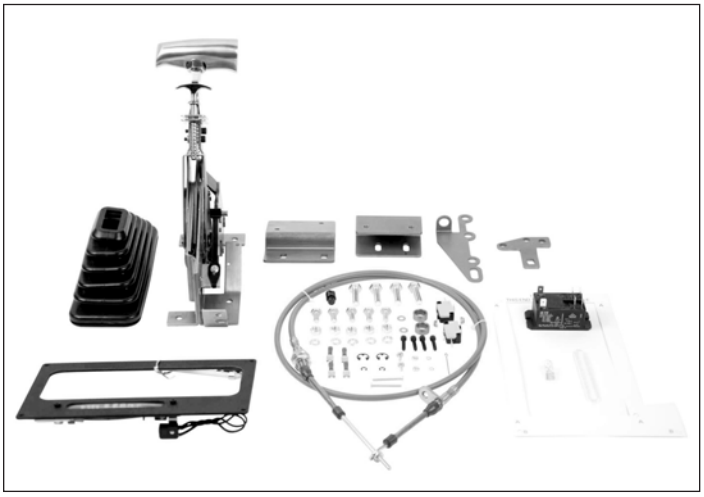
INSTALLATION INSTRUCTIONS FOR

CONSOLE MEGASHIFTER™ for 1982-1992 CAMARO & FIREBIRD equipped with the GM automatic transmissions listed below

(except 1988-1992 Firebird Formula)

Part No. 80692



INTRODUCTION

The MegaShifter™ is by far B&M's most popular shifter design, for both its form and its function. With its smooth, ratchet-shifting action, you won't miss a shift. It is compatible with both standard- and reverse-pattern valve bodies. And its "one-hand" reverse lockout trigger meets NHRA and IHRA safety requirements.

This MegaShifter fits the consoles of 1982-1992 Chevrolet Camaros and Pontiac Firebirds (except 1988-1992 Formula Firebirds) equipped with the 3- or 4-speed automatic transmissions listed below.

Before starting, take the time to read and understand these instructions.

Also, use the parts list to verify your kit's contents. In the unlikely event that any parts are missing, please contact B&M Technical Support for replacements.

> **NOTE:** Some hardware bags are shared by similar B&M shifters. While your bag may include extra items that are used on other shifters, the parts list below shows all the parts required for this shifter.

REQUIRED SUPPLIES

- Medium strength thread-locking fluid (Permatex Blue or equivalent)

APPLICABLE TRANSMISSIONS

This shifter kit **includes the cable bracket and selector lever** required for use with the following GM transmissions:

TRANSMISSION FAMILY	MODELS
GM Turbo-Hydramatic	TH200/200C TH250, TH350, TH400, 200-4R and 700R4 / 4L60
GM electronic models ***without*** PRNDL switch	4L60E, 4L65E, 4L70E, 4L75E, 4L80E and 4L85E

The shifter can also be used with the following GM transmissions, **with B&M install kit 70499** (special cable bracket), sold separately.

> **NOTE:** Additional instructions for these transmissions are included with the install kit.

TRANSMISSION FAMILY	MODELS
GM electronic models ***with*** PRNDL switch	4L60E, 4L65E, 4L70E, 4L75E, 4L80E and 4L85E

NOTES

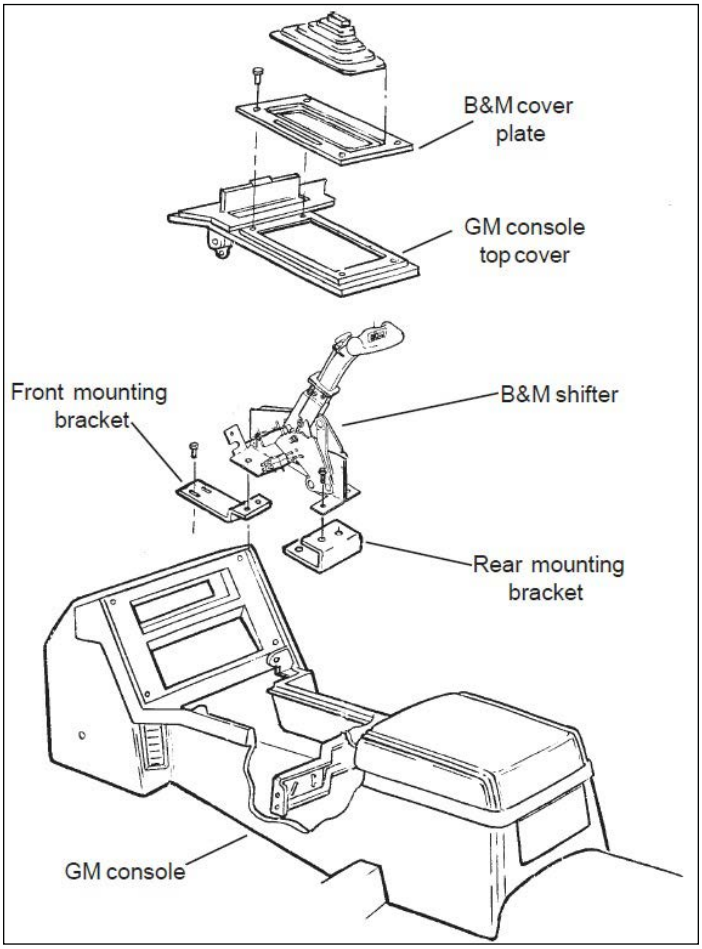
- Installation requires better-than-average mechanical knowledge and skills. If this job is beyond your abilities, seek the services of a qualified technician.
- The shifter mechanism is precision-assembled at our factory. **Any modification or disassembly of the shifter will void its warranty, and can cause it to malfunction.** Disassemble items **only** where specified in the instructions.
- Installation of this shifter requires permanent modification of your vehicle's console cover.
- If you do not understand any part of these instructions, please call **B&M Technical Support** at **(866) 464-6553** for assistance.
- The shifter-transmission positions mentioned throughout these instructions apply to standard (forward) pattern transmissions (P-R-N-D-2-1). Transmissions with reverse-pattern manual valve bodies (P-R-N-1-2-D) will alter your shifter-transmission positions accordingly. **An indicator window for reverse-pattern 3-speed transmissions is available from B&M.**

