

SERVICE INFORMATION LETTER



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SERVICE INFORMATION LETTER NO. SIL20C1-006

NOTE: Service Information Letters are used only:

1. To distribute information from Diamond Aircraft Industries (DAI) to our customers.
2. To distribute applicable information/documents from our suppliers to our customers with additional information.

NOTE: Typically there is no revision service for Service Information Letter (SIL). Each new information or change will be sent along with a new SIL.

1. TECHNICAL DETAILS

1.1 Aircraft Affected

All DA20-C1 aircraft with a Continental Motors IO-240B engine.

1.2 Subject

Inspection and Maintenance of the throttle and mixture control arms installation.

1.3 Reason

If the throttle and mixture control arms are not inspected for correct installation, it could result in a loss of throttle operation or degraded throttle operation.

1.4 Information

A spline machined into the mating chamfer in the side of the throttle/mixture control arm must be interlocked with a chamfered spline machined onto the mating end of the throttle/mixture component shaft. The throttle component shaft is part of the Continental fuel metering unit. The mixture component shaft is part of the Continental fuel injector.

NOTE: The splines of a control arm and mating component shaft may not match perfectly. Testing has shown that control arms correctly installed and properly torqued will mate and function correctly even if some mismatching of splines is visible.

Review the DA20-C1 Aircraft Maintenance Manual (AMM) Chap 5 and Chap 76-00-00 and the Continental AMM, M-6 Chap 6-3.18 for details on the engine throttle control maintenance. Inspection of the engine throttle control is recommended at each annual or 100 hour inspection. As per Diamond and Continental instructions the engine throttle/mixture control arm should be checked. This SIL is provided as a reminder and clarification of this inspection requirement as well as details of the removal and installation.

Diamond recommends that this check be carried out at the next scheduled maintenance.

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If the engine throttle control arm or mixture control arm is loose do the steps that follow. If there are signs of damage, corrosion or wear, replace the part.

NOTE: Make sure that Continental Service Bulletin SB08-3A has been installed on your aircraft. If it has not, install this SB and carry out the Throttle/Mixture Control Range of Movement Test as per the DA20-C1 AMM, Chap 76-00-00.

The following steps are then not required.

Refer to Figure 1 on Page 3 - Throttle Control Arm Installation and
Figure 2 on Page 4 - Mixture Control Arm Installation.

- 1.4.1 Remove and discard the lock nut.
- 1.4.2 Remove the throttle/mixture control arm from the throttle/mixture component shaft and fuel metering unit/fuel injector.
- 1.4.3 Carefully inspect the throttle/mixture control arm and the throttle/mixture component shaft.
 - Make sure that there are no cracked or stripped threads on the component shaft.
 - Make sure that the serrations on the throttle/mixture control arm and the throttle/mixture component shaft are not chipped or worn.
 - If the throttle/mixture control arm is damaged, replace it.
 - If the throttle/mixture component shaft is damaged, contact Diamond Customer Support or Continental Motors Customer Support for further instructions.
- 1.4.4 Install the throttle/mixture control arm.
 - Lubricate the threads of the throttle/mixture component shaft lightly with clean 50 weight engine oil.
 - Install the throttle/mixture control arm onto the throttle/mixture component shaft. Position the control arm to allow proper interface with throttle controls.
 - Make sure that the serrations of the control arm are meshed as close as possible with the serrations on the component shaft.
 - Wet-Install a new lock nut. Torque the lock nut to 100-120 in. lbs., or to the latest torque provided by Continental Motors.
 - Check the throttle/mixture control arm during torque application to make sure there is no free play or movement of the control arm on the throttle/mixture component shaft.
 - Witness mark the lock nut to its position on the throttle/mixture component shaft.
- 1.4.5 Do an inspection of the engine control cables and linkage in accordance with Teledyne Continental Service Bulletin SB95-2, dated 21 May 1995 or latest applicable revision.
- 1.4.6 Do a Throttle/Mixture Control Range of Movement Test in accordance with Chapter 76-00-00 of the DA20-C1 AMM.

