AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.1 (1) of CAR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 Loss of Airspeed Indication 2/2002 TX

Applicability: All Model Beech 400, 400A and 400T series aeroplanes.

Requirement: Revise the Emergency Procedures Section of the Aircraft Flight Manual (AFM) by inserting a copy of the relevant AFM Temporary Change from the following list:

Aircraft Model	Temporary Change Part Number
Beechjet 400T	132-590002-5TC3, dated 12 November 2001
Beechjet 400T	134-590002-1TC3, dated 12 November 2001
Beechjet 400A	128-590001-91TC5, dated 12 November 2001
Beechjet 400A	128-590001-95TC5, dated 12 November 2001
Beechjet 400A	128-590001-107TC5, dated 12 November 2001
Beechjet 400A	128-590001-109TC5, dated 12 November 2001
Beechjet 400A	128-590001-167TC7, dated 12 November 2001
Beechjet 400A	128-590001-169TC3, dated 12 November 2001
Beechjet 400	128-590001-13BTC1, dated 12 November 2001
Beechjet 400	128-590001-13BTC2, dated 12 November 2001

or,

by inserting a copy of this Directive into the AFM including the following procedures:

``Emergency Procedures (400)

Loss of Airspeed

Note: If the pilot's and/or copilot's airspeed(s) are noted to be decreasing toward zero, refer to the AOA indicator for airspeed control and land at the nearest suitable airport.

1. Autopilot - Disconnect
2. Airspeed - Slow to and Maintain 0.2 AOA
3. Thrust - As Required
4. Speed Brakes - As Required (Slow to 0.25 AOA with speed brakes extended)

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

Note: An AOA of 0.2 (0.25 with speed brakes extended) will yield an airspeed of about 210 knots. Use pitch attitude as the primary reference. Make small changes in pitch and wait for the AOA to stabilize.

When Ready for Descent

5. Seat Belts/Shoulder Harnesses - Fastened
6. Cabin Sign - As Required
7. Recognition Light - As Required
8. Anti/De-Ice Systems - As Required

Caution

If icing conditions are anticipated during the descent and approach, turn ice protection systems ON as early as possible prior to penetrating clouds. Maintain wing anti/deice operation light ON (approximately 70% N2) during descent to assure proper wing anti-ice operation.

9. Cabin Pressure Control - Set Field Elevation + 500 Feet
10. Windshield Defog - As Required
11. Altimeters - Set

When Ready for Approach

12. Airspeed - Slow to and Maintain 0.3 AOA

Note: Maintain 0.3 AOA throughout the configuration change to Flaps 10 deg. Gear Down. This will yield an airspeed of about 180 knots.

13. Fuel Management - Check
14. N1, Landing Distance - Confirm
15. Cabin Sign - Safety
16. Windshield Anti-Ice - Low
17. Hydraulic/Nitrogen Pressure - Check
18. Engine Sync - Off
19. Flaps 10 deg.

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

Before Landing

20. AOA Index - Preset 1.3 V/Vs
21. Landing Gear - Down
22. Airspeed - Slow to 0.4 AOA
23. Recognition Light - Off
24. Landing Lights - As Required
25. Ignitions - On
26. Flaps - 30 deg.
27. Approach Airspeed (VREF) - Slow to and Maintain 0.57 AOA

Note: This will yield a normal approach speed of VREF (0.57 AOA) and normal landing distances.

Balked Landing

28 Thrust - Takeoff N1
29. Pitch Attitude - 10 deg.

When Positive Climb Has Been Established

30. Flaps - 10 deg.
31. Landing Gear - Up
32. Airspeed - Accelerate to 0.3 AOA
33. Flaps - Up
34. Airspeed - Accelerate and Maintain 0.2 AOA
35. Landing Lights - Ret/off

Emergency Procedures (400A & RJ-61)

Loss of Airspeed

Note: If the pilot's, or copilot's and standby, or all three airspeed(s) are noted to be decreasing toward zero, refer to the standby attitude indicator, standby altimeter, standby heading and the AOA indicator for aircraft control and land at the nearest suitable airport. On PFD equipped airplanes, the pilot's and copilots altimeters, attitude displays and heading displays may be unreliable and the autopilot may disconnect. This may be accompanied by amber boxed A/S, ALT, ATT and/or HDG comparator flags. The comparator flags may be followed by red FAIL flags and removal of airspeed and altitude tapes and attitude/heading displays.

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

1. Autopilot - Disconnect
2. Airspeed - Slow to and Maintain 0.2 AOA
3. Thrust - As Required
4. Speed Brakes - As Required (Slow to 0.25 AOA with speed brakes extended)

Note: An AOA of 0.2 (0.25 speed brakes extended) will yield an airspeed of about 210 knots. Use pitch attitude as primary reference. Make small changes in pitch attitude and wait for AOA to stabilize.

