

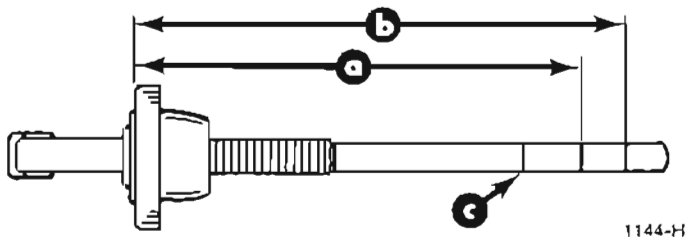
TO: SERVICE MANAGER MECHANICS
PARTS MANAGER

No. 86-32

Transmission Foaming/ Venting/Over Heating Borg-Warner In-Line Transmissions With 1.91:1 Reduction Units

It has come to our attention that under certain operating conditions some boats equipped with MIE engines and 1.91:1 in-line reduction transmissions may experience foaming of the transmission fluid. If foaming of the fluid occurs the transmission may spew fluid out of the vent and/or overheat. If a customer experiences this condition the following steps should be taken to remedy the situation.

1. Remark the transmission dipstick.
 - A. Measure down from the inside of the dipstick cover the distance shown and mark two new points on the dipstick. (Figure 1) Using a suitable tool, a hacksaw blade works well, scribe a line across the dipstick at these two points.
 - B. Remove original full mark on dipstick using a file.



- a - 3-13/16" (97mm)
- b - 4-3/16" (106mm)
- c - Original Full Mark (Remove with File)

Figure 1. Remarking Transmission Dipstick Measure From Inside of Dipstick Cover

2. Change Transmission Fluid Cooler
 - A. Remove original fluid cooler from starboard side of engine.

- B. Install new fluid cooler (Part No. 17319A1) using original mounting bracket. Fluid cooler must be installed with drain plug towards rear of engine and pointed downward. Connect hoses securely. Lower hose on transmission goes to front of cooler. Upper hose goes to rear of cooler.
3. Change transmission fluid and reset fluid level.
 - A. Drain transmission fluid from transmission.
 - B. Refill transmission with a 10 wt. tractor hydraulic fluid meeting the C3/To-2 specification. (Preferably Mobil 423, Chevron, or Citgo).
 - C. Start engine. Warm engine and transmission to operating temperature. Use the following procedure to check fluid level.
 1. Shift transmission into forward gear.
 2. Increase throttle to 1500 RPM.
 3. Bring throttle back to idle and shift transmission to neutral.
 4. Shut engine off and check fluid level immediately.

IMPORTANT: An assistant should be used so that level can be checked immediately to prevent drain back of the fluid from the cooler and lines.

- D. Fluid level should be between the two marks on the dipstick. (Figure 1) If not, add or remove fluid as required to adjust fluid between marks. Repeat above procedure to double check fluid level.

IMPORTANT: By following the above procedure when checking fluid level the forward clutch pack, cooler, and cooler hoses have been filled with oil. Also the oil has expanded from the heat. These conditions will give you the most accurate oil level readings.

Submit a warranty claim for 2.0 Hours Labor (along with the old cooler) for each transmission to your Regional Service Center.

NOTE: Citgo has two grades of fluid that meet the C3/To-2 specification. Citgo tractor hydraulic fluid and Citgo multi-purpose Dextron II. Both are acceptable to use.