



TUFF COUNTRY

EZ - Ride Suspension

Installation manual 3" front / 2" rear suspension system 07-14 FJ / 03-09 4Runner Part # 52000

sj110607rev.03

Part #: 52000
2007-2014 Toyota FJ / 2003-2009 4Runner
3" front / 2" rear suspension system

Parts list:

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
52907-01	Pre load spacer	2
52907-02	Strut spacer	2
MO3531BK-01	Rear coil spring spacers	2
52000NB	Hardware bag	1
52000INST	Instruction sheet	1
MIRRORHANGER	Rear view mirror hanger	1
WARNINGDECAL	Warning decal	1

Special Note: A strut compressor is going to be needed to perform this installation. If you do not have a strut compressor you may rent one from your local Auto Parts store.

Congratulations on your selection to purchase a Tuff Country EZ-Ride Suspension System. We at Tuff Country EZ-Ride Suspension are proud to offer a high quality product at the industries most competitive pricing. Thank you for your confidence in us and our product.

For a list of all parts, please refer to the Parts Description Page, at the end of the Installation Manual.

Make sure to use thread locker or loctite on all new and stock hardware associated with the installation of this suspension system.

The Tuff Country EZ-Ride Suspension product safety label that is included in your kit box must be installed inside the cab in plain view of all occupants.

After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspension maintenance.

Important customer information

Tuff Country EZ-Ride Suspension highly recommends that a qualified or a certified mechanic performs this installation.

If you desire to return your vehicle to stock, it is the customers responsibility to save all stock hardware.

It is the responsibility of the customer or the mechanic to wear safety glasses at all times when performing this installation.

It is the customers/installers responsibility to read and understand all steps before installation begins. OEM manual should be used as a reference guide.

This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road performance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. **DRIVE SAFELY!** Avoid abrupt maneuvers: such as sudden sharp turns which could cause a roll over, resulting in serious injury or death.

It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use.

Torque settings:

5/16"	15—18 ft lbs.
3/8"	28—32 ft lbs.
7/16"	30—35 ft lbs.
1/2"	65—85 ft lbs.
9/16"	85—120 ft lbs.
5/8"	95—130 ft lbs.
3/4"	100—140 ft lbs.

Limited lifetime warranty

Notice to all Tuff Country EZ-Ride Suspension customers: It is your responsibility to keep your original sales receipt! If failure should occur on any Tuff Country EZ-Ride Suspension component, your original sales receipt must accompany the warranted unit to receive warranty. Warranty will be void if the customer can not provide the original sales receipt. Do not install a body lift in conjunction with a suspension system. If a body lift is used in conjunction with any Tuff Country EZ-Ride Suspension product, your Tuff Country EZ-Ride Suspension WARRANTY WILL BE VOID. Tuff Country Inc. ("Tuff Country") suspension products are warranted to be free from defects in material and workmanship for life if purchased, installed and maintained on a non-commercial vehicle; otherwise, for a period of twelve (12) months, from the date of purchase and installation on a commercial vehicle, or twelve thousand (12,000) miles (which ever occurs first). Tuff Country does not warrant or make any representations concerning Tuff Country Products when not installed and used strictly in accordance with the manufacturer's instructions for such installation and operation and accordance with good installation and maintenance practices of the automotive industry. This warranty does not apply to the cosmetic finish of Tuff Country products nor to Tuff Country products which have been altered, improperly installed, maintained, used or repaired, or damaged by accident, negligence, misuse or racing. ("Racing is used in its broadest sense, and, for example, without regards to formalities in relation to prizes, competition, etc.) This warranty is void if the product is removed from the original vehicle and re-installed on that or any other vehicle. This warranty is exclusive and is in lieu of any implied warranty of merchantability, fitness for a particular purpose or other warranty of quality, whether express or implied, except the warranty of title. All implied warranties are limited to the duration of this warranty. The remedies set forth in this warranty are exclusive. This warranty excludes all labor charges or other incidental of consequential damages. Any part or product returned for warranty claim must be returned through the dealer of the distributor from whom it was purchased. Tuff Country reserves the right to examine all parts returned to it for warranty claim to determine whether or not any such part has failed because of defect in material or workmanship. The obligation of Tuff Country under this warranty shall be limited to repairing, replacing or crediting, at its option, any part or product found to be so defective. Regardless of whether any part is repaired, replaced or credited under this warranty, shipping and/or transportation charges on the return of such product must be prepaid by the customer under this warranty.

