The Silkear project
11/27/02 '84 LeSharo TD/Chrysler 3.8L

SEII project
07/04/08 '89 LS 2.2L Gas/Chrysler 3.3L

Front Axle CV Boot replacement

Due to hitting some road debris, I had to replace the outer halfaxle boots on both sides of my LS. This unit is a Chrysler conversion, so it uses the Renault wheel assemblies, therefore the outer spindle & boot are a Renault item.
I purchased 2 of these from Mobility RV(http://mobilityrv.com/) one for each side. Their part number for these boots is **R7701013275.** There is a **Napa part# CVB 6862148** that will also fit, just not as "long" in the bellows area. A much heavier material, but I can't say how it will last with the increased flexing with the larger angle on a conversion. At the same time I replaced one of the inner boots also. That boot was a **NAPA part# 6862265**. This is the right hand boot, and is a more flexible material than the original one. I will probably use that same boot for the left hand axle instead of the heavier one recommended.

You will need some extra tools for this effort.
a **30mm socket**, and breaker bar for the outer halfaxle nut, and
a **10mm Torx**, driver for the ball joint bottom bolts.

I did not use any of the clamps that came with the boots. Different reasons for each. The outer(Renault) boot is just a bit thicker material than originally used, so the clamps provided hit the inner surface of the hub at the crimp point and will eventually fail. I purchased a set of **14" stainless steel tywraps** from **JEGS** (http://www.jegs.com/i/JEGS/555/10626/10002/-1) and used these as the outer band on that boot.
One of the tricks that makes this a rather simple job to do is the large band on the inner joint, or tulip, assembly. The way that Chrysler has you remove the outer housing(tulip) on the sliding bearing is by brute force that is tough to do in the room allotted. The custom engine frame that I use gives me a bit more room, so it is probably worse with the original Renault engine cradle.
Go to a local VW repair shop that sells aftermarket parts and purchase 2 of the T-bolt style clamps, as is shown in the photos below. Also, if you can find a large **screw-type 1/4" fuel line hose clamp**, capable of opening to at **least 1 1/4"**, buy four of them. If you can't get the large ones, buy **8 of the 3/4" standard ones**. These will be used on the small(inner) end of the boots.

Email me if you have other questions at jvrsw@comcast.net

This is the type of damage that a tire recap will do if you hit one at night doing 65mph. Also scares the hell outa' ya! This damaged boot was the reason for pulling the axles and replacing the boots. Since I had to do one, I went ahead and did them both.

Before putting the LS on jackstands, break the **30mm locknut** loose on the wheel hub. Once you have loosened the nut and it is almost off, tap it with a board and hammer to break the spline loose. You should have about 3/4" of lateral movement in the axle.

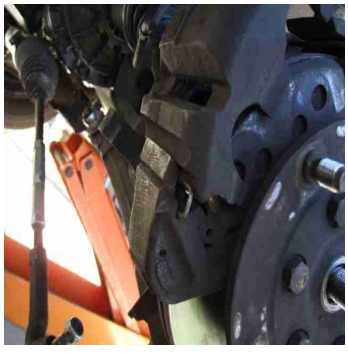
Once you have the front end up and on jackstands, tackle the brake caliper. If you haven't done brakes on the LS, the front caliper comes apart a bit different from the standard US style vehicles. First, remove the two small safety clips that are on the top and bottom shims. Don't lose them.

Take the pressure off of the top shim and slide it out the back. Note how it is installed as it is easy to get it turned around.

A second shot of the top shim. Note that the spring(where the screw driver is) goes under the caliper.

This is the bottom shim. There is not enough room to slide it out, so use a screwdriver and gently pry the caliper upwards until this shim is loose.

Another shot showing the bottom shim halfway out.



With the shims out drop the caliper down and you will have clearence at the top to rotate it out. You don't have to remove the pads, but this is

Then rotate it up and out. Note how it goes back in for later.

probably a good time to inspect and replace if necessary.

Get a cheap tywrap and hang the caliper up. Saves replacing the brake lines.

Disconnect the torsion arm bolt. If the rubber is worn or damaged, go buy a set of 1" polyurethane replacements from any parts dealer. This is the time to do it.

This photo is a bit out of focus, but you get the idea. Use the **10mm Torx driver** to remove the two bolts that hold the bottom ball joint to the wheel hub. I replace the torx head bolts with a standard **8mm X1.25 X 20mm** hex bolt, .

