

# Expedition/Navigator 2003-2004 4-Wheel Kit



## Installation Instructions Conversion Kit Systems



# INSTALL/REMOVAL INSTRUCTIONS: AIR SUSPENSION CONVERSION KIT

**ATTENTION:** Refer to the appropriate shop manual for your vehicle to obtain specific service procedures for this part. If you do not have a service manual or lack the skill to install this part, it is recommended that you seek the services of a qualified technician. Pay special attention to all cautions and warnings included in the shop manual. Read and follow all instructions carefully.

## Air Suspension Conversion Kit General Installation Instructions

When servicing any vehicle be sure to follow all safety procedures. First, make sure that when lifting the vehicle that you use an appropriate jack with a proper weight rating. Before going underneath any vehicle, make sure that it is properly supported with sturdy jack stands and on level ground so that the vehicle doesn't fall or slide off of the jack and onto you. As with any automotive repair, make sure you have the appropriate tools to do the job so you don't damage any parts on the vehicle. Safety glasses and mechanic's gloves should also be worn for your protection.

Take care not to exceed the Gross Vehicle Weight Rating (GVWR), or the maximum load recommended by the manufacturer. It is important that all the vehicle owner manuals recommendations are followed for your own safety and to prevent damage to the vehicle.

Once you are ready to disable the ride light, you will need to disconnect the negative battery cable (-) to prevent electrical shock/malfunction.

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## Quick Start Guide

### Ford Expedition/Lincoln Navigator

### 4-Wheel Kit 2003 – 2004

#### Parts Included in This Kit

Complete Strut assemblies with light out module



#### Tools needed for installation

- Metric socket set
- Floor jack
- Jack stands
- Metric wrenches
- Screwdrivers (Phillips and flat head)
- Wire cutter/stripper/crimping tool
- Level work surface
- Spring compressor (if applicable)
- Allen wrenches

**Note:** Vehicles with the 'kneel down' feature require dealer IDS computer to turn off suspension message. The recommended procedure is available by request. Procedure is not guaranteed.

**Note:** If installing a 4 wheel kit, install both kits before disarming the ride light.

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#### Rear Removal Instructions

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**Warning:** The electrical power to the air suspension system must be shut off prior to hoisting, jacking or towing an air suspension vehicle. This can be accomplished by turning off the air suspension switch located in the left rear cargo area. Failure to do so may result in unexpected inflation or deflation of the air springs which may result in shifting of the vehicle during these operations.

**1. Turn off the air switch. Support and raise the vehicle. Remove the wheels. (See Figures 1-2)**

**Fig. 1**



**Fig. 2**



**2. Depress the orange air collet on the solenoid. Release the air line. (See Figure 3)**

**Fig. 3**



**3. Disconnect the electrical connector from the solenoid. (See Figure 4)**

**Fig. 4**





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4. Remove the outer toe link from the spindle and disconnect the toe link bar. (See Figure 5)

Fig. 5



5. Loosen and remove the top three mounting nuts from the air strut. (See Figure 6)

Fig. 6



6. Remove the nut and bolt from the lower strut mount and remove the air strut. (See Figure 7)

Fig. 7



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## Front Removal Instructions

**Read instructions carefully before attempting installation. If you have problems during the install, feel free to call our Technical Support Line.**

- Turn off the air suspension switch. Support and raise the vehicle. (See Figures 1-2)

Fig. 1



Fig. 2



- Loosen and disconnect the outer red tie rod from the spindle. (See Figure 3)

Fig. 3



- Loosen and remove the top three mounting nuts from the air strut. (See Figure 4)

Fig. 4



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- **Depress the orange collet on the solenoid to release the air line. (See Figure 5)**

Fig. 5



- **Disconnect the electrical connector from the solenoid. (See Figure 6)**

Fig. 6



- **Remove the upper ball joint to ease the installation of new strut.**

- **Remove the nut and bolt from the lower strut mount and remove the air strut. (See Figure 7)**

Fig.7



**Note:** The rear springs may settle some during the first couple of weeks of use. The front height sensors may have to be adjusted to match the level of the new rear springs. The rear springs can sit a little low if the rear shocks are bad. Test the rear shocks by pushing down on the rear of the car. If the rear bounce also replace the shocks.