Important information that needs to be read before installation begins:

Tuff Country recommends a 32x11.50 tire package. If a larger size tire is installed on your vehicle in conjunction with part # 52000; Tuff Country assumes no liability and the warranty will be VOID.

Before installation begins, Tuff Country EZ-Ride Suspension highly recommends that the installer performs a test drive on the vehicle. During the test drive, check to see if there are any uncommon sounds or vibrations. If uncommon sounds or vibrations occur on the test drive, uncommon sounds or vibrations will be enhanced once the suspension system has been installed. Tuff Country EZ-Ride Suspension highly recommends notifying the customer prior to installation to inform the customer of these issues if they exist.

Hardware bag 52000NB includes:

<u>Description</u>	<u>Quantity</u>
126B (1/2" x 6" bolt)	2
12UN (1/2" unitorque nut)	2
BU3000 (hardware bag)	1
S10051 (differential spacer sleeves)	2
S10025 (stock skid plate spacers)	2
14WA (1/4" USS flat washers)	2
M8040B (8 mm x 40 mm bolt)	2
S10122 (rear shock sleeve)	2
SB34 (rear lower shock bushing)	2
PB8297 (rear upper shock bushing)	4
S10107 (rear upper shock washer)	4

Please follow instructions carefully:

Before installation begins, measure from the center of the hub, to the bottom of the fender well, and record measurements below.

Pre-Installation measurements:

Driver side front: _____

Passenger side front: _____

Driver side rear: _____

Passenger side rear: _____

At the end of the installation, take the same measurements and compare to the pre-installation measurements.

Post-Installation measurements:

Driver side front: _____

Passenger side front: _____

Driver side rear: _____

Passenger side rear: _____

Please follow instructions carefully:

Front End Installation:

1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the frame with a pair of jack stands. Place a jack stand on both the driver and passenger side. Next, remove the wheels and tires from both sides.

2. Remove the stock front skid plate and save the stock skid plate and the (2) upper stock skid plate mounting bolts for later re-installation. The (2) stock lower mounting bolts may be discarded.

3. Working on the driver side, remove the stock sway bar end link from the stock knuckle. Save the stock hardware for later re-installation. Repeat procedure on the passenger side.

Photo # 1

4. Working on the driver side, remove the stock cotter pin that connects the stock knuckle to the stock upper control arm. Save the cotter pin for later re-installation. Loosen but do not remove the stock castle nut that secures the stock knuckle to the stock upper control arm. Carefully break the stock taper in the stock upper control arm and the stock knuckle. **Special note: Using a hammer will help make removal easier. Take special care not to damage the stock upper ball joint dust boot during removal.** Once the taper has been broke, remove the stock castle nut and set aside for later re-installation. Repeat procedure on the passenger side.

Photo # 2 / Photo # 3

5. Working on the driver side, place an reference mark on the driver side strut. This is done so that the driver side strut will be put back into the driver side of the vehicle. Working on the driver side, remove the (3) upper stock nuts that connect the stock strut into the stock location. Save the stock nuts for later re-installation. Repeat procedure on the passenger side. **Special note: At this time, do not remove the center nut holding the stock strut together.**

Photo # 4 / Photo # 5

6. Working on the driver side, remove the stock lower bolt that connects the stock strut to the stock lower mounting location and save the stock hardware for later re-installation. **Special note: During removal of the stock bolt, take special care not to damage the stock CV boot. Also, make a mental note on which way the bolt is removed, it needs to be re-installed the same way that it was removed.** Remove the stock strut assembly from the stock location and set aside for further instructions. Repeat procedure on the passenger side.

Photo # 6

Tuff Country EZ-Ride Suspension recommends a wall mounted strut compressor be used when performing the steps that talk about installing the strut spacer into the strut. If you do not have a wall mounted strut compressor, please have these steps performed by your local Toyota Dealership.

