

# SERVICE BULLETIN

## PITTS SPECIAL

**AVIAT**   
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**DATE:** April 1992

**SERVICE BULLETIN - NO. 19**  
Engineering Aspects are  
FAA approved.

**SUBJECT:**

Oil Breather Line

**MODELS AFFECTED:**

All Pitts Special Aircraft

**TIME OF COMPLIANCE:**

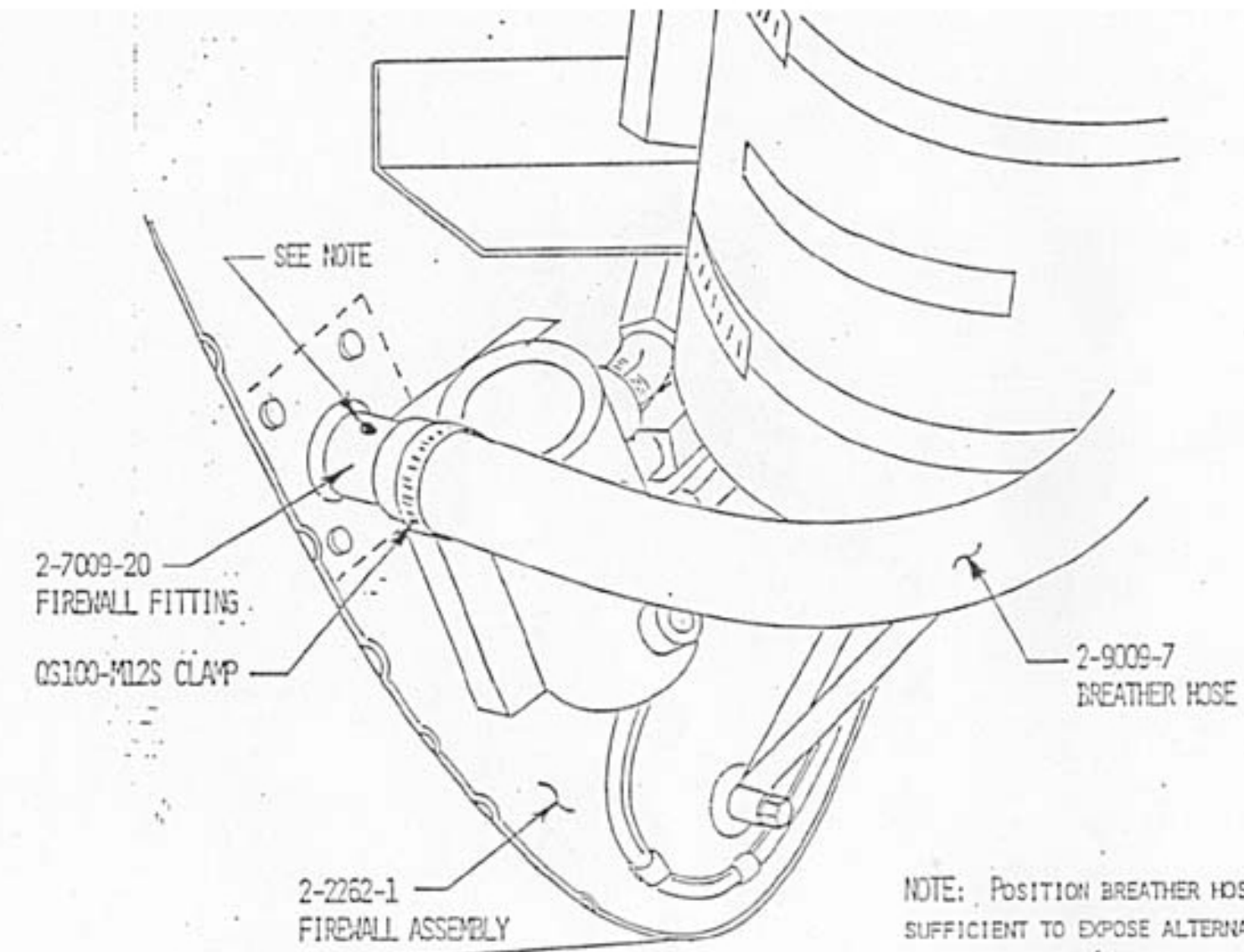
Within 30 Days

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It has recently been reported to us that a Pitts Special S-2B manufactured in 1987 by Christen Industries, Inc. suffered a rapid loss of engine oil and an off airport landing due to blockage of the Oil Breather Vent at the rear of the aircraft with ice.

