

ice formation. Takeoff may not be initiated unless the flight crew verifies that a visual check and a physical (hands-on) check of the wing upper surfaces have been accomplished, and that the wing is clear of ice accumulation when any of the following conditions occur:

- (1) When the ambient temperature is less than 50 degrees F and high humidity or visible moisture (rain, drizzle, sleet, snow, fog, etc.) is present;
- (2) When frost or ice is present on the lower surface of either wing;
- (3) After completion of de-icing.

When inspection aids (*i.e.* tufts, decals, mount pads, painted symbols, and paint stripes) are installed in accordance with McDonnell Douglas MD-80 Service Bulletin 30-59, the physical check may be made by assuring that all installed tufts move freely.

**Note:** This limitation does not relieve the requirement that aircraft surfaces are free of frost, snow, and ice accumulation, as required by Federal Aviation Regulations Sections 91.527 and 121.629. [End of Note]."

(2) Revise the CDL Appendix of the FAA-approved AFM to include the following. This may be accomplished by inserting a copy of this AD in the AFM.

**"30-80-01 Triangular Decal and Tuft Assemblies**

Up to two (2) decals or tufts per side may be missing, provided:

- (a) At least one decal and tuft on each side is located along the aft spar line; and
- (b) The tufts are used for performing the physical check to determine that the upper wing is free of ice by observing that the tufts move freely.

Up to eight (8) decals and/or tufts may be missing, provided:

- (a) Takeoff may not be initiated unless the flight crew verifies that a physical (hands-on) check is made of the upper wing in the location of the missing decals and/or tufts to assure that there is no ice on the wing when icing conditions exist;

or

- (b) When the ambient temperature is more than 50 degrees F."

(3) Install inspection aids (*i.e.*, tufts, decals, mount pads, painted symbols, and paint stripes) on the inboard side of the wings' upper surfaces, in accordance with McDonnell Douglas Service Bulletin 30-59, dated September 18, 1989; Revision 1, dated January 5, 1990; or Revision 2, dated August 15, 1990.

**New Requirements of This AD**

**Note 7:** The Honeywell Anti-Ice System specified in paragraphs (i), (j), and (k) of this AD, is also known and specified as an overwing heater blanket system installed in accordance with AlliedSignal Supplemental Type Certificate (STC) STC SA6061NM.

**For Airplanes Equipped With a Honeywell Anti-Ice System Installed per STC SA6061NM**

(i) For airplanes equipped with a Honeywell Anti-Ice System installed per STC SA6061NM: Accomplish the actions specified in paragraphs (i)(1), (i)(2), (i)(3),

and (i)(4) of this AD, at the times specified in those paragraphs.

(1) Within 72 hours after the effective date of this AD, disable the Honeywell Anti-Ice System installed per STC SA6061NM, per Honeywell Alert Service Bulletin 109XXXX-30-38, dated August 8, 2002.

(2) Within 72 hours after the effective date of this AD, revise the Limitations Section of the FAA-approved AFM to include the following (this may be accomplished by inserting a copy of this AD in the AFM):  
"Ice on Wing Upper Surfaces

**Caution**

Ice shedding from the wing upper surface during takeoff can cause severe damage to one or both engines, leading to surge, vibration, and complete thrust loss. The formation of ice can occur on wing surfaces during exposure of the airplane to normal icing conditions. Clear ice can also occur on the wing upper surfaces when cold-soaked fuel is in the main wing fuel tanks, and the airplane is exposed to conditions of high humidity, rain, drizzle, or fog at ambient temperatures well above freezing. Often, the ice accumulation is clear and difficult to detect visually. The ice forms most frequently on the inboard, aft corner of the main wing tanks. [End of Cautionary Note].

