

The following make/model transmissions are approved and warranted for towing when equipped with -  
**HARDWARE PACK # LP-HP010**

Lexus ES300 (U140E/F)
Toyota Sienna (U151E/F)
Toyota Camry (U150E/F)
Toyota RAV-4 (U241E/F)

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



**LP-HP010**

**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 Page5**

## REMCO LUBE PUMP PACK

### LP-HP010

**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-HP010 HARDWARE PACK TO COMPLETE THE INSTALLATION.**

<b>USE FOLLOWING PARTS FROM BASE KIT (LP-BK01)</b>		
<b>Part #</b>	<b>Description</b>	<b>Quantity</b>
11010046	PUMP ASSEMBLY	1
11010047	LP, PUMP MOUNT BRACKET ASSEMBLY	1
40010019	3/8" HOSE	16"
<b>USE FOLLOWING PARTS FROM HARDWARE PACK (LP-HP010)</b>		
<b>Part #</b>	<b>Description</b>	<b>Quantity</b>
11010019	LP, PAN PLUG CONNECTOR (HEX)	1
11010023	LP, TRANS PORT FITTING ASSEMBLY	1
11010031	LP, ROUTING TEE AND CHECK VALVE ASSEMBLY	1
41010035-S	AUX COOLER	1
40010019	HOSE, 3/8" (ADDITIONAL)	16 FT.
40010027-S	SILICONE SEALANT (BLACK, 3 OZ.)	1
40010021	CLAMP HOUSE 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**

## **LUBE PUMP INSTALLATION:**

(Refer to **DIAGRAM 1**, page 6)

**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.

**NOTE:** **Locate the pump in the upper part of the engine compartment, under the hood. Mount the pump vertically (motor down, pump head up) or horizontally to help ensure no water can collect and cause failure. It is important to keep the pump from being exposed to the weather and other harsh elements. Do not mount in the fender well or behind the bumper.**

**Failure to do the above mentioned will void the warranty**

**NOTE:** When routing the 3/8" hoses to the pump, 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.

Step 2. After mounting the pump, go to the transmission drain plug (sump) on the bottom of the transmission pan. Then remove the transmission drain plug from the bottom of the pan and install the **LP, Pan Plug Connector (Hex)** supplied with this kit.

Step 3. 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 3/8" hose to the **LP, Pan Plug Connector (Hex)** on the transmission pan. Cut the hose to a suitable length.

Step 4. Using one of the hose clamps connect the 3/8" hose to the **LP, Pan Plug Connector (Hex)**. Make sure hose clamps are securely tightened on all connections.

## Aux Cooler Installation

**Note: Place the Aux Cooler in a location that allows for plenty of air to pass through. Somewhere in front of the radiator would be preferred.**

- Step 1. Using a suitable length of 3/8" hose and one of the hose clamps, connect one end of the hose to the **output port** of the pump. Route the other end of the 3/8" hose from the **pump** to either port of the Aux Cooler. (refer to **diagram, page 6**). Using 1 hose clamp, connect the hose to the Aux Cooler.
- Step 2. Using a suitable length of 3/8" hose and one of the hose clamps, connect one end of the hose to the other side of the Aux Cooler. Route the other end of the 3/8" hose from the **Aux Cooler** to the **Routing Tee & Check Valve Assembly**. (Refer to **diagram, page 6**).

**WARNING: THE LINE FROM THE PUMP MUST BE CONNECTED TO THE COOLER THEN TO THE ROUTING TEE & CHECK VALVE ASSEMBLY ON THE COOLER SIDE.**

