SECTION X

SERVICING

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INTRODUCTION TO SERVICING

The purpose of this section is to help you keep your BEECHCRAFT Duke in top condition between visits to your BEECHCRAFT Parts and Service Outlet. This information will aid you in determining when the airplane should be taken to a shop for periodic servicing or preventive maintenance. It will also guide you should you choose, or be obliged by circumstances, to do some minor servicing yourself. These procedures are in no sense a substitute for the services performed at your BEECHCRAFT Parts and Service Outlet.

If you should desire information concerning your Duke, it is important that you include the airplane model designation, serial number, and date of manufacture in your correspondence. This information appears on the model designation placard attached to the left wing stub root rib adjacent to the inboard end of the flap. The placard is not visible unless the flaps are lowered.

GROUND HANDLING

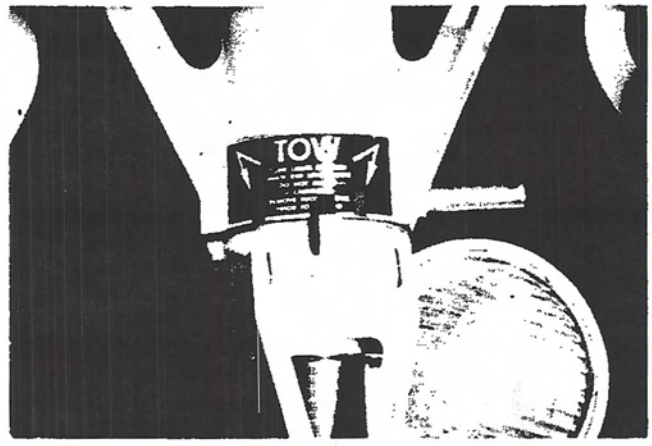
The three-view drawing shows the minimum hangar clearance for the airplane of standard configuration. Allowances have not been made for any special radio antennas. When this equipment is installed on the aircraft, the dimensions should be noted on the drawing for quick reference.

TOWING BY HAND

The Duke can be moved easily on a smooth, level surface with the hand tow bar. Attach the tow bar to the tow lugs on the nose gear lower torque knee. Someone should be present at the controls of the aircraft to operate the toe brakes if there is any danger of rolling down a slope. Do not apply excessive side pressure against the tow bar while turning sharply. The leverage of the bar could damage the steering mechanism.

CAUTION

Do not exert force on propellers, control surfaces or horizontal stabilizer.



Tow Limits

When the aircraft has been moved to the desired position, chock the main gears fore and aft to prevent rolling. If outside, tie down the airplane and install the control locks.

TOWING WITH A TUG

For maneuvering the airplane on rough ground or slopes, it is advisable to use a tug for greater security. Again, an assistant should remain at the controls to operate the brakes when necessary.

CAUTION

While turning the aircraft with a tug, exercise care to prevent exceeding the turn limits placarded on the nose gear. The Duke's low fuselage results in the nose sitting very close to the ground and, normally, a tug operator is unable to see the limit marks. If the aircraft is being maneuvered sharply, an assistant should monitor the turning of the nose gear.

TIE-DOWN

Tie the airplane down when it is not being used. Tie-down may be performed as follows:

1. Install the control locks.
2. Chock the main wheels, fore and aft.
3. Using chain or nylon line of sufficient strength, secure the airplane at the tie-down lugs; one under each wing and one under the aft fuselage. Tie-down lines should have no slack, but you should avoid raising the nose by pulling the aft line too tight. A high nose will produce lift by increasing the angle of attack of the wings.

SERVICING

BATTERY

The 13 ampere-hour, 24 volt nickel-cadmium battery is accessible through a door on the top of the left nacelle. The nickel cadmium battery is highly valued because it has the potential for years of reliable service; however, careful maintenance is required to obtain this service. Nickel-cadmium batteries are significantly different from lead acid batteries. When service is required for your nickel cadmium battery, it is recommended it be serviced at a qualified Nickel-Cadmium Battery Service Facility.

EXTERNAL POWER

When using external power, it is very important that the following precautions be observed.

1. The airplane has a negative ground system. Exercise care to avoid reversed polarity. Be sure to connect the positive lead of the auxiliary power unit to the positive terminal of the airplane's external power receptacle and the negative lead to the negative terminal of the external power receptacle. A positive voltage must also be applied to the small guide pin.
2. To prevent arcing, make certain no power is being supplied when the connection is made.
3. Make certain that the battery switch is ON, all avoinics and electrical switches OFF, and a battery is in the system before connecting an external power unit. This protects the electronic voltage regulators and associated electrical equipment from voltage transients (power fluctuations).

RECHARGING BATTERY USING AUXILIARY POWER

1. Battery switch - ON.
2. Connect an auxiliary power unit to the airplane's external power receptacle as described in the NORMAL PROCEDURES section.

If the battery relay will not close, the battery must be removed from the aircraft for recharging. Check the battery relay control circuit for a malfunction.

CHECKING ELECTRICAL EQUIPMENT

Connect an auxiliary power unit as outlined in NORMAL PROCEDURES. Ensure that the current is stabilized prior to making any electrical equipment or avionics check.

NOTE

If the external power unit has poor voltage regulation or produces voltage transients the equipment connected to the unit may be damaged.

MAGNETOS

Magnetos ordinarily require only occasional adjustment, lubrication and breaker point replacement. This work should be performed by your BEECHCRAFT Parts and Service Outlet.

WARNING

To be safe, treat the magnetos as hot whenever a switch lead is disconnected at any point; there is not an internal automatic grounding device. The magnetos can be grounded by replacing the switch lead at the noise filter capacitor with a wire which is grounded to the engine case. Otherwise, all spark plug leads should be disconnected or the cable outlet plate on the rear of the magneto should be removed.

