

CO2 AIR SHIFTER SCS3R 3-Speed / Shifts Both Gears

Installation instructions for a preassembled unit to bolt behind Turbo Action Cheetah, Winters, Fairbanks or J.W. shifters. Compatible with GM, Ford, and Mopar automatics.

Note: Shifter works with new style gate plate. This can be identified by a plate that has 3rd gear shift down and to the right. If the plate shifts down and to the left, a new plate is available from Biondo Racing, Inc.

INSTALLATION:

1) Insert the striker block between the shifter's stamped center plates as shown in figure #1. Put the shifter lever into the neutral position and slide the clevis pin through the stamped plates and the striker block by inserting it through the access hole in the side of the shifter. Fasten the clevis pin with the cotter pin.

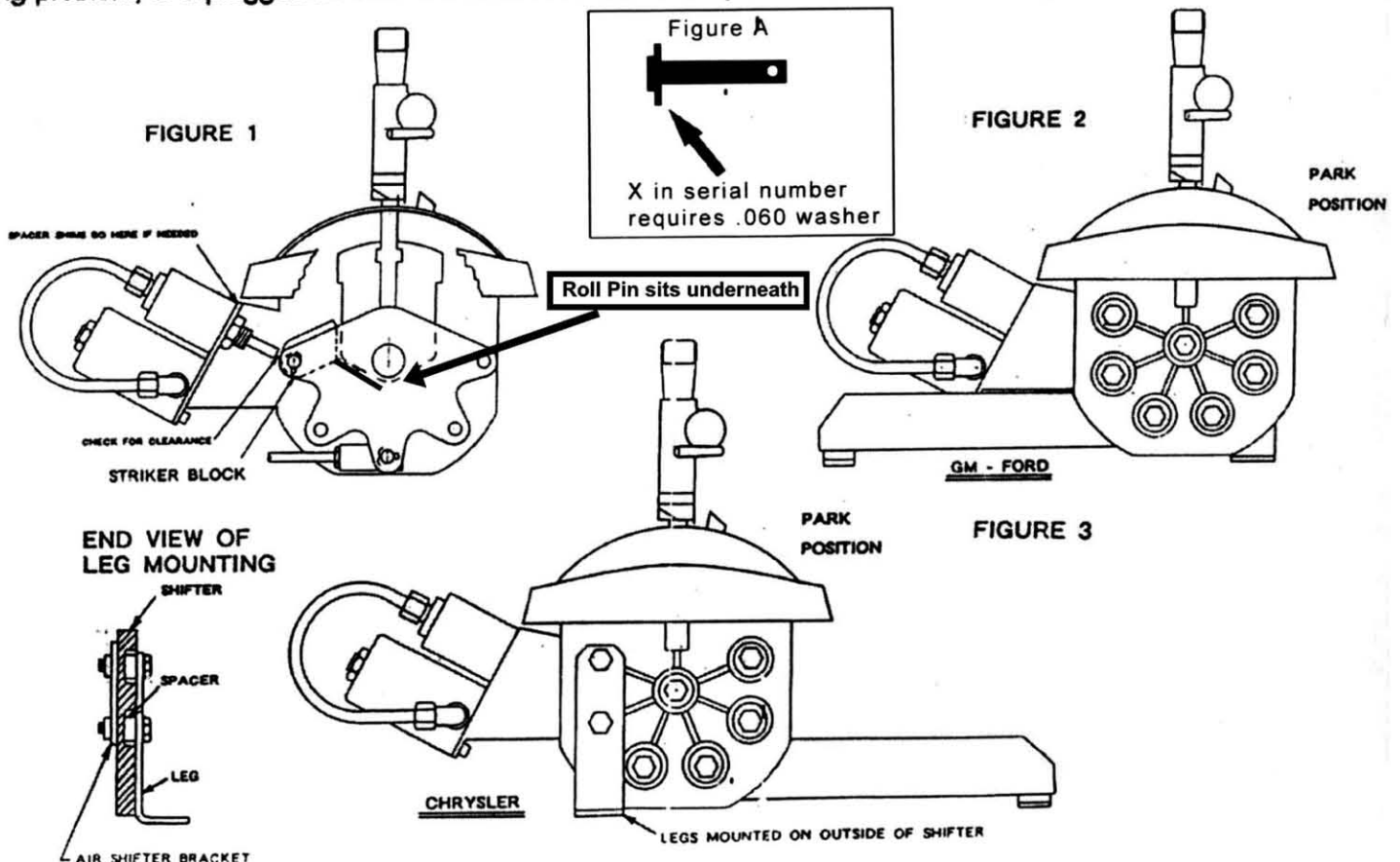
NOTE: If your shifter has a X in the serial number you must use the supplied .060 washer. Place the washer on the clevis pin as shown in figure A.

