

2018 DRIVELINE/AXLE

Propeller Shaft - Traverse

SPECIFICATIONS

FASTENER SPECIFICATIONS

Single Use Non-Threaded Fasteners/Components

NOTE: <i>All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.</i>	
Application	
O-Ring @ Differential Carrier Assembly	
Power Transfer Unit Propeller Shaft Retainer	
Power Transfer Unit Propeller Shaft Seal	
Propeller Shaft to Differential Carrier Interface Retainer	

Reusable Threaded Fastener Tightening Specifications

NOTE: <i>All fasteners listed in this table can be reused after removal.</i>	
Application	Specification
	Metric (English)
Rear Propeller Shaft Bearing Bracket Bolt	58 N.m (43 lb ft)

DIAGNOSTIC INFORMATION AND PROCEDURES

SYMPTOMS - PROPELLER SHAFT

Before beginning diagnosis, review the system description and operation in order to familiarize yourself with the system function. [Propeller Shaft Description and Operation](#)

Classifying the Symptom

Propeller Shaft symptoms can usually be classified into the following categories:

- Leaks
- Noises
- Vibrations

Leak and noise related symptoms are described within the propeller shaft section.

Vibration related symptoms are described within general information. [Symptoms - Vibration Diagnosis and Correction](#)

Visual/Physical Inspection

- Inspect the system for aftermarket devices which could affect the operation of the propeller shaft.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Symptom List

Refer to [Propeller Shaft Diagnosis](#) in order to diagnose the symptom.

PROPELLER SHAFT DIAGNOSIS

Review the propeller shaft description and operation. [Propeller Shaft Description and Operation](#)

The individual propeller shafts and the center support bearing are not serviced separately.

Inspect for loose or disconnected propeller shaft-to-drive unit interface. Replace snap ring as necessary. [Two-Piece Propeller Shaft Replacement](#)

Inspect for loose or damaged center support bearing bolts. Tighten or replace as necessary. [Two-Piece Propeller Shaft Replacement](#)

The center support bearing should be inspected for the following:

- Tears
- Cracks
- Contamination
- Damaged support bushing

The propeller shaft must be replaced as a complete assembly if any of the above conditions exist. [Two-Piece Propeller Shaft Replacement](#)

REPAIR INSTRUCTIONS

TWO-PIECE PROPELLER SHAFT REPLACEMENT

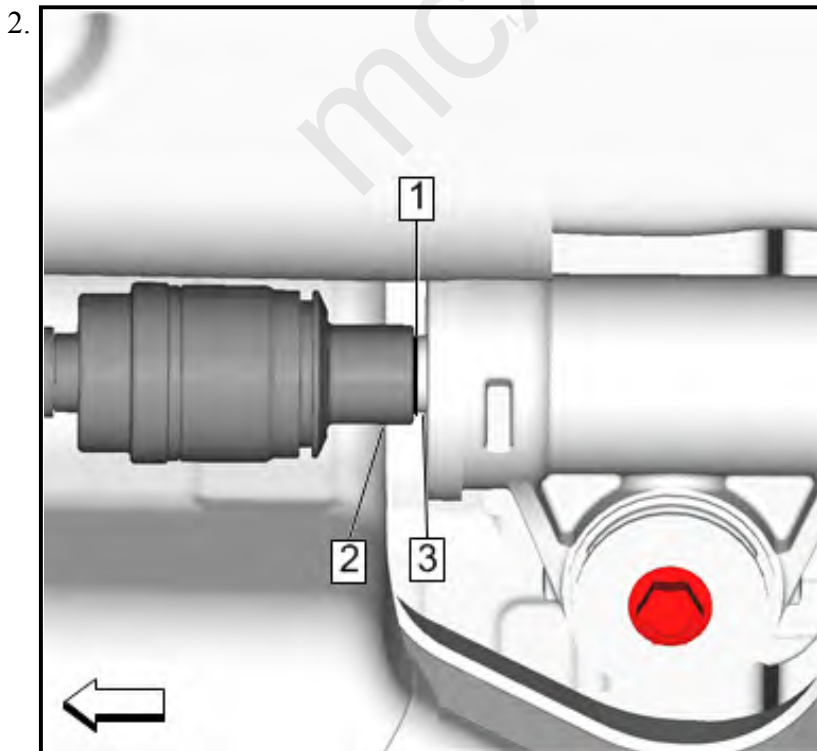
Special Tools

- DT-51329-A Drive Shaft Remover Adapter
- GE-2619-A Slide Hammer

Equivalent regional tools: [Special Tools](#)

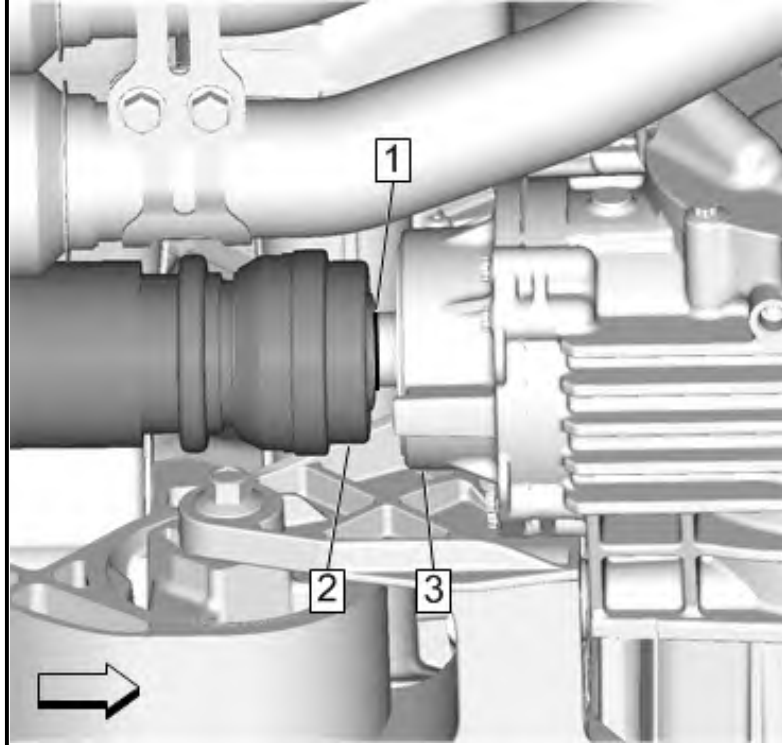
Removal Procedure

1. Raise and support the vehicle. [Lifting and Jacking the Vehicle](#)



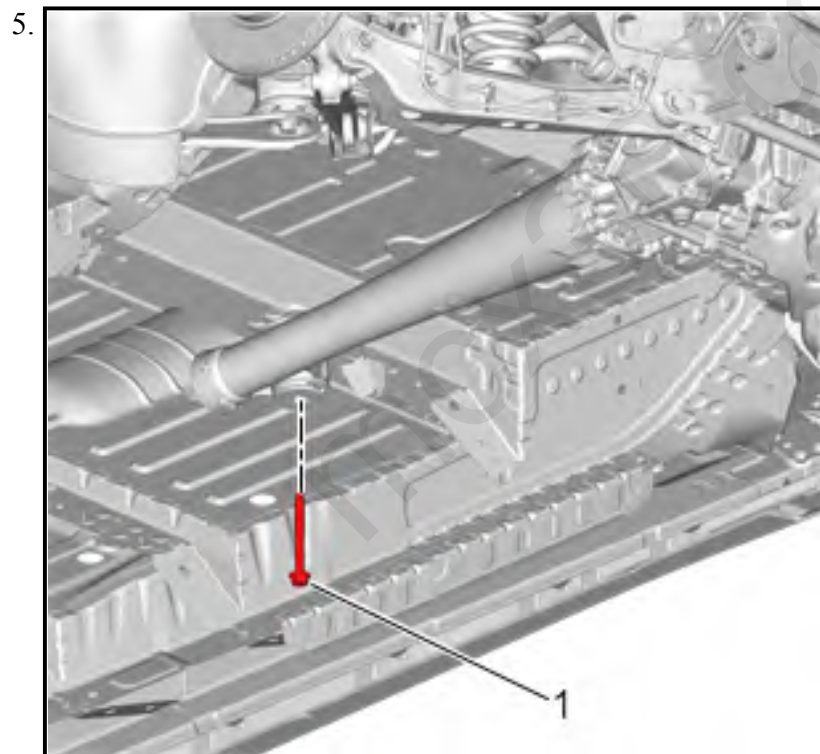
Using a paint pen or a suitable marker, mark the relationship of the propeller shaft (2) to the differential carrier assembly (3). This will be used as a visual reference for proper engagement location after re-installation.

