



**ENGINEERED
OIL DRAIN SOLUTION
FOR THE**

SMALL ENGINE INDUSTRY



Oil Drain Valve



Richco Oil Drain Valve (Part #ODV-1)

Installation Detail and Use

- Can be easily “designed in” by the O.E.M. to replace an oil drain plug. Use will speed engine testing and reduce assembly line time.
- Can be sold as an aftermarket item to replace an oil drain plug
- Oil changes are safer, quicker, and neater with Richco’s Oil Drain Valve
- Standard part has 3/8-18 NPT threads (American Standard Pipe Taper Thread)
- Part can be customized to accommodate different thread sizes
- Designed for use on crankcase where oil pressure is typically 5 psi or less
- Easy to use — remove the cap, install a drain tube, squeeze the tabs and pull open the barrel. After oil has been drained, just push the barrel back in, place the cap on the barrel and you are ready to refill the engine with oil.
- Manufactured using premium materials
- Oil drain valve comes with sealant on the threaded casting to prevent leakage from the engine block
- Has a unique product design that is patent pending
- Years of testing and development have gone into this product



Features and Benefits

ANTI-SNAG TUBE NIPPLE:

The edge of the inner tube grip of the nipple is rounded so that the tube will not snag when pulled off the nipple after use.

ROTATING BARREL:

The barrel and housing are designed to enable the user to rotate the barrel so that the finger tabs can be easily accessed when the valve needs to be opened.

IMPROVED STIFFNESS:

The concentric tubular design improves the part stiffness over the existing design. The improved stiffness provides better protection from damage to the valve caused by accidental impacts loads (i.e. foot, rocks, etc.).

SAFETY CAP:

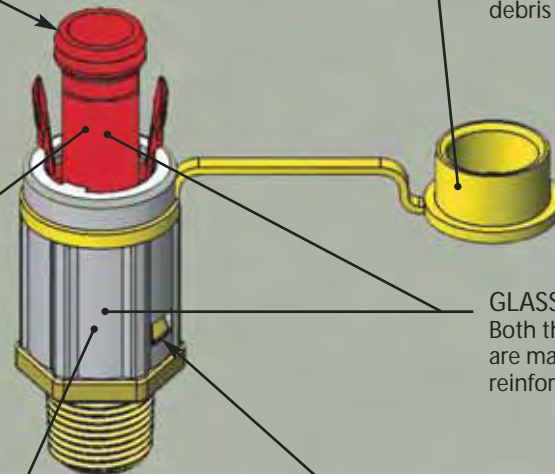
The cap is designed to prevent debris from entering the valve.

GLASS REINFORCED NYLON:

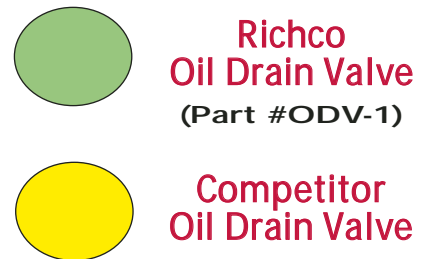
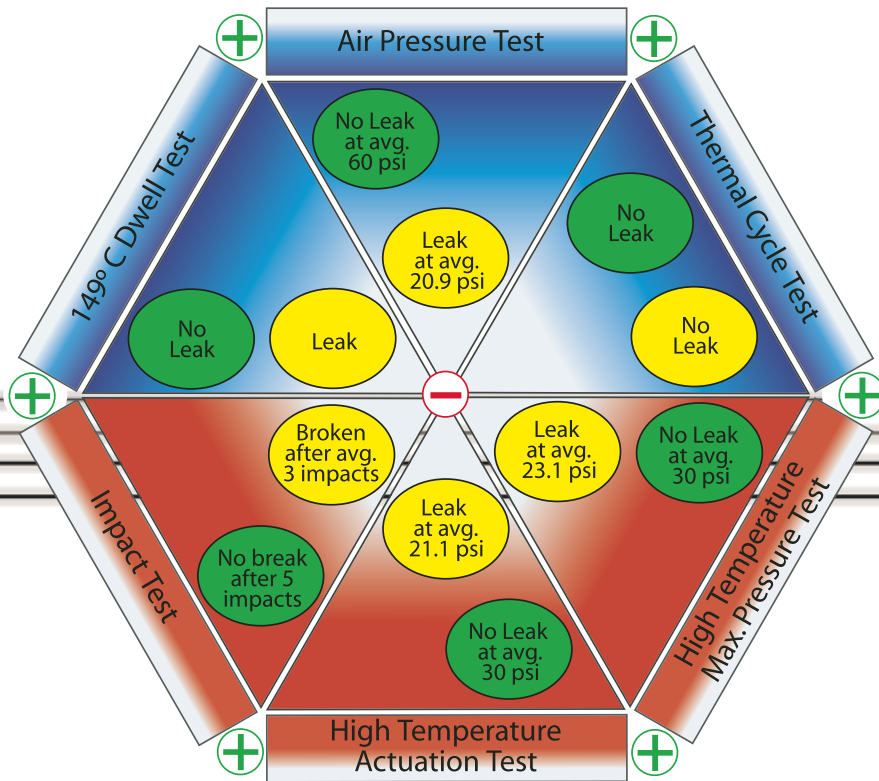
Both the housing and the barrel are made out of 33% glass reinforced nylon.

PERMANENT HOUSING LOCK:

The outside housing is designed to lock in place permanently so that it cannot be removed without a deliberate effort to cut the plastic thus destroying the valve assembly.



Test Data & Procedures



DISCLAIMER:
 This test data is intended solely for the purpose of providing information of a potential outcome of a comparison test and is not designed to provide a reference data for specific applications. The results are purely representative at the time of testing and may vary. If required, test arrangements can be made on special request according to the specification of the customer.

- Air Pressure Test**
 Samples were pressurized with air at room temperature until pressure loss was detected. Samples were considered to have failed if the pressure drop lasted 30 seconds or longer.
- Thermal Cycle Test**
 Samples were pressurized to 15psi at room temperature. The samples were then subjected to a series of temperatures. The temperature cycle consisted of the following: 93°C; -23°C; 93°C; -23°C; 24°C. Each temperature point was held for 2 hours and samples were inspected for leaks at the end.
- High Temperature Max. Pressure Test**
 Samples were subjected to a continuous temperature of 93°C and pressurized in 5psi increments until pressure drop was detected. Samples were considered to have failed if the pressure drop lasted 30 seconds longer.
- High Temperature Actuation Test**
 Samples were subjected to continuous temperature of 93°C for 2 hours. Then the samples were actuated 5 times (5 open-and-close cycles). The samples were pressurized until pressure loss was detected. Samples were considered to have failed if the pressure loss was recorded after each impact. Samples were considered to have failed if the pressure drop lasted 30 seconds or longer.
- Impact Test**
 Samples were held in a vice, only the plastic portions left free. A hammer was held at the end of the handle and suspended over sample in such a manner that when released, the hammer would swing down and impact the sample on its side. The samples were pressurized with air at 15psi. The hammer was held at approximated 130° from vertical and released. This was repeated 5 times and pressure loss was recorded after each impact.
- 149°C Dwell Test**
 Oil was heated to 149°C at atmospheric pressure and held at this temperature for 6 hours. The valve itself was not subject to 149°C – it was left protruding out of the environmental chamber at room temperature. After 6 hours, lateral force was applied to the samples to simulate the user (or rocks) accidentally hitting the valve during the use. This test was repeated for 5 samples.

**For samples or a quote, contact your local Richco office or representative
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