

Knowledge Domain: Motors
Unit: Cleaning/Lubrication
Skill: Lubricant (type, reservoir)

Tools and Parts Required:

1. Old motor to be lubricated
2. general motor/machine oil (A Penn brand or another)
3. Towel

Introduction

In motors, parts move against each other, causing friction that converts energy into heat. Contact between moving surfaces also wears away those surfaces. Worn parts could lead to lower efficiency and degradation of the motor. Lubricating oil creates a separating film between surfaces of adjacent moving parts.

Identification and Diagnosis

If a motor is not running at a steady speed or it sounds squeaky, then it may be time to add oil. Oils should be used for motors that run at higher speeds. Grease is for slower speeds and cool temperatures.

Large motors use a dip-stick or oil level sight gauge to tell the oil level.

Use all-purpose machine oil such as A Penn:



Procedure

1. Unscrew the plastic coverings.
2. Carefully remove the coverings.
3. Locate the reservoir.



4. Determine if there is enough oil already in the reservoir.
 - a. Dip-stick: Remove the dip-stick. Use a clean towel to wipe excess oil off the dip-stick. Replace the dip-stick into the reservoir. Remove the dip-stick immediately and read the oil level.
 - b. Oil level sight gauge: Locate the gauge. If the oil level is not between the targets, you must add more oil.

5. Add oil.



6. Replace all coverings.

Exercise

Your instructor will give you a motor. Take the covering apart and look for the reservoir. Determine if there is enough oil. If the engine needs oil, add more oil.

Preventative Maintenance and Calibration

Be careful when choosing suitable motor oil. WD40 is not motor oil.