IMPORTANT SERVICE INFORMATION FOR:
- ✓ SERVICE MANAGER
- ✓ SERVICE ADVISOR
- ✓ TECHNICIAN
- ✓ PARTS DEPARTMENT
- ✓ WARRANTY PERSONNEL

BULLETIN NUMBER:
IB17-J-001

ISSUE DATE:
AUGUST 2017

GROUP:
ENGINE

UNDERSTANDING DRIVE BELT NOISE

AFFECTED VEHICLES

- 2003-2009, 2012-2017MY Isuzu NPR/NPRHD
- 2003-2009MY GMC/Chevrolet W-Series Medium Duty Vehicles

Equipped with 6.0L Gasoline Engine

INFORMATION

If the drive belt on an Isuzu 6.0L gas vehicle starts making noise, whether a chirping sound, a squeal, or a tapping, ticking or rattling noise, it is important to correctly diagnose it. Accessory drive belt noise may occur for multiple reasons. A correct diagnosis will ensure that the proper repairs are completed the first time and prevent the unnecessary replacement of parts.

1. A common method of attempting to eliminate drive belt noise is to use chemical sprays, such as belt dressing, silicone, or brake cleaner on the belt. This will only provide a temporary fix, as it does not address the underlying cause of the noise.
2. The leading cause of belt noise is misaligned pulleys. A misaligned pulley creates a chirping noise. A pulley that is misaligned by as little as one degree can cause a chirping noise. The best way to check and adjust pulley alignment is to use Laser Alignment Tool No. EN-49228. Please refer to the Instructions section below for guidance regarding the use of the Laser Alignment Tool on the 6.0L engine.
3. The second most common cause of belt noise is a lack of proper tension on the drive belt. A lack of proper tension creates a squealing noise. The loss of tension can be caused by a failing automatic tensioner or a worn drive belt that has stretched. Also inspect driven components, such as water pumps, air conditioning compressors, and power steering pumps for excessive bearing play. Use a stethoscope to diagnose failing bearings on these components. Inspect belt driven accessories and mounting brackets for cracks and missing or loose nuts and bolts.
4. A squealing drive belt can also be caused by fluid contamination, such as oil or coolant. When a drive belt has a wet or shiny overall appearance, it is an indication of fluid contamination (see Figure 1). Diagnosing the source of the contamination is critical; simply replacing the belt will provide only temporary

relief. Once the leaking fluid contaminates the new belt it will start making noise again.

Figure 1

5. A pebble or a foreign object imbedded in the belt (see Figure 2) can cause a tapping, ticking or grinding noise. In this case it is important both to clear the objects and to identify the source of the objects. Check to see that all shields are in place to reduce road debris from entering the engine compartment. Check that the fan shroud is not broken. Make sure to diagnose the source of debris affecting the drive belt.

Figure 2

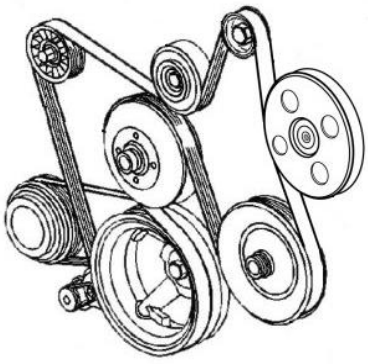
6. A rattling or squeaking noise from an automatic drive belt tensioner can be an indication of internal failure. Look for cracks, rust bleeding, noisy bearings and worn pulley surfaces. Always replace the tensioner as a complete assembly.

INSTRUCTIONS

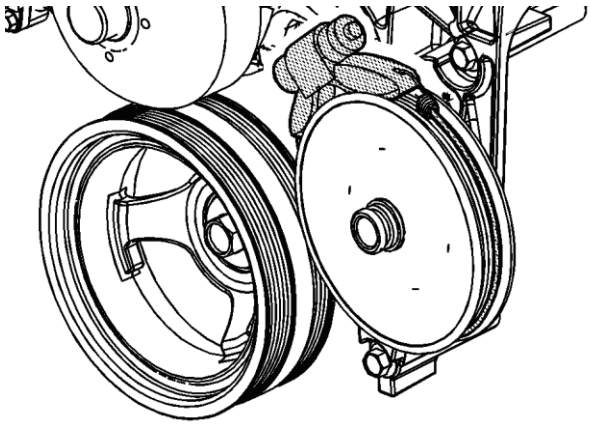
The instructions below are specific only to the 6.0L gasoline engine. These instructions are only for illustrative purposes to show how the tool in question may be used. Universal instructions are included in the box with the Laser Alignment Tool No. EN-49228.

CAUTION: Do not look directly into the beam projected from the laser. Use caution when shining the laser on highly polished or reflective surfaces. Laser safety glasses help reduce laser beam glare in many circumstances. Always use laser safety glasses when using the laser. Laser safety glasses are not designed to protect eyes from direct laser exposure.

1. Observe and mark the serpentine belt orientation.

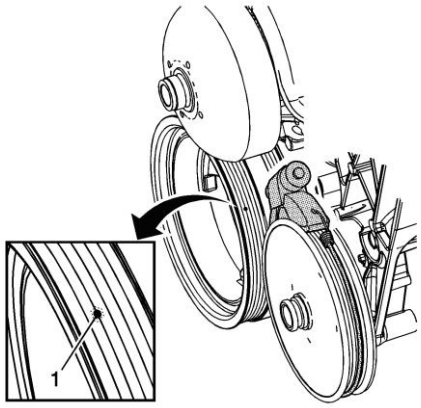


2. Remove the serpentine belt from the accessory drive system.

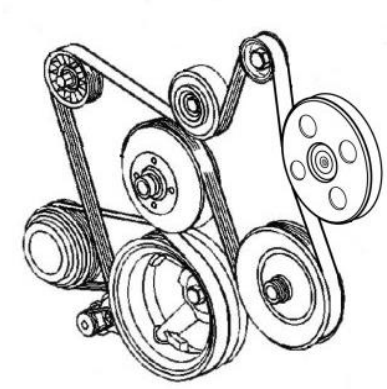


3. Install the tool onto the power steering pulley. Position the legs of the tool into the outer grooves of the pulley, farthest from the front of the engine. See figure above.

4. Install the retaining cord around the pulley and attach it to the legs of the tool.



5. Put on the laser safety glasses provided with the tool.
6. Depress the switch on the rear of the tool to activate the light beam.
7. Rotate the power steering pulley as required to project the light beam onto the crankshaft balancer pulley grooves.
8. Inspect for proper power steering pulley alignment. If the laser beam projects onto the second rib or raised area (1) (see figure above) the pulleys are aligned properly. If the laser beam projects more than one-quarter rib 0.9 mm (0.035 in) mis-alignment, adjust the position of the power steering pulley as required. Refer to the Service Information for Power Steering Pump Removal and Installation procedures.
9. Re-install the serpentine belt to the accessory drive system in the original orientation.



10. Verify that the belt is riding correctly on the vacuum pump pulley top and bottom. Adjust as necessary.

11. Operate the vehicle and verify that the belt noise concern is no longer present.