

R44-series Engine Air-Oil Separator Installation Kit Instructions

Replaces C727 breather tube. Applicable to R44 S/N 2565 & prior, R44 II S/N 14283 & prior, and Cadet S/N 30043 & prior; not compatible with oil filter installation using Lycoming filter adapter.

NOTE

Visit www.robinsonheli.com to verify kit instructions are current revision. Review instructions before installation; contact RHC Technical Support with questions. Verify kit contents match list; contact RHC Customer Service if parts are missing or damaged.

ITEM	PART NUMBER	KIT CONTENTS	QTY
1	KI-255-2Instr.	Kit Instructions	1
2	A729-77	Tube	1
3	A785-43	Hose	1
4	B277-4	Clamp	1
5	C728-2	Separator Assembly	1
6	C729-1	Adapter	1
7	C729-2	Fitting	1
8	C729-14	Bracket Assembly	1
9	STD-160	Lock washer	1
10	MS21919WDG8	Clamp	1
11	MS21919WDG14	Clamp	1
12	MS27039C0806	Screw	1

Consumables

Refer to R44 Maintenance Manual (MM) § 1.400 for approved materials list.

- A257-8 Rubber lubricant
- B270-20 Adhesive
- A701-11 PTFE Teflon tape (thread seal)

Kit Instructions

1. Remove C378-3 or -1 RH cowling assembly. R44 II only: Remove air box assembly per R44 MM § 6.470.
2. Refer to Lycoming PC-515-2 Figure 18 (O-540 engine), or PC-615-AE1A5 Figure 14 (IO-540 engine). Loosen inboard hose clamp on engine's #6 cylinder-head oil-drain tube assembly & attached hose. Disconnect tube from elbow fitting in cylinder head and remove tube, attached hose, and both clamps. Remove STD-684 nipple from crankcase and clean threads in crankcase.
3. Refer to Figure 1 or Figure 2, as applicable. On C729-1 adapter, apply two overlapping wraps of A701-11 tape to external tapered pipe thread; do not apply tape to adapter's first thread. Install adapter in crankcase, torque to 85 in.-lb, then tighten as required so threaded hole points forward and 15 to 25 degrees above horizontal.

Kit Instructions (continued)

4. Coat threads of C729-2 fitting with B270-20 adhesive. Install fitting fully bottomed in threaded hole of C729-1 adapter. Allow adhesive to cure undisturbed for 30 minutes.
5. Refer to R44 Illustrated Parts Catalog (IPC) Figures 71-5 (O-540 engine), or 71-9 (IO-540 engine). Remove and retain B277-12 hose clamp securing A729 rubber tube to breather fitting on engine accessory housing. Disconnect and remove hardware attaching C727 breather tube to airframe and remove breather, attached rubber tube, and B277-12 hose clamp; retain hose clamp and hardware.

NOTE

If removed C727 breather tube is 1-inch diameter, replace installed breather fitting with LW-18575 fitting and install replacement fitting wet with anti-seize.

6. Install new A785-43 hose on breather fitting and secure using retained hose clamp. Slide second retained hose clamp over A785-43 hose.
7. Refer to Figure 1 or Figure 2. Install bottom of C728-2 separator assembly thru hole in belly and insert upper end into A785-43 hose. Lightly clamp tab at lower end of separator assembly to adjacent B288-7 airframe tab using (1) MS27039C0806 screw, (1) NAS1149FN816P washer, and (1) MS21042L08 nut. Secure separator assembly's can to adjacent frame tube using (1) MS27039C0806 screw and (1) MS21919WDG14 clamp, with clamp's screw holes outboard. Fully tighten screw securing lower end of separator assembly. Ensure A785-43 hose is not deformed; reposition as required. Tighten both clamps. Verify security.
8. Refer to Figure 3. Locate aft-pointing bolt in accessory housing, immediately above & outboard of lower mounting stud for retard (engine-left) magneto. Remove bolt and discard washer. Install new STD-160 lock washer under bolt head. Position C729-14 bracket against accessory housing with nutplate tab pointing aft, and lightly clamp bracket to accessory housing using bolt & lock washer.
9. Refer to Figure 1 or Figure 2. Slide A729-77 tube onto drain protruding from separator assembly's can, and secure with B277-4 clamp. Slide opposite end of tube fully onto C729-2 fitting. With clamp's screw holes inboard and up, position MS21919WDG8 clamp on A729-77 tube. Lightly attach clamp to C729-14 bracket using MS27039C0806 screw. Adjust position of clamp & bracket so A729-77 tube is straight as obtainable. Torque bolt to 96 in.-lb. Tighten clamp screw. Verify security. Ensure tube's aft end is fully on C729-2 fitting.
10. Install cylinder-head oil-drain tube assembly, attached hose, and both hose clamps. Connect tube to cylinder head elbow and torque AN818 nut per Lycoming SSP-1776-5 Table VII. Torque both hose clamps per Lycoming SSP-1776-5 Ref 920. Verify security.
11. R44 II only: Install air box assembly per MM § 6.480.
12. Install C378-3 or -1 RH cowling assembly.
13. Have a qualified person run-up and shutdown helicopter per Pilot's Operating Handbook. Inspect air-oil separator installation and verify no leaks; repair as required.
14. Make appropriate maintenance record entries. Weight and Balance change is negligible.

