

>>> Service Bulletin

Experimental

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Initial Release

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Subject: Operational Limitation on Ryton[®] Sumps with Inverted (Acrobatic) Oil Systems.

Application:

Lightweight Sump Assembly	Engine Applications
SV78901 (front mount – injected) SV78903 (rear mount – injected)	Superior XP Engine Series and other Experimental 4-cylinder Lycoming style Aircraft Engines

Compliance:

Superior Air Parts Inc.[®] has determined that the design of the Ryton Sump does not reliably accommodate the Christen and Raven methods for oil pickup modifications. Specifically, the O-ringed plug of the Christen/Raven kit does not seal properly in the Superior Ryton sump. The Christen/Raven O-ringed plug is designed to fit in a bore at the end of the finger screen in Lycoming style sumps. The Superior Ryton sump has a different design at the end of the finger screen bore that does not reliably seal with the Christen/Raven O-ringed plug.

The Ryton Sump with Christen and Raven inverted oil systems will provide reliable lubrication to the engine only under positive G conditions. Negative G operation (as experienced in inverted and some other flight modes) may allow air to enter the suction side of the engine oil pump and negatively affect engine lubrication. Superior requires that engines equipped with Ryton Sumps (see Application for engine models) and Christen or Raven inverted oil systems be operated only in positive G loading.

Superior is currently designing a replacement for the Ryton Sump and Cold Air Induction system. Superior's new design sump will accommodate the Christen and Raven inverted oil systems. Once the redesigned sump is in production and available, the Ryton Sump system may be replaced with the redesigned system to facilitate your requirements for acrobatic operations. Superior does not intend to issue instructions for modification of the existing Ryton Sump to accommodate inverted oil systems.