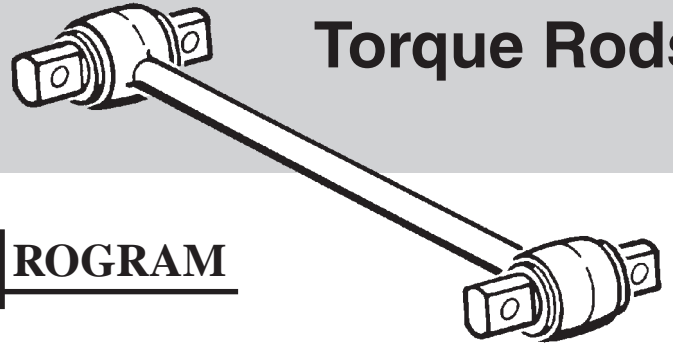


## Torque Rods



### **P**RODUCT **E**MPHASIS **P**ROGRAM

## What does a torque rod do?

The torque rod has a multi-functional role in truck, tractor and trailer suspensions. It controls driveline angles of the vehicle, restrains rotation of the axle housing while accelerating and braking, locates the axle and maintains alignment and absorbs leaning and cornering forces.

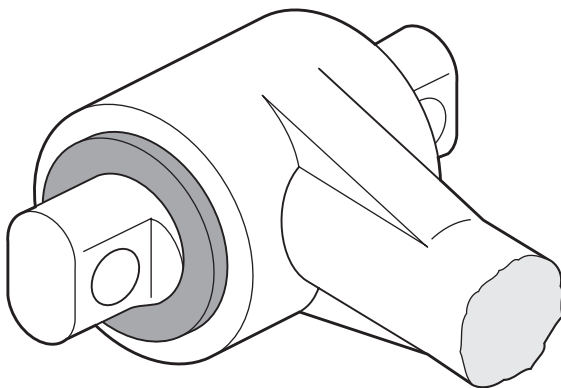
## Types of torque rods.

There are two major designs of torque rods specified by truck and suspension manufacturers.

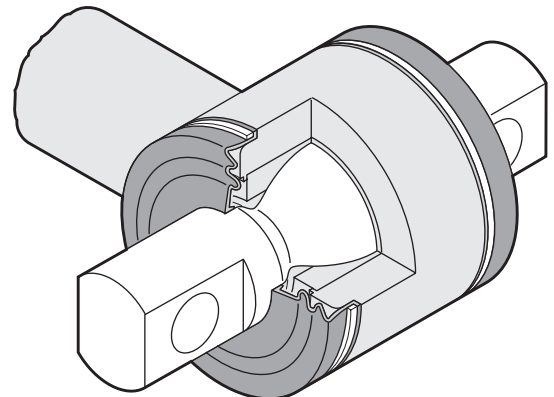
- Torque rods with rubber bushed rods in fixed and adjustable lengths
- Torque rods with “full ball” end designs

Each type has unique features and benefits depending on the service requirements and preference of the vehicle or suspension manufacturer.

- Replacement bushings and bushing cartridges are offered for most rubber-bushed rods. Normally torque rod replacement is not necessary unless it is bent or rod eyes are worn.
- Full ball designs provide longer service life do to their greater tolerance for angular movement. However, upon reaching the end of their service life the torque rod must be replaced. Full ball designs cannot be re-bushed.



**Rubber Bushing Design**

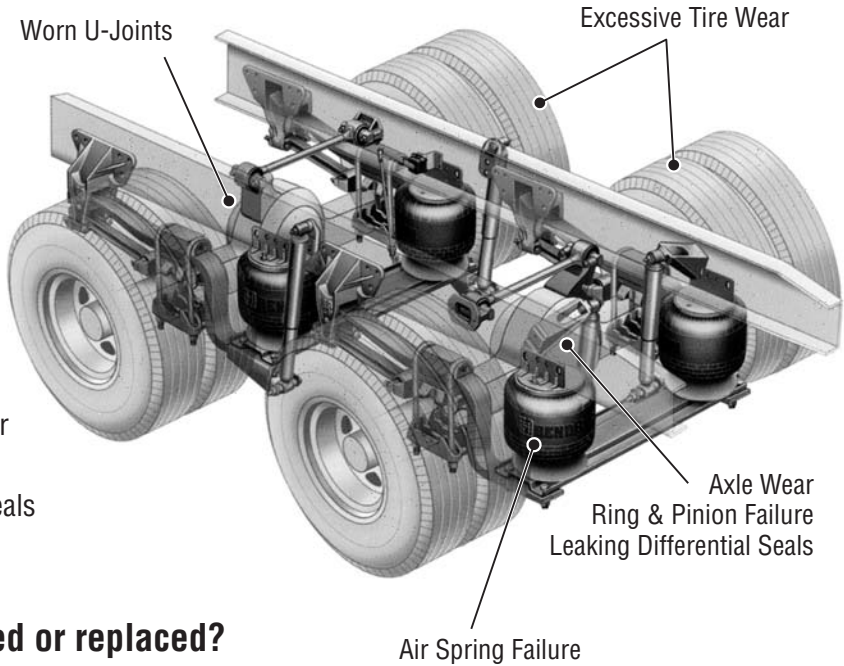


**Full Ball Design**

## Why should torque rods be repaired or replaced?

The main function of torque rods is to maintain axle alignment during acceleration and braking and restrain axle rotation. When a torque rod becomes worn and fails to perform these functions, a multitude of problems occur.

