

# GROUND FORCE

## 88-07 C-15 CLASSIC FRONT TORSION BAR LEVELING KEY KIT INSTALLATION

GM 4WD PICK UP AND ½ TON SUV WITH TORSION BARS AND 6 LUG WHEELS

READ INSTRUCTIONS COMPLETELY THROUGH BEFORE STARTING  
FAILURE TO ADHERE TO THE INSTRUCTIONS WILL VOID ANY GROUND FORCE WARRANTY  
IT IS RECOMMENDED THAT INSTALLATION BE DONE BY A QUALIFIED MECHANIC  
REPLACE ALL STOCK PARTS THAT ARE DAMAGED OR WORN  
INTERMIXING OF PARTS IS NOT RECOMMENDED AND WILL VOID THE WARRANTY  
ALWAYS WEAR EYE PROTECTION

CHECK TO SEE THAT ALL PARTS LISTED ARE INCLUDED:

2- TORSION BAR KEY ADJUSTERS 1- WARNING DECAL 1- INSTRUCTION

MEASURE AND DOCUMENT THE VEHICLE HEIGHT FROM FLOOR TO FENDER LIP.

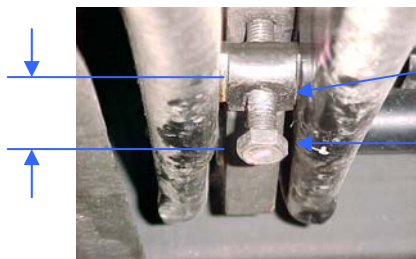
LF \_\_\_\_\_ RF \_\_\_\_\_ LR \_\_\_\_\_ RR \_\_\_\_\_

### FRONT INSTALL

1. BEFORE GETTING UNDER VEHICLE, JACK THE FRONT OF VEHICLE UP AND PLACE JACK STANDS UNDER THE FRAME RAILS. LOWER THE VEHICLE ONTO JACK STANDS AND MAKE SURE STANDS ARE SECURELY HOLDING THE VEHICLE.
2. MAKE SURE THAT THE FRONT TIRES ARE OFF THE FLOOR WHILE DOING THIS PROCEDURE.
3. LOCATE THE FACTORY TORSION BAR KEYS IN THE CROSS-MEMBER AT THE END OF THE TORSION BAR UNDER THE CAB.

**WARNING: THE TORSION BARS ARE UNDER PRESSURE. EXTREME CARE MUST BE TAKEN WHEN REMOVING AND INSTALLING THE TORSION BAR ADJUSTERS TO AVOID INJURY. FOLLOW THE TORSION BAR TOOL MANUFACTURERS LOADING / UN-LOADING INSTRUCTIONS.**

4. TORSION BAR ADJUSTER REMOVAL PROCEDURE. MAKE SURE THE JACK STANDS ARE SECURE UNDER THE VEHICLE FRAME.
  - A. MARK THE TORSION BARS LEFT OR RIGHT AND FRONT OR REAR.
  - B. MEASURE AND DOCUMENT THE DISTANCE FROM THE OUTSIDE OF THE HEAD OF THE TORSION BAR ADJUSTING BOLT UP TO THE TORSION BAR RETAINING PLATE. DOCUMENT BOTH LEFT AND RIGHT ADJUSTING BOLT HEAD HEIGHTS.



TORSION BAR ADJUSTER  
BOLT RETAINING PLATE.

TORSION BAR ADJUSTER  
BOLT HEAD.

BOLT HEAD HEIGHT

L \_\_\_\_\_ R \_\_\_\_\_

- C. USING A PROPERLY RATED TORSION BAR LOADER / UN-LOADER TOOL (KENT MOORE PART NO. 36202 OR ITS EQUIVALENT) INCREASE THE TENSION ON THE STOCK TORSION BAR ADJUSTING ARM. (FOLLOW THE TOOL MANUFACTURES INSTRUCTIONS).
- D. REMOVE THE ADJUSTING BOLT AND RETAINING PLATE.
- E. REMOVE THE TORSION BAR UN-LOADER TOOL.
- F. SLIDE THE TORSION BAR FORWARD.

