

Installation Instructions

QuickSilver Shifter

Part Number 80683

©2010, 2003, 2000 by B&M Racing and Performance Products

The **B&M QuickSilver Shifter** can be used in most vehicles equipped with three speed or four speed automatic transmissions. Your **B&M QuickSilver Shifter** comes equipped with a neutral safety switch and a backup light switch, transmission brackets, levers and a five foot shift cable. Optional shifter cables in 2 ft. (#80830), 3 ft. (#80831), 4 ft. (#80831), 8 ft. (#80831), 10 ft. (#80835) and 12 ft. (#80836) are also available. To use the **B&M QuickSilver Shifter** with the Ford AOD transmissions you will need the optional accessory kit #40496. To use the **B&M QuickSilver Shifter** with the GM 4L60E, 4L65E, 4L80E, and 4L85E equipped with a PRNDL switch you will need optional accessory kit #75498 otherwise you can use the supplied GM bracket.

To use this shifter with a GM four speed automatic transmission, you will need to remove the three speed limiter blocker pin and the two e-clips (**See Figure 1**). For the Ford AOD four speed transmissions do **not** remove this blocker pin.

To use this shifter with a Ford or Chrysler automatic transmission, install the blocker pin and the two e-clips (**See Figure 1**). This limiter limits the travel of the shifter when it is shifted into Park, so that it does not stretch the cable.

Please read the instructions and review the illustrations thoroughly before beginning the installation.

The mechanical components of this shifter are precision made and assembled at our factory. Any modification or disassembly of these parts can cause the shifter to malfunction and will void the warranty. You should disassemble only those items outlined in the instructions.

The vehicle should be about 2 feet off the ground for ease of installation. Use jack stands, wheel ramps or a vehicle lift. Make sure the vehicle is firmly supported before attempting to work on it.

IMPORTANT: If your vehicle is equipped with a locking steering column. Securing the column lock lever in the engine compartment in the full up position will allow the steering wheel to be locked and unlocked and the ignition key to be removed.

WARNING: This allows the steering wheel to be locked WHENEVER the ignition key is turned to the "lock" position WHILE THE VEHICLE IS MOVING, OR AT ANY OTHER TIME. Securing the steering column lock lever in any other position will both PREVENT the steering wheel from locking and the removal of the ignition key.

INSTALLATION

NOTE: If you are installing this shifter with a GM four speed automatic transmission, you must remove the three speed limiter blocker pin and the e-clips indicated in **Figure 1**. Removing this blocker pin gives the shifter four forward positions rather than three. For Ford AOD four speed automatic transmissions and Chrysler A-500 and A-518 four speed automatic transmissions do **not** remove this blocker pin, since these transmissions have only three forward positions. Also do **not** remove the blocker pin and the e-clips for any three speed automatic transmissions. (The three speed limiter blocker pin goes in the upper of the two holes at the rear of the shifter).

If you are installing this shifter with a Ford or Chrysler three or four speed automatic transmission you must install

the Park limiter blocker pin and the e-clips as also indicated in **Figure 1**. This limiter limits the shifter travel into the Park position, since Ford and Chrysler transmissions have less travel between Reverse and Park than GM transmissions do.

STEP 1. Remove the stock shift linkage; **Column Shifters:** Remove all rods, levers or cables from the column and the transmission. Place the column shift lever in Park position. Remove the pin holding the shift lever in the column and remove the lever assembly. If your vehicle is equipped with a locking steering column, secure the column lock lever in the full up position. **WARNING:** This allows the steering wheel to be locked and the ignition key removed WHENEVER the ignition key is turned to the "lock" position WHILE THE VEHICLE IS MOVING, OR AT ANY OTHER TIME.

Console Shifters: Remove the shifter mechanism from the console. Disconnect the rod or cable from the transmission. Remove the cable bracket if equipped. If there is a cable or linkage from the console shifter or transmission to the steering column lock, it must be blocked in the Park position as described above.

NOTE: Shifter installation may require console modification or complete console removal depending on the space available in your vehicle.

STEP 2. Pull the carpet away from the floorboard where the shifter is to be mounted. If the vehicle has a bench type seat, move the seat to the full forward position. Place the shifter on the floor with the stick shifted to the rearmost position. Locate the shifter for ease and convenience of operation. (The rear mounting

