



SKY DYNAMICS CORPORATION

AEROSPACE DESIGN AND FABRICATION

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MAXI – SUMP / COLD AIR INTAKE INSTALLATION INSTRUCTIONS FOR FOUR-CYLINDER LYCOMING AIRCRAFT ENGINES

1. On engines in service, it is necessary to remove existing oil sump assembly along with intake tubes and exhaust system.
 2. Clean and inspect all gasket surfaces. On engines so equipped, remove intake studs. New ¼" X 1" hex bolts are supplied for Cold Air Intake tubes.
 3. Mount Maxi-Sump on engine using new gasket taking care to align all holes prior to tightening bolts.
 4. When used as an aerobatic sump with an inverted oil system, the bottom-center fitting on the sump is plumbed to the bottom port of the changeover valve.
- Important note for sumps with swinging oil pickup tube:**
5. When attaching a line to the bottom fitting, hold the fitting from turning with a wrench as you tighten the line fitting onto it. If you allow the fitting in the sump to spin, the seals on the swinging oil pickup will be damaged.
 6. The rearmost fitting (oil pump feed) is plumbed to the center of the changeover valve. The front corner port is for the return from the air/oil separator tank. The smaller #8 cap and fitting is for an oil drain.
 7. For applications that do not use an inverted oil system, it is necessary to connect a line directly between the bottom-center port and the rear port of the sump.
 8. Due to the differences in the contour of our sump floor, it is important to recalibrate the oil dipstick during initial filling.
 9. After Maxi-Sump is installed, slide intake tubes onto their respective plenum ports as it is easiest to install the intake as a complete unit onto the engine. It is imperative to grease the o-rings for each slip joint prior to sliding the tube onto the plenum port. As these seals are chemical resistant, most types of oil or water based lubricants are acceptable. Twisting the tube while applying slight inward pressure is the key to easily sliding the tube onto the plenum port. Each intake tube is stamped on the underside of the flange to show cylinder number.
 10. Two people – one on each side of the engine – makes the intake install easy. Lift the intake as a complete unit up onto the engine, and align intake tube flanges. Our tubes are fitted to the flanges as a ball joint assembly. This allows slight movement of the flanges to aid installation. Verify o-rings are installed in the flange grooves and loosely install intake flange bolts.
 11. With the intake system still loose, loosely install fuel servo, servo inlet tube and mounting brackets. Once everything is in place, go back and tighten mounting brackets, fuel servo bolts, and intake flange bolts.
 12. After 5 hours of running time, re-check all fasteners for proper torque. Inspect oil hoses for possible chafing and exhaust system for abnormal binding.

Please feel free to contact us if you have any installation questions:
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