- 3.



Using a paint pen or a suitable marker, mark the relationship of the propeller shaft (2) to the power transfer unit (3). This will be used as a visual reference for proper engagement location after re-installation.

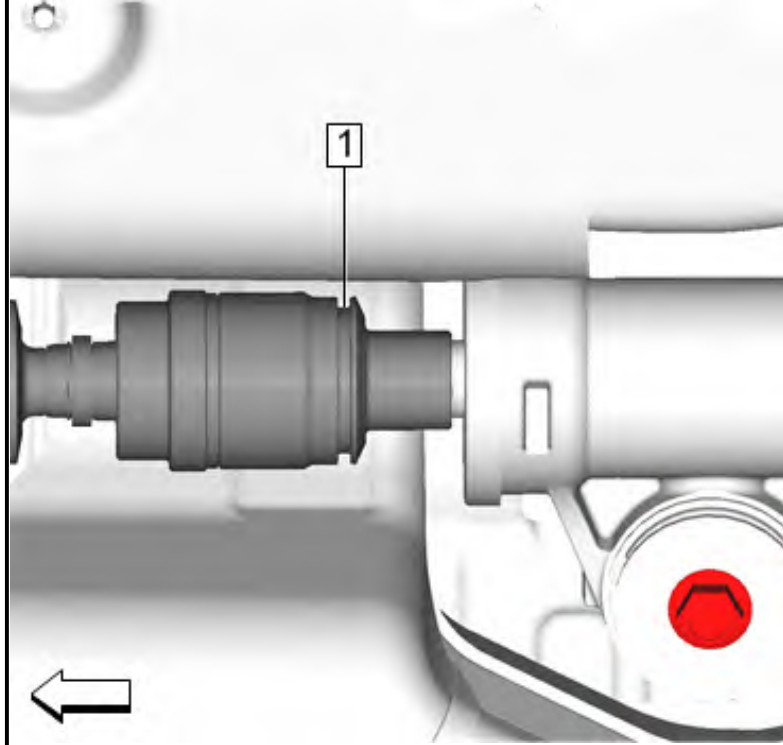
4. Support the front of the differential carrier assembly with a jack stand.



Differential Carrier Front Bolt (1) - Remove

6. Lower the front of the differential carrier assembly to provide additional clearance between the propeller shaft and the fuel tank.

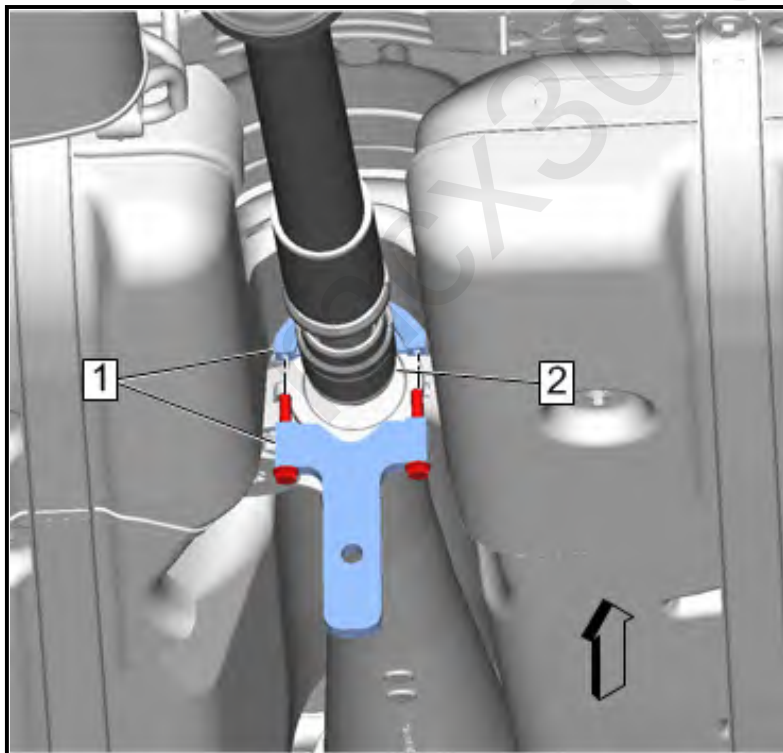




CAUTION: Use only the GM Special Tools Specified to remove the Propeller Shaft from the Differential Carrier Assembly. Prying on these components with any other tools may cause damage to either part which will result in improper performance or future failure.

Note the correct location of the propeller shaft service groove (1) prior to installing the **DT-51329-A** Drive Shaft Remover Adapter.

8.

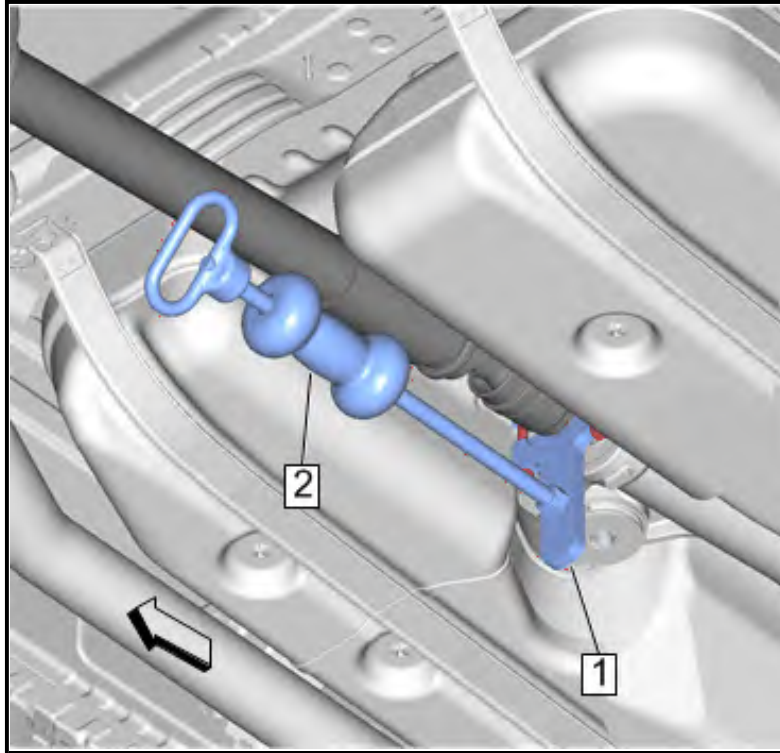


CAUTION: When removing the propeller shaft, **DO NOT** pry against the rear differential module slinger. Prying against the rear differential module slinger may cause damage to the slinger, which will result in unnecessary replacement of the rear differential module slinger.

NOTE: The 5/16" - 18 x 3.5" bolts included with the tool are to be used for this application.

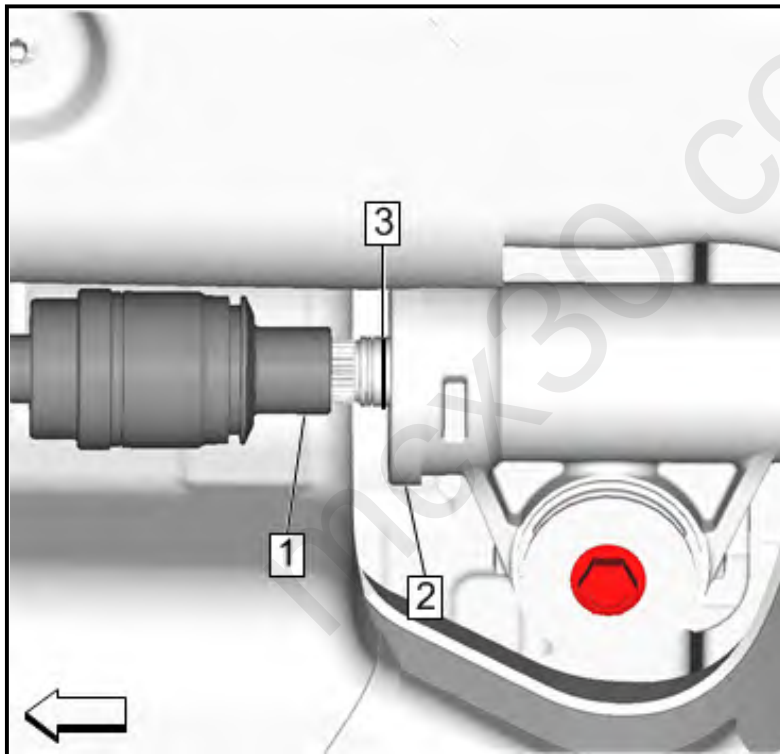
Install the **DT-51329-A** Drive Shaft Remover Adapter (1) at the service groove (2) located on the rear differential carrier assembly.

