18.09.26

REFURB SG371-SG606

SECTION - 3

Engine

1. **Change oil cooler coolant O rings and oil supply O rings.**

2. **Replace engine loom wiring plastic conduit where missing or brittle.**

3. **Replace fuel pipe (Spider) and reclip. Inspect all fuel pipe clipping and replace/fit as necessary (as per Dublin Bus Fuel Pipe Clipping Instruction).**

4. **Change PTO hub where identified on BAC check sheet.**

5. **Change alternator/compressor belt tensioners X 3.**

5a. Refurbish compressor cradle and repair cradle chassis mounting (repair elongated holes in chassis member)

6. **Change compressor and alternator bridge rubber mountings.**

7. **Function check auto oil top up system. Download and print out copy of active faults. Undertake necessary repairs. Erase all faults when repairs completed. Download and print out copy showing no faults present. Supply print out copies to BAC.**

8. **Change front and rear engine mountings as per BAC check sheet (i.e. engine mountings which are still Volvo campaign originals and have not been replaced by BAC since campaign completed - assess first 10 buses to confirm condition and policy going forward).**

9. **Replace missing alternator covers where necessary.**

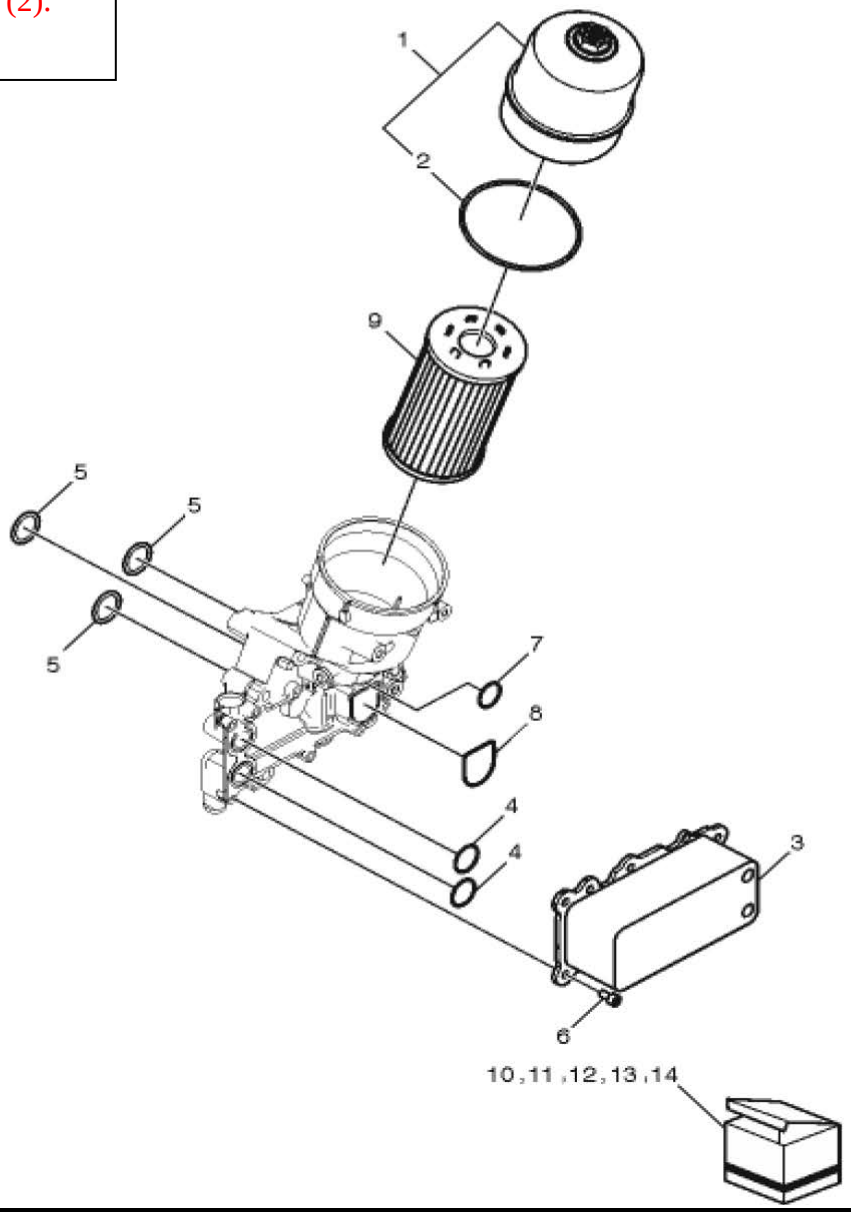
<u>Note</u> – All repairs must be undertaken in accordance with the Vehicle Manufacture's (Volvo) parts and service instructions as detailed on the Volvo IMPACT online parts and service website.

All the relevant Volvo tools as detailed in these service instructions must be used to undertake the service instructions as detailed on Volvo IMPACT.

