Cessna's New Service Bulletins

What Has Happened?

Cessna released 10 new Service Bulletins that pertain to turbo-charged piston twins effected by the promised Airworthiness Directive. All of the following Service Bulletins were released by Cessna on August 2, 1999. Cessna did not address the exhaust inspection times on turbo-charged twins through the Service Bulletin Program. They did, however, release Temporary Revisions to all of the Maintenance Manuals on all turbo-charged twins. A review of the Temporary Revisions follows a review of the Service Bulletins. Keep in mind that under FAR Part 91, Service Bulletins are not mandatory, even though the body of the bulletin may contain the word mandatory in the compliance wording. Under FAR Part 135, most critical service bulletins are indeed mandatory, depending on how the original 135 manual is written.

MEB99-6

MEB99-6 is titled Engine Exhaust Access Panels Installation and it is applicable only to turbo-charger equipped 310P through 310R models. The purpose of the bulletin is to add access panels to the lower nacelle which are designed to provide additional access for inspection and replacement of exhaust system components and non-destructive inspection of the engine support beams. Compliance is listed as mandatory and shall be accomplished within the next 500 hours of operation, at the next major exhaust system disassembly, or at the next engine overhaul, whichever occurs first. It is also recommended that compliance be accomplished concurrently with MEB99-7 and MEB99-8. The bulletin provides for the installation of Service Kit SK310-110. This kit has a current list price of $378.00, and adds 2 pounds to the weight of the aircraft.

Cessna states that installation of this service kit requires 20 hours of labor and will vary depending on the model, serial number, and condition of the airplane. Total cost per airplane for parts and labor should run approximately $1,500.00.

MEB99-7

MEB99-7 is titled Engine Beam Inspection and Modification and it is applicable to only turbo-charger equipped 310P through 310R models. The purpose of this bulletin is as follows: Revised inspection intervals and techniques have been developed for the engine beams and canted bulkhead installations. A modification has been developed to install heat insulation blankets on the engine beams. The heat insulation blankets are designed to assist in preventing heat damage to the engine beam if an exhaust leak or exhaust component/s fails in the area between the firewall and the canted bulkhead. These changes have been made to assist in maintaining the integrity of the engine beams and canted bulkheads. Compliance is listed as mandatory and shall be accomplished within the next 500 hours of operation, at the next major exhaust system disassembly, at the next engine overhaul, or 24 months, whichever occurs first. Note: Cessna added a 24 calendar month period for this bulletin only. Concurrent compliance is recommended with MEB99-6 and MEB99-8. The bulletin provides for the installation of service kit SK310-109, Engine Beam Repair Doubler Installation Kit, current list price, $119.00, and the installation of service kit SK310-112, Engine Beam Insulation Blanket Installation Kit, current list price, $1130.00. Cessna stated that compliance times would be as follows:

1. Inspection - 10 hours
2. Beam Repairs and Modifications - 38 hours
3. Beam Replacement - not determined
4. Heat Blanket Installation - 5 hours.

The best case would be an inspection at 10 hours and installation of the blankets at 5 hours. Total cost would be approximately $1,850.00. The worse case would be the inspection, beam and canted bulkhead replacement. This would include 4 engine beams, two canted bulkheads, and the installation of the new blankets. Now you are talking about as much as $18,000.00 in parts and as much as 300 hours of labor. Total cost could run as high as $35,000.00. Your costs will vary due to the condition of your aircraft.

MEB99-8

MEB99-8 is titled Crossfeed Fuel Lines Replacement and is applicable to only 310P through 310R models that are turbo-charger equipped. The purpose of the bulletin is to provide for the installation of stainless steel crossfeed fuel lines to replace the aluminum crossfeed fuel lines located behind the nacelle firewall. The stainless steel lines are designed to assist in preventing failure in the event a sustained exhaust leak or fire develops in the nacelle that impinges on the firewall. Compliance is listed as mandatory ans shall be accomplished within the next 500 hours of operation, at the next major exhaust system disassembly, or at the next engine overhaul, whichever occurs first. Concurrent compliance is recommended with MEB99-6 and MEB99-7. The bulletin provides for the installation of service kit SK310-111-1 for 310P0001 through 310Q1160 and service kit 310-111-2 for 310R0001 through 310R2140. The current list price for the kits is $385.00 and $412.00 respectively. Cessna states that installation would take approximately 36 and 32 hours respectively. Total cost to comply with this bulletin would run approximately $2,000.00.

