

To prevent incorrect operation of the precooler differential pressure switches, which could result in inappropriate automatic shutoff of the engine bleed valve, and consequent inability to perform engine cross-bleed restarts or possible failure of the anti-ice system; and to ensure that the flightcrew is advised of proper procedures to restart an engine in flight using the auxiliary power unit; accomplish the following:

Restatement of Requirements of AD 2000-13-02

Revision to Airplane Flight Manual (AFM): Limitations Section

(a) For airplanes identified in AD 2000-13-02, amendment 39-11801: Within 24 hours after July 3, 2000 (the effective date of AD 2000-13-02, amendment 39-11801), revise the Limitations section of the AFM to include the following statements (this may be accomplished by inserting a copy of this AD into the AFM; following accomplishment of paragraph (c) of this AD, the revisions required by this paragraph may be removed from the AFM):

"THE APU MUST BE OPERATIVE FOR EVERY DEPARTURE. SINGLE BLEED OPERATION IN ICING CONDITIONS IS PROHIBITED."

Revision to AFM: Abnormal Procedures Section

(b) For airplanes identified in AD 2000-13-02, amendment 39-11801: Within 24 hours after July 3, 2000, replace the existing "ENGINE AIRSTART" procedure in the Abnormal Procedures section of the AFM with the following procedures (this may be accomplished by inserting a copy of this AD into the AFM):

"ENGINE AIRSTART"

Affected engine:
 One Electric Fuel Pump (A or B). ON
 Ignition AUTO
 Start/Stop Selector STOP
 Engine Bleed CLOSE
 Thrust Lever IDLE
 Airspeed and Altitude .. REFER TO AIRSTART ENVELOPE
 Perform an assisted start or windmilling, as required.
 CAUTION: IN ICING CONDITIONS USE CROSSBLEED START ONLY, TO AVOID LOSS OF ANTI-ICE SYSTEM PERFORMANCE.
 Assisted Start:
 Crossbleed Start:
 N2 (operating engine) ABOVE 80%
 Crossbleed AUTO OR OPEN
 Engine Bleed (operating engine). OPEN
 Start/Stop Selector START, THEN RUN
 Engine Indication MONITOR
 Check ITT and N2 rising. Observe limits. Check ignition and fuel flow indication at 10% N2.
 APU bleed start:
 APU START
 APU Bleed OPEN
 Crossbleed AUTO
 Engine Bleed (operating engine). CLOSE
 Start/Stop Selector START, THEN RUN
 Engine Indication MONITOR

Check ITT and N2 rising. Observe limits. Check ignition and fuel flow indication at 10% N2.

Windmilling Start:

Airspeed ABOVE 260 KIAS
 Minimum N2 12%
 Start/Stop Selector START, THEN RUN
 ITT and N2 MONITOR
 Note:—Windmilling start will be slower than an assisted start.
 —Windmilling start with N2 above 30% and increasing, the loss of altitude may be minimized, by reducing airspeed.
 —Start will be faster if ITT is below 320 °C.

After Start:

Affected Engine Bleed AS REQUIRED
 Crossbleed AUTO
 APU Bleed AS REQUIRED"

Disconnection of the Precooler Differential Pressure Switches

(c) For airplanes identified in AD 2000-13-02, amendment 39-11801: Within 100 flight hours after July 3, 2000, disconnect the electrical connector from the precooler differential pressure switches in the left and right engine pylons, in accordance with EMBRAER Alert Service Bulletin 145-36-A018, dated April 14, 2000; or Change 01, dated October 20, 2000. Following accomplishment of this paragraph, the AFM revision required by paragraph (a) of this AD may be removed from the AFM.

