

! 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 2

INSTALLATION INSTRUCTIONS

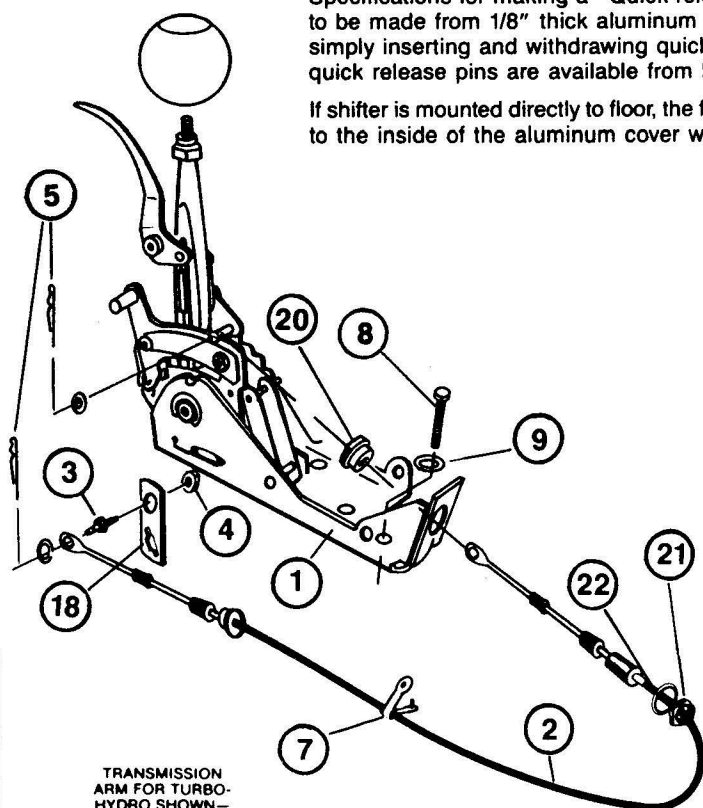
316 2020 316 2025

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 0039.

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.



TRANSMISSION
ARM FOR TURBO-
HYDRO SHOWN—
SEE PAGE 3 FOR
DRAWING OF
POWERGLIDE
APPLICATION

CONTENTS OF KIT

	PART NO.
1. A. 316 0020 Kit Shifter Packaged	316 0020
Shifter only	316 0021
B. 316 0025 Kit Shifter Packaged	316 0025
Shifter only	316 0026
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 (2)
8. 1/4" x 1" Self-Tapping Hex-Head Sheet Metal Screw	272 5699 (4)
9. 1/4" Flatwasher	267 3478 (4)
10. 15/16—18 x 1 Hex Head Cap Screw	97090096 (2)
11. Spacer—See Note Below	228 0111
12. Adapter Block—See Note Below	112 0008
13. 5/16 Flatwasher	96000559 (6)
14. Spacer-Cable Bracket	97X93092 (2)
POWERGLIDE APPLICATION ONLY (2 speed)	
15. Bracket—Transmission Cable	117 0098
16. Arm & Shaft Assembly—(Transmission)	105 7001
TURBO-HYDROMATIC APPLICATION ONLY (3 speed)	
17. Bracket—Transmission Cable	117 0099
18. Arm—(Transmission)	105 0098
19. Spacer—(Optional—Use When Shifter is Fastened Directly to Floor)	228 0113 (4)
The Following Parts in Bagged Hardware Pkg.	
20. Bezel Nut	154 0184
21. Hex Nut	179 0089
22. Flatwasher	179 0090
	267 0097

Bagged Hardware Package 154 0200 and 154 0184

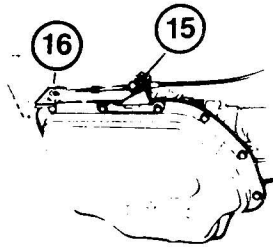
*Adapter Block — Part No. 112 0008 is installed in shifter for Powerglide Application. Spacer — Part No. 228 0111 is installed in Shifter for Turbo-Hydromatic Application.