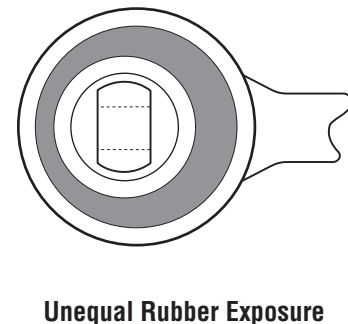
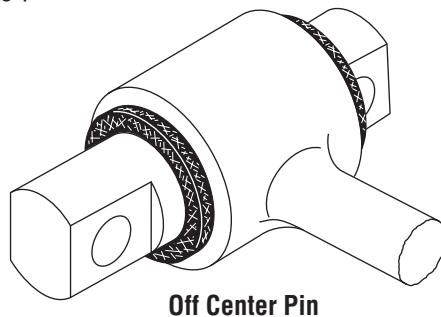
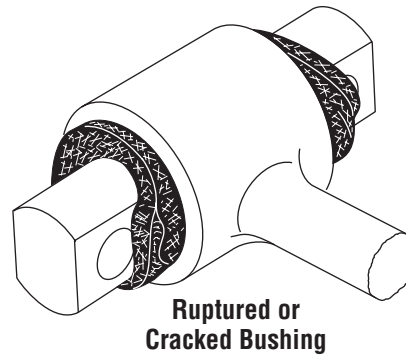
- Back slap
- Driveline whip
- Axle hop
- U joint failure
- Excessive tire wear
- Axle housing fatigue
- Ring & pinion failure
- Suspension misalignment
- Drive shaft failure
- Beam bushing failure or premature wear
- Air spring failure or premature wear.
- Leaking transmission and differential seals



## When should torque rods be repaired or replaced?

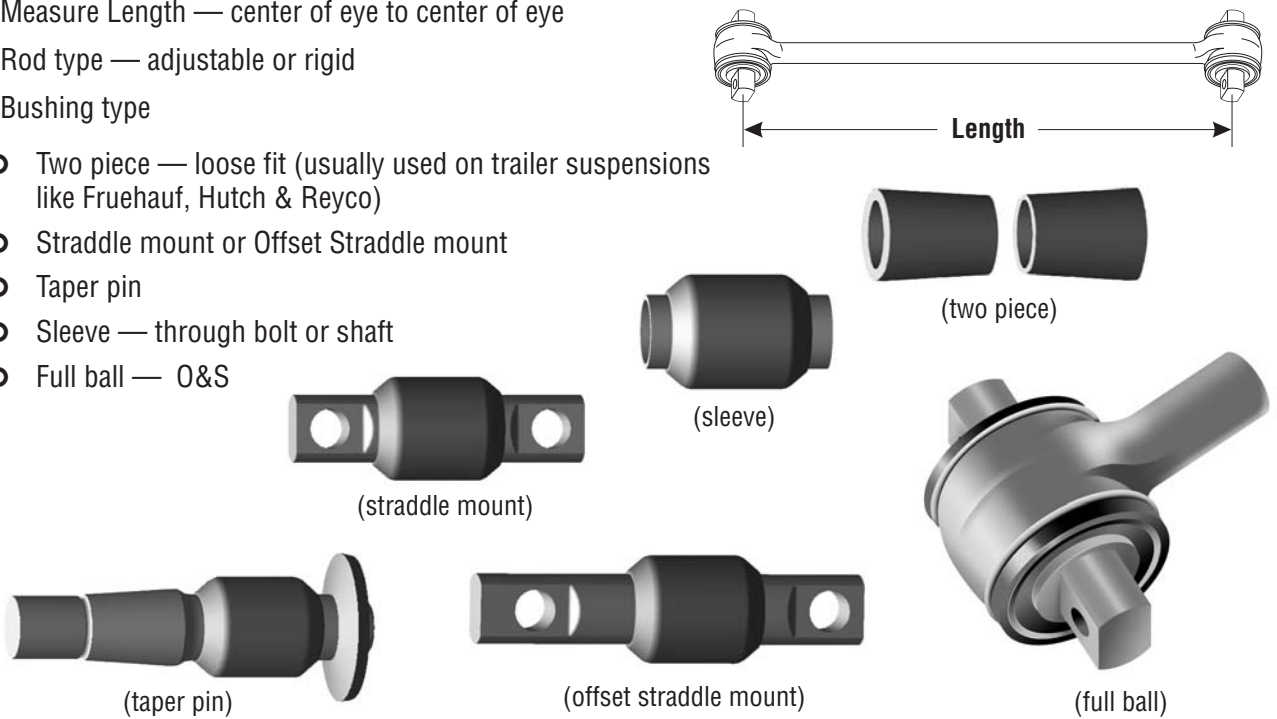
As with most suspension components, torque rods are subject to damage and wear. Torque rods should be checked on a regular basis and at scheduled preventative maintenance inspections.