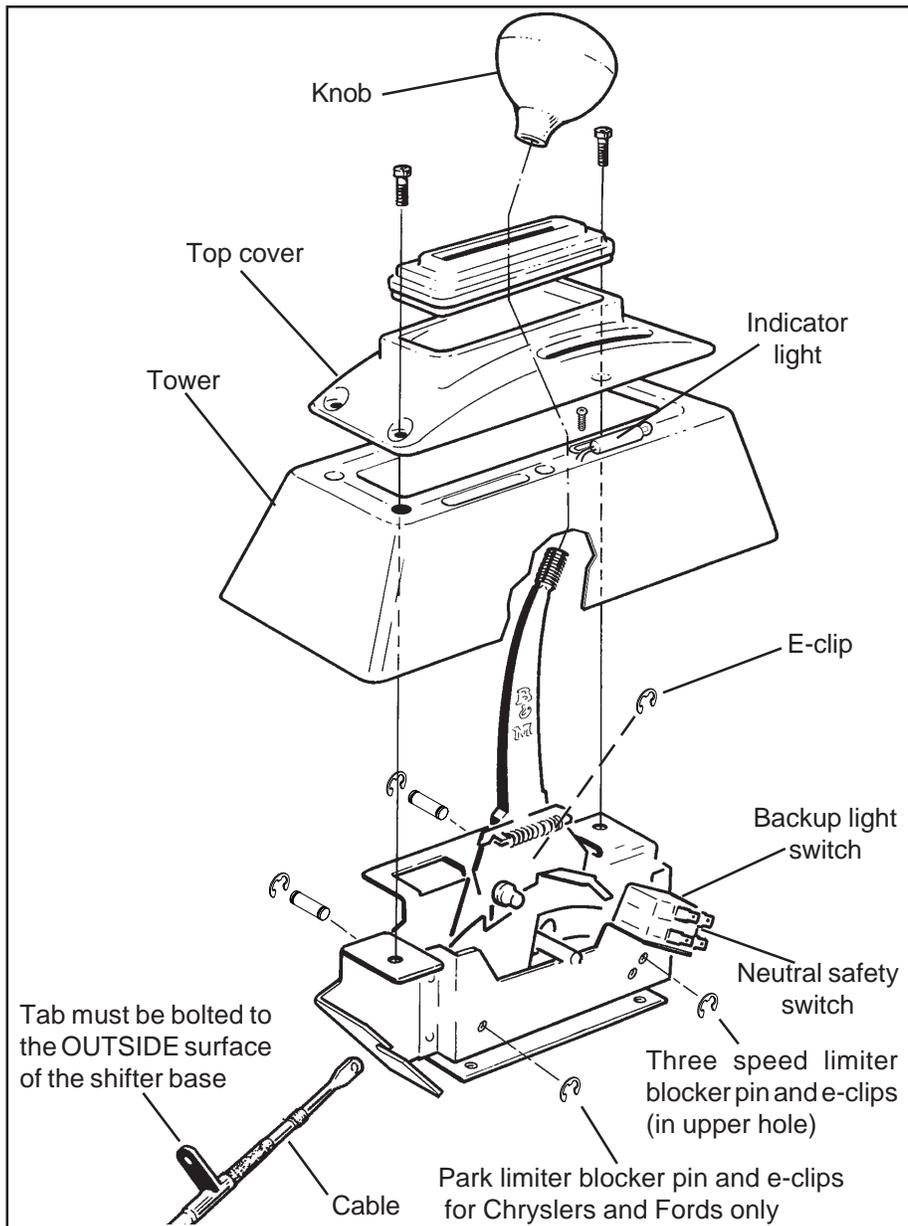


Figure 1

hole of the mechanism must be at least 1 $\frac{3}{4}$ " from the front of the seat when the seat is in the full forward position). Make sure the knob clears the dash with the shifter in the Park position. Mark the position of four mounting holes on the floor.

STEP 3. Drill the four 9/32" mounting holes where marked. Temporarily mount the shifter in place using the washers as required to get it level. Mark the location for the shifter cable hole, 3" ahead of the front shifter mounting hole. Drill or cut a 1 $\frac{1}{2}$ " diameter cable hole in the floorboard.

NOTE: Some floorboards are extremely thin and will not adequately support the shifter mechanism when bolted to the floor. For those vehicles we recommend that you fabricate a stiffener plate for additional strength.

STEP 4. Install (but do not secure) the carpet back to it's original position. Cut

holes in the carpet for the mounting holes and a 1 $\frac{1}{2}$ " slit for the cable. **DO NOT** use a drill bit to make holes in the carpet.

STEP 5. Install the cable on the shifter as shown in **Figure 1**. The cable attachment tab must be bolted to the outside surface of the shifter base using the supplied 1/4" X 1/2" hex bolt, lock washer and nut. Put the end of the indicator link on the cable pin outside of the shifter cable. Install the e-clip to secure the cable.

STEP 6. Install the backup light switch and the neutral safety switch in place on the shifter mechanism. Install them using the two supplied #4-40 screws, nuts and lock washers, as shown in **Figure 1**. If necessary, bend the fingers slightly so that they engage the slots. **Beware**, overtightening the switch attachment screws will crack the switch housings. Adjust the switches so that the neutral safety switch (the lower

switch) operates in Neutral and Park only and so that the backup light switch (the upper switch) operates in Reverse only by loosening the screws and sliding the switch as required. Then retighten the screws.

STEP 7. Install the shifter mechanism into the vehicle. Slide the shifter cable through the carpet and the hole in the floorboard. Bolt the shifter down using four 1/4" hex bolts and nuts. If required use 1/4" washers as shims between the shifter mechanism and the floor to level the shifter. **ROUTE THE CABLE AS SHOWN IN FIGURE 2, AVOID SHARP BENDS WHICH WILL KINK AND DAMAGE THE CABLE.** Use cable clamps or tie wraps to secure the cable housing to the chassis to avoid contact with hot engine or exhaust system. Seal the cable hole shut to avoid the entry of exhaust fumes or water. For General Motors vehicles go to **Step 8**, for Ford vehicles go to **Step 13**, for Chrysler vehicles go to **Step 19**.

GENERAL MOTORS

STEP 8. If you have not already done so, remove the stock selector lever nut and the selector lever. Discard the stock lever and the stock shifter linkage. Install the **B&M** selector lever in position using the stock selector lever nut (**See Figure 3**). Torque the nut to 23 lb. ft. The lever should move smoothly from front to rear with a positive click in each gear position.

STEP 9. Remove the two transmission oil pan bolts from the middle of the left side of the oil pan. Install the cable bracket in position (**See Figure 3**). The bracket must be installed with two spacers between the pan and the bracket. (If your transmission is equipped with a cast aluminum oil pan, these spacers should be omitted however the cable bracket may have to be modified). Install the two supplied 5/16-18 x 1.00" bolts and tighten to 12-13 lb. ft. Do not overtighten as this can damage the pan gasket.

Note: In some cases possible modification to the GM cable bracket might be required for the 4L80E and 4L85E transmissions without the PRNDL switch. Verify that selector lever does not grind on cable bracket before moving on to step 10.

STEP 10. Route the shifter cable according to **Figure 3**. Avoid kinks and sharp bends and route the cable away from hot engine or exhaust parts.

Remove the two rubber boots, one large nut, and a large lockwasher from

the threaded end of the shifter cable. Slide the end of the cable into the cable bracket. Install the large nut and the lockwasher loosely over the end of the cable. Install the two rubber boots onto the end of the cable. Install the swivel on the threaded end of the cable and position it in the center of the threaded portion.

STEP 11. If you have a four speed automatic transmission, be sure that you have removed the three speed limiter blocker pin shown in **Figure 1**. If you have a three speed automatic transmission, the three speed limiter blocker pin and e-clips should be installed. The Park limiter blocker pin and e-clips should not be installed for any GM transmission.

