

# ! WARNING

**THIS SHIFTER IS  
FOR RACING USE ONLY  
NOT FOR STREET USE!**

## READ ALL OF THIS INFORMATION CAREFULLY

1. All adjustments must be made with shifter and transmission in *Neutral (N)*.
2. Adjustments are critical and must be precise.
3. Do not mix components (all parts including cable must be Hurst components provided with kit).
4. If a shifter is removed and reinstalled, adjustments must be checked, and re-adjusted.
5. Always check cable for freedom of motion before connecting at shifter and transmission arm.
6. Routing of cable should avoid sharp bends—(permanent damage of cable will result).

FAILURE TO COMPLY WITH ANY OF THE ABOVE MAY RESULT IN MALFUNCTION OF SHIFTER OPERATION. DAMAGE TO CABLE DUE TO SHARP BENDING OR KINKING IS NOT COVERED BY WARRANTY



# QUARTER STICK

## INSTALLATION INSTRUCTIONS

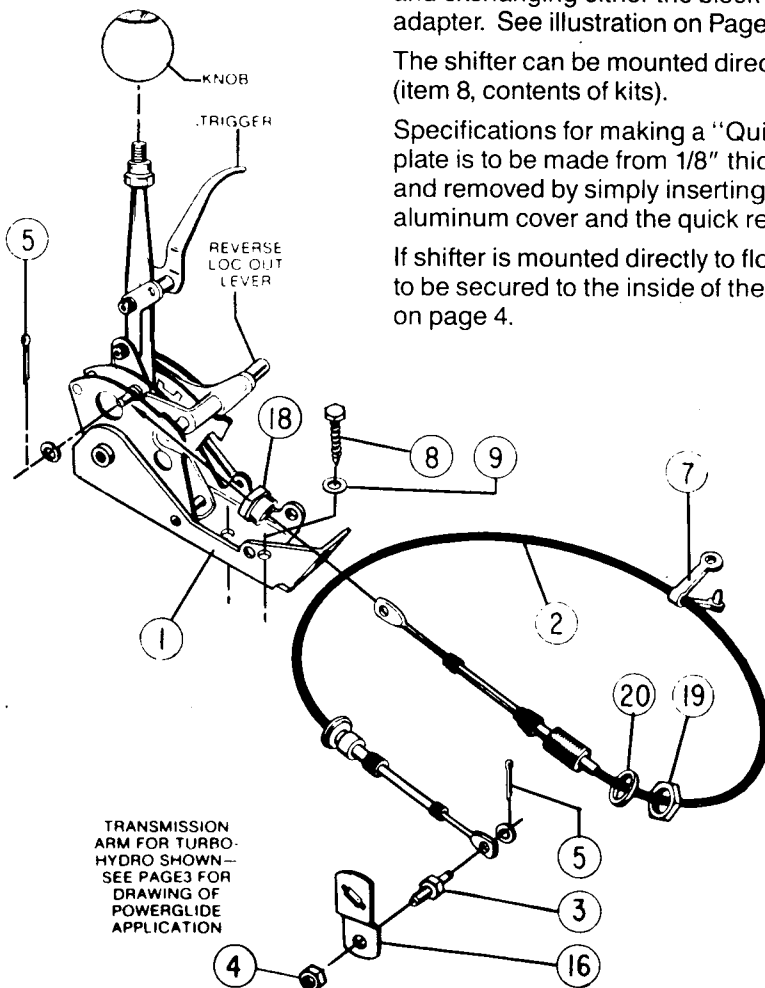
316 0001      316 0002

Quarter stick shifters are set up for 2 speed (Powerglide) or 3 speed (Turbo-Hydromatic). The shifter can be changed to either mode by removing the reverse loc-out retainer plate and exchanging either the block adapter for the spacer, or the spacer for the block adapter. See illustration on Page 4.

The shifter can be mounted directly to the floor with the four sheet metal screws supplied (item 8, contents of kits).

Specifications for making a "Quick release plate" are found on page 4 of this sheet. This plate is to be made from 1/8" thick aluminum or steel, and allows shifter to be installed and removed by simply inserting and withdrawing quick release pins (not included). The aluminum cover and the quick release pins are available from Hurst. Order pt. 130 0038.

