

26 EASY WINTER PROJECTS FOR THE A36

BY PETER TRACY, BISHOP, CALIFORNIA

1. REPLACE GRIMES ROTATING BEACON WITH WHELAN DROP-IN STROBE. STC SA615EA/SA800EA. Model HRCFA-14/28. P/N: 01-07700-29-3. No weight change. Need to paint part of body of strobe. FAA/PMA. Three screws and unplug. Drop-in. Plug-in. Three screws. Voila! \$356.50 at Chief. All red, all white or red/white lens. Parts Manual: Figures 361-361A. Maintenance Manual: Chapter 33-40-00.

2. REMOVE & REPLACE ALL LANDING GEAR FITTINGS. There are about 17 zerk fittings of different sizes and shapes. Most of them screw in, but a few are press-fit. Zerk fittings become clogged over time. Performance Aero has a 17 zerk fitting kit for \$19.00. Parts Manual: Figures 202-214B. Maintenance Manual: Generally Chapter 32, Lubrication Schedule, Chapter 12-20-00.

3. CLEAN OR REPLACE CHECK VALVES. There are two check valves in the wings—siphon break valves. One in the fuel return line. Sweeney Check valves. Fuel Return Line: P/N 50-380170-11—on firewall. Siphon break valves: P/N 34-1300-1 (P/N: 50-380170-11.) in fuel vent lines outboard of wing tanks and accessible through inspection panel under wing. These tend to gum up in time. One-way door valve. Can usually be cleaned. Make sure the

NOTE: Part numbers listed will vary by aircraft model and serial number. Many of these tasks require at least supervision by a licensed A&P mechanic. Often components in the Beech product line appear similar but are actually different, so check the shop and parts manuals for your airplane.

—Neil Pobanz, ABS Technical Consultant

right side is up—hinge on top. Good solvent. Parts Manual: Figures 281-281C and 282-282C. Maintenance Manual: Chapter 28-20-00.

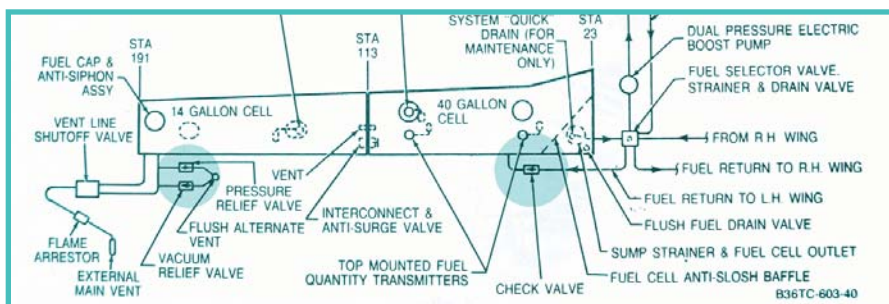
4. REPLACE LANDING GEAR LIGHT INDICATOR LENS & ALTERNATOR OUT AND BAGGAGE DOOR AJAR LENS. They tend to go hazy. P/N 855291SI-1-G-5STD (\$16.25 from Raytheon); 855291SI-R-2STD. These screw off and on. Alternator out lens: P/N855291S1R2DSP6-OUT. Baggage door ajar lens P/N 855291S1R2DSP6-AJAR. Parts Manual: Figures 354-354E, 391-391A, 392-392D (\$19.51 from Raytheon.)

5. REBUILD NOSE GEAR TORQUE KNEE ASSEMBLY. Torque knee junction bushing: P/N 35-820123. (\$23.79 from Raytheon.) Bolt: 130909B170; nut: 130909N7; washers: 100951S063ZZ (\$0.18 from Raytheon); 100951S063YH (\$0.23 from Raytheon) Parts Manual: Figures 206-206B. Maintenance Manual: Chapter 32-20-00.

6. REPLACE FLAP ROLLER ASSEMBLIES. Flaps roll on these rollers. Eight rollers required: two front & two rear on each side P/N BC56984. (\$78.87 each from Raytheon.) Usually only need to do four. Bolts: 130909B21, 130909B23; Nuts: 130909N29; Washers: AN960-10. Set up like railroad car wheels—flange on inside of tracks. Rubber bumper assemblies: P/N4988. (\$2.70 from Raytheon.) Very cheap. Parts Manual: Figure 40. Maintenance Manual: Chapter 27-50-00.

