

# QUIC-STEP® RETRACTABLE VEHICLE STEP

## MODEL VS-20-5

### ACTUATOR INSTALLATION AND ADJUSTMENT

#### VS-20-5 Actuator Installation & Adjustment

If step fails to extend or retract, inspect the step and clear any excess dirt build-up, debris, and other obstructions and lubricate all joints and pivots (see step manual page 8). If problem persists, check voltage to the actuator; voltage must be supplied at all times when the step is being used. The polarity will change depending on if the command is to extend or retract. If the voltage at the actuator connector is not present, check all related circuit breakers, fuses, and relays. If the voltage is present then actuator has failed and needs to be replaced, proceed as follows:

**CAUTION: Disconnect power to step circuit before beginning replacement process.**

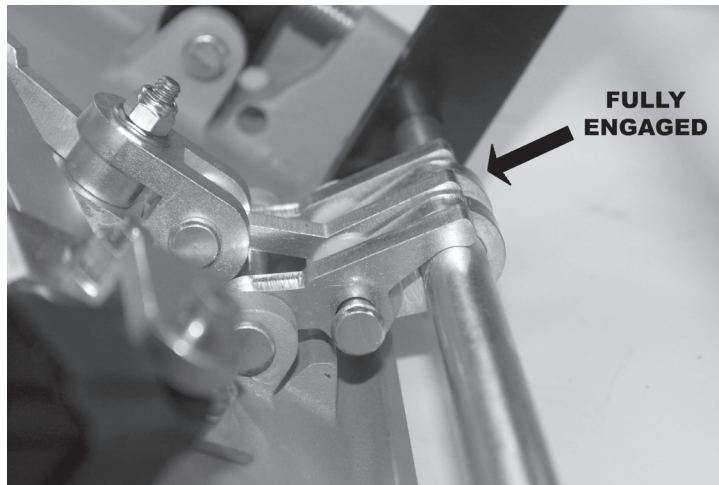
*Numbers in parenthesis indicate Item Number in Parts Breakdown, see page 4 of step manual.*

1. Separate the weatherpack wire connection.
2. Dismount step from vehicle - actuator replacement is best done on a workbench.
3. Remove the two screws attaching the Actuator Mount (9) to the Base (4).
4. Remove shoulder bolt (34) connecting Actuator (17) to Linear Link C (2).
5. Take note of actuator motor & wire relationship to Actuator Mount (9).

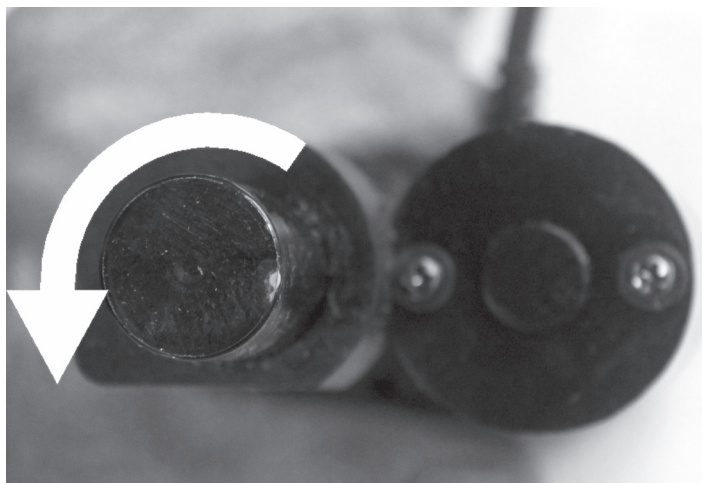


6. Remove Clevis Pin (35) from Actuator Mount (9) and set old actuator aside.
7. Attach rear of new actuator to Actuator Mount (9) using a new cotter pin in the Clevis Pin (35). If the actuator had failed with the step in the extended position, then unlock the locking link at this time.
8. Remove the cable tie that keeps the actuator ram from turning during shipping.
9. Being careful not to turn the actuator ram any more than it takes, attach it to the Linear Link C (2) with the shoulder bolt (34) and lightly tighten nut.
10. Reattach the Actuator Mount (9) to the Base (4) then tighten the hardware.