The wing upper surfaces must be physically checked for ice when the airplane has been exposed to conditions conducive to ice formation. Takeoff may not be initiated unless the flight crew verifies that a visual check and a physical (hands-on) check of the wing upper surfaces have been accomplished, and that the wing is clear of ice accumulation when any of the following conditions occur:

- (1) When the ambient temperature is less than 50 degrees F and high humidity or visible moisture (rain, drizzle, sleet, snow, fog, etc.) is present;
- (2) When frost or ice is present on the lower surface of either wing;
- (3) After completion of de-icing.

When inspection aids (*i.e.* tufts, decals, mount pads, painted symbols, and paint stripes) are installed in accordance with McDonnell Douglas MD-80 Service Bulletin 30-59, the physical check may be made by assuring that all installed tufts move freely.

**Note:** This limitation does not relieve the requirement that aircraft surfaces are free of frost, snow, and ice accumulation, as required by Federal Aviation Regulations Sections 91.527 and 121.629. [End of Note]."

**AFM Configuration Deviation List Revision**

(3) Within 72 hours after the effective date of this AD, revise the CDL Appendix of the FAA-approved AFM to include the following (this may be accomplished by inserting a copy of this AD in the AFM):

**"30-80-01 Triangular Decal and Tuft Assemblies**

Up to two (2) decals or tufts per side may be missing, provided:

- (a) At least one decal and tuft on each side is located along the aft spar line; and
- (b) The tufts are used for performing the physical check to determine that the upper

wing is free of ice by observing that the tufts move freely.

Up to eight (8) decals and/or tufts may be missing, provided:

(a) Takeoff may not be initiated unless the flight crew verifies that a physical (hands-on) check is made of the upper wing in the location of the missing decals and/or tufts to assure that there is no ice on the wing when icing conditions exist;

or

- (b) When the ambient temperature is more than 50 degrees F."

**Installation of Inspection Aids**

(4) Within 30 days after the effective date of this AD, install inspection aids (*i.e.*, tufts, decals, mount pads, painted symbols, and paint stripes) on the inboard side of the wings' upper surfaces, in accordance with McDonnell Douglas Service Bulletin 30-59, dated September 18, 1989; Revision 1, dated January 5, 1990; or Revision 2, dated August 15, 1990.

**Note 8:** Operators should note that certain AMOCs have been approved as acceptable methods of compliance with paragraph (i)(4) of this AD. Information concerning such AMOCs may be obtained from the Manager, Los Angeles ACO.

**Installation of Overwing Heater Blanket or Primary Upper Wing Ice Detection System**

(j) For airplanes equipped with disabled Honeywell Anti-Ice Systems installed per STC SA6061NM: Within 3 years after May 7, 2001, accomplish the requirements of paragraph (j)(1), (j)(2), or (j)(3) of this AD.

(1) Install an overwing heater blanket system, and install an EPD that provides a circuit-protection function to the overwing heater blanket, in accordance with a method approved by the Manager, Los Angeles ACO, FAA.

**Note 9:** Installation of an overwing heater blanket system and installation of an EPD that provides a circuit-protection function to the overwing heater blanket, in accordance with TDG Aerospace, Inc., SA6042NM, or TDG Master Drawing List (MDL) E93-104, Revision R, dated October 25, 2000; is an approved means of compliance with the requirements of paragraph (j)(1) of this AD.

(2) Install an overwing heater blanket system in accordance with a method approved by the Manager, Los Angeles ACO.

(3) Install an FAA-approved primary upper wing ice detection system in accordance with a method approved by the Manager, Los Angeles ACO.

**Note 10:** Boeing (McDonnell Douglas) has received FAA approval of an acceptable primary upper wing ice detection system, which is considered to be an acceptable method of compliance with the requirements of paragraph (j)(3) of this AD when accomplished in accordance with a method approved by the Manager, Los Angeles ACO.

**AFM Revision**

(k)(1) For airplanes equipped with a disabled Honeywell Anti-Ice Systems installed per STC SA6061NM: Prior to further flight after accomplishment of the installation required by paragraph (j)(1),