



SERVING THE BUS TRANSPORTATION INDUSTRY

## ***Electric Header Assembly and Rigging Instructions***

Rev. 10/11/05

1. Lubricate the main gear axel pins with white lithium grease and install both drive gears (6). Both sets of timing marks must line up with each other.



2. Install the gear stabilizer (14) with 2 each ¼-20x5/8" serrated washer head cap bolts grade 5 or better. Torque to 84 inch pounds.
3. Attach one end of the push-pull rods to the gear with a spacer (37) between the gear and the rod end using a ½-20x2-1/4" cap bolt (35) grade 5 or better. Apply thread locker to bolt and torque to 50 foot pounds.
4. Install motor stop bolt and leave loose. Install Emergency Release Assembly ( ) and tighten the retaining nut until snug. Check the amount of backlash between the motor drive gear and the first main gear. Adjust the emergency release lever assembly until there is zero clearance between the two gears. Turning the release lever clockwise increases the gap and turning it counter-clockwise decreases the gap. When the gap is set turn the release lever clockwise until the lever is facing to the right. Tighten the 5/8" mounting nut and the ¼" jam nut.
5. Adjust the motor stop bolt until there is a slight snap action when the emergency release lever is closed.
6. Insert a 1/8" thick spacer between forward gear spacer (37) and the gear stabilizer (14) and electrically drive the actuator to the open position using caution so as to not make rapid contact with the gear stabilizer.



7. Connect the forward door push-pull rod (4) using the ½-20x1-3/4" bolt (19). The washer (20) must be placed between the rod end (3) and the actuator arm (2) or damage to the push-pull rod assembly (4) will result.





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- Using a carpenters framing square measure the angle of door open. Adjust the length of the push-pull rod as required to achieve the 90° of door open. By shortening the rod, the door leaf moves open. By lengthening the rod, the door leaf moves closed. Adjust the actuator arm end only of the push-pull rod.

**Note. Your system may be equipped with a push-pull tubes with left hand and right hand threaded rod ends. If this is the case you need not disconnect the actuator arm rod end to make length adjustments.**

- Connect the aft door push-pull rod (7) using the ½-20x1-3/4" bolt (19). The washer (20) must be placed between the rod end (3) and the actuator arm (8) or damage to the push-pull rod assembly (7) will result.



- Using a carpenters framing square measure the angle of door open. Adjust the length of the rod as required to achieve the 90° of door open. By shortening the rod, the door leaf moves open. By lengthening it, the door leaf moves closed. Adjust the actuator arm end only of the push-pull rod.
- Counter-rotate rod ends in relation to each other and tighten the jam nut loosened in step #5. Push-pull assembly must have slight axial rotation just so as not to bind the assembly. This procedure will eliminate the risk of the switch actuator tab missing the limit switches.
- Adjust the position of the switch actuating tab (16) so it activates the open limit and auxiliary switch (15). Tighten the jam nuts for the switch tab. (16) Make sure the tab actuates the switch at full axial rotation each way of the push-pull assembly.



- Cycle the door closed and then back open, measure the door opening angle to assure it is opening a full 90°.
- By relocating the switch tab (16) forward, the door stops sooner. By moving the tab aft the door stops later. The drive motor should stop exactly at 90° door open.
- Examine the gear rod end spacer (37) to insure that it does not make contact with the gear stabilizer. If it does, adjust the switch tab closer to the switch assembly to stop door open a little sooner.



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16. By operating the door leaves manually both leaves should achieve the fully open position (90°) at the same time. The aft door leaf must lead the forward door leaf during the closing operation. If this condition is not true, re-check each rigging step.