

MAINTENANCE GUIDE

Daily prestart checks

- Check all periodic maintenance has been performed (see below).
- Ensure all guards and covers are intact.
- Check work area and remove any debris.
- Test operation of all controls.

 **CAUTION:** IF ANY FAULTS ARE FOUND, DO NOT ATTEMPT TO OPERATE THE MACHINE.

- Check operation of all safety devices.
- Check chains are not slack.

Monthly maintenance

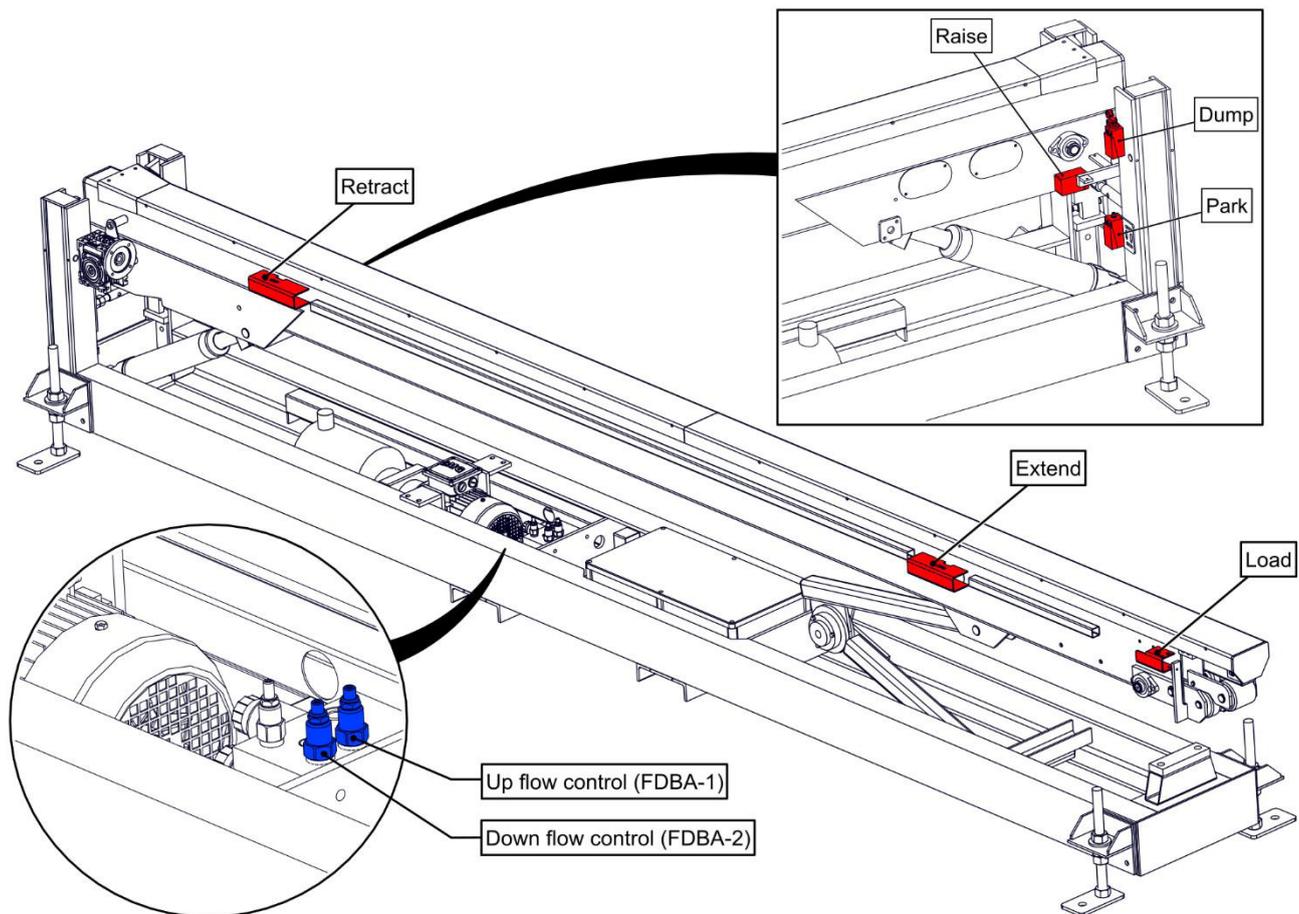
- Check torque limiters at front of booms are all set evenly.

 *Note:* the booms should not be springy or jerky.

1. Move the boom up until the boom is level, and extend out approximately 1m.
2. Push the front of the boom down by hand and watch it spring back into position. You want it to move in a single smooth motion.
 - If the boom bounces a few times, the torque limiter needs tightening.
 - If it grabs and releases in a jerky motion, the torque limiter likely needs to be loosened off slightly.
3. To adjust the torque limiter, evenly adjust the three screws that press into the spring.

 *Note:* if the screws bottom out, back them right off, tighten up the large nut as much as possible by hand then re-adjust the three screws evenly.

- Check flow rates for consistent slow up and down movements between booms.
 1. Make sure the torque limiters are all set evenly before adjusting flow rates.
 2. Adjust the up (FDBA-1) and down (FDBA-2) flow controls on the hydraulic manifold located beneath the weather cover (see drawing below) to bring the slow up and down speeds of each boom into sync.



