

Operational Excerpts

Flight and Operations Manuals

NTSB Investigation ERA22FA004

General Operations Manual



PAK WEST AIRLINES, INC. dba SIERRA WEST AIRLINES OPERATIONS MANUAL

2.24 OPERATIONAL CONTROL

Operational Control is defined in FAR 1 as "the exercise of authority over initiating, conducting and terminating a flight". Operational Control is exercised through both active and passive means:

Passive Control consists of developing and publishing policies and procedures for operational control personnel and Flight Crews to follow in the performance of their duties and assuring adequate information and facilities are available to conduct the planned operation.

Active control consists of making those decisions and performing those actions necessary to operate a specific flight such as crew scheduling, accepting charter flights from the public, reviewing weather and Notams, and flight planning.

Pak West Airlines is responsible for ensuring that both Flight Crews and Operational Control employees comply with Pak West Airlines published policies and procedures.

2.25 OPERATIONAL CONTROL PROCEDURES

The Director of Operations is responsible and has the authority to direct all operational functions. In addition to the Director of Operations, the personnel listed below are authorized to exercise Operational Control:

- The President;
- The Vice President;
- The Chief Pilot;
- The Director of Maintenance for maintenance matter;
- The Assistant Director of Maintenance for maintenance matter;
- The Flight Control Manager;
- The Flight Followers;

Any person with the responsibility of initiating or terminating a flight shall be trained to the satisfaction of the Director of Operations or his/her designated representative to include "pilot rest requirements" and "pilot flight time requirements". The Director of Operations will identify deficiencies and hazards by reviewing a risk assessment completed by both Flight Crews and Flight Followers prior initiating a flight or series of flights. The Flight Follower or Flight Control Manager will be immediately notified via telephone of any necessary corrective action, including termination or cancellation of a flight or series of flights.



PAK WEST AIRLINES, INC. dba SIERRA WEST AIRLINES
OPERATIONS MANUAL

4.1 DEFINITIONS (continued)

"*MEL Deferral Extension*" means a process used by maintenance to extend a current or expired MEL Item.

"*Non-Essential Maintenance*" means Items which can be improved for the convenience of the crew and that do not affect the airworthiness of the aircraft or safety of flight such as upholstery, paint, coffee service etc. and must not be an MEL item.

"*Stabilizing Approach Concept*" means the procedure by which the crew maintains a stable speed, configuration; descent rate, vertical flight path, and engines spooled.

"*VOR Check*" means the procedure by which the crew checks the VOR equipment, one system against the other to verify the maximum permissible variation between the two indicated bearings is no more than 4 degrees and records the value on the Aircraft Flight Log. The VOR Check will also be accomplished by compliance with any of the provisions of FAR §91.171.

4.2 CREW SCHEDULING

(a) Flight Crews will normally be relieved of all duties 15 minutes after the completion of a series of flights. A rest periods in accordance with FAR §135.267 will commence at that time. The Flight Control Follower and the Flight Crew Members will record all flight time and duty time. The Flight Crew Members will use Form PW007 "Flight Crewmembers Flight / Duty Time Report". (Appendix A-4) The Crew Scheduler will be responsible for scheduling pilots. He / She will post the schedule on a scheduling board and notify each pilot of the duty schedule. The Crew Scheduler may delegate the schedule to a Flight Control Follower, but must monitor the scheduling and records on a daily basis.

(b) No Flight Crew Member will be scheduled so that his/her flight and duty time will exceed standards set forth in FAR §135.261 and FAR §135.267.

(c) Procedures for Part 91 "deadhead home": A duty day may exceed 14 hours up to a maximum of 16 hours under the following criteria: At least one management person listed in Operations Specifications paragraph A006 (Excluding maintenance personnel), other than the pilot assigned, must be consulted. The decision must be optional to the Flight Crews. Conditions such as fatigue, En-route / destination weather, meals, etc. should be taken in consideration.

(d) At least one management person listed in Operations Specifications paragraph A006 (excluding maintenance personnel), other than the pilot assigned, must be notified prior to conduct a Part 135 flight or series of flights outside the US, Canada and Mexico.

(e) No Crewmember will be unavailable during scheduled time without an approved "Request for Time off", Appendix A-3.



PAK WEST AIRLINES, INC. dba **SIERRA WEST AIRLINES**
OPERATIONS MANUAL

4.6 CREW COORDINATION (continued)

SITUATION	PILOT NON FLYING (PNF)	PILOT FLYING (PF)
CRUISE	Checklist (200° Off ATL Callout)	
DESCENT		
Passing 18,000 Feet MSL	"Altimeter Set Right (or left)"	"Altimeter Set Left (or right)" "Descent Checklist"
	Reads Descent Checklist "Descent Checklist Complete"	"Roger"
Upon Receiving First Approach Vector, or When Cleared For Approach	Read, Back Instructions Prepare App, Plate and Nav Receivers	Confirm "Approach Checklist" Approach Briefing "Roger"
APPROACH IFR		
First Positive Inward Motion	"Course Alive" Or	"Roger"
Of VOR Or LOC Course	"Localizer Alive"	
At FD Or AP Capture of Course	" Localizer Capture, Flight DIR and/or Auto Pilot"	"Roger"
First Positive Movement of Glideslope Needle	"Glideslope Alive"	"Roger"
At One Dot Below Glideslope	Read Before Landing Checklist "Before Landing Checklist Complete"	"Gear Down, Before Landing Checklist" "Roger"
At FD or AP Capture of Glideslope	"Glide Slope Capture Flight Director and/or Autopilot"	"Roger"
1,000 Feet Above DH or MDA	"1,000 Above Minimums Ref _____ + Sink _____"	"Roger"
500 Feet Above DH or MDA	500 Above Minimums Ref _____ + Sink _____"	"Roger"
100 Feet Above DH or MDA	"100 Above Minimums Ref _____ + Sink _____"	"Roger"



