

## New Jersey Transit 31LFW: Exhaust Cradle Replacement



**Prepared by:** Kalman Takacs  
Sr. Field Service Engineer  
256-241-1243

**Approved By:** Dan Allen  
Chief Engineer of Mfg. and Service Support

**Property and Top Bus Number:** New Jersey Transit 31LFW

**Issue:** Exhaust cradle may have corrosion.

**Reason/ cause:** Inadequate protective coating.

**Solution:** Replace exhaust cradle as required per this work instruction.

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**Number of affected buses:** as required

**Estimate repair hours/bus:** 2 hours

**ECN #:**

**Necessary parts:**

Cradle,	P/N: <b>500-1408-340</b> ,	1/bus,
Strap assembly, DPF, SS,	P/N: <b>500-1408-350</b> ,	as required (2/bus),
Strap assembly, SCR, SS,	P/N: <b>500-1408-330</b> ,	as required (2/bus),

**Necessary tools:**

Regular hand tools, ladder, torque wrench capable to 80 ft-lb.

## **SAFETY PRECAUTIONS MUST BE FOLLOWED ACCORDING TO ACCEPTED INDUSTRY STANDARDS AND LOCAL/PROPERTY REQUIREMENTS.**

1. Park the bus on a flat surface and apply the parking brake.
2. Turn main battery disconnect switch off.
3. Open attic compartment access door.



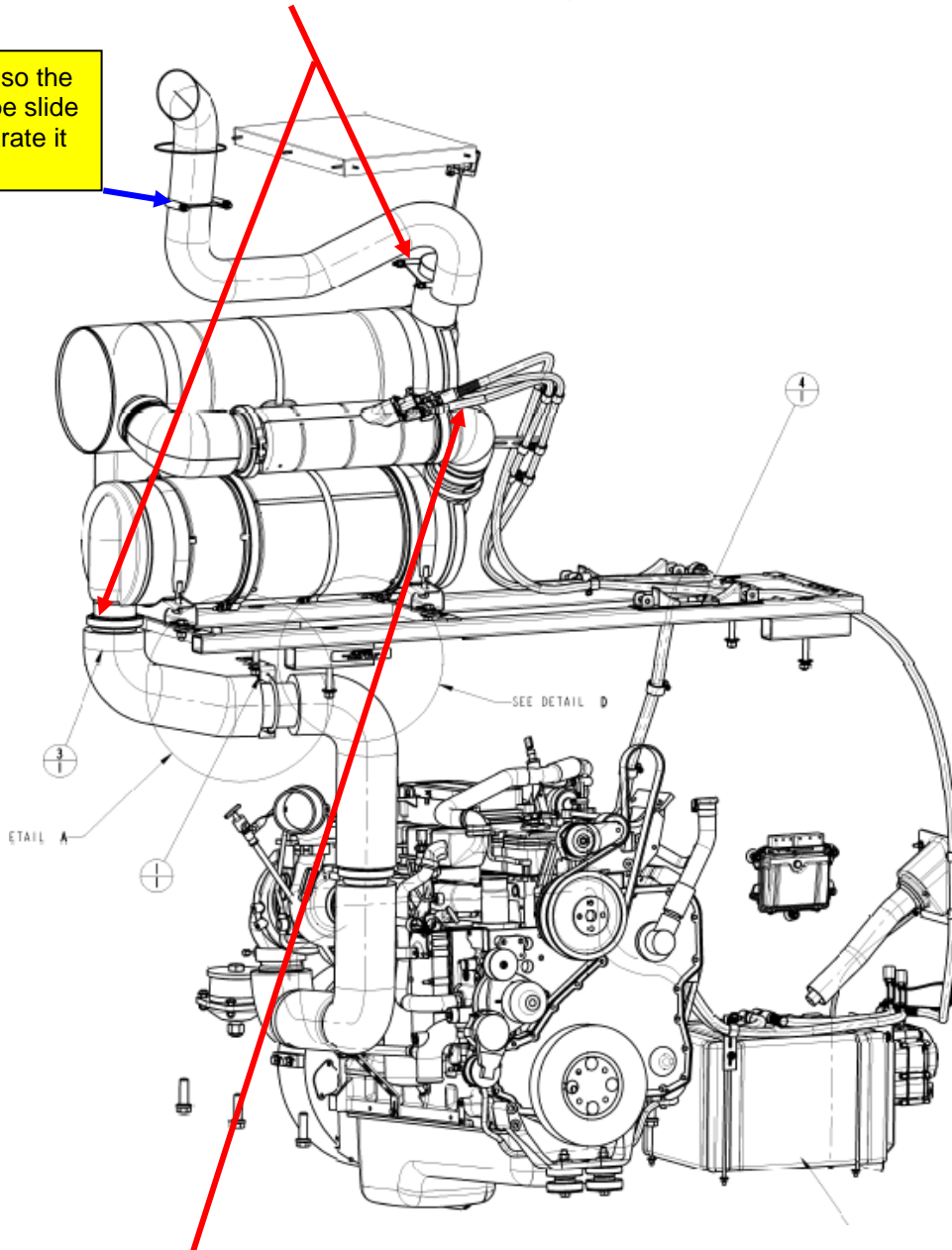
4. Ensure that the exhaust system is cold. Refer to NABI Maintenance Manual for safety precautions and instructions when working on the exhaust system.
5. Drain air tanks mounted on the exhaust cradle. Refer to NABI Maintenance Manual for safety precautions and instructions when working on air system.



