

The following make/model transmissions are approved and warranted for towing when equipped with - **HARDWARE PACK # LP-HP018**

<u>U660E transmission</u>
Toyota Camry (2006-2017) V6 3.5L
Toyota Highlander (2009-2016) V6 3.5L
Toyota Sienna (2010-2016) V6 3.5L
Toyota Venza (2008-2015)V6 3.5L
Toyota Avalon (2008-2017) V6 3.5L

Towed Vehicle **Lube Pump and Plumbing** **Installation Instructions**



LP-HP018

INSTALLER: GIVE THESE
INSTRUCTIONS TO THE
END USER AFTER
INSTALLATION FOR
THEIR FUTURE
REFERENCE

NO WARRANTY IS EXPRESSED OR IMPLIED FOR LUBE PUMP COMPONENTS OR VEHICLE'S TRANSMISSION UNLESS WARRANTY CARD IS FILLED OUT, DATED, AND SUBMITTED TO REMCO

See Warranty Card in the General Information
Manual Page 5

REMCO LUBE PUMP PACK

LP-HP018

TO COMPLETE THE PLUMBING OF YOUR TRANSMISSION WITH THE LUBE PUMP KIT YOU WILL NEED TO LOCATE THE FOLLOWING ITEMS FROM YOUR BASE KIT (LP-BK01) AND USE THEM IN CONJUNCTION WITH THE LP-HP018 HARDWARE PACK TO COMPLETE THE INSTALLATION.

USE FOLLOWING PARTS FROM BASE KIT (LP-BK01)		
Part #	Description	Quantity
11010046	PUMP ASSEMBLY	1
11010047	LP, PUMP MOUNT BRACKET ASSEMBLY	1
11010030	GENERIC HARDWARE PACK	1
40010019	3/8" HOSE	16'
USE FOLLOWING PARTS FROM HARDWARE PACK (LP-HP018)		
Part #	Description	Quantity
11010013	LP, REG. PAN CONNECTOR	1
40010027-S	SILICONE SEALANT, 3 OZ., (BLACK)	1
11010033	PRESSURE SWITCH, with CHECK VALVE ASS'Y	1
40010041	FITTING, COOLER	1
41010036	FITTING, 45DEG STREET ELBOW - 1/4MNPT x 1/4FNPT BRASS ADAPTER	1
11010041	WHITE SEALANT ASSEMBLY	1
41010035-S	COOLER-TRANS OIL COOLER, LOW PRESSURE DROP, UP TO 28000 LBS CORE, SPECIAL PACKAGING	1
40010021	CLAMP HOSES 5/16" X 7/8"	2

**AFTER INSTALLING THIS LUBE PUMP AND PLUMBING,
FIND THE WIRING INSTRUCTIONS IN THE
GENERAL INFORMATION & MOTORCOACH WIRING
(LP-BK01) INSTRUCTION MANUAL**

INSTALLATION OF THE PAN CONNECTOR:

It is necessary to remove the transmission pan to install the regular pan connector. You will need a large container to catch the fluid when the pan is removed.

NOTE 1: Transmission fluid becomes contaminated during usage, and therefore should not be re-used after it is drained from the pan. Similarly, the transmission's oil filter should be changed every 25,000 to 40,000 driven miles. Use manufacturer's recommendation.

NOTE 2: Dispose of used transmission fluid properly.

Step 1. Remove the pan and discard the gasket if one is present. If RTV sealant was used, it must be removed from both the transmission and transmission pan. (Some auto manufacturers use an RTV sealant instead of a gasket.)

Step 2. Carefully examine the underside of the exposed transmission and the manner in which the pan fits around valve body and filter before deciding on a suitable location for the pan connector.

NOTE 3: **Precautions to consider when determining the best location for the pan connector.**

- a. **It is NOT advisable to locate the connector on the bottom or the front surfaces of the pan because of the strong possibility of damage from road hazards.**
- b. The connector should be located away from any exposed gears, which tend to cause fluid to foam when in motion.
- c. It is desirable to have the connector located as far as possible below the transmission fluid level, taking into consideration the changes in fluid level, which will occur.
- d. Generally, the connector can best be located in the right or left sidewalls or the rear portion of the pan, keeping in mind the above situations.
- e. Make certain the location of the connector will not interfere with reinstalling the pan bolts and that it allows for an easy bend of the 3/8" hose, which will extend from this connector up to the lube pump.
- f. Finally, be sure the connector location provides sufficient flat surface area to permit tightening the hex nut on the inside of the pan.

