

# INSTALLATION INSTRUCTIONS

## **SLACK CHAIN SENSING SWITCHES – FLM & FLMC**

(Ref. Figures 32, 33a & 33b)

The slack chain sensing switch kits have been shipped loose to be field mounted, wired, and adjusted per the procedure below. These switches are intended to turn off the motor and stop movement of the carriage whenever a slack/broken chain status is sensed.



**DANGER!**

**To avoid personal injury or death, the procedures described in this section should only be performed by qualified service personnel.**

1. To install the slack chain sensing switches, first gain a safe access to the drive base at the top of the masts. There is a slack chain sensing switch kit provided for each lifting chain, (2) total.
2. With the carriage hanging from the chains, each tensioner arm will be pushing towards the sensing switch arm. Each switch is wired to be normally open – held closed.
  - a. Install each switch assembly onto its respective Unistrut channel as shown in **Figure 33a**.
  - b. With the sensing switch arm mounted hanging down & tightened, slide the sensing switch assembly in the Unistrut channel towards the tensioner arm until the switch arm pushes against the tensioner arm and the switches electrical contacts close (listen for the “click”). **See Fig. 33b**.
  - c. Tighten the two bolts holding the switch mounting angle to the Unistrut.

**NOTE:** To change the actuation direction of the switch, remove the switch head. Change the actuating control knob/mechanism to the desired actuation direction. (Reference **Figure 32**)

