

STOL CH 801

**LYCOMING O-360
Engine Installation**

**SECTION 2
Oil Cooler**

INSTALLATION OF THE OIL COOLER AND OIL LINES





Looking up at left side of engine. Note: An alternative oil line routing when not using a cross over muffler.

**IMPORTANT: LOCATION OF SOLENOID ON STARTER, LOCATED ON THE OPPOSITE SIDE OF THE OIL COOLER.
SKYTEC P/N 149-12PM**



The top of the baffle is approximately in line with the center of the cylinder; in this photo it is approximately 10mm higher.

With top portion of the cowl removed.

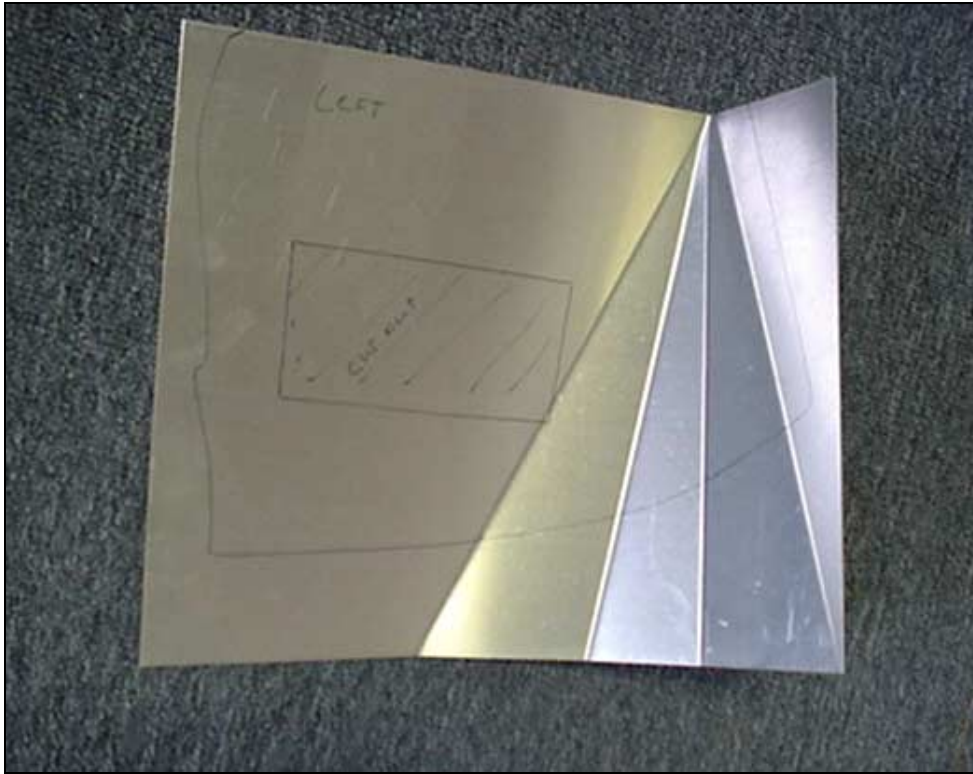


Space for the oil cooler
On the front left side of
engine. The lower cowl is
install to check that the
Fitting will not inter with
the cowl.



3/8" plywood block
taped to the oil line (to
assure proper spacing
between the bottom of
the oil cooler and the
Oil line).

Note the location of the 2 taped holes on the side of the engine casing. If necessary drill a large hole between the two horizontal taped hole in the oil cooler mounting bracket 360-OCB to make clearance for any existing bolt cap screw installed on the engine.



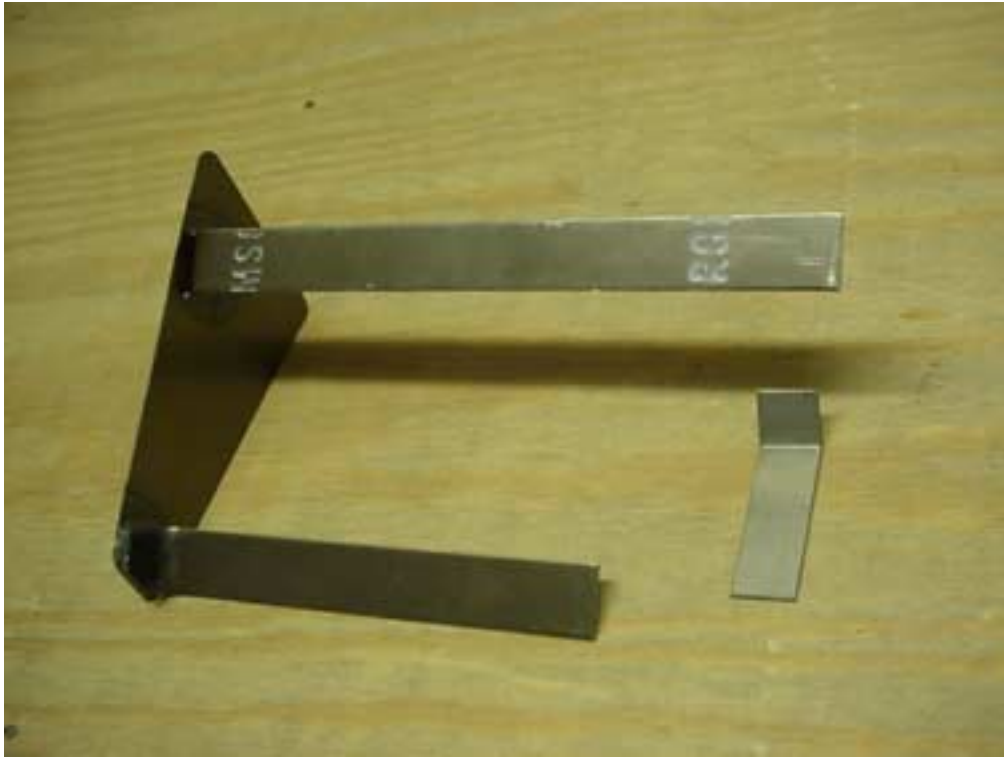
Cutout for the oil cooler in the front left baffle