7. Locate the driver side stock strut assembly. Working on the driver side strut, scribe a line down the entire strut from the top of the strut to the bottom. **Special note: If this step is not performed properly re-installing the strut back into the vehicle will be difficult.**

Photo # 7 / Photo # 8

8. Using a wall mounted strut compressor, carefully compress the driver side stock strut until the upper stock bearing plate can be removed. Remove the stock nut and hardware from the top of the stock strut assembly and save the stock hardware for later re-installation.

Photo # 9

9. Working on the driver side stock strut, remove the stock upper strut bearing plate from the stock strut assembly. Remove the stock rubber isolator from the stock upper strut bearing plate and set the stock upper strut bearing plate and isolator aside.

10. Locate (3) new 10 mm x 2 1/4" strut stud bolts from hardware bag 52000NB. Working on the driver side stock upper strut bracket, carefully remove the stock studs located in the stock upper strut bearing plate and discard. **Special note: The use of a hammer will make the removal of the stock studs easier.** Carefully install the new 10 mm x 2 1/4" strut stud bolts into the stock upper strut bearing. Set the modified stock upper strut bearing plate aside.

11. Locate (1) new strut spacer, the driver side stock strut,

the newly modified stock upper strut bearing plate, the stock isolator and the stock upper strut hardware. Carefully compress the stock strut enough so that the new strut spacer can be installed. Install the new strut spacer and isolator into the stock strut and secure the stock upper bearing plate to stock strut assembly using the stock upper strut hardware. Make sure to use thread locker or lock tite. Torque to **65 ft lbs.**

12. Locate (1) new upper strut isolator spacer and the stock upper hardware. Working on the driver side, install the new upper strut isolator spacer on top of the new strut assembly and install into the stock strut upper location. Secure the top of the new strut assembly using the stock hardware. Torque to the stock hardware to **42 ft lbs.** **Special note: If needed, carefully cut off the excess thread off of the 10 mm x 2 1/4" studs.**

Photo # 10

13. Locate the stock lower strut bolt and hardware. Secure the stock strut assembly into the stock lower location using the stock hardware. Make sure to use thread locker or lock tite. Torque to **75 ft lbs.** **Special note: When installing the stock lower bolt, make sure that the bolt is installed the way it was removed. Facing towards the front of the vehicle. Also, take special care not to damage the stock CV boot when re-installing the stock hardware.**

14. Repeat steps 7 - 13 on the passenger side strut assembly.

15. Locate the stock castle nut and cotter pin. Working on the driver side, secure the stock knuckle to the stock upper control arm using the stock hardware. Torque and install the stock cotter pin. **Special note: If the stock cotter pin can not be installed because the hole in the stock castle nut does not line up with the hole in the new ball joint, DO NOT loosen the stock castle nut so that the cotter pin can fit, tighten the stock castle nut some more so that the stock cotter pin can be installed.** Repeat procedure on the passenger side.

16. Locate the stock sway bar hardware. Working on the driver side, secure the stock sway bar to the stock knuckle using the stock hardware and torque to **65 ft lbs.** Repeat procedure on the passenger side.

17. Working on the driver side, carefully remove the stock bolt that connects the stock front differential to the stock front cross member. Save the stock oversize washer. The stock bolt and nut may be discarded. Repeat procedure on the passenger side.

18. Locate (2) new S10051, front differential spacer sleeves, (2) 1/2" x 6" bolts and (2) 1/2" unitorque nuts from hardware bag 52000NB. Also, locate the stock oversize washers. Carefully lower down on both hydraulic floor jacks allowing enough room for the new front differential spacers to be installed. Working on the driver side, install the new front differential spacer between the front differential and the stock front cross member and secure using the new

1/2" x 6" bolt, 1/2" unitorque nut and the stock over size washer. Make sure to use thread locker or lock tite. **Do not tighten at this point.** Repeat procedure on the passenger side. Torque the new 1/2" hardware to **80 ft lbs.** Carefully remove both hydraulic floor jacks front under the front differential.

