

**iLIFT Suspension Lift System**  
**Acura NSX, 2017-21 (USA / Canada only)**  
 note: Type-S requires modification (noted pg 21)  
 Document Version 5.9



No warranty is made or implied for products sold through Suspension Lift Technologies LLC against protection from damage, injury, or death. Under consideration for the purchase of these components, the buyer agrees to release, indemnify and hold Suspension Lift Technologies LLC harmless for, and assume all risk of any injury or damages that may arise from the installation or use of these components. Installation of these products must be performed by a competent and knowledgeable installer. Some items may only be used off road in some states. User assumes full risk. Suspension Lift Technologies LLC is not responsible for errors, typographical, or otherwise, in this installation guide.

**Please note:**

- See ways in which we can improve this guide? Please e-mail [info@iLIFTSystems.com](mailto:info@iLIFTSystems.com).
- Suspension lowering kit allows the suspension to be lowered 12 or 24mm at the shock absorber (approximately 10 or 20mm ride height lowering) – please consult with owner before starting.
- The system includes a piezo beeper mounted in the cabin to indicate when system commands are received and when the system is in the up position.
- Professional installation recommended.
- Torque specifications in diagrams: N/m (kgf/m, lbf/ft).
- Estimated labor hours:
  - 3.0 hrs - actuator install (front)
  - 6.0 hrs – front air control assembly, ECU installation, & cabin wiring
  - 4.0 hrs - rear air tank installation & tube routing
  - 3.0 hrs - (optional) rear actuator installation
  - 4.0 hrs - (optional) front sensor installation, add 2.0 hrs if side sensors are to be installed

**Required:**

- If a front-only iLIFT Suspension Lift Kit has been purchased and you wish to lower the ride height of the vehicle, a rear lowering kit is required (available from ScienceofSpeed – [www.ScienceofSpeed.com](http://www.ScienceofSpeed.com)).
- Wall-mount spring compressor (example: Branick model no. 7600).
- Visit this site for video for a tutorial on how to install the iLIFT actuator:  
[www.iLIFTSystems.com/support/NSX-2017-on](http://www.iLIFTSystems.com/support/NSX-2017-on)

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## Packing List:

2

### SYS-NSX2: iLift Suspension System - Front Only

QTY	ITEM	PART NO.
<b>Box - 36x18x18</b>		
<b>Box 1 - Air Control Assembly (2 Wheel) - 22x14x6 w/ expanding foam bag</b>		
1	assembly, 2 wheel air control	NSX2-ACA-2WH-ASY
<b>Bag 4x6 "Air Control Assembly Hardware"</b>		
4	screw, M6x25 hex flange (8.8 ZP)	HF06025
8	washer, M6 x 20 x 1.6 (18-8 SS)	WSX-SUS-M6X20-1.6
2	spacer, front bumper M6	NSX2-ACA-02
2	fitting, 5/16" push-to-connect tee	89230-05
<b>Box 2 - Air Tanks &amp; Accessories - 22x14x6 tanks in small bubble wrap</b>		
1	assembly, left air tank (5/16" 90 degree tube fitting, plug, & relief valve pre-installed)	NSX2-TNK-01-L
1	assembly, right air tank (5/16" 90 degree tube fitting & plug pre-installed)	NSX2-TNK-01-R
<b>Bag 9x12 "Air Intake Hose"</b>		
1	air compressor intake & filter Kit	COM-INT
<b>Bag 4x6 "Air Tank Hardware"</b>		
4	component, air tank bracket spacer	NSX2-TNK-003
4	bolt, M6x30 hex flange *fully threaded* (8.8 ZP)	90386A104
4	nut, M6 hex flange (8.8 ZP)	95003A101
<b>Bag 9x12 "Air Tube Hardware"</b>		
2	adel clamp, no. 16	3225T8
15	zip tie, 5.5"	7130K53
15	zip tie 8.5"	7130K54
6	zip tie, 14"	7130K56
1	tube cutter	TC
<b>Box 3 - Top Mounts &amp; Accessories (2 Wheel) - 12x9x3 tuck top (bubble bag top mounts &amp; tools)</b>		
2	assembly, top mount	NSX2-TPM-01-ASY
2	top mount cone spacer	NSX2-TPM-02
1	shock shaft socket tool	NSX2-TOL-TPM.01
1	17mm socket wrench tool	NSX2-TOL-TPM.02
1	actuator assembly cone tool (14x11mm)	ASC-14x11
2	clip, harness band (96.2mm)	91507-STK-A01
<b>Box 4 - Spring Hardware (2 Wheel) - 12x9x3 tuck top, individually bubble bag aluminum components</b>		
2	lower perch, front	NSX2-SPR-01
4	spacer, lower perch (12mm)	NSX2-SPR-03
4	spring bushing, actuator 70mm	SPB-60-70
2	shock absorber top cap	NSX2-SPR-05
2	bump stop, 20mm	BMP-20
<b>Box 5 - Electrical - 12x9x3 tuck top</b>		
1	main electrical harness	NSX2-ECU-02
<b>Bag 4x6 "Piezo / LED"</b>		
1	assembly, piezo buzzer	spp-781.23
<b>Bag 4x6 "Fuse Tap &amp; Fuses"</b>		
1	fuse tap, mini	46044
1	fuse, mini 7.5 amp	46254
1	fuse, mini 15 amp	46256
<b>Bag 5x8 "ECU Hardware" (bracket in 4x6 bag)</b>		
1	bracket, ECU saddle	NSX2-ECU-001
2	screw, M6x30 hex flange (8.8 ZP)	HF06030
2	nut, M6 hex flange (8.8 ZP)	95003A101
1	tape, 2" wide insulation (6" long)	7643A76

1	assembly, CAN bus connector	NSX2-ECU-03	3
1	ECU 18 position connector with plugs (included if auto sensors not purchased)	0	
<b>Bag 6x9 "PDM"</b>			
1	assembly, 29" power lead	NSX2-PDM-002	
1	power distribution module	46095	
1	fuse, JCASE 40A	46592	
<b>Bag 4x6 "PDM Hardware"</b>			
1	bracket, PDM	NSX2-PDM-01	
2	screw, M10x1.25x16 hex flange (10.9 ZP)	95735A616	
1	bolt, M5x8 philips pan (18-8 SS)	92000A318	
1	bolt, M6x45 hex flange (8.8 ZP)	1189106040	
<b>Bag 5x8 "Horn Relocation" (2017-19 only)</b>			
1	bracket, horn relocation (2017-19 only)	NSX2-HRN-01	
1	assembly, horn relocation harness (2017-19 only)	NSX2-HRN-02	
<b>Box 6 - ECU - 6x6x2</b>			
1	ECU assembly	ECU-ASY	
<b>Loose</b>			
10	tube, 5/16" Nylon (ft) - one 10' segment	NB-5-040-0250	
10	tube, 5/16" Nylon (ft) - one 10' segment	NB-5-040-0250	
30	tube, 5/16" Nylon (ft) - one 30' segment	NB-5-040-0250	
36	sleeve, 3/8" (per ft)	20401F	
2	spring, front (70mm ID, 7" OAL, 8.0 kgf/mm)	Z70-178-080	
2	actuator assembly, 14mm	ACT-14-ASY	
<b>Box, small tuck top "DUST BOOT 2WH"</b>			
2	dust boot, shock absorber	DUB-1	

## SYS-NSX2: iLift Suspension System - Front & Rear

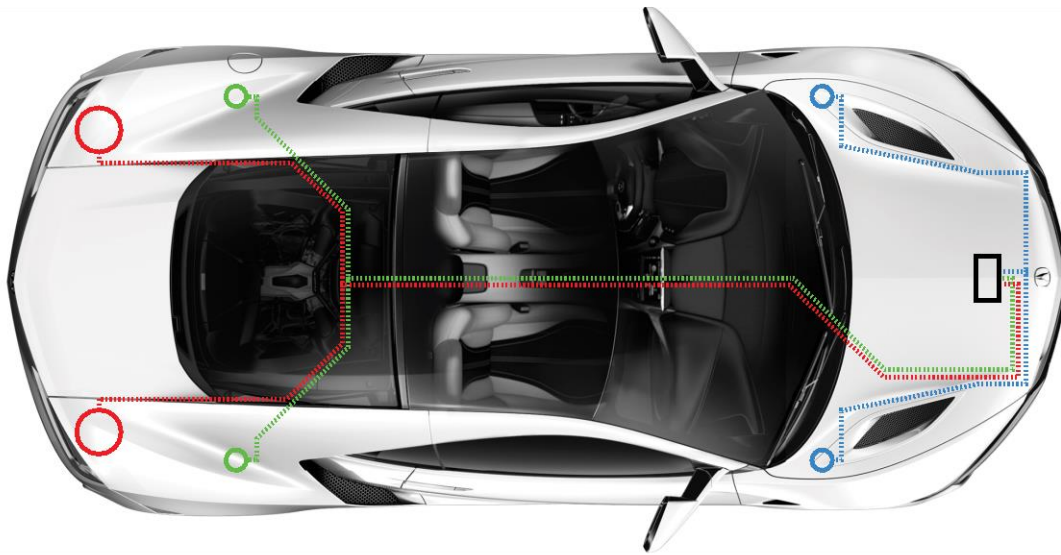
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<b>Box 1 - Air Control Assembly (4 Wheel) - 22x14x6 w/ expanding foam bag</b>		
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8	washer, M6 x 20 x 1.6 (18-8 SS)	WSX-SUS-M6X20-1.6
2	spacer, front bumper M6	NSX2-ACA-02
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<b>Box 2 - Air Tanks &amp; Accessories - 22x14x6 tanks in small bubble wrap</b>		
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4	clip, harness band (96.2mm)	91507-STK-A01
<b>Box 4 - Spring Hardware (4 Wheel) - 12x9x3 tuck top, individually bubble bag aluminum components</b>		
2	lower perch, front	NSX2-SPR-01
2	lower perch, rear	NSX2-SPR-02
8	spacer, lower perch 12mm	NSX2-SPR-03
8	spring bushing, actuator 70mm	SPB-60-70
4	shock absorber top cap	NSX2-SPR-05
2	bump stop, 20mm	BMP-20
2	bump stop, 40mm	BMP-40
<b>Box 5 - Electrical - 12x9x3 tuck top</b>		
1	main electrical harness	NSX2-ECU-02
<b>Bag 4x6 "Piezo / LED"</b>		
1	assembly, piezo buzzer	spp-781.23
<b>Bag 4x6 "Fuse Tap &amp; Fuses"</b>		
1	fuse tap, mini	46044
1	fuse, mini 7.5 amp	46254
1	fuse, mini 15 amp	46256
<b>Bag 5x8 "ECU Hardware" (bracket in 4x6 bag)</b>		
1	bracket, ECU saddle	NSX2-ECU-001



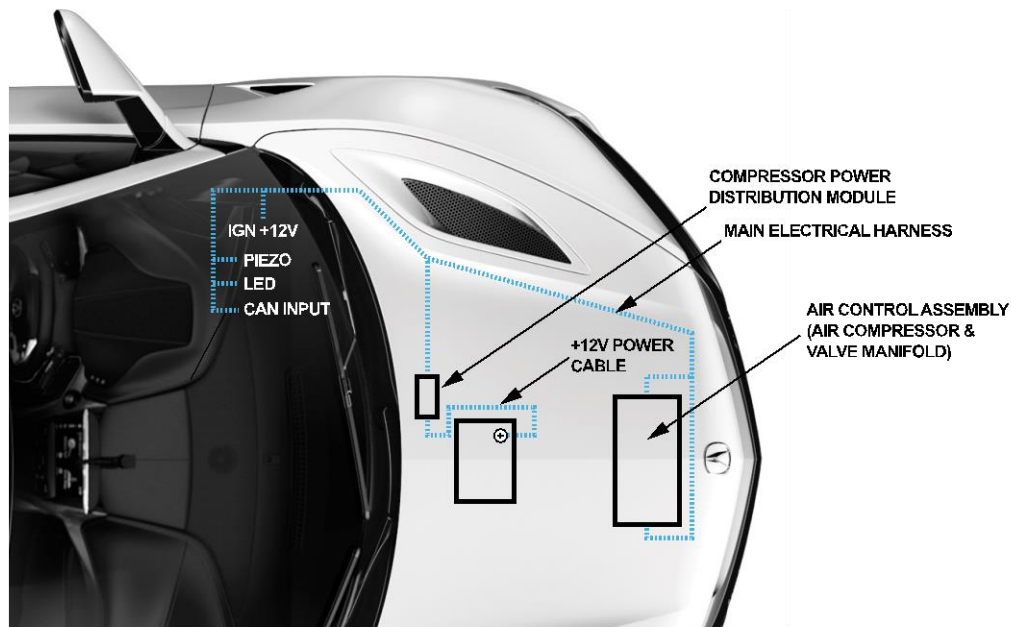
2	screw, M6x30 hex flange (8.8 ZP)	HF06030
2	nut, M6 hex flange (8.8 ZP)	95003A101
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1	ECU 18 position connector with plugs (included if auto sensors not purchased)	0
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30	tube, 5/16" Nylon (ft) - one 30' segment	NB-5-040-0250
36	sleeve, 3/8" (per ft)	20401F
20	sleeve, 3/8" (per ft)	20401F
4	actuator assembly, 14mm	ACT-14-ASY
2	spring, front (70mm ID, 7" OAL, 8.0 kgf/mm)	Z70-178-080
2	spring, rear (70mm ID, 8" OAL, 7.0 kgf/mm)	Z70-203-070
<b>Box, small tuck top "DUST BOOT 4WH"</b>		
4	dust boot, shock absorber	DUB-1
<b>PRX-KIT-NSX2: optional iLIFT Automated Sensor Lift System</b>		
1	assembly, sensor harness	spp-781.22
6	sensor modules	PRX-ASY
6	connector, DTM-compatible 3-way plug & wedge	CKK3031-1.2-21B
21	terminal, DTM No. 20, socket, solid, nickel, 16-22 AWG (for plug)	0462-201-20141
12	screw, No. 6 x 1" (18-8 SS)	91772A153
12	nut, No. 6 (18-8 SS)	91831A007
12	washer, No. 6 (18-8 SS)	90945A716
6	adel clamp, no. 4	3225T2
25	zip tie 8.5"	7130K54
9	shrink tube, 1/4" (one piece 9" long)	7861K53
1	crimp tool, size 20	18890

## Introduction & Overview:

The iLIFT Suspension Lift System is a product designed to raise and lower a vehicle to allow the driver to avoid obstacles. The system consists of four major components: 1) Air Control Assembly (consisting of the air compressor, manifold, and bracketry mounted in the front of the vehicle), 2) Actuators (pneumatic cylinders mounted on the shock absorbers), 3) Air Tanks (mounted in the rear quarter panels), and 4) Electronic Control Unit (mounted in the front compartment) and wire harness. The standard system requires the driver to manually raise and lower the front of the suspension using the factory cruise control switch. Two options add rear suspension lift and automated sensors that allow automated lifting of the vehicle based on feedback from proximity sensors mounted under the vehicle (still allowing manual raise with the cruise control switch). The system features wireless configuration (laptop or smartphone) and safety features such as automatic deactivation when vehicle speed exceeds 25 mph and when the cruise control system is on (allowing the switches to be used for both iLIFT activation and cruise control separately) .



**iLIFT AIR SYSTEM COMPONENTS & ROUTING**  
 AIR TANK - FRONT ACTUATORS - REAR ACTUATORS (OPTIONAL)



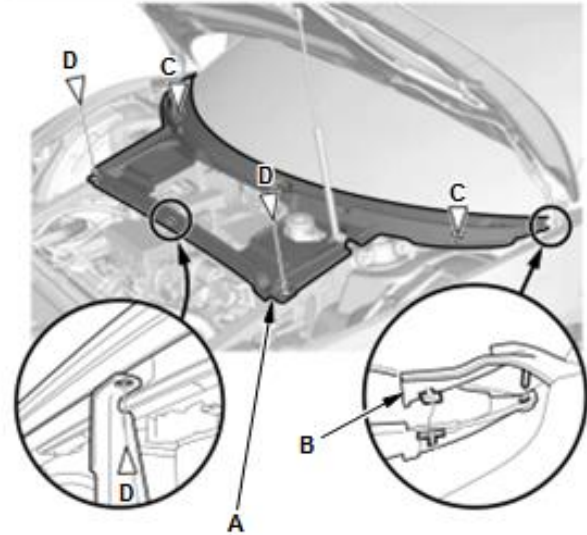
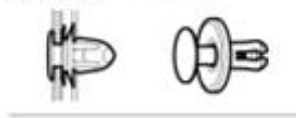
**iLIFT ELECTRICAL COMPONENTS**

## Front Shock Absorber Removal:

- Remove windshield wipers.
- Remove front cowl cover by removing three retaining clips (D).
- Lift up on the cowl to release clips (C) while being careful to unhook cowl from rubber (B).

### Fastener Locations

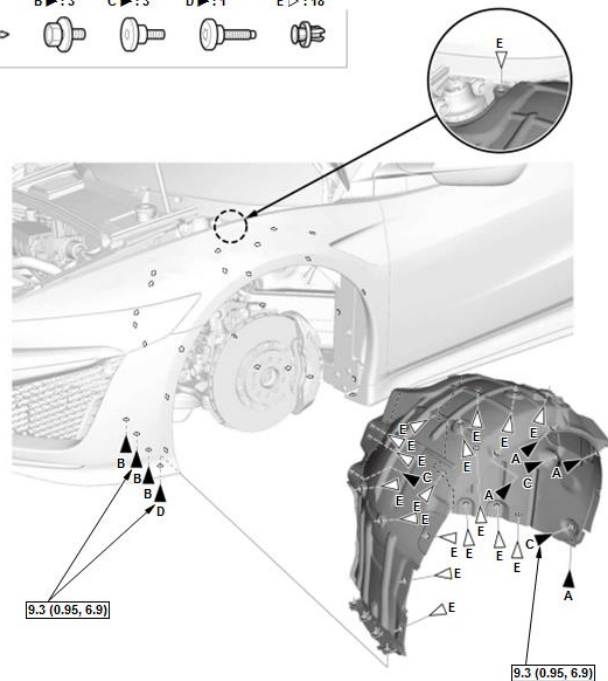
C ▷ : 2    D ▷ : 3



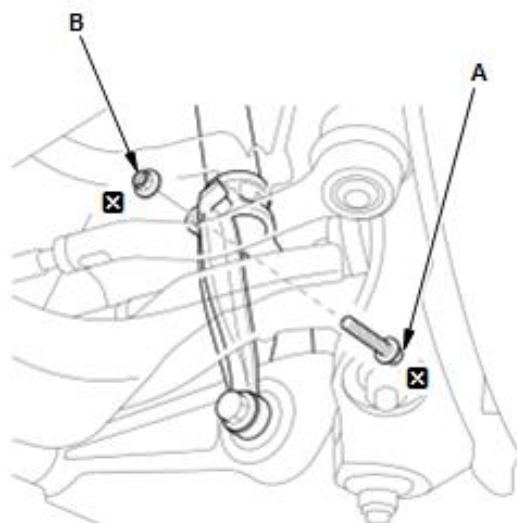
- Remove left front fender liners as shown (right side does not need to be removed).

### Fastener Locations

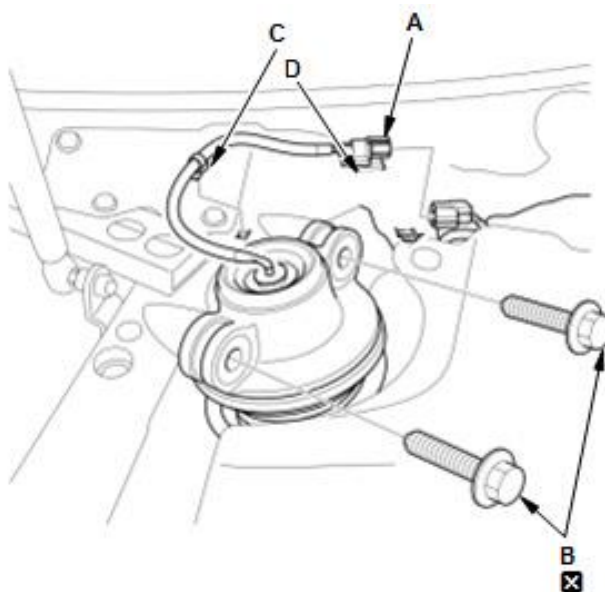
A ▷ : 4    B ▷ : 3    C ▷ : 3    D ▷ : 1    E ▷ : 18



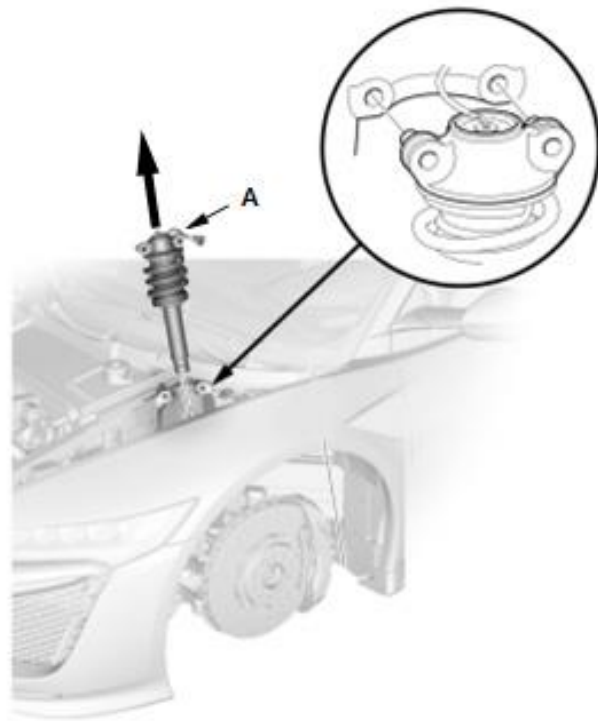
- Remove wheels.
- Remove bolt and nut to loosen lower fork clamp.



