 2" of clearance between the top of the chock and any portion of the vehicle. To adjust the height, push down the top of the hinge assembly and pull the faceplate outward and upward.

Place the chock in the floor grating as tightly as possible against the tire, both laterally and longitudinally. Make sure that the locking handle is vertical, the chock is fully seated, the paddle is to the inside of the tire and that there is no more than 3/4" space between the paddle and tire or between the chock face plate and tire. Re-position the chock until all of these conditions are met.

Rotate the locking handle forward to the full lock position. Check to make sure the chock is fully seated and locked in the grating.

Repeat procedure at all four tires.

Unused chocks are to be placed in their lowest height setting and properly stored in their storage pans.

Any modification to these procedures must be in writing and have both the carriers' and SOA's approval.

CHAIN (If approval has been obtained)

Four chains are to be used at all times.

Never use towing brackets for tie-down (see Tie Down Procedures for specific models.)

Equal tension is to be applied to all chains attached to each vehicle. To achieve this, take up all slack in the chain and then tighten the ratchet one/two notches. Make sure no part of the chain assembly touches the vehicle.

After tensioning tie-down chains, the following must be checked:

All four chains must be taut.

Chain angles must be as specified for each model.

Front and rear chains must exert opposing forces.

Tie-down chains must allow a minimum of 2" clearance with vehicle splash panel, bumpers, suspension, or exhaust components.

Tools specifically designed for use with each type of tie-down device are to be utilized during the tie-down procedure.

Unused tie-down devices are to be locked in the tie-down track and their chains are to be stored in the track.

Any modification to these procedures must be in writing and have both the carriers' and SOA's approval

Unloading

When off loading multi-level rail cars, they are to be spotted so that different deck heights are not mixed and in such a manner that vehicles can be driven off forward.

Extreme caution is to be used when opening and closing end doors on railcars. SealSafe end doors continue to experience failure in the pivot bolt area. When there is a total failure of the pivot bolt, the top of the door is not secured and may tilt outward until the green safety cable engages the door to prevent it from falling. However, the green safety cable may also fail allowing the door to fall to the ground. Before attempting to move doors, make a visual inspection to help insure the door is safe to operate.

Chocks and harnesses are to be removed from the vehicle and properly stored in the storage boxes or hung on the side panels of the multi-level.

To remove the **Thrall Wedge Chock**, disengage the ratchet release handle while pulling on the end of the harness strap. Ratchet must be completely unwound.

To remove the harness from the tire, move it toward the keyhole plate to provide enough slack to unhook the plate from the stud on the chock, then slide the harness off the tire.

To remove the chocks, push the locking pin handle toward the vehicle and then lift it up in the slot on the chock. This locks the pin in the open position so that the chock can be moved.

Due to vehicle movement during transit, a pry bar may have to be used to move the locking pin. So if needed, right above the locking pin handle, is a built-in pry point.

Carefully remove the chocks, one at a time, and place them end to end in their storage box, making sure they are completely down into the box.

Using the keyhole plate, hang the harness on the bolt that is attached to the side shielding. The harness of two chocks should be extended and crossed as stenciled on the multi-level's interior.

To remove the **Holden Grate Lock Wheel Chock**, rotate the locking handle away from the tire as far as possible. When the handle goes to the full unlock position the chock will slightly lift from the track.

If the chock does not release with hand pressure, downward foot pressure on the handle may be used.

If the vehicle is resting very tightly against the chock it may be necessary to move the vehicle away from the chock slightly.

Carefully remove the chock and place it on the multi-level deck, collapse the chock to the lowest possible setting, place it in the matching color coded storage pan, and lock in position by rotating the locking handle to the full lock position.

When removing **chains**, tie-down hooks are to be removed from vehicles. Tie-down chains are to be placed between the tie-down tracks.

Make certain chains are completely removed from all vehicles and are set clear of the wheel path.

Always use the correct wrenches when removing securement devices

Avoid vehicle contact at all times.

Procedure for Handling Damaged Subaru Vehicles at Rail Destinations:

- **Notify** Fenkell Automotive Services **immediately** of the VIN, area, type and severity of the damage by entry into Vehi-trac.
- **For minor damage** (small scratch or dent): **Ship vehicle.**
Notify Fenkell Auto Services and Email or fax a copy of the DIU Report to Subaru Logistics Department (see below).
- **For any other damage, HOLD the vehicle. Do Not Ship** until authorization has been received from Subaru of America (SOA) or Fenkell. Email or fax a copy of the DIU Report to Subaru Logistics Department (see below).

