Gippsland Aeronautics

PO Box 881, Morwell, Victoria 3840, Australia
Ph + 61 (0) 3 5172 1200
Fax + 61 (0) 3 5172 1201
www.gippsaero.com

SB-GA8-2005-26
Issue 3
OPTIONAL

Service Bulletin

Subject:

Rudder Pedal Modification

Applicability:

All GA8 serial numbers GA8-00-004 through GA8-07-129.

Amendments:

Issue 2: Added procedure for modification of rudder pedals in case of interference or inadvertent brake actuation. Minor clarifications and formatting changes.

Issue 3: Instruction 2.2 added. Instructions 1.7, 1.16, 1.17 and 2.4 revised. Also detail and dimensions added to Figures 2, 3, and 4.

Background:

To improve pilot comfort the rudder pedals may be moved approximately 1" forward.

Compliance:

For applicable aircraft, this optional Service Bulletin may be incorporated at the owner's discretion.

Weight and Balance:

Negligible effect.

Approval:

The technical aspects of this Service Bulletin have been approved under a CASA Authorisation.

Parts:

Item	Part Number	Description	Qty
1	GA8-272021-41	Brake master cylinder mounting bracket	4
2	GA8-325011-15	Steerage push rod	2
3	MS21252-5RL	Turnbuckle fork	2

Parts Availability:

Parts can be obtained as a kit directly from Gippsland Aeronautics.

Tel.: +61 03 5172 1200

Fax.: +61 03 5172 1201

Email: spares@gippsaero.com

Labour:

Approximately 7 hours should be allocated for completing the work detailed in this Service Bulletin.

Warranty:

Gippsland Aeronautics participation is limited to the supply of parts, including freight, at the owner's expense.

Instructions:

1. Rudder Pedal Position Change Procedure

NOTE:

Refer to Figures 2 and 3 (page 5) for a comparison of the rudder pedal positions before and after completing this procedure.

1.1. Remove the tailcone/rudder fairing.

1.2. Disconnect both rudder control cables from the rudder horns.

1.3. Remove the AN161-32RS turnbuckle forks from the now disconnected ends of the rudder control cables (refer to Figure 1).

1.4. Remove the crew seats and kick panels to gain clear access around the rudder pedals.

1.5. Disconnect brake cylinders from pedals and bracket. Disconnect the blank brake hoses and cylinders and remove the cylinders.

1.6. Remove the brake cylinder mounting brackets and install new brackets (GA8-272021-41, Item 1) in accordance with Figure 3.

1.7. Adjust the overall length between the brake master cylinder attachment holes to 7.625"±0.06" and cut 0.125” off the top of the brake master cylinder threaded pushrods. If necessary, shorten the pushrod using a suitable file or hack saw and dress the thread. The thread length may be increased using a 5/16"-24 die. Label the modified brake master cylinders with SB GA8-2005-26-3. Alternatively, the brake master cylinder may be replaced by Gippsland Aeronautics part GA8-324023-41. Modify the co-pilot hydraulic master cylinder pushrods as per the brake master cylinders, and label the modified part with SB GA8-2005-26-3. Also, Gippsland Aeronautics part GA8-324023-43 may be used to replace non-modified hydraulic master cylinder.

1.8. Raise and support the nose wheel clear of the ground.

1.9. Remove the nose gear steerage pushrods and rod ends.

1.10. Apply a sufficient quantity of suitable corrosion inhibitor, such as raw linseed oil, to completely coat the inner wall of the steerage pushrods, and drain any excess. Ensure outer surfaces are thoroughly clean of the corrosion inhibitor.

1.11. Fit rod ends to new steerage pushrods (GA8-325011-15, Item 2).

1.12. Adjust new steerage pushrods to an overall length of 10.75"±0.06" between rod end attachment holes. Check that thread engagement is in safety and tighten one check nut. Set the other nut to the position of rod end, and remove the rod end.

1.13. Reinstall the nose wheel steerage pushrods by passing the free ends through the firewall, maintaining the position of the check nuts. Reinstall the rod ends and reattach to the rudder pedals using existing hardware. Tighten the check nuts.

