# Fitting Instructions

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|---|---|
| **Vehicle:** | Toyota Corolla GR |
| **Product:** | Gear Shift Assembly |
| **Part number:** | ATMSCGR3 |


**Kit Contents:**

| | |
|---|---|
| 1x AIRTEC Motorsport Gear Shifter Assembly | 1x AIRTEC Motorsport Gear Knob |
| 4x M8x20mm Button Head Bolts | 1x 5mm Allen Key |
| 4x M8 Spring Washer | 1x 2mm Allen Key |
| 4x M4x12mm Grubscrew | 1x 1.5mm Allen Key |
| 4x M3x5mm Grubscrew | 1x Bottle of Thread Lock |

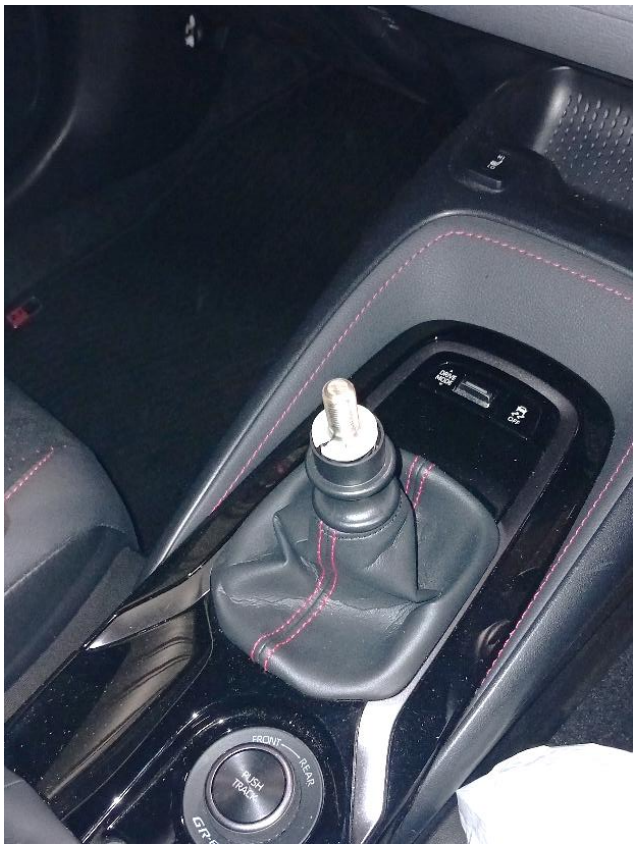
**Tools Required:**

| | |
|---|---|
| Ratchet and Socket Set | Trim Removal Tool |
| White Grease | Masking Tape |
| 10mm Spanner | Phillips Head Screwdriver |
| Small Hammer | Flat-Head Screwdriver |

**PLEASE THOROUGHLY READ THESE INSTRUCTIONS AND MAKE SURE YOU ARE FAMILIAR WITH THE STEPS BEFORE CARRYING THEM OUT**

# Instructions:

1. To start, unscrew and remove the gear knob, followed by the white locking collar and spring.



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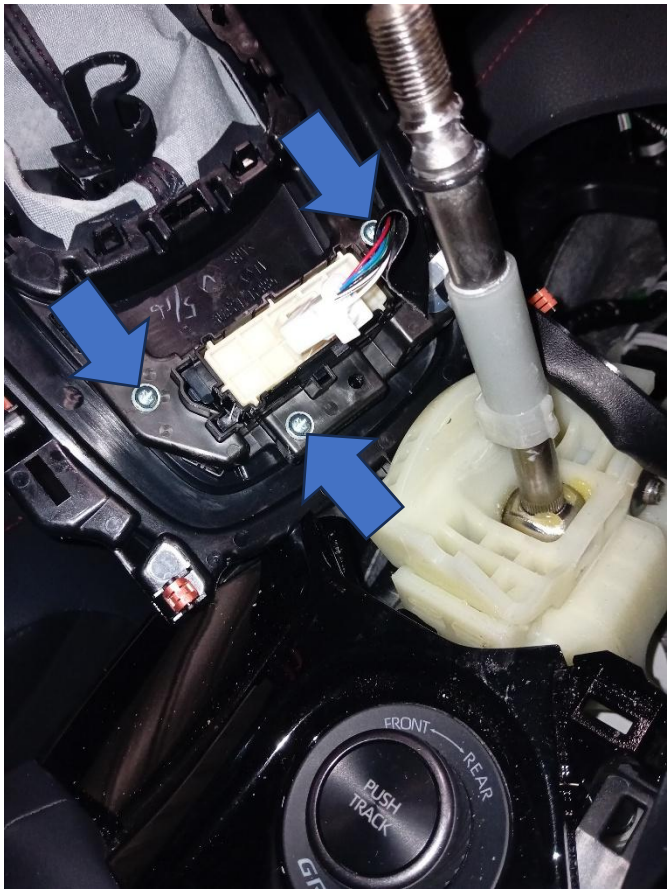
2. Firmly but carefully lift the edges of the upper centre console surround to unclip it from the lower section (blue arrows). Then push down on the inner panel housing the gaiter to unclip it from the outer surround.

