

ELECTRIC ACTUATOR INSPECTION, REMOVAL AND REPLACEMENT

TSB Number:	11-004-21		
Product:	Electric Actuator		
Date:	June 21, 2021	Labor Rate:	0.3 Hours Inspection/1.0 Hours Replacement

Purpose

Trailers must be inspected to determine if the units contain a 40" Venture High Speed Actuator with 18:1 Motor (part number **168956**) and whether that actuator should be replaced. If the serial number identifies the actuator as a model that must be replaced, procedures to remove and replace the actuator are included.

Safety

This document provides general instructions. Many variables can change the circumstances of any procedure, i.e. the degree of difficulty involved in the service operation and the ability level of the individual performing the operation. This document cannot begin to plot out procedures for every possibility, but will provide the general instructions for effectively installing, removing or servicing the system. In the event the skill level required is too advanced or the procedure too difficult, a certified technician should be consulted before performing the necessary operation. Failure to correctly install, remove or service the system may result in voiding the warranty, inflicting injury or even death.

WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death, serious personal injury, severe product and/or property damage if not performed safely and within the parameters set forth in this document.

CAUTION

The "CAUTION" symbol above is a sign that a procedure has a safety risk involved and may cause personal injury, product and/or property damage if not performed safely and within the parameters set forth in this document.

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Inspection

There is a two-step process for determining whether an actuator needs to be replaced. The actuator must be identified as a Venture model, and then the serial number must also be included in a list of those models to be replaced.

Identifying Venture Model

1. The Venture actuator has a black inner sleeve vs. gold for a Tuson actuator (Figs. 1 and 2).
2. The Tuson actuator has an embossed LCI logo on the bottom of the gearbox (Fig. 3).
3. The Tuson actuator has a single mounting bolt on the motor (Fig. 4).
4. The Venture actuator has double motor mounting bolts (Fig. 5).

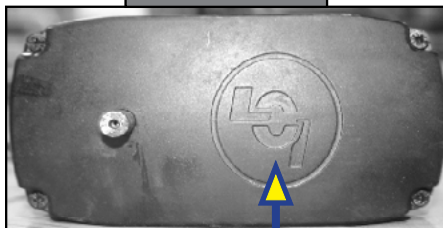
Fig. 1 - Venture Actuator



Fig. 2 - Tuson Actuator

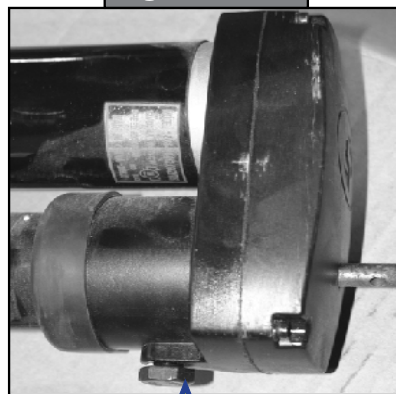


Fig. 3 - Tuson



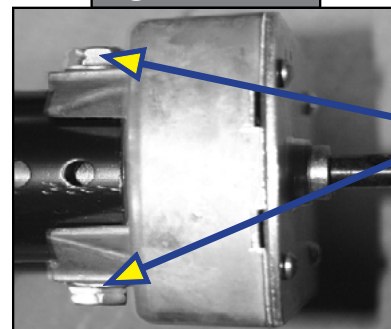
Embossed
"LCI" Logo
on Bottom
of Gearbox

