

Installation Manual
P/N M35-001-RLSK



M35A2 Reverse Light Switch
Kit

P/N M35-001-RLSK

RTT Reverse Light Switch Kit Installation Manual

PLEASE READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

Safety Guidelines!

WARNING! Always secure the vehicle from rolling.

WARNING! Always disconnect vehicle batteries before working on electrical components.

WARNING! Always wear safety glasses when operating power tools such as drills and grinders or using punches and chisels.

WARNING! Always properly secure fuel lines and wiring to prevent chaffing.

WARNING! Always have a fire extinguisher available when working with fuel systems.

PLEASE WORK SAFELY!

M35A2 Reverse Light Switch Kit Contents



<u>Qty</u>	<u>Item Description</u>
1	5 Amp/120 Watt Reverse Light Switch
1	Steel Switch Adapter
1	Single Use Loctite 609

Please check your parts inventory against the above parts list before beginning your installation.

While the switch adapter can be installed without removing the transmission top plate we don't recommend it. When mounting the backup light switch adapter without removing the transmission top plate from the truck it's nearly impossible to get a hammer into the area to tap the mount in properly. We strongly recommend removing the top shifter plate from the transmission and doing the installation on the bench. This will also give you a chance to inspect the transmission gears.

Backup Light Switch Adapter Installation

- 1) Remove bench seat.
- 2) Remove the center floor pan cover that goes over the transmission.

- 3) With the transmission in NEUTRAL remove the transmissions top plate. After removing the top plate bolts lift the top plate assembly straight up from the transmission. Be careful not to move any of the gears during removal.



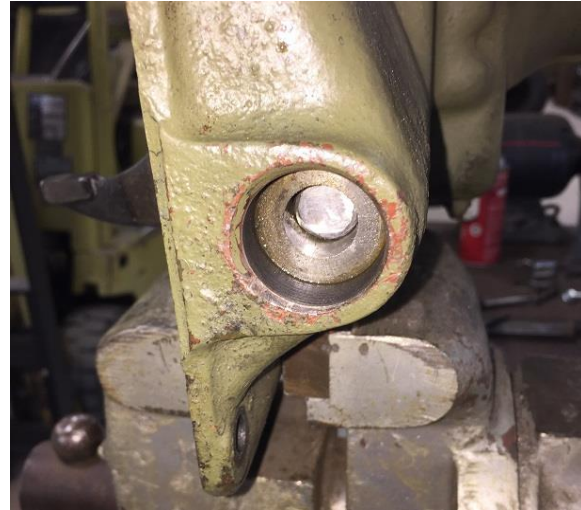
- 4) With the top plate on the bench and the shifter in REVERSE (sprag shaft fully extended) measure 1-7/8" from the end of sprag shaft back towards the case and mark the rod.

- 5) Cut the 1-7/8" section off. Now you will need to chamfer the edges, especially the area where the ball will be contacting the shaft. A rounded edge on the shaft end will help the switch work smoothly. Time spent on a nicely rounded edge in this step will make for a smoother shift into reverse. Simple tools are fine here although a cutoff wheel and grinding disk are preferred. But even a hacksaw and hand file will suffice. The shaft isn't hardened.



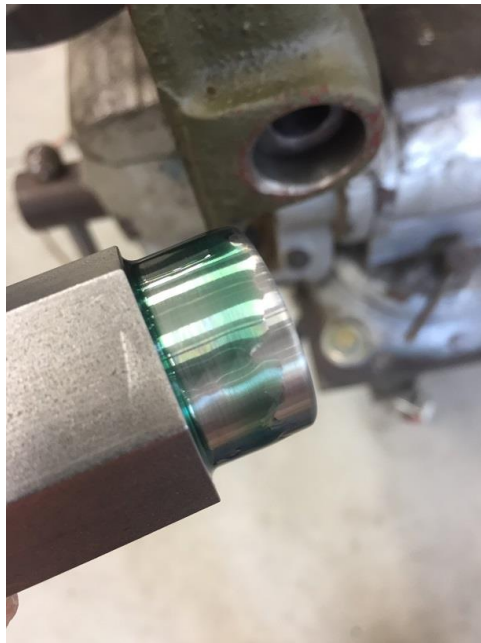
- 6) Remove rod seal AFTER cutting the shaft. Shifting into the 1st gear position will fully retract the sprag shift rod and give you access to pry the seal out.

- 7) With the seal removed and the shifter in 1st gear, clean the bore surface with brake cleaner. Do not use abrasives as this will be a slight interference fit (.0002") and removing material could prevent proper interference to retain the adapter.
- 8) Clean the outer round surface of the adapter with brake cleaner and let it fully dry. Use the small tube of supplied Loctite 609 and apply a thin layer of the retaining compound to both surfaces. Make sure that no retaining compound gets onto the sprag shifter rod or its bore.



Note: The Loctite 609 will begin hardening within 10 minutes.

- 9.) Line up the mount so the threaded hole is pointed in the direction you prefer the switch to be oriented. Using a hammer, gently tap the mount into the transmission cover. Make sure you have the adapter lined up straight with the hole on the top cover. Drive the adapter in until it stops. There should be a slight gap between the hex adapter body and the shift cover when fully seated. Let the Loctite cure overnight.



