

GROUND FORCE

07^ TOYOTA TUNDRA FRONT 2.0" LEVELING KIT INSTALLATION INSTRUCTIONS

READ INSTRUCTIONS/WARNINGS 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.

ALWAYS USE PROPERLY RATED SAFETY STANDS WHENEVER A PROCEDURE REQUIRES
YOU TO BE UNDER A VEHICLE. KNOW AND FOLLOW ALL SAFE WORK PRACTICES TO
AVOID SERIOUS INJURY OR DEATH.

NOTE: WE WANT TO THANK YOU FOR PURCHASING A *GROUND FORCE* PREMIUM LEVELING KIT.
THIS KIT IS MANUFACTURED FROM HIGH QUALITY MADE IN THE USA MATERIALS. THE HIGH
STRENGTH URETHANE THAT WE USE FOR OUR SPACERS IS HEAT RESISTANCE, IMPACT
RESISTANCE AND ALSO HAS A EXCELLENT RESISTANCE TO OIL, SOLVENTS AND MANY OTHER
CHEMICALS. WE ALSO USE HIGH STRENGTH 4140 MATERIAL FOR OUR STRUT EXTENDERS THAT
HAS BEEN HEAT TREATED, BLACK ZINC COATED AND AFTER BAKED TO RELIEVE ANY HYDROGEN
EMBRITTLMENT. THIS KIT HAS A LIMITED LIFETIME WARRANTY.

CHECK TO SEE THAT ALL PARTS LISTED ARE INCLUDED.

2- STRUT SPACERS 1- INSTRUCTION SHEET
8- STRUT EXTENDERS 1- PARTS PACK
1- GROUND FORCE WARNING DECAL

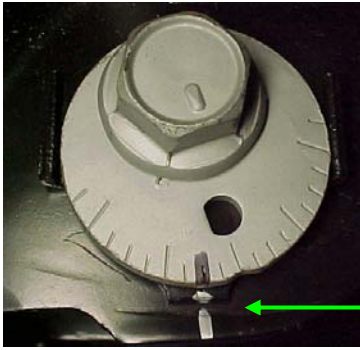
FRONT STRUT SPACER INSTALLATION PROCEDURE.

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

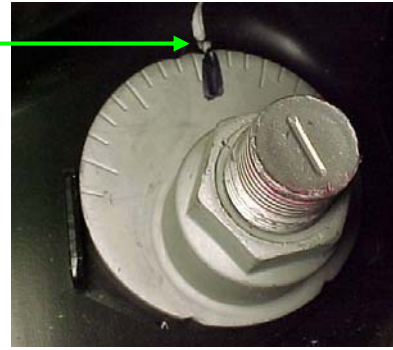
LF _____ RF _____ LR _____ RR _____

1. BEFORE GETTING UNDER VEHICLE, JACK THE FRONT OF VEHICLE UP AND PLACE STANDS UNDER THE FRAME RAILS. LOWER THE VEHICLE ONTO JACK STANDS AND MAKE SURE STANDS ARE SECURELY HOLDING THE VEHICLE.
2. REMOVE TIRE AND WHEEL ASSEMBLY.

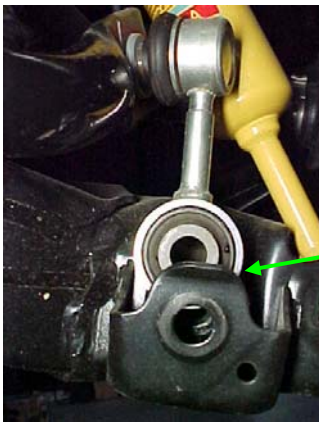
3. MARK ALL FOUR LOWER CONTROL ARM FACTORY ALIGNMENT CAM BOLT LOCATIONS TO THE FRAME AND LOOSEN THE CAM BOLT ALIGNMENT NUTS SLIGHTLY SO THE LCA WILL SWING DOWN FAR ENOUGH TO BE ABLE TO INSTALL THIS KIT.



