



WELCOME TO PROFORGED!

OUR COMMITMENT

Congratulations on your purchase of this high-quality Proforged 1999-2007 GM GMT800 1500 Truck & SUV Drop Spindle Kit. They are engineered to the highest standards, utilizes the finest materials, and is built with exceptional craftsmanship and attention to detail.

While we understand your eagerness to start your build, please remember that your safety is our utmost priority. Always use an approved and appropriately rated jack, jack stand, or automotive lift, and take all necessary safety precautions to ensure the job is completed safely and correctly.

Before you start, read and understand all instructions thoroughly. With hand tools and essential equipment, you can do the main assembly and setup of your new drop spindles in your home garage, but if you feel unsure of your abilities during the assembly or installation and need some help or have any uncertainties, please seek the assistance of a qualified mechanic or automotive repair shop.

If you have any product questions or need guidance, please don't hesitate to call and speak with Proforged technical support at 952-985-5675. Remember, we're here to support you every step of the way and are committed to ensuring your assembly and installation process is successful and enjoyable. We wish you all the best!

BEFORE INSTALLATION

Before you begin the Proforged Drop Spindle Kit installation, read and understand these instructions carefully. If instructions are not correctly followed, personal injury, equipment, or product damage can result. Products that have been installed are not eligible for returns. To prevent mistakes, thoroughly read these instructions before you start the drop spindle kit assembly procedure.

Check your order as soon as possible upon delivery. Proforged has provided parts list tables and images, as shown on pages 4 and 5. Compare your order's contents against the tables. Call your authorized dealer immediately if you discover anything missing from your order. This kit requires no welding to assemble and install.

It is important to wear the appropriate personal protective equipment (PPE). However, the responsibility does not end there. Follow the manufacturer's instructions for safe use when working with power tools, and be cautious and responsible in your work. Make sure to ventilate combustible vapors and remove any nearby flammable materials.

SPECIAL NOTIFICATION

These Proforged drop spindles require a minimum 17" wheel.

ABOUT THIS MANUAL

PURPOSE

These instructions outline the installation of the Proforged Drop Spindle Kit that fits the 1999-2007 GM GMT800 1500 Trucks & SUVs.

ITS CONTENTS

The information that follows is described in this instruction set:

- Required tools and supplies.
- Safety, hazard, and warning rules.
- Product overview and included parts.
- Installation and the setup procedures required for use.

Pages with images will have paragraphs and sentences with callout numbers that refer to their respective images, steps, and parts.

Procedures, once described in the text, are generally not repeated. When it is necessary to refer to another procedure, the page and step reference will be given.

REQUIRED TOOLS AND SUPPLIES

- Floor Jack
- Jack Stands
- SAE and Metric Wrench Set
- SAE and Metric Socket Set
- Torque Wrench (lb-ft)

SAFETY FIRST

- Work on your vehicle in an appropriate location.
- Park your car on a level surface.
- Use wheel chocks to prevent vehicle roll.
- Check your owner's manual for the correct jack lift points.
- Always support your vehicle with jack stands.
- Wear personal protection like safety glasses, gloves, and a fine particle respirator mask.
- Never use compressed air to clean brake or metal grinding dust from the brake, suspension components, frame, or rear axle housing.
- Grind metal only in a well-ventilated area, and wear a respirator until the dust has settled and the work area air has been cleared.
- Dispose of damaged or old parts in accordance with local laws. Do not throw any hazardous waste in the trash.
- Follow the manufacturer's instructions for safe use when working with power tools, and be cautious and responsible in your work.

CONTENTS

PROFORGED DROP SPINDLE KIT 4-17

PARTS LIST 4

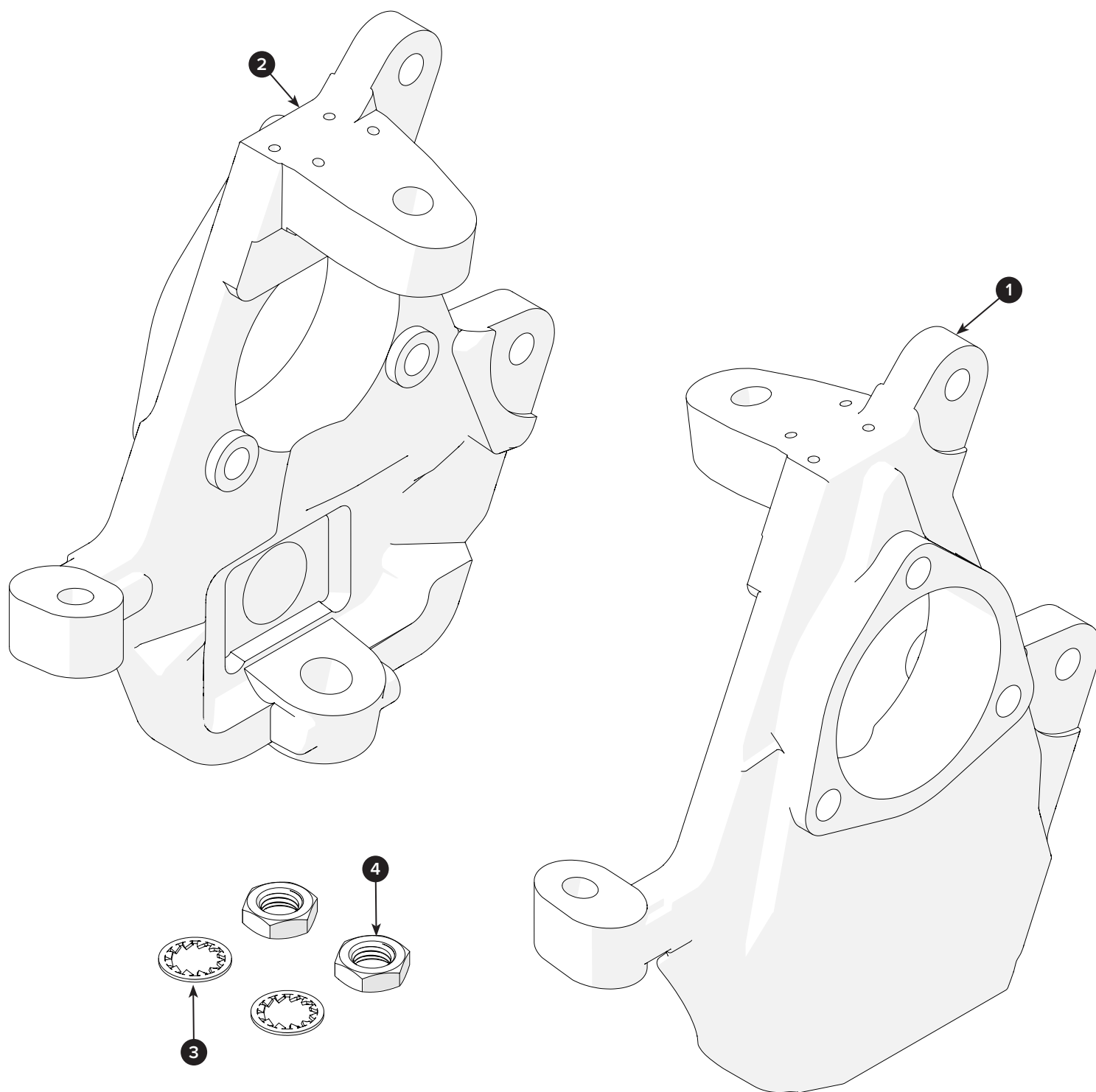
VEHICLE PREPARATION 6

DISASSEMBLY 7

ASSEMBLY 12

WARRANTY 17

99-07 2" DROP SPINDLE KIT 221-10017



1999-2007 GM TRUCK DROP SPINDLE KIT 221-10017

POSITION	DESCRIPTION	QTY	TORQUE SPECIFICATION
1	SPINDLE, 2" DROP, LH	1	—
2	SPINDLE, 2" DROP, RH	1	—
3	WASHER, LOCKING, M16	2	—
4	HALF NUT, STEEL, M16 x 2.0, RH	2	60 lb-ft

Note: The part positions listed above will be called out in this installation manual as a visual reference to their respective positions during the installation procedure. Refer to these pages during the installation. Count and compare all parts and fasteners to the list above. If parts are missing, contact sales@proforged.com.

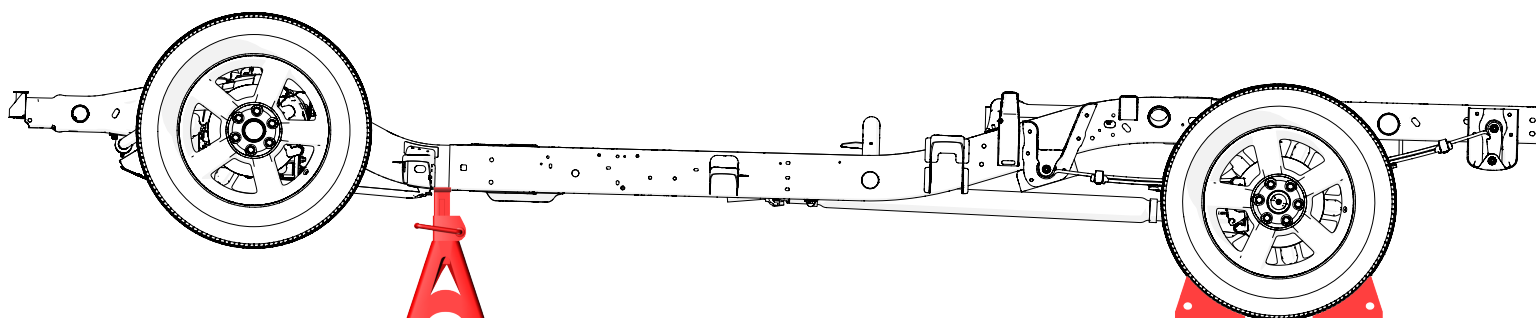
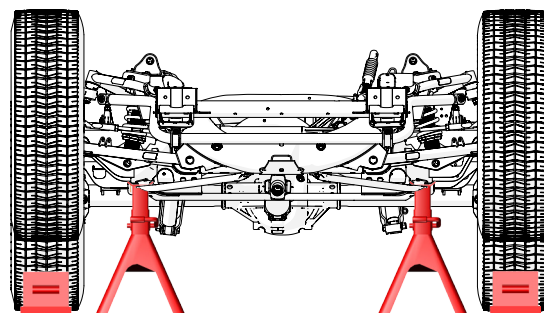


Installer's Note: This instruction set shows only the frame and chassis of the 99-06 Silverado/Sierra pickup truck. The body has been removed for visual clarity. All trucks listed on page 2 will follow the same installation procedure.