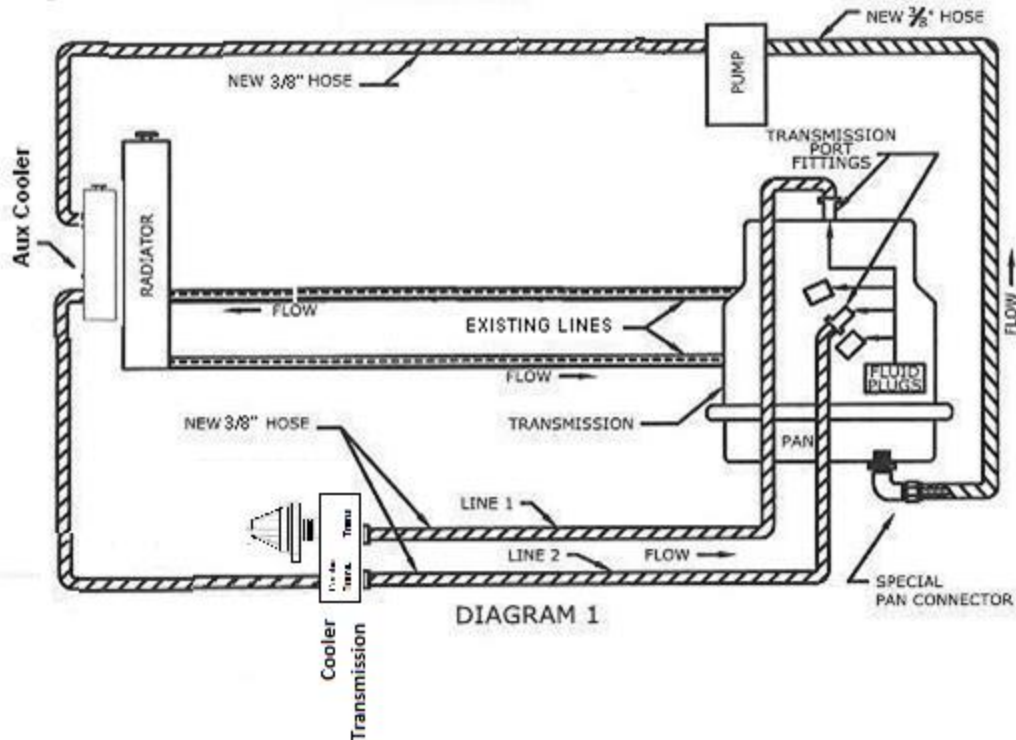
- Step 3. Using one of the 3/8" hose and one of the hose clamps, connect one end of the hose to one of the output fittings of the "**Routing Tee & Check Valve Assembly**".
- Step 4. Using the remaining 3/8" hose and one of the hose clamps, connect one end of the hose to the remaining output fitting of the "**Routing Tee**".
- Step 5. Remove the AIRBOX by:
- Loosen the large round tube and lift top of the AIRBOX up and set it aside.
  - Take out the air filter.
  - Remove the 3 10mm bolts from the bottom of the AIRBOX.
  - Detach the 2 plastic clips holding the wire to the bottom piece of the AIRBOX.
  - The AIRBOX can now be completely removed.
  - To reinstall the AIRBOX reverse this process.

**Note: There is a sensor above the transmission plug with a plastic clip below it that holds a small loom. Remove this clip and pull it up over the sensor to allow more room to get to the transmission port plug.**

- Step 6. Install one of the **transmission port fittings** (supplied by REMCO). The plug is close to the motor underneath the mass air intake assembly near where the transmission and motor meet, behind the starter and angling forward (**See picture on page 7**). Remove this plug with a 12mm socket to install **transmission port fitting**.
- Step 7. Install the supplied 90-degree elbow (finger tight only!) into the steel port fitting, replacing the plug you just removed. Finger tighten the combined pieces into the transmission. If the 90-degree elbow does not face the driver side of the car when the pieces are snug, remove both pieces and tighten the 90-degree piece into the plug more until it comes to a point it will face the driver side of the vehicle when installed.
- WARNING:**     **DO NOT OVER-TIGHTEN THE PIECES OR YOU WILL DEFINITELY STRIP THE THREADS IN THE TRANSMISSION CASE. IT IS UNREACHABLE TO REPAIR.**
- Step 8. Now add teflon and place a brass straight barb fitting into the 90-degree elbow so it will accept a 3/8" hose.
- Step 9. Using a hose clamp, route one of the 3/8" hoses from the "**Routing Tee & Check Valve Assembly**" to the fitting on top of the transmission (**see picture page 7**)
- Step 10. Remove the fluid plug located on the driver side of the transmission, forward of the axle and just above the frame. There are 2 or 3 plugs close together angling forward and downward. Remove plug noted in (**picture page 8**) Step 11.
- Step 11. Add teflon and install the **transmission port fitting** (supplied by REMCO) into the port were the plug was just removed..
- Step 12. Install the supplied 90-degree elbow into the steel port fitting
- Step 13. Using a hose clamp, route one of the 3/8" hoses from the "**Routing Tee & Check Valve Assembly**" to the fitting just installed (**see page 8**) and connect.
- Step 14. 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.