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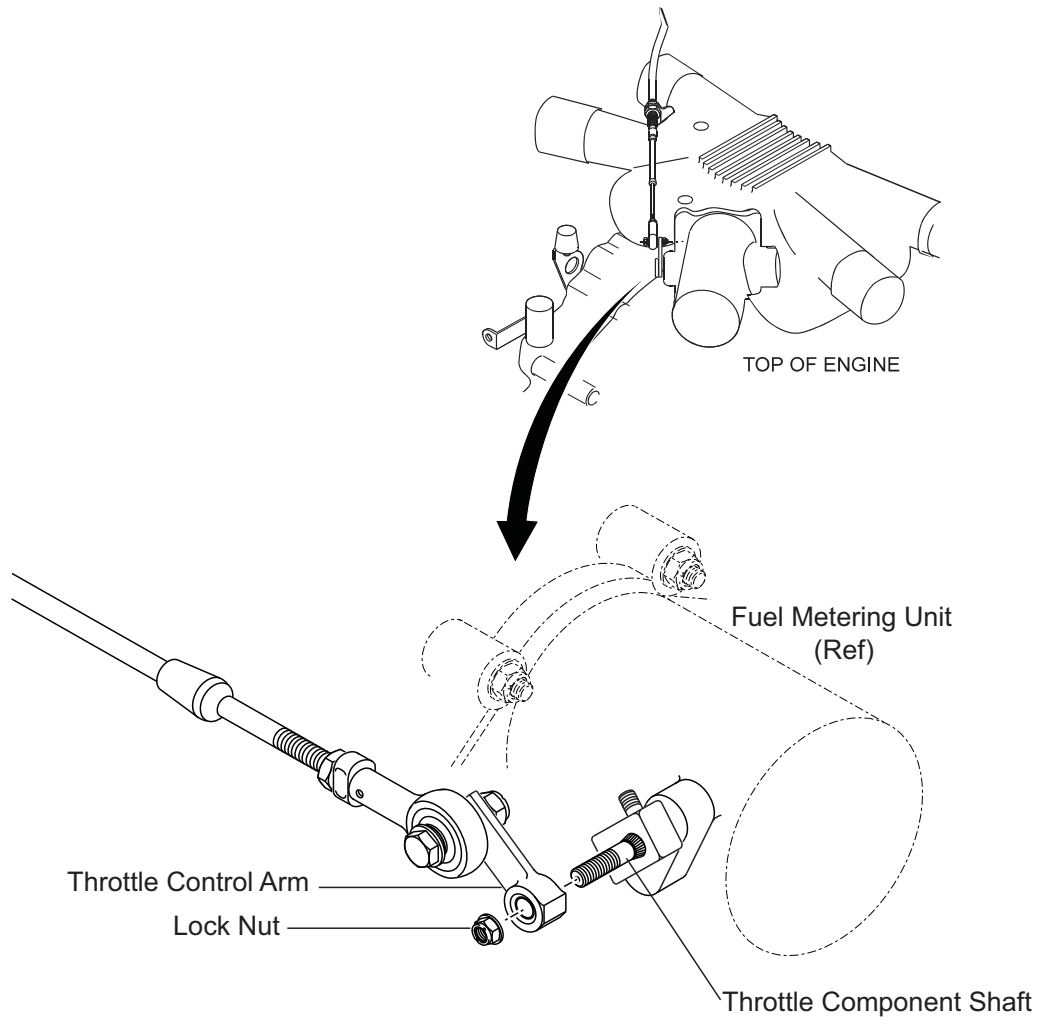


Figure 1 - Throttle Control Arm Installation

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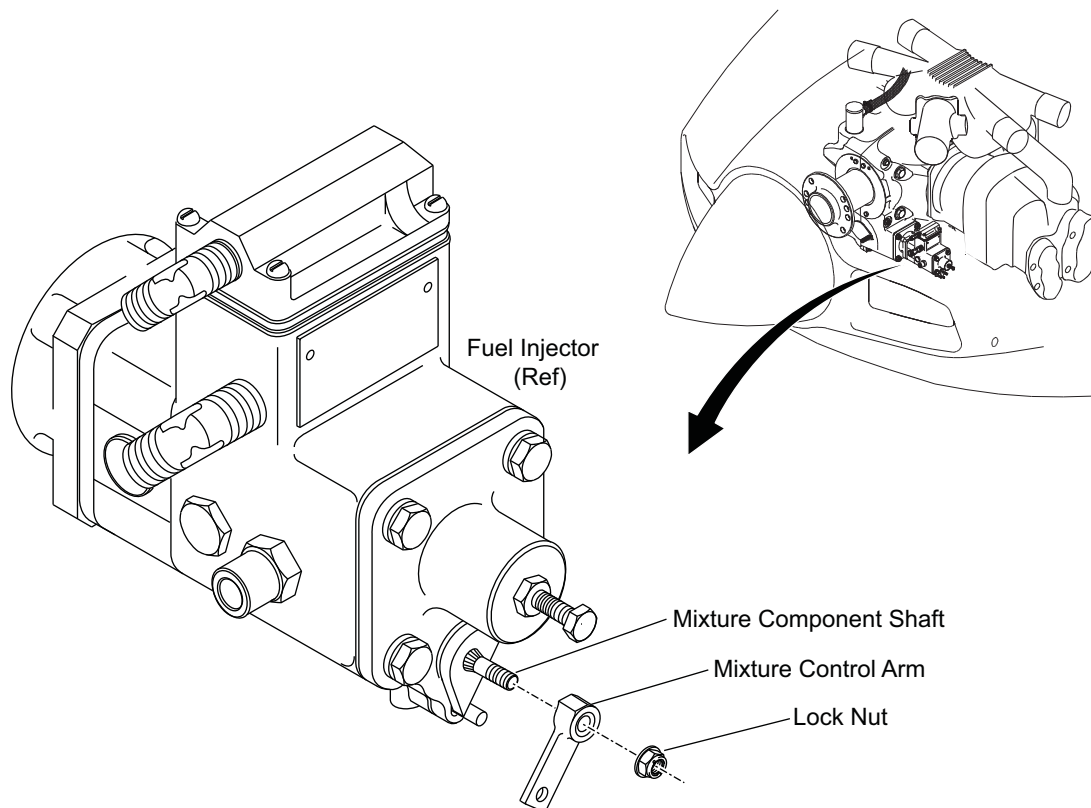


Figure 2 - Mixture Control Arm Installation

2. OTHERS

Contact DAI, your local authorized Diamond Service Center or Continental Motors if more information is required.

To obtain satisfactory results, procedures specified in this service information letter must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service information letter. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service information letter if it is not incorporated. If you no longer own the aircraft to which this service information letter applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft Industries Inc. at the address below.

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