

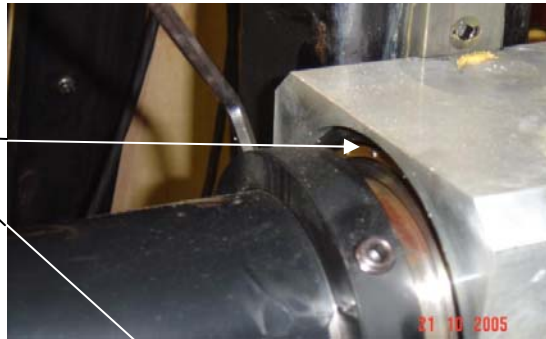
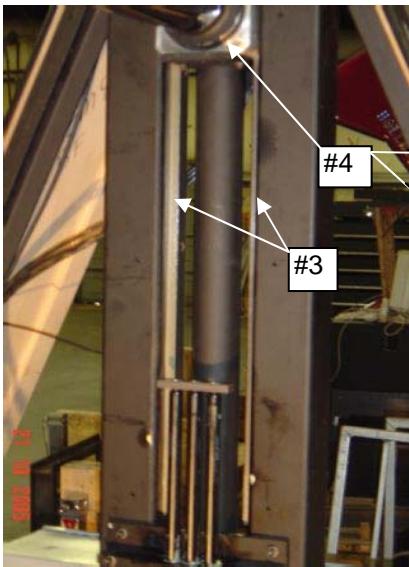
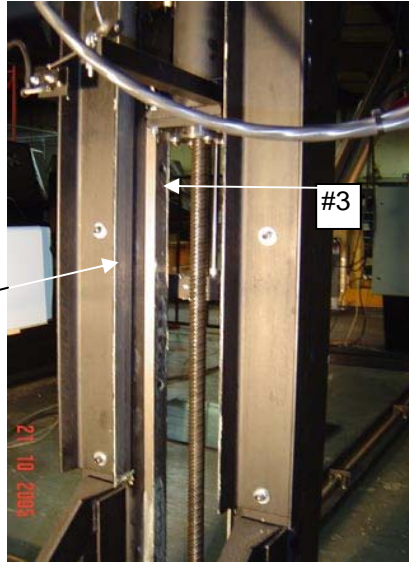
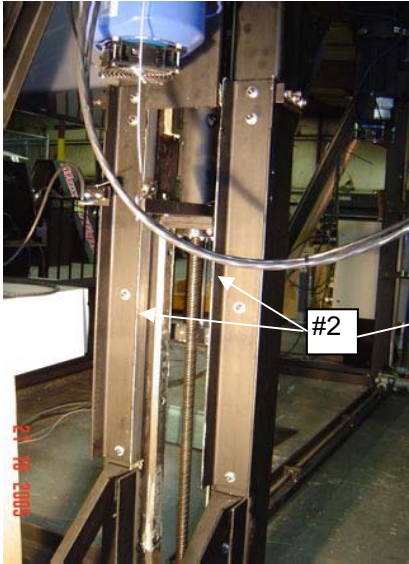
**LUBE REQUIREMENTS FOR ELECTRIC MACHINES**  
**WITH NEW MULI3 LIFT JACKS**

**NOTE! Numbers Referenced in drawing.**

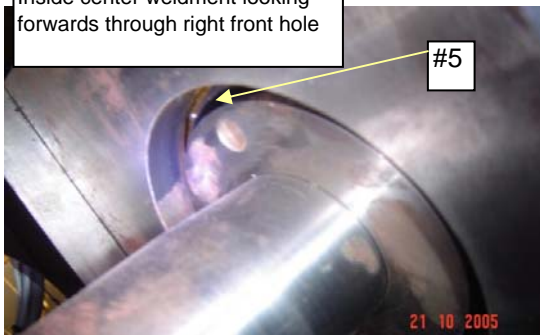
1. **LIFT JACKS.** Lube interval for lift jack gear box and ball nut are;
  - a. Gear box add lube at first 30 hrs or 10 days, then every 6 mos. thereafter.
  - b. Every 18 mos. Minimum, remove, take apart the gear box, clean all parts and re-lube. See Muli3 Maintenance Manual for procedures.
  - c. Ball nut, after 30 hours or 10 days, then every 60 days thereafter.
  - d. Ball nut lubricant is Gleitmo 805, 855M or Fuchs Lubritech GMBH. Lube until you see grease coming out from around the wiper seal.  
  