9.



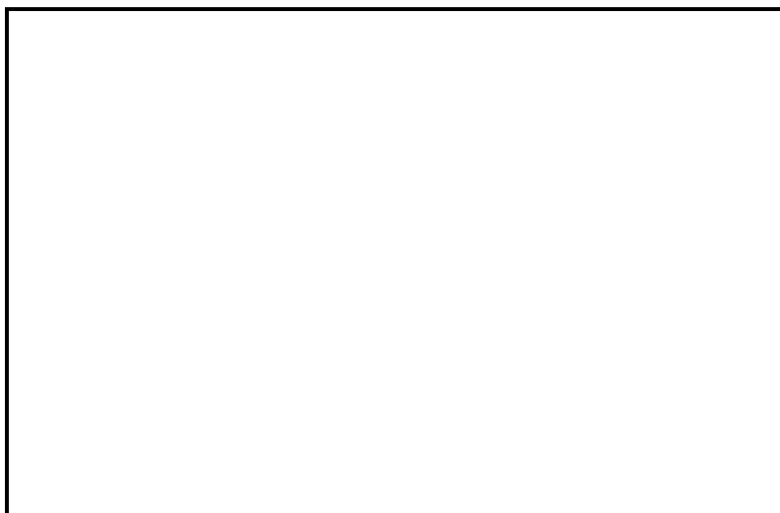
Install the **GE-2619-A** Slide Hammer (2) to the **DT-51329-A** Drive Shaft Remover Adapter (1).

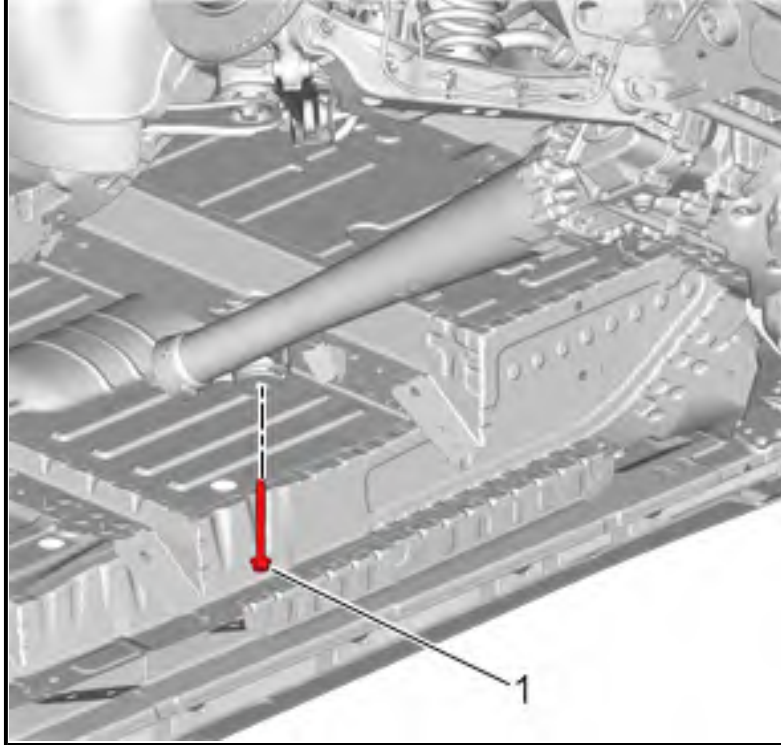
10.



Using the **GE-2619-A** Slide Hammer (2) and the **DT-51329-A** Drive Shaft Remover Adapter, separate the propeller shaft (1) from the rear differential carrier assembly (2).

11.

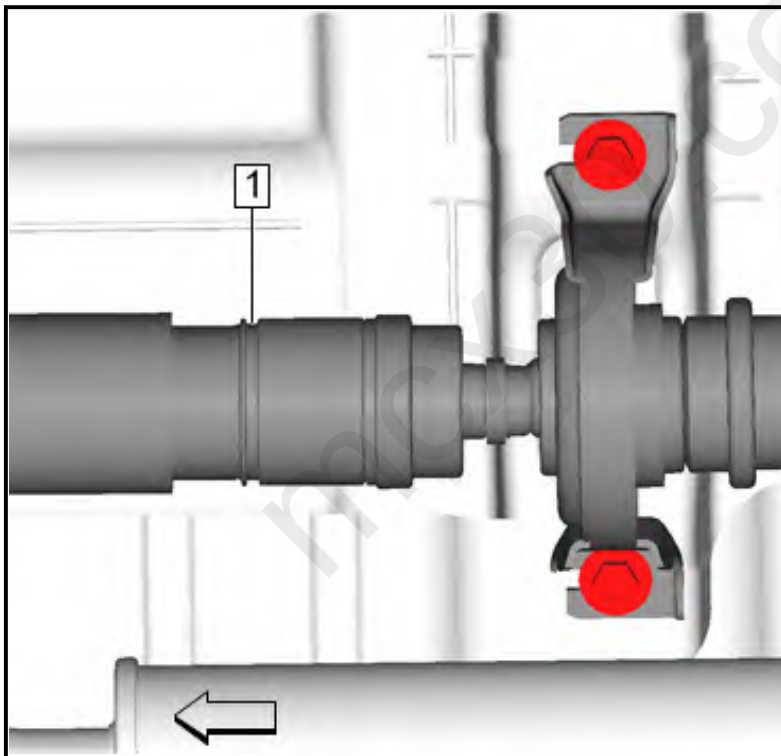




Differential Carrier Front Bolt (1) - Loosely install

12. Using a suitable jack stand, support the propeller shaft.

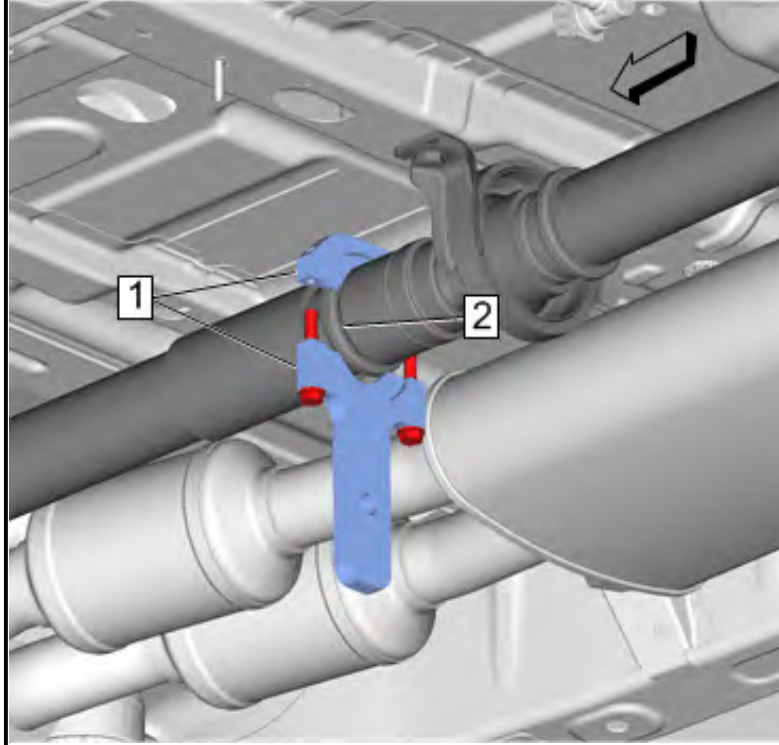
13.



Note the correct location of the propeller shaft service groove (1) prior to installing the **DT-51329-A** Drive Shaft Remover Adapter.

14.