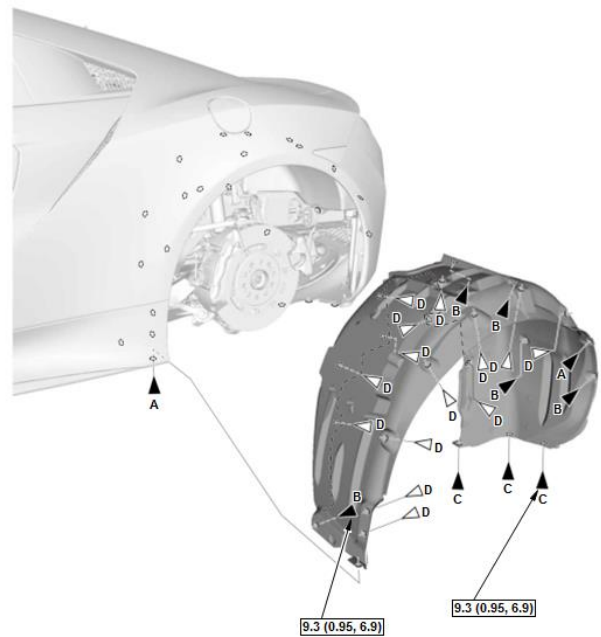
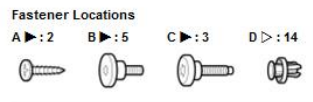
- Remove the connector (A) from the retainer by depressing clip (D) and sliding connector off from the retainer.
- Disconnect the male (A) and female connectors.
- Remove the damper/spring mounting bolts (B).
- Unclip the retaining wire band (C).
- NOTE: Do not let the damper/spring drop down under its own weight.



- The front shock absorbers (A) can be removed by lifting up and out.
- **IMPORTANT!** Carbon ceramic rotors are fragile. Use factory rotor protective panel or a thick pad to protect rotor and caliper.
- **IMPORTANT!** Be careful not to damage the body.

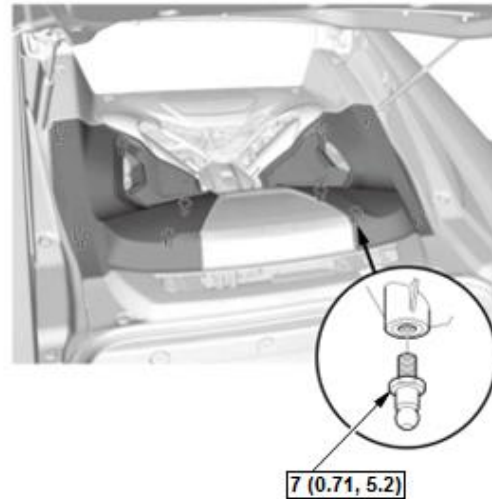


- Remove left & right rear fender liners as shown.

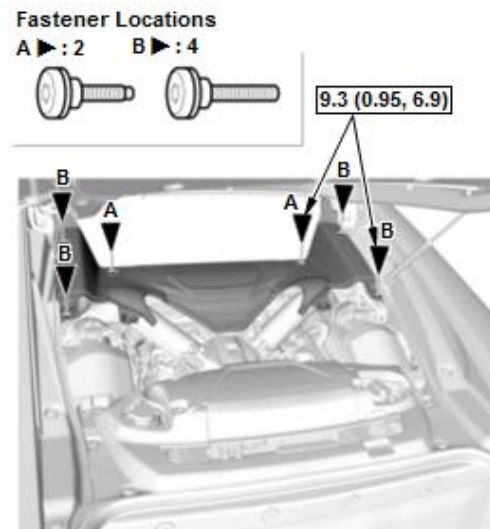


## Rear Shock Absorber Removal (Optional Rear Lift Only)

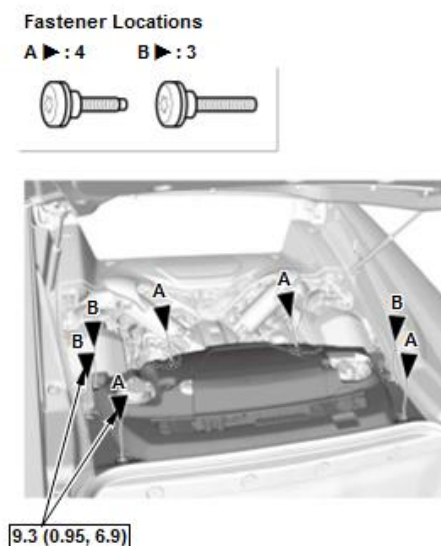
- These steps are only performed if the optional rear lift is purchased.
- Remove engine bay side panels highlighted by lifting up.



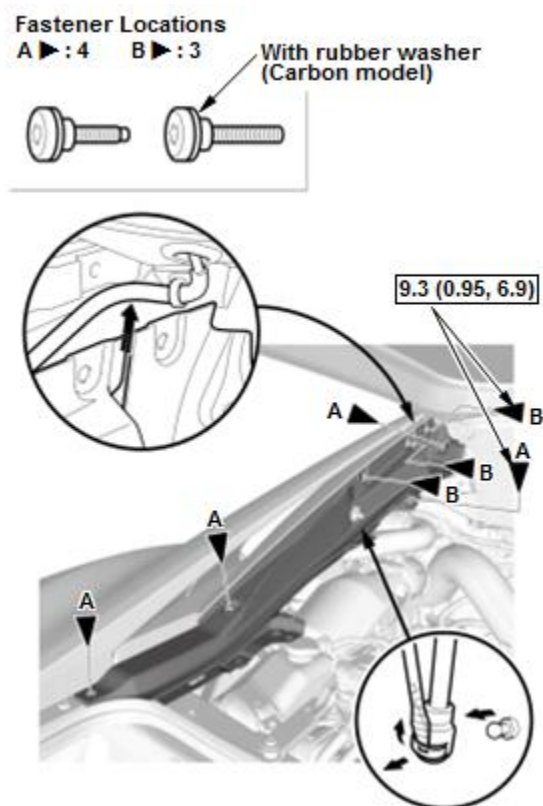
- Remove engine bay front panel highlighted by removing screws noted.



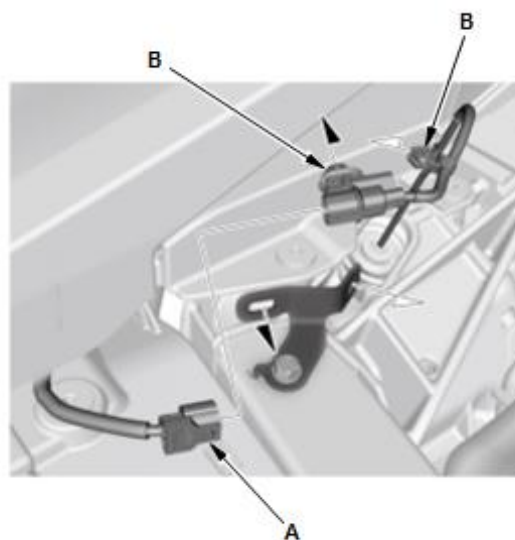
- Remove engine bay rear panel highlighted by removing screws noted.



- Remove engine gutter cover by supporting rear hatch with support rod and removing lift struts.
- Place a rag under the lift strut to protect the engine cover from being scratched when releasing clip.
- Remove fasteners A & B as shown to remove panel.

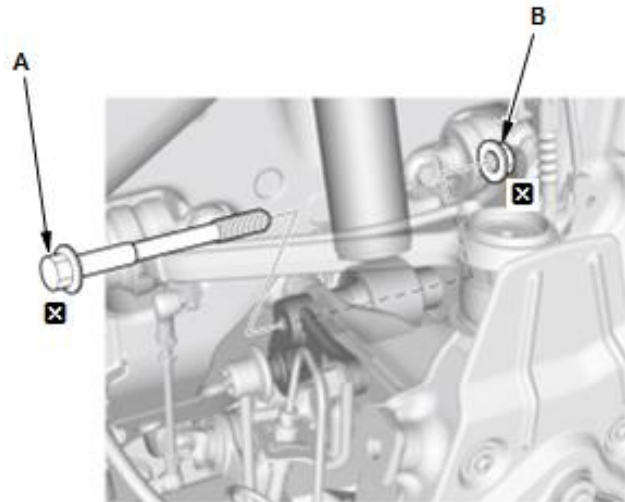


- Disconnect the connector (A).
- Remove the clips (B).

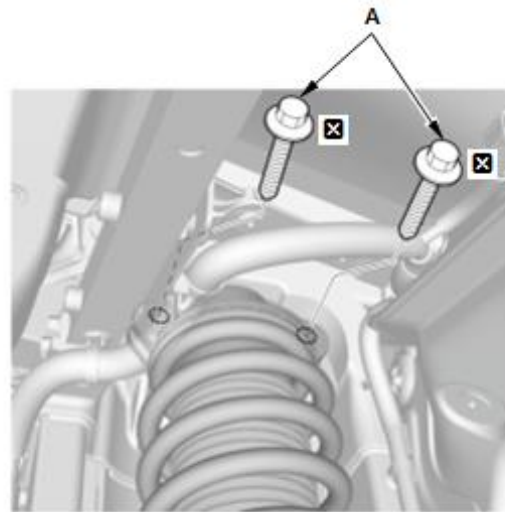




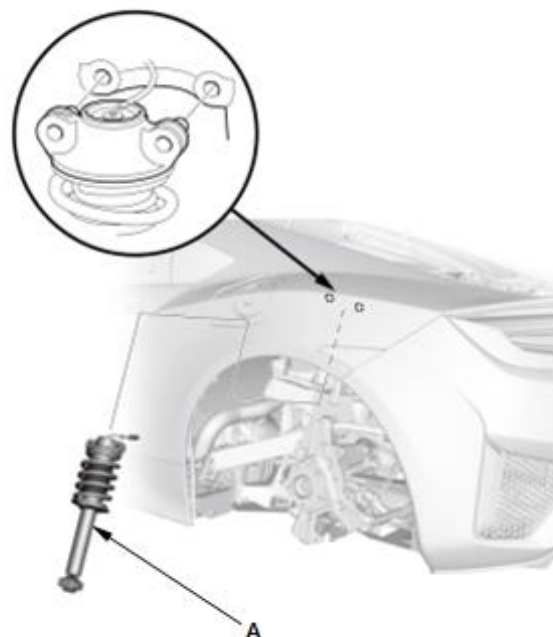
- Remove the damper/spring lower mounting bolt (A) and nut (B). Replace if necessary.



- Remove the damper/spring mounting bolts (A).
- **IMPORTANT!** Do not let the damper/spring drop down under its own weight.



- Remove the damper/spring (A).
- **IMPORTANT!** Carbon ceramic rotors are fragile. Use factory rotor protective panel or a thick pad to protect rotor and caliper.
- **IMPORTANT!** Be careful not to damage the body.



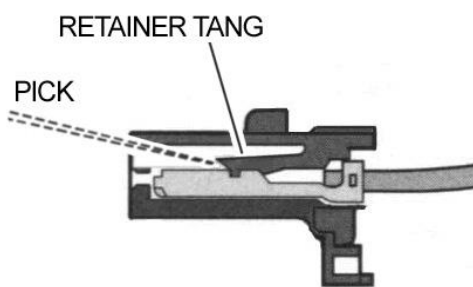


## Shock Absorber Disassembly:

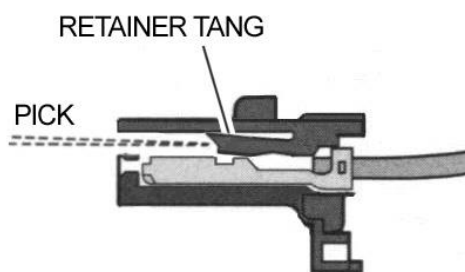
Visit this site for video for a tutorial on how to install the iLIFT actuator:

[www.iLIFTSystems.com/support/NSX-2017-on](http://www.iLIFTSystems.com/support/NSX-2017-on)

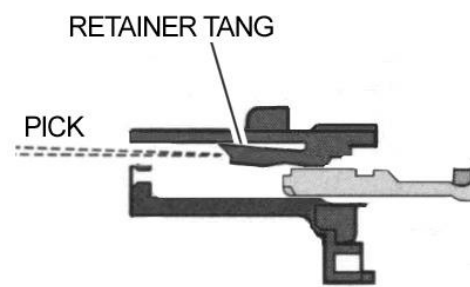
- Mark connector with position of black wire that will be removed from connector.
  - Cut off plastic wire band clip from harness (replacements are supplied).
  - Remove electrical tape and wire jacket to expose wires. Save wire jacket for reinstallation.
  - To remove terminals, first remove grey terminal retainer from connector with a pick.
  - Save grey terminal retainer for later step.
- 
- Remove terminals from connector by inserting a terminal removal tool or fine flat blade screwdriver under retaining tooth that latches in to terminal. The wire should easily remove from the rear of the connector as shown. The steps are illustrated below.



STEP 1

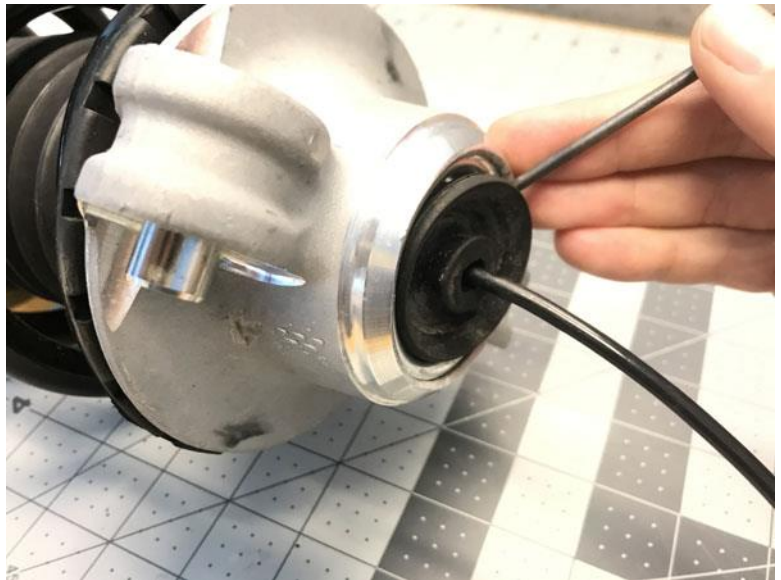


STEP 2



STEP 3

- Pry out rubber seal as shown and remove seal by pulling wires through the center of the seal.
- Save rubber grommet for later step.



- A spring compressor (as shown) is required (example: Branick model no. 7600).
- Compress spring by about 1". There is no need to compress further.
- Rubber pads / cut hose can be installed as shown to prevent scratching of the shock absorber components.



- With the spring still compressed, slip wires from shock absorber through supplied shock shaft socket as shown. This socket is installed on the flat on the shock shaft.
- Using the supplied 17mm socket, attach a 3/8" drive wrench to the square hole in the 17mm socket.
- While holding the shock shaft socket with a 14mm wrench as shown, loosen the 17mm nut by rotating counter-clockwise.
- Loosen and remove 17mm nut.



- Remove top mount, rubber isolators, spring, top cap (blue), and lower mount as shown (front shock absorber assembly shown). The top cap is secured under tension to the shock absorber. Slide the bottom mount against the base of the top cap. Tap the bottom side of the bottom mount with a soft mallet to remove the top cap.



### Shock Absorber Assembly:

- Note difference between front & rear (optional) lower mounts.





- Ride height (the normal height that the vehicle rides at without iLIFT engaged) is adjustable by installing the supplied lower mount spacers. During installation, the suspension can be setup for factory ride height or can be lowered.

**Factory ride height:** install both spacers.

**12mm spring drop** (approximately 10mm chassis ride height lower): install one spacer.

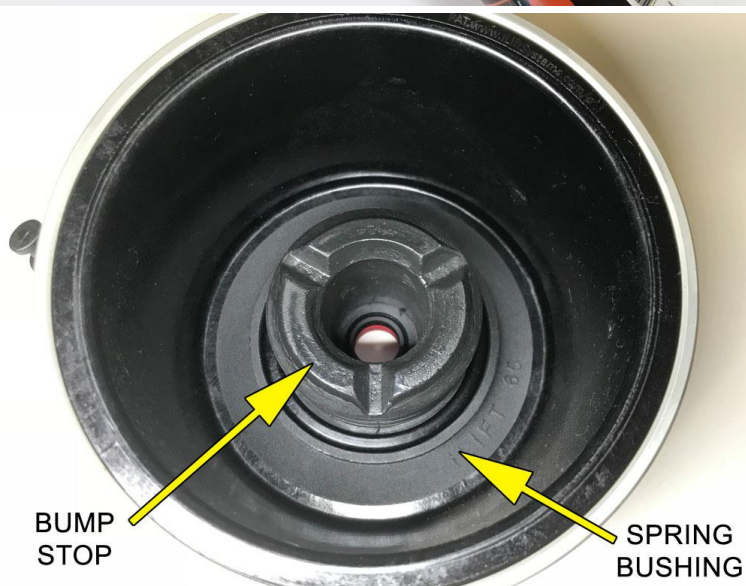
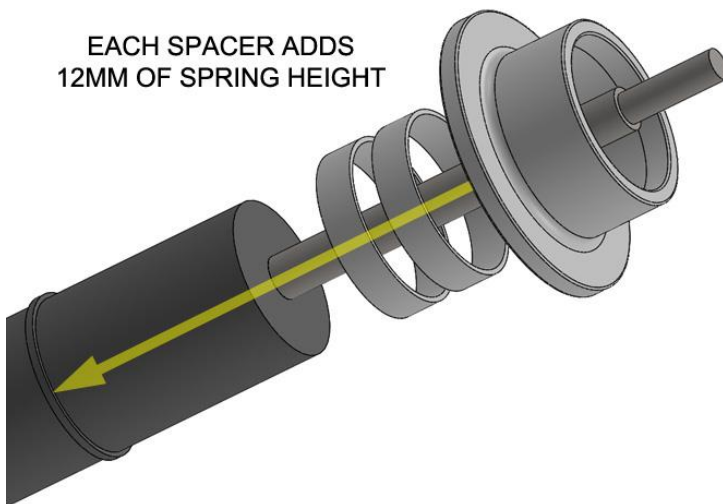
**24mm spring drop** (approximately 20mm chassis ride height lower): do not install any spacers.

The diagram shows a front shock absorber being setup for factory ride height.

If lowering a vehicle with a 2-wheel iLIFT Suspension Lift System – a separately available lowering kit is required for the rear. Please see note on first page.

- First, install the number of spacers required. Then, install the correct lower mount (rear shock absorber & rear mount shown).
- Install the plastic lower spring bushing as shown.
- Clean shock absorber top where supplied top cap will be installed. Apply a small amount of lubricant like WD40 or a soapy solution to the top lip of the shock absorber.
- Carefully install the supplied top cap to the shock absorber.
- Slowly tap the top cap on using a soft mallet making sure to allow the top cap to evenly slide down the shock absorber until it bottoms out (the slotted holes allow the bump stop to ventilate when compressed).
- **IMPORTANT!** Note that the front actuators have a straight fitting installed, and the rear actuators have a 90 degree elbow installed. The boxes are labeled front and rear.
- Install supplied 20mm bump stop pair in to the front actuators and the supplied 40mm bump stop pair in to the (optional) rear actuators.
- The bump stop clips in to the groove in the actuator as shown.

EACH SPACER ADDS  
12MM OF SPRING HEIGHT



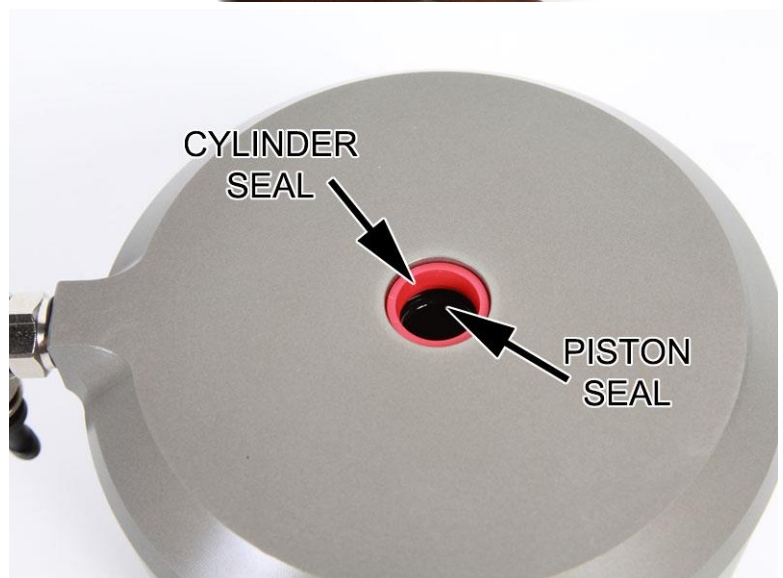
- Push the supplied dust boot on to the bump stop as shown. Push all the way down so that the dust boot is clipped in to the highest retaining groove on the bump stop. The reinforcement rings mounted on the dust boots are left in place.



- Install supplied front and rear (optional) springs to the shock absorbers.  
**FRONT:** 7" long, marked with 080  
**REAR:** 8" long, marked with 070.
- Install actuator installation tool to shock shaft as shown. This cone shaped tool will allow the actuator's seals to flare out and over the shock shaft.



- Using standard motor oil and a swab or brush, apply a light coat of oil to the actuator's cylinder seal and piston seal. Note: residual oil from the factory's assembly process may be found at the bottom of the actuator. This is normal.



- Position the shock assembly in to the spring compressor. Place the spring compressor's arms under the shock absorber's lower mount. Support the shock absorber from the bottom so that it does not fall through.
- Loosely position the top mount and actuator so that the spring compressor's top arms can contact the top of the actuator as shown.
- The position of the fitting in the actuator does not matter – the actuator can rotate in to place when installed in the car.