When Ready for Descent

5. Seat Belts/Shoulder Harnesses - Fastened
6. Cabin Sign - As Required
7. Recognition Light - As Required
8. Anti/De-Ice Systems - As Required

Caution

If icing conditions are anticipated during the descent and approach, turn ice protection systems ON as early as possible prior to penetrating clouds. Maintain wing anti/deice operation light ON (approximately 70% N2) during descent to assure proper wing anti-ice operation.

9. Cabin Pressure Control - Set Field Elevation + 500 Feet
10. Windshield Defog - As Required
11. Altimeters - Set

When Ready for Approach

12. Airspeed - Slow to and Maintain 0.3 AOA

Note: Maintain 0.3 AOA throughout the configuration change to Flaps 10 deg., Gear Down. This will yield an airspeed of about 180 knots.

13. Fuel Management - Check
14. N1, Landing Distance - Confirm
15. Cabin Sign - Safety
16. Windshield Anti-Ice - Low
17. Hydraulic/Nitrogen Pressure - Check
18. Engine Sync - Off
19. Flaps - 10 deg.

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

Before Landing

20. AOA Index - Preset 1.3 V/Vs
21. Landing Gear - Down
22. Airspeed - Slow to 0.4 AOA
23. Recognition Light - Off
24. Landing Lights - As Required
25. Ignitions - On
26. Flaps - 30 deg.
27. Approach Airspeed (VREF) Slow to and Maintain 0.57 AOA

Note: This will yield a normal approach speed of VREF (0.57 AOA) and normal landing distances.

28. Yaw Damp - Off

Balked Landing

29. Thrust - Takeoff N1
30. Pitch Attitude 10 deg.

When Positive Climb Has Been Established

31. Flaps - 10 deg.
32. Landing Gear - Up
33. Yaw Damp - On
34. Airspeed - Accelerate to 0.3 AOA
35. Flaps - Up
36. Airspeed - Accelerate and Maintain 0.2 AOA
37. Landing Lights - Ret/off

Emergency Procedures 400T(T-1A)

Loss of Airspeed

Note: If the pilot's, or copilot's and standby, or all three airspeed(s) are noted to be decreasing toward zero, refer to the standby attitude indicator, standby altimeter, standby heading and the AOA indicator for aircraft control and land at the nearest suitable airport. The pilot's and copilots altimeter's, attitude displays and heading displays may be unreliable and the autopilot may disconnect. This may be accompanied by amber boxed A/S, ALT, ATT and/or HDG comparator flags. The comparator flags may be followed by red FAIL flags on the airspeed, altitude, attitude and heading displays.

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

1. Autopilot - Disconnect
2. Airspeed - Slow to and Maintain 0.2 AOA
3. Thrust - As Required
4. Speed Brakes - As Required (Slow to 0.25 AOA with speed brakes extended)

Note: An AOA of 0.2 (0.25 speed brakes extended) will yield an airspeed of about 210 knots. Use pitch attitude as primary reference. Make small changes in pitch attitude and wait for AOA to stabilize.

When Ready for Descent

5. Seat Belts/Shoulder Harnesses - Fastened
6. Cabin Sign - AS Required
7. Anti/De-Ice Systems - As Required

Caution

If icing conditions are anticipated during the descent and approach, turn ice protection systems ON as early as possible prior to penetrating clouds. Maintain wing anti/deice operation light ON (approximately 70% N2) during descent to assure proper wing anti-ice operation.

8. Cabin Pressure Control - Set Field Elevation + 500 Feet
9. Windshield Defog - As Required
10. Altimeters - Set

When Ready for Approach

11. Airspeed - Slow to and Maintain 0.3 AOA

Note: Maintain 0.3 AOA throughout the configuration change to Flaps 10 deg., Gear Down. This will yield an airspeed of about 180 knots.

12. Fuel Management - Check
13. N1, Landing Distance - Confirm
14. Cabin Sign - Safety
15. Windshield Anti-Ice - Low
16. Hydraulic/Nitrogen Pressure - Check
17. Engine Sync - Off
18. Flaps - 10 deg.
19. GPWS TAC and FLP ORIDE - Off

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

Before Landing

20. AOA Index - Preset 1.3 V/Vs
21. Landing Gear - Down
22. Airspeed - Slow to 0.4 AOA
23. Landing Lights - As Required
24. Ignitions - On
25. Flaps - Set for Landing
26. Approach Airspeed (VREF) - Slow to and Maintain 0.57 AOA

Note: This will yield an approach speed of VREF (0.57 AOA) and normal landing distances.

27. Yaw Damp - Off

Caution

If icing conditions are encountered during flight, the maximum landing flap is 10 deg. unless one of the following are met.

The icing conditions are encountered for less than 10 minutes, and the RAM Air Temperature (RAT) during the encounter was warmer than -8 deg.C.

A RAT of +10 deg.C, or warmer, is observed during the descent, approach or landing.

If either of the above two conditions are met, Flaps 30 deg. may be used for landing.