Move the transmission selector lever by hand to the full rear position (Low). Shift the shifter mechanism to the Low gear position (ratcheted all the way back). Adjust the large nuts on the cable so that the swivel will slide into the hole on the selector lever. Tighten the large nuts completely. Be sure that the swivel will slide freely in and out of the hole in the selector lever. **Note: The shifter will not operate correctly unless the correct hole in the shift lever is used as shown below:**

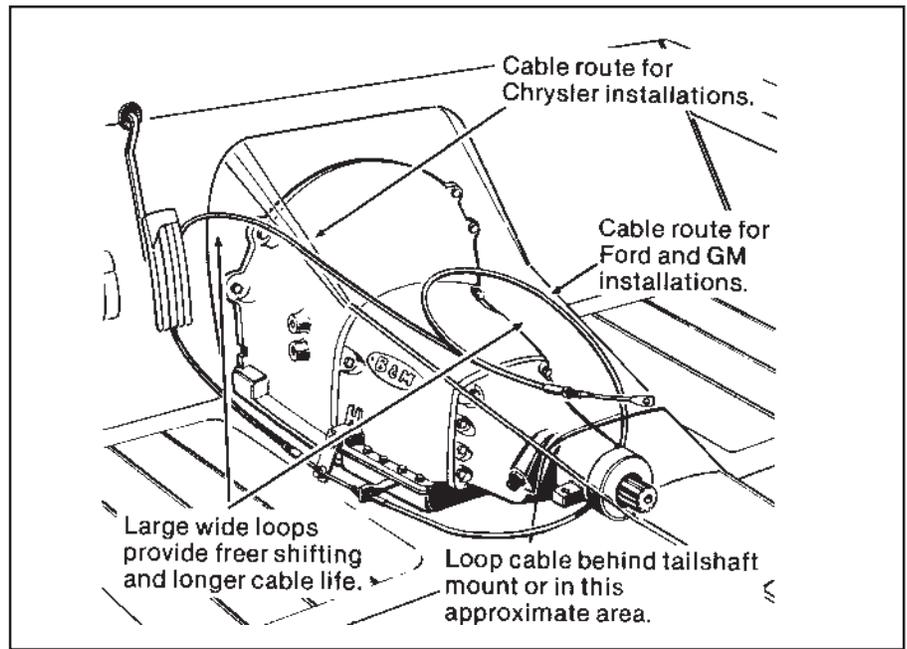
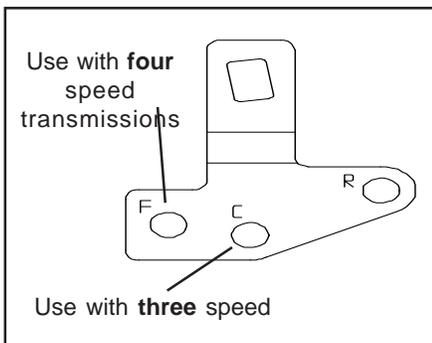


Figure 2

Leave the swivel out of the hole and move the selector lever to Park, all the way forward. Also move the shifter to Park position. (See operation section, page 7). Reinsert the swivel into the hole in the selector lever. Check to see that the swivel will slide freely in and out of the hole in the selector lever in this position. If it does not slip in freely, adjust the swivel slightly until it will slip into the hole in the lever.

Move the shifter back to the Low gear position and check that the swivel will still slide easily in and out of the hole in the selector lever. (If you do not use the hole in the lever, it will be impossible to cor-

rectly adjust the cable). Operate the shifter through all the gear positions. Check to make sure the swivel will slide in and out of the selector lever hole in each gear position. The shift cable is now correctly adjusted. Install the cotter key supplied with the shifter into the swivel and spread the key ends.

If you have a problem, **DO NOT FORCE THE SHIFTER**, this will damage the cable, the shifter or the transmission. Simply start at the beginning and carefully check all your steps.

