

SAAB 340 B

Aircraft Operations Manual



AIRCRAFT GENERAL, AIRCRAFT DATA
Description

1. GENERAL.

The SAAB 340B was developed and manufactured by Saab Aircraft AB, Linköping, Sweden

This manual reflects SAAB 340B with A/C S/N from 160 and up. The aircraft is a Regional Airliner designed and built for service over short/medium sectors and multistop routes.

The fuselage has a circular cross section housing the cockpit, passenger and cargo compartment. All areas

of the fuselage are pressurized except the radome, the nose wheel well and the tail cone.

Accommodation in the cockpit is provided for two operating crew members and one observer. The aircraft is certificated to carry up to 37 passengers. Passenger seating layout may, however, be varied to suit different operating requirements.

For some basic data, see below.

Main dimensions.

Length	64 ft 9 in	19.73 m
Height	23 ft	7.0 m
Span (without extended wingtips)	70 ft 4 in	21.44 m
Span(with extended wingtips)	74 ft 8 in	22.75 m
Propeller clearance	1 ft 8 in	0.51 m
Passenger door	27 x 63 in	0.69 x 1.60 m
Cargo door	53 x 51 in	1.35 x 1.30 m
Baggage compartment	240 cu ft	6.8 cu m

Weights.

See AFM 340B.

Engine Rating.

2 General Electric CT7-9B

Takeoff power +APR or Go-around power (each) 1 870 shp .

Takeoff power (each) 1 750 shp

Flat rated to (at SL) 35°C

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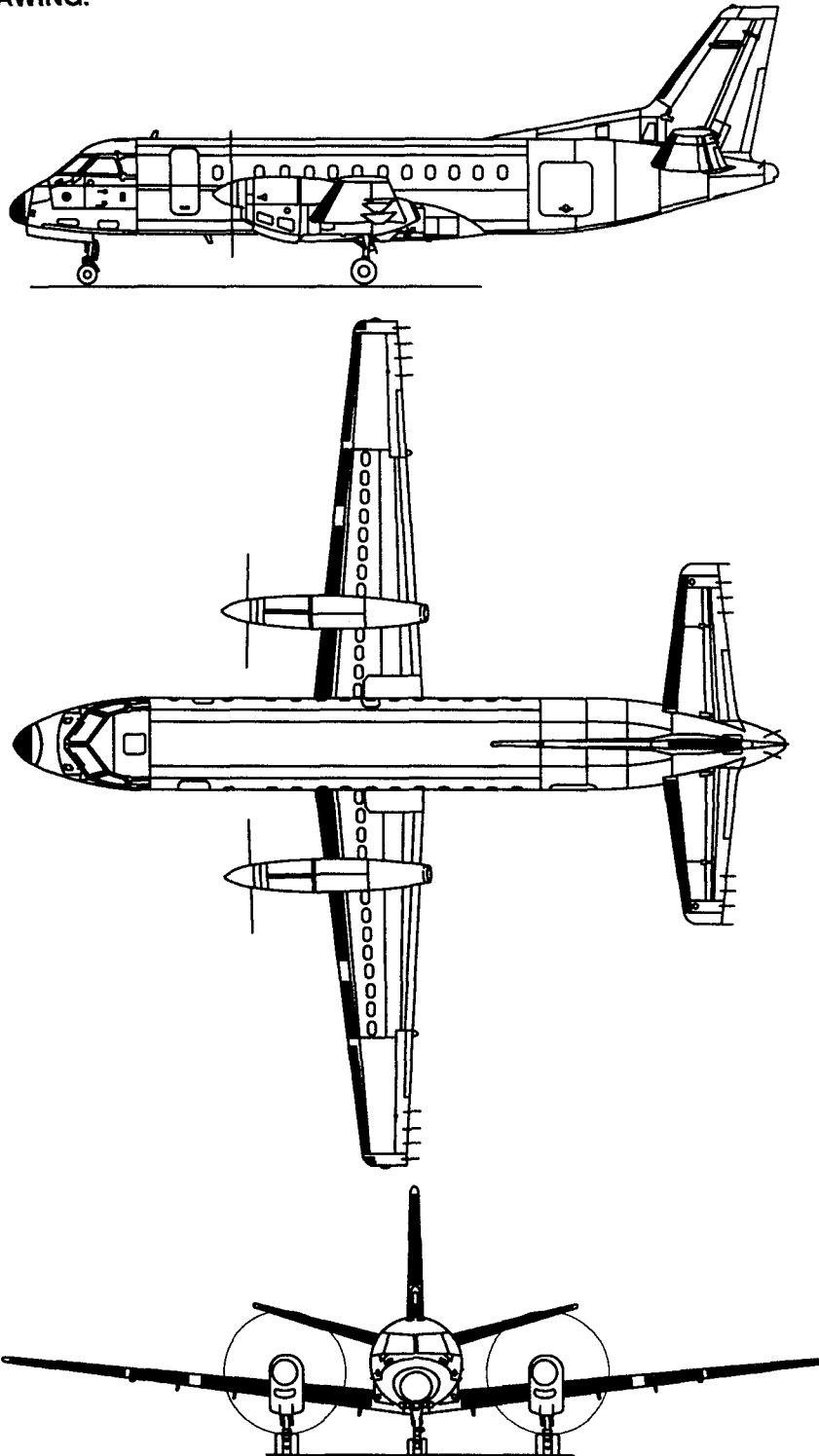
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2. THREE VIEW DRAWING.



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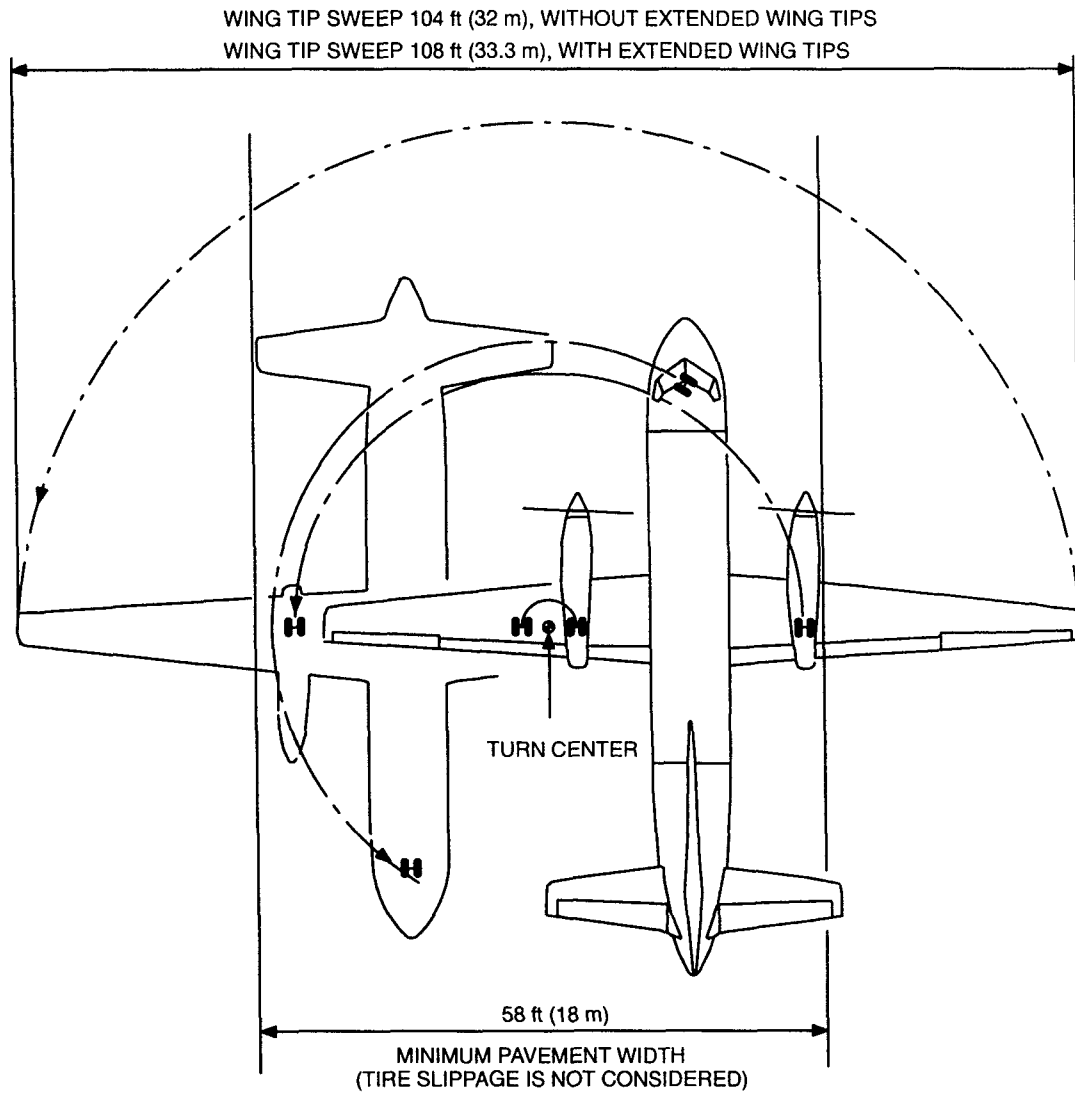
FIG. 1. Three view drawing (without extended wingtips).

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3. MINIMUM TURNING RADIUS.