If shifter is mounted directly to floor, the four spacers supplied (item 17, pt. 228-0113) are to be secured to the inside of the aluminum cover with epoxy adhesive. See section view on page 4.



### CONTENTS OF KIT

	PART NO.
1. Shifter	316 0002
2. Cable	120 0025
3. Cable Attachment Pin	189 0011
4. Hex-Nut	179 5959
5. Cotter Pin	190 3539 (2)
6. Cable Attachment Clip	127 5702
7. Cable Support Clamp	126 0013
8. 1/4" x 1" Self-Tapping Hex-Head Sheet Metal Screw	272 5699 (4)
9. 1/4" Flatwasher	267 3478 (4)
10. 5/16—18 x 3/4 Socket Head Cap Screw†	215 0018
11. Spacer—*See Note Below	228 0111
12. Adapter Block—*See Note Below	112 0008
<b>POWERGLIDE APPLICATION ONLY (2 speed)</b>	
13. Bracket—Transmission Cable	117 0095
14. Arm & Shaft Assembly—(Transmission)	105 0084
<b>TURBO-HYDROMATIC APPLICATION ONLY (3 speed)</b>	
15. Bracket—Transmission Cable	117 5711
16. Arm—(Transmission)	105 0080
17. Spacer—(Optional—Use When Shifter is Fastened Directly to Floor)	228 0113 (4)
<b>The Following Parts in Bagged Hardware Pkg.</b>	
18. Bezel Nut	154 0184
19. Hex Nut	179 0089
20. Flatwasher	179 0090
	267 0097

**Bagged Hardware Package** 154 0175 and 154 0184

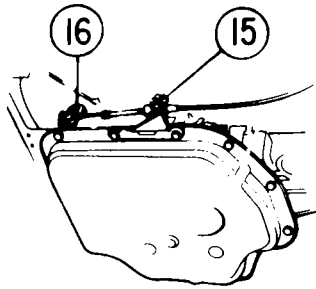
\*Adapter Block — Part No. 112 0008 is installed in shifter for Powerglide Application. Spacer — Part No. 228 0111 is installed in Shifter for Turbo-Hydromatic Application.

†GM350 & 200 Metric Turbo-Hydro Bracket — See "3 Speed Application", Page 2.

### 3 SPEED APPLICATIONS

#### 400 TURBO-HYDRAMATIC

USE STOCK BOLTS TO FASTEN END HOLES OF BRACKET TO TRANSMISSION

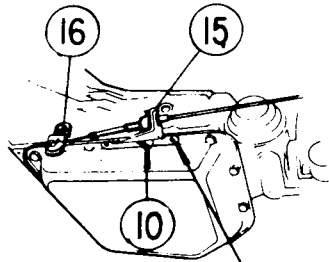


#### 350 TURBO-HYDRAMATIC

INSTALL BRACKET WITH 5/16-18 x 3/4 SOCKET HEAD CAP SCREW LOCATED AT REAR END OF SLOT (BRACKET FORWARD AS FAR AS POSSIBLE)

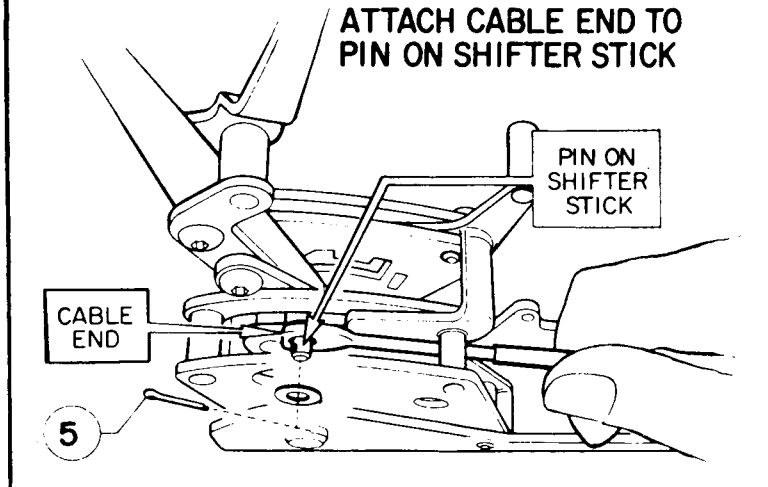
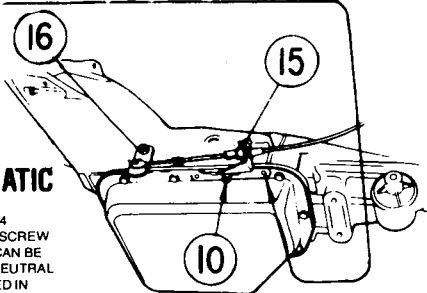
350 TURBO-HYDRAMATIC AND 200 METRIC TURBO-HYDRAMATIC

