



INSTRUCTION TO SERVICE

ITS: 5681

SECTION:	549 HVAC
WRITTEN BY:	Kevin Robinson
SUBJECT:	Remove EMP booster pumps and replace.

ITS5681

THIS DOCUMENT AND THE CONTENTS DISCUSSED HEREIN ARE THE CONFIDENTIAL AND PROPRIETARY INFORMATION OF NEW FLYER INDUSTRIES CANADA ULC AND NEW FLYER OF AMERICA INC. AND ARE DISCLOSED BY NEW FLYER IN CONFIDENCE. THIS DOCUMENT AND THE CONTENTS HEREIN ARE NOT TO BE DISCLOSED BY THE INTENDED RECIPIENT WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF NEW FLYER. ANY UNAUTHOIZED DISCLOSURE, REPRODUCTION OR OTHER DISTRIBUTION OF THIS DOCUMENT OR INFORMATION IS STRICTLY PROHIBITED AND MAY RESULT IN ACTION BEING TAKEN AGAINST THE PARTY MAKING THE UNAUTHORIZED DISCLOSURE. THIS DOCUMENT AND ALL COPIES HEREOF MUST BE RETURNED TO NEW FLYER UPON REQUEST.

PROCEDURE:

Inspection

1. Turn the main battery disconnect switch to the “OFF” position.
2. Locate the booster pump and review the date code and the EMP part number.
 - a. If the date code is equal to or greater than listed in the chart below, the pump has been updated and does not need to be replaced.
 - b. If the EMP part number on the pump does not match one of the numbers listed in the chart, replace the pump.

EMP PN	Updated product if date code is equal or greater
1030002277PA04	238-13
1030002277PA01	238-13
1030002278PA01	233-13
1030002276PA01	234-13



**Julian date code
(Day – Year)
(277 – 13 = Oct. 4, 2013)**



Figure 1: Location of Serial Number on an EMP Booster Pump

Remove and Replace Booster Pump (As Required)

3. Close the valves.
 - a. Close valve downstream from the booster pump.
 - b. Close valve upstream from the booster pump.
4. Remove the booster pump from the bus.
 - a. Disconnect the electrical connection.
 - b. Disconnect the hose clamp from the inlet side of the booster pump.
 - c. Disconnect the hose clamp from the outlet side of the booster pump.



NEW FLYER

5. Install new booster pump.
 - a. Install the new booster pump (HVAC NF PN 523856, MCP NF PN 532409) in the bus.
 - b. Re-attach the two silicone fittings to the new booster pump. Torque the hose clamps 30-70 in-lbs.
 - c. Reconnect the bus harness to the booster pump.
6. Open the valves closed previously.
 - a. Open valve downstream from the booster pump.
 - b. Open valve upstream from the booster pump.
7. Repeat steps 2 through 6 for the traction motor cooling pump, MCP (NF PN 532409).
8. Deaerate the system.
9. Remove all tools and debris and return the bus to service condition.
10. Turn the main battery disconnect switch to the "ON" position.

LABOUR ESTIMATE

	Operation	Men	Hours	Labour Time M X HR
1	Remove EMP HVAC booster pump and replace.	1	2.0	2.0
2	Remove EMP MCP booster pump and replace.	1	2.0	2.0

PARTS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes
1	523856	PUMP-BOOSTER EMP WP29 3000 RPM	1	EA	
2	532409	PUMP-EMP WP29 BAE	1	EA	