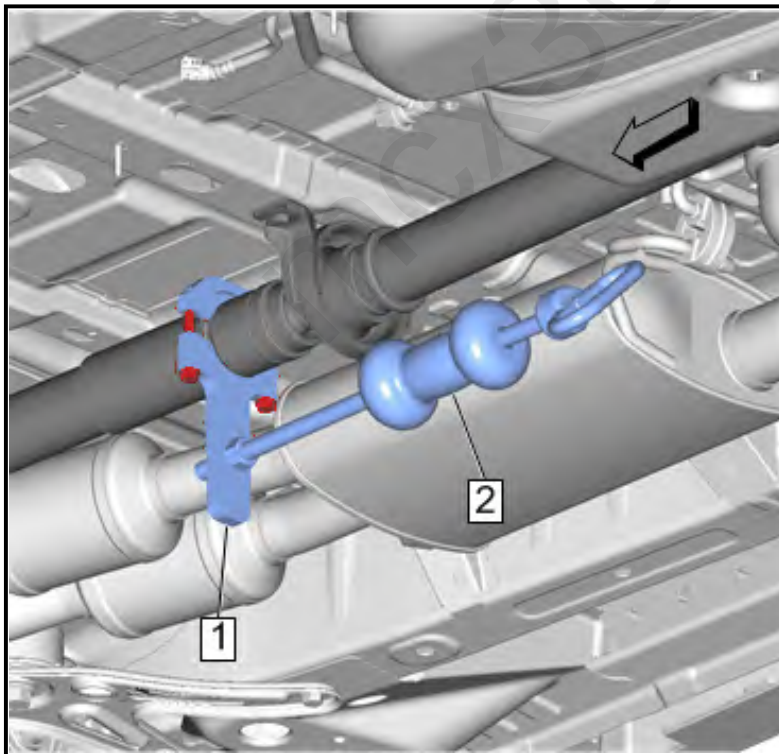


CAUTION: When removing the propeller shaft, **DO NOT** pry against the power transfer unit. The power transfer unit will be damaged if it is pried against, which will result in unnecessary replacement of the power transfer unit.

NOTE: The 5/16" - 18 x 3.5" bolts included with the tool are to be used for this application.

Install the **DT-51329-A** Drive Shaft Remover Adapter (1) at the service groove (2) located just forward of the propeller shaft bearing bracket.

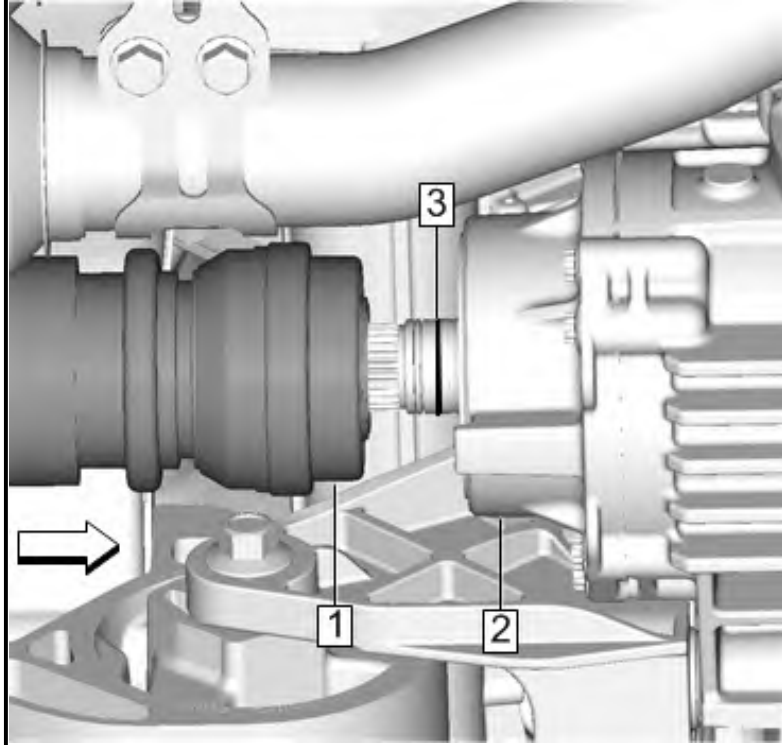
15.



Install the **GE-2619-A** Slide Hammer (2) to the **DT-51329-A** Drive Shaft Remover Adapter (1).

16.

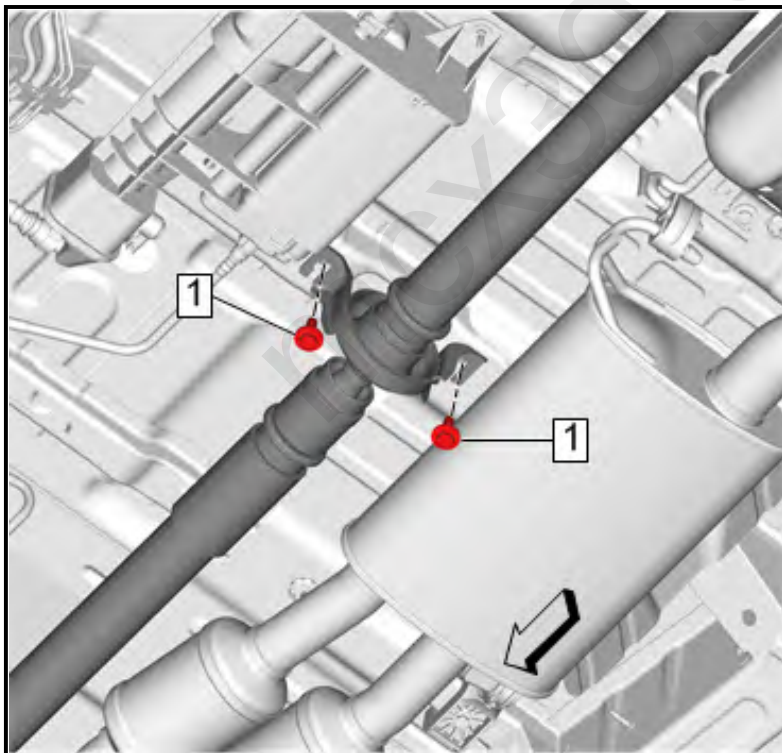




CAUTION: Use only the GM Special Tools Specified to remove the Propeller Shaft from the Differential Carrier Assembly. Prying on these components with any other tools may cause damage to either part which will result in improper performance or future failure.

Using the **GE-2619-A** Slide Hammer (2) and the **DT-51329-A** Drive Shaft Remover Adapter, separate the propeller shaft (1) from the power transfer unit (2).

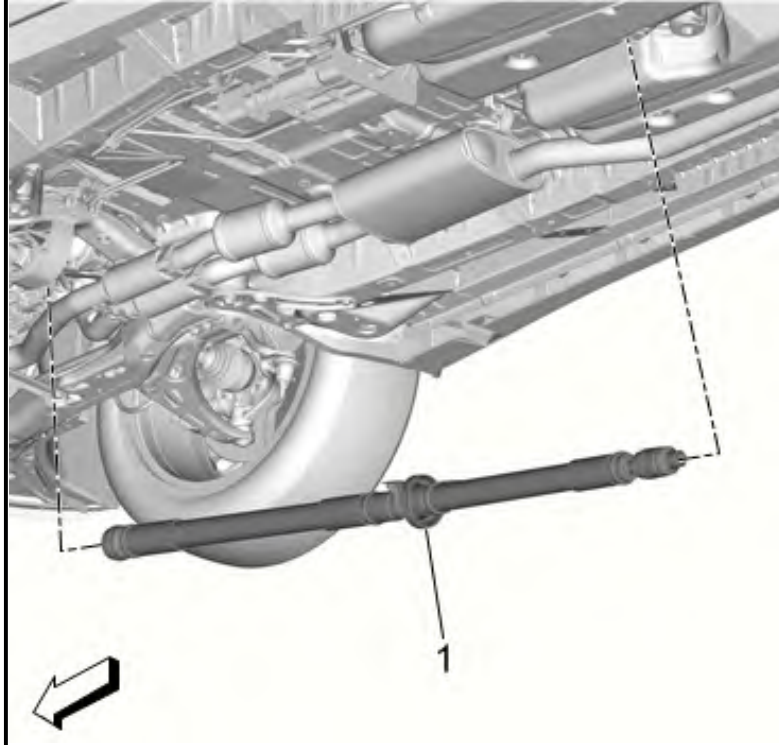
17.



Rear Propeller Shaft Bearing Bracket Bolt (1) - Remove [2x]

18.





