



Installation Instructions

Precision Sport Shifter

1999-2004 JEEP Wrangler (4.0L I6 with NV3550 transmission)

Part Number 45048

This **B&M Precision Sport Shifter** has been designed to work on most 1999-2004 JEEP Wrangler (4.0L I6) model vehicles equipped with the NV 3550 manual transmission. It has been engineered to greatly reduce shift throw and improve shifter feel. Check the parts list and tool lists at the beginning of these instructions for the supplied parts and the tools required to install your **B&M Precision Sport Shifter**. Installation of the **B&M Precision Sport Shifter** can be accomplished by anyone with minimal mechanical experience.

INTRODUCTION

This **B&M Precision Sport Shifter** can be installed in less than an hour by carefully following the instructions. Read all instructions first to familiarize yourself with the parts, tools, and procedures. This kit contains all the parts necessary to install the shifter.

PARTS

B&M Precision Sport Shifter



Tools

Drive



Extension



Socket (8mm, 10mm, 9/16)



Screwdriver (flat)



RTV Silicone



DISASSEMBLY

STEP 1. Remove stock shift knob insert.
Tools: Screwdriver (flat)



STEP 2. Remove stock shift knob jam nut.
Tools: Drive, extension, 9/16 socket



STEP 3. Remove stock shift knob.



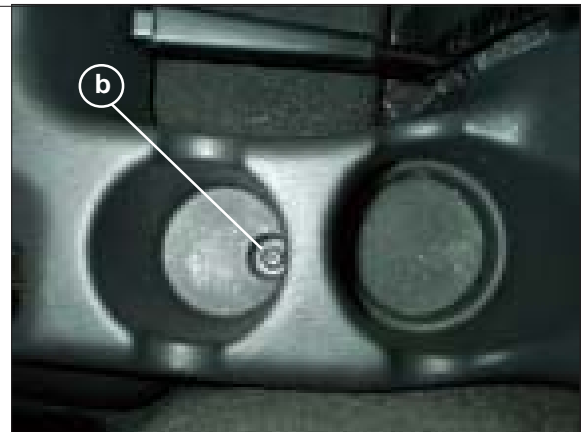
STEP 4. Remove shift boot.



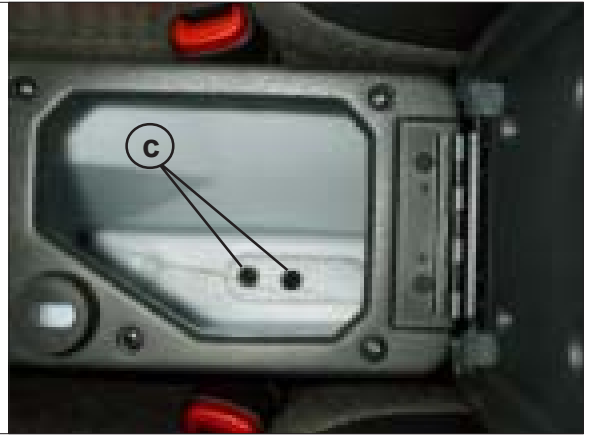
STEP 5. Remove center console bolt (a) near shifter.
Tools: Drive, extension, 10mm socket



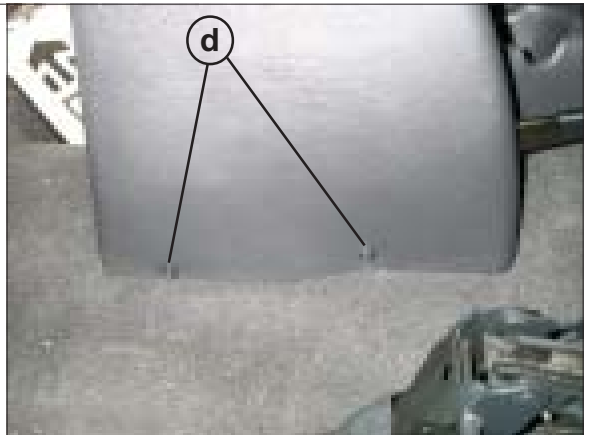
STEP 6. Remove center console bolt (b) in cup holder.
Tools: Drive, extension, 10mm socket.



