

Common Installation Issues



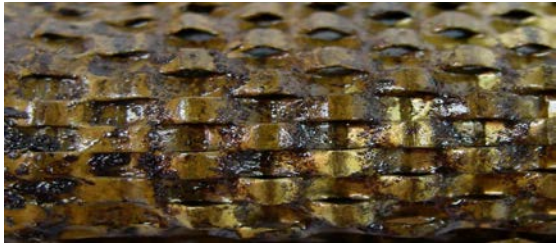
Table of Contents *Click on the title or page # to be taken to that section

Contamination Issue # 1	1
Contamination Issue # 2	2
PTO Interface	3
Vibration & Leaks	4
Lubrication	5
Driveline & Suspension	6

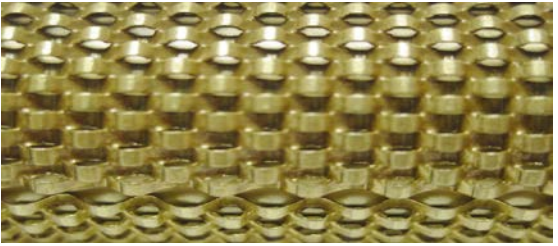
Contamination Issue # 1

Symptom	Cause	Preventative Action
<ol style="list-style-type: none"> 1. Decreased engine performance 2. Shifting erratically 3. Sticking valves 4. Excessive heat 5. Repeat failures 	Contamination caused by not properly flushing the cooler	Flush the transmission cooler as part of the installation process

BEFORE Hot Flush



AFTER Hot Flush



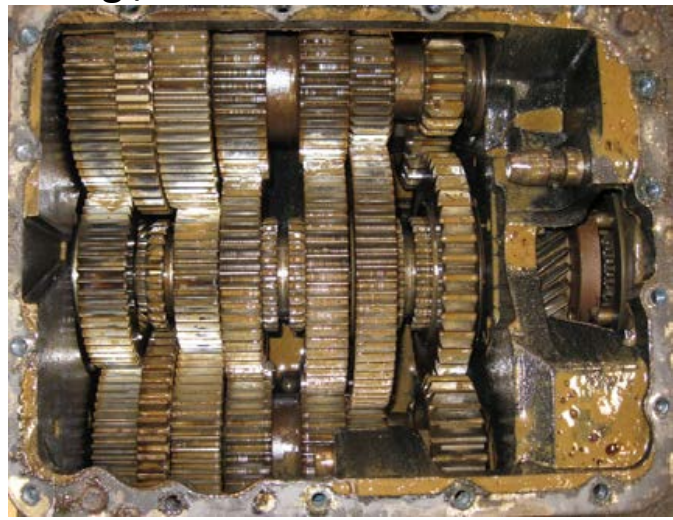
Hot Flush Machine



Contamination Issue # 2

Symptom	Cause	Preventative Action
<ol style="list-style-type: none"> Excessive heat Premature bearing failure Oil breakdown Grinding in high & low Oil leaking from breather 	<ul style="list-style-type: none"> Defective cooler Contamination due to not flushing cooler Mixed lubricants Antifreeze or water in heat exchanger leaking into transmission Glyco causes synchro lining to come off 	<p>Flush system prior to installing the remanufactured unit. Utilize a new oil cooler and/or heat exchanger.</p>

