

Directions for installation of short shift bracket

Note: Use and installation of these parts is at your own risk!!

Equipment you will need: Electric drill with decent torque “F” drill bit (0.2570”) Several smaller drill bits (for working up to the “F” bit) Center drill (optional but handy) Center punch Cutting oil (or any kind of lightweight oil) Loc-tite (optional, but highly recommended) Vice-grips/C-clamp (optional) Socket set, ratchet, pliers, etc.	Included in kit: 6061 aluminum bracket 5/16” – 18 x 1.25” SS bolt 5/16” – 18 nut 5/16” split ring lock washer 1/4”-20 x 1.5” SS bolt 1/4” – 20 nut 1/4” split ring lock washer
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Expected time to complete: 1-2 hours

Instructions:

1. Remove air box and any other obstructions.
2. Remove spring clips holding original (rubber) bushings in place and remove cable end/bushings. The old mounting post may need light sanding to remove surface rust. You can now also remove the rubber bushing from the cable end if you are going to be upgrading to brass bushings with this installation. Pliers will be useful for this.
3. At this point, you may choose to wipe the old bracket down with some solvent or light sanding to remove the grease. This will allow you to see the center punch you are about to make more clearly.
4. Place new bracket onto existing bracket, **with the curved edges lined up**. The old bushing post should slip into the large (~.3190”) hole on the new bracket. *Note: if your old post is too large and does not fit in the hole provided, you can either drill the hole out to a larger size that will fit the post tightly, or drill it out to a much larger size, disregard the post altogether and drill two 1/4-20 holes instead of one, and mount it using two 1/4-20 bolts.*
5. The radii of the arcs on the two brackets should be identical. Use this to line them up so that the new bracket is oriented the same way was the old one (using your fingers is fine – no need to break out the calipers). The bracket is not too sensitive to this adjustment, and several degrees of error are fine.
6. You can choose to clamp the bracket in place at this point if you’re not comfortable center-punching without it rigidly mounted. You can use vice-grips or a small c-clamp for this purpose (vice-grips may scratch the aluminum).
7. Note: there are three 1/4” holes that you can use to adjust the center location of your stick-shift. People with shorter arms may prefer to use the bottom of the three holes to move the shifter closer to the center console. The center hole should locate the shifter where it is from the factory. **Use this center hole for the initial location and drilling of the hole into the original bracket. You can choose which of the three holes to use when you do the final install.**
8. Choose whichever method you prefer to mark and transfer center-punch the location of the hole. Then remove the bracket so you do not damage it in the process of drilling.
9. Center drill if you got ‘em.

10. You will be drilling into steel, and it will take a good deal of pressure from the drill and a fairly **slow speed**. **Use lots of oil** and try to **step the drill bit up** several sizes before finally **using the “F” drill bit**. I started with approximately a #35 drill bit. If you don't have much experience drilling into steel, you can also do a practice hole somewhere else on the old bracket. This will in no way weaken the original bracket.
11. Drill the hole all the way through, **finishing with “F” drill bit**. The F drill bit is 0.257” and will allow a 0.25” bolt to go through easily. The drill doesn't have to be exactly F, but it is recommended to use as close to 0.257” as possible. You should be putting a lot of pressure on the drill, and it may punch through the other side unexpectedly. **Brace yourself** (with your elbows, for example) so you don't faceplant into the engine compartment.
12. Deburr the hole (if you so choose) and wipe any oil off with a rag. You are now ready to mount the new bracket.
13. Install the new brass bushing if you are making this upgrade as well.
14. Place the bracket down and put the ¼-20 bolt in to get the bracket at the correct location (if your tapped hole is not centered on the bracket hole it is possible you will not be able to get the bolt through both. This is ok, and you can just widen the hole on the aluminum bracket a bit with a larger drill so that you can get the bolt mounted).
15. Place the cable w/ bushing over one of the short-shift, tapped holes. On our test car the cable housing did not bend enough to allow us to use the hole that was furthest in. Different models may allow you to do this, and you will be able to choose which hole you want. Otherwise use the hole that is closer to the original cable mounting position.
16. Turn the provided 5/16”-18 bolt (**use loc-tite** at this point if you have it) in several turns to hold the bushing in place. Remove the ¼-20 bolt and bracket and tighten the 5/16”-18 bolt lightly down onto the brass/rubber bushing; then, **back it off 1/8-1/4 turn**. You want the bushing to be able to rotate freely on the bolt but not have too much play up and down (along the length of the bolt).
17. The 5/16”-18 bolt should stick down below the bracket a little bit. Place the provided nut with lock washer onto the bolt, and tighten this down against the bracket (reapply loc-tite if necessary). **Do not turn too hard** as this is into relatively thin aluminum (I would estimate no more than 5 ft-lbs, but that number has not been tested. It is provided solely for you to understand how lightly this must be tightened to not damage the aluminum).
18. The bolt should not be able to turn, but the bushing should be able to rotate freely around the bolt.
19. Place the new bracket down as before (onto the original bushing mounting post), and put the ¼-20 bolt provided through the center hole in the bracket and through the hole you just drilled. Check the position of the shifter. Select which of the three holes you would like to use to locate the center point of the shifter.
20. **Use loc-tite** on the bolt if you have it, place the lock washer on the end of the bolt then the ¼-20 nut. Tighten this nut down to hold the bracket in place.
21. Confirm that the shifter works at this point and that none of the bolts are loose.
22. Reinstall air box, hoses, etc.