

iLIFT Suspension Lift System
Honda S2000, 2000-09
Part Number: SYS-S21
Document Version: 1.2

iLIFT®
 Intelligent Suspension Lift Systems

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.

Note:

- This installation manual is intended to supplement, not replace, the factory service manual. Please consult the factory service manual for specifics like shock absorber removal, replacement, component locations, and torque specifications.

Required:

- Compatible shock absorber & springs (see next page for details).
- Spring compressor for factory shock absorbers (wall-mounted style recommended).
- Standard automotive & electrical tools, including insulated and non-insulated terminal crimpers.

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SYS-S2000-2WH**iLIFT System - S2000, 2000-2009 (2 wheel)**

QTY	ITEM	PART NO.
BOX: 30x15x15 double wall		
Box 1 - Compressor & Accessories - 12x10x10 box (heavy bubble on all components)		
1	assembly, air compressor - S2000	S21-COM-ASY
1	air compressor intake & filter kit	COM-INT
8	washer, M6 oversized (18-8)	
4	bolt, M6x30 hex flange (8.8 ZP)	
8	washer, M6 rubber oversized	
4	nut, M6 hex flange locking (8.8 ZP)	
Box 2 - Hardware - Small Tuck Top (2 Wheel)		
2	bump stop, 20mm	BMP-20
2	bump stop, 40mm	BMP-40
2	spring bushing, for 63/63, 65, or 70mm springs	SPB-60-XX
1	cone installation tool, AxB (shaft size x thread size)	ASC-AxB
Bag 6x9 - "Air Tube Accessories & Misc"		
1	fitting, Tee union 5/16" tube, nickel plated brass	89230-05
1	tube cutter tool	TC
10	zip tie, nylon, 5.5"	7130K53
20	zip tie, nylon, 8.5"	7130K54
Bag 4x6 - "Air Tank Hardware"		
1	bolt, M6x16 hex flange (8.8 ZP)	
3	bolt, M6x20 hex flange (8.8 ZP)	
3	nut, hex flange (8.8 ZP)	
4	nut, hex flange (8.8 ZP)	
6	washer, M6 rubber oversized	
Box 3 - Electrical - Tuck Top		
Bag 5x8 - "PDM & Accessories"		
1	power distribution module	46095
1	fuse, JCASE 40A	46592
1	bolt, M6x50 hex flange (8.8 ZP)	1189106045
1	nut, M6 hex flange	
1	assembly, PDM power wire	S21-HAR-PWR
1	assembly, fused ignition power wire	S21-HAR-FUS
Bag 5x8 - "Electrical Accessories"		
4	wire tap, 20-22 AWG	B004D0C2RC
1	switch, dual position up/down rectangle	10003281
4	terminal, flame-retardent for 22-18 gauge	9240K12
1	assembly, beeper w/ female connector	HAR-BPR-ASY
1	ECU 18 position connector with plugs (included if auto sensors not purchased)	

Loose

1	assembly, main wire harness - S2000	S21-HAR-ASY
2	actuator assembly, XXmm (replace XX with shock absorber shaft size)	ACT-XX-ASY
1	assembly, air tank & control 2 wheel - S2000	S21-AIR-2WH-ASY
1	Electronic Control Unit (ECU) Assembly	ECU-ASY
2	bolt, M6x35 hex flange (8.8 ZP)	6928106035
8	tube, 6mm Nylon (ft)	NB6x1-0100
40	tube, 5/16" Nylon (ft)	NB-5-040-0250
35	sleeve, 3/8" (ft)	20401F

SYS-S2000-4WH**iLIFT System - S2000, 2000-2009 (4 wheel)**

QTY	ITEM	PART NO.
Box 1 - Compressor & Accessories - 12x10x10 box (heavy bubble on all components)		
1	assembly, air compressor - S2000	S21-COM-ASY
1	air compressor intake & filter kit	COM-INT
8	washer, M6 oversized (18-8)	
4	bolt, M6x30 hex flange (8.8 ZP)	
8	washer, M6 rubber oversized	
4	nut, M6 hex flange locking (8.8 ZP)	
Box 2 - Hardware - Small Tuck Top (2 Wheel)		
4	bump stop, 20mm	BMP-20
4	bump stop, 40mm	BMP-40
2	spring bushing, for 63/63, 65, or 70mm springs	SPB-60-XX
1	cone installation tool, AxB (shaft size x thread size)	ASC-AxB
Bag 6x9 - "Air Tube Accessories & Misc"		
1	fitting, Tee union 5/16" tube, nickel plated brass	89230-05
1	tube cutter tool	TC
10	zip tie, nylon, 5.5"	7130K53
20	zip tie, nylon, 8.5"	7130K54
Bag 4x6 - "Air Tank Hardware"		
1	bolt, M6x16 hex flange (8.8 ZP)	
3	bolt, M6x20 hex flange (8.8 ZP)	
3	nut, hex flange (8.8 ZP)	
4	nut, hex flange (8.8 ZP)	
6	washer, M6 rubber oversized	
Box 3 - Electrical - Tuck Top		
Bag 5x8 - "PDM & Accessories"		
1	power distribution module	46095
1	fuse, JCASE 40A	46592
1	bolt, M6x50 hex flange (8.8 ZP)	1189106045
1	nut, M6 hex flange	
1	assembly, PDM power wire	S21-HAR-PWR
1	assembly, fused ignition power wire	S21-HAR-FUS
Bag 5x8 - "Electrical Accessories"		
4	wire tap, 20-22 AWG	B004D0C2RC
1	switch, dual position up/down rectangle	10003281
4	terminal, flame-retardent for 22-18 gauge	9240K12
1	assembly, beeper w/ female connector	HAR-BPR-ASY
1	ECU 18 position connector with plugs (included if auto sensors not purchased)	

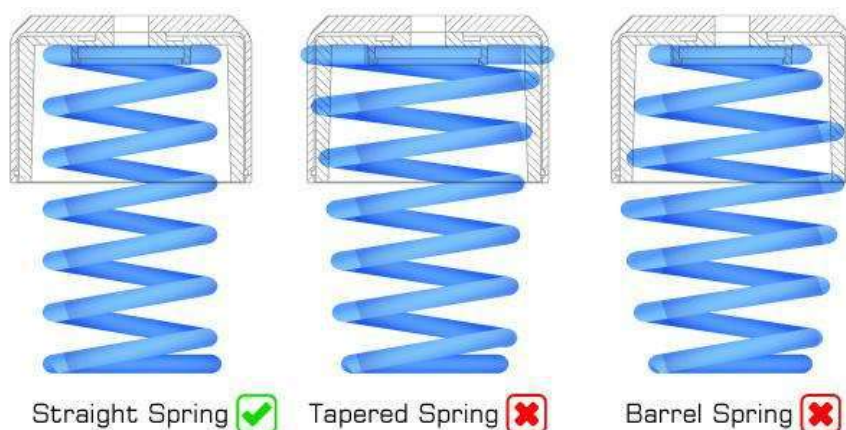
Loose

1	assembly, main wire harness - S2000	S21-HAR-ASY
2	actuator assembly, XXmm (replace XX with shock absorber shaft size)	ACT-XX-ASY
1	assembly, air tank & control 2 wheel - S2000	S21-AIR-2WH-ASY
1	Electronic Control Unit (ECU) Assembly	ECU-ASY
2	bolt, M6x35 hex flange (8.8 ZP)	6928106035
8	tube, 6mm Nylon (ft)	NB6x1-0100
75	tube, 5/16" Nylon (ft)	NB-5-040-0250
50	sleeve, 3/8" (ft)	20401F

