

TO: Service Locations

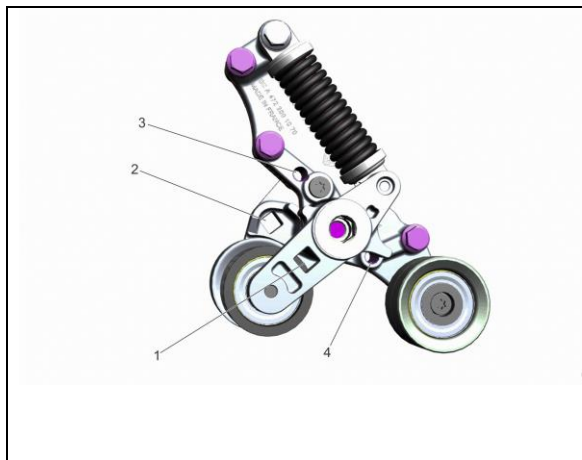
FROM: Service Systems Development

SUBJECT: **DD Heavy Duty Platform Belt Tensioner Change**

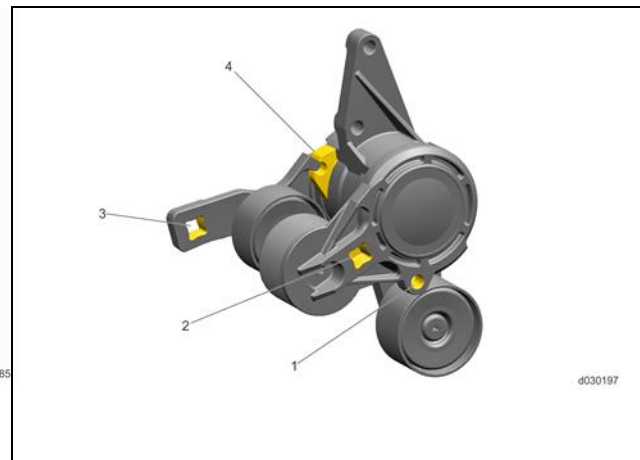
## ISSUE

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 continue to use the hydraulic damping tensioner. Refer to Chart 1 for part numbers.



**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.**

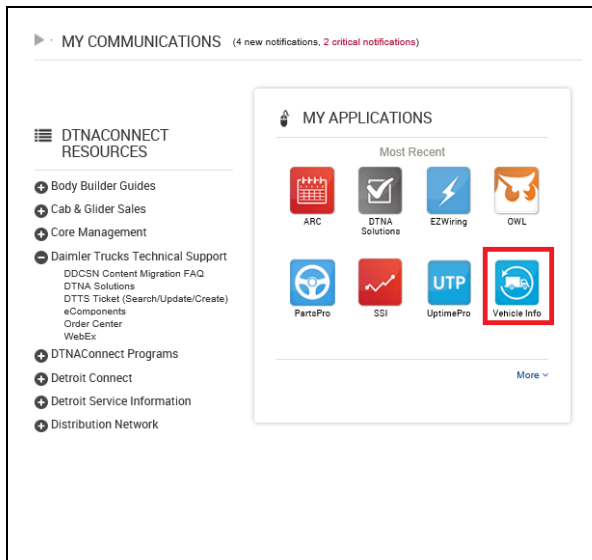
### Determine Replacement Tensioner Part Number

Follow the below steps to determine the correct replacement tensioner.

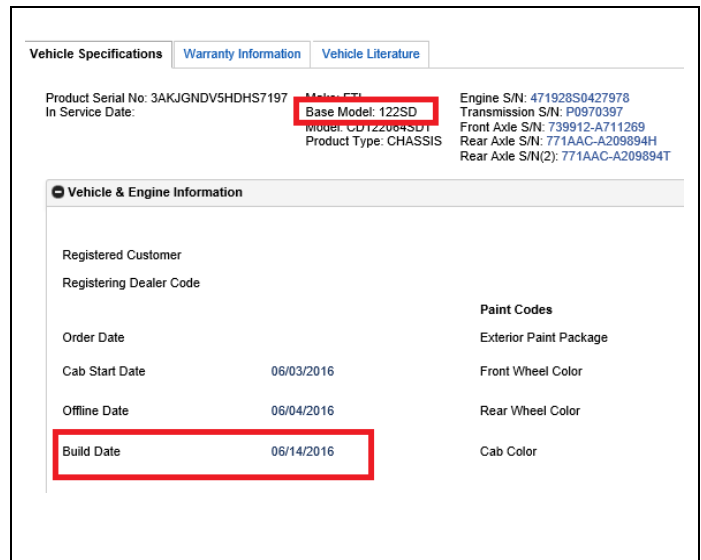
**All vehicles built on or after November 1, 2017 should use the Friction Damping Tensioner. Refer to Chart 1 for part numbers.**