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## Rear Installation Instructions

1. Place the strut into the upper mounting location and secure loosely with the three nuts. (See Figure 1)

Fig. 1



3. Place the lower strut mounting into the frame mount and tighten nut and bolt. (See Figure 2)

Fig. 2



3. Place the toe link back into the rear spindle and tighten the nut. (See Figure 3)

Fig. 3



4. Tighten the upper three mounts and replace the wheels. Lower vehicle to the ground. (See Figure 4)

Fig. 4



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## Front Installation Instructions

**Read the instructions carefully before attempting the installation.  
Call our Technical Support Line if you have problems during the install.**

- 1. Place the strut into the upper mounting location and secure with the three nuts loosely.  
(See Figures 1 & 2)**

**Fig. 1**



**Fig. 2**



- 2. Place the lower strut onto the frame mount and secure with the bolt and nut. (See Figure 3)**

**Fig. 3**



- 3. Replace the steering arm and secure with the previously removed nut. (See Figure 4)**

**Fig. 4**



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**4. Tighten the three upper nuts and replace the wheel. Lower the vehicle to the ground. (See Figure 5)**

**5. Reattach upper ball joint.**

**Fig. 5**

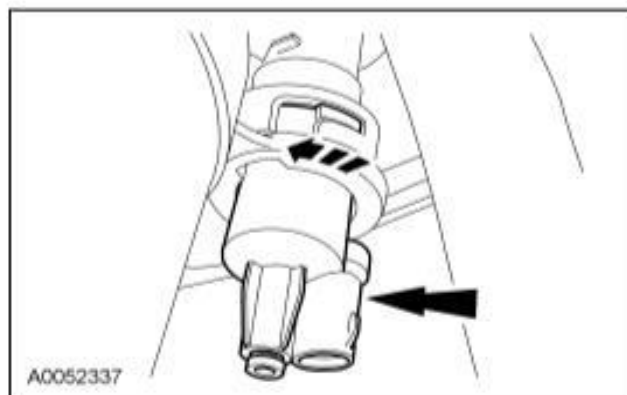


**Note:** The rear springs may settle some during the first couple of weeks of use. You may have to adjust the front torsion bars to match the level of your new rear springs. The rear springs can sit a little low if rear shocks are bad. Test the rear shocks by pushing down on the rear of the car. If the rear bounces you need to replace the shocks.

To make sure that the Air Suspension Light does not come on you must remove air spring solenoids from all the airbags and reconnect them to the vehicles.

#### **Solenoid Removal Instructions:**

- Remove the steel C-clip that holds the solenoid valve into the airbag.
- Turn the solenoid counter clockwise to remove. It should then come out. All the air will escape from the air spring. (See image below)
- Once the solenoid has been removed, simply plug it back into the electrical connector on the vehicle.



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## Light Disarm Instructions

- 1. Clear any codes in system.**
- 2. Use the Ford I.D.S. diagnostic computer.**
- 3. Select Suspension P.I.D.S**
- 4. Select calibration of ride height.**
- 5. Select raise and lower points.**
- 6. With the vehicle on a 2 post lift, raise the vehicle until the tires are off the ground.**
- 7. If an I.D.S. computer is not at hand, then turn off suspension switch in the rear. You will need to re-set the instrument cluster every time you start the vehicle.**
- 8. For the 2003-2004 models, a module is provided to remove the Check Suspension message.**
- 9. Instructions for module are included below**

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# Suspension Bypass Module



Always disconnect the negative battery cable prior to performing the following repair.

