

Service Advisory

VDrive Oil Level Check / Vent Operation

#SAP2016-04

September 2016

VDrives Affected:	1.72:1 Ratios	Engine S/N Affected:	PCM 555001 - 566616
	2.00:1 Ratios		CWS / Challenger 750001 - 761195

Pleasurecraft Engine Group has received reported instances of VDrive oil being expelled out of the vent on top of the VDrive unit. Most of the time, the VDrive is simply over-filled with oil. In some cases, the vent system may not be functioning properly.

If oil has expelled out of the VDrive vent, the oil may have migrated down the VDrive unit and may have signs of oil residue on the sides or the bottom of the VDrive unit, or in the bilge. This can be misdiagnosed as a leaking VDrive seal.

Once the VDrive oil level is checked, and a thorough inspection for VDrive oil has been performed, one of the following actions must be taken:

- If the VDrive oil level is within the operating range, and no signs of oil are present, the vent system is working properly and does not require a Vent Kit. **NO ACTION IS REQUIRED.**
- If the VDrive oil level is low, or there are signs of oil present, the vent system is not working properly and requires the appropriate VDrive Vent Kit installed. See the following pages for the correct Vent Kit Part Number for your application.

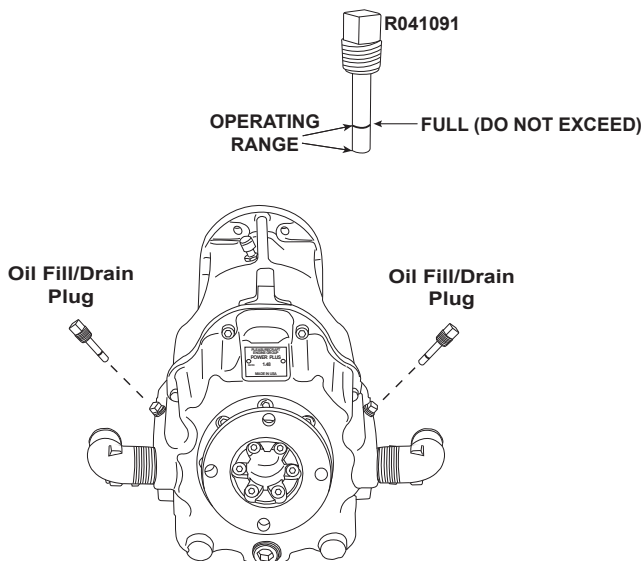
Use the following procedure to first ensure that the VDrive oil level is set to proper level.

1. The most accurate way to check the VDrive oil level is with the boat in the water at rest, and no ballast.
2. If the boat is not in the water, check the VDrive oil level with the VDrive unit sitting at 0-5 degrees. See illustration below.
3. VDrive unit should be cold, or allow adequate time for the oil to drain back in order to get an accurate reading. The oil level should be at the "FULL" indicator line, or within the operating range on the dipstick. If the level is over-filled, remove some VDrive oil until the level is within the operating range of the VDrive dipstick.
4. Remove the dipstick from the VDrive. Wipe the dipstick clean and insert into VDrive dipstick hole - Do Not Screw the dipstick into the hole. Remove and observe the fluid level.
5. The fluid level should be between the FULL mark, and the end of the dipstick. The oil is clear and may be difficult to see on the dipstick. If the VDrive requires oil, Pleasurecraft VDrive oil is provided with each kit. Add oil in very small increments (1 ounce) as the VDrive does not require much oil to top off to the operating range on the VDrive dipstick.

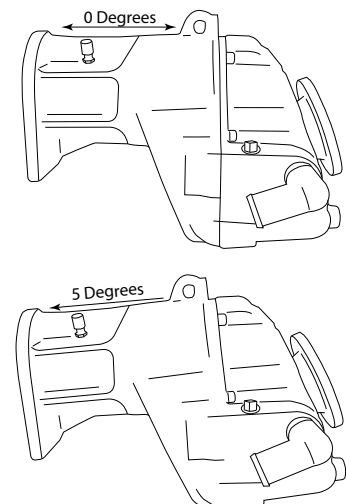
Attention International Dealers. Oils cannot be air freighted, therefore your kits will not contain VDrive oil. Use Mobiltrans SHC 50 Synthetic Transmission Lubricant.