3 SPEED APPLICATIONS

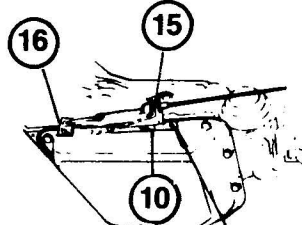
200, 350, and 400 TURBO HYDRAMATIC

To mount the cable bracket for the 200 and 350 Turbo Hydramatic you must use the round holes in the bracket. To mount the cable bracket for the 400 Turbo Hydramatic you must use the slotted holes.

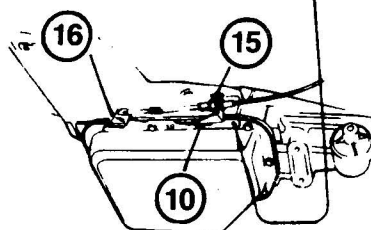
When installing the cable bracket on the 200, 350 and 400 Turbo Hydramatic transmissions, spacers item #14 and washers item #13 will need to be used to provide necessary clearance between the bracket and the transmission pan place a washer 5/16-18 x 1 H.H.C.S. then insert the bolt through the holes in the bracket, the spacer will be placed on the bolt then if needed 2 washers are supplied for proper clearance.



400 TURBO
HYDRAMATIC



350 TURBO
HYDRAMATIC



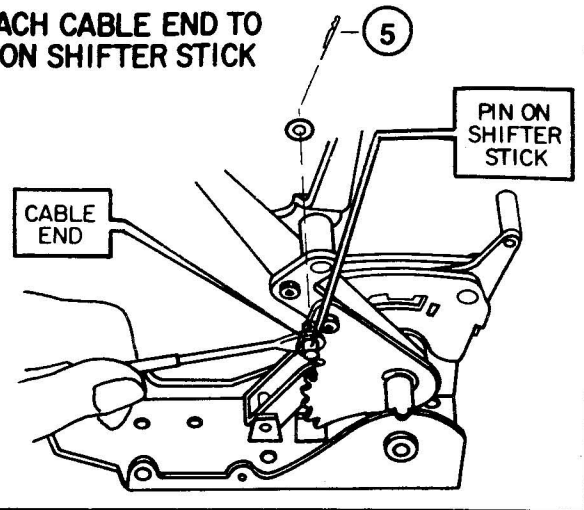
200 TURBO
HYDRAMATIC

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.

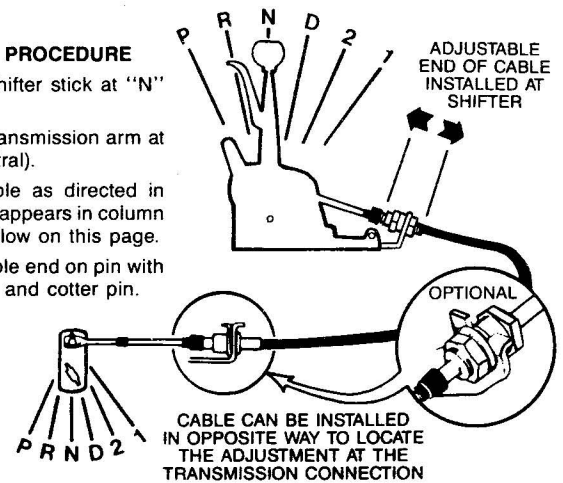
Remove stock transmission arm. Assemble the cable pin in the Hurst arm with hex nut as shown. Install the arm on transmission control shaft. Install cable bracket on transmission. Refer to directions with the illustration