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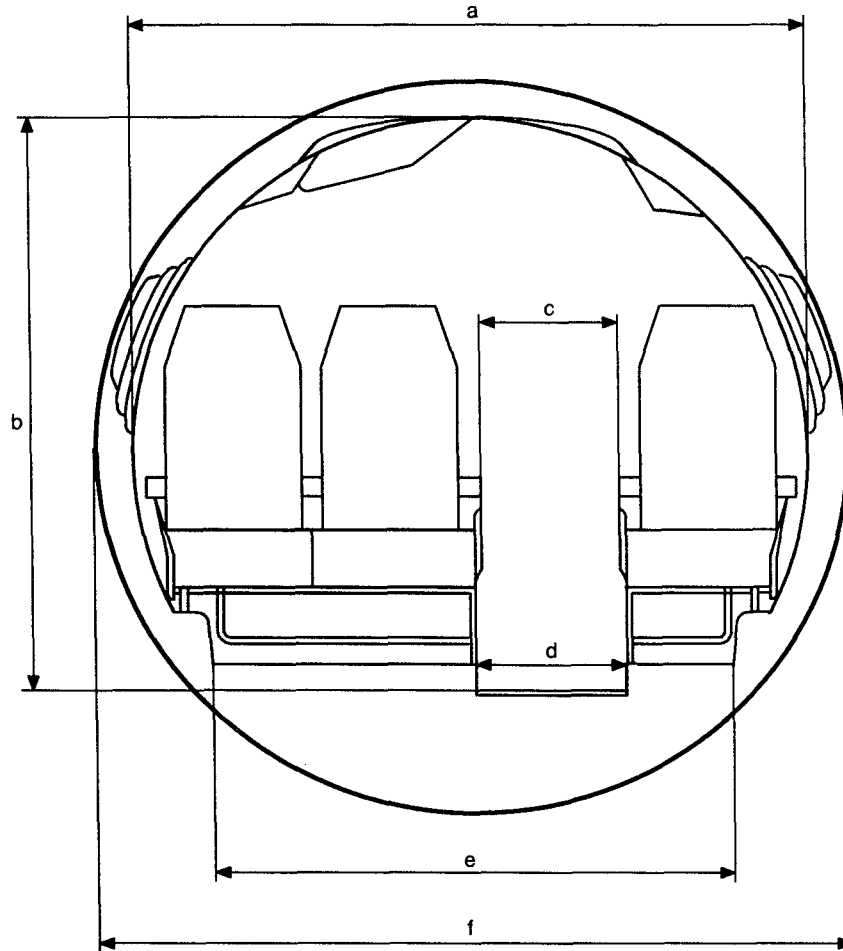
FIG. 2. Minimum turning radius.

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4. CABIN CROSS SECTION.

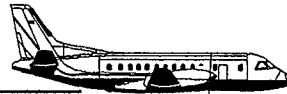


Ref	in	m
a	85.0	2.16
b	72.0	1.83
c	16.3	0.41
d	17.0	0.43
e	67.0	1.70
f	91.0	2.31

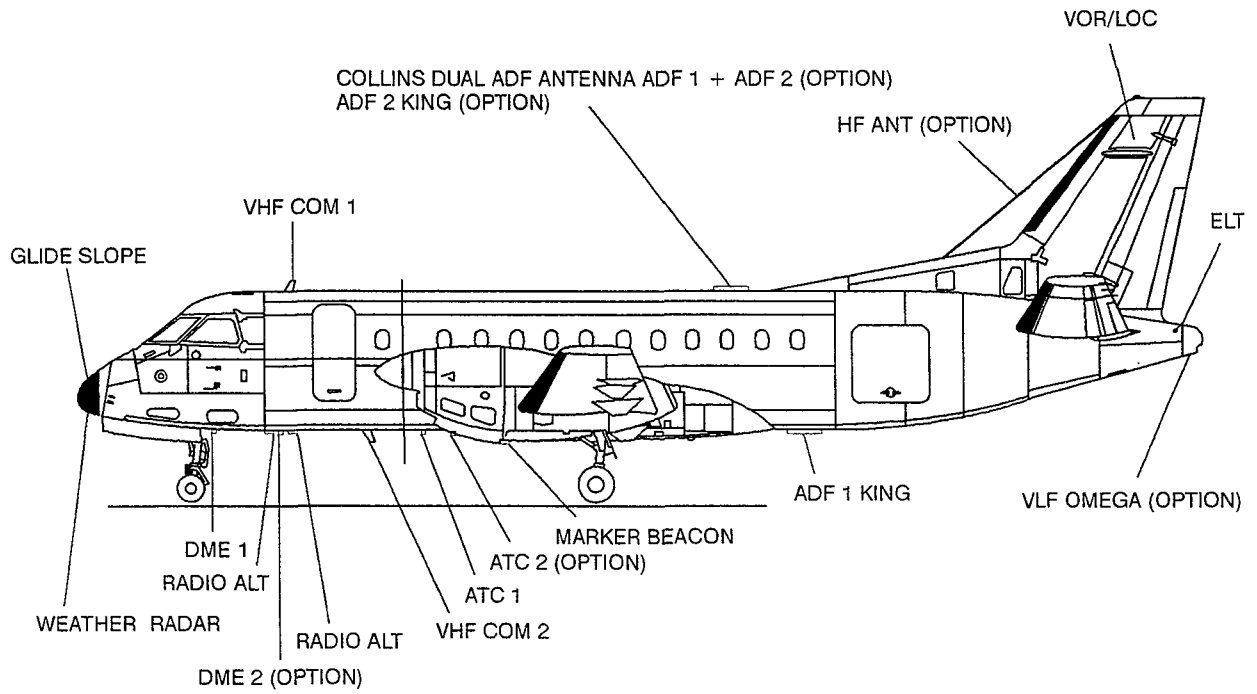
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FIG. 3. Cabin cross section.

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5. ANTENNA ARRANGEMENT.



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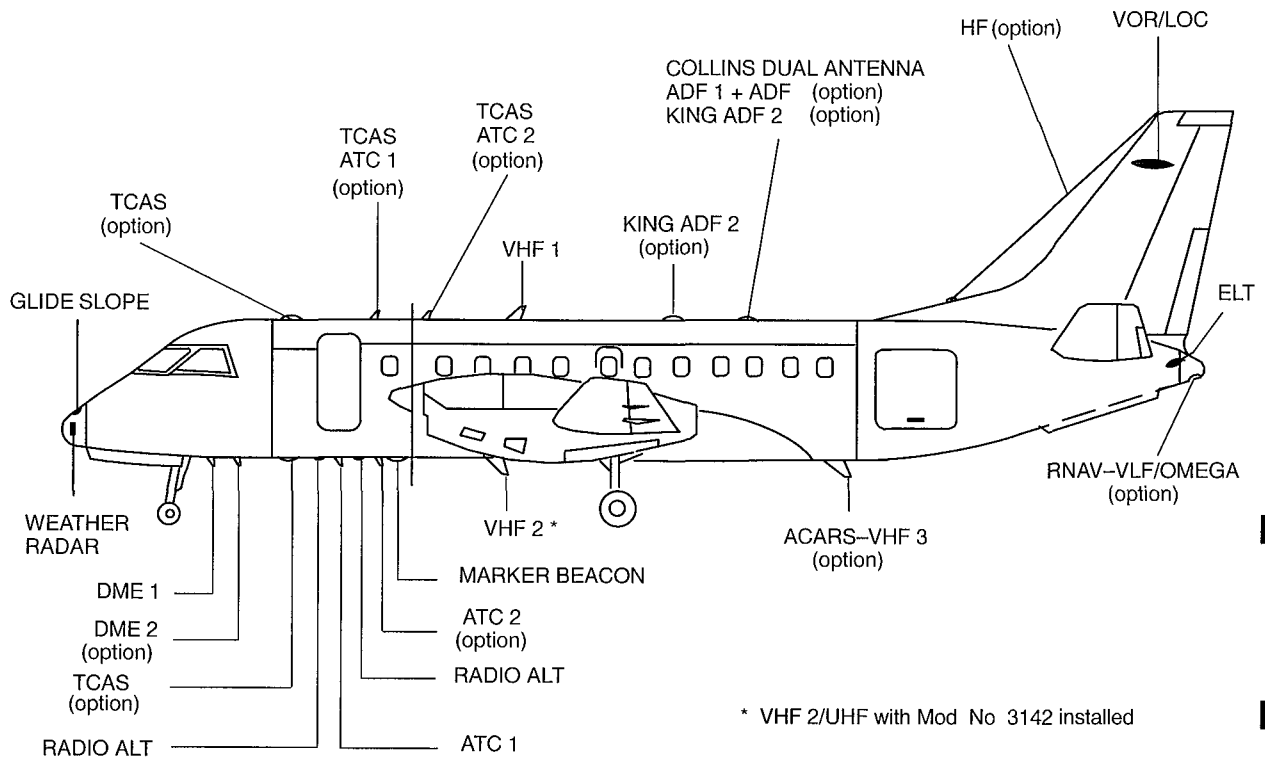
FIG. 4. Antenna arrangement.



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5. ANTENNA ARRANGEMENT.

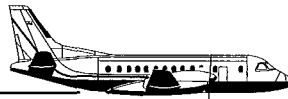


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FIG. 4. Antenna arrangement.

