W A Technology

Shift Knob Feels Great, Looks Cool and Shortens Throw!

This "Cue Ball" size shift knob is available for the C7. Had the black one (left) on my Red 2014 Z51 C7 and installed the white knob (right) on my Artic White 2017 Grand Sport.

They are available in white or black with the 7 speed shift pattern and on the sides either Stingray image, the word Corvette and for my new 2017 Grand Sport.

The side Stingray image inlay is available in Red, Blue, Yellow, Silver, Black (for white knob), or White (for black knob, which is what I ordered.)

The knobs are now available from RPI Designs as well as some other Vette Parts suppliers. There are a number of color/word/image options.

Product Quality:

The knob is very well made! The shift pattern is engraved and images/words are inlaid into the knob, not just painted on. The base fits the C7 and has the proper grooves to hold the chrome trim ring the same as the OEM knob. The manufacturer indicates the material will not get excessively hot or cold to touch.

Why Bother?

With my fat hands, I wanted to try another knob shape. In addition, the knob is advertised as 1 inch shorter so the shift throw will be shorter. How much? We measured. In the sun the OEM knob does get hot, this should be cooler.

Picture Install:

The following is a picture sequence of the install. Having read forum posts about installing shift knobs removing the chrome trim ring was more difficult than anticipated. The detailed pics included help in understanding why and what needs to be done.

In fact one forum poster said he was ready to use a hacksaw or C4 explosive to remove it! After trying for 10 minutes, following the best available advice, I was frustrated as well! Another forum poster, discussing the installation of a shifter kit that also requires removing the knob, indicated, *"After you remove it you'll see why it is necessary to raise it before pushing down!"* However that advice did not help getting it off in the first place! The pics provided show why!

Typically would put the Grand Sport install info first BUT the problems encountered made it more logical to put the 2014 first.

Photo Sequence

Install on 2014 C7

First task was to devise a way to measure the existing shifter throw. Decided since one often uses a cupped hand to pull the shifter back, the measurement method shown probably best defines the stoke. I used a section of wood that was perpendicular to the top board, simulating a cupped hand touching the knob. Marking the bottom block from the shift knob furthest forward to full back showed the standard shifter has a 2 ¾ inch throw.

The knob is large, 2 ¼ inch diameter, the same size as a cue ball!

This picture shows a comparison with my desk paperweight knobs from my 1974 Datsun 260Z and a knob from a short throw B&M shifter installed in my S-10 truck some years ago.

Now the tough part, removing the plastic (or what appears to be made of plastic) chrome trim ring that is attached to the top of the leather shift boot. Instructions and forum posts say you must pull-up, and then push down while turning counter clockwise. Easier said that done. Review the next few pics to see why! After 10 minutes of trying with various tools I went to YouTube and watched a video of a C6 knob removal that showed that the ring must be turned a full 90 degrees before it will slip down to expose the retaining screw. I had only been able to turn it 10 to 15 degrees.

That video statement allowed me to try again. Wasn't easy but the next pics show what finally worked!

First, with the knob removed you can see the grooves that are on both sides of the OEM shift knob. That is the path two pins attached to the trim ring must follow it have it slide down to reveal the screw holding the knob in place.

There is a slight raised ridge (red arrow) that must be cleared before pressing the ring down in the groove. I think getting over that ridge was the problem I had because in my shifter the pins fit very tight in the groves. Perhaps yours will have more clearance.

These are the tools I used trying to turn the trim ring! On the left is a rubber pipe wrench, which was not help. I even used a screw driver to leverage it down, don't do that, it won't help! Used a rag and the pliers shown next to the screw driver-no help. The best I could do was to get it to turn about 10 to 15 degrees when 90 degrees was needed!

Finally used the arc joint pliers (shown with the red star) and the jar friction pad (also shown with a red star.) The pad provided friction and well as protected the leather and chrome ring. It worked. Took quite a bit of force but it finally turned.

Once the trim ring was pulled down, removing the screw was easier than some instructions suggested. Used a T-25 Torx socket with a ¼ inch drive ratchet wrench. Just placed my right hand on the shifter while turning the wrench with my left. It appeared to have Loctite on the screw but it came turned easily. Some forum comments said to drive the car until the shifter was hot, assume to weaken the Loctite. Thought I might have to heat the screw with a soldering iron tip, but that was not necessary.

After the OEM knob was removed, this pic shows one of the pins that is part of the ring. There is a similar pin (hidden from view in this pic) on the opposite side.

Considering I also had some difficulty reinstalling the trim ring, I could have used an emery board and sanded both pins slightly to provide more clearance. Perhaps your pins will be easier to slide in the grooves.

