

1st Generation Shifter Mod

Compiled by Dean Yamada ag97@pobox.com

Actual comments from some owners after performing this mod:

"I'm not mechanically literate, but even a baby could follow the directions."

"Incredible page. My 6 year old car shifts better now than when I first bought it."

If you have a Galant VR4 or 2nd Gen, the same CONCEPTS apply. If you make a record of what you do, please let me know and I can put up additional pages.

Purpose:

Fixes a little more of the clunkiness and play in the shifter. Allows for more direct and crisper shifts. Fixes the shifter from moving while driving, shifter vibration, noises, grinding in going to gears, and difficulty in going to some gears (like reverse).

Cost:

\$0 if you have spare washers. The good thing is that this mod can be easily reversed back to stock.

Tools/Parts Needed:

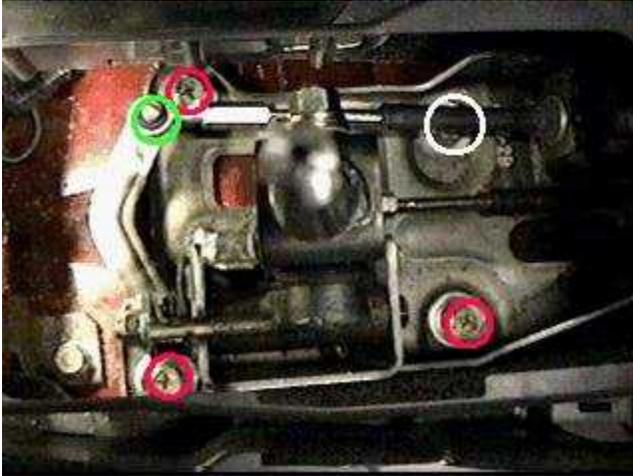
- Metric sockets 12-14mm and ratchet. Preferably all normal size, if you have deep sockets then you just have to disassemble a little more. But no problem.
- Flat tip and Phillips screwdriver
- Good scissors
- Four - 1" washers with 5/16" hole dia. Not needed for 1990 DSMs. (4 spare washers are fine, as long as they fit over the bolts, this is not an exact size for all DSMs)
- One - rubber, metal, or nylon washer, optional, but suggested, if you don't want to cut a grommet. (The idea is to shim up some slack, use whatever is perfect for your car)

- Allen wrench for removing your shifter knob (not needed for most knobs).
 - Adjustable wrench or 14mm open or closed wrench.
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This mod has been successfully performed on a 90-94 GSX - but you don't have to have a turbo or AWD to perform this mod. There are some slight differences in bushing/grommet sizes, picture shows smaller bushing and hole diameter of the 90 on the left, and the larger grommet/bushing design of the 91-92 on the right.

Remove the front section of the center console. (Front section being the part of the center console from the cigarette lighter to the front of the car.) I personally found it easier to sit in the passenger seat to do all of this. More specifically: Remove the slim plastic cover between the bottom of the stock radio and the console. Remove the three screws there. Remove the ash tray, remove the one screw there. Remove the shifter knob. Open the rear section of the console so you can easily move the front section of the console away. (They slightly overlap) Move the front section to the driver side, a bunch of wrapped wires will be held in place underneath the front section, detach them from the plastic holder to move the front section. You don't need to disconnect any connectors from the cigarette lighter.



You'll see 4 bolts on the bottom of the shifter base. One will be blocked by a shifter linkage [white circle]. Remove the cotter pin from that cable [green circle]. (You bend the two ends back to straight again and pull it out of the hole) Remove the four bolts. You can use a Phillips to unscrew the bolts once they are loosened. If you can reach/access the bolts with your socket extension and normal size socket then skip the next paragraph. The other red circles show the remaining bolts.



If you cannot reach/access the bolts - an 8" socket extension bar makes things easy, you'll have to remove the two side carpeted panels. Use a flat tip screwdriver to pop off the three "screw covers" from the passenger side. On the driver's side, you need only remove the two screw covers nearest the front of the car. The metal bracket that comes off the driver side panels can be discarded if you would like. In addition, if your deep socket won't reach the bolts, you'll have to loosen the rear section of the console. Under the cup holder area are screws you can remove and in the very back of this section is carpet that you can pull off - there are screws there also. By loosening the rear section, you can lift the entire plastic console assembly high enough to get at the bolts. You can then use a Phillips to unscrew the bolts once they are loosened.

After removing the four bolts: I found it easier to lift up the shifter base and

pull the bushings from out the bottom. After removing the bushings, pull the 4 grommets from out the bottom. You can use a screwdriver to push the rubber through.

Save one of the black rubber grommets for later use. You won't need the bushings nor the rest of the grommets. (For 91-94, put the new washers - 1" with 5/16" hole (or whatever spare washers you have) - under the stock washers) Tighten the four bolts of the shifter base down. **See Update.** Reattach the shifter link you removed the cotter pin from, and put the cotter pin back in.

Update is important in that it cures the shifter moving excessively while driving, it fixes grinding, cures shifter noises, and fixes the difficulty in going into some gears (like reverse): Make sure there's no play in that shifter link. It should come off and on the peg perfectly with the shifter in neutral - the link should not be any longer or shorter to reach the peg. To adjust: You loosen the two small nuts on that link (turn them both counter clockwise). Once loosened, you can then turn the long 1" nut either counterclockwise or clockwise to shorten or lengthen the cable. You can also turn the loop counter/clockwise. Both of the smaller nuts are tightened by turning them clockwise (assuming you are sitting forward in the car) [The green and white circle on the picture a few paragraphs above indicate the proper

shifter link to adjust] There is a second shifter link (not pictured) with the same cotter pin, do the same checks with this shifter link as well.