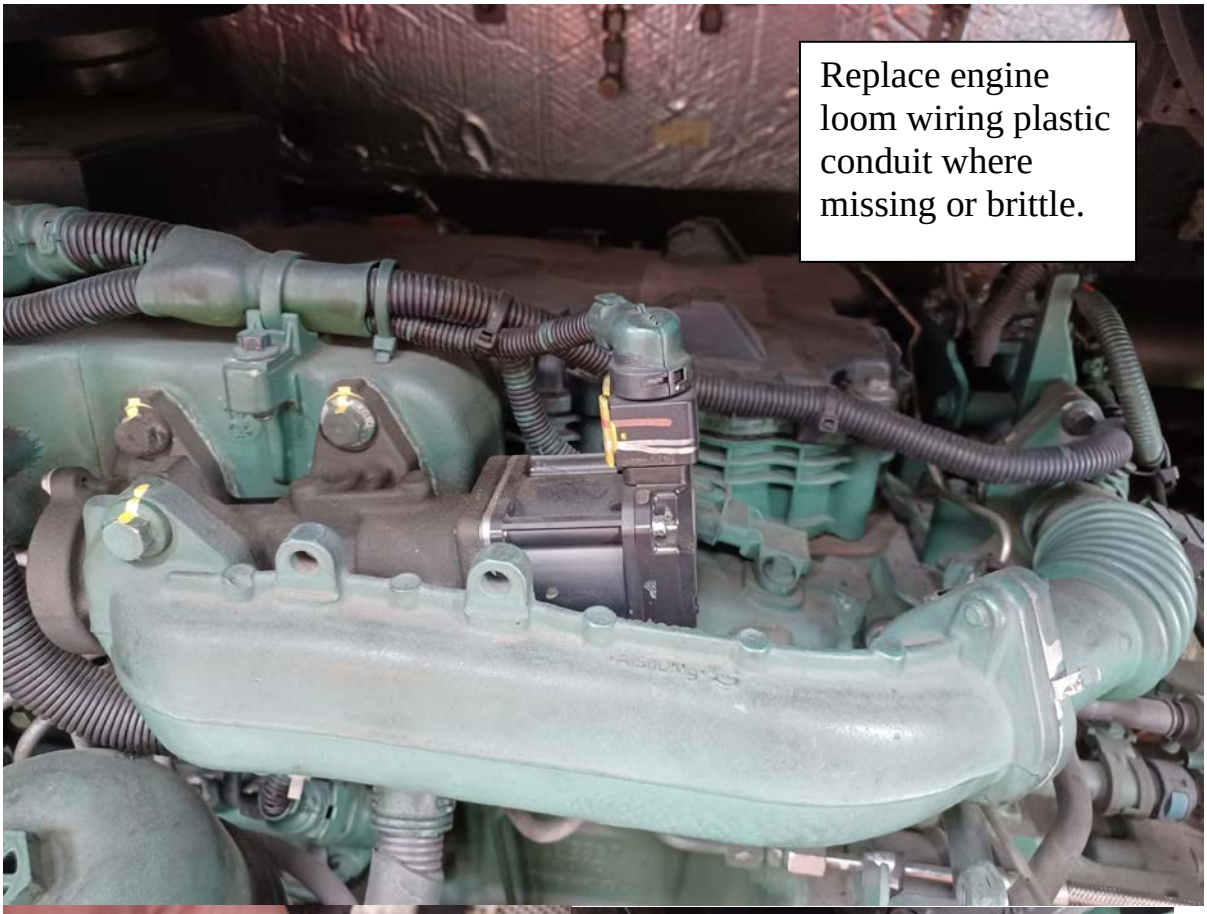
Section 3.1

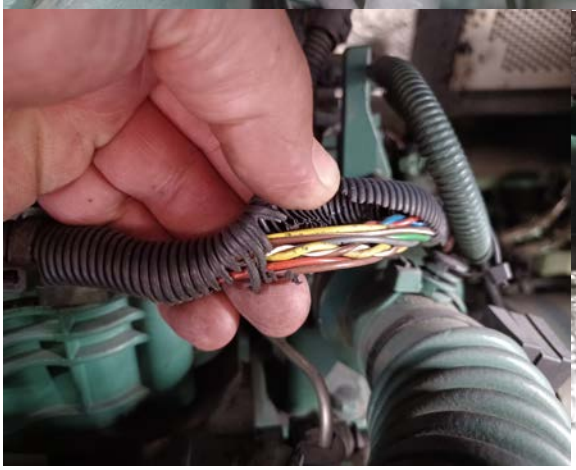
Assembly (Identity: TB-132326855-1)

3.1 - 1. Change oil cooler coolant O rings and oil supply O rings (4), (7), (8) and (2).



Section 3.2

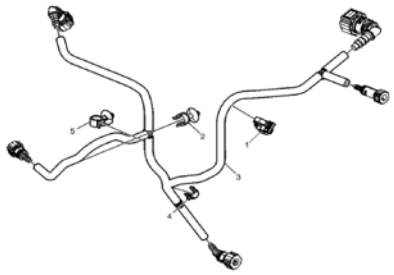

Replace engine loom wiring plastic conduit where missing or brittle.





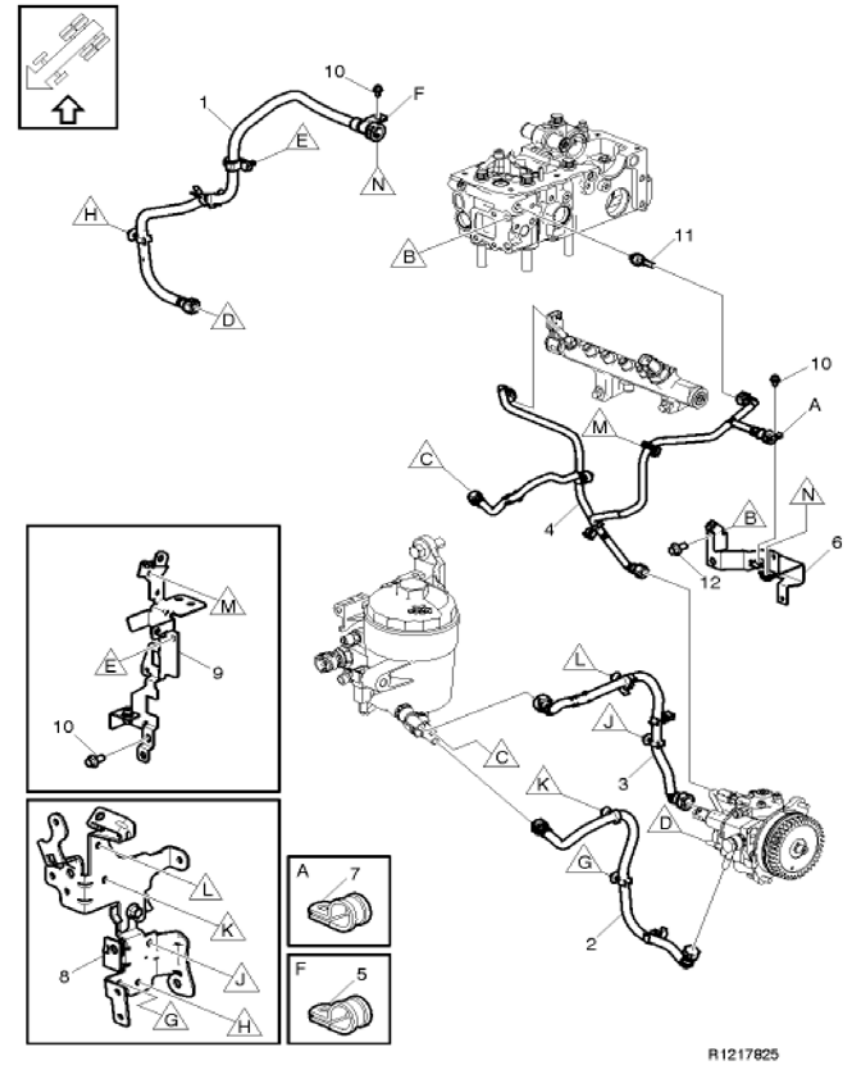
Section 3.3

Assembly (Identity: TB-131810206-1)



Replace fuel pipe (Spider) and reclip. Inspect all fuel pipe clipping and replace/fit as necessary (as per Dublin Bus Fuel Pipe Clipping Instruction).

Fuel lines, engine assembly (Identity: TB-137058590-2)



Dublin Bus Fuel Pipe Clipping Instruction – SG Buses

It has been identified that the feed and return fuel pipes to/from the engine can chafe together where the pipes cross each other and, as a consequence, start to rub through the outer insulation of the lower pipe. It has been agreed with Volvo Bus and Irish Commercials that Dublin Bus will inspect all SG buses and fit a new clipping arrangement and also replace all the original clips with new clips where the fuel pipes are not worn though the outer insulation. Dublin Bus has agreed to undertake this pipe clip replacement/modification where the fuel pipes in photo 2 are not worn through the outer insulation. If the pipes are worn beyond this limit, then the garage must report this vehicle to Irish Commercials for replacement of the fuel pipe under warranty. They will also under the pipe clip replacement program at the same time. In this case, Dublin Bus will supply the replacement kit to Irish Commercials.

To prevent further wear on the fuel pipes and potential fuel leaks in the engine compartment, please arrange to undertake the instruction as per below over the next weekly vehicle inspection cycle and report any vehicles with worn pipes as per the criteria below to Irish Commercials for fuel pipe replacement and also replacement of the full set of pipe clips.

