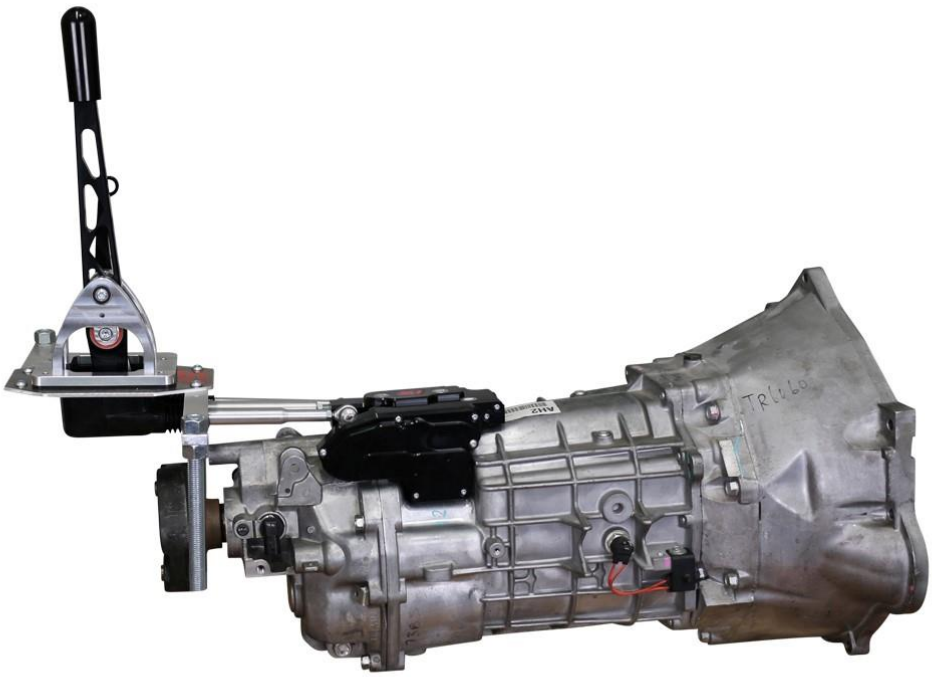
S1 SEQUENTIAL

CONTENTS AND ASSEMBLY INSTRUCTIONS

Remote mount shifter kit, T56/Tr-6060



COMPONENTS

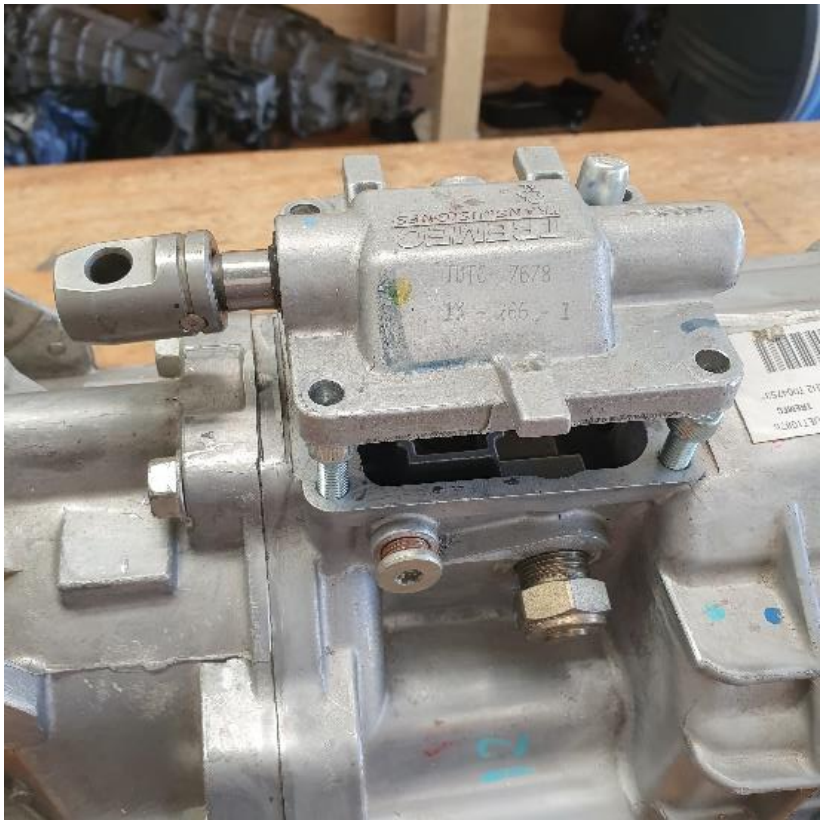
Sequential Shift Conversion Unit	
Lever & Shift Knob *(Options: High or Low, black or silver)*	
Lever Adaptor Plate (*vehicle specific*)	
Linkage Rods (*vehicle specific)*	
Rubber Boot	
Bolt Pack	

INSTALLATION

Installation should be done on a car hoist to allow easy access by someone skilled enough to do automotive work like changing a clutch or an engine. If you do not have this level of skills, please pay a professional to install. The gearbox will not have to be removed but the rear of it will have to be lowered for access.

