19,23,24

No. 0364-289, Rev. III
ATA Code 28-20
Recurring Inspection

SUBJECT: FUEL SYSTEM - FUEL SELECTOR VALVE - INSPECTION OF FUEL SELECTOR VALVE

NOTE

Service Instructions No. 0181-289 and Service Instructions No. 0364-289, Revisions I and II are hereby cancelled.

SYNOPSIS OF CHANGE: Service Instructions are rewritten in new format and fuel shut-off check is required as a Recurring Inspection. Serial effectivity is increased, freedom of movement check is further defined, availability of a new improved fuel selector valve is added and fuel selector valve guard replacement is added.

EFFECTIVITY: BEECHCRAFT A23-19, 19A, M19A and B19, serials MB-1 through MB-520;
B19 Sport 150, serials MB-521 through MB-616;
23, A23, A23A, B23 and C23, serials M-1 through M-1361;
C23 Sundowner 180, serials M-1362 through M-1485;
A23-24 and A24, serials MA-1 through MA-368;
A24R, serials MC-2 through MC-95;
A24R and B24R Sierra 200, serials MC-96 through MC-180;
that have not complied with Service Instruction No. 0622-289.

REASON: To preclude binding of the fuel selector valve installed as original equipment (Imperial Eastman), check the shut-off characteristics, install a new fuel selector valve guard and make available a new replacement valve if necessary.

COMPLIANCE: Beech Aircraft Corporation considers this inspection mandatory, and it should be accomplished at the next scheduled inspection or within the next 25 service hours, whichever occurs first, and at every 100 hour and/or annual inspection thereafter.

NOTE

If a new fuel selector valve is installed per Service Instructions No. 0622-289, the recurring inspection will no longer be applicable.

AW-654
570
R970
R1170
R175

Beech Aircraft Corporation issues service information for the benefit of owners and fixed base operators in the form of three classes of Service Instructions. CLASS I (Red Border) are changes, inspections, and modifications that could affect safety. The factory considers compliance mandatory. CLASS II (Green Border) covers changes, modifications, improvements or inspections the factory feels will benefit the owner and although highly recommended, they are not considered mandatory compliance, unless specified at the time of issuance. Class I and II are mailed to:

(a) BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers.
(b) Owners of record on the FAA Registration list and the BEECHCRAFT International Owner Notification Service List.
(c) Those having a publications subscription.

CLASS III (No Border) covers changes which are optional, maintenance aids, product improvement kits and miscellaneous service information. Compliance is at the owner or operator's prerogative. Copies of Class III are distributed per a and c above. Information on Owner Notification Service or Subscriptions can be obtained through any BEECHCRAFT Aero or Aviation Center, International Distributor and Dealer, or the Factory. As Service Instructions are issued, temporary notation in the index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Instructions and in accordance with Beech Warranty Policy.

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98-34239D

DESCRIPTION: The fuel selector valve is inspected, lubricated, repaired as necessary or replaced as required.

APPROVAL: FAA Approved - DOA CE-2.

MANPOWER: The following information is for planning purposes only.

Estimated man-hours for inspection: 1 hour.
Estimated man-hours to correct shut-off characteristics: 2 hours.
Estimated man-hours to correct freedom of movement characteristics: 1 hour.
Estimated man-hours for replacement: 5 hours.
Suggested number of men for any of the above: 1 man.

MATERIAL: If replacement of the fuel selector valve is necessary, a fuel selector valve kit will be required. Kits available for the various aircraft are listed in Service Instructions No. 0622-289 and may be obtained through your BEECHCRAFT Parts and Service Outlet. If only a guard is to be replaced do not order a kit. The following parts, if required, are available through your BEECHCRAFT Parts and Service Outlet.

PART NUMBER	DESCRIPTION	QUANTITY	PRICE*
169-920001-43	Fuel selector valve guard (A23 and A23A)	1	$11.80 each
169-920000-165	Fuel selector valve guard (23, A23-19, 19A, M19A, B19, B23, C23, A23-24, A24, A24R and B24R)	1	$11.20 each
AN960-516	Washer	as required	$ .50**
AN960-516L	Washer	as required	$ .50**

*Estimated suggested selling price (subject to change without notice).
**Price for a minimum buy quantity of 50 parts.

WARRANTY: BEECHCRAFT Warranty on a new airplane is 180 days from delivery or 180 days from the date noted on the Owner Warranty Card. Parts and labor noted herein will be allowed on BEECHCRAFTS within warranty at the time these Service Instructions are released.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: Service Instructions No. 0622-289.

PUBLICATIONS AFFECTED: It is recommended that a note to "See Service Instructions No. 0364-289, Rev. III" be made on all 19, 23 and 24 series Parts Catalog copies, P/N 169-590015F or subsequent, Figures 281, 281A, 281B and 281C.

ACCOMPLISHMENT INSTRUCTIONS: This inspection, repair and/or replacement may be accomplished as follows:

1. To check for proper shut-off, start the engine and set the throttle for 800 rpm.
2. Turn the fuel selector valve to the OFF position and maintain 800 rpm until the engine stops.
3. All carbureted engines must shut down within 5 minutes and all fuel injected engines must shut down within 20 seconds.
4. If the elapsed time exceeds that mentioned above, it will be necessary to adjust the quantity of washers between the packing nut and the valve handle as outlined in step 8. Proceed with the remainder of this inspection before working on the valve.
5. To check for freedom of movement, remove the valve handle and, using a torque wrench, measure the breakaway torque required to move the valve out of each detent position and the running torque required to move the valve through 360 degrees. Breakaway torque must not exceed 10 inch-pounds and running torque must not exceed 5

inch-pounds. If either torque exceeds its limit, repair the valve as outlined in step 7.