(See picture on page 5. Use this picture as a reference only. Determine the best location for your car)

- Step 3. When you have determined the best location for the pan connector, locate the hole vertically by holding the hex connector nut on a vertical surface of the pan and marking its location. Drill a 17/32" diameter hole in the side of the pan.
- Step 4. Clean off the drilled area with a lacquer thinner or other suitable cleaner/degreaser. Apply a small amount of the silicone sealant (provided in the kit) to the back (grooved) side of the hex nut (which is already mounted on the connector) and to the threads on the connector, and also to the back (grooved) side of the separate hex nut. Then insert the connector into the 17/32" hole and secure on the inside of the pan with the separate hex nut.
- Step 5. Before re-installing the transmission fluid pan, make sure the mating surfaces on both the pan and transmission housing are absolutely clean of all gasket material, oil or dirt. If the transmission was originally equipped with a gasket, replace with a new gasket. If silicone was originally used then carefully apply a 1/8" bead of silicone sealant (provided) around the bottom perimeter of the transmission housing using plastic nozzle provided. Make sure to encircle each bolt hole as shown (Refer to **DIAGRAM 2, below**). Allow the sealant to set up for about 1 hour. Assemble the pan to the transmission, installing the bolts finger tight only. Allow to set 45 more minutes. This allows the sealant to conform to two surfaces without squeezing it out. Tighten the bolts to the required torque specification. **Do not over tighten.** Refer to the vehicle service manual for torque specifications.

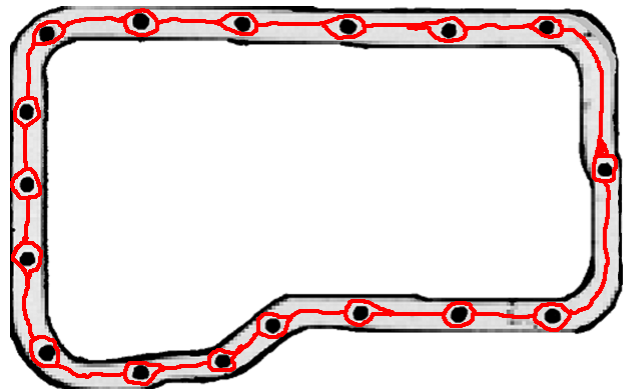


Diagram 2
PAN WITH SEALANT APPLIED



Use this picture as a reference only



Suggested Aux Cooler mounting location
On support bracket in front of radiator



Possible mounting location for pump.
Pump can be up/down or horizontal.

LUBE PUMP INSTALLATION:

(Refer to **DIAGRAM 1, page 8**)

WARNING: Failure to follow the procedures listed below will void the warranty on your pump.

LOCATION: It is important to determine a desirable place on the vehicle to locate the lube pump. The best location may vary from vehicle to vehicle.
(see page 5 for suggested location)

NOTE: When routing the 3/8" hoses to the pump, cooler, pressure switch assembly, check valve and pan connector, be sure to route them where road hazards, other moving parts, sharp edges, or hot exhaust parts will not damage them.

Step 1. The pump is to be mounted in the engine compartment to any suitable flat metal surface. The pump mounting bracket may be used. Use the four 1/4" x 1 1/4" self-tapping metal screws (provided) to mount the pump.

NOTE: **Mount the pump vertical or horizontal.. Do not mount in the fender well or behind the bumper. This will void the warranty.**

Step 2. Using one of the hose clamps (provided), connect one end of the 8-ft. length of the 3/8" hose to the **input side** of the lube pump. Carefully route the 3/8" hose to the **pan connector** on the transmission pan. Cut the hose to a suitable length.

Step 3. Using one of the hose clamps connect the 3/8" hose to the **pan connector**. Make sure hose clamps are securely tightened on all connections.