- 10) Apply Teflon Tape or thread sealant to the switch threads and install the switch into the mount. DO NOT tighten past 15 ft/lbs. or switch damage may occur. Paint the Hex Mount to prevent rust.
- 11) Once the Loctite has had time to set up test the shift into REVERSE.



WARNING NOTE: We have seen one cover that had a poorly machined seal bore. The bore was off center slightly and this was enough to cause the shift rod to hit the very tip of the switch threads and damage it. When testing the shift into REVERSE for the first time on the bench don't force it if resistance is felt. If the shifter doesn't want to drop smoothly into the REVERSE position remove the switch and check for any shiny spots or signs of impact with the rod. If this happens a simple thin washer will elevate the switch enough to allow a proper shift into REVERSE without resistance.

On the problem cover that we ran into we were able to use a large wrench and a hammer to rotate the switch 180° before the Loctite hardened which alleviated the interference issue. Rare but noteworthy.

- 12) Reinstall the top plate on the transmission. Be very careful and make sure that the shift forks properly engage the mating slots.
- 13) Set the transmission floor pan cover in place but don't reinstall yet. With the wheels chocked and the parking brake set start the vehicle and verify the shifting function.

SAFETY NOTE: If you miss engaging one of the shift forks the transmission can end up in reverse in all shift positions which creates a dangerous condition if you aren't ready for it. When letting the clutch out for the first time in neutral do so VERY slowly! If the truck tries to move backwards immediately shut the truck down, pull the top plate, and correct the shift fork engagement of the collars.

Electrical Connection

- 14) We suggest pulling power from the #75 brake light circuit going to the brake light switch. By using circuit #75 the backup lights will only come on if you have the 3 lever switch in the STOP LIGHT or SERVICE DRIVE positions and the shifter in reverse. The #75 circuit is near the transmission.

NOTE: On the newer trucks we have seen this circuit marked #175 instead of #75.

15. Verify proper function of the reverse lights.

Finishing Up

If all checks out good you are ready to finish up the installation.

- 16) Reinstall the floor pan transmission cover
- 17) Reinstall the passenger bench seat.
- 18) Road test the vehicle.

Thank you for your purchase. Enjoy the increased visibility behind you in the dark and being able to avoid dangerous situations when backing.

If you have any questions please don't hesitate to contact us for technical support.

Richard Martin

Rattlin Truck & Tractor
509-993-4923
sales@rattlintruck.com

RATTLIN' TRUCK & TRACTOR
DISCLAIMER OF LIABILITY

Other than as expressly set forth herein, Rattlin' Truck & Tractor (hereafter collectively, "SELLER") shall in no way be responsible for the PRODUCT'S proper use and service. In no event shall SELLER be liable for any special, incidental, indirect or consequential damages of any kind or nature, whether or not BUYER was advised of the possibility of damage, arising or resulting from the use or performance of the PRODUCT, and BUYER hereby waives any and all such claims.

BUYER acknowledges that he/she/it is not relying on SELLER'S skill or judgment to select or furnish goods suitable for any particular purpose and that SELLER has no liability that will extend beyond the scope of the limited warranty contained herein, and BUYER hereby waives all remedies or liabilities, expressed or implied, arising by operation of law or otherwise, (including, without limitation, any obligations of SELLER with respect to fitness for any particular purpose; merchantability; and special, incidental, indirect or consequential damages) or whether or not occasioned by SELLER'S negligence.

SELLER disclaims any warranty and expressly disclaims any liability for personal injury or damages related to BUYER'S use of the PRODUCT. BUYER acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and BUYER agrees to indemnify SELLER and hold SELLER harmless from any claim related to the PRODUCT and its use or performance. Under no circumstances will SELLER be liable for any damages, liabilities, costs or expenses incurred as a result of or by reason of the use, performance or sale of the PRODUCT, including, without limitation, any damages, liabilities, costs or expenses incurred by reason of BUYER'S negligence related to those uses of the PRODUCT.

SELLER assumes no liability regarding the improper installation or misapplication of the PRODUCT. It is the installer's responsibility to check for proper installation, and, if in doubt, contact the manufacturer.

LIMITATION OF WARRANTY

SELLER hereby provides the following limited warranty as to description, quality, merchantability, fitness for any product's purpose, productiveness, or any other matter of SELLER'S product sold herewith. The SELLER shall be in no way responsible for the product's open use and service and the BUYER hereby waives all rights other than those expressly written herein. This Warranty shall not be extended or varied except by a written instrument signed by SELLER and BUYER.

The Warranty is Limited to one (1) year from the date of sale and limited solely to the parts contained within the product's kit. All products that are in question of Warranty must be returned shipping prepaid to the SELLER and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by Glacier Diesel Power.

Under no circumstances shall the SELLER be liable for any labor charged or travel time incurred in diagnosis for defects, removal, or reinstallation of this product, or any other contingent expenses.

Under no circumstances will the SELLER be liable for any damage or expenses insured by reason of the use or sale of any such equipment.

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT: THE BUYER MAY PROMPTLY RETURN THIS PRODUCT, IN A NEW AND UNUSED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE WITHIN THIRTY (30) DAYS FROM DATE OF PURCHASE FOR A FULL REFUND. THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE BUYER HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITIONS.