

TURBO ACTION

1535 Owens Road, Jacksonville, FL 32218
Phone (904)741-4850***FAX (904)741-4853
www.turboaction.com



CHEETAH SCS SHIFTER Part # 70002B

Fits: All GM Turbo Hydro 200, 250, 350, & 400 and 1962-73 Competition Only Alum. Powerglides.
Will Not fit any 4-speed transmissions

Parts Breakdown

- 1 - G.M. Control (With #70060 Block Plate Installed)
- 1 - 70082B Gear Position Indicator Decal (PRN321)
- 1 - 70083B Gear Position Indicator Decal (PRN123)
- 1 - 70084B Gear Position Indicator Decal (PRN21)
- 1 - 70085B Gear Position Indicator Decal (PRN12)
- 1 - 70102 Special Five Foot Cable
- 1 - 70200A Control Switch 10AMP
- 1 - 70211 Park/Neutral Start Switch Kit (G.M. & Ford Only)
 - Includes:
 - 1 - 70210A Switch
 - 1 - 70049 Switch Mounting Bracket
 - 2 - 70154 Nylon Rollers (On Shifter)
 - 2 - 70155 Clevis Pins (On Shifter)
 - 2 - 70136A Cotter Pins (On Shifter)
 - 1 - 70139 Switch Nut
- 1 - 70221 Installation Kit
 - Includes:
 - 1 - Set of Instructions
 - 1 - 70030 Powerglide Shift Arm Shaft & Nut (70173)
 - 1 - 70031 Powerglide, Turbo 200/250/350/400 Shift Arm Lever
 - 1 - 70050A G.M. Pan Cable Bracket
 - 1 - 70130S Pivot
 - 1 - 70131 Cable Clamp (U-Shaped)
 - 1 - 70132 Cable Clamp Flat Shim
 - 2 - 70133 Cable Clamp Screws
 - 2 - 70135 Cable Clamp Nuts
 - 1 - 70136B Hairspring Cotter
 - 2 - 70137 5/16" x 18 x 1" Bolts
 - 2 - 70138 5/16" Lock Washers
- 2 - 50101 Contingency Decals

The Turbo Action *Cheetah Competition SCS Shifter* is the finest competition shifter built today. If installed properly, it will last for many years with flawless performance.

This shifter will work with either stock pattern or reverse pattern valve bodies.

FIRST, READ INSTRUCTIONS CAREFULLY, THEN PROCEED WITH EACH STEP INDIVIDUALLY.

Use Lifter Only To Go into Reverse. The unique reverse lock-out system requires only that you lift the reverse lockout mechanism with your two fingers while placing into reverse with the same hand. **Note: Do NOT** lift mechanism for any other shift!

CAUTION: In a race it is imperative that the forward gears be precise in relation to the shifter.

CAUTION! CAUTION!

Be absolutely sure that vehicle is in park or neutral position before attempting to start motor, and be sure that park/neutral safety switch is adjusted properly.

SPECIAL NOTE: Sanctioned dragstrips require functional Neutral Safety Switch mandatory.

STEP # 1: The Shifter is preassembled and only requires locating a suitable spot to mount it and hooking up the necessary bracket to hang cable to side of the transmission.

STEP # 2: If mounting shifter on thin floor pan, such as a Super Gas or Econo-Altered, would suggest putting a thin steel strapping behind the floor pan to offer a support where the shifter mounting bolts go through. Be sure to locate shifter in a position which will be comfortable for the driver to shift. After drilling holes in floor, start two rear bolts and make finger tight. Two front bolts leave out at this time; as you will be installing your Park/Neutral Start Switch Mounting Bracket later.

SPECIAL NOTE: The G.M. Shifter #70002B has the cable exiting out the rear of the control towards the rear end. It then makes a 180 turn back towards engine. The cable should in most cases go under the cross member and then mount to the transmission.

STEP # 3: The cable included with this shifter is very unique. You can make many tight radius turns and it will still work smoothly. It also is very sturdy even though it is highly flexible.

STEP # 4: When routing the cable, be sure to keep away from rotating parts (driveshaft, u-joints, etc.) and hot parts (headers, mufflers, etc.). **NOTE:** On installation if you will come through floor pan as close to the driver's side of the hump as possible, the cable will then lie snug against the side of hump and will be 4-5 inches from the driveshaft. If necessary, use some plastic ties to keep cable from moving around.

STEP # 5: The #70050A G.M. Pan Cable Bracket is completely universal with no compromise. **NOTE:** Fig. #1 which gives bracket location on transmission pan rail for the Powerglide, Turbo 200, Turbo 250, Turbo 350 and Turbo 400.

STEP # 6: Before bolting transmission Pan Cable Bracket to transmission install the u-shaped Cable Clamp and Shim into proper set of holes (See Fig. #2).

STEP # 7: If installing a shifter for a Powerglide, you will have to take pan off and install special Shift Arm Shaft #70030.

CAUTION: *You must use the Turbo Action Part #70031 Shift Arm Lever when installing into a Powerglide. No other brand lever (Hurst, B&M, Etc.) will work properly for the gate alignment, unless made specific for Turbo Action CHEETAH SCS Shifter. Other brands could result in transmission failure.*

STEP 8-15: ***For installing the supplied Powerglide Shift Arm Shaft into transmission.***

STEP # 8: Place transmission in PARK position.

STEP # 9: Remove drain plug and drain transmission oil. Remove pan.

STEP #10: Remove two bolts holding shift lever guide plate (Fig. #4). NOTE position of shift lever and manual valve. NOTE the relationship of the lever sticking through the guide and the shift arm itself (they are parallel to each other). (Fig. #4A) Remove detent spring, be sure to note its position. (Fig. #4B)

STEP #11: Carefully remove kickdown lever and old shift arm lever from transmission.

