

Docket No. SA-520

Exhibit No. 17-H

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Excerpts from BCAC Maintenance Manual

(3 Pages)

MD-80

MAINTENANCE MANUAL

Name and Number Manufacturer

Grease gun nozzle Alemite
Z-737

Grease gun midget Alemite
flush nozzle
314150

Extension adapter Alemite
(18 inch extension
w/coupler locking
sleeve) 307436

3. Lubrication Service Notes

A. Lubricant Application

WARNING: SOLVENTS USED IN FOLLOWING TEXT ARE FLAMMABLE,
EXERCISE NORMAL SAFETY PRECAUTIONS DURING USE.

CAUTION: DO NOT ALLOW LUBRICANTS TO COME IN CONTACT WITH
ELECTRICAL CONNECTORS.

- (1) Cleanliness is essential to good lubrication. Lubricants and dispensing equipment must be kept clean. Use only one lubricant in a grease gun or oil can.
- (2) Store lubricants in a protected area. Containers should be closed at all times when not in use.
- (3) Wipe grease fittings, oil holes, etc. with clean, dry cloths before lubricating.
- (4) Intermixing of different brands of engine oil, or mixing of Type I and Type II oils must be avoided. In event of inadvertent mixing of approved oils, engine or unit reservoir and oil system should be drained, flushed, and refilled with oil normally used, at earliest opportunity.

CAUTION: AFTER OTHER MAINTENANCE HAS BEEN PERFORMED, ENSURE
ADEQUATE LUBRICATION BEFORE FUNCTIONAL TESTING OF
ASSEMBLIES, UNITS, OR COMPONENTS.

- (5) Work moving parts, if practical, to assure thorough lubrication.
- (6) When lubricating sealed bearings use extreme care not to dislodge the seals. Use high pressure gun with controlled volume to assure entry of a small amount of grease.

EFFECTIVITY: AA ALL

THESE DATA SUBJECT TO RESTRICTIVE LEGEND ON TITLE PAGE.

12-21-00

Page 2

Jul 1/95

MD-60

MAINTENANCE MANUAL

- (7) When lubricating vented bearings, force grease into fittings until all old grease is extruded, unless otherwise noted.
- (8) Fill oil holes to near full, adding oil until level does not drop. Controllable pump-type oil cans should be used.
- (9) After any lubrication, clean surplus lubricant from all but actual working surfaces.
- (10) All sealed or prepacked anti-friction bearings are lubricated by the manufacturer unless otherwise specified.

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WARNING: P-D-680 TYPE 1 SOLVENT IS AN AGENT THAT IS FLAMMABLE AND POISONOUS. MAKE SURE ALL PERSONS OBEY ALL OF THE PRECAUTIONS WHEN P-D-680 TYPE 1 SOLVENT IS USED.

- DO NOT USE IN AREAS WHERE THERE IS HIGH HEAT, SPARKS, OR FLAMES.
- USE IN AN AREA OPEN TO THE AIR.
- CLOSE THE CONTAINER WHEN NOT USED.
- DO NOT GET P-D-680 TYPE 1 SOLVENT IN THE EYES, ON THE SKIN, OR ON YOUR CLOTHES.
- DO NOT BREATHE THE GAS.

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WARNING: REFER TO THE APPLICABLE MANUFACTURER'S OR SUPPLIER'S MSDS FOR:

- MORE PRECAUTIONARY DATA
- APPROVED SAFETY EQUIPMENT
- EMERGENCY MEDICAL AID.

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TALK WITH THE LOCAL SAFETY DEPARTMENT OR AUTHORITIES FOR THE PROCEDURES TO DISCARD THIS HAZARDOUS AGENT.

CAUTION: DO NOT EXPOSE BEARINGS TO SPRAY FROM STEAM, DETERGENT, OR CHEMICAL CLEANING. DO NOT SPRAY BEARINGS WITH UNAPPROVED LUBRICANTS, PENETRANTS OR ANTI-SEIZE COMPOUNDS. USE ONLY SPECIFIED OIL TO MINIMIZE DRYING OF PREPACKED GREASE OR TO REJUVENATE GREASE IN SITUATIONS WHERE BEARING REPLACEMENT IS NOT PRACTICAL.

- (11) When necessary to clean bearing exterior surfaces, wipe with cloth dampened with solvent, Federal Specification P-D-680, Type I and coat sides with MIL-G-81322 grease.
- (12) Friction bearings of porous sintered type are prelubricated with oil. An occasional pump-can oiling with VV-L-800 oil will prolong bearing service life.

EFFECTIVITY: AA ALL

THESE DATA SUBJECT TO RESTRICTIVE LEGEND ON TITLE PAGE.

12-21-00
Page 3
Jul 1/95



MD-80

MAINTENANCE MANUAL

- (13) The service life of sealed/prepacked bearings can be extended by periodic external application of VV-L-800 oil. Flight control system bearings, particularly those in exposed areas such as the wing rear spars and wheel wells, will especially benefit from this practice.

B. Operating Considerations

- (1) Specified lubrication is designed for an operating temperature range of -65° to +160°F (-54° to +71°C).
- (2) Lubrication frequency intervals expressed are based on an average of 300 flight hours per month. These intervals may be revised to accommodate any abnormal condition encountered, such as an increase or decrease in hours of service per month, extremely wet or salt air, dusty climates, and storage time. When inactive or storage time is considered and long term preservation of aircraft is not contemplated, lubricate according to the following table:

	NORMAL LUBE SCHEDULE	LUBE SCHEDULE WHILE AIRCRAFT INOPERATIVE
R	0-400 hrs	Monthly
	400-800 hrs	3 Months
	Above 800 hrs	6 Months

- (3) Wipe exposed reciprocating parts of the hydraulic cylinders with Skydrol 500B once a week if aircraft is idle. Shock struts on landing gears should be wiped with oil Federal Specification MIL-H-5606, or MIL-H-6083.
- (4) When the aircraft has been washed or exposed to inclement weather, all exposed components should be inspected and lubricated as necessary.

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THESE DATA SUBJECT TO RESTRICTIVE LEGEND ON TITLE PAGE.

12-21-00

Page 4

Jul 1/95

3