After installation has been completed, drill a 21/64 diameter hole through transmission case at rear mounting hole in bracket (use hole in bracket as drill guide). Fasten the rear end of bracket to transmission with a suitable 5/16" diameter bolt, lockwasher and nut. These items are not supplied with this kit. The lockwasher and nut are installed on the top side of the transmission case. This hardware is not shown in these drawings.



#### 200 TURBO-HYDRAMATIC

INSTALL BRACKET WITH 5/16-18 x 3/4 SOCKET HEAD CAP SCREW LOCATE SCREW AT MIDDLE OF SLOT THE LOCATION CAN BE ADJUSTED WHEN YOU PERFORM "NEUTRAL ALIGNMENT" OPERATION DESCRIBED IN TEXT.



ATTACH CABLE END TO PIN ON SHIFTER STICK

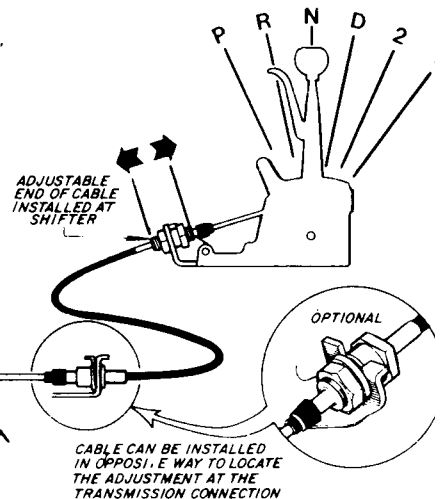
PIN ON SHIFTER STICK

CABLE END

5

#### ALIGNMENT PROCEDURE

1. Position shifter stick at "N" ( Neutral ).
2. Position transmission arm at "N" ( Neutral ).
3. Adjust cable as directed in text which appears in column directly below on this page.
4. Fasten cable end on pin with flatwasher and cotter pin.



ADJUSTABLE END OF CABLE INSTALLED AT SHIFTER

OPTIONAL

CABLE CAN BE INSTALLED IN OPPOSITE WAY TO LOCATE THE ADJUSTMENT AT THE TRANSMISSION CONNECTION

Carefully direct threaded end of cable through shifter frame toward cable stud as shown in exploded view. Secure threaded portion of cable housing to shifter frame as shown using bezel nut (Item #18), hex nut (Item #19), and flatwasher (Item #20). Center thread so that an equal amount is visible on each end after nuts are finger tightened

Temporarily slide end of cable on stud to insure proper routing through shifter. Refer to detail drawing. Shift to neutral, then slide cable off of pin.

Remove stock transmission arm. Assemble the cable pin in the Hurst arm with hex nut as shown. Install the arm on transmission control shaft. Install cable bracket on transmission. Refer to directions with the illustration

of your installation. Carefully route the cable toward the transmission cable mounting bracket and fasten in place with the cable attachment clip (Item #6). Push clip in until it is seated against ferrule on cable and front face of transmission cable mounting bracket. (CAUTION—AVOID SHARP BENDING OF CABLE. CABLE WILL BE PERMANENTLY DAMAGED BY ANY SHARP BENDING.)