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**

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

PartsPro Product Selection List Bookmark Print Core Support

Make: FTL SN: ZZ1305 Model: CD122084SDT VIN: 1FUNA6DR69LZZ1305 Prod. Date: MAY 19, 2008

Vehicle / Major Components Design Groups Bill of Material: 273-C09403

Tree View Grid View

+ 01	01 - ENGINE
+ 09	09 - AIR INTAKE
+ 13	13 - AIR COMPRESSOR
+ 15	15 - ALTERNATORS-STARTERS
- 20	20 - ENGINE COOLING-RADIATOR
	120 - FILTER-COOLANT (120-C01900)
	138 - ENGINE COOLANT PREHEATER (138-C20400)
	140 - RECEPTACLE & MTG-ENG HEATER (140-C04801)
	263 - FAN -ENGINE (263-C00428)
	266 - RADIATOR (266-C20425)
	267 - TANK-RADIATOR,SURGE (267-C09607)
	269 - RADIATOR MOUNTING (269-C04503)
	270 - RADIATOR PLUMBING (270-C20412)
	272 - FAN SHROUD (272-T99997)
	<b>273 - FAN DRIVE-ENGINE (273-C09403)</b>
	276 - WIRING-FAN CTRLS,ENG/RADIATOR (276-C07325)
	278 - SHIELD-AIR RECIRCULATION (278-C00105)
	27F - FAN CONTROLS-PNEUMATIC (27F-C01208)
	27H - SURGE TANK PLUMBING-RADIATOR (27H-C20404)

Fig. 5, Determine Fan Clutch Manufacturer

Parts List: 273-C09403  
FAN DRIVE-ENGINE

**HOR indicates Horton**

Ref	SL	AD	Description	Part Number	QTY	UM	Alt Part Number
001			FAN CLTCH,HORDM,HDEP,292,STAND	HOR 988621		EA	HOR 998621
007			:JOURNAL BRACKET	HOR 18546	1	EA	
008			:SHEAVE	HOR 18547	1	EA	
009			:DMA BEARING CONVERSION KIT	HOR 995574	1	EA	
010			:DRVMSTR PLREXT CLUTCH PACK	HOR 995036	1	EA	
011			:DRIVEMASTER FRICTION DISC KIT	HOR 994348	1	EA	
012			:DRIVEMASTER FRICTION LINER KIT	HOR 994349	1	EA	
013			:DMA CONVERSION SUPER KIT	HOR 995575	1	EA	
<b>Footnote:</b> LONG CLUTCH APPLICATION							
014			:DRIVEMASTER SEAL KIT	HOR 994346	1	EA	
015			:SPACER, BEARING	HOR 15055	1	EA	
002			BELT,10 RIB,1635MM,HDEP FAN	01-32731-635	1	EA	
003			SCR-CAP,HX,10.9,M12X1.50X40,ZY	000961 012171	4	EA	N000961 012171
004			WASHER-FLAT, HARDENED,M12,ZN	221822 012000	4	EA	N221822 012000
			DWG-HDEP ACCY INSTALLATION	D01-31507-000	R	EA	

Parts List: 273-C09479  
FAN DRIVE-ENGINE

**KYS indicates Kysor = "Other"**

Ref	SL	AD	Description	Part Number	QTY	UM	Alt Part Number
001			FAN CLUTCH,K30,HDEP,292,LONG	KYS 010026415	1	EA	
005			:HUB,FAN	KYS 010026419	1	EA	
006			:CLUTCH-FAN,KYS	KYS 1090 09600 01	1	EA	
<b>Footnote:</b> CLUTCH FAN SEAL KIT KYS 10334060002							
002			BELT,10 RIB,1635MM,HDEP FAN	01-32731-635	1	EA	
003			SCR-HEXFLGH,PC 10.9,M12X040	23-14047-040	4	EA	
			DWG-HDEP ACCY INSTALLATION	D01-31507-000	R	EA	

