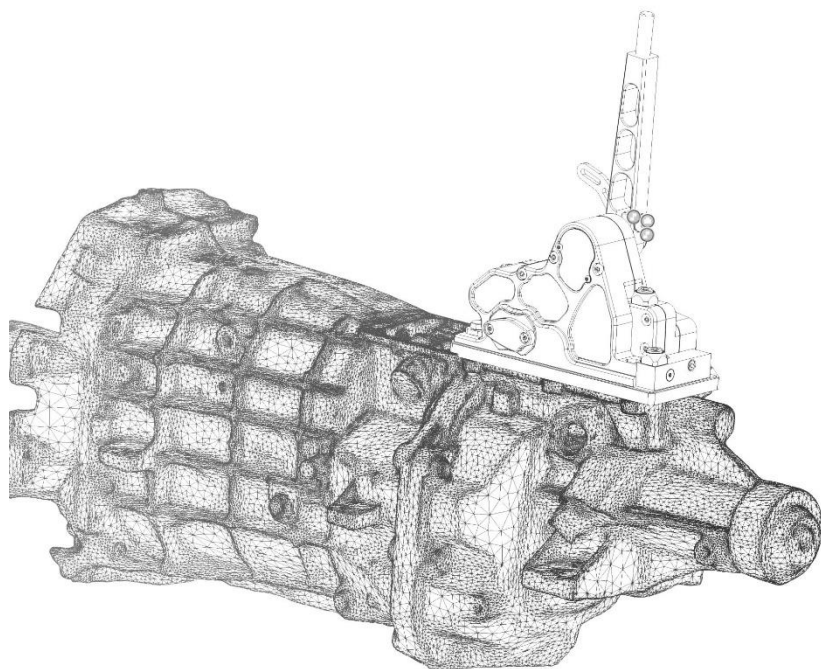


S1 Sequential

Sequential shifter

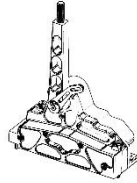
T56 Magnum

Contents and assembly instructions



Parts List

Sequential shifter x1



Base plate x1



Base spacer x1



Drill Square x1



Shaft fitting x1



Square washer x1



8mm Aluminium washer x3



Reverse lockout cover x1



M8x12 (reverse cover) x1



M4x8 (rps) x2



M5x25 (drill square) x1



M5x30 countersunk (drill square) x1



5/16 x1 countersunk (base plate to gearbox) x5



M8x35 hex (front left mounting bolt) x1



M8x35 socket head (rear left mounting bolt) x1



M8x80 socket head (rear right mounting bolt) x1



M8x60 socket head (front right mounting bolt) x1



M12x50 grub screw (top of lever)



Roll pin 6x32 (drill square)



M8x30 button head bolt (shaft fitting) x 1



M8x27 button head bolt (shaft fitting) x 1



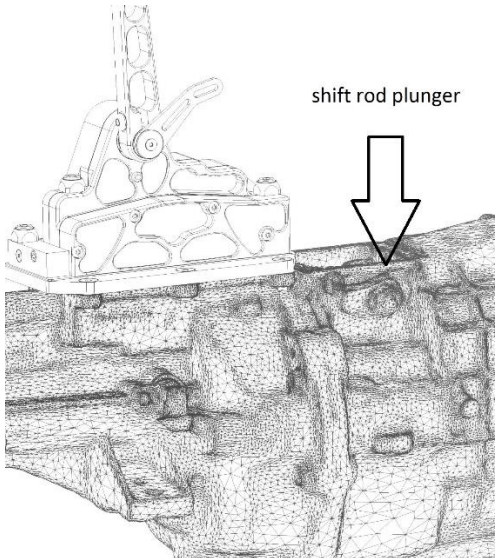
Base retainer M8 thread x 2



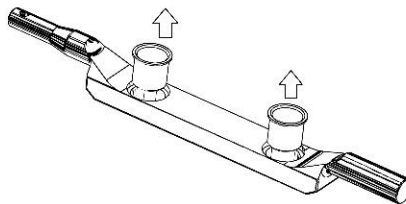
Please read instructions fully before fitting