Please follow the below instructions for installation of your new shifter,

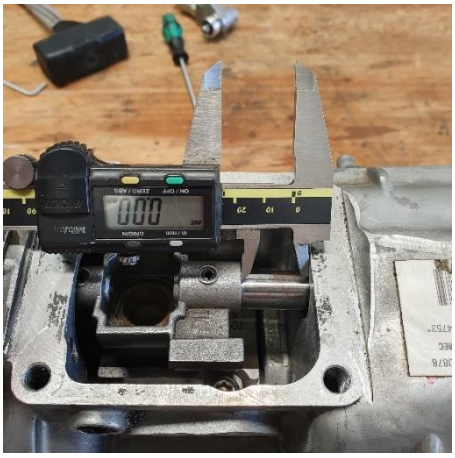
1. Remove shifter surround and any other trims inside the vehicle required to fit the sequential lever.
2. Place vehicle on hoist shift into neutral gear and remove exhaust & tail shaft, remove all linkages connecting the shifter to the transmission.
3. Lower hoist and remove shifter from inside the vehicle.
4. Lift hoist and support rear of transmission with a transmission lift, remove cross member and lower the rear of the transmission.
5. Remove factory shift coupling from top midpoint of transmission.

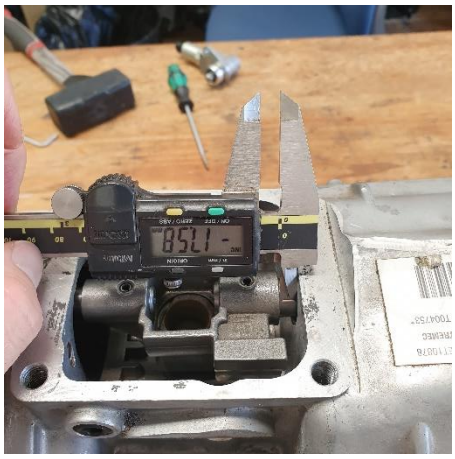


IMPORTANT

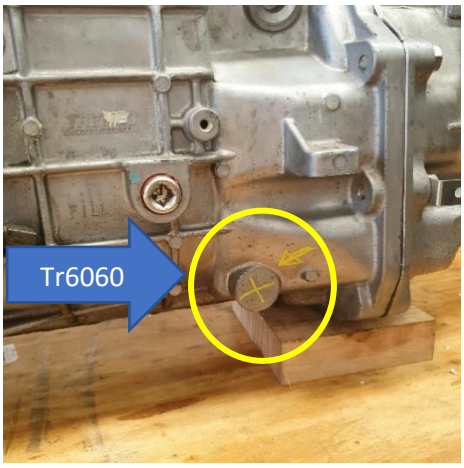
The Tremec t56 and Tr6060 gearbox can look very similar in both the direct and remote shifter variants, on both its important that you only use the correct shifter. We recommend that you confirm the variant you have while fitting the shifter.

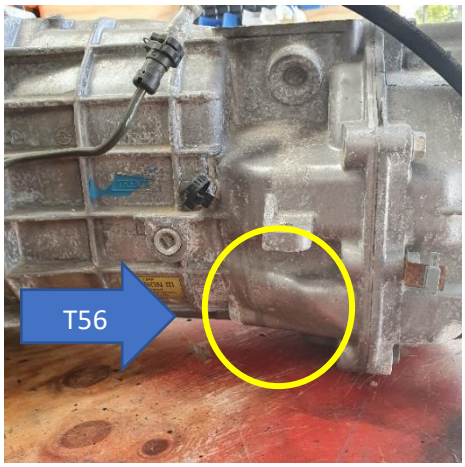
The most accurate way to determine the variant is to measure the throw of the shift rod between 3rd and 4th gears, the **T56 transmission will measure 20.3mm** and the **Tr-6060, 17.5mm**.