PAK WEST AIRLINES, INC. dba **SIERRA WEST AIRLINES**
OPERATIONS MANUAL

4.6 CREW COORDINATION (continued)

SITUATION	PILOT NON FLYING (PNF)	PILOT FLYING (PF)
PRECISION APPROACH		
At DH	"Minimums. Runway or Lights in Sight." Or "No Runway."	"Going Visual" or "Missed Approach"
Immediately After "Going Visual" Call.	"REF _____ + Sink _____"	No Response
NON-PRECISION APPROACH		
At MDA	"Minimum."	"Roger"
Upon Reaching Map, Or Sighting Runway	Runway Or Lights In Sight _____ O'clock or "No Runway"	"Going Visual" Or "Missed Approach."
Upon Initiating Final Descent At VDP	"REF _____ + Sink _____"	"Starting Down"
At 100 Feet Above TDZE	"REF _____ + Sink _____"	No Response
VISUAL APPROACH		
1500 Feet Above Touchdown	"1500 Above, REF _____ + Sink _____"	"Confirm Gear Down"
1000 Feet Above Touchdown	"1000 Above, REF _____ + Sink _____"	"Roger"
500 Feet Above Touchdown	"500 Above, REF _____ + Sink _____"	"Roger"
100 Feet Above Touchdown	"100 Above, REF _____ + Sink _____"	"Roger"
MISSED APPROACH	Read Missed Approach Checklist	"Missed Approach Checklist"
	"Missed Approach Checklist"	"Roger"

PAK WEST AIRLINES, INC. dba SIERRA WEST AIRLINES
STANDARD OPERATING PROCEDURES
FALCON 20 SERIES

SOP

FALCON 20 SERIES

Flow patterns are disciplined procedures; they require pilots who understand the aircraft systems/controls and who methodically accomplish the flow pattern.

Checklists

Use a challenge-response method to execute any checklist. After the PF initiates the checklist, the PNF challenges by reading the checklist item aloud. The PF is responsible for verifying that the items designated as PF or his seat position (i.e., LH or RH) are accomplished and for responding orally to the challenge. Items designated on the checklist as PNF or by his seat position are the PNF's responsibility. The PNF confirms the accomplishment of the item, then responds orally to his own challenge. In all cases, the response by either pilot is confirmed by the other and any disagreement is resolved prior to continuing the checklist.

After the completion of any checklist, the PNF states "___ checklist is complete." This allows the PF to maintain situational awareness during checklist phases and prompts the PF to continue to the next checklist, if required.

Effective checklists are pertinent and concise. Use them the way they are written: verbatim, smartly, and professionally.

Omission of Checklists

While the PF is responsible for initiating checklists, the PNF should ask the PF whether a checklist should be started if, in his opinion, a checklist is overlooked. As an expression of good crew resource management, such prompting is appropriate for any flight situation: training, operations, or checkrides.

Standard Operating Procedures

Challenge/No Response

If the PNF observes and challenges a flight deviation or critical situation, the PF should respond immediately. If the PF does not respond by oral communication or action, the PNF must issue a second challenge that is loud and clear. If the PF does not respond after the second challenge, the PNF must ensure the safety of the aircraft. The PNF must announce that he is assuming control and then take the necessary actions to return the aircraft to a safe operating envelope.

Abnormal/Emergency Procedures

When any crewmember recognizes an abnormal or emergency condition, the PIC designates who controls the aircraft, who performs the tasks, and any items to be monitored. Following these designations, the PIC calls for the appropriate checklist. The crewmember designated on the checklist accomplishes the checklist items with the appropriate challenge/response.

NOTE: "Control" means responsible for flight control of the aircraft, whether manual or automatic.

The pilot designated to fly the aircraft (i.e., PF) does not perform tasks that compromise this primary responsibility, regardless of whether he uses the autopilot or flies manually.

Both pilots must be able to respond to an emergency situation that requires immediate corrective action without reference to a checklist. The elements of an emergency procedure that must be performed without reference to the appropriate checklist are called memory or recall items. Accomplish all other abnormal and emergency procedures while referring to the printed checklist.

Accomplishing abnormal and emergency checklists differs from accomplishing normal procedure checklists in that the pilot reading the checklist states both the challenge and the response when challenging each item.

Advising of Aircraft Configuration Change

If the PF is about to make an aircraft control or configuration change, he alerts the PNF to the forthcoming change (e.g., gear, speedbrake, and flap selections). If time permits, he also announces any abrupt flight path changes so there is always mutual understanding of the intended flight path.

Time permitting, a PA announcement to the passengers precedes maneuvers involving unusual pitch or bank angles.