STEP #12: Reinstall new Selector Shaft #70030 and tighten. **DO NOT TIGHTEN EXCESSIVELY.** NOTE: Discard old kickdown lever and tightening clamp. Install special Shift Arm Lever #70031 on to Selector Shaft #70030 (Fig. #2). The side which is stamped "This Side Out" must face you when installed. **CAUTION:** You must use the Turbo Action Part #70031 Shift Arm Lever when on a powerglide. Be sure outside arm is parallel to inside arm that sticks up through guide plate. (Fig. #4C) **If your transmission requires kickdown linkage contact Turbo Action.**

STEP #13: Place shift lever guide plate and two bolts into place being sure the manual valve is properly lined up with the shift lever. Tighten bolts to 8-10 ft./lbs. (Fig. #4 & #4A)

STEP #14: Connect detent spring to detent spring bracket and valve body bracket with pair of needle nose pliers. (Fig. #4B)

STEP #15: Clean pan and place a new pan gasket on it. Install pan and tighten bolts.

STEP #16: Install Pan Cable Bracket as shown in (Fig. #1, #2 & #3); then refill transmission (Approx. 3 qts.). Use the two 5/16" x 18 x 1" bolts and two lock washers included.

STEP #17: Install special Shift Arm Lever #70031 (Fig. #2). The side which is stamped "This Side Out" must face you when installed. **CAUTION:** You must use the Turbo Action Part #70031 Shift Arm Lever when on a Powerglide, Turbo Hydro "200", "250", "350" or "400". No other brand lever (Hurst, B&M, etc.) will work properly for gate alignment, unless made specific for Turbo Action shifter. Other brands could result in transmission failure.

STEPS #18 - #19 Are for Turbo Hydro “200”, “250”, “350”, & “400”:

STEP #18: Position Pan Cable Bracket and u-shaped Cable Clamp as shown in (Fig. #1, #2 & #3).

STEP #19: Remove Powerglide Block Plate as shown in (Fig. #5) if using with Turbo Hydro “200”, “250”, “350” or “400” transmission.

STEP #20: Wire Park/Neutral Safety Switch into your wiring per (Fig. #9).

STEP #21: Install 70210A Switch and #70139 Switch Nut to the #70049 Switch Mounting Bracket (Fig. #7).

STEP #22: Slide the Switch Mounting Bracket underneath the shifter mounting brackets. Reinstall the bolts into floor, but do not tighten all the way at this time (Fig. #8).

STEP #23: Note that the Switch can be slid up and down. In addition, the Switch Mounting Bracket can be slid forward and back. Before adjusting Switch, the following must be done first.

- STEP #24:
- A. Place shifter in low if stock pattern (PRN321), (PRN21).
 - B. Place transmission Shift Arm Lever in high gear if reverse pattern (PRN123), (PRN12).
 - C. Adjust pivot to fit into hole in Shift Arm Lever.
 - D. Before installing Hairspring Cotter, have someone sit in car and move lever through each gear while you check to see if shift lever on transmission is moving the full distance.

CAUTION, VERY IMPORTANT:

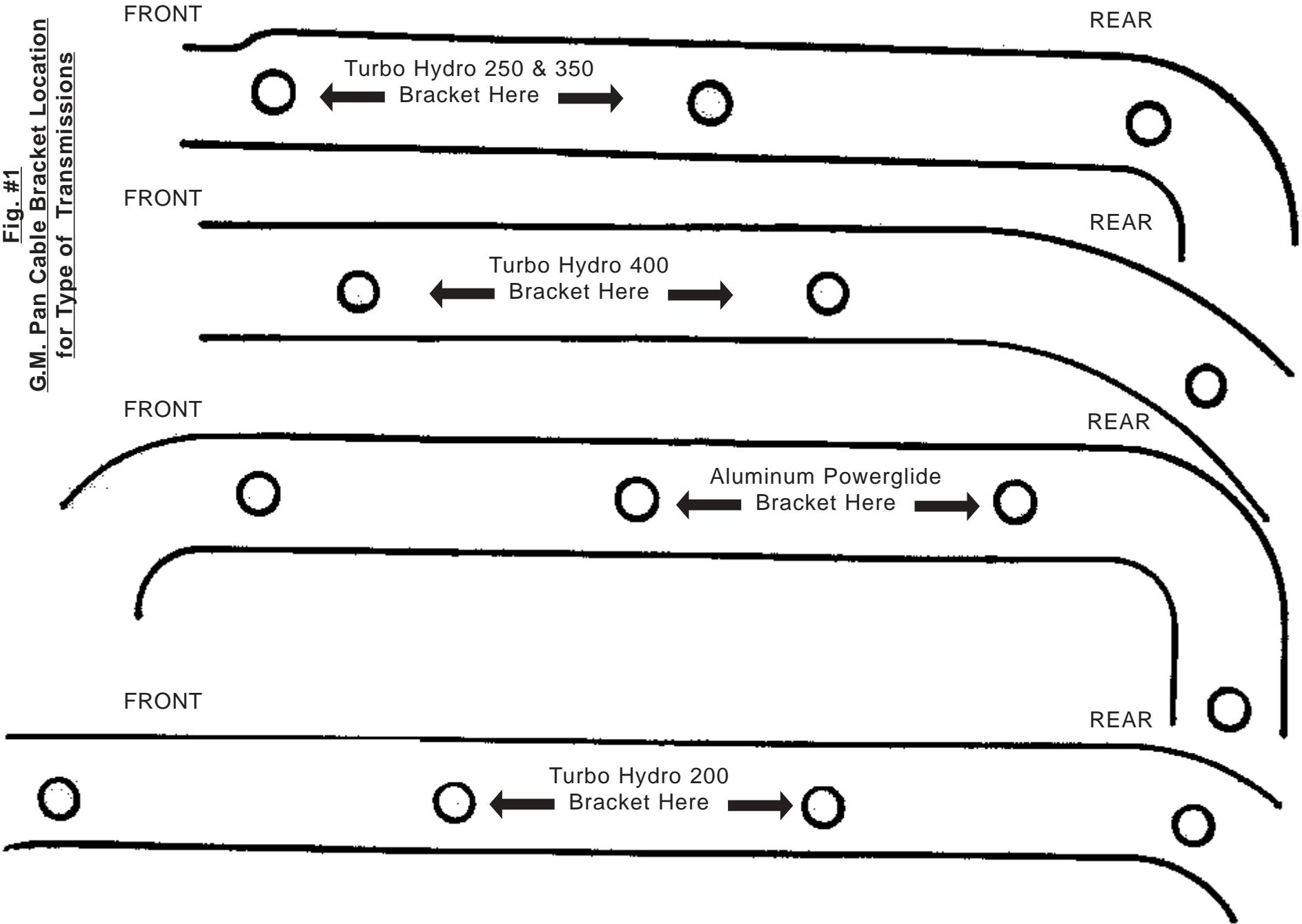
When installing the CHEETAH SCS Shifter, you must use the Turbo Action Shift Arm Lever, Shift Arm Shaft (if Powerglide) Pan Cable Bracket and Switch Mounting Bracket supplied otherwise improper alignment of shifter will occur causing possible transmission failure or miss shifts.