PARTS LIST

DESCRIPTION	QTY
SHIFTER BRACKET, REAR	1
SHIFTER BRACKET, FRONT	1
SHIFTER ASSEMBLY	1
BOLT, 1/4-20 × 1/2"	5
WASHER, SPLIT LOCK 1/4"	6
MICRO-SWITCH	2
SCREW, 4-40 × 1-1/4", SLOTTED, PAN HEAD	2
WASHER, SPLIT LOCK #4	2
NUT, HEX 4-40	2
CABLE, SHIFTER 5'	1
E-CLIP, 1/4" I.D.	1
NUT, HEX 1/4-20	3
COVER ASSEMBLY	1
INDICATOR WINDOW, 4-SPEED	1
JAM NUT, 1/2-20	1
T-HANDLE	1
E-CLIP, 1/8" I.D.	1
SCREW, SHEET METAL, #6 × 1/4"	2
WASHER, #6	2
LIGHT BULB, INDICATOR	1
BOLT, 1/4-20 × 1"	2
WASHER, FLAT 1/4"	4
SELECTOR LEVER, GM TH & ELECTRONIC	1
CABLE BRKT, GM TH & ELECTRONIC (NO PRNDL SWITCH)	1
BOLT, M8-1.25 × 25	2
BOLT, 5/16-18 × 1"	2
WASHER, FLAT 5/16"	2
SPACER, 7/16" I.D. × 1/4" L	2
SWIVEL, CABLE	1
JAM NUT, 10-32 (COMES INSTALLED ON CABLE END)	1
PIN, COTTER 1/16" × 1"	1
WIRE TERMINAL, FEMALE, 1/4", BLUE, 14-16 AWG	8
WIRE TERMINAL, FEMALE, 1/4", YELLOW, 10-12 AWG	2
RELAY, DPST, NORMALLY OPEN, 12 VDC	1
TEMPLATE, CONSOLE	1
SCREW, T-15 TORX, BLACK, M4.2-1.41 × 20	4
BOOT, SHIFTER	1

SAFETY WARNINGS

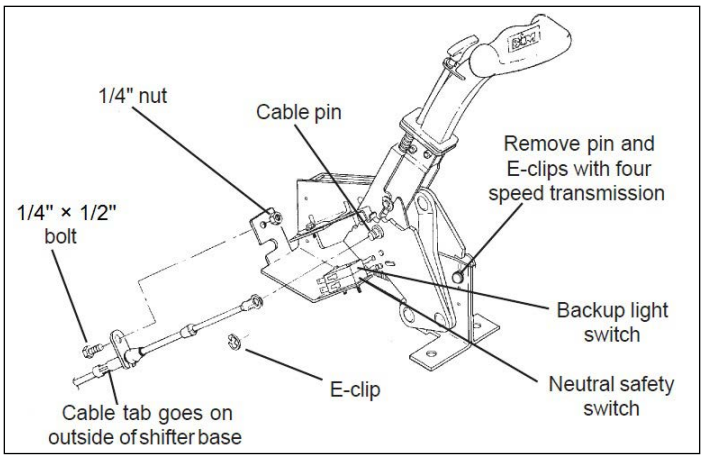
- **WORK SAFELY!** For maximum safety, perform this installation on a clean, level surface, with the engine turned off. Chock the wheels to prevent vehicle movement. To avoid bodily injury or vehicle damage, do not begin work until you are confident that the vehicle is safely secured and will not move.
- **AVOID SERIOUS INJURY OR DEATH BY CRUSHING!** If you have to raise the vehicle to work under it, securely support it on a lift or jack stands. **NEVER work under a vehicle that is supported only by jacks!**
- **WARNING: This B&M performance shifter uses a cable to shift the transmission only; it is NOT intended or designed to operate a locking steering column! If your vehicle has a locking steering column, it must either be a) MODIFIED, to allow the steering column to lock when the key is removed (modification described later); or b) DISABLED, to prevent the steering column from locking if the ignition switch is turned to LOCK while driving (not described in these instructions).** If you are not comfortable performing this work, or if you don't understand this warning, seek the services of a qualified technician for the safe installation of this shifter.



INSTALLATION

1. **Remove the stock shift knob.** The knob is fastened to the stick with a two-pronged pin (looks like a staple), located at the front of the knob. Move the shifter fully rearward (for best access). Use pliers or a flat-tip screwdriver to remove the pin, then pull the knob off the stick.
2. **Remove the console cover** — typically 6 screws for Camaros, and 5 screws (4 exterior, plus 1 in the ashtray opening) for Firebirds.

   NOTE: Some consoles have dummy screw heads, so proceed carefully.



3. **Disconnect the light bulb socket** from the bottom of the indicator, and remove the indicator. Then remove the bulb wiring from the clamp on the shifter base.

4. **Disconnect the two cables** from the shifter (shift cable on the left, park lock cable on the right). Then remove the shift cable grommet from the floor.

5. **Disconnect the switch plug** from the shifter.

6. **Remove the shifter mount bolts,** then remove the shifter from the vehicle.

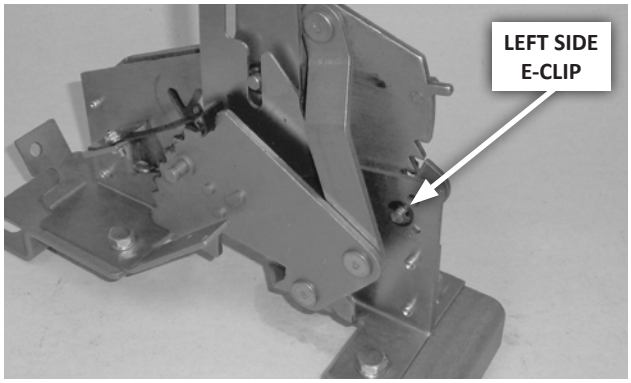
7. **At the transmission, disconnect the shift cable from the selector lever,** remove the cable bracket from the pan flange, and remove the bracket from the cable.

8. **Remove the shift cable** from the vehicle, then remove and retain the cable grommet.

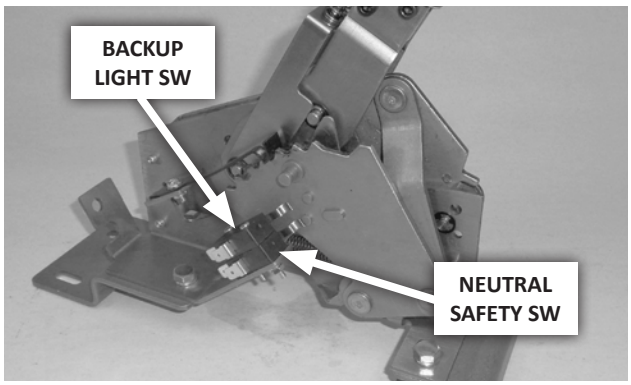
9. **Secure the park lock cable in the PARK position** (pushed fully in), so that **the key can be removed from the ignition switch, which will then lock the steering column.** (The cable end will eventually be secured out of the way inside the console.) After securing the cable in the PARK position, verify that the ignition switch can be turned to LOCK and the key removed, and that this locks the steering column.

