25-H10

ITEM 11-12

Table 24-2. Main Fuel Control Specifications Data

Power lever range (angular)	-6 to 0 degrees mechanical stop adjustment
	0-13 degrees min speed flat
	13-130 degrees min to max speed modulation
	130-133 degrees mechanical stop adjustment
	113.5 degrees rig position
100% speed rating	5,998 rpm
Operating fluid	MIL-F-24397 (Navy distillate)
	MIL-F-16884 (Marine diesel)
	MIL-T-5624 (turbine fuel, aviation grade JP-4 and JP-5)
Lubrication	Operating fluid provides required lubrication
Rotation	Counterclockwise (CCW) when viewed from drive end
Bypass pressure (P_b)	25-135 psia
Inlet pressure	1,185 psi above P_b (normal max.), 1,345 psi above P_b (extreme max.)
Discharge pressure	185-1,175 psia
Case pressure (P_{cr}) and pressurizing valve reference	100-120 psia
Servo pressure (P_c) and CIT system supply	200-240 psi above Pb
Ambient air pressure	12-18 psia
Compressor discharge air pressure	14-300 psia
Bypass flow	32,500 pph max.
Inlet flow	32,500 pph max.
Discharge flow	350-15,925 pph
Internal (valves) leakage and servo flows:	
Start (max. including P_b min.)	550 pph
Operating (max.)	1,500 pph
Overboard leakage flow	1 cc/min. to max.
CIT sensor supply flow	120 pph max.

Table 24-3. Special Tools Tool Set P/N 1C6815

Part No.	Nomenclature	Figure & Index No.
WT-27553	Assembly Tool	Figure 24-1, -1
WT-40638	Inserter	Figure 24-1, -2
WT-40639	Inserter	Figure 24-1, -3
WT-41290	Punch	Figure 24-1, -4
WT-41486	Puller	Figure 24-1, -5