STEP 12. On GM vehicles, the neutral safety/backup light switch is located on

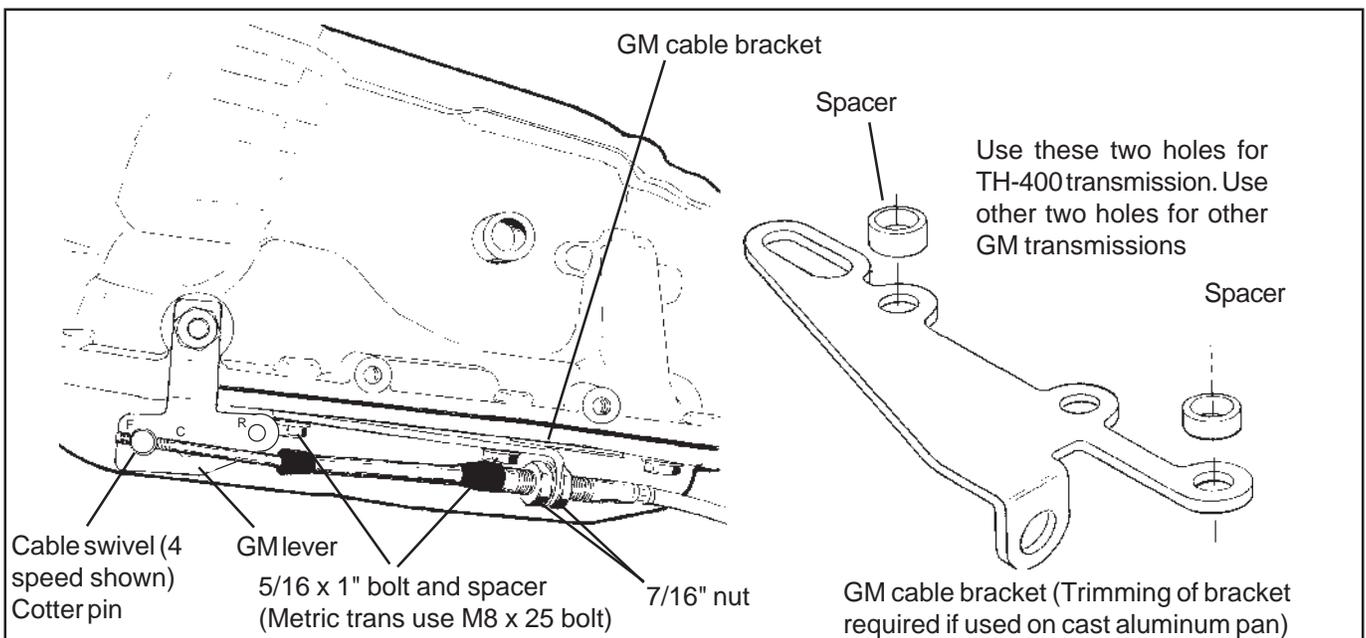


Figure 3

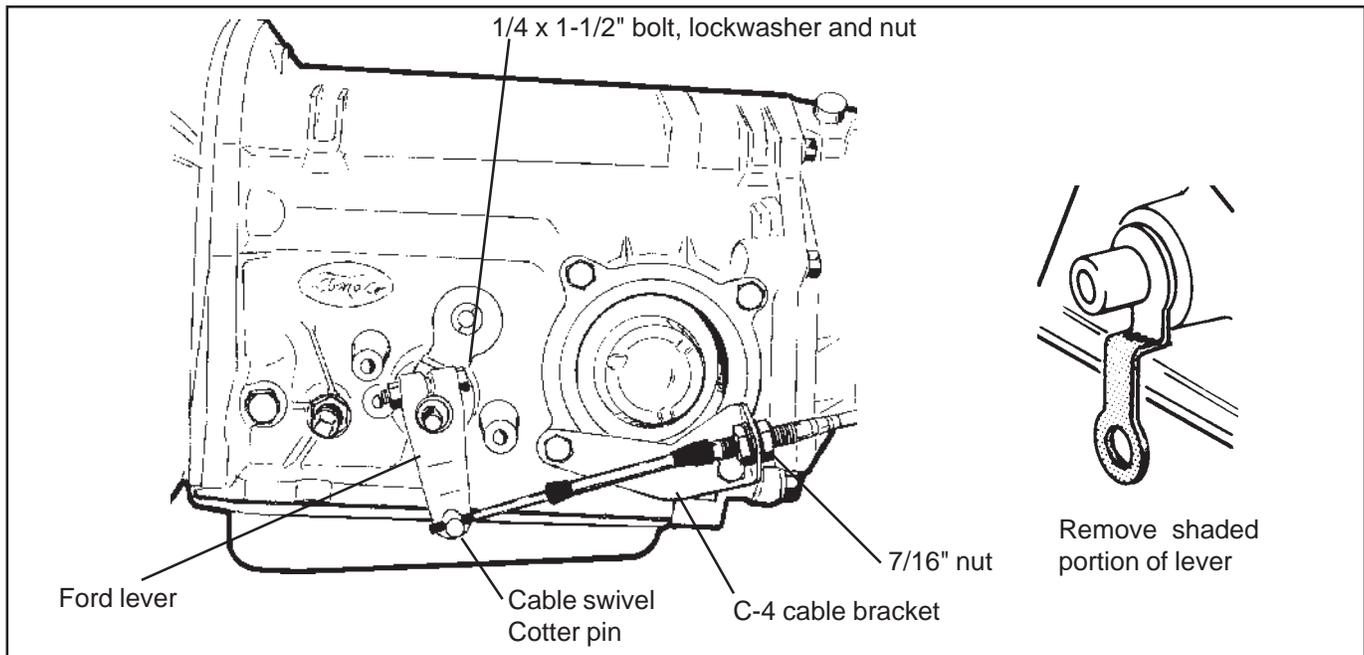


Figure 4

the console shifter or the steering column. Locate and identify the neutral safety switch (the engine will not crank unless these wires are connected together). Disconnect the battery ground cable before beginning to wire the neutral safety switch. Reroute the wires to the **B&M QuickSilver Shifter**.

On GM vehicles the neutral safety switch may be located on the shifter (steering column or console), or it may be a mechanical interlock in the steering column that prevents the key from turning to the Start position unless the shifter is in

the Park or Neutral position. Identify the type of neutral safety system you have. If the key will not turn to the Start position unless the stock shifter is in Park or Neutral, you have a mechanical interlock, otherwise you have a neutral safety switch. With either type, disconnect the battery ground cable to prevent accidental shorts. If you have a neutral safety switch, locate and identify the neutral safety wires (engine will not crank unless these wires are connected together). Extend the wires from the GM switch to the **B&M QuickSilver Shifter**. Strip $\frac{1}{4}$ " of insula-

tion off the wires and install the slip-on terminals supplied in the kit. Crimp the terminals onto the wires using a crimping tool or pliers. Connect the neutral safety wires to the **LOWER** switch and the backup light wires to the **UPPER** switch (**See Figure 1**). Tape the terminal connections and all other connections to prevent shorts.

If you have a mechanical interlock cut the wire that goes from the start position on the ignition switch to the solenoid on the starter. This wire is usually a 10 or 12 gauge purple wire. Run the wires from both ends of the cut wire to the **B&M QuickSilver Shifter**. Put the slip-on terminals on the ends of the lengthened wire. Crimp the terminals onto the wires using a crimping tool or pliers. Connect the wires to the **LOWER** switch on the shifter. The backup light switch is usually located on the steering column behind the instrument panel. Lengthen these wires and run them to the **UPPER** switch on the shifter. Tape the terminal connections and all other connections to prevent shorts.

Reconnect the battery ground cable, disconnect the coil wire and set the parking brake. Check the switch operation by attempting to start the motor in each shifter position. **The starter must crank only when the shifter is in the Park or Neutral position.** Check the backup light operation when the shifter is shifted to the Reverse position. Adjust the switches if required. Reconnect the coil wire. Go to **Step 25**.