Step 4. Mount the auxiliary cooler in front of the radiator on the support bracket.
(see page 5)

Step 5. Using a suitable length of 3/8" hose and one of the hose clamps, connect one end of the hose to the output of the lube pump. Using another hose clamp connect the other end of the hose to the input of the auxiliary cooler (either port can be used as input). From the output of the auxiliary cooler run a hose to the input of the Pressure Switch & Check Valve assembly. Connect the hose to the cooler and switch assembly with hose clamps.

WARNING: THE LINE FROM THE PUMP AND COOLER MUST BE CONNECTED TO THE PRESSURE SWITCH & CHECK VALVE ASSEMBLY WITH THE PUMP/COOLER FITTING SIDE GOING TO THE COOLER AND THE TRANS SIDE POINTING TO THE TRANSMISSION.



(Pressure Port Assy Port, Step 7, page 8.)

Step 6. Using a suitable length of 3/8" hose and one of the hose clamps, connect one end of the hose to the output/Trans side of the **Pressure Switch & Check Valve Assembly**.

Step 7. Remove the Pressure Port plug on top of the transmission. Add teflon (**white sealant**, provided) and install the **Fitting, 45 DEG Street Elbow-1/4 MNPT x 1/4 FNPT-Brass Adaptor**, part number 41010036.

Step 8. Add teflon (**white sealant**, provided) and install the **Fitting Cooler** (part number 40010041) to the 41010036-Fitting, 45 DEG Street Elbow-1/4 MNPT x 1/4 FNPT, you have just completed the transmission **port fitting Ass'y** (supplied by REMCO) into the port were the plug was just removed.

WARNING: DO NOT OVER-TIGHTEN THE PIECES OR YOU WILL STRIP THE THREADS IN THE TRANSMISSION CASE. IT IS DIFFICULT TO REPAIR.

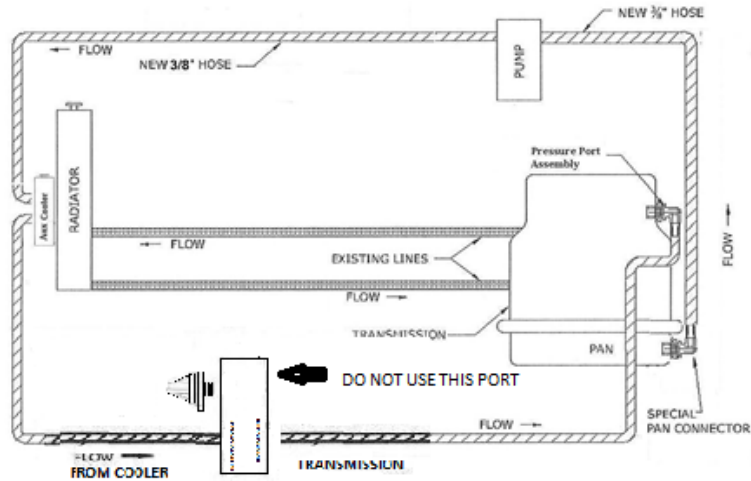


Diagram 1

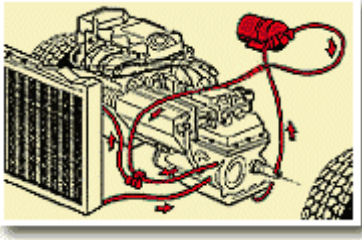
Step 9. When all connections are completed and all hose clamps securely tightened, refill the transmission with new transmission fluid. **Consult the vehicle Owner's Manual for the proper type of fluid to use** and for the recommended procedures to make sure the proper fluid level is restored. Proper fluid level is essential for trouble-free operation of the transmission as well as the lube pump.

For Installation Testing, Towing Checklist, and Troubleshooting see back section of the General Information Manual.

**RETURN THE THE GENERAL INFORMATION MANUAL PG.3
TO INSTALL THE WIRING HARNESS ON THIS TOWED
VEHICLE.**

NOTES:

REMCO HAS THESE PRODUCTS FOR YOUR TOWING CONVENIENCE



REMCO'S Lube-Pump lubricates and cools Select Front-Wheel Drive, Rear-Wheel Drive, Four-Wheel Drive, and All-Wheel Drive vehicles while towing.



REMCO'S Tail Light Wiring Kit is for easy hook up of your tail lights and turn signals for towing.



REMCO'S 12-Volt (DC) RV Water System Pumps

REMCO
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