1

Use a floor jack and lift the front of the vehicle. Put jack stands at its designated support points.

Note: Jack stands must be level and evenly positioned for safe vehicle load. Adjust the jack stands as necessary.

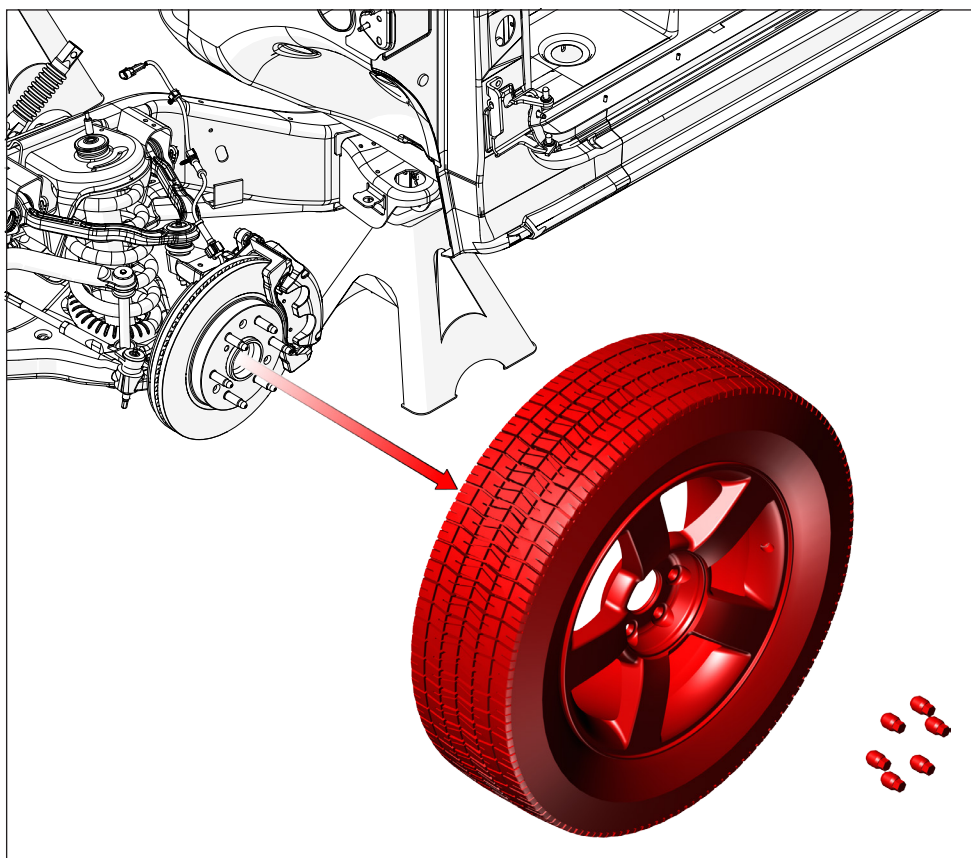


Installer's Note: This instruction set starts on the vehicle's front driver side.

The passenger side spindle replacement procedure is identical.

2

Remove the left and right side lug nuts and wheels from the front of the vehicle.



Installer's Note: The images shown in this installation instruction are for the 2WD model only. The 4WD front axle assembly is not shown in these instructions.

3

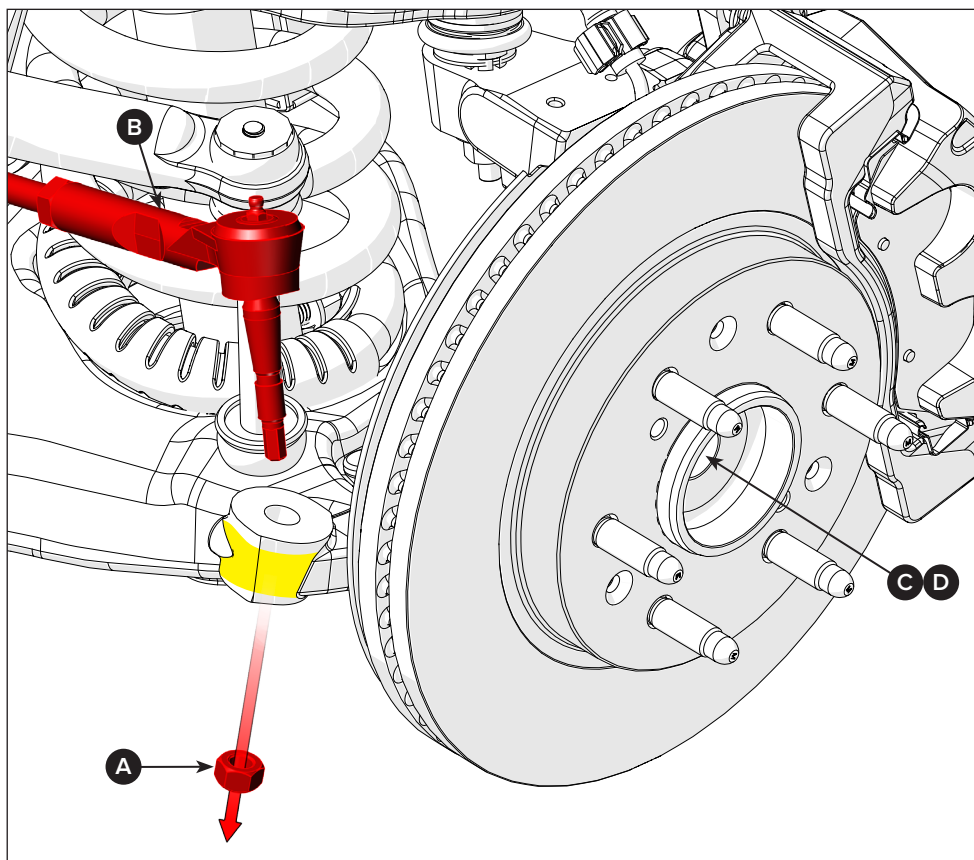
Remove the nut [A] from the tie rod end [B] and loosen the stud from the spindle.

Loosely put the nut back onto the tie rod end stud.

4WD models only: Remove the hub dust cap [C] and set it aside, as it will be reused.

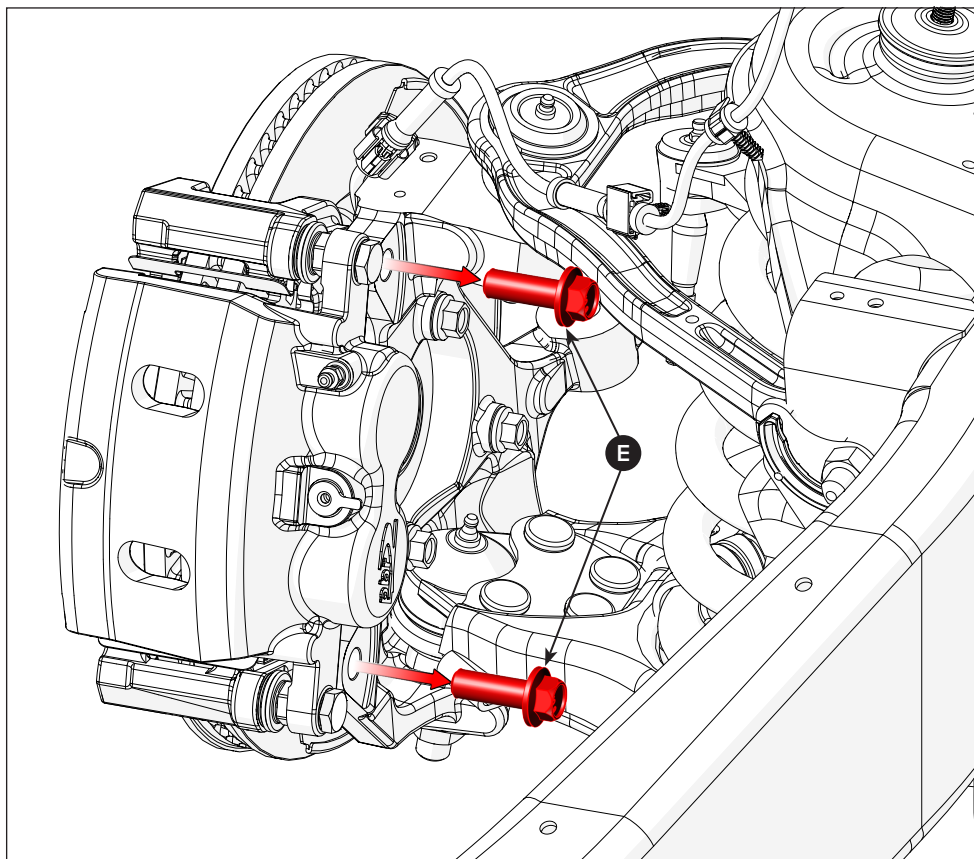
Now, remove the 36 mm front axle nut [D] from the axle stub.