PROPELLERS

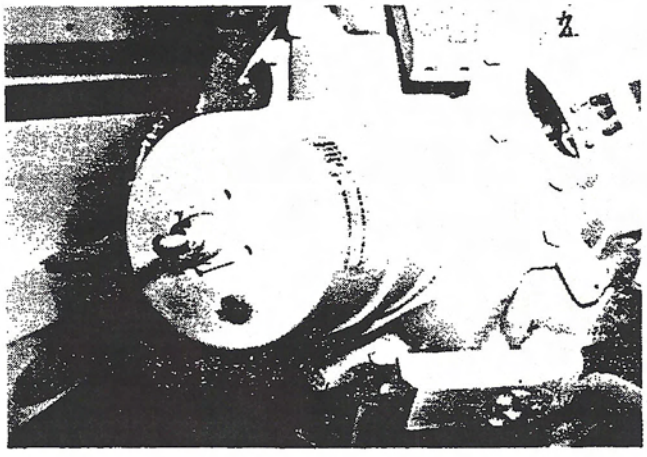
Propeller operation, servicing and maintenance instructions are contained in the propeller owner's manual furnished with your airplane.

WARNING

When servicing a propeller, always make certain the ignition switch is off and that the engine has cooled completely. STAND IN THE CLEAR WHEN MOVING A PROPELLER. THERE IS ALWAYS SOME DANGER OF A CYLINDER FIRING WHEN A PROPELLER IS MOVED.

PROPELLER DOME AIR PRESSURE SETTING

The propeller spinner dome air pressure should be checked for sufficient pressure each 100 hours as follows:



Propeller Dome

1. Remove the cap on the propeller spinner.
2. Connect a dry air or nitrogen supply line to the air valve and fill to 80 psi. This should be done at 70°F.

NOTE

Increase 2 psi for every 10 degrees of temperature increase. Decrease 2 psi for every 10 degrees of temperature decrease.

PROPELLER BLADE BEARING LUBRICATION

1. Remove the propeller spinner.
2. Remove the safety wire and covers from the four grease zerks.
3. Lubricate by placing the grease gun fitting on one zerk of each blade and filling until the grease is visible from the zerk opening on the opposite side of the blade. The zerk on the opposite side must be removed.
4. Clean the excess grease from the propeller, reinstall the grease zerk covers and safety.
5. Reinstall the spinner.

INDUCTION AIR FILTERS

The induction air filters should be cleaned every 50 hours of operation and replaced every 500 hours. In extremely dusty conditions the filter should be inspected frequently for cleaning if needed.

To remove and clean the filters:

1. Open the access door on the right side of each nacelle.
2. Slide out the filters.
3. Clean the filter per manufacturer's instructions printed on the edge of the filter, and replace.

LANDING GEAR

MAIN WHEEL JACKING

Individual main wheels may be jacked by placing a floor jack under the jacking point located under each axle.

SHOCK STRUTS

The shock struts are filled with compressed air and hydraulic fluid. The same procedure is used for servicing both the main and nose gear shock struts. To service a strut, proceed as follows:

1. Remove the air valve cap and depress the valve core to release the air pressure.

WARNING

Do not unscrew the air valve assembly until the air pressure has been released or it may be blown off with considerable force, causing injury to personnel or property damage.

2. Remove the air valve assembly.
3. Compress the strut and fill through the air valve assembly hole with hydraulic fluid until the fluid overflows (approximately one pint).
4. Cycle the strut from full extension to compressed and refill. Repeat until no more fluid can be added to the strut in the compressed position.

NOTE

Cycling of the shock strut is necessary to expel any trapped air within the strut housing.

5. Install the air valve assembly.
6. With the aircraft resting on the ground and the fuel cells full, inflate the nose gear strut until 4-1/16 to 4-5/16 inches of the piston are exposed and inflate the main gear until 3 inches of the piston are exposed. Rock the aircraft gently to prevent possible binding of the piston in the barrel while inflating.

NOTE

It is recommended that the nose strut inflation dimension and the tire inflation pressure be carefully adhered to. Properly inflated tires and struts reduce the possibility of ground damage occurring to the propellers. Exercise caution when taxiing over rough surfaces.

7. The shock strut piston must be clean. Remove foreign material by wiping the strut with a cloth containing hydraulic fluid.

CAUTION

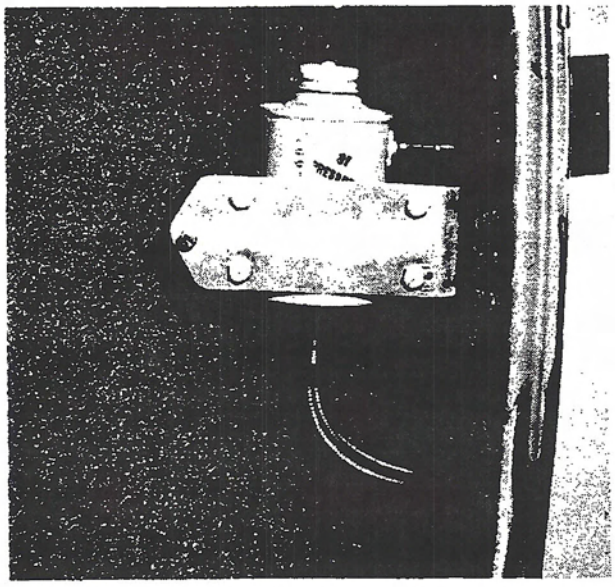
If a compressed air bottle containing air under extremely high pressure is used, exercise care to avoid over-inflation of the strut.

WARNING

NEVER FILL SHOCK STRUTS WITH OXYGEN.

BRAKES

The brake fluid reservoir, accessible through the forward baggage compartment door, is hinged on the aft frame of the door. Loosening the screw securing the reservoir to the



Brake Fluid Reservoir

aircraft structure allows the reservoir to swing out for easy servicing. Fill the reservoir with hydraulic fluid to the full mark on the dipstick. Maintain the fluid level between the "add" and "full" marks.

CAUTION

Do not overfill.

A brake wear indicator pin is attached to the pressure plate on each brake. The pin moves with the pressure plate as the brakes are applied. When the brakes are applied and the indicator pin is flush with its bushing, the lining has reached its wear limit.

PARKING BRAKE

The brakes are set for parking by pulling out the parking brake control and depressing the pilot's brake pedals to pressurize the system. Do not attempt to lock the parking brake by applying force to the parking brake handle; it controls a valve only and cannot apply pressure to the brake master cylinders.

CAUTION

Do not set the parking brake control when the brakes are hot from severe use or during low temperatures when an accumulation of moisture may cause the brakes to freeze.