Chaffing Point Examination

Firstly examine the fuel pipes as per photos 1 & 2 below – "chaffing point". The lower fuel pipe consists of 1.5mm fuel pipe with 1.5mm of outer insulation. If the fuel pipe is found to have rubbed through its 1.5mm outer insulation, then the fuel pipe needs to be replaced. The close up image on the page below shows an example of a pipe that would need to be replaced and therefore you should not continue with the fuel clip replacement campaign on this vehicle but instead report immediately to Irish Commercials so they may replace the fuel pipes and replace all fuel pipe clips as per instruction below. If, on the other hand, the fuel pipes are not worn through the outer insulation, then proceed with clip replacement campaign as per instruction below.

Please report all vehicles completed on this campaign to the Michael Geraghty in Technical Office on a weekly basis.

Photo 1:

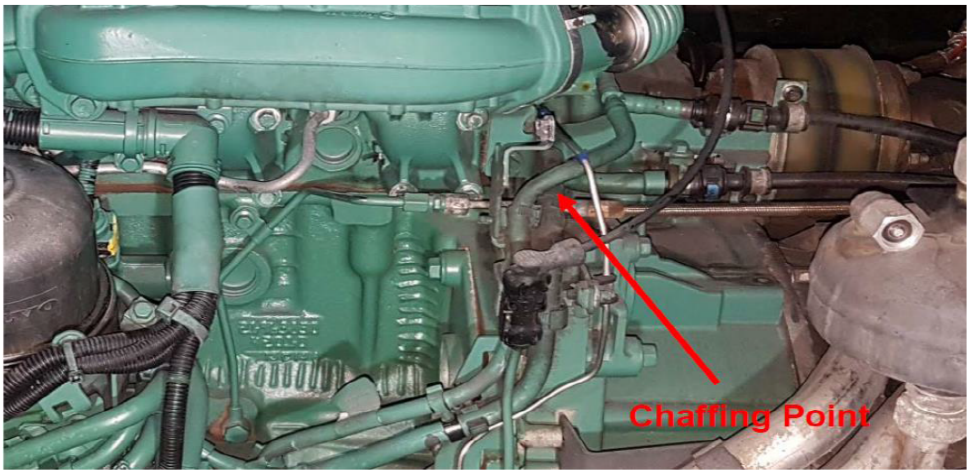
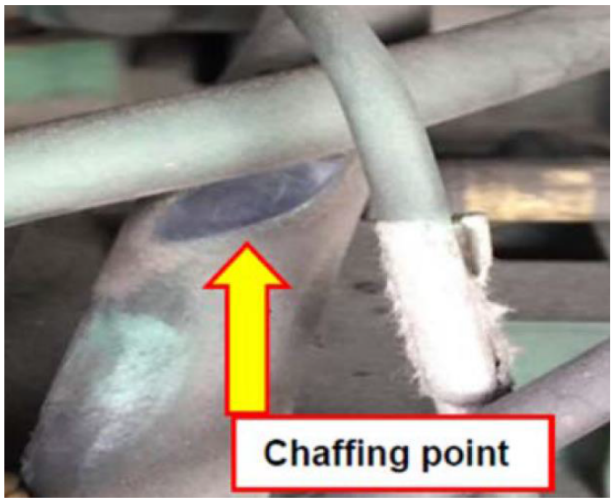


Photo 2:



Dublin Bus SG Fuel Pipe Clipping Replacement Instruction.

A kit of all required parts for the campaign will be supplied for each vehicle as a set. These should be available from stores before commencing the replacement campaign. Please ensure that you have all parts as listed below.

Parts List:

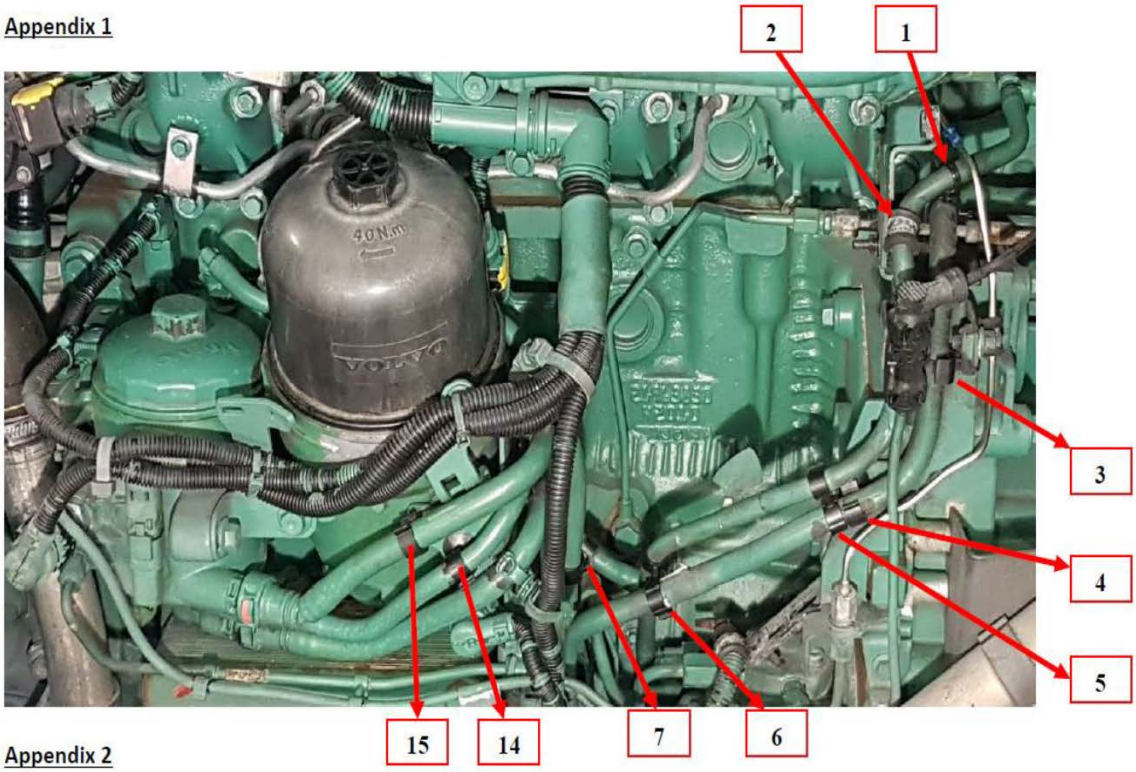
Part Description	Part Number	Quantity
Straight clip large diameter pipe	21979938	**X1**
90 degree angled clip small diameter pipe	21779894	**X1**
90 degree angled pipe large diameter pipe	21777574	**X6**
New pipe securing clip with cable ties	20885496	**X1**
Push fit Cable tie retainer	21751694	**X1**
Duel pipe clamp / spacer	3121512	**X4**
11 mm P-Clip	952626	**X1**
Flange Screw X 20mm	984726	**X1**
Flange Nut	990949	**X1**
Small Cable tie	948211	**X1**

