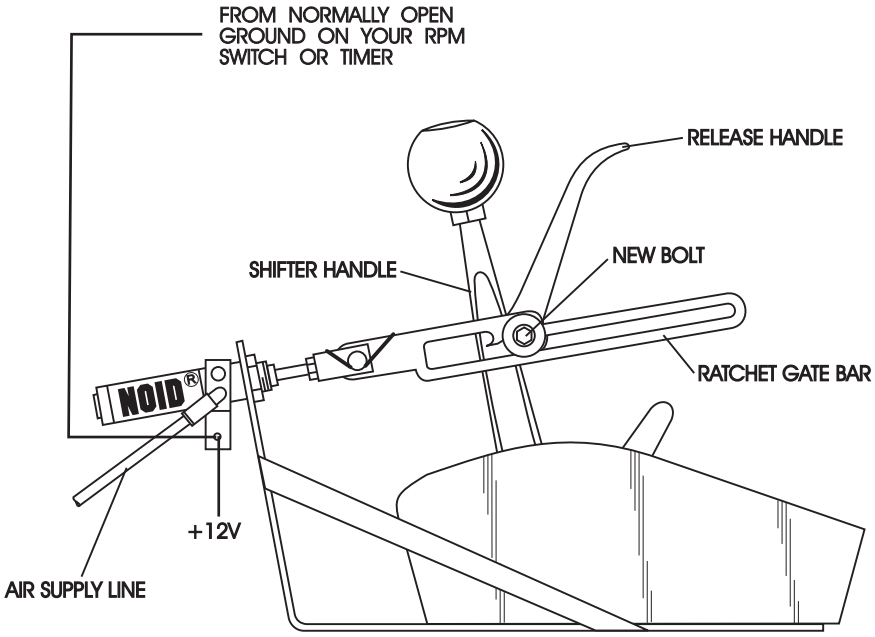
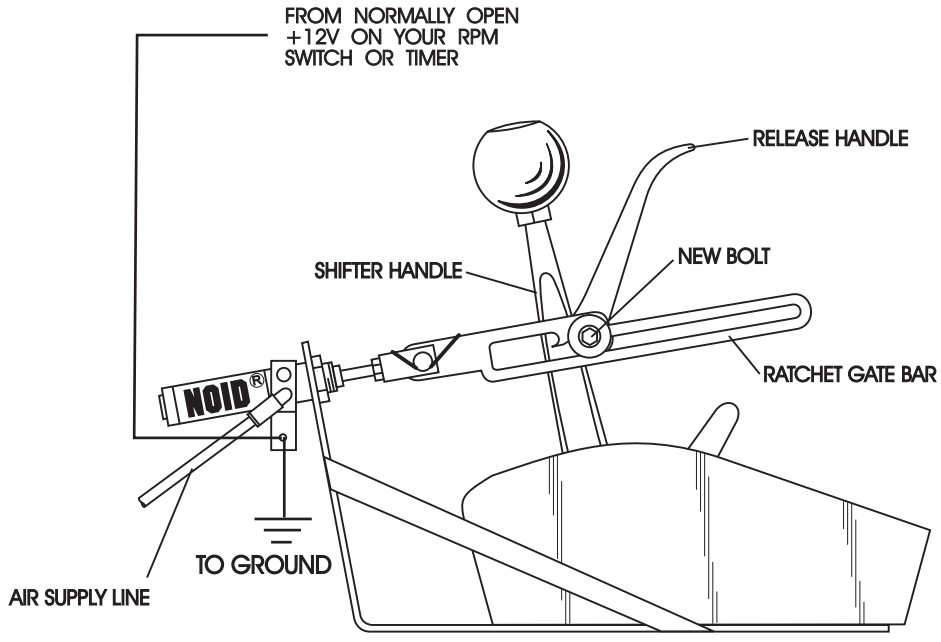
SHIFNOID WIRING DIAGRAM