Note: GM recommends to discard the axle nut and replace it with a new one. *This nut is not included with the drop spindle kit.*



4

Remove the bolts [E] that secure the caliper bracket to the spindle, and set them aside for reuse during assembly.



5

Disconnect the brake hose bracket from the spindle (procedure not shown).

Next, detach the hose bracket from the upper control arm (procedure not shown).

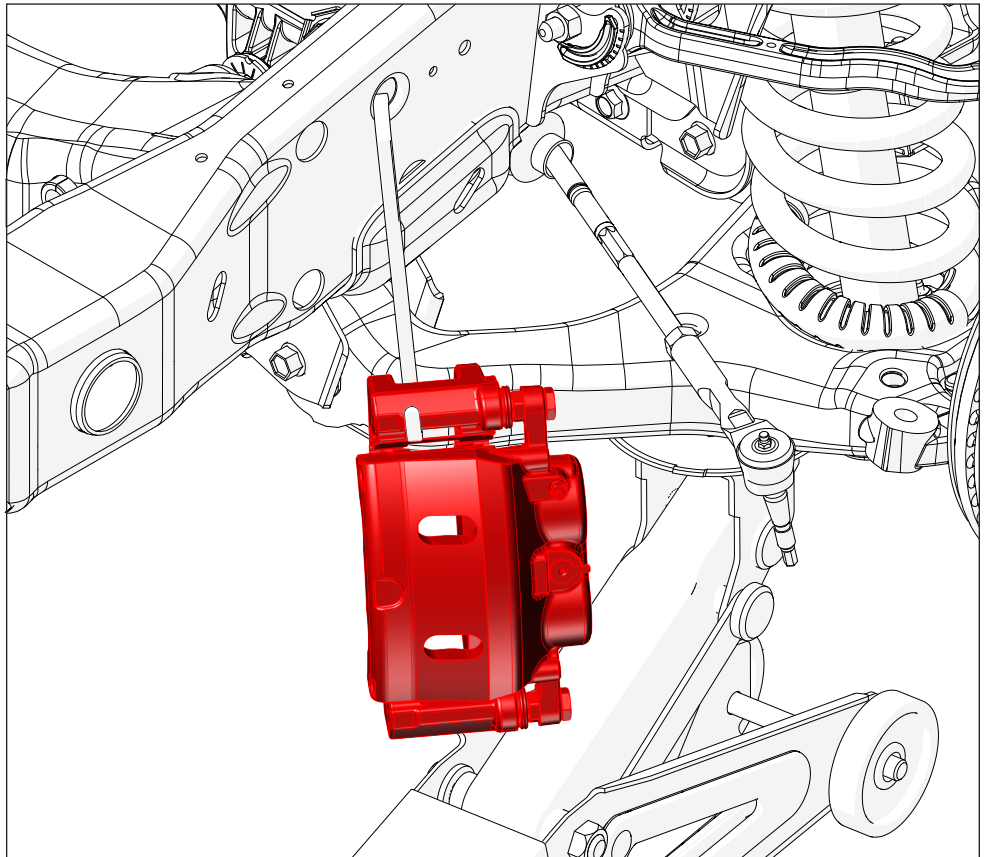
Put the fasteners safely aside, as they will be reused.

After that, remove the caliper assembly from both the spindle and the rotor.

Finally, safely hang the caliper assembly from the frame.

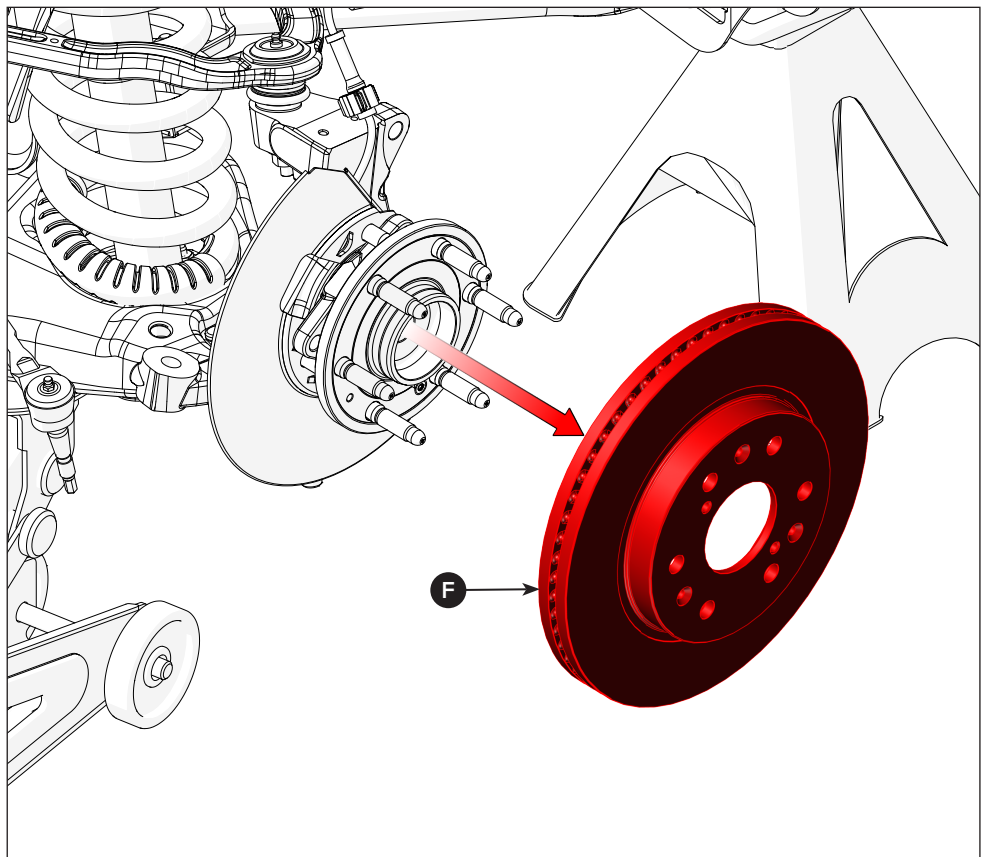
Note: Make sure the caliper is suspended close enough to the spindle to avoid strain on the brake hose and prevent damage.

Alternatively, the brake hose can be disconnected from the brake caliper. This method will require new crush washers, banjo bolts, and brake bleeding for safe braking operation.

**6**

Remove the rotor retainer screw, then pull the brake rotor (F) off the hub and set it aside. These parts will be reused during reassembly.

Note: Now is a good time to examine the rotor for damage or wear. Replace it if necessary.



7

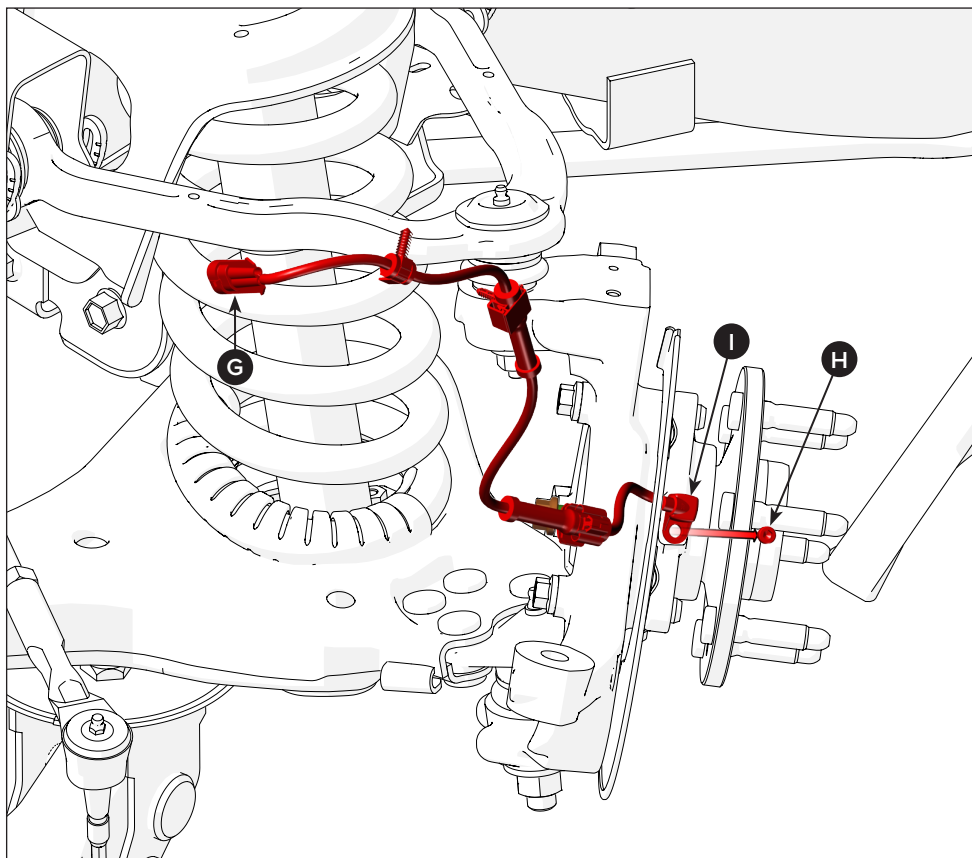
Disconnect the ABS wire connector (G) and all tree clamps from the frame and upper control arm.