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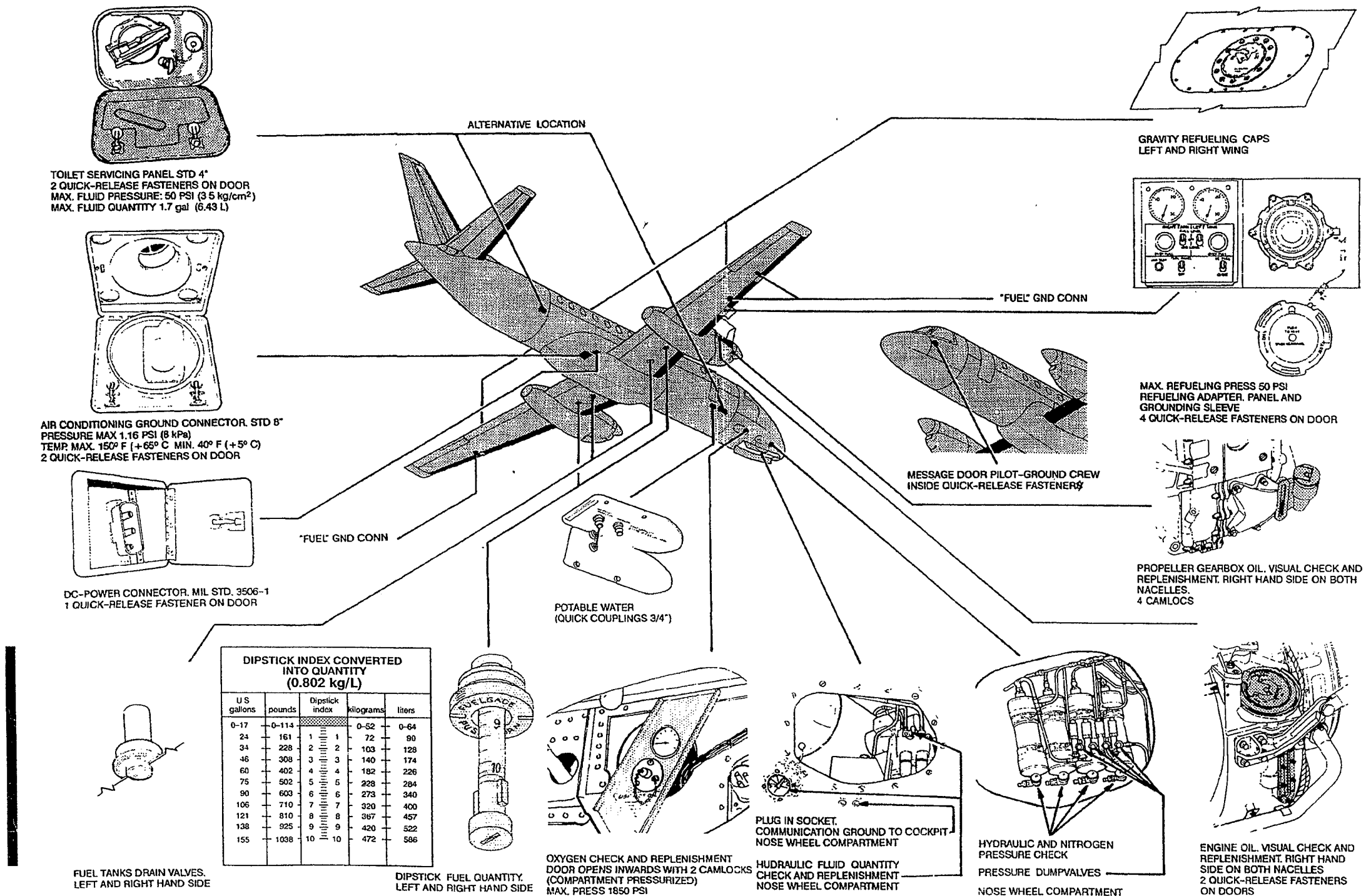


AIRCRAFT GENERAL, AIRCRAFT DATA
Description

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FIG. 5. Ground service connections.



1. LIMITATION.

1. 1. SERVICEABILITY.

- The aircraft is certificated in the Transport Category for the following types of operation provided the appropriate instruments and equipment required are installed and in operable condition according to the Master Minimum Equipment List, MMEL.
- Carriage of passengers (Maximum number of passenger seats 37).
- Carriage of cargo. The cargo compartment is classified as a class C cargo compartment.
- Operation in day and night Visual Flying Rules (VFR).
- Operation in day and night Instrument Flying Rules (IFR).
- Operating in icing conditions.
- Category II approach.

1. 2. DITCHING.

The aircraft is certificated for ditching provided Mod No 1198 is installed.

1. 3. OPERATIONAL LIMITS.

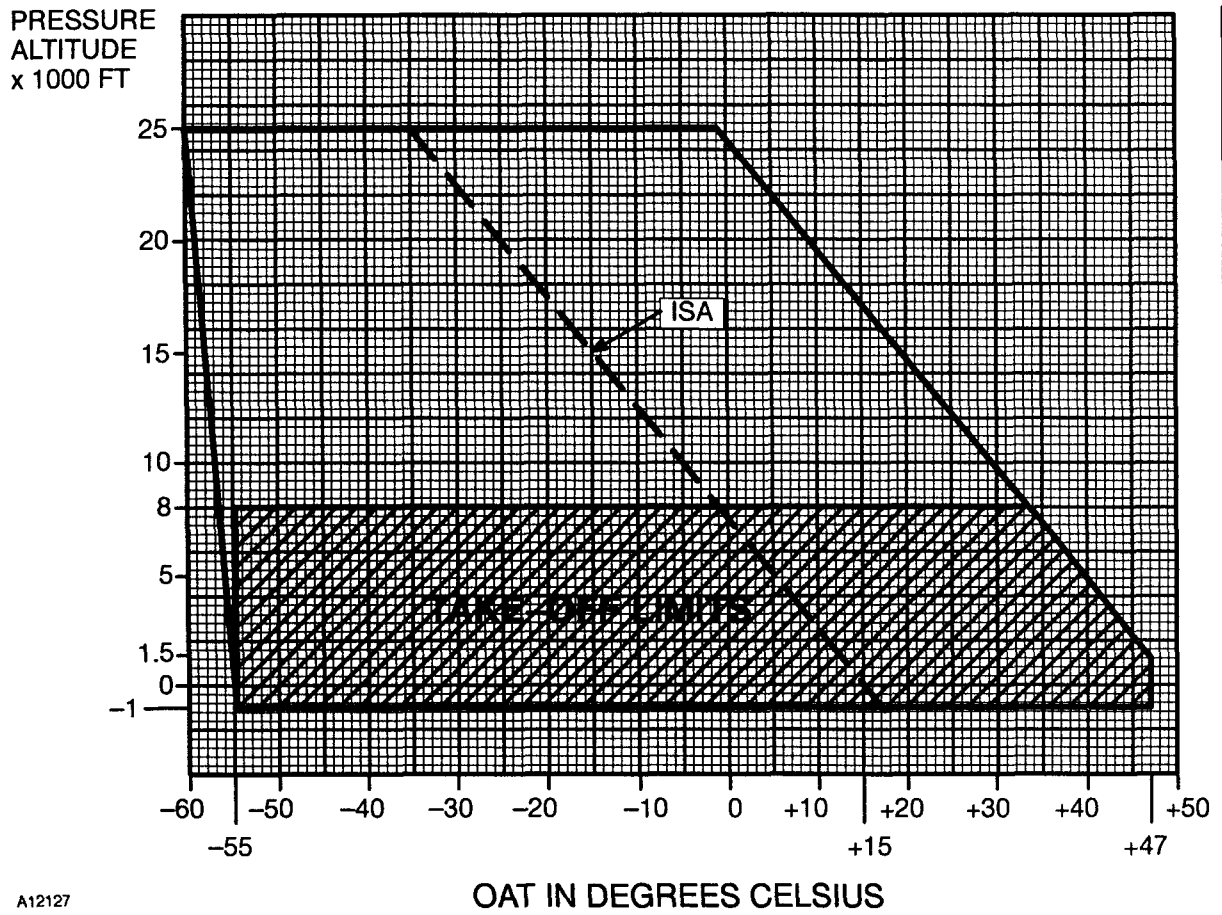
- Maximum runway slope Takeoff (mean) -2% to +1.5%.
- Maximum runway slope Landing (mean) -2% to +2%
- Airport pressure altitude -1 000 ft to +8 000 ft.
- Flight maneuvering load factors.
 - ° Clean configuration + 2.75 g to - 1.0 g.
 - ° Flaps extended + 2.0 g to 0 g.

(Cont'd)



(Cont'd)

– Maximum operating altitude and environmental envelope.



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Below -18° certain conditions in accordance with the AFM must be met.

(Cont'd)



(Cont'd)

1.4. STRUCTURAL WEIGHT LIMITS.

See approval Airplane Flight Manual (AFM).

1.5. MINIMUM CREW.

- Minimum flight crew: 2.
- The minimum cabin crews on passenger carrying flight must be according to local government regulations.

2. NORMAL OPERATION.

Not applicable.

3. ABNORMAL OPERATION.

Not applicable.



1. COCKPIT GENERAL.

The cockpit of the SAAB 340B can accommodate two pilots and one observer.

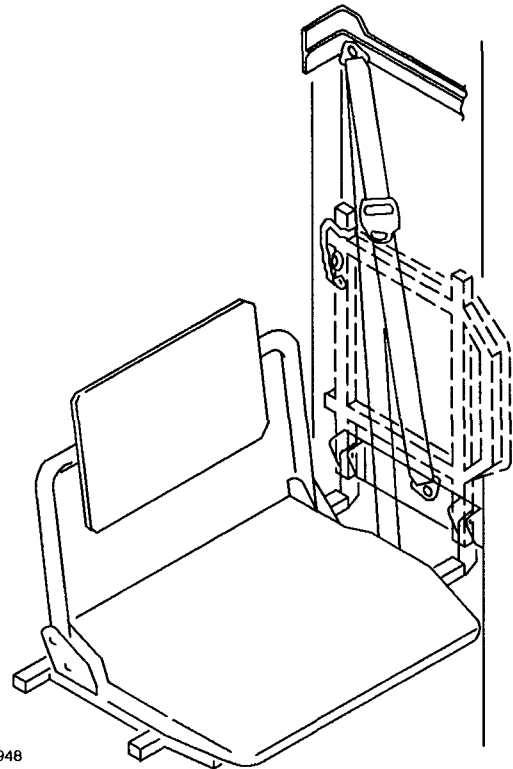
Both pilots have a set of flight instruments on his instrument panel. The rest of the controls and indicators are located in the overhead panel, glareshield panel, center instrument panel and on the pedestal.

The observer seat is of a foldable type but can also be stowed when not in use.

There is no cockpit window that can be opened. Instead, a crew communication door is installed on the left side of the fuselage below the side windshield.

As an alternate emergency exit from the cockpit a hatch is located in the cockpit ceiling. This hatch can also be used for ventilation on ground.

The cockpit is also provided with two adjustable sun-visors. It is important to notice that a sun-visor may never be upfolded in a position blocking the handgrips in the cockpit ceiling. This is to facilitate quick access to the grip should a seat runaway occur.



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FIG. 1. Observer seat.



