

# Replacing a CV Boot

DISCLAIMER: The information in these documents are a collection from experience (friends or myself), magazine articles, mailing lists and Internet web sites etc. So don't take these as 100% correct gospel, hence I don't take any responsibility for any of these guides.



Difficulty Rating: 3/5 - Easier than it looks, but can get messy.



Download printable [Adobe Acrobat file](#) (450K)

Created: 8 Jun 2001



Download zipped [web page version](#) (2.7MB)

Revision 1

Click on any of the pictures for a larger view.



A split CV boot on the front driveshaft.

This is a step-by-step guide on replacing a damaged outer CV boot to the front driveshaft. Split or turn rubber CV boots are a MOT failure and although the actual cost of the parts is small (typically between £10 to £15) the labour is the most expensive item. With this guide, you can replace the CV boots yourself and save some money, although you may have to buy some additional tools to make the job easier, which bumps up the cost.

This guide is based on a Nova GTE and the outer CV boot had split wide open and splashed the CV grease all over the mechanics of the driveshaft and braking system. Even though this guide is shown on a Nova, the same procedure is identical to most Vauxhall models, consult your user manual for more details. Plus the same procedure is identical to both sides of the car.

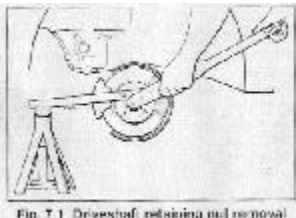


An after market CV boot kit with CV grease and boot ties.

## What happens if I don't get the CV boot replaced?

The CV boot contains a grease which protects the constant velocity joint which comprises six caged steel balls and a driven member. Without the grease, the friction obtained from driving and steering would over heat the components until they seize. Plus the CV boot stops unwanted dirt and moisture entering the mechanics, again protecting it against seizing. Without it, the driveshaft and constant velocity joint may only last a few weeks of typical driving before you will have big problems from getting from A to B. Replacing a damaged CV boot is far cheaper than replacing whole driveshafts and velocity joints etc.

*This guide was compiled with the help of the Haynes "Service and Repair Manual", which can be purchased from their web site at <http://www.haynes.co.uk>.*



How to remove the hub nut.

## Parts:



- |                               |                             |                               |
|-------------------------------|-----------------------------|-------------------------------|
| CV Boot kit                   | Trolley jack                | 2 axle stands                 |
| Long bar with 1/2" bit        | 30mm socket                 | 13mm socket                   |
| 13mm spanner                  | Torque wrench with 1/2" bit | Large flat blade screw driver |
| Small flat blade screw driver | Soft rubber mallet          | Large bar for prising         |
| Circlip pliers                | Haynes book                 | Carb cleaner                  |
| Lots of old rags              | Ratchet with 1/2" bit       | WD40                          |
| Pliers                        | Wire cutters                | New hub nut                   |
| New clamp bolt                | Copper grease               | New hub nut split pin         |

Rubber gloves

New Circlip for velocity joint

**Cost:**

CV Boot kit	£5
Copper grease (tube)	£1.50
Circlip Pliers	£10

- The CV Boot kit purchased was a pattern part which included 2 cable ties, one CV boot and the CV boot grease. These are obtainable from your local parts shop or Halfords.

**General Notes:**

Just before you start, make sure you note the following:

- If you don't have one, buy a Haynes manual for your car and have this in front of you. You'll need it on how to remove the ball joint and drive shaft etc. plus any torque settings etc.
- As this is a messy job, using exposable rubber gloves makes cleaning up much easier.
- The new CV boot replacement kit should come complete with one CV boot, two cable ties or metal strips and the CV boot grease. If metal strips were supplied then you'll need the tool to tighten them up.
- A new split pin and hub nut should be used once it is removed.
- When removing the hub nut, fit two road wheel bolts back on and locate an axle stand on one of the bolts with a strong metal bar (**as shown above**). Also put the car into 1st gear as this combination will stop the driveshaft from rotating when undoing the hub nut. However, in the end I needed an air gun to loosen the bolt as it appeared to be welded on as it was impossible to budge by hand.
- A new clamp bolt and nut should be obtained once it is removed from the balljoint.
- Be careful when removing the balljoint from the swivel hub as not to damage the rubber material on the balljoint itself (i.e. don't rip or crack the surface - as it will need to be renewed).
- To remove the balljoint from the swivel hub, position a large bar in-between these components and always push **DOWNWARDS** on the lower suspension arm with a large bar. It will be tough, but it does work.
- Once the swivel hub is free from the balljoint, turn the steering wheel so that you can manoeuvre the swivel hub out of the way more and remove the drive shaft.
- To remove the velocity joint from the driveshaft, there is a small circlip to open up. The use of a circlip pliers is ideal, but it is possible to do the same thing with very thin nose pliers.
- Use Carb Cleaner or WD40 to remove old CV grease and lots of old rags.
- Follow your car's manual on what torque setting the hub nut shall be tightened to. It is also most likely that it needs to be slackened again but turned again by 90° etc.
- When fitting everything back, always use copper grease on threads, bolts and nuts to stop them seizing the next time they need servicing in the future.