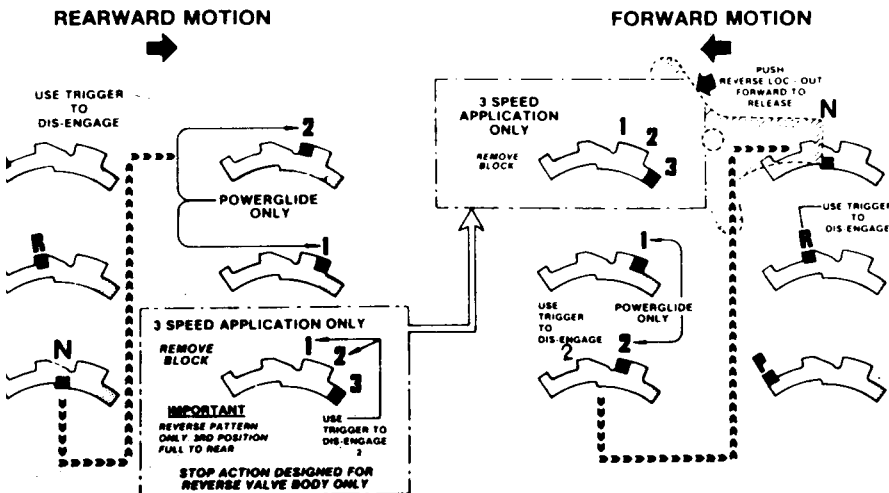
Locate cable hanger (Item #7) to apply support where it is most needed. Drill a 1/4 diameter hole through floor for cable hanger. Fold clamp around cable, push split end through hole in floor. Push pointed end through split end. Apply force until joint snaps together.

Rotate transmission arm to neutral (see illustration of shifter and transmission arm) and secure moveable end of cable to pin with flatwasher and cotter pin.

At shifter note position of moveable spade end of cable relative to cable stud. Shifter should be in neutral. Using the retaining nuts at threaded portion of cable, adjust the cable until spade end will freely enter on to cable stud. Shift through each gear position (up & down) and check for free entry of cable end on stud in each gear position—re-adjust if necessary to insure proper function. When satisfied with adjustment, tighten retaining nuts on threaded portion of cable without disturbing previous adjustment. Install cotter pin on stud and secure.

NOTE: If adjustment feature of cable is installed at transmission end, the same procedure for adjustment must be used, while a helper is shifting the Quarter Stick.

### SHIFTING PATTERNS



# POWERGLIDE APPLICATION

## **WARNING** IMPORTANT

Installation of Quarter Sticks shifter on Powerglide transmission eliminates throttle pressure control linkage (kickdown valve).

Powerglide installation of the Hurst Quarter Sticks is for racetrack use only. Under no circumstances is this shifter to be used in a vehicle that is operated on public highways or streets. In no case shall Hurst Performance, Inc. be liable for any direct or consequential damages resulting from improper use of this unit.

Refer to Fig. 1. Use hacksaw to cut protruding part of transmission away to allow cable bracket installation. Clean all metal chips away from transmission before removing oil pan. Remove all stock linkage. Drain transmission. Remove oil pan.

### IMPORTANT

DO NOT ALLOW FOREIGN MATTER (DIRT, METAL CHIPS, ETC.) TO ENTER TRANSMISSION OR CONTAMINATE ANY INTERNAL PARTS. IF NECESSARY, WASH PARTS IN SOLVENT AND BLOW THEM DRY WITH COMPRESSED AIR.