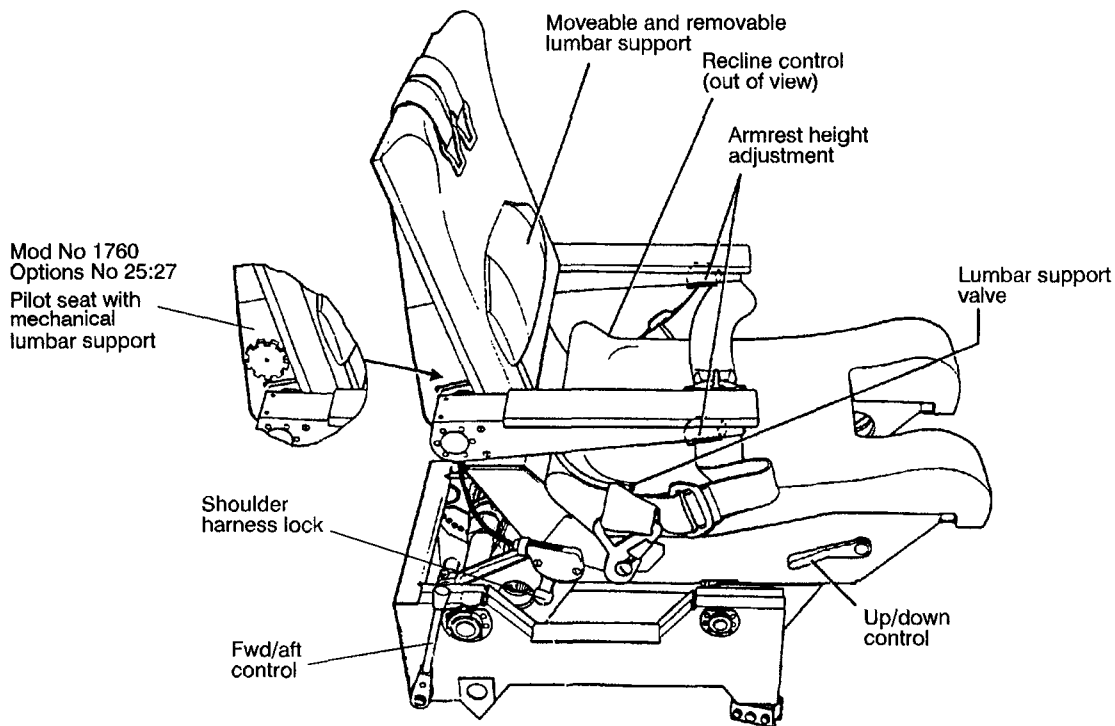
2. PILOT SEATS.

The pilot seats have controls for forward/aft and up/down movement. In addition, seat back recline, arm rests angle and lumbar support can be adjusted. With Mod No 1760 installed an adjustable mechanical lumbar support is introduced. With this modification the seat back can be raised or lowered by slightly pulling the lower part of the seat back and then adjusting the height.

The shoulder harness is of a reel type which can be locked by a handle or by inertia.

If optional ACARS Installed.

With ACARS installed the center pedestal is extended towards the observer seat resulting in less comfort for the occupancy. In order to improve that it is recommended that the inboard armrests on the two pilot seats should not be folded down when the observer seat is occupied.



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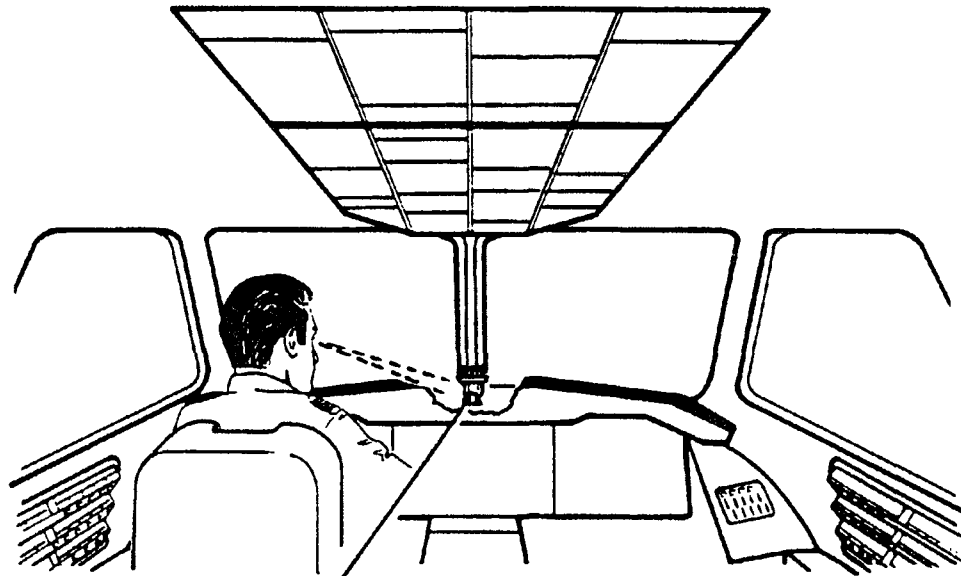
NOTE

- To improve observer comfort both inboard armrests should be stowed in up position.

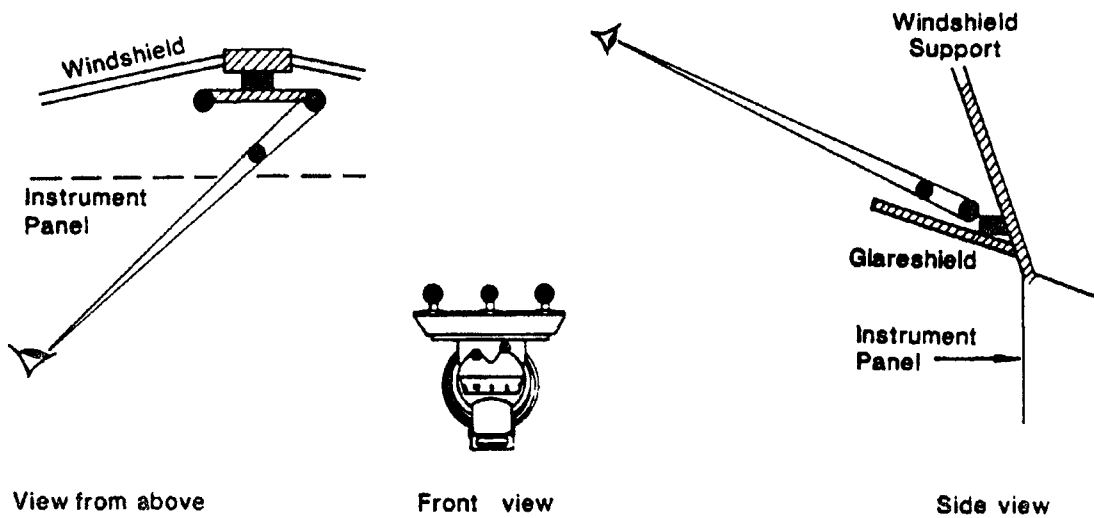
FIG 2. Pilot seat (left seat shown).



3. EYE POSITION INDICATOR.



Eye position indicator and Standby compass



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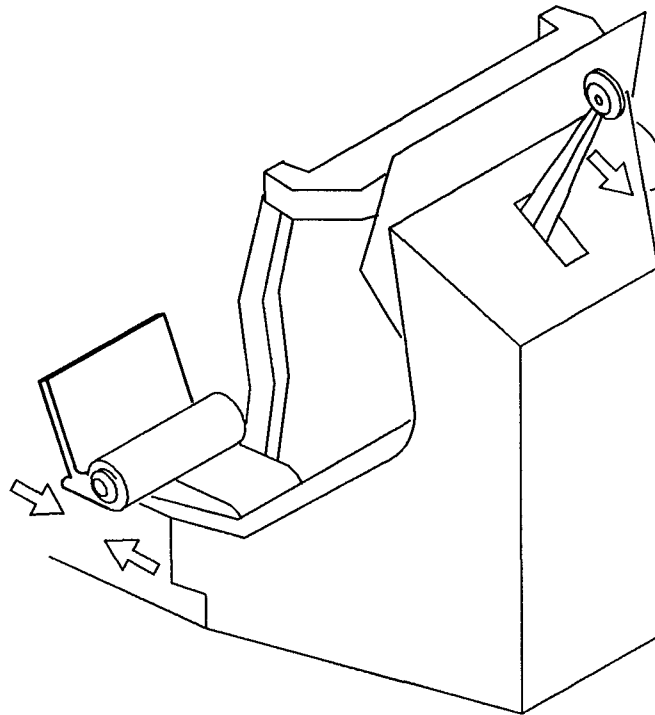
FIG. 3. Eye position indicator.



4. PEDALS.

The rudder pedals can be adjusted in forward/aft direction. By pulling the lever, the pedal lock is re-

leased and the pedals are free to be repositioned. When unlocked, the pedals are springloaded towards aft position.

