

Release Bearing Noise with Pedal Up

Background:

Occasionally, drivers notice clutch noises that they think are coming from the release bearing and which are assumed to indicate ball bearing failure. This prompts them to have the clutch changed. However, in most cases, no defect is found in the clutch or its release bearing, and a costly clutch change was needlessly performed.

Description of Condition Creating Concern:

The condition which creates the driver concern is a noise coming from the clutch area **only** while the clutch pedal is “**UP**” or very slightly pushed while the engine is running at idle **or** while the truck is being driven in gear. When the clutch pedal is pushed enough to eliminate all “free play”, the noise stops.

Causal Factors:

The three primary causes of this condition are as follows:

- 1. Release Linkage** - The mechanical rod clutch release linkage used in most North American trucks can become loose at the various joints and pivot locations and can rattle or buzz in reaction to engine operation when no load is placed on the linkage. Many truck manufacturers have a service kit available which includes rubber washers which are added to the joints and pivots to eliminate the looseness and noise.
- 2. Release Yoke** - When the release yoke is not mounted correctly in the center of the clutch housing, or if the side halfshafts are installed too deeply into the yoke, the clutch release bearing can be pulled off center or a binding condition can exist. This creates a side loading condition and it can result in a tapping noise between the housing side flats and the inside edges of the release yoke or the ends of the shafts. This can be corrected by loosening the yoke “pinch bolts” and repositioning the yoke half shafts and/or by relocating the external lever or collar on the half shafts to allow the yoke to move to a central location without side load or binding.

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3. Clutch Release Bearing - On certain older high mileage installations, the attachment between the release bearing assembly and the clutch pressure plate diaphragm fingers can loosen creating a noise. This looseness is most often caused by clutch misadjustment, contaminants in the bearing grease, use of an overly stiff bearing grease or unusual torsional vibrations in the powertrain. The looseness can often be corrected by installing an additional load washer in the attachment joint, or in severe cases, the clutch unit may need replacement.

Final Note:

“Clutch Noises: are very often the result of conditions existing which are not a part or function of the clutch itself. They can often be resolved through modest corrections to release system components. Clutches removed from such installations very often have no defect and should have remained in service.