IMPORTANT: The Pleasurecraft VDrive is considered "maintenance free." This means the only time the fluid should need to be changed is if the fluid gets contaminated from water or other foreign substance.

The VDrive oil level and visual inspection for leaks is still part of normal maintenance and should be checked with each engine oil change or service operation.



VDrive Angle - 0-5 Degrees



VDrive Service Vent Kits

There are three different VDrive setups that may be encountered, resulting in three different VDrive Service Vent Kits. Make sure the correct kit is ordered since two of the kits include a modified VDrive saddle bracket.

RF034002 - All applications that do not contain a VDrive saddle bracket.

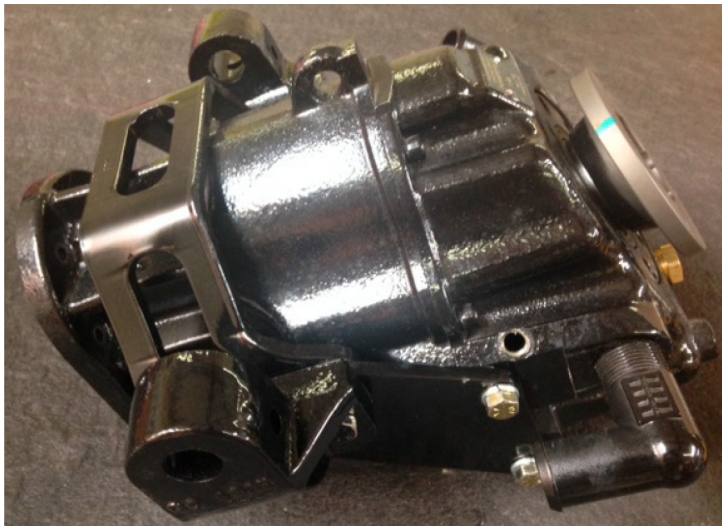


Original

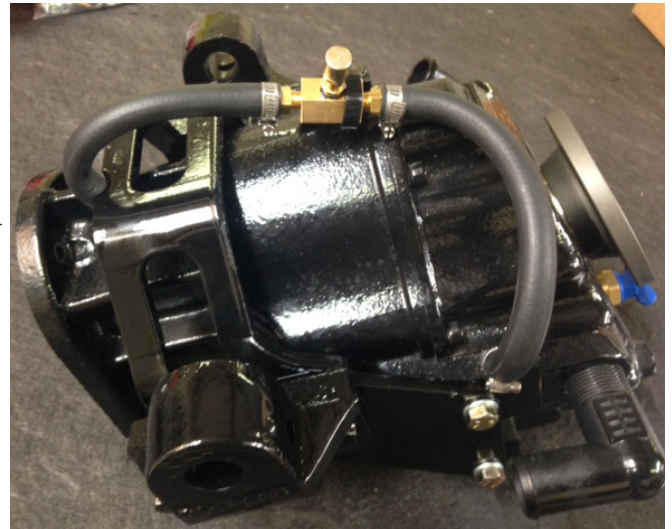


Kit RF034002 Installed - No Bracket

RF034002A - Nautique boats with the VDrive saddle bracket.



Original

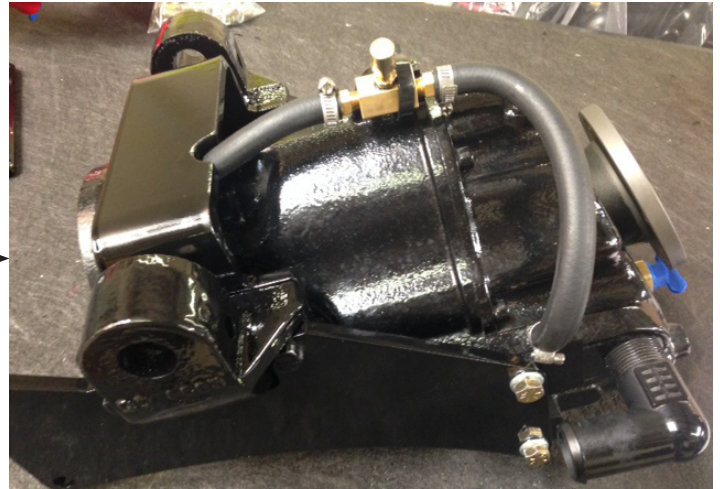


Kit RF034002A Installed - Modified Bracket

RF034002B - Axis boats with the VDrive saddle bracket.