Photo # 11

19. Locate (2) S10025 stock front skid plate spacer sleeves, (2) 8 MM x 40 MM bolts and (2) 1/4" USS flat washers from hardware bag 52000NB. Also, locate the stock skid plate and the stock skid plate hardware. Re-install the stock skid plate into the stock upper location using the stock hardware. **Do not tighten at this point.** Secure the lower portion of the stock skid plate to the stock location using the new 8 mm x 40 mm bolts, 1/4" USS flat washers and make sure to install the new spacer between the stock skid plate and the stock location. Torque the new 8 mm x 40 mm bolt and stock hardware to **12 ft lbs.**

20. Re-install the tires and wheels and torque to proper torque settings. Carefully lower the vehicle to the ground.

Front end Installation complete!

Rear end installation:

21. To begin installation, block the front tires of the vehicle so that the vehicle is stable and can't roll forward. Safely lift the rear of the vehicle and support the frame with a pair of jack stands. Place the jacks stands on both the driver and the passenger side. Make sure that the parking brake is not set. Next, remove the tires and wheels from both sides.

22. Place a pair of hydraulic floor jacks under the rear axle. Place one on the driver side and one on the passenger side.

23. Working on the driver side, remove the stock shock from the stock upper and lower location. Set the stock lower mounting hardware aside for later re-installation. The stock shock and upper mounting hardware may be discarded. **Special note: New longer rear shocks are needed. Tuff Country recommends using a 26" fully extended hydraulic shock.** Repeat procedure on the passenger side.

24. Carefully lower down on both hydraulic floor jacks at the same time allowing enough room so that the stock rear coil spring can be removed and the new rear coil spring spacers can be installed on top of the stock coil spring.

Photo # 12

25. Locate the new rear coil spring spacers. Working on the driver side, remove the stock coil spring isolator from the stock coil spring and install the new coil spring spacers on top of the stock coil spring then re-install the stock coil spring isolator. Repeat procedure on the passenger side.

Carefully raise up on both hydraulic floor jacks until the new coil spring spacer seats properly into the upper coil spring pocket.

**Photo # 13 / Photo # 14
Photo # 15**

26. Locate (2) S10122 rear shock spacer sleeves from hardware bag 52000NB. Working on the driver side, slide the new spacer sleeve over the lower mounting shock stud. **Special note: this is used as a spacer to move the body of the shock away from the axle tube.** Repeat procedure on the passenger side.

27. Locate the new rear shocks. **Special note: New longer rear shocks are needed once this suspension system has been installed and the new rear shocks need to be ordered as a separate part #. Tuff Country recommends using a 26" fully extended hydraulic shock in the rear of your vehicle.** Locate (4) new S10107 oversize washers, (4) PB8297 front upper shock bushings and (2) SB34 lower eyelet shock bushings from hardware bag 52000NB. Install the new 3/4" hour glass shock bushings into the lower eye-let of your new shocks. **Special note: Make sure to use a lithium or moly base grease prior to inserting the new bushings into the new shocks. This will increase the life of the bushings and will help prevent squeaking.** Install the new shock boots onto the new shocks. **Special note: The new shock boots are not included with this suspension system and the new shock boots need to be ordered as a separate part #.** Install the new oversize washer and upper shock bushing onto the stud of the new shocks. Working on the driver side, install the new shock into the stock upper location, install the new upper shock bushing and new oversize washer and secure the new shock into the stock upper location using the new nut. **Special note: The new upper shock nut is supplied with your new shocks. Do not tighten at this point.** Repeat procedure on the passenger side.

28. Locate the stock rear lower shock hardware. Working on the driver side, install the new shock into the stock lower location using the stock hardware. Torque the lower stock hardware to **42 ft lbs.** and torque the stock upper nut to **18 ft lbs.**

29. Carefully remove the hydraulic floor jacks from under the rear axle.

30. Re-install the tires and wheels and torque to proper torque settings. Carefully lower the vehicle to the ground.

31. Check and double check to make sure that all steps were performed properly.

Congratulations installation complete!

Special note: After the completion of the installation, Tuff Country EZ-Ride Suspension recommends taking the vehicle to an alignment shop and having a proper front end alignment performed.

Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use. Neglect of following these steps could cause brackets to come loose and cause serious damage to the suspension system and to the vehicle.