Fig. 4 - Tuson



Single Motor
Mounting Bolt

Fig. 5 - Venture



Double
Motor
Mounting
Bolts

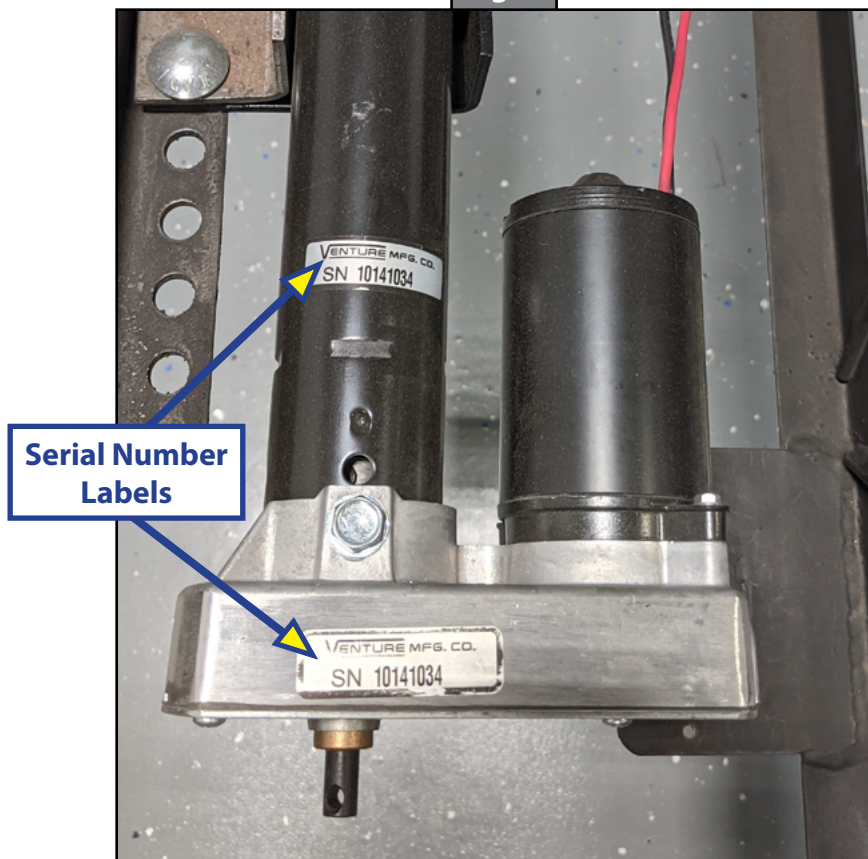
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Reviewing Serial Number

1. Locate the serial number label on the actuator motor and shaft.
- NOTE:** The orientation of the actuator could change which may impact visibility of the label.
2. Write down serial number and compare it to the list of serial numbers listed in this document.
 3. If the serial number is included among those in the list, the actuator must be replaced.

Fig. 6



Resources Required

- One or two persons, depending on task
- Socket wrench
- Appropriate sockets
- Open-end wrenches
- Wire cutter
- Wire nuts
- Impact wrench
- Appropriate sockets



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Serial numbers for Lippert 40" Venture High Speed Actuator with 18:1 motor, Part number 168956, that needs to be removed and replaced.

10514951 - 10515001
10516002 - 10516200
10516751 - 10516800
10516851 - 10516900
10517351 - 10517400
10517451 - 10517650
10518001
10519002 - 10519050
10519351 - 10519450
10520151 - 10520250
10520801 - 10521000
10521051 - 10521100
10521151 - 10521200
10521351 - 10521400
10522051 - 10522100
10522201 - 10522250
10522301 - 10522450
10522501 - 10522550
10522601 - 10522650
10523101 - 10523150
10523351 - 10523400
10523551 - 10523650

10523701 - 10523850
10523901 - 10523950
10525001
10526001 - 10526050
10526101 - 10526150
10526201 - 10526250
10526501 - 10526650
10526751 - 10526850
10526901 - 10526950
10527051 - 10527100
10527401 - 10527500
10527601 - 10527850
10528351 - 10528400
10528501 - 10528650
10529101 - 10529150
10529251 - 10529350
10529401 - 10529900
10530551 - 10530850
10530901 - 10531150
10531351 - 10531400
10531551 - 10531650
10532251 - 10532350

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Removal and Replacement

⚠ WARNING

The trailer must be supported per the manufacturer's recommendations before working underneath. Failure to do so may result in death or serious injury.

⚠ CAUTION

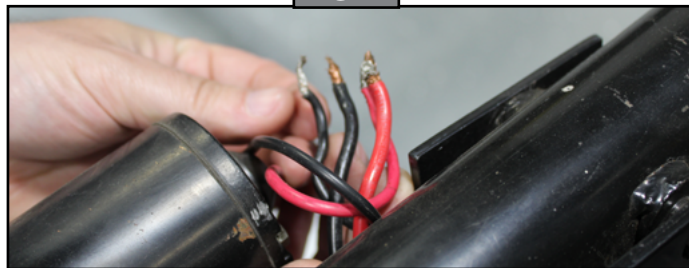
Moving parts can pinch, crush or cut. Keep clear and use caution.

