TECHNI/TIPS

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LEADERS IN LUBRICANTS **NUMBER 98**

GREASE TROUBLESHOOTING

Application	Symptom	Possible Causes	Check For
	BEARINGS – Assumes that correct bearings are in service.		
Rolling Contact	Noise	Condition of Bearing	Worn or brinelled bearing.
	High Bearing Temperature	Overgreasing	Too frequent application. Bearing packed too full. Excessive grease charged per servicing.
		Starvation	Insufficient application frequency.
		Incorrect Product	Incorrect base oil viscosity. Deficient load-carrying ability (EP quality).
	Excessive Leakage	Seals	Mechanical damage. Incorrect installation.
		Overgreasing	Too frequent application and excessive amounts applied.
		Incorrect Product	Grease too soft for application or softening in service.
		Incompatibility of Grease	Admixture of greases.
	Frequent Bearing Replacement	Excessive Wear	Load-carrying ability of grease to handle shock loading (EP). Starvation. Contamination, dirt and rust. Normal bearing life exceeded. grease too stiff, causing channeling.
		High Temperature	High operating temperature.
		Misalignment	Correct alignment.
Plain Type	Over heating	Improper Distribution in Bearings	Grease too stiff. Incorrect grooving.
		Starvation	Infrequent application. Defective/plugged lubricator.
		Incorrect Grease	Mechanical stability of grease in service.
	Excessive Wear	Starvation	Infrequent application. Defective/plugged lubricator
		Incorrect Grease	Inadequate load-carrying ability of grease. Temperature range of grease.
		GEARS	
Enclosed	Excessive Leakage	Grease too soft for Application	Product penetration.
		Incompatibility of Grease	Milling down of product. Admixture of grease.
	Nosie Gearbox	Lack of Lubrication	Improper lubricant level. Grease too stiff.
	Over heating	Lack of Lubrication	Improper lubricant level. Grease too stiff.
		Churning	High grease level. Grease to stiff.
	Tooth Breakage	Not Usually lubricant related	
	Pitting	Mostly improper design and fatigue related	While not generally lubricant related, a heavier grease or base oil may retard progression of pitting.
	Excessive Wear & Scoring	Lack of lubrication	Improper lubricant level.
		Incorrect product	Consistency, EP quality and base oil viscosity.
		Abrasive wear	Lubricant contamination
		Alignment	Not lubricant related

Application	Symptom	Possible Causes	Check For
Open	Gear Wear	Lack of lubrication	Incorrect lubricant. Incorrect application frequency.
		Abrasive wear	Contamination with abrasive.
	Buildup on gears or in roots	Excessive lubricant	Frequency of lubrication. Proper type of lubricant. Airborne dirt.
Sliding	Non-uniform motion (slip stick)	Lack of lubrication	Frequency of application. Proper type of EP qualities or adhesiveness.
U-joints	Excessive Wear	Insufficient lubrication	Lubricant EP and high temperature quality. Application frequency. Slumpability of grease.
Electric Motors	Electric malfunction high temperatures	Excessive grease leakage	Lubrication frequency and quality applied.
Couplings	Dry coupling	Excessive grease leakage	Damaged seals. Consistency of grease. Keyway opening. Initial fill.
	Hardened grease	Centrifugal separation	Proper grease quality.
	Excessive wear	Incorrect grease	EP qualities of product.
Centralized	No grease to points of Application	Depleted reservoir	Fill with proper lubricant
		Pump malfunction	Air/electrical supply.
		Plugged metering Blocks	Plugging and proper grease.
		Airbound system	Bleed as required.
	High system pressure	Plugged metering devices	Check and clean.
		Malfunctioning relief valve	Check and repair.
		Grease consistency too hard	Product recommendation.
Wet Applications	Noise-high wear	Lack of lubrication	Application frequency. Type of grease in service.
		Washout of lubricant	Extended application frequency, Grease consistency.
	Excessive corrosion	Incorrect lubricant Selection	Incorrect thickener type. Product's ability to absorb water. Inability to maintain structure. Rust inhibitor additives.
High Temperature	Noise-high wear	Lack of lubrication	Application frequency. Type of grease in service.
	Excessive leakage	Improper grease	Thickener type. Base oil viscosity.
		Incompatibility of grease	Consistency of grease. Admixture of greases.
		Seals	Not lubricant related (unless grease and seal are incompatible).
	Grease hardening	Improper grease	Oxidation stability of grease. Thickener type.
		Infrequent relubrication	Frequency of relubrication.
Low Temperature	Component motion restricted	Incorrect Grease	Grease with low torque quality. Base oil viscosity.
	Difficult application	Incorrect grease	Pumpability qualities. Base oil viscosity. Consistency.
	Freeze-up	Water in system	Water contamination. Lubricant's ability to absorb/ shed water.

Note: Above excerpts provided by NLGI-Lubricating Grease Guide, published by National Lubricant Grease Institute, Kansas City, Missouri.

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