Installation

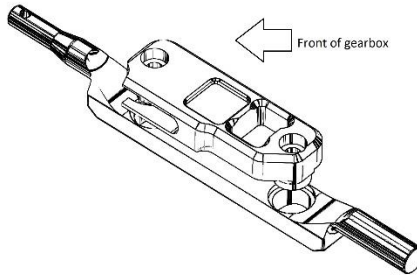
1. Remove the original shifter.
2. Remove factory electronic reverse lock out and fit supplied cover with sealant.
3. Remove the factory fitted shift rod cantering plunger and replace with supplied aluminium bung.



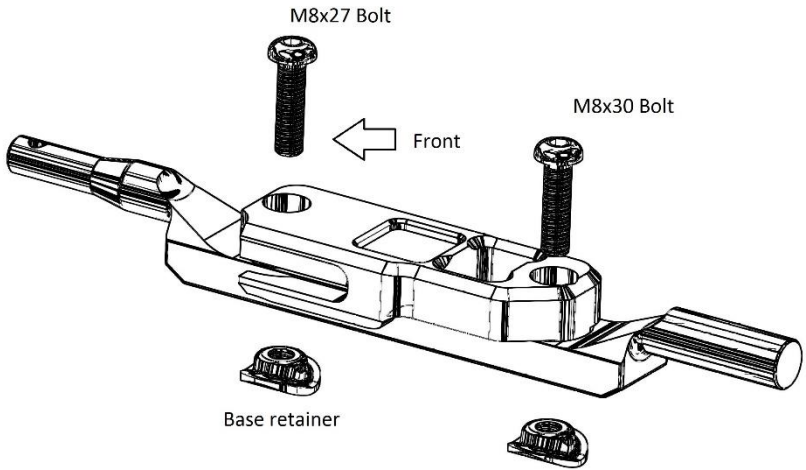
4. Remove the plastic shift bushes that are pressed in the offset lever from factory, these will be easy to remove and can be refitted later if needed.



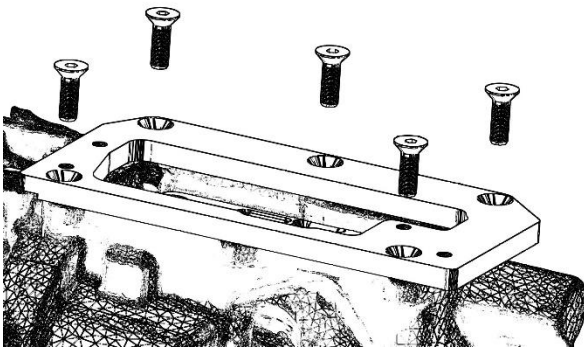
5. Fit the shaft fitting the offset lever as pictured
With the slotted section to the left. The rear end fitting should be a very tight fit and may even need sanding very lightly to fit.



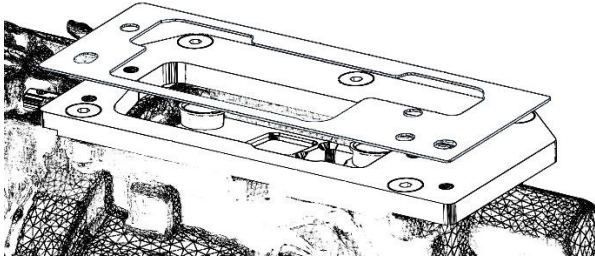
6. The base retainers must be slid under the offset lever this can be a bit tricky but can be done by rotating the offset lever to get clearance. Please stick some thick tape to the back of these before fitting so that if you so drop them they are easily recovered. It is best to fit the front base retainer first and remember it must have the cut down M8x27 button head bolt or it will hit the gear below both of these bolts must be secured with a suitable thread lock compound to be certain they will not work loose. Check for clearance between front bolt and gear while tightening.



7. Apply a thin sealant to the base plate the fit with the five 5/16 x 1 countersunk bolts.



8. Fit base spacer with a thin layer of sealant.



9. Before fitting the shifter to the box observe how the shifter functions especially how the reverse selector works. The shift pattern is N-1-2-3-4-5-6.

