

ISO-9001 Registered Quality System. ISO-21469 Compliant.

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## **LUBRIPLATE Pure Flush Instructional Bulletin**

\*NSF International H-1 Registered

"This product is certified OU Kosher Pareve"

"This product is Halal Certified"

LUBRIPLATE Pure Flush is an NSF International H-1 Registered\* flushing and cleansing lubricant which can be used to clean and flush all types of equipment within food, beverage and pharmaceutical processing plants. (Please see Bulletin 8-20 for additional technical data.)

The following are procedures that can be used when using LUBRIPLATE Pure Flush in gear cases, hydraulic systems, etc., without dismantling the equipment. This of course represents a savings on labor and downtime.

## **Gear Box Cleaning Procedure**

Clean gear boxes in accordance with periodic maintenance schedules. Special attention should be given to the breather seals, sight glass and fittings.

For removing water from gear boxes, please follow the tapping procedure listed below:

Open drain plug.

Drain until milky fluid and/or water or sediment stops running. At this point, clear, non-milky oil should appear.

Replace drain plug.

Clean breather and sight glass.

Fill to required level.

The following instructions should be adhered to when periodically changing oil.

#### **Periodic Oil Change Procedure**

Drain approximately 15 to 25% by volume the existing oil currently being used in the gear box.

Add a charge of 15 to 25% by volume, LUBRIPLATE Pure Flush, one to five days prior to a scheduled oil change. Percentage of LUBRIPLATE Pure Flush added will depend on the severity of contamination.

After the unit has run one to five days with LUBRIPLATE Pure Flush, pull the drain plug and drain as completely as possible. The oil will drain from the unit much more readily if drained just after shutdown.

Although it is not always possible, adding a small charge of new oil under pressure will flush any remaining contaminants that may be left behind.

When the gear box is empty, remember to clean the breather, sight glass, filters and heat exchange systems when they exist.

Recharge with new oil. Always check sight glass level.

Note: Regular use of LUBRIPLATE Pure Flush in gear boxes prior to each oil change will help remove any carbonaceous deposits, debris or sludge that may have developed over time.

## **Hydraulic System Cleaning Procedures**

In the cleaning of hydraulic systems, the recommended procedure will depend on both the size and the condition of the system. On smaller systems, drain up to 50% of the hydraulic oil and replace with LUBRIPLATE Pure Flush. This mixture should then be used for approximately two hours of normal operation. At this time, the oil should then be drained and replaced with new hydraulic oil. For larger hydraulic units or where it is not practical to drain as much oil from the system, we recommend draining off enough hydraulic oil so that an addition of 10% to 30% LUBRIPLATE Pure Flush be added to the system. This mixture should then be run for a period of two to four hours to thoroughly clean all deposits and debris. Then drain and refill with new hydraulic oil. Frequently check all filters as this is key for the collection of any discharged residue.

Note: If the unit is unusually dirty, your initial run may have to be without filters and an open line to discharge chunks of thickened oil. Immediately follow this flush briefly for 30 minutes with a mixture of LUBRIPLATE Pure Flush and clean oil to thoroughly clean lines, valves, etc., and then recharge with new lube. (Remember to change filters.)

Hydraulic tanks should have the following:

Venting (keep clean.)

Easy drain plug (magnetic plugs, if possible.)

Baffle to control fluid motion. Entry and exit ports should have extended piping and bias cut close to tank bottom.

Fittings, piping, exit and entry ports should be machined (no burs control agitation.)

Filter when moisture is present. No smaller than 10 micron (filter check required 4 to 8 weeks.)

Note: Valves, gauges, pressure and most important, temperature should be monitored regularly.

\* Routine oil analysis is advisable for temperatures in excess of 150°F.

## **Bearing Flushing and Cleaning Procedure**

Remove bottom bearing cap plug, if one exists. Prepare a grease gun with a mixture of LUBRIPLATE Pure Flush and grease. Inject into bearing and run for approximately 2 to 4 hours. If necessary, repeat a number of times, then try charging with new lube. Replace bottom bearing cap plug.

For severely contaminated bearings, use the following procedure: For motor bearings and other bearing housings where there is a drain plug, apply a quantity of LUBRIPLATE Pure Flush directly to the bearing housing (remove zerk fitting) allowing the unit to run for at least 20 minutes. Then remove the drain plug to permit the resultant mixture to be drained out. Replace the plug. Fill the housing approximately 1/3 capacity and run again for 15 to 20 minutes and drain. Repeat this last procedure again if the housing is unusually dirty or loaded with carbon deposits. After the unit is thoroughly cleaned and drained, pump in new grease slowly until grease appears at the drain plug. Replace the drain plug when the lubricant ceases to ooze from the drain hole.