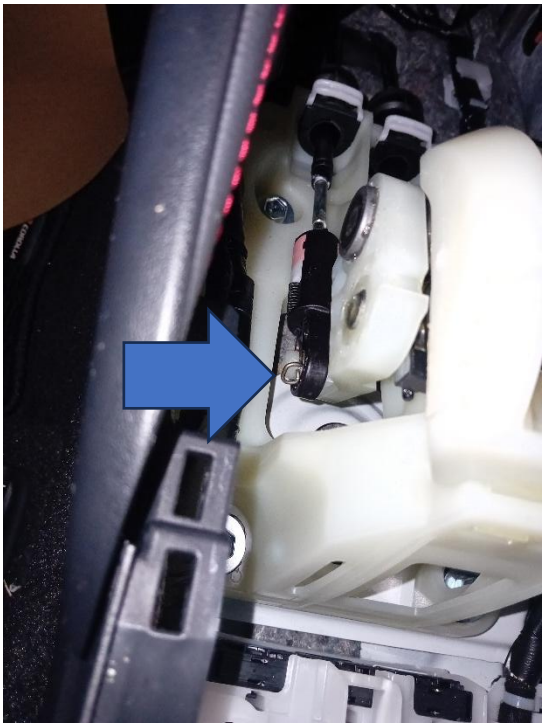
3. Now lift the inner section over the gear lever and on the underside, remove the Drive Mode switch by undoing the three Philips head screws holding it in place. The panel can then be removed.

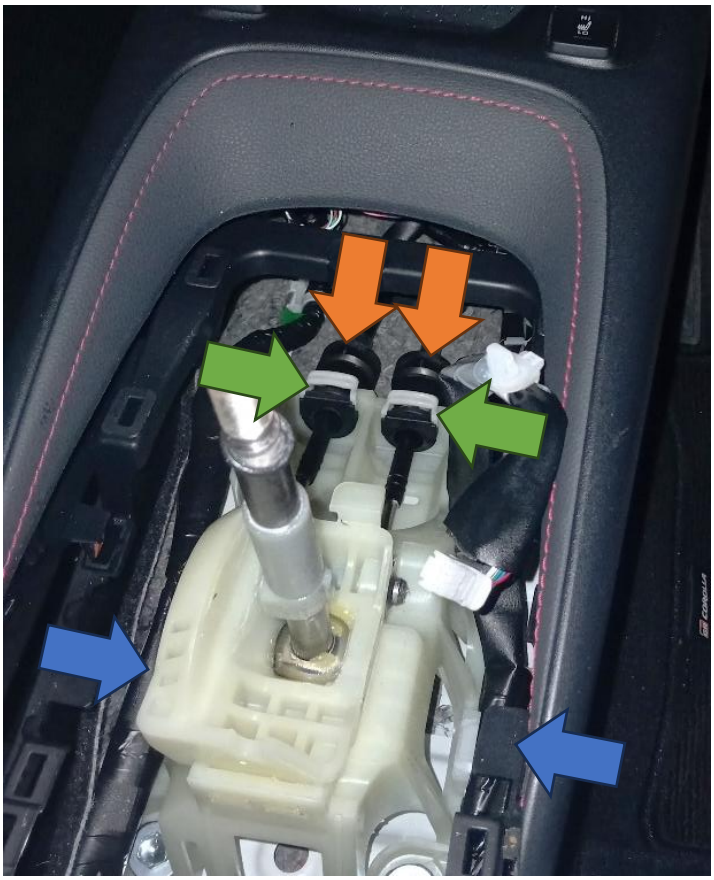
4. Carefully pull upwards around the edges of the handbrake gaiter to release the trim clips. Then slide the gaiter over the handbrake grip to remove it.

5. Firmly but carefully lift the edges of the rear centre console section to release the trim clips. Once free, lift to gain access to the wiring plugs underneath. Disconnect them (one at the front of the panel, two at the back) and lift the console over the handbrake to remove it.

6. With the original shifter now exposed, locate the R-Clip securing the left-hand gear cable in place and remove. Then disconnect the cable attached to the underside of the lever using a pair of pliers to gently separate the clip apart gently and move it back, allowing the gear cable to drop.