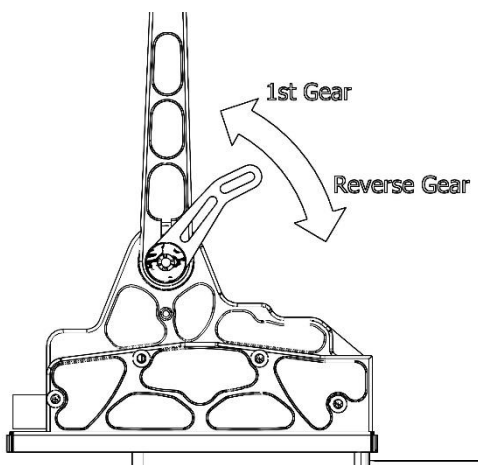
Pulling the back shifts up gears. Pushing the lever forwards shifts down gears.

Neutral is only a half shift to the stop under 1st gear and must be selected softly, shifting hard to neutral may damage the shifter or make reverse selection difficult.

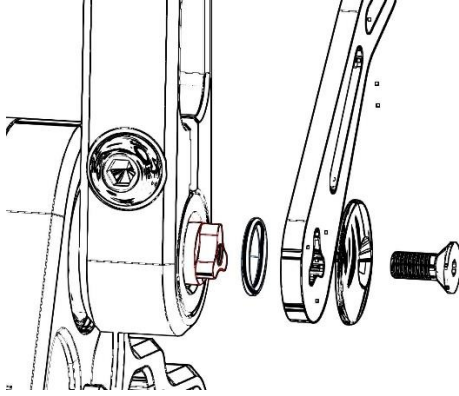
To select reverse first down shift to neutral then move the lever clockwise when viewed from the right side of the shifter, once the lever has moved up 3 clicks through the internal gate the main shift lever is pulled back to engage reverse gear.

To select neutral gear from reverse, push the main lever forwards a half shift to the stop then move the reverse gear selector anticlockwise. Be sure the reverse selector has been moved the whole way before engaging 1st gear. This will become very quick easily select a gear again and gently re-select neutral. and simple once it's been done a few times.

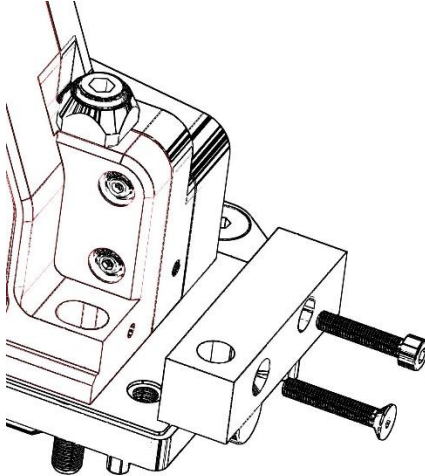
Never force the reverse selector if it doesn't move. The magnum gearbox also has no indexing of this shaft so it may be necessary to hold the reverse selector in its intended position while engaging the gear.



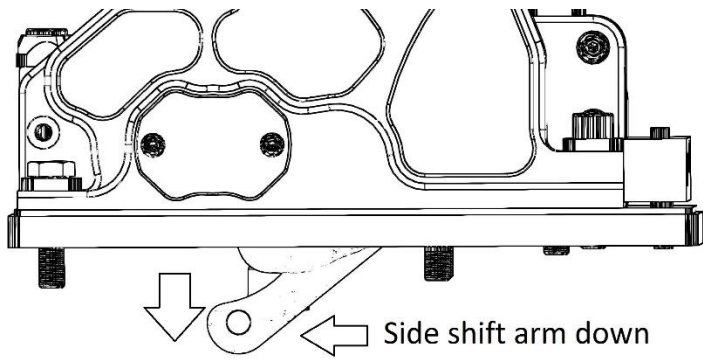
10. The reverse selection lever can be mounted facing forwards or backwards to suit the vehicle. To change this just undo the 5mm countersunk bolt holding it on.



