SOP Number:	PASCO COUNTY FLORIDA OPEN SPACES. VIBRANT PLACES. ***Utilities Operations and Maintenance*** 7501 Boyette Rd Wesley Chapel, FL 33544 **Standard Operating Procedures SOPs – WCWWTP**	Page: **1 of 3**
Date Written: 8/11/2020		Revised By:
Date Revised:		Approved By:
Tree Location: **WC-M-6004A**		
Title: **PE-East Chemical Flash Mixer #1**		

Safety/Environmental Require

- ☐ **H** = **H**azardous Material
- ☐ **C** = **C**onfined Space Requirements
- ☐ **T** = Care Must Be Used Not to Exceed **T**olerance Levels
- ☐ **R** = Special Safety/ Environmental **R**equirements
- ☐ **S** = **S**ubstance Containment Procedure required
- ☐ **L** = **L**ockout/Tagout Procedures Required
- ☐ **E** = Specialty Safety **E**quipment Required

Unique /Special Safety or Environmental Requirements:

N/A

Equipment / Materials Required (Safety Items, Tools, and Other Materials):

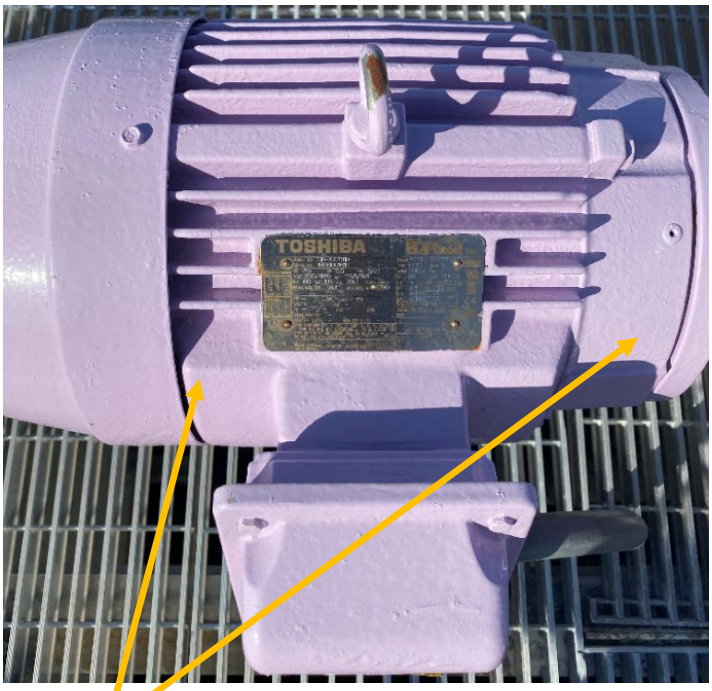
Appropriate PPE, Vibration pen, Temperature gun, oil dispensing jug, catch pan, grease gun, clean rag and correct oil – Refer to the Company Utilities Lubrication List

References:

- Toshiba Motors Operations and Maintenance Manual
- Philadelphia Mixing Solutions Operation and Maintenance Manual

STEPS	AWARENESS

1. This motor has sealed bearings that do not require relubrication.



Temperature readings should be taken on a weekly basis and Vibration Analysis should be taken monthly.

Frames 143T – 256T are furnished with double sealed or shielded ball bearings that are lubricated with lithium-based grease prior to installation. Grease fittings are not supplied and bearings are designed for average 100,000 hours operation under standard conditions.

General Tips:

Motor Information:
Frame – 213TC HP – 7.5 RPM - 1760

Bearing Information –
6208ZZC3 is a Radial/Deep Groove Ball Bearing - Round Bore, 40 mm ID, 80 mm OD, 18 mm Width, **Double Sealed**, C3 Internal Clearance

General Purpose horizontal pump – direct coupled vibration levels:

0.01 – 0.03 in/s	Good
0.04 – 0.10 in/s	Satisfactory
0.11 – 0.27 in/s	Alarm 1 (Warning)
0.28 in/s & up	Alarm 2 (Fault)

Temperature Levels:

Ambient – 130 deg F	Good
130 deg F – 150 deg F	Fair
150 deg F – 170 deg F	Alarm 1 (Warning)
170 deg F & higher	Alarm 2 (Fault)

Issues with this motor due to high vibration, high temperature or any other issue write a corrective work order.