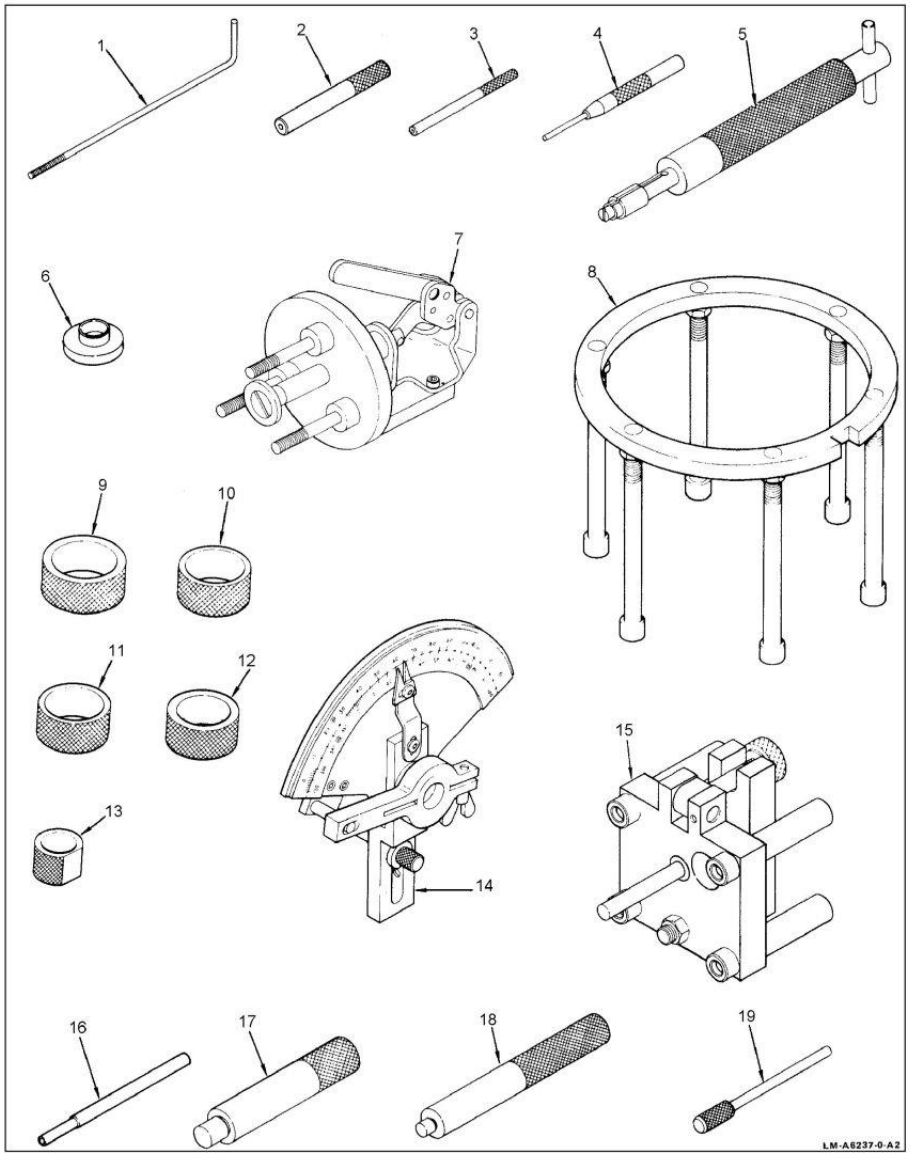

Figure 24-1. Special Tools P/N 1C6815

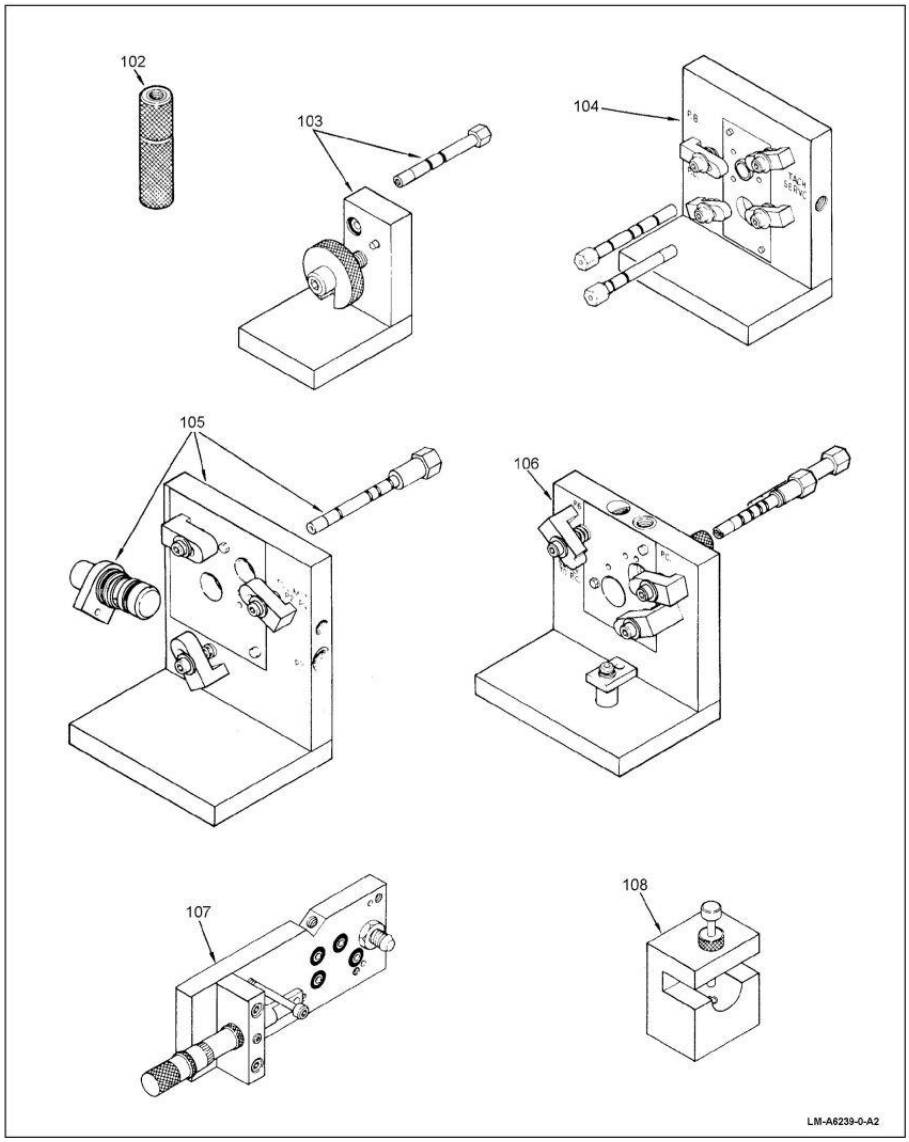

Figure 24-7. Special Tools P/N 1C6815

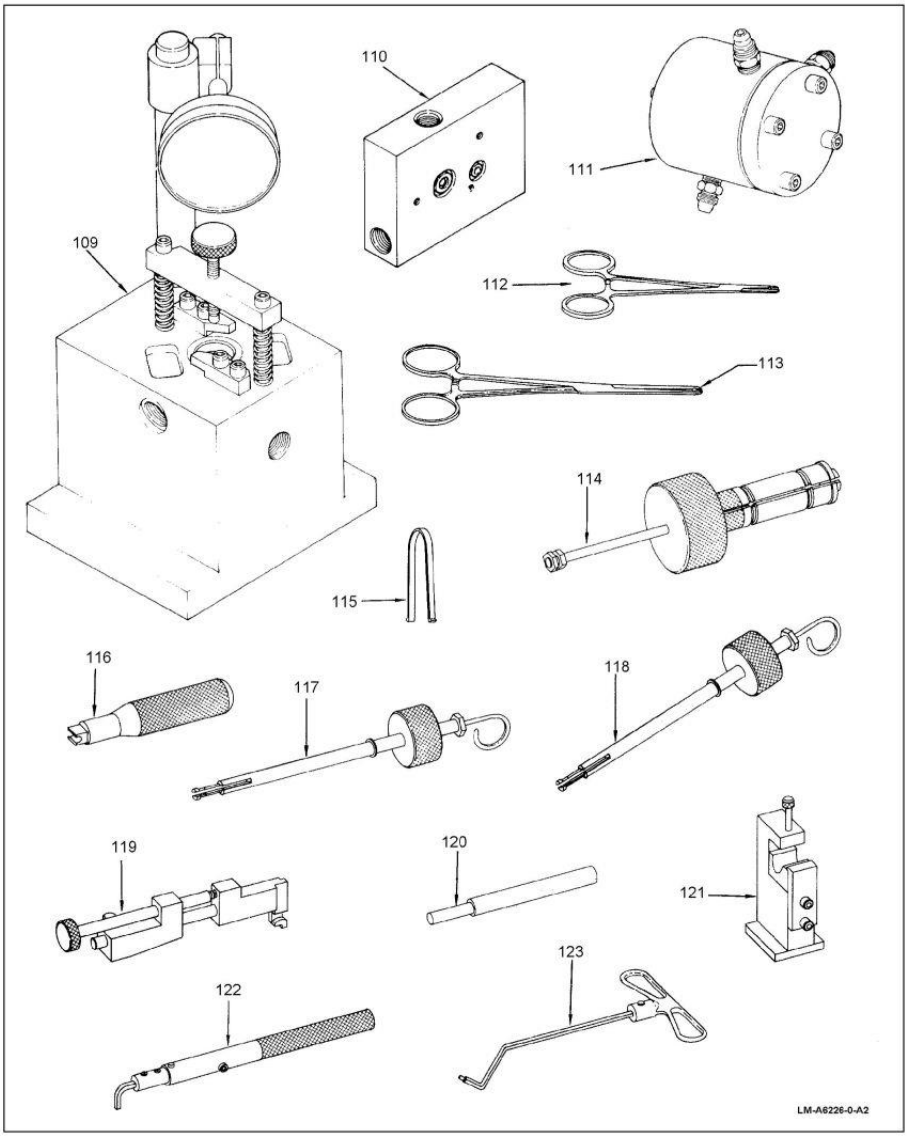

Figure 24-8. Special Tools P/N 1C6815

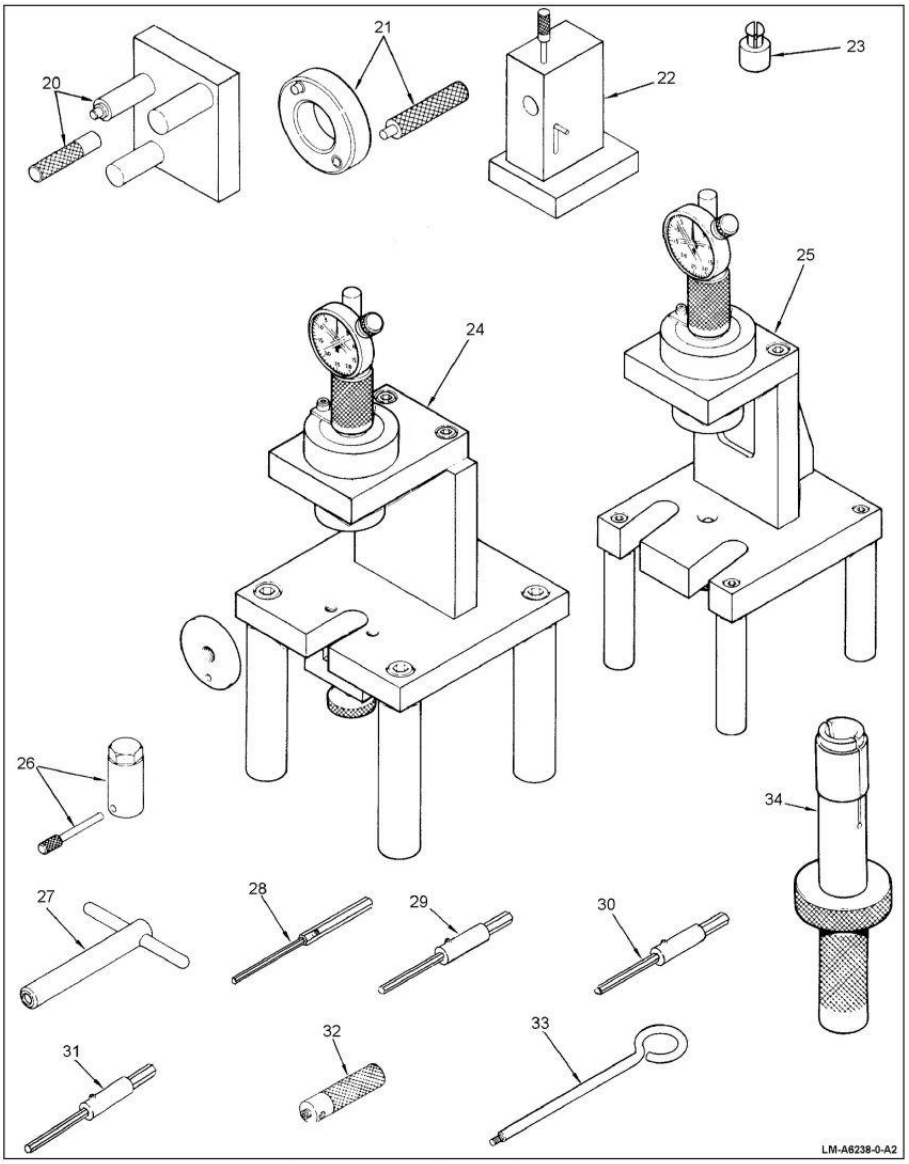

Figure 24-2. Special Tools P/N 1C6815

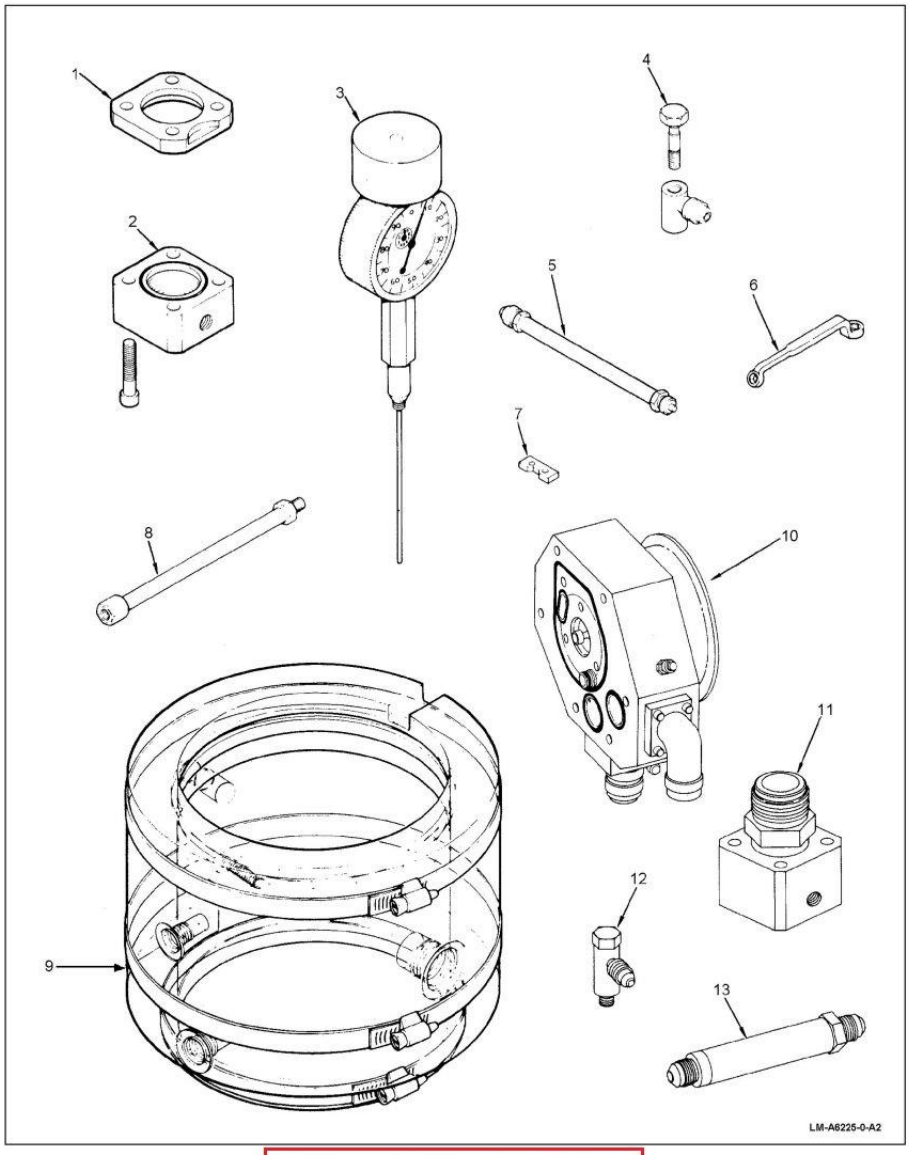

Figure 24-9. Special Tools P/N 1C6915

CHAPTER 24
FUEL CONTROL OVERHAUL AND REPAIR

24.1 INTRODUCTION.

24.2 SCOPE.

This chapter contains overhaul instructions for Fuel Control, VIN 8062-177 (GE P/N L16716P25), manufactured by Woodward Governor Co., Rockford, IL. Modify all P24 and below, P27, P28 and P30 Fuel Controls to P25 per