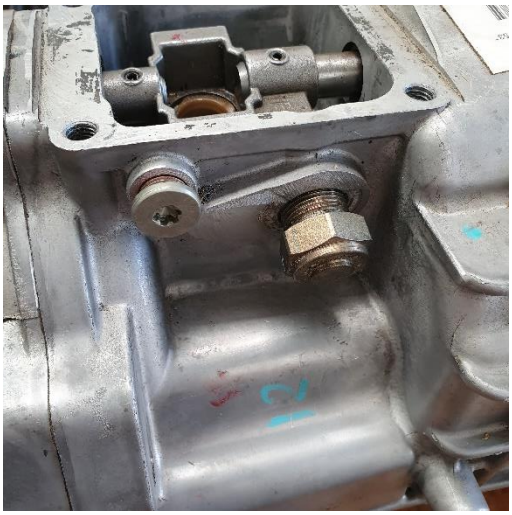
Note: Tr6060 has a protrusion in the casting for a fitting to be mounted where as T56 does not.

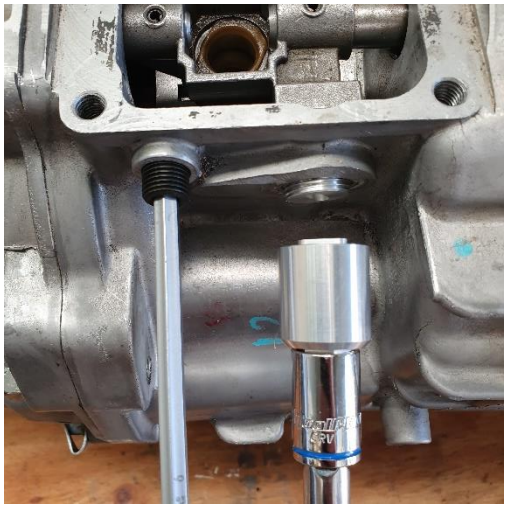




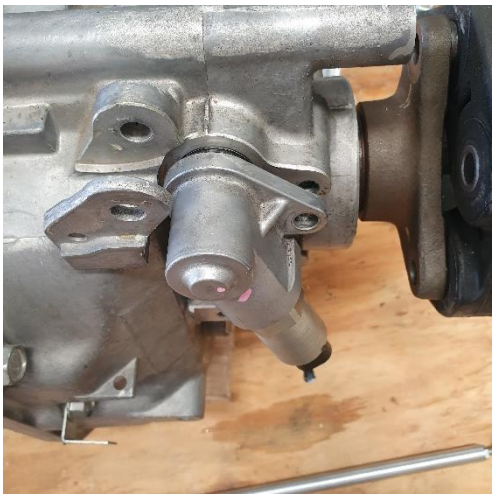
INSTALLATION

6. Remove ball plunger and bung from right side of transmission and fit supplied bungs with thread sealant. Notice this is the thicker of the aluminium bungs supplied. Use the tool provided with a 13mm socket if required and a 6mm Allen key for the black grub screw. Both bungs must be flush with the outer surface of the transmission. * t56 boxes will not have the thread for the small bung so you will need to tap it.