Wait to make the Rectangular cutout for the oil cooler until after the oil cooler attachment bracket is bolted to the engine.



Two piece front baffle. Front piece is bent down to reach the bottom cowl.

POSITECH OIL COOLER P/N 4211 qyt=1



OIL COOLER
Mounting Brackets

P/N 360-OCB

Qty=1
(Two parts, welded bracket and to bolt on side of engine casing, bent bracket to bolt on the front of cylinder head).

The mounting holes are not predrilled.



GR.8 HEX CAP SCREW
 $\frac{1}{4}$ -20X $\frac{1}{2}$ "
P/N 92620A537
Qty=2

Internal Tooth Lock washer
 $\frac{1}{4}$ "
P/N 91153A029
Qty=2

10-24- $\frac{1}{2}$ " MACHINE SCREW
SLOTTED HEAD
P/N 9020A242
QTY=1

INTERNAL TOOTH LOCK WASHER
P/N 91113A011
QTY=1



90 degree ELBOW

AN822-6-6D
(MS20822-6-6D)
(ALUMINUM)

Qty = 2

3/8" O/D tube FLARED TUBE, 3/8" PIPE THREADS
Note: photo shows 4 pieces, only 2 required.



2 BOLTS IN SIDE OF ENGINE

1 BOLT IN CYLINDER HEAD

BOLT
AN3-4A
To connect the top support with the smaller bracket bolted on the cylinder head.

CHECK: lay a straight edge over the top of the oil cooler to adjust the angle of the bracket against the engine; the straight edge intersects approximately in the middle of the cylinder.

Use existing tapped holes in the engine block to bolt the oil cooler attachment brackets on the engine. 1/4" BOLTS IN THE SIDE OF THE ENGINE BLOCK, ONE FOR THE TOP AND ONE FOR THE BOTTOM BRACKET.



Oil cooler flange sites on top of the Oil Cooler Bracket.

Note: in this photo the top of the oil cooler mounting bracket is not cutout as in the supplied part. The front support is welded with the small flange pointing up; the top support is welded with the flange down.

Screw in the outboard 90 degree elbow and check that there will be no interference with the bottom cowl.



Side view



Note: oil routing is shown differently because of the muffler, cross over system not installed in this photo.



BOLTS
AN3-41A

TUBE SPACER
4130N 1/4"OD x.028" wall
P/N TU-SP

QTY = 6

4 WASHERS PER BOLT:
1 UNDER HEAD
1 AT EACH END OF
TUBE SPACER TU-SP
1 UNDER NUT.

Refer to the sheet supplied with the Positech oil cooler



Spacer between the top and bottom flange of the oil cooler, see installation sheet supplied with the cooler.

If necessary adjust the length of the bushing.



The flange on the cooler is mounted on the topside of the aluminum baffle.

Number of bolts: Best to have 3 across the top and 3 across the bottom.



**ELBOW
AN822-6-6D**

Screwed in the oil cooler

Note: in this photo the oil cooler is riveted to the baffle across the front flange (instead of using 2 AN3-40A bolts and spacers)

Viewed from the front.



Oil line Assy.
P/N 20-SAF-3
With fire sleeve protection

QTY=2
LENGTH=44"



45 DEGREES BRASS
PIPE FITTING

P/N 3350X6

Quantity 2 required

3/8" FEMALE NPT TO 3/8" MALE NPT (NATIONAL PIPE THREADS)



NIPPLE

AN816-6-6D

QTY = 2

3/8" O/D tube FLARED TUBE, 3/8" PIPE THREADS

NOTE: photo shows 4 pieces, only 2 require.