Use a 3/16" hex bit to remove the ABS sensor's cap head screw (H).

Carefully twist and lift the ABS sensor (I) from its bore in the wheel's hub bearing assembly.

Set aside the ABS sensor, as it will be reused.

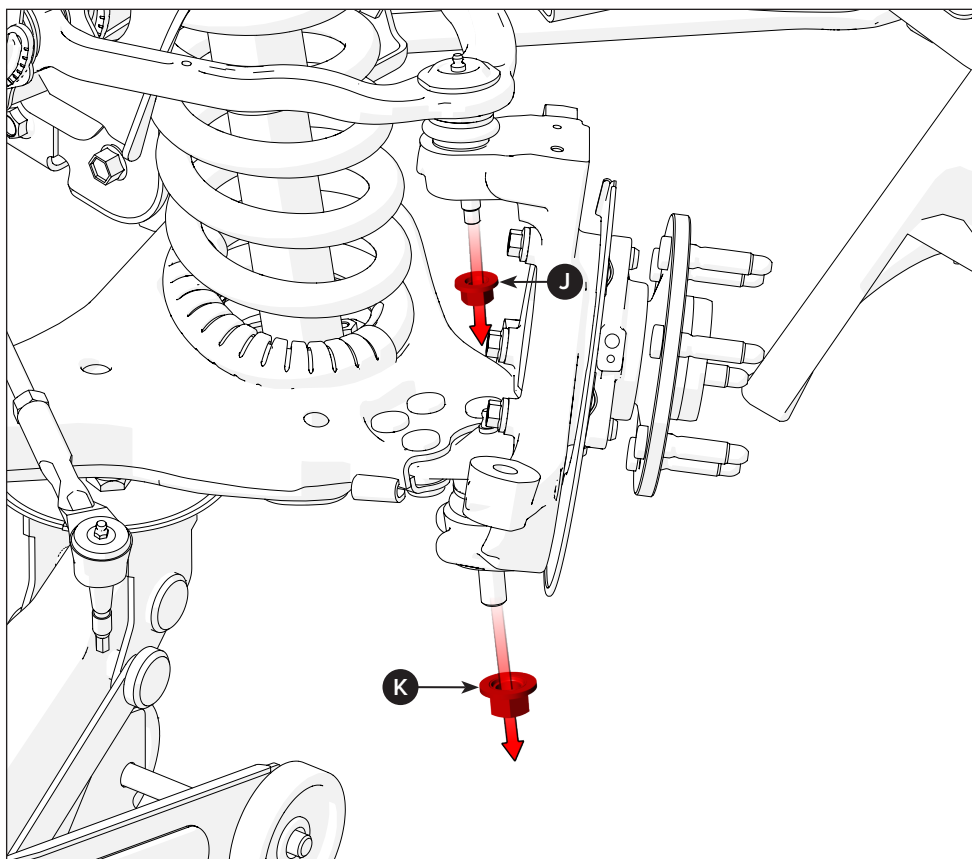
Note: The ABS sensor can be removed before or after the spindle is removed from the truck.



8

Remove the upper and lower ball joint nuts from the control arms.

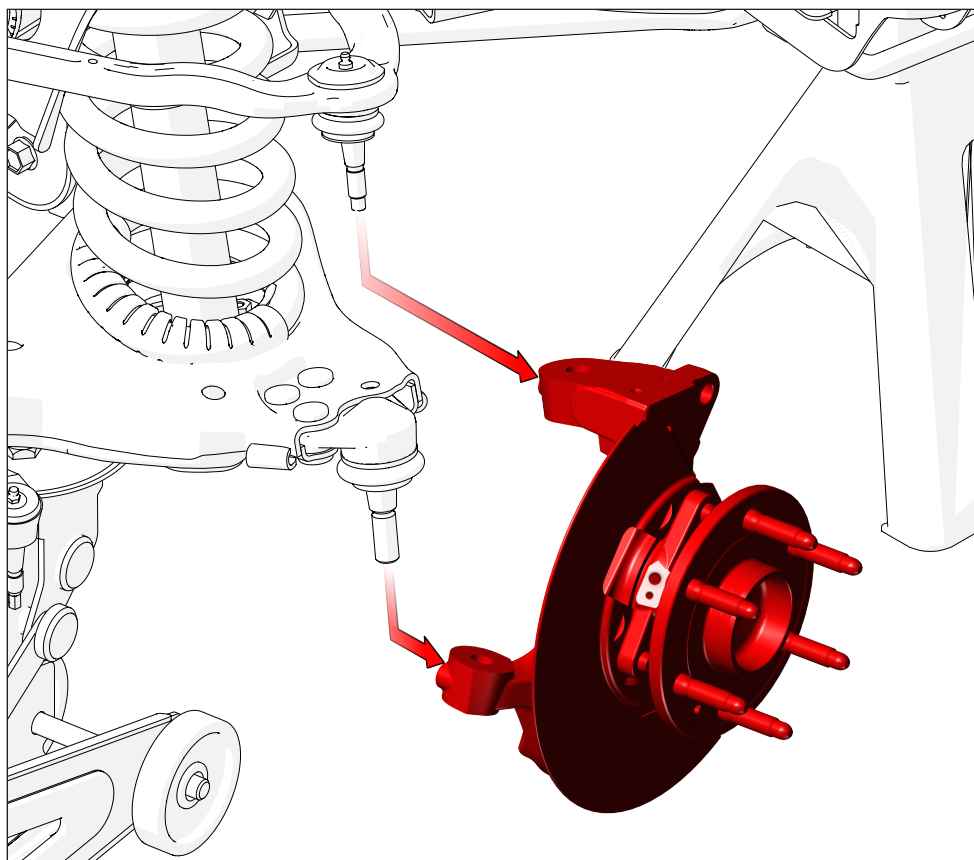
Set them aside as they will be reused.



9

Drop and remove the spindle from the control arms. If it is stuck to the ball joint studs, use a hammer to strike the spindle near the ball joints to release the studs from the spindle.

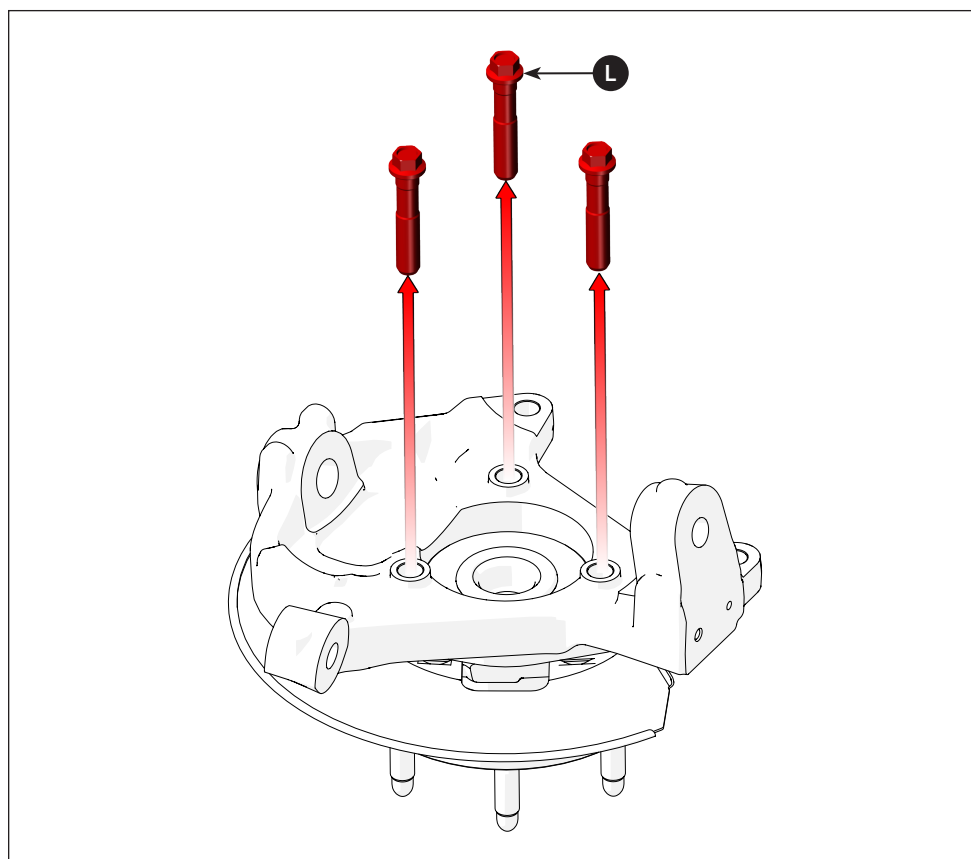
A ball joint separator may be used if needed.

**10**

Remove the three hub bolts (L) from the spindle assembly.

Set the bolts aside as they will be reused.

Note: The hub bolts are reusable, but Chevrolet recommends replacement if they are severely rusted or if the head or bolt threads are damaged.