TIRES

The main wheel tires are 6.50 x 8, 8 ply tubeless or tube type, rim-inflated or 19.5 x 6.75-8, 10 ply rated, tube, rim-inflated type. The nose wheel tire is a 15 x 6.00 x 6, 4 ply, tube type. A maximum outside diameter of 15 inches on the nose wheel tire is required to ensure proper clearance of the nose wheel shock absorber assembly. Inflate the nose wheel tire to 47 to 50 psi, and the main wheel tires to 69 to 75 psi on the 8 ply tire and 76 to 82 psi on the 10 ply rated tire. If necessary to comply with runway landing restrictions, main gear tire inflation pressure may be reduced to 65 psi. Maintaining recommended tire inflation will help to avoid damage from landing shock and contact with sharp stones and ruts, and will minimize tread wear. When inflating tires, inspect them visually for cracks, breaks or evidence of internal damage.

NOTE

Beech Aircraft Corporation cannot recommend the use of recapped tires. Recapped tires have a tendency to swell as a result of the increased temperature generated during takeoff. Increased tire size can jeopardize proper function of the landing gear retract system, with the possibility of damage to the landing gear doors and retract mechanism.

FUEL SYSTEM

The fuel system consists of an inboard and outboard leading edge fuel cell, a box section fuel cell and a nacelle fuel cell. The fuel cells in each wing are interconnected and filled through one flush-type filler cap, located in the outboard leading edge fuel cell.

When filling the aircraft fuel cells, always observe the following:

1. Service the fuel cells with 100/130 (Green) octane fuel or, if not available, use 115/145 (Purple) octane fuel.

2. Make certain the aircraft is statically grounded to the servicing unit.

3. Do not fill fuel cells near open flame or within 100 feet of any open, energized electrical equipment capable of producing sparks.

4. Do not insert the fuel nozzle more than 3 inches into the filler neck; to do so may cause damage to the rubber fuel cell.

Most fuel injection system malfunctions can be attributed to contaminated fuel. Inspecting and cleaning the fuel strainers should be considered to be of the utmost importance as a regular part of preventive maintenance.

Normally the fuel strainers should be inspected and cleaned every 100 hours. However, the strainers should be inspected and cleaned at more frequent intervals depending on service conditions, fuel handling equipment, and operation in localities where there is excessive sand or dust.

Open each of snap-type fuel drains daily to allow condensed moisture to drain from the system.

NOTE

If the cells are to remain unfilled for 10 days or more, apply a thin coating of light engine oil to the inside surface of the cell to prevent deterioration and cracking.

OIL SYSTEM

The engines are equipped with a wet sump, pressure type oil system. Each engine sump has a capacity of 13 quarts. The oil system may be checked through access doors in the engine cowling. A calibrated dip stick attached to the filler cap indicates the oil level. Due to the canted position of the engines, the dip sticks are calibrated for either right or left engines and are not interchangeable.

The oil should be changed every 100 hours under normal operating conditions and the oil filter changed every 50 hours. Lycoming specifies that only ashless dispersant oil be used in the engines. The oil drain is accessible through the cowl flap opening. The engines should be warmed to operating temperature to assure complete draining of the oil. Moisture that may have condensed and settled in the oil sump should be drained occasionally by opening the oil drain plug and allowing a small amount of oil to escape. This is particularly important in winter, when the moisture will collect rapidly and may freeze.

The oil grades listed in the Approved Oil Grades Chart are general recommendations only, and will vary with individual circumstances. Lycoming Service Instruction 1014E specifies only ashless dispersant multi-grade lubricants are to be used in the Dukes TIO-541 series engines. At operating temperatures above 60°F (15°C), multi-grade lubricants equivalent to SAE 50 or SAE 60 should be used. At temperatures below 30°F (-1°C), multi-grade lubricants equivalent to SAE 40 are recommended.

OXYGEN SYSTEM

To service the oxygen system, remove the protective cap from the filler valve located in the nose baggage compartment (or in the aft fuselage).

WARNING

Keep fires, cigarettes and sparks away when outlets are in use. Open and close all oxygen valves slowly. Make certain the oxygen shutoff valve is in the closed position. Inspect the filler connection for cleanliness before attaching it to the filler valve. Keep tools, hands and components clean, as fire or explosion may occur when pure oxygen under pressure comes in contact with organic material such as grease or oil.

Attach a hose from an oxygen recharging cart to the filler valve. To prevent overheating, fill the oxygen system slowly by adjusting the recharging rate with the pressure regulating valve on the cart. The oxygen cylinder should be filled to a pressure of 1800 ± 50 psi at a temperature of 70°F. This pressure may be increased an additional 3.5 psi for each degree of increase in temperature. Similarly, for each degree of drop in temperature, reduce the pressure by 3.5 psi. When the oxygen system is properly charged, disconnect the filler hose from the filler valve and replace the protective cap.

OXYGEN CYLINDER RETESTING

Oxygen cylinders used in the airplane are of two types. Light weight cylinders, stamped "3HT" on the plate on the side, must be hydrostatically tested every three years and the test date stamped on the cylinder. This bottle has a service life of 4,380 pressurizations or fifteen years, whichever occurs first, and then must be discarded. Regular weight cylinders, stamped "3A", or "3AA", must be hydrostatically tested every five years and stamped with the retest date. Service life on these cylinders is not limited.

MINOR MAINTENANCE

CLEANING

CLEANING DEICE BOOTS

Keep the boots free of engine oil with a solution of neutral soap and water. Avoid scuffing the surface of the boot to protect the special conductive surface.

CAUTION

Deice boots may be damaged by dragging gasoline hoses over them or resting ladders or platforms against them. Protect these surfaces while working around them.

INTERIOR

The seats, rugs, upholstery panels, and headlining should be vacuum-cleaned regularly. Commercial foam-type cleaners or shampoos can be used to clean rugs, fabrics, and upholstery; the instructions on the containers should be followed carefully.

ENGINES

Clean the engines with kerosene, solvent, or any standard engine cleaning solvent. Spray or brush the fluid over the engine, then wash it off with water and allow to dry.

CLEANING AND CARE OF AIRCRAFT FINISH

Do not apply wax or polish for a period of 90 days after delivery to allow the paint to cure. Waxes and polish seal the paint from the air and prevent curing. For uncured painted surfaces, wash only with cold or lukewarm (never hot) water and a mild nondetergent soap. Any rubbing of the painted surface should be done gently and held to a minimum to avoid scratching the paint film.