STEP 7. Remove center console bolts from storage console (c).
Tools: Drive, extension, 10mm socket



STEP 8. Remove bolts on passenger side of center console (d).
Tools: Drive, extension, and 10mm socket



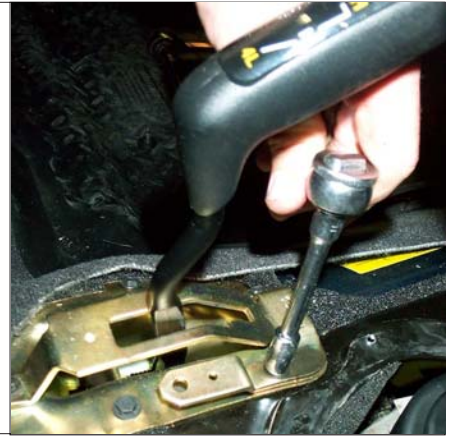
STEP 9. Remove center console.



STEP 10. Remove inner shift boot.
Tools: Drive, extension, and 8mm socket



STEP 11. Remove 4-wheel drive shift base.
Tools: Drive, extension, and 10mm socket



STEP 12. Remove floor plate.
Tools: Drive, extension, and 8mm socket



STEP 13. Remove stock shifter.
Tools: Drive, extension, 8mm socket

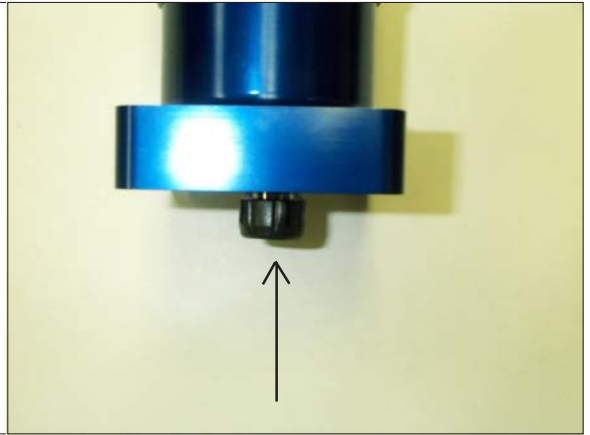


STEP 14. Pry pivot cup from stock shifter.
Tool: Screwdriver (flat)



ASSEMBLY

STEP 15. Press pivot cup onto **B&M Precision Shifter**.



STEP 16. Apply bead of silicone around perimeter of base.
Tool: RTV Silicone



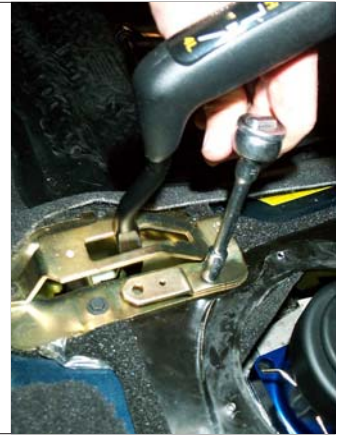
STEP 17. Install **B&M Precision Shifter**.
Tools: Drive, extension, 8mm socket



STEP 18. Reinstall floor plate.
Tools: Drive, extension, 10mm socket



STEP 19. Reinstall 4-wheel drive shift base.
Tools: Drive, extension, 10mm socket



STEP 20. Reinstall inner shift boot.
Tools: Drive, extension, 8mm socket



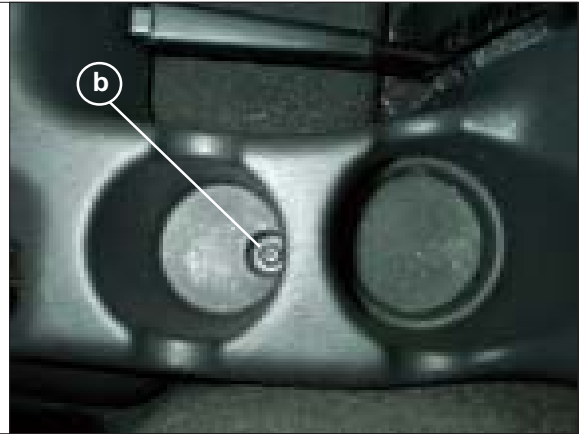
STEP 21. Reinstall center console.



