

Short Shift Kit

Installation



Getting Started

Please note: The installation of the **FDM AWD SSK** (for the 993 C4/C4S and turbo) is a little more involved than the standard SSK. You will need to modify the center tunnel cover by creating an indentation directly underneath the shift lever. We have designed this SSK so that minimal clearance is needed, approximately 3/8". More detail on this below.

The only thing that needs to be done inside the car is the removal of the shift boot/knob. Everything else is done via the underside of the car.

What you need:

- 17 mm wrench (x2)
- Dead blow hammer
- 13mm wrench/socket
- Needle nose pliers
- 19mm open end wrench or equivalent tool for prying (more on this later)
- 4mm Allen wrench
- Small standard screwdriver
- Medium strength thread locker such as Loctite 242
- White grease or Multi-purpose grease

The install should take about 60 to 90 minutes after the car is in the air.

Remove Shift Knob/Boot

There are a wide range of shift knobs out there but all of them should have the same boot base. The original AWD 993 knob itself is a friction fit with a clip towards the bottom. Note: There are some knobs that have an Allen head bolt to secure it to the shift lever.

1. On the driver's side, press down on the rectangular base ring where it meets the console. You can use a soft prying device or a screwdriver softened with a thin rag. (see photo below)
2. Once the base ring on the driver's side is released from the two spring clips, pull the rectangular base ring from the passenger's side clips. The clips on the passenger's side are fixed and the ring hinges on these. Remember this when reinstalling.
3. Now you remove the boot base from the console in the same way you remove some window screens. One corner first, then the next. Just take care to not scratch up your leather!
4. Once the boot base is free of the console, pull upward on the knob. On some cars this will be on there pretty good... be careful! When it comes loose you may smack yourself in the face! Don't ask me how I know...
5. If you have an MY02 knob (or some others) you will need to remove a set bolt that secures the knob to the shift lever.
6. You are done inside the car.



Remove Under Panels

Remove the panel forward of the tunnel cover (*Not seen in photo below*) 10mm nuts, a couple of different styles. Remove the center tunnel cover. Remove small cover near front pass side that overlaps the center panel. Many more 10mm nuts and a few bolts.



Remove Old Shift Components

Pull the rubber boot loose from the bottom of the torque tube to expose the shift lever and fork. Use a “pickle fork” or 19mm open end wrench to separate ball/cup joint. Slip the wrench in between the cup at the end of the forward, fixed rod and the shift lever (between red lines as seen below). Keep continuous pressure on while prying downward and it will slowly pop off.



At the other end of the forward rod:

Do the same thing to separate the front cup from the ball on the torque tube. Or, you can simply pull down on the rod until the cup slips off of the ball.



Use a small screw driver to pry e-clip off. There will be 3 washers (2 flat and one wavy washer). The wavy washer is sandwiched between the 2 flat washers and keeps tension on the e-clip and bushings. Slide shift rod and rubber boot out of the way.



Remove the four 4mm Allen head bolts (See red paint in photo below)

In this pic you may notice that the shift rod is still on the fork. You can remove the e-clip as described above after the 4 Allen bolts are removed... either way is OK.



Separate the shuttle halves (This probably already happened). Let the lower half that is attached to the shift lever/fork drop down and slip the upper half around and remove it.



Slide the shift lever down and carefully pull from the upper rubber boot. Take this assembly to a workbench.



Remove the e-clip from the shift fork. This is exactly the same as the clips/washers you removed earlier. Photo show these clips removed.
Slide the fork and shuttle half off of the shift lever.



Slide fork off of the shuttle half being careful to retain the rubber o-rings.



Reassembly

NOTE: The new SSK lever design looks different than the photos. It is much easier to install as well!
Reassemble the shuttle half onto the new FDM AWD Shift Lever using the original fork. Lightly grease the o-rings and bushings with white grease. Finish by inserting e-clip. Be very sure the e-clip is in its groove at all 3 points. You will need to press down on it in order to compress the spring washer to get it home.



Slide the new shift lever tip into the rubber boot after pulling it down a bit.
NOTE: Shift lever goes in on the left hand side of the car.