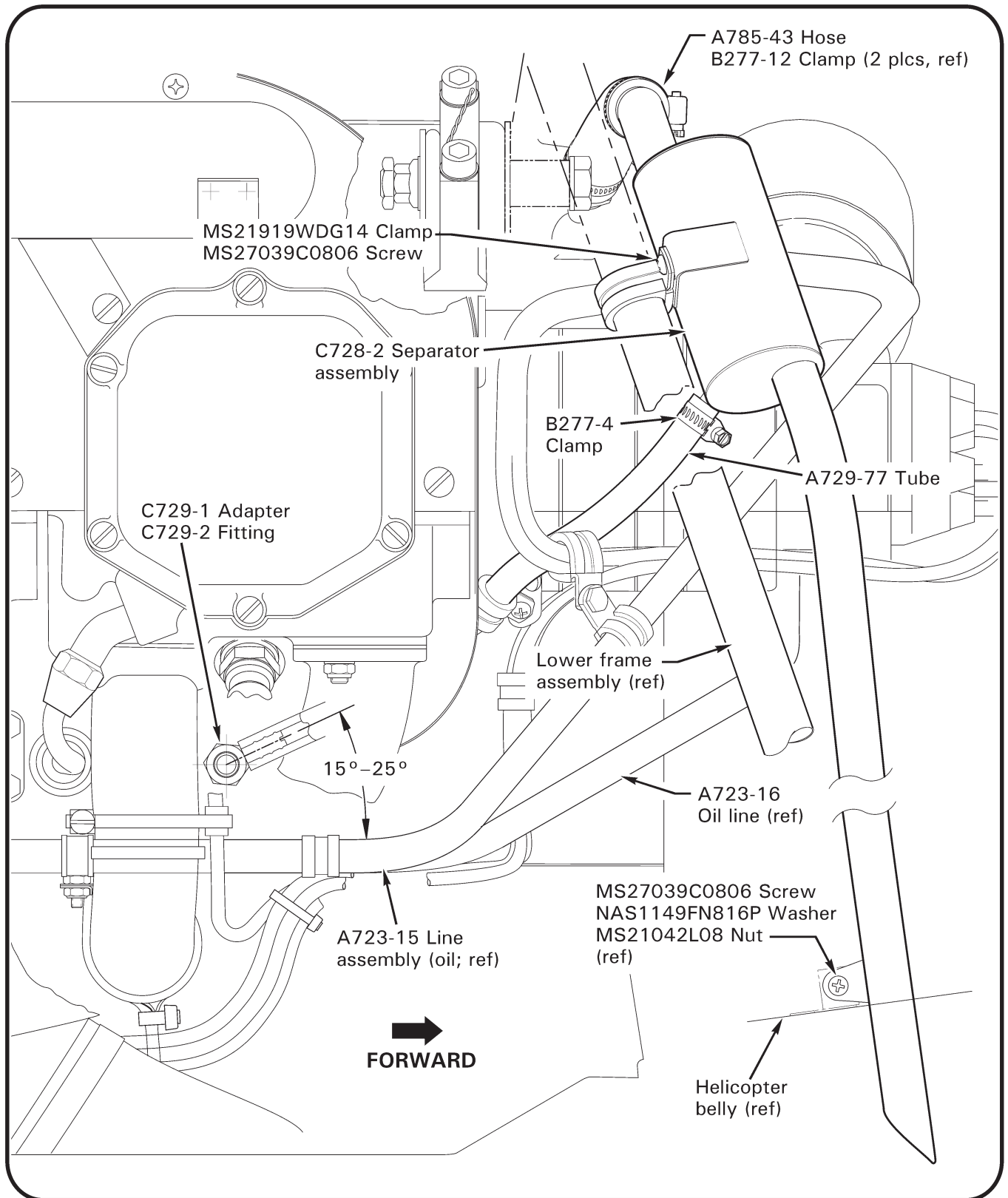


FIGURE 1 Installation of separator and associated parts (O-540 engine)