CAUTION:

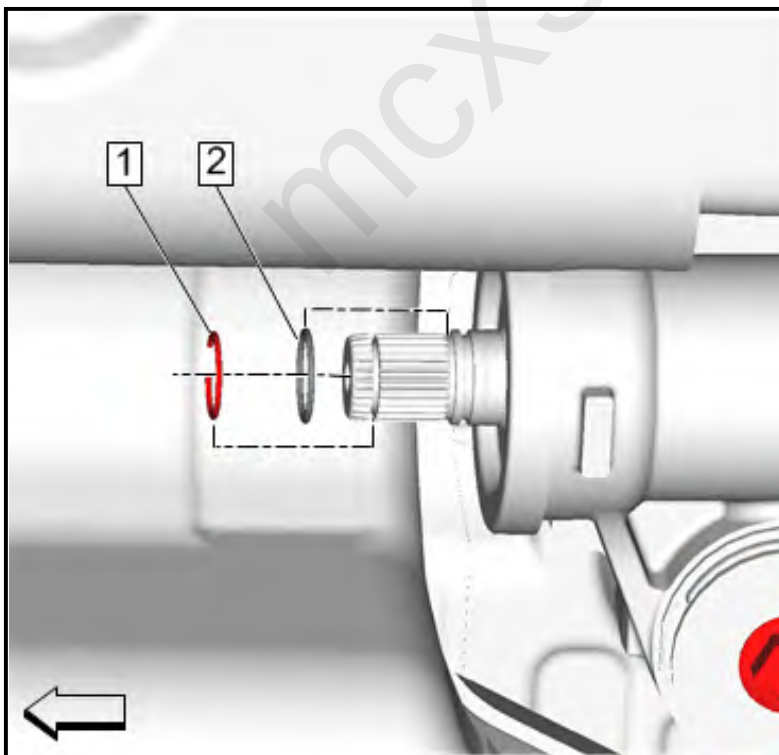
When servicing the propeller shaft, support both ends of the propeller shaft evenly to limit the movement of propeller shaft joints to a maximum of 10 degrees. Do not let the propeller shaft hang unsupported at any time, as it will cause damage to the propeller shaft boots

NOTE:

Due to the weight and length of the propeller shaft, not allowing excessive movement of the joints may be difficult during removal and installation. It is recommended to use the aid of an assistant to remove and install the propeller shaft.

Propeller Shaft (1) - Remove

19.

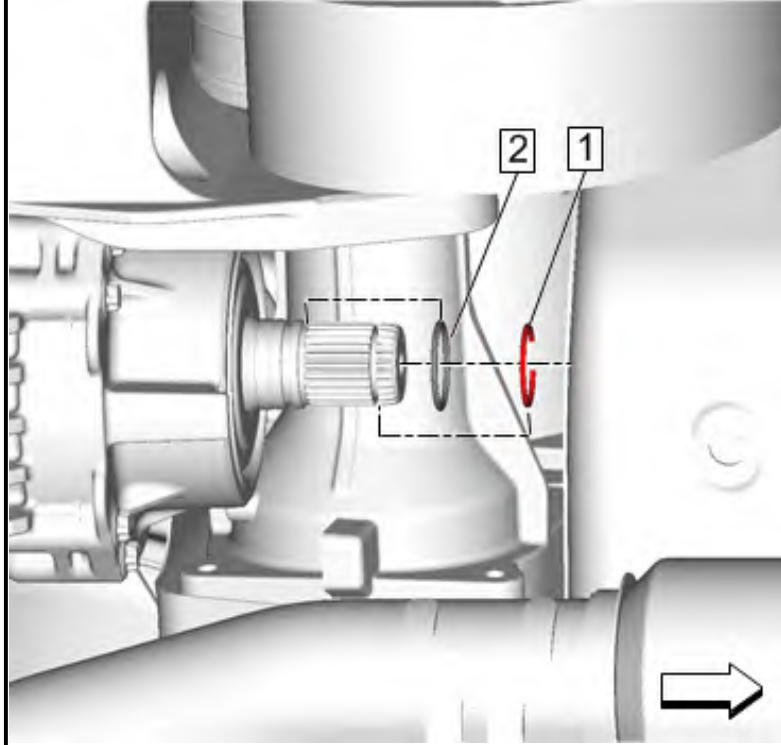


Propeller Shaft to Differential Carrier Interface Retainer (1) - Remove and DISCARD

20. O-Ring (2) @ Differential Carrier Assembly - Remove and DISCARD

21.

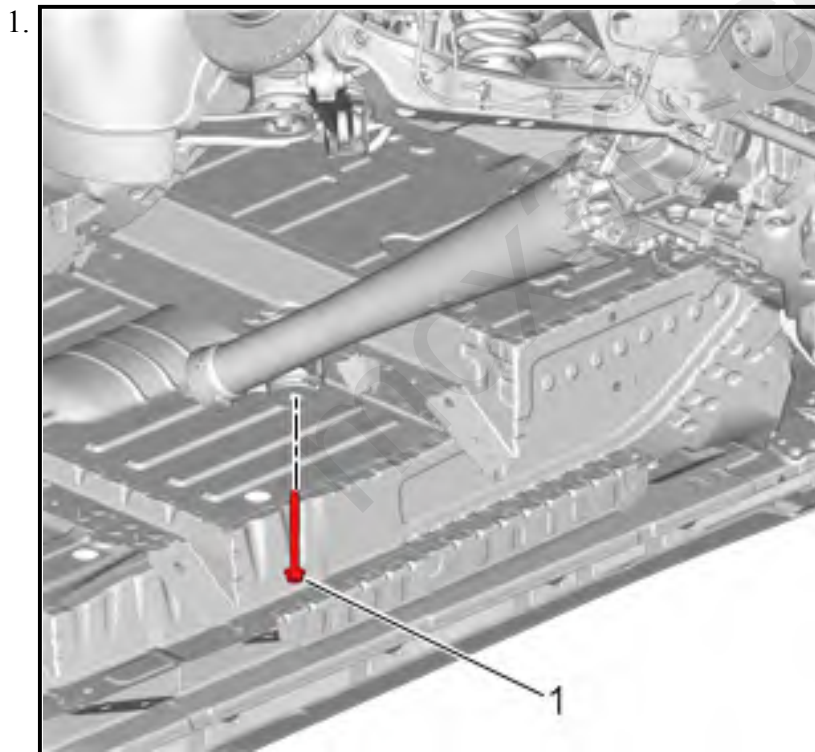




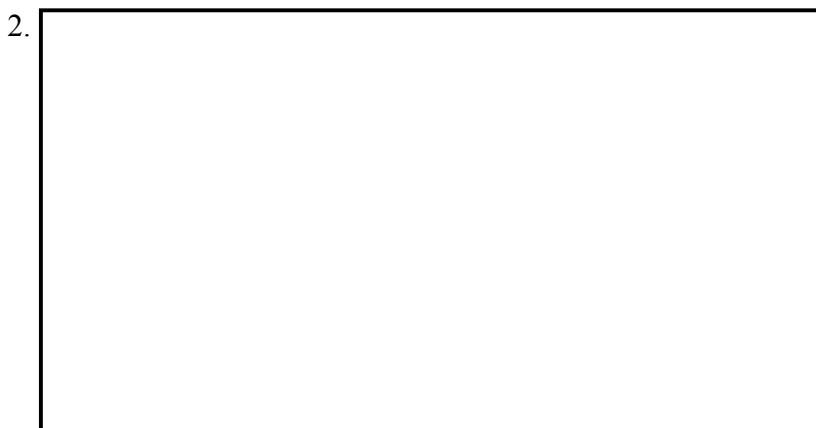
Power Transfer Unit Propeller Shaft Retainer (1) - Remove and DISCARD

