



**1-888-MAXX-CAM**

**www.SuspensionMAXX.com**

**Applications Include:**

Ford F-150 4X4 Trucks  
and Ford SUV's  
with Torsion Bars  
1997-2003 and 2004 Heritage

**FX** Cams are designed to add additional height adjustment to your vehicle. Under no circumstances should the truck be adjusted beyond the factory height measurement.

The shock absorber is the suspension height limiter and only stock length shock absorbers are recommended without modification whatsoever.

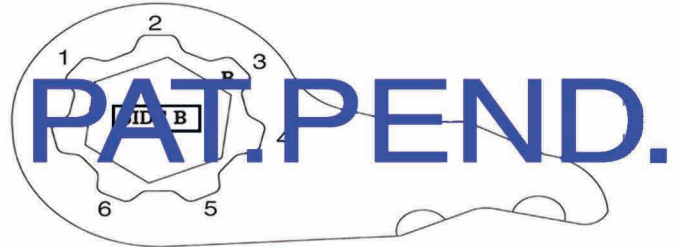
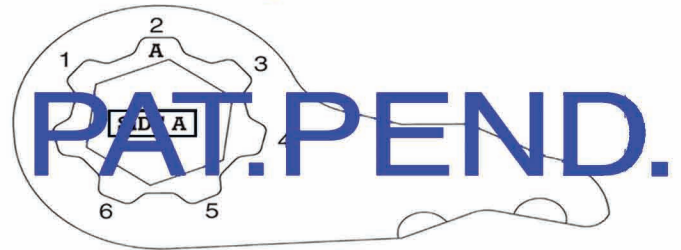
Adjusting vehicle suspension height beyond the maximum factory height can cause binding of crucial steering and suspension components.

These instructions and warnings shall not be substituted for the factory service manual. Torsion bars are preloaded in the vehicle. Only experienced suspension technicians with a working knowledge of the system and the properly designed tools and SAFETY EQUIPMENT should attempt installation of this part.

Installation of this product and all the adjustments should be performed by a licensed certified technician. Using the correct tools and procedures. Adjusting the suspension beyond the factory recommended maximum height can cause binding and accelerated wear of critical steering and suspension parts. Under no circumstances shall Suspension MAXX Inc. be held liable for any damage or loss of use due to incorrect installation or adjustment. Purchaser of this product assumes all liability.

**Lift Your Attitude!**  
Retain your factory ride

**Calibration is required before installation.**



1. To calibrate match A or B stamped on the internal hub with the appropriate numbered outer position
2. Apply Anti-Seize on gear tooth area to ease future disassembly
3. Install hub alignment clip for install. (Only 1 supplied)
4. Install **FX Cam** into vehicle
5. Remove hub retainer clip and discard
6. Adjust suspension ride height within specified range
7. Wheel alignment required after installation

\*Actual measurements may vary due to initial starting position, load and bar fatigue.

**FX Cam**

Decrease Height

B2 = -0.5"

A3 = -1.5"

Increase Height

A5 = +1.2"

B4 = +2.0"

Record Position for reference:

Right \_\_\_\_\_ Left \_\_\_\_\_

Installed \_\_\_\_\_ Mileage \_\_\_\_\_

This kit adds suspension travel only and will not add load carrying capacity to the suspension system.

**\*DO NOT OVERLOAD\***

This kit can be over calibrated. Over adjustment of the torsion bar is not recommended.

**Wheel Alignment Specs  
w/ Leveling Kit**

Camber... 0.0 Deg. +/- 0.5 Deg.  
Caster..... 2.0 Deg. +/- 1.0 Deg.  
Toe..... 1/8" +/- 1/16" (toe in)

\*Measurements are equal on both sides\*

**⚠ CAUTION: To prevent personal injury,**

- Wear eye protection that meets ANS1787.1 and OSHA requirements.
- The torsion bar is under pressure, creating a potentially dangerous situation. Completely release pressure before servicing the torsion bar.

**Warning:** Always remove any corrosion, dirt or foreign material from wheel mounting surfaces. If wheels are not installed with proper metal-to-metal contact at wheel mounting surfaces, lug nuts can loosen while vehicle is in motion. Check lug nut torque 500 miles after wheel installation.

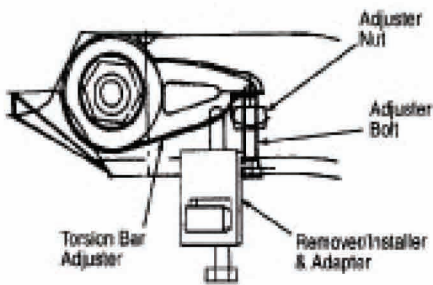
**REMOVAL**

**CAUTION:** The left and right side torsion bars are NOT interchangeable. The bars are identified and stamped R or L, for right or left. The bars do not have a front or rear end and can be installed with either end facing forward.