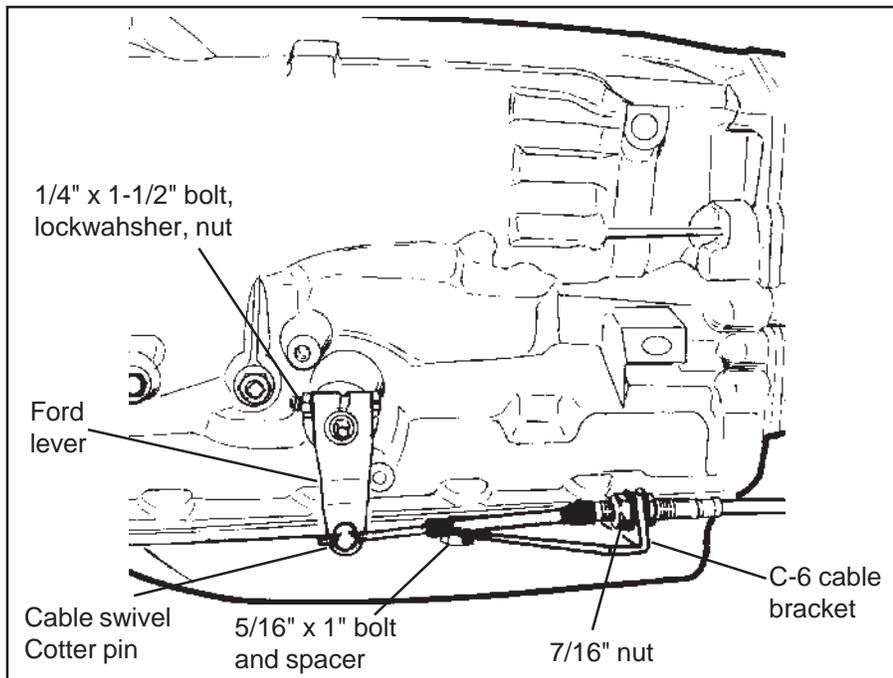


Figure 5

FORD

STEP 13. If you have not already done so, remove the nut and the lockwasher holding the downshift linkage onto the downshift lever shaft. The downshift lever is the outer lever on C-4, C-5 and C-6 transmissions. Pull the lever off the shaft and allow the linkage to hang free. Remove and discard the stock shift linkage rods. Some C-6, late C-4 and all C-5 transmissions have a neutral safety/backup light switch on the transmission shift lever. If your transmission is so equipped, remove the two bolts holding the switch in place and slide it off the shift shaft. Disconnect the switch at the factory plug and discard it.

STEP 14. Install the **B&M** selector lever (See Figure 4 or 5). Note: The **B&M** lever must point downward for proper operation. If the stock shift lever on your transmission points down, you will have to remove the lower part of the stock arm by cutting it off to clear the **B&M** lever (See Figure 4). Install the **B&M** selector lever onto the shift shaft of the transmission. Align the selector lever so when it points straight down it travels equal arcs in both directions from the center, then tighten the ¼"-20 x 1 ½" pinch bolt and the nut. The lever should travel smoothly from front to back with a positive click in each gear position. Make sure the o-ring is in position on the downshift shaft and install the downshift lever in position on the shaft. Install the lockwasher and the nut and tighten securely. The downshift lever must operate smoothly. Reconnect the downshift linkage.

STEP 15. Cable bracket installation:

C-4, C-5: Remove the two lower bolts from the rear servo cover. Install the cable bracket in position (See Figure 4). Install the two servo cover bolts as removed and tighten to 12-13 lb. ft. Do not overtighten as this can distort the servo cover.

C-6: Remove the two transmission oil pan bolts from the left rear corner of the oil pan. Install the cable bracket into position with the two spacers between the pan and the bracket (See Figure 5). (If your transmission is equipped with a cast aluminum oil pan, these spacers can be omitted). Install the two supplied 5/16-18 x 1.00" bolts and tighten to 12-13 lb. ft. Do not overtighten as this can damage the pan gasket.

STEP 16. Route the shifter cable according to Figure 2. Avoid kinks and sharp bends and route the cable away from hot engine or exhaust parts.

Remove the two rubber boots, one large nut, and a large lockwasher from the threaded end of the shifter cable. Slide the end of the cable into the cable

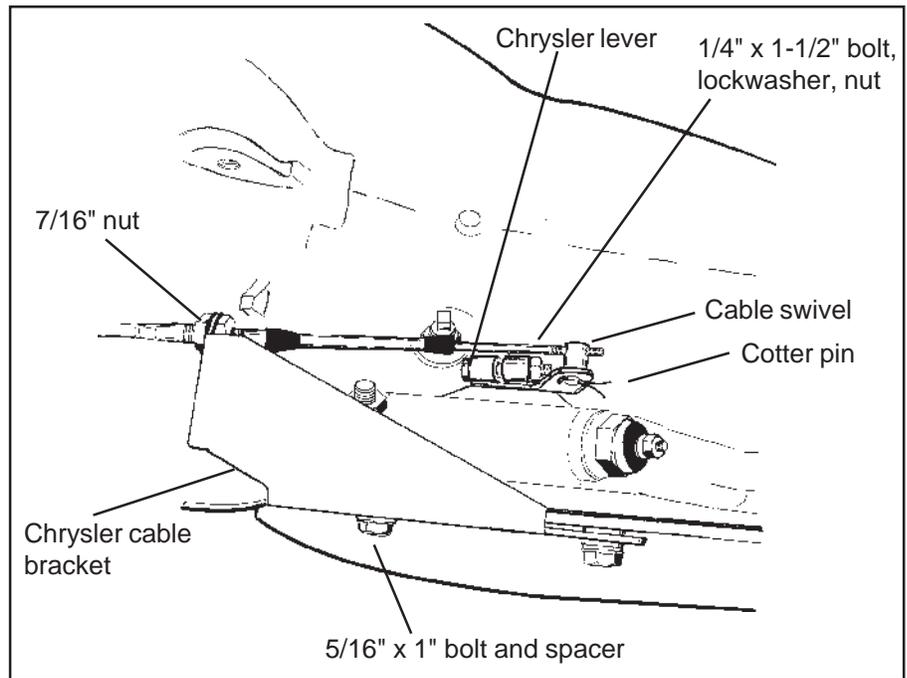


Figure 6

bracket. Install the large nut and the lockwasher loosely over end of cable. Install the two rubber boots onto the end of cable. Install the swivel on the threaded end of the cable and position it in the center of the threaded portion.

STEP 17. Be sure that the Park limiter blocker pin and the three speed limiter blocker pin are both installed as shown in Figure 1. The Park limiter will prevent the shifter from additional travel beyond the Ford Park position. (GM transmissions have greater travel between Neutral and Park than Ford transmissions do). The three speed limiter blocker pin is required because all Ford three and four speed automatic transmissions have only three forward gear positions, even the four speed AOD.

Move the transmission selector lever by hand to full rear position (Low). Shift the shifter mechanism to the Low gear position (ratcheted back until it is stopped by the three speed limiter blocker pin). Adjust the large nuts on the cable so that the swivel will slide into the hole on the selector lever. Tighten the large nuts completely. Be sure that the swivel will slide freely in and out of the hole in the selector lever.

With the swivel in the selector lever, shift the shifter to the Park position, as far forward as the shifter will go without forcing it. (The Park limiter blocker pin will prevent the shifter from moving any further). The shift lever on the transmission should be all the way forward. Check to see that the swivel will slide freely in and out of the hole in the lever in this position.