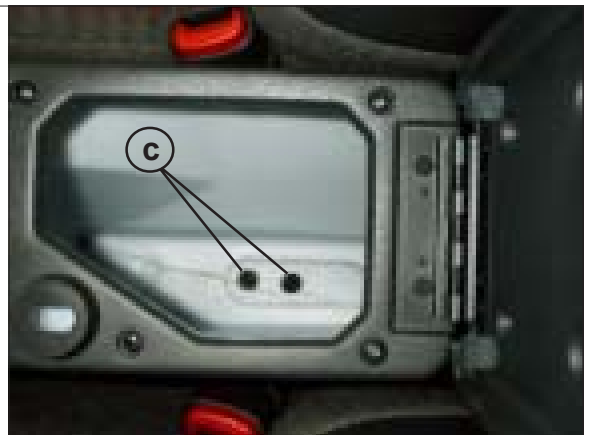
STEP 22. Install center console bolt (a) near shifter.
Tool: Drive, extension, 10mm socket



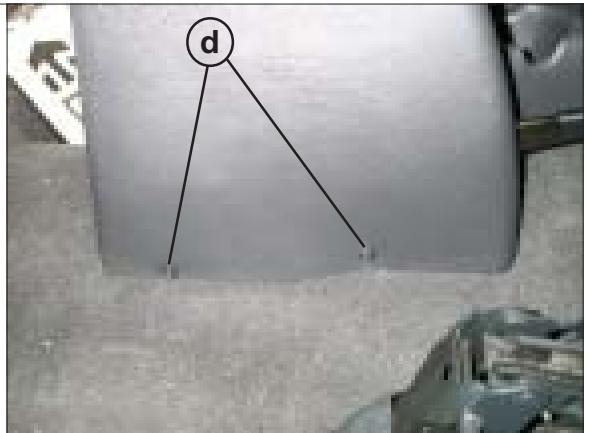
STEP 23. Install center console bolt (b) in cup holder.
Tool: Drive, extension, 10mm socket.



STEP 24. Install center console bolts from storage console (c).
Tool: Drive, extension, 10mm socket



STEP 25. Install bolts on passenger side of center console (d).
Tools: Drive, extension, 10mm socket



STEP 26. Reinstall shift boot,



STEP 27. Install shift knob.



STEP 28. Install shift knob jam nut.
Tools: Drive, extension, 9/16 socket.



STEP 29. Press insert into knob.



STEP 30. Test movement of shifter into all gears. Be sure all the parts have been securely tightened and shifter engages into each gear.
DO NOT operate vehicle until all gears can be smoothly and fully engaged. ENJOY!



Manual Shift Knobs

B&M's **Manual Shift Knobs** are perfect when style and performance matter. Ergonomically correct and made from the highest grade materials, these sturdy knobs incorporate the latest styling as well as distinctive design. Each knob is designed to fit most vehicles equipped with a floor mounted manual gearbox stick. B&M knobs are mounted and tightly secured via an innovative stick locating/locking method that keeps the mounting method invisible. Fit up to 9/16" or 14mm thread diameter (except where noted).



These Hi-tech **Button Knobs** can be used to control any 12-volt function in your vehicle. They feature a momentary switch in a billet aluminum anodized knob. Suitable for nitrous or line lock systems. Fits metric thread sizes: M16x1.5, M12x1.75, M12x1.25, M10x1.5 and M10x1.25 shifter sticks. Knob measures 3.75" in height.

B&M *Racing & Performance Products*

SuperCooler Oil Cooling Systems!

Hi-Tek Engine Cooling System

- Fin & plate cooler construction
- Includes 12 volt high flow fan
- Pressure tested to 200psi
- Units include 1/2 NPT fittings & thermal switch
- Integral mounting brackets.
- Suitable for all fluid cooling needs including: automatic transmission fluid, engine oil, differential fluid, power steering & turbocharger oil.

The newest addition to B&M's line of SuperCooler transmission and engine oil coolers is the Hi-Tek cooling system. Fitted with a high quality 12 volt electric fan and built-in mounting brackets, these coolers handle tough cooling jobs. They include a thermal switch to activate the fan when the fluid temperature reaches 160 degrees F. Can be used for racing, street performance and touring.

Hi-Tek Cooling System 13-1/2" x 9" x 3-1/2" w/9-1/2" fan . 70297
 Hi-Tek Cooling System 10" x 7-1/2" x 4" w/7" fan 70298

SuperCooler Transmission Fluid & Engine Oil Coolers

- The most efficient coolers by size & weight you can buy!
- Much better cooling than ordinary 'fin & tube' coolers.
- Resistant to damage from flying rocks or other debris.
- Fits all cars & light trucks with automatic transmission.
- Pressure tested to 200 PSI.
- Suitable for all fluid cooling needs including: automatic transmission fluid, engine oil, differential fluid, power steering & turbocharger oil.