   WARNING: NEVER turn the ignition switch to LOCK while the vehicle is moving (unless the steering column lock has been disabled according to the Safety Warning on p. 2).

10. **Mark and drill the MegaShifter's front mount holes.** Install the **rear shifter bracket** in the vehicle using the stock bolts. Assemble the **front bracket** and **shifter** using two **1/4-20 × 1/2" bolts** and **1/4" lock washers.** Place the shifter in the console, and temporarily attach it to the rear bracket using two **1/4-20 × 1/2" bolts** (finger tight only). Mark the location of the front bracket's two slots on the floor, remove the shifter and front bracket, and drill two 9/32" holes through the floor pan for the front bolts.



11. **If you are using the shifter with a 4-speed transmission, remove the speed limiter pin.** Remove the left-side e-clip, then push the pin out the right side.



12. **Install the two micro-switches on the shifter** as shown, using the two **#4-40 × 1-1/4" screws, lock washers** and **nuts**.

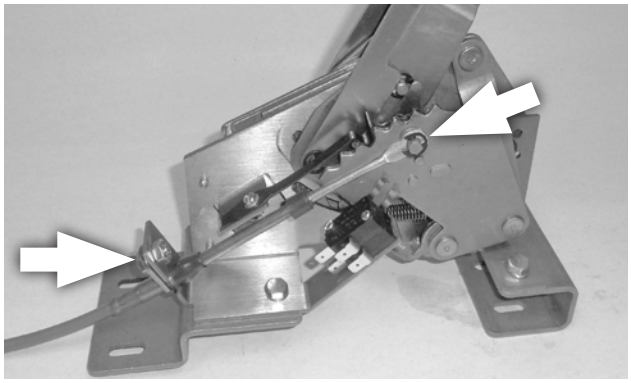
    CAUTION: Tighten the fasteners only until the lock washers are squeezed flat. Over-tightening may crack the switch housings.

While tightening the fasteners, check placement of the switches to verify that:

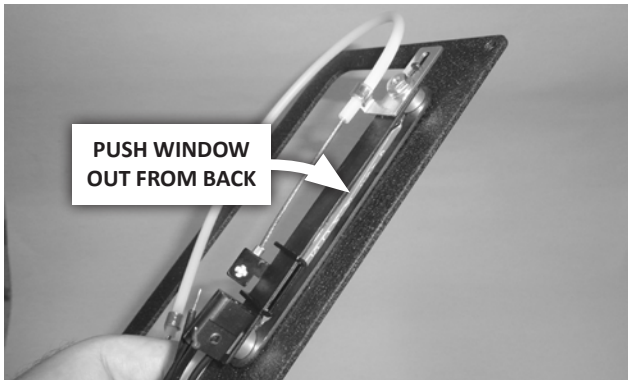
- the **neutral safety (bottom) switch** closes in NEUTRAL and PARK only; and
- the **backup light (top) switch** closes in REVERSE only.

NOTES

- Refer to the "Operation" section to understand the positions of the shift lever.
- The screw holes on the switches and shifter typically allow enough adjustment for proper actuation. However, the switch arms may be carefully bent, if necessary.



13. **Assemble the cable and shifter.** Secure the **cable** eye to the shifter pin with the **1/4" I.D. e-clip.** Then secure the cable's mount tab to the **outside** surface of the shifter base with the **1/4-20 × 1/2**" **bolt** and **nut** (apply **medium strength thread-locking fluid** to bolt).



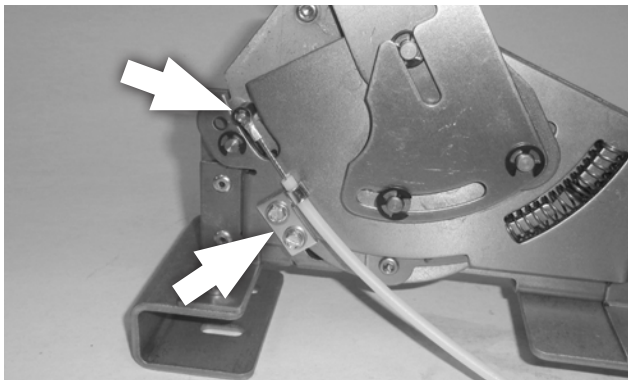
14. **If you are using the shifter with a 4-speed transmission, replace the 3-speed indicator window** in the **cover assembly.** From the underside of the cover, carefully push the 3-speed window out, and install the **4-speed window.**

    NOTE: The two supplied indicator windows are for standard (forward) pattern transmissions. **A window for reverse-pattern 3-speed transmissions is also available from B&M.**

15. **Temporarily install** the **1/2-20 jam nut** and **T-handle** on the shifter, to permit easier shifting during installation. (The handle will be removed and reinstalled later.)

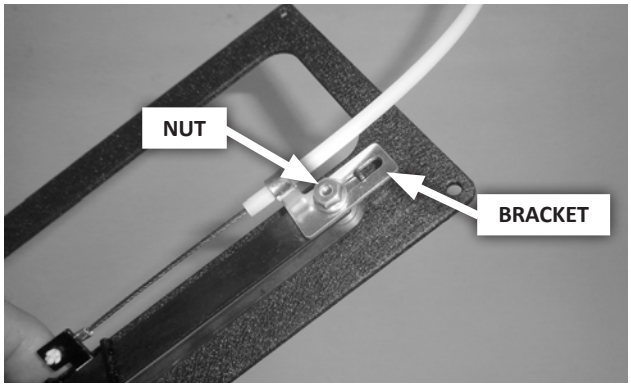
    CAUTION: Avoid cross-threading! The T-handle should spin freely onto the stick with no resistance.

    If you start to feel any resistance, STOP, remove the handle, align the threads properly, and try again.