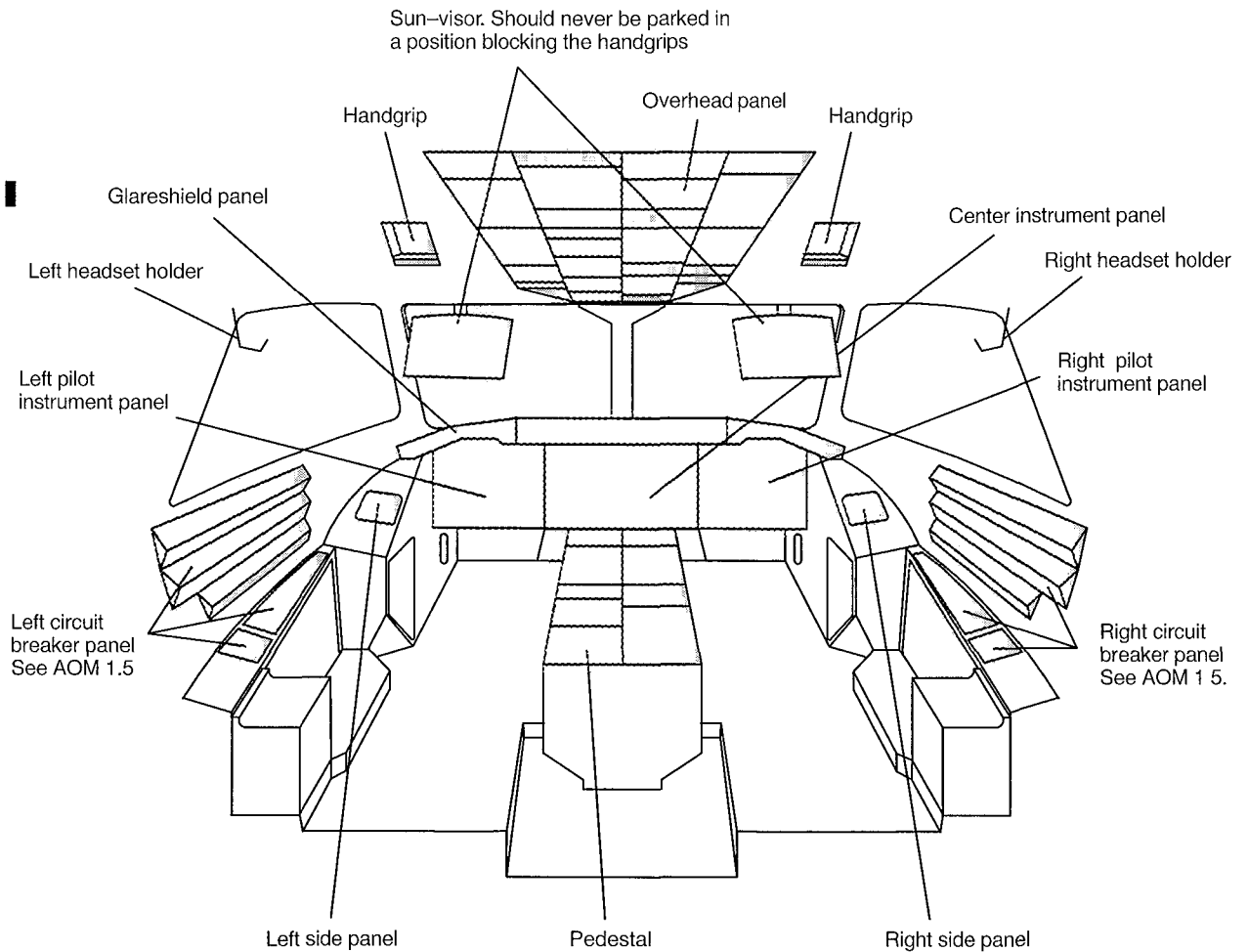


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FIG. 4. Pedal unit.



5. COCKPIT PANEL.



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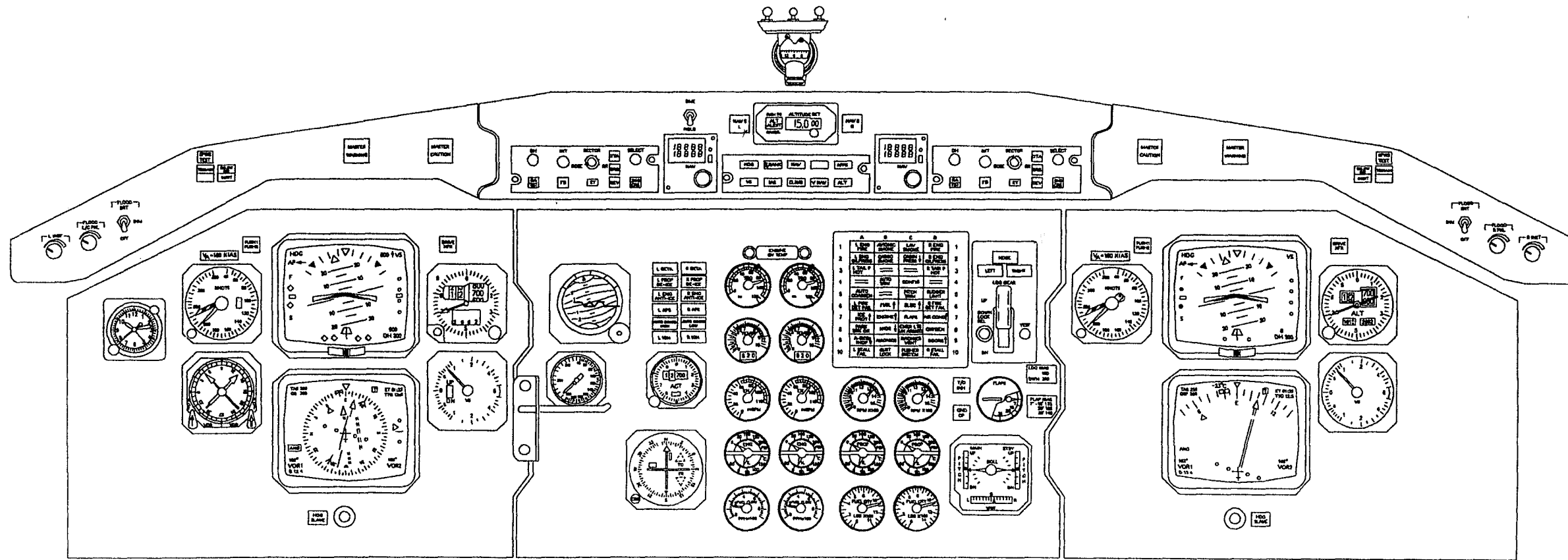
FIG. 5. Cockpit panels.



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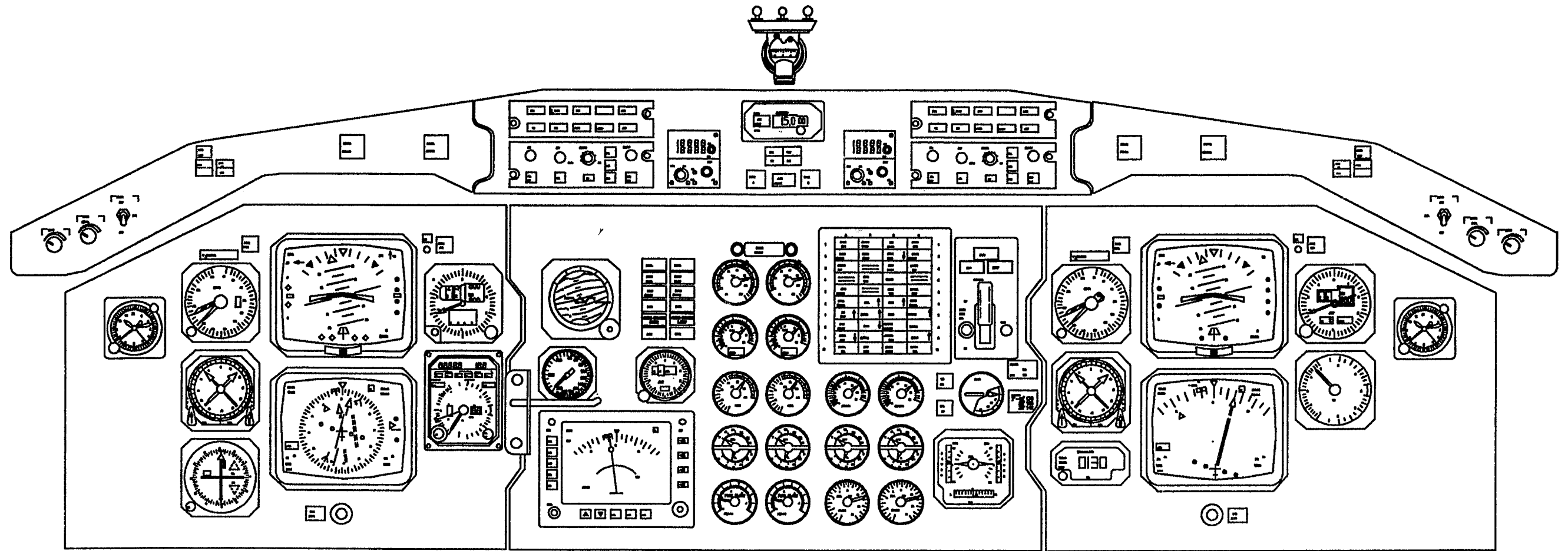


AIRCRAFT GENERAL, COCKPIT Description



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Fig. 6. Standard instrument panel. King avionics shown. (Highest modification standard shown).



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FIG 6 Max option instrument panel. Collins avionics shown.
(Highest modification standard shown).

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AIRCRAFT GENERAL, COCKPIT
Description