STEPS	AWARENESS

Oil Lubrication (ISO VG 220 EP)
Model #3853M requires 3 gallons of oil

Filling the Mixer Drive

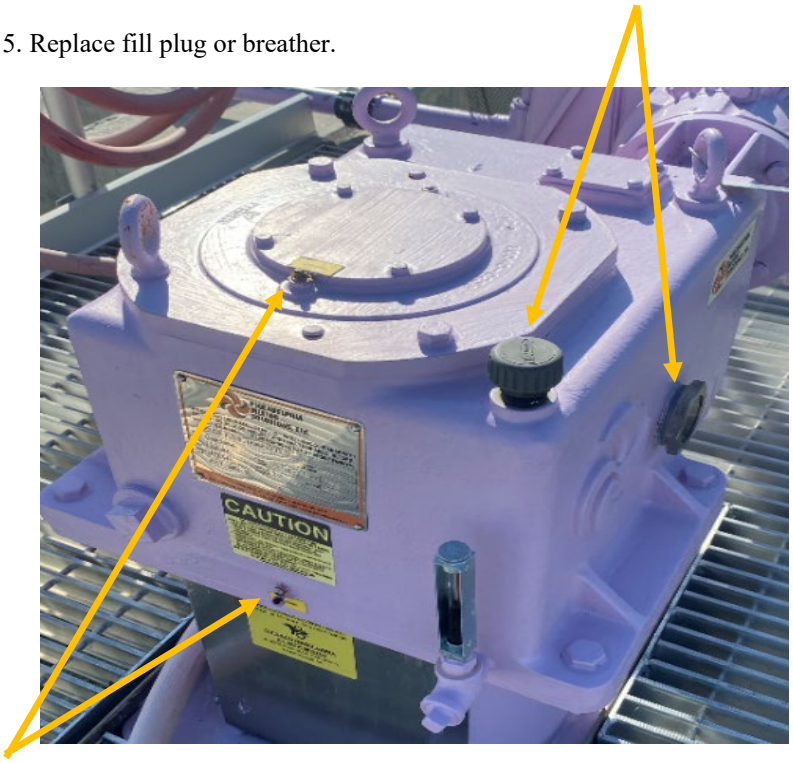
1. DO NOT OVERFILL OR UNDER FILL the mixer drive. Fill level is the "F" line scribed on the dipstick or mid-point of oil level window with the drive at ambient temperature and not running.

2. The mixer drive can be filled in 2 places: the fill plug or the breather.

3. Remove fill plug or breather and wipe clean.

4. Fill mixer drive with recommended lubricant until level is between the mid-point of oil sight glass window to 1/8" above the mid-point at the "F" line scribed on the dipstick. Make sure dipstick is fully seated for determining measurement. Or, if using oil sight glass window, fill unit level is at mid-point of the window. Do not under fill or over fill.

5. Replace fill plug or breather.



Grease Lubrication (ISO VG 220, NLGI 2)

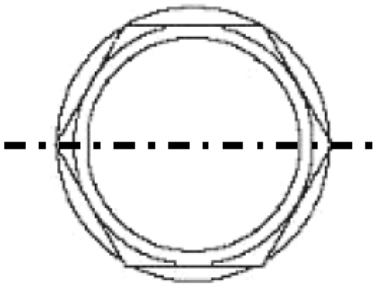
Add grease every 6 months or 2500 hours of operation.

Upper bearing requires 1 fluid ounce of grease

Lower bearing requires 2 fluid ounces of grease.

General Tips:

Oil fill level = "F" line on dipstick or mid-point of oil level window



Oil Changes – Predictive Maintenance (PdM) Schedule

Predictive Maintenance methods use regular oil analysis to determine the condition of the oil and the mixer and this data can be used to determine appropriate time for oil change.

It is recommended to sample the gear unit every **1000 hours** of normal operations or every **3 months**.

Temperature
Normal operating temperatures should not exceed 30 deg F higher than ambient temperature. Temperature will vary due to speed, load and condition of lubricant.

Issues with this pump due to high vibration, high temperature or any other issue write a corrective work order.