CAUTION: In a race car it is imperative that the forward gears be precise in relation to the shifter.

STEP #25: Adjust Switch and Switch Mounting Bracket until both Park & Neutral will allow the vehicle’s engine to start. Also, double check to be sure the vehicle will not start in reverse or any forward gear position.

STEP #26: Be sure all bolts are secured properly, including the final tightening up of the bolts mentioned in Step #22.

Fig. #1
G.M. Pan Cable Bracket Location
for Type of Transmissions



6/89, 7/98, 2/01, 5/06

5

Part #70002B

Fig. #2
Pan Cable Bracket

CHEETAH SCS Shifter

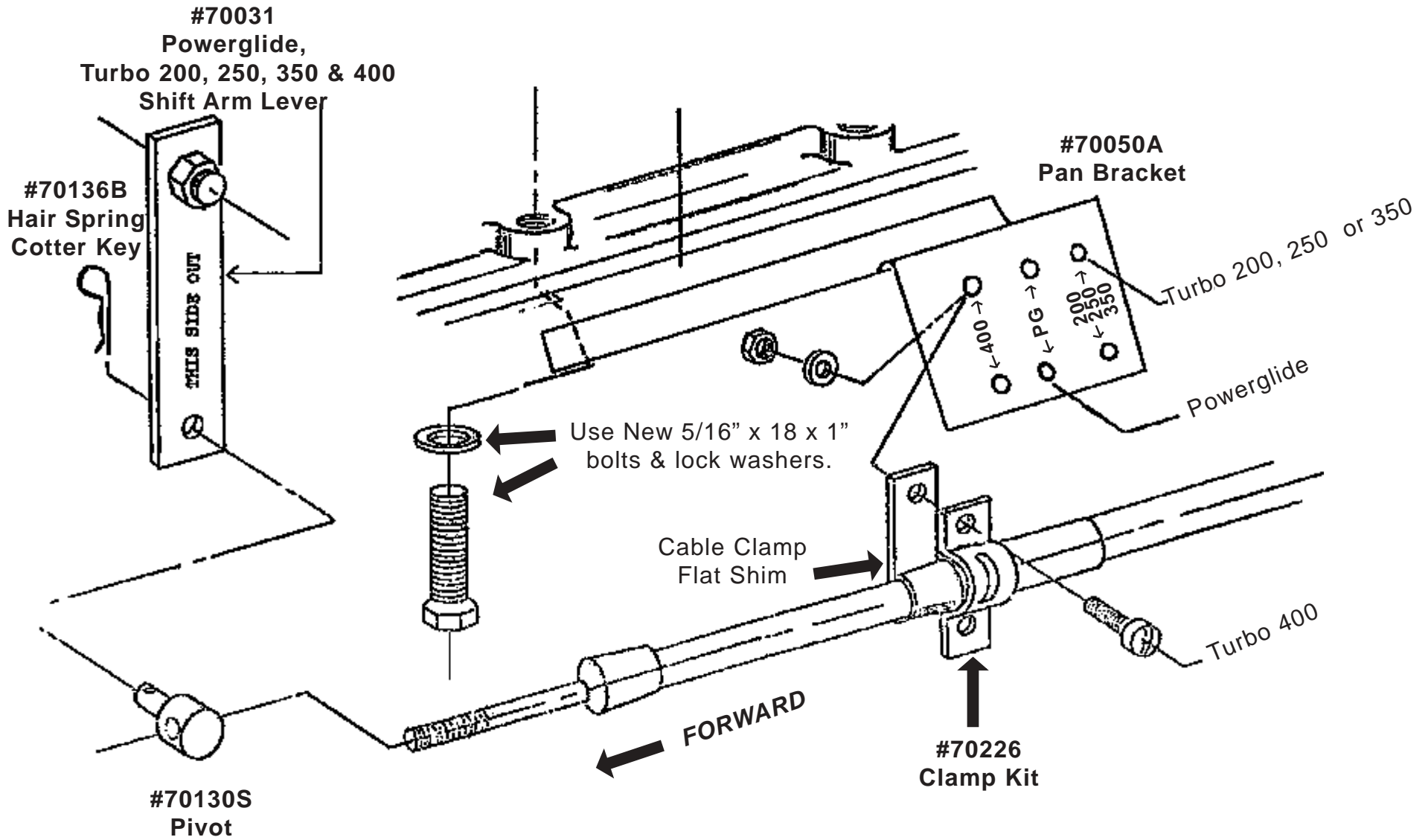
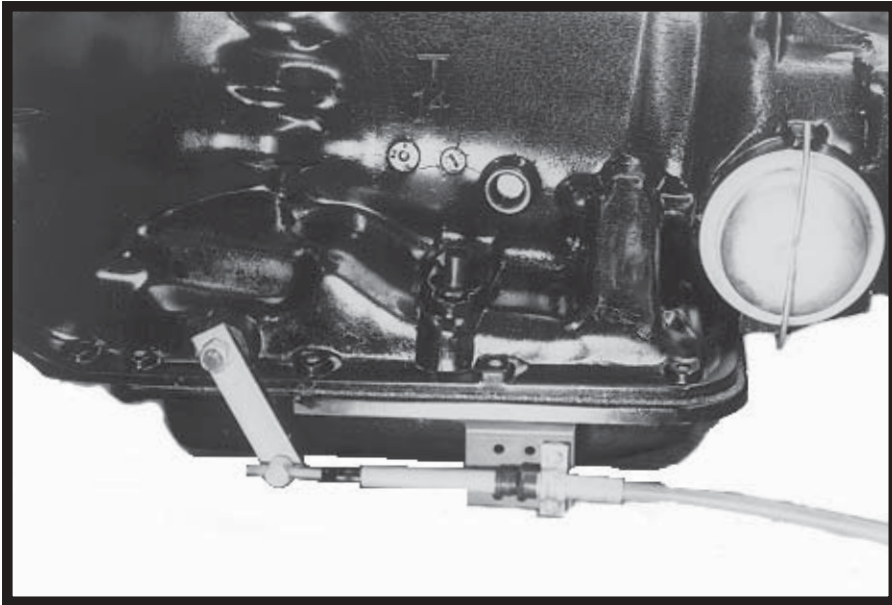
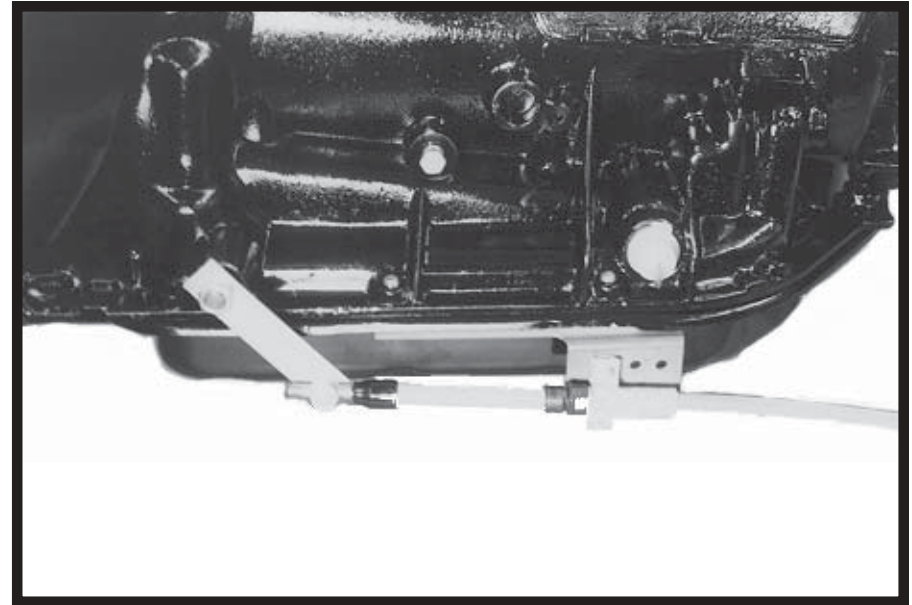


