

INSTALLATION INSTRUCTIONS

TRANSMISSION ISOLATOR ASSEMBLY KIT

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IMPORTANT INFORMATION AND SAFETY PRECAUTIONS

This product will provide excellent service life when it has been properly installed and maintained.

Read the instructions carefully. Pay particular attention to the NOTE sections which contain helpful information to make the installation as easy as possible. Also pay close attention to the sections with the following warning symbol next to them:

⚠ WARNING

These are provided to help avoid personal injury, property damage or to prevent future safety problems with the vehicle. In addition, we recommend that you strictly adhere to all federal and state approved shop safety practices and procedures. Carefully inspect the vehicle suspension that is being repaired. Correct or replace all defective components.

INSURE THE CORRECT KIT IS BEING INSTALLED

Before starting the installation process verify the following:

1. Check the contents of the kit against the parts list shown on the label located on the outside of the kit box. If part are missing, contact your local ATRO bushing distributor.

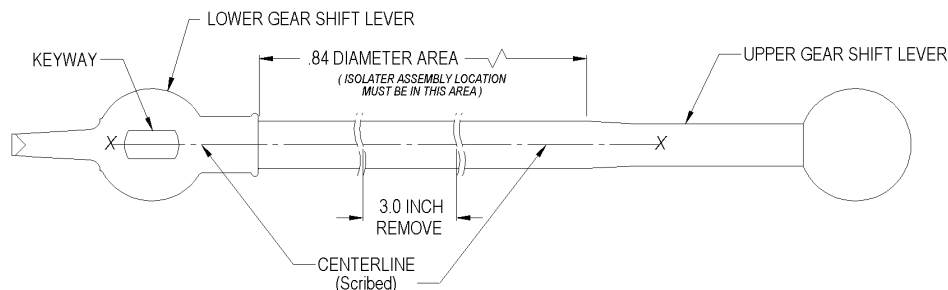
⚠ WARNING Do not replace any missing hardware with substitutes! Inferior components may cause premature or catastrophic failure.

2. Make sure the Gross Axle Weight Rating (GAWR) of the front steering axle for the vehicle does not exceed 20,000 lbs.
3. Measure the leaf spring and hanger bracket widths and insure they match the ATRO leaf spring bushing length.
4. Measure the leaf spring eye diameter and frame hanger bracket eye diameter to insure that they match the outer diameter of the ATRO leaf spring bushing.

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1. Remove the shifter lever from the transmission.
2. Scribe a reference line X-X through the center of the keyway in the shifter ball and along the center of the shifter shaft as shown in Figure 1.

FIGURE 1



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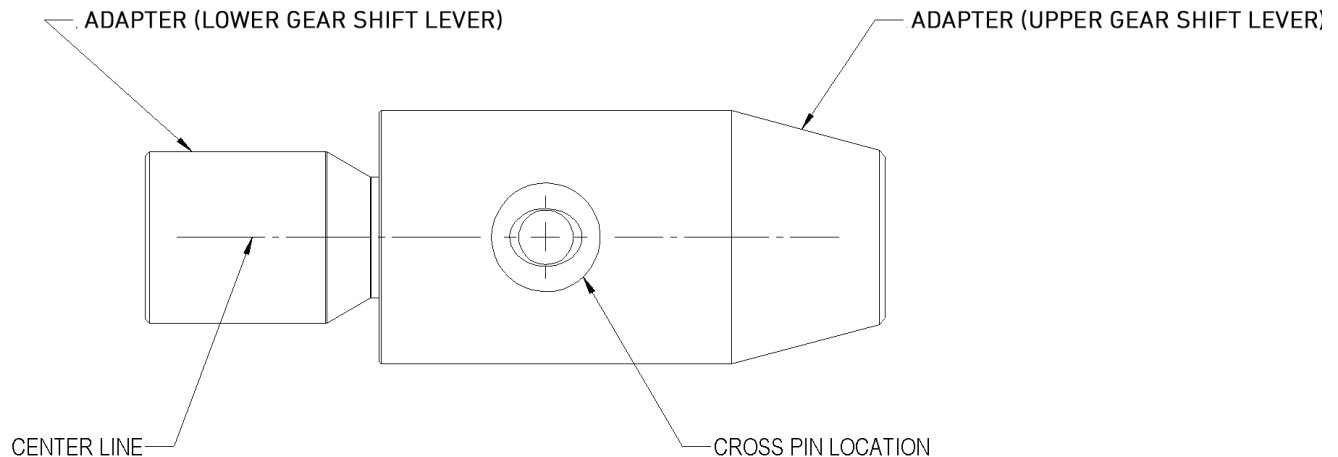
3. Remove a 3" section from the lower portion (.84" diameter) of the gear shift lever as shown in Figure 1.

NOTE: The section being removed will be replaced by the isolator assembly which has a larger diameter than the original gear shift lever assembly. Before selecting a cut location, insure that there will be sufficient clearance in all shift positions between the gear shift lever with mounted isolator assembly and all other cab equipment in close proximity. It is recommended that the isolator be located as close to the gear shift lever housing as possible.

4. Scribe a location line along the isolator assembly center line and through the center of the cross pin hole. (Figure 2)

FIGURE 2

ISOLATOR ASSEMBLY



5. Remove the lower gear shift lever adapter from the isolator assembly. Install the lower gear shift lever into the lower gear shift lever adapter and align the scribe lines. (Figure 3) Apply a 1/4" bevel weld where the lower gear shift lever stub enters the lower gear shift lever adapter. (LOWER WELD, FIGURE 3)

NOTE: Arc weld only. (MIG/GMAW) Lincoln weld-rod "Jetweld 1 E-7024" or equivalent is recommended.