Side Note: *This is way too complex a design for retaining this small shift boot trim ring. Perhaps that engineer should have designed the infamous faulty ignition switch!*

These are the two knobs side by side. Lining up the screw holes and measuring the max height shows about ¾ inches, not a full 1 inch height difference. The OEM knob is 2 inches wide and 2.07 inches front to back.

The new knob is 2 ¼ inch diameter. It feels fine in my hand. I don't have long fingers but the width for a glove measurement is 9 ½ inches which is a large to extra-large glove size.

I put blue, medium strength Loctite on the screw that attaches the new knob to the shaft (yellow arrow.)

If you have not used these stick Loctite products, they are great! In this instance I used a toothpick to apply to the screw. The screw uses a 3 mm Allen wrench, which allowed a good deal of force to be used when tightening.

The new knob has the same two pin grooves as the OEM knob (red arrow.) The pins on the trim ring need to ride in these grooves as it is raised in position. The pins fit tight and required significant force to have them move up to the top. Just wiggle as you pull up.

Note the knob came with 3 "O" rings to choose from that slip above the pin groove. It helps keep the trim ring snug. The thinnest of the 3 was used and with the tight pin fit, not sure even if it was required.

Once the knob is secured, the chrome trim ring is reinstalled. When fully up to the top It required the same arc joint pliers and the friction pad used to remove it, to rotate the ring in the final position. Not the best design especially since it appears it is only made of plastic.

Measuring the shifter throw with the new knob shows it was 2 7/16 inches. That is 5/16 inches less than the OEM shifter or 0.31/2.75 = 11.4% less.

Not the ~30% shorter throw of a specially designed complete new shifter, but much easier to install and less expensive! Note the short throw shifters still require removing the chrome trim ring!

The final installation looks great. The black knob complements the interior trim.

After 7 months of use I defiantly would recommend this knob. It particularly makes the 4th to 5th shift and the 6th to 7th shift feel more positive. I also fine the 1st to 2nd shift when the trans is cold more positive as it does require more force until it warms up. 11.4% is not a lot of shift stroke reduction but it is noticeable. Someone questioned how the stock could be less since it didn't change the pivot point as is done with aftermarket shifters. I relayed what we did with column shift 3 speeds that I drive as a teenager! We would grab the lever close to the steering column and have a very short throw!

The leather boot is held to that plastic chrome trim with two small staples. I did not have this come loose but a he said his boot did. A responder stated: *"The staples come out very easily. Best fix is to take the shift knob off, then pop the entire boot off. Turn it inside out and use picture hanging wire to secure it to the chrome ring. There is a groove that the wire will fit inwell.* **After seeing the above note in this report, another forum member sent the pic left and said he found the metal ring shown holding the chrome trim ring. Appears there may be differences depending on year or production date.**

Suggest you take care when pushing the ring down and it should not come loose.

Install on 2017 GS

The Grand Sport install should have been easy, after all I already had done one, right? Not only that when posting that PDF others have commented and had pics of the issues they had with the leather detaching from the chrome ring (as I posted above.)

Will know it wasn't easy there were two significant issues that will be covered here!

First thing that happened was it appeared very easy to turn the chrome ring! Well no it turned out what I found easy to move was the leather was moving and came loose from the chrome ring!

In fact this is a pic from a poster on the Forum. It shows something similar to what I saw a chrome ring separated from the leather boot! Not the first thing I wanted!

Thank goodness in a post where that happened to someone where members were saying you need to remove the console top to get access than staple the two tighter. In fact looks like two staple holes below the ring slot. I saw what looked like one side of a large staple but it must have fallen down.

Fortunately someone said; instead of all that work why not use Gorilla glue! Gave me an idea, use my favorite adhesive,-5 minute epoxy! Dry fit the parts and the top of the leather boot slipped in the groove fine. Mixed some epoxy and with a tooth pick carefully placed in in the groove and pulled up the leather boot. Left it overnight.

This is from a forum post but what my screw looked like. It required a small #15 Torx bit.

Another pic from a forum post but similar what I did using a Torx bit and a ¼ inch drive ratchet wrench

It looked like the screw was rounding so stopped and bought a new #15 Torx wrench.