**FACTORY ALIGNMENT
CAM BOLT TO FRAME
INDEX MARKS.**

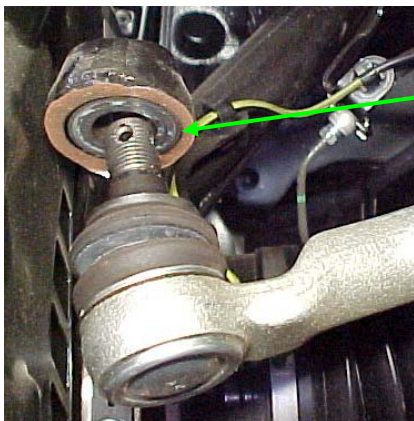


4. SUPPORT THE LOWER CONTROL ARM AND REMOVE THE SWAY BAR CONNECTING LINK HARDWARE FROM THE LOWER CONTROL ARM ON BOTH SIDES, SAVE HARDWARE.



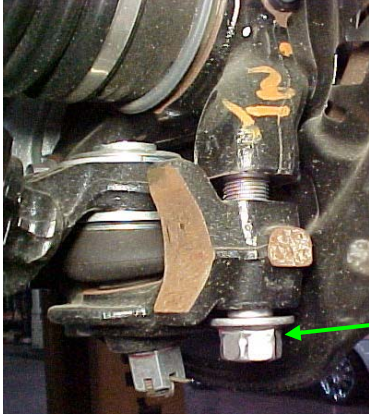
**SWAY BAR CONNECTING
LINK TO LOWER CONTROL
ARM**

5. REMOVE THE FACTORY TIE ROD COTTER PIN, LOOSEN THE TIE ROD NUT, TAP ON THE SPINDLE WITH A Mallet TO POP THE TIE ROD LOOSE FROM THE SPINDLE. REMOVE THE OUTER TIE ROD FROM THE SPINDLE, SAVE NUT.



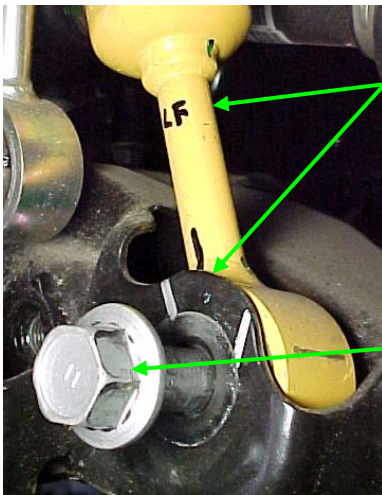
**REMOVE THE TIE ROD
COTTER PIN, TIE ROD NUT
AND REMOVE TIE ROD FROM
THE SPINDLE.**

6. LOCATE AND REMOVE THE TWO BOLTS HOLDING THE LOWER BALL JOINT TO THE BOTTOM OF THE STEERING KNUCKLE AND LOWER THE LOWER CONTROL ARM SLIGHTLY, SAVE THE HARDWARE, REPEAT TO OTHER SIDE OF VEHICLE.



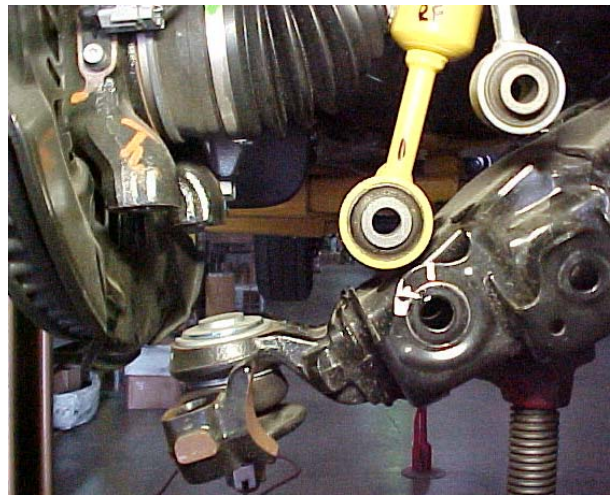
LOWER BALL JOINT TO STEERING KNUCKLE HARDWARE LOCATION

7. MARK THE STRUTS LEFT OR RIGHT AND ALSO PUT INDEX MARKS ON THE STRUTS SO YOU WILL BE ABLE TO INSTALL THEM BACK IN THE CORRECT LOCATION. SUPPORT THE LOWER CONTROL ARM AND REMOVE THE STRUT TO LOWER CONTROL ARM HARDWARE ON BOTH SIDES AND SAVE.