Actuator Fitment Requirements

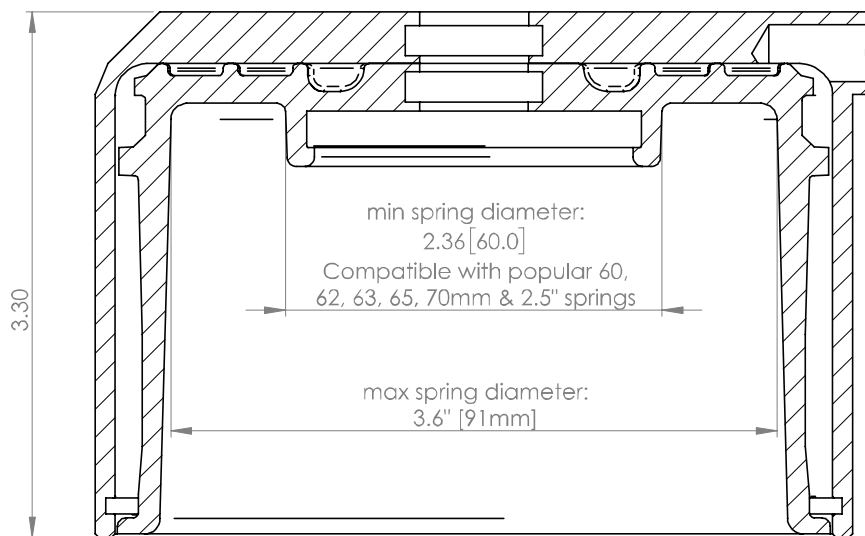
Straight Springs Required

The iLIFT Suspension Lift System actuators are designed for straight springs as shown. Factory style tapered springs and barrel springs are not compatible with iLIFT Suspension Lift System. Factory springs with a tapered or barrel shape can often be changed to a straight spring - however, this requires knowledge of the existing spring rate and may require a custom lower mount made to work with your shock absorber.



Spring Fitment in Actuator

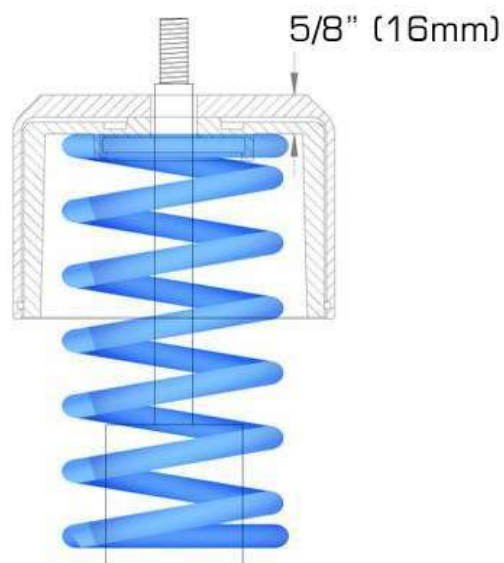
The iLIFT actuator is compatible with springs with an inner diameter of 60-70mm – and is compatible with popular springs including 60mm, 62mm, 63mm, 65mm, and 2.5". To determine your spring inner diameter, measure the inside of the spring with a caliper, or contact your coilover manufacturer. The spring's outer diameter cannot exceed 3.6" (91mm).



SIDE CROSS SECTION

Installation Height

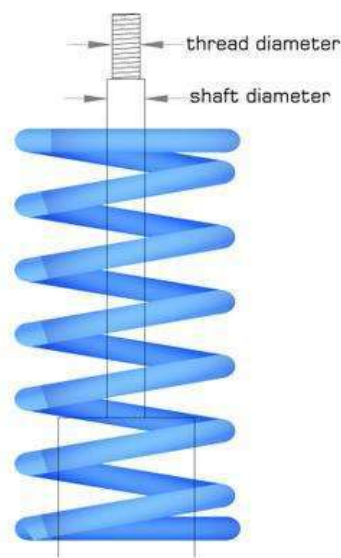
The iLIFT Actuator adds only 5/8" (16mm) of height to your spring. This requires a threaded body shock absorber with enough threads to lower the spring or modification of the lower mount to move the spring down 5/8".



Compatible Shock Absorber Shaft Diameter

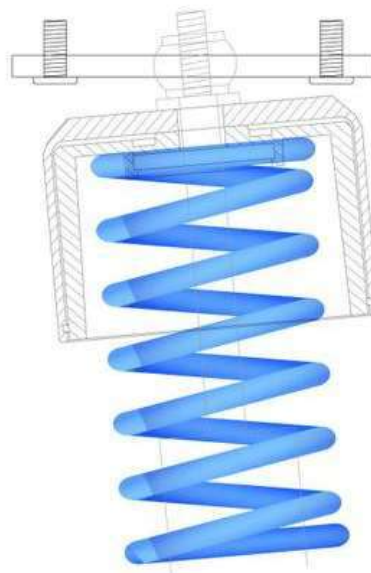
iLIFT Actuators are available for shock absorbers with 12mm, 12.5mm (1/2"), 13mm, 14mm, 15mm, 16mm, 18mm, 20mm, 24mm, and 25mm shaft diameters.

When the iLIFT actuator is installed over the shock absorber shaft, a cone shaped installation tool will be installed over the threaded portion of the shock absorber shaft. This tool will protect the seal from being cut on the threads and expand the seal over the step on the shaft. This information would have been collected when the order was placed, and a proper sized tool will have been provided.



Top Mount Fitment

The shock absorber's top mount must be able to accommodate the iLIFT Actuator. Because the seals in the iLIFT Actuator ride on the shock absorber's shaft – the actuator must remain parallel to the shock absorber, while the shock absorber must be able to pivot in the top mount to allow the suspension to pivot with suspension's movement. In addition, the top mount's joint must be designed to carry the full load of the suspension – factory designs where the spring mounts to the bottom of the top mount are not compatible. These requirements may require a custom top mount or adapters in order to work with your existing top mount.



