



# Harsco Track Technologies

Harsco

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## SERVICE BULLETIN MAINTENANCE OF WAY EQUIPMENT

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**DATE:** 2-6-2007 **BULLETIN NO:** 07-003

**TITLE:** CHARGE PUMP CIRCUIT CHANGE

**RATING:**  **DIRECTIVE** (Action Is Required)  **ALERT** (Potential Problem)  
 **INFORMATION** (Action Is Optional)  **PRODUCT IMPROVEMENT** (Enhance Product)

**PRODUCT SERIES / MODEL:** BNSF 6700S TAMPERS

**SERIAL NO:** 2006 Models Serial # 153400 thru 153403 and 153413  
2005 Models Serial # 153306 thru 153309 and 153394  
2005 and 2006 Models Rebuilt at Brainerd Rebuild Shop

**SUMMARY:** The above machines had the charge pump circuit piped incorrectly from the factory which can cause hydraulic pressure intensification in the propel charge circuit during extreme cold temperatures. The charge pump circuit must be checked for proper piping and if found to be incorrect, it must be changed.

**OPERATIONAL IMPACT:** To prevent hydraulic pressure intensification in the charge pump circuit during extreme cold temperatures.

**ACTION:** Follow the Instructions in this Service Bulletin to check for the correct charge pump circuit piping and to change the piping if necessary.

**CONTACT:** If you have any technical questions or if we can be of any service, please contact Mark Scott at the Ludington, MI. facility, 231-843-3431.

**SAFETY INFORMATION**

- n FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURE TO REMOVE MACHINE FROM ENERGY SOURCE. FAILURE TO COMPLY COULD RESULT IN SEVERE BODILY INJURY.**

**CHECKING CHARGE PUMP CIRCUIT FILTER PIPING**

1. Locate the Charge Pump Circuit Filter on the machine.
  - a. On 2006 Models Serial # 153400 thru 153403 and 153413, the Charge Pump Circuit Filter is located on the rear chassis to the rear of the right hand step.
  - b. On 2005 Models Serial # 153306 thru 153309 and 153394, the Charge Pump Circuit Filter is located on the front of the right hand step.
  - c. On 2005 and 2006 Models that were rebuilt at the BNSF Brainerd Rebuild Shop, the Charge Pump Circuit Filter will have to be located if it is not in one of the above locations.
2. Check the current Charge Pump Circuit Filter piping and compare it to the Incorrect Piping (Figures 1 and 3) and Correct Piping (Figures 2 and 4) photos and drawings.

**INCORRECT PIPING** - See Figures 1 and 3

3. If the Charge Pump Circuit Filter piping is the same that is shown in Figures 1 and 3, the piping is **INCORRECT** and it must be changed. Go to Step 5 - Changing Piping.

- In Port: A Tee Fitting was installed in the "IN" Port of the Filter Head and the hoses from the Cooler Fan Motor and from the Relief Valve were connected to the Tee Fitting.
- Out Port: A 90° Fitting was installed in the "OUT" Port of the Filter Head and the hose to the Travel Pump was connected to the 90° Fitting.

**CORRECT PIPING** - See Figures 2 and 4

4. If the Charge Pump Circuit Filter piping is same that is shown in Figures 2 and 4, the piping is correct and it does not have to be changed. Go to Step 8 - Filter Elements.

- In Port: A 90° Fitting is installed in the "IN" Port of the Filter Head and the hose from the Cooler Fan Motor is connected to the 90° Fitting.
- Out Port: A Tee Fitting is installed in the "OUT" Port of the Filter Head and the hoses to the Travel Pump and to the Relief Valve are connected to the Tee Fitting.

**CHANGING PIPING** - See Figures 2 and 4

5. If the current Charge Pump Circuit Filter piping is incorrect, disconnect the hoses from the fittings in the Filter Head ports. Then remove the fittings from the Filter Head.
6. Remove the Filter from its mounting location on the machine, turn 180° so the ports are facing the opposite directions, and then re-install the Filter in its original mounting location.
7. Install the fittings in the Filter Head ports and reconnect the hoses as follows:
  - In Port: A 90° Fitting is installed in the "IN" Port of the Filter Head and the hose from the Cooler Fan Motor is connected to the 90° Fitting.
  - Out Port: A Tee Fitting is installed in the "OUT" Port of the Filter Head and the hoses to the Travel Pump and to the Relief Valve are connected to the Tee Fitting.

**FILTER ELEMENTS**

8. A 5 micron filter element was installed in the Charge Pump Circuit Filter on all machines from the factory. HTT recommends that the 5 micron filter element be removed and replaced with a 10 micron filter element (HTT part # 172375-1).