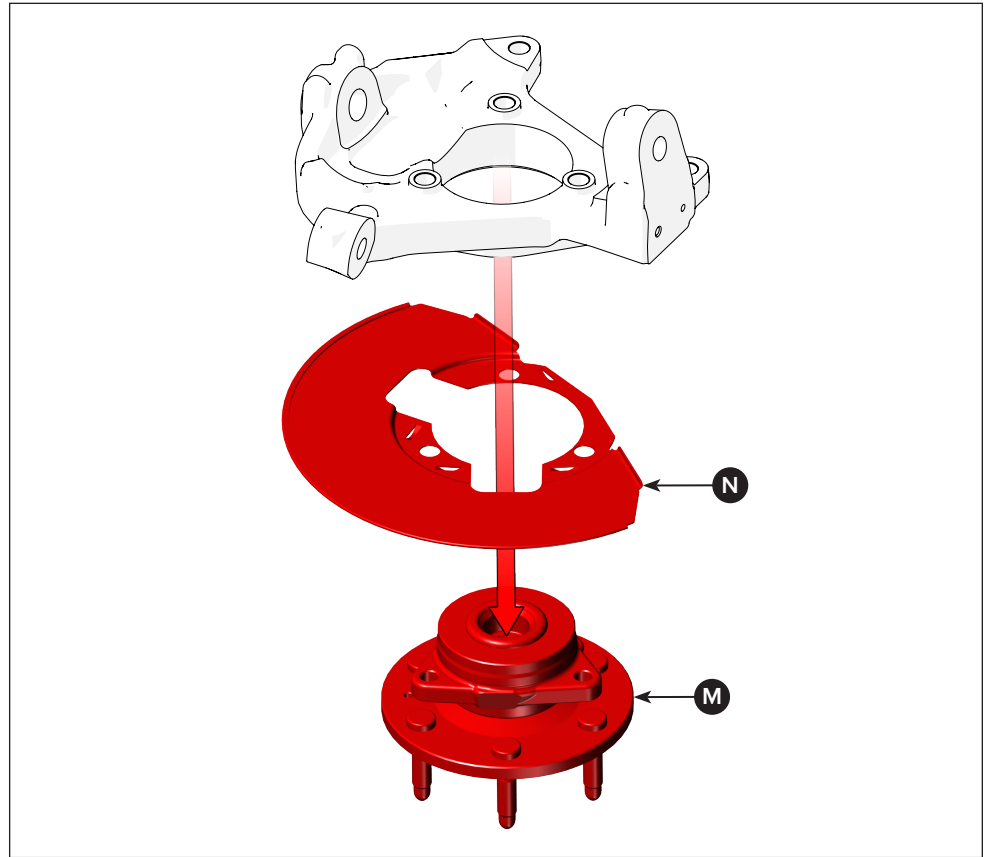


11

Push out the hub assembly (M) from the spindle. If it is stuck due to rust, use a hammer or mallet and strike the hub until it is out.

Pull away the brake backing plate (N) from the spindle and discard it. It will not be used due to the caliper's changed mounting geometry.

Set the hub assembly aside. It will be reused.



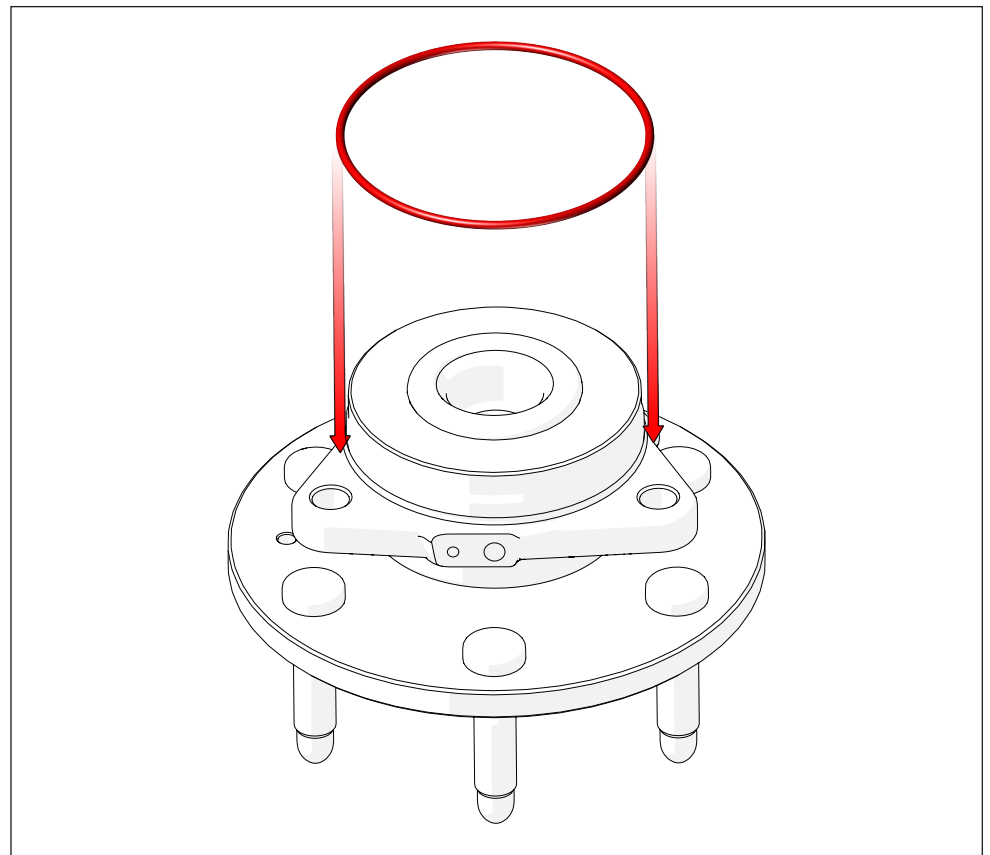
Installer's Note: The 1999-2007 GMT800 models use specialized, single-use O-rings (seals). These seals protect the internal wheel bearing assembly against rust and corrosion from moisture that passes through the gap between the hub flange and spindle. These seals are **NOT** included with this spindle kit and must be purchased separately from GM or an auto parts retailer.

12

To reuse the original seals, thoroughly examine them for wear, tears, and other damage.

If the seals are damaged, they will no longer provide a reliable moisture-tight seal and must be replaced.

For used and new seals, apply a light coat of waterproof grease to each one, then position them onto the back of the hub.



13

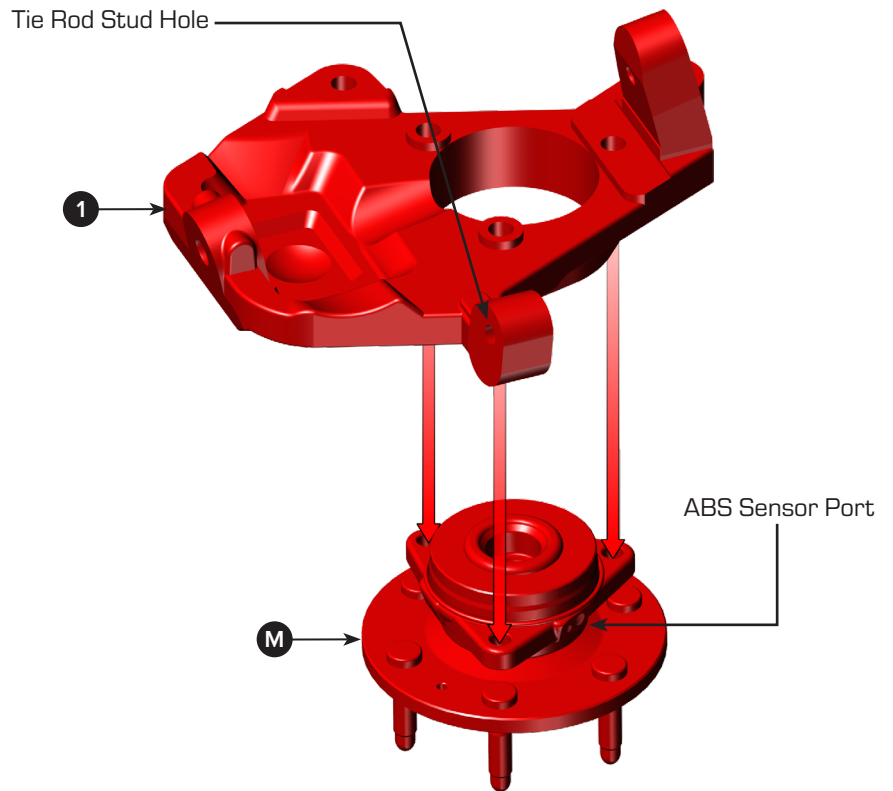
Position the left-hand (LH) drop spindle (1) with the tie rod stud hole to the hub (M).

The hub mount holes align with the spindle's hub holes.

Note: The ABS sensor port must face the same direction as the tie rod stud hole on the spindle.

Push the hub bearing assembly into the spindle as far as possible by hand.

The hub will be drawn into the spindle and fully seated in step 14.