E-mail: mlup@subaru.com
 grutz@subaru.com
 bbau@subaru.com

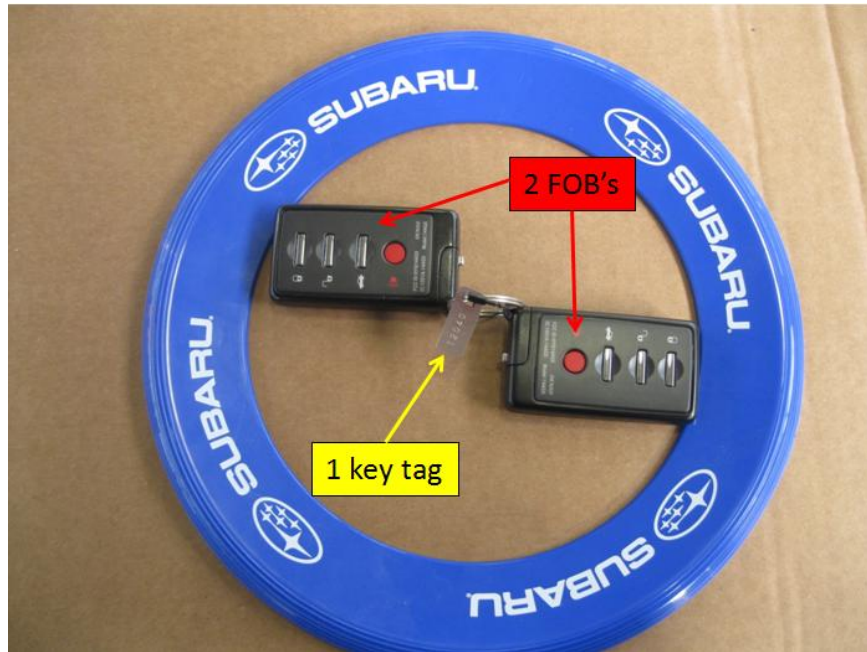
Phone: **856 488 5083** **George Rutz**
 856-488-5022 Mike Lupacchino
 856-488-8681 Barbara Baumgartner

Email or fax a copy of the DIU report. (Fax # 856-488-3138)

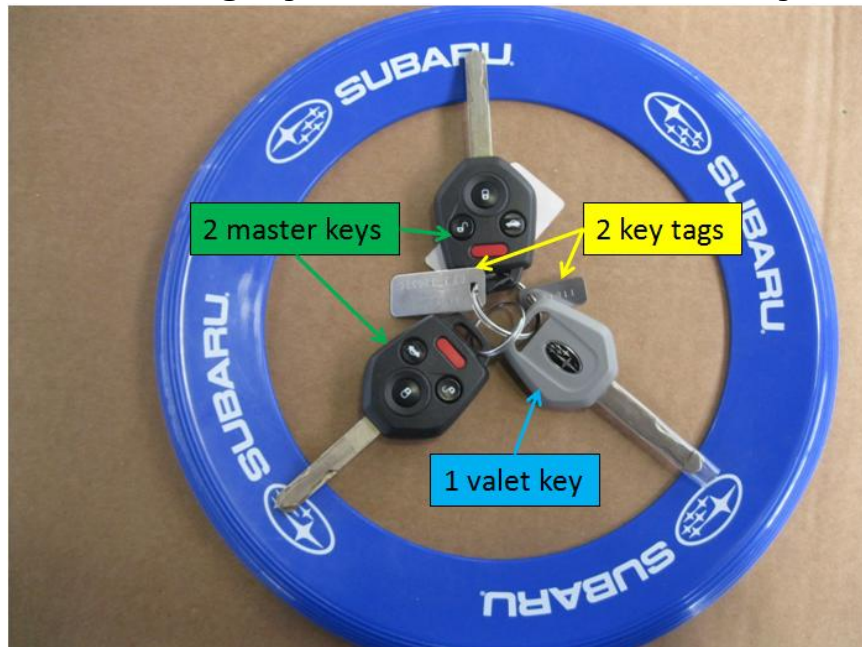
- SOA will provide written authorization for shipping instructions or arrange for a more detailed damage evaluation.