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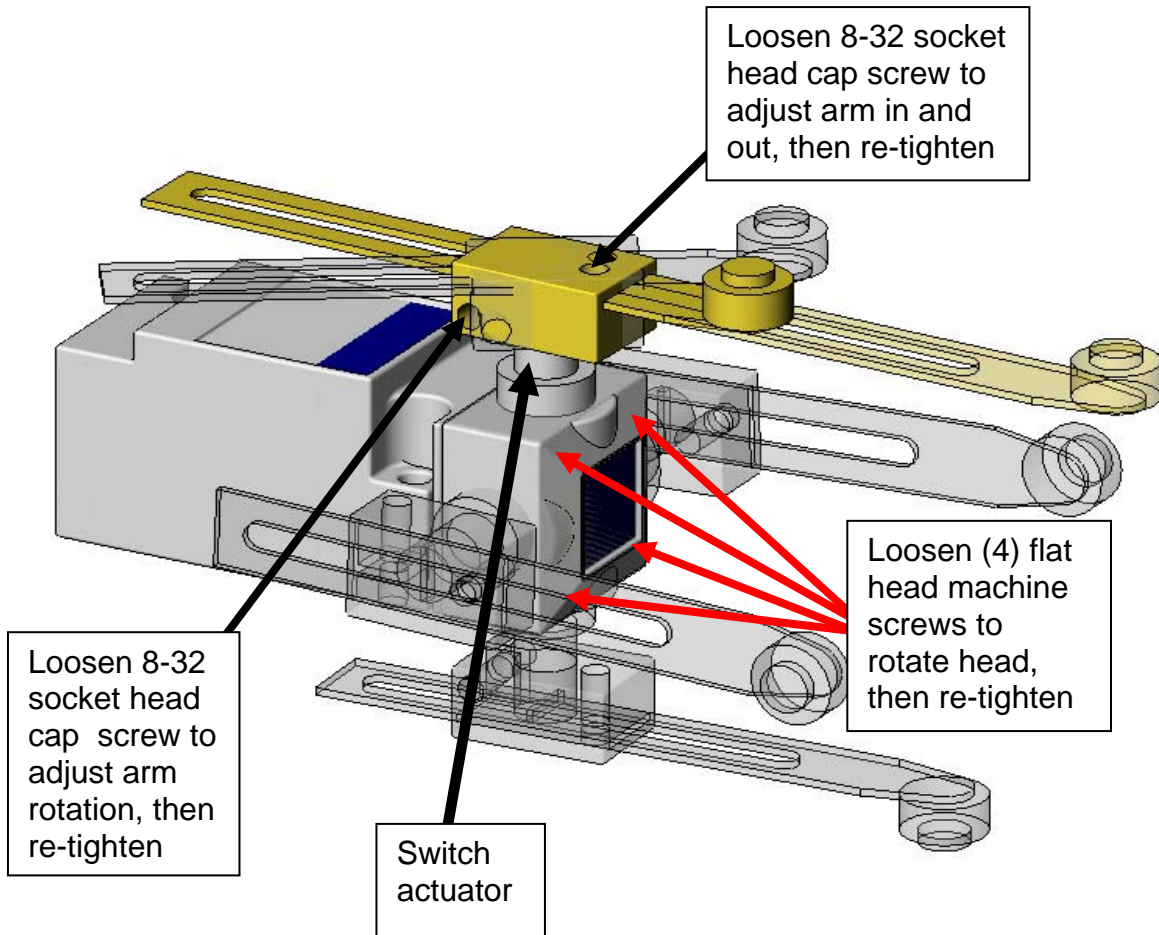
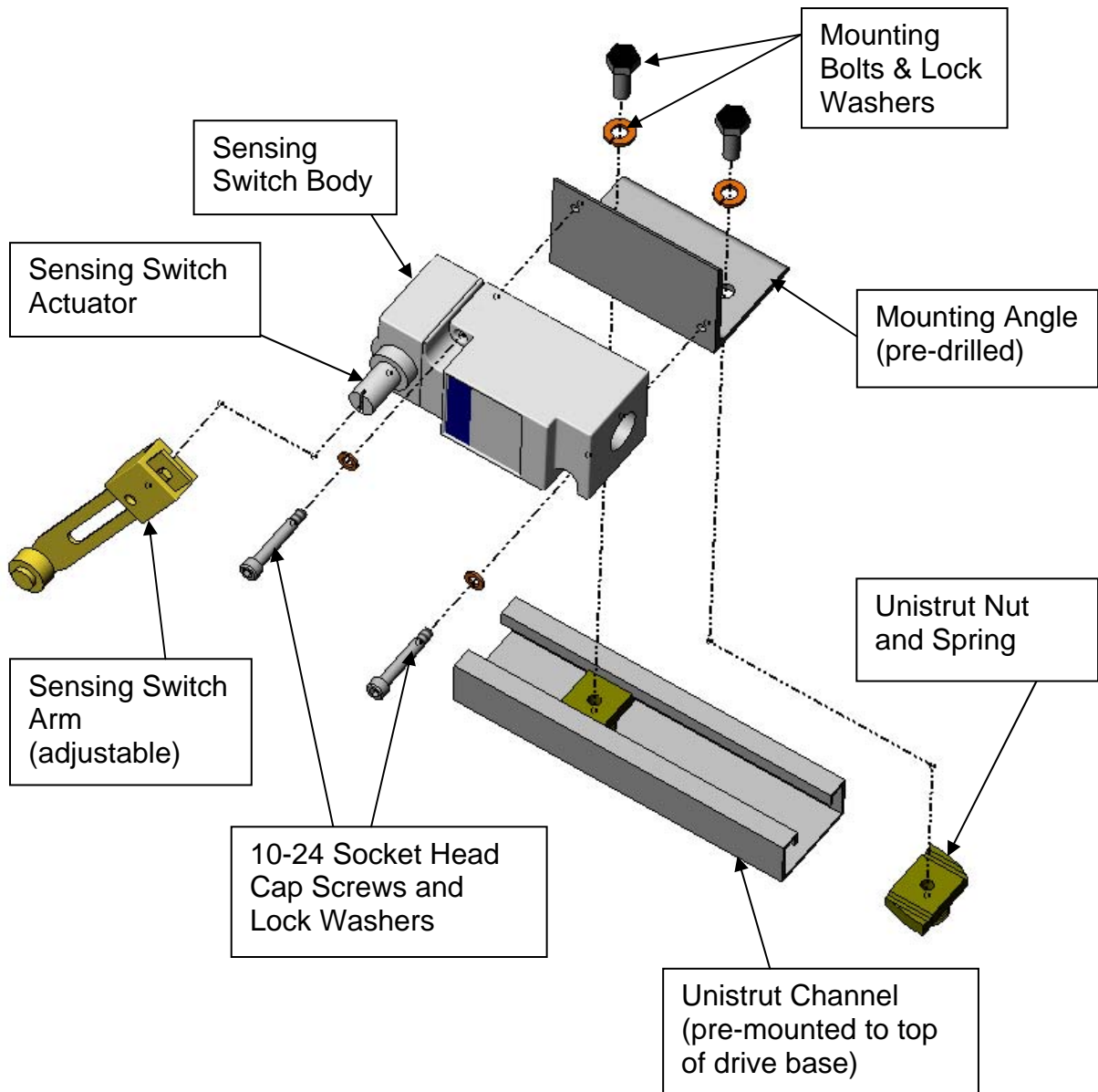


