



# Rerouting Decomposition Reactor Cooling Lines

# UPDATE

**WARNING:** Always follow all Federal, State, Local, and Shop safety standards and use proper safety equipment, and thoroughly read and understand all instructions before performing these procedures. Make sure exhaust, engine, and engine coolant are cool to the touch before performing these procedures.

Blue Bird has new guidelines from Cummins for the installation of the after treatment decomposition reactor cooling lines that is intended to reduce the formation of crystalized DEF around the injector during a hot shut down. The changes can reduce down time and engine torque de-rates, and increase system reliability and customer satisfaction. Buses built prior to these new guidelines can receive the same benefits by updating the routing of the decomposition reactor cooling lines. This product improvement is not covered by the limited warranty.

Models affected: 2010-2014 Visions and All Americans with Cummins ISB, ISC, & ISL 2010/2013 emissions diesel engines built prior to May 27, 2013.

### Vision (In-Line)

Visions require a new bracket, clamp, and fasteners that will move the coolant return line to a horizontal position for a minimum of 6-1/2 inches from the decomp tube as shown in figure 1. The bracket (10034335) will attach to the frame rail behind the DEF tank as shown in figure 2. See figure 3 for illustration of parts. The coolant supply line will remain in the vertical position.

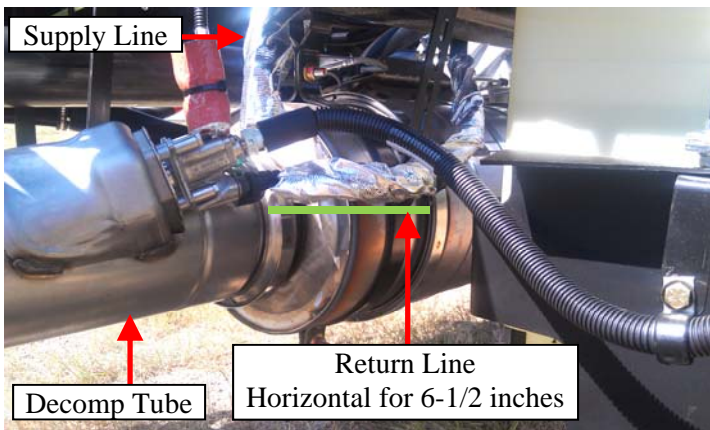


Fig. 1

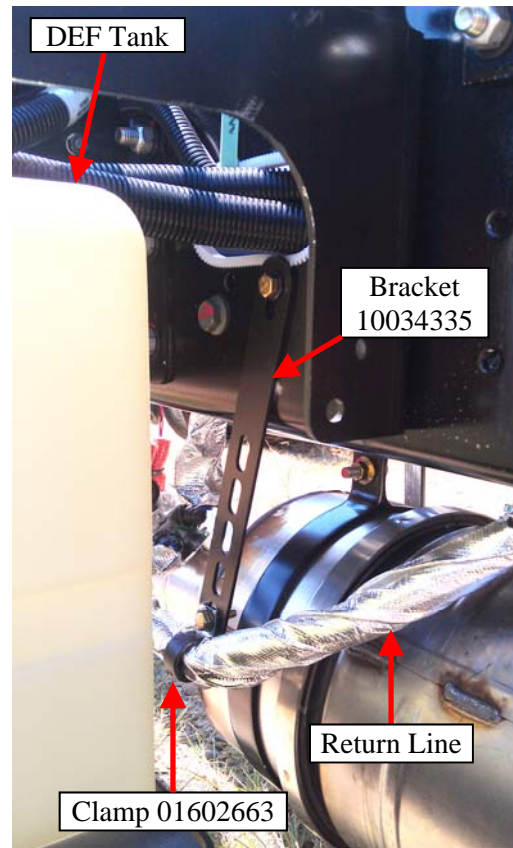


Fig. 2

**Vision continued**

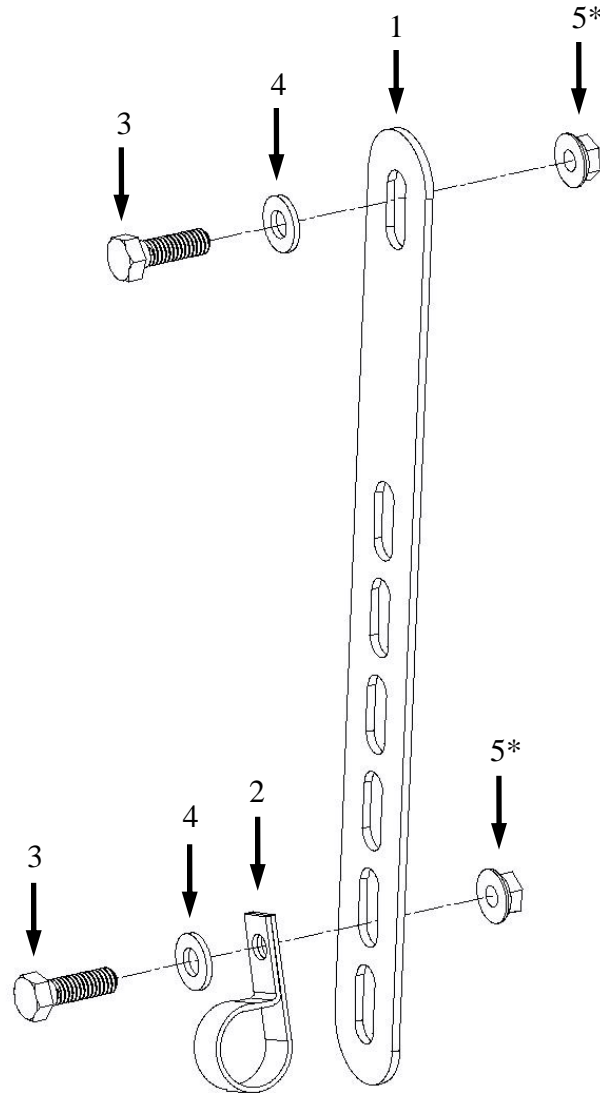


Fig. 3

Vision Parts List			
Item	Part #	Description	Qty
1	10034335	BRACKET,MTG,REACTOR COOLING LINE SUPPORT,BBCV	1
2	01602663	CLAMP,LOOP,1.00 INCH,INSULATED	1
3	00854406	CAPSCREW,HEX HD,5/16-18 X 1,GR8,YEL ZN DICH	2
4	01167485	WASHER,FLAT,11/32 X 11/16 X 5/64,HDN,BLK ZN	2
5	01480433	NUT,HEX HD,5/16-18,FLG PRVG TORQ,GR F,YDICH	2

\* Torque nuts 12-13 FT-LB.



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## All American Front Engine (In-Line / Body Models: 3406, 3508, 3603, 3800, 3909, 4004)

All American Front Engine buses with an in-line exhaust configuration require two brackets, two clamps, and fasteners that will move the coolant return line to a horizontal position for a minimum of 6-1/2 inches and the coolant supply line to vertical position as shown in figure 4. The bracket (10034335) will attach to an existing hole in the frame rail just in front of the decomposition tube. See figure 5 for illustration of parts.