1.14. Reinstall the brake cylinders to the pedal assemblies, reconnect brake hoses and bleed the system in accordance with GA8 Service Manual section 32-40-00.

1.15. Position the rudder pedals and nose steering to the neutral position.

NOTE:

Rudder pedals will adopt a position angled slightly forward as shown in Figure 3.

1.16. In the rear of the aircraft, replace the AN161-32RS turnbuckle forks with MS21252-5RL (Item 3) turnbuckle forks (long), if required, so as to achieve a rudder cable tension of **40±5lb**.

1.17 Reattach turnbuckle assemblies to the rudder horns using existing hardware and with the rudder and rudder pedals in the neutral position. Tension the rudder cables to **40±5 lb**. Reuse the AN161-32RS turnbuckle forks if the tension cannot be achieved with the MS21252-5RL forks.

1.18. Cycle rudder pedals through their full travel. Ensure that nose wheel stop clearances at full travel are 0.06" with the rudder on its stops, and that the rudder pedals achieve their full travel without interference. It may be necessary to make adjustments to the nose wheel steerage pushrod ends to achieve freedom from interference and adjustment to the nose wheel stops to achieve correct clearance.

NOTE:

If full travel of rudder pedals with freedom from interference cannot be achieved, or inadvertent brake actuation occurs during cycling of the rudder pedals due to interference of the pedals and crank arms, complete Procedure 2 (Rudder Pedal Modification Procedure) for all rudder pedals prior to repeating step 18 and completing the remaining steps of this procedure.

1.19. Lock turnbuckle barrels, clevis pins and the steering linkage rod ends for safety.

1.20. Lower the nose wheel to the ground.

1.21. Conduct a taxi test, turning the aircraft in both directions at full pedal travel. If inadvertent brake drag occurs, the steerage pushrods will need to be adjusted slightly to lengthen the rod until the system is free from inadvertent brake drag.

NOTE:

If brake drag occurs due to interference between the pedals and crank arms, complete Procedure 2 (Rudder Pedal Modification Procedure) for all rudder pedals prior to repeating step 21 and completing the remaining steps of this procedure.