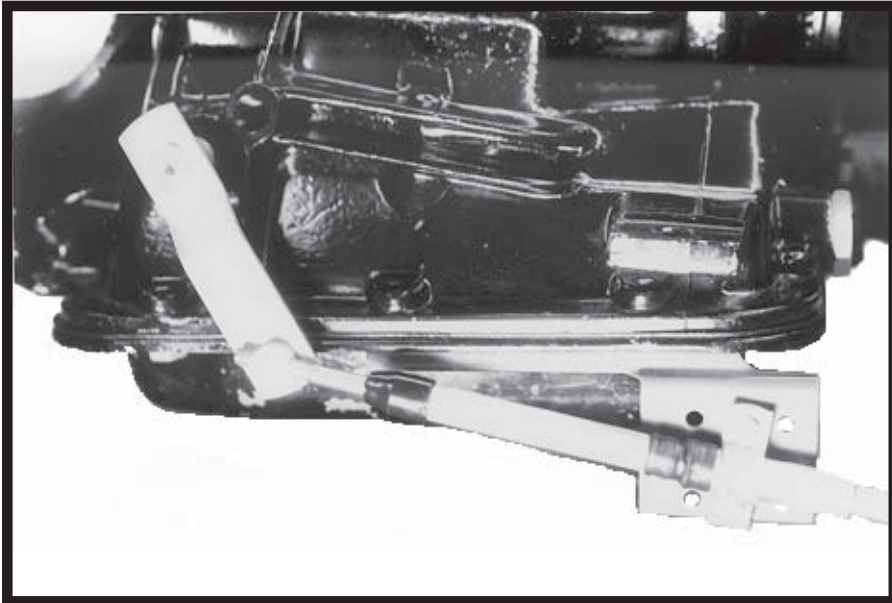
Fig. #3
Pan Cable Bracket & Cable Installation