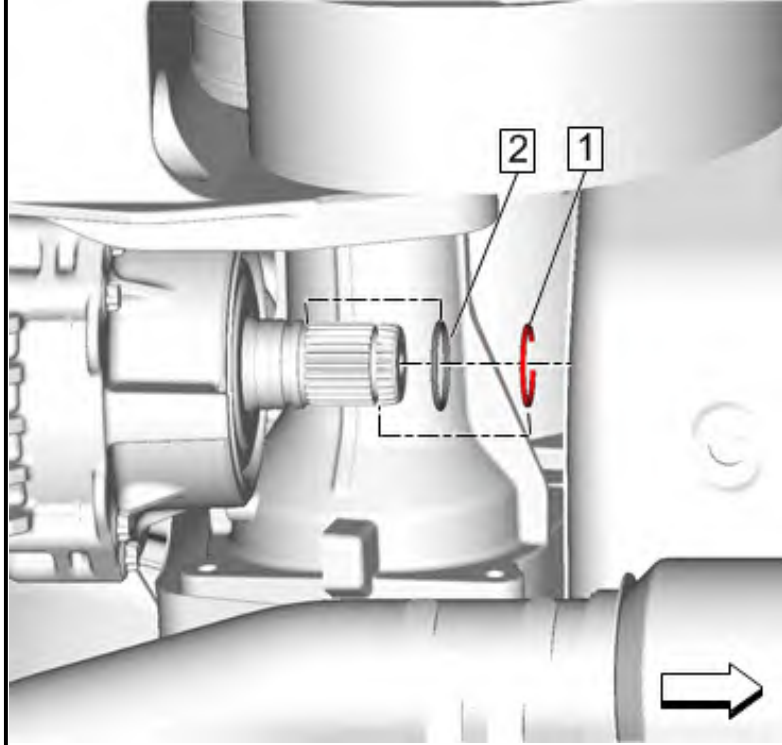
22. Power Transfer Unit Propeller Shaft Seal (2) - Remove and DISCARD

Installation Procedure



Differential Carrier Front Bolt (1) - Tighten - Differential Carrier Assembly Replacement

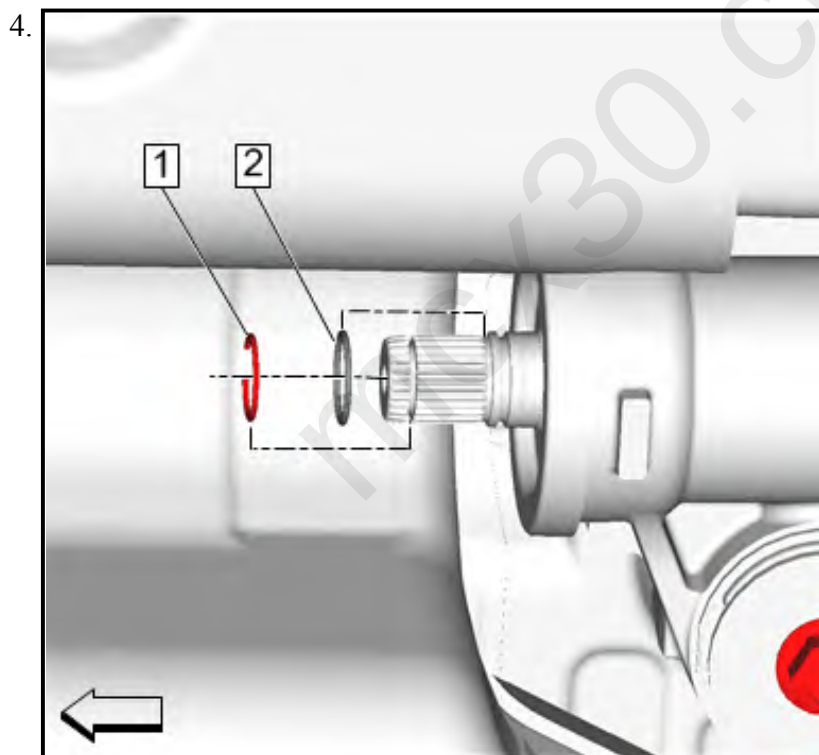




Power Transfer Unit Propeller Shaft Seal (2) - Install NEW

NOTE: Walk on the retaining ring over the nose of the shaft to avoid distortion.

3. Power Transfer Unit Propeller Shaft Retainer (1) - Install NEW

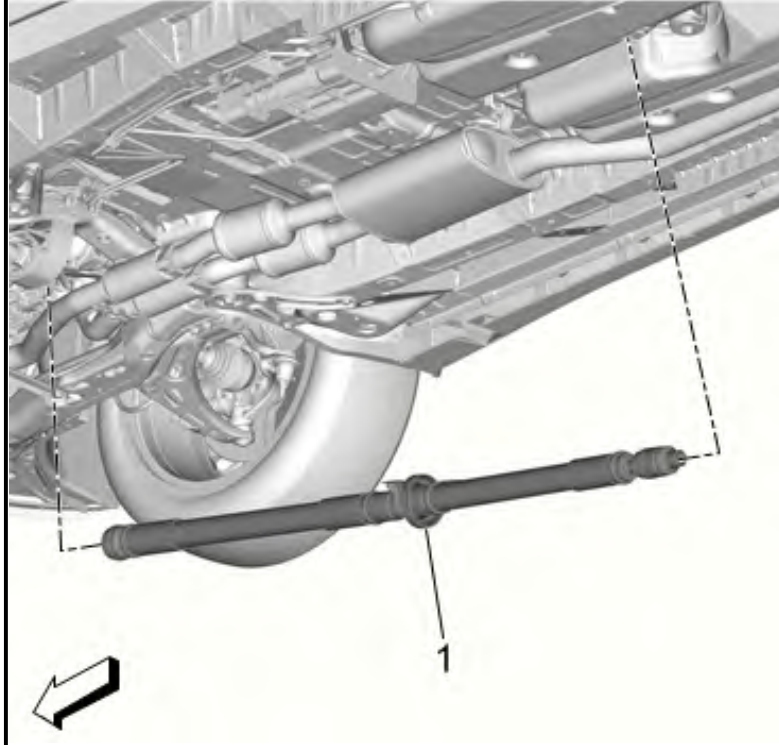


O-Ring (2) @ Differential Carrier Assembly - Install NEW

NOTE: Walk on the retaining ring over the nose of the shaft to avoid distortion.

5. Propeller Shaft to Differential Carrier Interface Retainer (1) - Install NEW





CAUTION:

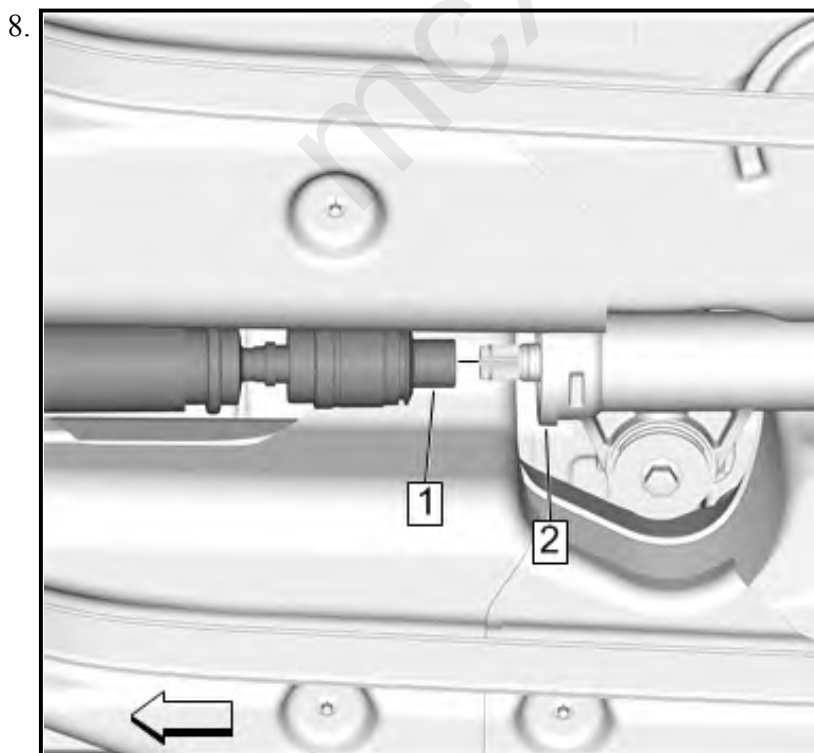
When servicing the propeller shaft, support both ends of the propeller shaft evenly to limit the movement of propeller shaft joints to a maximum of 10 degrees. Do not let the propeller shaft hang unsupported at any time, as it will cause damage to the propeller shaft boots

NOTE:

Due to the weight and length of the propeller shaft, not allowing excessive movement of the joints may be difficult during removal and installation. It is recommended to use the aid of an assistant to remove and install the propeller shaft.