STRUT INDEX MARKS

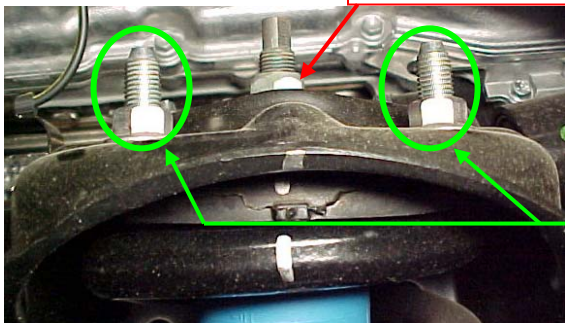
LOWER STRUT HARDWARE



WARNING: DO NOT LOOSEN THE CENTER STRUT NUT TO UPPER STRUT MOUNT AS THIS NUT HOLDS THE COIL SPRING IN PLACE ON THE STRUT AND IS UNDER A GREAT AMOUNT OF PRESSURE.

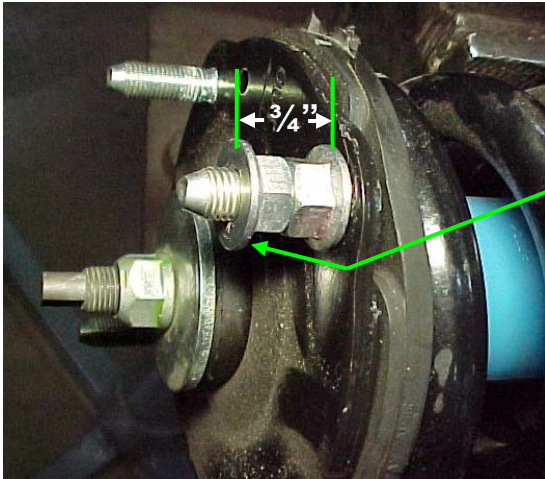
8. LOOSEN THE UPPER FOUR OUTER NUTS ATTACHING THE UPPER STRUT ASSEMBLY TO THE VEHICLE FRAME.

DO NOT LOOSEN THE CENTER STRUT NUT

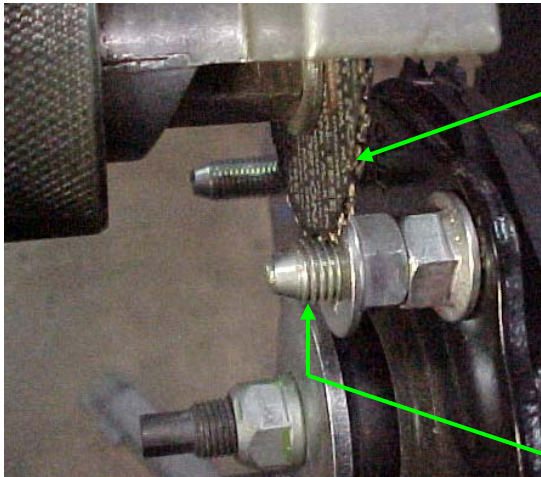


LOOSEN THE FOUR OUTER UPPER STRUT MOUNTING NUTS.

9. REMOVE THE STRUT ASSEMBLY FROM THE VEHICLE AND REPEAT PROCEDURE TO OTHER SIDE OF VEHICLE.
10. UPPER STRUT STUD TRIMMING PROCEDURE.
 - A. INSTALL THE FACTORY NUTS AS SHOWN IN THE PHOTO BELOW ON ONE OF THE FACTORY UPPER STRUT STUDS.
 - B. MEASURE AND ADJUST THE NUTS $\frac{3}{4}$ " ABOVE THE TOP OF THE STRUT MOUNT.
 - C. TRIM THE EXCESS STUD OFF USING A FINE TOOTH SAW OR CUT OFF WHEEL.
 - D. REMOVE THE FACTORY NUTS AND REPEAT THIS PROCEDURE TO THE REMAINING SEVEN UPPER STRUT STUDS. DISCARD THE FACTORY NUTS AFTER ALL EIGHT STUDS HAVE BEEN TRIMMED, AS NEW LOCK NUTS WILL BE INSTALLED LATER.