- Remove the top mount and push down on the actuator with the spring compressor approximately one inch as shown.
- Remove actuator installation tool.



- Install the supplied aluminum spacer with the larger diameter base of the spacer against the actuator as shown.
- The actuator should be pushed down far enough so that the spacer covers the shock shaft as shown. The shock absorber's shoulder should be at the top or above the spacer's top surface.
- Apply a film of grease to the shock threads to prevent corrosion.
- Replace the top mount in the same orientation it was removed.
- Secure top mount with factory nut using supplied shock shaft socket and 17mm socket wrench. While holding the shock shaft with the supplied socket and a 14mm wrench, use a 3/8" drive torque wrench to torque the nut. Torque = 34 lbf-ft (46 Nm). Note, this torque specification includes the offset of the wrench factored in. No adjustment is needed.



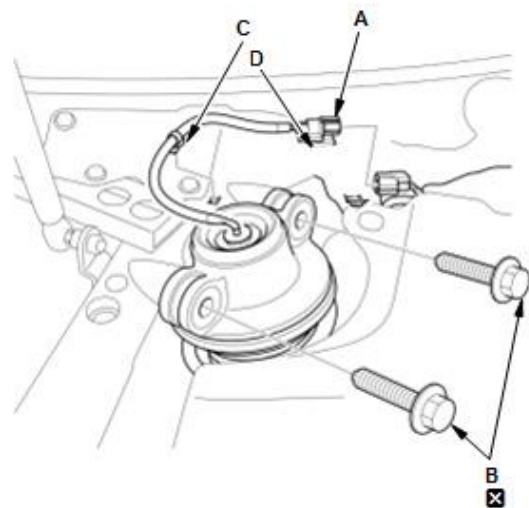


- Replace rubber grommet, wire jacket (secure with electrical tape), connector, and grey terminal retainer removed during prior step.

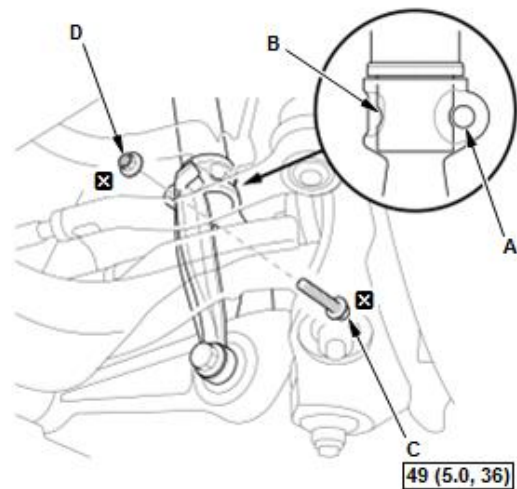


### Shock Absorber Reinstallation:

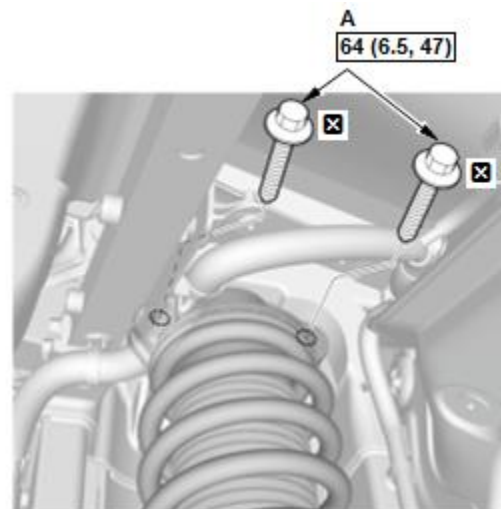
- **IMPORTANT!** If a front-only iLIFT Suspension Lift System is installed, and the front ride height has been lowered, you must install the ScienceofSpeed Rear Lowering Kit (install according to instructions provided).
- Note that the front actuators have a straight fitting installed, and the rear actuators have a 90 degree elbow installed.
- Replace front shock absorbers. Place the fittings on the iLIFT Actuators towards the vehicle's front side (the actuators can be rotated with some force when the suspension is not compressed). Replace bolts if needed. Leave bolts (B) slightly loose.
- Connect male (A) and female connectors.
- Replace connector (A) on to retaining clip.
- Replace wire band (C in diagram in prior step) with supplied.



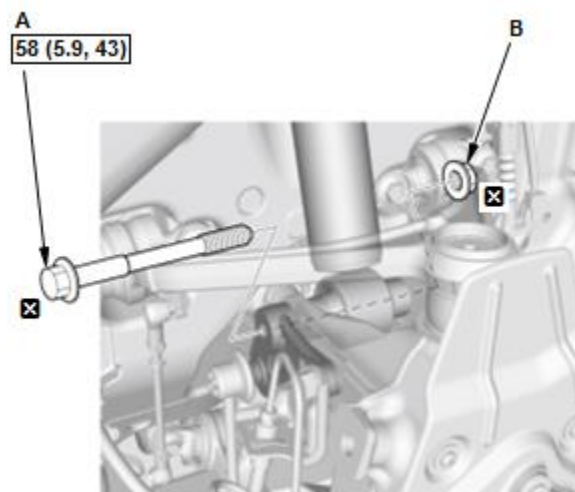
- Secure lower mounting bolt (C) and nut (D). Replace hardware if needed.
- Secure top mount bolts (B). Torque = 47 lbf/ft (64 Nm).
- Secure bottom bolt (C) and nut (D). Torque = 36 lbf/ft (49 Nm).



- If removed, replace rear shock absorbers. Place the fittings on the iLIFT Actuators towards the vehicle's front side (the actuators can be rotated with some force). Replace bolts if needed. Leave bolts (A) slightly loose.



- Install the lower mount bolt (A) and nut (B). Replace bolt and nut if needed.
- Secure top mount bolts (A in previous diagram). Torque = 47 lbf/ft (64 Nm).
- Secure bottom mount bolt and nut. Torque = 43 lbf/ft (58 Nm).
- Replace electrical harness and connect electrical connector.
- Replace wire band with supplied





### Air Tanks & Air Tubes Installation:

- See the diagram on page four for an overview of the air components and tube routing.
- The two supplied air tanks will be installed in the rear left and right corners. The air tanks can be installed without removing the rear bumper cover (photo shows bumper removed for illustration). If bumper cover is being removed for another component, such as downpipes or exhaust, access to the rear mount points are easier and should be done at the same time.
- Air tanks are pressured checked and cleaned before shipping.
- The left side tank has a port on the bottom for the pre-installed safety relief valve.
- Type S NSX: the supplied tanks are not designed for the modified Type S rear bumper. Installation on the Type S requires the tanks to be shifted forward by approximately 9.5mm. Test fit the tanks and drill two 1/4" holes to move the tanks forward.
- Remove the two factory hex flange screws from the bracket circled. Due to limited access, use a flat 10mm ratchet from the rear of the bracket. Remove the lower bolt, then the upper bolt.
- Replace both factory screws using the supplied M6x30 fully threaded screws.



- Remove the two factory screws as shown.



- Install the supplied air tank spacers over the rear of the previously installed M6x30 screws with the inner chamfered edge against the bracket (the chamfer allow the spacer to fit over the rivet nuts on the factory bracket).
- Loosely secure the bracket using the supplied M6 hex flange nuts as shown (two per side).



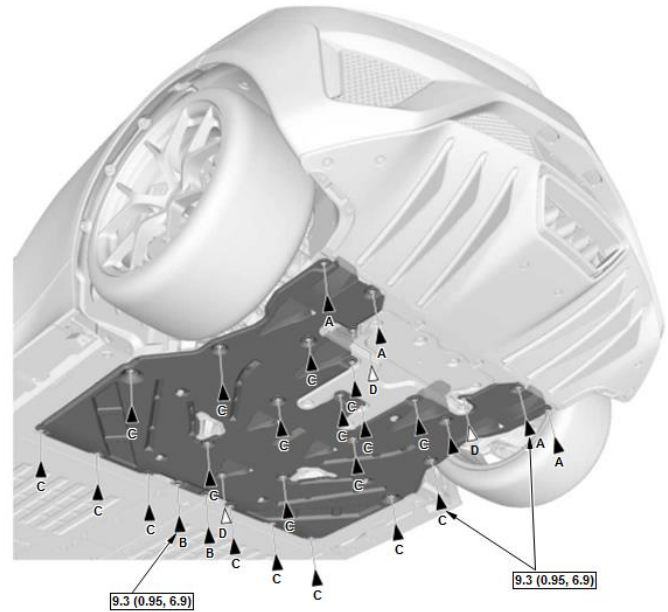
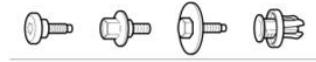
- Secure two nuts and two screws per tank. Torque = 7.2 lbf/ft (9.8 Nm).



- Remove rear under body panel.

## Fastener Locations

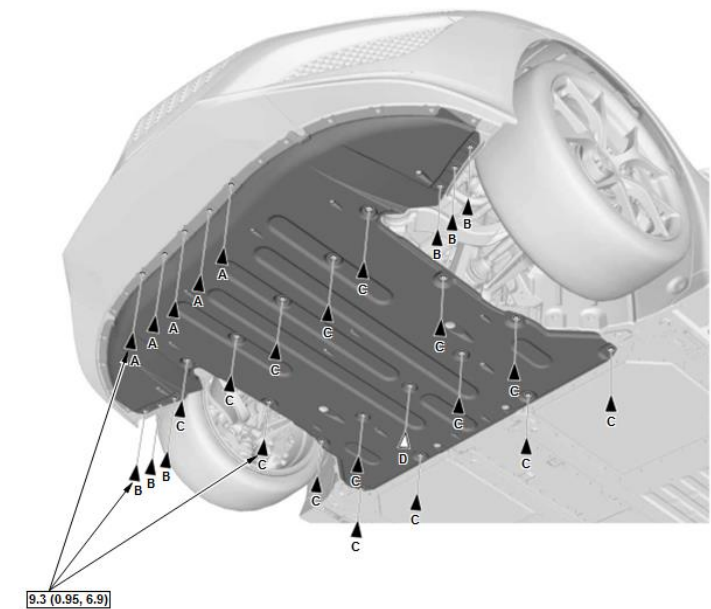
A ▶ : 4 B ▶ : 2 C ▶ : 19 D ▶ : 3



- Remove front under body panel.
- Remove center tunnel panel.

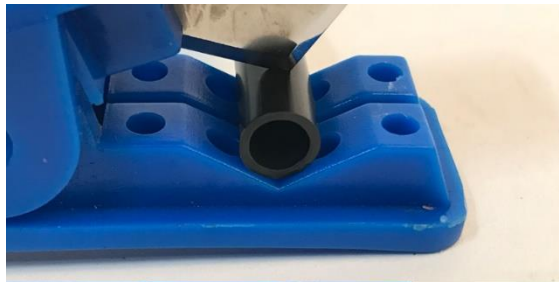
## Fastener Locations

A ▶ : 5 B ▶ : 6 C ▶ : 15 D ▶ : 1





- **Important!** When cutting tube, use only the supplied tube cutter. Do not use a razor or other cutting instruments, which can distort the tube when cutting, causing the o-ring in the fittings to fail.
- When cutting tube, make sure the tip of the blade is centered on the tube before cutting. This will prevent the tube from bending while being cut.



NO

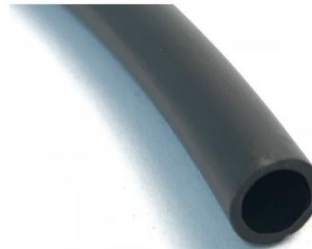


YES

- **Important!** The tube must have a clean, burr-free surface without being distorted in order for the o-ring in the fittings to not be damaged.



NO



YES

- Use the two supplied 10' sections of 5/16" tube and install 7' of supplied protective sleeve on each tube.

**Note:** Sleeve protects the plastic tube against heat sources (like the brakes) and abrasion. The sleeve will be positioned on the tube to protect against heat and abrasion.

- Slide the tube so that there is 1" of tube exposed.
- On the opposite end, apply masking tape over the end of the tube to prevent debris from entering tube during routing.
- Remove plugs from tank's tube fittings.
- On the end with the 1" exposed tube, insert end of tube into the tank's fitting. Insert tube with force until it bottoms out in fitting, then give it a tug to make sure it is engaged. If the tube ever needs to be removed, pull up on the retainer, and pull the tube out of the fitting.



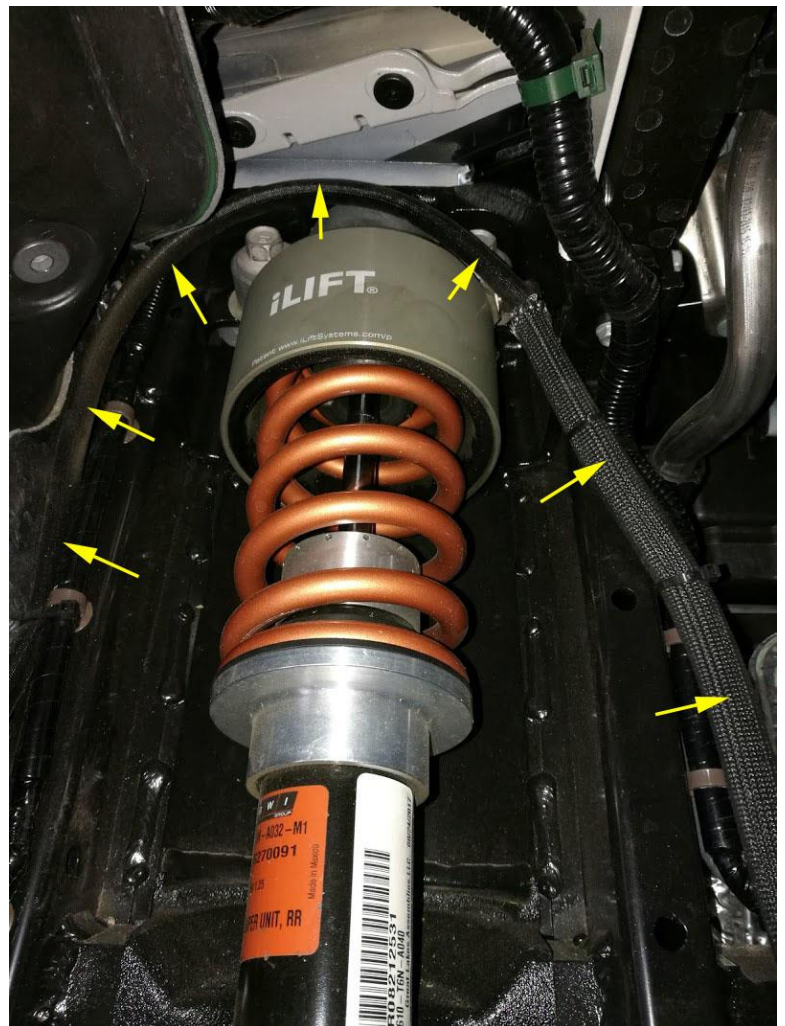
- Route tube from tanks along factory wire harness as shown.



- **(for optional rear lift only)** Cut two 7' sections of 5/16" tube and install 4' of supplied protective sleeve on each tube.

**IMPORTANT!** If you are installing a system with optional rear lift actuators, mark the opposite end of the tube installed into the actuator with a paint marker or masking tape. This will help identify the tube at a later step.

- Route tube(s) up and over the shock absorber as shown. Secure every 6" with supplied 5" zip ties.
- Route tube(s) in sleeve along the front of the shock absorber under the brake line and to the wire harness as shown.

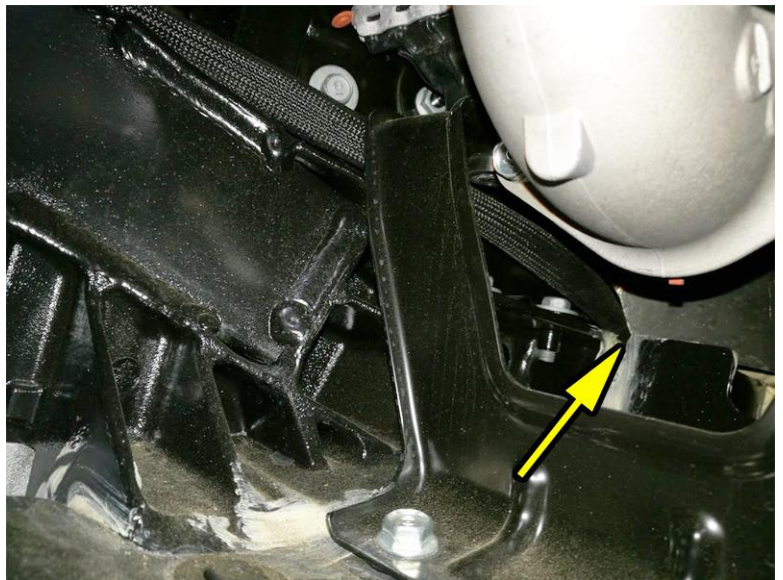




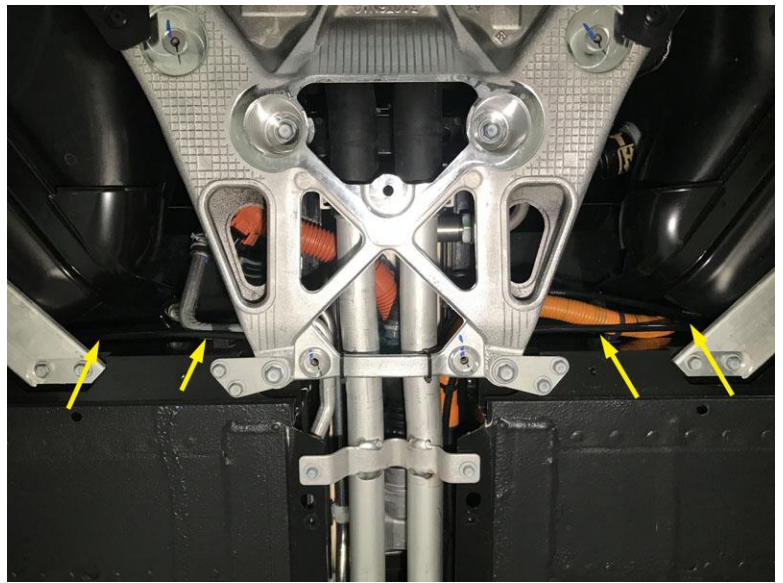
- Continue to route the tube(s) in the sleeve along the frame member as shown.
- Secure with two 14" zip ties per side.



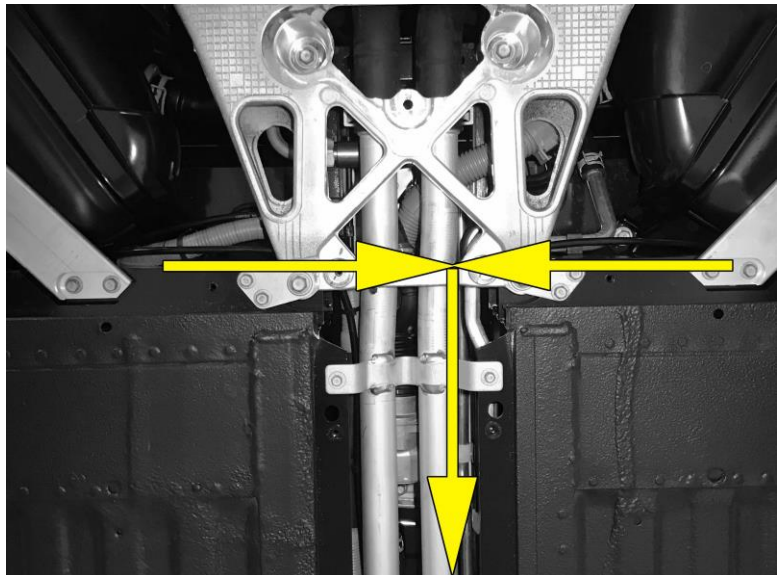
- Route the pair of tubes between the bracket and frame, under intercooler, and then through the hole as shown with arrow.



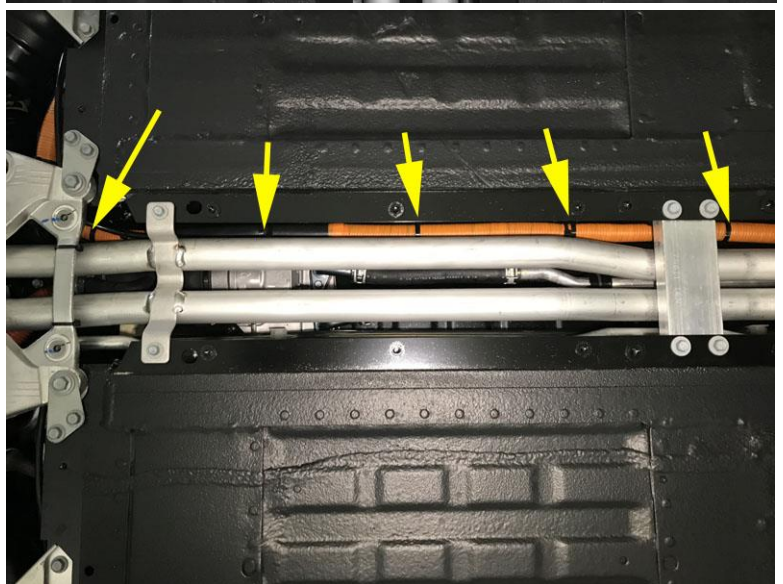
- Route lines toward center tunnel as shown.
- Leave pair of tubes with excess length in place while you repeat the same process for the other side.
- Cut 1' of protective sleeve (or two 1' sections for front & rear lift) and install around tube(s) leading from the vehicle left side (where they pass under the aluminum coolant tubes).