If it does not slip in freely, adjust the swivel slightly until it will slip into the hole in the lever in both Low and Park positions. Operate the shifter through all the gear positions. Check to make sure the swivel will slide in and out of the selector lever hole in each gear position. Install the cotter key supplied with the shifter into the swivel and spread the key ends. Reinstall the downshift linkage, tightening the nut securely.

If you have a problem, **DO NOT FORCE THE SHIFTER**, this will damage the cable, the shifter or the transmission. Simply start at the beginning and carefully check all your steps.

STEP 18. On Ford vehicles, the neutral safety/backup light switch is located on the transmission (or on the steering column on some early vehicles). If the vehicle has an AOD transmission the neutral safety/backup light switches on the **B&M QuickSilver Shifter** will **NOT** be used. The neutral safety/backup light switch on C-3 or AOD transmissions will continue to function normally.

On the C-4 and C-5 transmissions it is necessary to completely remove the stock neutral safety/backup light switch in order to install the **B&M** transmission shift lever. On C-4, C-5 and C-6 transmissions, it will be necessary to hook up the neutral safety/backup light switches on the **B&M QuickSilver Shifter**. Locate and identify the neutral safety (the engine will not crank unless these wires are connected together), and reverse light wires. Disconnect the battery ground cable before beginning to wire the neutral safety and

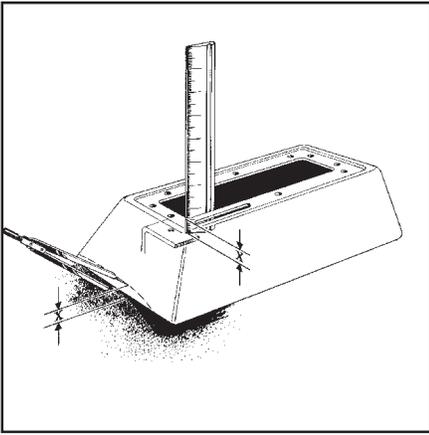


Figure 7

reverse light switches. Reroute the wires to the **B&M QuickSilver Shifter**. Strip $\frac{1}{4}$ " of insulation off the wires and install the supplied slip-on terminals. Crimp the terminals onto the wires using a crimping tool or pliers. Connect the neutral safety wires to the **LOWER** switch and the reverse light wires to the **UPPER** switch (See **Figure 1**). Tape the terminal connections to prevent shorts. Reconnect the battery ground cable, disconnect the coil wire and set the parking brake. Check the switch operation by attempting to start the motor in each shifter position. **The starter must crank only when the shifter is in the Park or Neutral position.** Check the backup light operation when the shifter is shifted to the Reverse position. Adjust the switches if required. Reconnect the coil wire. Go to **Step 25**.

CHRYSLER

STEP 19. If you have not already done so, loosen the pinch bolt on the throttle lever on the transmission. This is the lever on the small diameter shaft. Pry the lever off with a screwdriver and allow the linkage to hang free. Remove and discard the stock shift lever and the stock shift linkage. Install the **B&M** selector lever in position and tighten the pinch bolt securely (See **Figure 6**). Make sure the lever is not pushed down so far as to touch the transmission case. This will cause the lever to bind on the case. The lever should travel smoothly from front to back with a positive click in each gear position. Install the stock throttle lever into position on the small diameter shaft as removed and tighten the pinch bolt securely. The throttle lever must operate smoothly.

STEP 20. Remove the two transmission oil pan bolts directly below the shift lever. Install the cable bracket into position with two spacers between the pan and the bracket (See **Figure 6**). (If your transmis-

sion is equipped with a cast aluminum oil pan these spacers can be omitted). Install the two supplied 5/16-18 x 1.00" pan bolts and tighten to 12-13 lb. ft. Do not overtighten as this can damage the pan gasket.

STEP 21. Route the shifter cable according to **Figure 2**. Avoid kinks and sharp bends and route the cable away from hot engine or exhaust parts.

Remove the two rubber boots, one large nut, and a large lockwasher from the threaded end of the shifter cable. Slide the end of the cable into the cable bracket. Install the large nut and the lockwasher loosely over end of cable. Install the two rubber boots onto the end of the cable. Install the swivel on the threaded end of the cable and position it in the center of the threaded portion.

STEP 22. Be sure that the Park limiter blocker pin and the three speed limiter blocker pin are both installed as shown in **Figure 1**. The Park limiter will prevent the shifter from additional travel beyond the Chrysler Park position. (GM transmissions have greater travel between Neutral and Park than Chrysler transmissions do). The three speed limiter blocker pin is required because all Chrysler three and four speed automatic transmission have only three forward gear positions, even the four speed A500 and A518.

Move the transmission selector lever by hand to the full rear position (Low). Shift the shifter mechanism to the Low gear position (ratcheted back until it is stopped by the three speed limiter blocker pin). Adjust the large nuts on the cable so that the swivel will slide into the hole on the selector lever. Tighten the large nuts completely. Be sure that the swivel will slide freely in and out of the hole in the selector lever.

With the swivel in the selector lever, shift the shifter to the Park position, as far forward as the shifter will go without forcing it. (The Park limiter blocker pin will prevent the shifter from moving any further). The shift lever on the transmission should be all the way forward. Check to see that the swivel will slide freely in and out of the hole in the lever in this position. If it does not slip in freely, adjust the swivel slightly until it will slip into the hole in the lever in both Low and Park positions. Operate the shifter through all the gear positions. Check to make sure the swivel will slide in and out of the selector lever hole in each gear position. Install the supplied cotter key with the shifter into the swivel and spread the key ends.

If you have a problem, **DO NOT FORCE THE SHIFTER**, this will damage the cable, the shifter or the transmission.

Simply start at the beginning and carefully check all your steps.

STEP 23. Check the operation of the throttle linkage again. The linkage must operate smoothly with no bind. All transmissions using automatic valve bodies must have the throttle linkage connected and operating or transmission damage will result.

STEP 24. Neutral safety/backup light switch.

'66-'68: The neutral safety switch will continue to function normally. It will not be necessary to hook up the neutral safety switch wires on the shifter. Disconnect the battery ground cable before wiring the backup light switch. Locate the original backup light switch on the steering column or the console shifter. Run these wires to the **UPPER** switch on the **B&M QuickSilver Shifter** (See **Figure 1**). Reconnect the ground wire and check the light for proper operation. Adjust the switches on the shifter if required.