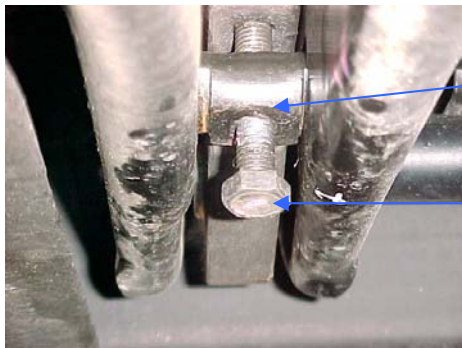
NOTE: YOU MAY HAVE TO TAP ON THE END OF THE TORSION BAR TO GET IT TO POP LOOSE FROM THE FACTORY KEY AND LOWER CONTROL ARM, AN AIR CHISEL WITH A PUNCH BIT WORKS WELL.

- G. REMOVE THE STOCK TORSION BAR KEY.
- H. REPEAT TO OTHER SIDE OF VEHICLE.



TORSION BAR KEY

TORSION BAR LOADER /  
UN-LOADER



TORSION BAR ADJUSTER BOLT  
RETAINING PLATE.

TORSION BAR ADJUSTER BOLT HEAD.

- 5. NEW RE-INDEXED TORSION BAR KEY INSTALLATION PROCEDURE.
  - A. INSTALL THE NEW TORSION BAR KEY UP INTO THE CROSSMEMBER WITH THE BOTTOM OF NEW TORSION BAR ADJUSTER JUST HANGING OUT FROM THE BOTTOM OF THE CROSSMEMBER.
  - B. SLIDE THE TORSION BAR BACK INTO THE NEW TORSION BAR KEY.
  - C. USING THE TORSION BAR LOADER / UN-LOADER TOOL INCREASE THE TENSION ON THE NEW TORSION BAR KEY (FOLLOW THE TOOL MANUFACTURES INSTRUCTIONS).

D. INSTALL THE STOCK RETAINER PLATE THROUGH THE CROSSMEMBER WITH THE **NOTCHES** IN THE RETAINER POINTING **DOWN**.

E. INSTALL THE STOCK ADJUSTING BOLT UP INTO THE RETAINING PLATE AND TURN THE TORSION BAR ADJUSTING BOLT IN UNTIL THERE IS ABOUT 3/16" MORE THREADS SHOWING THAT WAS DOCUMENTED IN THE STOCK MEASUREMENTS ON STEP 4 B. THIS WILL BE YOUR STARTING POINT FOR ADJUSTMENT.

(EXAMPLE THE STOCK TORSION BAR ADJUSTING BOLT ON THE LEFT SIDE WAS ADJUSTED AT 1.0" FROM THE BOTTOM OF THE ADJUSTING PLATE DOWN TO THE OUTSIDE OF THE TORSION BAR ADJUSTING BOLT HEAD AND WITH THE NEW TORSION BAR KEY THAT YOU INSTALLED YOU WILL HAVE 1 3/16" FROM THE BOTTOM OF THE ADJUSTING PLATE DOWN TO THE OUTSIDE OF THE TORSION BAR ADJUSTING BOLT HEAD.

6. REPEAT TORSION BAR KEY INSTALLATION PROCEDURE TO THE OTHER SIDE OF VEHICLE.

**NOTE: THE VEHICLE HEIGHT WILL NEED TO BE ADJUSTED WITH THE TIRES AND WHEELS THAT WERE ON THE VEHICLE WHEN MEASURED BEFORE KIT INSTALLATION.**

**NOTE: IF THE STOCK TORSION BAR ADJUSTING BOLTS WERE ADJUSTED FROM THE FACTORY SETTING YOUR ADJUSTMENT MAY VARY.**

7. CHECK CLEARANCE OF ALL FRONT COMPONENTS WHILE SWEEPING THE STEERING COMPLETE LEFT TO RIGHT LOCK.

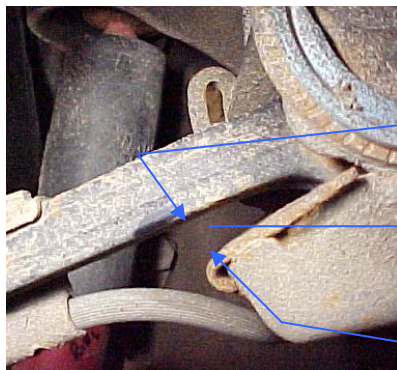
8. RECHECK THE TORQUE ON ALL NUTS AND BOLTS AFFECTED BY THIS PROCEDURE.