ATTACH CABLE END TO PIN ON SHIFTER STICK

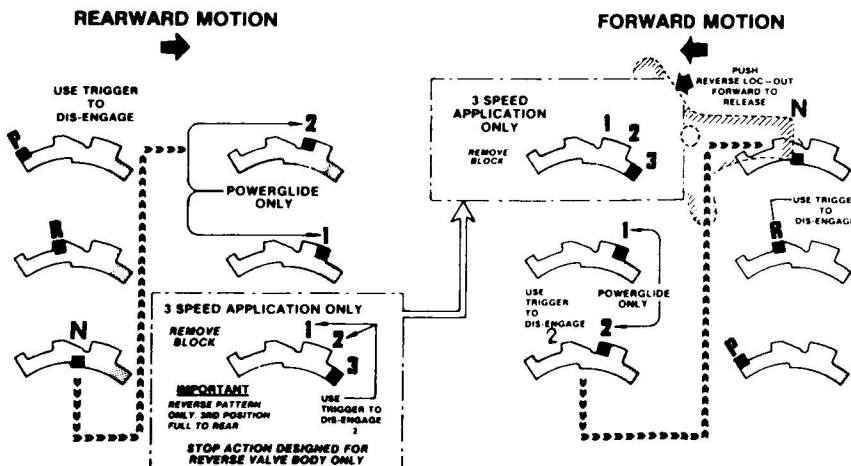


ALIGNMENT PROCEDURE

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.



SHIFTING PATTERNS



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.

POWERGLIDE APPLICATION

WARNING IMPORTANT

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

Powerglide installation of the Hurst Quarter Stick 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.

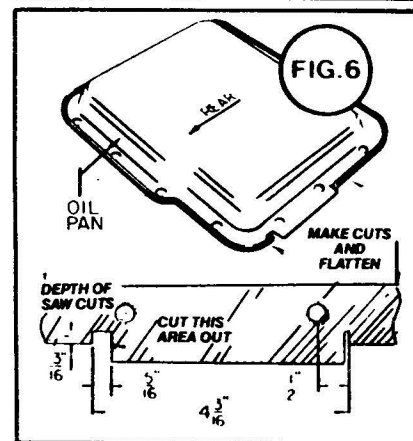
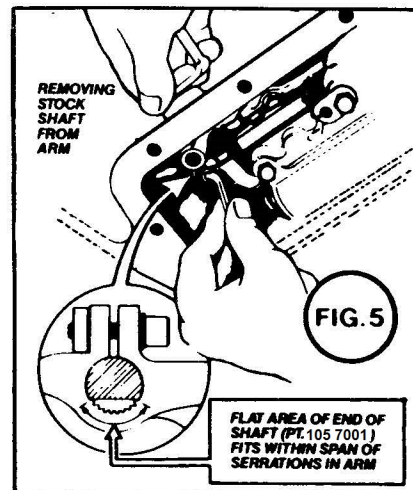
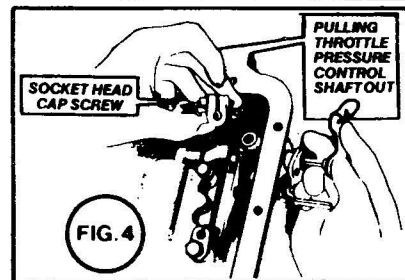
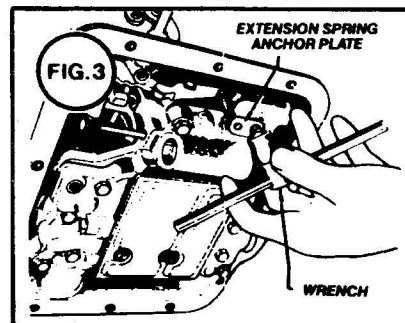
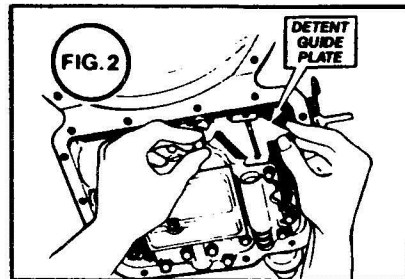
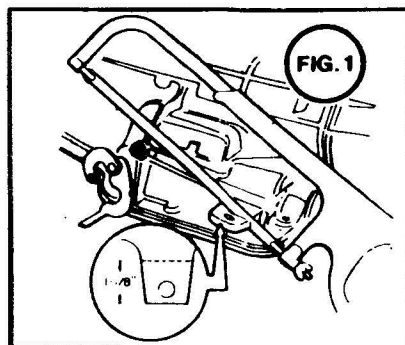
Refer to Fig. 2. Remove two screws that fasten detent guide plate over internal end of control linkage. Remove guide plate.