2) On GM and Ford shifters, slide the air shifter unit into the Cheetah shifter from the cable end as shown in figure #2. Fasten it in place with the 4 supplied 1/4 x 1/2 long bolts. Look down from the top of the shifter through the shift gate. Move the shift lever back and forth between first and reverse gear and look for clearance between the air cylinder rod end and the striker block. They should just barely touch or have a slight clearance.

3) On Chrysler shifters, unbolt the rear support legs and remount them on the outside of the shifter as shown in figure 3. This can be done by inserting the air shifter assembly into the Cheetah shifter as in step 2 above, except that instead of the 1/4 x 1/2 long bolts, you would use the four 1/4 x 3/4 long bolts to hold the leg, spacers and shifter unit in place as shown in the end view of figure 3.

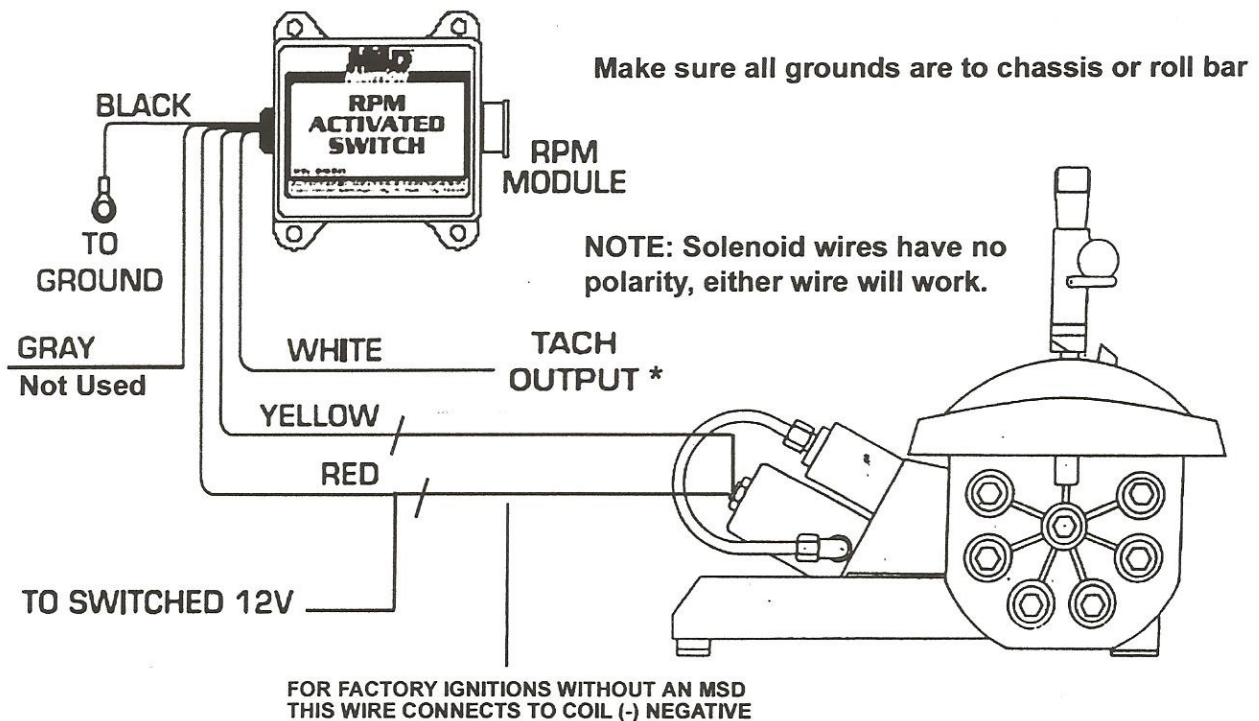
4) Attach the nylon air line to the fitting on the air shifter units solenoid. Set the CO2 bottle pressure regulator at about 110 psi. Increase that pressure until the unit shifts cleanly through the gears. You can go as high as 120 lbs. Higher pressure results in quicker shifts and gives more safety margin in case of a sticky shift cable or trans. The lower pressure gives you more runs per bottle fillup. In either cases, the bottle will last hundreds of shifts.

5) To test the unit, put the shifter in low gear. Ground one of the solenoid wires and touch the other wire to 12 volts, for an instant. (The wires have no polarity). The shifter should shift from first to second. Touch the 12 volt wire again and the shifter should now shift from second to third. If it doesn't shift, check for binding in shifter, possible wiring problem, or a plugged air line. If it shifts from first directly to third, increase the air pressure.



NOTE: THE ROLL PIN STICKING OUT OF THE STRIKER BLOCK DOES "NOT" GO IN THE HOLE ON THE BACK OF SHIFTER HANDLE. BLOCK IS MADE TO BE FLUSH ON THE RAIL.

IMPORTANT: If you are using solid core spark plug wires, there is a possibility you are creating enough electric interference (radio noise) to confuse the system. If you encounter erratic shifts or break-up shifting down track, but not on jackstands, try changing the coil to the distributor wire to suppression racing wire. If you still have problems change to a full set of suppressions racing wires.

