

2021+ Front End PTO Belt Replacement Instructions

Carefully read and understand the complete list of instructions before proceeding.

It is important before starting this or any other procedure, that you or anyone who operates, works with, maintains, services or repairs the Butler System and/or vehicle, be familiar with its operation and thoroughly read, understand and follow, in their entirety, all of the Warnings, Cautions, and Notices described in your Butler System and vehicle Owners' Manuals.

Purpose: To replace the front end PTO belts on the Butler System.

Applicable Models: 2021-present GMC & Chevrolet Cargo vans with 4.3L V6 & 6.6L V8 engines.

Who Should Perform This Procedure: This procedure is to be performed **only** by qualified service technicians who possess the knowledge, skill, tools, hardware, and/or equipment required to perform this procedure. It should not be attempted by persons who do not have significant automotive mechanic skills or experience.

Please contact the Butler Corporation Service Department at 1-800-535-5025 before beginning this procedure if you are unsure of what to do or, if you have any questions.

Required Parts: Matched set of (2) Optibelt XPA1557 Super XE-Power Pro Belts

Required Tools:

- 1/4" drive ratchet
- 1/4" drive 7mm socket
- 3/8" drive 10mm socket
- 3/8" drive 15mm socket
- 3/8" drive 12" extension
- 5/16" Battery Terminal Wrench
- 3/8" drive ratchet
- 1/4" drive 2" extension
- 3/8" drive 13mm socket
- 3/8" drive 6" extension
- 1/4" slotted screwdriver

Additional tools for lifting the driveshaft:

- 3/8" drive 9/16" deep well socket
- 17mm box end wrench or 10" adjustable wrench
- 3/8" drive torque wrench

Removing parts for access to the front end PTO belts:

1. Open the hood of the van.
2. Disconnect the negative battery terminal.

3. Disconnect the Mass Airflow Sensor. Remove the Air Cleaner and the Air Intake Hose.
4. Remove the Air Dam.
5. Move the Coolant Reservoir. (draining is not required)
6. Move any wires, hoses or clips out of the way to remove the Top Fan Shroud.
7. Remove the top portion of the Fan Shroud.
8. Remove the lower Splash Guard under the van.
9. Remove the lower Bolt on the Fan Shroud Ring. (your model may have a Spacer here)
10. Remove the two upper Bolts on the Fan Shroud Ring. (your model may have Spacers here)
11. Remove the Shroud Ring.

Replacing the front end PTO belts:

Important: the front PTO Belts should only be replaced with a matched set of **Optibelt XPA1557 Super XE-Power Pro Belts**

12. Remove the old belts using a $\frac{3}{8}$ " drive ratchet and extension to take the tension off.
13. Install the new belts. **If the belts are too tight to install, follow steps 13a-13i.**
 - a. Remove the Butler System Equipment Shroud.
 - b. Remove the CAT pump and Vacuum Blower Belts.
 - c. Remove the vinyl caps from the Saddle Bolts, loosen the Saddle, and remove the hardware.
 - d. Remove the Driveshaft Mount Saddle.
 - e. Have a second person hold the rear of the Driveshaft up a few inches while installing the front PTO Belts, or prop up the Driveshaft with a block of wood or other suitable object.
 - f. Once the Front Belts are installed, set the Driveshaft back down into the Mount, reinstall the Saddle, and tighten to approx. 30 ft.lbs.
 - g. Reinstall the belts on the Vacuum Blower and CAT Pump.
 - h. Reinstall the vinyl caps onto the Saddle hardware.
 - i. Reinstall the Equipment Shroud.



Cooling Fan removal is not required but removed for picture clarity.

Returning the van to running condition by reinstalling the factory parts in reverse order:

14. Reinstall the Shroud Ring and upper two Bolts. (make sure to replace the Spacers if required)
15. Reinstall the Lower Shroud Ring Bolt. (make sure to replace the Spacer if required)
16. Reinstall the Lower Splash Guard.
17. Reinstall the Upper Fan Shroud.
18. Reinstall any hoses, wires or clips moved earlier.
19. Reinstall the Coolant Reservoir.
20. Reinstall the Air Dam.
21. Reinstall the Air Intake Hose, the Air Cleaner, and Plug in the Mass Airflow Sensor.
22. Reconnect the Negative Battery Terminal.

Start the van's engine and visually inspect the belts to see if the belts are riding correctly on the pulleys.

Run the Butler System at high speed and add a load to the Vacuum Hose while visually inspecting the belts to ensure they are riding correctly on the pulleys.



If the belts ride correctly on the pulleys, the belt replacement procedure is now complete and you can return the unit back to service.