

# ProTech

Supporting Today's Professional Technician



## CV DO's and DON'Ts

**CARDONE**

- Don't: Use pneumatic tools on driveaxle components. You may damage threads or distort components.
- Do: Mark components prior to removal to assure proper referencing upon reinstallation.
- Don't: Remove both axles at the same time. Alignment of side gears will be lost.
- Do: Use a torque wrench when installing axle nuts.
- Don't: Use a hammer on the threaded end of the shaft. It will damage the core.
- Do: Handle ABS system CV axles with caution. Damage to the ABS sensor ring can occur resulting in a non functional ABS system.
- Don't: Raise a vehicle on the frame contact lift without supporting the suspension. Running the vehicle in gear without supporting the suspension may damage the CV joints.
- Do: Compare the replacement unit to the original to ensure the proper application.
- Don't: Ignore noises or vibrations. It may lead to more serious problems.
- Do: Use caution when draining the transaxle fluid. It may be hot and cause injury.
- Don't: Allow CV axles to hang unsupported. Always support the disconnected end of the axle.
- Do: Inspect wheel bearings, strut bearings and seals for wear and/or damage prior to installation of the replacement axle.
- Don't: Reuse prevailing type hardware. They cannot be reused.
- Do: Check the integrity of the motor/transmission mounts and mounting hardware. Broken mounts can affect drivetrain alignment and damage the CV assembly.
- Don't: Strike frozen axles with a hammer to remove them. Use the proper axle press for the job.

# ProTech

Supporting Today's Professional Technician



## Don't Reuse Torque-type CV Axle Nuts

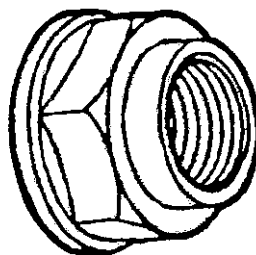
**Application:** Front wheel drive vehicles with prevailing torque-type retaining unit.

**Problem:** Outer Constant Velocity stub shaft has movement in and out with resulting clunking and damage to the outer joint.

**Cause:** Reuse of retaining nut of a prevailing torque type.

**Solution:** Discard old retaining torque-type nut and always use a new one.

Prevailing torque-type nut



**Do Not Reuse**

**Note:** Prevailing torque-type hardware will be supplied on applications where required.

# ProTech

Supporting Today's Professional Technician



## Tips To Prevent CV Axle From Getting Stuck in Transmission

### Application:

All Front Wheel Drive Vehicles With CV Axles.

### Problem:

Inability to remove inner CV axle joint from transmission.

### Cause:

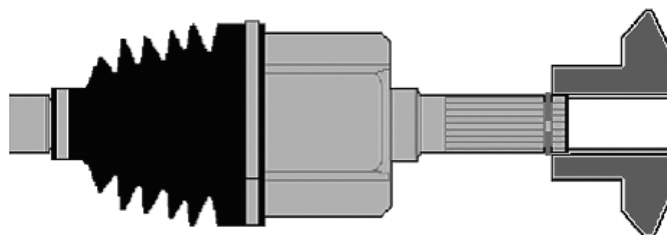
C-clip mis-shaped or rolled over upon installation.

### Solution:

Useful tips before installing axle into transmission:

- Use a small amount of light grease to help slide the splines and clip in.
- Orient the clip opening at 12:00 to prevent the ends from rolling over.
- Use a special compress tool where applicable.
- Do not use a hammer or force the axle into the transmission.

Top View



### Note:

This bulletin is supplied as technical information only and is not an authorization for repair.

# ProTech

Supporting Today's Professional Technician



## Chrysler Drivetrain Alignment Prevents CV Pop-Out

### Problem:

Vibration, inner joint pulling out of the transaxle or catastrophic axle failure, leaving the vehicle dead in its tracks (especially Chrysler products).

### Cause:

Drivetrain alignment out of specifications caused by:

- Defective or maladjusted engine mounts
- Missing or loose mounting hardware
- Front end damage

### Solution:

No need for an engineer to solve this problem. Check the drivetrain alignment as follows:

**Equal length axles:** With the vehicle on the ground, measure the distance from the small boot clamp on the outer joint to the large boot clamp on the inner joint. If unequal, loosen the engine/trans mount bolts and adjust the drivetrain until both measurements are equal.

**Different length axles:** Remove the nuts from both axles. Push axle towards the transmission and bottom out the inner joint. Measure the distance the stub shaft has moved into the hub. Repeat for the other shaft and compare the measurements. If unequal, loosen the engine/trans mount bolts and adjust the drivetrain until both measurements are equal.

### Note:

Consult a shop manual for more specific manufacturer's service procedures and specifications.

# ProTech

Supporting Today's Professional Technician



## Chrysler CV ID Guide

**Application:**

Chrysler front wheel drive axles.