When the shift lever and shuttle half are most in place, slip the upper shuttle half in the opposite side of the opening. The goal is to just get it up there at this point.

To get the shift lever in place, you will need to feed the top of the lever back up into the inverted rubber boot on the left side of the drive shaft. **There are a few of very important things to note while doing this step:**

- *DO NOT* hit the heim joint on the shift lever. If you do, you may damage the joint and possibly cause an undesirable “rattle” or “buzz” noise when in certain gears/RPMs. When tapping the lever into place you should contact the bolt at the base of the lever.
- Be sure the TOP of the lever is not contacting the center console inside of the car as it is inserted from underneath
- Be sure the upper half of the shuttle is not in the way. You will need to slide it up and out of the way.

After lever is in place, slip the upper shuttle half into position. This can be a little tricky but be patient and carefully line up the bolt holes. Once you get one Allen bolt started it gets very easy. Be sure to use Loctite 242 on these bolts.



Reconnect the shift rod.

Slip shift rod onto the shift fork. Slide washers onto the shift fork (flat washer/wavy washer/flat washer)

Use needle nose pliers to reinstall the e-clip. You are using the pliers to squeeze the clip into place with one jaw on the shift fork and the other on the clip.

Important items to note:

- Make sure both nylon bushings are in place
- Be very sure the e-clip is in it's groove
- Don't forget the rubber boot



Install & Adjust the Forward Rod

Install the new stainless steel forward rod.

1. Thread the rod about half way onto the joint at the shift lever with nut and lock washer. Tighten.
2. Either tape or have someone hold the front cup on the ball
3. Take a look at the shift lever position inside the car.

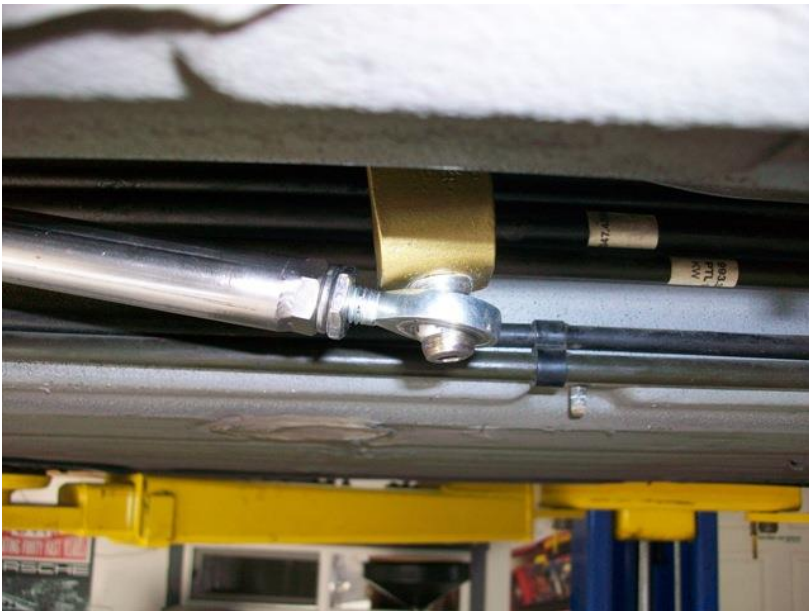
The forward rod is adjustable and moves the shift lever forward or back on the inside of the car.

- Shortening the rod moves the shift lever rearward
- Lengthening the rod moves the shift lever forward

Pressing the forward rod cup onto torque tube ball

There are a couple of ways to accomplish this. Be sure to lubricate the ball and cup with white grease.

1. Use a jack (floor jack if car is low enough, a tall lift jack if on a lift)
2. Dead blow hammer or other buffer using a heavy hammer.



Modify and Install Tunnel Cover

As previously mentioned, you will need to create about 3/8" clearance directly underneath the shift lever by putting an indentation in the tunnel cover.

A ball peen hammer works best to shape the indentation.

Use a block of wood as a backing and don't get too aggressive. It doesn't take much.

Test fit the cover using the 4-6 nuts around the middle where the shift lever is located.

Check to be sure that there is no rubbing throughout the entire shift pattern.

Reinstall the front underpanel.

Bolt the rest up and go for a *drive*...

