Canton Accusump

What is an Accusump?

An **Accusump** is a hydraulic pressure accumulator that utilizes a piston to separate the oil from a pressurized air chamber. The inside surface of the cylinder is precision machined and polished to allow the piston to slide freely in response to changes in system pressure. A small charge of pressure in the air chamber acts as a "spring" to keep the oil pressurized. Air is used instead of an metal spring because air will not bottom out or become "coil bound". When the engine is running, oil is forced into the Accusump under pressure. If the engine loses oil pressure, the Accusump returns pressurized oil to the engine. Both manual and electric valves are available. With a manual valve, the driver operates the valve and it must therefore be mounted in an accessible location. (The valve does not have to be mounted directly on the Accusump.) The pressure sensing electric solenoid valve kit can be remotely operated by a switch or can be wired into the ignition system to automatically actuate the Accusump when the ignition is turned on. One, two, and three quart versions are available. When choosing an Accusump, we recommend using the largest size that can fit in the space available.

Accusump Cylinders Only

Order mounting clamps and actuating valve separately.

Each Accusump cylinder includes a pressure gauge, pressure relief valve, and complete installation instructions. The sliding piston design allows mounting in any orientation. All three sizes have a 1/2 NPT female outlet port. Actuating valves and mounting clamps are sold separately at right.

Accusump Cylinder Only, 1 quart capacity ..... *Part No. 1249-Cyl*..... *$198.00*
Measures 3.25" dia. by 12.4" long not including the pressure gauge or relief valve.

Accusump Cylinder Only, 2 quart capacity ..... *Part No. 1240-Cyl*..... *$212.00*
Measures 4.25" dia. by 12" long not including the pressure gauge or relief valve.

Accusump Cylinder Only, 3 quart capacity ..... *Part No. 1241-Cyl*..... *$228.00*
Measures 4.25" dia. by 16" long not including the pressure gauge or relief valve.

Accusump Engine Input Adapters

Front view Back view

There are several ways to plumb an Accusump into your oil system. If you have a remote filter or oil cooler, you can use a Tee fitting and one-way valve to connect to one of the oil hoses. If no oil hoses are available, the Accusump can be connected directly to an oil gallery in the engine block. These billet aluminum input adapters make it easy to connect an Accusump to any engine equipped with a spin-on oil filter. They mount between your engine block and spin-on filter like a sandwich plate, but they have just a single 1/2 NPT female port for the Accusump hose. No check valve is required.

Single Port Input Adapter, 3/4-16 Filter Thread ..... *Part No. CM 22-565*..... *$81.99*
Single Port Input Adapter, 13/16-16 Filter Thread..... *Part No. CM 22-566*..... *$81.99*
Single Port Input Adapter, 18x1.5mm Filter Thread .... *Part No. CM 22-567*..... *$81.99*
Single Port Input Adapter, 20x1.5mm Filter Thread .... *Part No. CM 22-568*..... *$81.99*
Single Port Input Adapter, 22x1.5mm Filter Thread .... *Part No. CM 22-569*..... *$81.99*

Canton Turbo Oilers

Canton Turbo Oiler
Standard 1 Quart size shown
Part No. CM 24-150

Most turbo wear occurs during the moments after the engine is turned off. Although the engine quickly stops turning, the turbo continues to "spool down" for several seconds. Unfortunately, the oil pump stops delivering oil as soon as the engine stops turning. This leaves the turbine spinning against the hot bearings without a cushion of oil. The Turbo Oiler supplies pressurized oil to the turbo bearings in the moments after engine shut-down. The oil not only lubricates, it also cools the bearings and helps to prevent the buildup of sludge that also limits oil flow. The Turbo Oiler is constructed just like the Accusumps above. Each kit includes hose, barbed hose ends, a Tee fitting, and a one-way valve. Simply connect the Tee to your turbo oil feed line (requires adapters, sold separately) and pre-charge the Turbo Oiler cylinder with some air. When you start your engine, the cylinder will fill with oil under pressure. When you turn the engine off, the pressurized oil will automatically flow to the turbo bearings. No electrical connection is required.

Turbo Oiler Kit, Standard 1 Quart (12" x 3 1/4") ..... *Part No. CM 24-150*..... *$242.99*
Turbo Oiler Kit, Compact 1/2 Quart (6" x 3 1/4") ..... *Part No. CM 24-154*..... *$234.00*
Both sizes require 1 Quart mounting clamps (Part No. 1238), sold separately above right.

