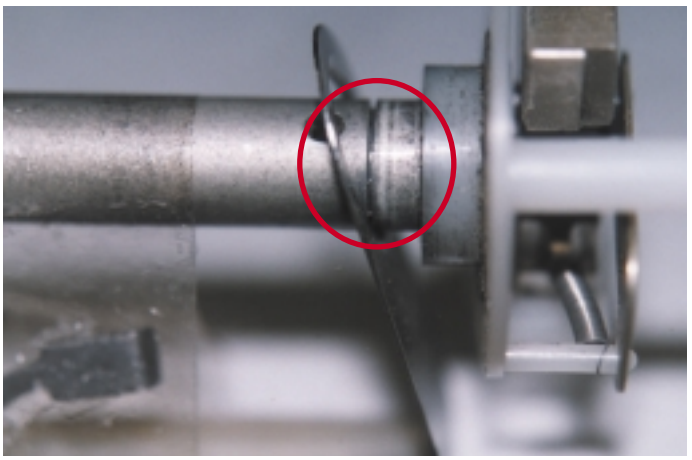
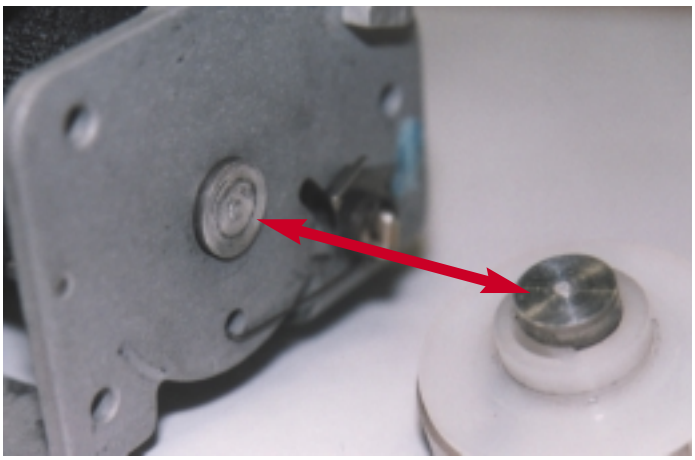
Maintenance alerts





Left: **Close-up of a Pacific Scientific inertia reel shows the hard steel guide has cut into the shaft.** *Right:* **The shaft has been cut through completely, causing total failure of the reel.**

Seatbelt inertia reel

AN INERTIA reel is designed to meet two conflicting requirements: allow pilots to move freely within their seats; and prevent excessive movement in the event of sudden deceleration.

Like all pieces of equipment, eventually an inertia reel will wear out with use. Although one purpose of an inertia reel is a single event, the frequent extension and retraction will eventually catch up with the mechanism.

One common Pacific Scientific inertia reel series, used in both GA and transport category aircraft, was originally fitted with an aluminium alloy shaft. Unfortunately the hard steel guide has been found to wear the shaft and in some cases the shaft was cut through. The accompanying photos tell the sorry tale. Reels manufactured after June 1992 contain a stainless steel shaft which corrected the problem.

However, there are plenty of older reels still in service and occasionally another one is reported failed. In all cases reported so far, the failure has caused the reel to jam rather than the much more dangerous situation of pulling loose. One reported indicator of a problem is a fine aluminium dust mark on the webbing near the reel, but this may not be visible. The shaft itself is not visible without dismantling the reel.

Pacific Scientific has produced a Service Bulletin for inspection and replacement. The reels are used in everything from Pipers to Boeings as well as helicopters.

If you have a Pacific Scientific inertia reel and it is dated before July 1992 or you think it may be, take a close look and raise the issue with your maintenance organisation. Preferably have the reel replaced. If the shaft fails, the least it will be is an inconvenience, but the worst it will be is an ineffective restraint at the time you most need it!

The Service Bulletin referred to above is Pacific Scientific SB A 25-1124A dated 1 June 2000.