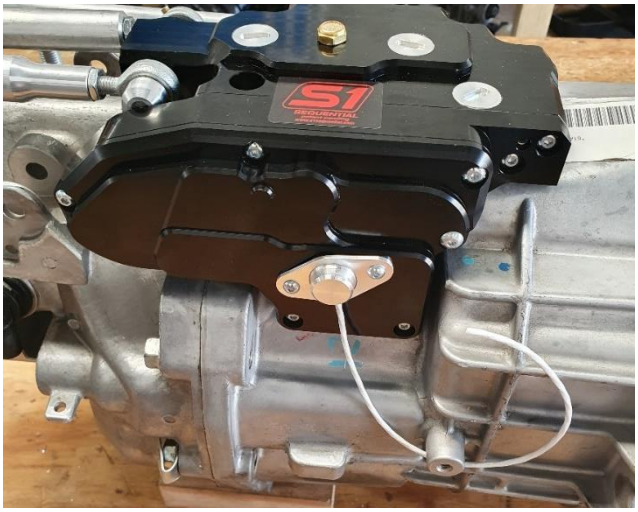


7. Remove reverse lock out solenoid and fit cover plate with sealant.

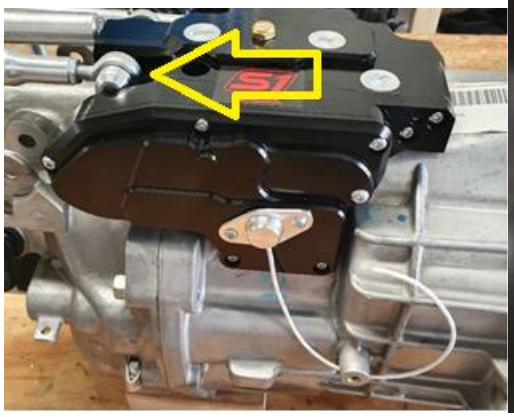


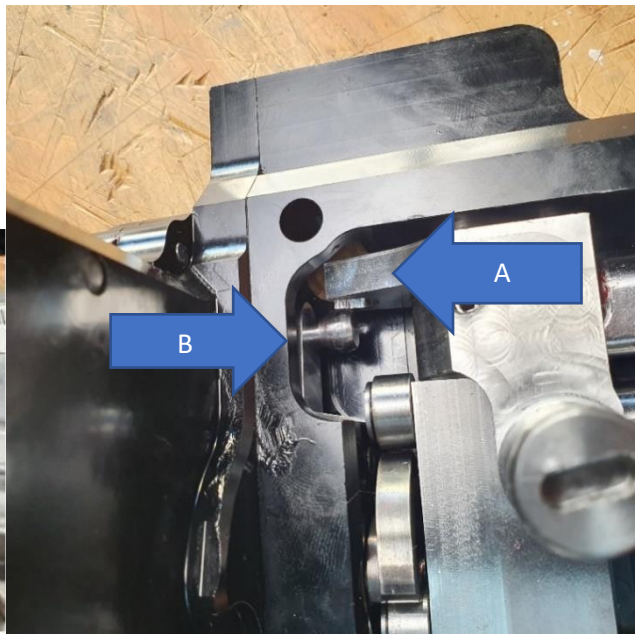
INSTALLATION

8. If you are using the position sensor it's time to fit this. The Sensor is attached using M4x8 button head bolts. The position pictured is the approximate required angle but you will have to adjust this until the gear indicator reads correctly later so that the zero point is not crossed in operation. If you are not using the position sensor, please make sure you fit the M4x8 bolts so oil will not come out the holes.



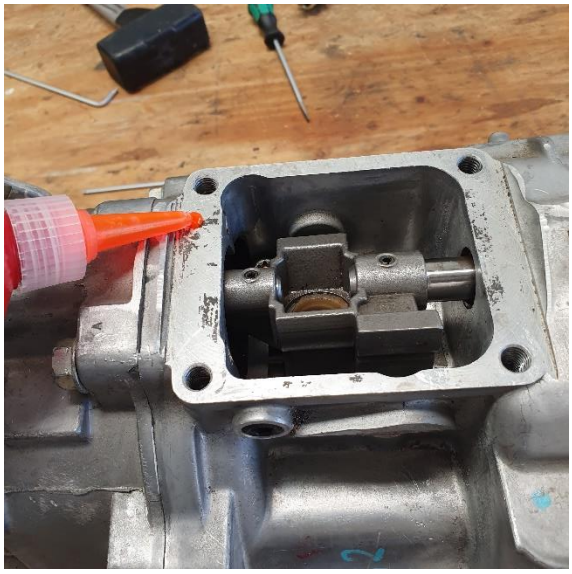
9. The sequential conversion unit can now be fitted, make sure the shifter is in neutral gear and the gear selection cam is pointing directly down (up when looking from the underside). To down shift to neutral move the shift arm away from the shift unit (yellow arrow) until the end stop is hit. When cycling through gears with the shifter off the gearbox part "A" might get stuck on the ball part "B" so you may need to align this part by hand as you shift. When in neutral the reverse lock out arm will move the ball part that engages the gear side to side when rotated.

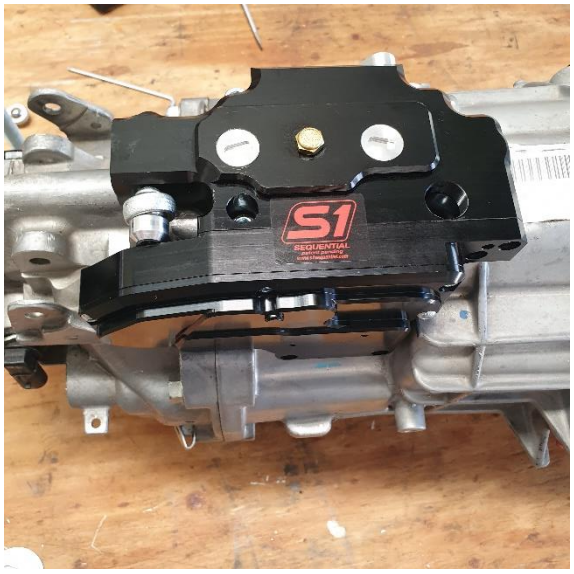




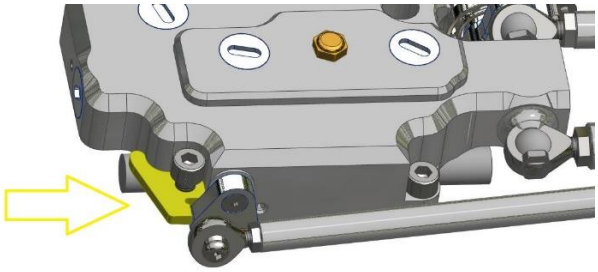
INSTALLATION

10. Test fit the shifter and check that it sits flush on the flange surface and that there is no clearance issues from the bungs on the right side of the case housing in front of the flange surface. Check that all 4 bolts can be fitted.

