

No.: 20 TS-03Rev2 September 2020

TO: Service Locations

FROM: Service Systems Development

SUBJECT: DD Heavy Duty Platform Belt Tensioner Change

### **ISSUE**

A newly designed, dual-arm friction shoe damping tensioner was implemented for the DD Heavy Duty Platform. New tensioner P/N: A4722001370 was released to engine production on December 7th, 2018, with approximate engine serial number HDE0644305 for current USA/Canada and export engines. Belt lengths and maintenance interval per application and engine variance did NOT change. For current belt information, reference Technical Service letter 18 TS-4rev. New sections in the appropriate workshop and troubleshooting manuals have been created. The new sections are labeled "Friction Belt Tensioner". The tensioner should only be replaced if indicated by the appropriate troubleshooting manual procedure.

The new friction damping tensioner is not backwards-compatible with certain vehicles built before November 1, 2017. The new tensioner can be used in all vehicles built on or after November 1, 2017. Certain vehicles built before November 1, 2017 will use a different aftermarket friction damping tensioner, part number GT 38667. Refer to Chart 1 for part numbers.

**Note:** The new friction damping tensioner, P/N A4722001370 and the aftermarket tensioner, P/N GT 38667 are not interchangeable. Tensioner GT 38667 should not be used on vehicles built after November 1, 2017.

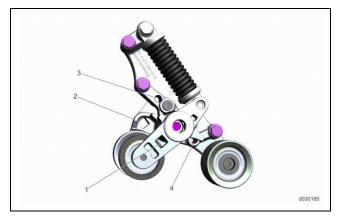


Fig. 1, Hydraulic Damping Tensioner

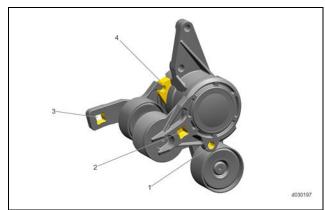


Fig. 2, New Friction Damping Tensioner

#### NOTICE:

Selecting the incorrect tensioner may prevent proper installation due to interference between the tensioner and the fan clutch. This interference may be difficult to identify visually.

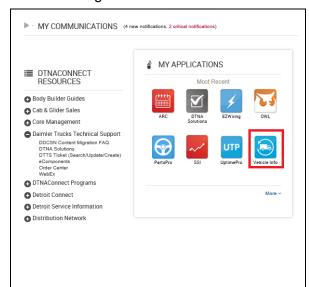
# **Determine Replacement Tensioner Part Number**

Follow the below steps to determine the correct replacement tensioner.

All vehicles built on or after November 1, 2017 should use the Friction Damping Tensioner. Refer to Chart 1 for part numbers.

For vehicles built prior to November 1, 2017.

- 1. Use the VIN to **determine if unit is a P4 Cascadia**. For Freightliner Trucks, refer to the 5<sup>th</sup> and 6<sup>th</sup> digits in the VIN. HG, HH, HJ, HK, HL, HM, HN, HP, HR, HS, HT, HU all denote P4 Cascadia.
- 2. Refer to Vehicle Info on DTNA Connect to **determine the vehicle build date**. See Figures 3 and 4.



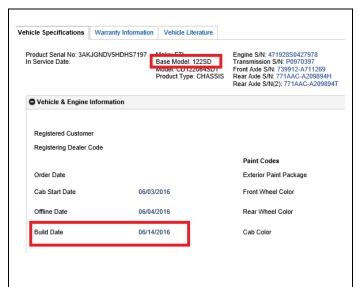


Fig. 3, DTNA Connect – Vehicle Info

Fig. 4, Vehicle Info - Build Date

3. **Determine the fan clutch manufacturer** by referring to module 273 in PartsPro. See Figures 5, 6 and 7.

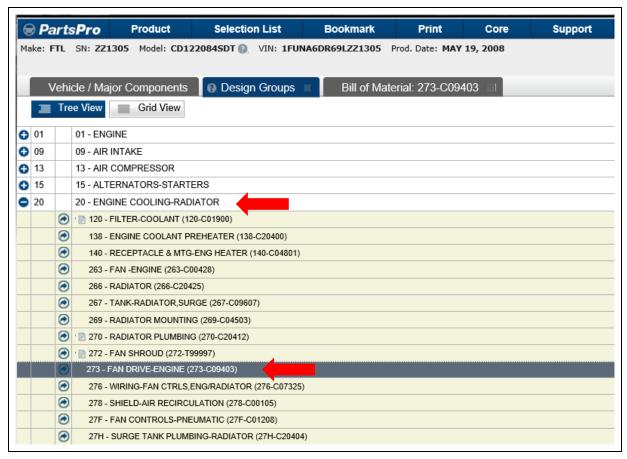
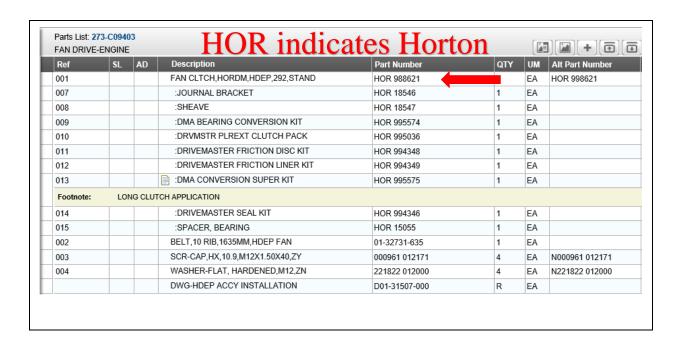