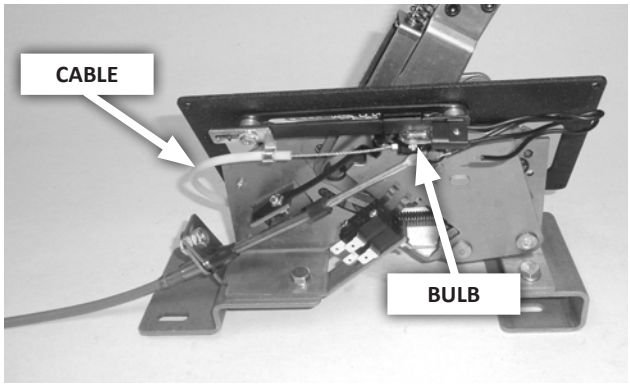


16. **Attach the end of the indicator cable** to its pin on the shifter with the **1/8" I.D. e-clip.** Then attach the cable bracket to the shifter with the two **#6 × 1/4" sheet metal screws** and **#6 washers.**

    NOTE: Use of a nut driver is recommended.



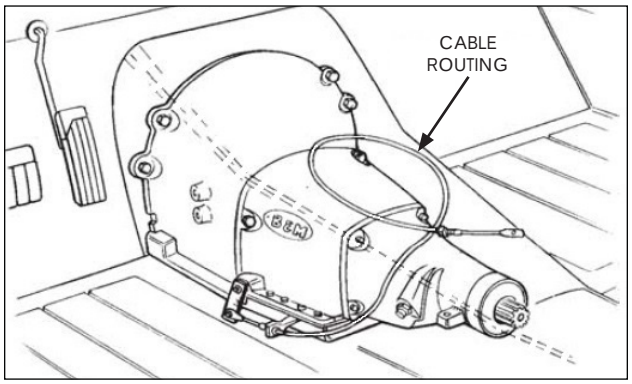
17. **Run the shifter through all the gears to verify the correct alignment of the indicator.** If it needs adjustment, loosen the nut holding the cable bracket to the cover assembly, slide the bracket to adjust the indicator position, and re-tighten the nut.



18. **Gently lower the cover assembly over the shifter lever.** Route the indicator cable between the front of the shifter mechanism and the shift cable mount tab. Then install the **indicator bulb** in its socket.

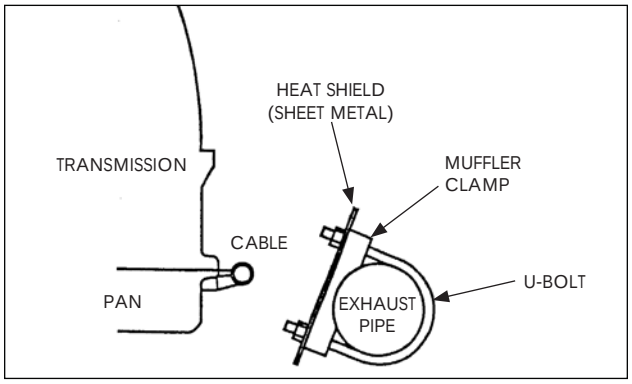
19. **Install the stock cable grommet over the B&M cable,** being careful to orient it correctly (top and bottom).

20. **Install the shifter in the vehicle.** Insert the cable through the hole in the floor. Bolt the shifter to the floor using two **1/4-20 × 1/2" bolts** and **1/4" lock washers** at the rear bracket, and two **1/4-20 × 1" bolts,** four **1/4" flat washers,** and two **1/4" lock washers** and **nuts,** at the front bracket.



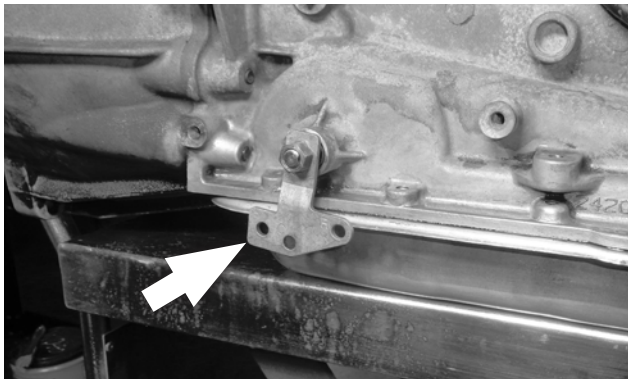
21. **Route the cable** approximately as shown (with excess length coiled on top of the transmission). **Avoid any sharp bends which may kink or otherwise damage the cable.** Reinstall the grommet in the cable hole. If necessary, use clamps and / or cable ties (customer supplied) to secure the cable so as to prevent contact with the exhaust system, engine, or any moving parts.

CAUTION: Do not kink the cable anywhere along its length, or it will lock up. The cable should be kept straight for at least 2" after it leaves the brass ferrule at each end.

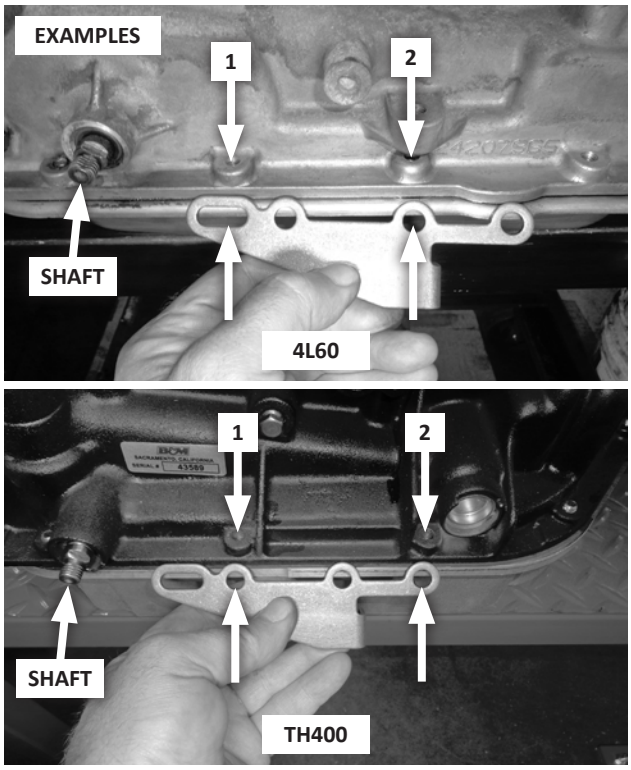


CAUTION: Heat will severely damage the shift cable, causing the housing to melt or become brittle. If the cable must be routed near exhaust system components, fabricate a heat shield. **Do not wrap the cable, as this retains heat.**

NOTE: The following photos show the transmission on a work bench, not installed in a vehicle.