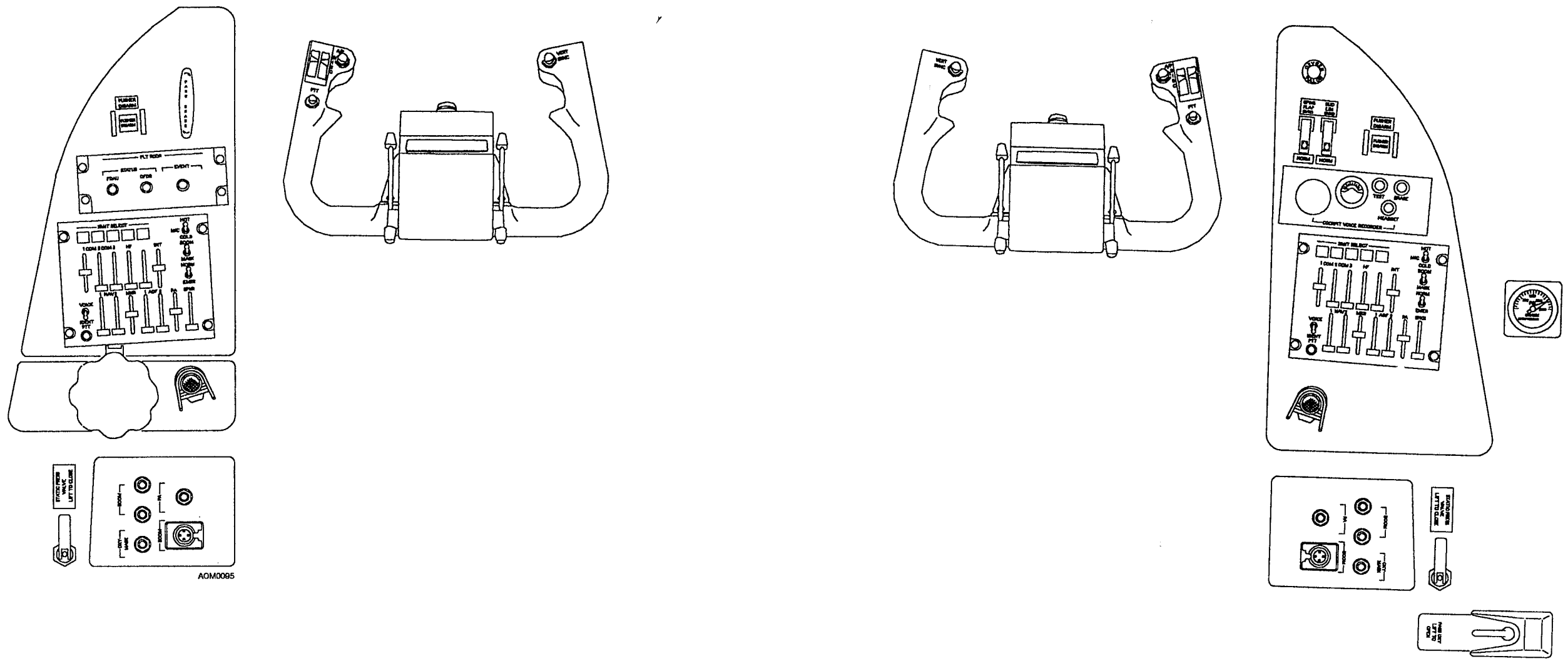


Fig. 8. Standard side panels and control wheels. (Highest modification standard shown.)



AIRCRAFT GENERAL, COCKPIT
Description

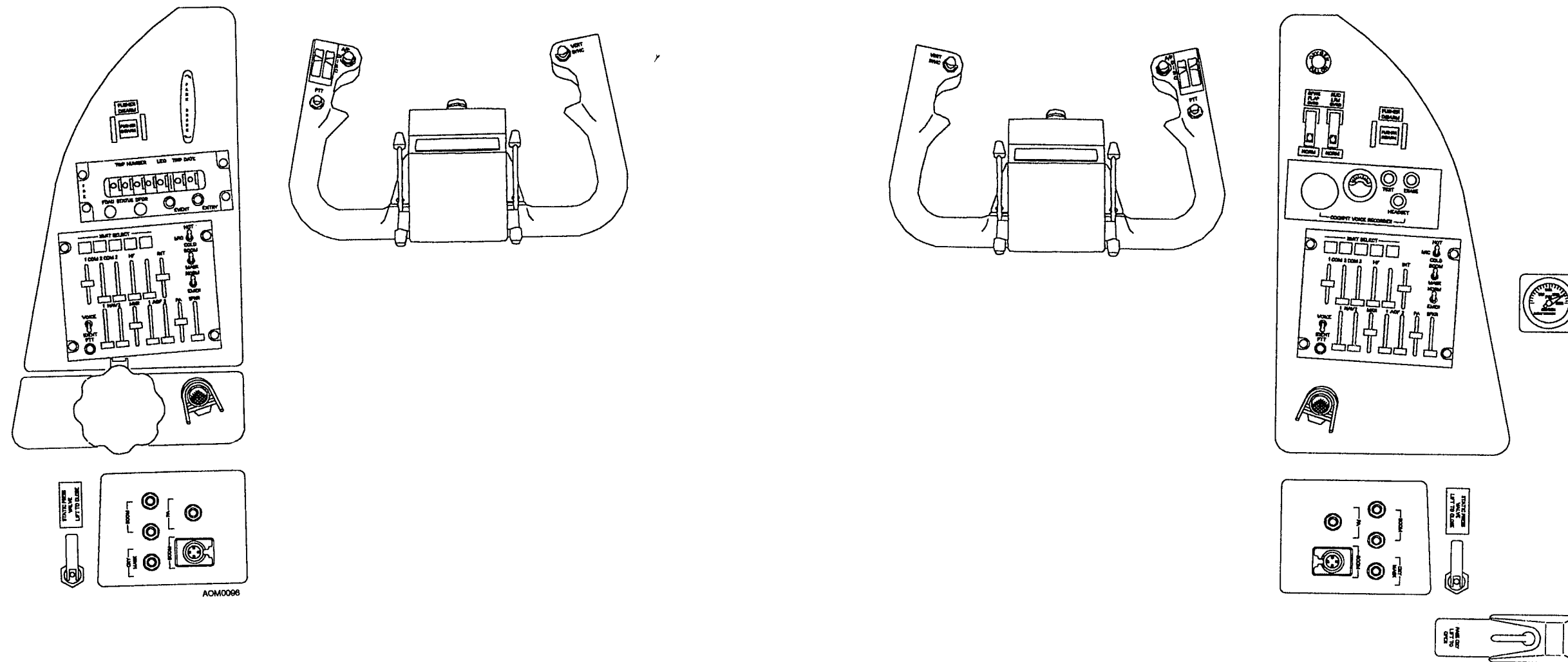
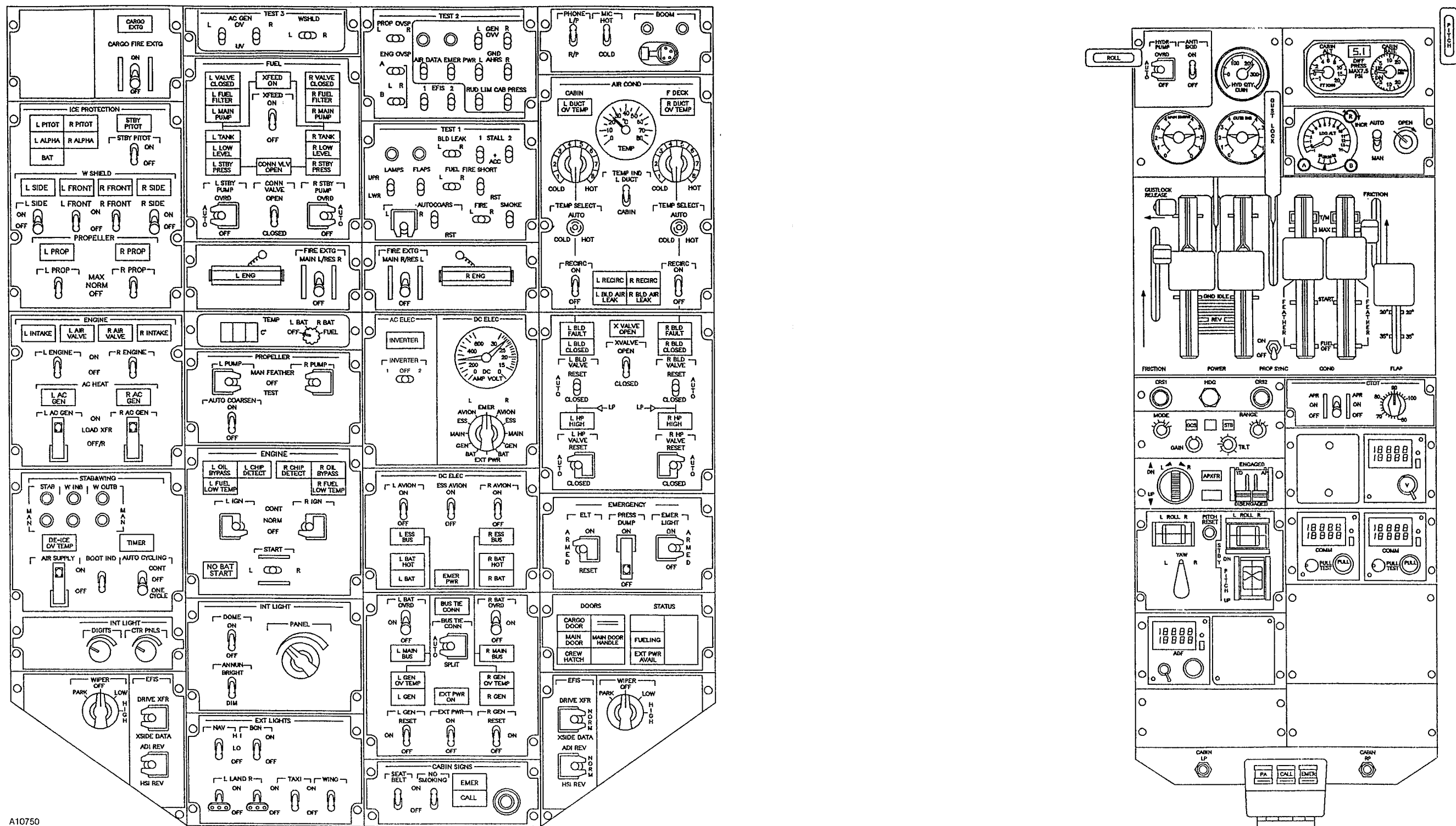


Fig. 9. Max option side panels and control wheels. (Highest modification standard shown.)