MEB99-9

MEB99-9, titled Engine Exhaust Access Panels Installation, pertains to all 320, 335, and 340 models. The bulletin provides for the installation of service kit SK340-30-1 and service kit SK340-30-2. The current list price for the kits is $366.00 and $109.00 respectively and the labor is listed as 20 and 12 hours respectively. Total cost to comply on the above models would run approximately $2,150.00. Concurrent compliance is recommended with MEB99-10, the engine beam inspection and modification and MEB99-11, the crossfeed fuel lines replacement.

MEB99-10

MEB99-10, titled Engine Beam Inspection and Modification, pertains for all 320, 335, and 340 models. The bulletin provides for the installation of four different service kits on the above models.

SK340-29-1 is the Engine Beam Repair Doubler Installation Kit for 320-0001 through 320C0073. This kit is currently listed for $156.00 per beam and requires 10 hours for the inspection and 38 hours per beam for the doubler installation.

SK340-29-2 is the Engine Beam Repair Doubler Installation Kit for 320D0001 through 340A1817. This kit is currently listed for $194.00 per beam and again requires 38 hours for installation.

SK340-32-1 is the Engine Beam Insulation Blanket Installation Kit for 320-0001 through 335-0065. This kit is currently listed for $1,153.00 and you need one kit per airplane. Installation time is listed as 5 hours per airplane.

SK340-32-2 is the Engine Beam Insulation Blanket Installation Kit for 340-0001 through 340A1817. This kit is currently listed for $1,149.00 and you need one kit per airplane. Installation time is also 5 hours per airplane.

MEB99-11

MEB99-11, titled Crossfeed Fuel Lines Replacement pertains to all 320, 335, and 340 models.

The bulletin provides for the installation of 8 service kits as listed below. Only one kit is needed for each airplane.

SK340-31-1 is the Crossfeed Fuel Lines Replacement Kit for 320-0001 through 320-0024. This kit is currently listed at $669.00 and requires 32 hours labor for installation.

SK340-31-2 is the Crossfeed Fuel Lines Replacement Kit for 320-00025 through 320C0073. This kit is currently listed at $691.00 and also requires 32 hours labor for installation.

SK340-31-3 is the Crossfeed Fuel Lines Replacement Kit for 320D0001 through 320D0130. This kit is currently listed at $770.00 and requires 36 hours labor for installation.

SK340-31-4 is the Crossfeed Fuel Lines Replacement Kit for 320E0001 through 320F0045. This kit is currently listed at $631.00 and requires 40 hours labor for installation.

SK340-31-5 is the Crossfeed Fuel Lines Replacement Kit for 335-0001 through 335-0065. This kit is currently listed at $263.00 and requires 32 hours labor for installation.

SK340-31-6 is the Crossfeed Fuel Lines Replacement Kit for 340-0001 through 340-0555. This kit is currently listed at $561.00 and also requires 32 hours labor for installation.

SK340-31-7 is the Crossfeed Fuel Lines

Replacement Kit for 340A0001 through 340A0038. This kit is currently listed at $528.00 and also requires 32 hours labor for installation.

SK340-31-8 is the Crossfeed Fuel Lines Replacement Kit for 340A0039 through 340A1817. This kit is currently listed at $528.00 and also requires 32 hours labor for installation.

In addition to the kits listed above, you may need to purchase extra parts such as spiral wrap, grommets, firewall sealant and fuel lines that are 2 inches longer than those provided in the service kit that may be cut to the proper length and flared during installation.

MEB99-12

MEB 99-12 titled Engine Exhaust Access Panels Installation, pertains to all 401, 402 through 402B, and 414 models. The bulletin provides for the installation of 3 service kits, depending on the model.

SK414-22-1, list price $372.00, requires 24 hours labor for installation and fits 401-0001 through 401B0221, 402-0001 through 402A0129, and 402B0001 through 402B0935.

SK414-22-2, list price $109.00, requires 12 hours labor for installation and fits 402B1001 through 402B1384 and 414-0801 through 414-0965.