If the actuator is identified as needing replacement, procedures for the removal of the existing actuator and installation of the replacement actuator are listed. There is also a video documenting these steps which can be found at: <https://support.lci1.com/videos/through-frame-slide-out-actuator-replacement>

1. Disconnect electric motor wires from the power source, including both power (red) and ground (black) wires (Fig. 7).

NOTE: Failure to disconnect the actuator from the battery before manually operating the system can cause damage to the system. Place wire nuts on the ends of the wires to prevent inadvertent power connection.

Fig. 7



2. Move to the other end of the actuator shaft and measure from the bracket to the end of the threaded rod (Fig. 8) and from the end of the stop can to the end of the threaded rod (Fig. 9).
3. Write down the two measurements.

Fig. 8

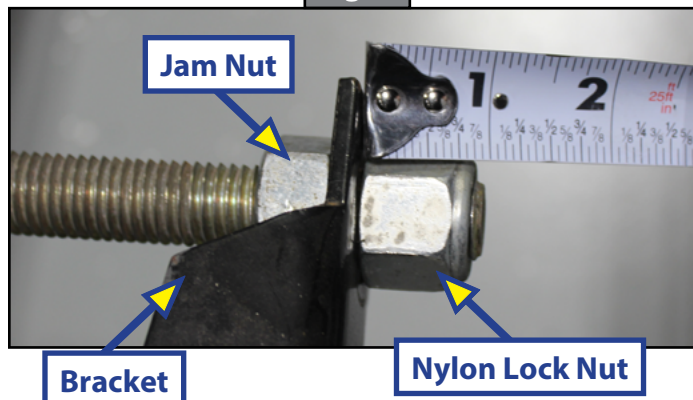
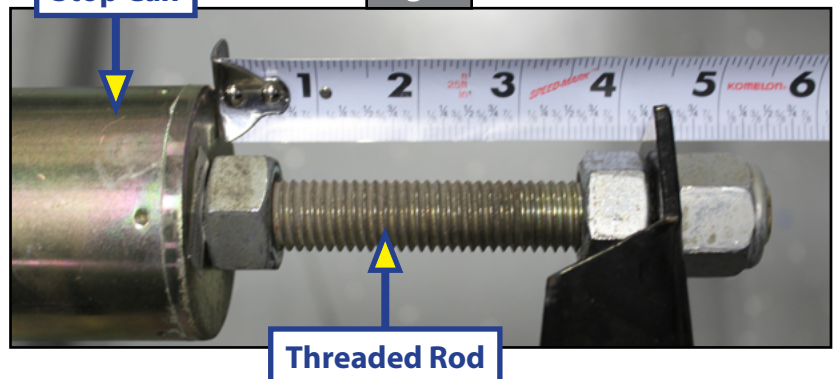


Fig. 9



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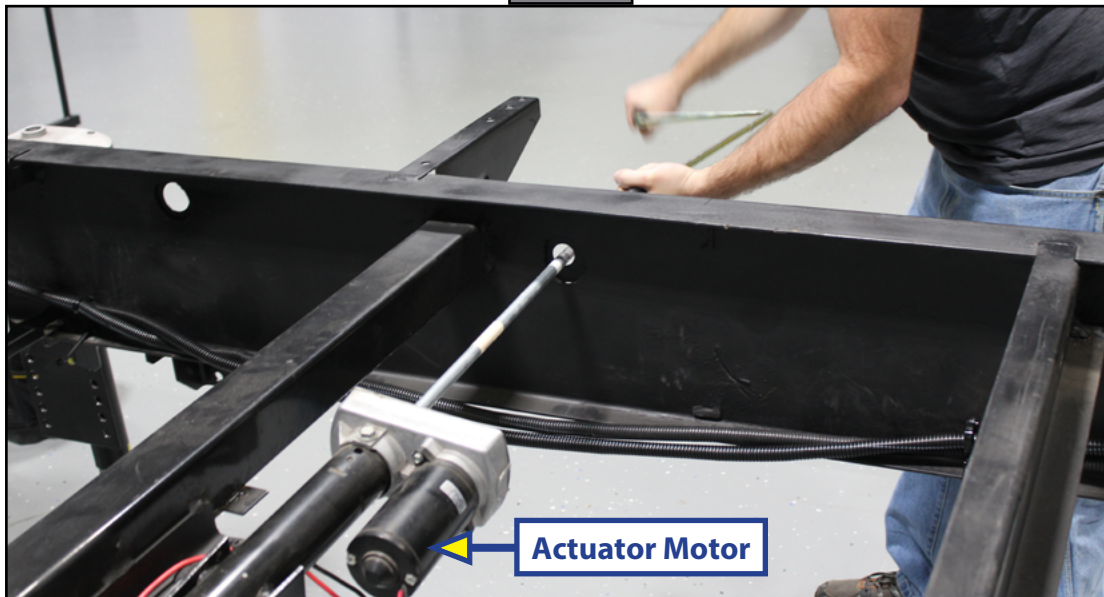
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4. Install manual crank onto the end of the actuator motor (Fig. 10).

