

SERVICE BULLETIN

AA-SB-28-002

Inspection & Rework of Fuel Shut-Off Mechanism

1. Planning Information

1.1 EFFECTIVITY

All HR200 and R2000 series s/n 001 to 378.

1.2 CONCURRENT REQUIREMENTS

Nil.

1.3 REASON

Development of the New Zealand produced Alpha 160A aircraft identified an issue with the fuel shut-off valve, where it may not be possible to switch the valve ON once the valve has been placed in the OFF position. This is due to friction in the shut-off system.

The fuel shut-off valve, which is normally ON, is a safety feature to allow the pilot to stop fuel flow to the engine in an emergency situation such as a forced landing without power. The fuel shut-off control is guarded and requires a deliberate action by the pilot to operate.

Notwithstanding this, a hazardous situation is possible if the fuel shut-off valve is inadvertently switched OFF in flight and the pilot is not able to switch it back ON.

1.4 DESCRIPTION

Due to friction in the fuel shut-off valve the push pull cable may deflect preventing the shut-off valve from being switched back ON after being switched to the OFF position.

1.5 COMPLIANCE

On receipt of this SB inspect aircraft for compliance within 10 hours of operation.

Replace cable if found bent. Replace or rework valve if force required to operate exceeds identified in 3. Accomplishment Instructions.

Make a log book entry stating compliance with this Service Bulletin. The entry shall identify the condition of the mechanism and action taken to correct any deficiencies.

1.6 APPROVAL

Alpha Aviation Design Organisation DO65180

1.7 WEIGHT AND BALANCE

Nil affect on weight or balance

1.8 REFERENCES

Alpha Aviation HR200 and R2000 Service Manual, as applicable.

1.9 OTHER PUBLICATIONS AFFECTED

Nil

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2. Material Information

2.1 MATERIALS IDENTIFICATION

<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
6402 10 17	Fuel Valve	1
86V001	Pushpull Cable	1

2.2 CONSUMABLES

Nil

2.3 OTHER PUBLICATIONS AFFECTED

Nil

2.4 SPECIAL TOOLING

Nil

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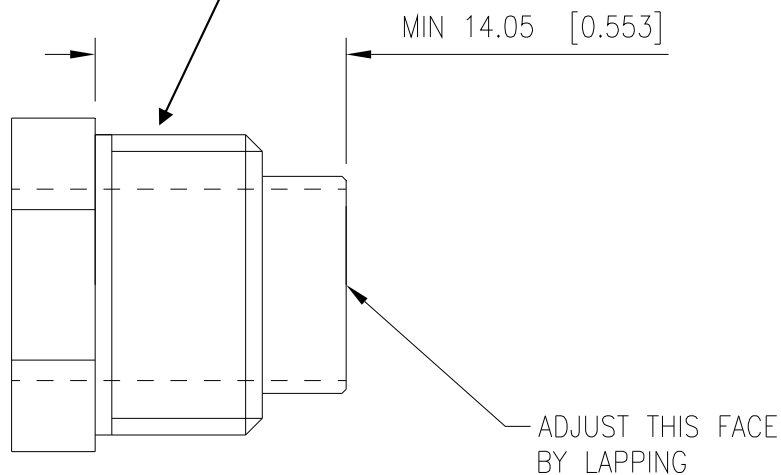
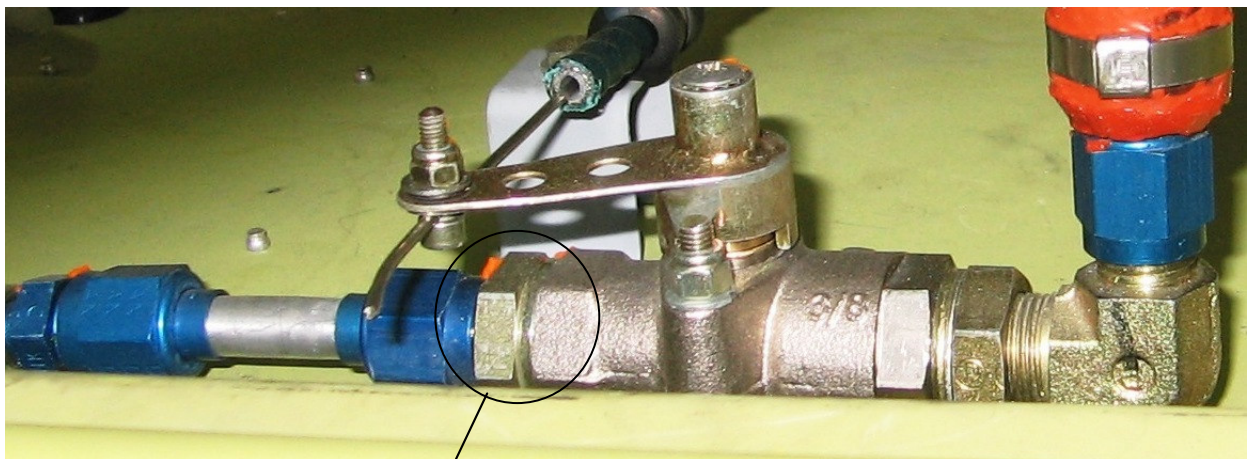
3. Accomplishment Instructions

Inspect the push pull cable at fuel shut-off valve end to determine if inner wire is bent or deformed. Operate push pull control to determine ease of operation. If any deflection of inner wire occurs or the valve is not able to moved to the on position disconnect the inner from the valve actuating lever. Move the valve lever through full range, the force required to move lever should not be more than 1 kg force.

If the push pull cable inner, outer or both are bent the cable is to be replaced.

If the valve requires more than the 1 kg force to activate then it must be removed to investigate the cause. The valve may be recovered by carrying out the following action. Unscrew the inlet fitting to gain access to the pressure O ring and Teflon cup. Examine the ball valve, if scored the whole valve must be replaced.

Measure the distance between the inner face and shoulder of the inlet fitting. (See Fig 1) If this is more than 14.05 mm, then the inner face may be dressed to reduce the friction loads within the ball valve. Reassemble the valve and carry out the test as described above.



Allowable modification of the Inlet fitting
Fig 1



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