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

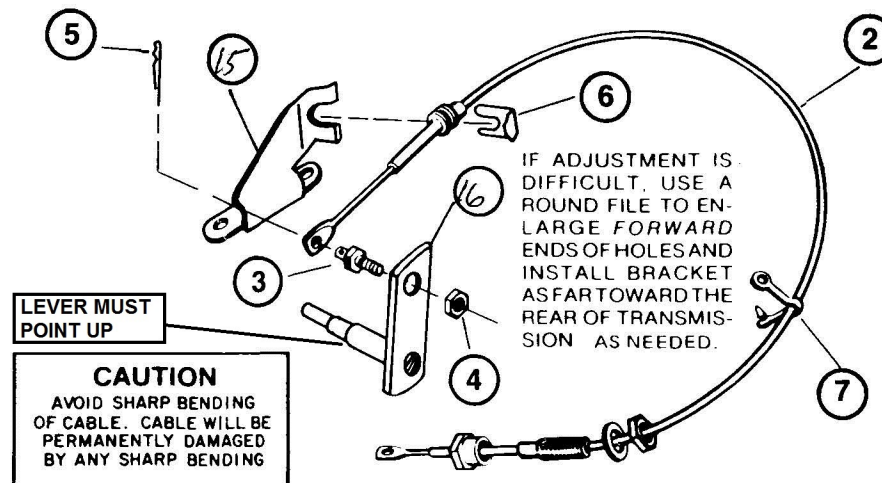
Refer to Fig. 4. Loosen socket head cap screw that fastens the throttle pressure actuator (transmissions that have throttle pressure control). NOTE: Installation of the solid control shaft supplied with this kit (Pt. 105 7001) in Powerglide transmission eliminates throttle pressure control. See warning 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 7001) fits within the span of the serrations in the detent plate.

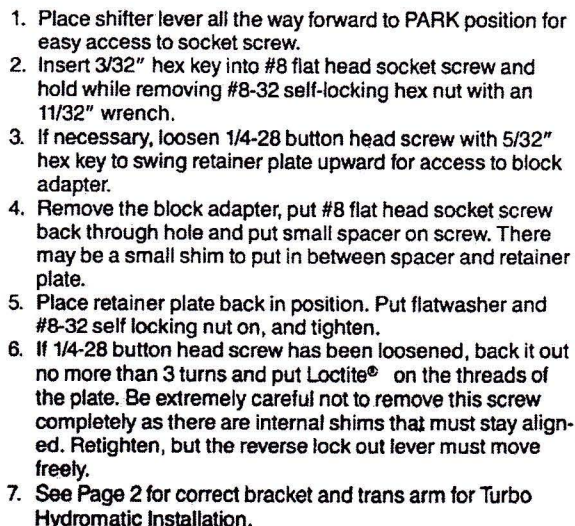
The drawing in Fig. 5 explains this. Loosen socket head cap screw that fastens detent plate to control shaft. Grasp detent plate carefully to keep it in position as you withdraw original shaft and replace it with the solid shaft (Pt. 105 7001). Detent plate is linked to PARK lock actuator plunger. Take 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).



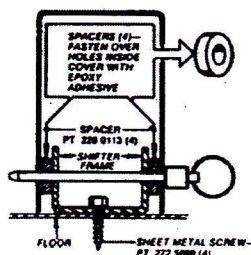
Refer to Fig. 6. Make cuts with hacksaw. Break away small length between cuts as seen in Fig. 6. Flatten lip of flange between the extreme cuts with ball peen hammer as shown in photograph. Inspect reworked area of oil pan flange. Gasket mating surface and areas around bolt holes must be flat. Use ball 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.



