

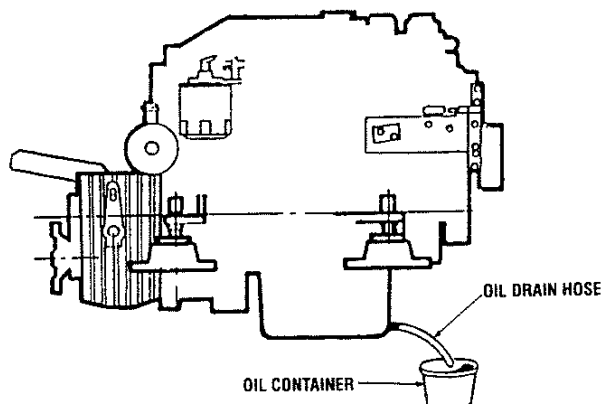
# ENGINE OIL CHANGE

## DRAIN THE SUMP

The engine oil should be warm. Remove the oil drain hose from its attachment bracket and lower it into a container and allow the oil to drain, or attach a pump to the end of the drain hose and pump out the old oil. Make sure the oil drain hose is capped and properly secured in its holder after all the old oil has been drained.

**NOTE:** Thread size for the lube oil drain hose capped end is 1/4 NPT.

Always observe the old oil as it is removed. A yellow/gray emulsion indicates the presence of water in the oil. Although this condition is rare, it does require prompt attention to prevent serious damage. Call a competent mechanic if water is present in the oil. Raw water present in the oil can be the result of a fault in the exhaust system attached to the engine and/or a siphoning of raw water through the raw water cooling circuit into the exhaust, filling the engine. This problem is often caused by the poor location or the lack of an anti-siphon valve. See UNIVERSAL'S Installation Manual.



**WARNING:** Used engine oil contains harmful contaminants. Avoid prolonged skin contact. Clean skin and nails thoroughly using soap and water. Launder or discard clothing or rags containing used oil. Discard used oil properly.

## Replacing the Oil Filter

When removing the used oil filter, you may find it helpful and cleaner to punch a hole in the upper and lower portion of the old filter to drain the oil from it into a container before removing it. This helps to lessen spillage.

**NOTE:** Do not punch this hole without first loosening the filter to make certain it will come off!

An automotive filter wrench should be helpful in removing the old oil filter. Place some paper towels and a plastic bag around the filter when unscrewing it to catch any oil left in the filter. Inspect the old oil filter as it is removed to make sure that the rubber sealing gasket comes off with the old oil filter. If this rubber sealing gasket remains sealed against the engine block, gently remove it. When installing the new oil filter element, wipe the filter gasket's sealing surface on the engine block free of oil and apply a thin coat of clean engine oil to the rubber gasket on the new oil filter. Screw the filter onto the threaded oil filter stub, and tighten the filter firmly by hand.

**NOTE:** Use genuine UNIVERSAL oil filters - generic filters are not recommended.

## REFILL THE OIL SUMP

Add fresh oil through the filler cap. After refilling, run the engine for a few moments while checking the engine's oil pressure. Make sure there is no leakage around the new oil filter or from the oil drain system, and then stop the engine. Then check the quantity of oil with the lube oil dipstick. If the engine requires additional oil, fill to, but not over, the high mark on the dipstick.