## Tools needed

- Wire cutters



- Wire crimpers



- Electrical tape
- Flash light



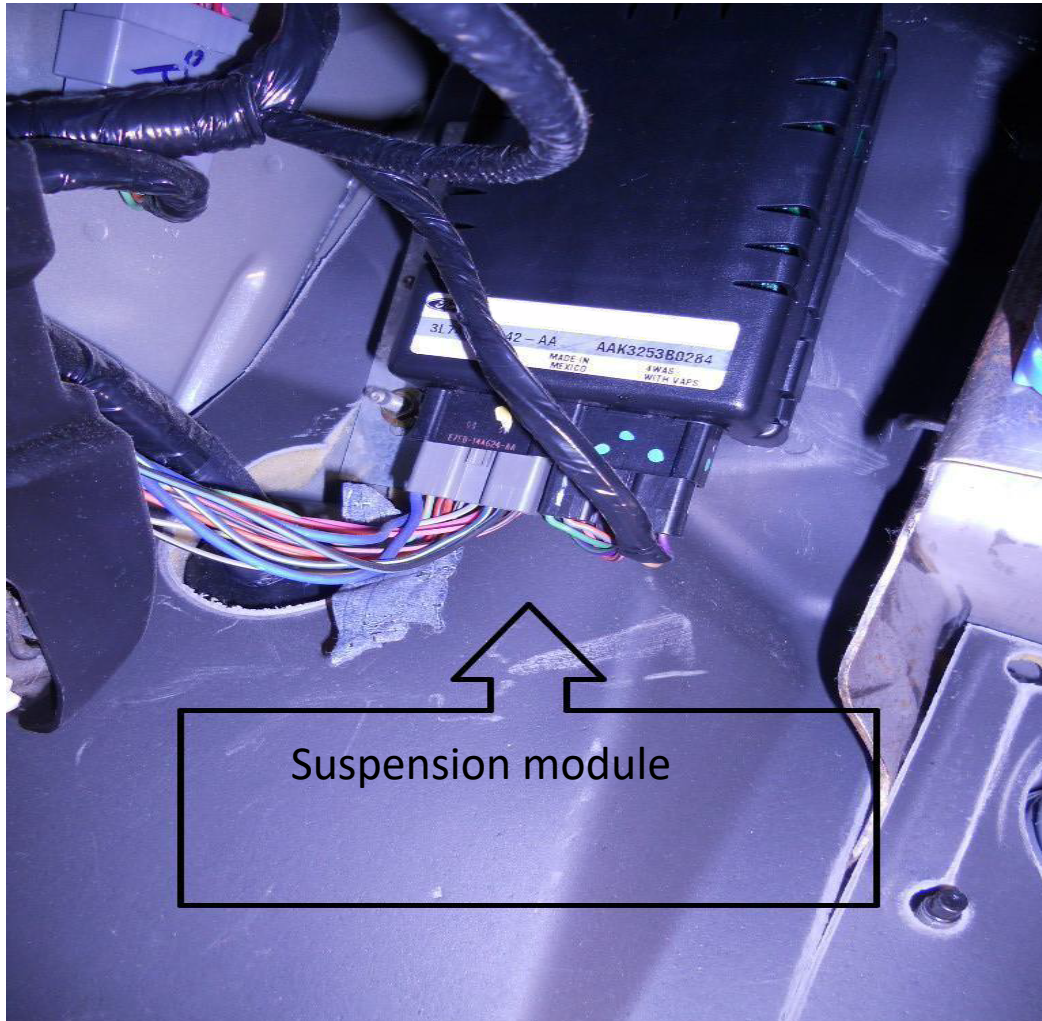
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## Suspension Bypass Module Installation

- Locate the vehicle suspension module mounted on the fire wall, behind the parking brake.



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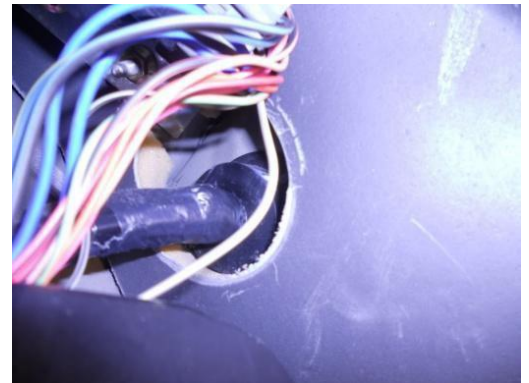
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## Suspension Bypass Module Installation

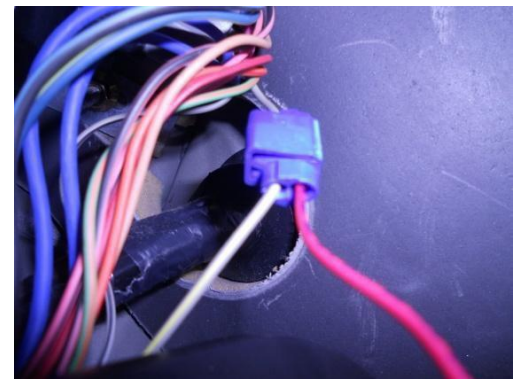
- You will be working with both the grey and the black connector. The power and ground come from the grey connector. The signal wire is in the black connector.