Tuff Country EZ-Ride Suspension packages (2) sets of instruction sheets with this box kit. (1) is for the installer and (1) is for the customer. The (1) for the customer has some post installation procedure literature and it is the installers responsibility to make sure that the customer receives a copy of the installation manual along with the literature.

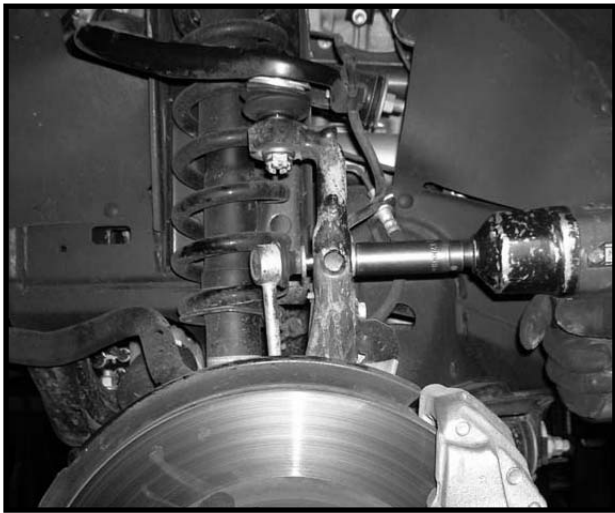


Photo # 1

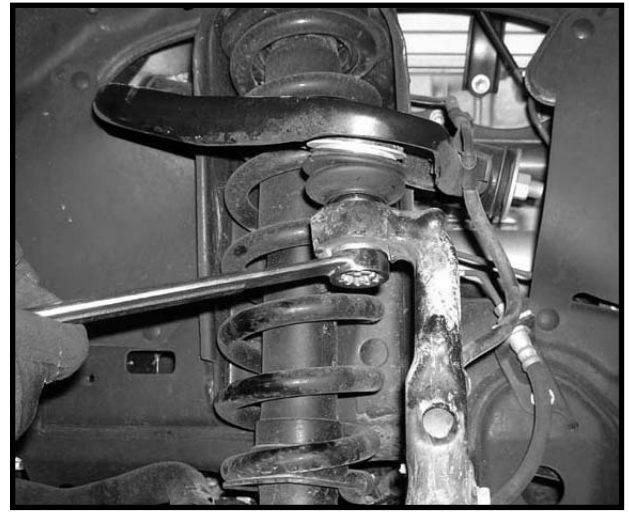