Appendix A Subaru of America Key Styles by Model

2013 Legacy/Outback/Tribeca – Push Start



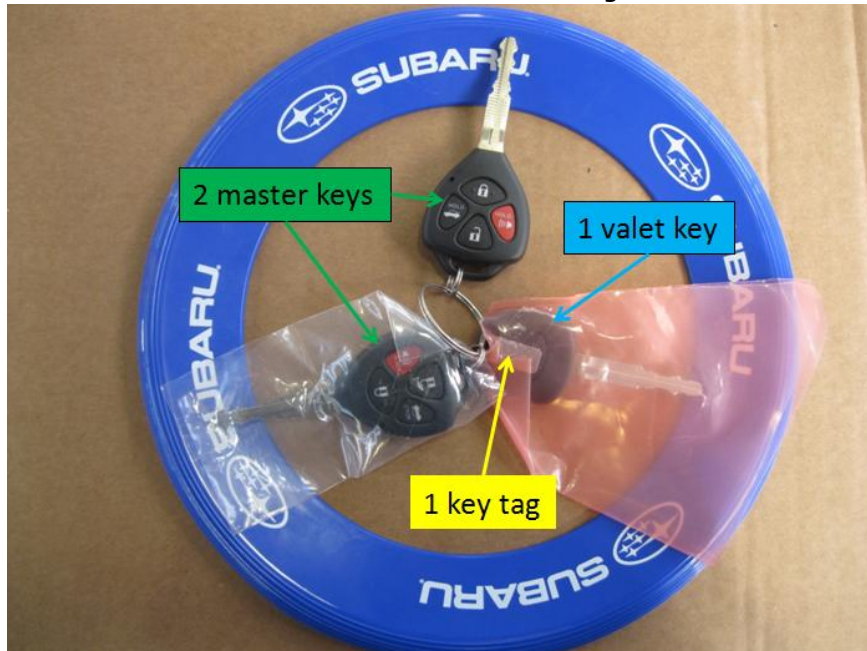
2013 Legacy/Outback/Tribeca – Turn Key



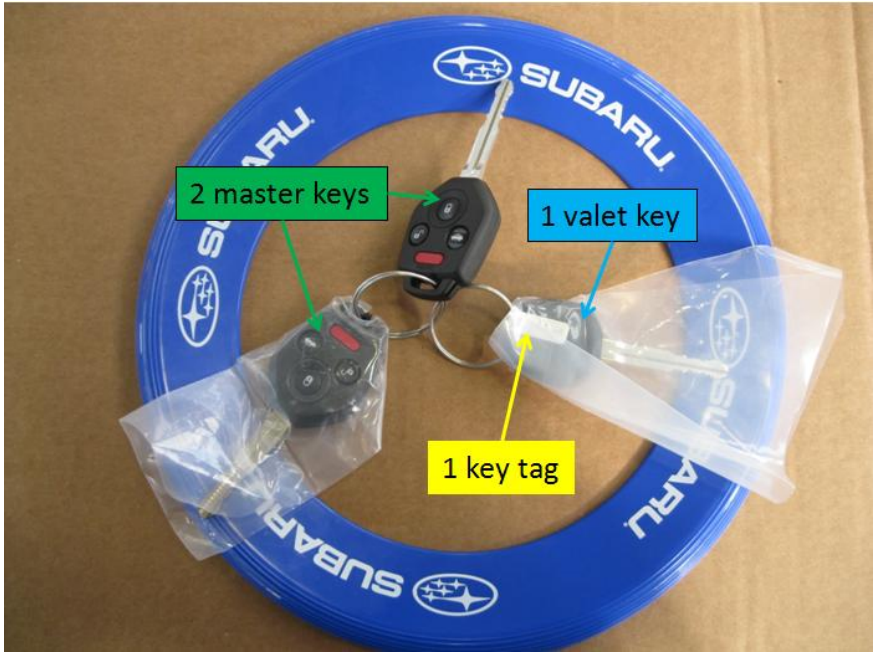
2013 BRZ – Push Start



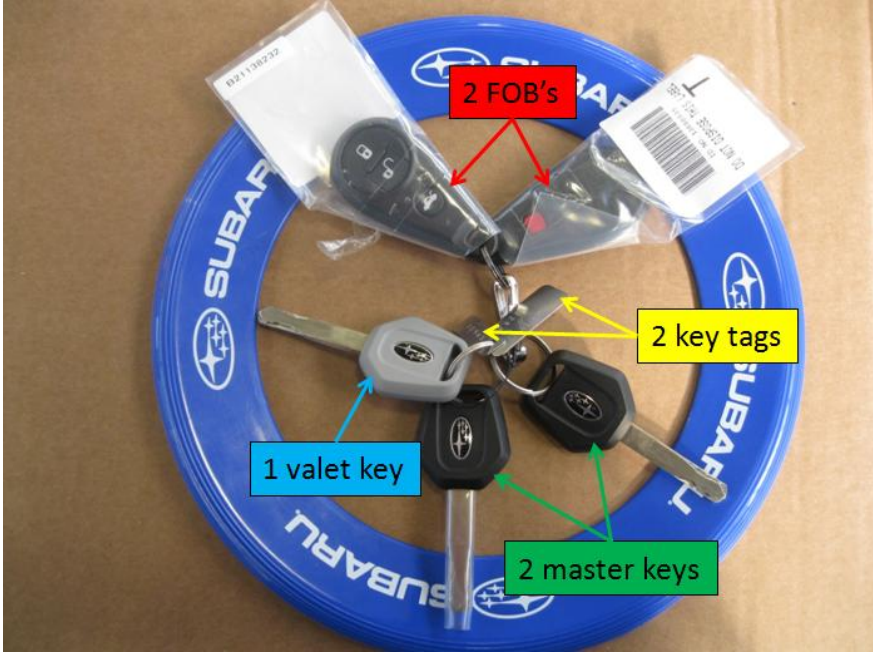
2013 BRZ – Turn Key



2013 Impreza/XV – Turn Key Only



2013 Forester – Turn Key Only



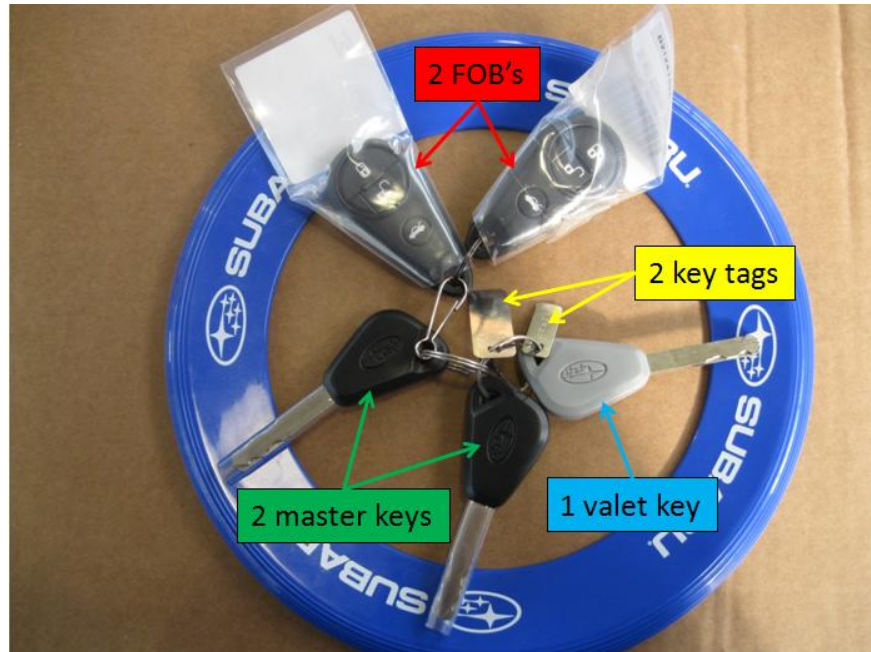
2014 Forester – Push Start



2014 Forester – Turn Key



2013 WRX/STI – Turn Key Only



Appendix B 2013/ 2014 Vehicle Weights and Dimensions

CONFIDENTIAL

2014

		Sedan	OBK	
Length	SIA	187.2	189	
Width	SIA	80.7	80.7	w/mirrors
Height	SIA	59.3	65.8	
W/B		108.3	107.9	(inches)

2013

		Sedan	OBK	
Length	SIA	187.2	189	
Width	SIA	71.7	71.7	w/mirrors
Height	SIA	59.3	65.8	
W/B		108.3	107.9	(inches)

SUBARU

2014 Model

WEIGHTS AND DIMENSIONS

Tribeca

Model	L	H	W**	WB	GC	Curb Wt.
3.6R LTD	191.5	67.7*	88.8**	108.2	8.4	4214

Legacy Sedan

Model	L	H	W	WB	GC	Curb Wt.
2.5i	187.2	59.3	80.7**	108.3	5.9	3392
2.5i Prem	187.2	59.3	80.7**	108.3	5.9	3388
2.5i Sport	187.2	59.3	80.7**	108.3	5.9	3439
2.5i LTD	187.2	59.3	80.7**	108.3	5.9	3424
3.6R LTD	187.2	59.3	80.7**	108.3	5.9	3545

