

## Installation Instructions Competition Plus Installation Kit

Fits: Various 1955-1981 GM vehicles w/Richmond/Borg Transmission See Application Guide for Specific Vehicles Catalog# 3738609

**WORK SAFELY:** Perform this on a good clean level surface for maximum safety and with the engine turned "off". Apply parking brake and place blocks or wedges in front of and behind both rear wheels to prevent movement in either direction.

**CAUTION:** To avoid any possibility of bodily injury or damage to vehicle, do not attempt disconnect or installation until you are confident that the vehicle is safely secured and will not move.

**ATTENTION**: Due to variations in the auto manufacturing tolerances, the transmission rods supplied with this kit may require slight bending to clear any obstructions, etc. Protect the threads while bending. <u>**BEND RODS COLD! – DO NOT APPLY HEAT!</u>**</u>

1. Disconnect backdrive linkage at reverse arm only. Remove all other stock linkage completely. Remove stock shifter and mounting plate.

2. Install HURST mounting plate. Use a drop of the supplied thread adhesive to the two flat-head screw threads. Tighten all bolts. Install shifter on mounting plate with the spacer plate between the shifter and the mounting plate. Tighten both shifter mounting bolts.

3. Assemble rods with their respective arms using nylon bushings and spring clips. Spin rod adjusting buttons onto about the mid-length of each rod.

4. Install arm-rod-button assemblies onto transmission shafts. Refer to the diagram for proper part combinations. Fasten arms onto shafts with stock hardware.

5. Insert nylon bushings into holes in levers - Refer to the diagram. Align levers with shifter frame and insert neutral alignment rod through notches in frame and holes in levers.

6. Rotate transmission arms backward and forward. The neutral position for each arm can be felt at the mid-position of full travel. Reverse arm must be moved all the way to forward end of travel (disengaged position).

7. Starting with the reverse rod & reverse button first, adjust positions of the buttons on each rod to permit easy slip-in fit of button into nylon bushing in proper lever.

(**NOTE:** the shifter may need to be loosened from the mounting plate to allow reverse button\* to be installed. Tighten mounting bolts after reverse rod has been adjusted and reverse button has been clipped in). TRANSMISSION ARMS MUST REMAIN IN NEUTRAL POSITION WHILE ALIGNMENT IS ACCOMPLISHED. Fasten buttons in levers with spring clips.

8. Remove the neutral alignment rod and test the shifter. The stick should move freely from side to side at Neutral (between 1-2 and 3-4 shifting paths). An increased pull toward the operator should engage the reverse lever. If the shifter functions properly, proceed to number 10.

If the stick CANNOT be moved freely between 1-2 to 3-4 or reverse path, one or more of the rod button adjustments must be corrected. Move the stick forward to 3<sup>rd</sup>, then back to 4<sup>th</sup>, then into Neutral. Insert the neutral alignment rod. If the rod CANNOT be inserted freely, the 3-4 rod button is incorrectly adjusted. Similar testing of the 1-2 shift will prove the alignment of the 1-2 rod adjustment.

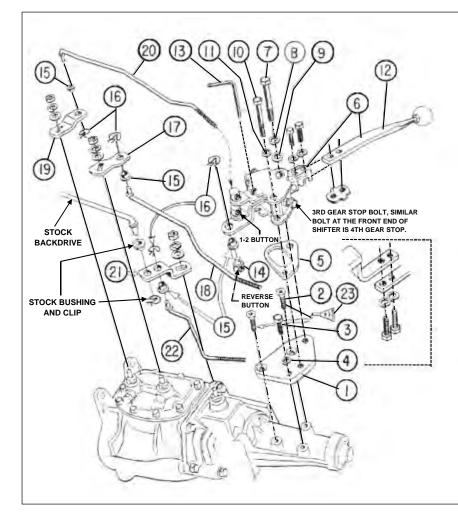
To check the reverse rod button adjustment, place the stick at Neutral. Disconnect the reverse rod adjusting from the reverse lever. Grasp the rod and push toward the front of the car. (Reverse arm is dis-engaged when at the end of forward travel.) Adjust the rod button for easy slip-in fit in the bushing. Re-assemble and fasten with a spring clip.

9. Adjust shifter stop bolts. Back both bolts out of shifter frame until only a few threads remain engaged. Push stick firmly into 3rd gear and hold gear engagement pressure. While maintaining pressure, screw 3rd gear stop bolt in until contact is felt. Back stop bolt out one FULL turn (360 degrees) and tighten locknut. Pull stick firmly back into 4th gear and hold gear engagement pressure. While maintaining pressure, screw 4th gear stop bolt in until contact is made, then back stop bolt out one FULL turn (360 degrees) and tighten locknut.

10. Connect the backdrive linkage rod to the hole provided at the lower end of the HURST reverse arm – See diagram. Check operation of the steering column lock. Adjust the stock linkage if necessary.

WARNING: THIS TRANSMISSION DOES NOT HAVE AN INTERLOCK TO PREVENT ENGAGEMENT OF THE REVERSE GEAR WHEN ANY OF THE FORWARD GEARS ARE ENGAGED. SEVER DAMAGE TO THE TRANSMISSION WILL RESULT IF THIS SHOULD OCCUR. DOUBLE-CHECK THE LINKAGE BEFORE STARTING THE ENGINE OR MOVING THE CAR. INSERT THE NEUTRAL ALIGNMENT ROD THROUGH THE LEVERS AND CHECK THE POSITIONS OF THE TRANSMISSION SHIFTING ARMS. 1-2 AND 3-4 TRANSMISSION CONTROL ARMS MUST BE AT NEUTRAL POSITIONS OF THEIR TRAVEL. REVERSE GEAR CONTROL ARM MUST BE AT THE FORWARD END OF ITS TRAVEL (DIS-ENGAGED).

**NOTE:** Some shifter assemblies may install easier/function better with the REVERSE BUTTON, bushing and spring clip installed from the opposite side of the lever.



## CONTENTS OF KIT

- **1. MOUNTING PLATE**
- 2. 3/8-16x1 FLAT HEAD SOCKET SCREW
- 3. 3/8-16x1 HEX HEAD CAP SCREW
- 4. 3/8" SPLIT LOCKWASHER
- **5. SPACER PLATE**
- 6. SHIFTER ASSEMBLY
- 7. 7/16-14x3 HEX HEAD CAP SCREW
- 8. 7/16" SPLIT LOCKWASHER
- 9.7/16" FLATWASHER
- 10. 3/8-16x3 HEX HEAD CAP SCREW
- 11. 3/8" INTERNAL TOOTH LOCKWASHER
- 12. STICK
- **13. NEUTRAL ALIGNMENT ROD**
- 14. ROD ADJUSTING BUTTON
- 15. BUSHING
- 16. SPRING CLIP
- 17. ARM 1 2
- 18. ROD 1 2
- 19. ARM 3 4
- 20. ROD 3 4
- 21. ARM REVERSE
- 22. ROD REVERSE
- 23. THREAD ADHESIVE

**BAGGED HARDWARE**