Attachment 23

Operational Factors Group Chairman's Factual Report

DCA00MA030

PULL-UP Warning Escape Procedure

ADDITIONAL INFORMATION/CONSIDERATIONS

PULL-UP WARNING

This procedure is accomplished anytime the **"Whoop Whoop Pull-Up"** aural warning sounds or the red GPWS Warning Light illuminates with no associated aural signal.

Speedbrakes must be retracted during the GPWS escape maneuver to maximize climb performance. Maximum thrust and a best angle climb should be used to achieve maximum altitude gain in minimum distance to ensure obstacle clearance. Best climb angle can be achieved by initially rotating the aircraft to approximately 15 degrees nose up and maintaining approximately 220 knots (in a clean configuration). Do not delay climb to achieve this airspeed, climb at present speed. If above this airspeed, excess airspeed may be traded for additional climb performance, however, do not allow airspeed to drop below best climb speed.

If a warning occurs when flying in Day and VMC conditions, and positive visual verification is made that no ground contact hazard exists, the alert may be regarded as cautionary and the approach/cruise may be continued.

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PULL UP WARNING

PROCEDURE:

Immediately And Simultaneously:

1. Thrust Levers ..... Maximum
2. Climb ..... Best Angle

"Pull Up Warning Checklist Complete"

ADDITIONAL INFORMATION/CONSIDERATIONS

OVERSPEED

This condition is recognized by the Mach Airspeed Warning clacker. The clacker sounds until airspeed is reduced below V_{mo}/M_{mo}. Thrust should be reduced and pitch attitude increased as required to reduce airspeed below V_{mo}/M_{mo}.

STALL

This procedure is accomplished at the earliest recognizable stall warning, initial airframe buffet and/or stick shaker.

Without delay, apply maximum thrust, and smoothly adjust pitch attitude to avoid ground contact or obstacles. At higher altitudes, it may be necessary to decrease pitch attitude to achieve acceleration.

CONFIGURATION WARNING

This procedure is accomplished when an intermittent warning horn sounds while advancing thrust levers during takeoff, or a steady warning horn sounds in-flight. Check and correct the position of the items which cause the warning:

- Stabilizer trim
- Flaps
- Leading edge devices
- Speedbrakes
- Landing gear
- Parking brake (as installed)

GROUND PROXIMITY ALERT

If an alert occurs when flying under Day and VMC conditions, and positive visual verification is made that no hazard exists, the alert may be regarded as cautionary and the approach may be continued. If the verification cannot be made, immediately check correct the aircraft flightpath, or go-around if necessary.

OVERSPEED

PROCEDURE:

1. Thrust ..... Reduce

If required:

2. Pitch Attitude ..... Adjust

"Overspeed Checklist Complete"

STALL

PROCEDURE:

Simultaneously and without delay:

1. Thrust ..... Maximum Available
2. Pitch Attitude ..... Adjust
3. Altitude Loss ..... Minimize

"Stall Checklist Complete"

CONFIGURATION WARNING

PROCEDURE:

Aircraft Configuration ..... Verify Correct

"Configuration Warning Checklist Complete"

GROUND PROXIMITY ALERT

PROCEDURE:

Simultaneously:

1. Flight Path ..... Ensure Correct
2. Configuration ..... Verify Correct

"Ground Proximity Alert Checklist Complete"