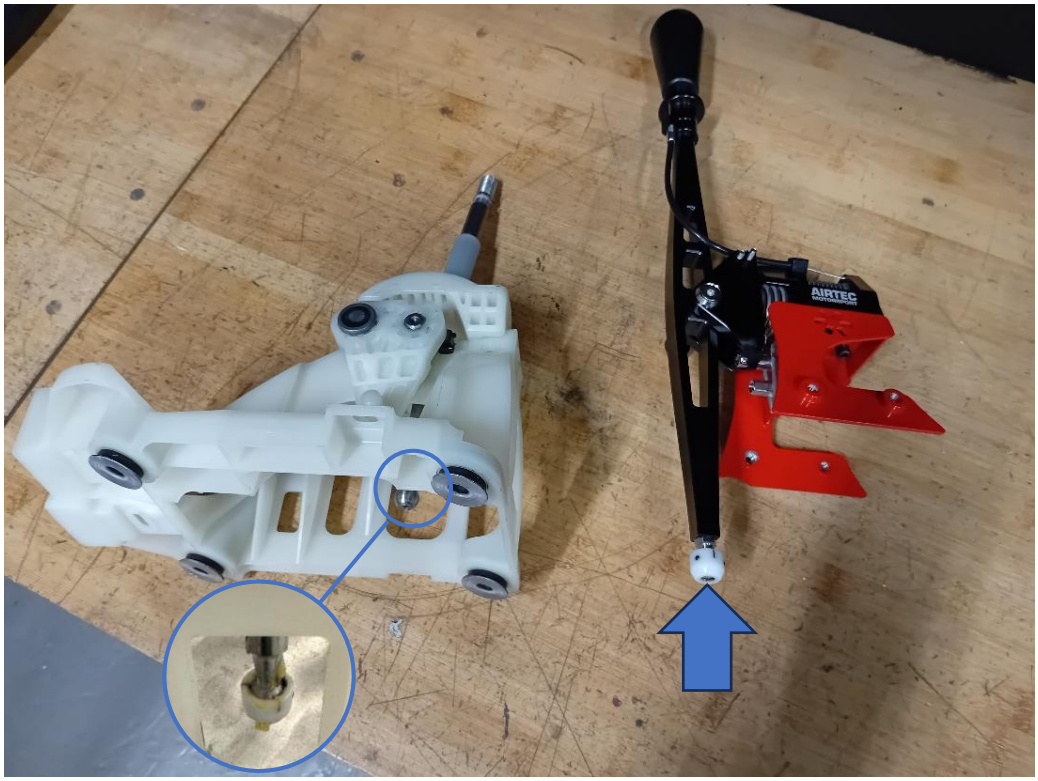


7. Now unclip the wiring looms from either side of the shifter tower (blue arrows) and disconnect the gear cables (orange arrows) by unscrewing the black collars clockwise as you look at them.
Once they are loose, lift the cables up out of their slots and push the white connector (green arrows) into the gap; this keeps the collars in the unlocked position for easier reinstallation.

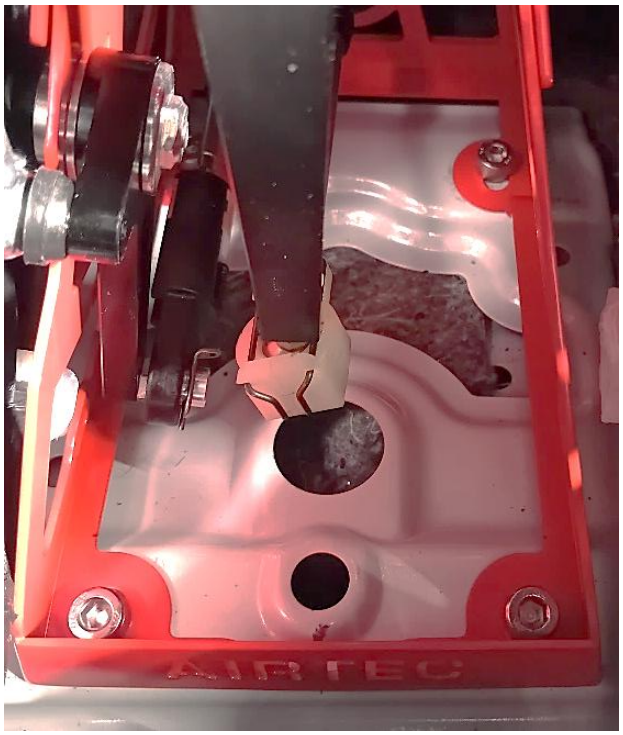


8. The shifter tower can now be removed by undoing the four 12mm bolts securing it to the floor. Once the assembly is out of the car, use a flat-blade screwdriver and a small hammer to **carefully** remove the plastic cup from the bottom of the gear lever. Then install it onto your new AIRTEC Motorsport shifter, as shown.

   **Please note:** We recommend applying white grease to the ball joint before installing.



9. Install the shifter using the four bolts and spring washers supplied in the kit. You can then reclip the wiring looms into the provided tabs, insert the cable collars into the slots and connect the cables to the shifter arms in reverse of Steps 6 and 7.