FOR a HURST QUARTER STICK, B&M PRO STICK, TCI OUTLAW OR THUNDER STICK SHIFTER with a SA4055 THREE SPEED SOLENOID KIT

IF YOUR RPM SWITCH OR TIMER SUPPLIES "NORMALLY OPEN GROUND" (SHIFNOID OR MSD) USE THIS DIAGRAM



IF YOUR RPM SWITCH OR TIMER SUPPLIES "NORMALLY OPEN +12V" (DEDENBEAR OR DIGITAL DELAY) USE THIS DIAGRAM



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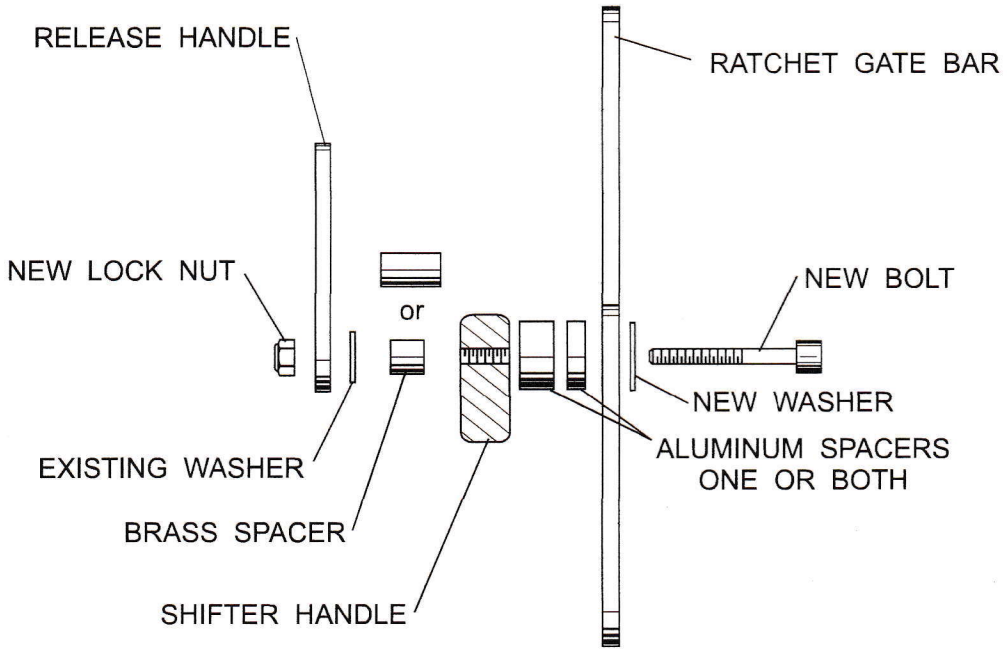
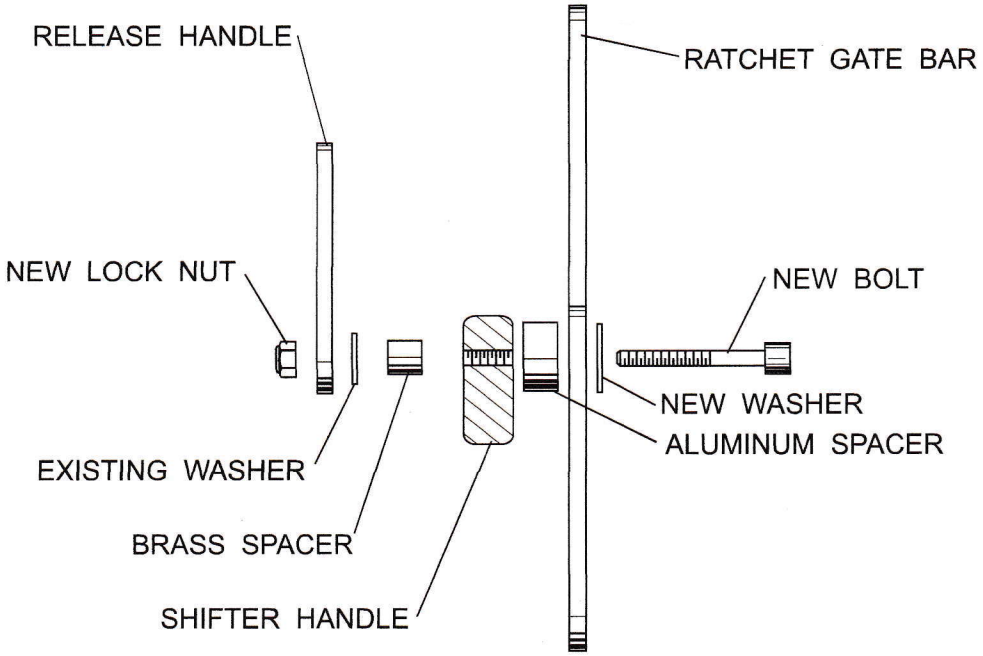
SHIFNOID SEQUENCE DIAGRAM

FOR a SA4055 THREE SPEED SHIFT KIT



HURST QUARTER STICK



B&M PROSTICK, TCI OUTLAW or THUNDER STICK

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INSTALLATION INSTRUCTIONS

"SHIFNOID" AUTO SHIFTER SOLENOID KIT

PART # SA4055

FOR REVERSE PATTERN 3 SPEED TRANSMISSIONS USING "HURST" QUARTER STICK, B&M PROSTICK, TCI OUTLAW OR TCI THUNDER STICK SHIFTERS
1ST TO 2ND & 2ND TO 3RD SHIFT