**Problem:**

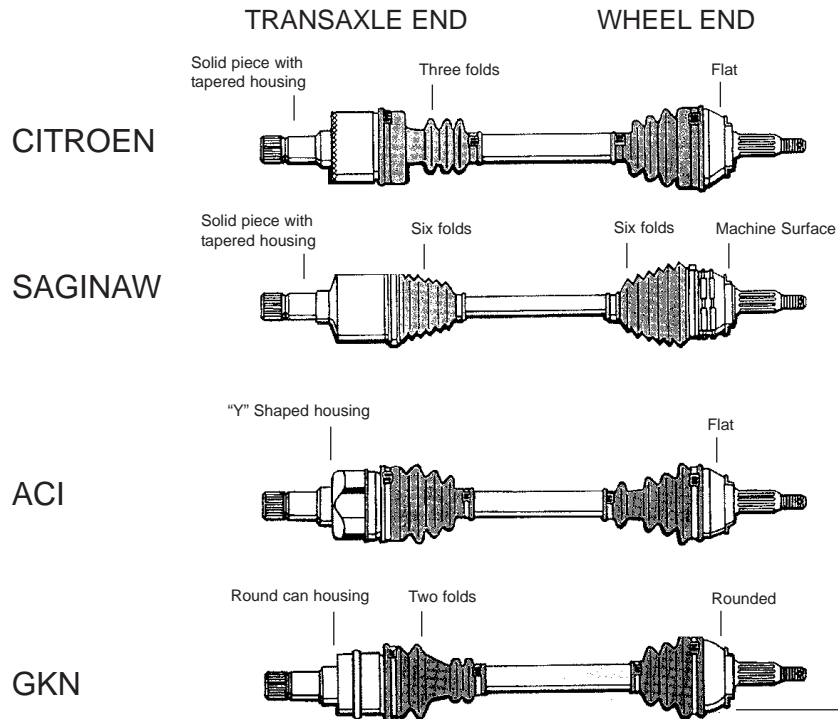
CV driveaxle replacement units are different.

**Cause:**

Chrysler uses four different design joints.

**Solution:**

All four designs are interchangeable as long as the complete axle is installed.



**Note:**

Chrysler CV axles **MUST** be handled with extreme caution! The inboard joint is spring loaded and may pop loose, causing a total malfunction and **VOID THE WARRANTY.**

# ProTech

Supporting Today's Professional Technician



## 1980-84 "X" Body — Fix for Defective Transmission Output Bushing

### Application:

G.M. "X" body vehicles with automatic transmission (1980-1984 Chevrolet Citation, Pontiac Phoenix, Oldsmobile Omega and Buick Skylark).

### Problem:

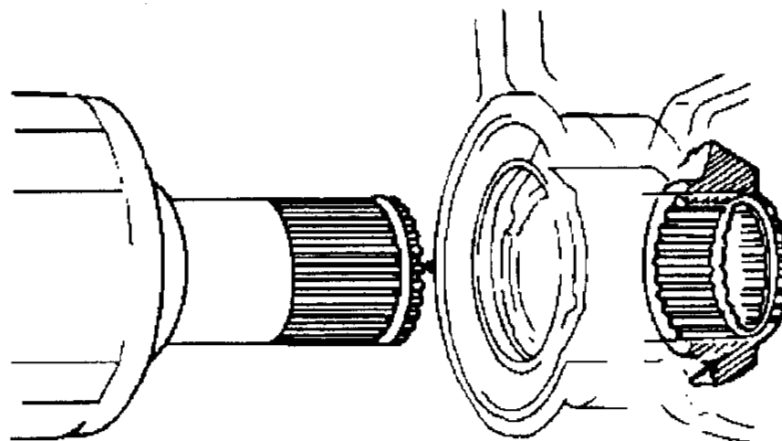
Replacement axle is loose in transmission housing.

### Cause:

Output bushing for driveaxle in transmission case is defective/worn.

### Solution:

Install an axle saver kit on the transmission case.



### Note:

If the original axle has a collar pressed on the bearing surface, you must install an axle saver kit on the replacement axle.

# ProTech

Supporting Today's Professional Technician



## GM or Subaru CVs Appear Boxed Wrong — Transfer Stub Shaft

### Application:

GM vehicles using 60-1216, 1243 or 1323.  
Subaru vehicles using 60-7007, 7209.

### Problem:

Inboard housing of original unit is male; the replacement unit is female. Is the replacement unit boxed wrong?

### Cause:

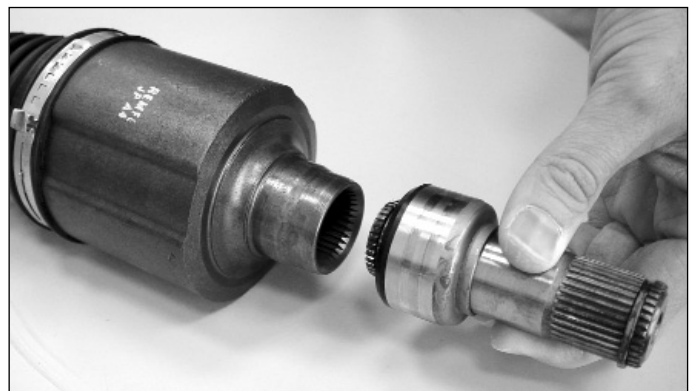
The inboard stub shaft is removable. For axles of this type, the original stub shaft is either stuck in the original unit or is secured with a roll pin.