OK, got all the above? Then follow the steps below (remember to click on the pics for a bigger view):

**Step 1**

Apply the handbrake and jack

**Step 2**

With the wheel removed,

**Step 3**

Put the car in 1st gear, use a

up the front of the car onto axle stands.

remove split pin from the driveshaft with a pair of pliers and hammer.

30mm socket and undo the hub nut. Once removed, take off the washer sitting behind it.

**Step 4**



Tap the driveshaft with a rubber mallet which will shock it loose within the swivel hub.

**Step 5**



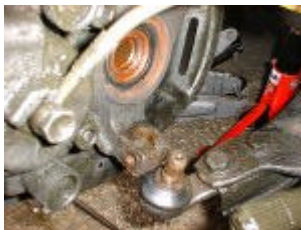
Undo the balljoint clamp bolt with a 13mm socket and spanner. Use loads of WD40 on this area.

**Step 6**



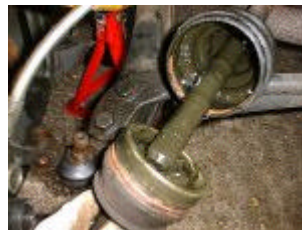
With the balljoint loose, use a large bar and push down on the suspension arm to prise the balljoint off the swivel hub.

**Step 7**



Manoeuvre the swivel hub to one side so that the driveshaft can be extracted. Take care of the splines, remove the metal strips or cable ties holding on the CV boot.

**Step 8**



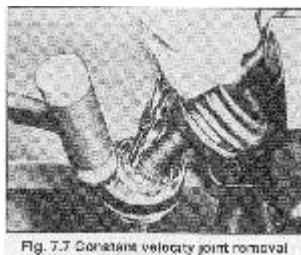
Push the old CV boot back up the shaft towards the engine to gain access to the back of the velocity joint.

**Step 9**



Bend the velocity joint so that you can see the ball bearings and circlip which holds the driveshaft on.

**Step 10**



With circlip pliers, open the circlip and gently tap the edge of the velocity joint so it comes off.

**Step 11**



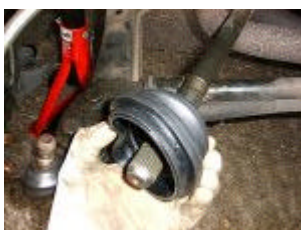
Look inside the velocity joint examine the ball bearings and windows, all should be in good condition.

**Step 12**



Pull off the old CV boot and discard it as you no longer need it. Clean the driveshaft so its totally clean of dirt and grease.

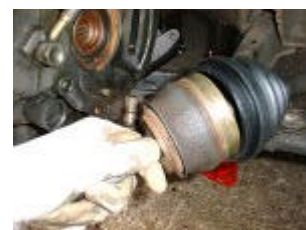
**Step 13**



**Step 14**



**Step 15**



Place the new CV boot on the driveshaft and push it up the shaft.

Clean the edges of the velocity joint of old CV grease and place it back on the splines of the driveshaft.

Once the splines are lined up, tap the velocity joint back on with the rubber mallet until a 'click' can be heard.

**Step 16**



Test to see if its in place by holding the driveshaft in one hand and tug the velocity joint in the other. If it comes off, it wasn't fitted properly or a new circlip is required.

**Step 17**



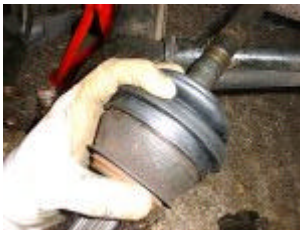
Position the small diameter end of the CV boot in the groove on the shaft and secure with the cable tie(s) supplied in the kit.

**Step 18**



Fold back the large diameter end of the CV boot and apply the supplied CV grease inside the velocity joint.

**Step 19**



Push the large diameter end of the CV boot over the velocity joint without getting CV grease on the surface edge.

**Step 20**



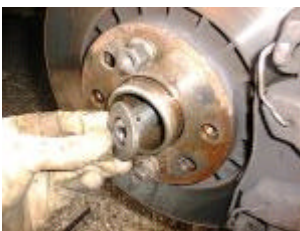
With the CV grease applied and the new CV boot in place, push the driveshaft back into the hub (note the position of the splines).

**Step 21**



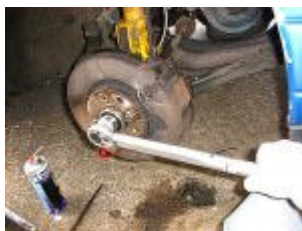
With the driveshaft back in the swivel hub, put the swivel hub back onto the balljoint and fit the clamp nut and bolt back on.

**Step 22**



Place the washer, hub nut and new split pin back onto the driveshaft thread and torque up to spec (don't forget to put on some copper grease on the threads).

**Step 23**



With the car still on the axle stands, rotate the driveshaft by hand looking for fouling and ensure full lock is possible without the CV boot slipping off.

**Step 24**



Once that is done, fit the road wheel back on and give the car a quick test drive noting any knocking sounds while driving and at full lock on steering.