- Route tubes from left and right of vehicle at the point shown.
- The two tank tubes will join together using the supplied tee then be routed forwards in a later step.
- Pull sleeve back, then cut the tank tubes to length and join together with the supplied tee fitting. Make sure to double check fitment before cutting to length.
- **(for optional rear lift only)** Mark tee fitting installed with actuator tubes to be identified in later step. Repeat the same process for the tubes marked in a previous step.
- Secure fittings / hose to aluminum chassis member using 8.5" zip ties as shown in photo making sure that tubes do not come in to contact with hot coolant tubes.

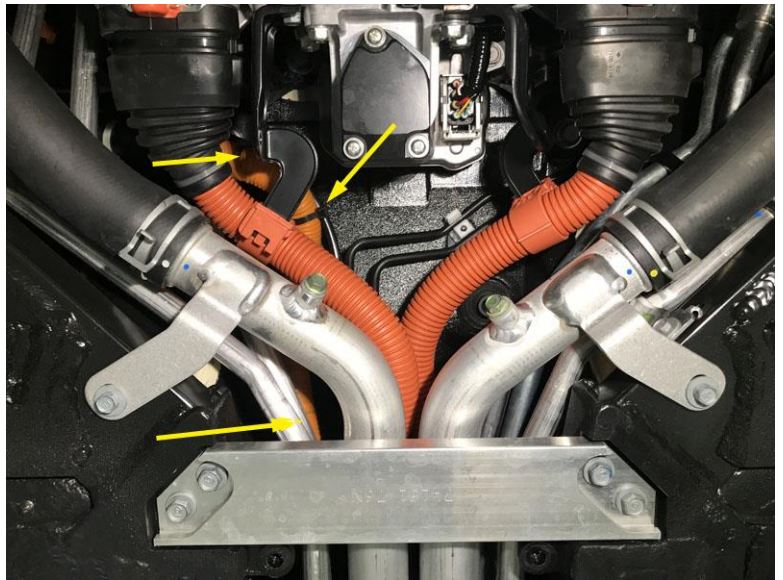


- Cut one 16' length of tube for the air tanks (plus one extra 16' length for optional rear lift for the rear actuators). For optional rear lift: Mark end of tube from actuators with paint marker or masking tape.
- Cut one 12' length (plus one extra 12' length for optional rear lift) of protective sleeve and install the 12' segment of sleeve on each tube(s) leaving 1" of tube exposed on one end.
- Install the tube(s) with the 1" exposed to the tee fitting(s).
- Route the air tube(s) on top of orange colored conduit as shown. Route the tubes and secure to the orange cable using supplied 8.5" zip ties. Route the tube so that it is above and away from the coolant tubes.

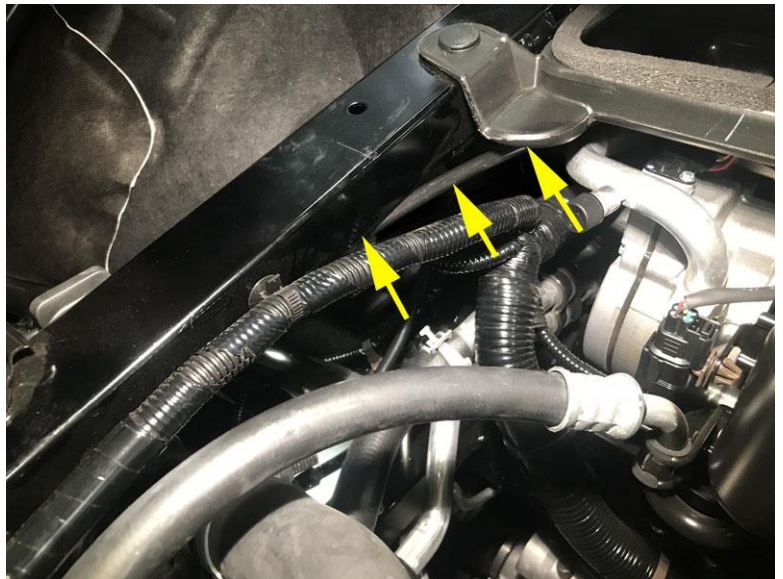




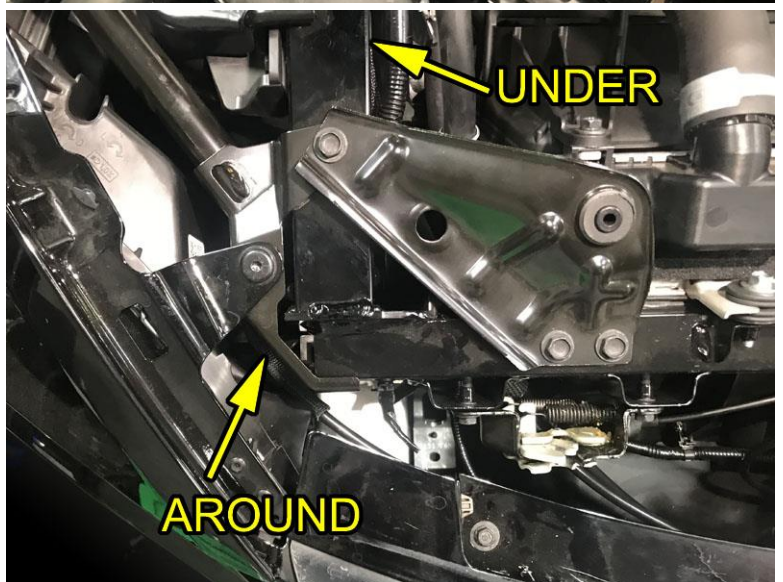
- Continue to the route the tubes following the smaller orange conduit above the larger orange conduits as shown securing to conduit with supplied 8.5" zip ties as shown.
- Make sure to route tubes away from hot coolant tubes.



- Route the tubes from under the car past the A/C compressor as shown. The end of the sleeve will terminate past the A/C compressor.



- Route tubes under frame member and around the front of the core support (where the bracket creates a gradual curve without sharp edges).
- Leave excess length in front compartment. They will be trimmed in a later step.





### Front Lift Actuator Tube Installation:

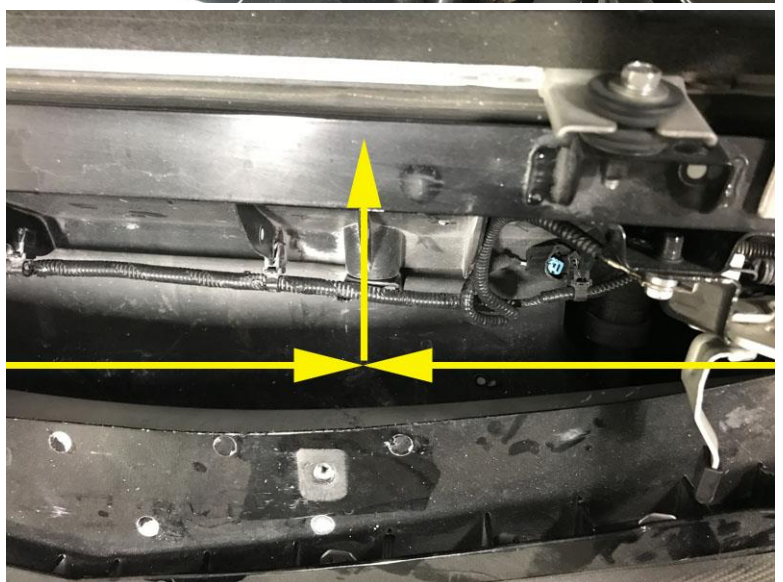
- Rotate the actuator as needed so that the fitting and tube does not rest against the frame. The actuator can be rotated with some force with the suspension uncompressed.
- Cut one 5' length and one 4' length of supplied 5/16" tube. Cut one 4.5' length and one 3.5' length of protective sleeve.
- Install 4.5' long sleeve over 5' tube and 3.5' long sleeve over 4' tube.



- Starting with vehicle right (passenger) side actuator, install one end of 5' tube into actuator's straight tube fitting as shown above.
- Route tube from actuator to in front of core support to join tube from air tank (and optional rear actuators).
- Install one end of 4' tube in to vehicle left (driver) side actuator's tube fitting. The tube will be routed in a later step.

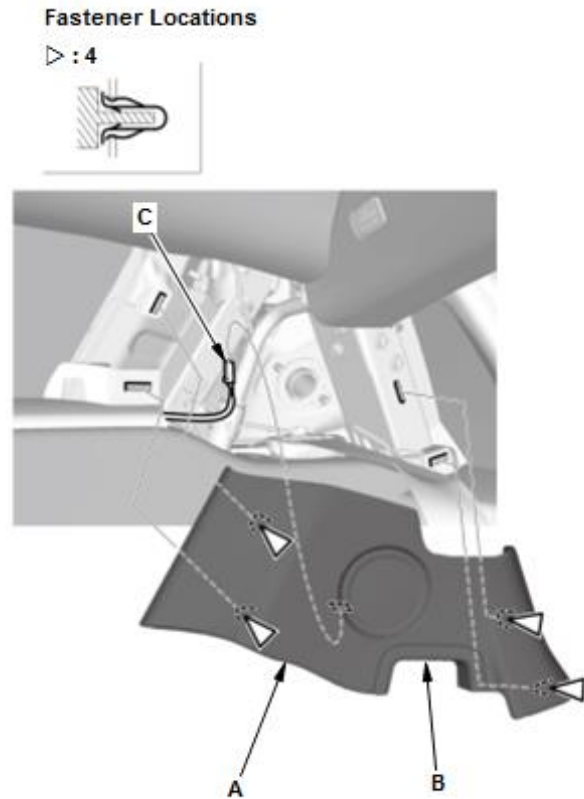


- Route front actuator tubes to the point shown. Cut to length and join the tubes with a supplied 5/16" tube tee fitting. Allow enough slack in each tube from the left and right so that the tube can lay on the bottom of the radiator duct.
- Cut one 5" long segment of 5/16" tube. Install into tee's center point. Cut one 5" length of protective sleeve and install over 5" long tube (it will overlap the fittings).

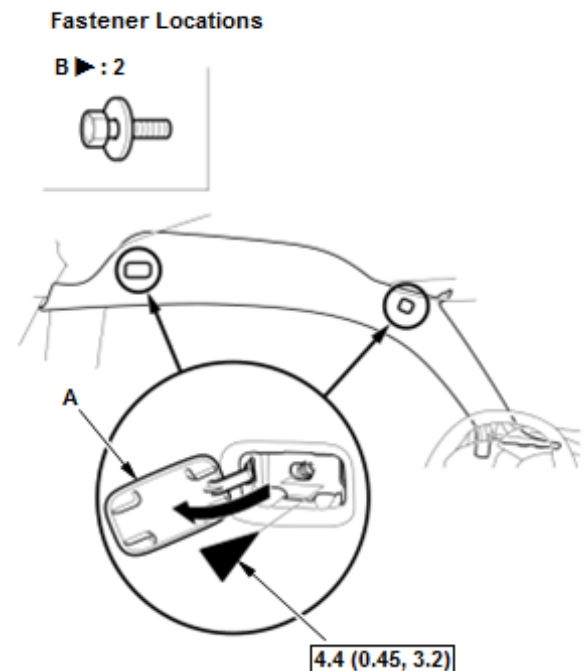


## Main Wire Harness & Power Distribution Module (PDM) Installation

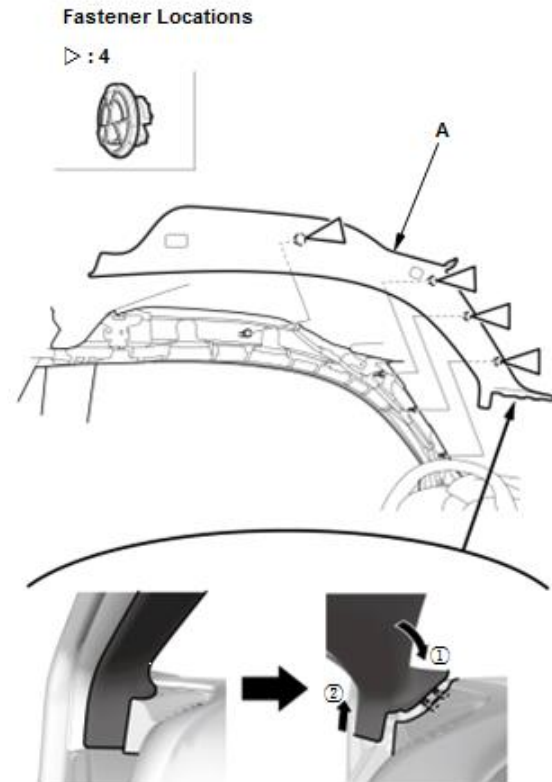
- See the diagram on page six for an overview of the electrical components.
- Interior components will be removed to install CAN wires, and piezo beeper.
- Remove the C-pillar trim (A). **Note:** Do not pull on the seat belt webbing pocket (B).
- Disconnect the connector (C).



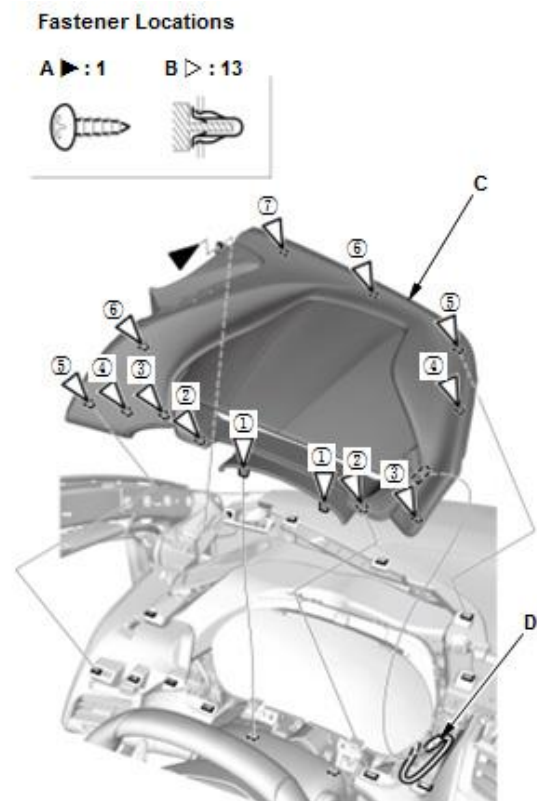
- Open the cap (A) by prying with a small flat blade screw driver or wedge from the front side as shown.
- Remove the bolts (B).



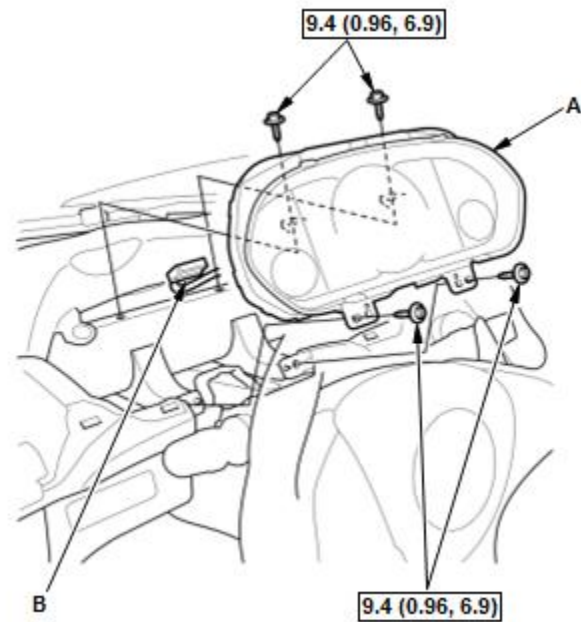
- Remove A pillar trim by gently prying panel away from A pillar, starting from the rear. Rotate panel downwards towards passenger side then lift up as shown in diagram below. Use care to not tear leather covering.



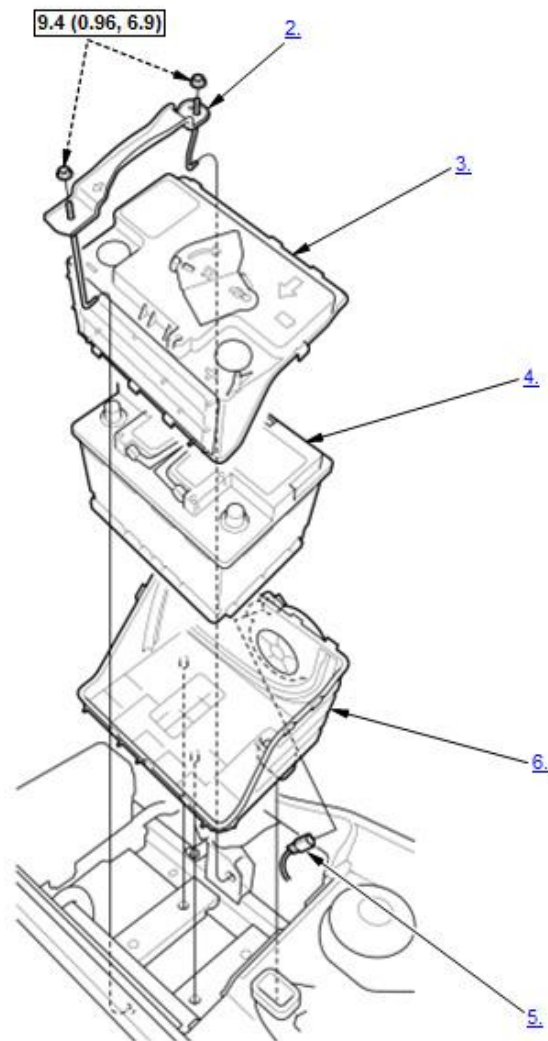
- Remove dash panel by first removing screw (A) that was hidden by A pillar panel (illustrated by dark arrow in diagram).
- The dash panel is retained by clips illustrated by white arrows in diagram. Gently tug upwards to release.
- Disconnect the (D) connector as the panel is removed.



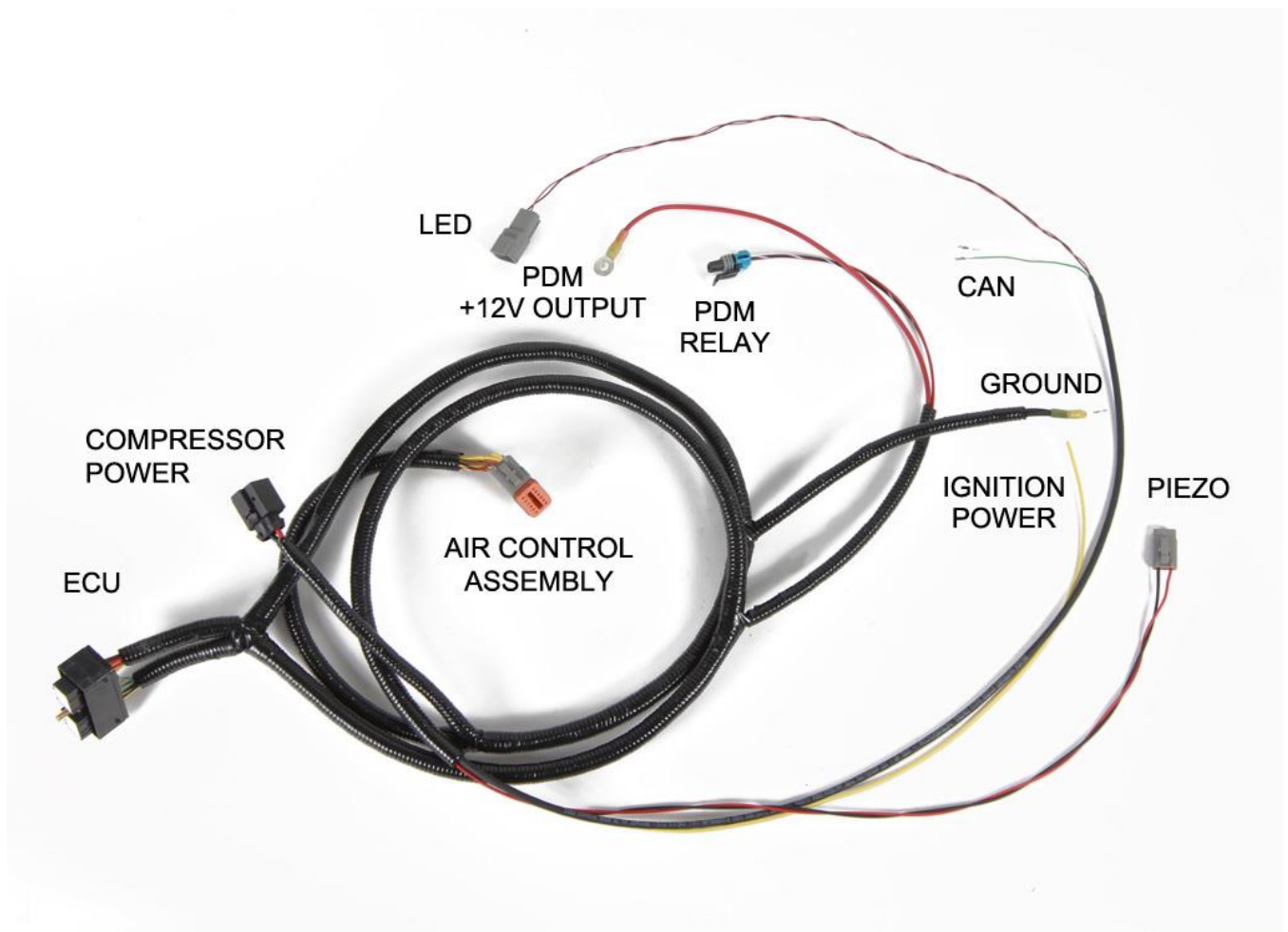
- Remove gauge control module (A) by removing the four screws as shown and disconnecting the (B) connector



- Remove battery by first disconnecting the ground and positive terminals.
- Remove battery tie down (2).
- Remove the top box cover (3).
- Remove battery (4).
- Unplug fan connector from the rear of the bottom box cover (5).
- Remove bottom box (6).