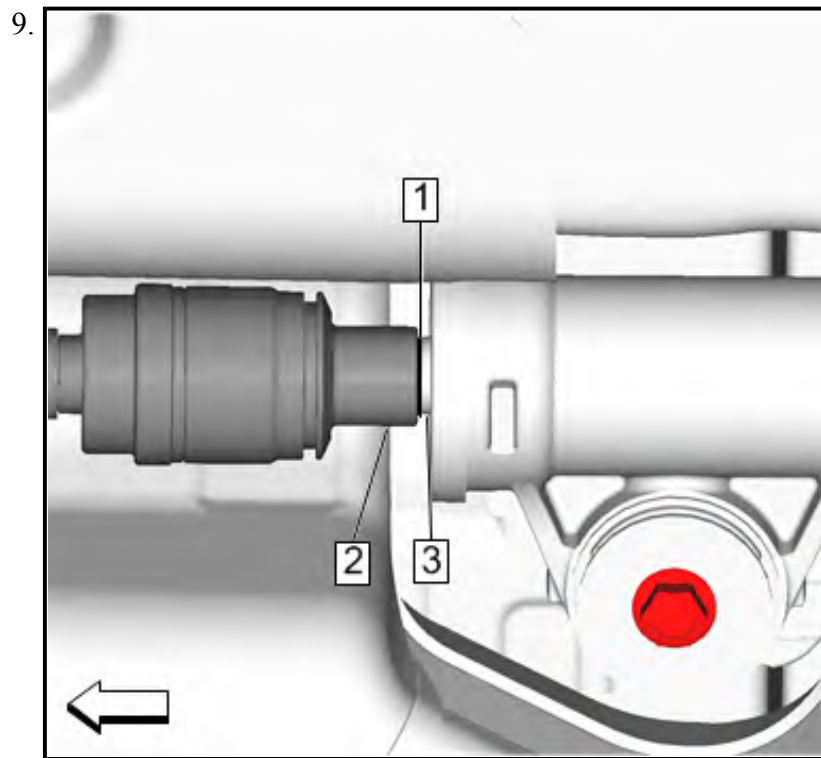
Propeller Shaft (1) - Install

7. Using a suitable jack stand, support the propeller shaft.

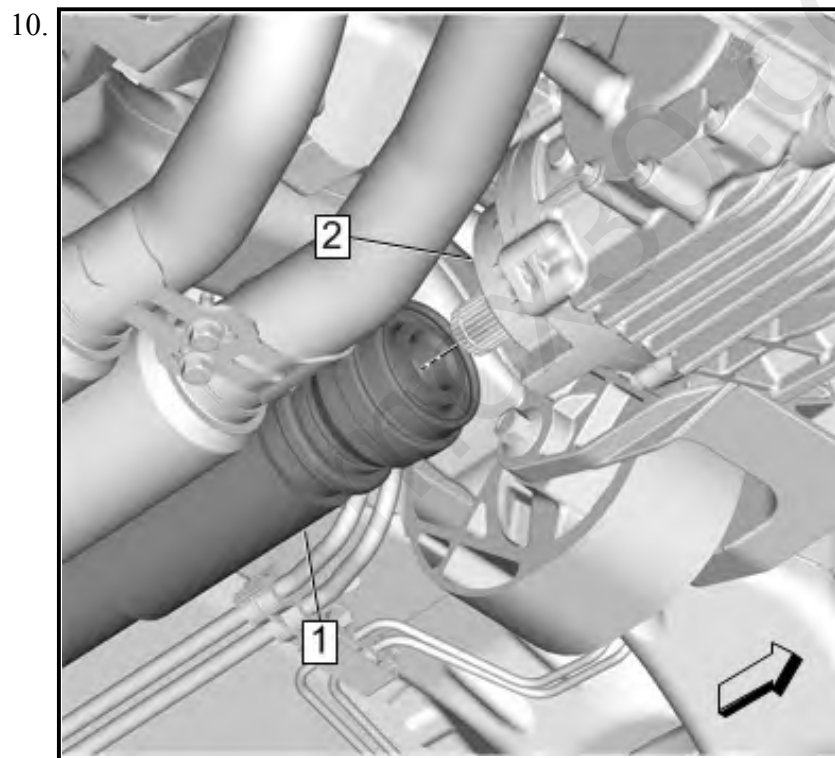


NOTE:

When installing the propeller shaft to the differential carrier assembly, align the balance index paint mark on the propeller shaft to the paint mark on the differential carrier assembly shield/slinger.

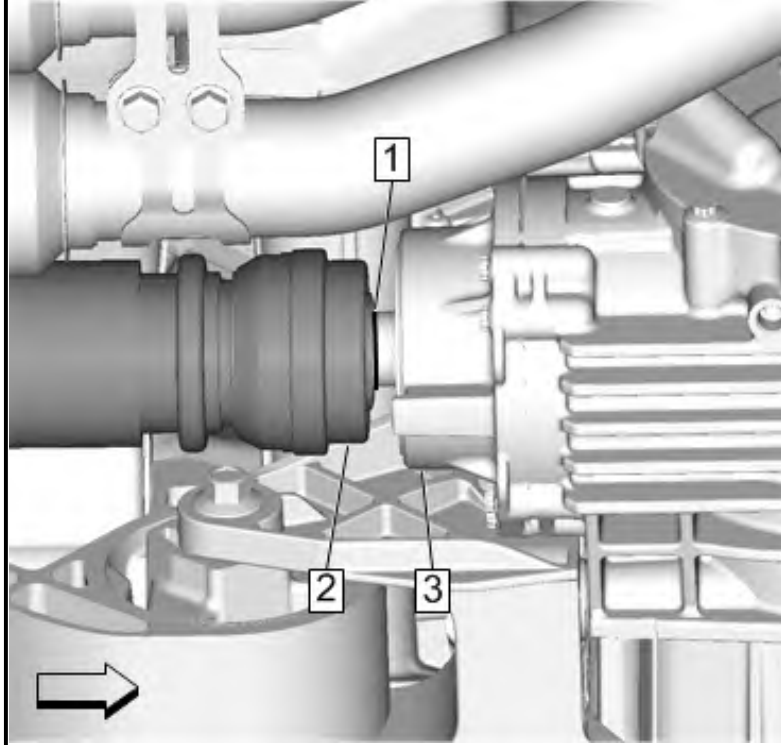


Install the propeller shaft (2) so that it aligns with the reference mark (1) at the differential carrier assembly (3).



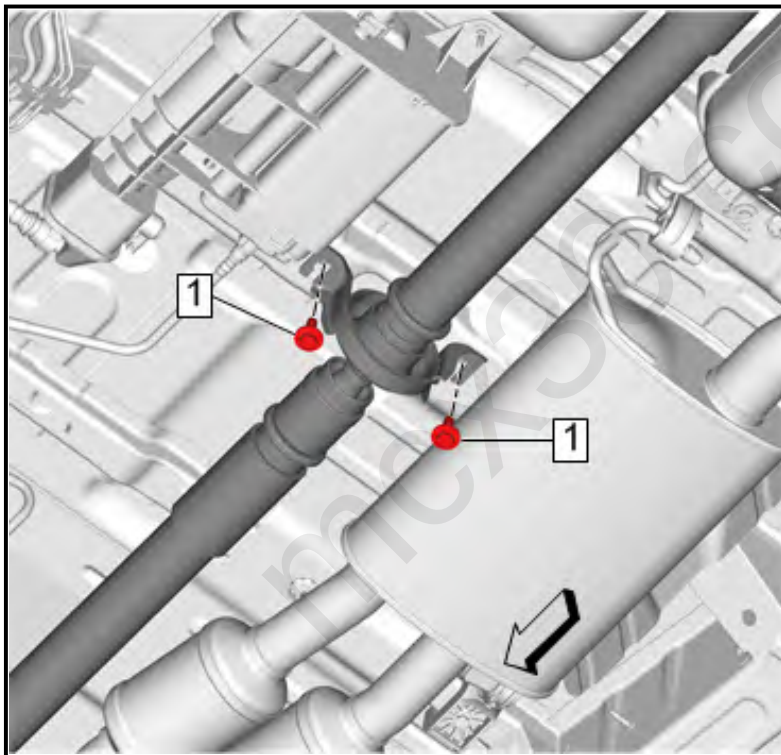
Propeller Shaft (1) @ Power Transfer Unit Rear Output Shaft (2) - Install





Install the propeller shaft (2) so that it aligns with the reference mark (1) at the power transfer unit (3).

12.



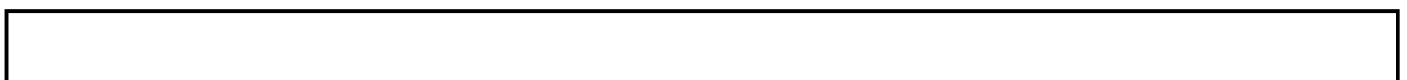
CAUTION: Refer to [Fastener Caution](#) .