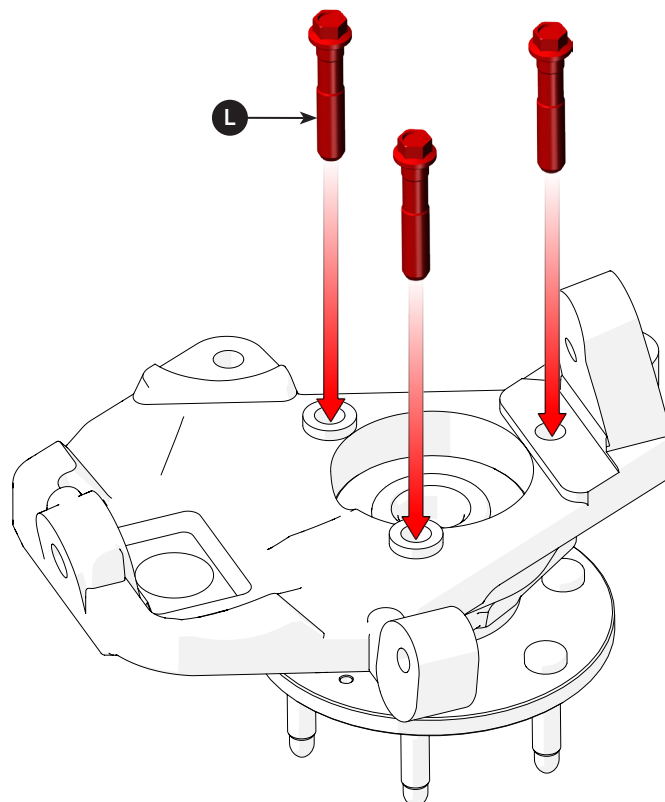
14

Turn the hub bolts (L) through the spindle and into the hub.

Torque the bolts to 133 lb-ft.

Note: If you will also replace the front struts, set aside the spindle assembly and refer to your strut or coilover installation instructions.

Otherwise, proceed to the next step.



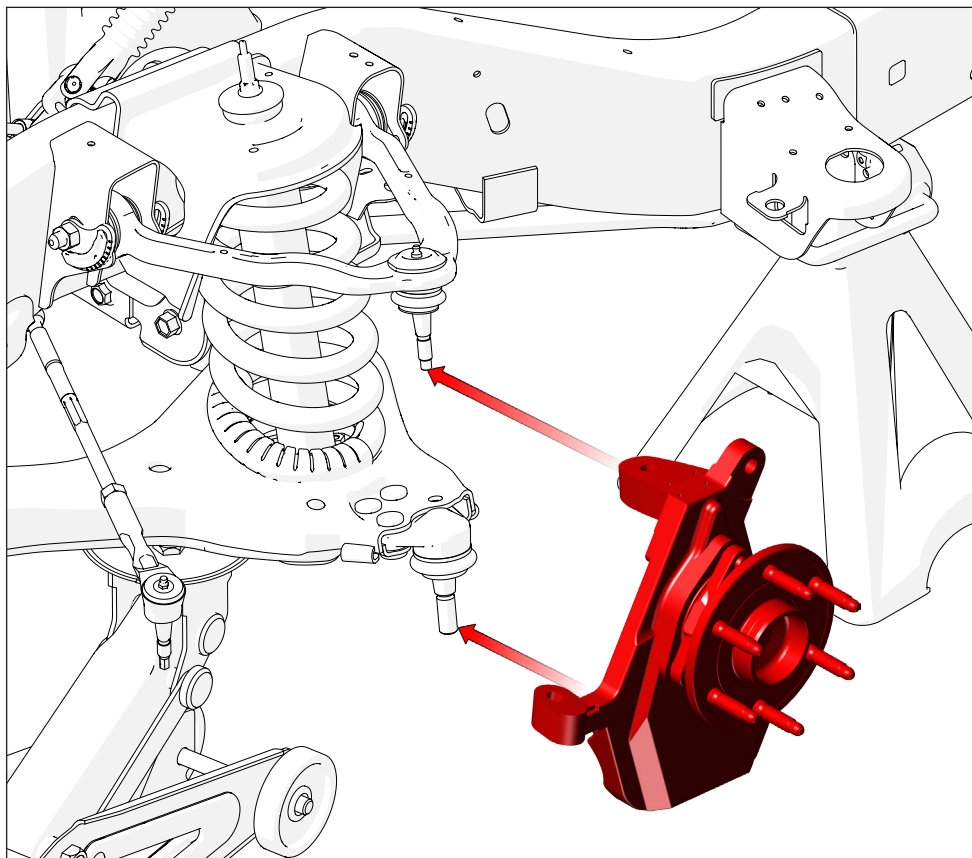
15

To simplify the installation of the driver's side spindle assembly onto the vehicle, follow these steps:

Place the lower control arm's ball joint stud into the tapered hole of the lower spindle ball joint.

Then, position the upper control arm's ball joint stud into the tapered hole of the upper spindle ball joint.

4WD models: Insert the axle's stub shaft into the wheel hub before the upper ball joint stud is attached to the spindle.



16

For 20"+ wheels: Attach the upper ball joint to the spindle with the nut (J) removed during step 8.

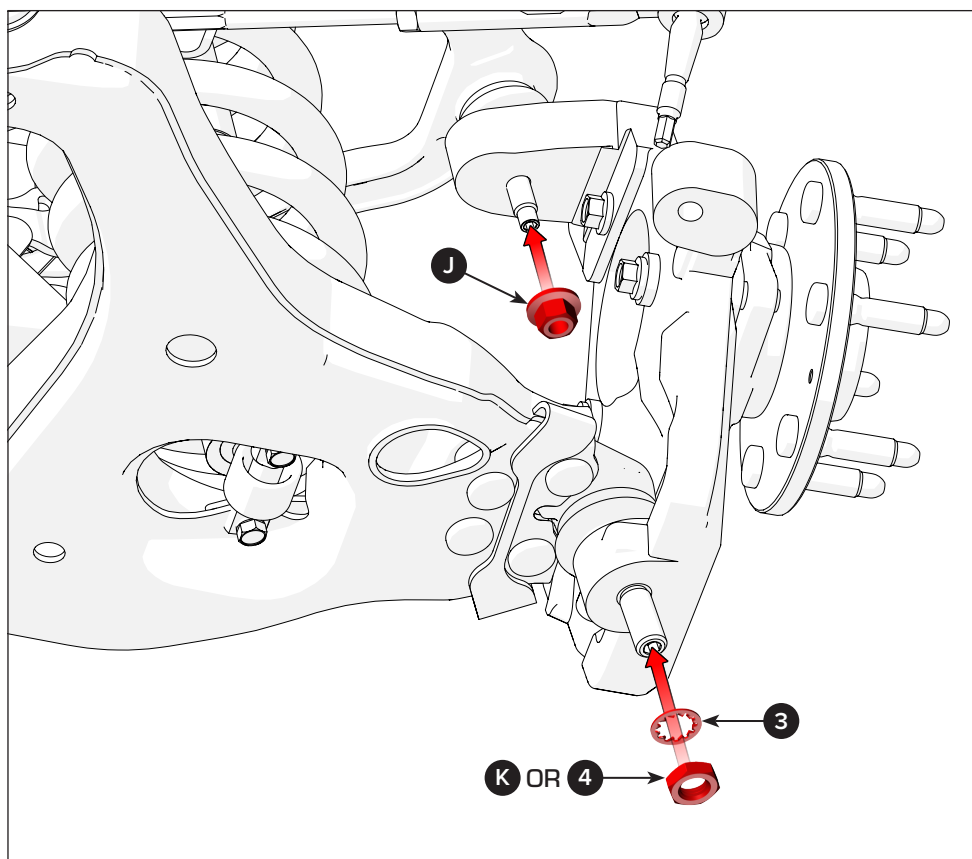
Then, attach the lower ball joint to the spindle with the nut (K) removed during step 8.

For 17" and 18" wheels: Use the new lock washer (3) and half nut (4) to attach the lower ball joint as shown.

Note: The lower ball joint studs must be trimmed to use 18" wheels. That procedure will be shown in step 18.



To keep the ball joint stud in position during assembly, use a hex key to hold the stud, and turn the nut with a closed-end wrench or pass-through socket.



17

Once the stud's taper is seated in the spindle, torque the nut with a deep socket and torque wrench as follows:

Upper ball joint nut:

Torque the upper ball joint nut (J) to 37 lb-ft.

Lower OE ball joint nut:

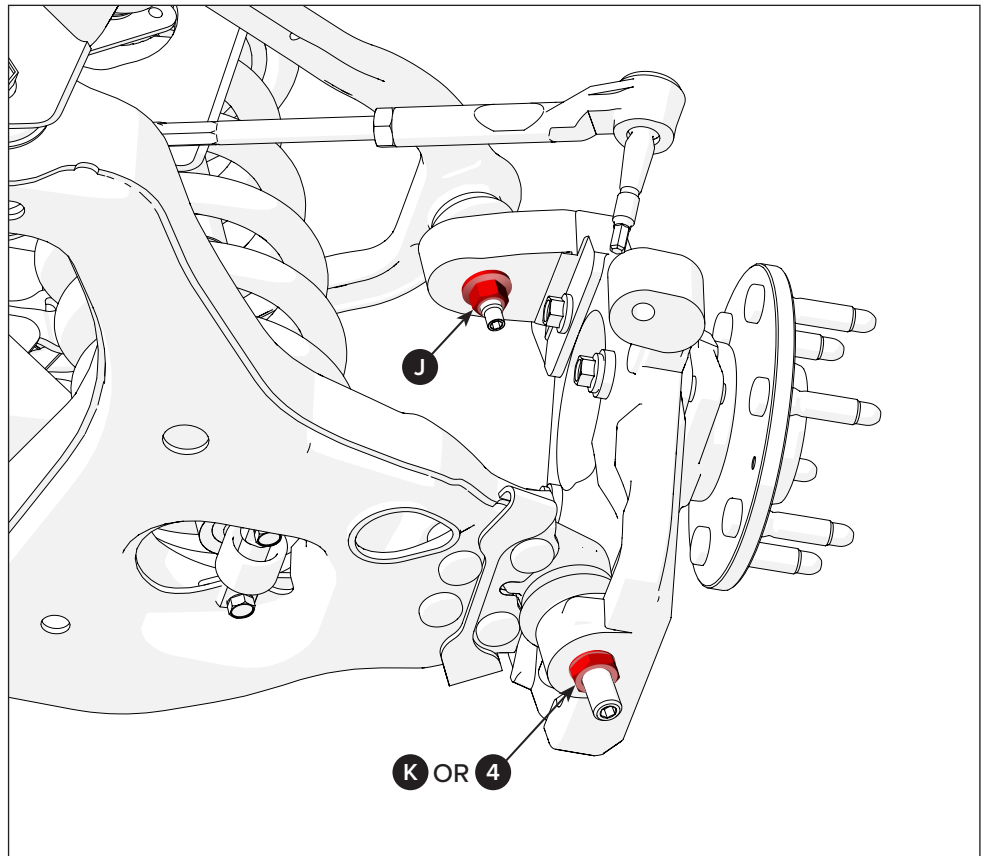
Torque the lower ball joint nut (K) to 81-92 lb-ft.