MODIFYING YOUR SHIFTER

Due to the style of shifter you will mount this kit to, it will be necessary to grind off the block or ramp on the gate of your shifter where the safety handle engages. Do this only to the spot on your gate that stops the shifter handle from going from 2nd to 3rd gear. This will eliminate squeezing the handle on the shifter between 2nd and 3rd. You can accomplish this, on the Quarter Stick by buying the opposite pattern shifter than your transmission pattern. For a reverse pattern transmission buy a forward pattern shifter or grind the gate as explained.

You can also make this change on a B&M or TCI by replacing the gate that came on your shifter with the gate for the opposite shift pattern. Some shifters come with both gates. If you have a reverse pattern shifter, install a forward gate. This eliminates any grinding and is relatively inexpensive and easy to do. Grinding on or changing your gate will allow your shifter to shift from 1st, directly to 3rd, if the handle is pulled or hit with sufficient force. When shifting by hand, such as in a burn out, you will need to shift gently, using the feel for the detent in your transmission as your guide for shifting from 1st to 2nd.

MOUNTING THE UNIT

The SHIFNOID mounting bracket is drilled for all models of three speed shifters listed. Bolt the bracket between the shifter and the mounting surface, (floor, shifter platform, etc.). Bolt the bracket down using the holes that correspond with your shifter, but do not tighten at this time. Per the drawing, the three holes marked "B" in the base of the bracket are for B&M and TCI shifters, the three holes marked "H" are for the HURST shifter. These mounting holes are drilled oversize so that alignment may be done before final tightening. It may be necessary to shift the bracket back to front or from side to side for proper alignment before tightening your mounting bolts. The single hole closest to the bend is used to attach the bracket to the floor. The shifter does not use this hole.

Following the supplied diagram, remove the bolt and washer that holds the squeeze or release handle to your shifter. This bolt is replaced with the supplied bolt, washers and spacer. The 1 3/4" bolt is for B&M and TCI and the 2" bolt is for HURST. Follow the sequence shown in the diagram when attaching the ratchet gate bar to the shifter handle. The supplied bolt passes through the washer, gate bar, then large spacer, then threads into the hole on the shifter handle from the passenger side. The small spacer slides over the bolt threads protruding through the handle. There are two spacers provided. The short, larger diameter spacer fits the B&M and TCI and the tall, smaller diameter spacer fits the Hurst. On some older models of Quarter Sticks, it maybe necessary to shorten this spacer. Please call SHIFNOID Tech for help. Replace the original washer and handle. The lock nut supplied will hold the release handle in place. Take care to insure that this assembly is not over tightened when installed. Over tightening could cause your release handle to bind when squeezing. With sufficient clearance, so the ratchet bar can slide easily, hold the bolt and tighten the lock nut. This will hold the bolt position in place.

The placement of the ratchet gate bar in relationship to the bolt it pulls on is critical. If the ratchet gate is too far forward, the solenoid may not pull your shifter fully into the next gear. If the ratchet gate is back too far the solenoid may pull your shifter from 1st to 3rd gear. The supplied spacers on the shaft of the cylinder, between the clevis and head of cylinder may be added or removed to adjust how far the cylinder pulls the shifter handle. Keep in mind the cylinder should not pull the shifter all the way into gear when you push or pull on the rod manually. The system works, when activated by pressure, by "throwing" the handle from one gear to the next. This is done so that the unit does not over shift.

PLUMBING & WIRING THE UNIT

Follow the wiring diagram supplied. If your RPM switch or Timer supplies a "Normally Open Ground" connect the trigger wire from your device to either wire on the air solenoid. Supply the other wire on the air solenoid with 12 volts.

If your RPM switch or Timer supplies a "Normally Open 12V+" connect the trigger wire from your device to either wire on the air solenoid. Supply the other wire on the air solenoid with a ground.

Your incoming air / CO2 pressure should be set at approximately 85 lbs. to 100 lbs. The lowest working pressure will save the most CO2. Increase pressure as needed to compensate for any hard shifting situations, but do not exceed 125 lbs.

USING THE UNIT

When ready to race, simply place your shifter in first gear. The RPM switch or timer you are using to activate this unit will send a signal to the air valve, which in turn will fire the cylinder, causing it to pull backwards. This will cause the ratchet gate to pull on the shifter handle, shifting into second gear. As soon as the switch releases, the solenoid will return the ratchet gate to the ready position, grabbing the handle for the next shift. When the switch is again activated, the cylinder will pull the handle into third gear. When you are ready to return the shifter to low gear, or forward of low gear, simply lift the ratchet gate with your little finger as you are squeezing the release handle on your shifter and push forward.