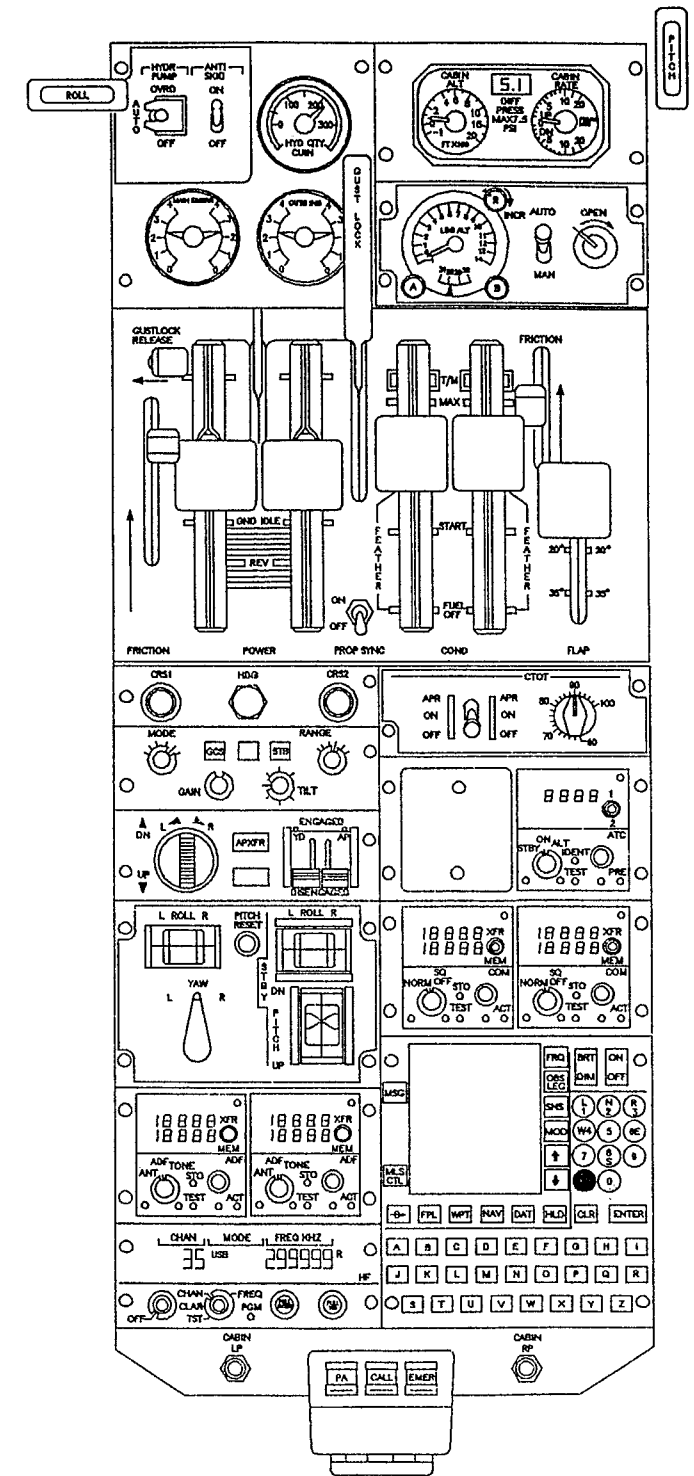
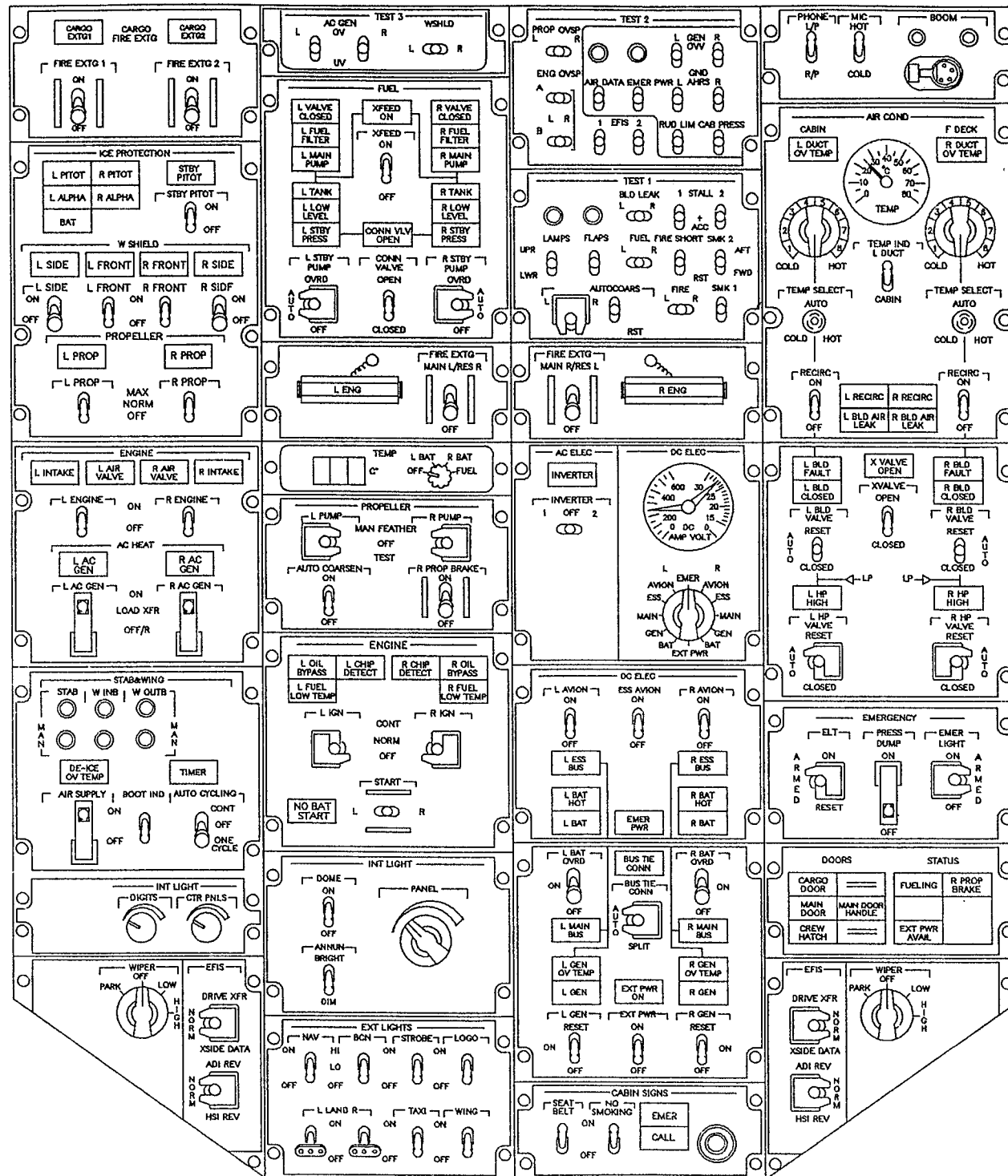
AIRCRAFT GENERAL, COCKPIT Description



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FIG. 9 Standard overhead panel and pedestal
King avionics shown (Highest modification standard shown)

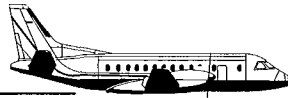
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FIG. 10 Max option overhead panel and pedestal.
Collins avionics shown. (Highest modification standard shown)

1/2.1



6. COCKPIT DOOR

To open the cockpit door from the cabin, the rounded knob on the cockpit door is turned and the door pulled open. The door can be latched in the fully open position by pressing it against a door catcher located on the cover panel to the avionic rack.

The door can be latched closed on the cockpit side by turning the latch lever to locked position as indicated by the red marking beside the lever.

In case of a rapid decompression, the door has a pressure equalization panel (blowout panel) to equalize the pressure between the passenger compartment and the cockpit.

In event that cockpit door cannot be opened toward passenger cabin due to immovable obstruction on cabin side, the door may be partially opened into the cockpit as follows:

- a) Remove the jumpseat assembly from its frame.
- b) Turn the door stop (colored red) adjacent to the rounded knob on the door jamb.
- c) Release the pintle latch by turning on the rounded knob.
- d) Pull the door inwards.

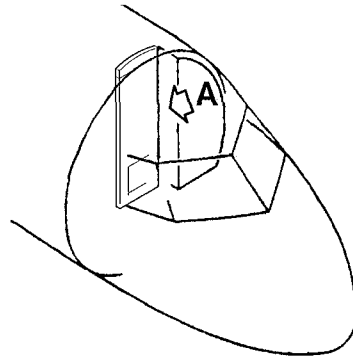
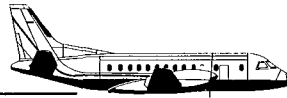
NOTE

Easy or full opening of the door may be obstructed by the observer's smoke mask assembly, jumpseat harness buckle holder, etc. However, slight force should overcome such obstructions.