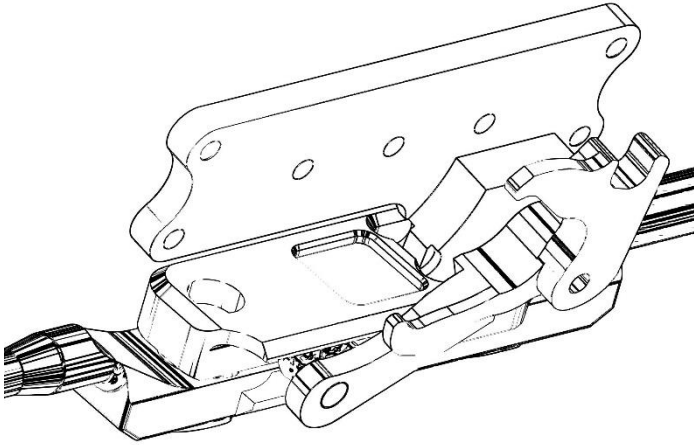
11. Attach the part “drill square” with the m5x25 cap head bolt and the M5x30 countersunk bolt as pictured.



12. Put the gearbox in neutral gear and rotate the selector shaft all the way to the reverse position. This is with the left side up.
13. Put the shifter in the neutral position. Shifting may be difficult when the shifter is not mounted in the car. It is easiest to hold the lever and push the front of back edge of the shifter on a solid surface.
14. Move the reverse selector to the 1st gear position and observe the side shift arm moving down.



15. Slide the ball shaped fitting on the side shift arm into the groove on the left side of the shaft fitting as you lower the shifter onto the base plate. Check that the shifter slides all the way flush with the base, do not force it down with bolts.

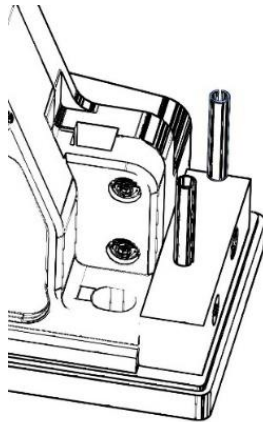


16. Fit and slightly tighten the three 8mm cap head bolts to attach the shifter to base plate then rotate the reverse selector back and forth a few times to get a feel of it.

Rotate the reverse selector all the way to the 1st gear position and you should now be able to select gears. If the shifter has not been placed exactly in the centre it may jam or get tight to move near the end of lever travel it is often most

obvious when you go to change out of that gear where it will be much harder to move than in the opposing gear, this indicates that you need to move the shifter very slightly back or forth. If the problem is on an odd number gear you need to move the shifter slightly forwards, if the problem is on an even numbered gear move it slightly backwards. Take your time with this get it right the first time then tighten the bolts and check it shifts as it should in all gears.

17. Once you are certain the position is correct drill two 6mm holes in the drill square and through the base spacer for the 6mm roll pins. Be careful not to drill through the mounting bolts securing the drill square to the shifter body. These are needed and must not be left out.



18. Remove shifter and apply a thin sealant refit bolts finger tight and fit the roll pins to locate the shifter then fit and tighten all 4 shifter bolts.
19. If needed the lever handle can be adjusted for angle. If you cannot easily rotate the handle once loosened removed the bolt and insert it from the other side with a piece of metal inserted to cover the hole in this way the bolt its self can be used to loosen the grip on the shaft.

Things to remember

1. A gearbox with any shifter fitted may not shift through all gears when the car is not moving. A lot of people don't notice this as with a H-pattern shifter there is no motivation to shift through all 6 gears while stationary. It may be necessary to release the clutch slightly with the engine running while engaging each gear so the internals can rotate and line up. A lot of t56 show this the most on reverse gear.
2. Clean transmission fluid is very important in these boxes and it wears out fast when driven hard.
3. Clutch operation is also very important many cars have poor shift just from the clutch not fully disengaging. If the car moves forwards even a little

