



Thank You for choosing Suspension Maxx

Made in the U.S.A.



This kit is designed to add adjustability to the factory supplied system to compensate for torsion bar sag and fatigue.

Applications include:

**Full size Ford F150 4X4 series trucks and SUV's with torsion bars.
Model years 1997-2003**

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.

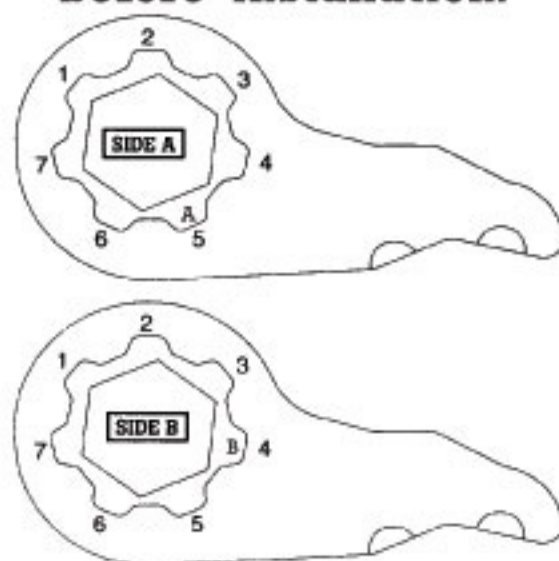
The shock absorber is the suspension height limiter and only stock length shock absorbers are recommended without modification whatsoever.

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

These instructions and warnings are not to be substituted for the factory service manual. Torsion bars are preloaded in the vehicle. Only experienced suspension technicians with 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 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. The purchaser of this product assumes all liability.

Calibration is required before installation.



- To Calibrate Match A or B stamped on the internal hub with the appropriate numbered outer position..
- Apply Anti-seize on on gear tooth area to ease future disassembly.
- Install hub retainer clip (one clip supplied)
Reinstall **FX** Cam in vehicle
- Remove Hub retainer clip and discard
Adjust suspension ride height within specified range
- Wheel alignment required after installation.

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

FX Cam

Negative Calibration	Positive Calibration
A3 -1.5 in	A5 +1.2 in
B2 -.5 in	B4 +2.0 in
	A7 +2.7 in

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!

NOTICE ALL POSITIONS MAY NOT BE USED IN SOME APPLICATIONS.

Notice... Wheel Alignment required after installation.

⚠ CAUTION: To prevent personal injury,

- Wear eye protection that meets ANSI Z87.1 and OSHA requirements.
- The torsion bar is under pressure, creating a potentially dangerous situation. Completely release pressure before servicing torsion bar.

WARNING: Always remove any corrosion, dirt or foreign material from wheel mounting surfaces. If wheel 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 after 500 miles after wheel installation.

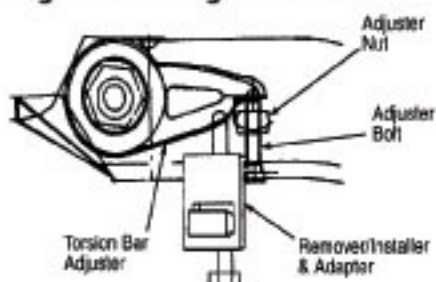
Removal:

CAUTION: The left and right side torsion bars are NOT interchangeable! The bars are identified and stamped R or L, for right and 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.

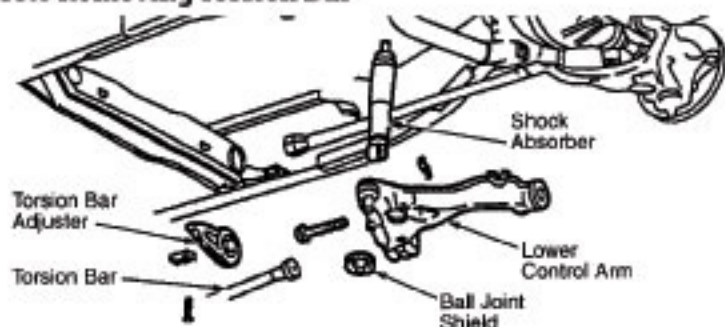
1. Raise and support the vehicle with the front suspension hanging.
2. Remove torsion bar adjuster bolt. Install torsion bar installer/remover (T96T-5310-AR) and adapter (T96T-5310-A) onto torsion bar. See Fig.4 Tighten installer/remover until adjuster lifts off adjuster nut. Remove adjuster nut. Remove remover/installer. 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 and 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 **FX** Cam in the frame crossmember.
3. Install torsion bar installer/remover (T96T-5310-AR) and adapter (T96T-5310-A) onto torsion bar. See Fig.4. Tighten installer/remover to load torsion bar. Coat adjusting bolt with a dry adhesive whenever it is backed off or removed. Install torsion bar adjuster nut and bolt.
4. Remove install/remove tool see Fig.4
5. Tighten all fasteners to specifications, lower vehicle and adjust ride height.

Ride Height Adjustment Procedure:

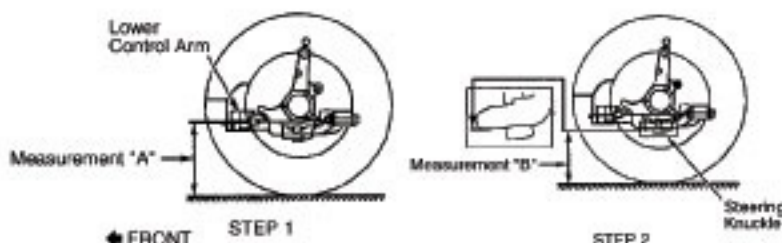
CAUTION: Use hand tools when adjusting ride height. DO NOT use power tools.

NOTE: On vehicles with 4-wheel 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 riding 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 at 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 static 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 riding height measurement.
4. Riding height should be as specified. See **RIDE HEIGHT SPECIFICATIONS** table. If riding height is not as specified, tighten or loosen torsion bar adjusting bolt at each side as required. Ensure to check ride height at 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 precalibrated values already stored in control module.

RIDE HEIGHT SPECIFICATIONS

Application	In. (mm)
Expedition & Navigator	
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 Knee 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)
F150	
Original Components	3.89-5.11 (99-130)
New Components	5.60-5.23 (127-133)



Measurement "A" - Measurement "B"
Equals FRONT RIDE HEIGHT

STEP 3