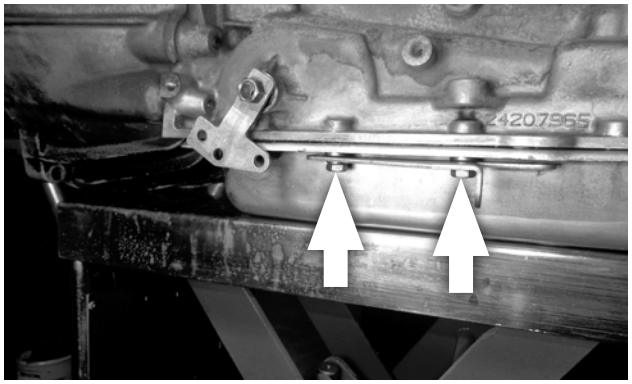
22. **Remove the selector lever nut** and selector lever. Install the B&M **selector lever** using the stock selector lever nut, and tighten the nut to 23 ft-lbs torque. The lever should travel smoothly back and forth, with a positive “click” in each detent.



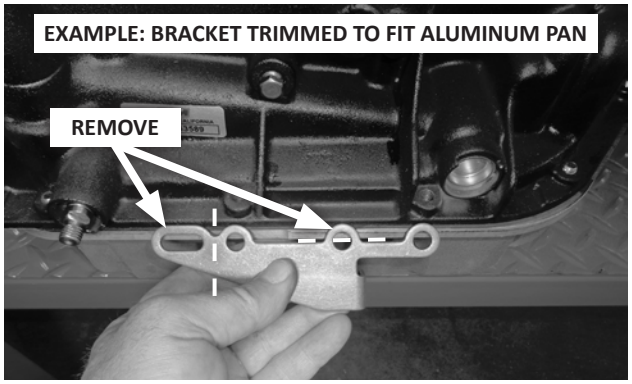
23. **Check cable bracket fit:** Remove the two oil pan bolts to the rear of the selector shaft. Determine which cable bracket holes will be used on your transmission.

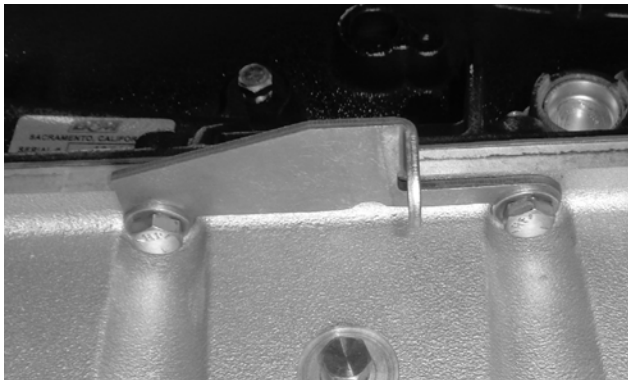
CAUTION: To avoid stripping out your transmission’s bolt holes, use the correct bracket bolts. This kit includes both metric and SAE bracket bolts. The metric bolts have finer threads. To choose the correct kit bolts for your transmission, compare them to the stock bolts you removed.

24. **Install the cable bracket,** using either the two **M8-1.25 × 25 (metric)** or the two **5/16-18 × 1" (SAE) bolts,** and two **5/16" flat washers,** at the bracket holes that fit your transmission.



A. **For stamped sheet-metal (stock) pans,** use the two **spacers** between the pan and bracket.

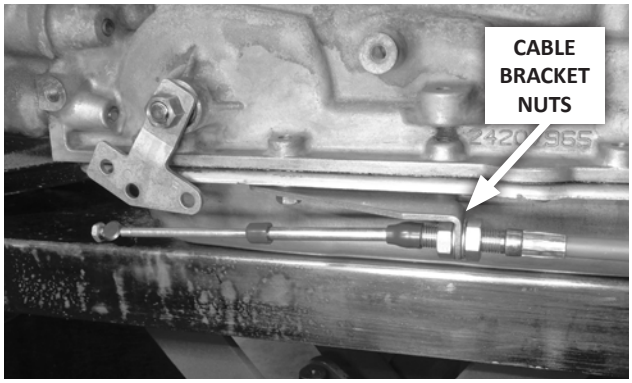




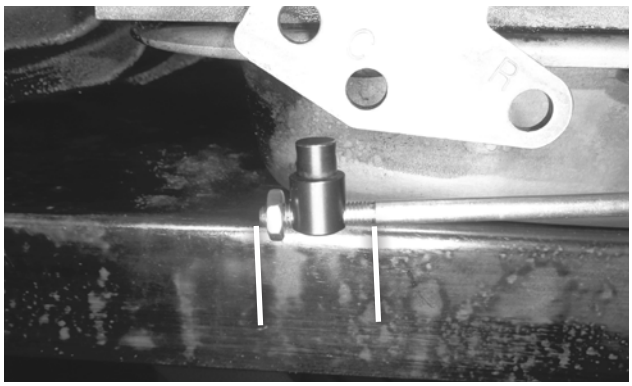
B. **For cast aluminum pans:**
   - the bracket may need to be trimmed to fit; and
   - the spacers are not used.

Tighten the bolts to 12-13 ft-lbs torque.

CAUTION: Do not over-tighten the bolts, as this can damage the pan gasket.



25. **Attach the shifter cable to the cable bracket.** First remove the small jam nut, both plastic dust boots, and one large nut and lock washer, from the cable. Then insert the cable through the cable bracket, reinstall the lock washer and nut (loosely, to allow room for adjustment), and reinstall the dust boots.

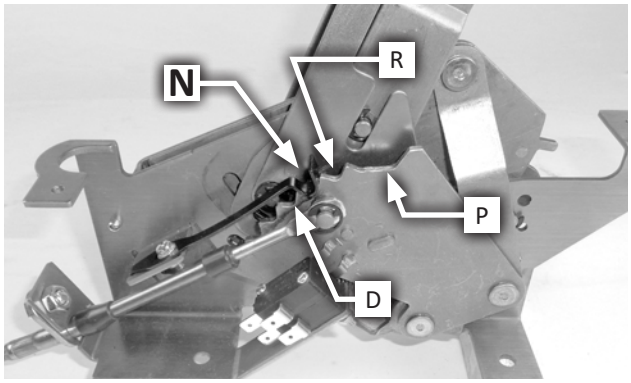


26. **Thread the swivel onto the cable** to about the middle of the threaded section, then reinstall (but do not yet tighten) the **jam nut.**