Lower ball joint half nut (18" wheels):

Torque the lower ball joint nut (4) to 60 lb-ft.

4WD models (not shown): Attach the axle stub to the hub with the nut (D) removed during step 3.

Torque the CV shaft nut to 177 lb-ft., then push the dust cap (C) into the hub end.



Installer's Note: Make sure the ball joint studs are completely seated in their knuckle's bores and the nuts are torqued to the correct specification. Double-check both conditions before you proceed.

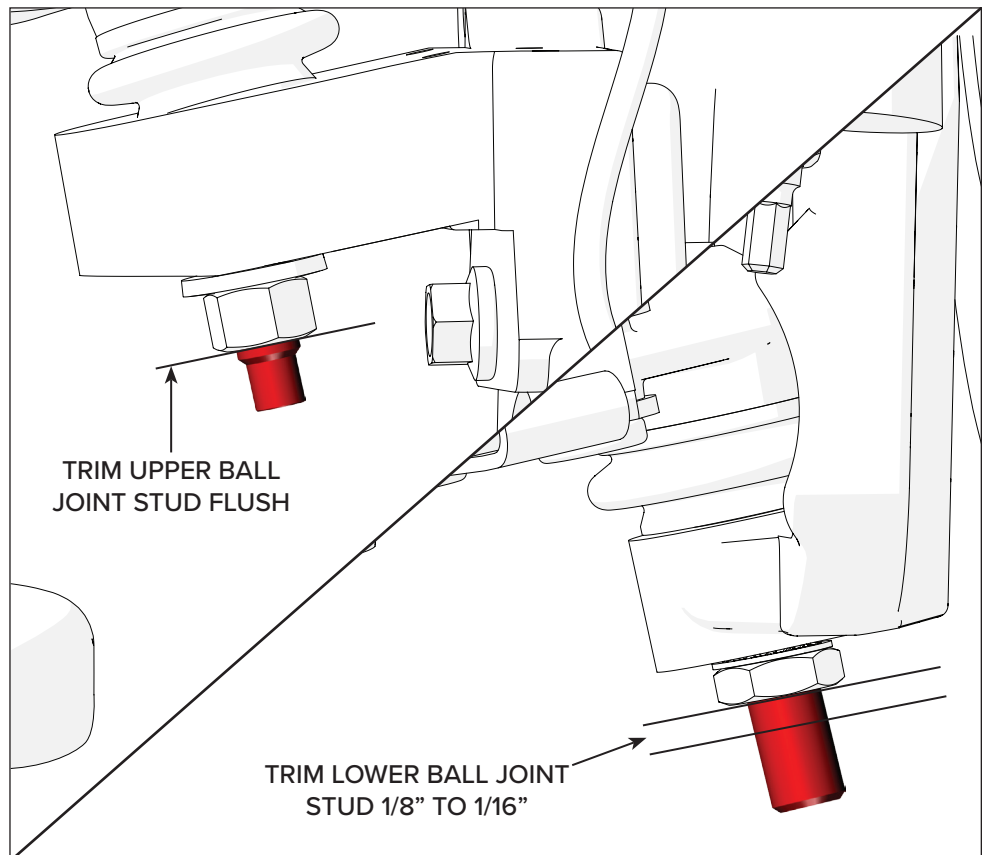
18

4WD models (not shown): After the upper ball joint nut is torqued to specification, trim the upper ball joint stud flush with the ball joint nut for clearance around the CV shaft boot.

When fitted with 17" and 18" wheels, the lower ball joint stud must be trimmed to accommodate wheel clearance.

Measure down the stud shaft 1/8" from the bottom of the jam nut. Use a preferred tool to cut away the stud below the 1/8" mark.

Test fit the wheel to verify proper fitment and adequate wheel-to-stud clearance. If the wheel does not fit or the clearance is too tight, trim the stud closer to the nut, but no closer than 1/16". Once completed, use a chisel to stake the bottom of the stud in an X pattern for nut retention.



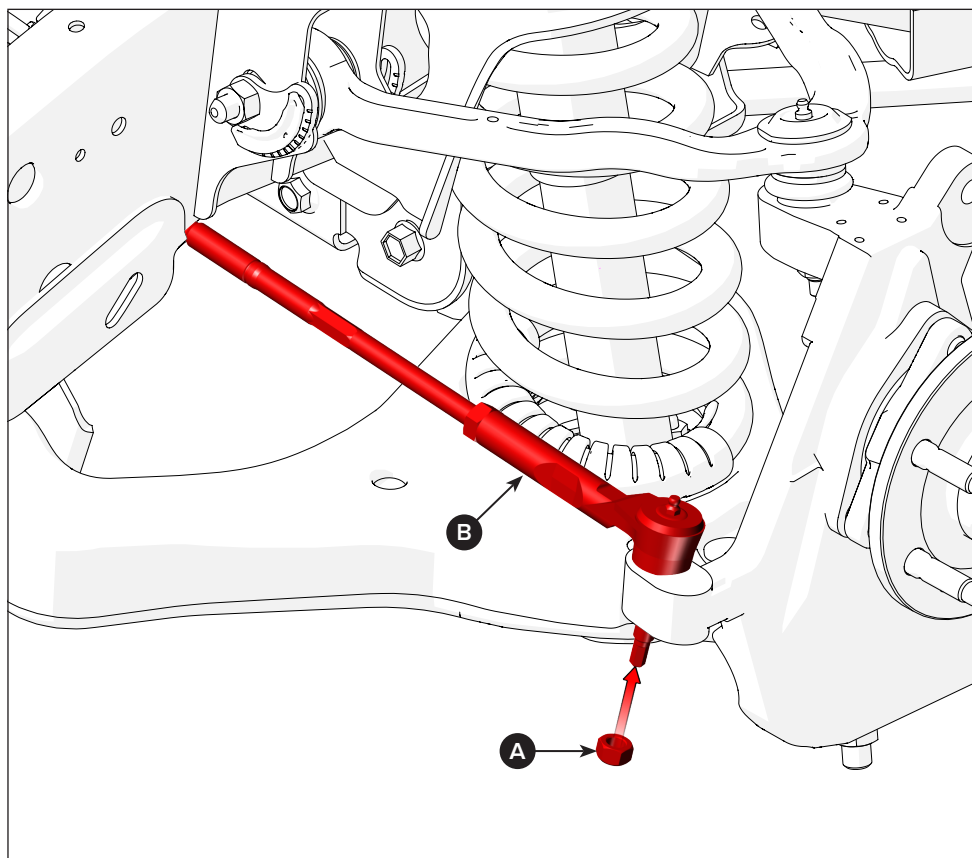
19

Attach the tie rod end (B) to the spindle with the nut (A) removed during step 3.

Torque the nut to 26 lb-ft.+ 90°.



To keep the tie rod's stud in position during assembly, use a wrench to hold the stud's external hex, and turn the nut with a closed-end wrench or pass-through socket.



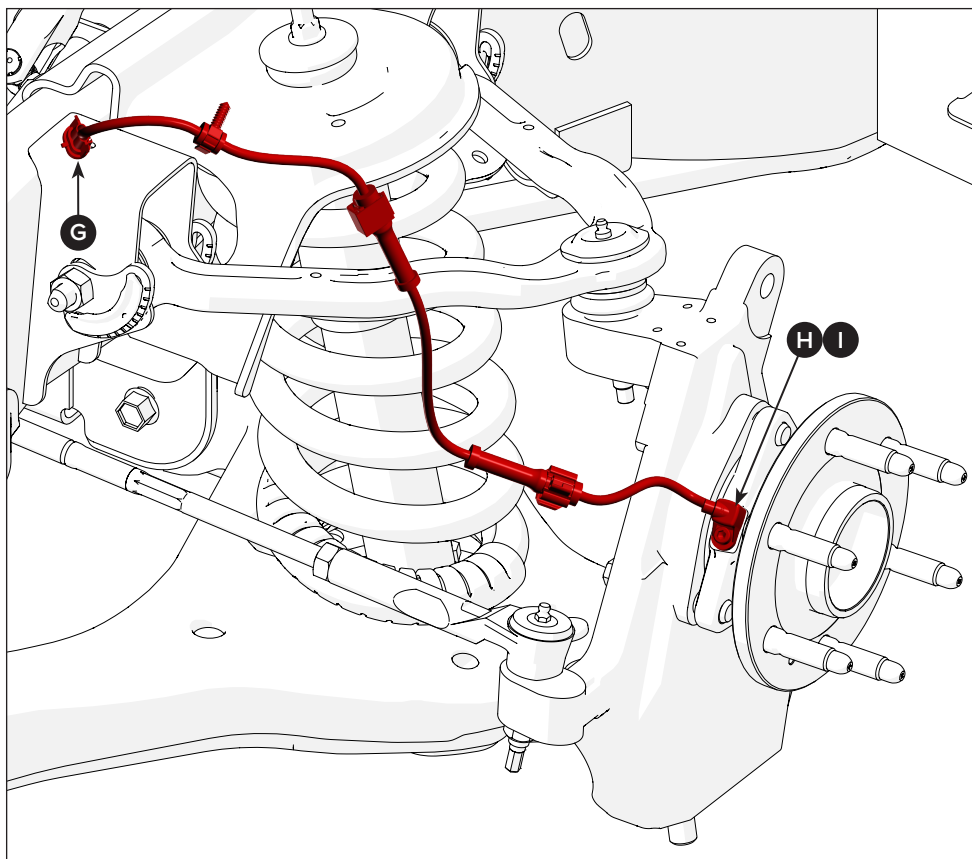
20

Push the ABS sensor (I) into its bore in the wheel's hub bearing assembly.

