

**R22-series Engine Air-Oil Separator Installation Kit Instructions**

*Replaces A727 breather tube. Applicable to R22 S/N 4782 & prior.*

**NOTE**

Visit [www.robinsonheli.com](http://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-255-1Instr.	Kit Instructions . . . . .	1
2	A729-76	Tube . . . . .	1
3	A785-43	Hose . . . . .	1
4	B277-4	Clamp . . . . .	1
5	C728-1	Separator Assembly . . . . .	1
6	C729-1	Adapter . . . . .	1
7	C729-2	Fitting . . . . .	1
8	C729-11	Bracket Assembly . . . . .	1
9	D210-3	Nut . . . . .	1
10	STD-160	Lockwasher . . . . .	1
11	MS21042L08	Nut . . . . .	1
12	MS21919WDG8	Clamp . . . . .	1
13	MS21919WDG12	Clamp . . . . .	1
14	MS27039C0806	Screw . . . . .	2
15	NAS1149FN816P+	Washer (Note: "+" in part number indicates 20-qty pack) . . . . .	1

**Consumables**

Refer to R22 Maintenance Manual (MM) § 23-70 for approved materials list.

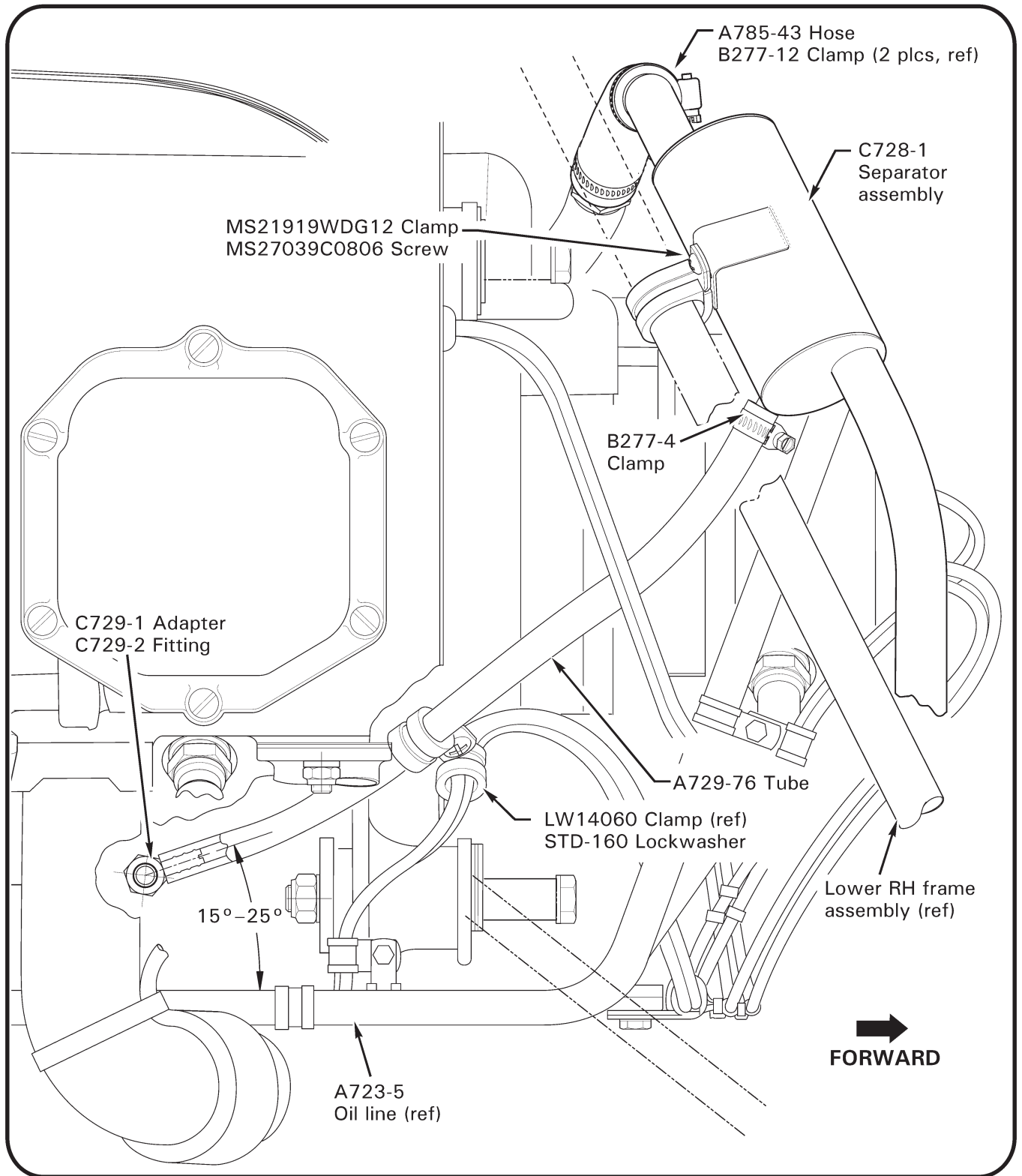
- A257-8 Rubber lubricant
- B270-20 Adhesive
- A701-11 PTFE Teflon tape (thread seal)

