



# SPARTAN CHASSIS, INC.

**TSB05-230-001**

February, 2005

Page 1 of 2

## **TECHNICAL SERVICE BULLETIN**

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**SUBJECT:** Engine Cooling

**APPLIES TO:** Spartan K2 Chassis Models Equipped with a Cummins ISM engine and Mechanical Fan Drive, having a Vehicle Date of Manufacture (VDM) 11-02-03 to 05-13-04.

**CONDITION:** Potential for Engine Overheating When Operating Under Full Power.

**CORRECTION:** Replace crankshaft pulley and fan clutch assembly.

**PART / SERVICE INFORMATION:**

**Labor Time:** 2.0 Hrs.

<b><u>QTY.</u></b>	<b><u>Part Number</u></b>	<b><u>Description</u></b>
1	S-1651-001	Kit- Mech Fan Drive Pulley
as required	N/A	Locktite 270

**Kit #S-1651-001 Contains:**

<b><u>QTY.</u></b>	<b><u>Part Number</u></b>	<b><u>Description</u></b>
1	1665-AA3-001	Pulley- Crankshaft 7.88" diameter
1	1739-FF1-001	Pulley- Clutch 5.88" diameter
1	TSB05-230-001	Document- Instructions

**PLEASE READ THE ENTIRE BULLETIN BEFORE  
PROCEEDING WITH ANY WORK.**

**STEP-BY-STEP INSTRUCTIONS:**

1. Observe all industry safety standards and secure vehicle to allow for replacement of the fan drive pulleys.
2. Loosen six (6) fan clutch pulley retaining bolts.

Technical Service Bulletins are intended for use by Professional Technicians only. They are written to guide Professional Technicians in performing service to vehicles of product specific nature in conjunction with industry standards. Professional Technicians are appropriately trained on industry standards and have the tools and equipment to perform procedures safely and properly.



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3. Loosen the six (6) crankshaft pulley retaining bolts.
4. Loosen two (2) 5/8" fan clutch bracket pivot bolts.
5. Release belt tension by turning the tensioner bolt clockwise.
6. Remove the two (2) fan clutch drive belts and retain for reinstallation.
7. Remove the six (6) fan clutch pulley bolts & washers and retain for reinstallation.
8. Remove and properly dispose of fan clutch pulley; may be necessary to tap pulley with plastic mallet.
9. Install (hand tighten) new fan clutch pulley using original hardware.  
**Note: Apply 1 drop of Locktite 270 to each of the 8mm bolt threads.**
10. Remove six (6) crankshaft pulley retaining bolts & washers and retain for reinstallation.
11. Remove and properly dispose of crankshaft pulley.
12. Install new crankshaft pulley using original hardware.
13. Apply 1 drop of Locktite 270 to each of the bolt threads and torque to 47 LB. FT.
14. Check/adjust fan clutch pulley to crankshaft pulley alignment using appropriate pulley alignment laser or equivalent tool.
15. Reinstall original belts onto fan clutch and crankshaft pulleys.
16. Turn the tensioner bolt counter clockwise to adjust belt tension. Belt deflection in the center of the belt should be less than the width of one belt with moderate downward force after tensioning.
17. Torque the two (2) 5/8" fan clutch bracket pivot bolts to 212 LB. FT.
18. Torque the six (6) fan clutch pulley bolts to 35 LB. FT.