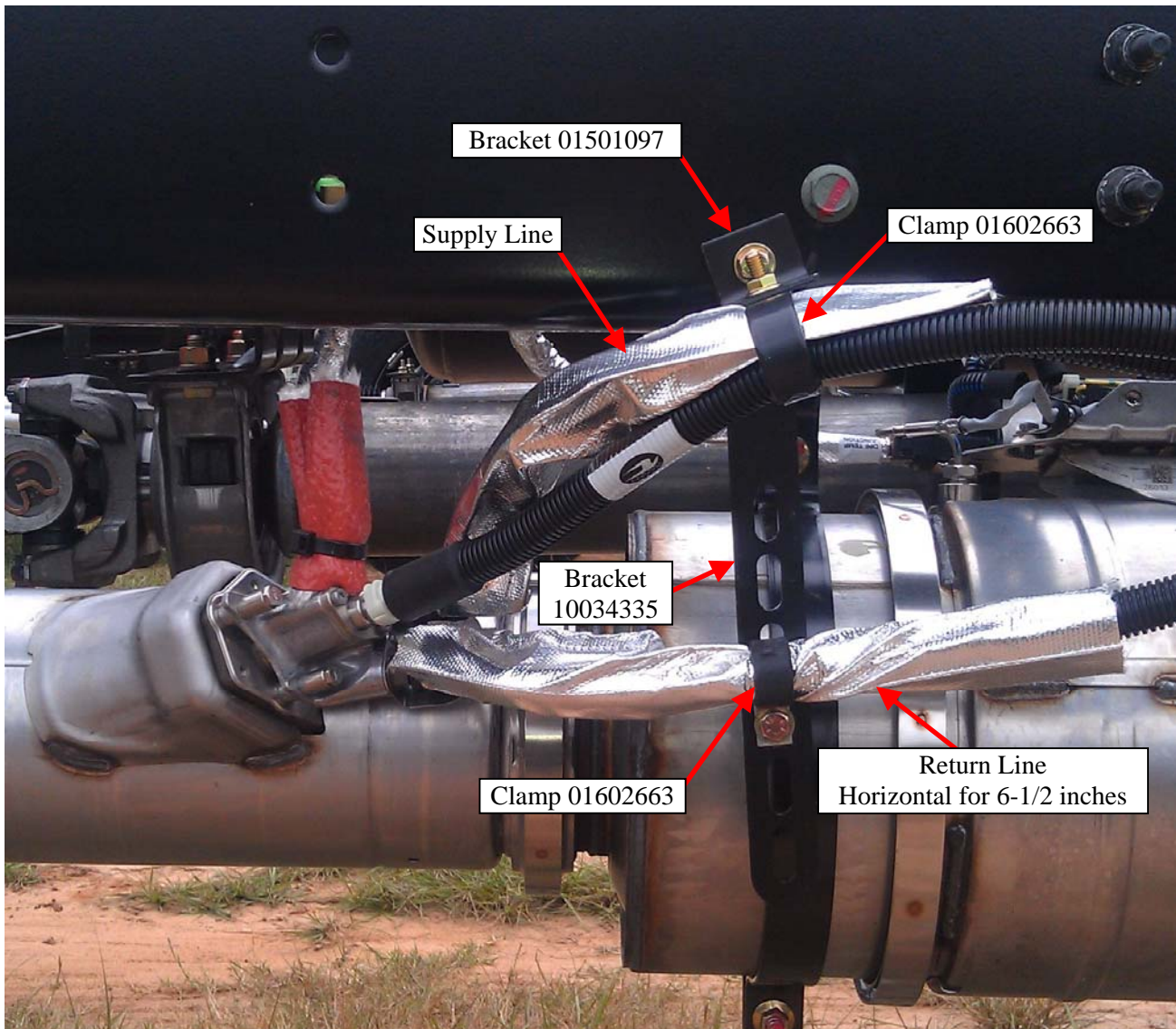


Fig. 4

S U I 3 1 4  
- S E R V I C E U P D A T E -

**All American Front Engine (In-Line) continued**

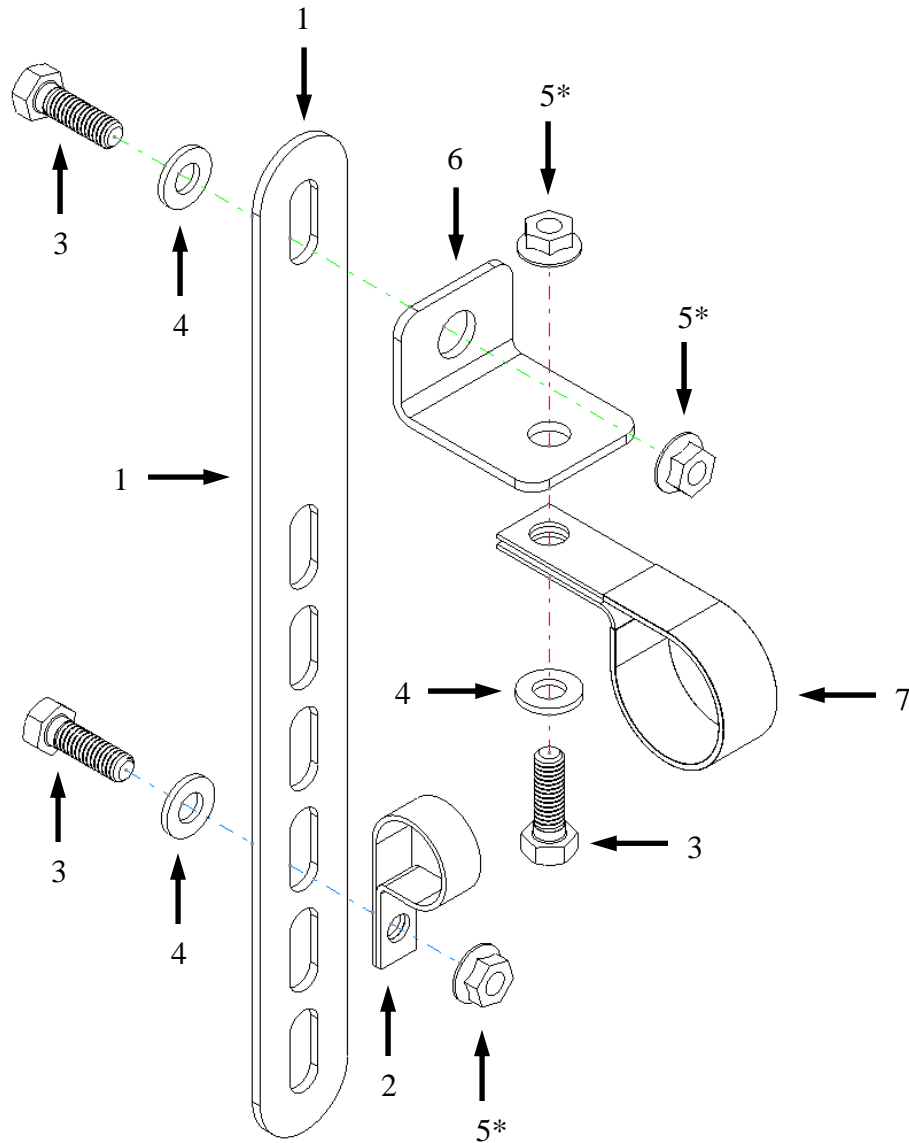


Fig. 5

All American Front Engine Parts List			
Item	Part #	Description	Qty
1	10034335	BRACKET,MTG,REACTOR COOLING LINE SUPPORT,BBCV	1
2	01602663	CLAMP,LOOP,1.00 INCH,INSULATED	1
3	00854406	CAPSCREW,HEX HD,5/16-18 X 1,GR8,YEL ZN DICH	3
4	01167485	WASHER,FLAT,11/32 X 11/16 X 5/64,HDN,BLK ZN	3
5	01480433	NUT,HEX HD,5/16-18,FLG PRVG TORQ,GR F,YDICH	3
6	01501097	BRACKET,ATCH,BRAKE LINE TO FRAME HDRE	1
7	01039486	CLAMP,LOOP,1.50	1

\* Torque nuts 12-13 FT-LB.





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## All American Front Engine (Switch-Back / Body Models: 2903 & 3107)

All American Front Engine buses with a switch-back exhaust configuration only requires a re-routing of the coolant supply line. The coolant supply line should remain in a vertical position. The coolant return line should exit horizontally before transitioning upward. See figure 6.