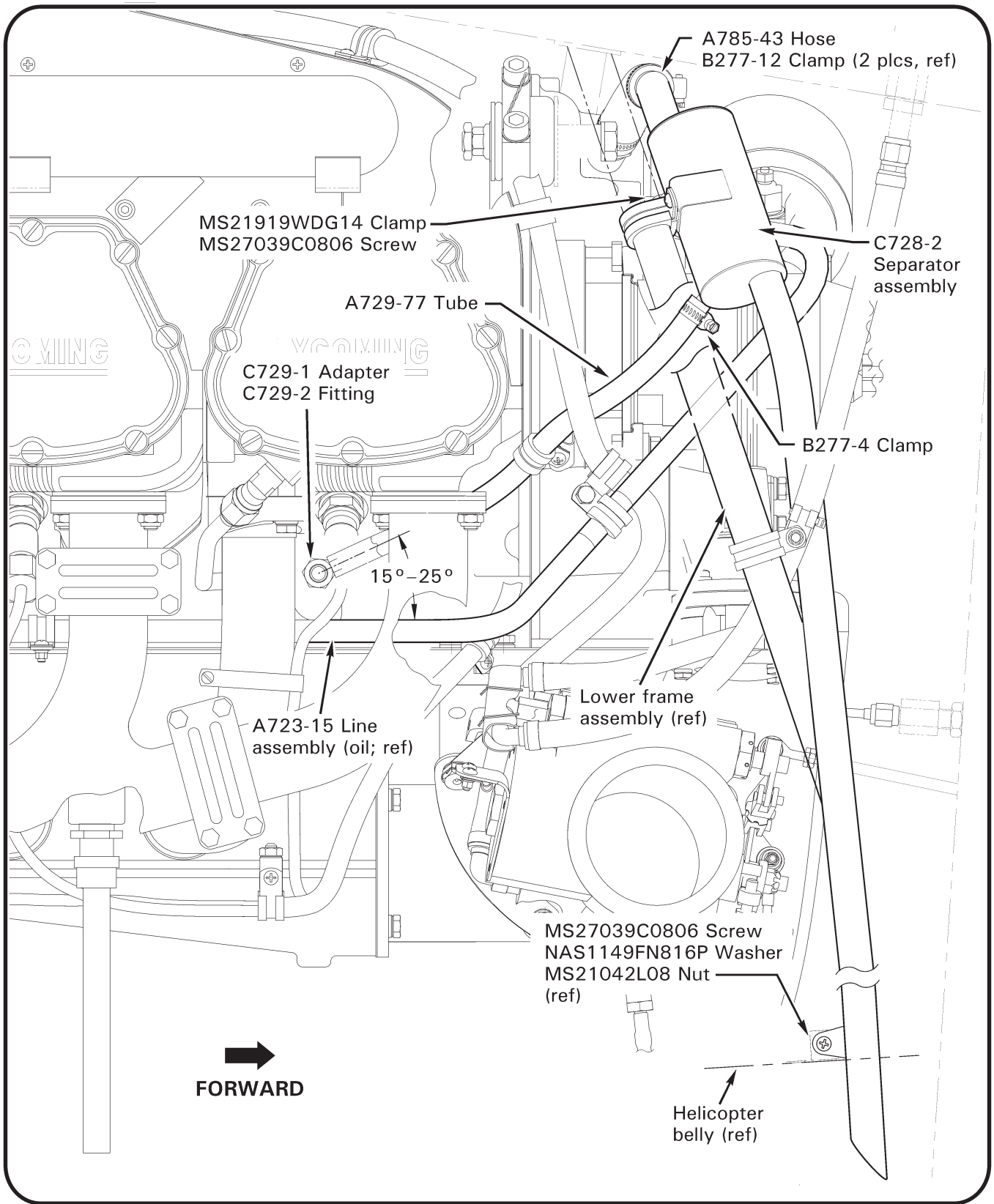


FIGURE 2 Installation of separator and associated parts (IO-540 engine)

