



Installation Instructions

Part No. 3738611

Competition/Plus® Installation Kit

For 1969-1979 Corvette with: 1969+ Muncie M-20, M-21 & M-22 (shift arms attach to forks with bolts); or Richmond/Borg-Warner Super T-10.

Rev 7/29/2020

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. **BEND RODS COLD! – DO NOT APPLY HEAT!**

WARNING: THIS TRANSMISSION DOES NOT HAVE AN INTERLOCK TO PREVENT ENGAGEMENT OF THE REVERSE GEAR WHEN ANY OF THE FORWARD GEARS ARE ENGAGED. SEVERE 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).

1. Raise the vehicle and support it with safety-approved jackstands. Remove the stock shifter and linkage. Remove the two bolts that fasten the transmission extension housing to the crossmember at the rear support. The transmission can be moved to the right side to gain clearance for installation of the mounting plate and shifter.

2. Install the mounting plate on the tailshaft and tighten all bolts securely.

3. Install the shifter onto the mounting plate and tighten mounting bolts. Return the transmission to normal position. Replace the crossmember mounting bolts and tighten them. Remove the center console plate. Install the spacer block between the stick and shifter and tighten the stick mounting bolts.

IMPORTANT - CENTER MARK ON SPACER MUST FACE SHIFTER (toward driver).

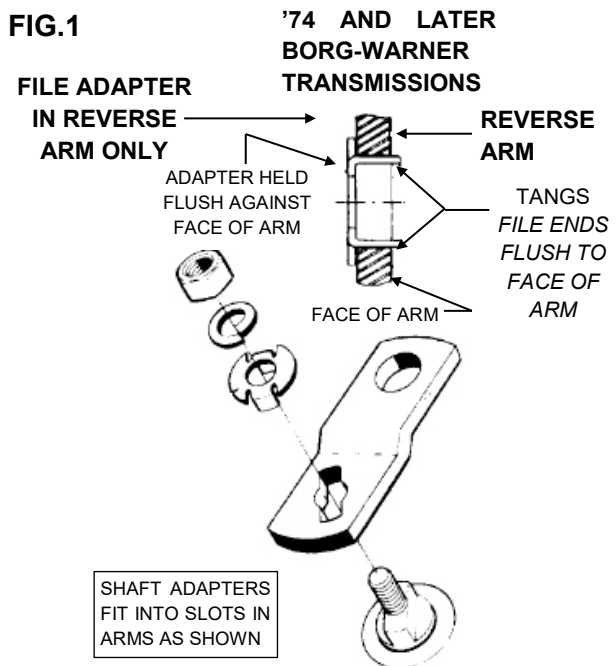
4. Assemble the hooked ends of the rods into the arms with nylon bushings and spring clips. Refer to the diagram for proper part combinations. Spin the rod adjusting buttons onto the threaded ends of the rods. Spin them onto the middle of the thread length.

5. MUNCIE TRANSMISSION - Install the arm/rod/button assemblies onto the transmission shafts. Refer to the diagram for proper part combinations. Fasten the arms onto the shafts with stock washers and bolts.

BORG-WARNER TRANSMISSION - Insert the shaft adapters into the slots in arms (refer to FIG. 1). Use the stock lockwashers and nuts to fasten arms.

REVERSE ARM ONLY - The tangs of the adapter must be filed shorter to allow the Reverse arm to be fastened. Place the adapter in the arm slot and file ends flush to surface of the arm as shown in FIG.1.

FIG.1



6. Align levers with shifter frame and insert neutral alignment rod through holes in levers.

7. Rotate the transmission arms backward and forward. The neutral position for each arm can be felt at the mid-position of full travel. The Reverse arm must be moved to the end of its travel toward the front (dis-engaged position).

8. Adjust positions of button on each rod to permit easy slip-in fit of button into nylon bushing in proper lever. TRANSMISSION ARMS MUST REMAIN IN NEUTRAL POSITION WHILE ALIGNMENT IS ACCOMPLISHED. Fasten buttons in levers with spring clips.

9. 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 9.