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

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

Chart 1: Determine Replacement Tensioner

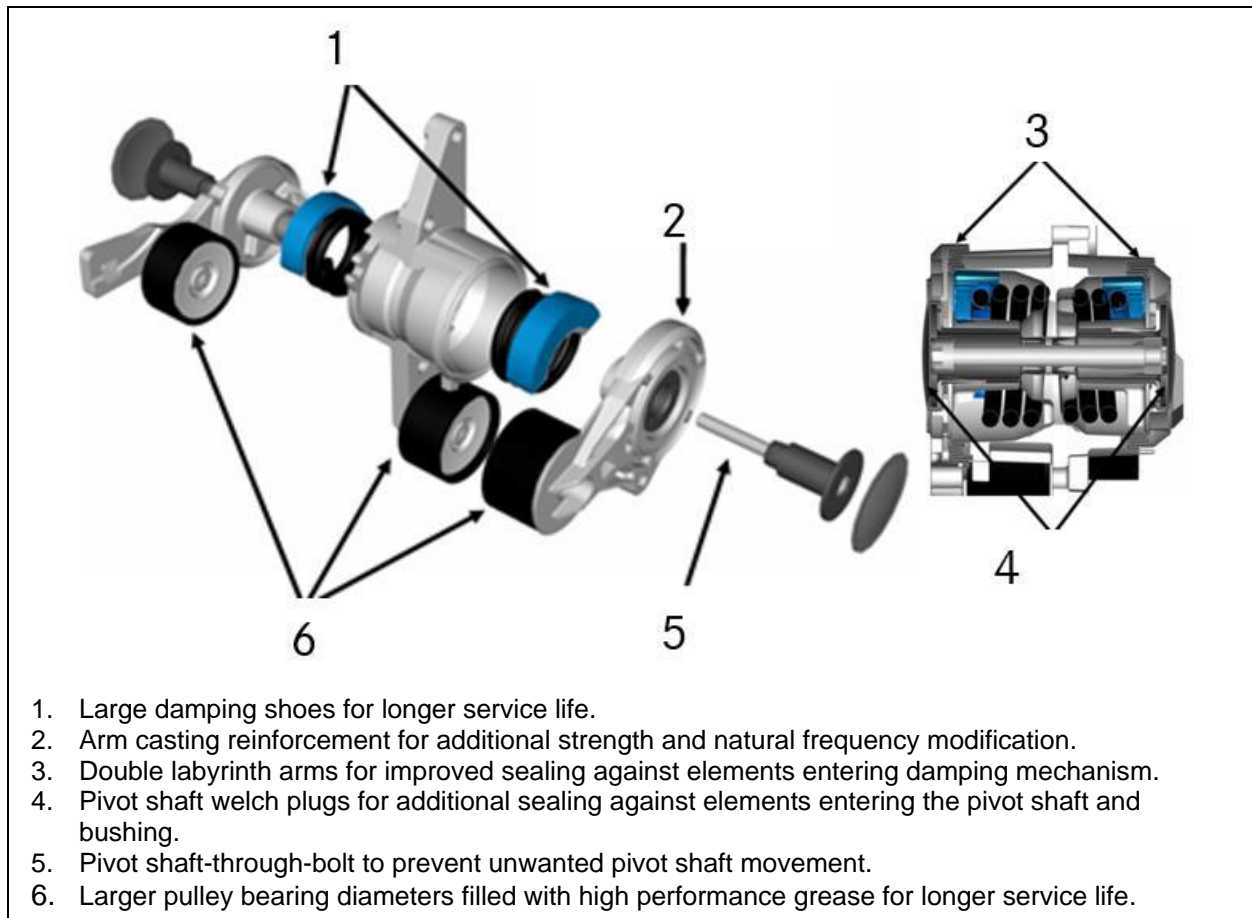
Vehicle Build Date	Chassis Model	Fan Clutch Manufacturer (See PartsPro BOM 273)	Original Tensioner	Replacement Tensioner
Prior to November 1, 2017	Freightliner P4 Cascadia	All	Hydraulic	Friction Damping Tensioner Kit <b>P/N A4722001570<sup>1</sup></b> Also requires (3) mounting bolts <b>N000000001435</b>
	All Other Vehicles (Non P4 Cascadia)	Horton	Hydraulic	Hydraulic Damping Tensioner <b>P/N EA4722001070<sup>2</sup></b>
		Other	Hydraulic	Friction Damping Tensioner Kit <b>P/N A4722001570<sup>1</sup></b> Also requires (3) mounting bolts <b>N000000001435</b>
November 1, 2017 and newer	All	All	Hydraulic	Friction Damping Tensioner Kit <b>P/N A4722001570<sup>1</sup></b> Also requires (3) mounting bolts <b>N000000001435</b>
			Friction Damping	Friction Damping Tensioner Kit <b>P/N A4722001570</b>

<sup>1</sup> (3) Shorter mounting bolts, P/N N00000000143, are required when replacing a hydraulic tensioner with a friction tensioner. Refer to the appropriate section when removing and installing the tensioner based on tensioner type.

<sup>2</sup> The friction damping tensioner CANNOT be used in this application.

## 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.



**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](mailto:csc@daimler.com) if you have any questions.