After the paint cures, wash the airplane with a mild soap and water. Flush loose dirt away first with clear water. Harsh, abrasive, or alkaline soap or detergents which could cause corrosion or make scratches should never be used. Use soft cleaning cloths or chamois to prevent scratches when cleaning and polishing. Any good grade automobile wax may be used to preserve painted surfaces. To remove stubborn oil and grease, use a soft cloth dampened with naphtha. However, after cleaning with naphtha, the surface should be rewaxed, and polished.

CLEANING PLASTIC WINDOWS

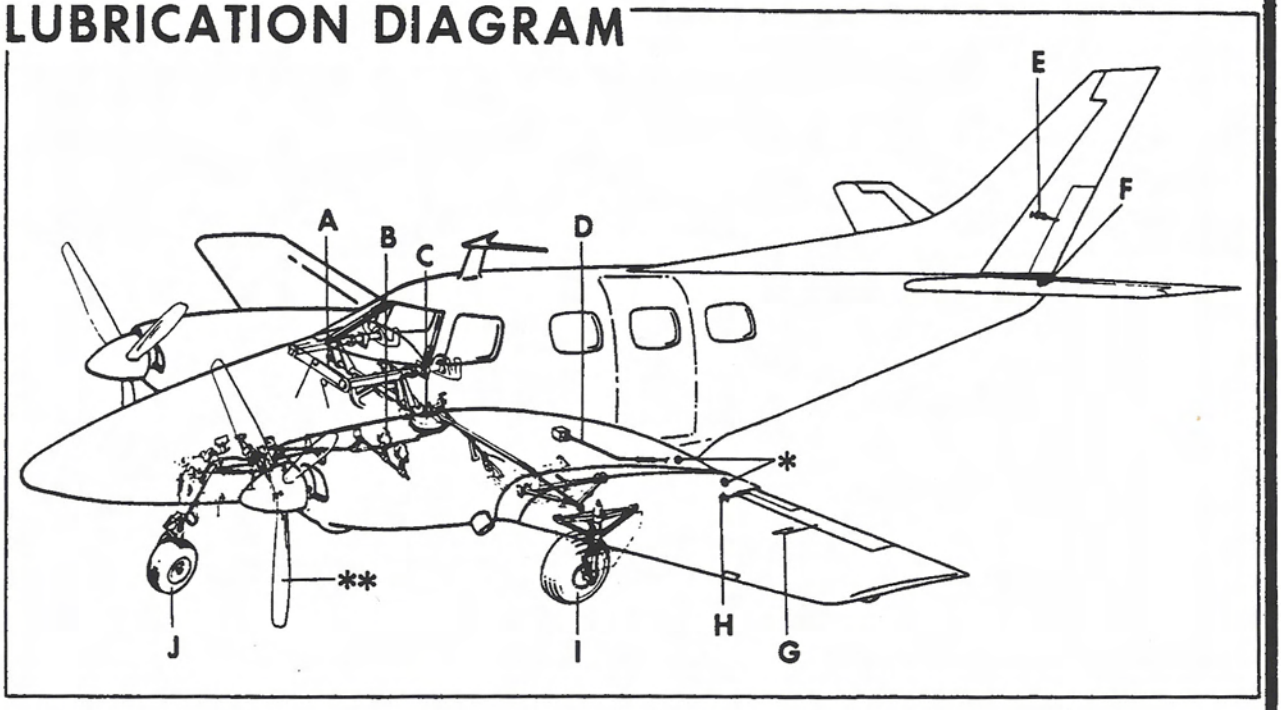
If a commercial cleaning compound for cleaning acrylic plastic windows is used, follow the instructions on the container. If a commercial cleaner is not available, clean as follows:

Cleaning of the acrylic plastic windows should never be attempted when dry. Flush the window with water or a mild soap solution and rub lightly with a grit-free soft cloth, chamois or sponge. Stubborn grease or oil deposits are readily removed with aliphatic naphtha or hexane. Rinse with clear water.

CAUTION

Do not use thinner or aromatic abrasive cleaners to clean the windows since the surface of the plastic may be damaged. Also, aliphatic naphtha and similar solvents are highly flammable, and extreme care must be taken when using them.

LUBRICATION DIAGRAM



NOTE

Apply MIL-G-7711 lubricating grease at all point of friction, in the cabin door, except where Oilite bearings are installed. The time interval for lubrication is as required.

* Flaps track rollers (pre-lubed sealed bearings). Pressure lubricate at 1000 hours inspection using MIL-G-23827 lubricating grease.

Precaution should be taken when using MIL-G-23827 and MIL-G-7711, since these greases contain chemicals harmful to painted surfaces.

** Hartzell DG grease is recommended for use in lubricating the blade bearings in the Hartzell Propeller. This grease will insure against a possible freeze up of the pitch change mechanism when prolonged flights are made at altitudes where the ambient temperature is below -20°C.

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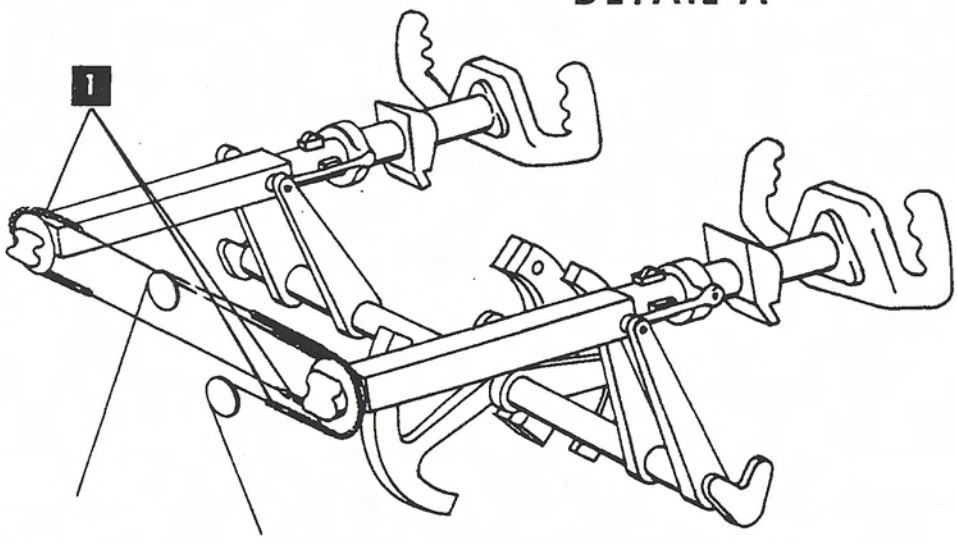
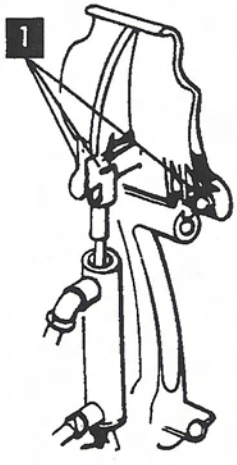
LUBRICATION POINTS

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	CONTROL COLUMN	DETAIL A		
1	Control column chain	SAE-20		100 hrs.