SCREW THE BRASS FITTING 3350X6 INTO THE ENGINE BLOCK

SCREW THE NIPPLE AN316-6-6D TO THE BRASS FITTING 3350X6

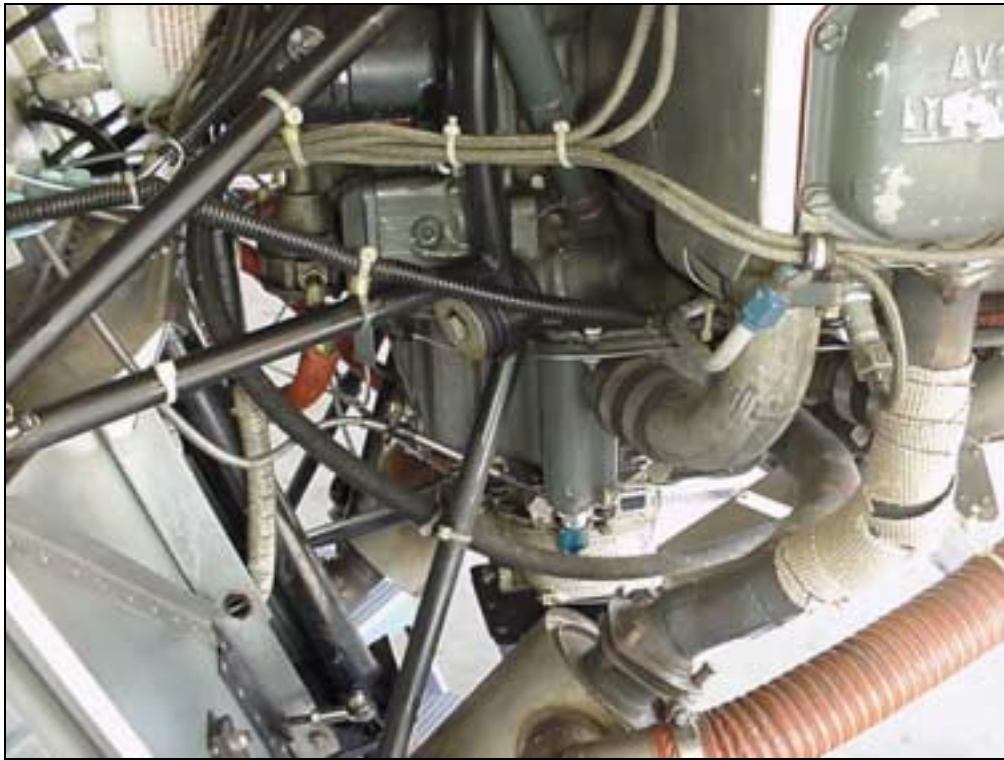
SCREW THE END OF THE OIL LINE TO THE NIPPLE AN316-6-6D

SAME FITTINGS AND LINES USED FOR THE IN AND OUT LINES



ROUTING OF OIL LINE TO THE BACK RIGHT SIDE

RIGHT SIDE OF ENGINE



ROUTING OF OIL LINE
UNDERNEATH ENGINE
- RIGHT SIDE -



Note the routing of the magnito wires on the right side of engine.



ADAPTER
1/2X3/8 PIPE
P/N F120-CC

Qty=1



FIRST TRY TO SCREW
IN THE 45 DEGREE
FITTING WITHOUT THE
ADPATER, USE THE
ADPATER IF THERE IS
INTERFERENCE WITH
THE BLOCK

OPTION:

Adapter F120-CC
screwed into the engine
block create an offset to
screw the 45 DEGREES
BRASS PIPE FITTING
P/N 3350X6



In this installation the 45 DEGREES BRASS PIPE FITTING P/N 3350X6 is screwed in directly into the engine block without the APATER 120-CC

LEFT SIDE

DETAIL OF FITTING TO ENGINE BLOCK

SAME FITTINGS AND HOSE USED FOR THE LEFT AND RIGHT SIDES



OIL LINE ROUTING ABOVE THE EXHAUST (Red heat shield)

Rubber hose (radiator hose) with tie wraps to protect oil hose from contact with the cowl.

Left side, not the routing of the magnito wires

*****OIL COOLER***
Section 2**

P/N	DESCRIPTION	QTY
4211	POSITECH OIL COOLER	1
360-OCB	COOLER INSTALLATION BRACKET (2 pcs: top and bottom)	1
AN3-4A	BOLT, SL NUT, WASHER (bolt the bent bracket to the welded bracket on the oil cooler bracket 360-OCB)	1
AN3-41A	BOLT, SL NUT, 4 WASHER (to bolt oil cooler to mounting bracket 360-OCB)	6
TU-SP	TUBE SPACER (Ref. Positech IMPORTANT NOTICE) ¼"O.D. X.028"	6
92620A537	GR. 8 HEX CAP SCREW ¼-20X1/2" with INTERNAL TOOTH LOCK WASHERS (taped holes in engine block)	2
9020A242	10-24 ½" MACHINE SCREW, SLOTTED HEAD with internal tooth lock washer	1
AN822-6-6D	OIL COOLER ELBOW (screwed to oil cooler)	2
AN816-6-6D	NIPPLE (screwed into 3350x6)	2
3350X6	45 DEG BRASS PIPE FITTING (screwed in engine block)	2
20-SAF-3	OIL LINE ASSY, length=44" (oil cooler to engine) WITH FIRE-SLEEVE	2
F120-CC	ADAPTER 3/8X3/8 PIPE (use if required between block and 45 fitting)	1