	Thinking they may have used a Red type Loctite I readied my soldering iron and shaped the flat tip to fit the screw
	Also bought a product I knew about but had not every used. It is a friction increaser than said it would increase the contact force between a warn screw and the tool! Tried it with the new Torx bit. The screw (or I thought) made about a ½ turn. Encouraging But it would not turn any further. Used the soldering iron for several minutes, no help!
	No choice it was not turning so drilled a small hole and used a product called Screw-Out. It is made of hardened steel and has sharp edges that bit into the hole. Still would not budge.
	Then placed a drop of this black toothpaste consistence Screw Grip on the Screw-Out! Movement, not the screw as hoped - the head sheared from the screw! Screwed!! Though of several options including buying an MGW quick shift kit! If needed would have done that! Thought even then need to drill out the screw and install a bolt if necessary until the shift kit arrives. When drilling out the screw body realized it was not as long as the new screw provided. There were 4 or 5 threads left in the shifter shaft that were visible and unharmed

It worked, the new Allen screw held firmly. Had some difficulty getting the pins in the chrome ring to slip in both grooves. If one lined up the other was off perhaps 10 degrees. Had to start one pin and then turn the ring forcing the pin in the other grove.

Tried to use one of the "O" Rings but that made it tougher to get both pins up to the top grove. Unlike the OEM knob, there is no slightly raised area to keep the chrome ring from turning. Needed something to keep the chrome ring from turning and keep the pins snug in the groove.

The solution with our white knob was a small amount of white silicone placed in the groove prior to the pins being fully up and then turned. Put some in with a toothpick, then pulled the pins fully up and turned ~90 degrees to have the seams line up properly.

Used some string around the leather boot and let the silicone dry overnight.

Snug as a bug in a rug!

Finally got in all back together!

Looks and works fine!

More work than planned. Hopefully helps anyone finding similar difficulties!

WA Technology

Other 2017 Grand Sport & 2014 Stingray PDF's Available:

Some 40 items discuss improvements or information about a 2017 Grand Sport and 2014 Stingray function and/or esthetics. Some are minor and others, like the installing ceramic brake pads, include detailed install information.

Below are the PDF's available. Click on picture (may need Ctrl pressed.) Or just copy and paste the PDF info (Blue type) into your browser. Or email me at GUttrachi@aol.com **and state the title desired, shown in Yellow:**

Note: **GS indicates the info was updated from that available for the C7 Z51 PDFs.**

Rusty GS/C7 Muffler ***Why the C7 muffler is rusted and a simply way to make rust turn matte black.*** ***Bottom pic rusted, top pic treated*** **http://netwelding.com/Muffler_Rust.pdf**	
Change GS/C7 Oil ***WHY change your own oil and HOW to do it*** ***Revised, includes C7 Lifting Methods*** **http://netwelding.com/Changing_Oil.pdf**	
C7 Carbon Fiber Side Skirts ***How to install side skirts with jacking information for DIY's without lifts*** **http://netwelding.com/Side_Skirts.pdf**	
C7 Carbon Fiber Splitter w/End Plates ***How to install Splitter & Nylon bra fit*** **http://netwelding.com/CF_Splitter.pdf**	
C7 Removing GM Plastic Film ***How To Remove The Rocker Panel Film*** **http://netwelding.com/Rocker_Panel_Film.pdf**	

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GS/C7 Mirror Proximity Alarm ***Limit switch alarm warns when passenger mirror is too close to door frame*** **http://netwelding.com/Mirror_Proximity_Alarm.pdf**	
Jacking Pads for GS/C7 ***Jacking Pads must 2 1/2 inch max OD. Made four. Bought 2 1/2 inch OD x 2 inch high pads after installing side skirts; Bought pads right for the GS.*** **http://netwelding.com/Jacking_pads.pdf**	
GS/C7 Radar Power ***For C7 tapped rear fuse panel. For GS tapped mirrow*** **http://netwelding.com/Radar_Detector_Power.pdf**	
GS/C7 Belt Rattle ***Passenger seat belt rattles against the seat back. The solution, add a shoulder belt pad.*** **http://netwelding.com/Eliminate_Rattle.pdf**	
Aluminum C7 Chassis and Weld Repair ***The C7 has an all aluminum chassis, made from 117 welded pieces*** **http://netwelding.com/Aluminum_Chassis.pdf**	
GS/C7Ceramic Brake Pads ***The Z51 has very dusty brakes. These pads help!*** **http://netwelding.com/Ceramic_Pads.pdf**	
GS/C7 License Plate Frame; **Must Meet South Carolina Law** **http://netwelding.com/License_Plate_Frame.pdf**	
Manage GS/C7 Spilled Gas ***Protect the side of the Vette when filling up with gas*** **http://netwelding.com/Manage_Spilled_Gas.pdf**	
GS/C7 License Plate & Cargo Lights ***LED license plate light & cargo area bulbs are brighter and whiter*** **http://netwelding.com/License_Plate_Light.pdf**	
GS/C7 Rear Cargo Area ***Rear cargo area needs storage device and rear protector*** **http://netwelding.com/Rear_Cargo_Area.pdf**	