11. Loosen the locknut on the Bumper Rod (41) and back off bumper four full turns.
12. Remount the step to the vehicle, connect the wire, and open associated vehicle door. Turn on the circuit and step will extend and stop. Turn off circuit and disconnect actuator connector.
13. Examine the locking link to confirm that it is fully engaged.

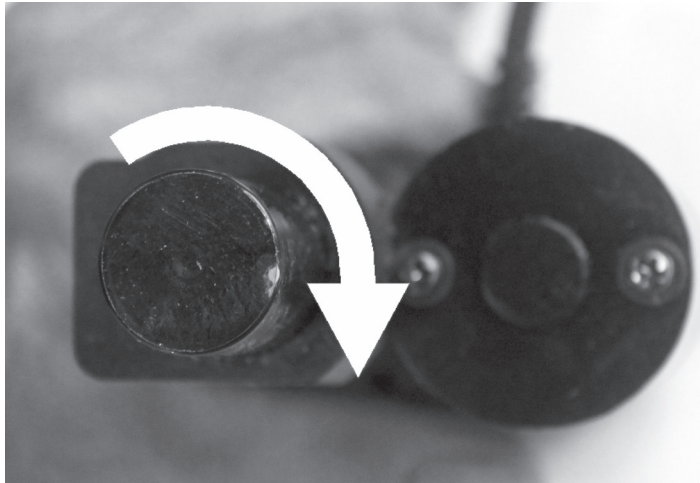


14. If locking link is fully engaged, a test to ensure the actuator's internal limit switch has been tripped should be performed. If not engaged, skip to Step 15.
  - a. Using a meter set to diode test you should get an open line reading across the pins on the actuator connector in one of the meter's polarity directions. If so, skip to Step 16.
  - b. If switch has not been tripped, turn on power to circuit and close door.
  - c. Lightly plug actuator connector into supply just long enough to retract step a few inches, then disconnect.
  - d. Remove shoulder bolt (34) attaching actuator ram to Linear Link C (2).
  - e. From the ram end of the actuator, rotate the ram counterclockwise a half turn and reattach it to Linear Link C (2) with shoulder bolt (34).



- f. Connect actuator, open vehicle door and turn on circuit. After step extends and stops, turn off the circuit and disconnect actuator connector. Now repeat Steps 13 & 14.

15. If locking link was not fully engaged in Step 13, proceed as follows, otherwise skip to Step 16.
  - a. Turn on power to circuit and close door.
  - b. Lightly plug actuator connector into supply just long enough to retract step a few inches, then disconnect.
  - c. Remove shoulder bolt (34) attaching actuator ram to Linear Link C (2).
  - d. From the ram end of the actuator, rotate the ram clockwise a half turn and reattach it to Linear Link C (2) with shoulder bolt (34).



- e. Connect actuator, open vehicle door and turn on circuit. After step extends and stops, turn off the circuit and disconnect actuator connector.
  - f. Examine the locking link to confirm that it is fully engaged. If not, repeat Step 15. If it is engaged, proceed to Step 14.
16. Connect actuator, turn on circuit, and close vehicle door. Step will retract and stop. Confirm that the Rear Arm Weldment (6) is not hitting the Bumper (41). Hitting the bumper can stall the actuator before it hits the limit switch.
17. Turn off the circuit and disconnect the actuator.
18. Perform Retract Switch Test - Using a meter set to diode test you should get an open line reading across the pins of the connector in one of the meter's polarity directions.
19. Turn Bumper (41) out until it makes contact with Rear Arm, then turn out an additional one and a half turns and tighten locknut.
20. Reconnect weatherpack connector, check step operation and secure wire.



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