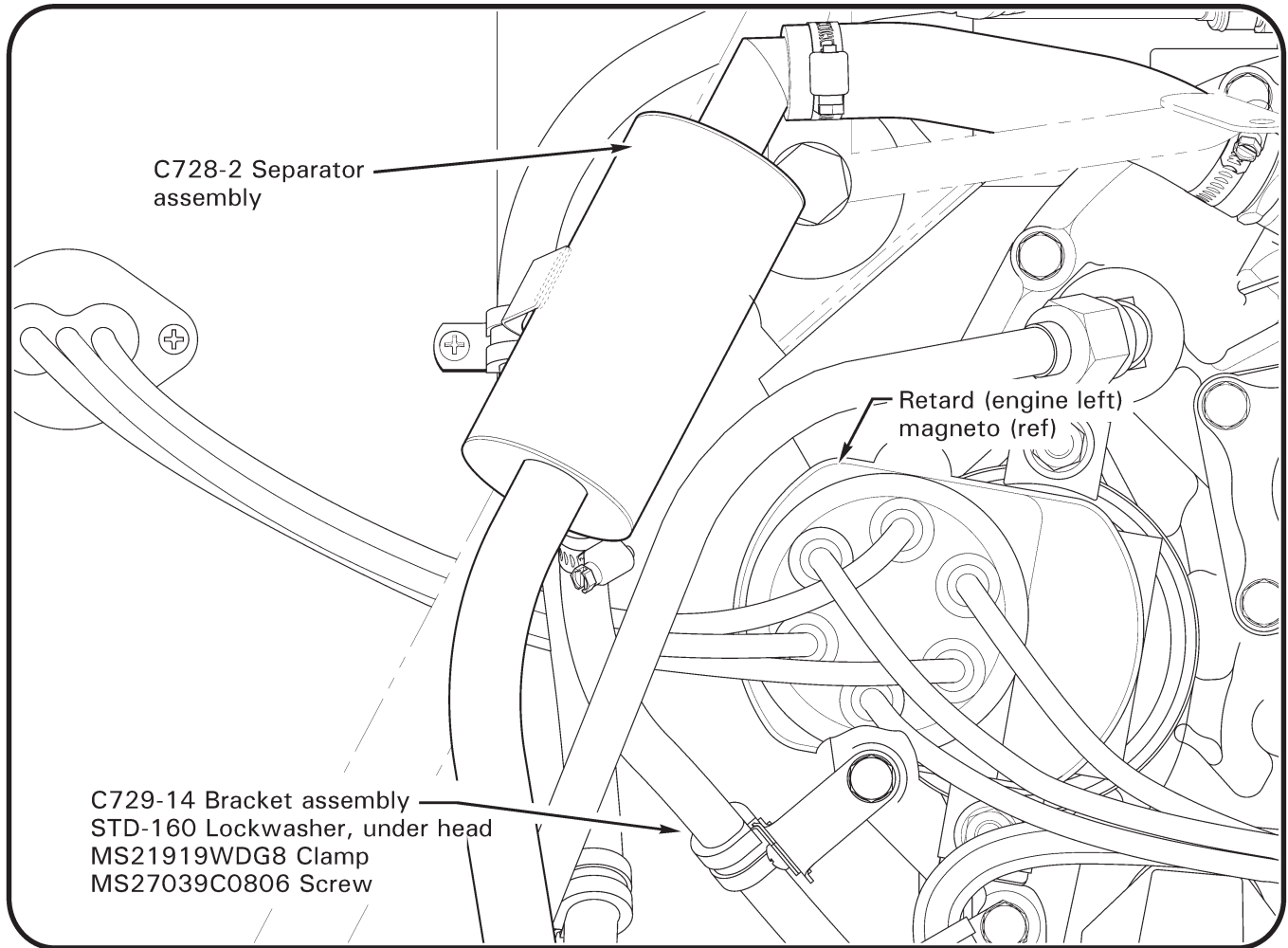


FIGURE 3 Installation of C729-14 bracket
(view looking aft)