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GS/C7 Door Panel Protector ***Black plastic protector added to prevent scuffing of door when exiting*** **http://netwelding.com/Door_Panel_Protector.pdf**	
GS/C7 Improved Cup Holder ***A solution to the cup holder spilling under hard braking or shape turns.*** **http://netwelding.com/Improved_cup_Holder.pdf**	
GS/C7 Wheel Chatter/Hop ***Why sharp, low speed turns with cold tires causes the front tires to chatter/hop.*** ***http://netwelding.com/Wheel_Chatter.pdf***	
C7 Carbon Fiber Grille Bar ***Install genuine carbon fiber grille bar overlay*** ***http://netwelding.com/CF_Grille_Bar.pdf***	
Jacking a GS/C7 Vette ***Safely jacking either front only or back & front*** ***http://netwelding.com/Jacking_A_C7.pdf***	
Deer Whistle Installed on GS/C7 ***Do they work? Plus Install Info*** ***http://netwelding.com/Deer_Whistle.pdf***	
Replacing C7 Battery ***After using a GM type charger and showing fully charged a voltage low, replaced battery with AGM!*** **http://netwelding.com/Battery_Issues.pdf**	
GS/C7 Window Valet ***Lower Windows with FOB*** ***Window Valet Helps 2014/2015 Latch Hatch*** **http://netwelding.com/Hatch_Latch.pdf**	
GS/C7 Splash Guards ***GM offers splash guards for the C7 Corvette. An easy DIY installation. ACS Best Front Guards for GS.*** ***http://netwelding.com/Splash_Guard.pdf***	

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GS/C7 Blind Spot Mirror

Smaller rear and side windows cause C7 blind spots. Small "blind spot mirrors" help

http://netwelding.com/Blind_Spot.pdf

GS/C7 Skid Pad Protector

After the air dam, the aluminum "skid pad" hits driveway ramps etc. Plastic protector helps.

http://netwelding.com/Skid_Pad_Protector.pdf

GS/C7 Wheel Locks

Wheel locks, torqued to required 100 ft-lbs, help protect your expensive wheels from theft.

http://netwelding.com/Wheel_Locks.pdf

GS/C7 OnStar Lights

The OnStar LED's in the rear view mirror, at a quick glance, look like a police car flashing light! This is a fix.

http://netwelding.com/OnStar_Lights.pdf

GS/C7 Skip Shift Eliminator

Skip Shift Eliminator install with suggestions on jacking a C7.

http://netwelding.com/Skip_shift_Eliminator.pdf

C7 Catch Can & Clean Oil Separator

Direct inject engines like the LT1, are particularly subject to "coking." What is Coking and how to reduce the potential?

http://netwelding.com/Catch_Can.pdf

GS/C7 Round Shift Knob

A round shift knob shortens throw.

http://netwelding.com/Shift_Knob.pdf

GS/C7 Stingray Sill Plate

Stingray sill plate replaces original.

http://netwelding.com/Sill_Plate.pdf

GS/C7 Nylon Bra

Nylon Bra Stops Bugs on Front and Grill. Fits with Stage 3 Winglets

http://netwelding.com/Nylon_Bra.pdf

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GS/C7 Clutch Fluid Change ***Clutch fluid after 3000 miles gets dirty*** **http://netwelding.com/Clutch_Fluid.pdf**	
C7 Carbon Fiber Hood Vent ***Replaces Plastic Hood Vent*** **http://netwelding.com/Hood_Vent.pdf**	
GS/C7 Cold Air Intake ***Low Restriction Air Filter & Duct*** **http://netwelding.com/Cold_Air_Intake.pdf**	
Garmin GPS for GS Cubby ***Garmin Mounts in GS Cubby*** **http://netwelding.com/GPS_In_Cubby.pdf**	
GS Splitter Stage 3 Winglet ***Stage 3 Winglets Integrate with Spats*** **http://netwelding.com/Stage_3_Winglets.pdf**	
GS 2LT to 2.5 LT ***Red Upper Dash Pad Like 3LT*** **http://netwelding.com/Red_Dash_Pad.pdf**	
Jake Emblem/Decals for GS ***Jake Symbols Support GS Racing Image*** **http://netwelding.com/Jake_Emblems.pdf**	
GS Splitter Protector ***Rugged Plastic Protection for Splitter*** **http://netwelding.com/Splitter_Protectors.pdf**	
GS: Vitesse Throttle Controller ***Adjustable Throttle-by-Wire Control*** **http://netwelding.com/Throttle_Control.pdf**	
May Be Of Interest: **Engineering a ProStreet Rod** ***How Our '34 ProStreet Rod Was Designed and Built*** ***8.2 Liter Engine, 4 Wheel Disk Brakes & Coilovers*** **http://netwelding.com/Engineering%20Street%20Rod%203-08.pdf**	

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