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Spicer Driveshaft Components Failure Analysis Guide

Learn how to identify failed driveshaft components.

Preventive Maintenance

Driveshaft inspection should be performed as part of your regular maintenance. Normal vehicle maintenance and recognition of component discrepancies are necessary to prevent serious mechanical problems and avoid driver discomfort. Failure to perform normal maintenance may also void the vehicle warranty.

Routine Inspection Steps

1. Check the output and input end yokes for looseness.
2. Check for excessive radial looseness of output/input shaft.
3. Check for looseness across ends of u-joint.
4. Check the slip spline for excessive radial movement.
5. Check the shaft for damage, bent tubing, or missing balance weights.
6. Check for a loose or missing slip yoke plug.

Failure Analysis

Component failures can result from improper maintenance, installation, or assembly procedures. This quick reference guide assists service technicians in recognizing some possible component failures.

Spicer® Ultra-Premium Synthetic Grease

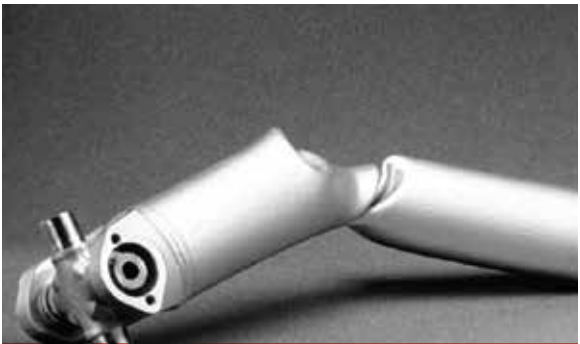
You count on genuine Spicer Life Series u-joints for unparalleled performance. Do not skimp on the grease that keeps everything running smoothly! Spicer Life Series ultra-premium synthetic grease is the only synthetic lubricant that meets the precise standards that have made Spicer the name people everywhere trust.

⚠ DANGER

Rotating shafts can be dangerous. You can snag clothes, skin, hair, hands, etc. This can cause serious injury or death. Do not go under the vehicle when the engine is running.

How to Identify Failure and Probable Cause

Tubing



Twisted Tubing

- Excessive torque
- Driving into immovable object under power
- Spinning tires that suddenly grab hold

Tubing

Failed Tubing

- Shock loads
- Improper welding procedures
- Excessive vibration
- Possible torsional vibration problem

How to Identify Failure and Probable Cause

Universal Joints

- Lack of lubrication (improper maintenance)
- Wrong lubrication type
- Improper application

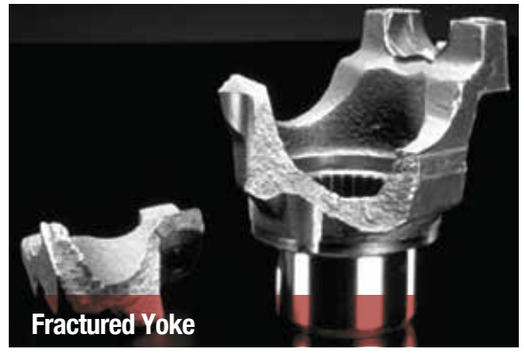
Universal Joints

- Excessive u-joint operating angles
- Improper assembly procedures
- Sprung or bent yoke
- Lack of lubrication (improper maintenance)

Universal Joints

- Excessive continuous torque loads
- Seized slip yoke splines
- Excessive driveline angles
- Sprung or bent yoke
- Overtightened U-bolts

Yoke

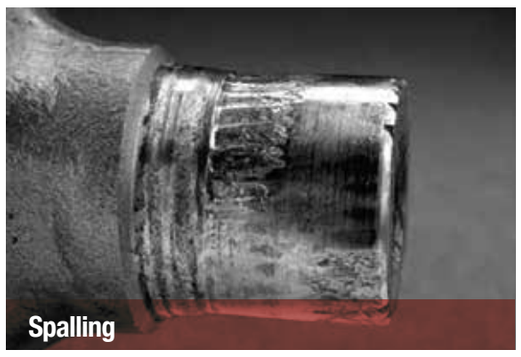


- Excessive torque loads
- Shock loads
- Improper application
- U-joint kit failure

Universal Joints

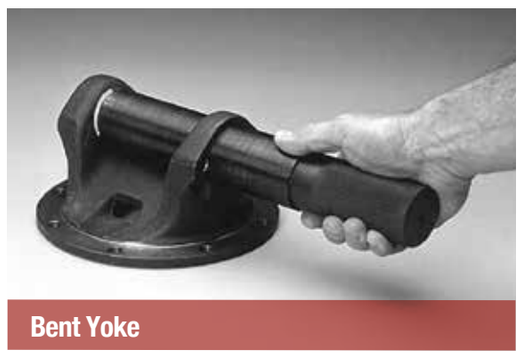
- Excessive torque loads
- Shock loads
- Improper application

Universal Joints



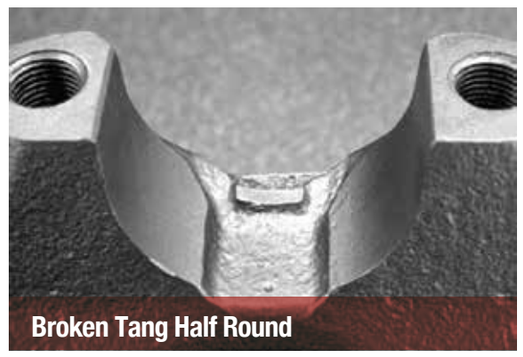
- Water contamination
- Improper lube type
- Lubrication failure

Yoke



- Excessive torque
- Improper application
- Improper u-joint removal

Yoke



- Improper bearing retainer bolt torque
- Improper installation
- Strap was reused instead of replaced

Tube Shafts

Fractured Spline

- Excessive torque loads
- Shock loads
- Improper application

Spicer Parts.

Tested. Proven. Trusted. Driven.

Spicer® service parts deliver the same quality used by major original equipment manufacturers. Each component is engineered to work together to offer quality and reliability. Specify genuine Spicer parts for all of your driveshaft repairs.

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Discover other performance driveline & axles on our website.