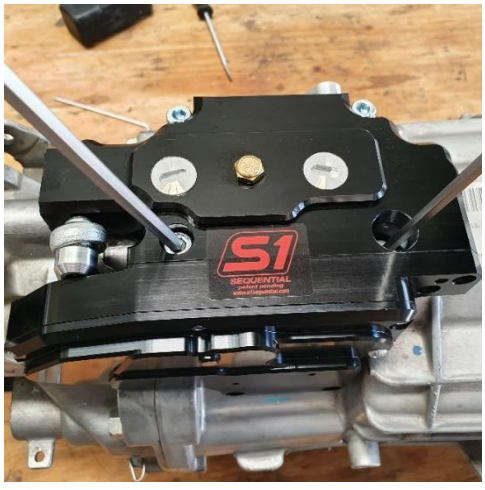




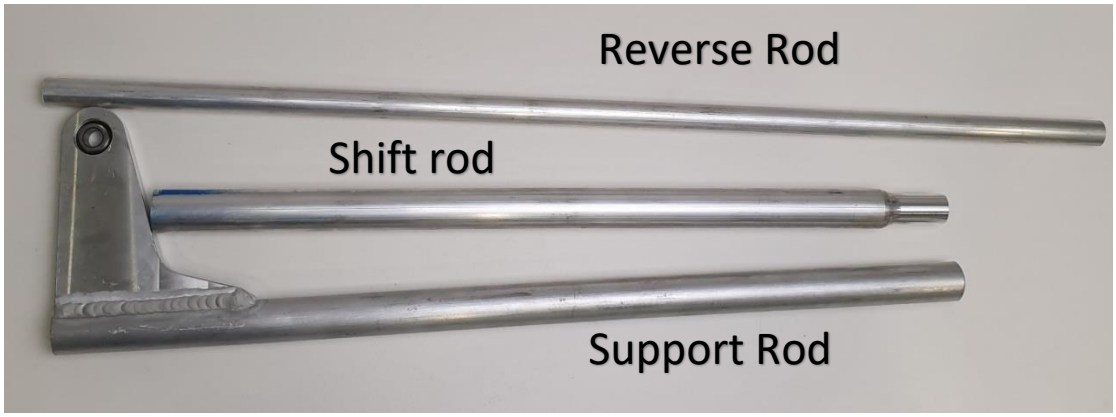
11. Apply sealant to the flange surface and fit the sequential conversion unit to the transmission making sure that the ball goes in the socket. Fit the reverse lock out stop plate as pictured



12. Fit bolts gently tightening the countersunk M8x16 to the front right hole before tightening the others, this will locate the shifter. Tighten all bolts.

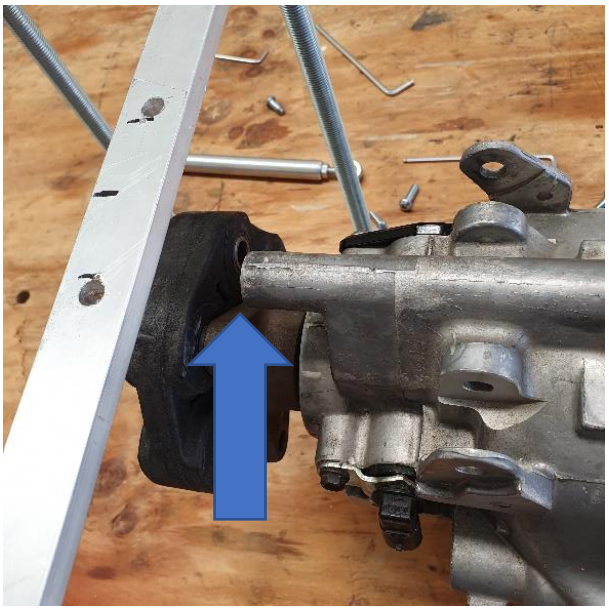


13. If you are using a custom kit you will have to cut the rods to length, then drill and tap the ends.



IMPORTANT TIP

The best way to do this is to measure the distance from the rear of the transmission as pictured below, to where you want the lower linkage mount of the lever to sit then apply the formula.