Photo # 2



Photo # 3



Photo # 4

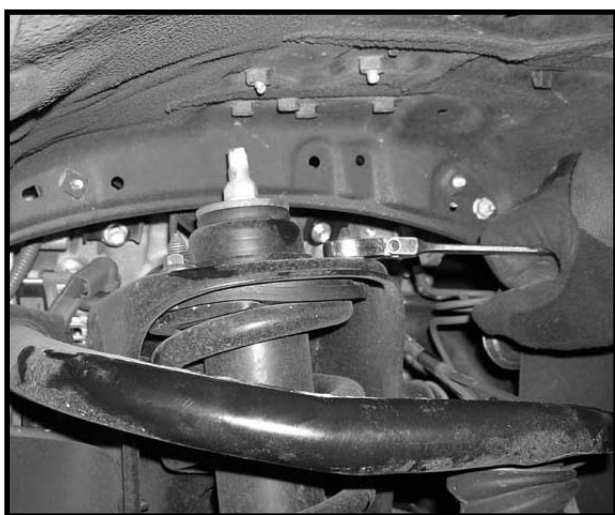


Photo # 5



Photo # 6



Photo # 7

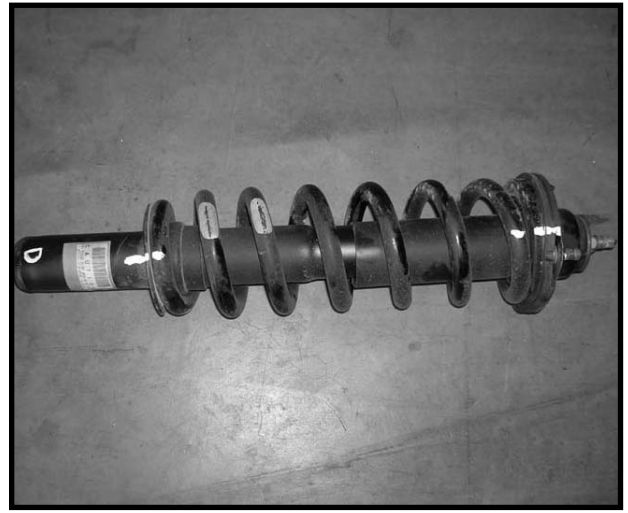


Photo # 8



Photo # 9

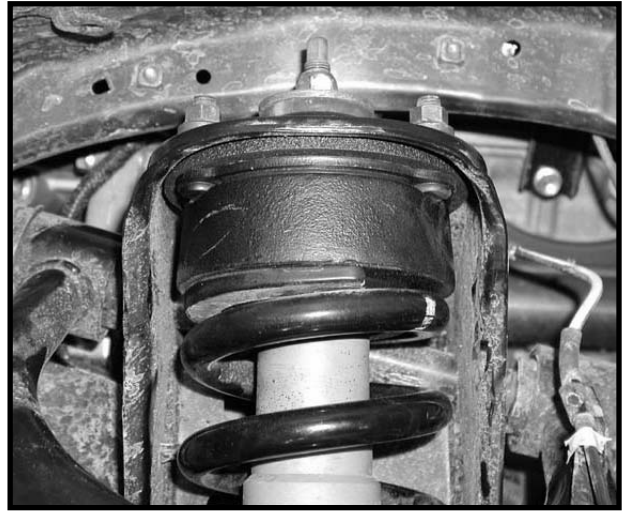


Photo # 10



Photo #11

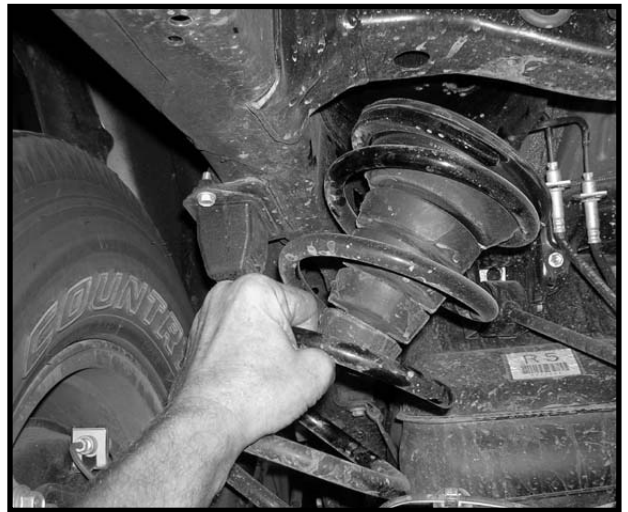


Photo #12



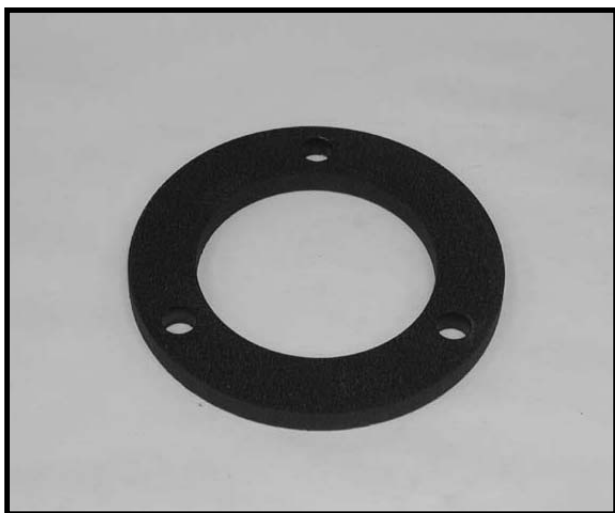
Photo # 13



Photo # 14



Photo # 15



52907-01 / Pre load spacer (qty. 2)



52907-02 / Strut spacer / (qty. 2)