#### **Cleaning Air Tools**

LUBRIPLATE Pure Flush is excellent for cleaning air-operated tools and equipment. LUBRIPLATE Pure Flush can be fed directly though the airline lubricators or it can be injected into the airline by an oil pump. In many cases where air-operated equipment has become sluggish, the introduction of LUBRIPLATE Pure Flush oil through the airline system will flush and clean the unit, eliminating disassembly for cleaning purposes. It is recommended for cleaning all types of air-operated impact wrenches, rotary grinders, reciprocating air tools and other air-operated equipment. For continued good operating efficiency after the tool is cleaned, use LUBRIPLATE FMO-85-AW which is an excellent air tool and airline oil and is also NSF International H-1 Registered.

## **Cleaning Chain**

For contaminated roller chain, LUBRIPLATE Pure Flush can be applied directly to the chain by the means for which the chain lubricant is dispensed. However, if LUBRIPLATE Pure Flush is applied under pressure, this will increase the effectiveness of the cleaning process. LUBRIPLATE Pure Flush should not be used straight in chain applications which exceed 200°F.

These suggested flushing and cleaning procedures will always be superseded by specific flushing and cleaning instructions that may be listed in the manufacturer's original equipment manual. We stress the need to consult with your OEM instructions prior to the introduction of LUBRIPLATE Pure Flush.

# Procedure for Flushing Rotary Screw Air Compressors with LUBRIPLATE Pure Flush

LUBRIPLATE Pure Flush should be used where an NSF International H-1 Registered cleaning and flushing lubricant is required. For non-food grade applications, please consider LUBRIPLATE Syn Flush.

- 1. Drain compressor oil immediately after shutdown while fluid is warm. This should include all possible drain points.
- 2. Check all filters as well as the separator. If in good condition, proceed to step 3. If filters or separator is heavily contaminated, change or clean at this time as the use of LUBRIPLATE Pure Flush may result in carbonaceous deposits and varnish being removed during use. Fill compressor with LUBRIPLATE Pure Flush.
- 3. Run air compressor <u>UNDER NO LOAD</u> for a period of 2 hours to 24 hours. The run time will be decided in part by the severity of contamination and the condition of the air compressor.
- 4. Drain LUBRIPLATE Pure Flush from air compressor at all drain points as completely as possible. This should be done immediately after shutdown.
- 5. Change air oil separator as well as all filters to ensure that all contaminants and oxidized oil are removed from compressor.
- 6. Refill compressor with fresh LUBRIPLATE SFGO Ultra oil.
- 7. An initial sample should be taken after 500 hours service. Oil analysis will determine the condition of the oil at that time and whether continued flushing is necessary. Oil samples should then be taken at 500-hour intervals until an appropriate oil drain interval has been established. The LUBRIPLATE Oil Analysis Program is provided at no cost to the customer. Drain intervals may be as high as 2,000 to 4,000 hours when using LUBRIPLATE SFGO Ultra oil.

LUBRIPLATE Pure Flush is compatible with mineral oils, USP white mineral oils, other polyalphaolefins, and many ester based synthetics. Always consult LUBRIPLATE when converting an air compressor to LUBRIPLATE SFGO Ultra oil from an existing lubricant that may not be compatible with polyalphaolefin synthetic oils. Many synthetics are as different from each other as they are with petroleum products; therefore, it is always advisable to contact LUBRIPLATE prior to changing compressor oils.

For additional information or other possible applications for LUBRIPLATE Pure Flush, please contact your LUBRIPLATE District Manager or our Technical Service Staff at 1-800-347-5343.

\*Registered H-1 by NSF International for use in food processing facilities as a lubricant or anti-rust agent on equipment in which there may be incidental contact involving the lubricated part and the edible product.

#### \*NSF International H-1 Registration No.

126121

(Meets former USDA 1998 Guidelines)

Manufactured with ingredients that comply with FDA 21 CFR 178.3570.

"LUBRIPLATE Pure Flush contains no components derived from TSE/BSE relevant animal species; therefore, they are compliant with the requirements of the TSE Note for Guidance EMA/410/01 Rev. 3 July 2011".