7. REPLACE COWL GILL DOOR AIRLOC FASTENERS WITH MIL-SPEC PRODUCTS, INC. STAINLESS AIRLOC FASTENERS. Kit No. MB35-4. Needs no special tools—but need vise-grips with hole in jaw to push out old and push in new pins. Parts Manual: Figures 91-91A. Maintenance Manual: Chapter 71-10-00. Kit: \$155.00.

8. REPLACE TRIM TAB ACTUATOR REAR ATTACH BUSHING AND HARDWARE. Trim tabs get loose. Lots of linkage and small wear amounts add up. Maximum allowable trim tab movement is about $\frac{1}{8}$ ". Lots of places to be loose. This is an easy fix for part of the looseness. Bushing: P/N 105740X-ZH0115. (\$27.54 from Raytheon.) Rod end: P/N 96-526011 (\$145.04 from Raytheon) & 96-526012 (\$169.25 from Raytheon)—usually don't need the rod-ends. Bolt: 130909B171. Nut: 130909N45. Washers:

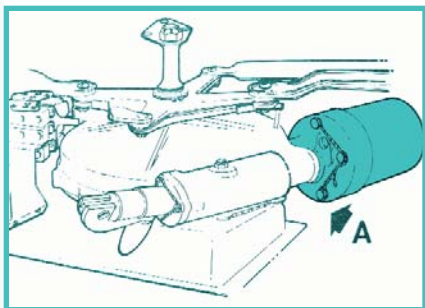


Check valves - Maintenance Manual: Chapter 28-20-00.

AN960-10, AN969-10L. Replace hardware. Needs close tolerance bolt: triangle marking. Not standard AN bolt. Should be loose enough to turn with fingers. Not tight. Especially important on 35 models because of wire trim tab cables—bending/flexing/breaking. Parts Manual: Figure 131. Maintenance Manual: Chapter 27-30-00.

9. INSTALL FUEL SELECTOR VALVE SAFETY KIT. Kit installs button on fuel selector to keep from turning to “off” by mistake. Kit No. 36-5006-1 S. Per MSI 1248. Kit is \$208.25 from Raytheon.

10. INSTALL LANDING GEAR SELECTOR SAFETY KIT. Very easy to install. Kit No. 58-8001-1 S. MSB 1215. Kit is \$436.08 from Raytheon. Can be had in the aftermarket for about \$75 new.



Landing gear motor - Parts Manual: Figures 214-214B

11. REMOVE AND OVERHAUL LANDING GEAR MOTOR. Relatively easy. Under main spar cover under pilot's seat. Unhook wires. Unbolt motor. Motor is .50 Cal. machine gun belt feed motor. Motor will get weak. May lose dynamic brake. Cruisair can overhaul. Beech recommends overhaul at 2000 hours and brush replacement each 500 hours. Check your gear retract times. New from Raytheon: \$2,459.66. Field overhaul cost is about \$500; \$800 for a factory-repaired unit. Motor P/N 96-380022-5, superseded by P/N 58-380090-1. Parts Manual: Figures 214-214B. Maintenance Manual: Chapters 32-20-00 and 32-30-00.

12. REPLACE NOSE GEAR DOOR BUSHINGS, BALL JOINTS. Remove the nose gear doors. Replace all attach bushings: P/N 105739S-ZG0250. (\$3.70 from Raytheon.) Ball joints: P/N C100102. (\$47.52 from Raytheon.) Parts Manual: Figure 208. Maintenance Manual: Chapter 32-20-00.

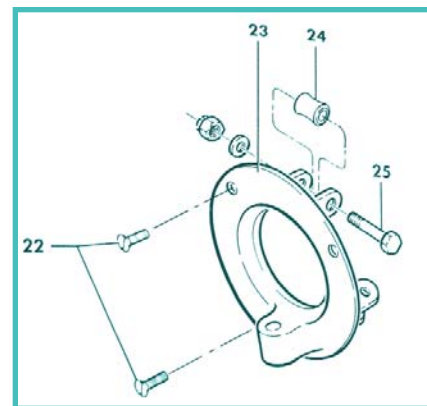
13. REPLACE MAIN GEAR DOOR BUSHINGS. Remove old nonpressed bushings and hardware from outer main gear doors & replace. Bushings: P/N 58-810022-1 (\$31.89); Bolts P/N 130909B20, 130909B36, 130909B38; Nuts: P/N 130909N29, 130909N32, AN316-4R; Washers: P/N AN960-10, AN960-10L, AN960-416. Parts Manual: Figure 204. Maintenance Manual: Chapter 32-10-00.