FACTORY NUTS INSTALLED $\frac{3}{4}$ " ABOVE THE TOP OF THE STRUT MOUNT WITH TOP NUT INSTALLED "HEX SIDE DOWN" SO IT CAN BE USED AS A GUIDE TO TRIM THE STUD OFF.



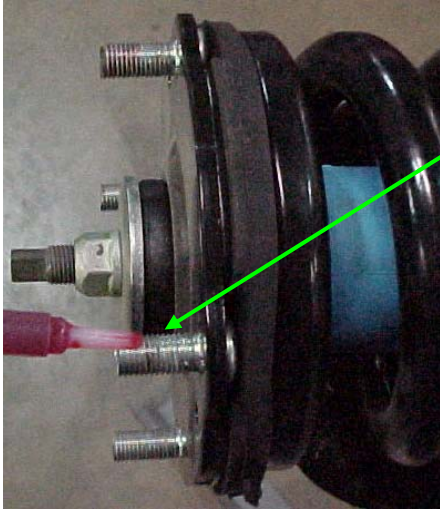
CUT OFF TOOL

NOTE: THE STUD TRIMMING PROCEDURE MUST BE COMPLETED SO THAT THE NEW STRUT EXTENDERS WILL SEAT FLAT AGAINST THE TOP OF THE STRUT MOUNT WHEN INSTALLED AND TIGHTENED.

THE EXCESS STUD BEING TRIMMED OFF.

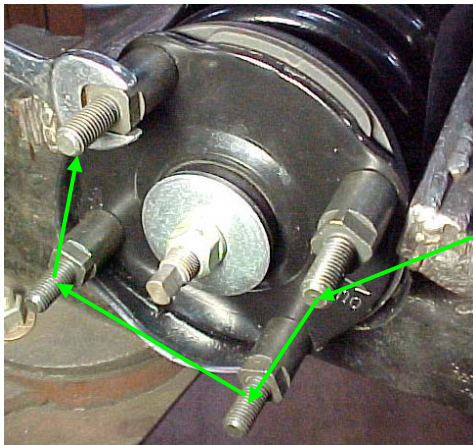
11. STRUT EXTENDER INSTALLATION PROCEDURE.

- A. APPLY A FEW DROPS OF THE SUPPLIED THREAD LOCKER TO EACH OF THE FACTORY STRUT STUDS.



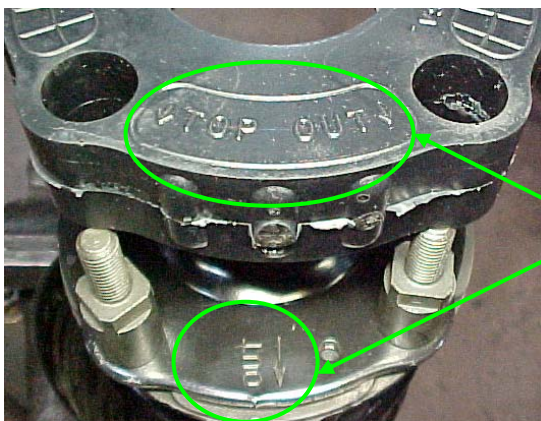
**SUPPLIED HIGH STRENGTH
THREAD LOCKER BEING
APPLIED TO THE FACTORY
STRUT STUDS TO LOCK THE
NEW STRUT EXTENDERS IN
PLACE**

- B. INSTALL THE FOUR SUPPLIED STRUT EXTENDERS PER STRUT AND TIGHTEN USING A 5/8" WRENCH.



**FOUR STRUT
EXTENDERS BEING
INSTALLED OVER THE
FACTORY STRUT
UPPER MOUNTING
STUDS.**

12. INSTALL THE SUPPLIED URETHANE STRUT SPACER (**WITH THE SIDE MARKED TOP OUT TOWARD THE OUTSIDE OF THE VEHICLE**) OVER THE STRUT EXTENDERS ON TOP OF THE FACTORY STRUT MOUNT. MAKE SURE "OUT" IS LINED UP ON THE STRUT AND SPACER AS THE SPACER WILL ONLY FIT ON THE STRUT ONE WAY.