# Shifter Adjustment

Once the shifter is installed and the gear cables connected it will need setting up. Follow this guide to understand how to adjust the shifter for perfect selection of all gears.

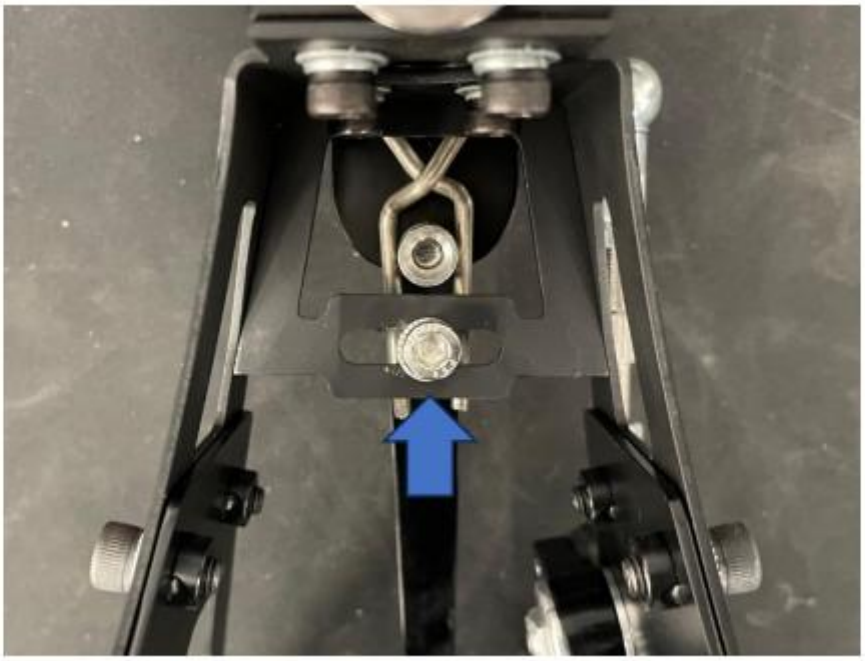
## STEP 1 – CENTERED

First, ensure the lever is perfectly centred in the gate by checking it easily moves up and down to select both 3rd and 4th gears with no sideways resistance. If there is any form of sideways movement required of the gear lever to engage 3rd or 4th gears, then loosen the rear-facing Allen Key bolt as shown, **but do NOT unscrew more than two turns under any circumstance.**

Once loose, gently move the lever over to centre it, re-tighten the bolt and check for resistance again. Repeat this process until there is no sideways resistance


Side view of bolt to adjust with Allen Key in place.

Rear view of bolt to adjust with Allen Key in place.



There is adjustment in the bracket to move the bolt left and right.

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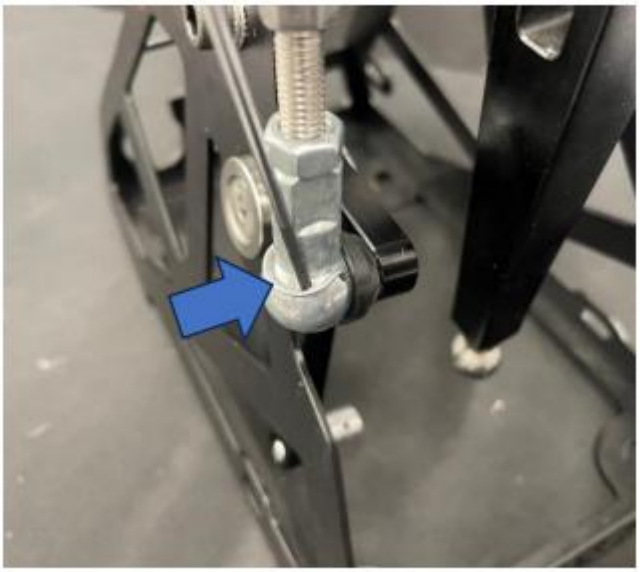
## STEP 2 - PRE-LOAD

Secondly, check there is no pre-load on the gear linkage. To do this, use a small flat-blade screwdriver to carefully release the locking spring clip from the bottom ball joint - **be careful not to lose this clip**.