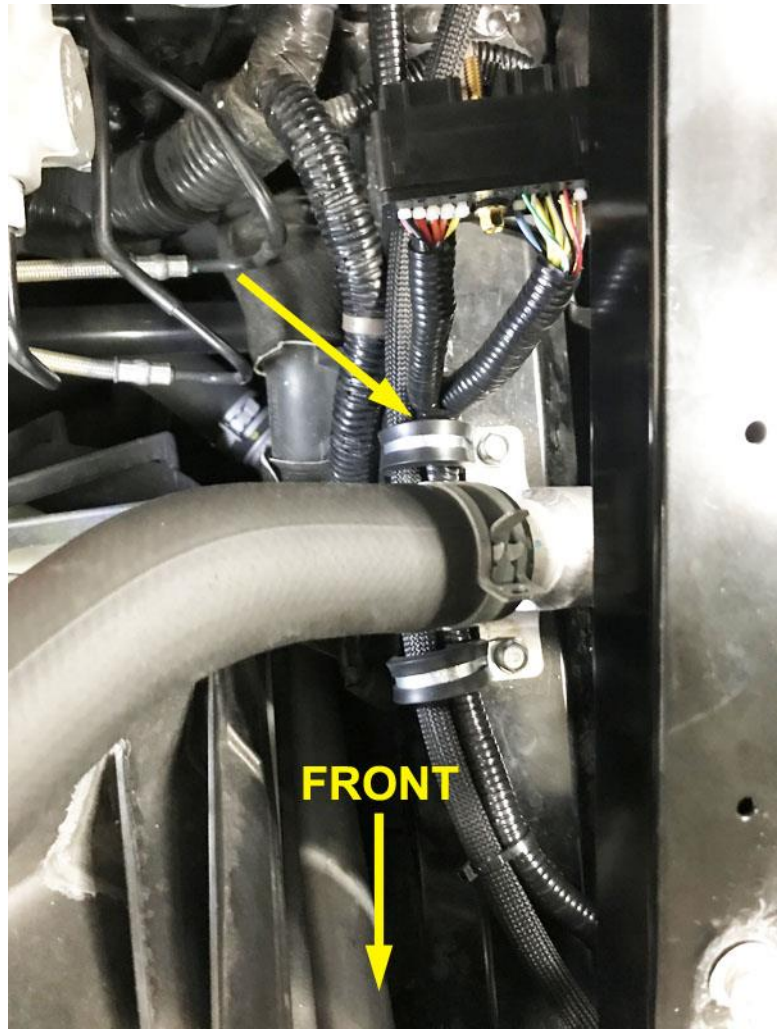






**MAIN ELECTRICAL HARNESS**

- The main harness will be installed on the top of the vehicle's left frame rail joining the front compartment (where the air control assembly is installed), the PDM, and the interior sections of the harness.
- Start by removing the two screws that secure the coolant hose junction pipe in the photo.
- Place the two supplied No. 16 adel clamps around the wire harness and air tube from the vehicle's left actuator and secure as shown using factory screws.
- Take note how the ECU harness junction (indicated by arrow) is placed behind the rear adel clamp. This will help keep the harness away from the junction pipe.



- Remove horn and horn bracket from front compartment under hood.
- Remove horn's ground ring terminal from bracket. It will be relocated in a later step.
- Install the front section of the harness (with the air control assembly connector and compressor connector) along with the front left actuator's air tube under the radiator bracket and around the front of the core support along the path as shown.
- Lay harness in front compartment for connection in later step.



**2017-19 NSX only:**

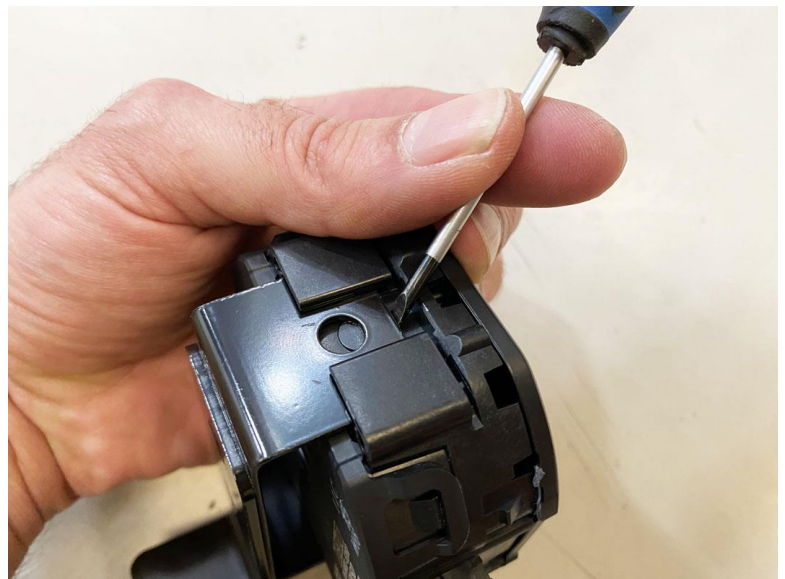
- To install the supplied horn relocation bracket, the vehicle's right side hood latch assembly will be removed and the bracket placed between the latch assembly and the latch assembly's mounting brackets on the core support.
- Before removing the latch assembly, measure the installed height of the latch assembly from the top of core support (the assembly's height is adjustable, and after removing it, you'll use this measurement to place it back in the same position).
- Remove the latch assembly, and install the supplied horn relocation bracket between the latch assembly and latch assembly mounting brackets as shown. The bracket is designed to go around the factory crimp nut bosses on the latch assembly mounting brackets.
- Replace the latch assembly to the same height, and verify the hood closes evenly on the left and right sides.

**2017-19 NSX only:**

- Connect the supplied horn relocation harness between the horn and horn connector.
- Install one ring terminal to the factory ground point where the horn ground wire was original installed (remove any paint on this threaded boss so that terminal makes a good ground connection).
- Secure horn to bracket as shown in photo above using the same hex flange nut that secured it in the factory position. Place the remaining ring terminal between the nut and horn relocation bracket.
- Attach connector to horn & verify horn operation.

**2020-on NSX only:**

- The 2020 NSX horn is not modified.
- The EV sound generator (black colored module located immediate in front of the radiator in front of the radiator core support must be relocated to install the air control assembly.
- Remove the sound generator by disconnecting the electrical harness and removing the bracket from the chassis (two M6 bolts).
- Disconnect the bracket from the sound generators shown.



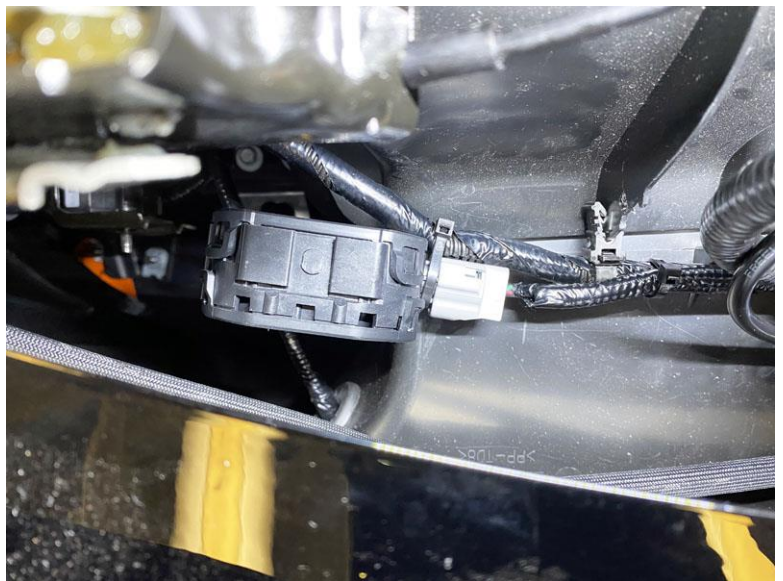


**2020-on NSX only:**

- The sound generator's wire harness will be repositioned.
- Release the wire harness from the wire stay by depressing the retainer in the wire stay as shown.
- The band can then be released and the sound generator's wire harness removed. Replace the band on the wire stay.

**2020-on NSX only:**

- Attach the sound generator to the wire harness and zip tie the sound generator in place to the factory wire harness as shown.



- Locate the factory ground point on the vehicle's left side inner frame rail, immediately behind the radiator. Run the iLIFT main wire harness ground to this location, and secure using factory fastener.



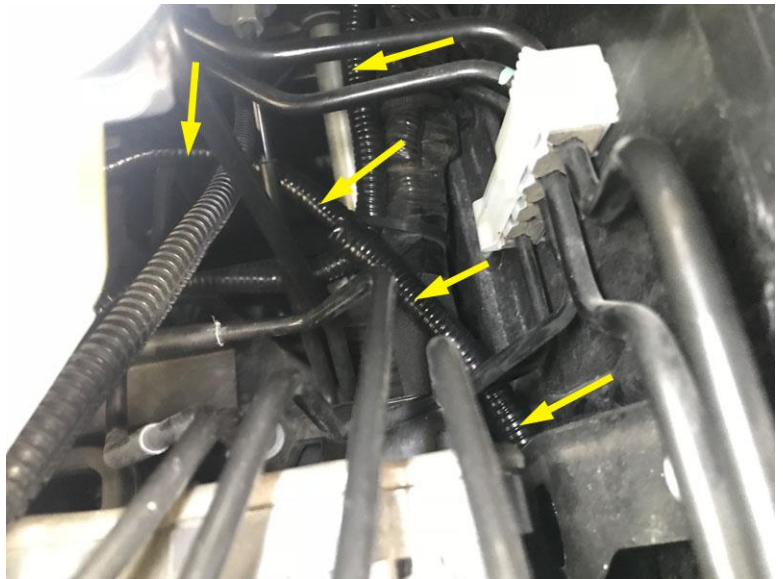


- Route the interior section (including power wire, CAN wires, and piezo connector) and PDM section of the harness under the ABS bumper bracket as shown.

**Note:** Take care with the connectors – they are fragile and can be damaged if not carefully inserted through this area.



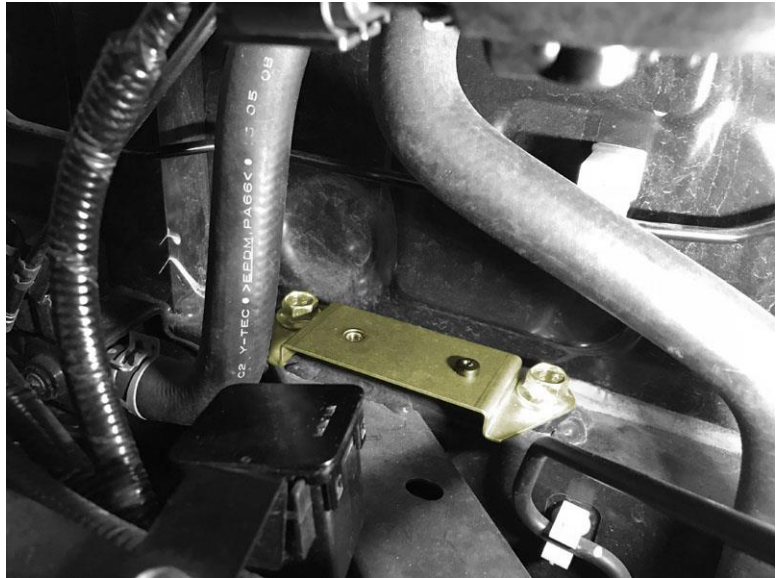
- Route the PDM side of the harness to the center of the vehicle along the firewall as shown.
- Route the interior side of the harness backwards as shown. It will be installed during a later step.



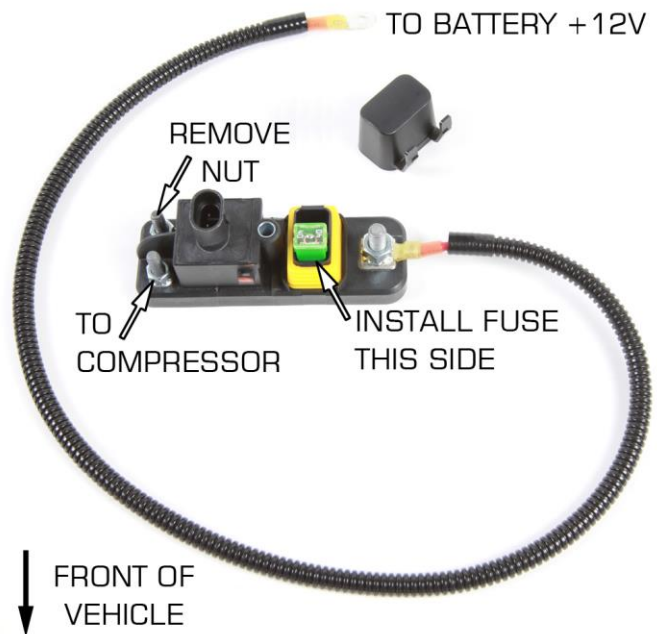
- Install supplied M5 screw to supplied PDM bracket as shown.



- Mount PDM bracket to firewall using supplied M10x16 hex flange screws as shown. Torque = 28 lb/ft (38 Nm).



- If not already installed, install the supplied fuse to the front position as noted with arrow.
- Install the supplied battery lead with the larger ring terminal to the M8 power input stud if not already attached as shown.
- Remove the nut from the rear M6 stud noted with arrow.



- Before installing the PDM to the bracket, position the PDM near the bracket with the M8 stud positioned to the vehicle left's side as shown.
- Next, attach the power output lead from the main harness to the forward M6 stud on the PDM (it already has a nut installed). The ring terminal sits on top of the existing nut and is secured in place using the nut removed in the last step.
- Attach the PDM relay connector from the main harness to the PDM.
- Install the PDM assembly to the PDM bracket and secure using the supplied M6x45 hex flange screw. Torque = 7.2 lbf/ft (9.8 Nm).
- Note the orientation of the bracket. The larger M8 stud sits over the M5 screw (which prevents the PDM from rotating).





- Install PDM fuse cover.
- Route all PDM connections from the PDM behind heater hose shown in prior step's photo.
- Use supplied 8.5" long zip ties to secure cables to brake lines.
- Route the battery lead under the ABS pump and over to the battery's positive cable. Attach the ring terminal to the battery's positive terminal fastening screw (under the screw's square head).
- Secure battery lead to positive cable using supplied 8.5" zip ties.
- Replace battery and battery box, making sure to reconnect the fan connector.



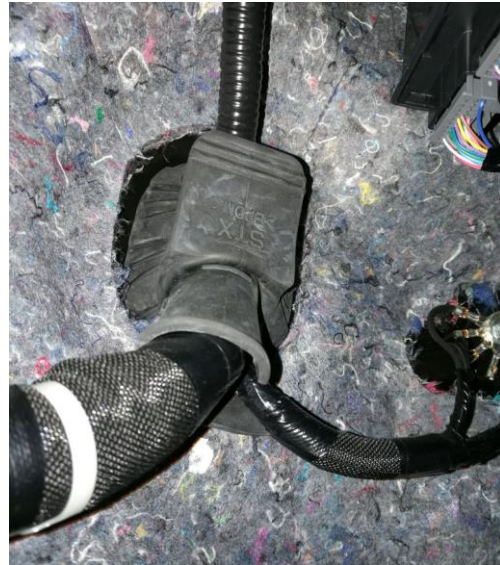
- Note that if the fuse needs to be serviced in the future, the PDM can be accessed with the battery in place by removing the battery cover and reaching your arm around the battery as shown.
- To service the fuse, remove the black fuse cover by releasing the two retaining tabs.



- Locate the large factory rubber grommet in the rear of the vehicle's left front fender well.
- Being careful not to cut the factory wire harness, using a razor to create a 2.5" long slit in the grommet located in the rear of the vehicle's left fender well as shown with dotted line.



- Locate the interior side of the factory wire harness grommet.
- Being careful not to cut the factory wire harness, using a razor, create a 1" slit in the top of the grommet. The iLIFT main harness will be installed through this slit as shown in the next step.



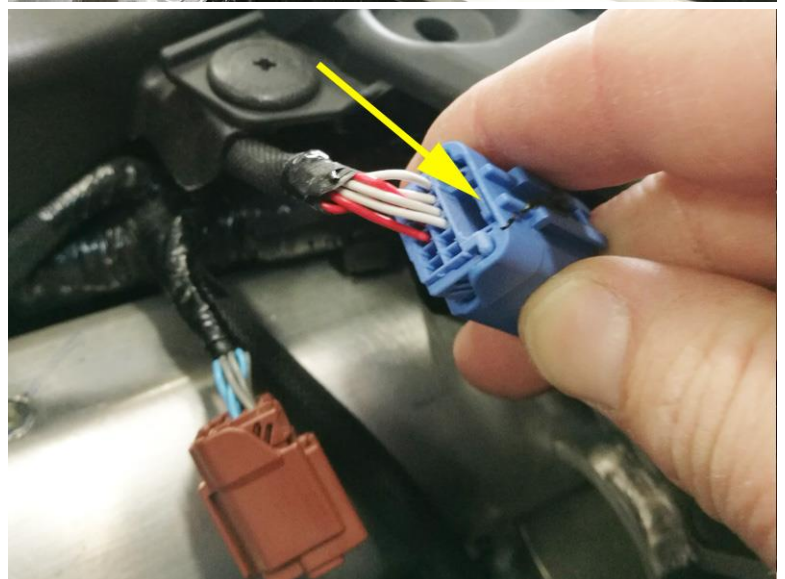
- Route the interior side of the harness (including power wire, CAN wires, and piezo connector) in to the left wheel well through the opening as shown (red arrow).
- Install the interior side of the main harness through the slit created and pass through in to the interior. Note: it helps to have a helper in the interior help guide the harness in to the vehicle.

**Note:** Take care with the connectors – they are fragile and can be damaged if not carefully inserted through this area.

- Secure harness to factory interior cabin harness using supplied 8.5" long zip ties.
- Connections for the interior will be made in a later step.



- Route CAN section of harness to behind where instrument cluster was removed.
- Locate blue CAN connector behind previously removed instrument cluster (located toward center of vehicle under dashboard) as shown being held.
- Carefully cut back the electrical tape securing the CAN connector from the electrical harness.
- The CAN connector has a buss connector (a connector without wires that joins the terminals in the mating connector) attached. To disconnect the buss connector, use a small flat head screwdriver to push down and release the retainer as shown with the arrow.





- Once the buss connector is removed, to release the terminal retainer on the CAN connector, use a small flat blade screwdriver as a wedge at the point illustrated with the arrow.

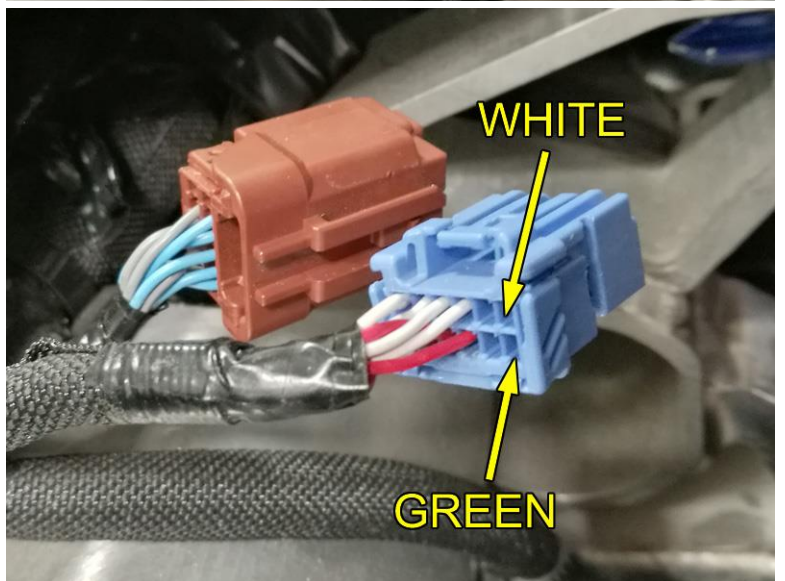


- Release the terminal retainer using the flat blade screwdriver as shown by prying apart as shown.



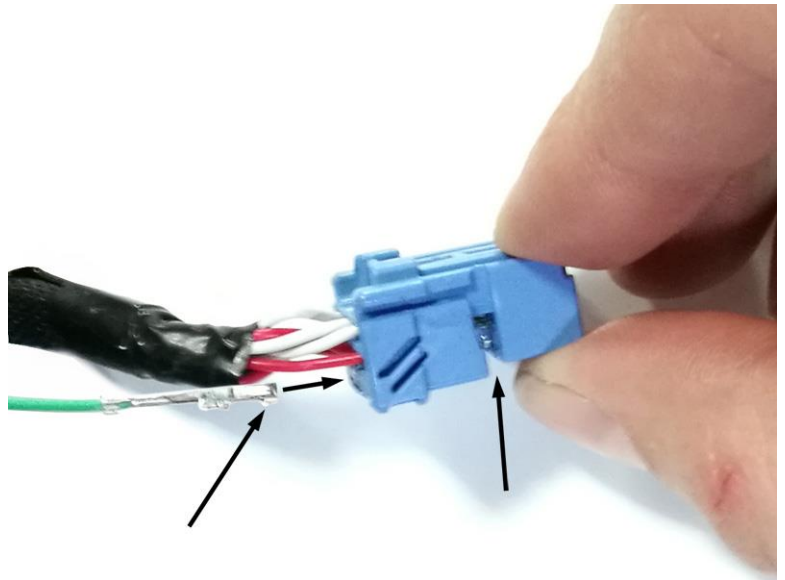
- Insert the green and white CAN bus wires in to the connector as shown.