**Kit Instructions**

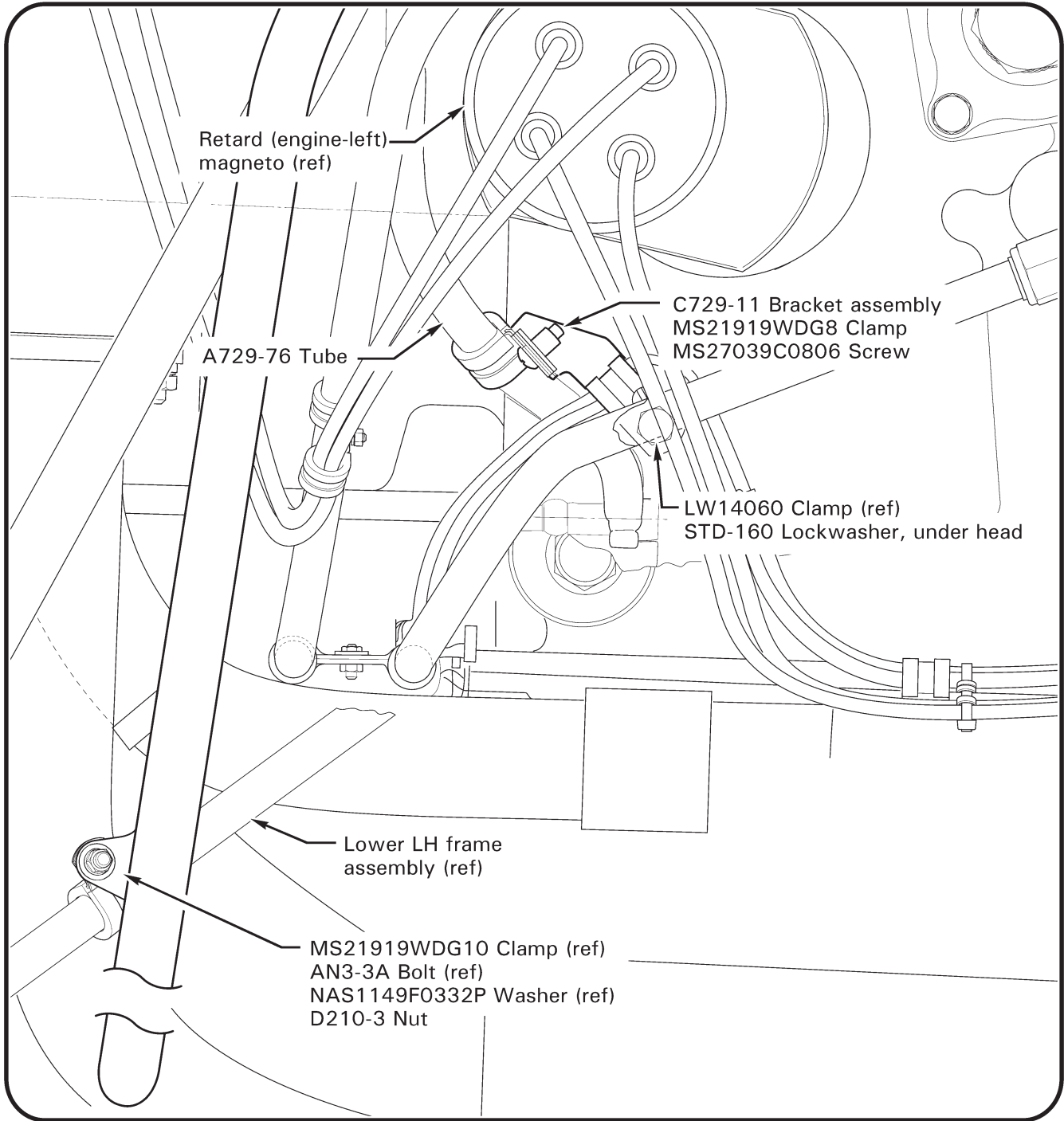
1. Remove A378-3 RH panel & A378 RH skirt.
  
2. Refer to Lycoming PC-306-11 Figure 14. Loosen inboard hose clamp on engine's #4 cylinder head oil drain tube assembly (Lycoming p/n 68761) & attached hose. Disconnect tube at cylinder head elbow and remove tube, attached hose, and both clamps. Remove STD-684 nipple from crankcase and clean threads in crankcase.

**Kit Instructions (continued)**

3. Refer to Figure 1. 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.
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 R22 Illustrated Parts Catalog (IPC) Figure 71-1. Remove and retain B277-12 hose clamp securing A729 rubber tube to breather fitting on engine accessory housing. Disconnect hardware attaching A727 breather tube to airframe, retaining MS21919WDG10 clamp, NAS1149F0332P washer, and AN3-3A bolt. Remove breather, attached rubber tube, and B277-12 hose clamp; retain hose clamp.
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 Figures 1 and 2. Insert upper end of C728-1 separator assembly into A785-43 hose. Secure separator assembly's can to adjacent frame tube using (1) MS27039C0806 screw and (1) MS21919WDG12 clamp, with clamp's screw holes outboard. Secure lower end of separator to frame tube using retained MS21919WDG10 clamp, AN3-3A bolt, & NAS1149F0332P washer, and new D210-3 nut. Ensure A785-13 hose is not deformed; reposition as required. Tighten both clamps. Verify security.
8. Refer to Figure 2. Locate aft-pointing bolt in crankcase, immediately above & slightly inboard of lower-RH engine mount (bolt typically secures an ignition harness clamp). Remove bolt and discard washer. Install new STD-160 lock washer under bolt head. Position C729-11 bracket against crankcase, with nutplate tab pointing aft, and lightly clamp bracket to crankcase using bolt & lock washer.
9. Slide A729-76 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 screw holes inboard & forward, position MS21919WDG8 clamp on A729-76 tube. Lightly attach clamp to C729-11 bracket using MS27039C0806 screw. Adjust position of clamp & bracket so A729-76 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 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. Install A378-3 RH panel & A378 RH skirt.
12. 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.
13. Make appropriate maintenance record entries. Weight and Balance change is negligible.



**FIGURE 1 Installation of separator and associated parts  
(view looking inboard)**



**FIGURE 2 Installation of C729-11 bracket**  
(view looking aft)