NOTE: Some motors may not have a manual override extension on the end. If not equipped with extension, use socket wrench on the hex head crank extension on the end of the shaft inside chassis main frame.

5. Turn crank counterclockwise to extend the slide-out to provide enough clearance for removal of nylon lock nut, jam nuts and the stop can.

Fig. 10



6. Using an open-end wrench, loosen the nylon lock nut at the end of the threaded rod (Fig. 2) and then remove the nut from the rod.
7. Manually retract the actuator by turning clockwise until the end of the threaded rod is pulled from the bracket. Continue retracting actuator until there is adequate access to the remaining nuts and stop can.
8. Loosen and remove both remaining nuts (Figs. 11 and 12).
9. Lift actuator shaft and unscrew stop can from threaded rod (Fig. 13).

Fig. 11

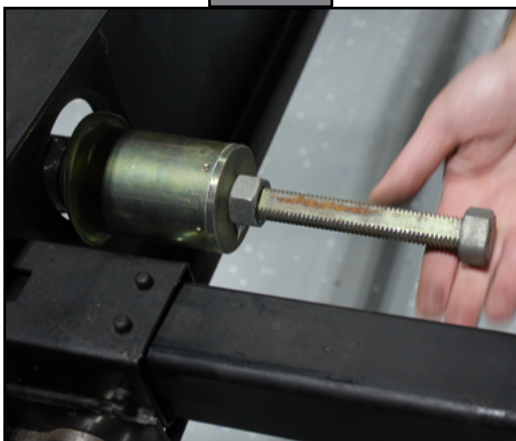


Fig. 12

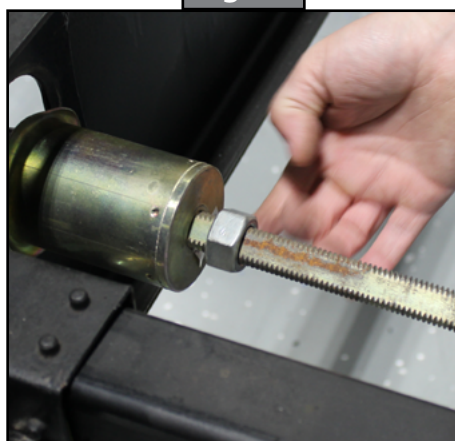
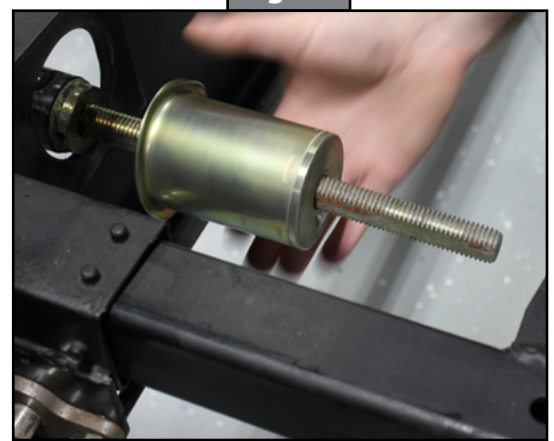


Fig. 13



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10. Note the two actuator shaft mounting bolt locations behind the motor (Fig. 14).
11. Remove nuts and hardware from the two mounting bolts secured to the underside of the hat channel (Fig. 15) and then remove the bolts.