Although the aircraft is prohibited from flying in known or forecast icing conditions this Service Bulletin requires all owners to ensure that the Oil Breather Tube located on the forward side of the firewall is pulled forward sufficiently to insure that the secondary breather hole is exposed to allow pressure release in the event of blockage by ice of the tail outlet of the breather tube (see illustration).

The company is investigating a more convenient solution but no problem will exist if the breather hose is positioned forward of the secondary breather hole to prevent any pressure buildup in the breather system.



# SERVICE BULLETIN No 19

## [SUPPLEMENT]

September 1992.

### PITTS SPECIAL - ALTERNATE BREATHER VENT

Service Bulletin No 19 was issued in April 1992 to warn pilots of factory made Pitts's to ensure that the secondary breather hole remain exposed to protect against the blockage of the main breather vent - this supplement is to advise ALL pilots to be aware of the situation.

One of the major combustion engine by-products is water vapor which, along with other exhaust products, finds its way past the engine cylinder rings and into the crankcase. To prevent a build-up of excess pressure in the crankcase which could result in failure of engine oil seals and resulting loss of oil, a means must exist to vent this pressure to the atmosphere. This is the purpose of the crankcase breather line. On the Pitts the breather line exits the aircraft aft by the tail post. This keeps breather fumes and overflow oil during aerobatic maneuvers from staining the finish. However, when the OAT is at or below freezing and during long flights the possibility exists that water vapor in the breather line may start to freeze up perhaps blocking the breather line entirely.

Two methods of providing alternate breather venting have been used on various Pitts models. On the early serial number S-2, S-2A, S-1S, and S-1T a separate tube (S-2, S-2A P/N 1-604-43 and S-2, S-2A P/N 2-7009-29) was attached to the engine mount and vented above the right hand exhaust stack through the lower cowl cooling air opening. This method and the means for retrofitting was described in Pitts Aviation Enterprises, Inc Service Bulletin No. 2, dated Dec 27, 1971. When operation in freezing conditions was anticipated the breather hose from the oil separator was disconnected and reconnected to the alternate tube and secured. (FIG 1)

Later S-2A, S-1T, S-2S, and S-2B aircraft have a 9/64 hole drilled in the upper forward side of the firewall fitting (S-1S, S-1T P/N 1-604-40 and S-2S, S-2B P/N 2-7009-29). It is essential that this alternate vent hole remain uncovered in freezing conditions. The breather hose from the oil separator should be pulled forward to expose the vent hole. (FIG 2) If a vent hole is not present one can be drilled using a minimum 9/64 drill.

All Pitts owners, whether factory built or kit built, using an inverted oil system with aft venting breather lines should verify that one of these two methods of alternate crankcase venting exists on their aircraft and is open, especially during long flights or cold weather operation.