Standard Operating Procedures

Descent (continued)

PF

PNF

At Appropriate Workload Time

REVIEW

REVIEW

Review the following:

- approach to be executed
- field elevation
- appropriate minimum sector altitude(s)
- inbound leg to FAF, procedure turn direction and altitude
- final approach course heading and intercept altitude
- timing required
- DA/MDA
- MAP (non-precision)
- VDP
- special procedures (DME step-down, arc, etc.)
- type of approach lights in use (and radio keying procedures, if required)
- missed approach procedures
- runway information conditions

ACTION Brief the following:

- configuration
- approach speed
- minimum safe altitude
- approach course
- FAF altitude
- DA/MDA altitude
- field elevation
- VDP
- missed approach
 - heading
 - altitude
 - intentions
- abnormal implications.

Accomplish as many checklist items as possible. The Approach checklist must be completed prior to the initial approach fix.

Visual Traffic Patterns

PF

PNF

Before Pattern Entry/Downwind (1,500 Ft Above Airport Surface)

CALL "Approach checklist."

ACTION Complete Approach checklist.

CALL "Approach checklist complete."

Downwind

CALL "Flaps 10/15."

CALL "Flaps selected 10/15."

When flaps indicate 10°/15°, "Flaps indicate 10/15."

CALL "Flaps 25."

CALL "Flaps selected 25."

When flaps indicate 25°, "Flaps indicate 25."

CALL "Gear down. Before Landing checklist."

CALL "Altimeters check."

CALL "Gear selected down."

When gear indicates down, "Gear indicates down."

ACTION Complete Before Landing checklist except for full flaps.

Visual Traffic Patterns (continued)

PF

PNF

At 1,000 Ft Above Airport Surface

CALL "Check."

CALL "1,000 AGL."

At 500 Ft Above Airport Surface

CALL "Check."

CALL "500 AGL."

VDP

Standard Operating Procedures

Landing

PF

PNF

At Point on Approach When PF Sights Runway or Visual Reference (Landing Assured)

CALL "Going visual. Land.
Flaps 40."

CALL "Flaps selected 40."

When flaps indicate
40, "Flaps indicate
40."

ACTION Push autopilot and
trim disconnect
switch.

ACTION Continue with:

- speed check
- vertical speed
check
- callouts
- gear down
verification
- flap verification.

CALL "Autopilot off."

CALL "Final gear and flaps
recheck. Before
Landing checklist
complete."

At 100 Ft Above Touchdown

CALL "100 ft."

At 50 Ft Above Touchdown

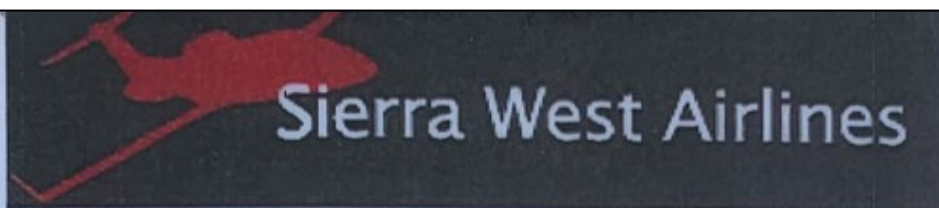
CALL "50 ft."

At Touchdown

CALL "Extend airbrakes."

ACTION Extend airbrakes.

CALL "Airbrakes extended."



Takeoff Data								Landing Data	
1000' PA									
Weight X 1000 Lbs.	V ₁	V _R	V ₂	Balanced Field Length				V _{REF}	Landing Field Length
				50°F 10 °C	68°F 20 °C	86°F 30 °C	104°F 40 °C		
TO EPR				1.57	1.54	1.52	1.48		
MC EPR				1.49	1.48	1.43	1.39		
MC RPM				95.2	96.2	96.5	96.3		
28.6	135	136	132	6300	6850	7200	8300	NA	NA
28	133	135	131	6050	6500	6850	7900	NA	NA
27	131	132	128	5700	6150	6400	7500	132	5225
26	128	130	126	5100	5500	5950	6800	129	4975
25	126	127	124	4700	5100	5400	6300	127	4700
24	123	125	121	4400	4700	5050	5700	124	4550
23	122	125	121	4250	4500	4850	5400	122	4400
22	121	125	120	4100	4350	4700	5200	119	4275
21	121	125	120	3950	4200	4500	5000	116	4125
20	120	125	120	3800	4050	4350	4800	113	3975
19	120	125	120	3700	3900	4200	4700	110	3825
18	120	125	121	3600	3750	4050	4600	107	3675
17.5	120	125	121	3500	3600	3900	4500	104	3525

Take Off Notes: No Wind, No Slope, Antiskid On, Engine Anti-Ice Off, Flaps 15° except where noted.
 = Zero Flaps Use Adapted Thrust Takeoff Procedure whenever possible.
 Landing Notes: No Wind, No Slope, Dry Surface, Flaps 40, Antiskid On, ISA



AFTER TAKEOFF

Landing Gear	NFP	UP & LIGHTS OUT
Landing/ Taxi Lights	NFP	OFF & RETRACTED
Flaps	NFP	UP & LIGHTS OUT
Igniters	NFP	OFF
Engine/ Airframe Anti-ice	NFP	AS REQUIRED
Pressurization	NFP	CHECKED
Climb Power	NFP	STATE EGT & RPM, VERIFY WITHIN LIMITS