Instructions to Modify

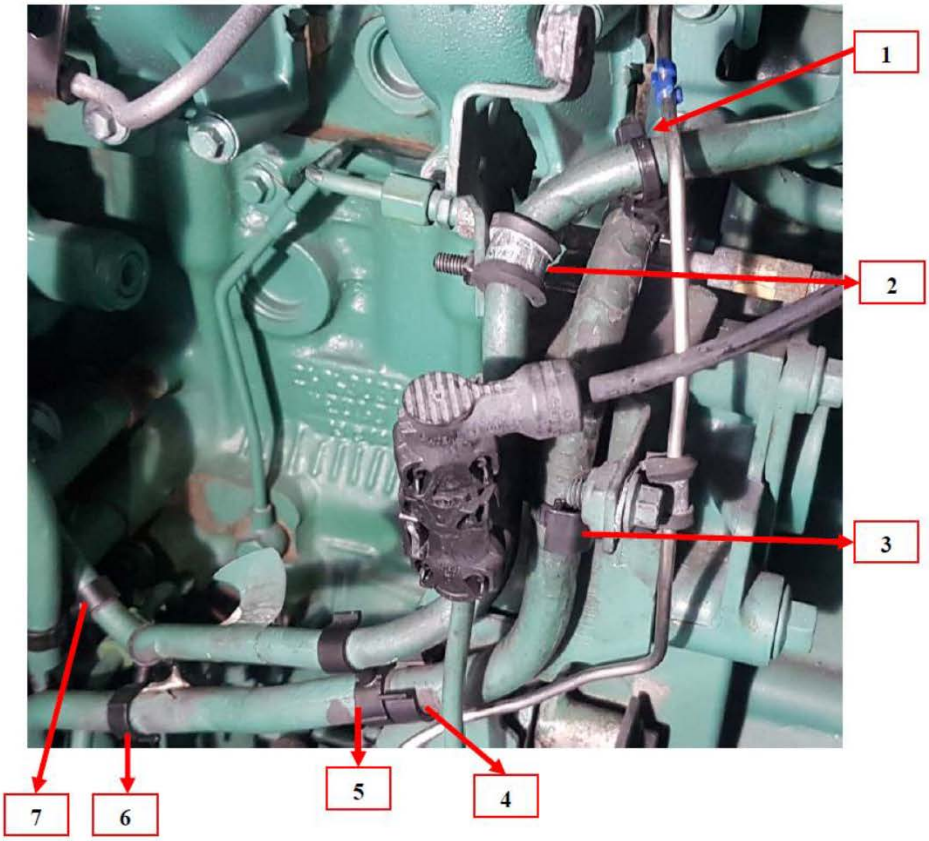
Using the table reference and photos below, replace the fuel pipe securing clips accordingly.

Clip Reference Number	Part Description Used	Part Number Used	Photo Appendix Number	Comments
1	New pipe securing clip with cable ties	20885496 x 1	1&2	Clip the 2 pipes together
2	11 mm P-Clip Flange Screw X 20mm Flange Nut Small Cable tie	952626 x 1 984726 x 1 990949 x 1 948211 x 1	1, 2&3	Ensure fuel pipe isnt fouling any brackets once the P-Clip is fitted and tightened
3	Push fit Cable tie retainer	21751694 x 1	1&2	
4	90 degree angled pipe large diameter pipe	21777574 x1	1, 2, 3 & 4	
5	Dual pipe clamp / spacer	3121512x1	1,2,3&4	
6	Dual pipe clamp / spacer	3121512x1	1, 2, 4, 5 & 6	
7	Dual pipe clamp / spacer	3121512x1	1, 2, 4, 5 & 6	
8	90 degree angled pipe large diameter pipe	21777574 x 1	4, &5	
9	90 degree angled pipe large diameter pipe	21777574x1	4&5	
10	Straight clip large diameter pipe	21979938 x 1	4,5 & 6	
11	Dual pipe clamp / spacer	3121512x1	4&6	
12	90 degree angled pipe large diameter pipe	21777574 x 1	4&6	
13	90 degree angled pipe large diameter pipe	21777574 x 1	4&6	
14	90 degree angled clip small diameter pipe	21779894 x 1	1, 4&6	
15	90 degree angled pipe large diameter pipe	21777574 x 1l	1,4 & 6	

