

B&C SPECIALTY PRODUCTS



QUICK FACTS

ENHANCED INVERTED OIL PICKUP

A simple change can sometimes have an impressive impact.

That's particularly true of the VAC-2 Inverted Oil Pickup from B&C Specialty Products. For aerobatic aircraft equipped with the typical inverted oil system, the VAC-2 offers significantly improved lubrication — while retaining flexibility in engine-driven accessories.

The VAC-2 provides a direct replacement for the Lycoming vacuum pump pad adaptor. Its unique design offers both a standard vacuum pump pad adaptor AND provision for inverted oil pickup. The vacuum pump pad is often used for one of our spline-driven alternators, such as the SD-8 or BC410-H.

The VAC-2 is available for both 4-cylinder and 6-cylinder applications, and ships complete with oil seal installed, gaskets, and an MS20822-10D 90° fitting. It comes ready for installation, using the standard Lycoming vacuum pump drive gear and washer (not included).



VAC2 Inverted Oil Pickup

WHY USE THE VAC-2?

Not every Lycoming engine is suited to aerobatic maneuvers. Those engines that have been rated as “aerobatic” (signified by an “A-” or “AE-” model prefix) are uniquely equipped for negative-G and inverted flight. Among the various provisions needed for such operation are measures to insure adequate engine lubrication.



Two different approaches to engine lubrication have been employed for aerobatic engines over

the years. The first utilizes an external oil tank with special inlet and outlet provisions, as well as special breather connections. Engines that use this particular system are typically known as “dry sump” engines. The second (and more common) approach to aerobatic engine lubrication uses an internal oil reservoir at the base of the crankcase, with a special ball valve, pickup lines and breather connections. This system is often referred to as a “wet sump” engine.

The VAC-2 inverted oil pickup was designed for use on “wet sump” engines. It improves the delivery of engine oil during

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FEATURES:

- Unique dual-purpose design
- Direct replacement for Lycoming vacuum pump pad adaptor
- Permits retention of a standard vacuum pump—or installation of a B&C spline-driven alternator
- Cast aluminum for strength and modest weight
- Plated for corrosion resistance
- Ships complete with new oil seal, two gaskets, and 90° fitting
- Weighs 11.5 ounces

PRICING

VAC-2/4 (Homebuilt), fits 4-cylinder Lycoming	\$185
VAC-2/6 (Homebuilt), fits 6-cylinder Lycoming	\$185

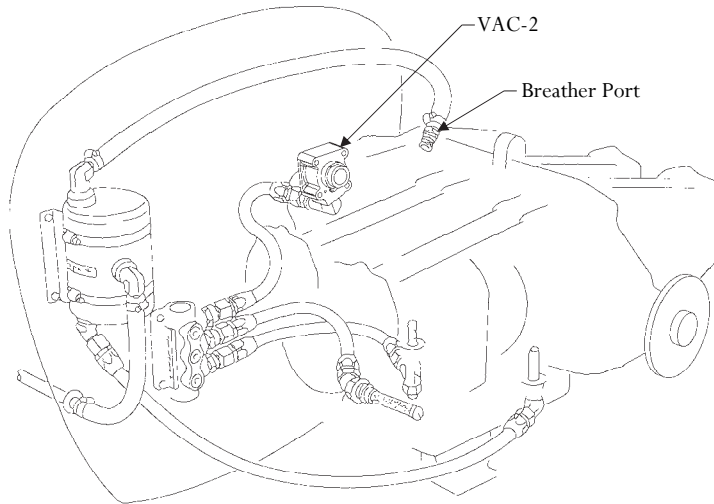
ALSO OF INTEREST

72970 Used Vacuum Pump Drive Gear, 4-cyl. (limited availability)	Call
72974 Used Vacuum Pump Drive Gear, 6-cyl. (limited availability)	Call

SEE PAGE 2 FOR:

- VAC-2 Installation Diagram
- Flexibility to Suit Varied Applications
- Why Use the VAC-2? (Continued)

VAC-2 INSTALLATION DIAGRAM



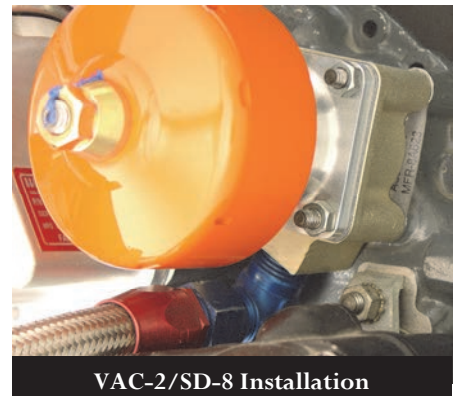
This part is not STC'd or PMA'd and is sold for amateur-built aircraft only.

FLEXIBILITY TO SUIT VARIED APPLICATIONS

Flexibility is an asset when weight and space are at a premium. After all, what suits one aircraft may prove completely unworkable in another.

A unique advantage of the VAC-2 — aside from improved lubrication during inverted flight — is that it retains a fully-functional vacuum pump pad adaptor. This permits the use of a vacuum pump, a B&C spline-driven alternator, or nothing at all (with an accessory pad cover-plate). That's flexibility.

For combined operation on aerobatic aircraft, a popular choice is to install the VAC-2 in conjunction with our SD-8 Alternator. This provides a remarkably lightweight, time-proven pair of components, with many hundreds of installations in aerobatic aircraft worldwide. Similarly, matching the VAC-2 with our BC410-H Alternator provides an unusually robust combination—inverted oil pickup AND 20 to 30 amps of electrical output (depending on engine RPM).

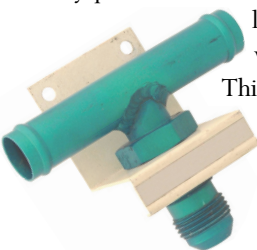


VAC-2/SD-8 Installation

WHY USE THE VAC-2? (CONTINUED)

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inverted flight by positioning the inverted oil pickup on the vacuum pump accessory pad, and connecting this directly to the ball valve assembly.



This direct connection improves upon the stock, or commonly-added, inverted

oil system by eliminating a firewall-mounted T-fitting used to route vital engine oil—somewhat indirectly—through the oil breather line.

The difference in relative performance is most clearly evident in flight. Aircraft with oil systems using a T-fitting typically experience “low” oil pressure for three- to five- seconds after rolling inverted. In contrast, aircraft equipped with the VAC-2 encounter

only a momentary oil pressure decrease as the ball valves in the oil valve assembly switch ends. As a result, the engine receives more consistent lubrication—preserving the critical hydrodynamic oil film between internal components. “Prop surges” with constant-speed propellers are also reduced. For aerobatic engines, these are crucial factors in safeguarding engine life and maintaining peak efficiency.