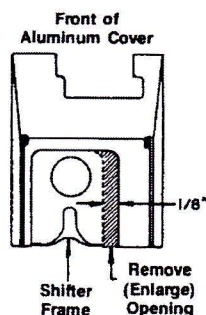
Quarter Stick Shifters are set up for 2-speed (Powerglide) from the factory, but with the following modification procedure your shifter will be ready to use on a 3-speed (Turbo-Hydromatic). TAKE NOTE: Where small shims and Loctite® are used, this is important for free movement of the reverse loc-out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



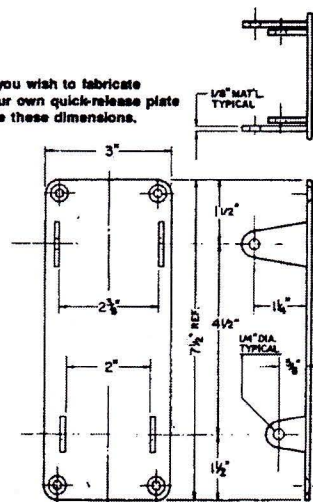
OPTIONAL ALUMINUM COVER (PT. 130 0039)



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.



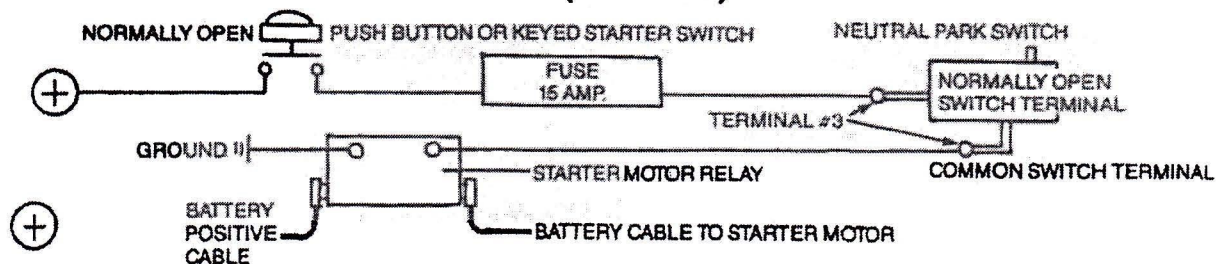
Neutral/Park Start Safety Switch Electrical Wiring Instructions

1. Vehicle must have engine off, parking brake securely engaged, wheels blocked, with transmission and shifter in the neutral position before attempting switch wiring hookup.
2. Install the supplied female crimp terminals to two suitable lengths of wire, use at least 16 gauge wire for this installation.
3. Plug each female connector onto the spade terminals of the micro switch located in the plastic switch housing.
4. Using the wiring diagram below as a guideline, install the switch wires into your starting circuit.
5. With shifter and transmission in neutral, check to see that engine starts. Repeat this with the shifter and transmission in the park position. If necessary, loosen the screw on the adjusting collar located near the shifter handle and adjust slide mechanism back and forth until vehicle starts in neutral and park only.

Pistol Grip Roll/Control Switch

The Pistol Grip Quarter Stick shifters come equipped with a precision, snap-action, 12 volt switch that is ideal for operating the Hurst Roll/Control, nitrous oxide systems, trans. brakes, etc. It is a normally open, momentary contact, quick release switch with a maximum 10 amp. rating.

NEUTRAL/PARK SWITCH WIRING DIAGRAM (GENERAL)



TECHNICAL SERVICE

A highly trained technical service department is maintained by Hurst Performance to answer your technical questions, provide additional product information, and offer various recommendations.

Technical service calls, correspondence, and warranty questions should be directed to the following address:

Hurst Performance Products
Phone: (707) 544-4761
Monday-Thursday 6:30 AM - 5:00 PM PST
Friday 6:30 AM - 1:30 PM PST
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