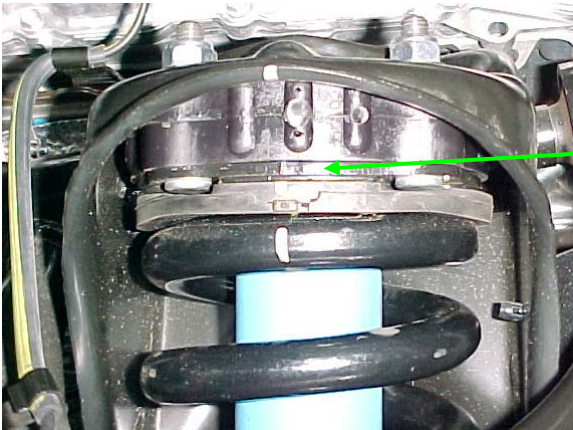


**THE SIDE MARKED TOP
OUT MUST BE
INSTALLED UP AND
TOWARD THE OUTSIDE
OF THE VEHICLE ON
BOTH THE STRUT AND
NEW SPACER**



**URETHANE SPACER
INSTALLED OVER THE STRUT
EXTENDERS.**

13. STRUT AND NEW STRUT SPACER ASSEMBLY INSTALLATION.



**STRUT WITH NEW LEVELING
SPACER ASSEMBLY MOUNTED TO
THE TOP.**

- A. INSTALL THE STRUT ASSEMBLY UP INTO THE STOCK LOCATION USING THE INDEX MARKS MADE FROM STEP 7.
- B. ALIGN AND INSTALL THE FOUR UPPER STRUT STUDS UP INTO THE FACTORY FOUR HOLES IN THE FRAME UPPER MOUNT.
- C. INSTALL THE SUPPLIED FOUR UPPER STRUT M10 WASHERS AND M10 **LOCKNUTS**, JUST SNUG.
- D. USING THE FACTORY HARDWARE (**HEAD** OF BOLT TOWARD THE FRONT) ALIGN AND INSTALL THE LOWER STRUT MOUNT INTO THE LOWER CONTROL ARM FACTORY STRUT MOUNT. (JUST SNUG THE HARDWARE @ THIS TIME).
- E. JACK THE LOWER CONTROL ARM UP TO RIDE HEIGHT AND SECURE THE VEHICLE WITH JACK STANDS. APPLY A FEW DROPS OF SUPPLIED LOCK TIGHT ONTO THE FACTORY LOWER BALL JOINT BOLTS. LINE UP AND REINSTALL THE FACTORY TWO LOWER BALL JOINT BOLTS UP INTO THE STEERING KNUCKLE FACTORY LOCATION AND TORQUE TO SPEC.
- F. TORQUE THE UPPER THREE STRUT NUTS TO **35 FT. LBS.** (DO NOT USE AIR TOOLS TO **TIGHTEN THE UPPER STRUT NUTS**).
- G. TORQUE THE LOWER STRUT FACTORY HARDWARE TO SPEC.
- H. REPEAT STRUT ASSEMBLY INSTALLATION PROCEDURE TO THE OTHER SIDE OF VEHICLE.