CRUISE

Cruise Power	NFP	SET
Pressurization	FO	CHECKED
Ammeters	NFP	CHECKED

DESCENT

Atis / Approach briefing	C/FO	COMPLETE
Seat Belt/Shoulder Harness	C/FO	SECURED
Altimeters	C/FO	SET
Pressurization	FO	SET
Fuel Balance & Quantity	NFP	CHECKED
Hydraulic Pressure & Quantity	NFP	CHECKED
Circuit Breakers	C/FO	CHECKED
Landing Data	NFP	SET

APPROACH

Altimeters	C/FO	SET
Flight & Nav Instruments	C/FO	SET
Anti-Ice & Igniters	NFP	AS REQUIRED
Approach Briefing	FP	COMPLETE

BEFORE LANDING

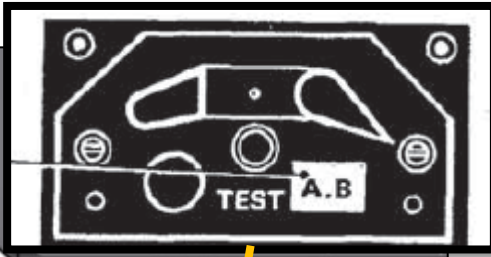
Igniters	NFP	AS REQUIRED
Gear	NFP	DOWN & THREE GREEN
Antiskid	NFP	TESTED
Hydraulic Pressure & Quantity	NFP	CHECKED
Airbrake	NFP	RETRACTED & LIGHT OUT
Flaps	NFP	STATE POSITION
Landing Lights	NFP	On
Radar	NFP	On

Operator supplied photographs of
accident airplane cockpit





Alarm indicator
red light



DA20 AIRPLANE FLIGHT MANUAL EXCERPTS, OPERATING MANUAL



FAN JET FALCON AIRPLANE FLIGHT MANUAL

BASIC FJF + SERIES D
WITH VMO/MMO = 370 kt/0.85

LIMITATIONS

AIRSPEED LIMITATIONS (cont'd)

MAXIMUM LANDING GEAR OPERATING SPEED (VLO)

VLO	190 kt
-----	--------

VLO is the maximum speed for lowering or raising the landing gear.

MAXIMUM LANDING GEAR EXTENDED SPEED (VLE)

VLE	220 kt
-----	--------

VLE is the maximum speed for operation with the landing gear extended and locked with the doors closed.

NOTE : *When the landing gear has been extended using the emergency extension system, the landing gear doors will remain open ; therefore, limit the operating speed to VLO = 190 kt.*

MISCELLANEOUS MAXIMUM SPEEDS

VLLO	Maximum retractable landing light operating speed	220 kt
VLLE	Maximum retractable landing light extended speed	220 kt
VABO	Maximum airbrake operating speed	No special limitation
VABE	Maximum airbrake extended speed	
VWVO	Maximum windshield wiper operating speed	180 kt

Tires

Tires approved for 180 mph	157 kt (ground speed)
Tires approved for 200 mph	174 kt (ground speed)



FAN JET FALCON AIRPLANE FLIGHT MANUAL

ALL

LIMITATIONS

TEMPORARY REVISION No 27

FILING INSTRUCTIONS

Insert this page adjacent to page 1-10-4 or 1-10A-4 or 1-10B-4 or 1-10C-4 or 1-10D-4.

AIRSPPEED LIMITATIONS

Add the following item at the end of the text:

CAUTION: *DO NOT INTENTIONALLY FLY THE AIRPLANE SLOWER THAN INITIAL STALL WARNING ONSET.*

DASSAULT AVIATION Proprietary Data

DTM589 / 590 / 591 / 592

EASA APPROVED

TEMPORARY REVISION No 27

FOR TRAINING PURPOSES ONLY

Section	1
Sub-section	10
Page	4



FAN JET FALCON AIRPLANE FLIGHT MANUAL

ALL

LIMITATIONS

MISCELLANEOUS LIMITATIONS

CABIN PRESSURIZATION LIMITATIONS

Δp is the difference between cabin pressure and outside static pressure.

Maximum Δp (pressure relief valve setting)	8.5 psi
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AIRBRAKE OPERATING LIMITATIONS

In approach with flaps extended, the airbrakes must be retracted. If the approach is made with the anti-icing on, the airbrakes may be extended down to 500 ft above the ground.

DRAG CHUTE OPERATIONAL LIMITATION

It is forbidden to use the drag chute in flight. On the ground, with a crosswind component exceeding 15 kt, do not deploy the drag chute before nose-wheel touch down.

WINDOW HEAT LIMITATIONS

MAX. position shall be used exclusively in flight if NOR. position cannot prevent ice from accumulating on the windows.

HYDRAULIC FLUID APPROVED

The hydraulic fluid used in the hydraulic systems must conform to MIL-H-5606 specification.

LIMITATIONS FOR USE OF REAR COMPARTMENT

It is forbidden to use the rear compartment for storage of baggage and spares kit.

TAKE-OFF AND LANDING ON WATER OR SLUSH COVERED RUNWAY

Maximum height of water or slush: 0.5 inch (12.7 mm).