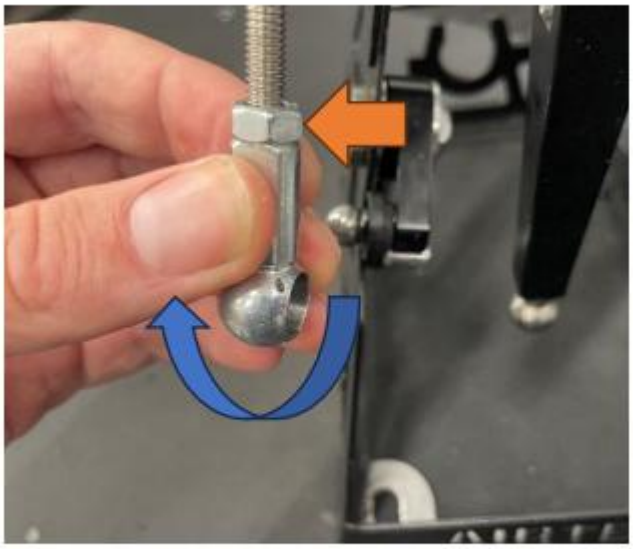
The ball joint should separate from the linkage arm without the gear cable moving backwards or forwards and should fit back onto the linkage arm without moving backwards or forwards. If you have to push or pull the linkage arm to get the ball joint on, then it will need adjustment.

To do this, loosen the one of the lock nuts and wind the adjuster in or out until the ball joint lines up perfectly and the gear cable does not move when attaching it. You can then tighten the lock nuts fully using 8mm and 10mm spanners.

**Please note:** Each end of the adjuster is an opposite thread, so one side is a right-hand thread and one is a left-hand thread.



Carefully release the spring clip and pop the ball joint apart. The two parts should line up perfectly without moving up or down to disconnect or reconnect. If you have to push or pull the linkage arm, it will need some adjustment.



Loosen the lock nut (orange arrow) and then wind the adjuster up or down until the ball joint lines up perfectly. You can then use 8mm and 10mm spanners or tighten the lock nuts up and stop the adjuster moving position.

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## STEP 3 – SETTING TRAVEL LIMITS

Use the supplied grub screws to limit how far the gear lever can travel left-to-right and for reverse gear.

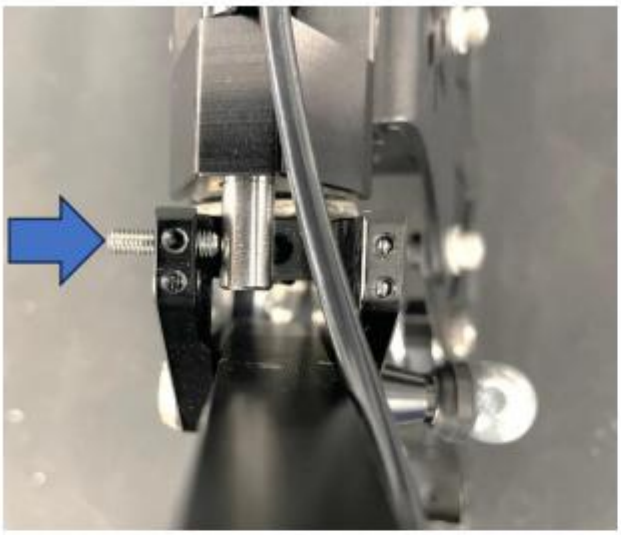
First select reverse gear and wind a supplied grub screw using the supplied Allen Key in one of the **upper holes**. If reverse is next to first or second gear, use the right-hand upper hole. If reverse is next to fifth or sixth gear, use the **left-hand** upper hole.

Wind the grub screw in until it touches the centre bar – **then unwind half a turn so there is a small gap. Please note: You MUST leave a small gap, it should not touch.**

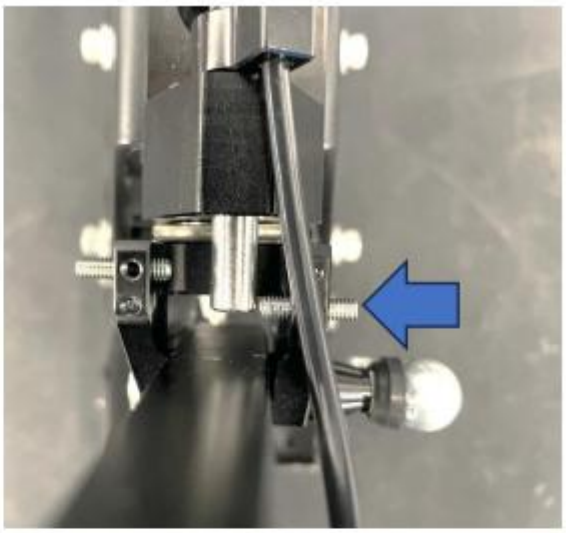
Then select first gear and wind another grub screw in the **lower right-hand hole** and repeat the process.

Then select sixth gear and wind another grub screw in the **lower left-hand hole** and repeat the process.