**Do not, over lubricate the ball nut or it will overheat!!!!**
  - e. Gear box uses Lithogrease G421, or Castrol Speerol BM2, or Mobil Mobilgrease XPH.
  - f. New universal, the spider gets lubed with standard bearing grease, one shot a month. Wipe excess from universal. (Needs a point type nipple on grease gun)
2. **TORQUE ARM GUIDE RAILS.** Lube with white lithium grease once every 200 rides or minimum once per week. Clean off old grease and lightly re-coat surface. Do not allow old grease to accumulate.
3. **PITCH SHAFT BEARING BLOCK GUIDE RAILS.** Same as #2 above.
4. **PITCH SHAFT BEARINGS.** Use oil can with synthetic motor oil. Loosen pitch inner locking collars and move inwards to center about (1) one inch. Apply ten drops or equivalent to topside of bearing, wipe off excess. Put locking collar back into position and snug down set screws. Also apply 4 drops or equivalent to topside of acetyl bearing. This bearing is between outside of pitch block and outer locking collar, both sides. This should be done every 200 rides or if squeak is heard from bearing.
5. **ROLL HUB BEARING.** Apply ten drops or equivalent of synthetic motor oil to the top side of the bearing cage. This can be accessed thru the hand holes in the front of the center weldment. Use an oil can with flexible spout to reach into this area. This should be done every 200 rides or minimum once a week.
6. **LIFT SYSTEM CROSS DRIVE SHAFT.** One drop of synthetic motor oil per bearing. This should be done every 200 rides or minimum once a week.

7. **COUNTERWEIGHT SHAFT.** Remove old white lithium grease and lightly re-coat with same. Perform this lubing monthly.
8. **COUNTERWEIGHT ACTUATOR DRIVE SHAFT.** Add one small dab of Mobil EP-2 grease, before and after the counterweight clutch. Do not wipe off old grease.
9. **LIFT SHOCKS.** Lube with white lithium grease once every 200 rides or minimum once per week. Clean off old grease and lightly re-coat surface. Do not allow old grease to accumulate.

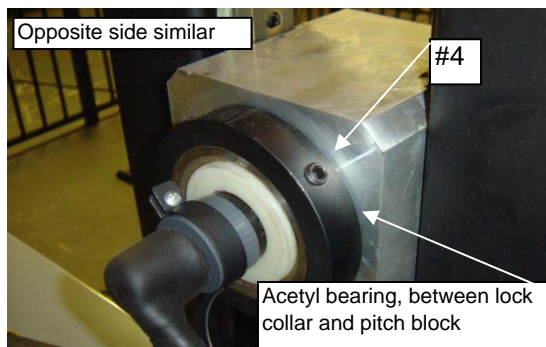
NOTE2. The Mobil EP-2 grease is also used inside the counterweight gear box. Normally no extra service is required on the gear box.