Actuator Installation

Check Ride Height

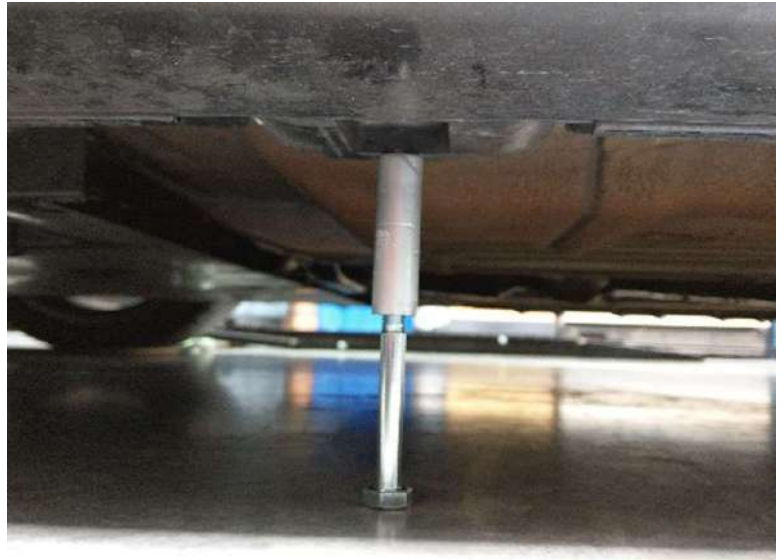
- Before raising vehicle, measure factory ride height at jack points on all four corners on flat level ground. A bolt and threaded shaft as shown can be used to gauge ride height.
- Record ride height:

_____ Front Left

_____ Front Right

_____ Rear Left

_____ Rear Right



Remove Shock Absorbers

- Remove shock absorbers (consult factory service manual for procedures).
- Note that some shock absorbers will require a spring compressor to remove the top mounts.

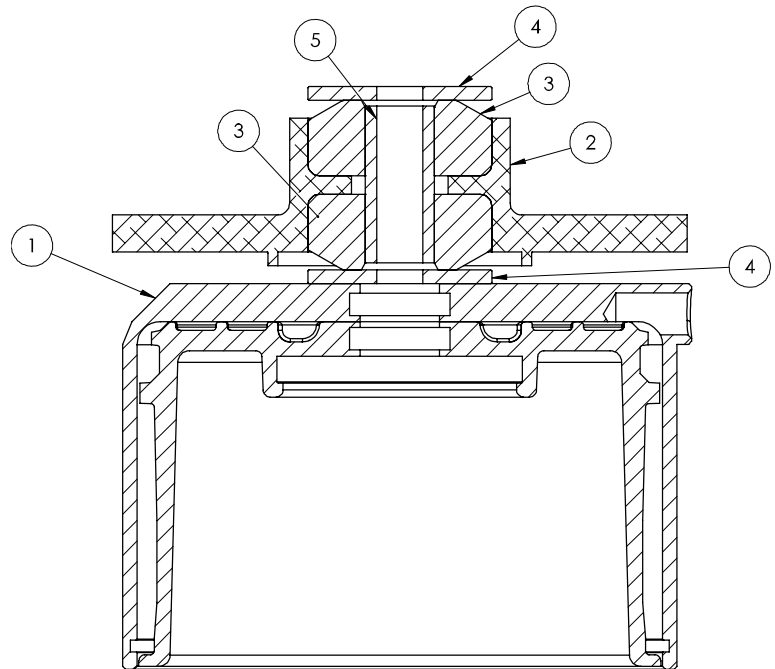
Assemble Actuators to Shock Absorbers

The top mount & springs must be compatible with the iLIFT actuator (see section "Actuator Fitment Requirements"). This includes spring fitment in the actuator, a threaded perch that allows the lower mount to be lowered by about 16mm to accommodate the thickness of the actuator, a compatible shock shaft, and a top mount that allows the shock to articulate without causing the actuator to contact the top mount, and a top mount that is designed to support the full load of the suspension on its center joint. Do not install the iLIFT actuator with incompatible shock absorbers, springs, or top mounts.

This diagram shows a typical iLIFT actuator installation.

Contact iLIFT Systems with questions before attempting installation.

- 1: iLIFT actuator
- 2: top mount (optional)
- 3: bushing (optional)
- 4: support washers (optional)
- 5: sleeve (optional)



IMPORTANT!

The top surface of the iLIFT actuator below "4" must be supported by at least a 1.25" washer or flange diameter due to the hollow seal groove below.

- These instructions show a typical shock absorber. Your shock absorber may be different and require different installation steps. Contact iLIFT Systems before attempting installation to prevent damage to actuator seals.

Prepare shock absorber:

- Measure the current position of the shock absorber adjustable perch. They will need to be lowered by 5/8" / 16mm from the current position when installed to maintain the existing ride height.
- Once measured and recorded, thread the perches down by an inch or two.

Prepare iLIFT actuator:

- Install the supplied top spring bushing into the spring (for springs larger than 60mm). This locates the spring in the iLIFT actuator piston. A spring bushing is included that is compatible with the spring that you indicated on the iLIFT universal information sheet.
- 20mm and 40mm bump stops are included. These replace the bump stops that may have been installed on your shock absorber previously. Use the size that is closest to your previously installed bump stop.
- Insert the supplied iLIFT bump stops by pushing the bump stop into the bottom of the piston. It will clip into place.

Install actuator to shock absorber:

- Apply oil (engine oil is acceptable) in the inner diameter of the seal in the piston (black) and in the cylinder (silver aluminum).
- Install the supplied assembly installation cone tool on the shock absorber as shown.
- This cone tool will allow the iLIFT actuator's seal to slide over the shock shaft.
- Carefully slide the actuator over the cone installation tool. The oil applied to the seal should allow the actuator's seals to slip over the shaft with minimal effort.
- If resistance is felt, remove and inspect the actuator and seals. Make sure the cone tool is installed properly and lubricated. Do not allow the seal to catch on the shoulder of the shock absorber or damage to the seal can result.
- Remove cone installation tool.

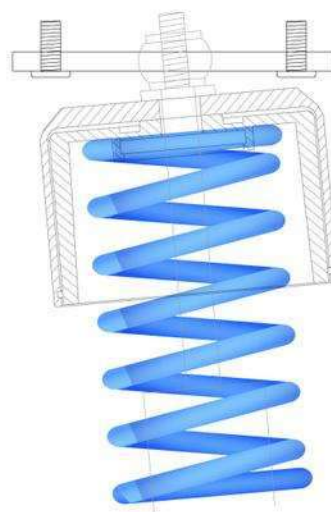


View these example videos for actuator installation

note: these videos show application specific installations. Some components are not included in universal kits.

