



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

SEVERE TURBULENCE OR MANEUVERS BUFFETING CONDITION - INSPECTION/CHECK

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do an inspection on the aircraft if severe / extreme turbulence or severe / extreme maneuvers or buffeting condition occur.
- B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
05-50-27-200-801-A	SEVERE TURBULENCE OR MANEUVERS ALL OR BUFFETING CONDITION	



AIRCRAFT MAINTENANCE MANUAL

TASK 05-50-27-200-801-A

EFFECTIVITY: ALL

2. SEVERE TURBULENCE OR MANEUVERS OR BUFFETING CONDITION

A. General

- (1) This task gives the procedures to do an inspection on the aircraft after a severe turbulence or maneuvers or buffeting condition occurs.
- (2) The results of these procedures will show if other more accurate inspection is necessary.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM MPP 71-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 25-51-01-200-801-A/600	BAGGAGE COMPARTMENT LINING - VISUAL INSPECTION
AMM TASK 31-31-00-700-803-A/500	FDR DATA - PERSONAL COMPUTER DOWNLOADING
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 51-50-01-820-801-A/200	-
AMM TASK 71-10-00-200-802-A/600	COWLING AERODYNAMIC SURFACES - INSPECTION
AMM TASK 71-12-01-000-801-A/400	ENGINE LOWER COWLING - OPENING

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Outside the aircraft

I. Preparation

SUBTASK 841-002-A

- (1) Do not do other tasks on the aileron, rudder, elevator and flap systems.

- (2) Make sure that there are no objects or persons in the aileron, rudder, elevator and flap travel areas.

J. Inspection After Aircraft is Submitted to Severe Turbulence or Maneuvers or Buffeting Condition
SUBTASK 212-002-A

- (1) **NOTE:** Severe turbulence or maneuver is a turbulence or maneuver which causes abrupt changes in altitude and/or attitude. The aircraft could be out of control for a short time and this could be followed by large and often rapid variations in indicated airspeed. Passengers and crews are moved violently against their seat belts and loose objects will move around the aircraft.

Examine the aircraft external surfaces for distortion, flaking paint, cracks, and pulled or missing fasteners as follows:

- (a) Examine the area adjacent to bulkheads 40, 46, and 50, and attachment region of wing spars II and III, fuselage, and empennage.
- (b) Examine the wing-to-fuselage fairing.
- (c) Examine the wings at surfaces around the root area, spars II and III, lower skin splices, and trailing-edge upper surfaces for skin buckles.
- (d) Examine the horizontal stabilizer and elevator structures and at hinge bearings and actuator bearing for signs of binding. Also examine the skin splices for misalignment and signs of buckling.
- (e) Examine the vertical stabilizer and rudder I and rudder II.

WARNING: MAKE SURE THAT THERE ARE NO PERSON OR EQUIPMENT IN THE AILERONS, RUDDER I AND RUDDER II, AND ELEVATOR TRAVELS AREAS TO MAKE SURE THAT THE SURFACE MOVEMENTS THROUGHOUT THE DEFLECTION RANGE WILL NOT INTERFERE WITH A PERSON OR EQUIPMENT.

- (f) Make sure that the movement of the flight controls is free. Do a check of ailerons, rudder I and rudder II, and elevator and make sure that these surfaces move freely along their full deflection range.
- (g) Examine the engine cowlings for buckling or other unusual condition ([AMM TASK 71-10-00-200-802-A/600](#)).

WARNING: MAKE SURE THAT THE LANDING GEAR SAFETY PINS ARE INSTALLED TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL ([AMM TASK 32-00-01-910-801-A/200](#)).

- (h) Examine the landing gear doors and landing gear extension, retraction and lock components for damage.
- (i) Examine the wing, fuselage and landing gear wheelwells for signs of fuel or other fluid leakage.

- (2) If signs of damage are found, do these inspections as applicable:



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- (a) If an external damage is found on the fuselage, fuselage-to-wing attachment fittings, wings, elevator, and rudder I and rudder II, the internal structure of the applicable area must be examined at all internal primary structure to which you can get access for distortion, buckling, cracks, flaking paint and sealant, and pulled or loose rivets.
- (b) If unusual conditions are found at flight controls, check the circuits for general condition and the control cables for tension.

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 71-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (c) If one of such bad conditions is found at engine cowlings, remove the access panels ([AMM MPP 06-43-00/100](#)) and cowlings ([AMM TASK 71-12-01-000-801-A/400](#)) and examine all engine-to-mount attach points and their adjacent fittings, and all other primary structure for distortion, cracks, and loose or missing fasteners.

NOTE: The Maneuvering Flight Load Factors is found in LIMITATIONS section of the Airplane Flight Manual.

- (d) Do the download of flight data recorder (FDR) ([AMM TASK 31-31-00-700-803-A/500](#)), and compare the data of NORMAL ACCELERATION with MANEUVERING FLIGHT LOAD FACTORS.

If the aircraft flight load accelerations are higher than the limit, with signs of bad damage, the aircraft alignment check must be made (AMM TASK 51-50-01-820-801-A/200).

- (3) Examine the aircraft internal surfaces as follows:
 - (a) Examine the structure aft of the rear pressure bulkhead for distortion, cracks, and pulled or missing rivets.
- (4) Examine the baggage compartment lining ([AMM TASK 25-51-01-200-801-A/600](#)).