- Locate the grey/yellow wire in the grey connector.



- Splice the red wire from the new module into the grey/yellow wire on the vehicle's grey connector.



### Note:

Scotch lock installation is as follows:

- Place both wires into the scotch lock.
- Press down on the small metal crimp. Using pliers will help.
- Fold over the plastic cover till it locks into place.

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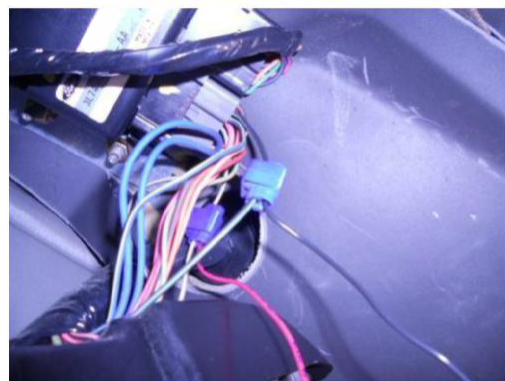
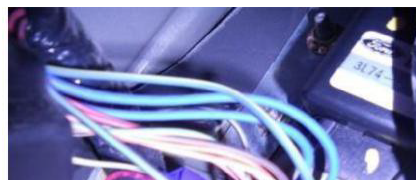
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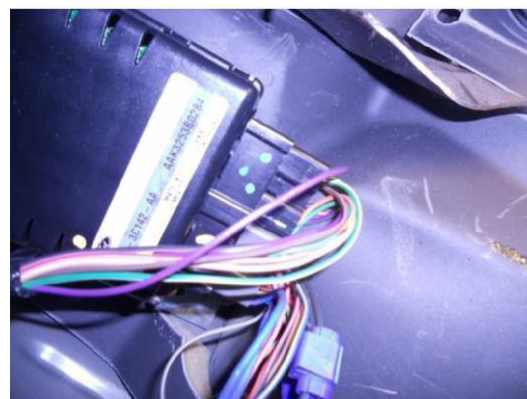
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## Suspension Bypass Module Installation

- Locate the black/light blue wire in the grey connector.
- Splice the black wire from the module into the black/light blue wire in the vehicle's grey connector.



- Locate the violet wire in the black connector.



- Cut the violet wire two inches from the connector.



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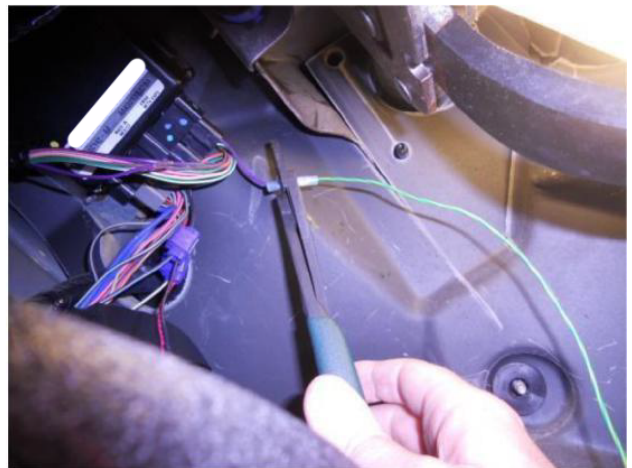
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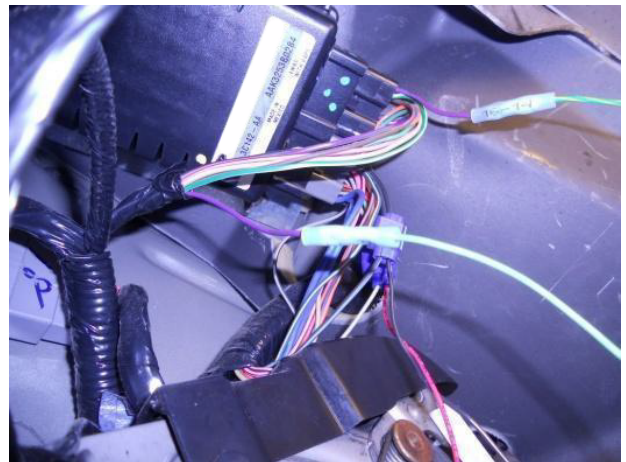
- Violet wire after cutting.