Check your gears for smoothness. If you're real picky like me, you can drive around a little, and if things don't feel just perfect, you can loosen the four bolts, move the shifter base around slightly and retighten and check again. But once you've found that smooth spot, you should be very happy with the results! Did you put anti-seize on those bolts? **Update:** Some people spend over an hour finding "that spot" and they are happy they took the time to do it right.

SECOND PART OF THE SHIFTER MOD

This part of the mod fixes the play in the shifter, if you have any. Before doing the second part of this mod, make sure you are happy with the results of removing the grommets and bushing from the first part. You will be cutting one of those grommets in half at this point, so in other words, you won't be able to go back to stock from this point on. You may also keep all your grommets and substitute a washer instead, so that you can always go back to stock.



Remove the 14mm nut from the main shifter rod. Slide the shifter rod off to the driver's side (much harder than it sounds, you might have to push the plastic of the console back) and keep the 2 washers and the 2 white nylon bushings. **Update:** You can save yourself about 10 minutes by undoing that shifter link first (removing the cotter pin and detaching the link).

The nylon bushings have a tendency to fly off to nevernever land. The nylon bushing might be black on some 93-94 models. The nylon bushing is very thin, don't lose it or crush it, that little thing is \$6 from the dealership for just one!



After you've gotten the handle off of the shaft completely, take one of those rubber grommets and cut in half width-wise. **Update:** Since first doing this mod, I've now decided that everyone would be better off using a washer (nylon preferably) instead of cutting a stock grommet. The first reason is that now you can always return your car back to stock. The second reason is that the black rubber on the grommet will rub off after a while and gum up the nylon bushing and shaft.



If you want, you may instead use one rubber, nylon, or metal washer in place of the rubber grommet. It can be done either way. The idea here is to take up some of the free play. The washer (whatever size/# you use) is to serve as a shim to take up some of this free play. Use the size or number of washer(s) that works for you.



Slide one half of the grommet over the shaft [nylon&grommet].

Reassemble the shifter mechanism. Remember the smaller ends of the two nylon bushings face each other. Be careful when tightening the 14mm nut - make sure both bushings are in place, you don't want to crush one of them.

Update, 12/20/96: Some owners have noticed a "thick maple syrup" type shifting after doing this mod. This is the result of overtightening the 14mm nut. Loosening the nut a little cures this problem.

Update, 12/23/96: After loosening the nut, it may have a tendency to unscrew itself through the course of shifting, and eventually fall off. When you first find the "perfect spot" of where the 14mm nut should be, go through your gears and see if it unscrews itself through the course of shifting. Although I have not had this problem, check for yourself. This can be solved with some threadlock on the end of that shaft.

Update, 1/12/97: Instead of threadlock, you will need to use a shim (the washer, maybe 2 thin nylon washers) to take up the exact amount of free play. By using a shim that is not too thick or too thin, you can then torque the end nut to the proper torque and not have to worry about it unscrewing itself. This method is the preferred method. If you do it this way, you can disregard the 2 previous updates.

Update, 3/21/98: You can also try wrapping the threads of the shifter arm with teflon tape a few times, and then spin the nut on.

Update, 6/23/97: There's an additional "half-circle" grommet that is located at the welding at the bottom of the shifter lever. (It is not the rubber stopper at the bottom of the shift lever) This is a half-circle grommet that is maybe 2-2.5" in diameter and it wedges itself near the bottom of the shifter lever assembly. Over time, it has a tendency to spin around to the opposite side. Try turning the grommet back around where it should be. It doesn't really move much, but over 7 years it will.

You should be very happy with the feel of your shifter after this mod.

When replacing the console, make sure none of the cigarette lighter connections have gotten loose, and make sure the wiring is reattached to the plastic holder.

NOTES:

- At this point if you haven't already changed your tranny fluid with BG Synchronshift (my personal first choice) or Redline MTL or MTL90, please do so. This is a must! The improvement is amazing. You'll need just over 3 quarts.
 - Before draining your tranny fluid, **figure out first** how you will refill it. There's little room and you will need a cheap tube or small syringe or cheap plastic siphon (gear oil) pump or a long tube and a flexible funnel. Your car should be completely level as well.
 - At every oil change, it wouldn't hurt to top off the fluids in your tranny and transfer case. This is a good habit and adds just a few minutes.
 - 17mm for tranny filler plug, transfer filler plug, and oil drain plug.
 - 24mm for tranny drain plug, transfer drain plug, rear diff. drain plug and rear diff. fill plug.
 - 21mm for 16" wheel lug nuts.
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2G NOTES:

- Console removal:
 - Remove the shift knob by twisting it off counterclockwise
 - Remove the ashtray. Now grab the ashtray base/cup holder section and pull upwards. This piece is just snapped in place.
 - Remove the plastic ring that goes around the radio/air conditioner knobs. There are two snaps just below the A/C knobs and two down at the bottom.
 - Remove the two gold screws that hold the center console in place by the radio. There are two more gold screws down in the hole where the ash tray used to be. The final two black screws that hold the console in place are on the side of the console toward the back.
 - Gently lift up on the back of the console. You will need to unhook the light to the ashtray and the three wires that feed the cigarette lighter. Remember where they go and how they fit on. Now the center console should lift out completely.
 - The rest of the shifter mod is essentially the same. There is part of the car's wiring harness toward the rear of the shifting platform that needs to be loosened from its mounts but not disconnected.
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Credits:

- Pics by:
 - Damian Sigman
- Text by:
 - Dean Yamada
 - Damian Sigman
 - [Buschur Racing](#)
 - Greg Clayton
 - Stephen McDonnell
 - Rob McKellar
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 - Tom Stangl
 - Joe Gilbertson
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