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SEE DIAGRAMS SHOWING THE DIFFERENT METHODS  
ON THE REVERSE SIDE >

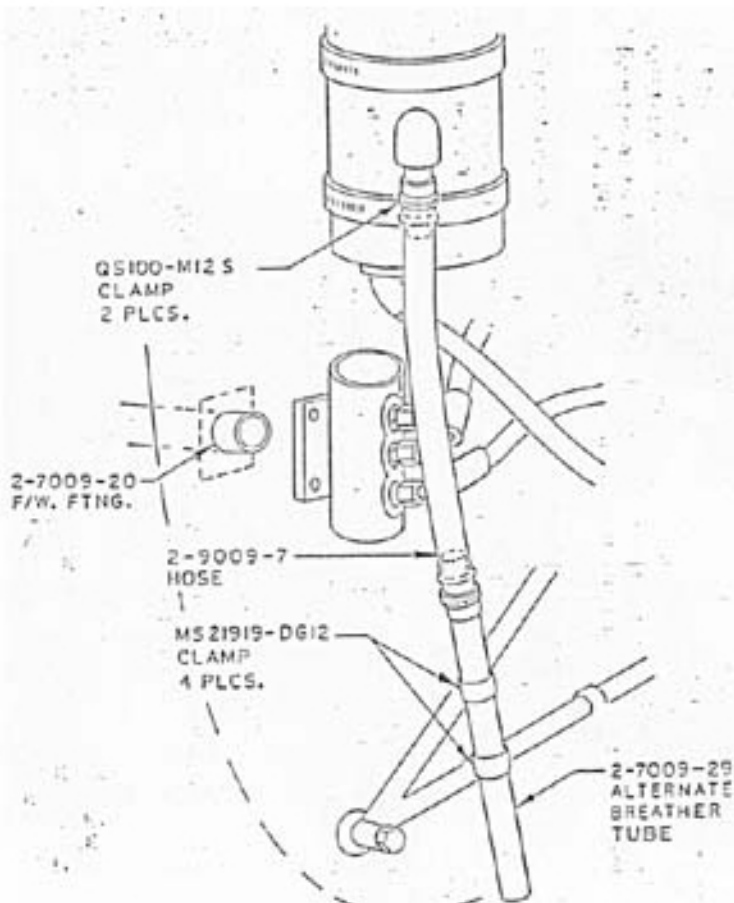


FIG. NO. 1

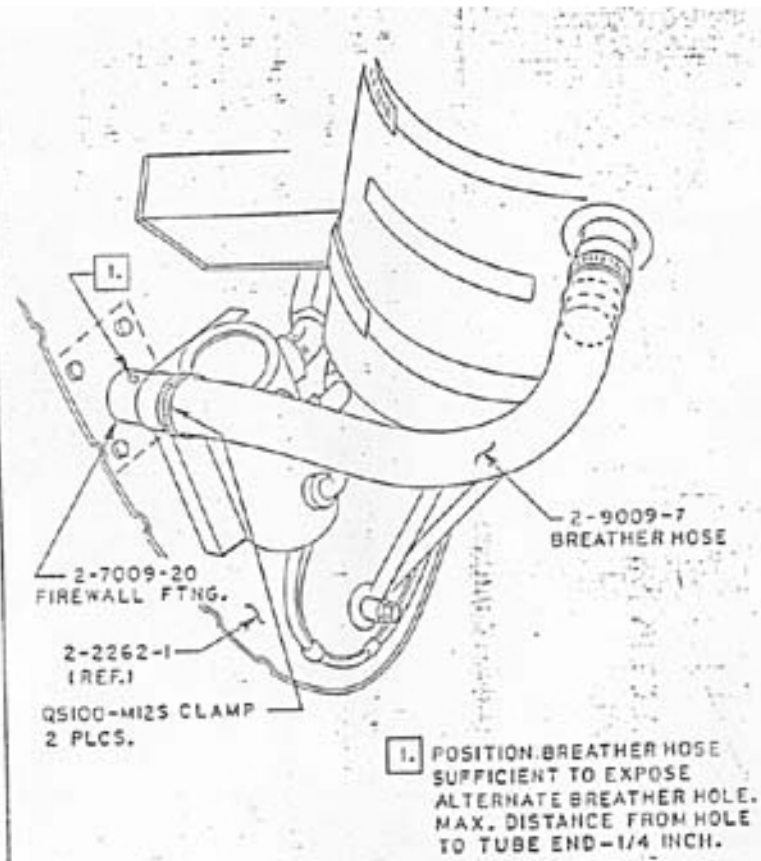


FIG. NO. 2