'69 and Later: The neutral safety/backup switch is located on the transmission and will continue to function normally. It will not be necessary to connect any wires to the switches on the shifter.

STEP 25. Place the black tower over the shifter mechanism until the bottom edge of the tower touches the floor. Hold the tower level to the shifter with the bottom of the tower touching the highest surface on the floor it will come into contact with (See **Figure 7**). Use a ruler to measure the distance X from the underside of the tower to the tower mounting brackets on the shifter mechanism.

STEP 26. Set a pair of dividers at the distance X, measured in **Step 25**. Holding the tower in position, place one leg of the divider against the floor while the other touches the tower (See **Figure 7**). Using the dividers, scribe a line around the tower that follows the contour of the floorboard. Remove the tower and trim at the scribe line using tin snips.

STEP 27. Mount the indicator light on the tower (See **Figure 1**). The light socket can mount on the top or the bottom of the tower depending on the brightness desired. Mount the socket so the bulb is to rear of the tower and secure it using one 10-24 self-tapping screw. Do not over-tighten as you may strip out the hole in the tower. Place the tower into position on the shifter. Connect one wire from the light socket to a good chassis ground. A shifter mounting bolt should be satisfactory. Run a length of wire from the vehicles instrument panel light circuit to the other wire from the light socket. Secure and tape all wires. Indicator light will work with the instrument panel lights.

STEP 28. Snap the indicator window in place in the chrome top cover. The window snaps in from the top with the tabs inserting under the cover. The indicator window supplied with the shifter works with standard shift pattern automatic transmissions. If your vehicle is equipped with a reverse pattern manual valve body, you need to use the indicator window #80618 for three speed transmissions and Ford or Chrysler four speed transmission, or #80898 for GM four speed transmissions. These are available from your **B&M** dealer.

STEP 29. Install the cover and the tower into position on the shifter. Install four 10-24 self-tapping screws in place on the cover and tighten snugly. Two of the screws continue through the tower into the shifter tabs. Do not overtighten the cover screws as this may distort or crack the cover or the tower. Slip the boot over the stick and position it on the cover. Work the boot onto the cover until the slot on the edge of the boot fits into the lip on the cover.

STEP 30. Tighten the knob onto the stick securely. Thread sealer will help keep the knob from loosening. Position the knob insert on top of the knob and align the **QuickSilver** logo. Push down on the insert to snap it into place. Secure the carpet to the floorboard and to the door edges.

OPERATION

The **B&M QuickSilver Shifter** combines a straight gate shifter and a ratchet shifter in one mechanism. Refer to the following instructions for proper operation:

Straight gate mode: In the upper position, the shifter functions in the straight gate mode. The stick travels in a direct

line forward and backwards from Park to Drive. The shifter stick must be raised to clear the stop gates when going through the gear positions (**See Figure 8**).

Park: To get Park from any straight gate gear position, lift the stick all the way and push the stick all the way forward to the Park position. Release the stick and the shifter is locked in Park. To get to any other gear position you must raise the stick to clear the stop gates.

Reverse: Raise the stick to clear the stop and move the stick to the Reverse position.

Neutral: Move the stick to Neutral. You do not have to raise the stick unless you are in Park.

Drive: Move the stick to Drive. You do not have to raise the stick unless you are in Park.

Second and First gears cannot be selected when the shifter is in the straight gate mode.

Ratchet Shift Mode: The ratchet shift mode allows firm, positive, no-miss upshifts and downshifts in all forward gear positions and Neutral. Reverse and Park cannot be selected in the ratchet shift mode.

To switch from straight gate to ratchet operation, the shifter must be in the Drive position. With the stick in the Drive position the stick will drop down to engage ratchet shift mode. The stick will snap down approximately $\frac{3}{4}$ ". The shifter is now in the Drive gear position (**See Figure 9**).

Shifting in the ratchet mode: Move the stick forwards or backwards with a quick firm action until it hits the internal stop.

Caution: Do not lift the stick when making ratchet shifts. Release the stick and allow it to spring return to the center position. The shifter is now ready for the next shift (**See Figure 10**). Refer to the shift

indicator for gear positions in the ratchet mode.

When the shifter has reached the extreme rear gear indicator position, the stick will contact the stop and you will not be able to ratchet the stick towards the rear.

The shifter is capable of ratcheting all the way to Neutral. When the shifter reached the Neutral position the shifter will not ratchet any further.

To switch the shifter from ratchet mode back to straight gate operation, ratchet the shifter to the Drive position and pull up firmly on the knob. You are now in the straight gate mode, still in Drive (**See Figure 11**).

Remember: To go from straight gate mode into ratchet shift mode or from ratchet mode into straight gate mode the shifter must be put into the Drive position.

If these instructions for operating the shifter seem complicated, do not be alarmed. You will find that, in actual use, the shifter will be extremely easy to operate after a minimal amount of experience (**See Figures 8, 9, 10 and 11**).