14. REINSTALL THE SWAY BAR CONNECTING LINKS INTO FACTORY LOCATION. LINE UP AND INSTALL THE FACTORY CONNECTING LINK HARDWARE THEN TORQUE BOTH SIDES TO SPEC.
15. REINSTALL THE OUTER TIE RODS TO THE SPINDLES. INSTALL THE FACTORY TIE ROD NUTS AND TORQUE TO SPEC. INSTALL THE SUPPLIED COTTER PINS.
16. CHECK AND MAKE SURE THE BRAKE LINES AND ANTI LOCK BRAKE WIRES ARE IN THE FACTORY LOCATIONS. CHECK THE ANTILOCK BRAKE WIRE AND BRAKE LINE FOR CLEARANCE AND ADJUST IF NECESSARY.
17. JACK THE LOWER CONTROL ARM UP TO RIDE HEIGHT AND MAKE SURE THE SAFETY STANDS ARE SECURE UNDER THE VEHICLE. LINE UP THE CAM BOLT INDEX MARKS MADE IN STEP 3 AND TORQUE THE ALIGNMENT CAM BOLT/NUTS TO SPEC. REPEAT TO OTHER SIDE OF VEHICLE.
18. MAKE SURE ALL FASTENERS EFFECTED BY THIS PROCEDURE ARE TORQUED TO FACTORY SPEC.
19. REINSTALL TIRE AND WHEEL ASSEMBLY.
20. CHECK AND MAKE SURE THAT ALL INSTALLATION STEPS HAVE BEEN COMPLETED. CHECK ALL NUTS AND BOLTS FOR TORQUE AFTER THE FIRST 300 MILES AND AT EVERY ROUTINE SERVICE INSPECTION.
21. JACK THE VEHICLE UP AND REMOVE STANDS, THEN LET THE VEHICLE DOWN.
22. MAKE SURE THERE ARE NO CLEARANCE PROBLEMS. ROTATE THE STEERING LOCK TO LOCK UNDER FULL WEIGHT OF THE VEHICLE AND FULL SUSPENSION TRAVEL. MAKE SURE TO DOUBLE CHECK THE BRAKE LINE /ANTI LOCK WIRE TO TIRE/WHEEL CLEARANCE @ THIS TIME.
23. GO BACK AND CHECK THAT ALL INSTALLATION STEPS HAVE BEEN COMPLETED.
24. ROAD TEST VEHICLE.
25. **MAKE SURE TO INSTALL THE SUPPLIED WARNING DECAL FOLLOWING THE INSTRUCTIONS INCLUDED WITH THE WARNING INFORMATION SHEET.**
26. MAKE SURE TO KEEP THESE INSTRUCTIONS WITH THE VEHICLE.
27. THE VEHICLE NEEDS TO HAVE A FRONT END ALIGNMENT PERFORMED IMMEDIATELY AFTER THE INSTALLATION OF THIS KIT IS COMPLETE. THE FACTORY CAM BOLTS WILL NEED TO BE ADJUSTED TO THE FACTORY SPECIFICATIONS.
28. READJUST THE HEADLIGHTS TO THE PROPER SETTINGS.

WARNING: AGAIN CHECK TIRE AND WHEEL CLEARANCE BEFORE MOVING VEHICLE. ALSO CHECK CLEARANCE IF INSTALLING NEW TIRES AND/OR WHEELS.

NOTE: INSTALLATION OF WHEELS WITH BACKSPACING OTHER THAN STOCK MAY CHANGE THE VEHICLE HEIGHT AND ALSO EFFECT THE FRONT END ALIGNMENT.

WARNING: INSTALLER/DEALER IT IS YOUR RESPONSIBILITY TO INSTALL THE SUPPLIED WARNING LABEL WHERE VISIBLE TO ALL OCCUPANTS AND FORWARD THE SUPPLIED WARNING SHEET & AND INSTALLATION INSTRUCTIONS TO THE END USER. FOR MORE INFORMATION PLEASE REFER TO PART NO 15237 WARNING SHEET THAT IS INCLUDED WITH THESE INSTRUCTIONS.

IF YOU WOULD HAVE ANY QUESTIONS CONCERNING THIS KIT PLEASE CALL 724-430-2068 AND ASK FOR CUSTOMER SERVICE.

GROUND FORCE

Limited Lifetime Warranty

North America Only

GROUND FORCE WARRANTY (LIMITED) AND REMEDY LIMITATIONS

TO: WHOLESALERS, JOBBERS, RETAILERS, INSTALLERS, VEHICLE OWNERS.

Ground Force warrants to vehicle owners that its products are from material defects in workmanship and materials as long as the installing vehicle owner owns the vehicle. Ground Force makes no other warranty. Ground Force makes no application or use recommendations for its products and is not responsible for such decisions. Excluded from the warranty are the finish, poly boots, and steering Stabilizers* (90 days from purchase, only). Ground Force gas shocks Have a limited warranty: One year from date of purchase.

Ground Force retains the exclusive right to determine whether a Defect is material and replacement appropriate.