- Pin mount top mounts: <https://www.youtube.com/watch?v=iRF8JY0A11A>

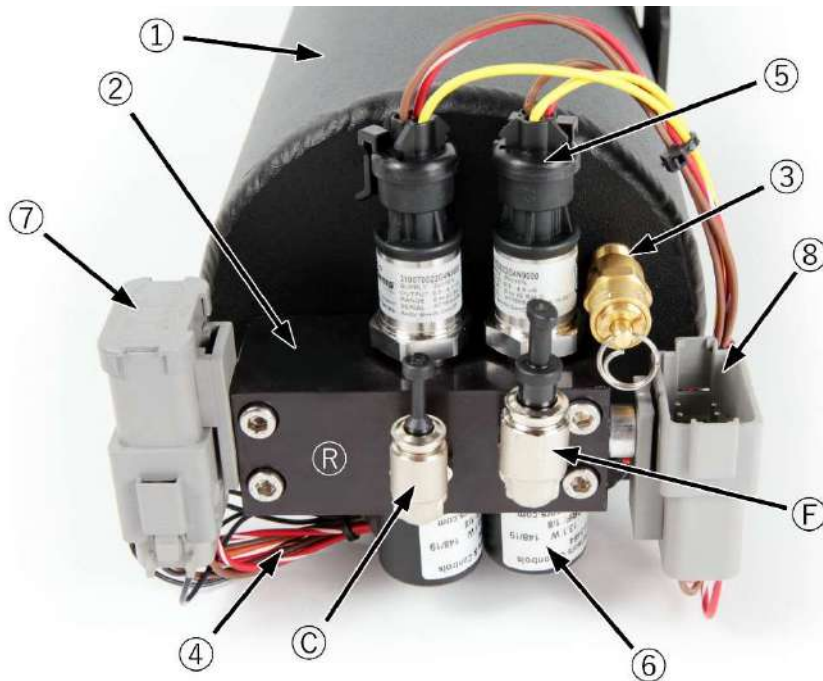
- Re-install shock absorbers to vehicle.
- If removed, leave off fender liners to be able to inspect actuators when they are pressure checked.
- Make sure that the shock absorber can articulate in the top mount without the actuator hitting the top mount. See diagram at the beginning of this guide for more information.
- Raise perch to height recorded and lower by 5/8" / 16mm to account for additional thickness of iLIFT actuator.
- Place the actuator's air fittings in a position where an air tube can be installed in a later step.



Air Control Assembly & Air Tank Assembly Overview

The air control assembly consists of the aluminum manifold, solenoid valves, and pressure sensors that regulates the iLIFT system's air flow. A wire harness and connectors attach to the manifold. The air tank stores the air volume used to raise the vehicle. The components are water resistant. The air tank & air control assembly are mounted to the underside of the trunk panel in the rear of the vehicle above the left side exhaust muffler.

Air Control Assembly & Air Tank

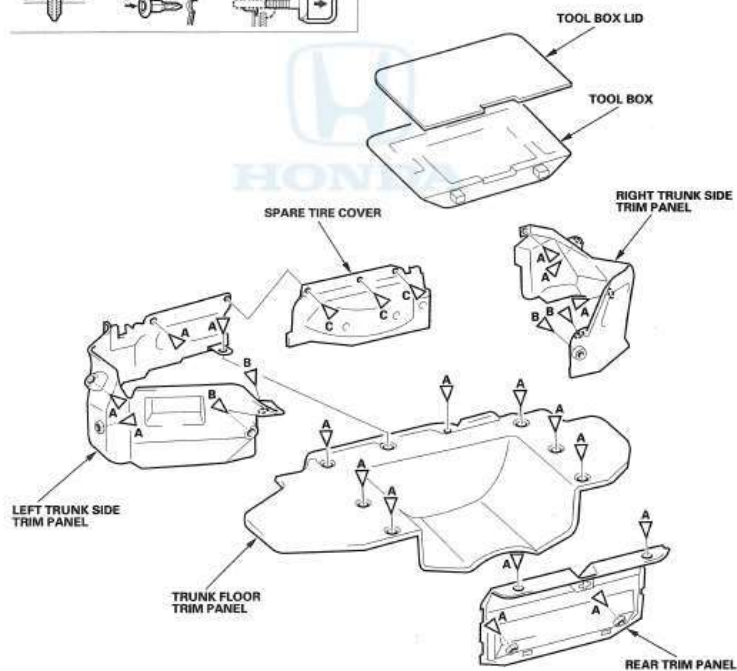


- 1 – air tank
- 2 – air control manifold
- 3 – pressure relief valve
- 4 – air control assembly wire harness
- 5 – pressure sensor
- 6 – valve solenoid
- 7 – buss connector
- 8 – main wire harness connector
- F – front actuator
- C – air compressor
- R – rear (not shown)

- Remove the spare tire cover, left trunk side trim panel and trunk floor trim panel.

Fastener Locations

A ▷: Clip, 18 B ▷: Clip, 4 C ▷: Clip, 3



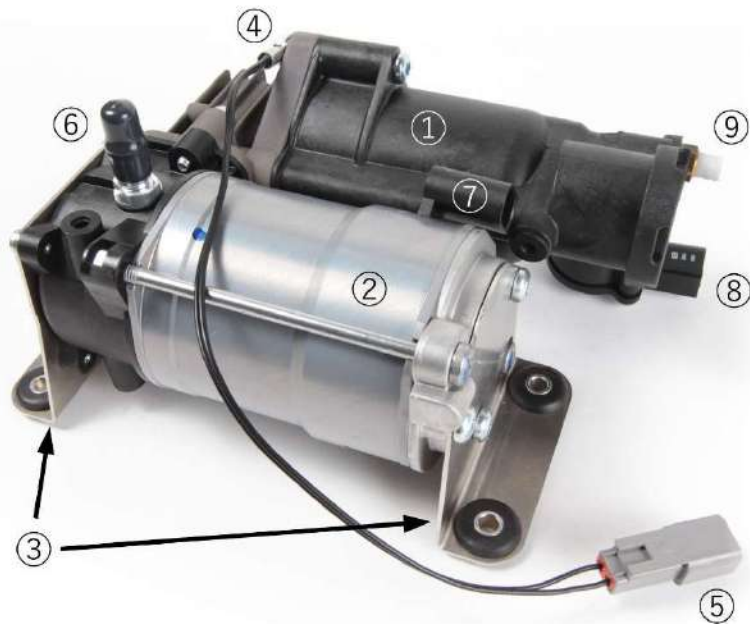
- Remove the exhaust muffler assembly for better access to the trunk panel.
- The air tank & air control assembly are mounted to the underside of the trunk panel in the rear of the vehicle above the left side exhaust muffler.
- On the vehicle's left side, you will drill the first hole for the air tank assembly (note next photo for reference).
- Locate the rib on the trunk floor noted in the image and mark a hole 2-1/4" (57mm) away from the front edge as shown.
- Drill a 1/4" hole.



- Align the tank as shown with the front outer hole in alignment to the drilled hole.
- Mark the remaining three holes.
- Drill a 1/4" hole where the three marks were made.
- Using an assistant, mount the tank to the first drilled hole (with the raised rib surface) with the supplied M6x16 hex flange bolt and nut. Install the bolt from the trunk and the M6 hex flange nut on the bottom.
- Mount the remaining positions using the supplied M6x20 hex flange bolts and M6 hex flange nuts placing two rubber washers between the tank mounting bracket and trunk panel surface.



