

SUBJECT: ENGINE CONTROLS - MODIFICATION OF CARBURETOR THROTTLE ARM ATTACHMENT

SYNOPSIS OF CHANGE: Serial effectivity of Models 23, B23, and C23 clarified (serial M-3, which is a Model A23, not applicable); warranty statement added and price of parts omitted; Model 23 added to parts list (inadvertently omitted in original Service Instructions).

EFFECTIVITY: The following BEECHCRAFT airplanes if equipped with the vernier type throttle control as original equipment or by field modification:
BEECHCRAFT Model A23-19, 19A, M19A, and B19, serials MB-1 through MB-520;
Sport B19, serials MB-521 through MB-557;
Models 23, B23, and C23, serials M-1, M-2, M-4 through M-554, and M-1095 through M-1361;
Sundowner C23, serials M-1362 through M-1415, M-1419, M-1423, M-1439, and M-1447.

REASON: To prevent slippage of the throttle arm and possible malfunction of the throttle control cable.

COMPLIANCE: As specified in the applicable FAA Airworthiness Directive.

DESCRIPTION: The throttle control cable is inspected for broken or distorted strands and replaced if necessary. A new throttle arm stop and shaft are installed.

APPROVAL: FAA Approved - DOA CE-2.

MANPOWER: The following information is for planning purposes only:

Estimated man-hours: 4 hours.
Suggested number of men: 1 man.

MATERIAL: The parts required for this modification are available through your BEECHCRAFT Parts and Service Outlet. Warranty credit will be allowed for those parts in the following list that are required, and for labor not to exceed 4 man-hours. Submit all warranty claims for parts and labor to Parts and Service Operations, Beech Aircraft Corporation, Wichita, Kansas 67201 prior to June 1, 1974. All orders for parts must be accompanied by the information that the parts are on warranty request.

MODEL	PART NUMBER	DESCRIPTION	QUANTITY
23, A23-19, 19A, M19A, and B19	13-1521	Throttle Shaft and Stop Arm	1 per aircraft
	12B57	Throttle Lever	1 per aircraft
	*169-940013-13	Throttle Control	1 per aircraft
	81-311	Nut	1 per aircraft
	82-43	Cotter Pin	1 per aircraft

No BECP
873
R1173

*If replacement is necessary.

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- (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.

Service Instructions No. 0589-159, Rev. I

MODEL	PART NUMBER	DESCRIPTION	QUANTITY
B23 and C23	13-1526	Throttle Shaft and Stop Arm	1 per aircraft
	12B56	Throttle Lever	1 per aircraft
	*169-940013-19	Throttle Control	1 per aircraft
	81-311	Nut	1 per aircraft
	82-43	Cotter Pin	1 per aircraft

*If replacement is necessary.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: Avco Lycoming Service Instruction No. 1265A.

PUBLICATIONS AFFECTED: It is recommended that a note be made on Figure 159 of all 19, 23, and 24 series Parts Catalogs to "See Service Instructions No. 0589-159, Revision I."

ACCOMPLISHMENT

INSTRUCTIONS: This modification may be accomplished in the following manner.

1. Remove the engine cowling.
2. Disconnect the throttle control cable from the carburetor throttle arm.
3. Remove the carburetor from the engine.
4. Lock the cockpit throttle control in the full forward position.
5. Apply approximately 50 pounds pressure against the rod end of the throttle cable in such a manner as to force the control cable back into the housing. Use a felt tip pen or grease pencil to mark the throttle control cable at the end of the throttle control cable housing at the carburetor end of the control.
6. Apply a pulling force of approximately 50 pounds to the throttle control cable and place another mark on the control cable at the end of the housing.

load. If it does, the throttle control assembly must be replaced.

7. If the distance between the marks on the control cable is 1/4 (.25) inch or more and/or if binding or roughness is evident during operation of the control, the throttle control assembly must be replaced.
8. Replace the carburetor throttle shaft, stop arm, and throttle arm as shown in Lycoming Service Instruction No. 1265A (reprinted and attached to these Service Instructions).
9. Reinstall the carburetor.
10. Attach the throttle control cable to the throttle arm and rig as shown in Section 3 of the 19, 23, and 24 series Shop Manual.
11. Inspect to assure that all parts are secure.
12. Reinstall the cowling.

NOTE

The throttle lock should not give under this

RECORD COMPLIANCE: Upon completion of these Service Instructions, make an appropriate maintenance record entry.

AVCO LYCOMING DIVISION

WILLIAMSPORT, PENNSYLVANIA 17701

Service Instruction



DATE: May 4, 1973

Service Instruction No. 1265A
(Supersedes Service Instruction No. 1265)
Engineering Aspects are
FAA (DEER) Approved

SUBJECT: Serrated Throttle Lever and Shaft
MODELS AFFECTED: Normally aspirated Avco Lycoming engines.
TIME OF COMPLIANCE: As required; during carburetor overhaul.

All Marvel-Schebler carburetors are now being furnished and serviced with serrated throttle levers and shaft. Refer to Marvel-Schebler Aircraft Carburetor Manual for overhaul and modification instruction. The new components in the following list replace the old smooth shaft and throttle lever assemblies. They are adjustable 360° in increments of 15°.

The superseded lever was tightened on the shaft by the clamping action of the attaching screw and secured

with lockwire. See fig. 1. The serrated feature of the new lever and shaft insures positive locking and eliminates the requirement for safety wire and torque requirements as specified in Service Bulletin No. 330A.

