

Hose Specs for Birddog O-470-11 engines

aj - v4b

Comments:

Always double check that the hose lengths are correct for your aircraft. This list has proven correct for at least eight -11-powered aircraft (by 6/2014), but *double check your particular installation*. The Aircraft Spruce catalog is a good starting point for info, style numbers and length codes when ordering hoses. But there are a number of other good hose sources, too.

Notes: All described hoses have straight fittings, both ends. The military-spec'd original hoses all had straight fittings. You may choose to revise that, particularly with the oil cooler ends of the cooler's supply and return hoses. **This list describes dimensions that are overall, end-to-end lengths that include the fitting.** That is an industry standard as the proper way to express the length of a hose when ordering. The assembly shop will calculate the actual length of the flexible hose section so that when the lengths of the fittings *that they use* are added to the hose section, the overall end-to-end length is correct. **Let the shop calculate the hose section length, the sealing-surface-to-sealing-surface length, etc. That's their expertise! Don't attempt that yourself! The risk of receiving the wrong length is too great! If ever ordering a hose with 45 deg or 90 deg fittings, seek advice from a hose shop for the proper way to express those hoses' lengths.**

The following info is derived from the -34P Parts Manual and real-world experiences. Part numbers are Aeroquip part and assembly numbers. They should be good at any aircraft hose manufacturer's approved hose shop, including shops assembling Stratoflex hoses. Those shops can easily cross over the part numbers to Stratoflex assemblies.

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Fuel Lines:

(All are Teflon "lifetime" Aeroquip integral fire-sleeved style except as noted. For non-integrally sleeved Teflon "lifetime" Aeroquip hoses, part numbers become AE3660000xyyyy - with sizing called out the same as the integral-sleeve style.)

Fuel Pressure - cabin side of firewall to panel gauge, -4 size, 14 inch length
AE3663161E0140 (*non-sleeved hose is AE3660000E0140*)

Fuel Pressure - carb to engine side of firewall, -4 size, 33 inch length
AE3663161E0330 (*non-sleeved hose is AE3660000E0330*)

Fuel Return - carb to engine side of firewall, -4 size, 30 inch length
AE3663161E0300 (*non-sleeved hose is AE3660000E0300*)

Fuel Primer - engine side of firewall to distribution block's line, -4 size, 17 inch length
AE3663161E0170 (*non-sleeved hose is AE3660000E0170*)

Fuel Supply - gascolator to engine-driven fuel pump, -6 size, 7 inch length.
AE3660000G0070 Note the G (-6 size) and not E size - other parts lists are

inaccurate.

(aj note: *The gascolator-to-pump hose is more easily installed if it is a half inch longer than specified in the -34P; increase it to a 7.5" length. But, longer than 7.5" will prevent installation. For this suggested 7.5" length, the part number becomes AE3660000G0075.*)

NON-INTEGRAL SLEEVING IS NECESSARY FOR THIS GASCOLATOR TO FUEL PUMP HOSE to permit the curve necessary for installation. Sleeve this hose with conventional orange fire-sleeve and metal band clamps, not the stiff integral sleeving. (See end note.)

Fuel Supply - engine-driven fuel pump to carb -6 size 28 inch length
AE3663161G0280 Note the G (-6 size) and not E - other parts lists are inaccurate. (*non-sleeved hose is AE3660000G0280*)

NOTE: All hose installations are to be verified by a licensed mechanic.

Oil Lines:

(All are Teflon "lifetime" Aeroquip integral fire-sleeved style except as noted. For non-integrally sleeved Teflon "lifetime" Aeroquip hoses, part numbers become AE3660000xyyyy - with sizing called out the same as the integral-sleeved style.)

(Always double check that the lengths are correct for your aircraft. Some aircraft have the Ector STC installed which modifies the oil circuit and several of the hose lengths.)

Oil Pressure Line - cabin side of firewall to oil pressure gauge; -4 size, 14 inches (original is internally-reinforced rubber, original spec: AN6270-4-14)
AE3663161E0140 -4 size 14 inch length - integral fire-sleeved (*non-sleeved hose is AE3660000E0140*)

Oil Cooler Return Line - lower right of oil cooler to left side of case, -8 size, 18 inches:

non-sleeved hose is AE3660001H0180.

(aj note: *I've found the hose is more easily installed if it is one inch longer – a 19.0" length non-sleeved hose – and is NOT a stiff integral-fire-sleeved hose. Part number becomes AE3660001H0190.*)

Oil Cooler Supply Line - upper right of oil cooler (vernitherm fitting) to right side of case, -8 size, 10 inches

non-sleeved hose is AE3660001H0100

(aj note: *I've found the hose is more easily installed if it is one-half inch longer – a 10.5" length – and is NOT a stiff integral-fire-sleeved hose. Part number becomes AE3660001H0105.*)

Oil Pressure Line - from left mid-crankcase to firewall; -4 size, 43 inches
AE3663161E0430 integral fire-sleeved (*non-sleeved hose is AE3660000E0140*)

And...

Brake hoses - master cylinders to fuselage side bulkhead fittings - not fire-shielded: -4 size, 14 inch length. Two (2) qty of: AE3660000E0140

The above part numbers should be good at any aircraft hose manufacturer's approved hose shop, including shops assembling Stratoflex hoses. The shop can easily cross over the Aeroquip part numbers to Stratoflex assemblies.

Conventional Fire Sleeve: The Aeroquip part number for the traditional, separately-installed orange fire-sleeving is AE102- followed by a part size number. The Stratoflex part number for their orange sleeving is 2560 followed by a part size number. You MUST refer to a Stratoflex chart. Their sleeves' tabbed size numbers do not correspond to industry hose size numbering conventions. In both cases, your hose shop can help with proper fire sleeve sizing.

NOTE: All hose installations are to be verified by a licensed mechanic.

A final thought: *For convenience in the identification of installed fuel and oil lines, I chose to color-code the lines by specifying the integrally-fire-sleeved fuel lines as blue colored and my oil lines as brown colored sleeving. As of this writing, available colors are blue, brown, orange and purple. Check with your hose shop for their available colors. Not all shops stock all colors of the material.*
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