

# **Installation Instructions**

# 1"-2" Adjustable RANGERCAM

For use with 95-00 Explorer Sport Track 98-08 Ford Ranger 4x4 and 2wd with torsion bars

Part #: SMX-MC R

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

## RANGER

**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.

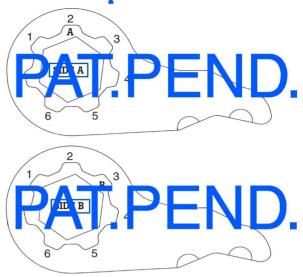
Adjusting vehicle suspension height beyond the maximum factory height can cause binding of crucial steering and suspension components.

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 held liable for any damage or loss of use due to incorrect installation of adjustment. Purchaser of this product assumes all liability.

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## 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 gear tooth area to ease future disassembly.
- Install hub alignment clip. (Only 1 supplied)
- Reinstall RANGERCAM in vehicle.
- Remove hub alignment clip. (Discard not required)
- Adjust suspension ride height within specified range.
- Perform a front wheel alignment. Specs below chart.

# Calibration Chart

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

## Ranger & Explorer

Decrease

A1 = -2.0"

B7 = -1.0"

A7 = -0.5"

B6 = +0.75"

A6 = +1.5" B5 = +2.0"

Increase

☐ Indicates maximum positive calibration recommended with most lift kits

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

## 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) \*Measurments are equal on both sides\*







- Wear eye protection that meets ANSI787.1 and OSHA requirements.
- The torsion bar is under pressure, creating a potentially dangerous situation. Completely release pressure before servicing the torsion bar.

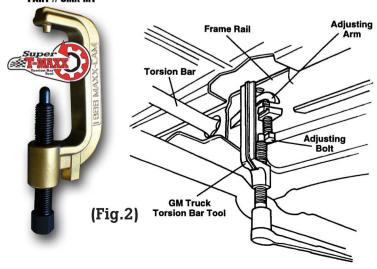
### REMOVAL USING UNLOADING TOOL (SMX-MT)

- 1. Attach the Torsion Bar Tool (No. 7822A and J42393) to the vehicle frame rail as shown. Tighten the tool against the torsion bar adjusting arm.
- 2. Loosen or remove the torsion bar adjusting bolt while counting the number of turns required. This helps identify the original position of the adjusting bolt.
- 3. Remove the tool, and perform the required service.

#### INSTALLATION

- 1. Attach the tool to the vehicle frame rail. Tighten the tool against the torsion bar adjusting arm.
- 2. Tighten the tool to draw the torsion bar adjusting arm into the frame rail.
- 3. Tighten the torsion bar adjusting bolt using the same number of turns recorded in Step 2 during removal.
- 4. Remove the tool.
- 5. Refer to the vehicle service manual for the correct trim height and alignment specifications.

#### PART # SMX-MT



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TORSION BAR ADJUSTING LEVER
PROPERLY DESIGNED TOOLS REQUIRED!
USE OF IMPROPER TOOLS AND PROCEDURES NOT
RECOMMENDED!

### REMOVAL USING UNLOADING TOOL (SMX-MT)

- 1. Raise and safely support vehicle under cer tified frame lift points. Remove tire and wheel assembly. Using specified Torsion bar unloader tool (J36202), (J42393) or OTC (7822A). See Fig. 2 increase tension on torsion bar adjusting lever, remove height adjusting bolt and horizontal adjusting nut when unloaded.
- 2. Slowly relieve torsion bar tension. Remove unloader tool. Slide torsion bar forward disengaging hex from lever. CAUTION DISENGAGED LEVEL CAN FALL FROM VEHICLE AND CAUSE INJURY. (Notice torsion bar may be frozen in lever, added force may be required for disassembly).

### INSTALLATION

- Inspect torsion bars, crossmember support for bends, cracks, rust or damage. Check adjusting bolts and nuts for damage, rust or stripped threads. Replace as necessary.
- 4. Calibrate **RANGERCAM** as needed to compensate for torsion bar sag and fatigue. **See CALABRATION INSTRUCTIONS.**
- Install RANGERCAM into crossmember, slide torsion bar rearward fully engaging torsion bar hex in RANGERCAM
- 6. Reinstall torsion bar unloader tool (see Fig 2) increase tension on torsion bar unloader tool as required to reinsert horizontal adjusting nut. NOTICE INCREASED PRESSURE REQUIRED! USE EXTREME CAUTION! Install adjusting bolt. Relieve tenson onto adjuster bolt. Remove unloader tool.
- 7. Check and adjust ride height and wheel alignment.

  Over adjustment of torsion bars not recommended.