SLIDING WINDOW

Maximum speed for use of the sliding window 160 kt

THIS PAGE IS APPLICABLE TO
MODEL: MODEL : ALL
EXCEPT SPECIFIC SUPPLEMENT No 11.



AVIONS MARCEL DASSAULT-BREGUET-AVIATION
FAN JET FALCON
AIRPLANE FLIGHT MANUAL
SECTION 5
PERFORMANCE

DEFINITIONS (cont'd)

=====

- VLOF, lift-off speed :
Speed at which the airplane first becomes airborne.
- V2, take-off safety speed :
The scheduled target speed to be attained at the 35 ft (10.7 m) height with one engine inoperative.
- V2 min., minimum take-off safety speed :
Speed designed not to be less than :
1.2 time the stalling speed in take-off configuration.
1.1 time the minimum control speed in the air, VMCA.
- VREF, reference speed :
Speed equal to or higher than 1.3 times the stalling speed in the normal landing configuration.
For the Series F, reference speed may be higher than 1.3 VS.

ATMOSPHERIC DATA

OAT, outside air temperature :
The free air static temperature.

RAT, ram air temperature :
Sum of the static temperature and the temperature increase resulting from adiabatic compression taking into account the recovery factor of the probe.

QFE, field pressure :
The actual atmospheric pressure at the elevation of the airport.

Wind :
Reported wind component at 50 ft (15m) height.
- Headwind or tailwind : component parallel to the flight path.
- Crosswind : component perpendicular to the flight path.

To determine the performance, the considered headwind component value shall not exceed associated crosswind component of 25 kt.