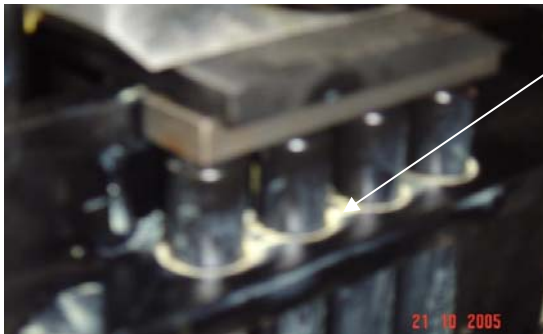
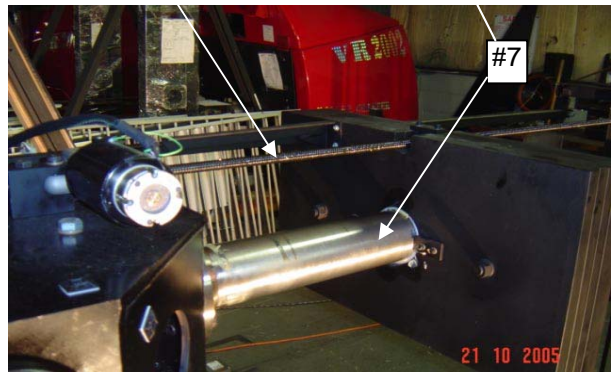
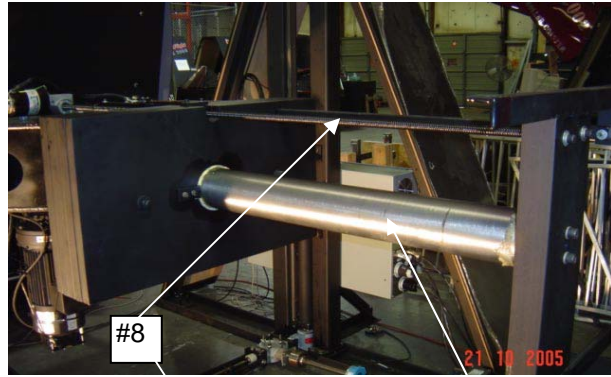
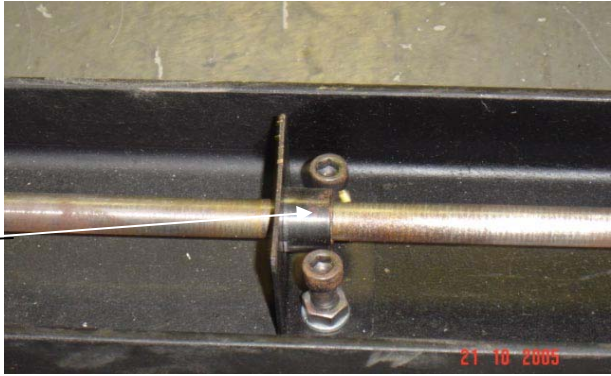
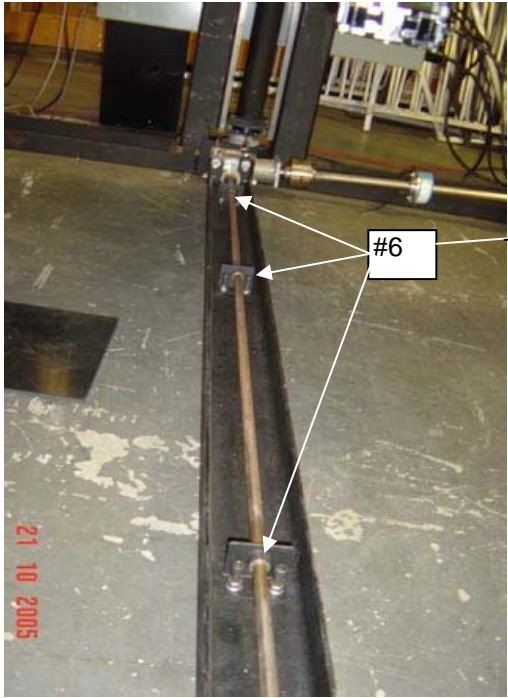
Inside center weldment looking forwards through right front hole



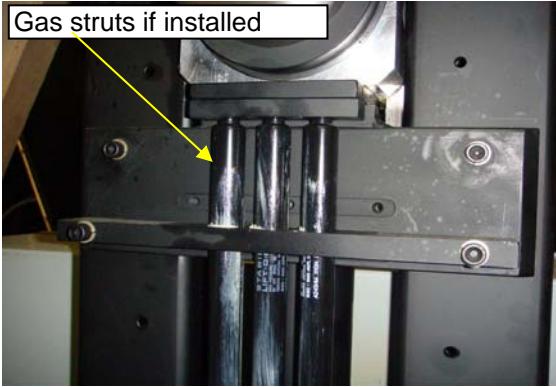
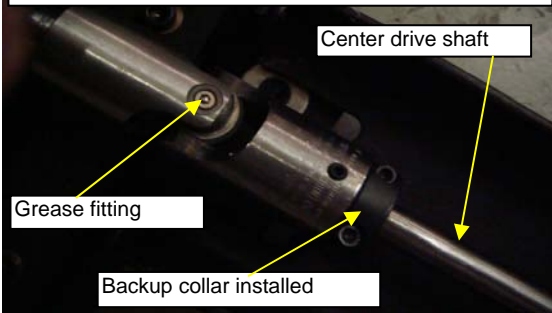
Opposite side similar



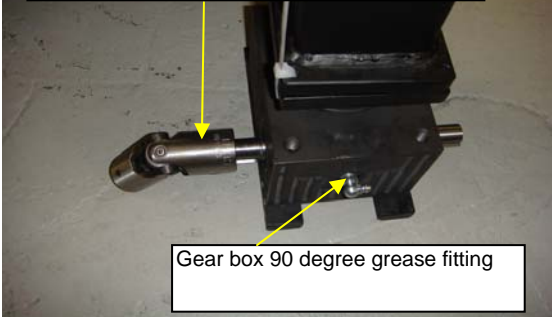
Acetyl bearing, between lock collar and pitch block



1f. Universal spider gets lubed every month using standard bearing grease. One shot



Motor side with new style universal installed



1a. Gear box add lube at 30 hrs or 10 days then every 6 mos.



1c. Ball nut after 30 hrs or 10 days, then every 60 days thereafter. DO NOT OVERFILL nut will overheat