Aircraft wiring

RECENT INCIDENTS involving aircraft wiring problems have highlighted the need for maintenance personnel to exercise special care when working with or near electrical wires.

Do not use wire attached to panels and components to support them during maintenance. Disconnect the wires prior to maintenance. Do not bend the wire over sharp edges and never exceed the minimum bend radii. Keep wiring free of fluff, dirt, and spills. When cleaning, be aware some cleaning fluids may have a corrosive or hardening effect on insulation.

Never step on wires. Standing on wire can cause additional stress on the loom or wires. It can also distort or damage insulation. These are all simple practices that if adhered to will ensure a long and trouble free service life.

Acrid odour

IN TWO RECENT events involving large transport category aircraft, pilots have reported an acrid burning smell coming from the passenger cabin. In the latest incident the pilot in command declared a PAN and the aircraft returned to the airport from which it had departed.

During subsequent investigations, the cabin odour was traced to chemicals used to clean components in the pneumatic bleed and airconditiong systems. When heated, the chemicals gave off a pungent odour in the form of a mist that activated the toilet alarm and caused minor irritation to passengers and crew.

Operators should be aware that chemicals and other substances used to clean aircraft components should meet the requirements set out by the aircraft and component manufacturer.

AM-SAFE spacer

AN ARTICLE in a previous issue of *Flight Safety Australia* highlighted a potential problem with an AM-SAFE seatbelt/shoulder strap attachment. This design has a small plastic "spacer" or grommet (correct term used by AM-SAFE) which secures the attachment for the shoulder strap to the lap belt buckle.

AM-SAFE has informed us a Service Bulletin was issued in 1994 which provided instructions for replacing the individual connector plate on some buckles, and for making a temporary field repair using a section of ester or ether based polyurethane tubing.

To obtain this Service Bulletin (SB 449429-25-01 Rev 1 dated 12 Jan 1994) refer to your maintenance organisation, or contact AM-SAFE at ATS Australia Pty Ltd Main Beach Queensland. Phone (07) 5531 4944.

ADs Issue AL 2/2001, 22 February 2001

Part 39-105 - Lighter Than Air

There are no amendments to the CAR part 39-105 Lighter Than Air Series this issue.