Use a 3/16" hex bit to reinstall the ABS sensor's cap head screw (H). Torque the screw to 115 in-lbs.

Route the ABS wire into its factory position, then push all the tree clamps into the upper control arm and frame mount locations.

Push the ABS wire connector (G) to its harness.



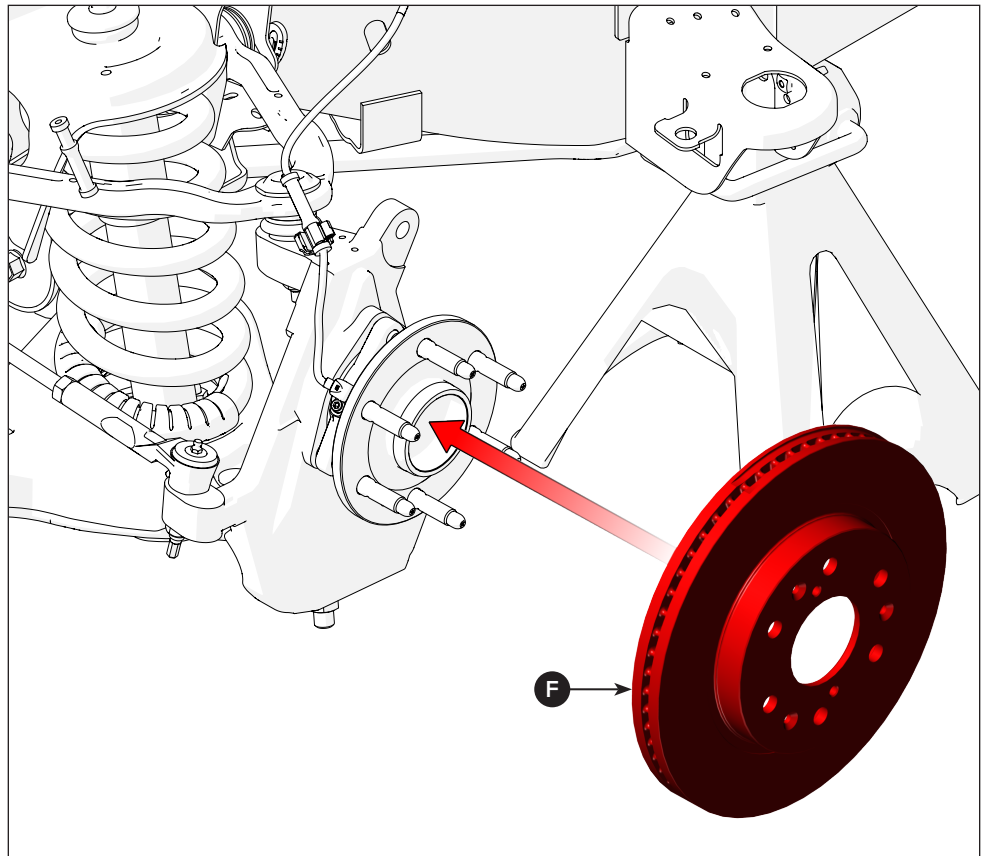
21

First, thoroughly clean the hub surface to remove all rust and debris.

Next, clean the inside of the rotor (F) hat with the same method.

Note: Both surfaces must be completely free of contaminants, as they can prevent proper rotor seating and cause warp or excessive runout.

Note: Examine the clearances around the rotor to the spindle. Rotate the rotor and listen for any noise that indicates contact.



22

Align the brake caliper bolt holes to the spindle's holes.

Then, attach the caliper with the bolts (E) removed during step 4.

Torque the caliper bolts to 129 lb-ft.

Check the brake lines and ABS wires for enough slack to allow full suspension travel and prevent damage to them.

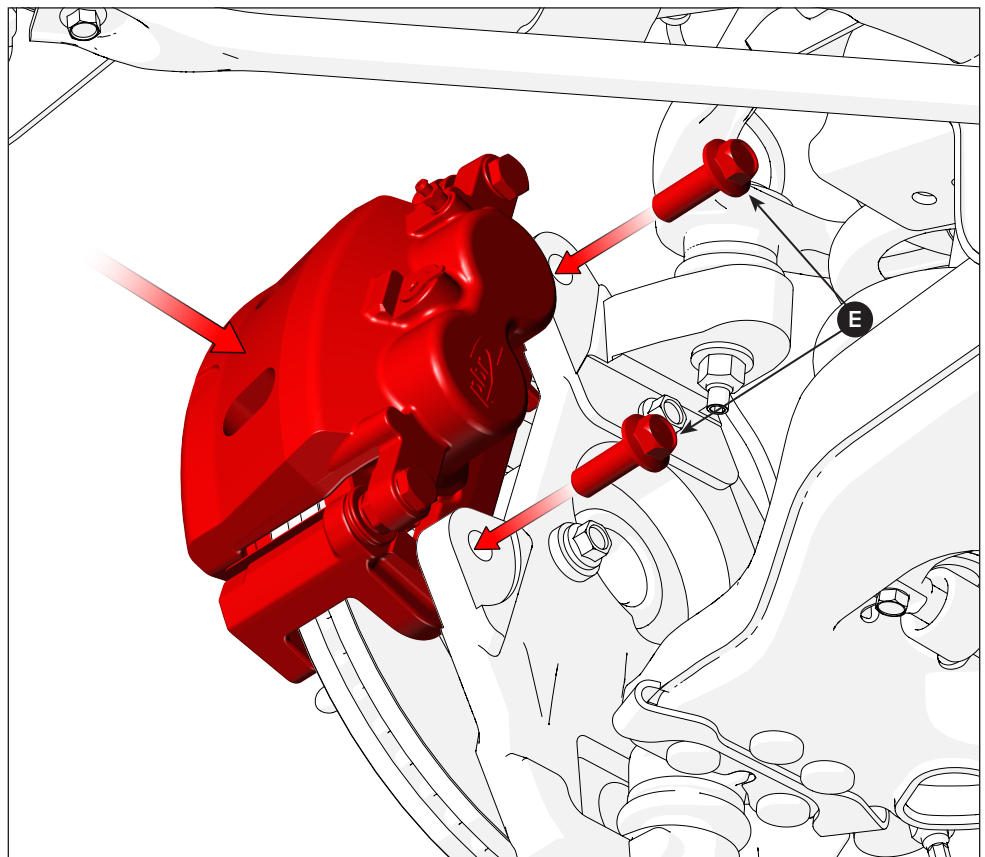
Repeat steps 3–22 for the passenger side drop spindle replacement.

Install the wheels, lower the vehicle, and torque the lug nuts to 140 lb-ft.

Rotate the wheels to check ball joint clearance. Turn the steering lock-to-lock and check for interference. On your first drive, check for tire contact with the body and any components.

Firmly press the brake pedal several times to reseat the brake pads before shifting into gear.

Note: Align the front end to factory specs before driving.



PROFORGED MILLION-MILE LIMITED WARRANTY

Warranty Coverage: Proforged warrants its steering and chassis components to the original purchaser to be free from defects in material and workmanship for 1,000,000 miles, provided the product is registered at proforged.com/warranty-registration within 90 days of purchase.

Exclusions: This warranty will not apply if the product has been installed on a vehicle used primarily for racing, competition, or off-road purposes, subjected to misuse, neglect, abuse, accident, improper installation, altered, modified, or repaired with non-genuine Proforged components, damaged by unrelated vehicle issues or external causes beyond normal road use, or affected only by cosmetic blemishes or normal wear not impacting function.

Remedy: If a registered product fails due to a defect in material or workmanship under normal use, Proforged will replace it with the same or an equivalent product. Coverage applies to product replacement only. Refunds, labor charges, or other associated costs are not included.

Limitation of Liability: Proforged shall determine whether a product is defective or qualifies under this warranty. Liability is limited to replacement (or refund in rare cases). Proforged shall not be liable for indirect, incidental, consequential, special, exemplary, or punitive damages, loss of use, inconvenience, commercial loss, or loss of time. In no event will liability exceed the purchase price of the defective product. All warranty obligations, terms, and conditions are subject to amendment, change, or discontinuation at Proforged's discretion at any time without notice.

State Laws & Other Rights: Some states (or jurisdictions) do not allow exclusion or limitation of incidental or consequential damages or implied warranties, so those exclusions or limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary by state.