New Requirements of This AD

Revision to AFM: Limitations Section

(d) For airplanes having serial numbers 145245, 145250 through 145255 inclusive, 145258 through 145262 inclusive, 145264 through 145324 inclusive, 145326, and 145327: Within 24 hours after the effective date of this AD, revise the Limitations section of the AFM to include the following statements (this may be accomplished by inserting a copy of this AD into the AFM; following accomplishment of paragraph (f) of this AD, the revisions required by this paragraph may be removed from the AFM):

"THE APU MUST BE OPERATIVE FOR EVERY DEPARTURE. SINGLE BLEED OPERATION IN ICING CONDITIONS IS PROHIBITED."

Revision to AFM: Abnormal Procedures Section

(e) For airplanes having serial numbers 145245, 145250 through 145255 inclusive, 145258 through 145262 inclusive, 145264 through 145324 inclusive, 145326, and 145327: Within 24 hours after the effective date of this AD, replace the existing "ENGINE AIRSTART" procedure in the Abnormal Procedures section of the AFM with the following procedures (this may be accomplished by inserting a copy of this AD into the AFM):

"ENGINE AIRSTART"

Affected engine:
 One Electric Fuel Pump (A or B). ON
 Ignition AUTO
 Start/Stop Selector STOP
 Engine Bleed CLOSE
 Thrust Lever IDLE

Airspeed and Altitude .. REFER TO AIRSTART ENVELOPE

Perform an assisted start or windmilling, as required.

CAUTION: IN ICING CONDITIONS USE CROSSBLEED START ONLY, TO AVOID LOSS OF ANTI-ICE SYSTEM PERFORMANCE.

Assisted Start:

Crossbleed Start:

N2 (operating engine) ABOVE 80%
 Crossbleed AUTO OR OPEN
 Engine Bleed (operating engine). OPEN
 Start/Stop Selector START, THEN RUN
 Engine Indication MONITOR
 Check ITT and N2 rising. Observe limits. Check ignition and fuel flow indication at 10% N2.
 APU bleed start:
 APU START
 APU Bleed OPEN
 Crossbleed AUTO
 Engine Bleed (operating engine). CLOSE

Start/Stop Selector START, THEN RUN
 Engine Indication MONITOR

Check ITT and N2 rising. Observe limits. Check ignition and fuel flow indication at 10% N2.

Windmilling Start:

Airspeed ABOVE 260 KIAS
 Minimum N2 12%
 Start/Stop Selector START, THEN RUN
 ITT and N2 MONITOR
 Note:—Windmilling start will be slower than an assisted start.

—Windmilling start with N2 above 30% and increasing, the loss of altitude may be minimized, by reducing airspeed.

—Start will be faster if ITT is below 320 °C.

After Start:

Affected Engine Bleed AS REQUIRED
 Crossbleed AUTO
 APU Bleed AS REQUIRED"

Inspection of Electrical Connectors and Follow-on Actions

(f) For airplanes having serial numbers 145245, 145250 through 145255 inclusive, 145258 through 145262 inclusive, 145264 through 145324 inclusive, 145326, and 145327: Within 100 flight hours after the effective date of this AD, perform a one-time general visual inspection to ensure that electrical connector P1904 located in the right pylon is insulated and disconnected from precooler differential pressure switch S0354, and to ensure that electrical connector P1904 or P2252 located in the left pylon is insulated and disconnected from precooler differential pressure switch S0355, per the Accomplishment Instructions of EMBRAER Alert Service Bulletin 145-36-A018, Change 01, dated October 20, 2000. Following accomplishment of paragraph (f)(1), (f)(2), or (f)(3) of this AD, as applicable, the AFM revision required by paragraph (d) of this AD may be removed from the AFM.

(1) If all connectors are disconnected and insulated, no further action is required by this paragraph.

(2) If any connector is connected to a precooler differential pressure switch, prior to further flight, disconnect and insulate the connector per the Accomplishment Instructions of the alert service bulletin.

(3) If any connector is disconnected from a precooler differential pressure switch, but is not insulated, prior to further flight, insulate the connector per the Accomplishment Instruction of the alert service bulletin.