- Butt splice the green/yellow wire from the new module to the violet wire going into the black connector.



- Butt splice the green wire from the new module to the violet wire leading back into the vehicle harness.



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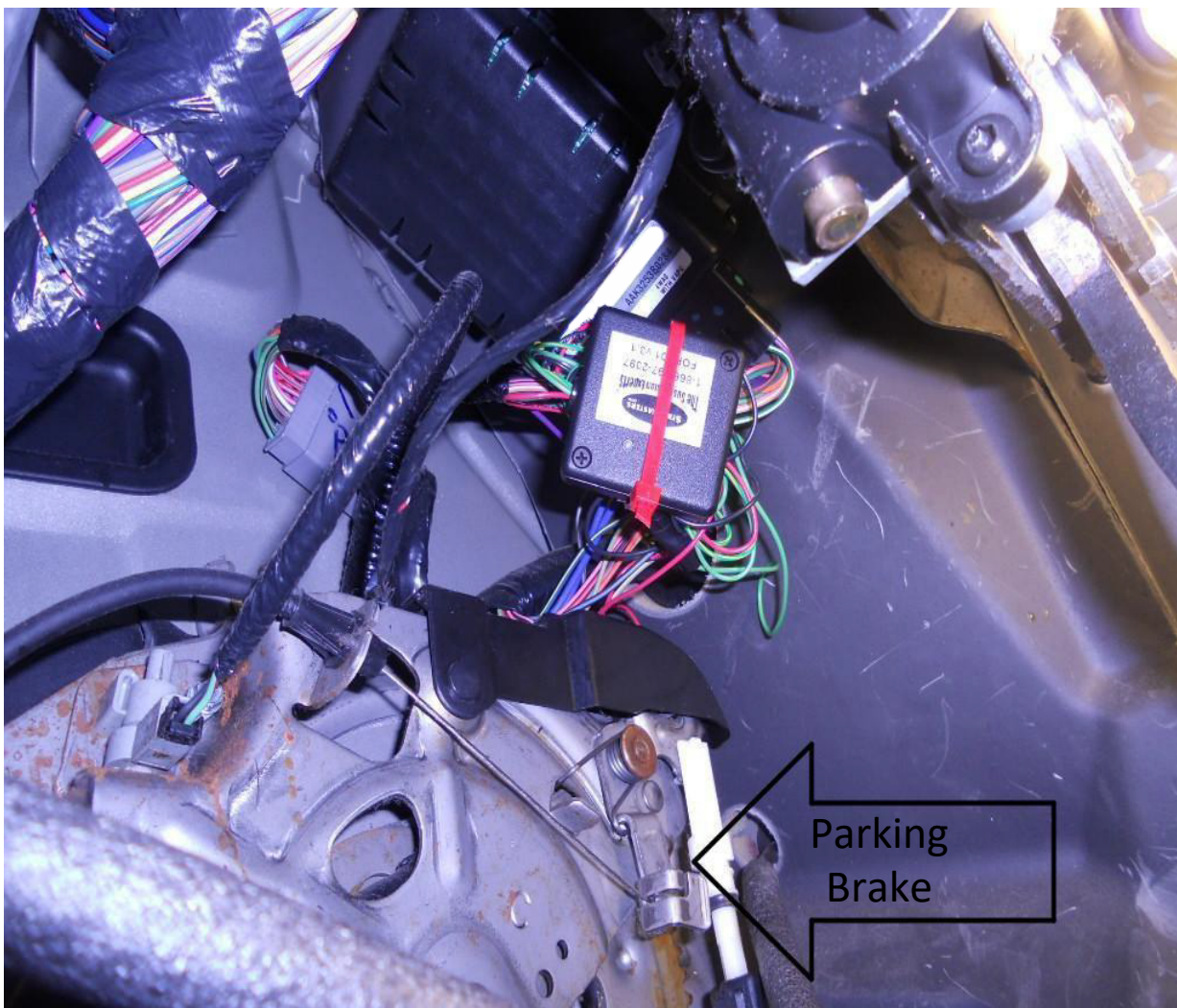


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## Suspension Bypass Module Installation

- Zip-tie the module to the harness above, keeping clear of the parking brake mechanism.

It is recommended that you tape the wires for an organized job.



- Reattach the negative battery cable and leave the suspension main switch in the on position.

Installation is now complete.