GTC No. 54 and GTC No. 66. Modify all P24NI/NIS Fuel Controls to P25 per GTC No. 66. In addition, readjust the P30 Fuel Control Minimum Fuel Flow Stop to settings in para. 24.78, step n.

24.3 PURPOSE.

The overhaul process involves the disassembly, cleaning, inspection, repair, assembly and final testing of fuel control units with known operating abnormalities or that are not VIN 8062-177 (GE L16716P25) configuration. The final configuration of all fuel controls processed will be VIN 8062-177 (GE L16716P25). Where the serviceability of units returned to depot is unknown, it is recommended that the unit undergo a performance test per para. 24.76 to determine the necessity for overhaul of the unit. VIN 8062-177 (GE L16716P25) fuel controls which pass the performance test may be returned to stock for immediate use.

24.4 LEADING PARTICULARS.

Refer to Table 24-2 for a listing of fuel control leading particulars.

24.5 OVERHAUL INSTRUCTIONS.

24.6 SPECIAL TOOLS.

Refer to Table 24-3 for a listing of the tools contained in tool set P/N 1C6815 and test set P/N 1C6915.

24.7 FUEL CONTROL DISASSEMBLY.

(See Figure 24-10 through Figure 24-38).

24.8 INITIAL DISASSEMBLY

CAUTION

Insert rest buttons (P/N WT-50199) in bottom of fuel valve housing to prevent damage to bottom surface.

NOTE

- Some of the bearings used in the fuel control are three piece matched sets consisting of two bearing races and a ball bearing. Keep individual bearing sets together during processing.
- If possible, save all shims for use during reassembly. Damaged shims should be measured and their thickness recorded. New shims can then be peeled to the thickness of the original shim and thereby provide a reasonably close starting point for determining proper shim thickness.
- Wire retaining rings should be discarded at disassembly; they are not to be re-used.
- The bracket assembly (consisting of parts 9, 10, 11, 12, 13, 14, 15, and 16, Figure 24-10) need not be disassembled unless there is obvious damage.
- A ball end speed driver wrench is necessary to remove the outer most screws (2, Figure 24-10).