6. If the valve has acceptable shut-off and freedom of movement characteristics at this point proceed to step 11.

7. Accomplish the following only if indicated in step 5.

a. Reduce the fuel quantity in each cell to a minimum.

b. Remove the roll pin from the valve stem.

c. Loosen the packing nut on the valve top and remove the valve cone from the valve.

CAUTION

Use extreme care; flammable fuel spilled in the cabin may result in fire.

d. Clean the valve thoroughly with benzine or naphtha then lubricate the valve cone with a very thin coating of Dow Corning FS-1292 Flourosilicone Lubricant (product of Dow Corning Corporation, Midland, Michigan, 48640) or equivalent.

e. Reinstall the valve cone and the packing nut.

NOTE

Ascertain that the detent washer is properly positioned before installing the nut to avoid deformation of the detent washer.

f. Install five AN960-516 washers and one AN960-516L washer over the valve stem.

8. Accomplish the following only if indicated in step 4.

a. Reduce the fuel quantity in each cell to a minimum if not already accomplished.

b. Remove the roll pin from the valve stem if not already accomplished.

CAUTION

Use extreme care; flammable fuel spilled in the cabin may result in fire.

c. Remove one AN960-516 washer and add one AN960-516L washer. If necessary, the bottom of the valve handle may be milled or sanded, not to exceed .030 inch, to obtain the desired function. Additional spacers may be fabricated from .005 inch brass shim stock if necessary or desired.

9. Reinstall the roll pin in the valve stem.

NOTE

Make certain the roll pin is installed in the valve stem so that proper positioning of the valve handle is assured.

10. Repeat the inspection procedures in steps 1 through 5. If the valve does not meet the specifications required, replace it as instructed by Service Instructions No. 0622-289.

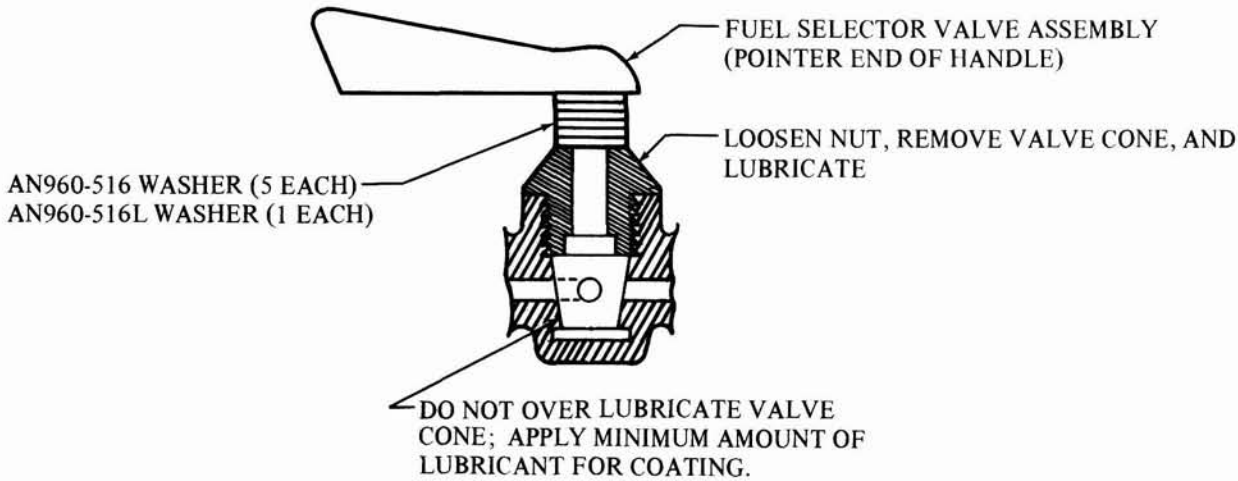
NOTE

A kit is to be ordered only if the fuel selector valve is to be replaced.

If a new fuel selector valve is to be installed no further action will be necessary except as instructed in Service Instructions No. 0622-289.

11. If the fuel selector valve is acceptable, reinstall the fuel selector valve handle and apply downward pressure to insure the handle is riding on the washers and secure the handle with the attaching screw.

12. If the white paint on the pointer end of the valve



Cutaway view of fuel selector valve

handle is worn off, repaint with white epoxy paint. (See valve illustration.)

13. Replace the existing guard with a new improved P/N 169-920001-43 fuel selector guard (A23 and A23A) or P/N 169-920000-165 fuel selector valve guard (23, A23-19, 19A, M19A, B19, B23, C23, A23-24, A24A, A24R and B24R).

14. Reinstall all components and parts removed to facilitate the accomplishment of these Service Instructions.

15. The Pilots Check List requires checking the fuel selector valve prior to engine start to see that the handle will turn through 360 degrees. If binding of the valve is noted, it must be disassembled and lubricated per these Service Instructions as soon as practical, but within 5 service hours.

For those owners/operators who have not obtained the new revised check lists, they are listed below.

MODEL	CHECK LIST PART NUMBER	DATE ISSUED
A23-19 and 19A	169-590009-7B	November 6, 1970
A23 and A23A	169-590001-3	May 8, 1970
23 and B23	169-590008-7B	November 6, 1970
A23-24	169-590007-7	May 7, 1970
A23-24 (Constant Speed Propeller)	169-590007-15	March 26, 1970

RECORD COMPLIANCE: Upon completion of these Service Instructions, make an appropriate maintenance record entry and return a completed compliance card to Beech Aircraft Corporation.

COMPLIANCE CARD RETURN REQUESTED