Fig. 5, Determine Fan Clutch Manufacturer



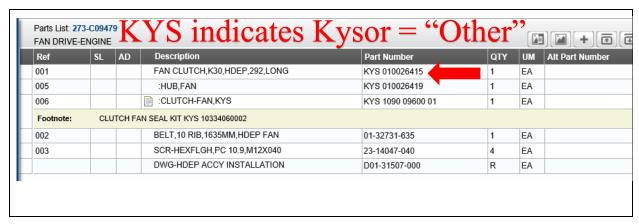


Fig. 7, "Other" Non-Horton Fan Clutch

4. **Refer to Chart 1** to determine the correct replacement tensioner.

**Chart 1: Determine Replacement Tensioner** 

Vehicle Build Date	Chassis Model	Fan Clutch Manufacturer (See PartsPro BOM 273)	Original Tensioner	Replacement Tensioner
Prior to November 1, 2017	Freightliner P4 Cascadia	All	Hydraulic	Friction Damping Tensioner Retrofit Kit <b>P/N A4722001670</b> 1
	All Other Vehicles (Non P4 Cascadia)	Horton	Hydraulic	Aftermarket Friction Damping Tensioner <b>P/N GT 38667</b> <sup>2</sup>
		Other	Hydraulic	Friction Damping Tensioner Retrofit Kit <b>P/N A4722001670</b> <sup>1</sup>
November 1, 2017 and newer	All	All	Hydraulic	Friction Damping Tensioner Retrofit Kit <b>P/N A4722001670</b> 1
			Friction Damping	Friction Damping Tensioner Service Kit <b>P/N A4722001570</b> <sup>3</sup>

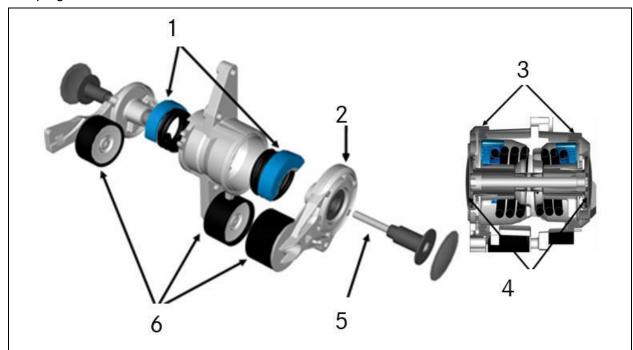
<sup>&</sup>lt;sup>1</sup> Retrofit Kit P/N A4722001670 includes shorter mounting bolts that are required when replacing the hydraulic tensioner with the new friction damping tensioner. Refer to 18SP743 for a complete kit breakdown.

<sup>&</sup>lt;sup>2</sup> The new friction tensioner P/N A4722001370 (contained in kit P/N A4722001570 and A4722001670) CANNOT be used in this application.

<sup>&</sup>lt;sup>3</sup> Friction Damping Tensioner Service Kit P/N A4722001570 contains all components required for replacing the friction damping tensioner. The original mounting bolts are to be re-used on like for like friction damping tensioner swaps. Refer to 18SP736 for a complete kit breakdown.

## **ADDITIONAL INFO (NEW)**

Detroit™ recommends using the new friction damping tensioner, **when applicable and according to Chart 1**. The new belt tensioner has been through vigorous testing to optimize functionality and reliability. The following components have been optimized for the new friction damping tensioner.



- 1. Large damping shoes for longer service life.
- 2. Arm casting reinforcement for additional strength and natural frequency modification.
- 3. Double labyrinth arms for improved sealing against elements entering damping mechanism.
- 4. Pivot shaft welch plugs for additional sealing against elements entering the pivot shaft and bushing.
- 5. Pivot shaft-through-bolt to prevent unwanted pivot shaft movement.
- 6. Larger pulley bearing diameters filled with high performance grease for longer service life.

Fig. 9, Friction Damping Tensioner Enhancement Description

### **CONTACT INFORMATION**

Please contact the Detroit Diesel Customer Support Center at 800-445-1980 or email csc@daimler.com if you have any questions.