**IMPORTANT!** Green wire needs to be inserted in row with red wires and white wire in white row.

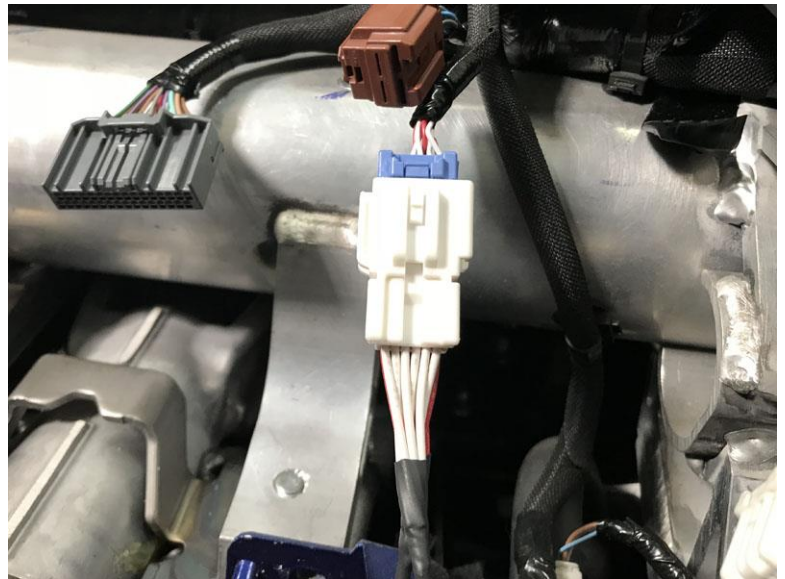




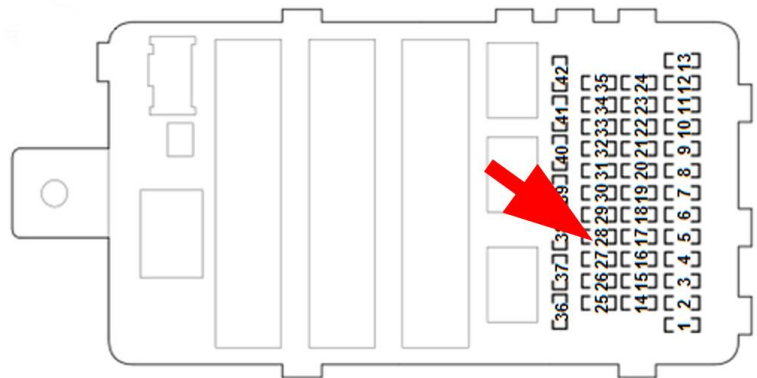
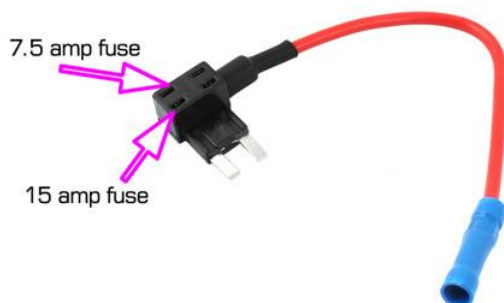
- Insert the terminals in to the connector with the tangs of the terminal on the same side as the opening in the connector illustrated with the arrows. The terminal should click in to place. If it does not, do not force it. Verify the connector terminal retainer is open and that the terminal is being inserted in the correct orientation.
- Close terminal retainer.



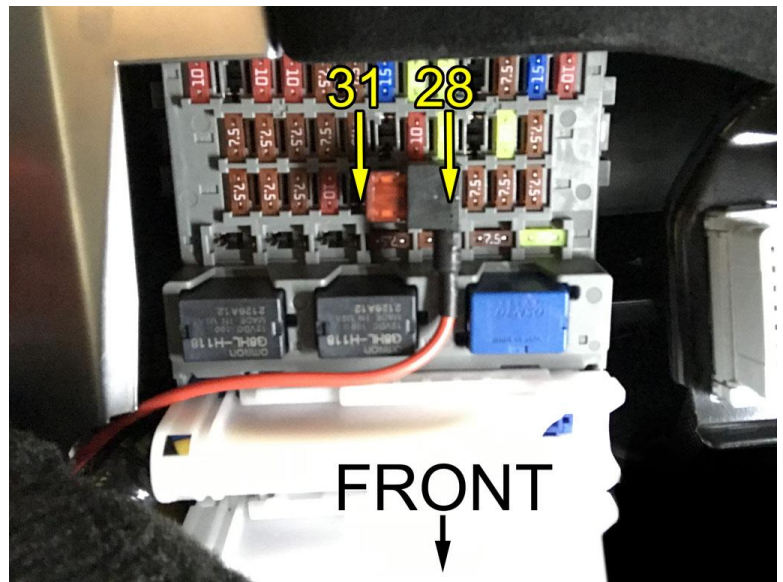
- Install supplied buss connector on to the CAN connector as shown.
- The removed buss connector will not be used. Keep this connector to give back to the owner with the removed parts.
- Re-install instrument cluster in opposite order it was removed.



- Locate and remove 15 amp fuse (position C28) in interior fuse panel located below steering wheel. There is a decal under the steering wheel indicating the fuse positions (and the fuse panel is also marked).
- Install supplied 7.5 amp fuse in to fuse tap in position closest to the attached wire (illustrated by photo below).
- Install supplied 15 amp fuse in the remaining position.



- Install fuse tap in the orientation as shown.
- If position 28 is already occupied by another aftermarket accessory, fuse position 31 may also be used.
- Make sure the red wire exits in the direction shown (this is required to make sure the fuse tap input is on the correct side).



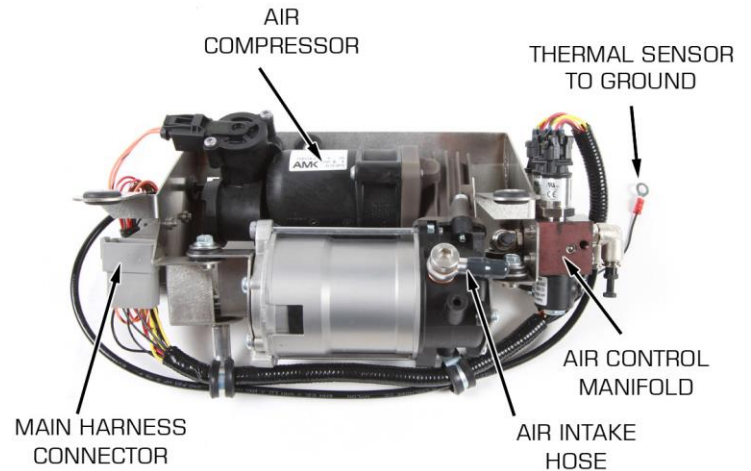
- The yellow wire previously installed through grommet will be crimped to connector on fuse tap.
- Trim yellow wire to length allowing enough length to secure wire to factory wire harness away from driver's feet.
- Strip 1/4" from yellow wire then crimp to connector on fuse tap.
- Secure fuse tap wire to factory wire harness using supplied 5" zip ties.
- Connect piezo beeper's connector to main harness and secure under dash as shown using supplied 8.5" zip ties.



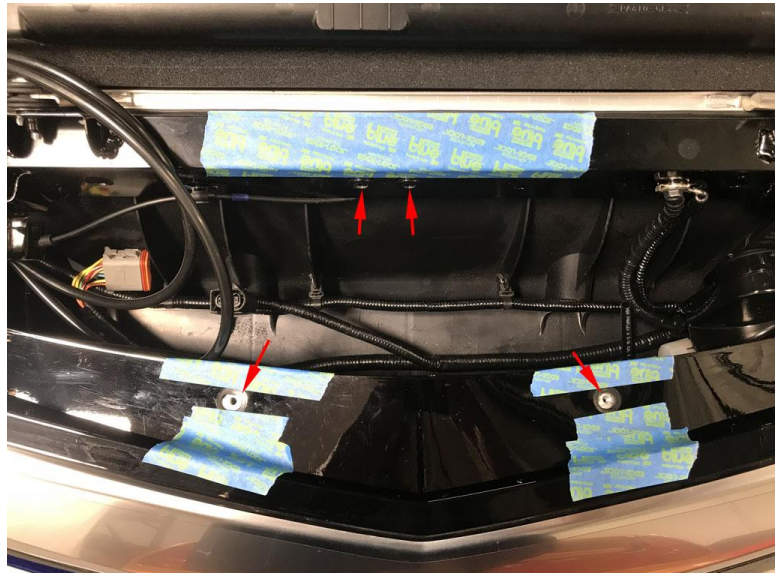


## Air Control Assembly Installation

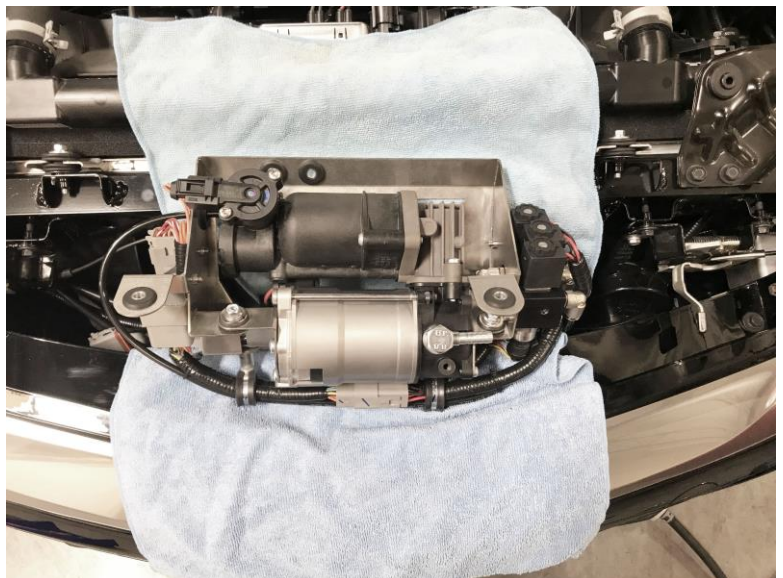
- The pre-assembled air control assembly consists of the air compressor, flow control manifold, wire harness, and bracketry.
- Remove cap from air intake hose fitting.
- Remove plugs from fittings by pushing in on the plug, holding the retainer ring, then pulling plug out.
- **Note:** be carefully when laying air control assembly down to prevent damage to fragile plastic electrical connectors that are exposed when the assembly is set on a flat surface.
- **Installations with Optional Proximity Sensors:** Front bumper removal required before air control assembly installation. Skip to page 49 (Proximity Sensor Installation) before continuing.



- The air control assembly mounts in the front compartment to the four OEM mounting locations shown with arrows.
- Note: for markets which have siren installed at the upper two mounting locations, this will need to be removed or relocated.
- Remove the two M6 fasteners in the front as shown, and apply masking tape (two layers help) as shown to protect the finish.

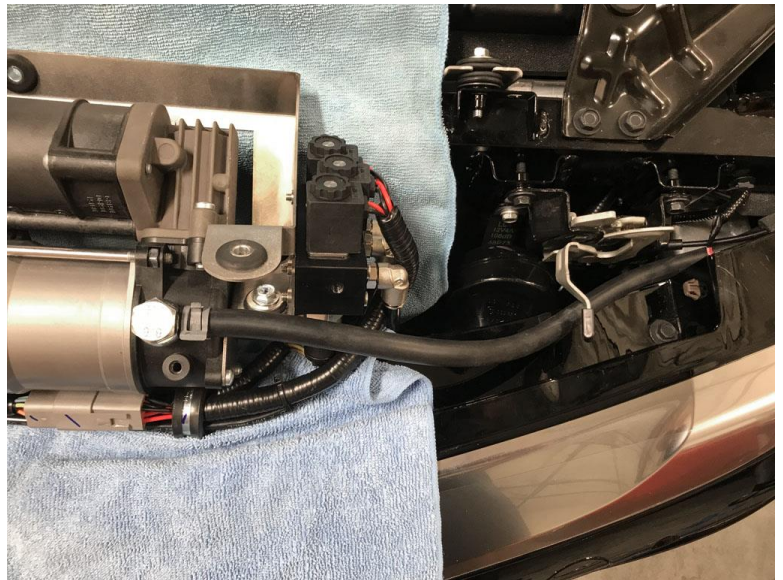


- In order to protect the finishing while making the connections, place two rags as shown and lay the assembly on the rags.

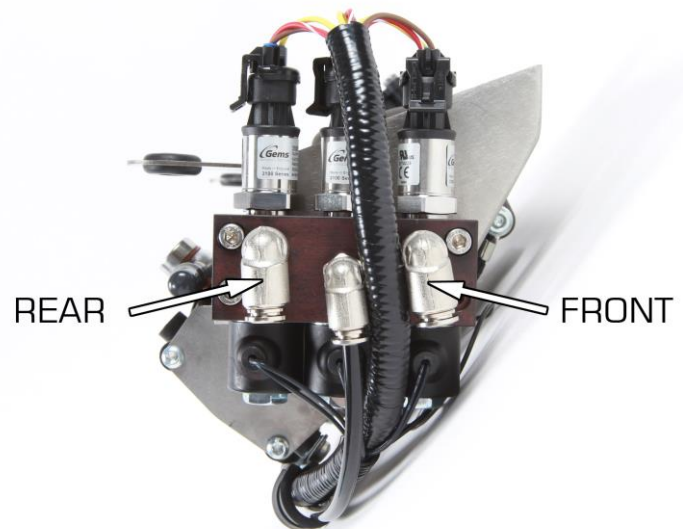




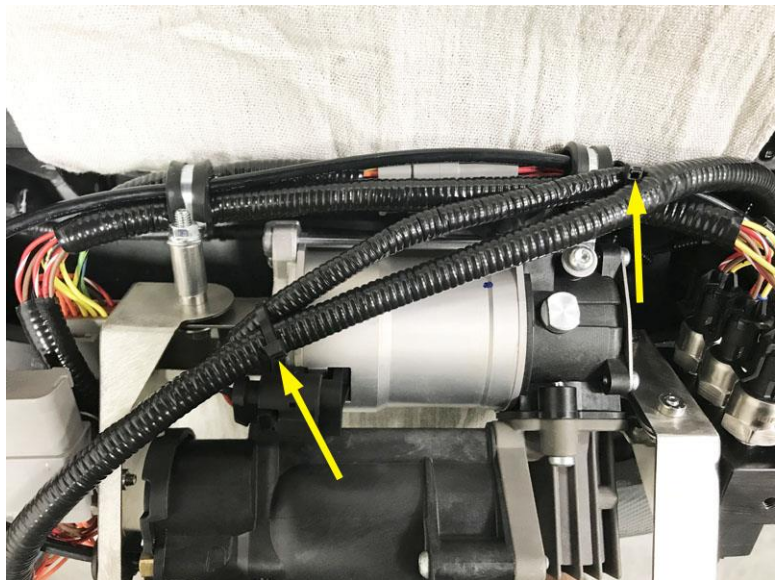
- Connect the air intake hose to the fitting and secure with the hose clamp as shown.
- Route hose under latch assembly as shown.



- With the insulation sleeve installed around the front, rear (optional), and tank tubes – make the connection to the front tube fitting (from the tee fitting directly below air control assembly installed in prior step).
- Test fitment of the rear air tube (marked in prior step). When satisfied with the installed fitment, cut sleeve and tube to length then install tube in to rear tube fitting.
- Test fitment of the tank air tube (connection on the back side of manifold). Allow the protective sleeve to reach all the way over the tank tube fitting. When satisfied with the installed fitment, cut sleeve and tube to length then install tube in to tank tube fitting.



- Secure compressor power connector to rear of compressor.
- Before installing assembly, using two supplied 8.5" zip ties, secure the compressor power cable in the two locations as shown to prevent the cable from chafing against the bracketry.



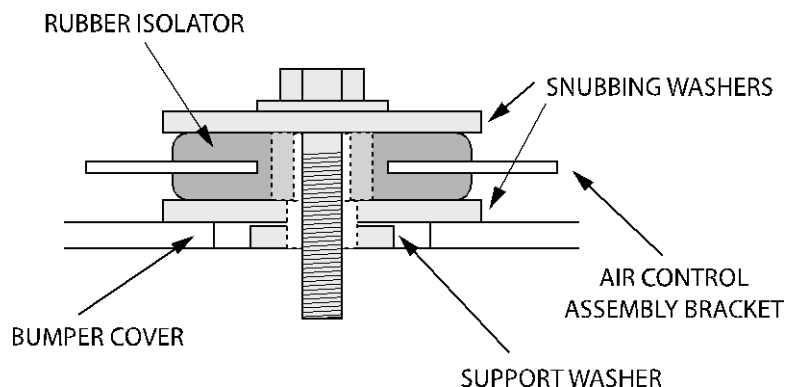
- Remove rags and carefully lower assembly in to place. The rear mounting holes will be secured first.
- Install the supplied M6x25 hex flange screws into the rear mounting location with the pair of washers installed on both sides of the rubber bushings as shown.
- Loosely secure screws.



- Gently pull up on the bumper to gain clearance for the banjo bolt. Install additional tape to protect the finish.
- Once the bolt head is under the bumper, the assembly will drop in to place.
- If assembly does not drop easily in to place, lift the assembly up and check for clearance of air tubes and main wire harness.

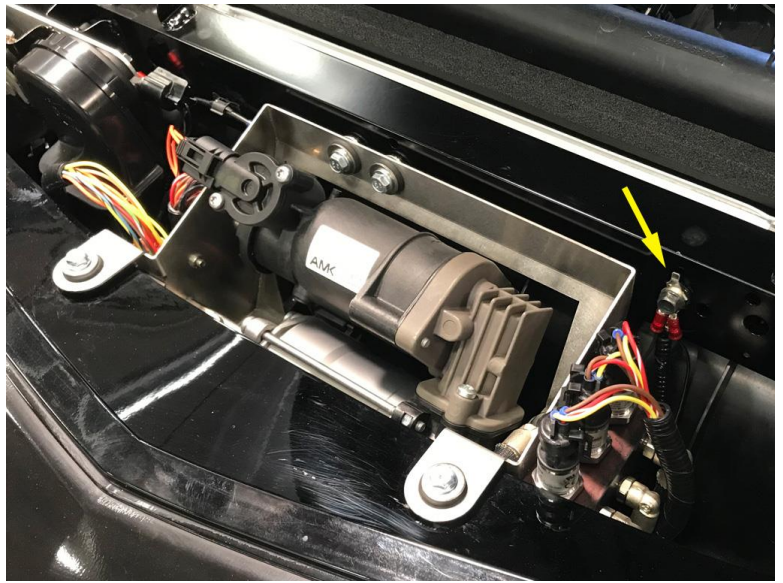


- Install supplied M6 support spacer in to pocket of front bumper cover as shown in diagram (if the plastic is deformed in this hole and does not allow the support spacer to sit flush, use a razor to trim the plastic).
- Slip snubbing washer (supplied M6 oversized washer) under rubber isolator that is pre-installed in to air control assembly bracket.
- Install second snubbing washer and M6x25 hex flange screw to complete assembly as shown in diagram.
- Due to variance in manufacturing, the air control assembly bracket may need to be adjusted slightly to align to front holes.

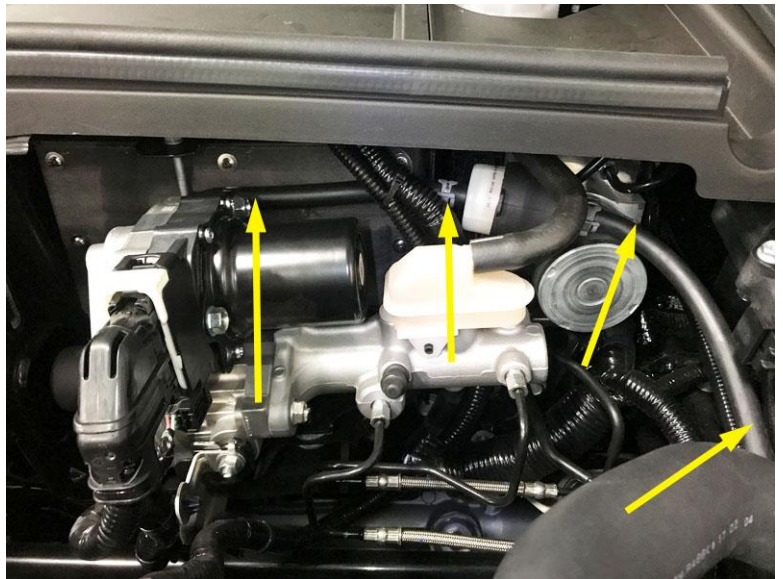




- Remove tape installed to protect finish.
- Attach air control assembly electrical connector on main electrical harness.
- Secure thermal sensor wire to ground point (same as shared with horn) as indicated with arrow.
- Secure M6 bolts. Torque = 7.2 lbf/ft (9.8 Nm).

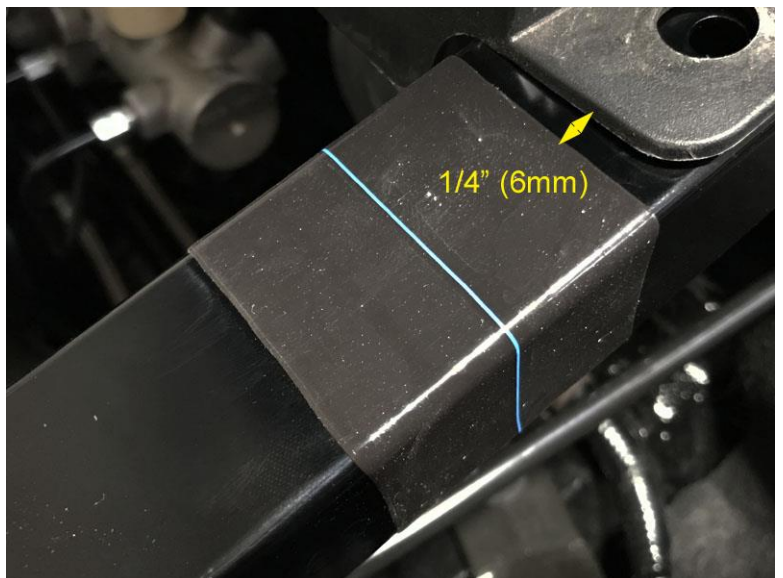


- Route air intake hose as shown, point curved hose downwards behind brake components, and secure loosely (as to not pinch hose) in place using supplied 8.5" zip ties.