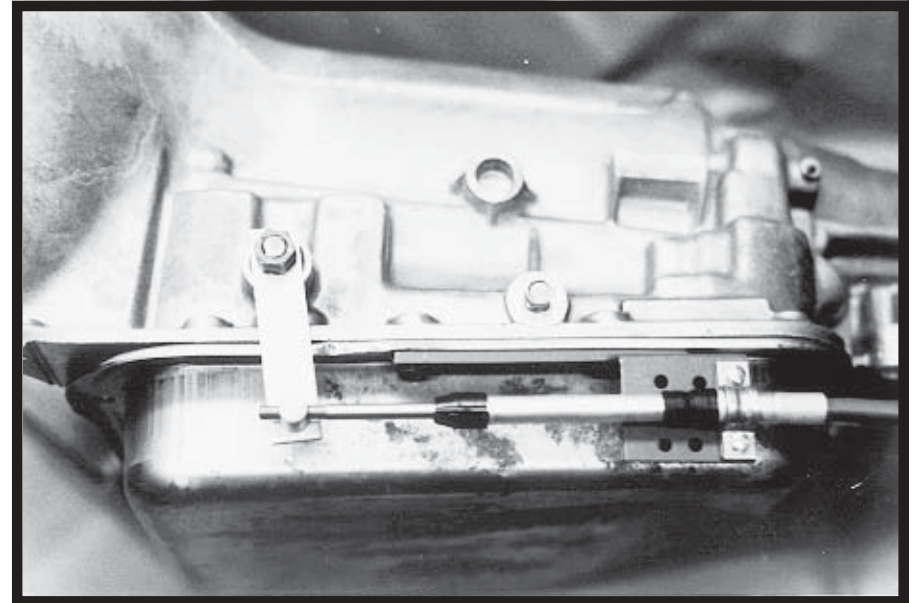
Turbo Hydro 250 & 350



Turbo Hydro 400



Aluminum Powerglide



Turbo Hydro 200

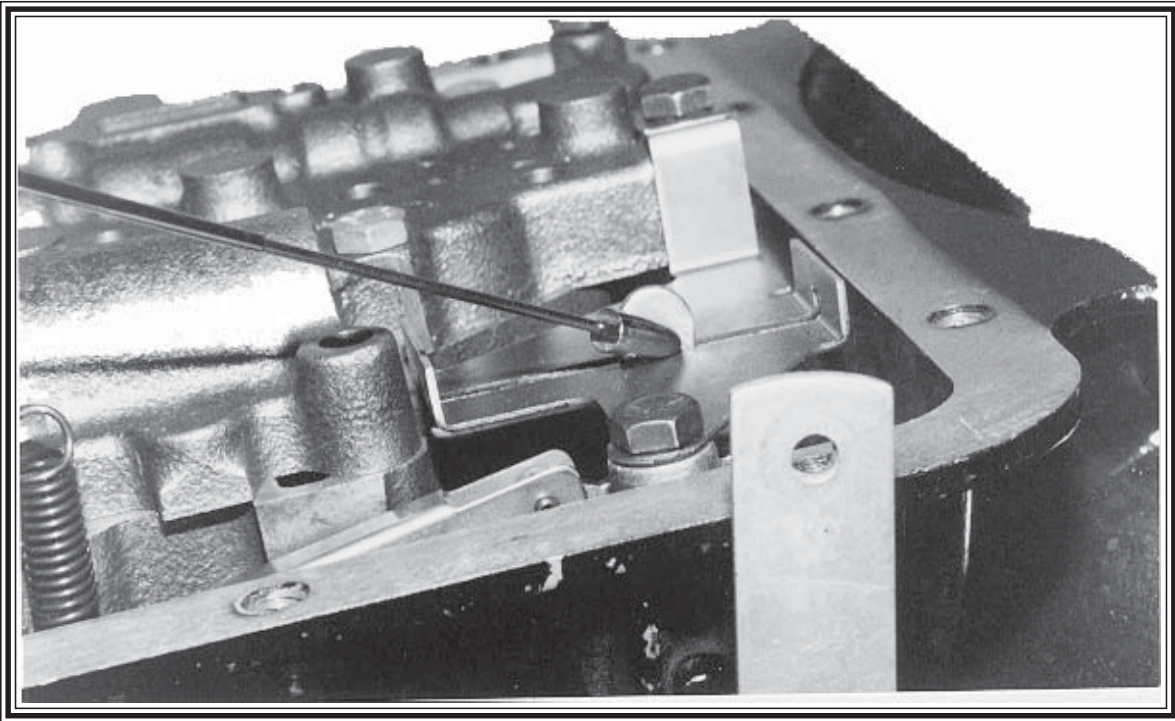


Fig. #4

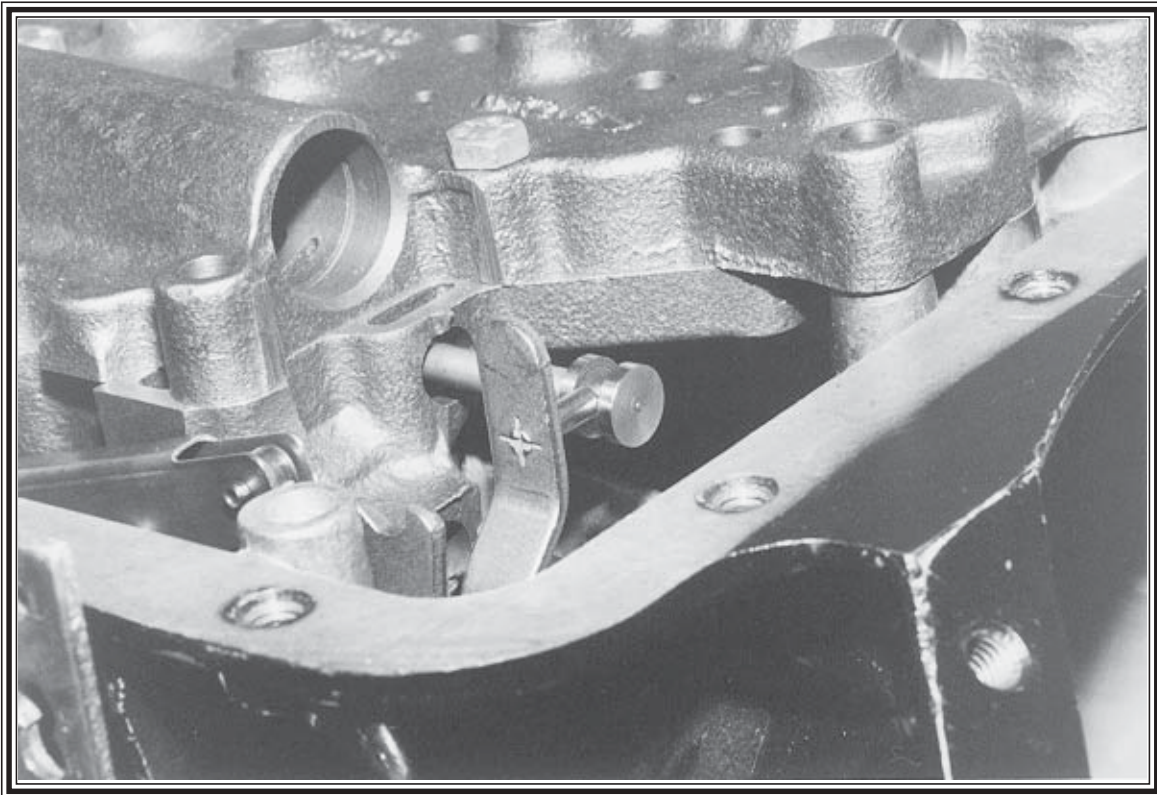