Balked Landing

28. Thrust - Takeoff N1
29. Pitch Attitude - 10 deg.

When Positive Climb Has Been Established

30. Flaps - 10 deg.
31. Landing Gear - Up
32. Yaw Damp - On
33. Airspeed - Accelerate to 0.3 AOA
34. Flaps - Up
35. Airspeed - Accelerate and Maintain 0.2 AOA
36. Landing Lights - Ret/off

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

Emergency Procedures 400T(TX)

Loss of Airspeed

Note: If the pilot's, or copilot's and standby, or all three airspeed(s) are noted to be decreasing toward zero, refer to the standby attitude indicator, standby altimeter, standby heading and the AOA indicator for aircraft control and land at the nearest suitable airport. The pilot's and copilots altimeter's, attitude displays and heading displays may be unreliable and the autopilot may disconnect. This may be accompanied by amber boxed A/S, ALT, ATT and/or HDG comparator flags. The comparator flags may be followed by red FAIL flags on the airspeed, altitude, attitude and heading displays.

1. Autopilot - Disconnect
2. Airspeed - Slow to and Maintain 0.2 AOA
3. Thrust - As Required
4. Speed Brakes - As Required (Slow to 0.25 AOA with speed brakes extended)

Note: An AOA of 0.2 (0.25 speed brakes extended) will yield an airspeed of about 210 knots. Use pitch attitude as primary reference. Make small changes in pitch attitude and wait for AOA to stabilize.

When Ready for Descent

5. Seat Belts/Shoulder Harnesses - Fastened
6. Cabin Sign - As Required
7. Anti/DeIce Systems - As Required

Caution

If icing conditions are anticipated during the descent and approach, turn ice protection systems ON as early as possible prior to penetrating clouds. Maintain wing anti/deice operation light ON (approximately 70% N2) during descent to assure proper wing anti-ice operation.

8. Cabin Pressure Control - Set Field Elevation + 500 Feet
9. Windshield Defog - As Required
10. Altimeters - Set

When Ready for Approach

11. Airspeed - Slow to and Maintain 0.3 AOA

Note: Maintain 0.3 AOA throughout the configuration change to Flaps - 10 deg., Gear Down. This will yield an airspeed of about 180 knots.

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

12. Fuel Management - Check
13. N1, Landing Distance - Confirm
14. Cabin Sign - Safety
15. Windshield Anti-Ice - Low
16. Hydraulic/Nitrogen Pressure - Check
17. Engine Sync - Off
18. Flaps - 10 deg.

Before Landing

19. AOA Index - Preset 1.3 V/Vs
20. Landing Gear - Down
21. Airspeed - Slow to 0.4 AOA
22. Landing Lights - As Required
23. Ignitions - On
24. Flaps - 30 deg.
25. Approach Airspeed (VREF) - Slow to and Maintain 0.57 AOA

Note: This will yield a normal approach speed of VREF (0.57 AOA) and normal landing distances.

26. Yaw Damp - Off

Balked Landing

26. Thrust - Takeoff N1
27. Pitch Attitude 10 deg.

When Positive Climb Has Been Established

29. Flaps 10 deg.
30. Landing Gear - Up
31. Yaw Damp - On
32. Airspeed - Accelerate to 0.3 AOA
33. Flaps - 0 deg.
34. Airspeed - Accelerate and Maintain 0.2 AOA
35. Landing Lights - Ret/off"

Note 1: When a previously specified Temporary AFM revision has been incorporated into the general revisions of the AFM, the general revision may be inserted in the AFM, provided the information contained in the general revision is identical to that specified in the specified Temporary AFM revision.

Beechcraft 400 Series Aeroplanes

AD/BEECH 400/22 (continued)

Note 2: FAA AD 2001-24-11 Amdt 39-12528

Compliance: Within five days after the effective date of this Directive.

This Airworthiness Directive becomes effective on 11 December 2001.

Background: The United States Federal Aviation Administration has received several reports of loss of the pilot's and/or the co-pilot's Indicated Airspeed (IAS) display on certain Raytheon Model Beech 400A series aeroplanes. Such loss of IAS display may lead to loss of the altitude displays and up to 10 degrees of pitch error in the pilot's and/or co-pilot's attitude display. Loss of the IAS display can also adversely affect the display for altitude and attitude (Attitude/Heading/Reference System) and can result in uncommanded autopilot or yaw damper disengagement. The reported incidents occurred between 38,000 and 41,000 feet of altitude while the airplanes were in cruise or during initial descent. In the reported incidents, the altitude indication returned to normal at an undetermined point in the descent, and the airplanes landed without further incident. Investigation of those reports indicates that the cause of the loss of airspeed indication display may be due to water freezing in the pitot systems.

This Directive requires revision of the AFM Emergency Procedures Section to ensure the flightcrew is advised of in-flight procedures in the event of loss of airspeed indication.

Eugene Paul Holzapfel
Delegate of the Civil Aviation Safety Authority

7 December 2001

The above AD is notified in the *Commonwealth of Australia Gazette* on 11 December 2001.