

DUAL LOAD CARRYING BALL JOINTS

INSTALLATION INSTRUCTIONS



 **RARE PARTS**®
INC.
STEERING & SUSPENSION

 DIAMOND SERIES®  FAB SERIES®  G₂ NEXT GEN

CAUTION: This kit **must** be installed by a qualified mechanic, otherwise an unsafe vehicle and/or personal injury could result.

TOOL LIST:

Heavy Duty Ball Joint Press Tool
Torque Wrench
Long Nose Pliers
Side Cutters
1/2" Ratchet, 12pt-13MM, 7/8" and 1 1/16" Sockets
Adjustable Wrench with 2" jaw opening OR
2" 6-point Socket (RP69248 available)
1/8" T-handle Allen Wrench (Supplied)

TJ SPECIFIC:
13MM, 36MM Sockets

JK SPECIFIC:
21MM, 35MM Sockets
3/16" Allen Wrench



INSTALLATION VIDEO AVAILABLE AT:
[YOUTUBE.COM/RAREPARTS](https://www.youtube.com/rareparts)

STEP 3

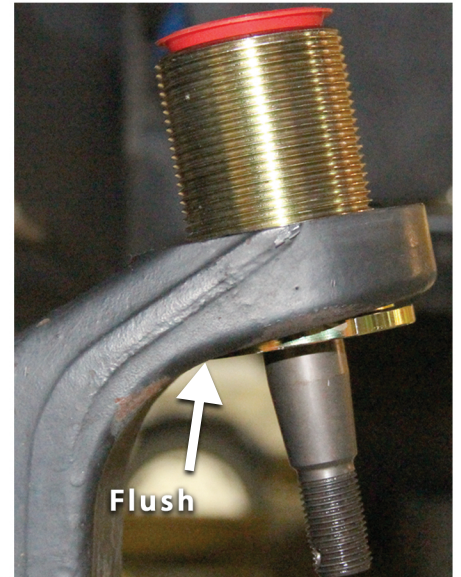
INSTALL UPPER BALL JOINTS



Install upper ball joint. Rare Parts design presses in from the bottom of the inner "C".

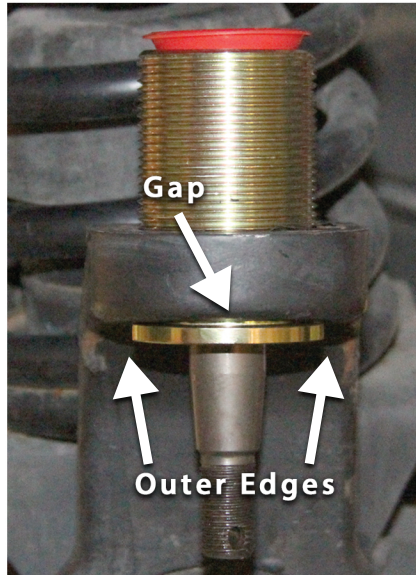


Ensure outer lip is facing outboard.



Flush

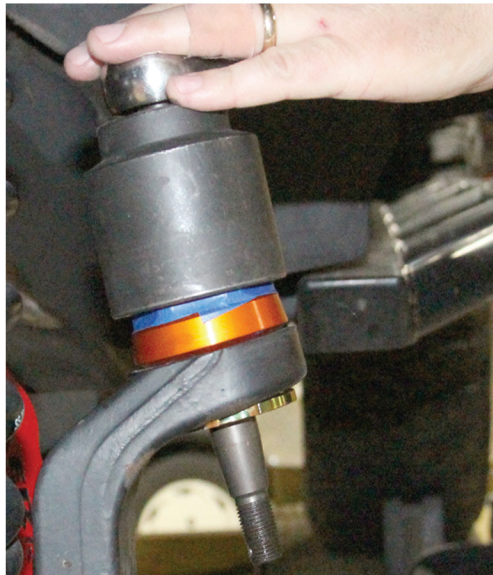
Press upper ball joint into place using HD ball joint tool. Ensure bottom face sits flush against inner "C".



Gap

Outer Edges

The gap pictured is normal, as long as the outer edges shown are making contact with the face of the inner "C".