Fig. #4A

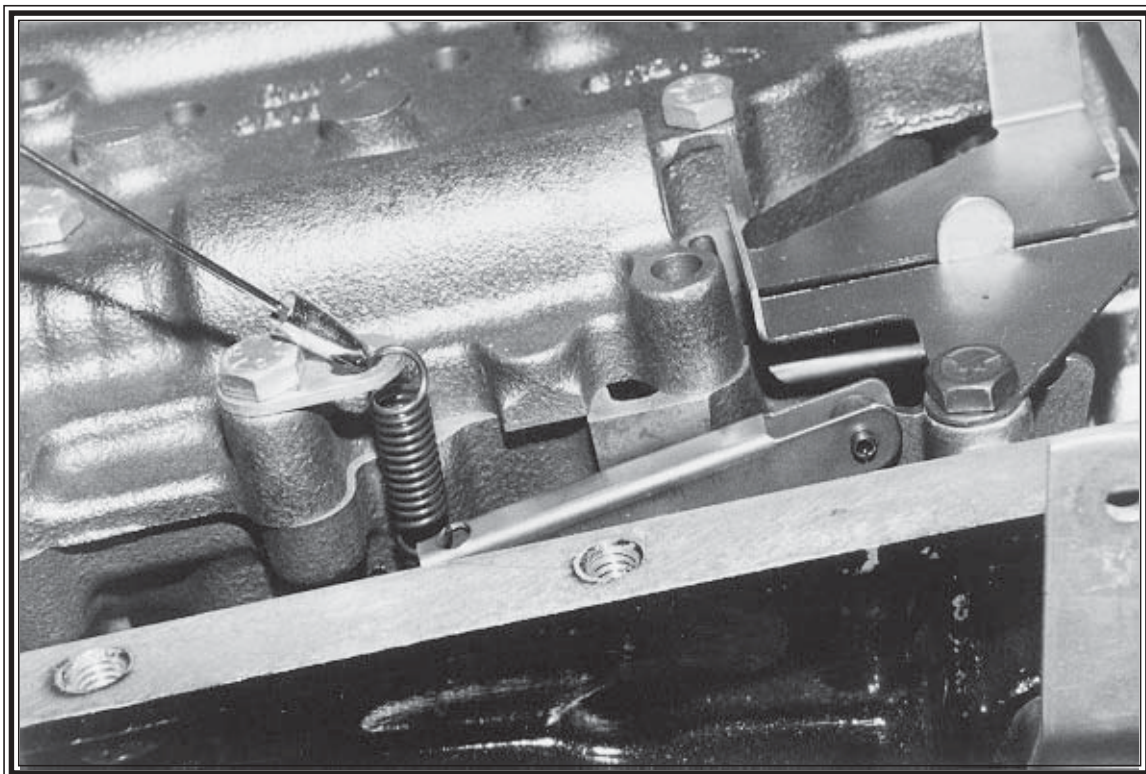


Fig. #4B

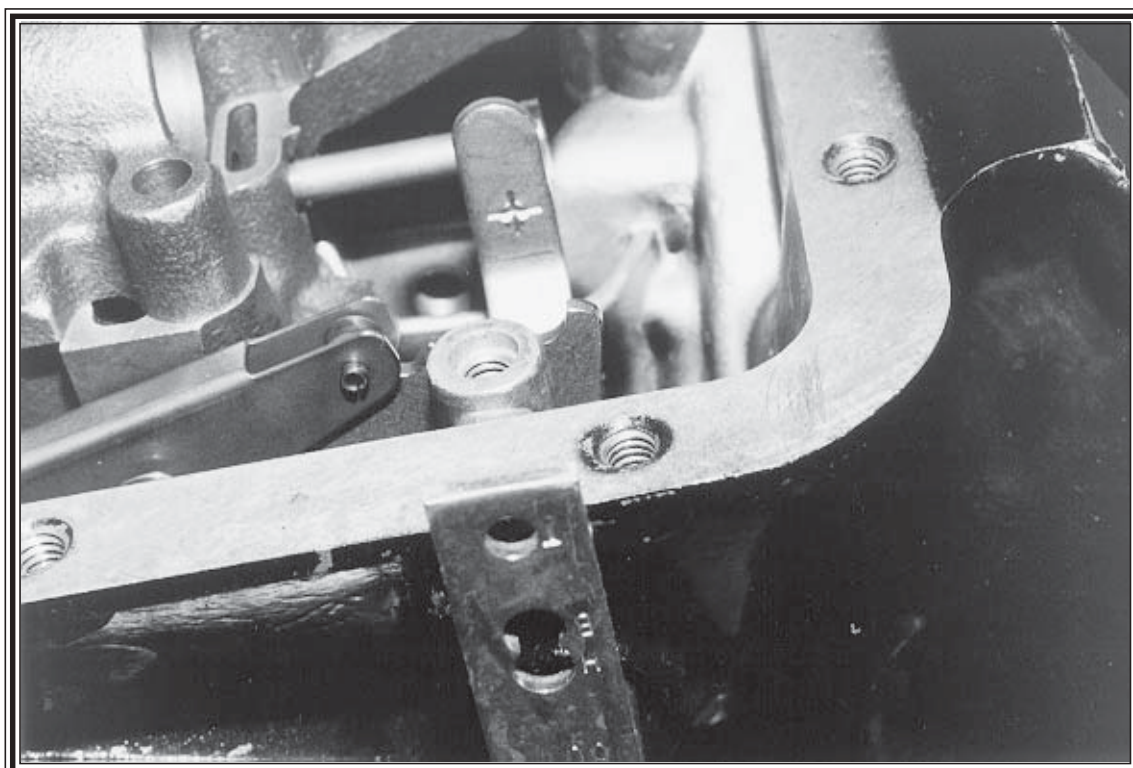


Fig. #4C

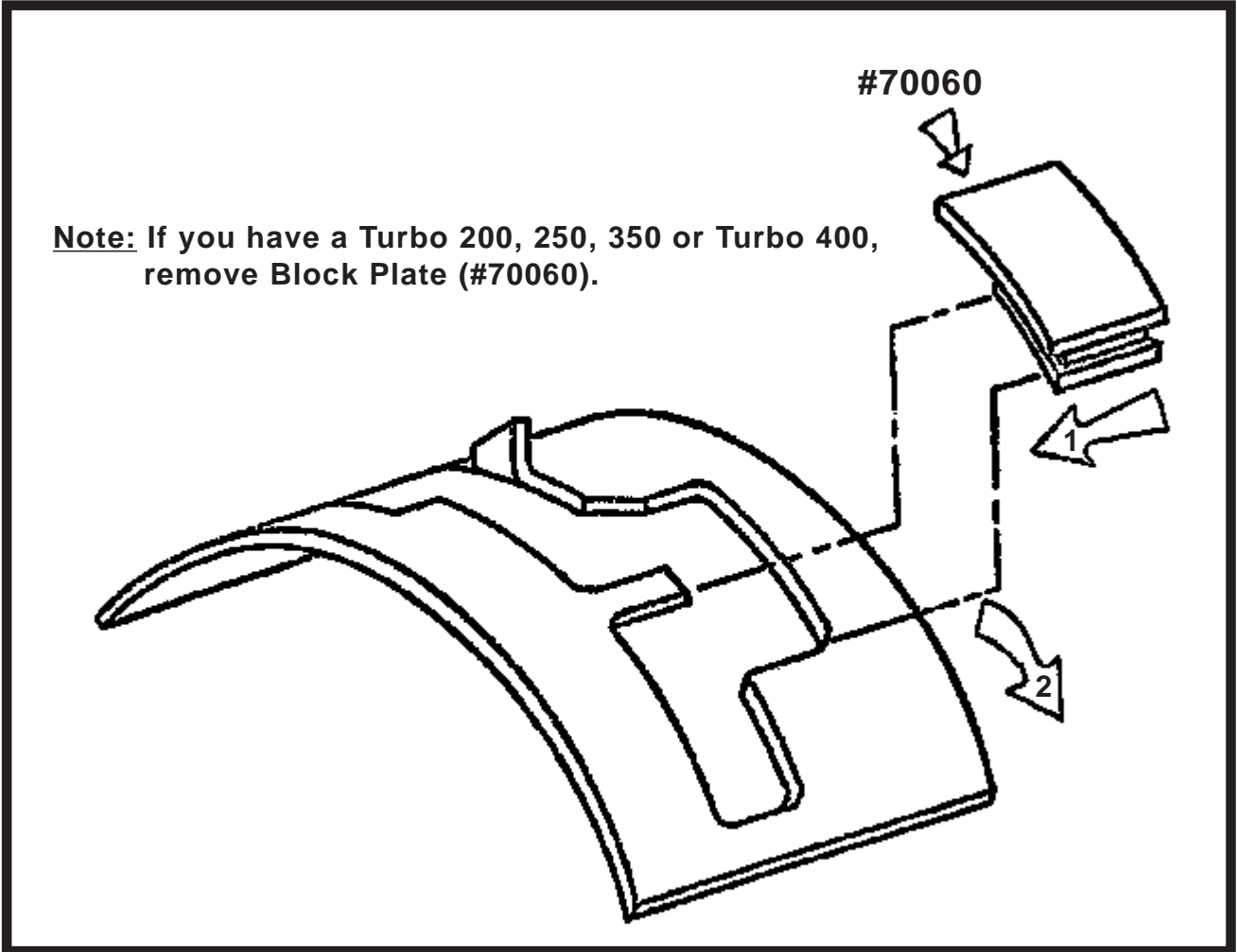


Fig. #5

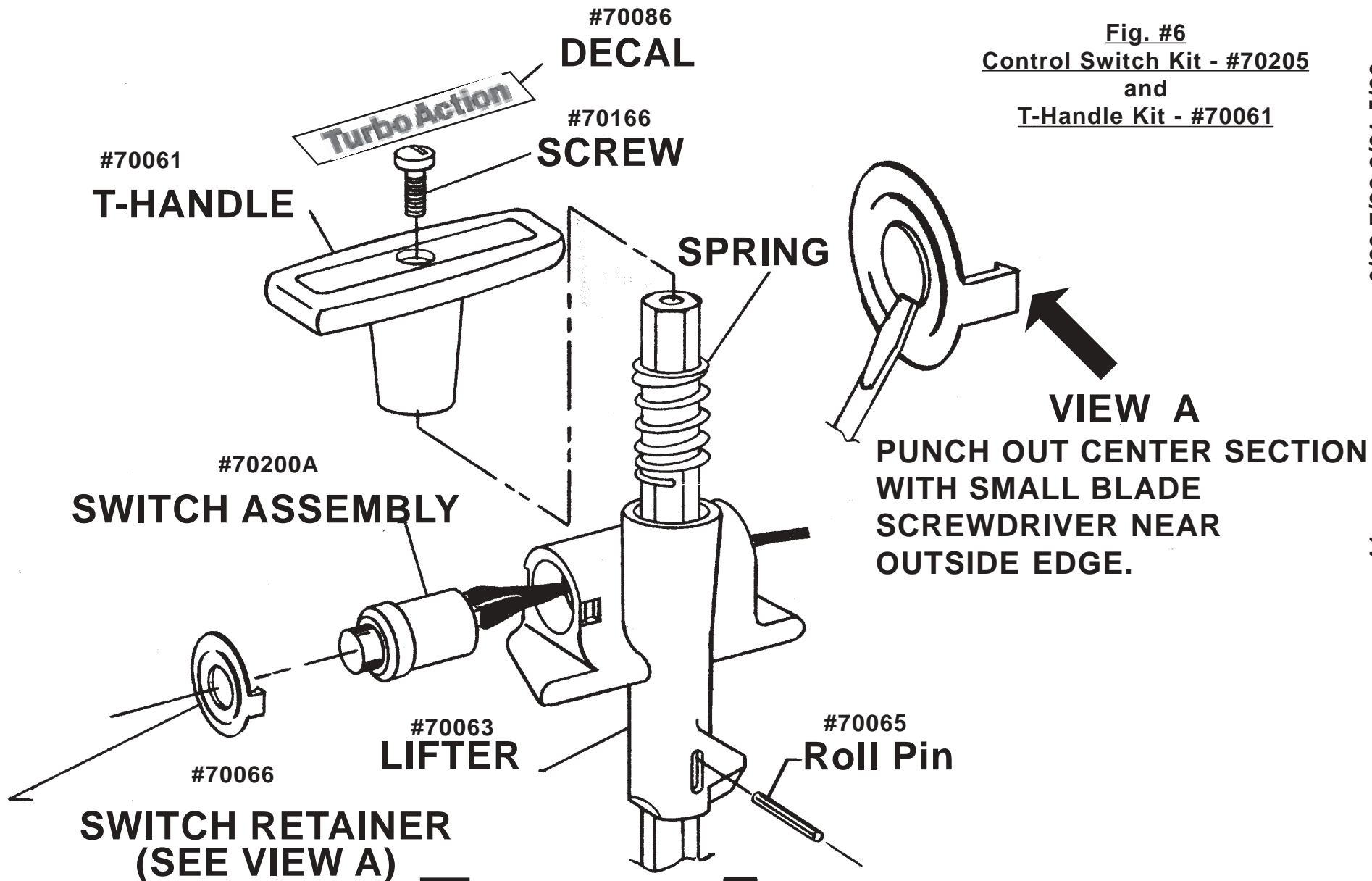


Fig. #6