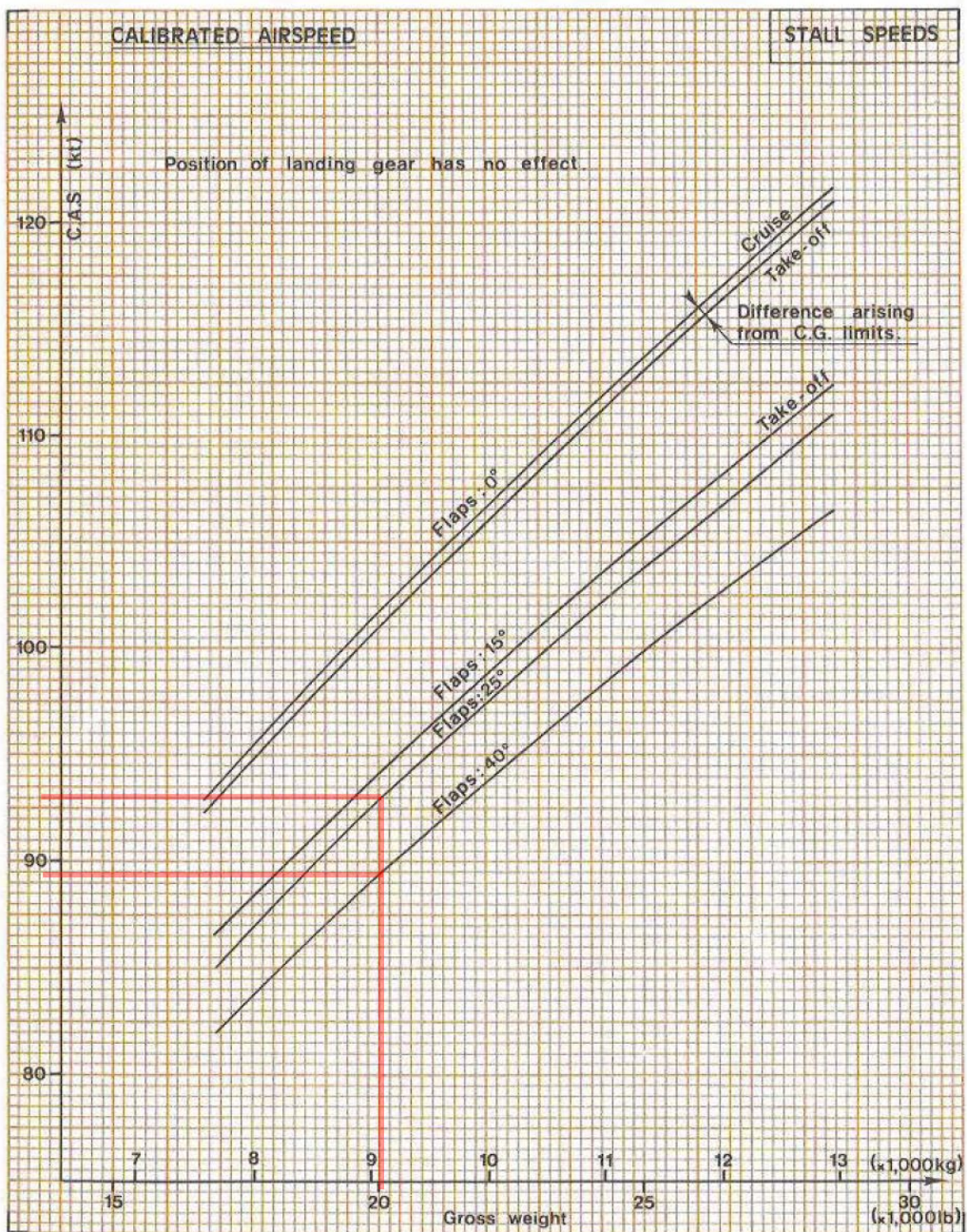
ALTITUDES, HEIGHTS, AND CLIMB GRADIENTS

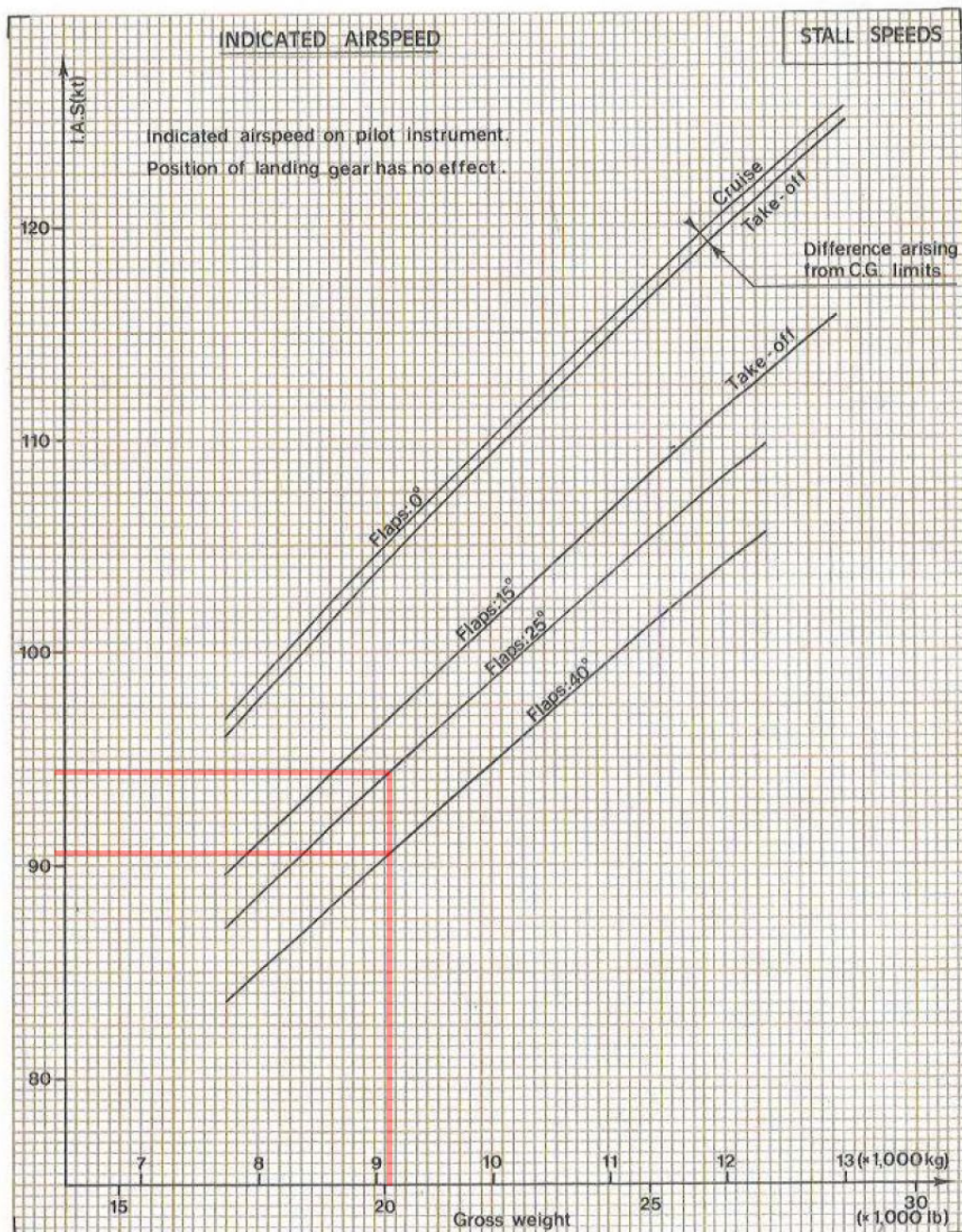
Zp, pressure altitude :
Vertical distance from a level reference corresponding to 1,013.2 mbar (29.92 in. Hg).

THIS PAGE IS APPLICABLE TO
MODEL: BASIC FJF + SERIES D + E.