WARNING

Be Prepared! If you are using an RPM switch or Timer, you must be aware that at any time RFI (Radio Frequency Interference) could stop your RPM switch or Timer from activating. This in turn could cause your automatic shifter to not activate and you will need to shift manually. Always pay attention to your car and be prepared to manually shift or lift off of the accelerator to prevent the over revving of your engine. One of the best ways to protect your engine under these conditions is to also install some type of over rev control so that the engine cannot reach an RPM beyond it's safe limits. Please read the enclosed information on RFI included with this kit.

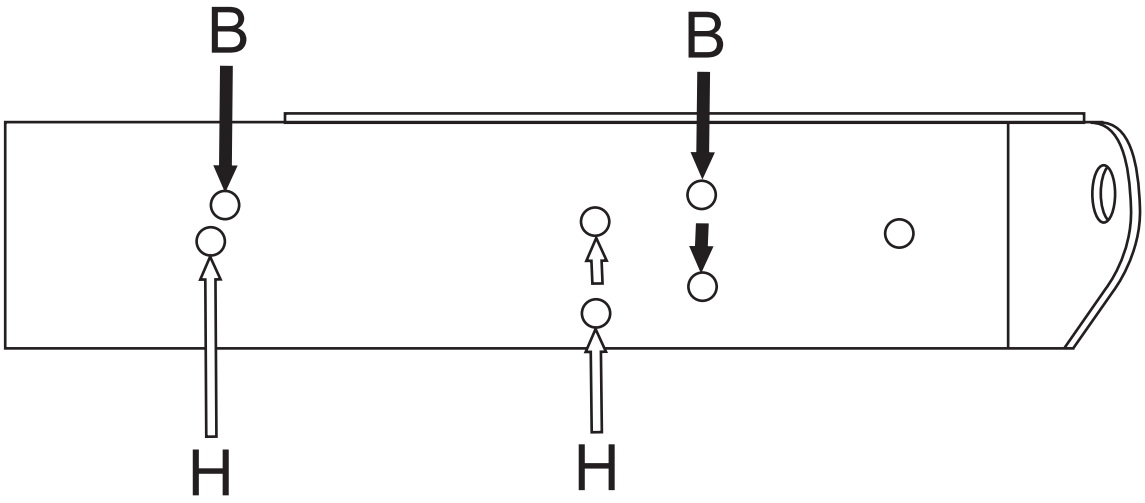
QUESTIONS ?

If you have questions or concerns on the installation or use of this product, do NOT contact the retailer you purchased the kit from. Most retailers are not equipped to help you with in-depth tech questions. SHIFNOID LTD. has arranged for all tech and warranty to be handled by it's distributor:

CONTENDER PERFORMANCE PRODUCTS INC.

Phone: 740-927-0060 www.contenderperformance.com

B➡ B&M ProStick, TCI Outlaw and TCI Thunder Stick



H⇨ Hurst Quarter Stick

SUPPLEMENT FOR
SN5055H - SN5057 - SA4055
IF MOUNTING ON HURST QUARTER STICK

1. On some models of Hurst Quarter Stick the gap between the shifter handle and the SHIFNOID ratchet bar may need to be filled with BOTH large ALUMINUM SPACERS supplied, using the 2.25" bolt. In most cases only the larger spacer of the two supplied is needed, as shown in the SHIFNOID sequence diagram.

2. Please note that when installing the parts to attach the ratchet gate bar to the Hurst Quarter Stick handle, the SHIFNOID instructions and sequence diagram refer to a "BRASS SPACER", that slides over the bolt to accommodate the release handle so that it does not bind when attaching and tightening the new lock nut. These BRASS SPACERS are supplied with the SHIFNOID kit. Because of variations of the Hurst Quarter Stick you may need either length of spacer.

Also, there is a new variation of Hurst Quarter Stick that requires using the spacer supplied with the Hurst shifter that is on the existing bolt that holds the release handle INSTEAD of the supplied brass spacers. On these shifters it may also be necessary to remove the lock set screw that is in the threaded hole, preventing the supplied bolt from passing through.

The result is that the safety / release handle must still be functional and able to pivot when the Shifnoid supplied new bolt and new lock nut is attached.

PLEASE CALL US FOR TECH HELP

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Phone: 740-281-0136 www.contenderperformance.com 7 AM to 7 PM Eastern Time