### Solution:

Transfer the stub shaft to the replacement unit. Some typical units are shown below. CARDONE supplies a new roll pin for units of that design.



Subaru Design



GM Design

# ProTech

Supporting Today's Professional Technician



## Time Saver CV Axles for Certain Honda and Isuzu Vehicles

### Application:

1988 & up Honda Passport, Isuzu Amigo, Hombre, Rodeo, Trooper & Trooper II.

### Problem:

The labor to remove and install a complete CV drive axle can take up to 4 hours per side. A time-consuming part of the job is removing the inner housing of the drive axle from the differential.

### Solution:

Over 90% of the time, the inner housings on this vehicle type are not worn out and do not need to be replaced. Therefore, the Time-Saver Solution axle can be installed to save valuable time. These axles are supplied without the inner housing so the original can be left in the differential, thus SAVING 2.5 hours for removal and installation. Refer to the catalog for applications with the Time-Saver Solution option. These part numbers end with an S. For example, 60-4159 is a complete axle; the Time-Saver Solution is 60-1352S.

Time-Saver Solution



Original Axle



### Note:

Time-Saver Solution axles are supplied with an additional instruction sheet. Consult a shop manual for more specific manufacturer's service procedures and specifications.

# CV INSTALLATION GUIDE

To ensure full core credit, if applicable, the core must be returned in the replacement unit box.



## Top things to do to ensure successful installation

1. Check motor and transmission mount condition or alignment.
2. Check suspension and steering component condition, repair or replace as necessary.
3. If original axle nut is a prevailing torque type, the supplied hub retainer nut must be installed.
4. Check front-end alignment; realign vehicle as required.

### Precautions and Notices

- This replacement unit should be installed applying all required safety precautions, using proper tools and following the removal, installation and testing procedures described in the vehicle's service manual or similar reference. If you lack the installation experience or do not have the proper tools or reference material, you should seek the services of a qualified technician.
- Instruction material supplied with this unit is only intended as a supplement to the vehicle service manual; it is not the sole information required for successful installation and proper operation of the replacement unit. It is not intended to cover all possible removal and installation steps and adjustment procedures.
- This unit is guaranteed to fit and function in the applications for which it is listed. Carefully verify that the replacement unit part number is correct for your application.
- Original units often fail because of some external cause. Replace or repair whatever caused the failure before installing and operating the replacement unit.
- Make every effort to prevent debris from contacting operating surfaces or entering bearings. Protect seal surfaces during CV installation.
- Be sure to replace any damaged fasteners with components of equal or better quality.
- Be sure to use, as applicable, OE approved fluids, lubricants, adhesives or sealants as specified by the vehicle service manual.

### REMOVAL:

Because of the variation and complexity of applications, you must refer to the vehicle service manual for detailed and specific removal procedures for your application.

1. Lift vehicle using suitable equipment and safety precautions.
2. Carefully inspect motor and transmission mounts for damage. If the drive train has shifted to one side, the axle might pull out while turning, resulting in catastrophic axle failure.
3. Work on one side at a time. Differential internal components may become dislocated if both axles are removed at the same time. Complete the removal and installation on one side before removing the second side. This is very important on some Fords. Removing both CVs will allow the differential gears to fall, then requiring disassembly of the transaxle.
4. Never hammer on outer joint to remove unit from hub. If damage is done to outer joint due to hammering, full core credit will not be issued.
5. Several methods are used to secure the CV axle to the differential. Refer to the vehicle service manual for detailed steps.
6. Never over-extend or over-angle a drive axle, as this will cause damage not covered by unit warranty. Keep outer end supported while servicing the inner end of the assembly.

### INSTALLATION:

Refer to the vehicle service manual for specific installation instructions. Please read any special instruction material that may come with the replacement unit. Damage to the CV axle during installation VOIDS UNIT WARRANTY.

1. Compare the original and replacement units.
2. Vehicle splines and installation surfaces must be clean. Lubricate CV splines to assist installation. Apply a thin film of quality grease to CV oil seal contact surfaces.
3. Correct or repair any pre-existing suspension damage or oil leaks before installing the replacement drive axle. Remember to support the other end of the CV during installation.
4. Be certain axle nut is properly installed. Refer to the vehicle service manual for the correct installation procedure and proper tightening specification.
5. Before operating the vehicle, check transmission lubricant level, refill with correct lubricant as needed.
6. Be sure to torque wheels to vehicle specification.
7. Complete the installation by referring to any supplemental instructions supplied with the replacement unit.

FROST & SULLIVAN

**Market Engineering Award Recipient**

**Product Quality Leadership**

**2002**



Some things speak for themselves.

Frost & Sullivan is a leader in international strategic market consulting and training. They present Market Engineering Awards to companies that demonstrate diligence, perseverance and dedication in the global marketplace.

REMANUFACTURED CV DRIVE AXLES

**CARDONE**

BRAKES • DRIVETRAIN • ELECTRONICS • MOTORS • PUMPS • STEERING

On our website you can discover more about replacement driveline and axles.