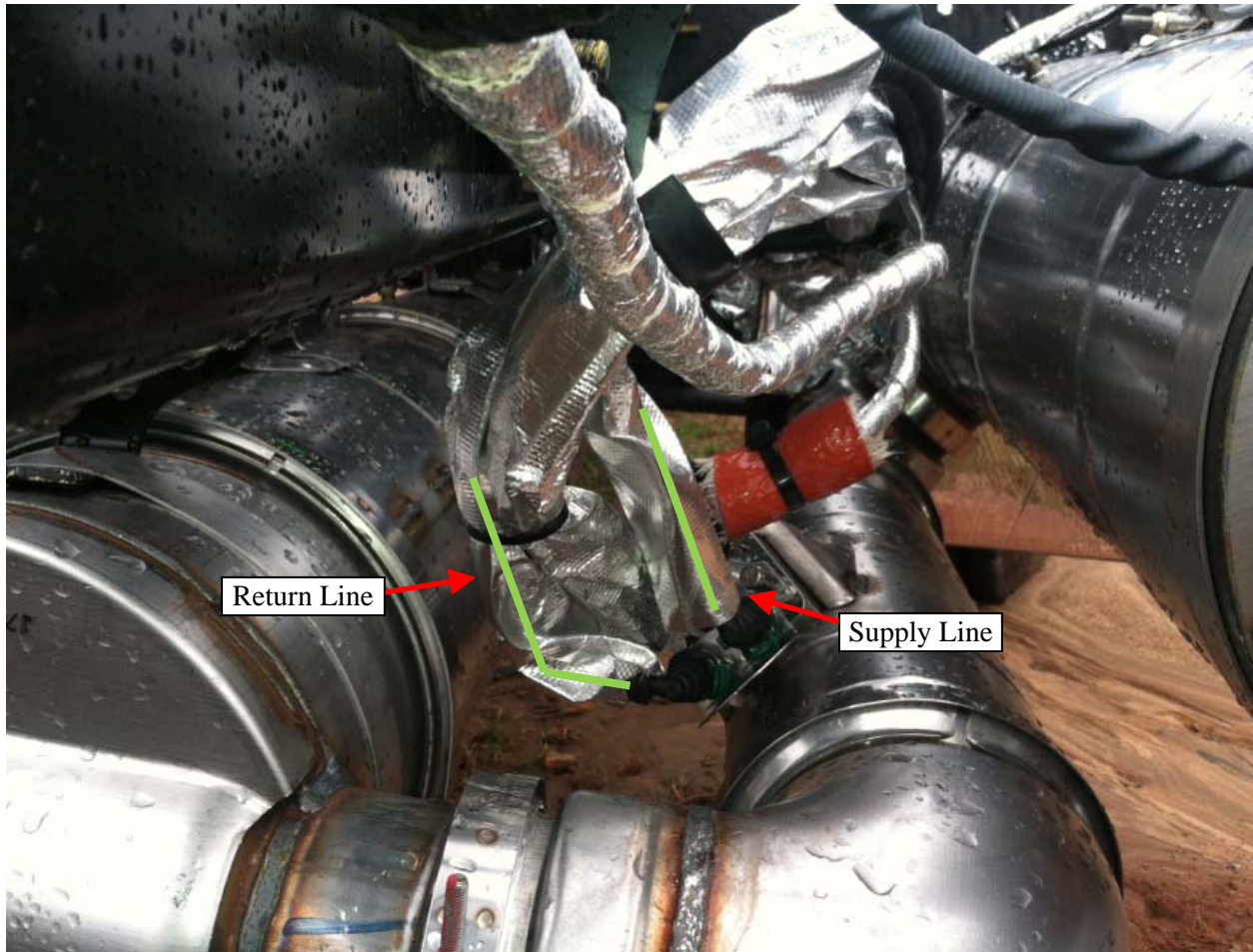


Fig. 6

S U I 3 1 4  
- S E R V I C E U P D A T E



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## All American Rear Engine

All American Rear Engine buses only require a re-routing of the coolant supply line. The coolant supply line should be re-routed so that it rises as high as possible over the coolant return line, DEF line, and the electrical connector. See figure 7.