DETAIL A



DETAIL B



INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	RUDDER PEDALS	DETAIL B		
1	Pedals linkage	SAE-20		100 hrs.

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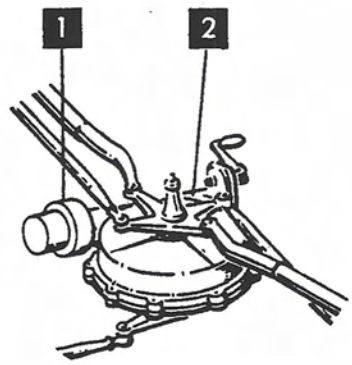
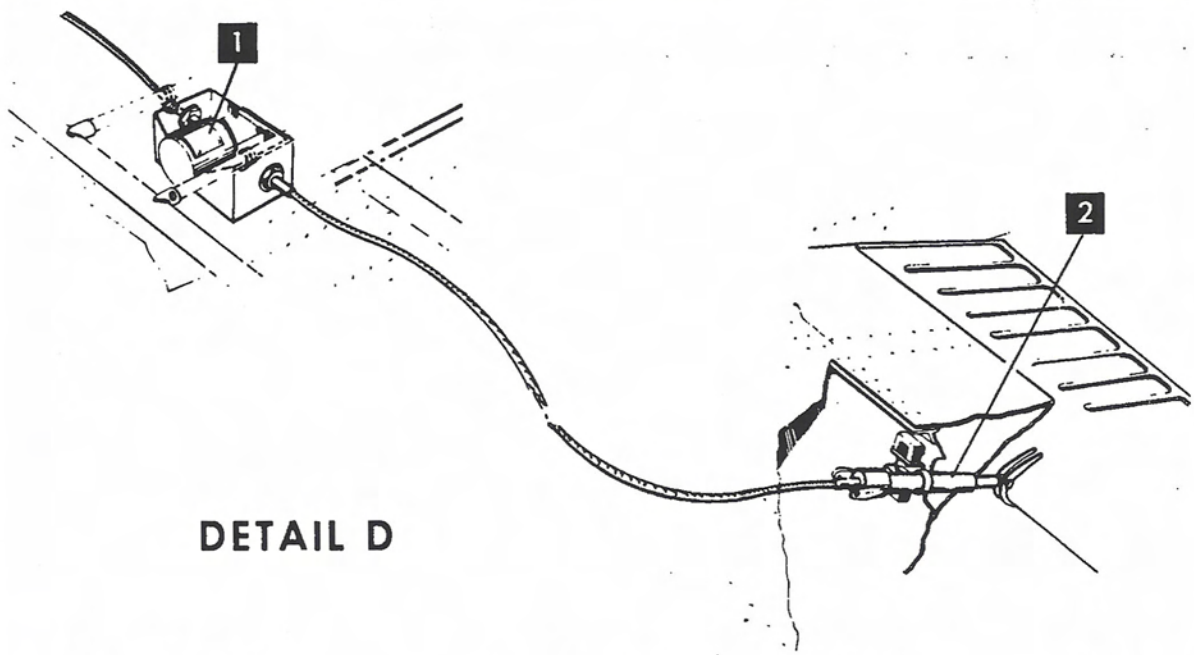
LUBRICATION POINTS

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	LANDING GEAR ACTUATOR	DETAIL C		
1	Landing gear motor gear box	MIL-G-7711		300 hrs.
2	Landing gear actuator gear box	Mobile Compound GG		300 hrs.

DETAIL C





DETAIL D

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	FLAP ACTUATOR	DETAIL D		
1	Flap motor gear box	MIL-G-23827		300 hrs.
2	Flap actuator	MIL-G-6086 Grade M		300 hrs.

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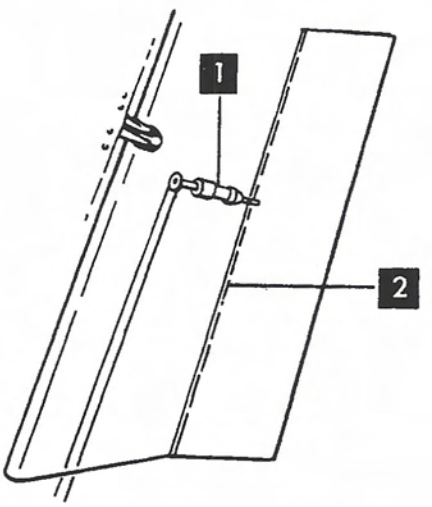
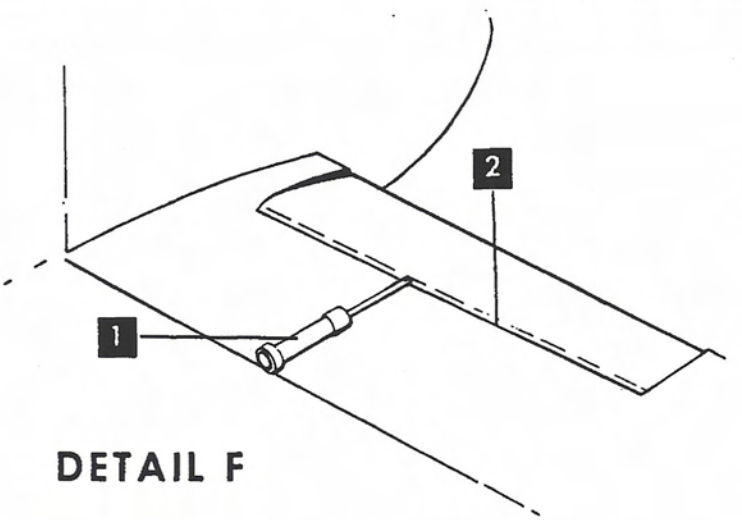
LUBRICATION POINTS

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	RUDDER TRIM	DETAIL E		
1	Rudder trim tab actuator	Aero Shell F		AR
2	†Rudder trim tab hinge	MIL-G-6711		100 hrs.

