



**Crown Automotive Sales Co., Inc.**  
**RT21023 Shackle Kit**  
**Installation Instructions**

**Kit Contents:**

- 8 - Shackle Plates
- 16 - Bushing Halves (Replaces P/N: 52002552)
- 4 - Large Sleeves
- 8 - Small Sleeves (Replaces P/N: 52002553)
- 8 - ½" x 4.5" Greasable Bolts
- 4 - ½" x 4.5" Non-Greasable Bolts
- 12 - ½" Mechanical Locking Nuts



1. Ensure that all components in kit are accounted for.

**Front Suspension**

2. Park the vehicle on a level surface and place wheel chocks in front of and behind the rear tires. Jack the vehicle by the front axle, supporting the vehicle's frame with jack stands, and droop the front axle enough to release the stress from the spring shackles. Disconnecting the front sway bar from the frame and the shocks from the axle may be necessary to allow the axle to adequately droop.
3. Remove the front shackle bolts at the frame and the leaf spring on both sides. Remove the stock shackle bushings from the frame and leaf spring and clean the bushing eyes on the frame and the leaf spring with a wire brush and a scuff pad. Apply a layer of grease to the bushing eyes, the bushing halves, and the bushing sleeve. Install the bushing halves followed by the bushing sleeves into the bushing eyes using a rubber mallet.
4. Pre-install the large sleeves in the center hole of the shackle halves using a non-greasable bolt and nut.
5. Install each shackle assembly to the frame with the greasable bolts and



loosely install the nuts. The threads of the bolt should be closest to the center of the vehicle. The long end of the shackle should be facing the ground with the dogleg angled toward the front bumper. The orientation of the shackle is very important due to clearance issues.

6. Install the greasable bolts into the leaf spring and loosely install the nuts. The threads of the bolt should face the center of the vehicle.
7. Once both shackles have been installed remove jack stands from the frame and lower the vehicle to the ground. Do not torque hardware at this time.

**Rear Suspension**

8. Place wheel chocks in front of and behind the front tires and jack the vehicle by the rear axle. Support the vehicle's frame with jack stands and droop the front axle enough to release the stress from the spring shackles. Disconnecting the shocks from the axle may be necessary to allow the axle to adequately droop.
9. Remove the rear shackle bolts at the frame and the leaf spring on both sides. Remove the stock shackle bushings from the frame and leaf spring and clean the bushing eyes on the frame



Front Left Spring Shown

with a small wire brush and a scuff pad. Apply a layer of grease to the bushing eyes, the bushing halves, and the bushing sleeve. Install the bushing halves followed by the bushing sleeves into the bushing eyes using a rubber mallet.

10. Pre-install the large sleeves in the center hole of the shackle halves using a non-greasable bolt and nut.
11. Install each shackle assembly to the frame with the greasable bolts and loosely install the nuts. The threads of the bolt should be closest to the center of the vehicle. The short end of the shackle should be facing the ground with the dogleg angled toward the rear bumper. The orientation of the shackle is very important due to clearance issues.
12. Install the greasable bolts into the leaf spring and loosely install the nuts. The threads of the bolt should face the center of the vehicle.
13. Once both shackles have been installed remove jack stands from the frame and lower the vehicle to the ground. Jounce the front and rear of the vehicle to ensure it is at ride height. Torque greasable bolts to 30 ft. lbs. and non-greasable bolts to 55 ft. lbs.
14. Tighten all of the grease fittings and pump a small amount of grease into each bushing assembly. Reinstall the shocks and sway bars if they have been disconnected during installation.

### Post Installation

15. Ensure that there are no parts that interfere with the new shackles by cycling the suspension and the steering.
16. An alignment must be performed after installing this kit. Failure to do so will cause dangerous driving characteristics and premature tire wear.
17. Headlights may need to be re-adjusted.
18. Re-torque all hardware after 500 miles. Check fastener torque and grease bushing assemblies regularly.



*While every attempt is made to ensure that the information contained in these instructions are correct, no liability can be accepted by the authors for loss, damage or injury caused by any errors in, or omissions from the information given. All service should be performed by qualified mechanics. Crown Automotive Sales Co., Inc. cannot be held responsible for any mechanical work performed. Standard and accepted safety precautions and equipment should be used in every procedure. This modification will cause the vehicle to handle differently than with stock suspension. Unusual maneuvers could cause loss of control. Care must be taken at all times.*