Air Compressor Overview



Air Compressor

- 1 – air compressor dryer
- 2 – air compressor motor
- 3 – air compressor brackets w/ bushings
- 4 – thermal sensor
- 5 – thermal sensor connector
- 6 – air compressor intake fitting
- 7 – air compressor power connector
- 8 – air compressor exhaust valve connector
- 9 – air compressor outlet (with plug installed)

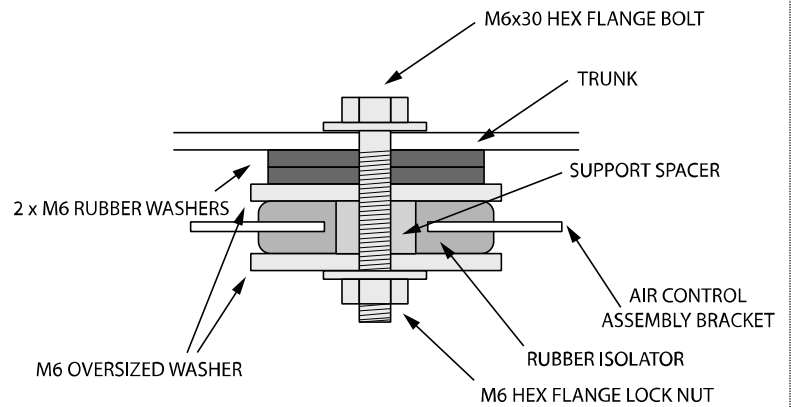
- The air compressor assembly is mounted to the underside of the trunk panel in the rear of the vehicle above the right side exhaust muffler.
- On the vehicle's right side, you will drill the first hole for the air compressor bracket (note next photo for reference).
- Make a mark that is 1" (25mm) from the front edge and $\frac{3}{4}$ " (19mm) from the outer edge as shown.
- Drill a $\frac{1}{4}$ " hole at this mark.



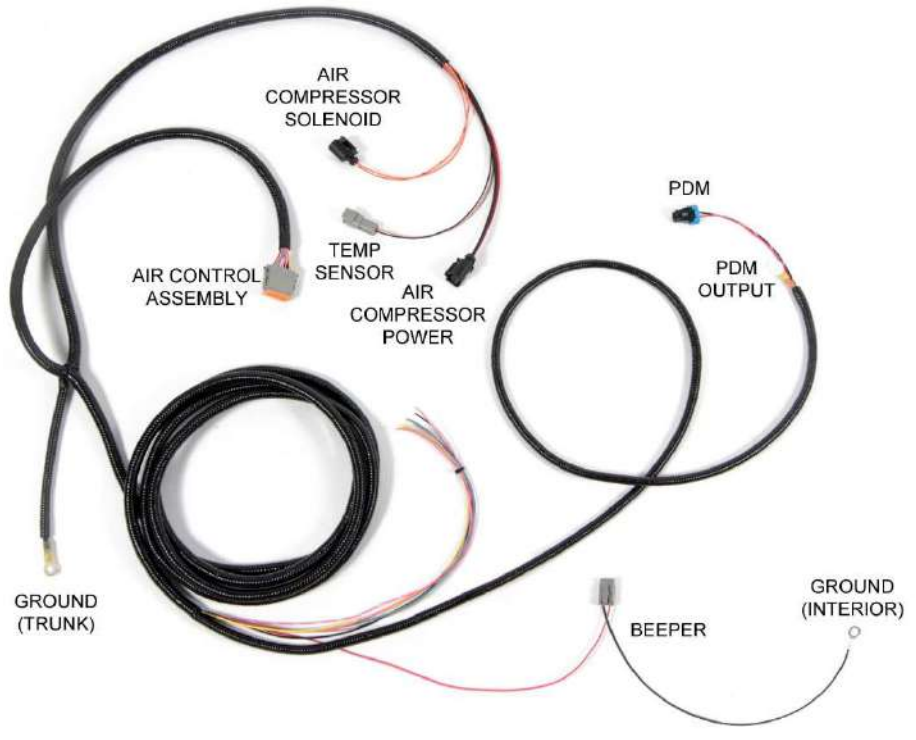
- Align the air compressor as shown with the front outer hole in alignment to the drilled hole.
- Mark the remaining three holes.
- Drill a ¼" hole where the three marks were made.



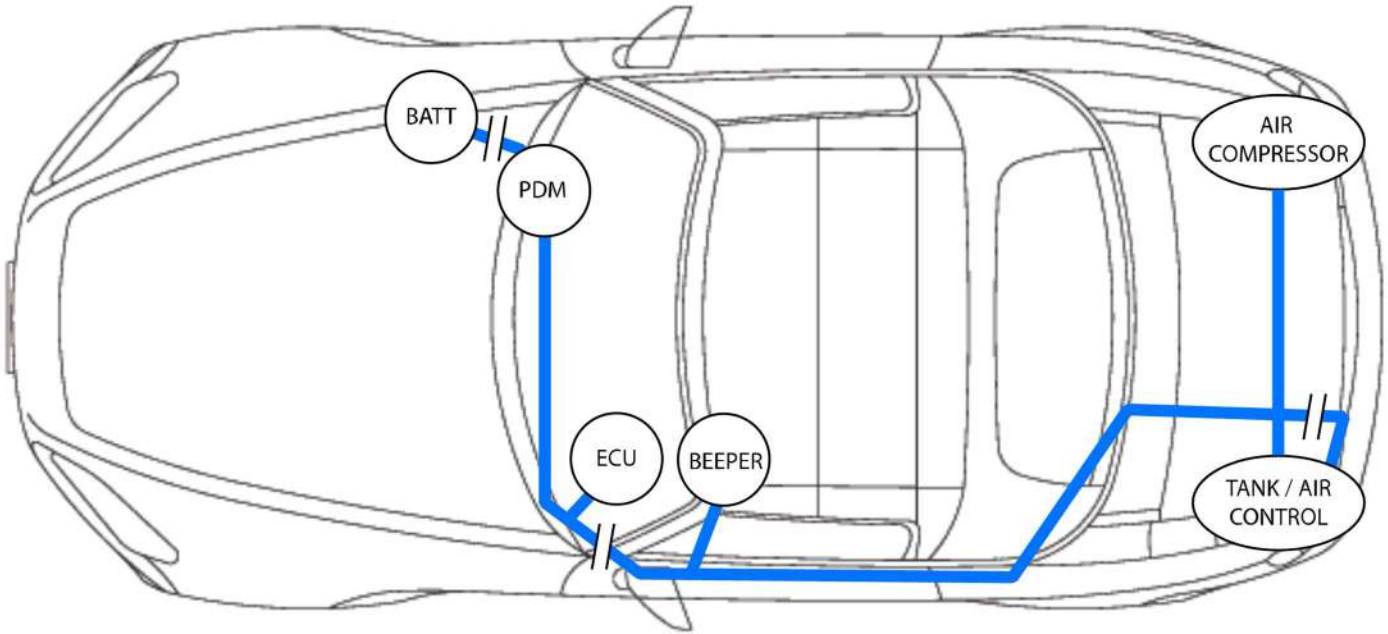
- Using an assistant, mount the air compressor to the drilled holes with the supplied M6x30 hex flange bolts, M6 hex flange lock nuts, rubber washers, and oversized washers as shown in the diagram.



Electrical: Wiring Overview



iLIFT Electrical Harness



Harness Routing

- Attach the compressor's power and solenoid connectors to the air compressor.
- If the power connector on the air compressor needs to be removed, slip a small flat blade screwdriver under the retainer lock, push down on the retainer, and remove the connector as shown.
- Route the wire harness along the rear bumper beam to keep it away from heat.
- Attach the connector to the air control assembly.