Control Switch Kit - #70205
and
T-Handle Kit - #70061

TURBO ACTION

1535 Owens Road, Jacksonville, FL 32218
(904)741-4850, FAX (904)741-4853

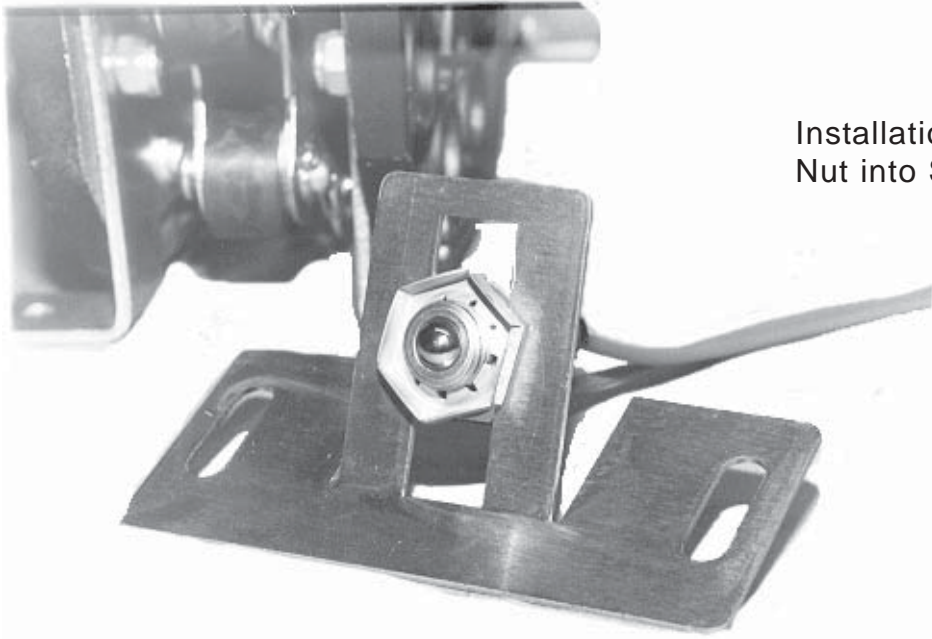


Fig. #7
Installation of Switch & Switch Nut into Switch Mounting Bracket