## ECU Installation

- Replace cowl in the reverse order it was removed.
- Using supplied 6" insulation tape, secure tape to vehicle 1/4" (6mm) from cowl as shown (note: the tape does not have adhesive and bonds to itself). Stretch the tape slightly and allow the tape to overlap by at least 1" to allow it to bond to itself and stay in place.

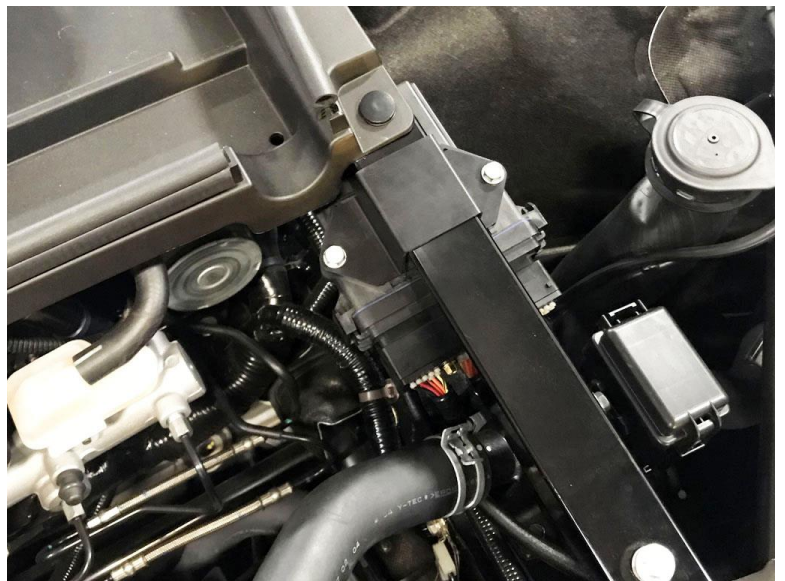




- Before securing ECU to bracket, attach ECU to wire harness connector using  $\frac{1}{4}$ " socket.



- Secure bracket over the insulation tape and secure ECU to ECU bracket as shown using two supplied M6x30 hex flange screws and M6 hex flange nuts as shown.

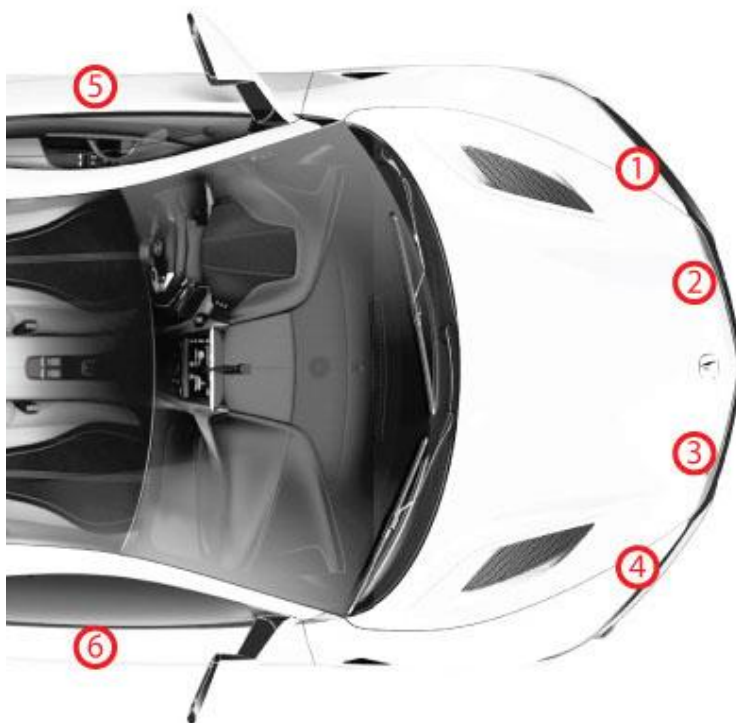


- Secure factory ground strap to factory location as shown reusing factory screw removed during an earlier step. If the surface is painted, sand off the paint to reveal the aluminum metal surface to insure a good metal contact. Test the horn to verify operation.



## Proximity Sensor Installation (Optional)

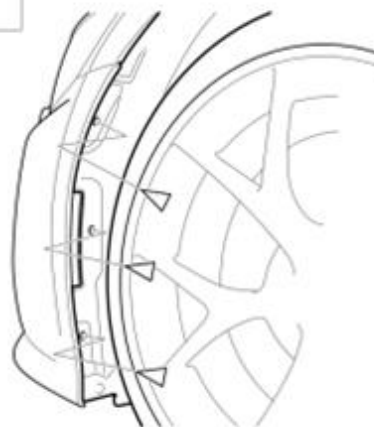
- Four sensors will be installed under the bumper and two sensors will be installed in each rocker panel. The positions numbers of the sensors are illustrated in the diagram.



- To install sensors 1-4, remove the front bumper by first removing the clips (A).
- Repeat on the opposite side.

### Fastener Locations

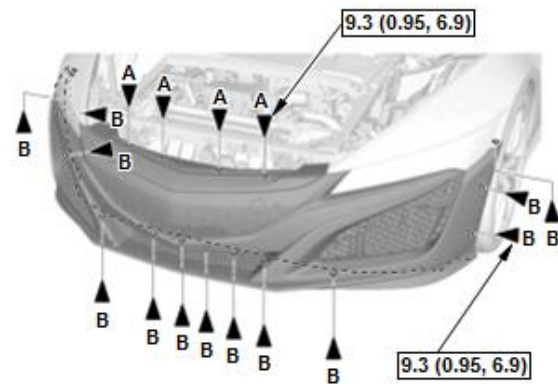
A ▷ : 3



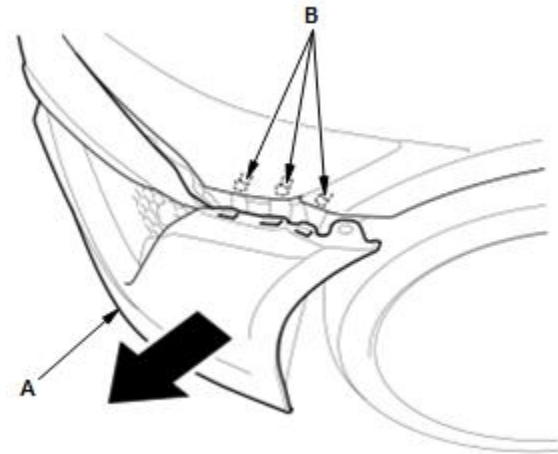
- Remove the bolts (A, B).

## Fastener Locations

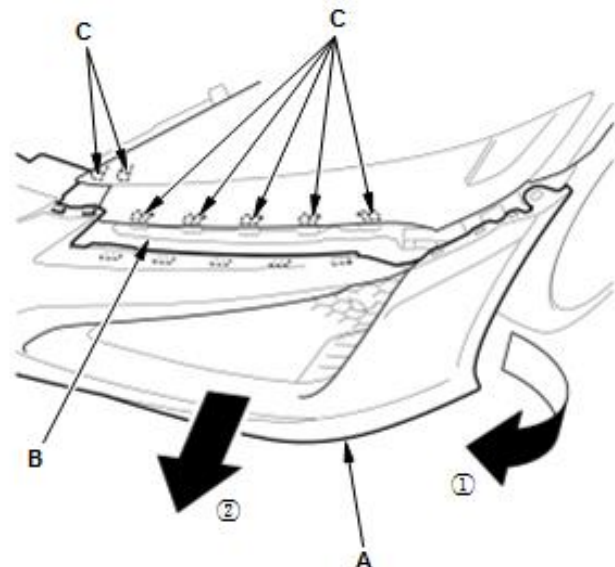
A ▶ : 4    B ▶ : 13



- Pull out the front bumper (A) at the wheel arch area to release it from the hooks (B) on the upper beam.

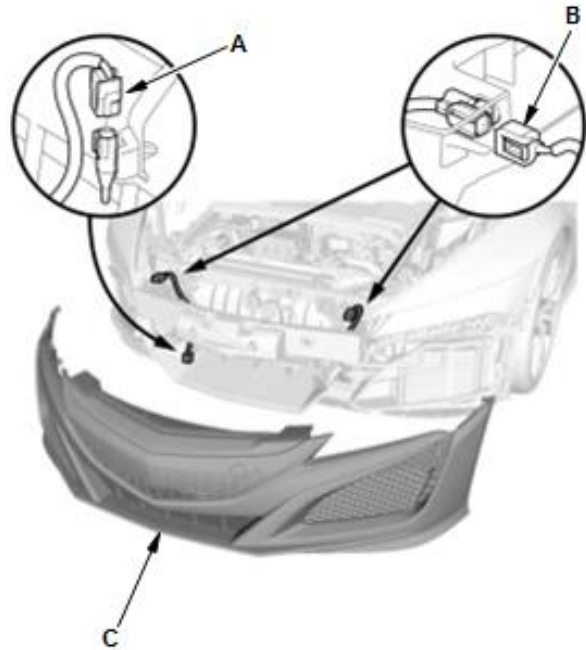


- With the help of an assistant, while pulling the front bumper (A) away from the upper beam (B), release the bumper from the hooks (C) on the upper beam.

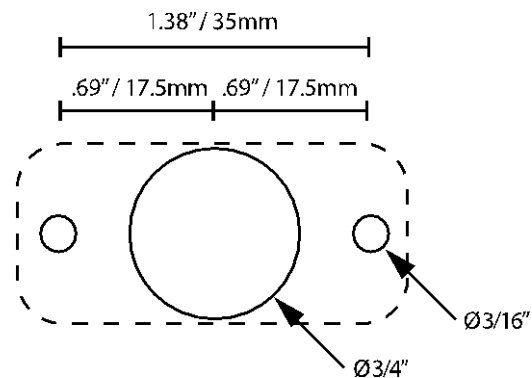




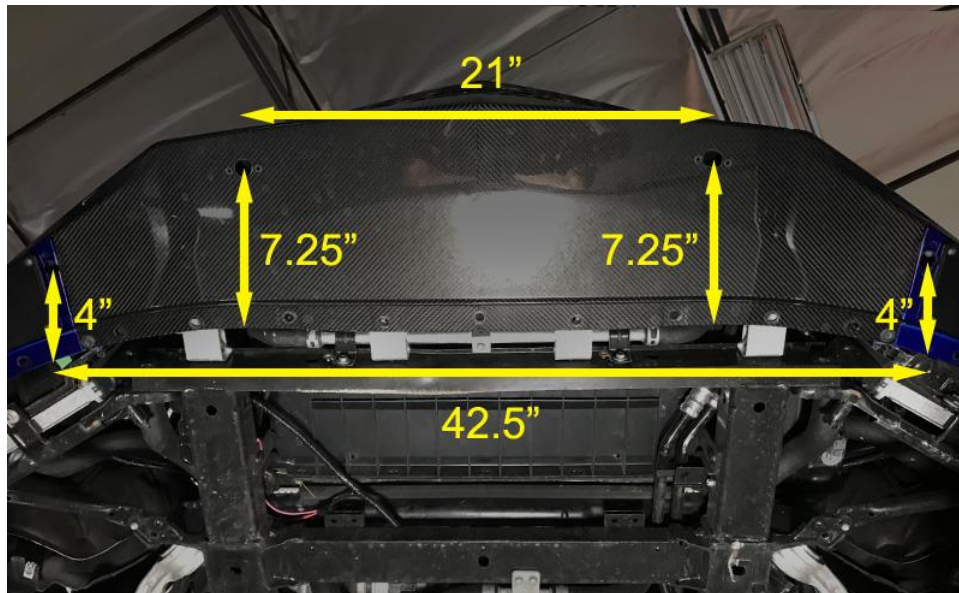
- With the help of an assistant, disconnect the connector (A).
- With parking and back-up sensor system:  
With the help of an assistant, disconnect the connectors (B).
- Remove the front bumper (C).



- Sensors 1-4 will be mounted on top of the bumper lower panels, facing down. Sensors 5 & 6 will be mounted in the rocker panels.
- To create a clearance hole, use this template. A 3/16" drill bit and 3/4" step drill can be used to create the pattern.



- The positions of sensors 1-4 are noted in the diagram below. The measurements are from the center of the 3/4" diameter hole to the edge of the bumper as shown. Note the orientation of the sensors in the following two close-up photos on the next page.



- Close-up photo of outer hole pattern of sensor 1 & 4.



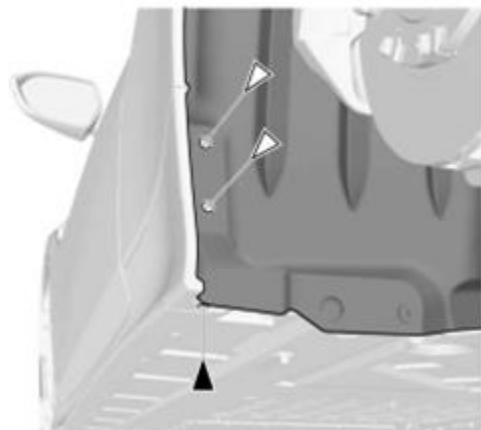
- Close-up photo of sensors 2 & 3.
- Once hole pattern is created, secure sensors using supplied No. 6 x 1" screws, No. 6 washers, and No. 6 lock nuts (placing washer between nut and sensor body).
- Replace bumper assembly (leaving under panel off).



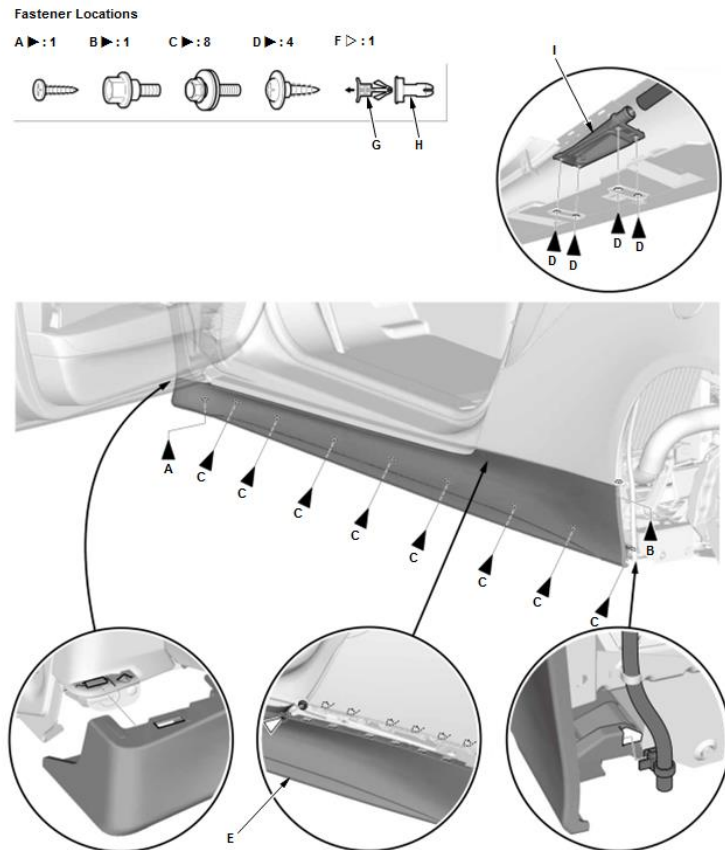
- Remove side sill panels by removing screw (A) and clips (B) if not already removed.

#### Fastener Locations

A ▶ : 1    B ▷ : 2



- Remove screw (A) and bolts (B, C).
- Pull out the side sill (E) to release the pin (G) and grommet (H).



- Sensors 5 & 6 are installed in to the side sill. Measure 33" from the front edge of the side sill panel.





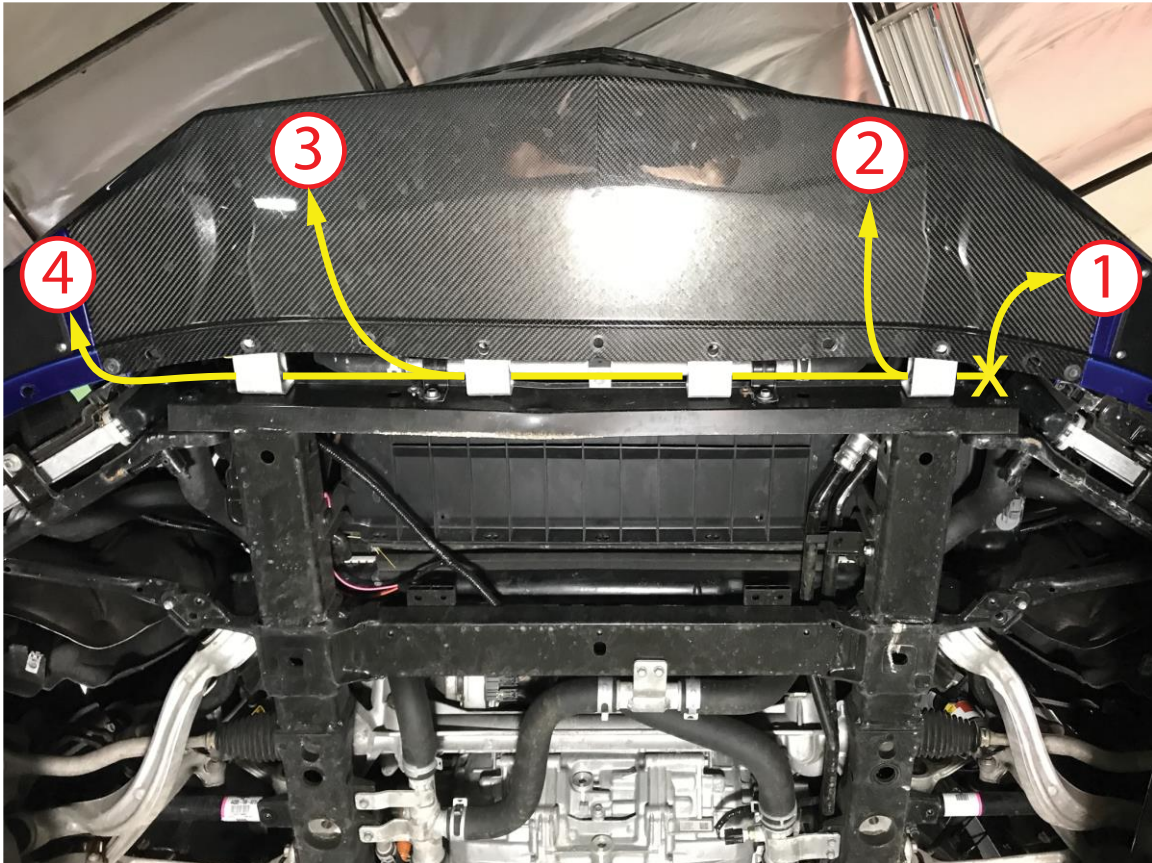
- Use the template to create the pattern 2" from the inner edge of the side sill.
- Once hole pattern is created, secure sensors using supplied No. 6 x 1" screws, No. 6 washers, and No. 6 lock nuts (placing washer between nut and sensor body) as shown.



- Install the proximity sensor 18 position harness to the ECU using 1/4" socket. Each one of the 6 cables are labeled at the end with the sensor position as illustrated in the diagram on page 51.
- Route all cables as shown. Bundle cables 1-4 together and secure with supplied 8.5" zip ties as shown.



- Route cables 1-4 down the front left frame member along the factory wire harness to the spot marked with an X in the diagram below. Route cable 1 to the sensor. Route cables 2-4 through the aluminum bracket then route cable 2 to the sensor as shown. Route cables 3 and 4 through the next two aluminum brackets then route cable 3 to the sensor as shown. Finally, route cable 4 through the last aluminum bracket then to the sensor as shown. Secure cables to factory electrical harness in front of front frame rail and to aluminum brackets using supplied 8.5" zip ties. Connectors will be installed to cable ends in a following step.



- Back by the ECU, route cable 5 traveling backwards along the path of the main wire harness. Install it in to the no. 16 adel clamps installed in a prior step as shown.





- Continue to route the cable along the main wire harness in the front left wheel well, then follow the factory wire harness as shown. Secure cable to wire harnesses using supplied 8.5" zip ties.



- Route the harness through the gap between the front left fender and the body as shown.
- Secure harness to factory M6 screw using supplied No. 4 adel clamp as shown.

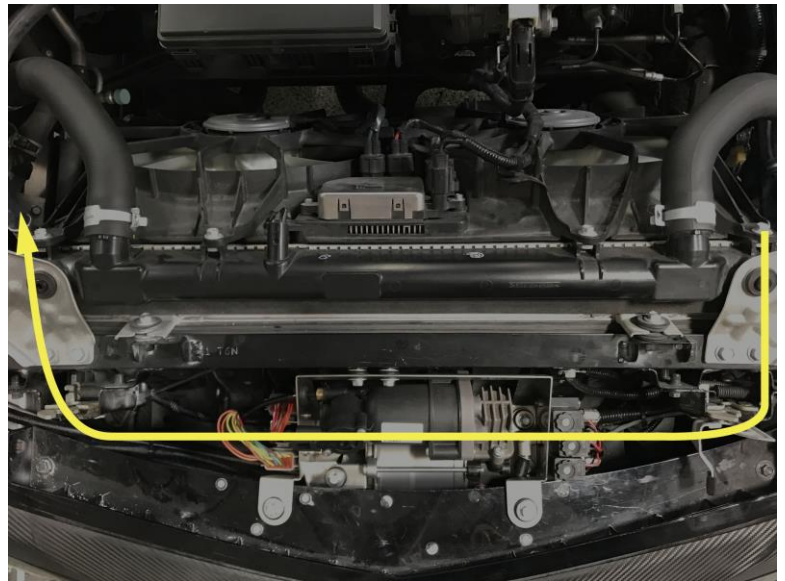




- Secure the cable using the supplied no. 4 adel clamps. Replace each screw with clamp under the screw head.
- The connector will be installed in a later step.