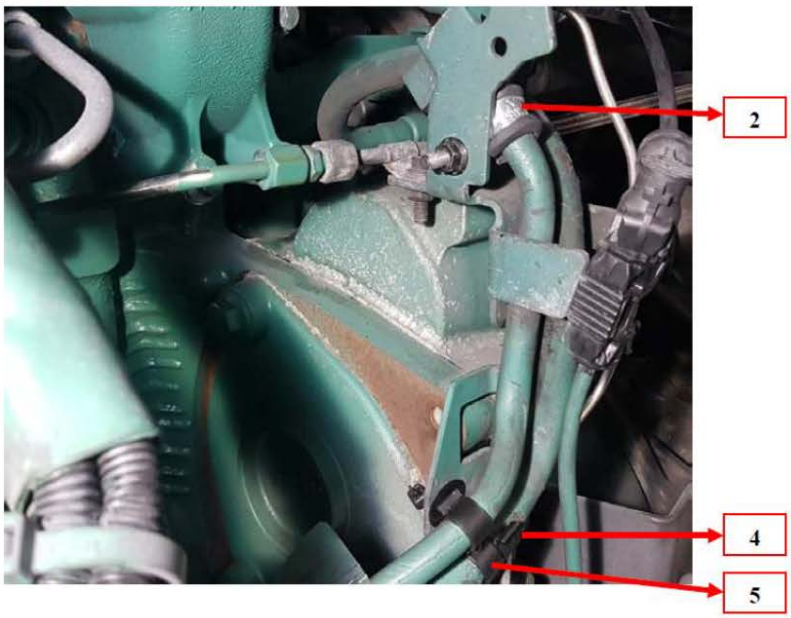
Appendix 1



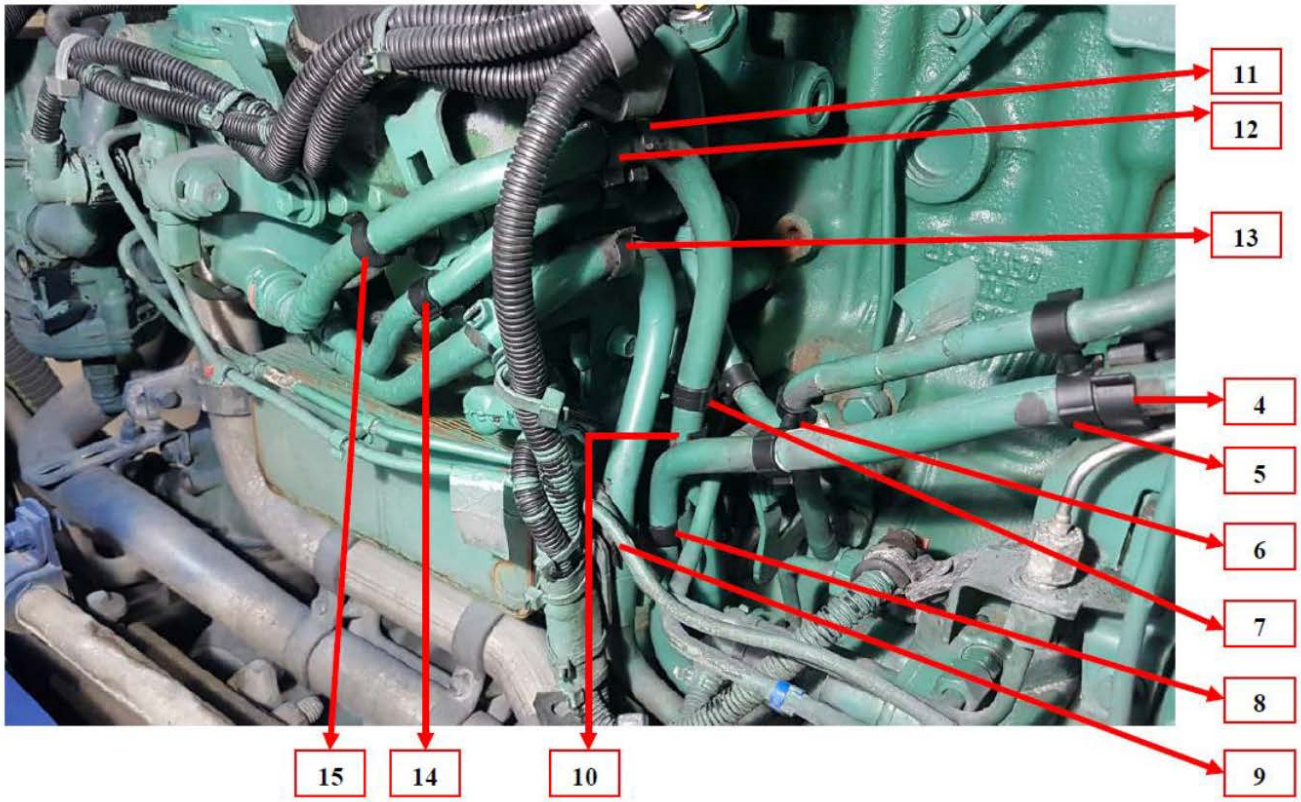
Appendix 2



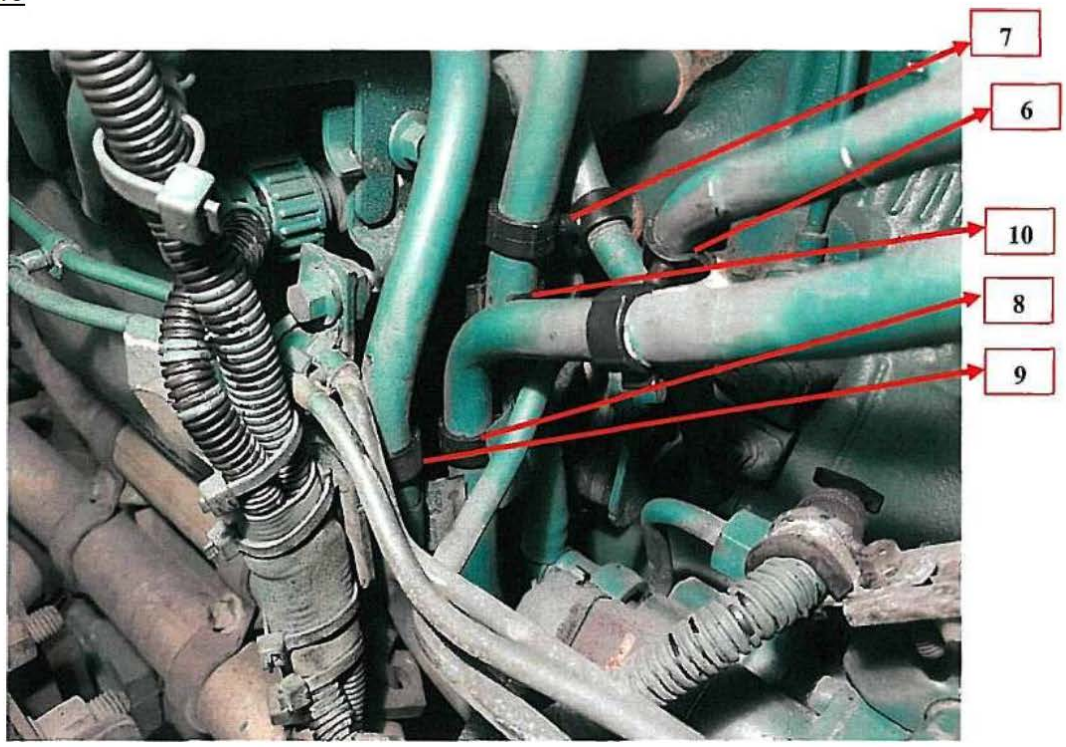
Appendix 3



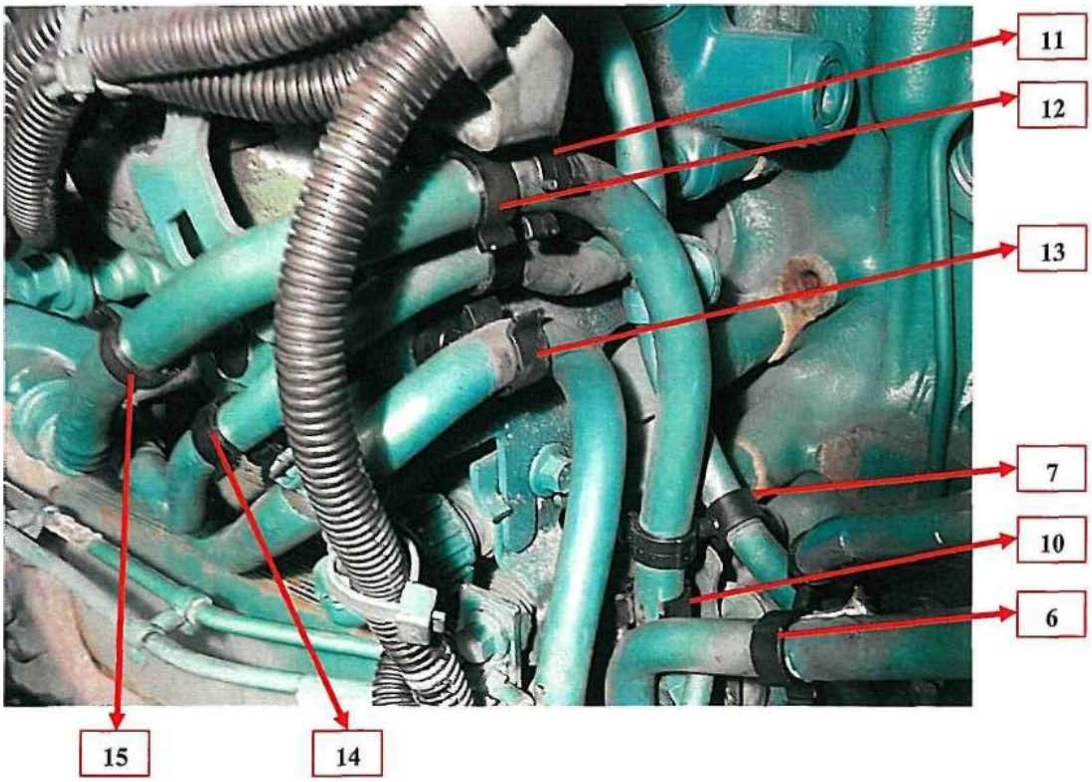
Appendix 4



Appendix 5

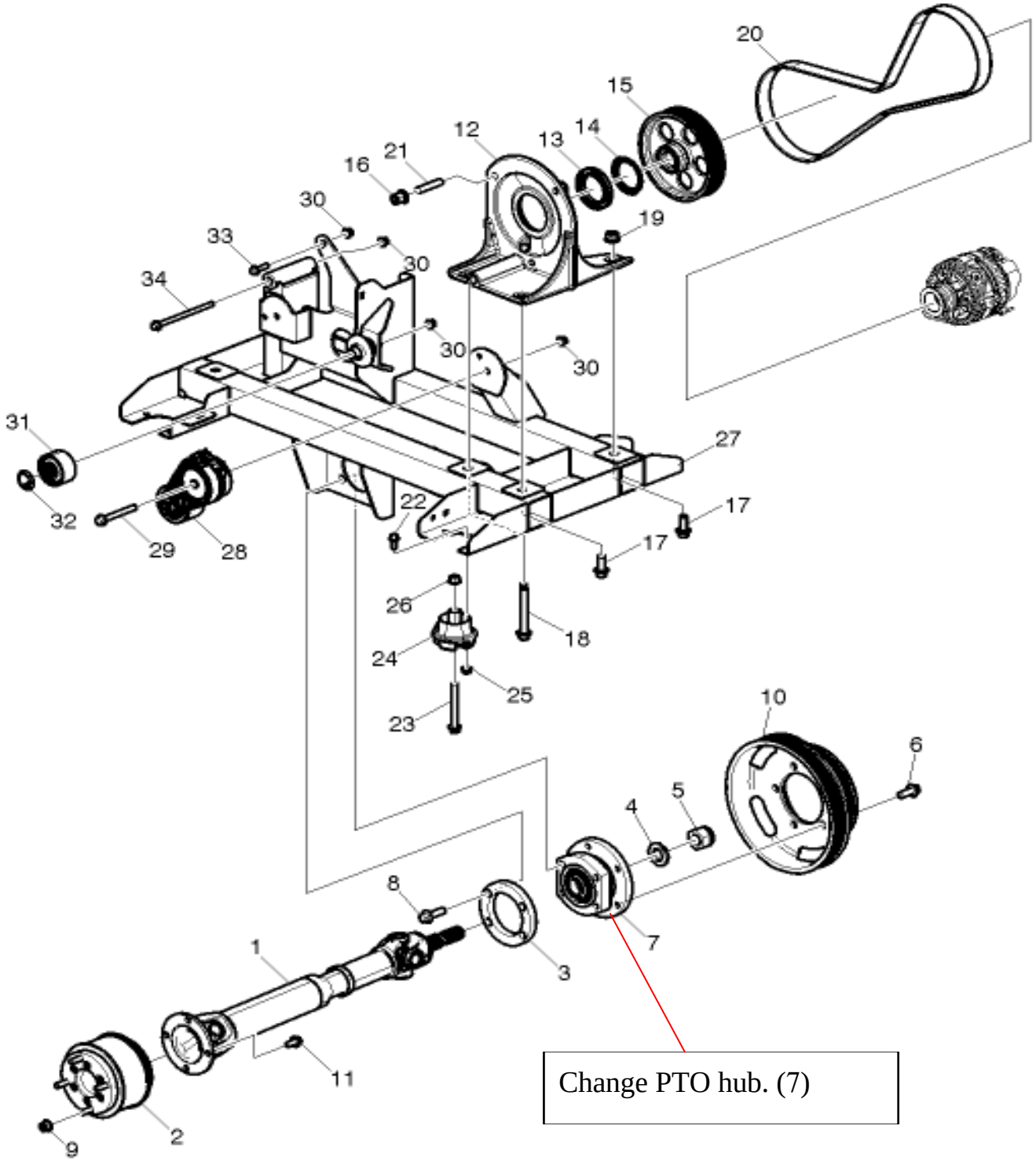


Appendix 6

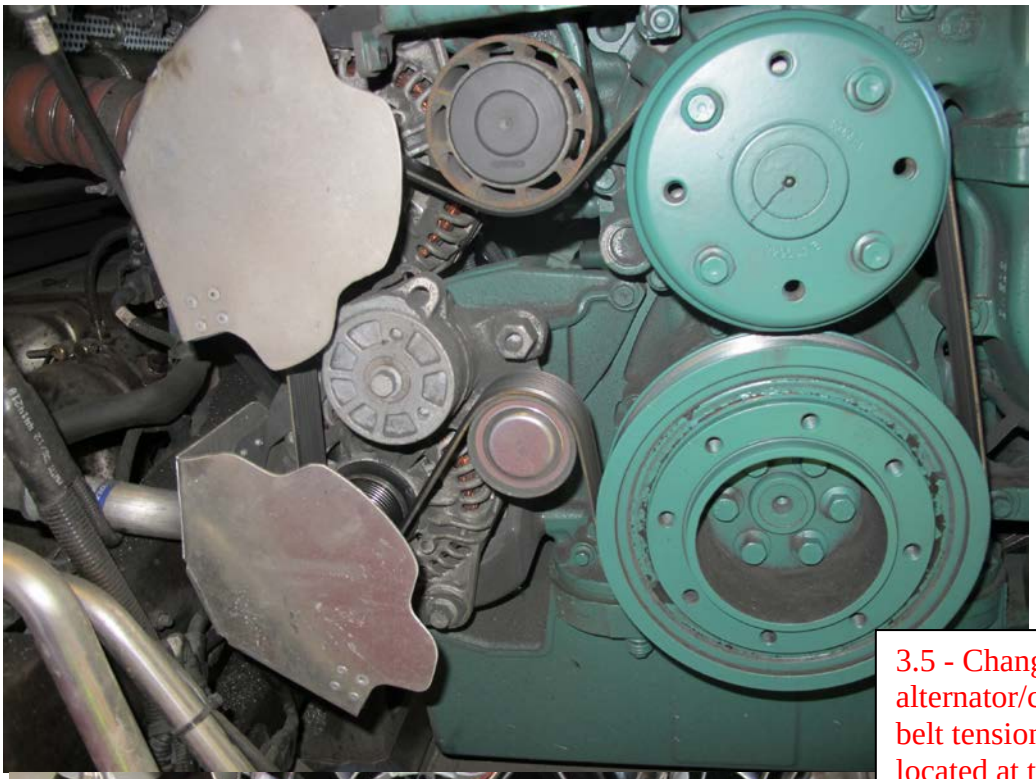