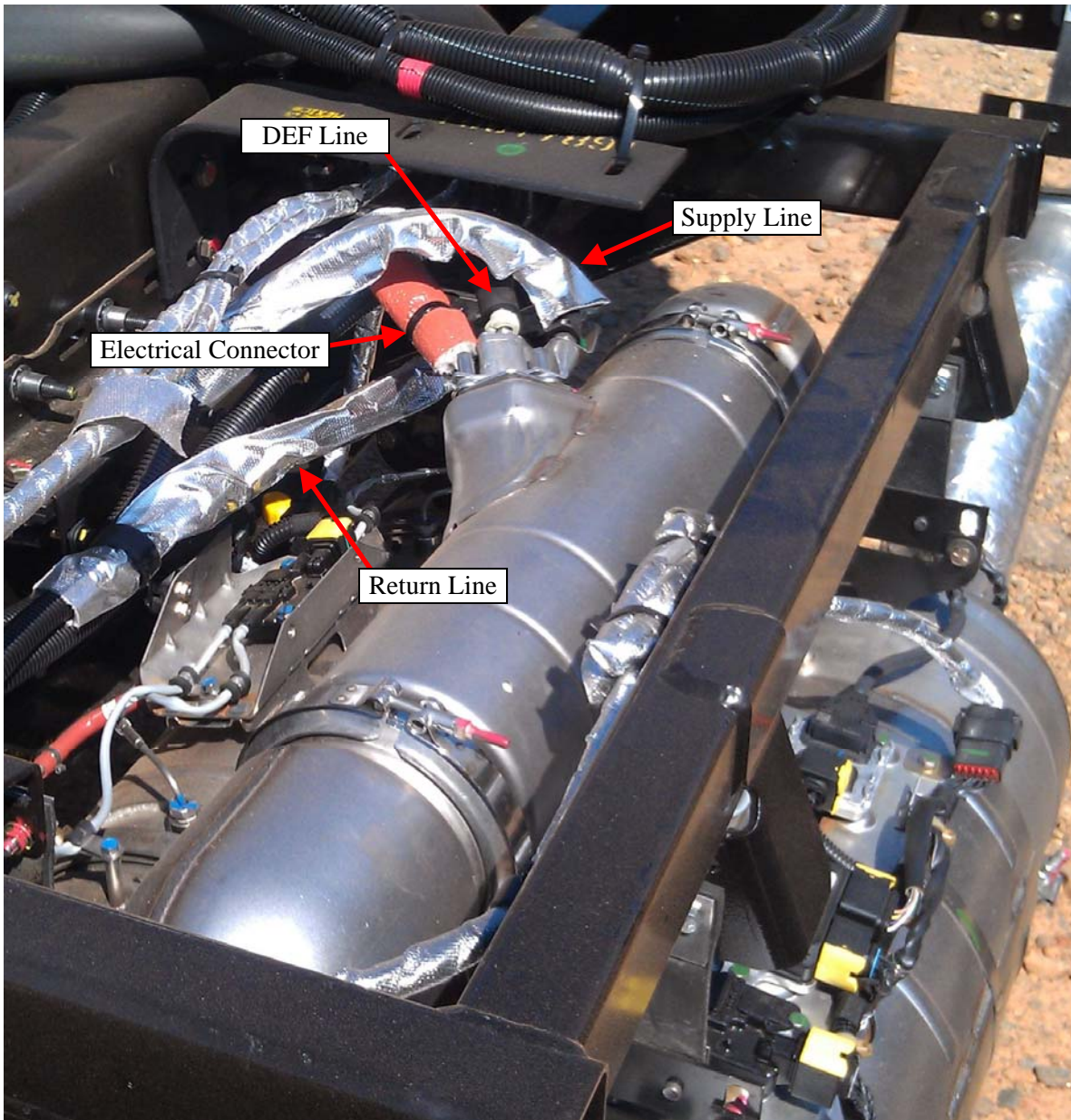


Fig. 7

S U I 3 I 4  
S E R V I C E U P D A T E