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FAN JET FALCON
AIRPLANE FLIGHT MANUAL
SECTION 5
PERFORMANCE

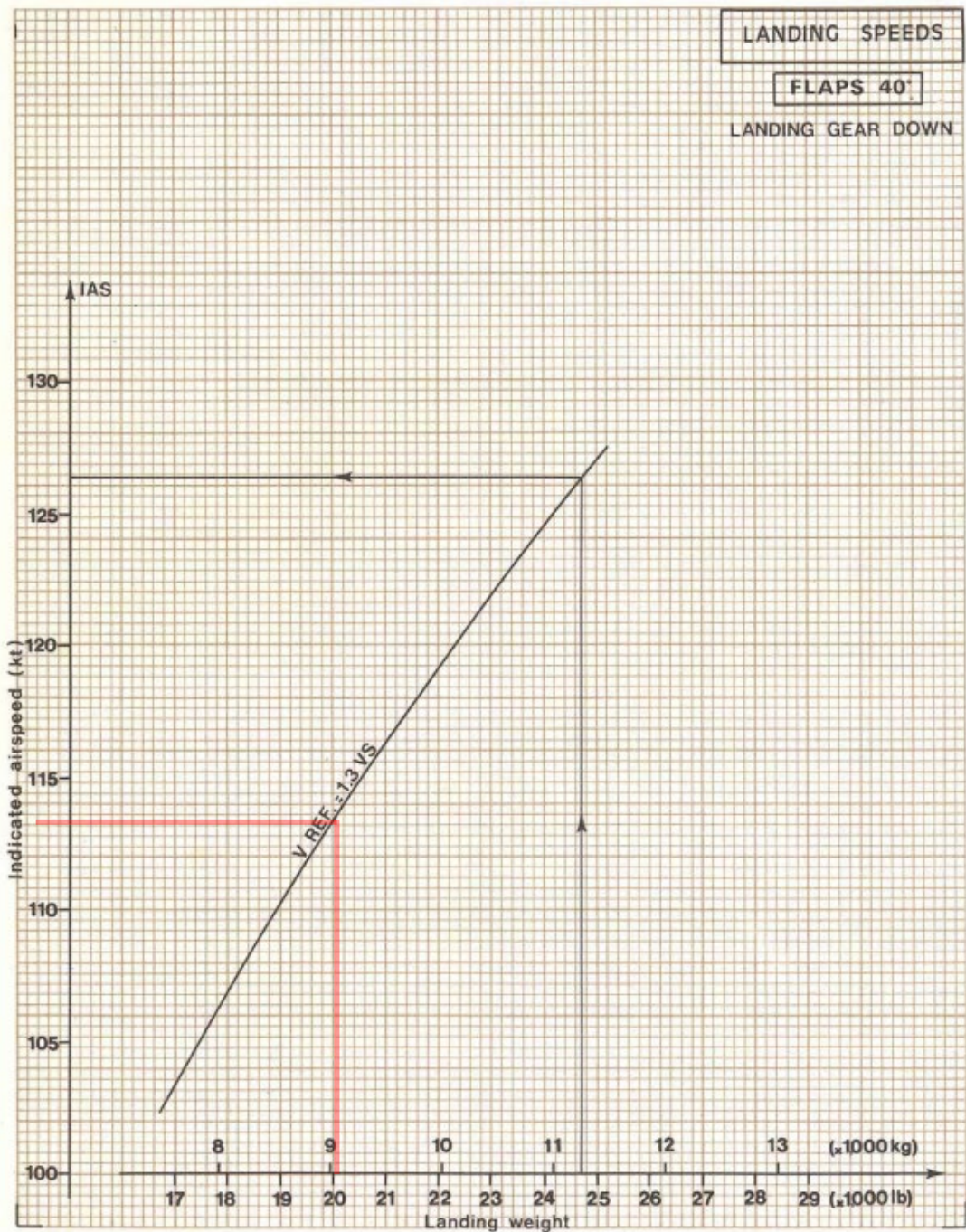




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WITH: CF700-2C.



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FAN JET FALCON
AIRPLANE FLIGHT MANUAL
 SECTION 5
 PERFORMANCE



AVIONS MARCEL DASSAULT
FAN JET FALCON
AIRCRAFT OPERATING MANUAL

MISCELLANEOUS SYSTEMS
STALL WARNING

STALL WARNING

Stall warning system is designed to inform the pilot of a forthcoming stall, by sounding of an aural warning. Moreover, this system will energize and relight automatically the engines at a certain angle-of-attack.

System equipping airplanes is a GIANNINI system. GIANNINI stall warning system receives angle-of-attack data from a vane located on RH fuselage skin. Power supply is non-shed 28 VDC. The vane will position itself in the wind therefore as function of the angle of attack. System functions as follows :

- For basic FAN JET FALCON, Series D, Series E and MYSTERE-FALCON 20-C5, -D5 and -E5 airplanes

- . Aural warning contact for $26^{\circ} \pm 45'$ from fuselage horizontal reference (FHR).
- . In-flight relight for $28^{\circ} \pm 45'$ from fuselage horizontal reference.

- For FAN JET FALCON Series F and MYSTERE-FALCON 20-F5 airplanes

- . Aural warning contact for $32^{\circ} \pm 45'$ from FHR.
- . In-flight relight contact for $34^{\circ} \pm 45'$ from FHR.

The $26^{\circ} \pm 45'$ contact (or $32^{\circ} \pm 45'$ for FAN JET FALCON Series F and MYSTERE-FALCON 20-F5 airplanes) triggers the aural warning.

The $28^{\circ} \pm 45'$ contact (or $34^{\circ} \pm 45'$ for FAN JET FALCON Series F and MYSTERE-FALCON 20-F5 airplanes) triggers operation of in-flight relight system.

A microswitch on RH landing gear shock-absorber de-activates stall warning system on the ground. Ground and flight test of stall warning system is possible by means of two buttons "STALL FLIGHT" and "STALL GROUND" on pedestal flap-leading edge control unit.

The vane is heated electrically by copilot pitot tube heating system.