Original



Kit RF034002B Installed - Modified Bracket

VDrive Service Vent Kit Installation Instructions

1. Locate the VDrive vent. The vent consists of a pressed-in base with a spring loaded cap.



2. Remove the cap by prying off with a pair of pliers. The vent base fitting should remain in the VDrive.
3. Discard the cap, spring and rubber seal.

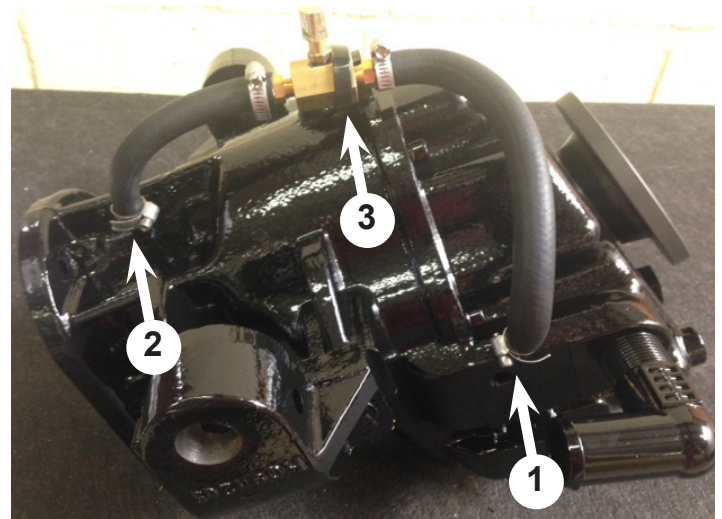
NOTE: Inspect the vent base. If the vent base is damaged in anyway, or the hose does not install and clamp properly to the base, call Pleasurecraft Warranty for a replacement fitting.



4. Remove the left side VDrive dipstick (1) and discard.

IMPORTANT: MUST be the left side dipstick when viewing the VDrive from the coupler end.

5. Install the straight VDrive adapter fitting (supplied in kit) into the left side VDrive dipstick hole (1). Tighten securely.
6. Install the end of the vent kit hose that has a "BLUE" identifier mark on the end of the hose, and clamp onto the VDrive adapter fitting (1). Tighten securely.
7. Install the other vent kit hose and clamp onto the vent base fitting (2). Tighten the clamp securely.
8. If applicable, install the modified VDrive saddle bracket (provided in kit).



NOTE: See previous page for final installation with bracket.

IMPORTANT: Make sure that the front vent hose is routed through the notch on the new VDrive saddle bracket.

The hose attached to the vent base may need to be trimmed 1-2" on the Axis saddle bracket applications.

9. Zip tie the vent assembly to the eyelet lug on top of the VDrive (3).

IMPORTANT: Make sure that the hoses are not kinked in any way.

Published by Pleasurecraft Engine Group Training Services. Pleasurecraft's policy of continued improvement creates dated information and necessitates changes in procedures, specifications and methods used in trouble shooting and repair. In the event you have any questions regarding any of our products, the most up to date information may be obtained by contacting our service department to insure that any published information in your possession has not been updated. The information in the publication is believed to be true and correct at the time of publication. This publication is for informational purposes only and does not constitute a guarantee or warranty or in any way change or modify the written warranty, which is attached to Pleasurecraft Products at the time of sale. The knowledge of this publication, the information revealed herein and/or the possession of this publication grants no license or authority to anyone to perform any action or make any statement or commitment, beyond the specific instructions stated herein, in behalf of or in the name of Pleasurecraft Engine Group. It is the sole responsibility of those using the information contained herein, to follow industry standard and common sense safety procedures when using the information contained herein and those using the information contained herein agree to defend and hold Pleasurecraft Engine Group harmless in all cases where injury and/or damage may occur during the use and/or application of the information contained herein.