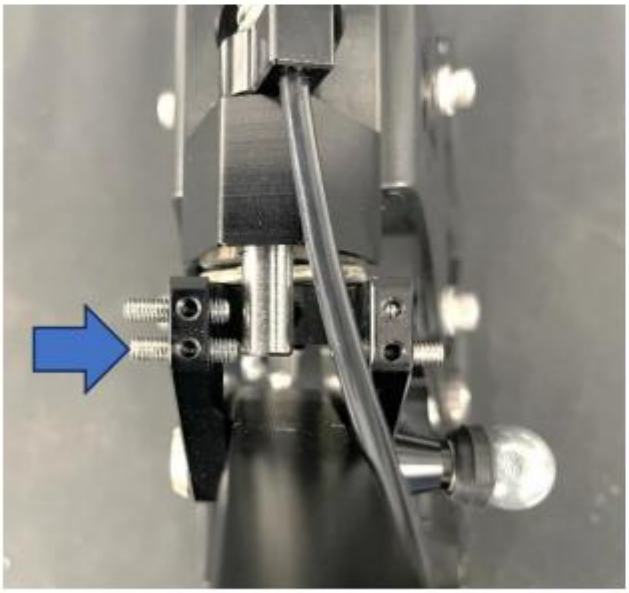
Once they have been set, ensure you can select reverse gear by lifting the gear lever's safety collar enough to pull the centre bar back to clear the lower grub screw.



Select reverse, insert a grub screw until it reaches the centre bar and unwind half a turn.



Select first, insert a grub screw in the lower right hole until it reaches the centre bar and unwind half a turn.



Select sixth, insert a grub screw in the lower left hole until it reaches the centre bar and unwind half a turn.

When you lift the lever's reverse collar the centre bar should move back to allow reverse to engage.

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## STEP 4 – LOCKING IN POSITION

Finally, once you have set all your grub screws, use the smaller supplied grub screws to lock them in place. Before doing so, apply a good amount of the supplied Lock Thread into the top thread hole and to the grub screw itself before winding them in.


Apply a good amount of Lock Thread to each of the holes.


Use the supplied Allen Key to screw in the top grub screws.

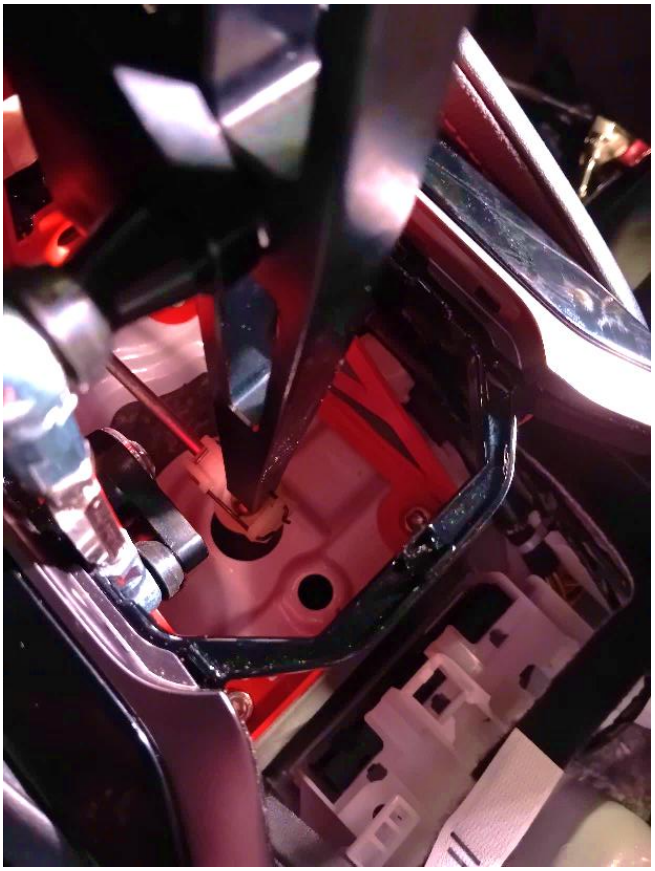
10. Once the shifter is installed and adjusted, it will need to be partly deconstructed to allow the centre console to be reinstalled. To begin, unclip the centre gear cable from the lever (blue arrow) and then carefully remove the spring clip securing the upper ball joint and disconnect it (orange arrow). Then, undo the four 10mm bolts (green arrows) securing the top of the shifter to the base and remove.

11. Before refitting the centre console panel, unclip and remove the gear stick gaiter. Then apply a few layers of masking tape to protect the centre (blue arrow) from damage during fitting.