**CAUTION:** If the vehicle is equipped with air suspension system, electrical power supply system must be turned off prior to hoisting, jacking or towing vehicle. This can be done by disconnecting battery or turning air suspension switch to OFF position. Switch is located in right kick panel.

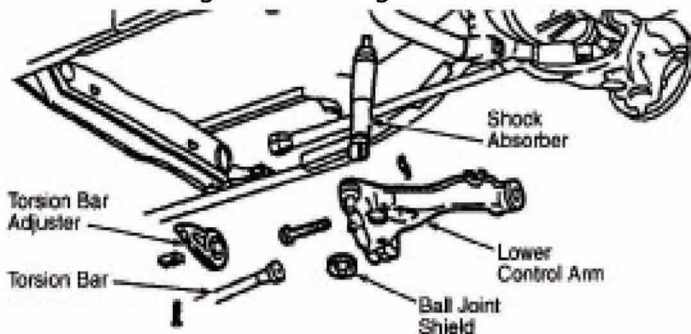
1. Raise and support the vehicle with the front suspension hanging.
2. Remove torsion bar adjuster bolt. Install torsion bar unloading tool (T95T-5310-AR) and adapter (T96T-5310-A) or either SMX-MT or SMX-2011MT onto torsion bar. See Fig. 4. Tighten tool until adjuster lifts off adjuster nut. Remove adjuster nut. Remove tool. Remove torsion bar adjuster.

**Fig. 4: Loading & Unloading Torsion Bar**



3. Remove torsion bar and anchor. Remove anchor from torsion bar. See Fig. 5

**Fig. 5: Removing Torsion Bar**



4. Remove all foreign material from torsion bar mounting in anchor and suspension arm.
5. Inspect adjustment bolt, bearing and swivel for damage.

**INSTALLATION**

**CAUTION:** The left and right side torsion bars are NOT interchangeable. The bars are identified and stamped R or L, for right or left. The bars do not have a front or rear end and can be installed with either end facing forward.

1. Insert torsion bar ends into **FX Cam** and suspension arm.
2. Position the **FX Cam** in the frame crossmember. See Fig. 38
3. Install Torsion Bar Unloader Tool to the anchor and the torsion bar.
4. Increase the tension on the anchor in order to load the torsion bar.
5. Install the adjustment bolt and adjustment nut.
6. Remove torsion bar tool. See Fig. 4
7. Tighten all fasteners to specifications.
8. Lower vehicle and adjust the front suspension height.

**Ride Height Adjustment Procedure:**

**CAUTION:** Use hand tools when adjusting ride height. DO NOT use power tools.

**Note:** On vehicles with air suspension system, see RIDE HEIGHT ADJUSTMENT under ADJUSTMENTS in appropriate ELECTRONIC article.

1. On vehicles with front air suspension system, air shock absorbers must be vented prior to adjusting ride height. To vent shock absorbers, connect New Generation Star (NGS) tester to Data Link Connector (DLC) located under steering column. Select AIR SUSPENSION CONTROL MODE under ACTIVE COMMAND MODES menu. Select VENT FRNT to deflate front air shocks.
2. Hold 30 seconds to allow complete system venting. DO NOT disconnect NGS tester. Keep NGS tester in same mode to keep system in diagnostic mode at time of ride height measurement. If NGS tester is disconnected, system will go to operational mode and based on signal inputs will level vehicle to specified height.
3. Raise vehicle on hoist with frictionless plates to support front wheels. Jounce vehicle to normalize stable ride height. Measure distance between center of lower control arm front bolt and ground (STEP 1 in illustration). See Fig. 2. Measure distance between bottom of steering knuckle and ground (STEP 2 in illustration). Subtract smaller measurement from larger measurement. This is ride height measurement.
4. Riding height should be as specified. See RIDE HEIGHT SPECIFICATIONS table. If ride height is not as specified, tighten or loosen torsion bar adjusting bolt at each side as required. Ensure to check ride height on each side after each adjustment.
5. After mechanical ride heights have been adjusted, using NGS tester, select SAVE CALIBRATION VALUES under ACTIVE COMMAND MODE menu to calibrate control module. Scroll through warning message and save FRONT (turn from OFF to ON). DO NOT save rear ride heights. Rear ride heights are pre-calibrated values already stored in control module.

**Ride Height Specifications**

Application	In. (mm)
<b>Expedition &amp; Navigator</b>	
Without Air Suspension	
Original Components (First Measured)	4.02 - 5.20 (102-132)
Original Components (After Repair)	4.21 - 4.44 (107-113)
New Components	4.80 - 5.04 (122-128)
With Air Suspension (Vehicle in Kneel Position)	
Original Components (First Measured)	2.36 - 3.42 (60-87)
Original Components (After Repair)	3.00 - 3.23 (76-82)
New Components	3.00 - 3.23 (76-82)
<b>F-150</b>	
Original Components	3.89 - 5.11 (99-130)
New Components	5.00 - 5.23 (127-133)