NOTE: The cross-bolt is always to be installed in the same direction as the picot ball keyway

6. Install the upper gear shift lever into the upper gear shift lever adapter to a depth of no more than 1" and align scribe lines. Apply a 1/4" bevel weld where the upper gear shift lever stub enters the upper gear shift lever adapter. (UPPER WELD, Figure 3)

NOTE: Arc weld only. (MIG/GMAW) Lincoln weld-rod "Jetweld 1 E-7024" or equivalent is recommended.

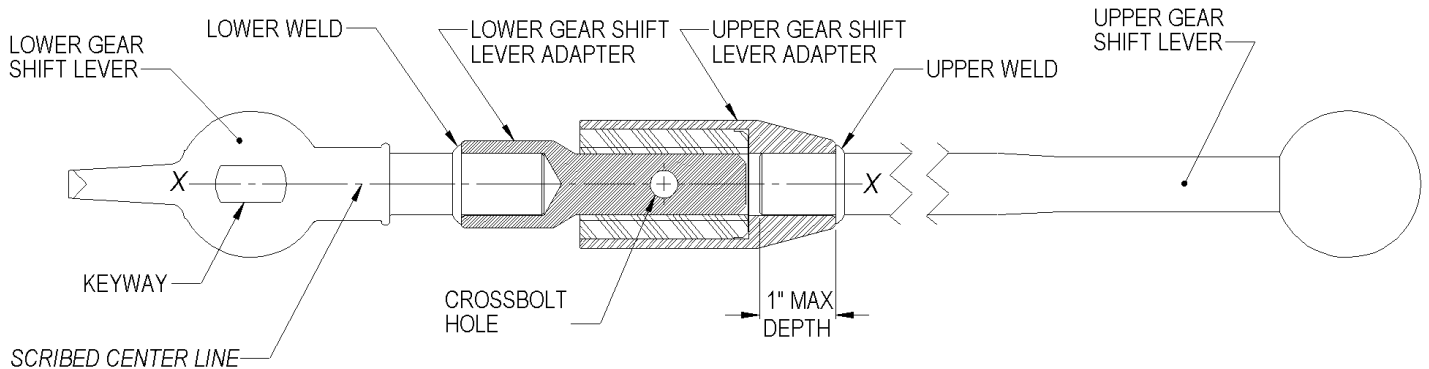
WARNING Positioning the upper gear shift lever deeper than may cancel the effect of the isolator.

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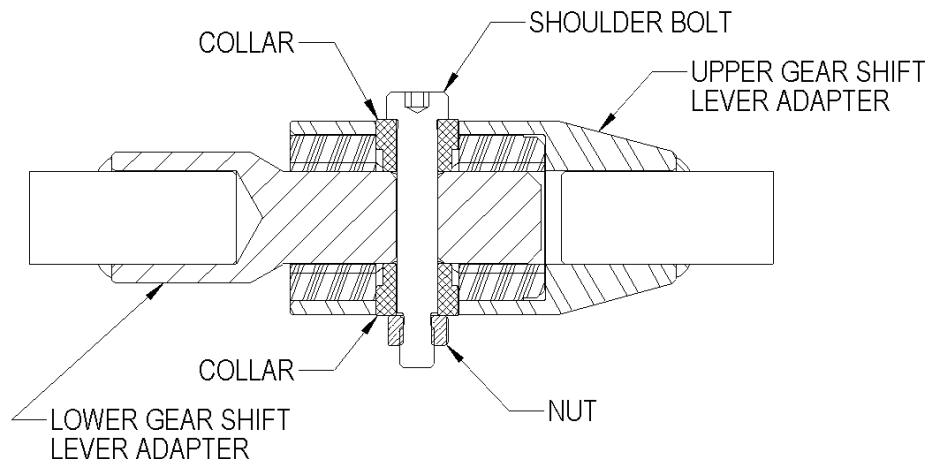
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FIGURE 3



- After both sections of the gear shift lever assembly have cooled, reassemble as shown in Figure 4.
 - Lubricate the inside of the upper gear shift lever housing and press in polyurethane bushing, chamfered end first, until the bolt holes are aligned
 - Align the upper and lower isolator assemblies using the scribed center line.
 - Center the inner line cross-bolt hole with the outer cross-bolt hole.
 - Insert an adapter collar over the shoulder bolt with the large diameter end against the underside of the bolt head.
 - Insert the bolt through the cross-bolt hole until seated.
 - Place the second adapter collar over the protruding end of the shoulder bolt with the large diameter facing outward.
 - Thread retaining nut on the end of the shoulder bolt and tighten until seated against shoulder.

FIGURE 4



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FRONT END ALIGNMENT

After installing the ATRO leaf spring bushing it may be necessary to perform a front end alignment check for caster, camber and toe-in. Use the manufacturers' guidelines and specifications for performing this task.

MAINTENANCE

The ATRO leaf spring bushings are self-lubricating and virtually maintenance free. The spring, hanger bracket, side bars, and ATRO leaf spring bushings should be visually inspected during every oil change. Also, the lock bolts should be re-torqued periodically to insure the integrity of the leaf spring bushings.

WARRANTY NOTICE

Follow the guidelines below to take full advantage of your ATRO spring eye bushing warranty. Failure to do so could void your warranty and may lead to premature failure, damages and/or injuries.

- DO NOT use alternate components and/or hardware in conjunction with ATRO spring eye bushings
- Always use matching ATRO components on both sides of the vehicle
- DO NOT exceed the 20,000lb GAWR
- Use proper installation tools and installation methods (see installation instructions)
- DO NOT expose ATRO spring eye bushings to excessive heat (i.e. welding or torch use)

ATRO Engineered Systems, Inc. can not be held responsible for any failure, damages or injuries that may result from not adhering to these guidelines.



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