- When torque rod is bent
- When there is more than 1/8" of movement in the rod end. Check by hand or by prying against the torque rod end.
- Ruptured or cracked bushings
- Off center pins
- Unequal rubber exposure
- Expanded mounting pin bolt hole



**Identification and selection of replacement of torque rods or bushings**

- Measure Length — center of eye to center of eye
- Rod type — adjustable or rigid
- Bushing type
  - Two piece — loose fit (usually used on trailer suspensions like Fruehauf, Hutch & Reyco)
  - Straddle mount or Offset Straddle mount
  - Taper pin
  - Sleeve — through bolt or shaft
  - Full ball — O&S



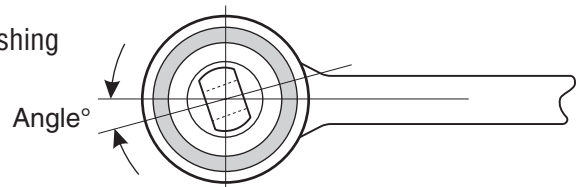
Refer to Dayton Parts catalog 211 where easy to use tables will lead you to the proper replacement torque rod.

**Bushing replacement**

General torque rod bushing replacement procedure

- Push out old bushing make note of center pin position. *Do not use heat or cutting torch to remove bushing from rod. Use of heat may affect strength of torque rod.*
- Clean bores and inspect rod ends remove nicks, burrs and metal build up with emery cloth.
- Install replacement bushing or cartridge make sure straddle pin angles are properly aligned.

Make note of bushing pin angle before removing bushing — install new bushing at same angle.



**Rubber OD bushings**

Lube rod end and bushing with vegetable oil. *Do not use petroleum-based lubricants; they will cause premature deterioration of the rubber.*

**Metal OD bushings**

- Clean outer metals of new bushings with emery cloth to remove phosphate or other coatings and dirt
- Apply thin coating of clean grease to outer metal
- After pressing in bushing remove excess grease

Dayton Parts Distributors can supply all your torque rod and torque rod bushing repair/replacement needs, whether rubber-bushed or full ball design.

**Replacement Cartridges and Bushings**

**O & S Uni-Rod™ Kits**

**Full Ball Fixed Length**

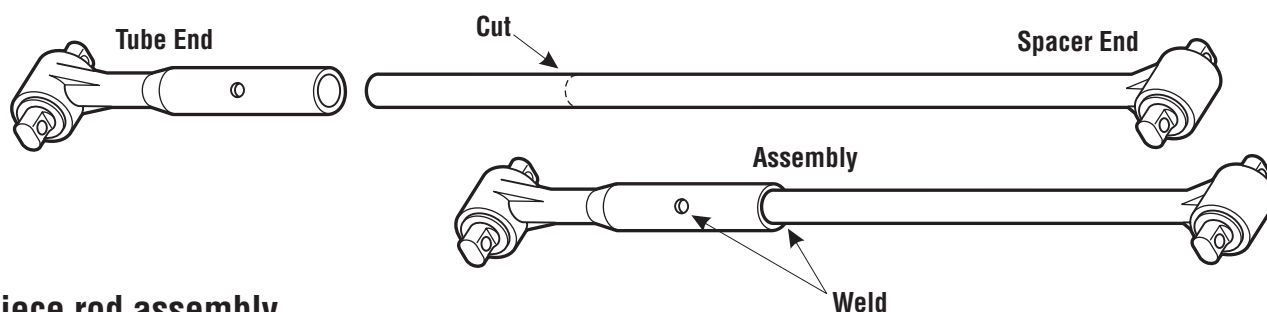
**Ultra-Rod™ Two Piece Rod Components**

**Hendrickson Bushings and Cartridges**

**Clevite Torque Rods and Bushings**

## Rigid torque rod replacement

Because of the infinite possible rod lengths required for replacement of rigid torque rods, manufacturers have developed “two piece” torque rod components. Thus allowing the installer the flexibility to “make” a rod to the required length as needed. Various end configurations are available in both full ball and rubber-bushed styles.



## Two piece rod assembly

- Measure used rod length — center to center
- Determine end configurations — straddle mount, taper pin or sleeve
- Select replacement end type — rubber-bushed or full ball
- Cut rod ends to determined length — **Do not flame cut.** *Flame cutting will weaken the torque rod resulting in possible rod failure and serious injury or death.*

Fully seat rod ends align and plug weld sleeve hole, then fillet weld sleeve and rod. *Specific welding instructions from the rod manufacturer should be followed. Failure to do so may produce an inferior assembly.*

### Related items

Universal Joints  
Differential Seals  
Beam Bushings  
Suspension Bushings  
Air Springs & Suspension Components

### Catalogs and support material

Torque Rods & Bushings - Catalog 211  
Leaf Springs - Catalog 215  
Torque Rod Stock Guide  
Ultra Rod™ — Service Instructions 45745-143  
Ultra Rod™ — FAB Brochure 45745-146  
Tech Service — 800-822-2042  
Web Site — [www.daytonparts.com](http://www.daytonparts.com)