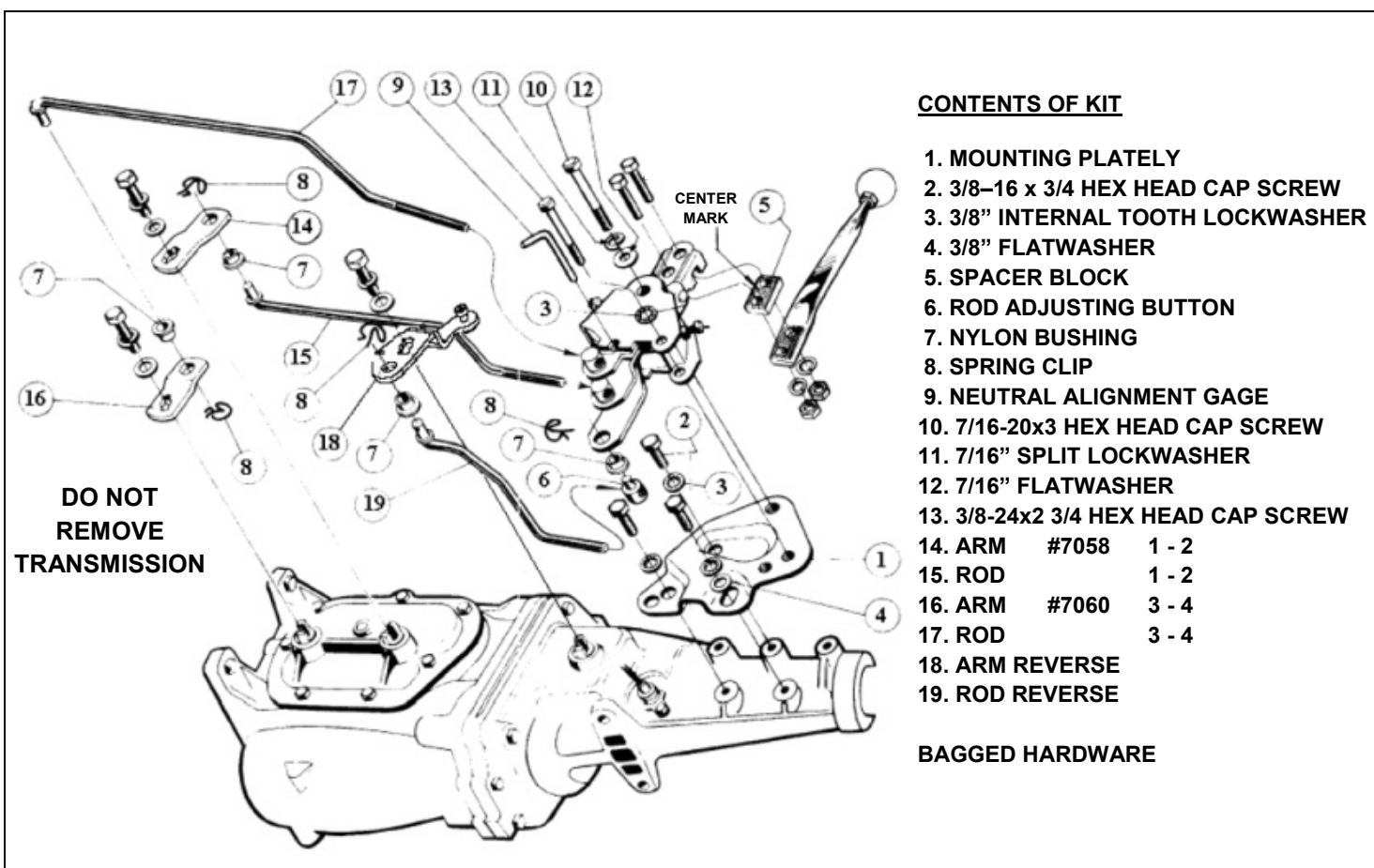
If the stick CANNOT be moved freely between 1-2 to 3-4 or reverse path, one or more of the rod button adjustments must be corrected. Move the stick forward to 3rd, then back to 4th, then into Neutral. Insert the neutral alignment rod. If the rod CANNOT be inserted freely, the 3-4 rod button is incorrectly 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.

10. Connect the BACKDRIVE cable end to the pin of the HURST Reverse arm and fasten with the stock hardware. **HURST now provides a reverse arm with a #10-24 threaded bolt and nut that replaces the pin.**

11. Adjust the shifter stop bolts. Back the bolts out of the shifter frame until only a few threads remain engaged. Push the stick firmly into 3rd gear and hold it. Screw the 3rd gear stop bolt in until contact is made. Back the bolt out one turn and tighten the locknut. Pull the stick firmly back into 4th gear. Screw the 4th gear stop bolt in until contact is made, then back it out one turn and tighten the locknut.

NOTE: A hole is provided in the reverse arm for the actuating rod of a GM back-up light switch. If your transmission is equipped with this switch, hook the switch rod in this hole.



2nd & 4th gear stop bolt and jam nut. Similar bolt and jam nut at the rear of the shifter is 3rd gear stop bolt. Refer to Step 11 above for adjustment.



NOTE:

Muncie transmission is shown in the assembly drawing. Borg-Warner is recognized by the curved bottom side cover shown in this photo. Assembly of all parts is identical to a Muncie installation



IMPORTANT: RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

Technical Service

Hurst Performance maintains a highly trained technical service department to answer your technical questions, provide additional product information and offer various recommendations.



Hurst Performance Products

(866) 464-6553

www.hurst-shifters.com