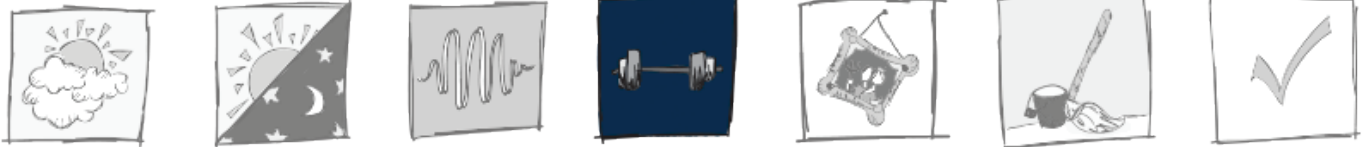


Oil or Grease: Load (Part 3/4)

June 30, 2016

Factor #4: Load



As you might guess, an increased load increases the stress upon your motor, just as a full trailer increases the stress on your truck or a child on your shoulders puts increased pressure on your back. In motors, this stress produces heat, which creates a heightened potential for lubricant evaporation.

Spill a glass of lemonade on the sidewalk on a hot day, and your 25-cent beverage from the neighbor kids across the street will evaporate in the sun. Produce enough heat inside a motor that is lubricated with oil, and in extreme cases, the same will happen.

To compensate for this loss, re-lubrication must become a routine part of your motor maintenance schedule. Although this practice is much more relevant to larger motors, some fractional horsepower motors also benefit from this type of maintenance. The key is to determine whether or not your motor is sealed or unsealed—if unsealed, re-lubrication might be necessary.

The frequency of re-lubrication as well as the amount of oil to use is determined by both the type of motor and by how often it is used. However, such specifications should be provided by your manufacturer, so re-lubrication is more a matter of inserting oil into the lubrication ports according to the directions provided. Sometimes purging, or the complete removal of all existing lubricant, is recommended.

However, although oil is usually easily refilled (oils tend to be fairly compatible with each other), grease proves to be a bit more complicated, because all greases are not created equal. Even the “normal” grease, or rather NLGI 2 grease, is not always compatible with another grease of the same classification—all cans and brands are not created equal. The best recommendation would be to advise that greases should only be refilled with the EXACT same brand and kind. The following compatibility chart demonstrates this compatibility problem.



“Greases should only be refilled with the EXACT same brand and kind.”



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In addition to finding the correct grease replacement, some people suggest that like some oils, the complete purging of grease should occur before refilling it; however, with grease this increases risk to contamination, and sometimes the gearbox placement or motor position make re-lubrication exceedingly difficult or impossible, which is one of the topics of the final installation of the Oil vs. Grease debate.

Catch next week's blog for the last three factors to consider: orientation, cleanliness, and efficiency.

	Aluminum Complex	Barium	Calcium	Calcium 12-Hydroxy	Calcium Complex	Clay	Lithium	Lithium 12-Hydroxy	Lithium Complex	Polyurea
LEGEND:										
C = Compatible										
M = Moderately compatible										
I = Incompatible										
X = Same lubricant type										
Aluminum Complex	X	I	I	C	I	I	I	I	C	I
Barium	I	X	I	C	I	I	I	I	I	I
Calcium	I	I	X	C	I	C	C	M	C	I
Calcium 12-Hydroxy	C	C	C	X	M	C	C	C	C	I
Calcium Complex	I	I	I	M	X	I	I	I	C	C
Clay	I	I	C	C	I	X	I	I	I	I
Lithium	I	I	C	C	I	I	X	C	C	I
Lithium 12-Hydroxy	I	I	M	C	I	I	C	X	C	I
Lithium Complex	C	I	C	C	C	I	C	C	X	I
Polyurea	I	I	I	I	C	I	I	I	I	X