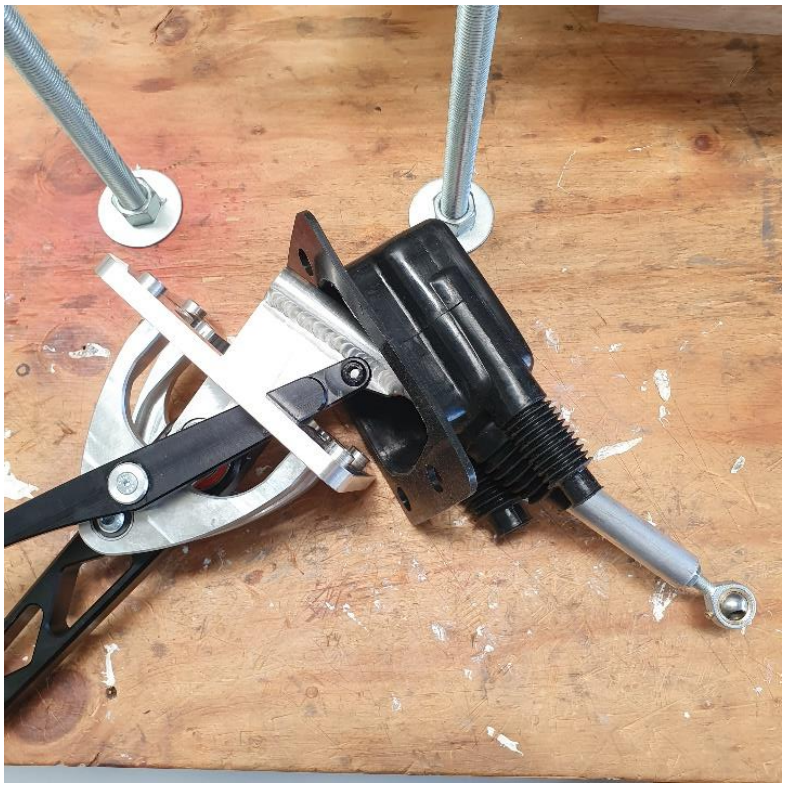
Support rod = 153 + length **Shift rod =** 108 + length **Reverse rod =** 243 + length

INSTALLATION

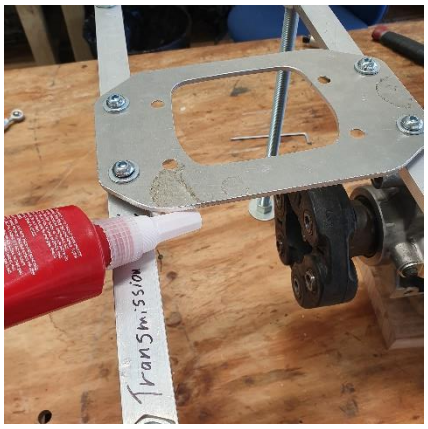
14. Fit rod ends to linkage rods as pictured using the thin locking nuts & a small amount of thread locker you may want to adjust these later to adjust the levers to your preferred angle.

15. Shift lever fitment:

Use a M8x20 button head screw to connect the brace bar to the lever swing section use thread locker on this. Carefully run the brace bar though the middle hole of the rubber boot