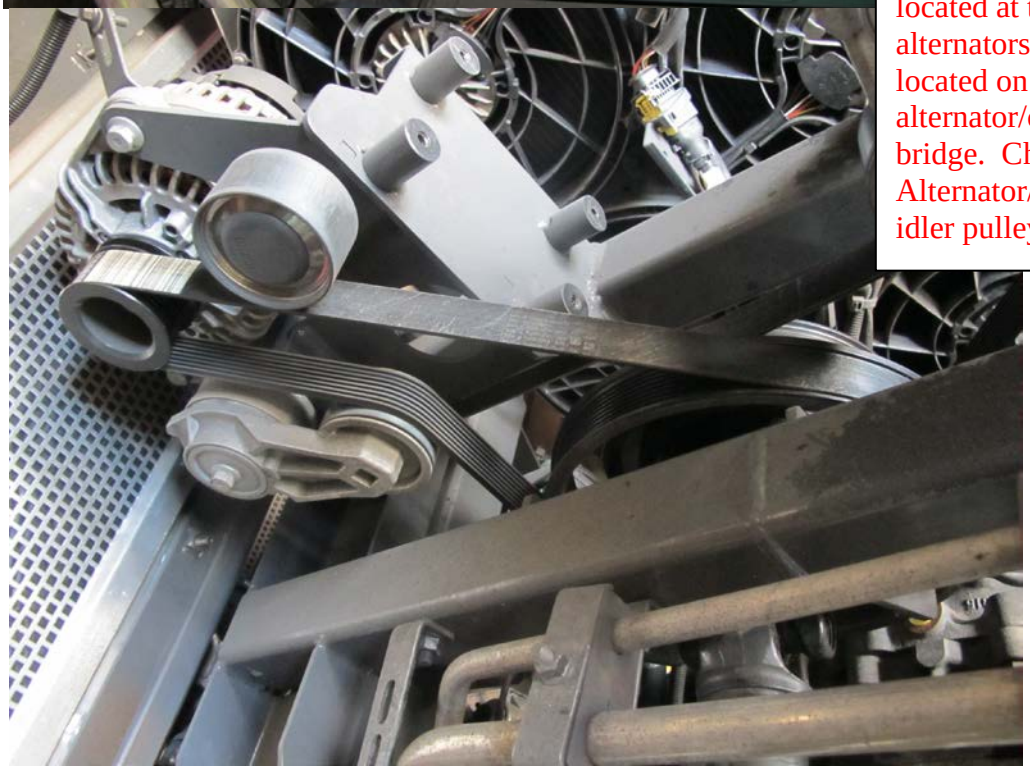
Please fit small grey cable ties to the rear of as many feather clips as possible

Section 3.4


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Change PTO hub. (7)
R1286184

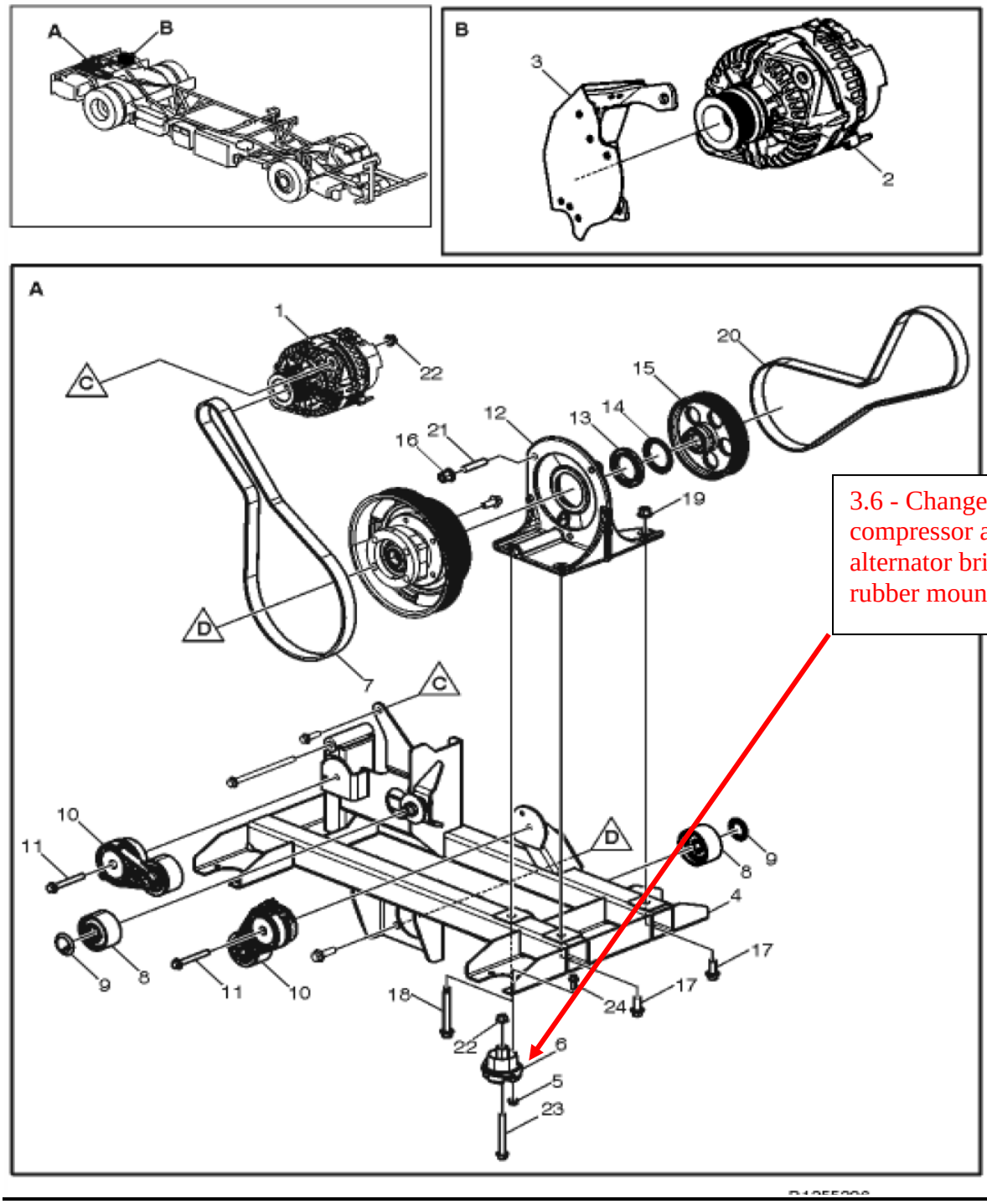
Section 3.5





3.5 - Change alternator/compressor belt tensioners X 3. 