Failed oil cooler causes brownish coloring / indicates oil contamination



Oil cooler



Heat exchanger

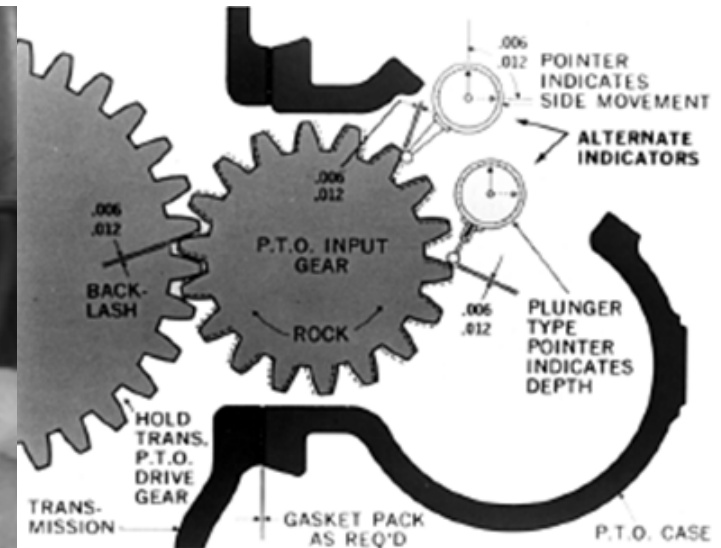
PTO Interface

Symptom	Cause	Preventative Action
<ol style="list-style-type: none"> Hard shifting Noise Premature transmission failure 	<ul style="list-style-type: none"> Improper cleaning of used PTO Failure to use a new PTO reseal kit Failure to set backlash properly (.006-.012) 	<ul style="list-style-type: none"> Clean PTO inside and outside. Inspect for wear, replace seal. Mount using PTO gasket shims & cooper washers on bolts.

Backlash check using dial indicator



Cut-away view of backlash check



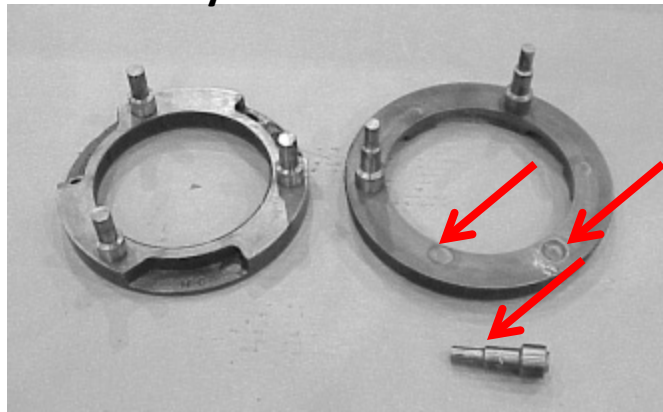
Vibration & Leaks

Symptom	Cause	Preventative Action
<ol style="list-style-type: none"> 1. Output shaft endplay 2. Failed output bearing 3. Vibration & leaking 	<p>End yoke not torqued to correct specification</p> <p>Not using correct torque tool</p>	<p>Upon install, check for proper torque & worn splines</p> <p>Install a new yoke if necessary</p> <p>Torque to OE specification using proper tool</p>

Worn End Yoke
Worn splines & U-Joint Cap



Broken synchro due to vibration

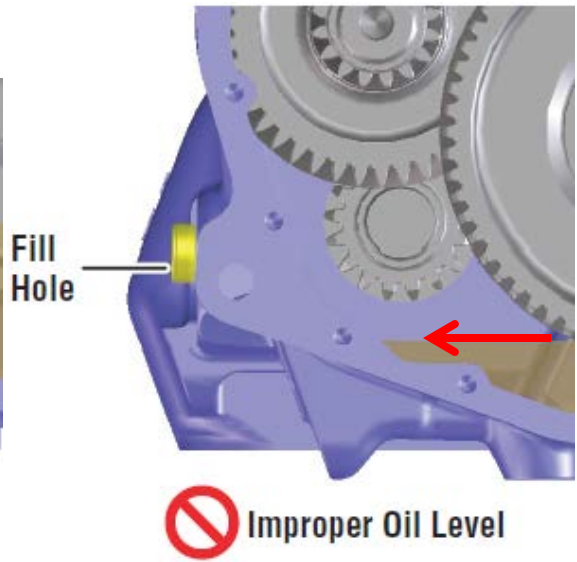
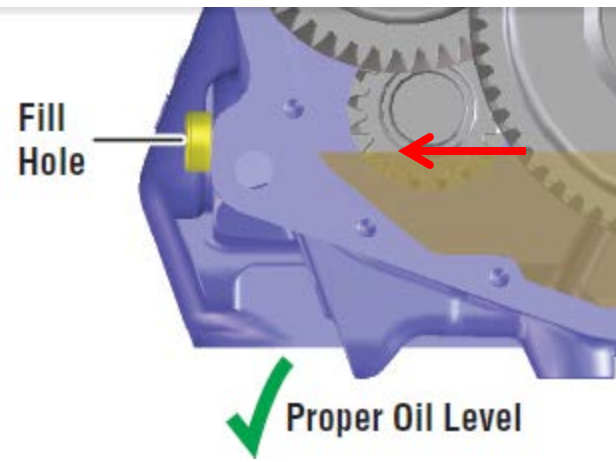


1" Air Impact
Up to 1000 ft. lb.