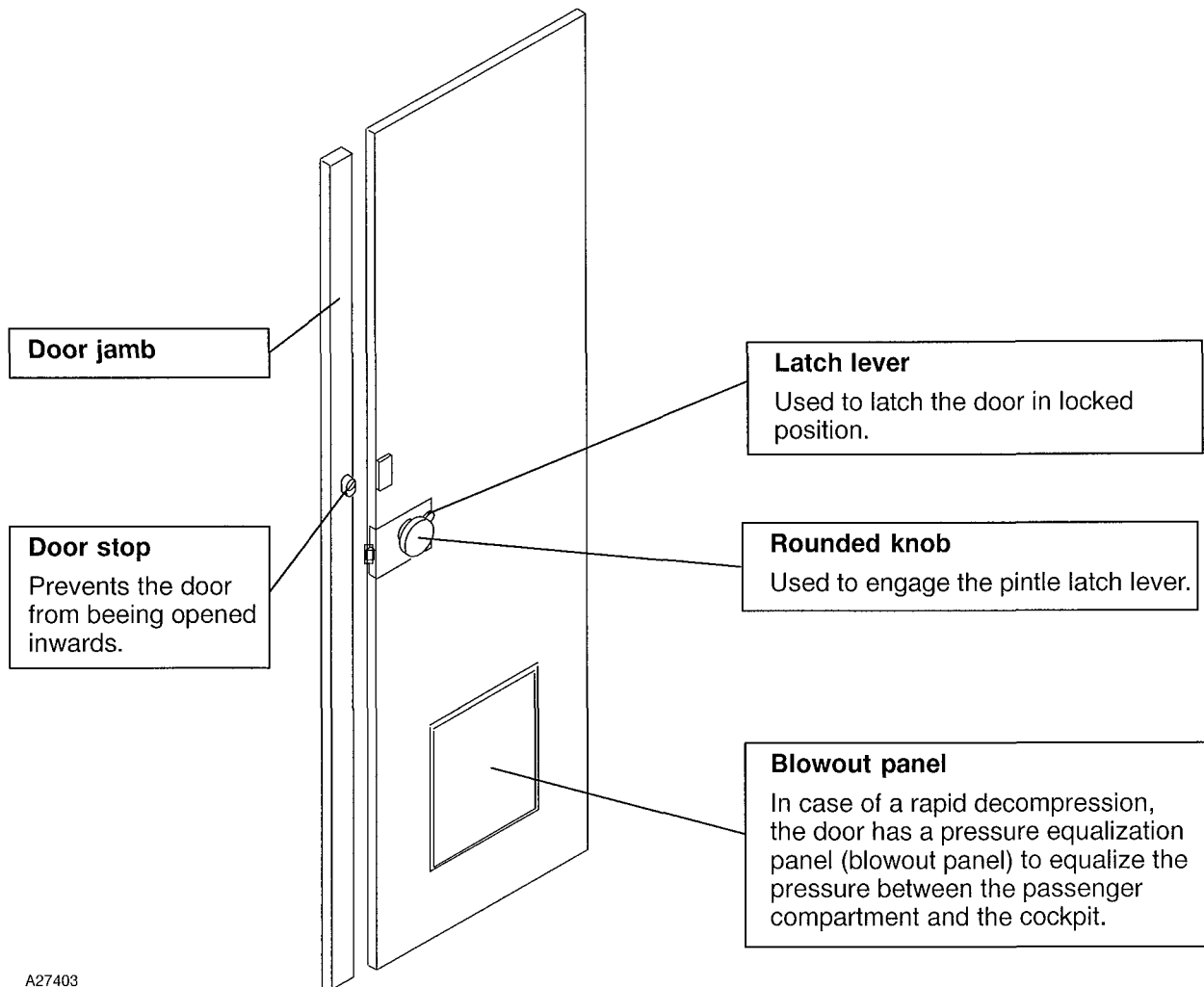
CAUTION

Due to possibility of damage to door assembly, hinge, etc., opening of door inwards is considered an abnormal operation, and shall be attempted only if an immovable obstruction prevents normal opening of the door in a timely manner.

Note that emergency egress from the cockpit in event cockpit door cannot be opened, or is inaccessible, shall be via the cockpit emergency escape hatch.



A FLIGHT COMPARTMENT DOOR



A27403

FIG. 1 Cockpit Door



6. COCKPIT DOOR

6.1 General

To meet new requirements for protection of cockpit and cockpit crew from intrusion by unauthorized personnel, Saab 340 aircraft have been fitted with a reinforced cockpit door. In addition to a complete lack of means of opening the door from the cabin side, the door also provides protection from forced entry, including such attempted entry by use of battering instruments and large-caliber handguns.

6.2 Main components

The door is constructed of reinforced composite board to withstand intrusion force, with ballistic material added to forward face (i.e., cockpit side). As noted above, tests have proven the door's capability of resisting repeated battering by weighted sledge, and repeated impact from large-caliber handgun rounds.

The lock pintle and barrel assembly and door hinge are reinforced to resist intrusion. The door can only be locked or unlocked from the cockpit, by means of a spring-loaded pintle and latch. A short nylon lanyard is provided to assist in closing of the door by aircrew.

The pressure equalization panel ("blowout panel") fitted in the cockpit door is constructed of non-reinforced material. However, on the cockpit side of the cockpit door, a built-up cage assembly is fitted to prevent entry – including partial entry – into the cockpit should the "blowout" panel be compromised. The forward face (i.e., cockpit side) of this cage includes a panel made from ballistic material to resist gunfire, etc.

Also, on either side of the cockpit entryway, immediately adjacent to the metal cage, two panels made from ballistic are fitted to protect aircrew from firearm discharge.

The cockpit door jamb is reinforced by a heavy-gauge aluminum abutment. The abutment angle is attached to the cockpit side of the door jamb by three clevis pins, thus allowing removal of the abutment angle by aircrew in event door must be opened inward.

A large, clear-vision, armored-glass sight window is fitted to allow observation of the passenger cabin from the cockpit. A cover is fitted to the sight window on the cockpit side of the door, to prevent viewing of cockpit from cabin side of door.

6.3 Normal Operation

As stated above, the cockpit door cannot be opened, or latched closed, from the passenger cabin side of the door.

– To close door, either aircrew member pulls door towards closed position via the nylon lanyard. To engage the latch, lift up the small rounded knob to release the pintle latch lever, and slide the pintle latch lever inboard. Pull the door to the closed position, release the rounded knob, and pintle will latch closed. Proper latching of the pintle is indicated by observation of the green band painted above the rounded knob. Attempt to slide the pintle latch lever inboard to ensure proper latching – if latched properly, the lever will not move.

– To open the door, lift up on the rounded knob, and slide the pintle latch lever inboard. Door can now be pushed open.

NOTE

There is no longer any installed means of latching the door in the open position.

– To observe the passenger cabin, rotate the sight window cover either right or left to uncover the window. DO NOT attempt to lift the cover, as damage to the cover attach point will occur.

6.4 Abnormal Operation

In event that cockpit door cannot be opened toward passenger cabin due to immovable obstruction on cabin side, the door may be partially opened into the cockpit as follows:

- Remove the jumpseat assembly from its frame.
- Slide the grill latch to remove the blowout panel cage assembly removable grill (with Mod No. 3133 installed).



- c) Remove the three clevis pins from the abutment angle by pressing down the knob on the clevis pins and pulling them out.
- d) Remove the abutment angle.
- e) Release the pintle latch by lifting up on the rounded knob, and slide the pintle latch lever inboard.
- f) Pull the door inwards.

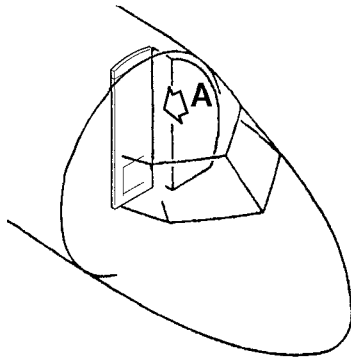
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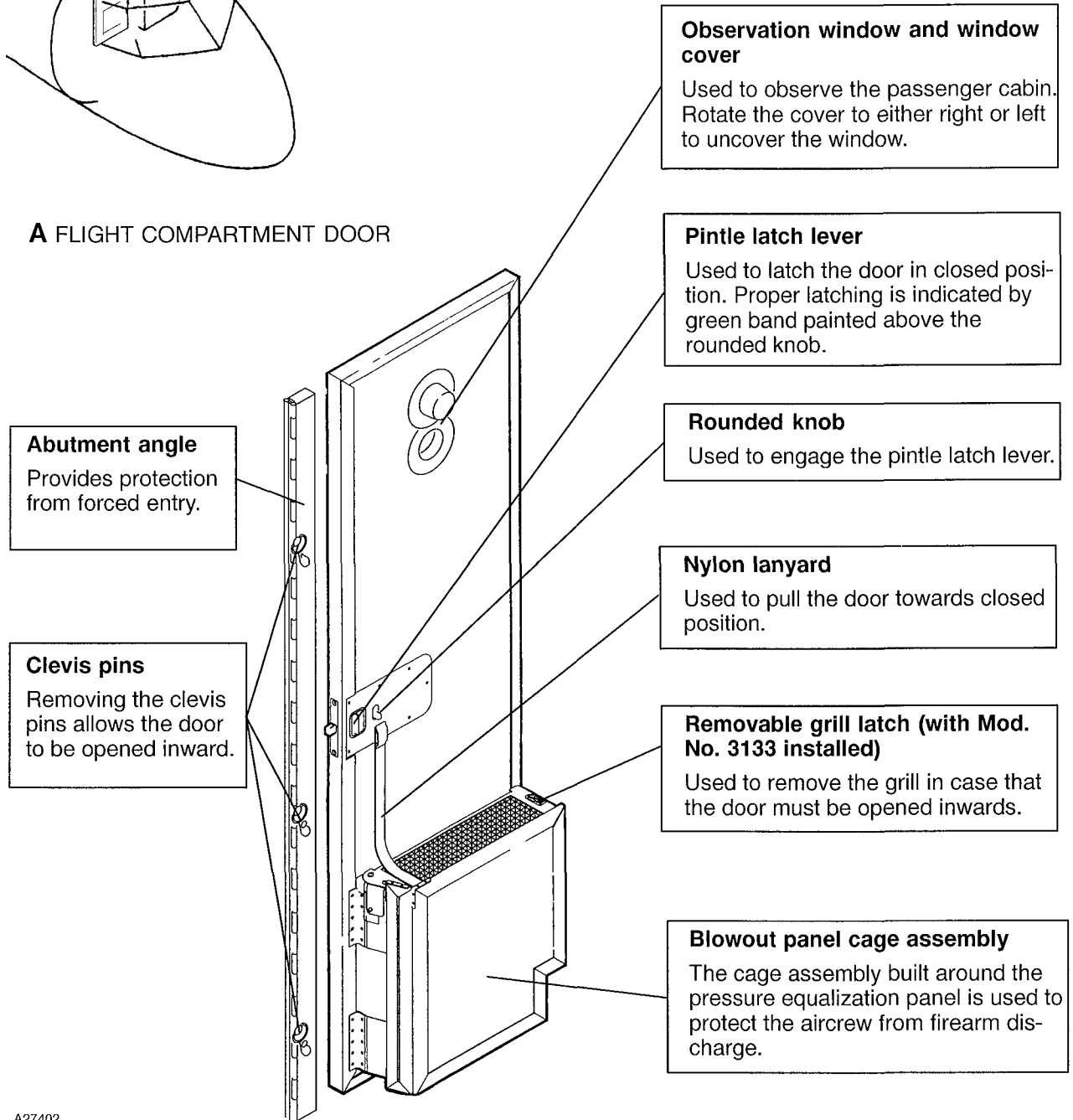
CAUTION

Due to possibility of damage to door assembly, hinge, etc., opening of door inwards is considered an abnormal operation, and shall be attempted only if an immovable obstruction prevents normal opening of the door in a timely manner.

As was case prior to installation of reinforced cockpit door, emergency egress from the cockpit in event cockpit door cannot be opened, or is inaccessible, shall be via the cockpit emergency escape hatch.



A FLIGHT COMPARTMENT DOOR



A27402

FIG. 1 Cockpit Door