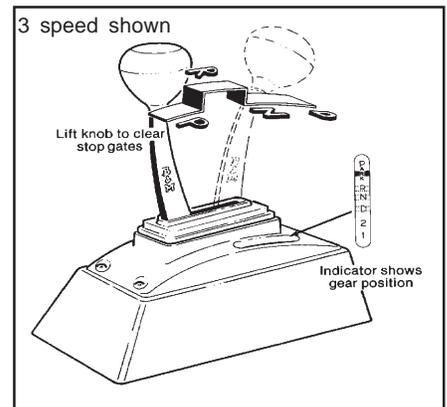


Figure 8

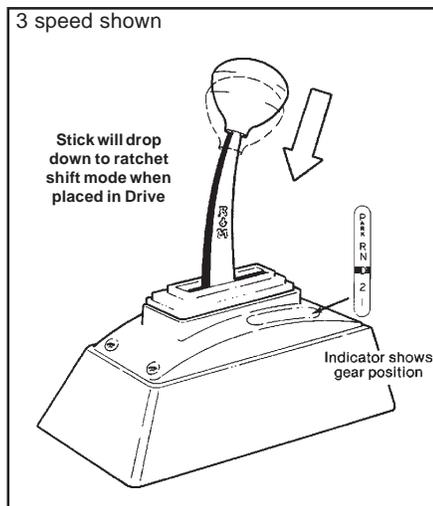


Figure 9

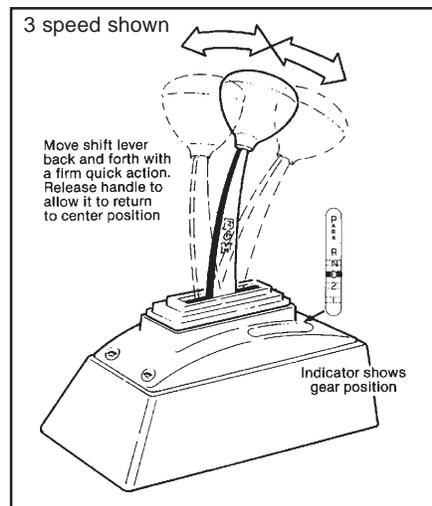


Figure 10

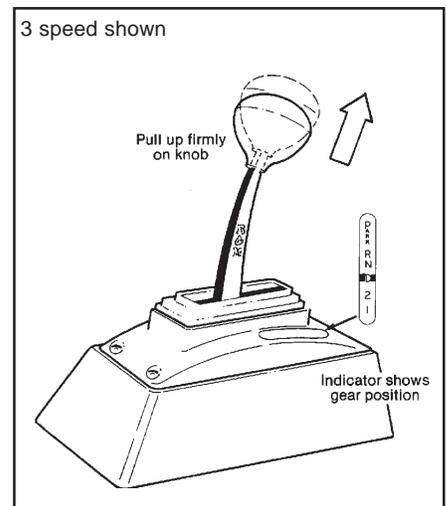


Figure 11

TOOL LIST

- 1 Phillips screwdriver
- 1 7/16 socket
- 1 Ratchet or speed handle
- 1 7/16" wrench
- 1 1/2" wrench
- 1 9/16" wrench
- 2 11/16 wrench
- 1 9/32 drill bit
- 1 drill motor
- 1 1-1/2" holesaw
- 1 Crimping tool
- 1 Torque wrench 0-50 lb. ft.
- 1 File
- 1 Tin snips
- 1 Wire strippers
- 1 Ruler
- 1 Dividers
- 1 Electrical tape
- 1 Hacksaw
- 1 Hammer
- 1 Drift pin
- 2-4 Jackstands

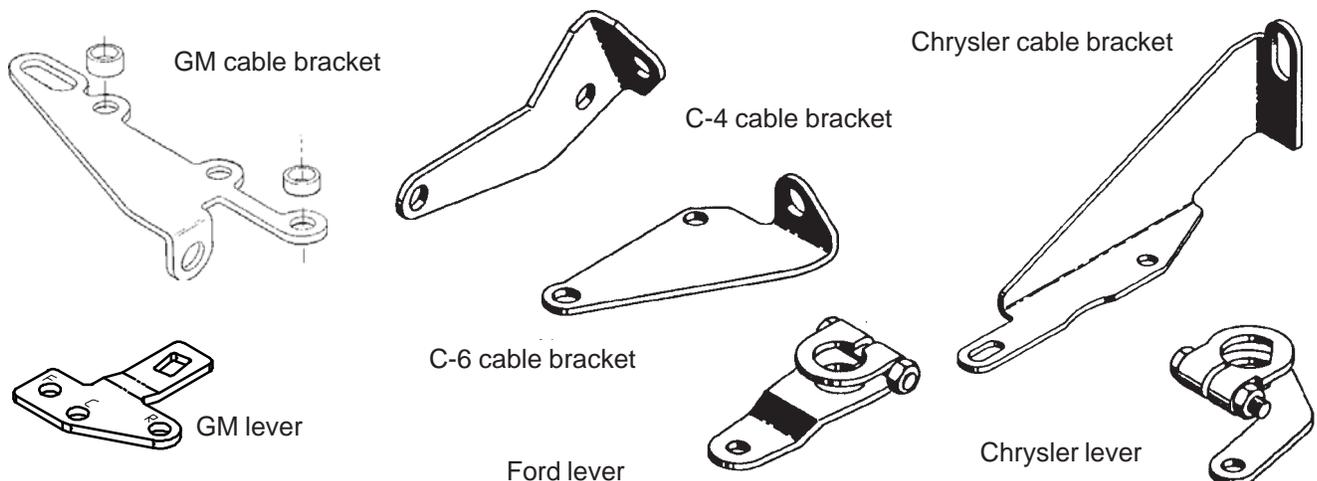
CHECK LIST

- ___ Locking steering column lever is permanently fastened in the full up position. Step 1.
- ___ Shifter is convenient to reach and has ample room for your hand in both park and low gear. Step 2.
- ___ Carpet covers floorboard holes. Step 4.
- ___ Cable is securely fastened to the shifter and held with e-clip. Step 5.
- ___ Shifter is securely mounted to floorboard. Step 7.
- ___ Shifter cable is clear of exhaust system, engine and any moving parts. Step 7.
- ___ Throttle lever and shift lever are tight on transmission. GM step 8, Ford Step 14, Chrysler Step 19.
- ___ Oil pan bolts are tightened to 12-13 lb.ft. GM Step 9, Ford Step 15, Chrysler Step 20.
- ___ Shifter is properly adjusted. Cable boots are installed, cable nuts are tightened and swivel is secured with cotter key. GM Step 11, Ford Step 17, Chrysler Step 22.
- ___ The neutral safety switch is connected and properly adjusted to prevent engine starts in drive gears and reverse. GM Step 12, Ford Step 18, Chry not required.
- ___ There is no debris in the shifter mechanism.
- ___ Tower is trimmed. Step 26.
- ___ Boot and tower effectively cover mechanism. Step 27.
- ___ Indicator clearly visible Step 29.
- ___ Shifter moves freely in all positions as described in Shifter Operation.
- ___ If your shifter is not working properly do not attempt to drive your car. Make sure you have followed all instructions. If the shifter is broken or defective return it to your **B&M** dealer.

WARNING

PERIODIC INSPECTION AND MAINTENANCE OF YOUR SHIFTER IS RECOMMENDED TO ENSURE THAT THE MECHANISM IS WELL LUBRICATED, FREE FROM DIRT OR RUST AND THAT THE CABLE IS PROPERLY ADJUSTED. LACK OF MAINTENANCE COULD RESULT IN A FAILURE INCLUDING A FAILURE OF THE REVERSE LOCKOUT SAFETY FEATURE.

Note: Ford AOD Lever and bracket not shown



Cable brackets and levers