9. MAKE A SMALL TEST DRIVE TO GET THE VEHICLE SETTLED INTO POSITION.

10. THE VEHICLE HEIGHT SHOULD NOT BE CHANGED MORE THAN 2.0 FROM THE FACTORY SETTING. OVER ADJUSTING THE TORSION BAR KEY ADJUSTING BOLTS WILL AFFECT RIDE QUALITY AND MAY CAUSE DAMAGE TO THE VEHICLES FRONT CV HALF SHAFTS, THEREFORE IT IS NOT RECOMMENDED.

11. THE FRONT HEIGHT CAN BE ADJUSTED BY TURNING THE FACTORY TORSION BAR ADJUSTING BOLTS (IN TO LIFT OUT TO LOWER) TO GET THE VEHICLE TO THE DESIRED HEIGHT AND LEVEL SIDE TO SIDE.

A. CLEARANCE BETWEEN THE BOTTOM OF THE UPPER CONTROL ARM AND THE TOP OF THE FRAME DROOP STOP AT RIDE HEIGHT SHOULD BE NO LESS THAN 5/8".



BOTTOM OF THE UPPER CONTROL ARM

MINIMUM CLEARANCE OF 5/8" SHOWN BETWEEN THE BOTTOM OF THE UPPER CONTROL ARM AND THE TOP OF THE FRAME DROOP STOP AT RIDE HEIGHT.

FRAME DROOP STOP

**NOTE: MAKING A HEIGHT ADJUSTMENT OF 1/8" AT THE TORSION BAR ADJUSTING BOLT HEAD WILL MAKE ABOUT 1/2" OF CHANGE AT THE WHEEL.**

**NOTE: IF YOU ARE INSTALLING THE HD KEYS TO COMPENSATE FOR THE ADDED WEIGHT OF A WINCH OR AFTERMARKET ACCESSORIES MAKE SURE TO HAVE THE ADDED ACCESSORIES ON THE VEHICLE WHILE MAKING THE FINAL ADJUSTMENTS TO THE TORSION BAR ADJUSTING BOLTS.**

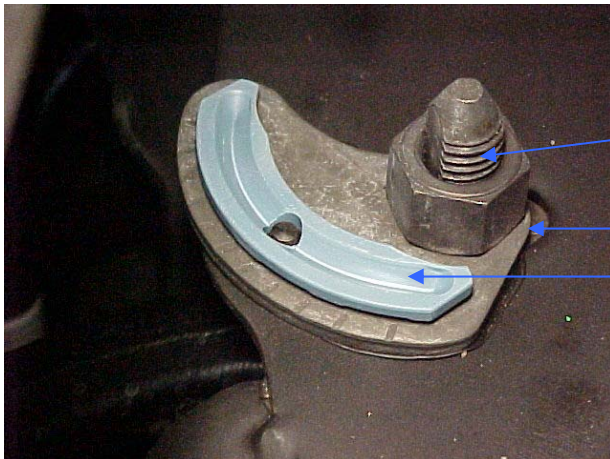
12. GO BACK AND CHECK THAT ALL INSTALLATION STEPS HAVE BEEN COMPLETED. CHECK THE TORQUE OF ALL NUTS AND BOLTS AFFECTED BY THIS PROCEDURE. RECHECK ALL NUTS AND BOLTS FOR TIGHTNESS AFTER THE FIRST 300 MILES AND AT EVERY REGULAR SERVICE INSPECTION.

13. ROAD TEST VEHICLE.

**NOTE: IF ANY TORSION BAR ADJUSTMENTS ARE MADE, THE VEHICLE MUST BE TEST DRIVEN TO GET THE SUSPENSION HEIGHT SETTLED IN BEFORE RE-MEASURING.**

**NOTE: MAKE ALL TORSION BAR ADJUSTMENTS BEFORE HAVING THE VEHICLE FRONT END ALIGNMENT DONE.**

14. THE VEHICLE NEEDS TO HAVE A FRONT END ALIGNMENT PERFORMED IMMEDIATELY AFTER THE INSTALLATION OF THIS KIT.



FACTORY UPPER CONTROL ARM TO FRAME ALIGNMENT ADJUSTING BOLT SHOWN FROM A 99-06 K-15.

FACTORY ADJUSTING SLOT

FACTORY PLASTIC CAM BOLT INSERT THAT MUST BE REMOVED DURING ALIGNMENT.

**NOTE: YOUR HEADLIGHTS WILL NEED TO BE ADJUSTED TO THE PROPER SETTING AFTER THIS INSTALLATION IS COMPLETE.**