Stall warning system operation initiates ignition at 28° (or 34° , FAN JET FALCON Series F and MYSTERE-FALCON 20-F5 airplanes) and illuminates "IGNITERS ON" lights.

Ignition will automatically be cut-off 10 seconds after the vane has moved to below 26° (32° , FAN JET FALCON Series F and MYSTERE-FALCON 20-F5 airplanes).



FAN JET FALCON
AIRCRAFT OPERATING MANUAL
TEMPORARY REVISION No 15

MISCELLANEOUS SYSTEMS
STALL WARNING

FILING INSTRUCTIONS

Insert this page adjacent to page 07.161(3).

STALL WARNING

The stall warning angles are modified as follows:

For FAN JET FALCON Basic, Series D, Series E, Series F .

Airplane Type	Stall Vane Angles (From FHR)	
	Audio	Audio plus ignition
FAN JET FALCON, Basic Series D and Series E	$26^{\circ} \pm 45'$	$28^{\circ} \pm 45'$
FAN JET FALCON, Series F	$32^{\circ} \pm 45'$	$34^{\circ} \pm 45'$

For MYSTERE FALCON 20, Models C5, D5, E5, F5.

Airplane Type	Stall Vane Angles (From FHR)
	Audio plus ignition
MYSTERE – FALCON 20, Models C5, D5, E5	$26^{\circ} \pm 45'$
MYSTERE – FALCON 20, Model F5	$32^{\circ} \pm 45'$

NOTE: For MYSTERE–FALCON 20, Models C5, D5, E5, F5, in case of failure of above contacts, the following contacts ensures the ignition only:

28° (for Models C5, D5, E5).

34° (for Model F5).

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AIRCRAFT OPERATING MANUAL

MISCELLANEOUS SYSTEMS
AURAL WARNING

AURAL WARNING

Aural warning device is located in the radio compartment behind the pilot's head. It is powered by non-shed 28 VDC. Warning functions as follows :

- A sound is heard in the loud speaker and in pilot and copilot headsets.

Aural warning and horn are heard in the following conditions :

CONDITIONS	SOUNDS
1. Landing gear "NOT EXTENDED" with the throttles at less than 80-85%.	Steady low pitch (250 Hz).
2. Landing gear "NOT EXTENDED" with the throttles at less than 80-85% and the flaps are more than 28° out.	Steady low pitch (250 Hz) (warning cannot be silenced).
3. Cabin differential pressure above 8.7 psi (600 mb) or cabin-altitude above 10,000 ft.	Modulated low pitch (230 Hz) 1 second on - 1 second off.
4. Approaching stalling conditions.	Modulated medium pitch (850 Hz thru 50 Hz). 2/3 second on - 1/3 second off.
5. Mach limit.	High pitch with rapid cut-off (680 Hz thru 3,000 Hz). 4 to 5 cuts-off per second.
6. Fire detection.	Two-pitch sound.
7. Horizontal stabilizer in operation (normal or emergency control or autopilot in operation).	<ul style="list-style-type: none"> - <u>Single pitch clacker.</u> Intermittent sound in flight and on the ground (75 dB). - <u>Two-pitch clacker.</u> 89 dB level is activated. <ul style="list-style-type: none"> . On the ground with at least one throttle above 85% (MF20-()5) throttle above 88% (FJF). 75 dB level only is heard : <ul style="list-style-type: none"> . In flight. . On the ground with the throttles below 85% (MF20-()5) or 88% (FJF).

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MISCELLANEOUS SYSTEMS
 AURAL WARNING

CONDITIONS	SOUNDS
8. HORIZONTAL STABILIZER WARNING HORN - Basic FJF and MF20-C5 incorporating SB F20-179 and 275 - FJF Series D, E and F, MF20-D5, E5 and F5. Horizontal stabilizer above 4°40' nose-up (basic FJF, Series D, E, MF20-C5, -D5, -E5) 5°40' nose up (FJF series F, MF20-F5). Airplane on ground: throttles above 85% (MF20-()5) throttles above 88% (FJF)	Modulated medium pitch (1/2 second on 1/2 second off).

A control on the pedestal labeled "HORN SILENCE" enables to cut-off the following aural warnings :

- Fire detection.
- Landing gear "NOT EXTENDED" with the throttles below 80-85% and the flaps out at less than 28°.
- Cabin pressurization.

Four pushbuttons on the same box on pedestal enable to test the following warning systems :

- | | |
|---|---|
| <ul style="list-style-type: none"> - Stall warning (in flight or on the ground). - Cabin pressurization. - Mach limit. | <ul style="list-style-type: none"> - "STALL FLIGHT" and "STALL GROUND". - "CABIN PRESS" pushbutton, enabling also to test the light identified "CAB" on failure warning panel. - VMO/MMO pushbutton. |
|---|---|

Landing gear warning can be tested by means of "TEST" pushbutton on landing gear control panel and fire detection warning by means of "TEST" pushbutton on fire panel.

Horizontal stabilizer horn can be tested by means of "TEST TRIM" pushbutton located below trim position indicating panel.
 This button enables also to test "STAB" trim indicator red light (Basic FJF and MYSTERE-FALCON 20-C5 incorporating SB F20-179, FJF series D, E and F, MYSTERE-FALCON 20-D5, -E5, -F5).