14. REPLACE SHIMMY DAMPENER HARDWARE. You service and overhaul your shimmy dampener, but what about the attach hardware? Two bolts: 130909B17, AN6-31A; Two bushings: 105740X-YN1458 (\$53.68 each from Raytheon), 105739X-ZK0190 (\$82.15 each from Raytheon). Parts Manual: Figures 206-206B. Maintenance Manual: Chapter 32-20-00.

15. REPLACE FUEL CAP O-RINGS. Caps: Shaw Aero P/N 96-380035-1. Two O-rings: Large: MS29513-338 (\$1.19 from Raytheon), Small: MS29513-10 (\$0.08 from Raytheon). Alternate Caps: 96-380035-3 use large O-ring: 37617-339. Small O-ring: MS9021-110. Second alternate caps: 96-380035-5 use large O-ring: MS29513-338; small O-ring: MS29513-11. O-rings can be ordered separately. Performance Aero has a kit for \$9 per cap. Fuel-resistant O-rings. Small one is very important. Some airplanes have alternative caps: P/N Parts Manual: Figure 287-287A. Maintenance Manual: Chapter 28-20-00.

16. REMOVE, PAINT & REPLACE BATTERY BOX. Removes with four bolts. Treat inside with acid-resistant

paint. Paint outside. Replace hoses. Drain hose: P/N 35-410462-25. (\$40.25 from Raytheon.) Vent hose: P/N BE709-4-30-6. (\$20.13 from Raytheon.) Replace grommets: P/N MS35489-12S. (\$0.45 each from Raytheon.) Parts Manual: Figure 356-356C. Maintenance Manual: Chapter 24-30-00.



Control column rollers - Parts Manual: Figures 155-155A.

17. REPLACE CONTROL COLUMN ROLLERS AND HARDWARE. Very easy job. Pull collar from around control column—three screws. Pull collar back. Column rides on three nylon rollers. They tend to compress and wear over time. New rollers: P/N 35-524197-4. (\$16.57 each from Raytheon.) Rollers ride on three bolts, nuts, washers. Bolts: 130909B23/M; Nuts: 130909N29/M; Washer: AN960-10L; Screws: AN507-832-10. Parts Manual: Figures 155-155A. Maintenance Manual: Chapters 27-10-00, 27-11-00. Not applicable to A36s built from 1984 forward.

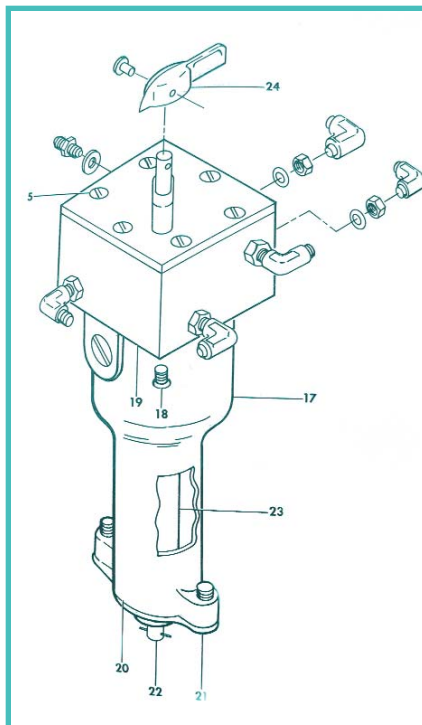
18. REBUILD NOSE LANDING LIGHT CUSHIONING ASSEMBLY. Remove old seals, spacer & hardware. Replace with new seals, spacer & hardware. Landing light: Seals: P/N 002-410000-129 (\$12.79), 002-410000-133 (\$16.45), 002-410000-145 (\$16.09). Spacer P/N 002-410000-135 (\$9.26). Parts Manual: Figure 360-360A. Maintenance Manual: Chapter 33-40-00.

19. REPLACE INLINE INSTRUMENT CANISTER AIR FILTERS WITH AEROTECH COMPONENTS, INC. "CLEARVIEW" PNEUMATIC INLINE FILTERS. Old canister filters are replaced on time. Can't see condition. "Clearview" filters are visible. Have darkness gauge. P/N CV1J4. STC SA289CH. FAA/PMA. Replaces 1J4-7, which is \$45.75 from Airborne, \$24.50 from Rapco. Clearview: \$48.95 at Chief.