B&M SuperCoolers are 100% aluminum construction and use stamped plates sandwiched together to create one of the most efficient oil cooling devices available. Not only does this unique design provide for maximized cooling through more efficient heat dissipation but it also provides a much sturdier cooler which is practically impervious to flying rocks or other debris. The Super-Coolers intended for automatic transmission fluid also offer an additional feature known as "Low Pressure Drop". The coolers assembled with hose barb ends include a unique bypass feature allowing a controlled amount of ATF to bypass the stacked plate core when the fluid is cold. This is beneficial in cold climate areas to guard against lube system failure. Controlled by viscosity, fluid is returned directly to the lube circuit through bypass openings in the stacked plate core. As the temperature increases, more ATF is directed through the core. This highly efficient design combines improved protection against lube system failure with the required levels of optimal heat transfer.

- SuperCooler - Engine Oil/ATF 11"X 2-3/4"X1-1/2"70265*
- SuperCooler - Engine Oil/ATF 11"X 8"X1-1/2"70272*
- SuperCooler - Engine Oil/ATF 11"X 5-3/4"X1-1/2"70273*
- SuperCooler - Engine Oil/ATF 11"X 8"X1-1/2"70266*
- SuperCooler - Engine Oil/ATF 11"X 11"X1-1/2"70274*
- SuperCooler - ATF 11" X 5-3/4" X 3/4"70255
- SuperCooler - ATF 11" X 7-1/2" X 3/4"70268
- SuperCooler - ATF 11" X 6" X 1-1/2"70264

* Assembled with female 1/2" NPT fittings. 70265 & 70272 model are polished.



#70297 shown



#70298 shown



#70274 shown

#70273 shown

#70268 shown

Heat Is The #1 Killer Of Engines & Transmissions. Protect Your Vehicle With The Most Efficient Coolers By Size & Weight Available!

Hi-Tek Engine Oil Cooler Kit

For those that demand the best! This engine oil cooler kit comes complete with CNC machined billet aluminum remote filter mount and engine oil adapter, -10 braided steel hose and stacked plate design oil cooler. Utilizing the small stacked plate oil cooler this kit is ideal for the sport compact car. This kit will fit most vehicles with spin on oil filters and 20mm X 1.5 oil filter threads and many domestic U.S. vehicles with spin on oil filter and 3/4"-16 oil filter threads. This kit is designed to remotely mount the oil filter and includes an adapter to mount to the engine block. Hi-Tek Engine Oil Cooler Kit70296



Engine Oil Coolers Systems

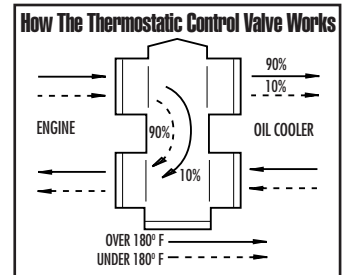
Without a cooler, high engine speeds and oil temperatures can break down lubricants and destroy your engine. The same rugged design, stacked plate SuperCooler is included in the engine oil cooler kits along with the necessary hardware and adapters to fit your engine. Small compact design, yet extremely efficient SuperCoolers will cool the oil reducing the risk of fluid break down.

- Most GM V-8s with recessed filter.70270
- Most sport compacts with 20mm X 1.5 or 3/4"-16 oil filter threads70261



Engine Oil Thermostatic Control Valve

This remote engine oil thermostat will help maintain proper oil temperatures required in today's high performance vehicles outfitted with auxiliary oil coolers. A must for street driven vehicles. When oil temperature is below 180° F, the valve bypasses 90% of the oil, allowing 10% to flow through the cooler to prevent possible air pockets. Above 180° F, the valve opens fully and flows 90% through the cooler. Thermostatic control valve70259



Cooler Selection Chart

Part #	Dimensions	BTU Rating	Engineered For
70255	11" x 5-3/4" x 3/4"	9,800	Transmission Fluid
70268	11" x 7-1/4" x 3/4"	13,000	Transmission Fluid
70264	11" x 5-3/4" x 1-1/2"	14,400	Transmission Fluid
70273	11" x 5-3/4" x 1-1/2"	15,000	Transmission Fluid, Engine Oil, Powersteering Fluid, Differential Fluid, Turbo Oil
70266	11" x 8" x 1-1/2"	20,500	Transmission Fluid, Engine Oil, Powersteering Fluid, Differential Fluid, Turbo Oil
70274	11" x 11" x 1-1/2"	29,200	Transmission Fluid, Engine Oil, Powersteering Fluid, Differential Fluid, Turbo Oil
70265*	11" x 2-3/4" x 1-1/2"	7,500	Transmission, Engine Oil, Powersteering Fluid, Differential Fluid, Turbo Oil
70272*	11" x 8" x 1-1/2"	20,500	Transmission Fluid, Engine Oil, Powersteering Fluid, Differential Fluid, Turbo Oil

* Polished