1 located at twin alternators and 2 located on alternator/compressor bridge. Change Alternator/compressor idler pulleys X3

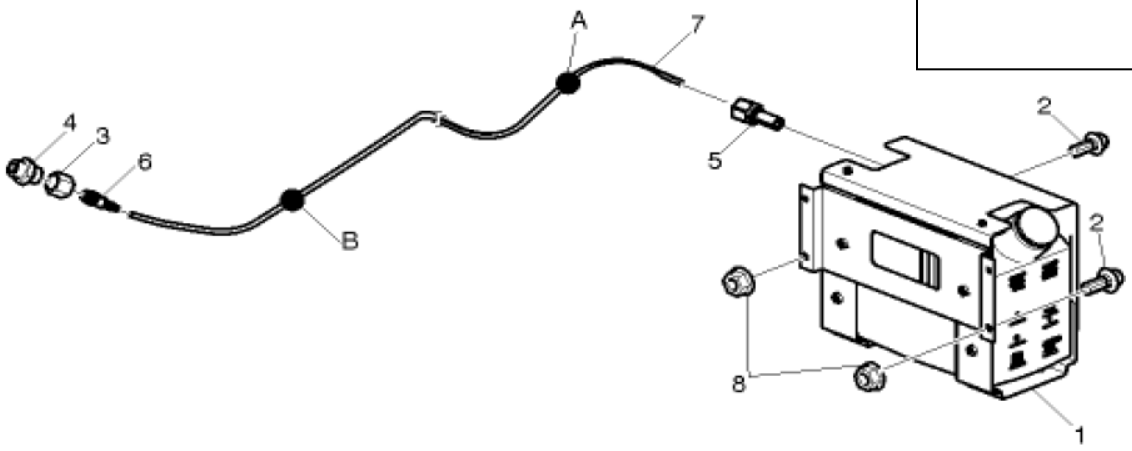
Section 3.6

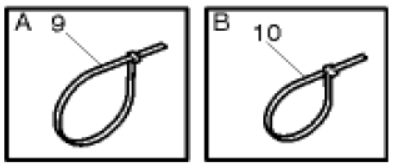

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3.6 - Change compressor and alternator bridge rubber mountings.