Outback

Model	L	H*	W	WB	GC	Curb Wt.
2.5i	189.0	65.8*	80.7**	107.9	8.7	3495
2.5i Prem	189.0	65.8*	80.7**	107.9	8.7	3508
2.5i LTD	189.0	65.8*	80.7**	107.9	8.7	3538
2.5i LTD SAP	189.0	65.8*	81.2***	107.9	8.7	3573
3.6R LTD	189.0	65.8*	80.7**	107.9	8.7	3648
3.6 Limited SAP	189.0	65.8*	81.2***	107.9	8.7	3682

* Including Roof Rails

** Including Mirrors

*** Including Mirrors with Integrated Turn Signals

NOTE: All models require the "T" hook for the rear and the "S" hook for the front tie-downs.

SUBARU
WEIGHTS AND DIMENSIONS

2014 Model

Forester

Model	L	H	W	WB	GC	Curb Wt.
2.5i	180.9	66.4	80.0**	103.9	8.7	3366
2.5i Premium	180.9	68.2*	80.0**	103.9	8.7	3391
2.5i Limited	180.9	68.2*	80.0**	103.9	8.7	3419
2.5i Touring	180.9	68.2*	80.0**	103.9	8.7	3433
2.0 XT Premium	180.9	68.2*	80.0**	103.9	8.7	3624
2.0 XT Touring	180.9	68.2*	80.0**	103.9	8.7	3651

Impreza

Model	L	H	W	WB	GC	Curb Wt.
4 Door 2.0i	180.3	57.7	78.2**	104.1	5.7	3010
4 Door 2.0i Premium	180.3	57.7	78.2**	104.1	5.7	3043
4 Door 2.0i Limited	180.3	57.7	78.2**	104.1	5.7	3087
4 Door WRX	180.3	58.1	77.8**	103.3	6.1	3208
4 Door WRX Premium	180.3	58.1	77.8**	103.3	6.1	3241
4 Door WRX Limited	180.3	58.1	77.8**	103.3	6.1	3252
4 Door WRX STI	180.3	57.9	78.0***	103.3	5.9	3384
4 Door STI Limited	180.3	57.9	78.0***	103.3	5.9	3417
5 Door 2.0i	173.8	57.7	78.2**	104.1	5.7	3010
5 Door 2.0i Premium	173.8	57.7	78.2**	104.1	5.7	3043
5 Door 2.0i Limited	173.8	57.7	78.2**	104.1	5.7	3087
5 Door 2.0i Sport Premium	173.8	59.5*	78.2**	104.1	5.9	3098
5 Door 2.0i Sport Limited	173.8	59.5*	78.2**	104.1	5.9	3109
5 Door WRX	173.8	58.1	77.8**	103.3	6.1	3208
5 Door WRX Premium	173.8	58.1	77.8**	103.3	6.1	3241
5 Door WRX Limited	173.8	58.1	77.8**	103.3	6.1	3252
5 Door WRX STI	173.8	57.9	78.0***	103.3	5.9	3373

* Including Roof Rails

** Including mirrors

*** Including mirrors with Integrated turn signals

NOTE: All models require the "T" hook for the rear and the "S" hook for the front tie-downs.

SUBARU
WEIGHTS AND DIMENSIONS

2014 BRZ

BRZ

Model	L	H	W	WB	GC	Curb Wt.
2 Door Premium Auto	166.7	50.6	77.8**	101.2	4.9	Pending
2 Door Premium Manual	166.7	50.6	77.8**	101.2	4.9	2762
2 Door Limited Auto	166.7	50.6	77.8**	101.2	4.9	2822
2 Door Limited Manual	166.7	50.6	77.8**	101.2	4.9	2776

** Including Mirrors

SUBARU
WEIGHTS AND DIMENSIONS

2014 XV Crosstrek

XV Crosstrek

Model	L	H	W	WB	GC	Curb Wt.
2.0i Prem Auto	175.2	63.6*	78.2**	103.7	8.7	3142
2.0i Prem Manual	175.2	63.6*	78.2**	103.7	8.7	3087
2.0i LTD Auto	175.2	63.6*	78.2**	103.7	8.7	3164
2.0i LTD Manual	175.2	63.6*	78.2**	103.7	8.7	Pending
Hybrid Prem	175.2	63.6*	78.8***	103.7	8.7	3450
Hybrid LTD	175.2	63.6*	78.8***	103.7	8.7	3450

* Including Roof Rails

** Including Mirrors

*** Including Mirrors with Integrated Turn Signals