LUBE BEST PRACTICES

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IF YOU THINK TRAINING IS EXPENSIVE, TRY IGNORANCE!!

KCP&L Kansas City
THE FIVE RIGHTS OF LUBRICATION

The right lubricant
The right quality
The right amount
The right place
The right time
Most new oil today comes to you in a new drum with 150 PPM of water. In metal drums with metal bungs you can get a lot more than that if not stored properly.
DON’T STORE DRUMS OUTSIDE IF POSSIBLE, AND IF YOU MUST BE SURE TO COVER THEM UP. EXPECT CONTAMINATION FROM THE RUSTY BARREL TOPS AS THEY WILL HAVE WATER IN THEM.
ROLL DRUMS SO THE BUNG WILL BE AT THE 3 AND 9 O'CLOCK POSITION
OILERS CAN PROTECT AND CONTAMINATE THE LUBRICATING SYSTEM.

BASIC SEDIMENT AND WATER TRAPS HAVE MANY ADVANTAGES, USED CORRECTLY THEY HAVE A REAL RETURN ON INVESTMENT. WATER IN OIL WILL CAUSE HYDROGEN EMBRITTLEMENT ON YOUR BEARING RACES

OIL CONDITION SIGHT GLASS OR BS&W BOWL IS NEEDED TO SHOW IF THE OIL IS SATURATED W/WATER, THE OIL HAS FREE WATER, AND THE OIL LEVEL IS POSSIBLY TOO HIGH.
THIS PHOTO SPEAKS FOR IT’S SELF
So Does This One
FLUID CLEANLINESS REFERENCE

Typical hydraulic system clearances

- Smallest visible to the eye: 40
- Human hair: 80
- Fuel: 5
- 2

Circle sizes indicate size of objects relative to each other.
0.002% Water in Oil

1 drop of water in a quart of oil shortens bearing life by 48%

3% water in oil reduces bearing life by 85%

TEMPERATURE AND CONTAMINATION EFFECT OIL LIFE THE MOST. USE INDUSTRIAL ASSEMBLY LUBRICANTS FOR ALL REBuILDS.
Grease motor bearing inspections in plants indicate that most motor bearings are over greased, some refineries surveys confirm 98%.

Over-greasing can cause excessive bearing temperatures, premature lubricant breakdown and bearing failure. Care should be exercised against over-greasing.

There are more failures from over lubrication than not enough lubrication 5 to 1 at least.
WHAT CAN HAPPEN WHEN WE OVER LUBRICATE?
Greases of different bases (lithium, polyuria( silicone ), clay, etc.) may not be compatible when mixed. Mixing such greases can result in reduced lubricant life and premature bearing failure. Prevent such intermixing by disassembling motor, removing all old grease and repacking with new grease.

Run the motor for 15 to 30 minutes with the drain plug removed to allow purging of any excess grease (to eliminate the possibility of over-greasing). Shut off unit and replace the drain plug. Put motor back into operation.

CAUTION
TRUTH ABOUT LIP SEALS

Look at the heat in this photo where the lip seal is wearing the shaft!
WHAT IS HOT AND WHAT IS NOT HOT?
90-100-110-120-130-140-150-160

250° and up will push the limits of standard bearings
200 ° will push the limits of most oils
180 ° is a good bearing running temperature
Is the bearing housing the same temperature as the oil and/or bearing?
TEMPERATURE AFFECT ON OIL LIFE

Life of Oil is Halved for Each 18°F Rise in Temperature (10°C)
OIL APPEARANCE & WATER CONTAMINATION
ADDED VALUE TRAINING

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