Part 39-105 - Rotorcraft

Bell UH-1 Series Helicopters

AD/UH-1/5 Amdt 2 - Tailboom Vertical Fin Spar

Eurocopter AS 332 (Super Puma) Series Helicopters

AD/S-PUMA/38 - Main Frame 5295

McDonnell Douglas (Hughes) & Kawasaki 369 Series Helicopters

AD/HU 369/106 Amdt 1 - Helicopter Technology Main Rotor Blades

Part 39-105 - Below 5700 kgs

Embraer EMB 110 (Bandeirante) Series Aeroplanes

AD/EMB 110/2 Amdt 8 - Fatigue Life Limits

Pilatus Britten-Norman BN-2 Series Aeroplanes

AD/BN-2/71 - Main Landing Gear Oleo Attachment Bracket

AD/BN-2/72 - Wing Access Panel

Pilatus Britten Norman BN-2A Mk III (Trislander) Series Aeroplanes

AD/BNT/47 - Main Landing Gear Oleo Attachment Bracket

Pilatus PC-12 Series Aeroplanes

AD/PC-12/13 Amdt 1 - Flap System

Part 39-105 - Above 5700 kgs

Airbus Industrie A300 and A310 Series Aeroplanes

AD/AB3/162 - Inertial Reference Unit

Boeing 737 Series Aeroplanes

AD/B737/127 Amdt 2 - Elevator Tab Push Rod Attachment

AD/B737/149 - Autothrottle Computer

Boeing 767 Series Aeroplanes

AD/B767/130 - Nacelle Strut and Wing Structure

AD/B767/131 - Canted Pressure Deck Drain System

Bombardier (Canadair) CL-600 (Challenger) Series Aeroplanes

AD/CL-600/39 - Fuel Level Sensing Wiring Chafing

Bombardier (Boeing Canada/de Havilland) DHC-8 Series Aeroplanes

AD/DHC-8/76 - Electrical Arcing and High Pressure Fuel Line

British Aerospace BAe 125 Series Aeroplanes

AD/HS 125/163 - Wire Bundle Chafing

AD/HS 125/164 - Pitot/Static and Stall Vent Drain Valves

British Aerospace BAe 146 Series Aeroplanes

AD/BAe 146/84 - Rear Pressure Bulkhead Horizontal Butt Joint

Douglas DC-9 Series Aeroplanes

AD/DC-9/15 Amdt 1 - Engine Nacelle Pylon Front Spar Attachments and Upper Cap

AD/DC-9/118 - Outboard Flap Idler Hinge Fitting

Part 39-106 - Piston Engines

There are no amendments to the Part 39-106 Piston engine series this issue

Part 39-106 - Turbine Engines

Alliedsignal (Garrett/Airesearch) Turbine Engines - TPE 331 Series

AD/TPE 331/55 - Oil Analysis Program

Rolls Royce Turbine Engines - Spey Series

AD/RRT-S/12 Amdt 2 - Stage 2 Low Pressure Turbine Blades

Part 39-107 - Equipment

Electrical Equipment

AD/ELECT/70 Amdt 2 - Inflatable Door Seal System

AD/ELECT/73 - Britax Sell Galley Equipment

Radio Communication and Navigation Equipment

AD/RAD/70 - Aerodata AeroNav II and III Display Units

AACs issue AL 2/2001, 22 February 2001

Part 1 - Airworthiness Articles

There are no amendments to AAC Part 1 - Airworthiness Articles this issue.

Part 6 - General Advice

There are no amendments to AAC Part 6 - General Advice this issue.

Part 9 - AME Licensing and Examination

AAC 9-1 Issue 10 - Aircraft Maintenance Engineer (AME) Licensing Examinations

AAC 9-5 Issue 7 - AME Specific Type Training Courses and Examinations Conducted by Approved Australian Operators, Maintenance and Training Organisations

AAC 9-93 Issue 5 - Administration and Procedure - Aircraft Maintenance Engineer Licences - Category Radio

ADs issue AL 3/2001, 22 March 2001

Part 39-105 - Lighter Than Air

There are no amendments to the CAR part 39-105 Lighter Than Air Series this issue.

Part 39-105 - Rotorcraft

Hiller UH-12 Series Helicopters

AD/HILLER 12/43 - Control System Linkage

Sikorsky S-76 Series Helicopters

AD/S-76/65 Amdt 4 - Main Rotor Shaft

AD/S-76/66 - Main Landing Gear Positioning Rod Assembly

Part 39-105 - Below 5700 kgs

Aerospatiale (Socata) TB9 & TB10 Series Aeroplanes

AD/TB 10/31- Rudder Bearing

Aerospatiale (Socata) TB20 (Trinidad) Series Aeroplanes

AD/TB 20/37 - Rudder Bearing

Aerospatiale (Socata) TB 200 Series Aeroplanes

AD/TB 200/4 - Rudder Bearing

Aerospatiale (Socata) TBM 700 Series Aeroplanes

AD/TBM 700/23 - Fuel Tank Vent Valve

AD/TBM 700/24 - Fuel Tank Vent Valve

AD/TBM 700/25 - Propeller Governor Control Cable

American Champion (Aeronca, Bellanca)

