



Navistar RV, LLC
P.O. Box 8160
Coburg, OR 97408

AFC 13909

Authorized Field Change
Issued April 2013
Expires April 2014

Engine Cooling Fan and Drive Replacement

Affected Product: Holiday Rambler 2011½ - 2012 Endeavor & Ambassador and Monaco 2011½ - 2012 Diplomat & Knight

Route: Service, Warranty, & Parts Managers

Read these instructions carefully and become thoroughly familiar with the procedures before beginning inspection and/or repairs.

Issue: Certain vehicles were manufactured with an incorrectly specified engine cooling fan. Affected vehicles were manufactured 3/29/2011 thru 8/17/2011 and are equipped with MaxxForce 10 engines and 16 blade cooling fans.

Inspection:

Verify that the engine is a MaxxForce 10 and the engine cooling fan has 16 blades.

- If the engine is a Cummins, do **not** proceed with the repair.
- If the engine is a MaxxForce 10, but the fan has 12 blades, do **not** proceed with the repair.

Gaining Engine Access:

Access will be gained through the interior of the vehicle by removing the engine access covers that are located at the rear wardrobe area.

- For floor plans where the bedroom is the rearmost room, it will be beneficial to extend rear slides and lift the bed to gain more room to work.
- Remove toe kick at the bottom of the wardrobe by removing two screws on each side. See figure 1.
- Remove the lower wardrobe track by removing two screws on each side. See figure 2.
- Remove the wardrobe doors and place them in a location where they will not be damaged.
- Remove access covers by removing four screws in each cover. See figure 3.



Fig. 1—Remove screws from the toe kick.



Fig. 2—Remove lower wardrobe track.



Fig. 3— Remove access covers

Repair Procedure:

WARNING: Do not begin this procedure until the engine and cooling system are cool.

Unless otherwise noted, access for this procedure is from the interior of the vehicle.

A portion of this procedure requires 2 people.

- Drain coolant from radiator — access from the exterior.
 - Install a tube on the petcock valve located under the radiator to allow the coolant to drain into a 5 gallon bucket.
 - Open the valve.
 - Retain coolant for re-use.
- Remove the CAC pipe. See figure 4 for location. Tools: 1/2" and 7/16" sockets.
- Cut tie wraps securing hoses at upper portion of coolant pipe. Tool: side cutter.
- Remove the upper coolant pipe. See figure 5 for location. Tool: 3/8" socket.
- Remove the nuts and washers from the cooling fan and lay it against the radiator. See figure 6 for location. Tool: 1/2" socket.

Note: use care; do not damage radiator fins.

- Remove the fan belt and airline that controls the fan clutch—access from under the vehicle. Tool: the fan belt tensioner requires 1/2" drive with long handle ratchet.
- Remove the fan drive assembly.
 - Remove the 4 bolts from the fan drive. See figure 7 for location. Tool: 16mm short socket.
 - Remove the fan drive from under the vehicle.

Note: this will require two people; one on the interior of the vehicle and one under the vehicle. The fan drive weighs approximately 48 lbs.

- Remove the fan through the interior of the vehicle. It may be necessary to cut some of the blades off. Tool: saw.
- Place the new 12 blade fan in the shroud area against the radiator. Be sure that the leading edge (thicker) is pointed towards the engine.

Note: use care; do not damage radiator fins.

- Clean the mounting area for the fan drive assembly.
- Install the new fan drive assembly from under the vehicle.

Note: this will require two people; one on the interior of the vehicle and one under the vehicle. The fan drive weighs approximately 48 lbs.

- Install bolts with medium strength loctite.
- Torque to 46 ft-lbs.



Fig. 4— Remove CAC tube.



Fig. 5— Remove upper coolant tube .



Fig. 6— Remove the engine cooling fan and lean it against the radiator.



Fig. 7— Remove the fan drive assembly. Note: it will require an additional person to lift the fan drive out and under the vehicle.

Repair Procedure continued:

- Install the fan blade to the drive assembly.
Note: this may require two people; one on the interior of the vehicle and one under the vehicle rotating the fan and holding it tight to the drive assembly.
 - Use the new 5/16" x 18 nylock nuts provided with the parts kit and 5/16" washers.
 - Torque to 28 ft-lbs.
- Reinstall the fan belt.
Note: this may require two people to route the belt; one on the interior of the vehicle and one under the vehicle.
- Reinstall the air line to the drive assembly.
- Reinstall the upper coolant pipe and secure hoses to upper portion of cooling pipe with tie wraps. Torque to 85-95 in-lbs at the coolant pipe cuffs.
- Reinstall the CAC pipe. Torque to 70-75 in-lbs at the CAC cuffs.
- Pump the coolant back in through the surge tank.
Note: verify that the petcock valve is closed first.
- Start unit, run until operating temperatures are reached, then top off coolant.
- Verify the proper operation of the fan.
- Reinstall engine access.
- Reinstall closet doors, track, and toe kick.

Parts Required:

AFC 13909 Parts Kit—p/n 01811738
which includes:

- 1—12 blade fan (p/n 07012430)
- 1—fan drive (p/n 01810547)
- 6—5/16" X 18 nylock nuts (p/n 11408052)

Tools & Supplies Required:

Screw driver with flat tip and #2 sq. drive bits
Drain tube and 5 gallon bucket for coolant
Side cutter
Socket wrench
Sockets—1/2", 3/8", 7/16", & 16mm (short)
1/2" sq. drive long handle ratchet
Torque wrench
Saw
Loctite—medium strength
Tie wraps

Warranty:

Warranty claims must be submitted on MDEX.

Parts Return:

All parts must be field destroyed.

Labor Operation Code: AF1002FKFD

Labor Hours: 7.5 hrs.

Further Information

For information regarding AFC instructions, please call (800) 685-6545. For questions regarding MDEX or claims, please call (877) 332-9239 and follow the prompts that support the product with which you are dealing.



Navistar RV, LLC
Parts Purchase Order

AFC 13909
Engine Cooling Fan and Drive Replacement

Date: _____

Dealer Number: _____

Contact: _____

PO Number: _____

Ship to: _____

Phone Number: _____

Fax Number: _____

AFC 13909 Parts Kit—part number 01811738
which includes:

1—12 blade fan (p/n 07012430)

1—fan drive (p/n 01810547)

6—5/16" X 18 nylock nuts (p/n 11408052)

Price: \$551.77

Customer Name: _____

VIN & Production Numbers: _____

All parts will be shipped UPS Ground unless other arrangements are made in advance.

Submit Parts Orders to:

Fax: (541) 995-1182 -or- E-mail: angela.brooks@navistarrv.com