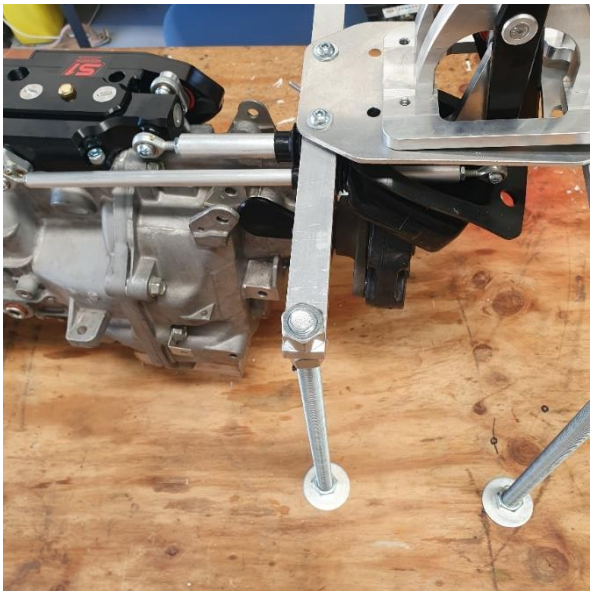


16. Place lever adaptor plate in vehicle but do not bolt in place.



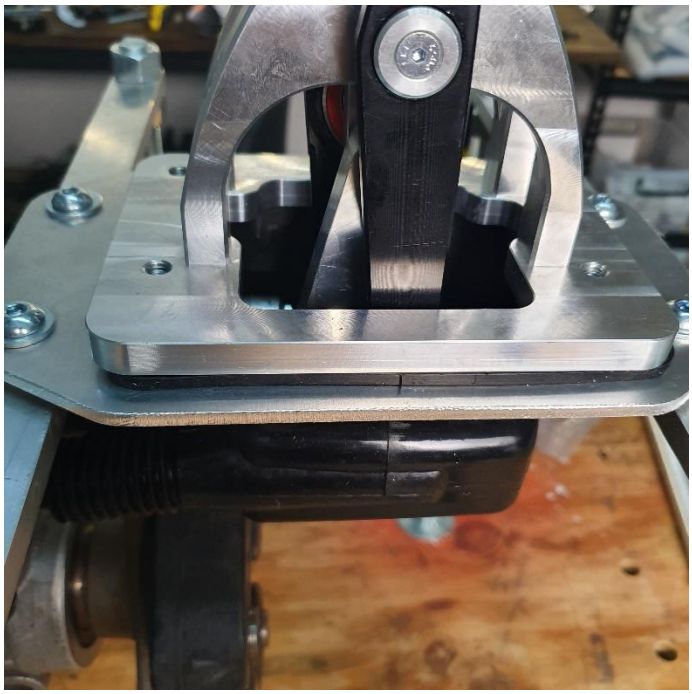
17. Put lever and boot in place as pictured, screw shift rod onto the rod end that is attached to the shifter and feed the end with the rod end already installed through the boot.
Bolt in place all rod ends with the following bolts:

Shift rod rear = M8x20 Button head
Support rod rear = M8x20
Support rod front = M8x25 Button head
Reverse rod front = M6 x 20 Button head
Reverse rod rear = M6x16 Button head



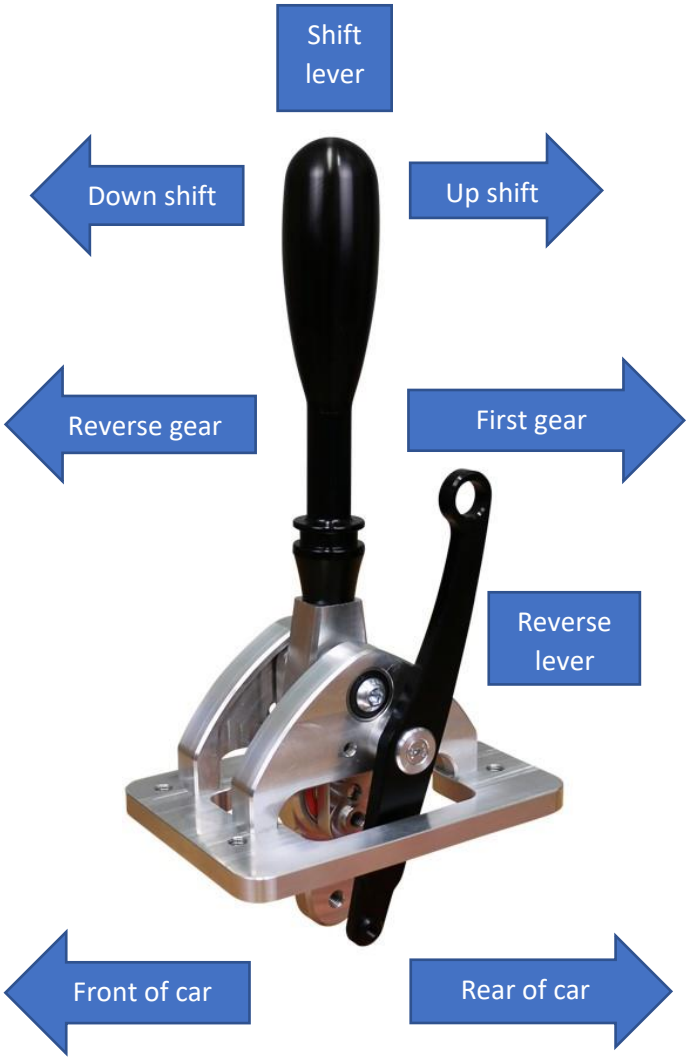
18. Lift the rear of the transmission and re install cross member

19. Lift silicone boot to fit between the adaptor plate and the base of the lever and bolt these parts with the M8x16 countersunk screws.



20. Bolt adaptor plate to transmission tunnel and check operation of the shifter while remembering that a synchro box may not go through all gears without the driveline moving and a dog box almost certainly will not so it may be necessary to run the engine and lift your foot off the clutch slightly to get gears to engage.