Below are listed the Marvel-Schebler Part Number changes; note that the Lycoming P/N's remain the same.

THROTTLE LEVER AND SHAFT REPLACEMENT COMPONENTS

CARBURETOR PART NO. (LYC.)	THROTTLE LEVER PART NO.		THROTTLE SHAFT & STOP ARM, PART NO.		CARB. MODEL NO.
	NEW	OLD	NEW	OLD	
62289	12B-57	12A-17	13-1520	13-949	MA-3-SPA
61547	12B-57	12A-17	13-1519	13-1446	MA-3-A
62830	12B-57	12A-17	13-1520	13-949	MA-3-SPA
69250	12B-57	12A-17	13-1521	13-828	MA-4-SPA
72394	12B-57	12A-17	13-1521	13-828	MA-4-SPA
71098	12B-58	12A-150	13-1522	13-811	MA-4-5
71710	12B-58	12A-150	13-1522	13-811	MA-4-5
72920	12B-59	12A-216	13-1524	13-1315	MA-6AA
72740	12B-58	12A-150	13-1523	13-1187	MA-4-5
74121	12B-58	12A-150	13-1523	13-1182	MA-4-5
77158-Y	12B-55	12B-11	13-1526	13-1448	HA-6
77279	12B-57	12A-17	13-1521	13-828	MA-4-SPA
77585	12B-57	12A-17	13-1519	13-1446	MA-3-A
77939	12B-57	12A-17	13-1520	13-949	MA-3-PA
78728	12B-57	12A-17	13-1521	13-828	MA-4-SPA
LW-10064	12B-58	12A-150	13-1522	13-811	MA-4-5
LW-10196	12B-58	12A-150	13-1523	13-1182	MA-4-5
LW-12175	12B-56	12B-22	13-1526	13-1448	HA-6
LW-10260	12B-56	12B-22	13-1526	13-1448	HA-6
LW-10619	12B-57	12A-17	13-1520	13-949	MA-3-PA
LW-10540	12B-58	12A-150	13-1523	13-1182	MA-4-5
LW-11222	12B-57	12A-17	13-1521	13-828	MA-4-SPA
69540	12B-59	12A-216	13-1523	13-1182	MA-4-5
73257	12B-58	12A-150	13-1523	13-1182	MA-4-5AA
72386	12B-59	12A-216	13-1523	13-1182	MA-4-5

17754 - This number for Avco Lycoming reference only.

NOTE: Revision "A" adds part nos. and torque value on fig. 2. Removes detail parts from list. Removes non-applicable assemblies from list.

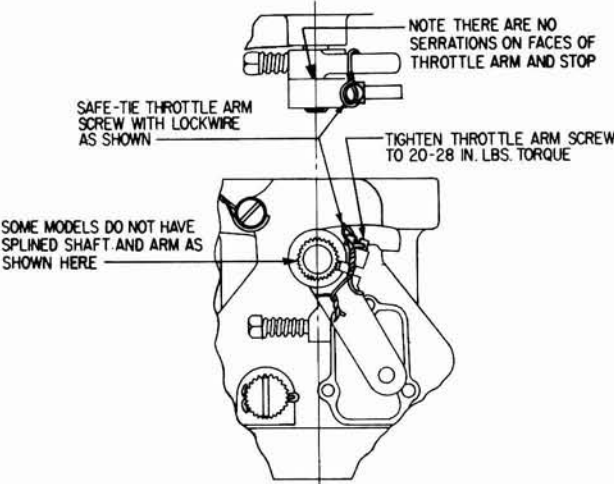


Figure 1. Previous Throttle Arm Configuration Showing Clamping Screw and Lockwire

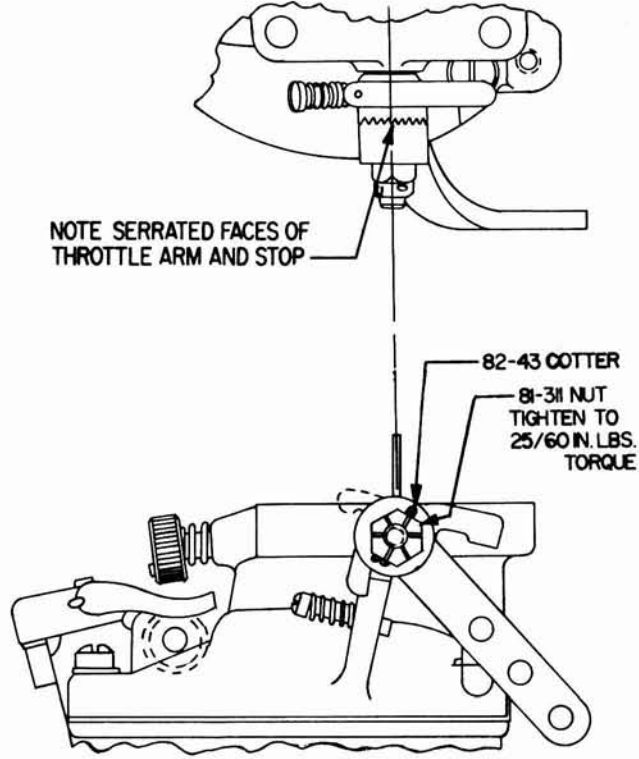


Figure 2. New Throttle Arm Configuration Showing Serrated Faces of Arm and Stop Levers