Why use an Accusump?

Most bearing and camshaft damage in an engine occurs under one of two conditions. The first is when the engine is being turned over by the starter and during the few seconds after start-up, before full oil pressure is developed. An Accusump eliminates this wear by storing pressurized oil before the engine is turned off. The pressurized oil is then allowed to flow back into the engine just prior to startup so that oil pressure and flow is restored even before the engine is turned over. The second condition that results in bearing and camshaft damage is when the oil pump pick-up is uncovered during high G-load maneuvers, which can occur during hard cornering or braking. This results in a sudden drop in oil pressure and subsequent engine damage. An Accusump prevents this damage by automatically maintaining oil pressure when the oil pump stops delivering oil.

Note: The SCCA recognizes the engine saving abilities of an Accusump and allows its use in all classes except Spec Miata.

Accusump Mounting Clamps

Accusumps must be properly mounted with clamps at the ends of the cylinder only. Any distortion of the precision machined and polished cylinder will prevent free movement of the piston. We recommend these Accusump mounting clamps for proper attachment to the vehicle.

Mounting Clamps, 1 quart size, pair ..... *Part No. 1238*..... *$19.00*
Mounting Clamps, 2 or 3 qt. size, pair..... *Part No. 1246*..... *$18.00*

***Billet** Mounting Clamps, 2 or 3 qt. size, pair*..... *Part No. CM 24-210*..... *$124.00*
Standard mounting clamps (shown) use a stainless steel T-bolt clamp. Billet mounting clamps (not shown) are more solid, but it is critical that the mounting surface is flat and true to avoid distorting the cylinder.

Accusump EPC Pro Electric Valves

EPC (Electric Pressure Control) Valves automatically control Accusump operation using a pressure switch wired to a 12 volt power supply. If you connect the pressure switch directly to your ignition switch, the valve will be active when you start the engine and closed when you stop. If the pressure drops below the specified pressure, the valve opens to allow pressurized oil to the engine. The valve will not let the Accusump refill until pressure returns. The 35 psi valve is most common for racing. 20 psi is recommended for street applications. 55 psi is for extreme applications. There is a trade-off between activating pressure and usable volume. The lower the pressure, the greater the volume. The Pro series feature a new one-piece valve body with a revised piston design for durability. Each kit includes an electric valve with 1/2 NPT female ports, a pipe nipple, toggle switch, wire, terminals, and instructions.

Accusump EPC Pro Electric Valve, 20 psi ..... *Part No. CM 24-271X*..... *$227.00*
Accusump EPC Pro Electric Valve, 35 psi ..... *Part No. CM 24-273X* *$227.00*
Accusump EPC Pro Electric Valve, 55 psi ..... *Part No. CM 24-275X* *$227.00*

Accusump Manual Valve

This manual ball valve is preferred by many builders because of its simplicity. Just open the valve right before startup and close it just before shutting down. If a manual valve is used, it must be accessible by the driver. Keep in mind that SCCA rules require any oil line in the driver's compartment to be metal braided hose (such as our Part No. 3270-xx hose on page 86 or Part No. 3480-xx hose on page 87) or steel tube.

Manual Valve Kit ..... *Part No. 1248*..... *$14.00*
For use with any size Accusump cylinder. The valve has 1/2 NPT female ports. A 1/2 NPT close nipple is provided for mounting directly on the cylinder.

Accusump Parts & Accessories



Replacement Gauge for any Accusump Cylinder..... *Part No. 1263-Gauge*..... *$11.99*
The gauge above is the same pressure gauge supplied with new Accusump cylinders.

Liquid-Filled Gauge for any Accusump Cylinder ..... *Part No. CM 24-500*..... *$31.99*
The liquid-filled gauge is recommended in extreme shock and vibration environments.

Replacement Pressure Relief Valve..... *Part No. 1242*..... *$11.49*
We recommend replacement of the pressure relief valve every five years.

Brass One-Way Valve with 1/2 NPT female ports ..... *Part No. 3605- 1/2 NPT*.... *$25.00*
Used to prevent back flow of oil from the Accusump through the oil pump. It is only needed when the Accusump is connected via a Tee fitting into an existing hose. (Not to be used if the Accusump is connected directly to the engine block with a single hose.)