1.22. Record completion of Procedure 1 in the Document Compliance Notice.

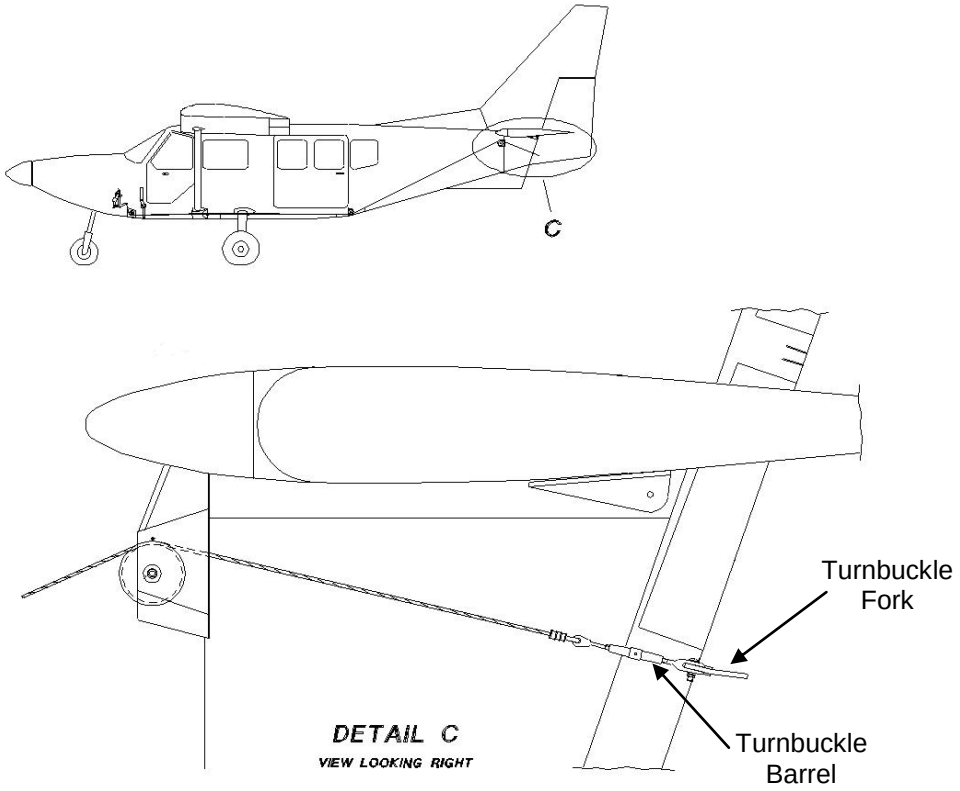

Figure 1: Directional Control Circuit - Aft

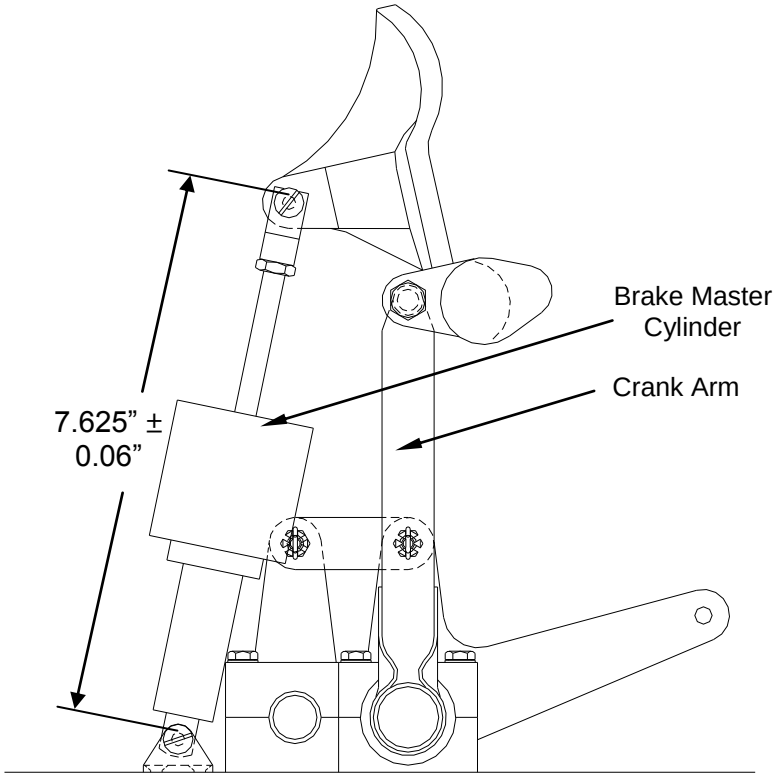

Figure 2: Original Configuration

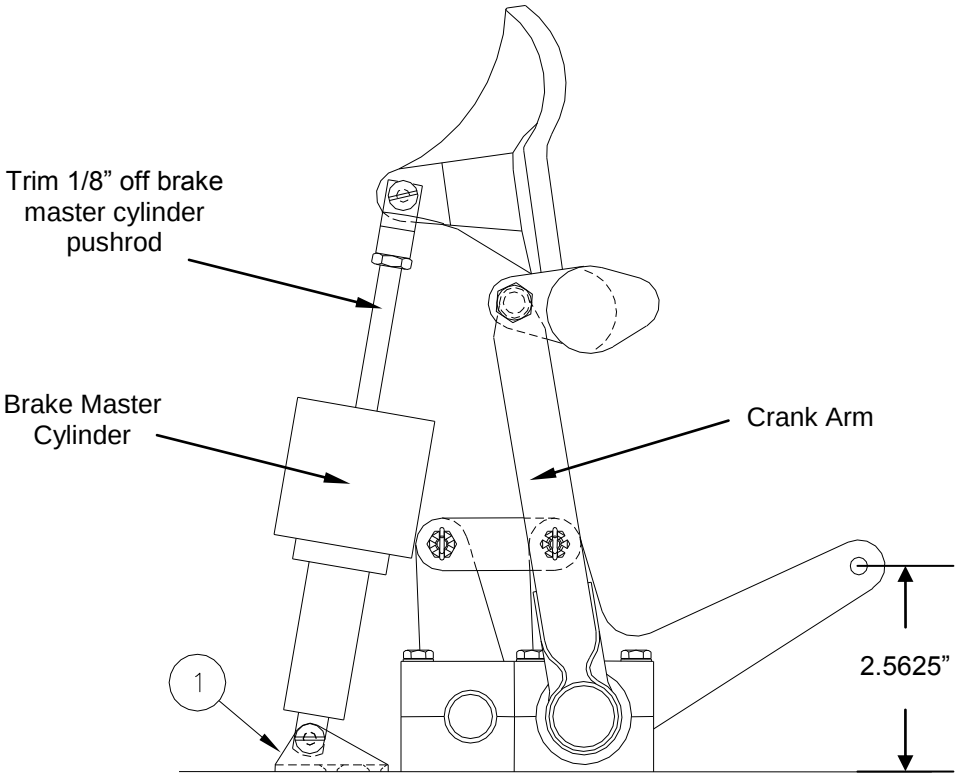

Figure 3: Position after Service Bulletin Incorporation

2. Rudder Pedal Modification Procedure

NOTE:

Complete this procedure if brake actuation occurs during cycling of the rudder pedals (Step 18, Procedure 1 - Rudder Pedal Position Change Procedure) due to interference of the pedals and crank arms.

2.1. Remove the rudder pedals.

2.2. Trim the rudder pedal in accordance with Figure 4.

2.3. Machine a radius in each pedal in accordance with Figures 4 to 6.

2.4. Ensure that all sharp edges are removed using an appropriate file and label the forward side of each modified rudder pedal with “SB-GA8-2005-26-3”.

2.5. Reinstall the rudder pedals using existing hardware.

2.6. Record completion of Procedure 2 in the Document Compliance Notice.

2.7. Continue with remaining steps of Procedure 1 (Rudder Pedal Position Change Procedure), repeating appropriate steps to ensure freedom of interference of pedals with crank arms.