LEVER OPERATION



Gear selection process

The shift pattern of this shifter is R--N123456. **Pulling back on the lever will upshift, pushing forwards will down shift** until you hit the neutral end stop which is only a half shift.

Reverse selection

1. Down shift to neutral.
2. Push reverse lock out lever all the way forwards.
3. Pull the main shift lever back.

Leaving reverse to get back to first

1. Push main shift lever forwards to get neutral.
2. Pull main shift lever back to rotate the selector shaft back to the 1st gear side of the gate.
3. Pull main shift lever to engage 1st gear.

Gear indicator fitment & programming

Small Housing Style

Nice and compact in a black casing.

Gauge Pod Style

Designed for a standard 52mm / 2 $^{1}/_{16}$ in gauge pod.

This gear indicator differs slightly from most by using not just an analog signal to determine gear but also an input from a reverse switch which is necessary with our shifter.

It is that required that the installer has the appropriate knowledge to complete the job, if cannot use a multimeter to test voltage and resistance it is best to get this job done by a professional.

Fitment

Mount the gear indicator in the desired position using double sided tape for the small flat style gear indicator or a 52mm, 2 1/16 in gauge cup for the pod mount style and connect all wires.

Wire Colours

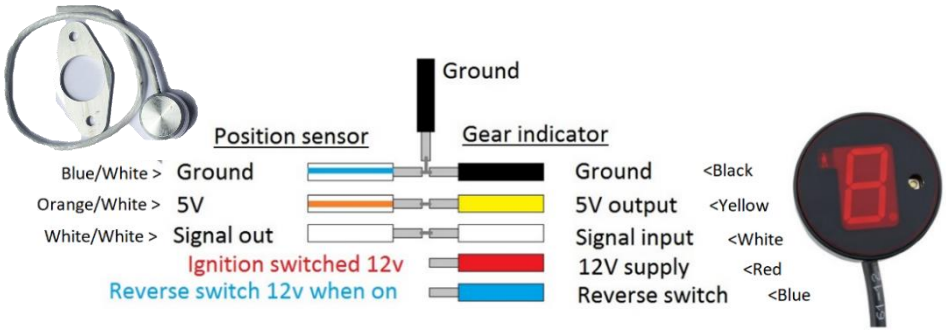
Black = Ground

Red = 12v (ignition switched maximum 18 V)

Yellow = 5v output for position sensor

White = Signal input (signal output from sensor)

Blue = Reverse input



Sensor fitment

Position sensors now have a revised design that allows them to be rotated 360 degrees under the mounting bracket. To determine the correct position it is best to use a multimeter between the white signal wire and ground to ensure the sensor is positioned so it will not cross the dead zone in operation where the output will instantly jump from a low to high voltage. The sensor is secured with the supplied 4mm stainless steel screws.

Set up

These Gear indicators now ship programmed but this may still need to be reprogrammed for your specific set up.

Programming

1. Hold the programming button down while the ignition power is switched on this will put the gear indicator into programming mode. The programming button can be accessed through the 4mm hole on the front of the gear indicator. This should be done with a nonconductive object to prevent any accidental damage.
2. The gear indicator will now pulse the gear it is waiting to be entered starting with neutral.
3. Select the gear displayed on the shifter/transmission then press the program button to set the position in the gear indicator.
4. Once you have programmed the number of gears your transmission has turn off power to the gear indicator for all the settings to be saved.

5. Reverse can be displayed my either a high or low power (under 1V=low, over 4V= high) on the blue wire this will come from the reverse switch on the side of the transmission.

   The reverse input will override all other gear positions.

   Generally earlier cars and most conversions switch to 12v with reverse is engaged and many late model cars have a 12v supply to the sensor that gets pulled to ground when reverse is engaged. To select positive or negative trigger press the program button for 1 second any time at least 5 seconds after start up and the input trigger behaviour will switch.
   When you select positive trigger the display will flash “P” with you select negative trigger the display will flash “N”.
   If you’re not sure what to do and you definitely have a reverse switch wire that changes when reverse is selected just try pushing the button and see what happens.

Trouble shooting

Gear indicator does not light up: Check that there is at least 10v between the black and red wires.

I program the gear indicator, but it does not save: Check that the sensor out put changes with gear position (measure between black and white wires). Check that the Yellow wire to the sensor has between 4 & 5 volts (measure between black and yellow wires).

Gear indicator only shows “R” or “A”: This is the same letter the “A” is the closest we can get to an “R” on the seven-segment display. The “R” will mean that the reverse input is triggered so invert its behaviour by pressing the program button for one second at least 5 seconds after power has been switched on.

Contact

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