



Figure 11-23. *Great Plain's Volkswagen conversion.*

be shipped completely assembled, are available from 1600 cc up through 2276 cc. All the engine kits are built from proven time tested components and are shipped with a Type One VW Engine Assembly Manual. This manual was written by the manufacturer, specifically for the assembly of their engine kits. Also included are how to determine service and maintenance procedures and many tips on how to set up and operate the engine correctly. The crankshaft used in the 2180 cc to 2276 cc engines is a 82 mm crankshaft made from a forged billet of E4340 steel, machined and magnafluxed twice. The end of the crankshaft features a 1/2-inch fine thread versus a 20 mm thread found on the standard automotive crank.

Teledyne Continental 0-200 Engine

The 0-200 Series engine has become a popular engine for use in light-sport aircraft. The 0-200-A/B is a four-cylinder, carbureted engine producing 100 brake hp and has a crankshaft speed of 2750 rpm. [Figure 11-24] The engine has horizontally opposed air cooled cylinders. The engine cylinders have an overhead valve design with updraft intake inlets and downdraft exhaust outlets mounted on the bottom of the cylinder. The 0-200-A/B engines have a 201 cubic inch displacement achieved by



Figure 11-24. *0-200 Continental Engine.*

using a cylinder design with a 4.06-inch diameter bore and a 3.88-inch stroke. The dry weight of the engine is 170.18 pounds without accessories. The weight of the engine with installed accessories is approximately 215 pounds. Developed specifically for light aircraft, the 0-200-D engine has a dry weight with installed accessories of approximately 199 pounds. The engine is provided with four integral rear engine mounts. A crankcase breather port is located on the 1-3 side of the crankcase forward of the number 3 cylinder.

The engine lubrication system is a wet sump, high-pressure oil system. The engine lubrication system includes the internal engine-driven pressure oil pump, oil pressure relief valve, pressure oil screen mounted on the rear of the accessory case and pressure instrumentation. A fitting is provided at the 1-3 side of the crankcase for oil pressure measurement. The oil sump capacity is six quarts maximum. The 0-200-A/B induction system consists of an updraft intake manifold with the air intake and throttle mounted below the engine. Engine manifold pressure is measured at a port located on the 2-4 side of the intake air manifold. The 0-200-A/B is equipped with a carburetor that meters fuel flow as the flightdeck throttle and mixture controls are changed.

Lycoming 0-233 Series Light-Sport Aircraft Engine

Lycoming Engines, a Textron Inc. company, produces an experimental non-certified version of its 233 series light-sport aircraft engine. [Figure 11-25] The engine is light and capable of running on unleaded automotive fuels, as well as AVGAS. The engine features dual CDI spark ignition, an optimized oil sump, a streamlined accessory housing, hydraulically adjusted tappets, a lightweight starter, and a lightweight alternator with integral voltage regulator. It has a dry weight of 213 pounds (including the fuel pump) and offers continuous power ratings up to 115 hp at 2800 rpm. In addition to its multi-gasoline fuel capability, it has proven to be very reliable with a TBO of 2,400 hours. The initial standard version of the engine is carbureted, but fuel injected configurations of the engine are also available.



Figure 11-25. *Lycoming 0-233 engine.*