- Back by the ECU, route cable 6 along the main wire harness to the front compartment, under the air control assembly, and follow the air tubes from the rear of the car as shown. Secure with supplied 8.5" zip ties.



- Route cable 6 along air tubes from the rear of the car as shown. Secure with supplied 8.5" zip ties.



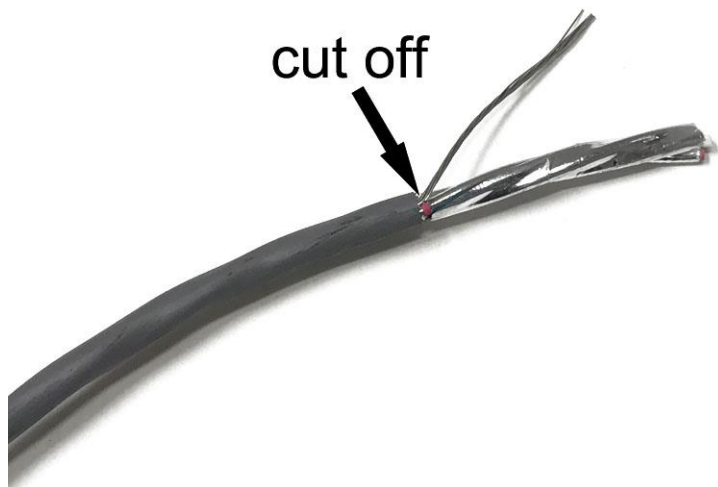
- Route cable 6 up and over shock absorber, securing to factory electrical harness as shown.
- Route cable down to the side sill and continue installation of cable 6 the same way as done on the vehicle's left side.



- Test fit the routing of each cable to each sensor's connector. Add 2-3" for slack then cut each cable to length.
- Using a razor, lightly score the cable's outer jacket 3" from the end. The jacket should separate when the cable is bent as shown.
- Do not cut too deep past the foil or the wires will be nicked.
- You can test these steps on one of the excess scraps of cable for practice.



- Cut off the drain wire (bare stranded wire) as shown.



- Cut six 1-1/2" lengths from the supplied 1/4" shrink tube.
- Slip the shrink tube over the cable.
- Peel the foil tape back that covers the wires.
- Strip 3/16" from the end of each wire.



- Insert long end of supplied terminal in to supplied crimp tool.



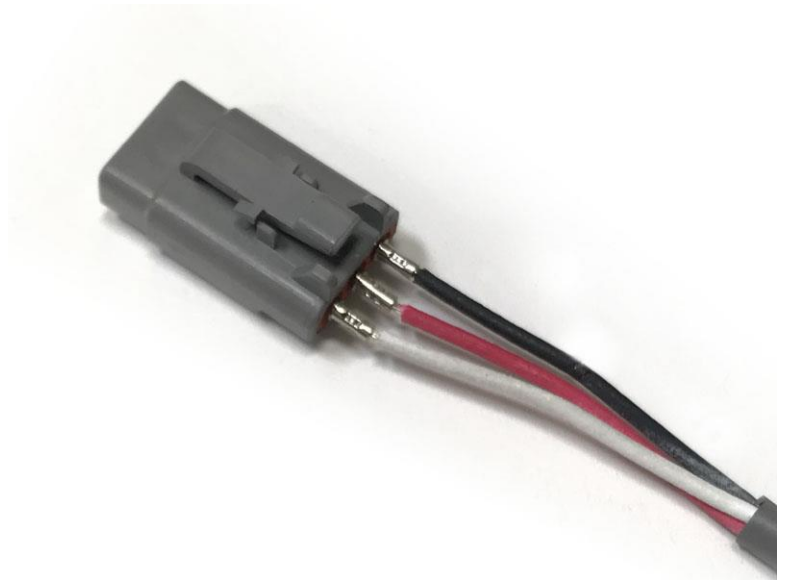
- Push down on the terminal until it is fully seated in to crimp tool as shown.
- Insert wire in to terminal.
- Squeeze crimper until the handles spring back.
- Remove terminal from crimper and give wire a gently tug to verify proper crimp.



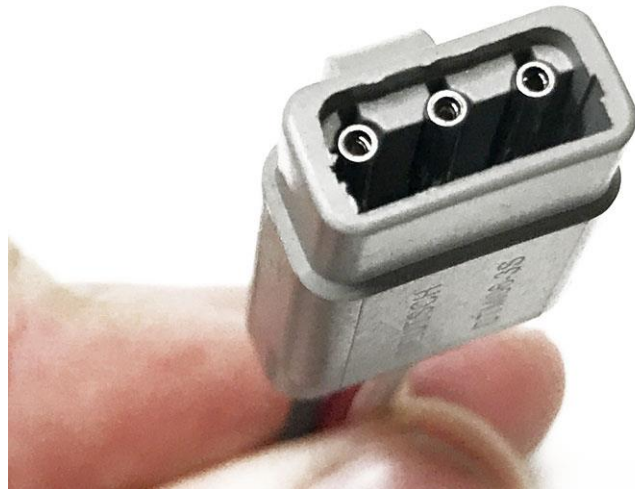


- Insert all three terminals partially through the supplied connector's orange seal in the orientation as shown. The terminal positions are imprinted on the side of the connector.

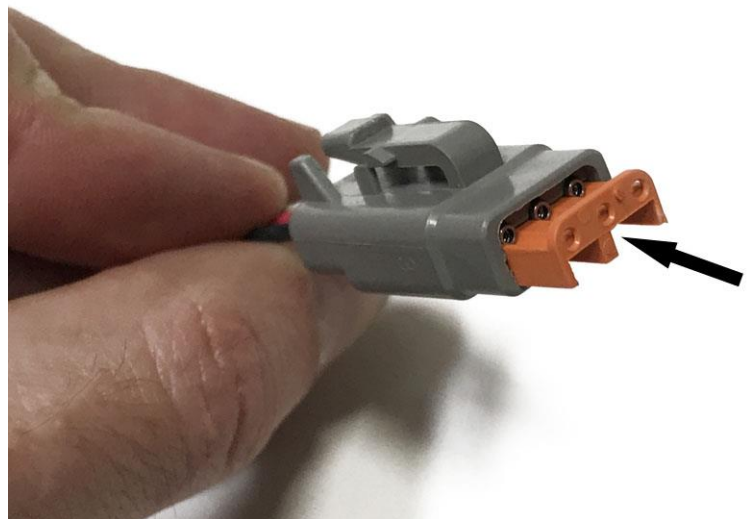
1 – white  
2 – red  
3 – black



- Push each terminal one at a time until it clicks in place. Once all three terminals are installed, they should be evenly inserted as shown.



- Push in retainer until it is fully seated.



- Using heat gun, shrink tube in place as shown.
- Connect sensors.
- Replace side sill panels.

**Note:** after the next section “Verify Operating & Reassemble”, see “Wireless Instructions” for instructions to activate and calibrate the proximity sensors.



## Verify Operation & Reassemble:

### Pressurize system for the first time:

- Connect the ground battery connection.
- Turn the ignition on and start the engine (place the mode control in “Sport+” to keep the engine running. The compressor will only run when there is 12.6 or more volts – which usually requires the engine to be running.
- The compressor will run and pressurize the tanks to 180 PSI (approximately 1.5 – 2 minutes).
- Inspect for leaks between the manifold and air compressor.
- Allow the compressor to cool for at least 5-10 minutes before activating the actuators. The first fill from 0 PSI requires a compressor run time that is unusually long. Subsequent partial fills require less time.
- If the compressor does not turn on, see troubleshooting below.

### To activate actuators (with wheels off, allowing for inspection):

- Do this step with the wheels still off.
- The system is activated by the cruise control switch while the vehicle is traveling at or below 25 mph with the cruise control system off and ignition power on.
- Make sure cruise control is off.
- Press and hold (1-2 seconds) the cruise control switch in the “accelerate” or up position to raise the vehicle. The piezo beeper will signal to confirm the raise command.
- If the vehicle is equipped with the optional rear lift kit, continue pressing up (additional 1-2 seconds) to activate the rear actuators.
- With the actuators activated, inspect for leaks between the manifold and the actuators.
- Press and release the cruise control switch in the “resume” or down position to lower the vehicle. The piezo beeper will signal to confirm the lower command. If the actuators do not activate, see troubleshooting below.
- Note: during troubleshooting, if multiple activations are required, the compressor may reach a limit in time or cycles that prevents it from running until 10 minutes has elapsed (see section “Operating Instructions: Compressor Safety Feature”). Allow the compressor to cool between multiple cycles. The iLIFT system is intended only for intermittent use.
- Note: due to the tires and wheels moving in an arc during suspension raising and lowering, and the sounds generated from the urethane bushings used in the iLIFT top mounts – some amount of noise is normal.

### Reassemble:

- Once operation is verified, replace underbody panels, fender liners, and wheels.
- Replace wheels & secure bolts. Torque = 125 lbf/ft (170 Nm).



## Suspension Alignment & ECU Learning:

Only required if vehicle has been lowered.

- After lowering, engine performance will be reduced until a learning process is complete. After the alignment is complete, drive the vehicle continuously for 10-15 minutes in Sport (not Sport+) mode. Engine performance will be restored after drive cycle is complete.
- Alignment is not required unless the car was lowered.
- Before performing alignment, if lowered, allow the new springs to settle which can take multiple suspension compression cycles (such as driving over speed humpers / driveways).
- The lowered ride height makes the largest effect on camber (making camber more negative as the car is lowered). The factory adjustment for camber is to place shims between the lower control arm and the chassis. This offers a very limited range in camber adjustment.
- When setting the suspension to the 12mm lowered position, generally three to four steps thinner in shim thickness can be used. This can generally result in camber specification at or near factory range.
- When setting the suspension to the 24mm lowered position, generally five to six steps thinner in shim thickness can be used. This generally means that, especially in the rear, the range required is beyond the factory adjustment range. In this case, shims usually must be removed from the rear. If this is the case, use one set of shims to even out camber from left to right.
- Consult factory service manual for complete suspension alignment information.

<b>Caster angle:</b> $7.2^{\circ} \pm 0.2^{\circ}$  <b>Rear individual toe-in:</b> $0.16^{\circ} \pm 0.04^{\circ}$  <b>Camber angle:</b> Front: $-0.50^{\circ} \pm 0.1^{\circ}$ Rear: $-1.50^{\circ} \pm 0.2^{\circ}$ (Maximum difference between the right and left side: $0.1^{\circ}$ )	<b>Shim Thickness</b>	<b>Paint Color</b>
	0.5 mm	BLUE
	1.0 mm	YELLOW
	1.5 mm	BLACK
	2.0 mm	RED
	2.5 mm	PURPLE
	3.0 mm	WHITE
	3.5 mm	GREEN
	4.0 mm	ORANGE

### Enter Neutral Holding Mode:

1. Park the vehicle on level ground and block all four wheels.
2. Turn the vehicle to the READY TO DRIVE mode.
3. Shift the transmission to N position/mode while pressing the brake pedal.
4. Press and hold the N button again for 2 seconds without pressing the brake pedal.
5. Confirm that the message "Neutral-Hold Mode ON" is indicated on the gauge control module.
6. Turn the vehicle to the OFF (LOCK) mode.

**CASTER:**

1. Remove the splash shield as needed.
2. Hold the adjusting bolt (B) on lower arm A, and remove the self-locking nut (C).
3. Replace the self-locking nut with a new one, and lightly tighten it.

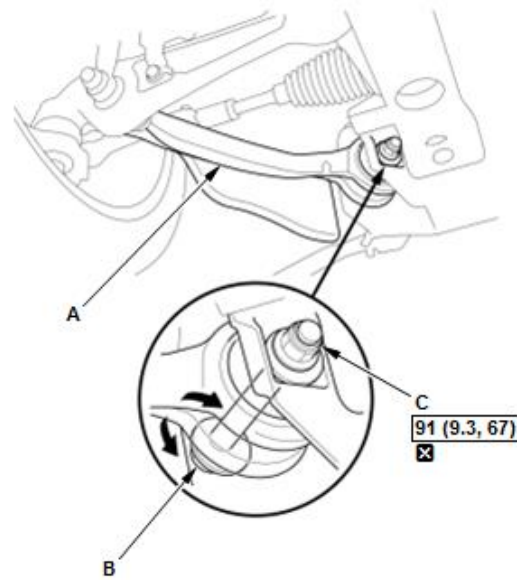
**NOTE:**

Always use a new self-locking nut whenever it has been loosened. Reassemble the adjusting bolt and the adjusting cam plate with the eccentric facing up.

4. Adjust the caster by turning the adjusting bolt until the caster is correct.
5. Tighten the self-locking nut to the specified torque while holding the adjusting bolt.
6. Install the splash shield.

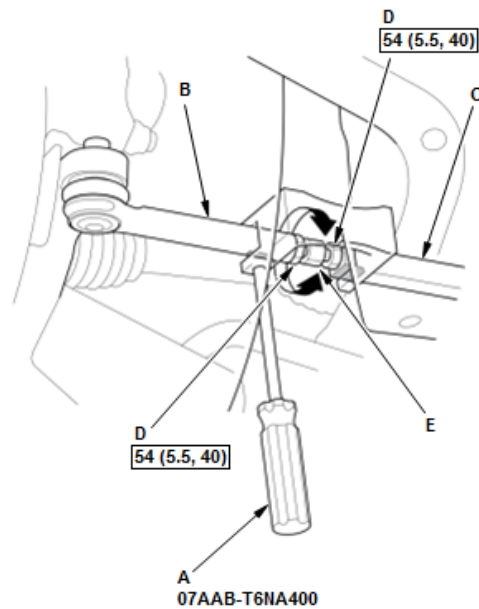
**NOTE:**

Torque specifications in diagrams: N/m (kgf/m, lbf/ft).

**REAR TOE:**

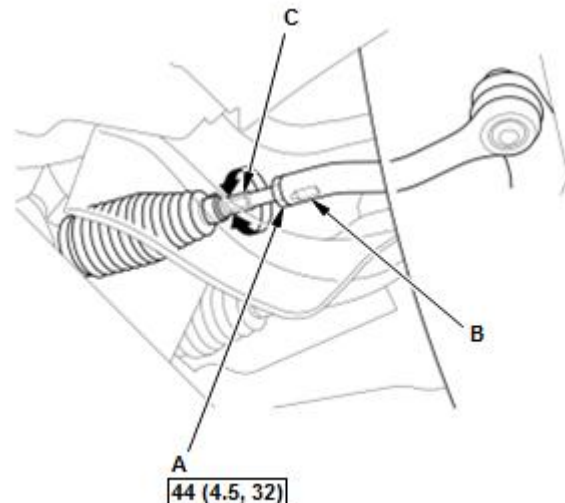
**NOTE:** Do the rear toe adjustment before the front toe adjustment.

1. Remove the engine undercover as needed.
2. Install the arm holder (A) on to the tie rod end (B) and the control arm (C) as shown. While holding the tool, loosen the control arm lock nuts (D) and turn the adjusting bolt (E) until the rear toe is within specifications.
3. After adjusting, tighten the control arm locknuts to the specified torque.
4. Install the engine undercover.

**FRONT TOE:**

**NOTE:** Do the rear toe adjustment before the front toe adjustment.

1. Loosen the tie-rod end locknut (A) while holding the flat surface section (B) of the tie-rod end and turn the tie-rod (C) until the front toe is within specifications.
2. After adjusting, tighten the tie-rod end locknuts to the specified torque. Reposition the rack-end boot if it is twisted or displaced.



**CAMBER:**

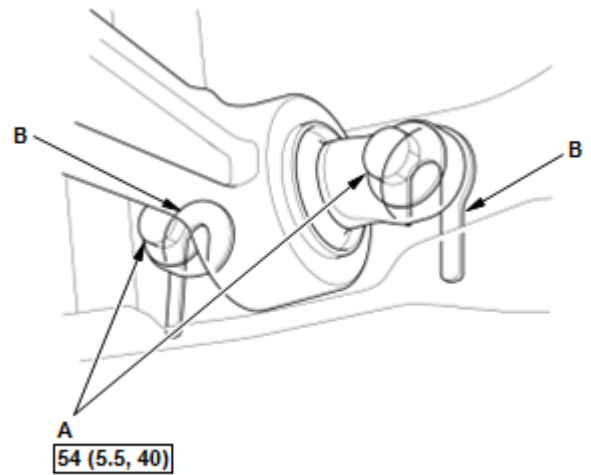
1. Loosen the flange bolts (A).

NOTE: If the flange bolt was removed, replace it.

2. Remove the camber shims (B) and check the thickness.

3. Based on the shim thickness chart below, choose the applicable shim to bring the camber to specifications and install them on lower arm B.

NOTE: Shims cannot be stacked. Apply the same thickness shim on both sides of the arm. Shims are available in 0.5 mm increments which changes the camber in 0.095 ° increments.



This illustration shows front side.



## Wireless Configuration

- The iLIFT Suspension Lift System ECU is pre-configured for your application. Do not update or modify the firmware unless instructed by iLIFT Systems.
- If the optional automatic sensors are installed, calibration is required. Please see this website for calibration instructions:  
[www.iLIFTSystems.com/support/NSX-2017-on](http://www.iLIFTSystems.com/support/NSX-2017-on)
- If configuration changes will be made, a wireless device, such as a laptop, phone, or tablet can be used to configure the iLIFT ECU. Please visit this website for instructions:  
[www.iLIFTSystems.com/support/ecu-instructions/](http://www.iLIFTSystems.com/support/ecu-instructions/)

## Operating Instructions:

***Installer: Please review these instructions with customer. Provide this booklet with take-off parts to customer when complete.***

### To Raise:

- The system is activated by the cruise control switch while the vehicle is traveling at or below 25 mph with the cruise control system off. Make sure cruise control is off.
- Press and hold (1-2 seconds) the cruise control switch up (accelerate) position to raise the vehicle. The piezo beeper will signal to confirm the raise command.
- If the vehicle is equipped with the optional rear lift kit, continue pressing up (additional 1-2 seconds) to activate the rear actuators.
- The system will beep every 15 seconds (default setting) when the system is raised.
- The system will not allow activation with the cruise control system in the on position.
- The system will not activate above 25 mph.
- The system will automatically lower itself if you drive above 25 mph.

### To Lower:

- Press & hold the cruise control switch down (resume position).
- The system will automatically lower itself if you drive above 25 mph.

### Compressor Safety Feature:

- The iLIFT system is intended only for intermittent use.
- iLIFT Systems are designed to work intermittently. The system is designed to allow the vehicle to lift and raise approximately ten (4 wheel lift) to twenty (2 wheel lift) times in a 10 minute span (which will require the air compressor to refill the air tank). The iLIFT ECU (electronic control unit) has built in compressor overheat protection. It will allow up to five compressor activations for up to 2 minutes of total run time every 10 minutes. In addition, your system includes a thermal sensor that will prevent the compressor from turning on if it detects the compressor is getting too hot. The iLIFT system will continue to function to raise the vehicle even if the compressor does not run (as long there is sufficient air pressure).

### Mode Control: Toggling between Manual, Automatic, and Disable modes (as of firmware version 1283):

- Using the activation switch, the system can be toggled between manual, automatic, and disable.
- To toggle, press and hold the down switch for 5 seconds until you hear a confirmation beep, this enters "mode control".
  - Automatic with Manual Mode: press and hold down one time to activate.
  - Manual Only: press switch down twice, holding on the second press.
  - Disable: press switch down three times, holding on the third press.
- A 1, 2, or 3 beep will be heard to confirm selection. The system saves your selection even if the ignition is turned off, and confirms your current selection each time the ignition is turned on.
- It is recommended to disable the optional automatic sensors when driving in rain / muddy conditions. Sensors should be periodically cleaned.

- **System does not activate when cruise control switch is pressed up:**

This may be caused by:

1. Cruise control system is on.
2. System is off (see “Mode Control” section below).
3. Vehicle speed is greater than 25 mph.
4. CAN wires installed improperly.

If you have verified these requirements and the system does not activate, please contact iLIFT Systems for assistance.

- **Compressor does not turn off:**

The ECU monitors the air tank pressure, then shuts off the compressor once tank pressure reaches 180 PSI. If the system continues to run, it is because there is a leak and the compressor cannot fully pressurize the tank, or there is a problem with the pressure signal from the tank. If you have verified there are no leaks, contact iLIFT Systems for assistance.

- **Air compressor will not turn on to fill air tanks:**

This may be caused by:

1. Voltage is below 12.6v.  
The system requires a steady 12.6 volts to operate in order to maintain sufficient power to the air compressor. This usually requires the engine to be running (place the NSX mode control switch to “Sport+” to keep the engine from shutting off). The air compressor uses 18-22 amps while operating. Turn the engine on to supply required voltage. If the tank is not full, and the air compressor does not turn on, check the power distribution module’s 6mm output stud. If there is not +12v when the engine is running, check the fuse (it should be located on the same side of the 6mm stud you are checking). Contact iLIFT Systems for assistance.
2. Compressor safety feature has been activated.  
See “Operating Instructions: Compressor Safety Feature”.

- **The automated sensors are activating the system improperly:**

This may be caused by:

1. The calibration is too sensitive.  
Recalibrate the sensors, and move the target closer to the sensors. Also, test increase filtering to reduce false activations.
2. The sensor lens is dirty or wet.
3. Clean the sensor lens with a soft cloth and mild glass cleaner. Driving in the rain may cause false activations, especially if dirty spray is kicked up on the sensors in the wet. Disable automatic activation when driving in the rain (see “Mode Control” in Operating Instructions).