**CHECK FOR LEAKS**

9. After changing the piping and/or the filter element, start the engine and pressurize the hydraulic system. Check the Charge Pump Filter hose and fitting connections for leaks. Be sure to wear gloves and use a piece of cardboard or wood when checking for pressurized leaks. **DO NOT USE YOU BARE HANDS.**

FIGURE 1  
INCORRECT PIPING



FIGURE 2  
CORRECT PIPING



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415 North Main Street  
Fairmont, MN  
56031-1837  
Tel: (507) 235-3361  
Fax: (507) 235-7370

2401 Edmund Road, Box 20  
Cayce-West Columbia, SC  
29171-0020  
Tel: (803) 822-9160  
Fax: (803) 822-7471

200 South Jackson Road  
Ludington, MI  
49431  
Tel: (231) 843-3431  
Fax: (231) 843-1644

FIGURE 3  
INCORRECT PIPING

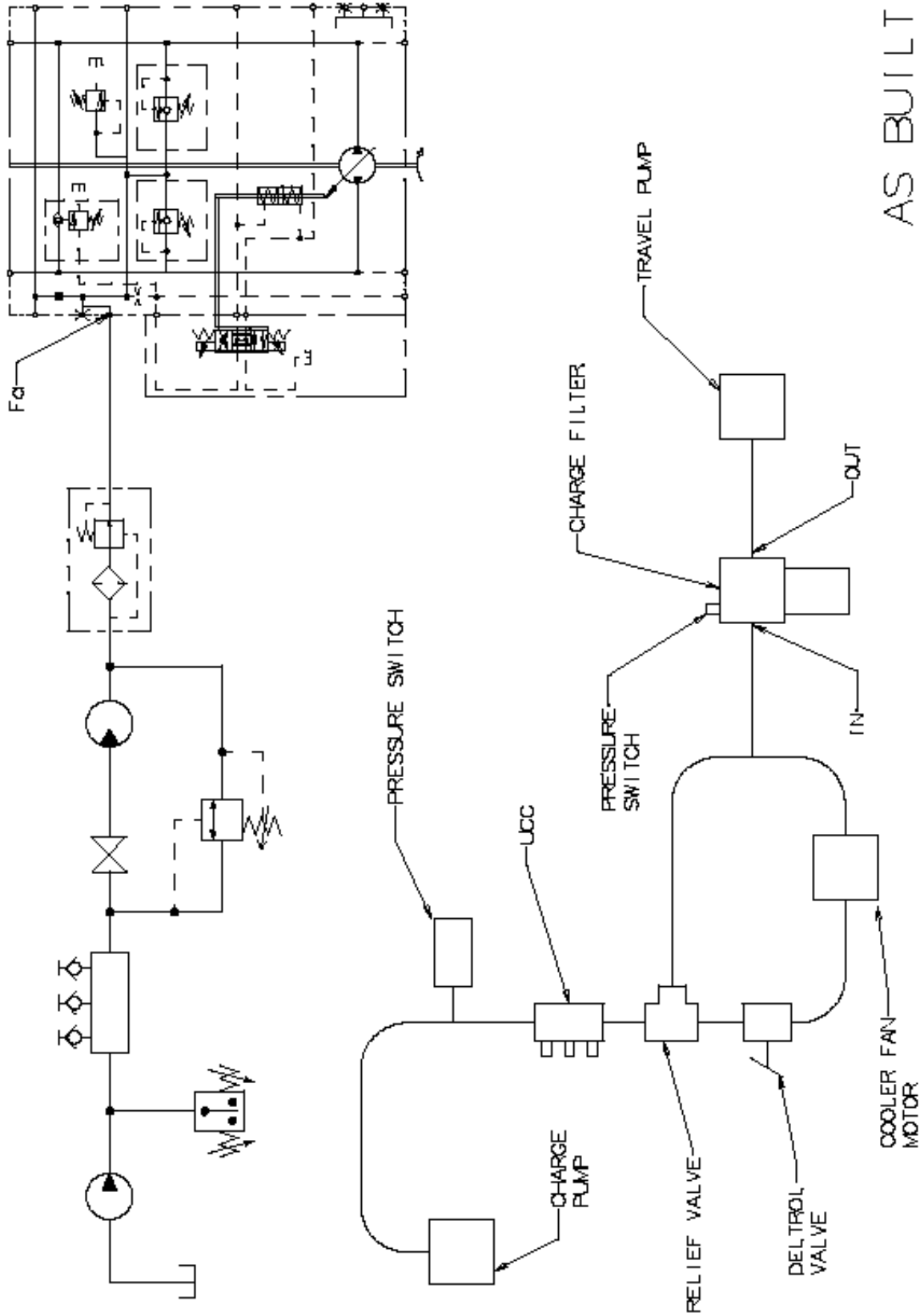


FIGURE 4  
CORRECT PIPING