AD/CHA/23 Amdt 3 - Wing Spars

Beechcraft 36 (Bonanza) Series Aeroplanes

AD/BEECH 36/48 - Right Hand Fuselage Rivets

Beechcraft 55, 58, & 95-55 (Baron) Series

AD/BEECH 55/88 - Rudder Bellcrank Interconnect Tube

AD/BEECH 55/89 - Right Hand Fuselage Rivets

Cessna 170, 172, F172 & 175 Series

AD/CESSNA 170/59 Amdt 1 - Horizontal Stabiliser Front Spar

Cessna 310 Series Aeroplanes

AD/CESSNA 310/55 Amdt 1 - Seat Back Reinforcing Strap

Pilatus PC-12 Series Aeroplanes

AD/PC-12/26 - Passenger Oxygen System

AD/PC-12/27 - Flap System Operation

Piper PA-31 Series Aeroplanes

AD/PA-31/93 Amdt 1 - Main Landing Gear Inboard Door Hinge

Siai Marchetti S205 and S208 Series

AD/SM-205/25 Amdt 1 - landing Gear Actuator Attaching Fork

Part 39-105 - Above 5700 kgs

Airbus Industrie A300 and A310 Series

AD/AB3/43 Amdt 1-Door Surroundings

AD/AB3/80 Amdt 2-Centre Wing Box - Angle Fittings at Frame 47

AD/AB3/165 - Flight Crew Seats

ADs issue AL 3/2001, 22 March 2001)

Airbus Industrie A319/A320/A321 Series

AD/A320/93 Amdt 3 - MLG Forward Pintle Pin Cross Bolt

AD/A320/99 Amdt 2 - Rudder Pedals

AD/A320/105 Amdt 1 - Emergency Escape Slide Frangible Link

AD/A320/114 - Frame 36 - Longitudinal Beams of the Pressure Panel

AD/A320/115 - Flight Crew Seats

AMD Falcon 50 and 900 Series Aeroplanes

AD/AMD 50/21 - Emergency Procedure - Rapid Decompression

Boeing 747 Series Aeroplanes

AD/B747/239 - Main Entry Door 1 Forward Edge Frame

Bombardier (Canadair) CL-600 (Challenger) Series Aeroplanes

AD/CL-600/35 Amdt 1- Main Landing Gear Main Fitting

AD/CL-600/40 - Electrical Power - Chafing of IDG Cables

AD/CL-600/41 - Fire Warning Control Unit

British Aerospace BAe 125 Series

AD/HS 125/165 - Nose Landing Gear Drag Stay

Douglas DC-9 Series Aeroplanes

AD/DC-9/109 Amdt 1 - Forward Passenger Doorjamb.

Fokker F28 Series Aeroplanes

AD/F28/81 Amdt 1 - MLG Attachment Bracket

Fokker F50 (F27 Mk 050) Series

AD/F50/79 Amdt 3 - Control Surfaces Leading Edge Attachment

Gates Learjet 35 and 36 Series Aeroplanes

AD/LEARJET 35/37 - Emergency Procedures - AFM Amendment

Part 39-106 - Piston Engines

There are no amendments to the Part 39-106 Piston engine series this issue

Part 39-106 - Turbine Engines

Rolls Royce Turbine Engines - RB 211 Series

AD/RB 211/24 Amdt 1 - HP Turbine Disc - Inspection

Part 39-107 - Equipment

There are no amendments to the CAR part 39-107 - Equipment series this issue.

AACs issue AL 1/2001, 25 January 2001

Part 1 - Airworthiness Articles

There are no amendments to AAC Part 1 - Airworthiness Articles this issue.

Part 6 - General Advice

There are no amendments to AAC Part 9 - General Advice this issue.