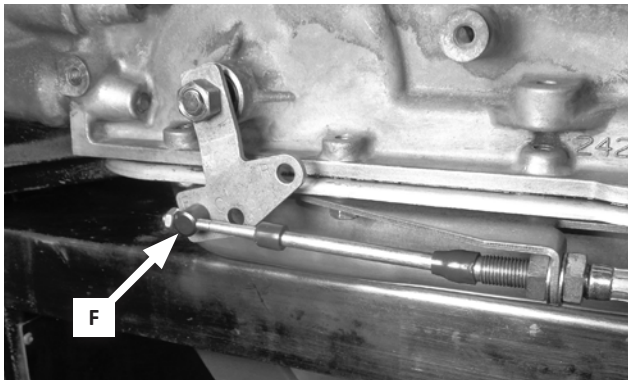
    NOTE: Before proceeding, verify that the speed limiter pin is either installed (for 3-speed transmissions), or removed (for 4-speeds), as described at **Step 11.**

    Selector levers on GM transmissions travel twice the distance between PARK and REVERSE than they travel between the remaining positions, which is why the MegaShifter's PARK notch ("P" below) is wider than the others.

27. **Adjust the shifter cable** as described below. (See **"OPERATION"** to understand the shifter's positions.)

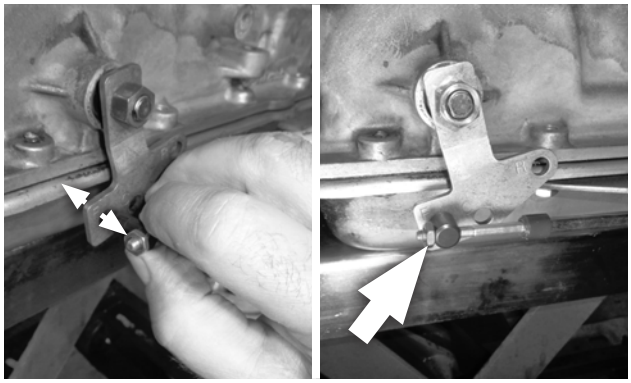


A. On the transmission, manually move the selector lever to the NEUTRAL detent (that is, 2 clicks back from full-forward / PARK). Then in the vehicle, move the shifter to the NEUTRAL position.



B. Adjust cable bracket nuts (and the swivel, if necessary) until the swivel slips freely in and out of **hole "F"** in the selector lever. Gradually tighten the cable nuts against the bracket while continuing to check the fit of the swivel in the selector lever.

CAUTION: The shifter will not operate properly unless hole "F" in the selector lever is used.



C. When the swivel slips freely in and out of the selector lever, lightly snug the jam nut.

D. With the swivel still in the selector lever, move the shifter to DRIVE, and check the fit of the swivel in the selector lever. The swivel should slip freely in and out of **hole "F"**. If not, adjust the cable bracket nuts (and swivel, if necessary) per **Step B**.

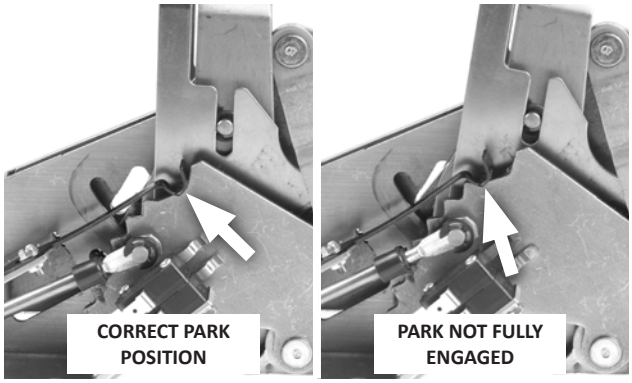
E. Repeat for both SECOND (for 3-speeds) or THIRD (for 4-speeds), and REVERSE gears.

F. Check the swivel's fit in FIRST (for 3-speeds), or FIRST and SECOND (for 4-speeds). THERE MAY BE A SLIGHT DRAG. This is normal; do not re-adjust the cable.

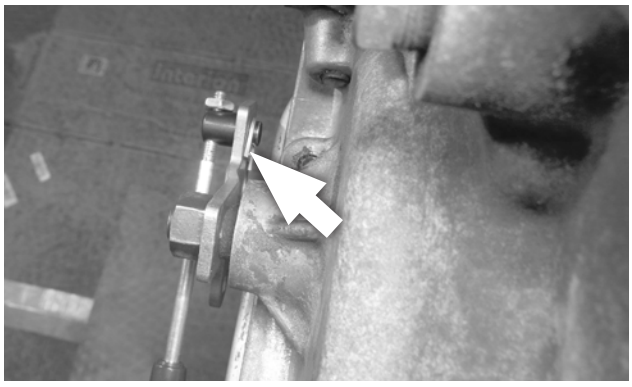
CAUTION: If you encounter restricted movement or any other problem during this process, DO NOT FORCE THE SHIFTER. Doing so may damage the cable, the shifter and / or the transmission. Simply return to **Step A** and re-check each step.

28. The cable is correctly adjusted when the swivel slips freely in and out of **hole "F"** in REVERSE through THIRD gears, and has a slight drag in SECOND and FIRST.

Verify that the two cable bracket nuts, and the cable swivel jam nut, are tight. Also verify that the vehicle does not roll with the transmission in PARK.



CAUTION: Once shifter installation is completed, always push the lever FULLY FORWARD to put the transmission into PARK. Otherwise the transmission's park pawl will not engage, which will allow the vehicle to roll. See "Operation" for further information.



29. Secure the swivel to the selector lever with the cotter pin. Operate the shifter through all the gear positions, verifying that it operates correctly.

WIRING

NOTE: The schematic shown is for automatic transmissions with lockup torque converters (includes all stock configurations). **The included relay is not used with transmissions that don't have lockup torque converters.**

30. **Disconnect the battery ground cable.**

31. **Determine which wiring configuration your vehicle requires.**

    A. **For transmissions with lockup torque converters, wire the relay and two switches** according to the schematic. Be sure to connect relay terminal "0" to a suitable chassis ground (for example, a shifter mount bolt).

    B. **For transmissions without lockup torque converters, the included relay is not used.** Connect the neutral safety wires (purple and yellow) to the LOWER switch. Connect he backup light wires (dark blue and light green) to the UPPER switch.

32. **Wire the switches (and relay, if used).** Cut each wire from the plug, then lengthen it by about 4 to 6 inches — long enough to reach the two switches, and to allow the relay to be secured away from the shifter mechanism. Strip 1/4" of insulation from each wire and crimp an appropriately-sized **terminal** to it, **using an appropriate crimping tool.**

    CAUTION: Failure to use an appropriate tool to crimp the terminals may result in defective, unreliable connections.