DETAIL E





DETAIL F

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	ELEVATOR TRIM	DETAIL F		
1	Elevator trim tab actuator	Aero Shell F		AR
2	†Elevator trim tab hinge	MIL-G-6711		100 hrs.

†Mix MIL-G-6711 with Naptha and apply with a brush.

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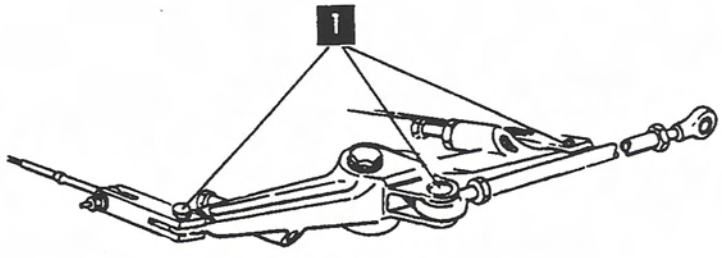
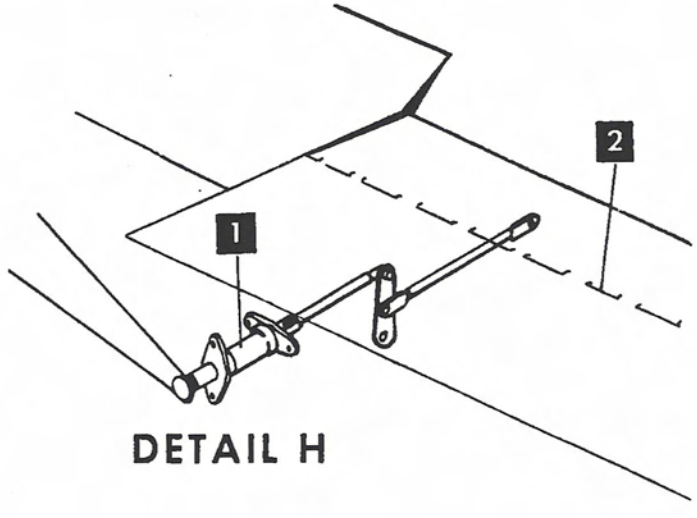
LUBRICATION POINTS

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	AILERON BELL CRANK	DETAIL G		
1	Aileron bell crank	SAE-20		100 hrs.

DETAIL G





DETAIL H

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	AILERON TRIM TAB	DETAIL H		
1	Aileron trim tab actuator	Aero Shell F		AR
2	†Aileron trim tab hinge	MIL-G-6711		100 hrs.

†Mix MIL-G-6711 with naptha and apply with a brush

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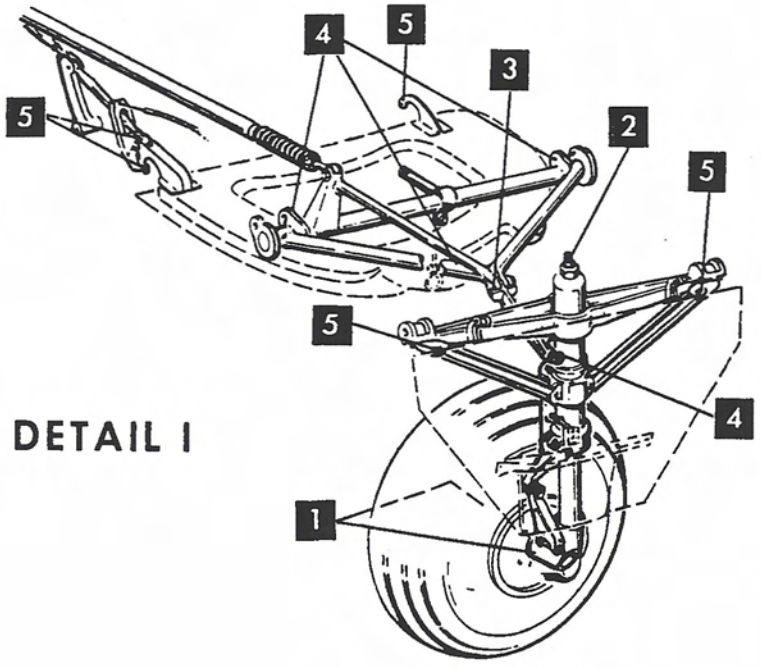
LUBRICATION POINTS

INDEX	LOCATION	LUBRICATION	APPLICATION	INTERVAL
	MAIN LANDING GEAR	DETAIL I		
1	Main wheel bearings	MIL-G-3545		100 hrs.
2	Main shock struts	MIL-H-5606		100 hrs.
3	Uplock rollers	SAE-20		50 hrs.



DETAIL I

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
4	Main retract fittings	MIL-G-7711		100 hrs.
5	Main gear door hinges	SAE-20		100 hrs.

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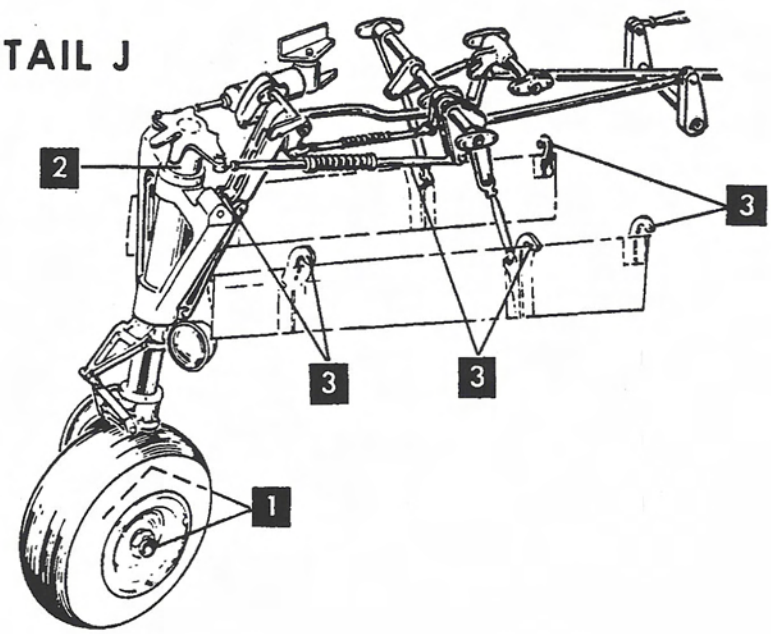
LUBRICATION POINTS

INDEX	LOCATION	LUBRICANT	APPLICATION	INTERVAL
	NOSE LANDING GEAR	DETAIL J		
1	Nose wheel bearings (2)	MIL-G-3545		100 hrs.
2	Nose shock strut (1)	MIL-H-5606		100 hrs.
3	Nose gear door hinges (6)	SAE-20		100 hrs.