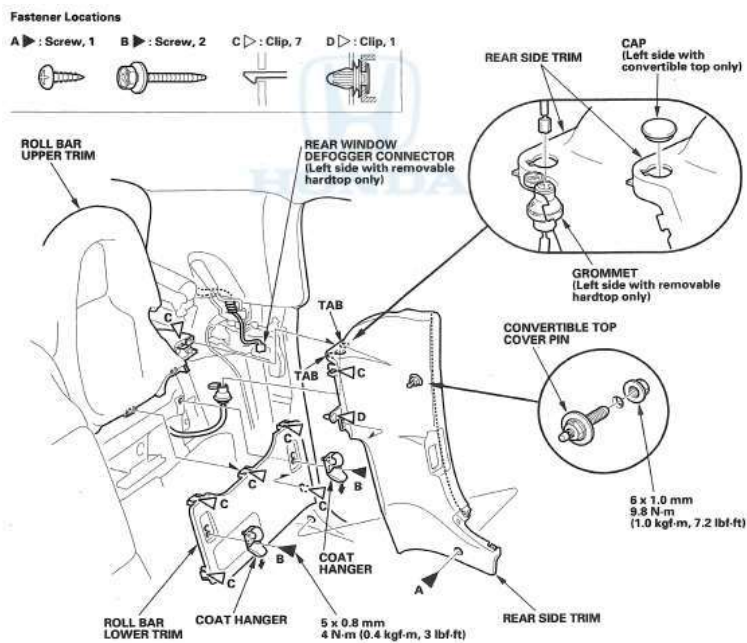
- The trunk vent duct needs to be trimmed to allow the electrical harness to enter the cabin.
- Trim the duct with a razor as shown.



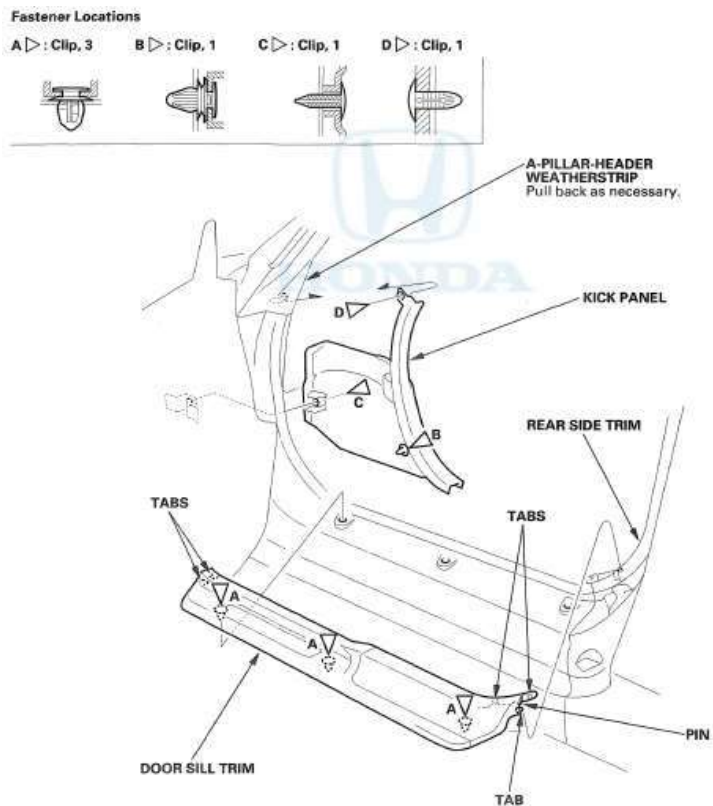
- Remove the bolt above the duct and attach the trunk ground on the supplied wire harness along with the other factory ground wires to this point.



- Remove left rear side trim panel from interior.



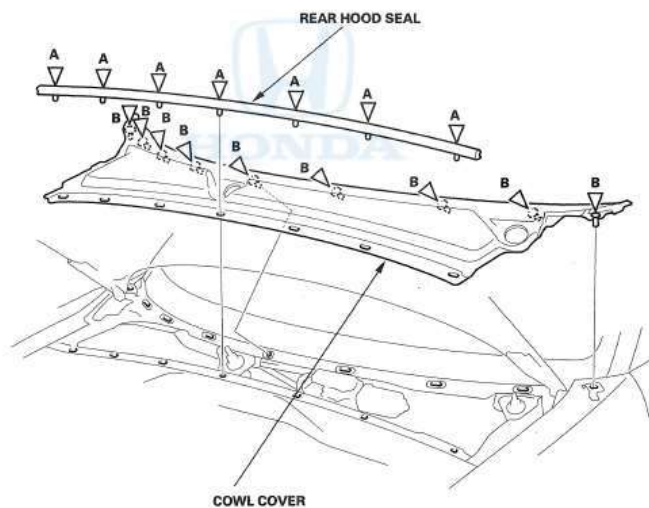
- Remove left door sill trim.
- Peel back carpet along sill.
- Route wire harness along left side of trunk, through spare tire compartment, down the left rear corner, along the left sill, and up to where the ECU is located.



- Raise the front hood and remove the wiper arms and cowl cover.

Fastener Locations

A ▷ : Clip, 7 B ▷ : Clip, 9



- In the engine bay, make a slit on the top of the wire harness grommet (1) where it enters the engine bay from the cabin.
- Make a slit in the wire harness grommet (2) that enters the cowl compartment.
- Pull the PDM connector and PDM output ring connector through both grommets.



- The power distribution module (PDM) will be installed next.

1 – cover (remove by depressing both latches).

2 – fuse position – only this position should be used. Do not install the fuse yet.

3 – input stud (M8).

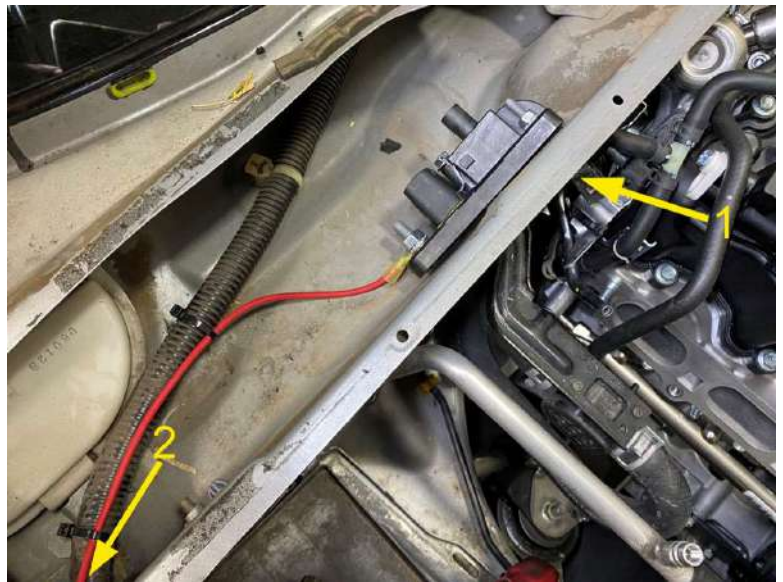
4 – output stud (M6) – note, only this stud must be used.

5 – PDM solenoid connector.

6 – mounting position.



- Remove the hex flange bolt that secures the factory bracket (1).
- Install the PDM with the supplied M6x50 hex flange bolt.
- Orient the PDM as shown with the larger M8 stud on the passenger side of the vehicle.
- Secure the factory bracket using the supplied M6 hex flange nut.
- Install the 8mm ring terminal (note there is a 6mm and 8mm side) on the supplied power wire to the PDM's input M8 stud using the pre-installed nut.
- Route the power wire along the factory wire harness, securing it with zip ties as shown.
- Make a slit in the grommet (2) to slip the 6mm ring terminal through.