Part 9 - AME Licensing and Examination

AAC 9-4 Issue 9 -Acceptance of Training Courses Conducted by Overseas Equipment Manufacturers and Training Organisations

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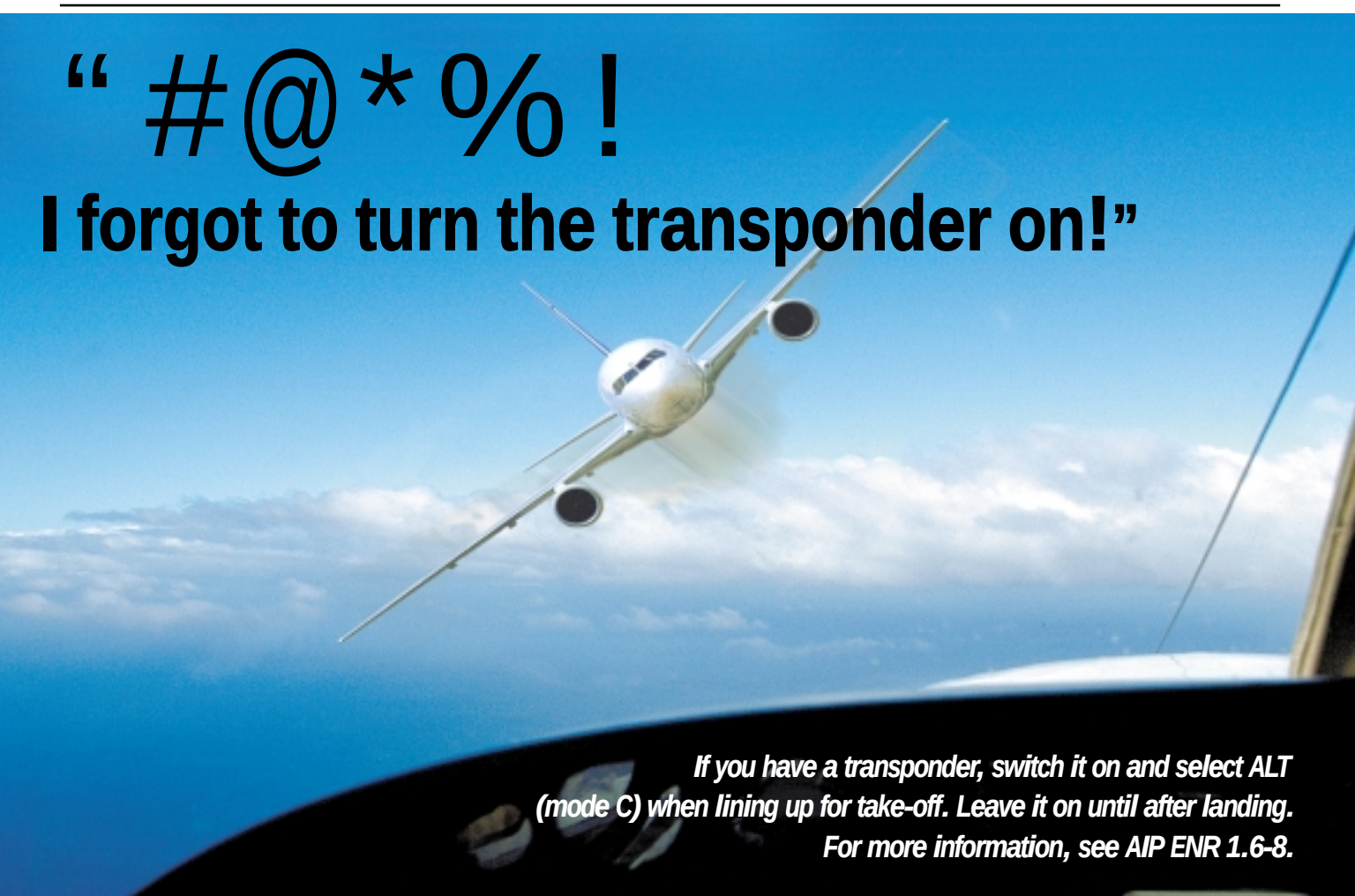
" #@*%!

I forgot to turn the transponder on!"



If you have a transponder, switch it on and select ALT (mode C) when lining up for take-off. Leave it on until after landing. For more information, see AIP ENR 1.6-8.