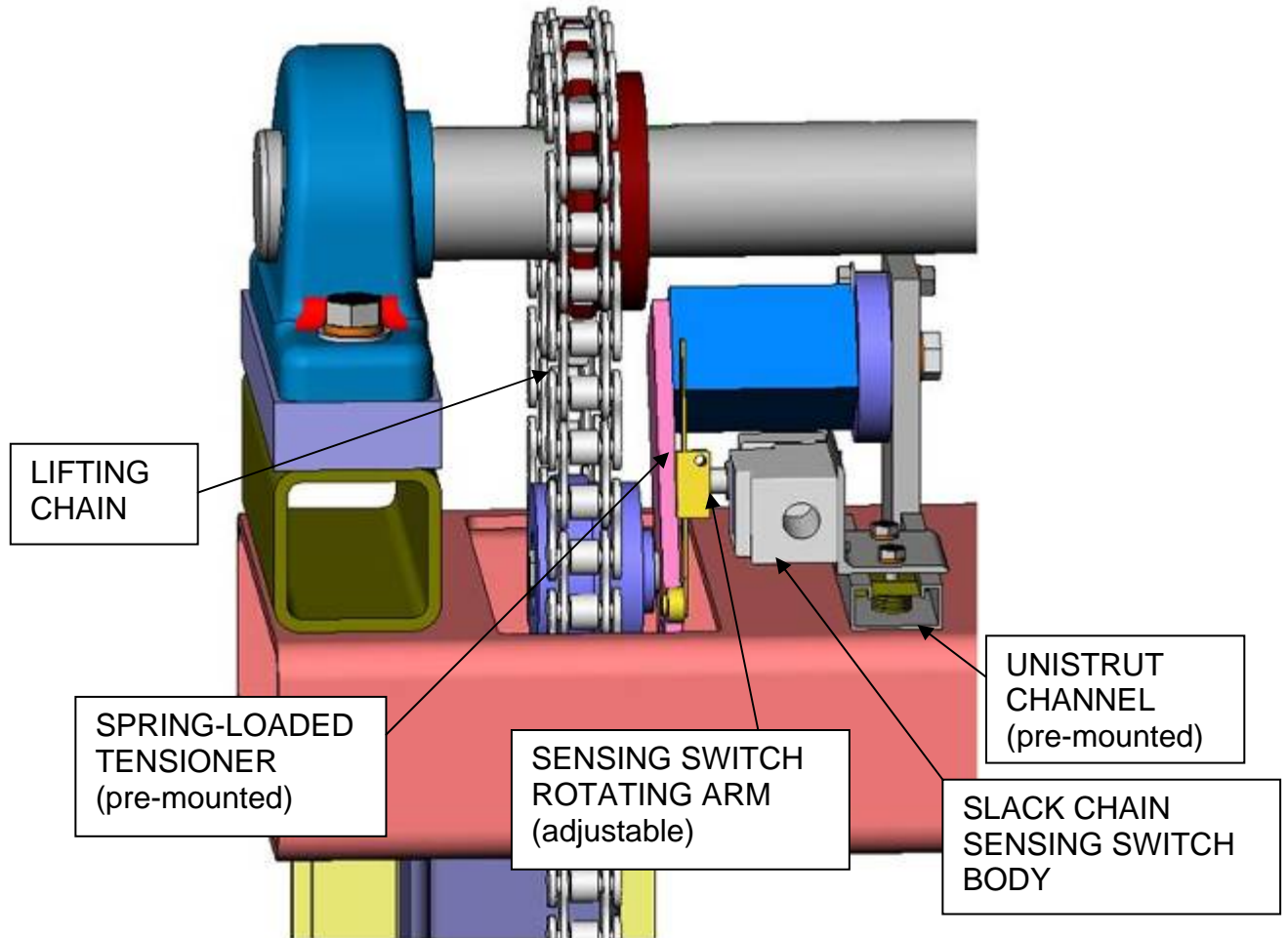
Figure 32 Sensing Switch Adjustments

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**Figure 33a Slack Chain Sensor Kit Assembly**

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**Figure 33b Slack Chain Sensor Kit Mounting**

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3. After installing the slack chain sensing switches, you must test them to make sure they are adjusted and set correctly.
  - a. stack some empty pallets under the carriage, surface must be level
  - b. operate the lift and lower the empty carriage onto the pallets
  - c. when the carriage makes contact with the pallets and as soon as the lifting chains go slack, the motor should stop.

**CAUTION: Be ready to press the emergency stop button if the motor doesn't stop when chains go slack.**

## IF THE MOTOR STOPS WHEN CHAINS GO SLACK

4. A qualified electrician should, while referencing the lift's electrical schematic, test the electrical continuity of both slack chain sensing switches inside the lift's motor control panel to make sure that the contacts in both switches are in the open condition. If both are confirmed open, proceed to step 6. If either switch has contacts which test closed, repeat steps 2 through 4.

## IF THE MOTOR DOESN'T STOP WHEN CHAINS GO SLACK

5. If the emergency stop button had to be used to stop the motor, repeat steps 2 through 4 to further adjust & re-test both slack chain sensing switches.
6. Once confirmed that both slack chain sensing switches are in the open condition as required, chain tension must be re-established in both lifting chains. However, because the slack chain sensing switches are now set properly, the motor will not run to lift the chains. Therefore, a qualified electrician must install a temporary wire jumper inside the lift's motor control panel and bypass the slack chain sensing switches in order to be able to run the motor and raise the carriage enough to re-establish chain tension. Refer to the job-specific electrical schematic for identification of the correct electrical contacts to accomplish this.

**NOTE:** Make sure to remove the temporary jumper once the sensors are adjusted properly and after chain tension is re-established in both lifting chains.



## **WARNING!**

**Slack chains require factory help! Do not attempt to repair slack chain conditions alone! Always contact your local Autoquip representative or call the Autoquip Service Department at 888-811-9876.**