DETAIL J



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RECOMMENDED SERVICING SCHEDULE

INTERVAL	ITEM	LOCATION (Letters refer to Lubrication Diagram)	SERVICE AND MATERIAL (Numbers Refer to Item in Consumable Materials)
Preflight	Drain Fuel Sump	Lower wing surface	
	Drain Fuel Strainer	Lower wing surface	
	Drain Fuel Tank	Lower wing surface	
	Drain Heater Fuel	Aft bulkhead of nose wheel well	
	Check Engine Oil Level	Access door on upper cowling	(2)
50 hrs.	Replace Engine Oil Filter	Right side of engine	
	Clean Induction Air Filter	Right rear side of engine	Clean per instructions on filter
	Lubricate Uplock Rollers	Each main landing gear (1)	SAE-20
100 hrs.	Change Engine Oil	Accessible through cowl flap opening	(2)
	Clean Engine Oil Screen	Engine oil sump	Clean with solvent and blow dry with air pressure at oil change.
	Check Battery Electrolyte	Access plate on rear of left nacelle	See Shop Manual
	Check Propeller Air Dome	Access cap on propeller spinner	Dry air or nitrogen
	Check Propeller Accumulator	Lower rear of engine	Dry air or nitrogen
	Clean Pressure System Inlet Air Filter	Forward side of aft engine baffle	Wash with soap and water, rinse and dry
	Clean Servo Fuel Filter	Fuel injection	Clean with solvent and blow dry with air pressure (9)
	Clean Cabin Altitude Control Filter	Right subpanel	Clean with solvent and blow dry with air pressure (9)
	Clean Static Air Button	Aft fuselage skin	Clean with solvent and wipe dry with clean rag (9)
	Clean Heater Fuel Pump Screen	Left wing stub	Clean with solvent and blow dry with air pressure (9)

RECOMMENDED SERVICING SCHEDULE (Continued)

INTERVAL	ITEM	LOCATION (Letters refer to Lubrication Diagram)	SERVICE AND MATERIAL (Numbers Refer to Item in Consumable Materials)
100 hrs.	Drain Static Air Line	On upholstery panel below copilot's subpanel	
	Service Main and Nose Landing Gear Struts	Top of each strut	Compressed air and (7)
	Lub Control Column Chain (A)	In cockpit	Lubricate with SAE-20
	Lub Rudder pedals (B)	In cockpit	Lubricate with SAE-20
	Lub Elevator Trim Tab Hinge (F)	On elevator	Lubricate with MIL-G-6711 (6)
	Lub Rudder Trim Tab Hinge (E)	On rudder	MIL-G-6711 (6)
	Lub Aileron Trim Tab Hinge (H)	On aileron	MIL-G-6711 (6)
	Lub Aileron Bell Crank (G)	Under cockpit floorboards	SAE-20
	Lub Main Wheel Bearings (I)	Main landing gear	MIL-G-81322 (5)
	Lub Main Shock Struts (I)	Main landing gear	MIL-H-5606 (7)
	Lub Main Retract Fittings (I)	Main landing gear	MIL-G-7711 (3)
	Lub Main Gear Door Hinges (I)	Main landing gear wheel well	SAE-20
	Lub Nose Wheel Bearings (J)	Nose landing gear	MIL-G-81322 (5)
	Lub Nose Shock Strut (J)	Nose landing gear	MIL-H-5606 (7)
	Lub Nose Gear Door Hinges (J)	Nose landing gear wheel well	SAE-20
	Lub Turbocharger Wastegate butterfly valve	Exhaust manifold forward at turbocharger	MOUSE MILK or KANO KROIL

RECOMMENDED SERVICING SCHEDULE (Continued)

INTERVAL	ITEM	LOCATION (Letters refer to Lubrication Diagram)	SERVICE AND MATERIAL (Numbers Refer to Item in Consumable Materials)
300 hrs.	Lub Landing Gear Motor Gear Box (C)	Under floorboards of cockpit	MIL-G-7711 (3)
	Lub Landing Gear Actuator gear box (C)	Under floorboards of cockpit	Mobile Compound GG
	Lub Flap Actuator (D)	Under floorboards of cabin	MIL-G-6086 Grade M (17)
	Lub Flap Motor Gear Box (D)	Under floorboards of cabin	MIL-G-23827 (4)
500 hrs.	Replace Pressure System Inline Air Filter	Right rear side of nacelle	
	Replace Induction Air Filter	Right rear side of nacelle	
As Required	Lub Rudder Trim Tab Actuator (E)	On rudder	Aero Shell F
	Lub Elevator Trim Tab Actuator (F)	On elevator	Aero Shell F
	Lub Aileron Trim Tab Actuator (H)	On aileron	Aero Shell F
	Brake Fluid Reservoir	Forward baggage compartment	MIL-H-5606, hydraulic fluid (7)
	Oxygen Cylinder	Forward baggage compartment	MIL-O-27210, aviators breathing (13) oxygen
	Air Conditioner Compressor Oil Level	See Shop Manual	Suniso No. 5 or Texaco Capella (18) E, 500 Viscosity oil
	Air Conditioner Refrigerant	See Shop Manual	Refrigerant No. 12 (19)

CONSUMABLE MATERIALS

The vendor products appearing in this table have been selected at random to help field personnel determine products conforming to the military specifications in this publication. The brand names are listed for ready reference and are not specifically recommended by Beech Aircraft Corporation. Any product which conforms to the referenced specification may be used.