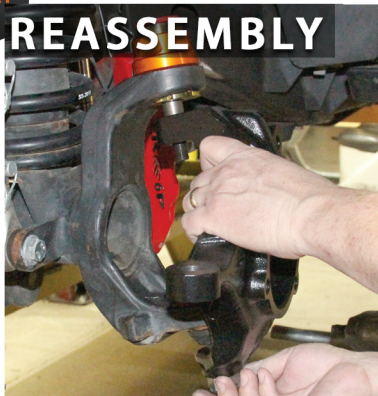


Install retaining nut using an adjustable wrench, or 2" socket . Torque to approx. 100 ft/lbs. TIP: Wrap the nut with painter's tape to protect the finish. If you need a 2" socket, we have one available (P/N: RP69248).



STEP 4

REASSEMBLY



Install dust boot for the lower ball joint. Install knuckle and thread on lower ball joint castle nut. Reinstall speed sensor bracket (JK only) and thread on upper castle nut. Be sure there is a minimum of 1/8" gap between upper ball joint face and face of the knuckle.



1/8" Gap Min.



Install axle shaft and wheel hub. Ensure the axle shaft does not hit the lower ball joint grease fitting. To do this, rotate the axle shaft while turning the knuckle lock to lock.



STEP 1

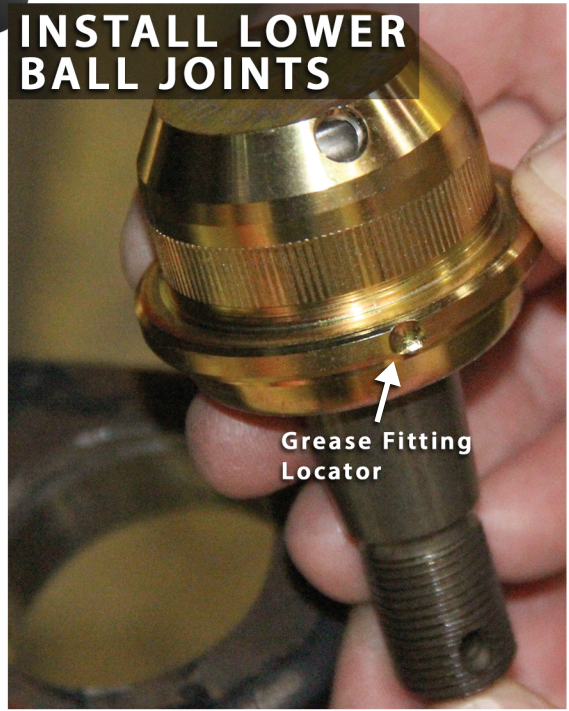
REMOVE/INSPECT



Remove old ball joints. Clean and inspect upper and lower ball joint holes in inner "C".