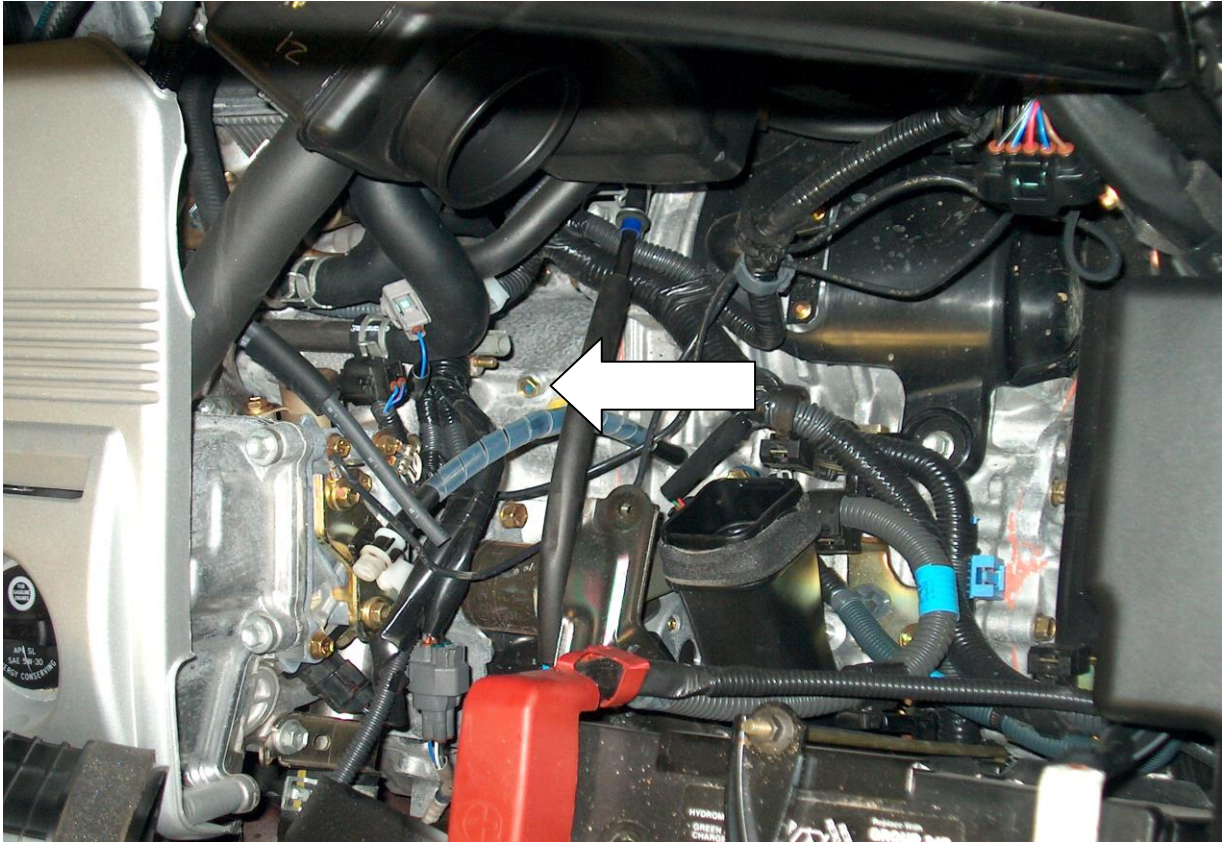
**WARNING:**

**TIGHTEN FITTINGS ENOUGH SO O-RING ON FITTING IS SNUG TO PORT. DO NOT OVER-TIGHTEN THE PIECES OR YOU WILL STRIP THE THREADS IN THE TRANSMISSION CASE. IT IS UNREACHABLE TO REPAIR.**