Section 3.7

Oil filling, automatic (Identity: TB-132038937-2)

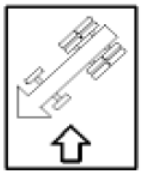
3.7 - Function check auto oil top up system and repair where necessary

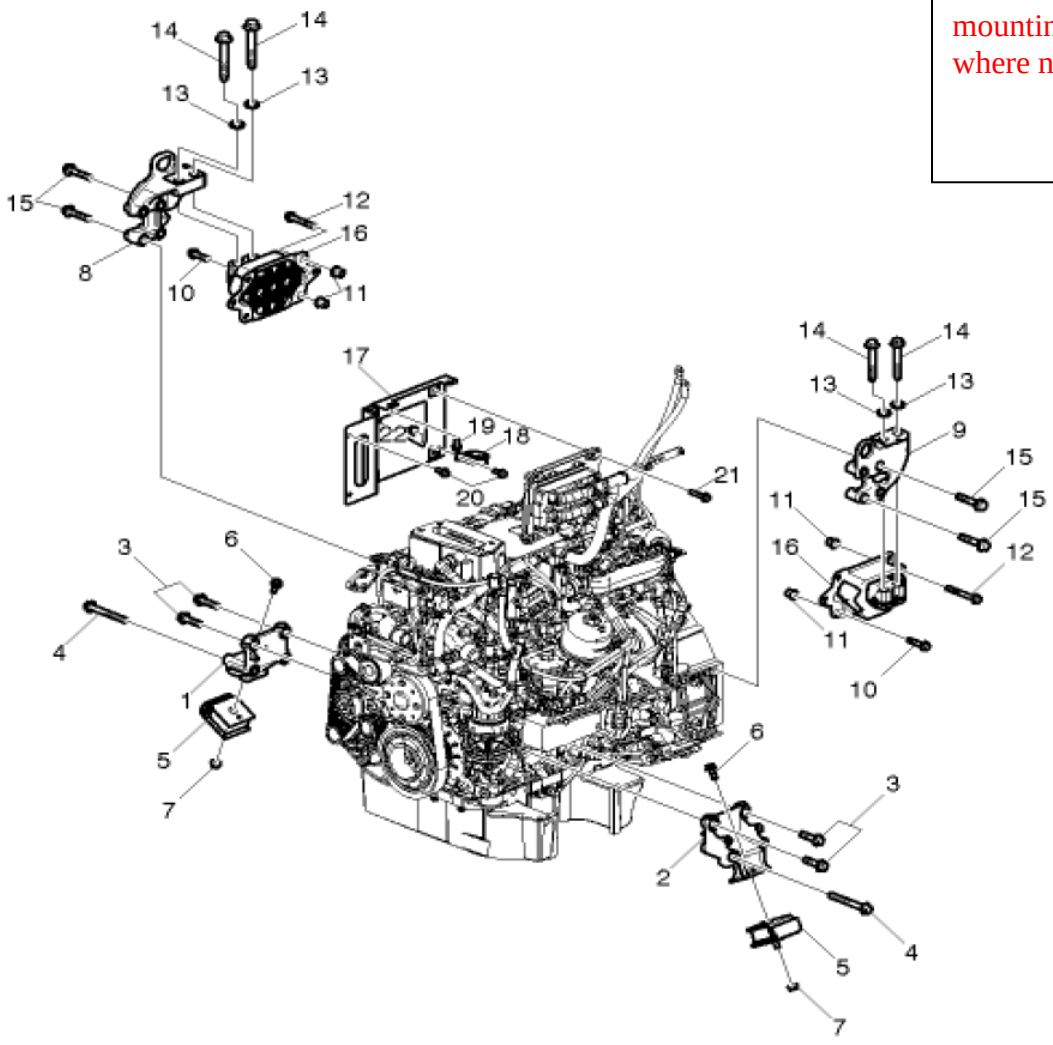




Section 3.8

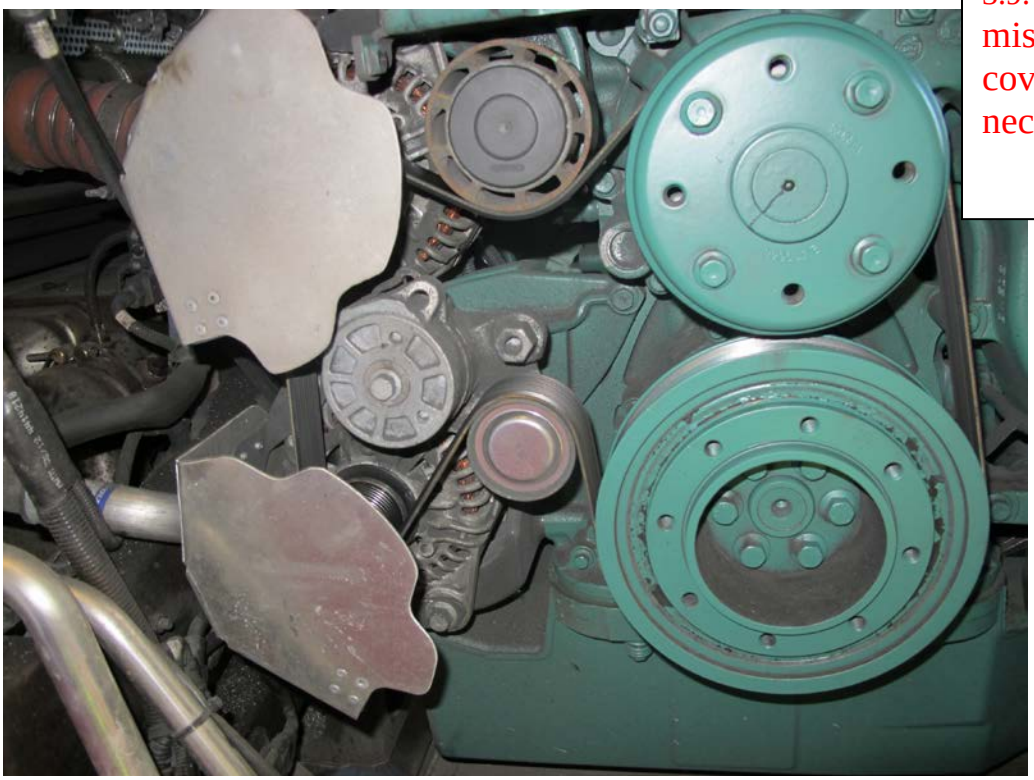
Engine mounting (Identity: TB-131661450-1)





3.8.- Check condition of all Engine mountings and replace where necessary

Section 3.9



3.9.- Replace missing alternator covers where necessary.