➤ Check all limit switches are functioning (see drawing above).

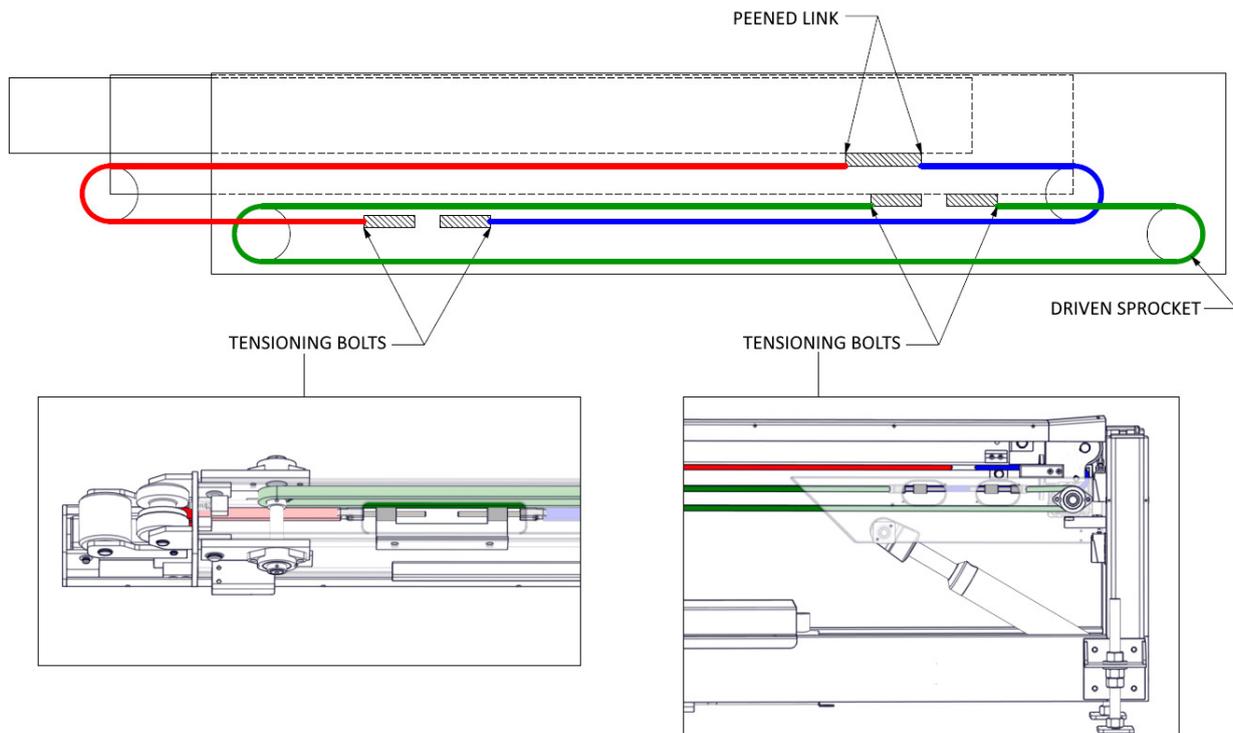
- The **Extend** (forward) and **Retract** (reverse) limit switches should stop the boom at their respective limit.
 - If not triggering, angle the switch inwards slightly.
 - Ensure the bolts holding both switches in place are tight.
- The **Raise** limit switch should stop the boom when the maximum raised position (front end of the boom) is reached. It can be adjusted using the adjusting bolt above it.
 - Wind the adjusting bolt up to raise the maximum raised position.
 - Wind the adjusting bolt down to lower the maximum raised position.
- The **Park** limit switch should trigger when the back end of the boom is fully down. It can be adjusted by moving the mounting bracket up or down.
- The **Dump** limit switch should trigger when the back end of the boom is fully up. No particular adjustment is needed. If not triggering, wiring needs to be checked or the switch replaced.



Note: if the front end of the boom can be lowered at high speed, there is likely an issue with this switch.

- The **Load** limit switch should stop the boom if an obstruction is detected under the boom while lowering. It can be adjusted using the adjusting bolt on the sensor arm.

- Grease all roller bearings as needed.
There are two roller bearings at the front and two at the rear. Each bearing requires a couple of pumps of general purpose grease.
- Oil the chains as needed.
 - The main front chain (shown in red below) can be oiled while the boom is extended.
 - The rear chain (shown in green below) can be accessed for oiling by removing the cover plate at the back of the boom.



- Check all chains are tensioned appropriately.
There are three chains that need to be tensioned:
 - The two front chains (shown in red and blue above) can be adjusted using the tensioning bolts that are accessed via an opening on the underside of the boom near the front. There are two tensioning bolts, each of which tensions one of the chains.
 - The rear chain (shown in green above) can be adjusted using the tensioning bolts that are accessed by removing the side access cover plates at the rear of the boom. This chain is a full loop, so either of the tensioning bolts in this location can be used.

⚠ CAUTION: ENSURE THE CHAINS ARE SQUARE AND NOT TWISTED AFTER TENSIONING TO AVOID DAMAGE.