

Docket No. SA-520

Exhibit No. 11-L

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D. C.

Acme Screw and Nut Endplay Check

(3 Pages)

Task Card # 24527000	<i>Alaska Airlines</i> MD80			Tail # 963	Page # 259 1 OF 3
Work Code # 02525	TITLE ACME SCREW AND NUT END PLAY CHECK			Type Check C05	
Rev Date 10/07/96	A T A 27-00	M/Hours 4.0	Skill MECH	Task CHECK	Effectivity ALL

ZONE:
630



MATERIALS/TOOLS:

T 0-1301-0-0169 4916750-1 HOR.STAB.RESTRAINING FIXTURE
T 0-1301-0-0689 TOOL NO. 0561, DIAL INDICATOR
T 0-1300-0-0172 804605 GO-NO GO

GRAPHICS:
H655000A

TEXT:

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NOTE: A safety belt attachment lug is located on top of vertical stabilizer.

NOTE: When moving the horizontal stabilizer with either primary or alternate control handles, operate both primary or both alternate control handles simultaneously in the same direction to the noseup or nosedown position. This procedure insures proper synchronization of brake switch and motor contactor operation.

1. Check Acme Screw And Nut Operation
 - A. Check acme screw and nut.

WARNING: BEFORE MOVING CONTROL WHEEL TRIM SWITCHES, MAKE CERTAIN THAT AREAS AROUND HORIZONTAL STABILIZER AND ELEVATORS ARE CLEAR OF PERSONNEL AND EQUIPMENT.

- (1) Move both primary longitudinal trim control wheel switches, located on outboard horn of aileron control wheel, to airplane noseup position. Hold until shutoff functions.
- (2) Check that upper acme nut stop is at 12.2 degrees. dimension (bg) should be 12 13/16 (+ or - 5/32) inches (Ref Fig 1, View A1).
- (3) Using control wheel trim switches, run horizontal stabilizer in airplane nosedown ("AND") direction until shutoff functions. Check the following:
 - (a) Check that lower acme nut stop is at 2.1 degrees. dimension (bg) should be 1 5/16 (+ or - 9/64) inches
- B. Check acme screw and nut wear.
 - (1) Using control wheel trim switches, move horizontal stabilizer to approximately one degree airplane noseup

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ALL MAINT/INSPECT ITEMS

COMPLETED

DATE: 7.29.97

Task Card # 24627000	<i>Alaska Airlines</i> MD80			Tail # 963	Page # 259 2 OF 3
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position.

WARNING: TAG AND SAFETY OPEN CIRCUIT BREAKERS.

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- (2) Open the following circuit breakers.

Circuit Breaker	Panel Location	Panel Area
Autopilot & Alter-nate Longitudinal Trim (3)	upper epc	Left Radio AC Bus
Primary Longitudi-nal Trim (2)	upper epc	Left Radio DC Bus
- (3) Remove panel and stabilizer fairing to gain access to work area.
- (4) Install horizontal stabilizer restraining fixture.
- (5) Clamp dial indicator mounting bracket to jackscrew torque tube retaining nut and positional dial indicator probe against acme nut as shown in View A of Fig 1.
- (6) Clamp dial indicator mounting bracket to upper stop on jackscrew and position dial indicator probe against lower plate of support assembly as shown in View C Fig 1
- (7) Preload indicator probe to at least .100 inc and record dial indicator reading.
- (8) Apply 250 to 300 inch pounds of torque to horizontal stabilizer by shorting restraining fixture and record dial indicator readings.
- (9) Relieve torque on restraining fixture. Check that dial indicator has returned to initial reading.
- (10) Repeat steps (8) and (9) several times to insure consistent results (within .001 inch).
- (11) Check that end play limits are between .003 and .040 inch. Readings in excess of above are cause for replacement of acme jackscrew and nut. Should replacement become necessary accomplish E.O. 8-55-10-01 if not previously accomplished.
- (12) Check that free play between jackscrew and upper support does not exceed .010 inch. If free play exceeds this dimension, upper bearing must be replaced
- (13) Remove restraining fixture, dial indicator and attaching brackets and clamps. Install stabilizer fairing and

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Task Card # 24627000	<i>Alaska Airlines</i> MD80			Tail # 963	Page # 259 3 OF 3
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- panel.
- (14) Close the circuit breakers identified in Step (2).
 - (15) Return horizontal stabilizer to neutral

***** END OF TEXT *****