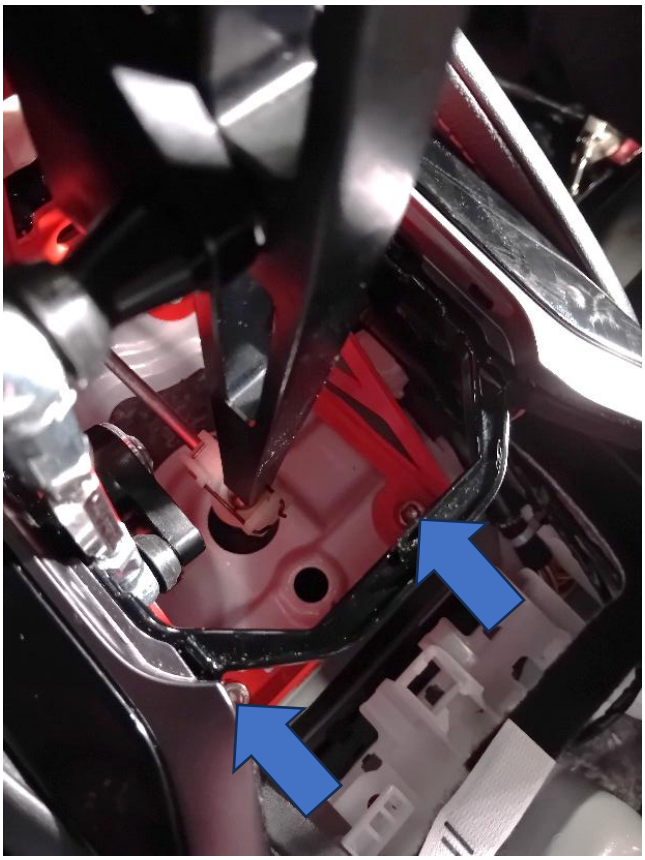
12. Reinstall the panel into the centre console surround in reverse of Steps 2 and 3.

13. Now carefully reinstall the top half of the shifter in reverse of Step 10.
    **Please note: Make sure to use the supplied thread-lock on the four 10mm bolts before reinstalling.**

14. Once the top is secure, reconnect the shift lever and linkage in reverse of Step 10.

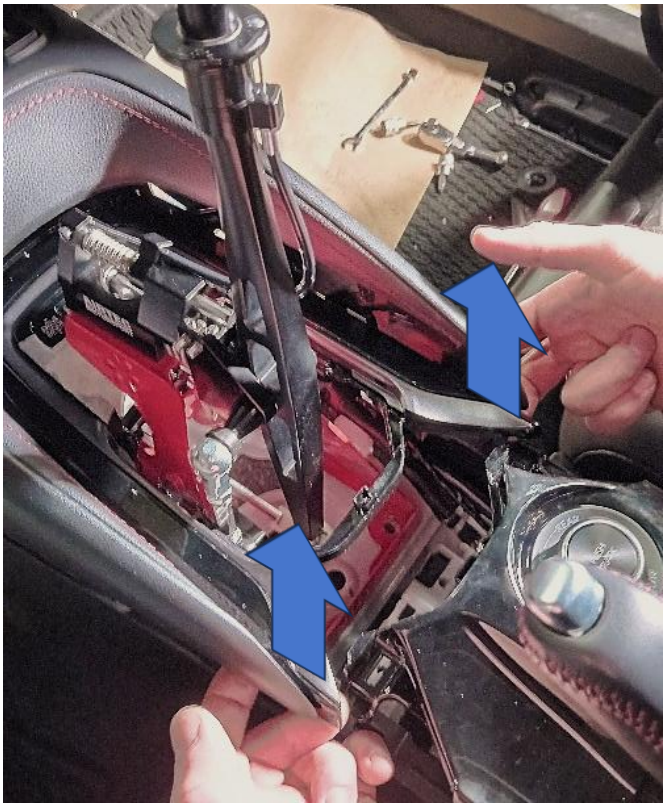
15. Now loosen the two bolts securing the rear of the shifter to the car so that the tower can move up slightly. This will allow the rear centre console section to fit in place.