ITEM	MATERIAL	SPECIFICATIONS	VENDOR PRODUCTS
1.	Fuel, Engine	100/130 (Green) Octane, if not available, use 115/145 (Purple)	
2.	Oil, Engine	MIL-L-22851	Ashless Dispersant Only
3.	Lubricating Grease (General Purpose)	MIL-G-7711	Regal AFB 2, Texaco Inc., 135 East 42nd Street, New York, 17, N.Y. Aeroshell Grease No. 6, Shell Oil Co., 50 West 50th Street, New York 20, N.Y. 22442, International Lubricants Co., New Orleans, La.
4.	Lubricating Grease (Aircraft and Instruments, Low and High Temperature)	MIL-G-23827	Supermil Grease No. A72832, American Oil Co., 910 South Michigan Avenue, Chicago, Ill. Royco 27A, Royal Lubricants Co., River Road, Hanover, N.J. Aeroshell Grease 7, Shell Oil Co., 50 West 50th. St. New York 20, N.Y.
5.	Lubricating Grease (High Temp.)	MIL-G-81322	Mobil Grease 28, Mobil Oil Corp. Shoreham Bldg. Washington D.C. 20005 Aeroshell Grease 5, Shell Oil Co., 50 West 50th St., New York 20, N.Y.
6.	Graphite, Lubricating	MIL-G-6711 or "Petrochem Chain Life"	GP-38 National Carbon Co. New York, N.Y. Ashland Chemical Co., P.O. Box 2260 Santa Fe Springs, California 90670
7.	Hydraulic Fluid	MIL-H-5606	Brayco 756D, Bray Oil Co., 3344 Medford Street, Los Angeles 63, California PED 3565, Standard Oil Co., of California, 225 Bush Street, San Francisco 20, California

CONSUMABLE MATERIALS (Continued)

ITEM	MATERIAL	SPECIFICATIONS	VENDOR PRODUCTS
8.	Anti-Ice Fluid	TT-I-735	Sherwood & Co., Wichita, Kansas
9.	Solvent	PD680	
10.	Soap Solution, Oxygen System, Leak-Testing	MIL-L-25567	
11.	Lubricant, Molybdenum Disulfide	MIL-M-7866	Molykote Z, Wilco Inc. Wichita, Kansas
			Molykote Z, Standard Oil of Kentucky
			Molykote Z, Hasker Seals Glendale, California
			Molykote Z, Alpha Molykote Corp. Stanford, Conn.
			Moly-Paul Number 4, K.S. Paul Products Ltd. London, England
12.	Oxygen Thread Compound Anti-Seige and Sealing, Oxygen Systems	MIL-T-5542	No. 15, Rector Well Equipment Co., Houston, Texas
			Dag 217, Acheson Colloies Co., Port Huron, Michigan
			Key Abso-Lute, Type B, Key Co., East St. Louis, Illinois
13.	Aviator's Breathing Oxygen	MIL-O-27210	
14.	Naphtha	TT-N-95	
15.	Methyl Ethyl Ketone	MIL-M-13999	
16.	Thread Locking Compound		Stud Loc, Loctite Corp. Newington, Conn.
17.	Lubricating Oil, Gear	MIL-L-10324A or MIL-L-6086 Grade M	Trojan Gear Oil 6086M Cities Service Oil Co., New York, New York
			Aeroshell Fluid 5M, Shell Oil Co., 50 West 50th Street, New York, N.Y.
			L-1195, Sinclair Refining Co., 600 Fifth Avenue, New York, N.Y.

CONSUMABLE MATERIALS (Continued)

ITEM	MATERIAL	SPECIFICATIONS	VENDOR PRODUCTS
18.	Oil (Air Conditioner Compressor)	Suniso No. 5	Virginia Chemical & Smelting Co., West Norfolk, Virginia
		Texaco Capella E (500 viscosity)	Texaco Inc., 135 East 42nd St., New York, N.Y.
19.	Air Conditioning Refrigerant	Dichlorodifluoro-methane Racon 12	Racon Inc. Wichita, Kansas
		Genetron 12	Allied Chemical Speciality Chemicals Division Morristown, New Jersey
		Freon 12	DuPont Inc. Freon Products Division, Wilmington Delaware 19898

NOTES

1. If 100/130 (Green) octane fuel is not available, 115/145 (Purple) octane fuel may be used as an alternate. Never use a lower octane fuel.
2. Mix item 10 with naphtha and apply with a brush.
3. Precautions should be taken when using MIL-G-23827 and MIL-G-7711, since these greases contain chemicals harmful to painted surfaces.
4. Flap track rollers (pre-lubed sealed bearings). Pressure lubricate at 1000 hour inspection using MIL-G-23827 lubricating grease.

APPROVED ENGINE OILS

(ASHLESS DISPERSANT OILS)

COMPANY	BRAND IDENTIFICATION
Delta Petroleum Company Incorporated	Global Concentrate A
Enjay Chemical Company	Paranox 160 and 165
Mobil Oil Corporation	RT-451, RM-178E, RM-180E
Shell Oil Company	Shell Concentrate A Code 60068 Aeroshell W120 Aeroshell W80
Texaco Incorporated	TX-6309 Aircraft Engine Oil Premium AD120 Aircraft Engine Oil Premium AD80
American Oil and Supply Company	PQ Aviation Lubricant 753
Chevron Oil Company	Chevron Aero Oil Grade 120
Humble Oil and Refining Company	Esso Aviation Oil E-120 Enco Aviation Oil E-120 Esso Aviation Oil A-100 Enco Aviation Oil A-100 Esso Aviation Oil E-80 Enco Aviation Oil E-80
Standard Oil Company of California	Chevron Aero Oil Grade 120

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LAMP REPLACEMENT GUIDE

LOCATION	PART NUMBER
Annunciator Panel Lights	327
Edge Lights	D158-100-5T1
Post Lights	327
Compass Light	327
Instrument Flood Lights (Red)	1846R
Instrument Flood Lights (White)	1846
Map Light	1495
Landing Gear Position Lights	327
Reading Lights	1495
Threshold Light	313
Nose Baggage Compartment Light	303
Navigation Lights (Wing)	1524
Navigation Light (Tail)	1683
Rotating Beacon (Upper And Lower)	A7079B24
Ice Light	A7796A24
Landing Lights	4596
Taxi Light (Nose Landing Gear)	4587