Lubrication

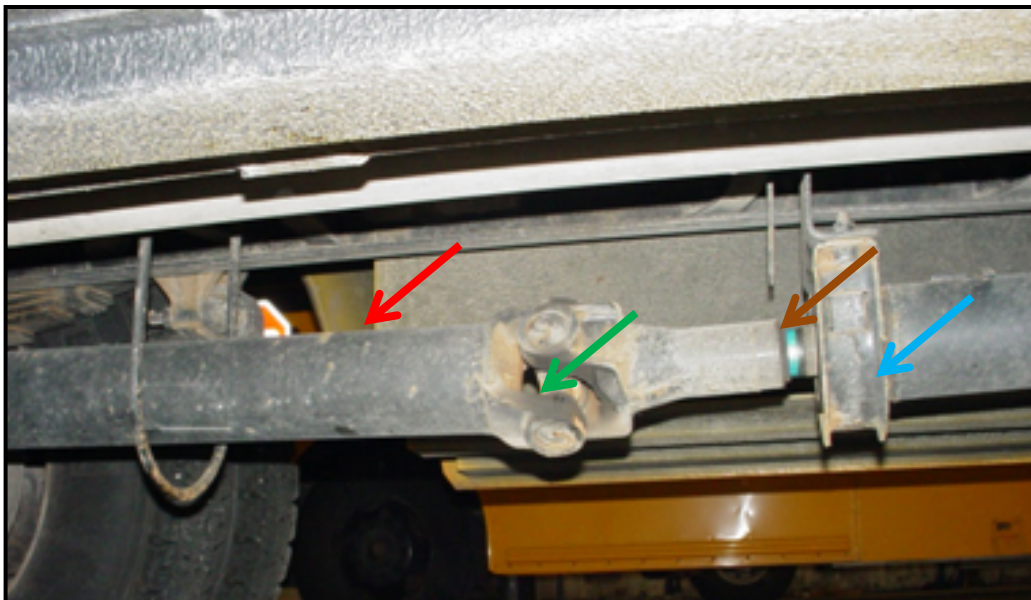
Symptom	Cause	Preventative Action
1. Noise 2. Excessive heat	Failure to use approved lubricants Failure to top off lubricants Failure to road test and recheck Mixed fluids in system	Follow recommended practices Know approved lubricants for all Drive Train components







Manufacture	Unit Type	Oil Type
Eaton / Fuller	Manual /AMT Transmissions	PS-386 Synthetic
Allison	Allison Transmissions	TES-295 Synthetic
Dana	Differentials	GL-5 Spec 75w -90, 80w-140
Meritor	Differentials	GL-5 Spec 75w -90, 80w-140
Mack	Differentials	GO-J Spec. 80w-90, 85w-140 GO-J + Synthetic 75w 90

Driveline & Suspension

Symptom	Cause	Preventative Action
<ol style="list-style-type: none"> 1. Vibration 2. Noise 3. Grinding 4. Component failure 	Failure to inspect driveline and suspension components for systems deficiencies	Perform inspection prior to putting the vehicle in service Practice standard maintenance intervals



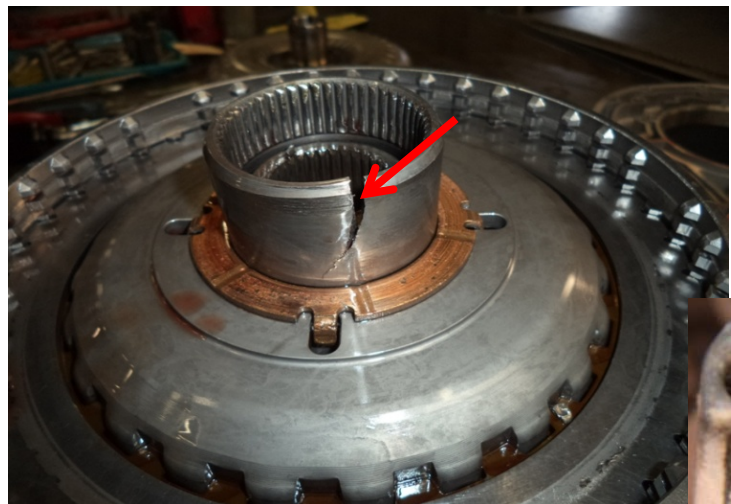
-  Improper driveline angle
-  Worn u-joint
-  Worn slip yoke
-  Worn carrier bearing

continued...

Driveline & Suspension continued

Component failures due to vibration - vibration caused by faulty driveline/suspension

Crack in clutch support hub



Worn splines



Loose fasteners