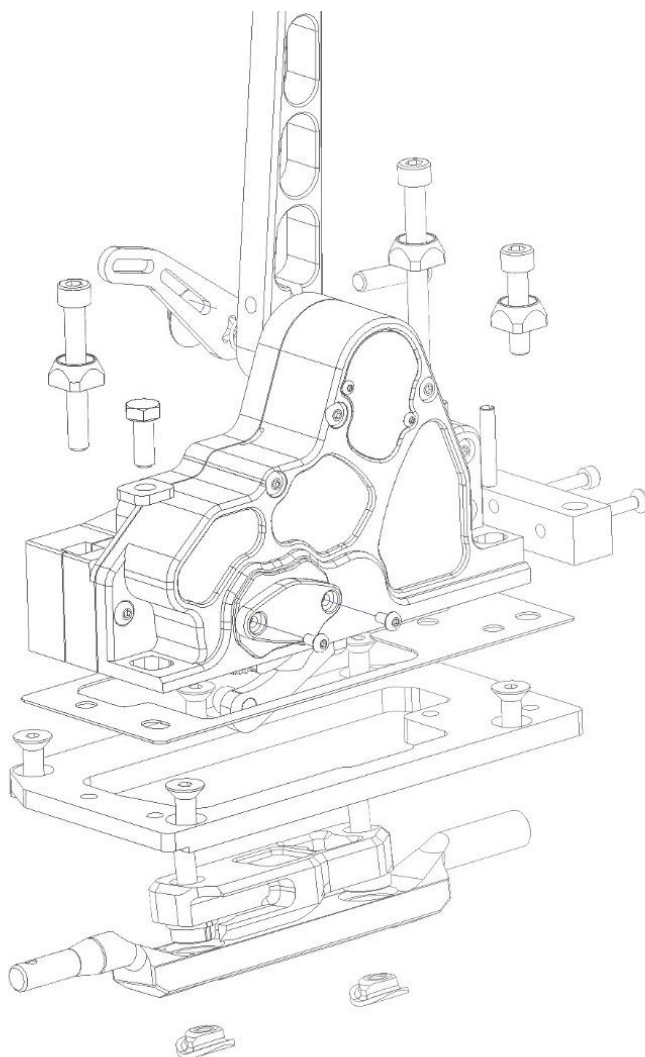
when first gear is engaged the clutch is not fully releasing. Clutch fluid also gets old and causes issues in a lot of cars.

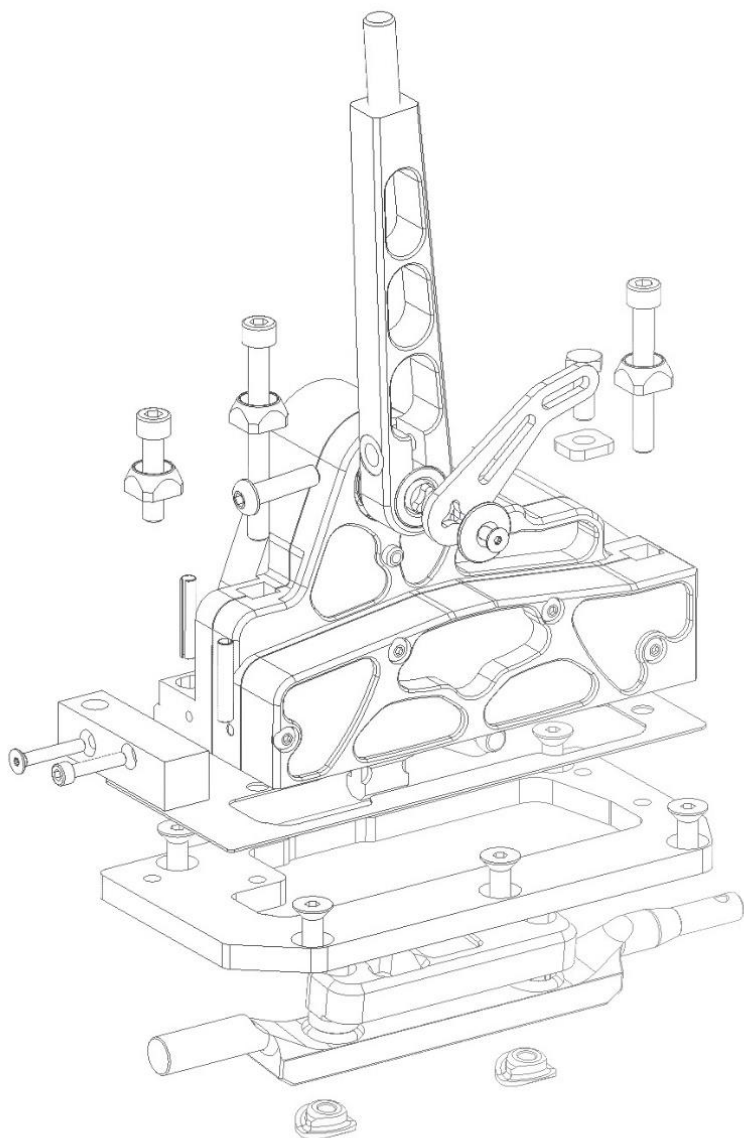
4. It's probably possible if you tried hard enough to break the reverse selector lever so please don't force it these will not be covered under warranty.
5. This shifter is designed for a gearbox with standard throws and alignment, most modified boxes are made this way however we have seen some that are not. We can provide advice but it is not our job to correct prior work done to your gearbox. The issues we have had to this point have been a custom shift rod that was not aligned correctly and had already caused issues with the H pattern shifter and a dog gear box that had a shortened throw. A very slight modification may be needed for the dog gear boxes and we are happy to advise.