Fig. 14



Fig. 15



12. Remove actuator (Fig. 16).

NOTE: If actuator is equipped with manual override extension, this extension must be removed before the actuator is removed.

Fig. 16



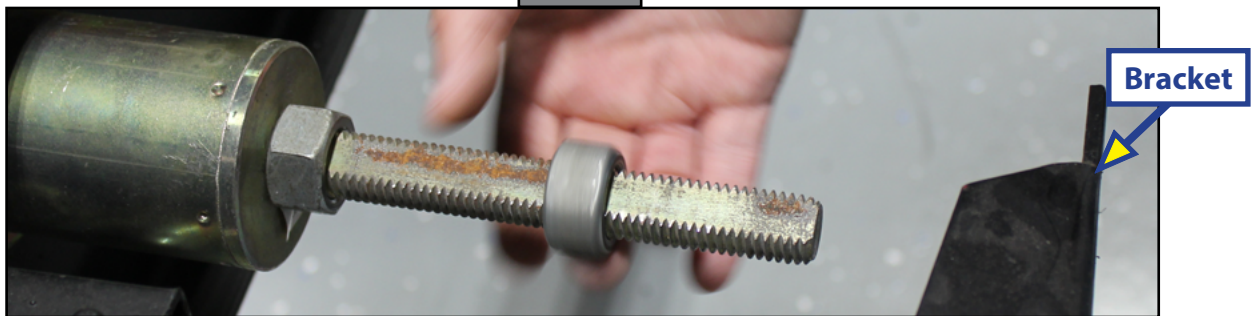
13. Insert new actuator and reinstall mounting bolts, hardware and nuts in the hat channel at the original positions.
14. Tighten nuts firmly.

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15. Reinstall stop can on threaded rod and move the stop can to the end of the threads.
16. Reinstall nut on threaded rod and loosely tighten against stop can.
17. Thread second nut onto the rod (Fig. 17) and place it in the original position based on the earlier measurement from end of threaded rod to bracket.

Fig. 17



18. Reconnect motor wires to the power source using wire nuts.
19. Use zip ties to secure the wires to the motor and actuator.
20. Extend the slide-out so the threaded rod continues through the bracket until the middle nut is flush with the bracket.

NOTE: A second person may be needed to assist lifting the shaft when extending the threaded rod through the bracket.

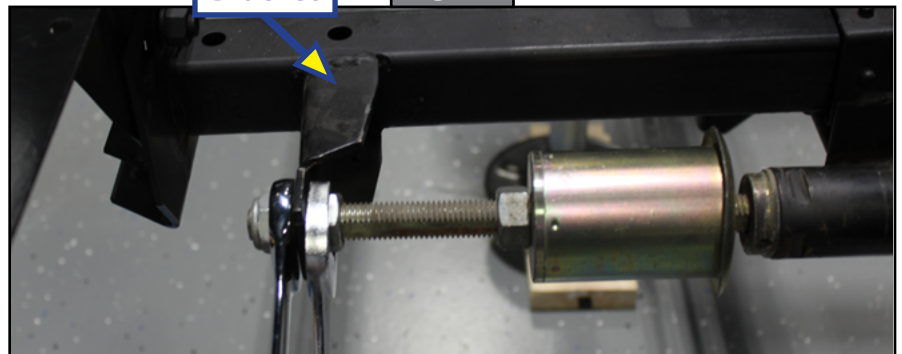
21. Confirm the correct location of the middle jam nut based on the earlier measurement (Fig. 2). If necessary, adjust location.
22. Loosen the interior nut and stop can and move them to the original location based on the earlier measurement from the end of the threaded rod to the stop can (Fig. 3).
23. Using a wrench, tighten jam nut against stop can (Fig. 18).
24. Install remaining nylon lock nut on the end of the threaded rod.
25. Using two wrenches, firmly tighten the jam nut and nylon lock nut against the bracket (Fig. 19).

Fig. 18



Bracket

Fig. 19



As a supplier of components to the RV industry, safety, education and customer satisfaction are our primary concerns. Should you have any questions, please do not hesitate to contact us at (574) 537-8900 or by email at customerservice@lci1.com. Self-help tips, technical documents, product videos and a training class schedule are available at lippert.com or by downloading the MyLCI app.



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