SK414-22-3, list price $411.00, requires 24 hours labor for installation and fits 414-0001 through 414-0655.

The average weight increase per airplane is over 2 pounds. In addition to the basic inspection panels, all mounting hardware is included.

Concurrent compliance is recommended with MEB99-13 the engine beam inspection and modification and MEB99-14, the crossfeed fuel lines replacement.

MEB99-13

MEB99-13, titled Engine Beam Inspection and Modification, pertains to all 401, 401A, 402, 402A, 402B, and 414 airplanes. The bulletin provides for the installation of 3 service kits on the above models. 10 hours labor is required for the initial inspection of the aircraft.

SK414-21 is the Engine Beam Repair Doubler Installation Kit for the above models. The kit is currently listed at $159.00 and 38 hours labor is required for installation.

SK414-24-1 is the Engine Beam Insulation Blanket Installation Kit for 401-0001 through 402B1384. The kit currently lists for $1,148.00 and requires 5 hours labor for installation.

SK414-24-2 is the Engine Beam Insulation Blanket Installation Kit for 414-0001 through 414-0965. The kit currently lists for !,222.00 and also requires 5 hours labor for installation.

MEB99-14

MEB99-14, titled Crossfeed Fuel Lines Replacement, pertains to 401, 401A, 401B, 402, 402A, 402B, and 414 models. The bulletin provides for the installation of 2 service kits.

SK414-23-1 is the Crossfeed Fuel Lines Replacement Kit for 401-0001 through 402B1384. The kit currently lists for $188.00 and requires 32 hours labor for installation.

SK414-23-2 is the Crossfeed Fuel Lines Replacement Kit for 414-0001 through 414-0965. The kit currently lists for 342.00 and also requires 32 hours labor for installation.

Again, other parts may be required during installation.

MEB99-15

MEB99-15 is titled Crossfeed Fuel Lines Replacement and is applicable to all 411 and 421 through 421B models. Only tip tank equipped models are affected. This bulletin provides for the installation of service kits SK421-149-1 on all 411 models and 421-0001through 421A0091. Current list price is $457.00. This bulletin also provides for the installation of service kit SK421-149-2 on 421A0092 through 421B0970. Current list price is $322.00. This is the only new exhaust service bulletin in print at this time for the 411 and 421 through 421B models.

Temporary Maintenance Manual Revisions

Cessna chose to address the inspection of the exhaust on all turbo-charged models through temporary revisions to the service manuals rather than service bulletins.

Basically, Cessna has taken on the same time limits as the proposed AD. On stainless steel or partial stainless steel systems, they ask for a

complete tear down inspection at 500 hour intervals. On total Inconel systems this is expanded to each engine overhaul. On stainless steel or partial stainless steel systems, they recommend that the exhaust slip joints and tail pipe assemblies be removed for inspection within the next 100 hours of receiving the temporary revision.

It has been our experience that Inconel is only slightly better than stainless steel and is no better than heavy wall thickness stainless steel available aftermarket. We feel that, because of the age of the fleet, there should be no differentiation between Inconel and stainless steel. It would make the inspection process much simpler and, under the proposed AD, you do not know what type of exhaust you have prior to the 500-hour tear down inspection.

For copies of the Service Bulletins and Temporary Maintenance Revisions that apply to your model, call Cessna Aircraft, Customer Support, at (316) 517-5800.

Well, there is more information about your turbo-charged twin Cessna than you probably wanted to know. What is this really going to cost. Let's cover the fleet by models.

The 320 through 320C models are going to take a serious hit that will in a large number of cases retire the aircraft from service. With the cost for compliance reaching a large percentage of the value of the aircraft, some owners will opt to sell or salvage the aircraft.

ON the 320D through 320F and T310 models, there will be some owners that elect to sell the aircraft "where is - as is" rather than spend the money to repair the aircraft. Keep in mind that any 320D, E, or F and T310 model that has new engine beams as necessary and a complete new exhaust installed after the AD is published will certainly increase in value, possibly as much as most of the cost of repair.

