

Table 4-1. Troubleshooting Engine Control System

Symptom	Probable Trouble	Corrective Action
Rough engine operation	Mixture too rich	If operation is rough at idle speed, adjust mixture.
	Mixture control linkage not adjusted correctly	Adjust linkage so that movement of cabin controls results in corresponding correct movement of mixture control lever.
	Mixture too lean	Check for clogged fuel lines, fuel strainer and fuel filter. If operation is rough at idle speed, adjust mixture. Check for induction air leaks; check gaskets, O-rings and drain valves for leaks.
Engine does not idle, or idles improperly	Incorrect idle mixture	Adjust idle mixture.
Engine exhaust smoking	Mixture too rich	Adjust mixture.
Engine starts but quits and fails to restart	Mixture control in IDLE CUTOFF position	Move MIXTURE to FULL RICH position.
Engine runs sluggish and has low power	Throttle not opening	Adjust throttle linkage.

- e. Set the throttle arm to full closed (idle) position. Verify that throttle arm is approximately 17° counterclockwise from vertical position (Fig. 4-1). If not, remove arm-to-shaft cotter pin and back off the securing nut. Move arm on shaft serrations (15° spacing) to obtain correct position. Retighten nut while maintaining arm position and secure with cotter pin.



- f. With throttle arm in full open position, connect tie rod to throttle arm; tighten nut and install cotter pin.
- g. Measure distance from forward edge of throttle override bellcrank bushing to the centerline of clevis hole in the throttle bellcrank extension. Dimension should be 3.8 inches (Fig. 4-3). If

required, loosen jam nut and adjust bellcrank extension as necessary to obtain the correct dimension. With the extension clevis fork slot vertical, tighten jam nut.

NOTE

The 3.8 inch dimension may have been adjusted to achieve the RPM condition described in the NOTE following step q. below.

- h. Fully retract and mark throttle cable on each end at edge of cable support sleeve. This mark will be used to determine 1/8 inch cushion clearance exists after throttle rigging is complete.
- i. Orient clevis bolt head as shown in Figure 4-2 and reconnect upper end of throttle cable to throttle bellcrank extension with bushing, clevis bolt, nut and cotter pin.

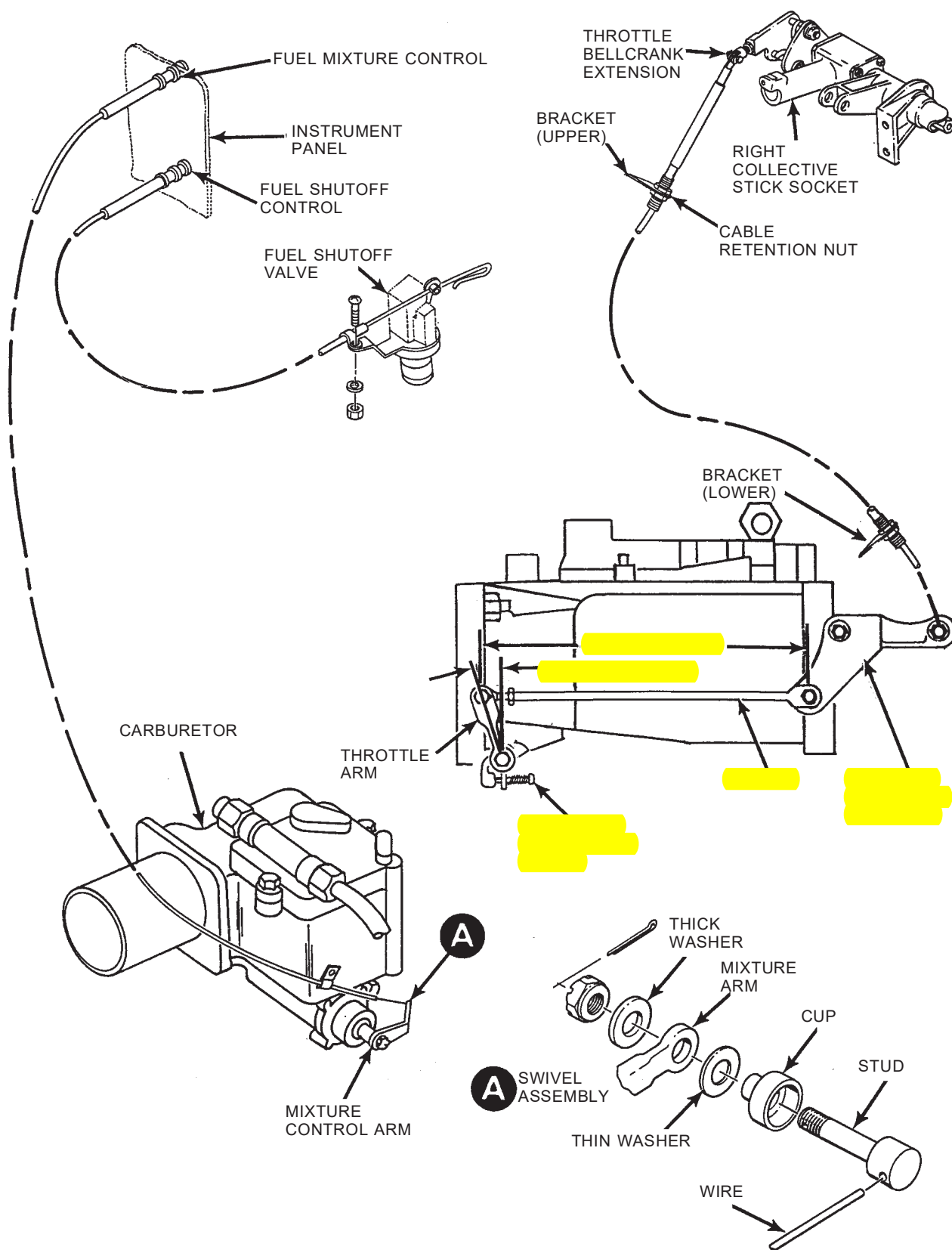


Figure 4-1. Engine Controls (Carburetor Engine) (Sheet 1 of 2)