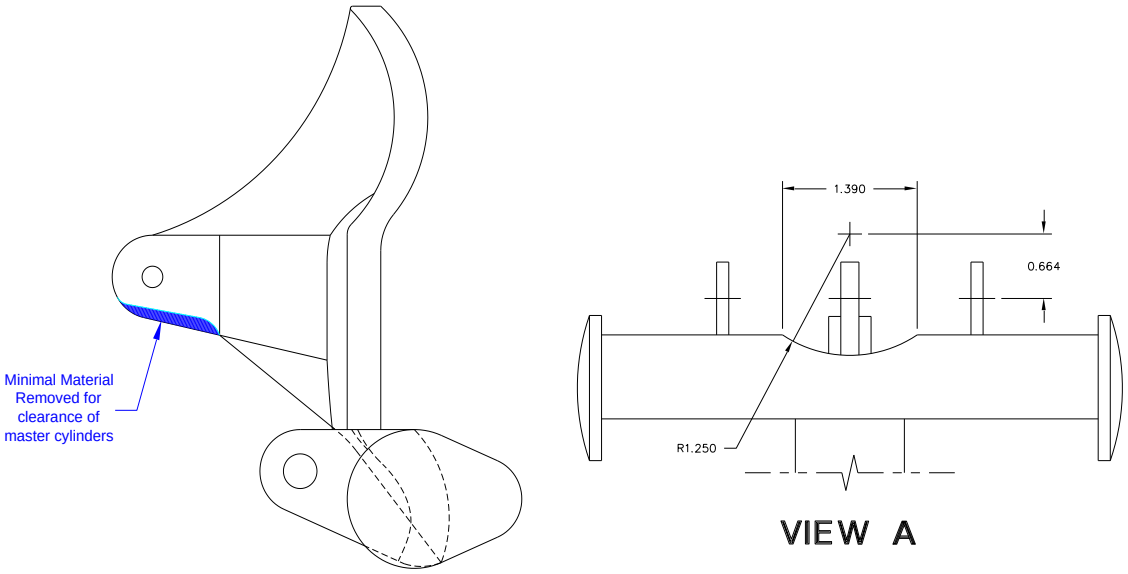

Figure 4

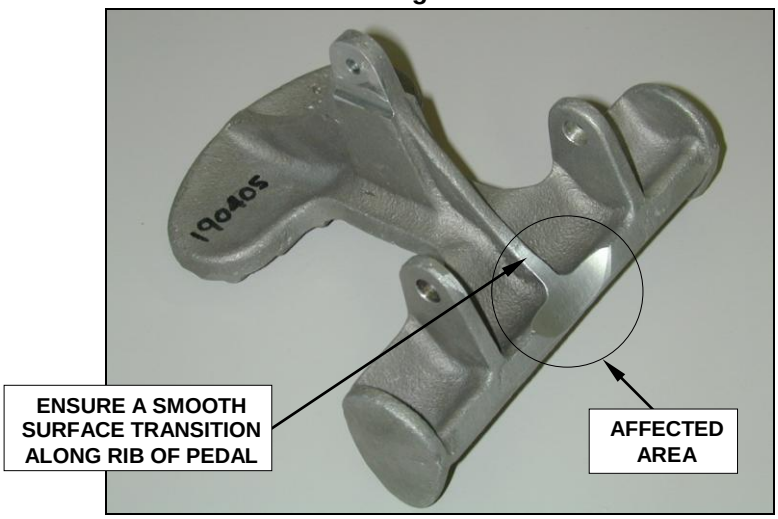

Figure 5

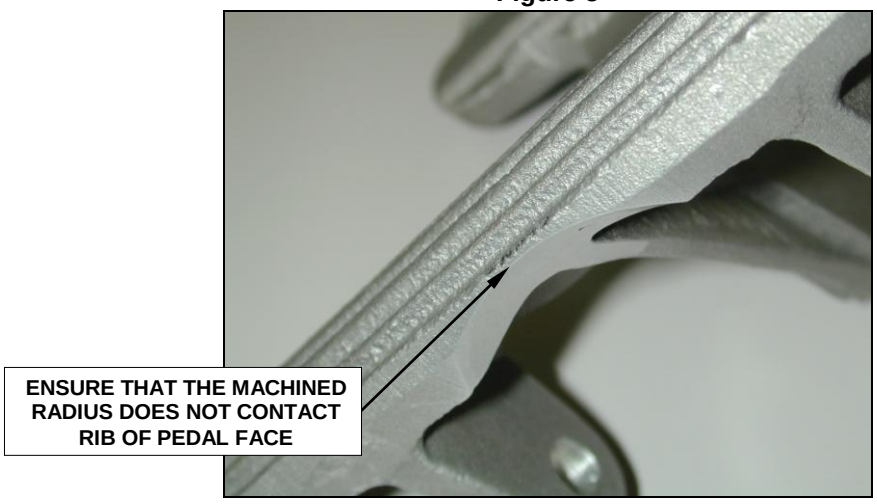

Figure 6

Documentation:

Update aircraft log book to reflect incorporation of this Service Bulletin.

Compliance Notice:

Complete the Document Compliance Notice and return to Gippsland Aeronautics by fax or mail.

DOCUMENT COMPLIANCE NOTICE

Gippsland Aeronautics	**Document:** **Service Bulletin SB-GA8-2005-26, Issue 3**

☐ Completion of Procedure 1 (Rudder Pedal Position Change Procedure)

☐ Completion of Procedure 2 (Rudder Pedal Modification Procedure)

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2005-26 Issue 03 has been incorporated for the above aircraft.

Date _____

_____

Signed

Print Name _____

Please post or fax this compliance notice to:

Gippsland Aeronautics
Attn: Technical Services
P.O. Box 881
Morwell Victoria 3840
Australia
Fax.: +61 03 5172 1201