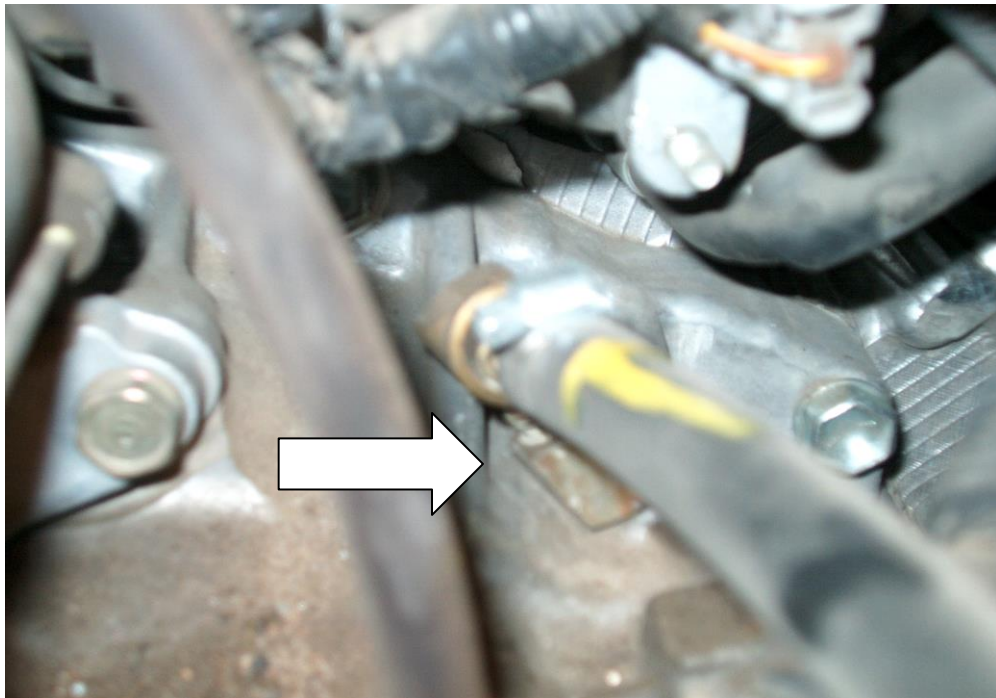


**RETURN THE THE GENERAL INFORMATION MANUAL PG. 8 TO INSTALL THE WIRING HARNESS ON THIS TOWED VEHICLE.**

**For Installation Testing, Towing Checklist, and Troubleshooting see back section of the LP-BK01 General Information Manual.**



Top of Transmission with airbox removed.  
Looking from front of vehicle.  
Arrow points to the correct plug to access.



Port on top of transmission under airbox with adaptor plug and hose installed.





Driver's side of transmission, looking through the wheel well, in front of the tire.  
Arrow indicates correct port.  
(Note: Some earlier models of this transmission have only the two lower ports. Access port indicated by the arrow.)

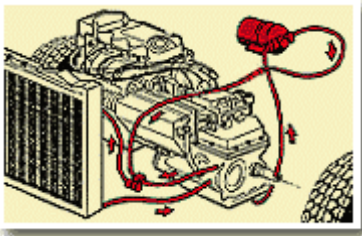


Arrow points to the port on the side of the transmission with adaptor plug installed.



**Notes:**

**REMCO** OFFERS THESE PRODUCTS FOR YOUR TOWING CONVENIENCE



**REMCO'S Lube-Pump** lubricates and cools transmissions on 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**  
*The Towing Experts*

4605 County Road 82 SE  
Alexandria, MN 56308  
1-800-228-2481  
763-253-4740  
Fax: 763-253-4741