6. Tag and disconnect nylon air lines from air tanks.
7. Remove mounting straps/hardware of the tanks and remove tanks.
8. Remove P-clamps securing the hose of the fire suppression system to the cradle.

9. Disconnect exhaust clamps shown on the drawing below.

Loosen this clamp so the exhaust pipe can be slide up in order to separate it from the muffler.



10. Tag and disconnect hoses from Decomp module: one DEF hose and two coolant hoses.

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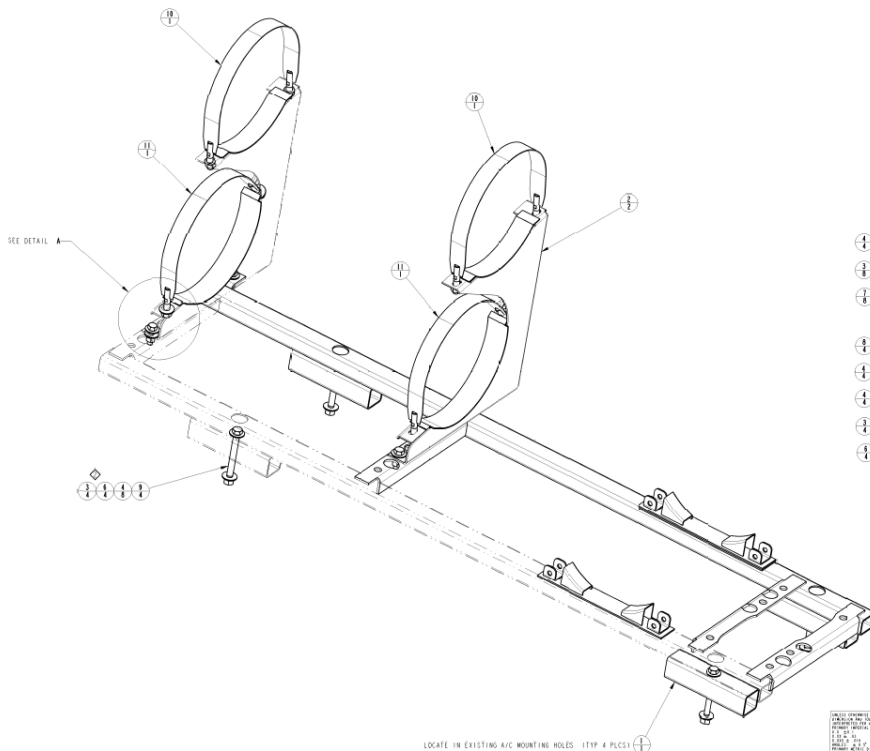
11. Remove slotted bar mounting bracket from exhaust clamp.