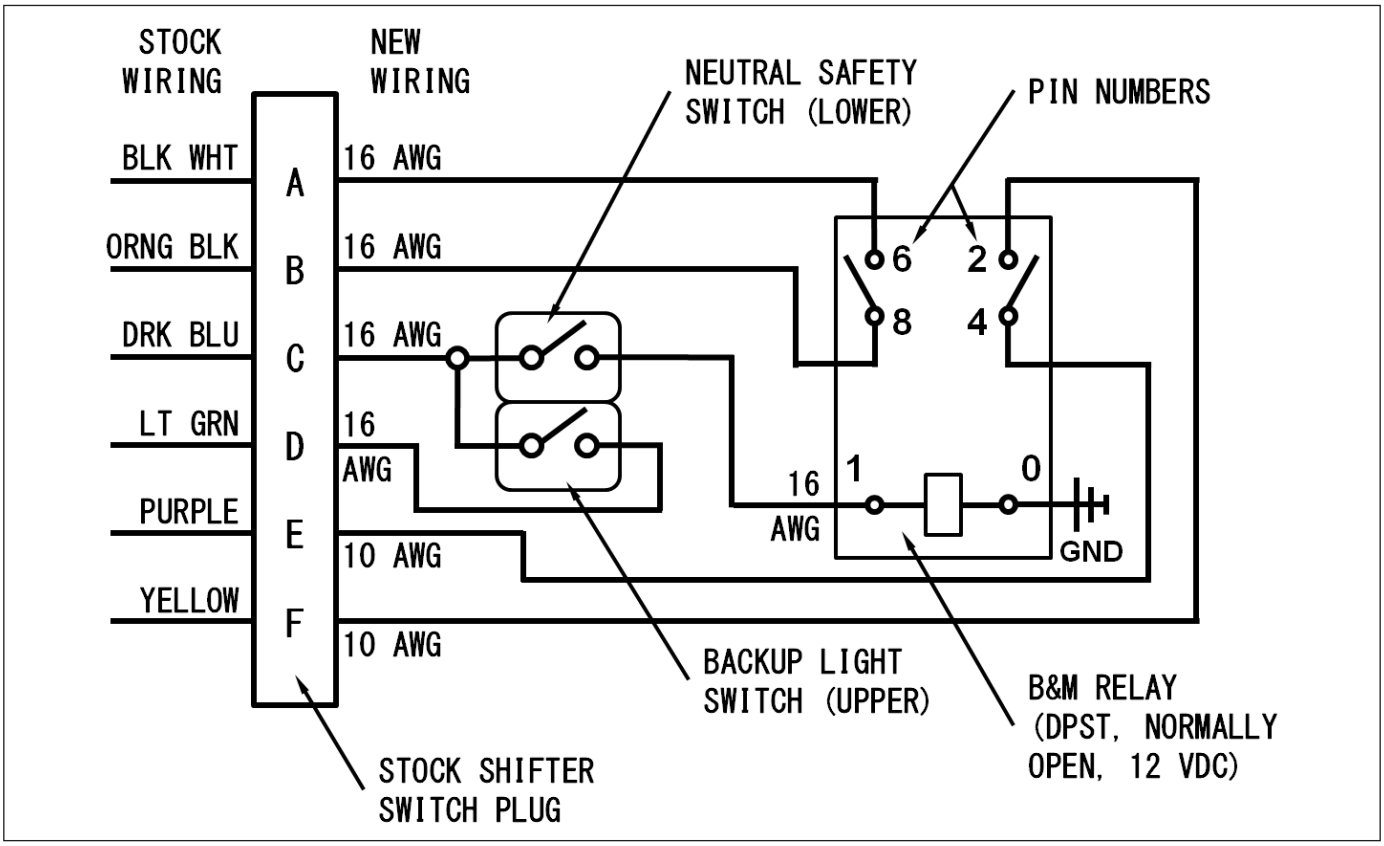
    NOTE: Use blue terminals with 16 gauge wire, and yellow terminals with 10 gauge wire.

    Tape or heat-shrink the terminal connections. Then make the required connections as determined at **Step 31.**

33. **Verify switch function.** Reconnect the battery ground cable, disconnect the coil wire and set the parking brake. Check the neutral safety switch by attempting to crank the engine in each shifter position. The starter must crank only when the shifter is in PARK or NEUTRAL. Check backup light operation with the shifter in REVERSE. If required, adjust the switches as described at **Step 12.** After verifying correct switch operation, reconnect the coil wire.

34. **Cut the wires to the stock indicator bulb socket,** connect them to the wires on the B&M socket, and tape or heat-shrink the connections.

35. **Secure the relay and park lock cable** away from the shifter's moving parts.



FINISH INSTALLATION

36. **Modify the stock console cover.** Tape the supplied **template** onto the GM console cover, aligning the holes as follows:

    CAMARO: Align the four holes marked “A” with the screw holes at the corners of the shifter opening.

    FIREBIRD: Align the two holes marked “B” with the screw holes at the rear end of the cover.

    BOTH: Mark the opening outline on the cover with a scribe or pencil. **FIREBIRD:** Also mark the four corner holes “A”.

    BOTH: Remove the template, remove the marked material with a rotary tool or key hole saw, and file or sand the cut edges. **FIREBIRD:** Drill 3/16" holes at four locations “A”.

37. **Verify the shifter mechanism is free of any debris or hardware,** then lower the modified console cover over the shifter, carefully feeding the B&M cover assembly up through the modified opening.

    NOTE: Maintain the location of the indicator cable around the front of the shifter as described at **Step 18.**

38. **Secure the console cover and B&M cover assembly** to the console. Use the four **black Torx screws** on the B&M cover, and stock screws at the remaining locations.

39. **Remove the T-handle, then slide the shifter boot over the stick.** Work the boot’s bottom groove onto the inside edge of the cover, and work its top groove onto the **bottom flange** on the shift lever. (The top flange will sit atop the boot.)

40. **Apply medium strength thread locking fluid to the threads** at the top of the shifter lever.

    CAUTION: If thread locking fluid is not used, the T-handle's threads may gall, making it impossible to remove it from the stick in the future.

41. **Carefully thread the T-handle** all the way onto the stick.

    CAUTION: Avoid cross-threading! The T-handle should spin freely onto the stick with no resistance. **If you start to feel any resistance, STOP,** remove the handle, align the threads properly, and try again.