Shifter removal

1. Use a punch to knock the roll pins all the way out of the base plate.
2. Undo all bolts and remove

Bolt fitment exploded view





Gear position sensor fitment

The gear position sensor is an optional extra. The shifter comes with the magnet pre-installed and the orientation of this magnet is read through the wall of the shifter by the position sensor. To fit simply attach the sensor with the M4x8 bolts.

Sensor wiring:

White/orange: 4.5V-5.5V (do not connect to 12v)

White/blue: Ground

White: Signal out

If you suspect an issue with the position sensor please check its function with a multimeter your first step should be to check the supply voltage which should be between 4.5 & 5.5V . If this is ok then check the output of the sensor which should change as you shift. Please don't waste time randomly changing things hoping it will work.

Aftermarket dash integration:

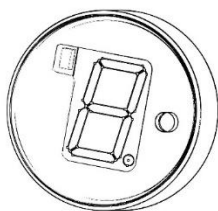
Our shifter uses the same type of sensor as almost every sequential gearbox, most people assume this can be directly displayed on an aftermarket dash that has gear display, most of these lean heavily towards canbus for all information even though they may have analog inputs there is no way to map the analog voltage to a

gear to be displayed in the more popular displays like Racpak/ aem. The advice from racepak on this was to use one of their auxiliary analog input modules which then can be mapped to send the current gear to the dash via canbus. We can't provide any further support than this you probably need to speak to the display manufacturer or your electronics installer.

The cheapest and easiest option is to buy our gear indicators.

Gear indicator fitment & programming

The gear indicator is not sold with the shifter but is available as an extra.



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.

Fitment

Mount the gear indicator in the desired position with double sided tape and connect all wires as follows.

Wire Colours

Black = Ground (this should be shared with the Ecu ground and not a chassis ground)

Red = 12v (ignition switched maximum 18 V)

Yellow = 5v output for position sensor

White = Signal input (signal output from sensor)

Blue = Reverse input (to output from reverse switch on gearbox maximum 18V triggered when input is high)

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 then press the program button.
4. If using with our sequential shifter after the 6th gear is entered it will automatically progress and programming is finished.
5. If using another gearbox with less than 6 gears on the entry of the last gear instead of pressing the program button hold it until the display flashes.
6. The reverse symbol will now be displayed for 5 seconds, if you want to set this press the program button within this time and it will begin to flash waiting for programming. Once reverse is selected press the program button to enter. This step is not used for our shifter but is needed for some other gearboxes.

For more information please contact us at
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www.s1sequential.com