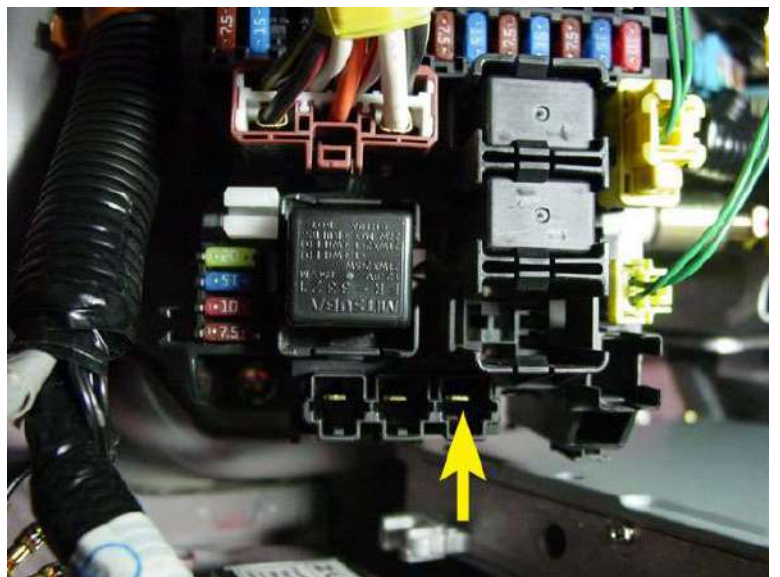
- Install the 6mm ring terminal to the positive battery clamp.
- Replace the battery clamp.
- Install the supplied fuse in to the PDM. Note the correct position for the fuse in the image of the PDM in a prior step.



- Route the wire harness along the factory wire harness under the wiper motor brackets as shown.
- Secure the 6mm ring terminal to the bottom M6 stud as shown using the pre-installed nut.
- Secure the wire harness to the factory wire harness using the supplied zip ties.

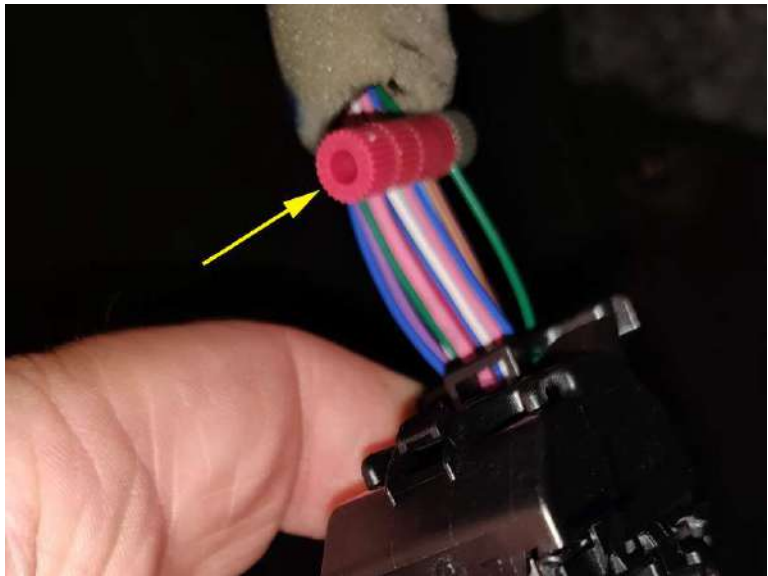


- Install the brown connector on the ECU ignition power wire into the position noted.
- Locate the loose yellow wire in the supplied wire harness. Cut it to length to reach the butt connector on the ECU ignition power wire and strip off 3/16 – 1/4". Crimp the wire to the butt connector using a crimp tool designed for insulated terminals.
- Locate a suitable ground point near the fuse box. Remove paint as needed to have a solid connection to ground.
- Locate the loose black wire in the supplied wire harness. Strip off 3/16 – 1/4" and crimp the wire to the loose supplied 1/4" ring terminal using a crimp tool designed for non-insulated terminals.



Electrical: Vehicle Speed

- Wire taps are supplied to tap factory wires.
- Remove grey-colored nut from supplied wire tap.
- Insert wire tap as shown by piercing factory wire with tap's needle, and then reinstalling grey nut.
- Speed pulse (blue wire):
Locate this wire in the ECU wire harness:
2000-05: "A9"
2006-09: "A18".
- Remove red nut from the wire tap.
- Install the blue wire through the hole in the red nut.
- Strip 1/4" from the end of the blue wire and install exposed stranded wire into the wire tap.
- Secure red nut into wire tap. The nut crimps the stranded wire to the pointed protrusion in the wire tap leaving no exposed wire from exiting the wire tap nut.
- Follow instructions to program ECU for speed pulse.



A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11		
A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24
			A25	A26	A27	A28	A29	A30	A31	A32		

2000-05 "A" connector (from wire side)

1	2	3	4	5	6	7	8	9			
KS	IGF2	IGP1	PG2	PG1	CMP	CKP	LG2	LGI			
10	11	12	13	14	15	16	17	18	19	20	21
AFS- HTC			IGPLS4	IGPLS3	IGPLS2	IGPLS1	NC		VCC2	VCC1	
	23	24	25	26	27	28	29	30	31		
	SG2	SG1	AFSB	AFSA		AFS-		MAF	AFS+		

2006-09 "A" connector (from wire side)

Electrical: Switches

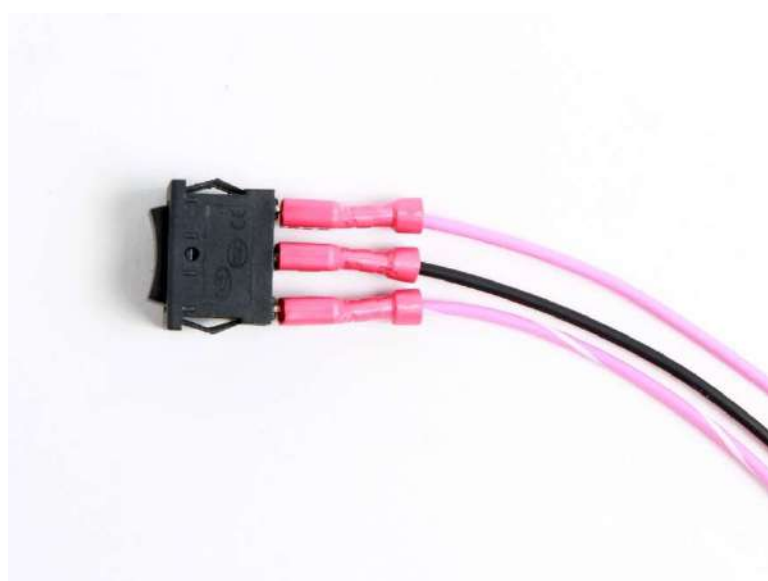
Install Aftermarket Switch (OPTIONAL)

- A switch is required to activate the iLIFT System. The supplied switch may be used, or the wires from the factory cruise control switches may be used instead (skip to the next step if using the factory cruise control switches).
- Any dual position switch instead of the supplied switch (for up and down commands) may be used.
- The supplied switch requires a $\frac{3}{4}$ " x $\frac{1}{2}$ " rectangular hole to be added to a panel.
- Cut the pink, pink/white, and black wires to length (they may need to be lengthened to reach the desired location).
- Strip off $\frac{3}{16}$ " of insulation from each. Crimp the supplied $\frac{3}{16}$ " female spade terminals to each (a spare is provided).

