



# Spartan Motors Chassis, Inc.

SERVICE BULLETIN

RSB14-270-002

NHTSA Id: 14V-022

3/21/2014

Transport Canada Id: TC14-027

**SUBJECT:** Engine cooling fan vibration and material strength.

**CONDITION:** Engine cooling fan may come apart.

**APPLIES TO:** This bulletin applies to certain Gladiator model emergency response chassis cabs equipped with a Cummins ISM engine, fan clutch, and built between October 30, 2007 and June 16, 2011.

**CORRECTION:** Install new engine cooling fan.

**LABOR ALLOCATION:** 2.0 hrs.

**PARTS NEEDED:**

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S-2442-001	Kit-Service, Fan Clutch, 2007 ISM ERC

**Kit # S-2442-001 Contains:**

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	1342-FF1-007	Fan-30", ACS #39325A-30
3	M12175065H7Y	Bolt-M12X1.75X65 Hex GR10.9
3	07FWSAE8Y	Washer-Flat 7/16 SAE GR8
6	0616HSN8Y	Nut-3/8-16 GR8
6	06FWSAE8Y	Washer-Flat 3/8 SAE GR8
1	RSB14-270-002	Instruction Document

**GENERAL INSTRUCTIONS:**

Please thoroughly review entire work procedure before starting work. If there are questions and/or concerns with steps defined in this procedure, contact Spartan Motors Chassis, Inc. Customer & Product Support Group.

All applicable industry safety standards must be followed when performing work identified in this procedure.





**STEP-BY-STEP INSTRUCTIONS:**



**WARNING**

Coolant is toxic. Keep away from children and pets. If not reused, dispose of in accordance with local environmental regulations.



**WARNING**

Coolant components and other engine components can be very hot if serviced shortly after operation. Serious personal injury can occur if hot components are touched.



**WARNING**

Ensure nuts, bolts, washers, and other hardware items are not dropped into the fan shroud. Loose items left in, or around, the fan may become projectiles resulting in damage or personal injury.



**WARNING**

Master Switch and Ignition Switch must be in the “OFF” position before removal of any components; it must remain in “OFF” position during this entire process. Serious personal injury can occur.

1. Drain approximately 3-4 gallons of coolant from the radiator. Retain fluid for reuse.

**Note: A clean drain pan or catch basin of some type should be used to capture fluid.**

2. Disconnect deaeration lines from coolant reservoir and allow them to lie out of the way.

**Note: Allowing them to lie on the valve cover will keep them from dropping down and syphoning/draining coolant.**

3. Remove the coolant fill line from the reservoir.

**Note: Allow this hose to also lie on the valve cover to eliminate coolant loss.**

4. Unplug the low coolant sensor.

5. Remove clamp holding the top coolant tube to the fan shroud. Retain all for reuse.

6. Carefully remove the six nuts and washers securing the fan to the fan clutch. Properly dispose of hardware.

7. Allow fan to lie in the shroud.

**CAUTION**

**Ensure the radiator is not damaged by the fan.**



8. Remove the fan drive serpentine belt. Inspect the belt, if it is damaged or worn, obtain a replacement belt; otherwise retain the belt for re-use.
9. Disconnect air line from clutch housing.
10. Remove the three (3) fasteners holding the fan clutch to the engine block. Remove clutch and retain for reuse. Properly dispose of hardware.
11. Remove the fan while pulling back on the coolant tube.

**CAUTION**

**Ensure the radiator is not damaged by the fan.**

12. Lay the newly supplied fan in the fan shroud.
13. Install the retained fan clutch utilizing the supplied bolts and washers. Torque to 72-78 lbs. ft.

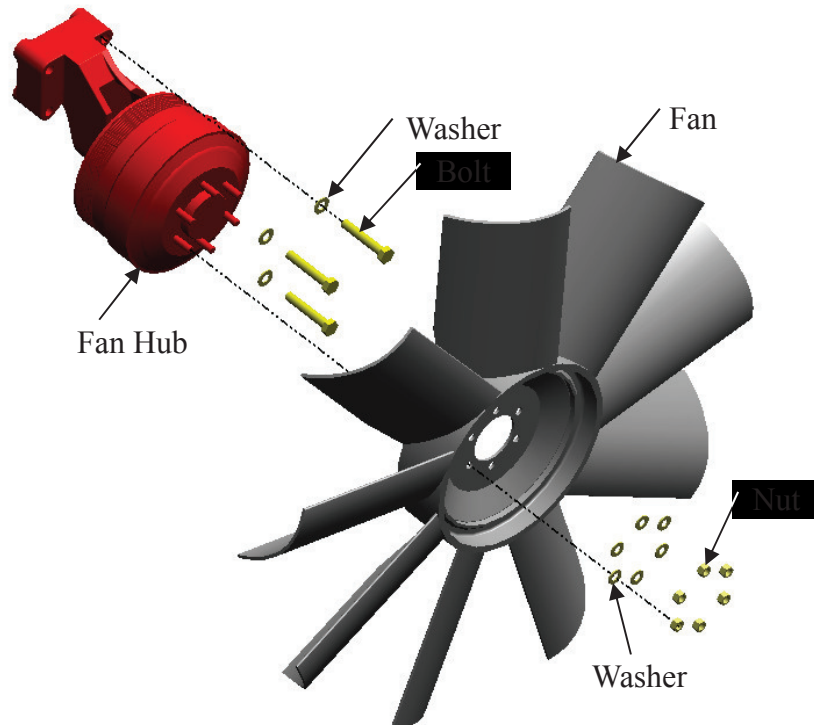
**Note: For the following instructions apply Loctite® 242® Threadlocker to the bolt on the first five threads from end of bolt.**

14. Re-connect retained airline to clutch housing.
15. Re-install retained serpentine belt.
16. Install new fan onto clutch.

**CAUTION**

**Ensure the radiator is not damaged by the fan.**

17. Install the supplied six (6) nuts and washers. Torque in a crisscross pattern to 33-37 lbs. ft. Refer to FIG. 3-1.



**FIG. 3-1**

18. Re-install retained clamp securing water tube to fan shroud. Clamp shall be snug tightened.

19. Re-connect retained coolant fill and torque clamp to 55 lbs. in.

20. Re-connect retained deaeration lines.

21. Plug low coolant plug into sensor. Secure harness with tie strap if they had to be cut for removal.

22. Top off reservoir with retained coolant. If additional; coolant is needed refer to owner's manual for correct type.

23. Run the engine to verify no coolant leaks exist and proper operation of engine cooling serpentine belt and cooling fan.

24. Recheck coolant level and top off reservoir if needed.