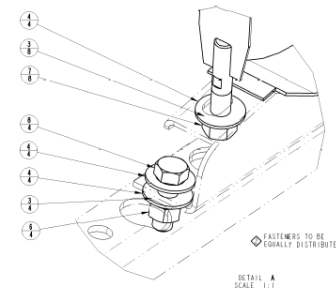
12. Remove exhaust cradle mounting hardware.

13. Remove exhaust cradle assembly from bus. Tag the cradle (add date of removal and bus number) and return it to NABI.

14. Remove exhaust components from cradle. Replace DPF and SCR mounting straps (see item 10 and 11 below) if they are not stainless steel. Replace any components if damaged. See part numbers of exhaust cradle and mounting hardware below.



REV	ECN NO.	DATE	BY	DESCRIPTION	CHECKED BY
1	1012-25648	10-17-2011	JM	INITIAL RELEASE	JM
2	1012-26845	01-10-2012	JM	ADDED ITEM#2 TO OTHER VIEW	JM
3	1012-30026	08-20-2012	JM	CHG'D 1/2" WASHERS TO 7/16"	JM
4	1012-33846	09-11-2013	JM	REPLACED STRAPS WITH SS STRAPS	JM



11	500-1408-350	STRAP ASSY, DPF, SS	2
10	500-1408-330	STRAP ASSY, SCR, SS	2
9	220013408	BOLT, 1/2-13x5,HEX,ZN,CR8	4
8	220013128	BOLT, 1/2-13x3-1/2,HEX,ZN,CR8	4
7	200820	NUT, 1/2-20, HEX	8
6	308813	NUT, 1/2-13,HEX	8
4	2607	WASHER,FLAT,7/16,ZN,CR 8	20
3	2508	WASHER,LOCK,1/2	16
2	540-1408-310	BRACKET ASSY,EXHAUST SYS,3010	2
1	500-1408-340	BRKT 1208810 DRIVE COCKLE	2

See these part numbers on the next page.

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4	11	500-1408-350	STRAP ASSY, DPF, SS	2
4	10	500-1408-330	STRAP ASSY, SCR, SS	2
	9	220813408	BOLT, 1/2-13x5, HEX, ZN, GR8	4
	8	220813128	BOLT, 1/2-13x1-1/2, HEX, ZN, GR8	4
	7	200820	NUT, 1/2-20, HEX	8
	6	200813	NUT, 1/2-13UNC, HEX	8
3	4	2607	WASHER, FLAT, 7/16, ZN, GR 8	20
	3	2508	WASHER, LOCK, 1/2	16
	2	540-1408-310	BRACKET ASSY, EXHAUST SYS, 2010	2
	1	500-1408-340	BRKT, HYBRID DRIVE COOLER	1
	ITEM	PART NO.	DESCRIPTION	QTY

15. Install exhaust components (DPF, SCR, etc.) to the new cradle.
16. Reinstall new cradle assembly to the bus. Torque ½-13 size mounting hardware to 80 ft-lb.
17. Reconnect hoses to Decomp unit.
18. Reinstall slotted bar bracket to the exhaust clamp (see photo at paragraph 11).
19. Reinstall exhaust clamps. See instruction below about tightening clamps.

- 8 INSTALLATION NOTES:
- 1) COMPONENTS TO BE INSTALLED LOOSE INITIALLY.
  - 2) ORIENT AND LOCATE COMPONENTS AND TIGHTEN CLAMPS SLIGHTLY.
  - 3) FINALIZE COMPONENT POSITION AND GASKET LOCATION BEFORE FINAL TIGHTENING.
  - 4) ALL V BAND CLAMPS- TORQUE TO 100 IN-LBS

20. Reinstall air tanks and reconnect air lines to the tanks.
21. Reinstall clamps of fire suppression system discharge hose.
22. Remove unused parts and tools from work area.
23. Check for completeness of work.
24. Start the bus and let the air pressure built up to 115-120 PSI.
25. Record bus number, mileage and date of completion.