MATERIAL TO PARTICIPATION IN THIS WARRANTY PROGRAM IS THE DISCLAIMER OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

THE SOLE REMEDY FOR ANY CLAIM OF PRODUCT DEFECT EITHER IN BREACH OF WARRANTY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE IS LIMITED TO

REPAIR OR REPLACEMENT OF THE PRODUCT AT GROUND FORCE'S DISCRETION.

EACH SELLER, INSTALLER AND USER OF THE PRODUCT AGREES THAT THIS LIMITATION OF REMEDIES IS A CONDITION OF THE SALE OF THE GROUND FORCE PRODUCT. EACH DISTRIBUTOR AND/OR SELLER OF GROUND FORCE PRODUCTS IS REQUIRED TO FORWARD WARRANTY/REMEDY INFORMATION TO EACH PURCHASER.

SELLERS, INSTALLERS AND USERS OF THIS PRODUCT(S) UNDERSTAND AND AGREE THAT REPAIR/REPLACEMENT REMEDY DOES NOT FAIL OF ITS ESSENTIAL PURPOSE. HOWEVER, IF DETERMINED TO FAIL OF ITS ESSENTIAL PURPOSE, SELLERS, INSTALLERS AND USERS AGREE, IN THE ALTERNATIVE, TO ACCEPT A REFUND OF THE PURCHASE PRICE AS A SOLE REMEDY.

Ground Force is not liable to sellers, installers or users of its products for incidental or consequential damages occasioned by any defect, malfunction, sale or use of any product, whether in breach of warranty, contract, strict liability or otherwise.

THIS DOES NOT APPLY TO PRODUCT WHICH HAVE BEEN ABUSED, MISUSED, IMPROPERLY INSTALLED OR TO VEHICLE OWNERS SUBSEQUENT TO INSTALLING PURCHASE.

VALIDATION AND CLAIM PROCEDURE

Answer you questions about Ground Force products by calling our hot line 724-430-2068. Take advantage of our warranty/remedy program, complete and return the warranty registration card attached, along with a copy of your receipt, within thirty days (30) of purchase.

To make a warranty claim, notify Ground Force at:

Attn: Ground Force Warranty Claim Department
PO Box 149
Mt. Braddock, PA 15465

Providing your name, address, vehicle make and model, product sold and installing dealer, if any. For your convenience, we suggest you keep this warranty/remedy certificate with you owner's manual!

To register Part, tear off card below and mail to:

Ground Force Registration Dept
PO Box 149
Mt Braddock, PA 15465

GROUND FORCE WARRANTY/REMEDY REGISTRATION

- Yes!! I want to take advantage of Ground Force's warranty/remedy program. I have read the warranty/remedy certificate and certify that the enclosed receipt evidences my purchase of a Ground Force product

Name: _____ Address: _____
Products: _____

Part # _____ Dealer/ Location _____ / _____ Installer _____
Date/Purchase _____ / _____ Make/Model: _____ / _____
VIN # _____ Year of Vehicle: _____ Vehicle GVW: _____

Signature: _____

Part Number 15079A-REV.B



WARNING

MODIFYING AN ORIGINAL EQUIPPED VEHICLE WILL RESULT IN A VEHICLE HANDLING DIFFERENTLY. ALL TYPES OF SUSPENSION MODIFICATIONS WILL AFFECT REACTION, RIDE, HANDLING AND WEAR AND TEAR RATE OF A VEHICLE AND ITS COMPONENTS. ABRUPT MANEUVERS, SHARP AND SUDDEN TURNS AND WEATHER CONDITIONS WILL INCREASE THE VEHICLE'S SUSCEPTIBILITY FOR LOSS OF CONTROL. DEATH AND SERIOUS INJURY COULD BE THE RESULT IF YOU FAIL TO OPERATE A MODIFIED VEHICLE SAFELY. KNOW AND FOLLOW THE LAWS OF THE STATES.

**GROUND FORCE Mailing
Address:**
P.O. Box 149
Mt. Braddock, PA 15465

**GROUND FORCE
Shipping Address:**
714 Braddock View Drive
Mt. Braddock, PA. 15465

(724) 430-2068
(724) 430-2075 Fax

ENCLOSED WITH THIS PRODUCT IS A WARNING LABEL WHICH IS TO BE AFFIXED
ON THE VISOR OF THE VEHICLE WHERE VISIBLE TO ALL OCCUPANTS.