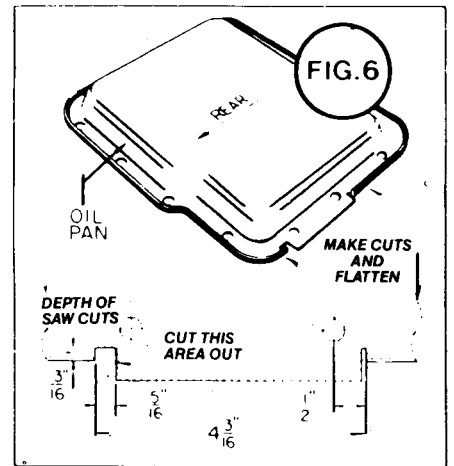
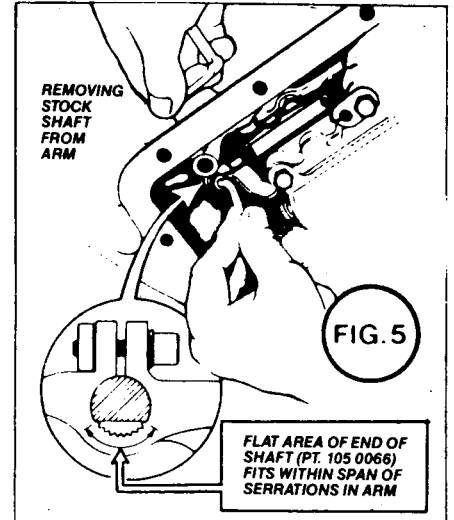
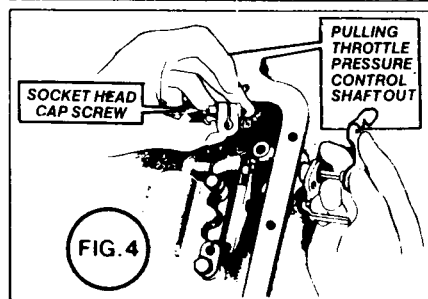
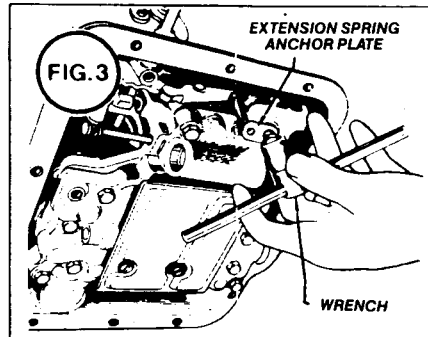
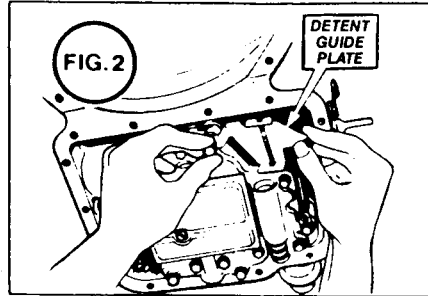
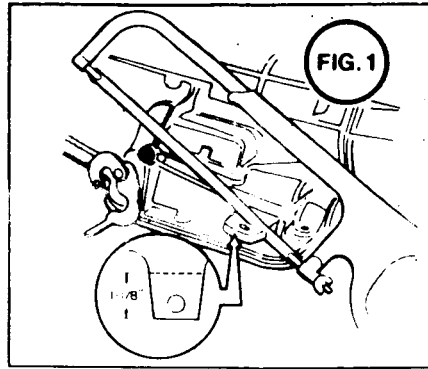
Refer to Fig. 2. Remove two screws that fasten detent guide plate over internal end of control linkage. Remove guide plate.

Refer to Fig. 3. Loosen screw that fastens the extension spring anchor plate to release tension on the detent roller.

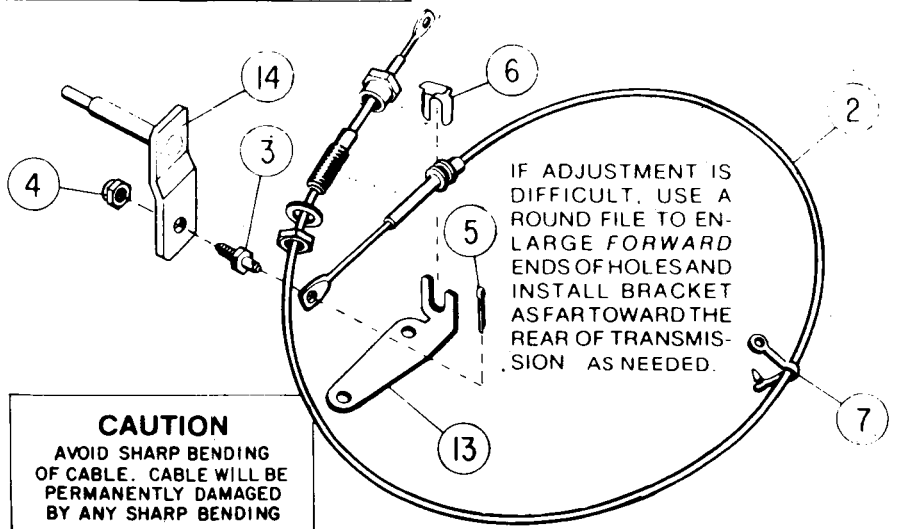
Refer to Fig. 4. Loosen socket head cap screw that fastens the throttle pressure actuator (transmissions that have throttle pressure control). *NOTE: Installation of the solid control shaft supplied with this kit (Pt. 105 0066) in Powerglide transmission eliminates throttle pressure control. See warning on page 1 of this instruction sheet. Grasp the actuator and pull the throttle pressure control shaft out of transmission control shaft. Stock transmission control shaft is now ready for removal.*