On the 335, 340, and 400 series models, unless the airframe is at or near 10,000 hours, the aircraft carries a value that justifies the necessary repairs to keep it flying. Some of these repairs will be extremely expensive, especially for those aircraft that have not received timely and pertinent maintenance in the past. A large number of people that have neglected their aircraft are in for a large repair bill. Like the old saying, "You can pay me now or pay me later."

While the proposed AD mentions a cost of $60,000.00 as the upper limit, we have done our homework well on this subject and we find that the real costs per aircraft including service bulletin and AD compliance, should average approximately one fourth to one half of this amount. There are a lot of bad engine support beams that will not pass the inspection. These will have to be replaced. While Cessna offers a repair panel for the original engine beam, the beam must be removed from the aircraft to facilitate installation. If you spend the money for the labor to remove and replace the beam from the aircraft, I would suggest that you consider spending the money to purchase a new engine beam.

We feel that the installation of the stainless steel crossfeed lines should be mandatory. In nearly all of the accidents to date that led to in-flight fires and fatalities, the crossfeed fuel lines had ruptured due to heat stress. The installation of stainless steel crossfeed fuel lines will stop the lines from rupturing due to heat stress and therefore save some lives.

More stringent inspections on the complete exhaust system on all turbo-charged aircraft, not just twin Cessna models, is fast becoming a way of life.

Repairs on turbo-charged exhaust components are not recommended. If there is a problem with a part, replace it with a new part. The good thing that has come of all this mess (if there is one) is that several companies are now manufacturing aftermarket exhaust for twin Cessna aircraft. 10 years ago, a new "Y" pipe for a Cessna 414 was available from Cessna only at a cost of over $4,000.00. That same part today is available from several different suppliers at one third of the Cessna cost.

We are aware of aftermarket parts that are manufactured out of stainless steel that is nearly twice as thick as the original. We feel that this is the true answer to the problems that have led to this action by the FAA and Cessna. Inconel is, indeed, a material that will stand slightly higher pressures and heat before failure, but the age of the fleet has not been considered. An Inconel pipe that has been in service for an extended number of years or an extended number of flight hours offers no better protection for the pilot and passengers, simply

because it is Inconel. The over-all condition of the exhaust in service will be evaluated in the near future. The 24 calendar month time-frame may be asking too much of the industry. If you take 6,500 aircraft, each with two complete exhaust systems, that represents 13,000 exhaust systems that must be removed, inspected and re-installed in two years. Two years represents about 520 working days. Do the math - the industry has to complete 25 exhaust systems each and every working day. This represents a labor undertaking that has probably not been seen in aviation since World War II.

Our suggestions to you as a turbo twin Cessna owner are as follows:

1. Do nothing less that the necessary inspections to comply with AD75-23-08R5 until the new AD is out and you have a firm effective date. Any action now may have to be repeated after the AD is published.
2. If you are a FAR Part 135 operator, comply with the Service Bulletins only after the AD is published, if possible. Check your 135 operations manual.
3. Buy some new exhaust parts for your aircraft that you feel may not pass the inspections as stated in the proposed AD. "Y" pipes, tail pipes and elbows are the most vulnerable.
4. Install the new stainless steel crossfeed fuel lines available from Cessna as mentioned above. This is a great insurance policy that will cost $2,000.00 but could save your life.
5. Expect this AD and Service Bulletin compliance to cost you money. Start saving your dollars now so that you won't have to come up with the money all at once.
6. If you feel that compliance will cause you financial distress, consider selling the aircraft at a discount that will allow the new owner to make the necessary repairs.
7. Consider salvaging the aircraft only as a last ditch effort. This will probably cause a large number of turbo twin Cessnas to find their way into the salvage yards.

Remember, we are your support group and we will help you in any way possible. It's our job, we like what we do, and we strive to do it well. If you have questions, call us at (800) 825-5310 or visit our new web site at www.twincessna.org for the latest information. You might not like the answers, but we will tell you what we know to be true. We will not offer any speculation. We have found through experience that second guessing what will be in the final rule of the proposed AD is a waste of time.

This is going to effect some 6,500 turbo-charged twin Cessna aircraft. The cost to each owner is going to be substantial. The value of the aircraft both up and down will be directly affected by the compliance status. If all service bulletins and the new AD (when issued) are complied with, the aircraft will surely carry a greater value on the resale market.

Good flying.