20. REPLACE BRAKE FLUID RESERVOIR & LOWER FLEXIBLE BRAKE LINES. Old brake fluid reservoir is a simple thin can. Brake fluid attracts water and tends to corrode out in time. New brake fluid reservoir is a beautiful item. P/N 9027A100-1. (\$170.48 from Raytheon.) Brake lines harden with time. P/N MS28741-4-0160. (\$57.04 from Raytheon.) Parts Manual: Figure 202. Maintenance Manual: chapter 32-40-00.

21. REMOVE & OVERHAUL AUXILIARY FUEL BOOST PUMP. Beech recommends overhaul every 10 years. Unhook wires. Unbolt unit. Send out for overhaul. Parts Manual: Figures 281-281C. Maintenance Manual: Chapter 28-00-00. Dukes pump. MSB: Re Nylatron Vanes. "-NV" P/N 1296-00-1NV. \$2,323.07 new from Raytheon. About \$450 for a factory overhaul by Dukes, including compliance with MSB & putting in Nylatron Vanes. Procedure: Drain & purge fuel system; remove pilot & copilot seats; remove royalite cover over main spar; remove fuel selector handle & unscrew post-light covers from the royalite truss cover, then remove the truss cover. Disconnect the fuel plumbing from the fuel selector valve. Remove the four bolts securing the auxiliary fuel pump to the mounting bracket & remove the auxiliary fuel pump. The auxiliary fuel pump is located

in front of the spar carry-through on the pilot's side.



Fuel selector valve - Parts Manual: ---Figure 289A-289C.

22. REMOVE & OVERHAUL FUEL SELECTOR VALVE. Fuel selector valve removal requires a/c to be de-fueled. Remove valve. Send out for overhaul. Cost: About \$200. Beech recommends overhaul every 10 years. Parts Manual: Figure 289A-289C. Maintenance Manual: Chapter 28-20-00. Procedures: Drain and purge fuel system. Remove pilot & co-pilot seats. Remove royalite cover over main spar. Remove fuel selector handle & unscrew postlight covers from the royalite truss cover, then remove the truss cover. Disconnect the fuel plumbing from the fuel selector valve. Remove the four bolts securing the auxiliary fuel pump to the mounting bracket & remove the auxiliary fuel pump. The auxiliary fuel pump is located in front of the spar carry-through on the pilot's side.

23. REMOVE & REPLACE FLAP MOTOR & TRANSMISSION ASSEMBLY. Relatively straightforward. Motor & transmission is a single unit. Purchased new from Raytheon: \$300+/- . Unhook wires. Unbolt. Put in new unit. P/N D160-00-3. (\$213.97 new from Raytheon.) Parts Manual: Figure 161. Maintenance Manual: 27-50-00.

24. REPLACE DIPSTICK GAS-KET. Dipstick gasket is nothing to replace. TCM P/N 533355. (\$2.16 from Raytheon.) Performance Aero has 1/8" & 1/16" gaskets.

25. REPLACE THROTTLE CABLE & MIXTURE CABLE ROD-ENDS AT ENGINE END. Throttle rod-end P/N 131765-1F which is a replacement for P/N F34-14M. Mixture control rod-end P/N 131765-1F, replacement for P/N F34-14M. (\$41.08 from Raytheon.) Parts Manual: Figures 159-159A. Maintenance Manual: Chapters 71-00-00.

26. REPLACE INTERIOR & EXTERIOR PLACARDS. Maintenance Manual: Chapter 20-08-00. Parts Manual: Figures 15 and 16. See also POH/AFM "Limitations, Section II. Decals are self-explanatory. Performance Aero has emergency exit window placards, \$9; emergency landing gear instructions to extend, \$15; Arm Rest Emblems, \$8.50; Seat Belt Buckle Emblems, \$4; Glove Box Door Medallions, \$45. They also have Fuselage Emblems: A36 Aft Fuselage Emblems with Crest, \$87 per pair; V35B & F33A Aft Fuselage Emblems with Crest, \$85 per pair. Beechcraft Crests only: \$19 per pair. They also have Baron Exterior Cowl Door Emblems, \$69 per pair. Numerous other placards and decals. Additionally, you can get them from Aerographics or have them made by Engravers, Inc. 