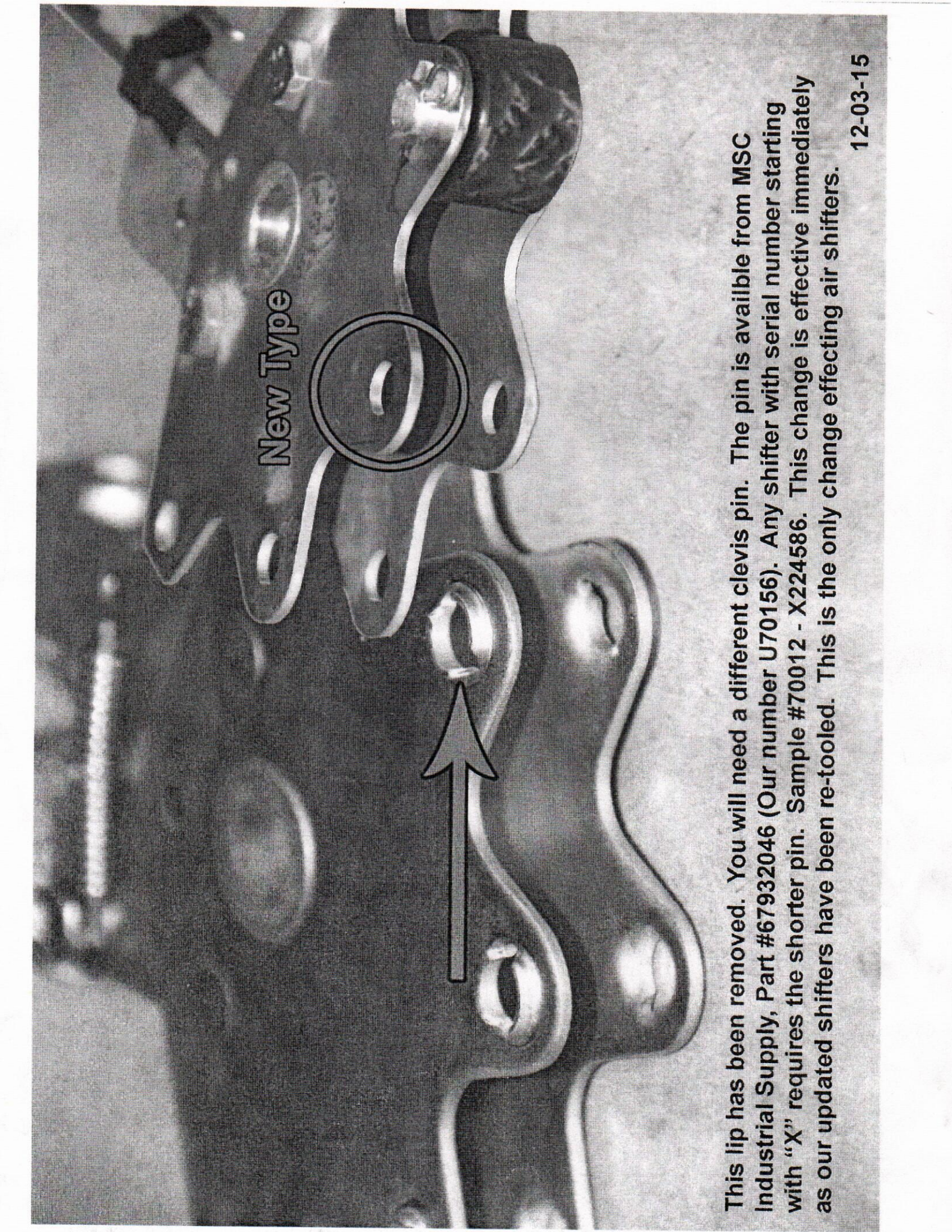


Switch must be turned on prior to staging and must be turn off after run. This serves 2 purposes. One, it saves CO2 by not engaging during warm-ups or burnout. Second, and more important it prevents any chance of the car shifting out of neutral during warm-ups which can create a hazardous situation.

WARRANTY

Every unit has been tested prior to shipment, but if failure should occur within 6 months due to faulty equipment, we will repair or replace the defective unit, at Biondo Racing's option, free of charge. And unlike our competition, all parts can be purchased separately.

Biondo Racing Products, INC. shall not be liable for injury, consequential, or other type of damages resulting from use of its products. This warranty is in lieu of all other warranties of merchantability or fitness of use.



New Type

This lip has been removed. You will need a different clevis pin. The pin is available from MSC Industrial Supply, Part #67932046 (Our number U70156). Any shifter with serial number starting with "X" requires the shorter pin. Sample #70012 - X224586. This change is effective immediately as our updated shifters have been re-tooled. This is the only change effecting air shifters.

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