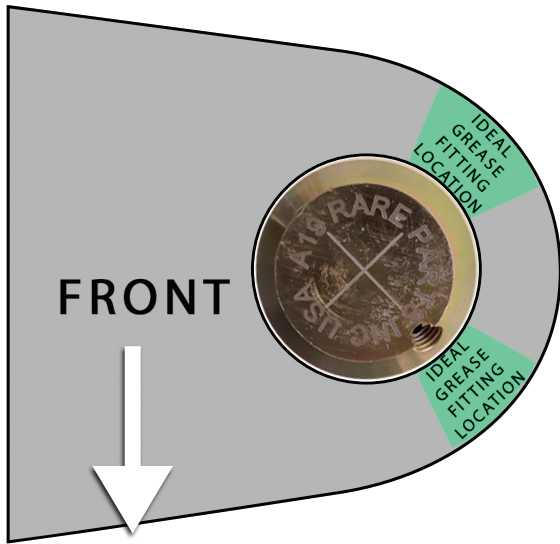
STEP 2

INSTALL LOWER BALL JOINTS

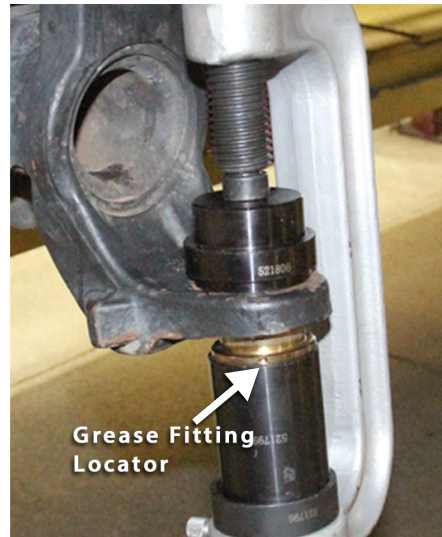


Grease Fitting Locator

The lower ball joint has a grease fitting locator so the ball joint can be positioned properly during installation.



Insert lower ball joint. Align grease fitting hole 45 degrees outward towards the front or rear of vehicle.



Grease Fitting Locator

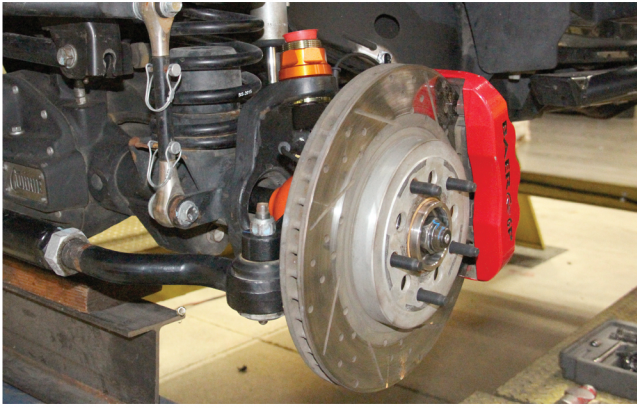
Using the HD ball joint press tool, press lower ball joint up into place.



Install flush mount grease fitting in the lower ball joint.

STEP
5

SETTING PRELOAD



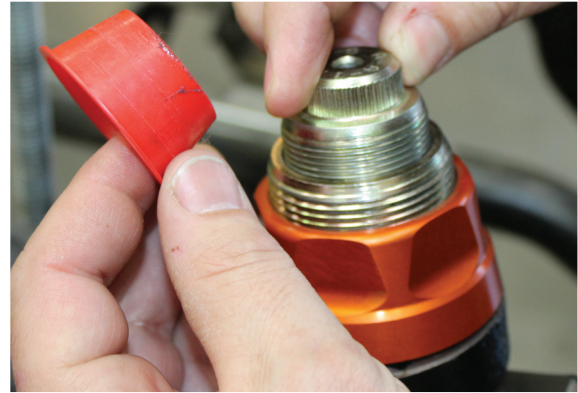
Using a 1 1/16" socket, torque LOWER castle nut to 75-90 ft/lbs. Using 7/8" socket, torque UPPER castle nut to 65-75 ft/lbs. Install cotter pins. Reinstall rotor, caliper, tie rod assembly, drag link and wheel according to service manual.



IMPORTANT: Lower vehicle to put the full weight on the tires. This **MUST** be done **BEFORE** installing upper ball joint threaded caps.



Load Carrying Caps, T-Handle Wrench, Set Screws



Remove the red caps, and install the load carrying cap by hand.



Tighten using the supplied T-handle wrench until cap stops turning and wrench flexes (approx 50 INCH/lbs). DO NOT exceed 55 INCH/lbs. Do not use ft/lb wrench.



Install 1/4-28 set screw to lock the cap in place, and tighten with supplied 1/8" T-handle wrench. Install upper grease fittings.

STEP
6

Grease upper and lower ball joints with high quality grease, such as AMSOIL. Turn wheel lock to lock during greasing to make sure the grease cycles through the ball joints.

Note: There is no "break in" period.

It is recommended that after test driving the vehicle, you should remove cotter pins and check torque on upper and lower castle nuts. If castle nuts need to be re-torqued, remove set screw from the upper ball joint, and remove load carrying caps. Retorque castle nuts, reinstall the cotter pins, and reset the preload on the upper ball joints with the full weight of the vehicle on the tires.

THANK YOU FOR CHOOSING RARE PARTS.