Fig. #8
Installation of Switch, Switch Nut & Mounting Bracket Assembly Underneath Shifter Mounting Brackets

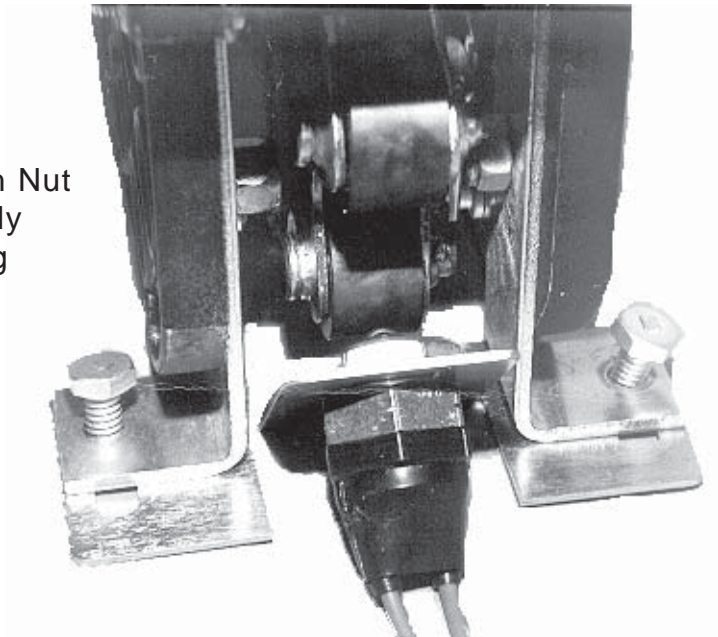


Fig. #9
Wire Switch

Suggested Wiring Diagram