Refer to Fig. 5. The flat area on the end of the solid control shaft (Pt. 105 0066) fits within the span of the serrations in the detent plate.

The drawing in Fig. 5 explains this. Loosen socket head cap screw that fastens detent plate to control shaft. Grasp detent plate carefully to keep it in position as you withdraw original shaft and replace it with the solid shaft (Pt. 105-0066). Detent plate is linked to PARK lock actuator plunger. Take care to keep this assembly in position while exchange of control shafts is accomplished. You must hold detent plate in position with one hand while you remove original shaft and install the solid one. Stud pin in detent plate must engage the groove in the manual valve. Tighten socket head cap screw to fasten detent plate to control shaft. Align detent roller with detent plate, then tighten anchor plate screw to restore tension to extension spring. Replace detent guide plate. Rotate detent plate through full travel to prove correct assembly (P-R-N-D-L).

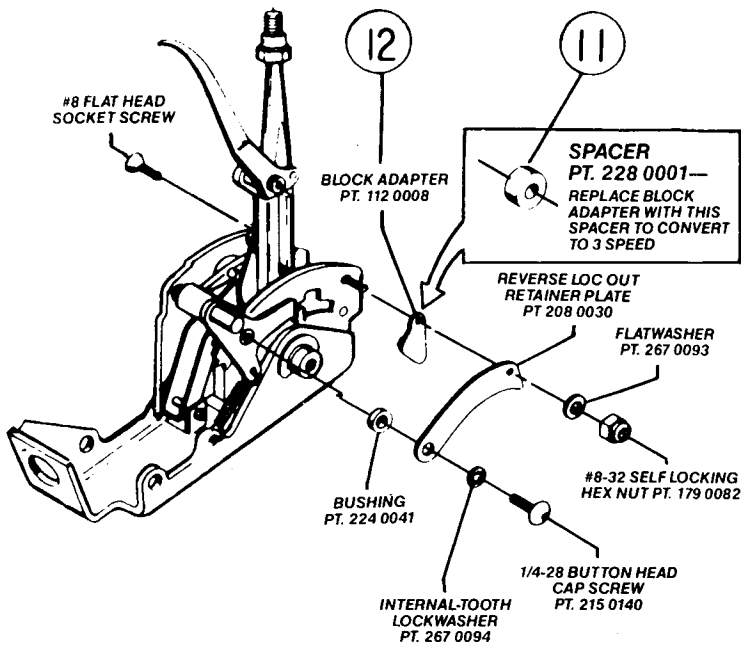


Refer to Fig. 6. Make cuts with hacksaw. Break away small length between cuts as seen in Fig. 6. Flatten lip of flange between the extreme cuts with ball peen hammer as shown in photograph. Inspect reworked area of oil pan flange. Gasket mating surface and areas around bolt holes must be flat. Use ball peen hammer to peen flange flat (with pan properly supported on anvil, etc.) Clean pan thoroughly in solvent. Install oil pan with new gasket. Cable bracket is installed with pan bolts. Tighten all bolts evenly. Install fresh transmission fluid.