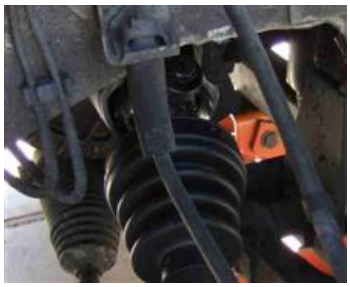
Remove the tierod end from the hub.

Break the lower control arm loose from the wheel hub. You might have to use a pry bar to do this. If so clean it up so save yourself some grief on reassembly. Note that this picture was taken after the axle was removed, but it still is the same action.

This is a picture of the inner slider joint "tulip" with the boot banded on. Get a set of side cutters and clip the large outer band.

Here is the picture of the old outer band cut loose.

Pull the boot off of the tulip. If it is cooked on, this may take a bit of effort. Also, it is full of grease. Get a roll of cheap paper towels, you will need them!



Mark the orientation of the axle to the tulip. Pull the boot back to expose the bearings. At this time verify that the splines are loose on the wheel end. if they were not, things will get ugly real fast.

Now carefully pull the slider bearing out of the tulip. Later you will clean the tulip up, but for now you will have your hands full of the axle. Cover the tulip with a plastic bag to keep dirt out.

Axle out of tulip and hub. Beer break.....

Cut the small band from the inner boot and slide the boot back. note the ridges on the axle. When reinstalling the boot these will be important to remember.

Exposed slider bearing with circlip at end. Clean the excess grease off, but don't go overboard. Unless there is obvious hot spot discoloration, or visual damage, you don't want to strip all the grease off of these

Carefully work the circlip off. Be careful, as it will fly away and you will be looking for it for hours! Mark the orientation of the slider bearing on the axle for reassembly purposes.

Here is the axle with the slider bearing and inner boot removed.

Cut the bands off the outer boot.

bearings.

Slide off the old boot and clean up. Same as the slider end, inspect for damage. Don't remove all the old grease unless it is hardened or contaminated. Work some new moly grease into the balls and through out to make sure there is plenty in the outer bearing housing.

I purchased a couple of the small 3 oz., 6" long tubes of the Sta-Lube Moly Graphite grease from a NAPA store, but you can get it anywhere, like WalMart, etc. I used this instead of the grease that came with the boot. Takes a full tube per bearing. Fill the boot up, then slid it over the bearing race and put it in place.

Here is the stainless steel tywrap on the outer boot. It is pulled tight with pliers then bent back over itself. Then it is tapped lightly with a ball peen hammer to flatten as much as possible.

I then wrap a high quality electrical tape around the band and insert it into the wheel hub for a clearance check. If there are no scrape marks on the tape, then the clearance is good.

Since I couldn't find a 1 1/4" diameter fuel line clamp, I put two of the 3/4" ones together as shown.

Here the wheel bearing inner boot clamp is in place. Tighten just enough so the boot won't move.

Clean up the wheel hub of old grease. Insert the axle before you put the inner boot and slider bearing on and spin to check the clearence of the outer boot band. You might have to grind off a bit of metal, as I did on the area shown near the caliper, to get the best clearence. A Dremil comes in handy.

After checking the clearence, continue assembling the axle. Shown here is the slider bearing,circlip, and the outer boot reinstalled. Be sure to align the bearing using the marks you made durning disassembly.

Clean the majority of the old grease out of the tulip still on the tranny.

Place the slider bearing back into the tulip. Line up the marks you placed on both durning removal.

Insert the wheel bearing, and put the lower control arm ball joint back in plsce. Use a screwdriver to lign up the holes on the lower ball joint.

Should now look like this.

Secure the ball joint back in place with the new hex head bolts. Again, these are 8mm X 1.25 X 20mm hex head bolts that have a 13mm head.

Work the inner boot back on. Note the 3 indentations and how the boot aligns with them.

Use the VW style t-bolt clamp of the large inner band.

Here is the inner boot banded in place, the large band being that t-bolt, and the small band being another of the screw type fuel line ones.

Reconnect the tie rod end and retighten the ball joint screws.

Reconnect the torsion bar.

Replace the caliper by doing the removal instructions in reverse. Be sure to get the small clips in place.

Put the tire back on, take the rig off the jackstands, and torque the 30mm nut back on to approximately 175ft/lbs.

At this point you are done with the one side. Go have a beer then start on the other side!