PINK = Up

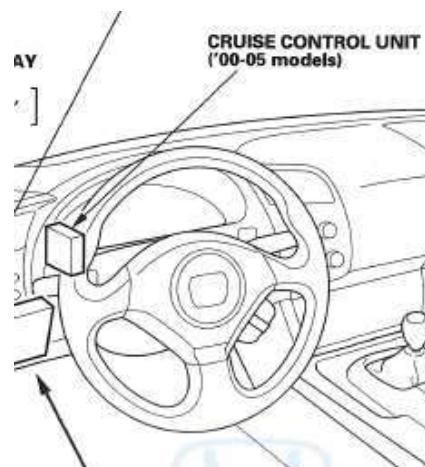
PINK/WHITE = Down

BLACK = Common (Ground)



Factory Cruise Control Switches (OPTIONAL):

- Follow the instructions for using the supplied wire taps in the Vehicle Speed section.
- If the factory cruise control switches will be used, the cruise status wire (tan) must be tapped in to the factory cruise active switch. By doing this, the iLIFT ECU will detect when the cruise main switch is pressed and will disable iLIFT from operating. The cruise switches will then work as intended by the factory. When cruise main is off, the iLIFT system will be able to raise the vehicle. Using the supplied wire tap, tap in to the factory wire:
2000-05: cruise control "13" (Lt Green)
2006-09: ECU "D4"
- For the Resume "UP" switch, connect the pink wire using the supplied wire tap to:
2000-05: cruise control "7" (Lt Green/Black)
2006-09: "D7"
- For the Set "DOWN" switch, connect the pink/white wire using the supplied wire tap to:
2000-05: cruise control "6" (Lt Green/Red)
2006-09: "D1"
- If using cruise control switches, the iLIFT ECU's default switch voltage must be changed. See the section "Wireless Configuration".



CRUISE CONTROL UNIT CONNECTOR (14P)

1	2	3	4	5	6	7
8	9	10	11	12	13	14

2000-05 Cruise Control connector (from wire side)

1 CCSET SW			4 CCM SW		
7 CCRES SW	8 BKSW NC	9 CCCL SW			
			15 ETCS RLY		

2006-09 "D" connector (from wire side)

Wireless ECU Configuration

- A mobile phone, tablet, or laptop is required to connect to the iLIFT ECU for configuration changes.
- To make configuration changes, please visit this website for instructions: <https://iliftsystems.com/support/ecu-instructions/>
- Contact iLIFT Systems (info@iLIFTSystems.com) if you have questions on configuring the iLIFT ECU.
- The iLIFT ECU is pre-configured for your application. Only these items need to be programmed:
 - Calibrate speed – the ECU will be configured when driving at 15 mph.
 - Switches:
 - If the factory cruise control switches are used (default configuration):
 - Cruise control status input: +12V
 - Switch Up: +12V
 - Switch Down: +12V
 - If the supplied aftermarket switch is used:
 - Cruise control status input: disabled
 - Switch Up: ground
 - Switch Down: ground

Verify Operation & Reassemble

1. The fender liners, interior, and trunk panels will be left off until after start-up and inspection.
2. Replace wheels and lower vehicle and jounce springs by pushing down on the front and rear.
3. If new springs are installed, note that the new springs will settle. Ideally, allow the springs to sit overnight and adjust ride height the following day.
4. Turn ignition on.
5. Start engine. The air compressor will start after 10-20 seconds. Note that the compressor is designed to start only when the voltage is greater than 12.5v, which usually requires the engine to be running.
6. The air compressor will run for less than 2 minutes to charge the air tanks from 0 PSI to more than 180 PSI. Once the air compressor turns off, shut off the engine and listen for air leaks. If the compressor runs for longer than 2 minutes, turn off the ignition and inspect the system for leaks.
7. Turn the ignition on (engine does not need to be running) and raise the vehicle. Turn off the ignition. Leave the vehicle raised. Listen for air leaks.
8. Once it is verified that the system is not leaking, allow the compressor to sit for 10 minutes to cool. The extended time it runs from 0 PSI is unusual, future fills will already have around 100 PSI in the tanks of reserve air pressure.
9. Replace interior, fender liners, and engine bay panels.
10. Replace trunk panels.

System Operation

- ECU is switched on with ignition power. A series of beeps will be heard. One long – indicating the ECU has powered on, then one to three short beeps indicating Mode (see details on Mode below).
- If tank pressure sensor indicates low pressure, and there is sufficient battery voltage, the ECU switches on the power distribution module's (PDM) relay and air compressor runs until the tank pressure sensor indicates the air tank is full.
- To prevent the air compressor from over heating, the ECU will allow the air compressor to run for up to 2 minutes or 5 cycles every ten minutes. The ECU will not allow the air compressor to run if the thermal sensor indicates the compressor is too hot. The thermal sensor must be plugged in for the ECU to function properly.
- When the switch is pressed to the up position momentarily, the ECU opens the air tank and front (and optional) rear valve and the vehicle lifts. The piezo beeper confirms the switch press with a beep. The valves stay open until the front pressure sensor indicates that the actuators have reached their target pressure. The ECU closes the valves. The piezo beeper will beep twice approximately every 30 seconds while the ECU detects the vehicle is in the raised position.
- When the switch is pressed to the down position momentarily, the ECU opens the exhaust valve and the front (and optional) rear valve. The valves stay open until the pressure sensors indicate that the actuators are empty.

To Raise:

- The system is activated by pressing the up switch while the vehicle is traveling at or below 25 mph with the cruise control system off (if using the cruise control switches).
- Press and release (1-2 seconds) the up-position switch 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. Note that the system can be programmed to lift the front and rear together. It is suggested to keep the system configured to lift the rear independently (default setting). Lifting the front only uses less air and allows the system to be used for several lifts.
- 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 (if the cruise control switches are used).
- 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 down-position switch.
- The system will automatically lower itself if you drive above 25 mph.

Compressor Safety Feature:

- iLIFT Systems are designed for intermittent use. 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:

- 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.

Troubleshooting

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

This may be caused by:

1. Cruise control system is on or cruise control status is not programmed (if using cruise control switches).
2. System is off (see “Mode Control” section above).
3. Vehicle speed is greater than 25 mph or not configured properly.
4. CAN or switch wires (depending on application) installed improperly or not configured properly.
5. A wiring issue exists.

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. 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. The ECU will attempt to run the compressor for 2 minutes, then turn off the air compressor. If there is voltage, but it is less than 12.6v, you may need to improve the wiring between the PDM and battery. If there is no voltage, 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).