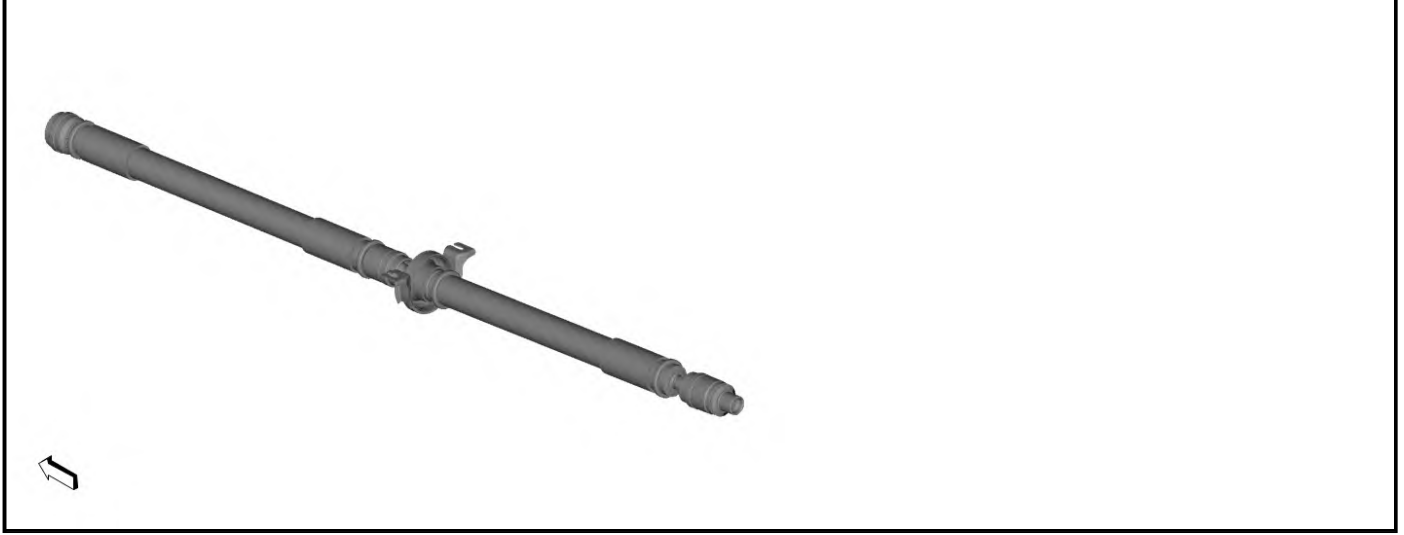
Rear Propeller Shaft Bearing Bracket Bolt (1) - Install and tighten [2x] 58 N.m (43 lb ft)

13. Conduct a retention check on the propeller shaft front and rear interface. Place hands around the propeller shaft tube just behind the interface and lightly pull on the propeller shaft tube without using leverage or body weight. For rear, place hands around the rear CV joint and pull without using leverage or body weight. The intention is to check that the retaining ring snapped into position, not to forcefully remove a correctly installed propeller shaft.
14. Remove the support and lower the vehicle.

DESCRIPTION AND OPERATION

PROPELLER SHAFT DESCRIPTION AND OPERATION





The propeller shaft assembly is a 2-piece design. The front shaft consists of a plunging constant velocity joint at the front and the rear.

The front and rear shafts are joined together at the center support bearing and are coupled with barreled snap rings. The center bearing provides support where the front and rear shafts mate and is bolted to the underbody.

The front female splines are retained to the male splines of the output shaft on the power take-off unit (PTU). This interface is retained by a barreled snap ring.

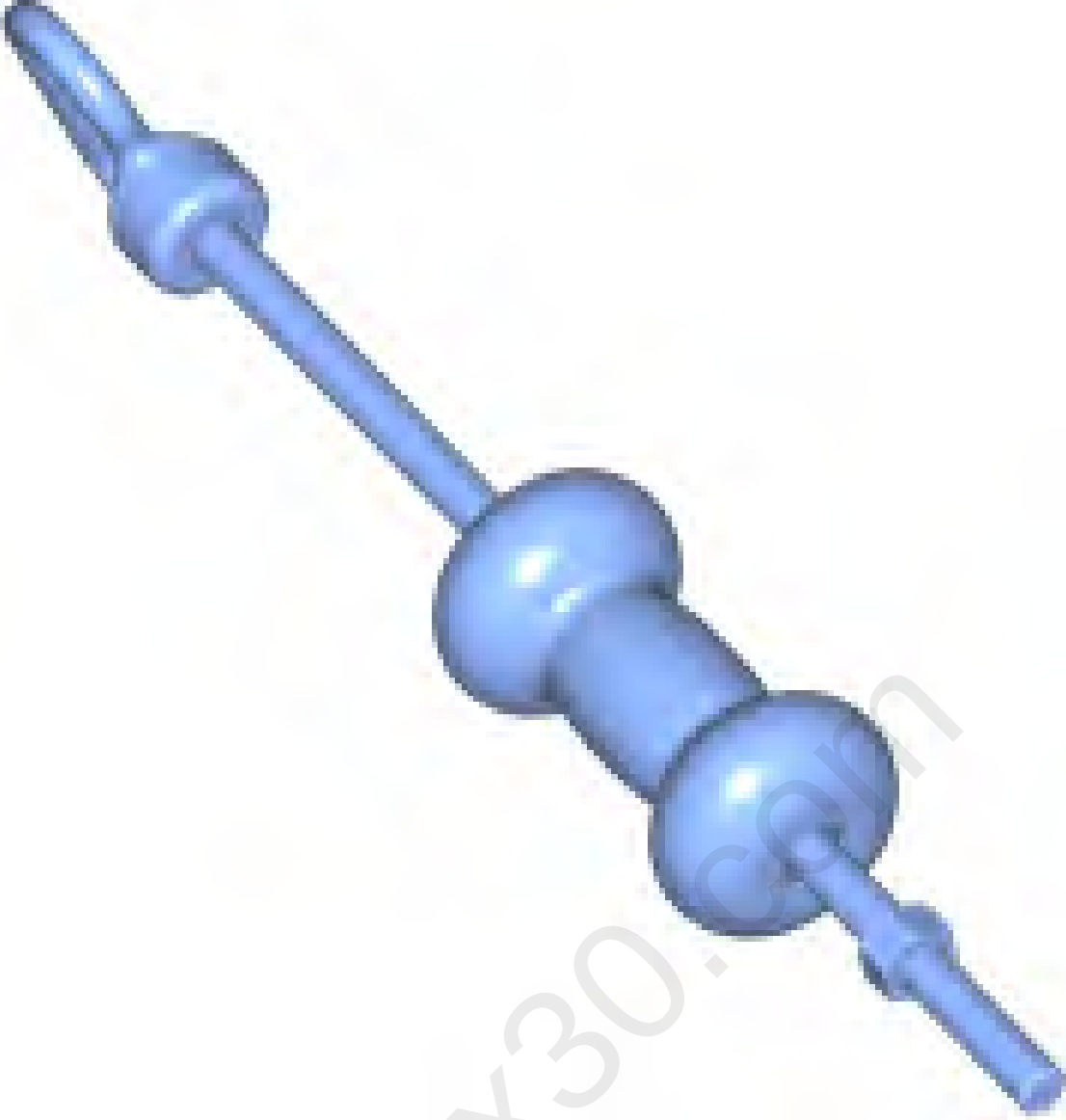
The rear female splines are retained to the male splines of the input shaft on the rear drive axle. This interface is retained by a barreled snap ring.

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

Illustration	Tool Number/Description
	DT-51329 Drive Shaft Remover Adapter

Illustration	Tool Number/Description
 The illustration shows a blue metal tool and three blue bolts. The tool has a long, cylindrical handle with a hexagonal base. The base has a circular opening in the center. Three blue bolts are shown to the left of the tool. A large, diagonal watermark 'mcx30.com' is overlaid across the image.	

Illustration	Tool Number/Description
 A blue slide hammer tool, consisting of a long handle with a sliding weight in the middle. The handle has a pointed end and a threaded end. The weight is a large, rounded cylinder with a smaller cylinder in the center. The tool is shown diagonally.	GE-2619-A J-2619-A J-2619-01 Slide Hammer