    Align the T-handle as desired, then tighten the jam nut.

    Congratulations! Your B&M MegaShifter is now installed and ready to use.

INSTALLATION CHECKLIST

- ☐ Ignition / steering column lock works correctly: key can be removed, and steering column locks when key is removed (Step 9).
- ☐ Cable is securely fastened to the shifter base, and cable end is secured to shifter pin with E-clip (Step 13).
- ☐ Shift position indicator operates properly (Step 17).
- ☐ Shifter is securely mounted to floorboard (Step 20).
- ☐ Cable is routed clear of exhaust system, engine, and any moving parts (Step 21).
- ☐ Selector lever is securely installed on the transmission (Step 22).
- ☐ Cable bracket bolts are tightened to 12-13 ft-lbs torque (Step 24).
- ☐ Shifter is properly adjusted; cable boots are installed; cable nuts are tightened; swivel is secured with jam nut and cotter key (Steps 27-29).
- ☐ The neutral safety switch is connected and properly adjusted to prevent engine start in FORWARD and REVERSE drive gears (Steps 30-33).
- ☐ Relay (if applicable) and park lock cable are secured away from the shifter (Step 35).
- ☐ There is no debris or hardware in the shifter mechanism (Step 37).
- ☐ Stock console cover, B&M cover assembly, and boot are installed (Steps 38-39).
- ☐ Shifter moves freely into and out of all positions, as described in Operation.

    CAUTION: If your shifter is not working properly do not attempt to drive your car! Verify you have followed all instructions. If the shifter is broken or defective, return it to your B&M dealer.

OPERATION

NOTE: The shifter positions referred to below apply to standard-pattern transmissions (P-R-N-D-2-L). Reverse-pattern transmissions (P-R-N-L-2-D) will alter your shifter-transmission positions accordingly.

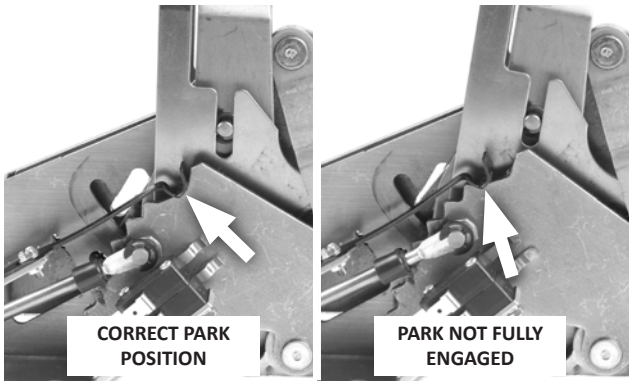
The B&M MegaShifter operates in "straight gate" mode from PARK through DRIVE. (In PARK, the reverse lockout trigger must first be lifted to shift into REVERSE.)

When the shifter moves from NEUTRAL into DRIVE, it enters the "ratchet shift" range (from NEUTRAL to LOW). To shift the transmission in "ratchet shift" mode, pull or push the shifter handle to a full stop then release it, allowing it to return to its "centered" position. Repeat this action until the transmission is in the desired gear.

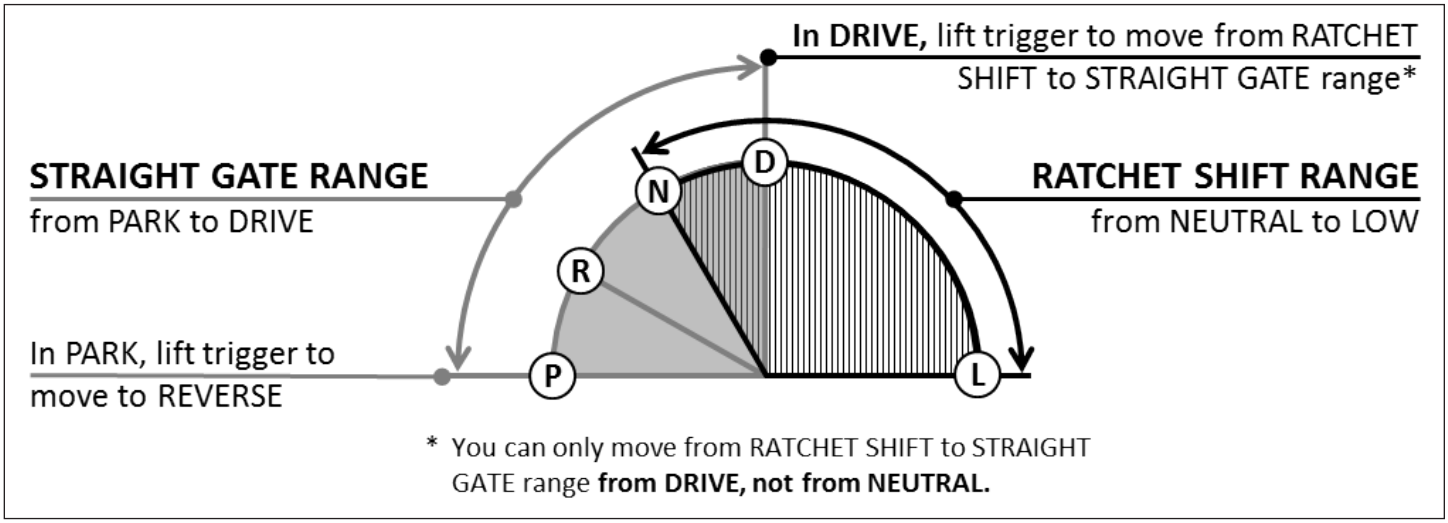
The shifter only operates in "ratchet shift" mode between LOW and NEUTRAL, to prevent unintended shifting into REVERSE. To shift from "ratchet shift" back to "straight gate" mode, shift the transmission to DRIVE, lift the reverse lockout trigger, and push the handle forward into NEUTRAL, REVERSE or PARK.

The shift range diagram will help you to better understand how to operate the MegaShifter. And the photos explain the correct shifter position for putting your transmission in PARK.

If the instructions seem complicated at first, not to worry — the MegaShifter is easy to operate after just a brief time of familiarization.



CAUTION: Always push the shifter lever FULLY FORWARD to put the transmission into PARK. Otherwise the transmission's park pawl will not engage, which will **allow the vehicle to roll.**



KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

B&M Performance & Off-Road maintains a highly-trained technical service department to answer your technical questions, provide additional product information and offer various recommendations.

B&M TECHNICAL SUPPORT: (866) 464-6553