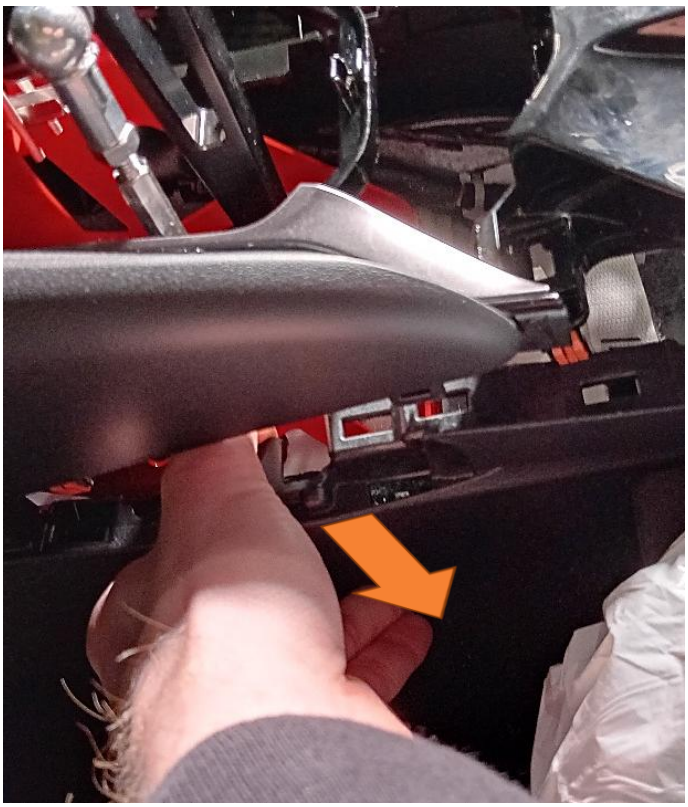


16. Lower the rear centre console over the handbrake and reconnect the three wiring plugs. Then raise the rear of the front centre console's corners as high as possible (blue arrows) to allow the rear panel to slip underneath and clip in place.
    **Take care, as excessive force will scratch the panel on the underside of the shifter cutout.**

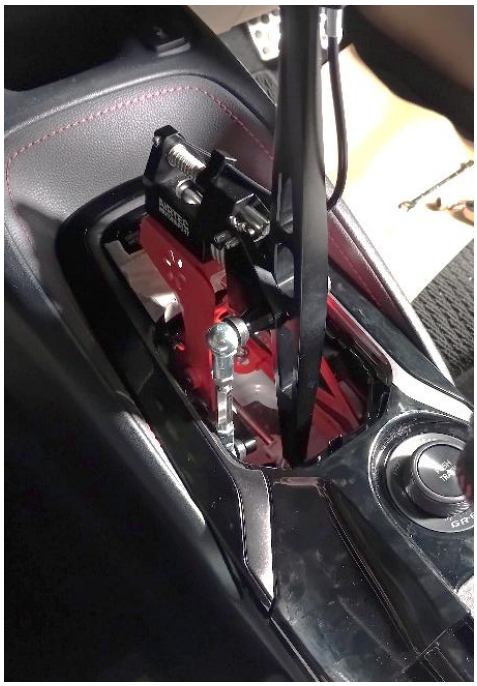
    If necessary, more clearance can be made available by pulling the plastic walls underneath the centre console outwards whilst manoeuvring the rear panel into position (orange arrow).

    **Please note:** We strongly recommend that two people perform this step, as simultaneously lifting the front panel and locating the rear is extremely difficult on your own.

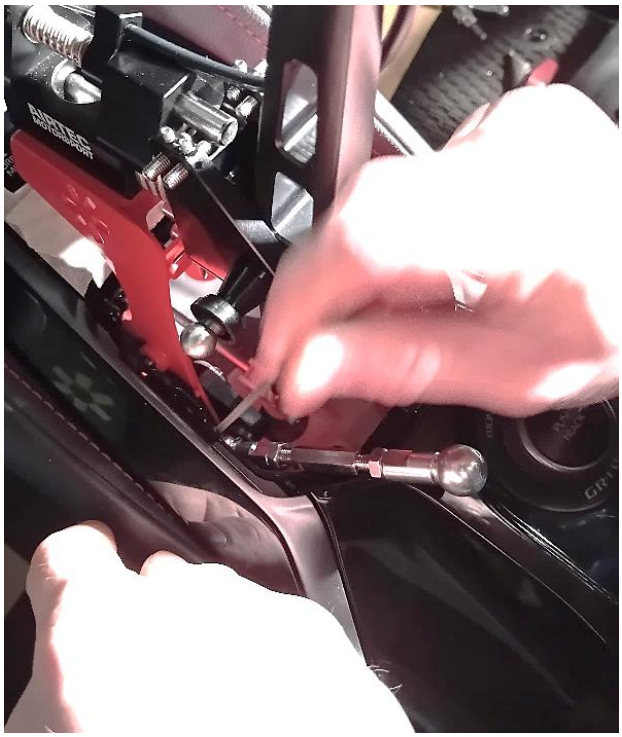




17. Once the rear panel is located and secured in position, lower the front panel back down, clip it in position and retighten the two shifter tower bolts loosened in Step 15.



18. At this point, try and engage all gears and check for any interference issues. Due to the adjustable nature of the shifter, the linkage **may** come into contact with the edge of the front centre console's plastic panel (blue arrow). If necessary, detach the linkage and carefully use a file or Dremel tool to trim the panel. Make sure that the linkage is correctly resecured with its spring clip after trimming.


19. Finally, check that the shifter is set up to your satisfaction and that all of the components are fully tightened. Then reinstall the handbrake gaiter in reverse of removal and clip the supplied cover surround in place.

**Enjoy your new AIRTEC Motorsport Gear Shifter Assembly!**

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**Please note:** We recommend periodically checking the tightness of all moving parts, as under harsh conditions fittings may need retightening and the joints may need regreasing with white grease.

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