

ATA AIRLINES, INC.

INSPECT CONTROL CABLES - NLG

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CHECK BEING PERFORMED: Custom

ZONES: 115 116  
A/C NUMBER:  
REV. DATE: 01/23/06  
FREQUENCY: 1C

W/C NUMBER: 316I2001 DATE:

MFR P/N	DESCRIPTION	QTY
BMS3-33	Grease, Aircraft General Purpose	A/R

REFERENCES

Figure 1

MECH INSP

MPD Item: 32-440-00

NOTE: This task includes NLG Manual Extension Cables and NLG Steering Cables located in the Nose Landing Gear Wheel Well.

NOTE: The control cable system must be displaced full travel in each direction for cleaning, lubricating, and complete inspection at seals, pulleys, and fairlead areas.

XXXXX 1. Remove screws [6] securing NLG Manual Extension housing access cover located at the aft ceiling of the NLG Wheel Well and remove access cover.

XXXXX 2. Clean control cables for the inspection.

CAUTION: DO NOT USE HEAT TO THIN THE GREASE. DO NOT USE SOLVENT. DO NOT APPLY OR SPRAY BMS 3-23 ON THE CONTROL CABLES.

A. Use a clean, dry, lint-free cloth to remove the old grease and dirt from the surface of the control cable.

(1) Clean the control cable for the full length of the cable for the full length of travel through fairleads, air pressure seals, over pulleys, quadrants, and drums.

XXXXX 3. Lubricate control cables where lubricant is removed.

NOTE: Do not lubricate stainless steel (CRES) control cables.

A. Apply a light even coat of grease, BMS3-33 to the cable for the full length of travel.

(1) Do not apply grease to these areas because they will receive grease during cable movement:

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MECH: INSP:

- (a) The clad areas.
- (b) Through the fairleads.
- (c) Through the air pressure seals.
- (d) On the pulleys.
- (e) On the quadrants.
- (f) On the drums.

B. Wipe the cable with a clean cloth to remove grease, but leave a thin visible film.

4. Inspection of the control cables (Fig. 1).

XXXXX \_\_\_\_\_ A. Perform a DI to make sure the cable does not contact parts other than pulleys, quadrants, cable seals, or grommets installed to control cable routing.

NOTE: The minimum cable clearance from other parts is 0.20 inches, except 0.10 inches within 10 inches of a pulley or quadrant.

(1) Look for evidence of contact with other parts.

XXXXX \_\_\_\_\_ B. Perform a DI of the cable runs for incorrect routing, kinks in the wire rope, or other damage.

(1) Cable assembly must be replaced if:

(a) A wear pattern exists where the individual wires in a strand appear to blend together (one or more outer wire cross sections worn by more than 40 percent) (Fig. 1).

(b) If a kink is found.

(c) If corrosion is found.

XXXXX \_\_\_\_\_ C. Perform a DI of the cable.

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NOTE: To do a check for broken wires, rub a cloth along the cable. The cloth will catch on any broken wires.

- (1) The 7X7 cable assembly must be replaced if:
  - (a) There are two or more broken wires in 12 continuous inches of cable.
  - (b) There are three or more broken wires anywhere in the total cable assembly.
- (2) The 7X19 cable assembly must be replaced if:
  - (a) There are four or more broken wires in 12 continuous inches of cable.
  - (b) There are six or more broken wires anywhere in the total cable assembly.
- (3) Make sure there is sufficient lubrication on the carbon steel control cables.

NOTE: Grease or oil should not be applied to stainless steel (CRES) control cables.

XXXXX \_\_\_\_\_ 5. Inspection of the Control Cable Fittings.

- A. Perform a DI to make sure the means of locking the joints are intact (wire locking, cotter pins, turnbuckle clips, etc.).
  - (1) Missing parts must be replaced.
- B. Perform a DI of the swaged portions of swaged end fittings for surface cracks or corrosion.
  - (1) Cable assembly must be replaced if:
    - (a) Cracks are visible.
    - (b) Corrosion is present.
- C. Perform a DI of the unswaged portion of the end fitting.

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MECH: INSP:

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(1) Cable assembly must be replaced if:

(a) Cracks are visible.

(b) Corrosion is present.

(c) End fitting is bent more than 2 degrees.

D. Perform a DI of the turnbuckle.

(1) Turnbuckle must be replaced if:

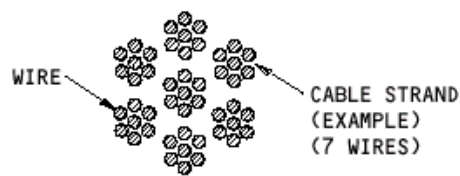
(a) Cracks are visible.

(b) Corrosion is present.

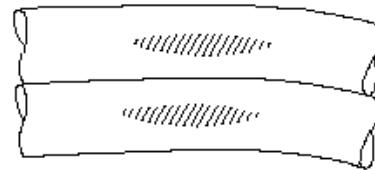
XXXXX \_\_\_\_\_ 6. Check associated pulleys and brackets for condition and security of installation.

\_\_\_\_\_ XXXXX 7. Reinstall NLG Maunual Extension housing access cover.

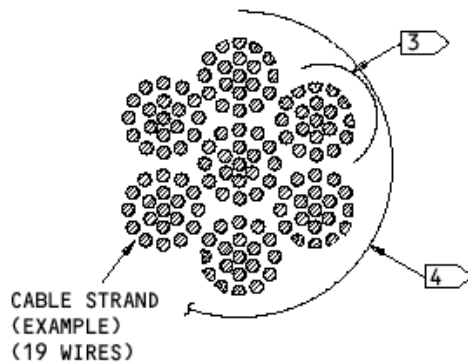
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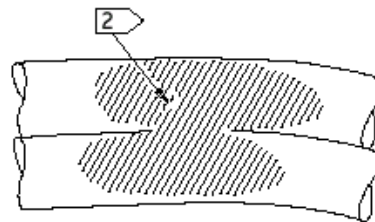
7x7 CABLE



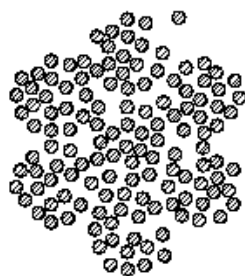
EACH OUTER WIRE WORN LESS THAN 40% (WORN AREAS NOT BLENDED)



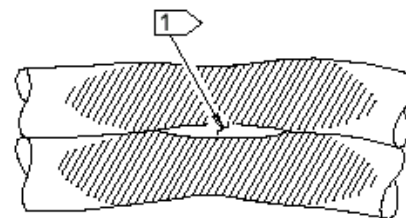
7x19 CABLE



EACH OUTER WIRE WORN 40-50% (WORN AREAS ARE BLENDED)



EXAMPLE OF INTERNAL WEAR



EACH WIRE IS WORN MORE THAN 50%

- 1 VISIBLE SPACE BETWEEN WIRES.
- 2 WEAR CONDITION RESULTING IN BLENDED SURFACES BETWEEN WIRES.

- 3 THE OUTER WIRE WEAR AREA ON CABLE STRAND. A VISIBLE SPACE BETWEEN WIRES 1 OR A FULLY BLENDED SURFACE 2 OVER APPROXIMATELY SIX WIRES INDICATES 50 PERCENT WIRE WEAR.

- 4 CABLE WEAR MAY OCCUR ON ONE SIDE ONLY OR ON FULL CIRCUMFERENCE. CABLE WEAR CAN EXTEND ALONG THE CABLE FOR A DISTANCE EQUAL TO USUAL CABLE TRAVEL.

### Cable Wear Patterns