## TO CONVERT FROM 2-SPEED POWER GLIDE TO 3-SPEED TURBO, OR VICE-VERSA.

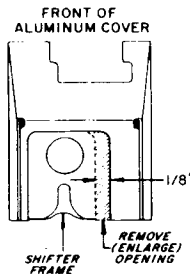
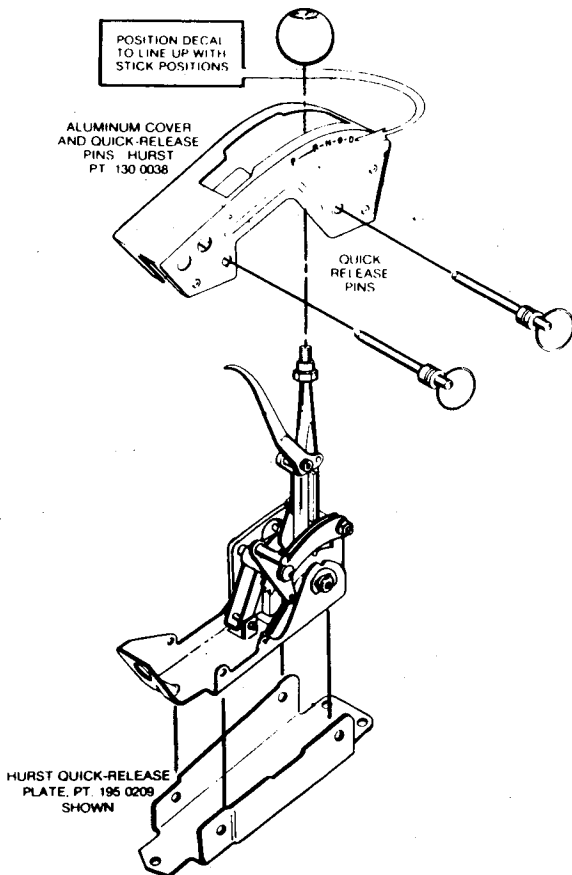
Quarter Stick Shifters are set up for 2-speed (Powerglide) from the factory, but with the following modification procedure your shifter will be ready to use on a 3-speed (Turbo-Hydromatic). TAKE NOTE: Where small shims and Loctite® are used, this is important for free movement of the reverse loc-out lever.



1. Place shifter lever all the way forward to PARK position shown, for easy access to socket screw.
2. Insert 3/32" hex key into #8 flat head socket screw and hold while removing #8-32 self-locking hex nut with an 11/32" wrench.
3. If necessary, loosen 1/4-28 button head screw with 5/32" hex key to swing retainer plate upward for access to block adapter.
4. Remove the block adapter, put #8 flat head socket screw back through hole and put small spacer on screw. There may be a small shim to put in between spacer and retainer plate.
5. Place retainer plate back in position. Put flatwasher and #8-32 self locking nut on, and tighten.
6. If 1/4-28 button head screw has been loosened, back it out no more than 3 turns and put Loctite® on the threads of the plate. Be extremely careful not to remove this screw completely as there are internal shims that must stay aligned. Retighten, but the reverse lock out lever must move freely.
7. See Page 2 for correct bracket and trans arm for Turbo Hydromatic Installation.

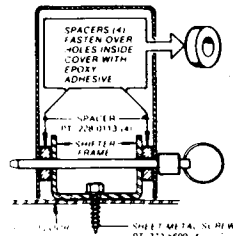
## QUICK-RELEASE FLOOR PLATES

OPTIONAL ALUMINUM COVER (PT. 130 0038)

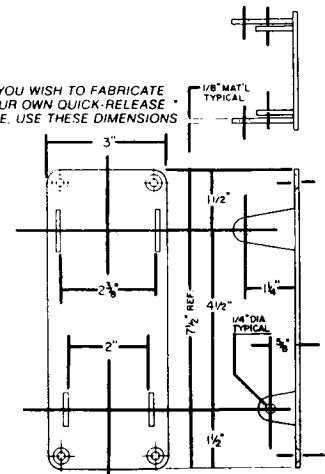


### OPTIONAL

IF SHIFTER IS FASTENED DIRECTLY TO FLOOR (QUICK-RELEASE PLATE IS NOT USED)—REFER TO SECTIONED DRAWING BELOW.



IF YOU WISH TO FABRICATE YOUR OWN QUICK-RELEASE PLATE, USE THESE DIMENSIONS



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