

Supplement 928-1014

Date: 11-92

Insert with-

Title: ES Service Manual

Number: 900-0335

This supplement includes information on electric governor adjustments which should be added to *Governor Adjustment* section of above listed Service Manual.

ELECTRIC GOVERNOR

Electric Governor Adjustments: Beginning Spec F

If necessary, adjust the linkage according to Figure 2 and wire the controller according to Figure 1. Then adjust the governor controller as follows.

1. Initially set the switches as follows (see Figure 1):

SW1

ADJ1/ADJ2 - Down position (**ADJ1**)

50HZ/60HZ - Up position (**50HZ**) or down position (**60HZ**).

4CYL/6CYL - Up position (**4 CYL**) or down position (**6 CYL**).

SW2 (Rotary Switch)

GAIN - Position 4.

SW3

All positions down.

2. Attach tachometer to engine or frequency meter to generator output leads if control panel does not come equipped with one of these meters.

Prior to adjusting governor control, make sure that governor control terminals 5 and 6 are jumpered.

3. Start the set. Hold throttle linkage so that engine will not overspeed, should the governor control be out of adjustment.

If the engine overspeeds, shut down the set. Turn the **GAIN** switch to the next higher position and restart the set.

4. Warm up the set under at least 1/4 load until it is up to normal operating temperature and then disconnect the load.

5. If the engine has a consistent hunt at approximately 1 to 2 Hz, adjust **GAIN** rotary switch until engine is stable and responsive to governor control (clockwise increases gain, counter-clockwise decreases gain).
6. Manually actuate governor linkage several times to ensure correct gain adjustment. Unit should respond quickly but should not hunt, use maximum possible gain setting.
7. If the engine has an audibly fast hunt, set **SW3** position 3 to the up position. If no change is seen or heard, return switch to down position.
8. If the engine has an inconsistent slow hunt that is barely audible, set **SW3** position 2 to the up position to reduce integral gain. If no change is seen or heard, return switch to down position.
9. If the engine has a very slow hunt at approximately 0.5 Hz, set **SW1** position 1 up to add friction compensation to the controller. If no effect is seen or heard, return switch to down position and check for linkage binding and repair as necessary.
10. Check for stability (no audible hunting) under a range of loads from no-load to full-load.
11. If engine has significant undershoot on load acceptance, turn **GAIN** rotary switch clockwise. Repeat Steps 6 and 11 to achieve overall stability between no-load and full-load conditions.
12. If engine has significant overshoot on load acceptance after the initial drop in engine speed, move **SW3** position 2 to the down position if it was moved to the up position in Step 8. Return switch to the up position if no change is seen or heard.
13. Shut down engine. Restart engine to make sure that unit does not overspeed.
14. Shut down engine and remove tachometer or frequency meter previously attached.
15. Engine is now ready for service.

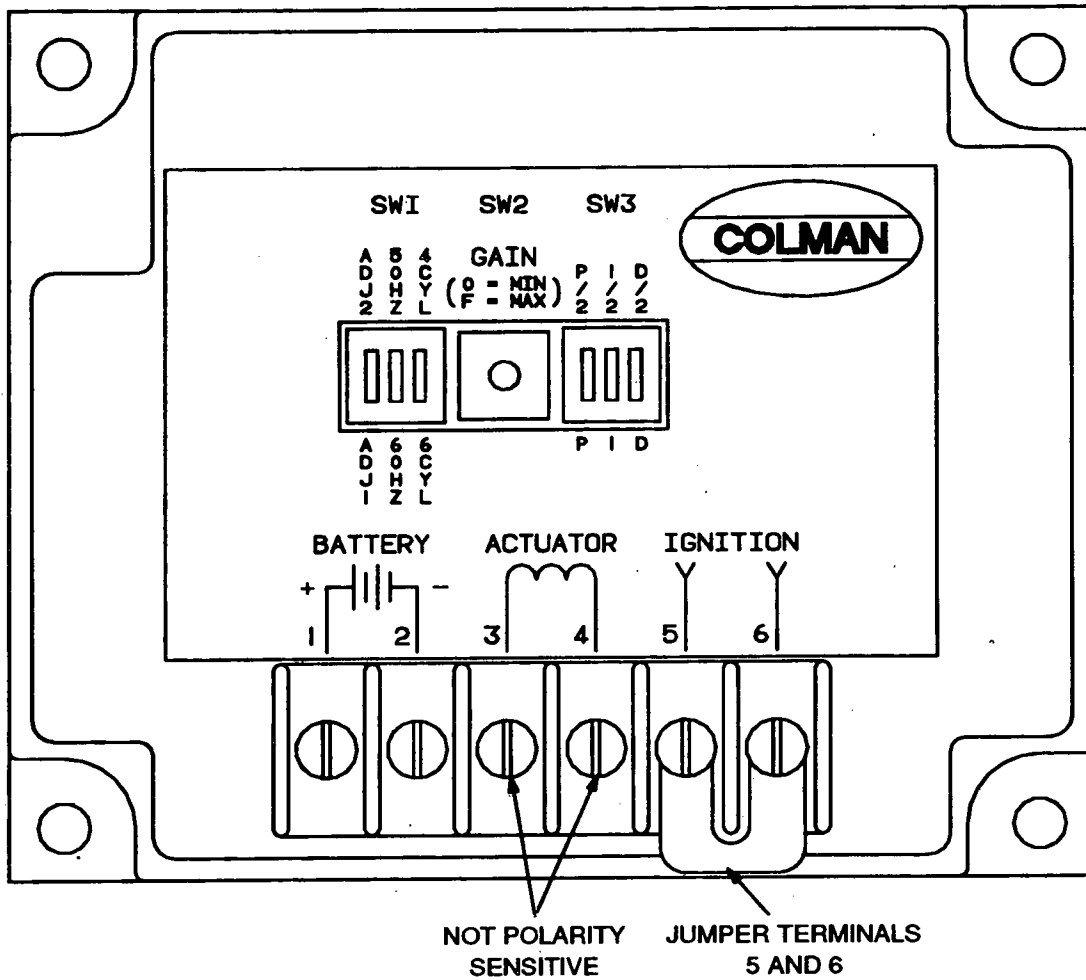


FIGURE 1. GOVERNOR CONTROLLER TERMINALS AND ADJUSTING SWITCHES

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Linkage Adjustments: Beginning Spec F

Figure 2 illustrates the arrangement of the electric governor components and how to adjust the linkage of the electric governor. The following should be noted:

1. Assemble the governor linkage as shown in Figure 2. Thread each female component at least three to four turns onto each male component and set the lock nuts.

2. Thread the assembled governor linkage three or four turns onto the actuator shaft.

3. Snap the ball joint of the governor linkage onto the ball stud of the throttle lever.

4. Loosen the throttle lever screw.

5. Rotate the throttle linkage to the full speed stop and extend the actuator shaft to its end of travel.

6. Tighten the throttle lever screw.

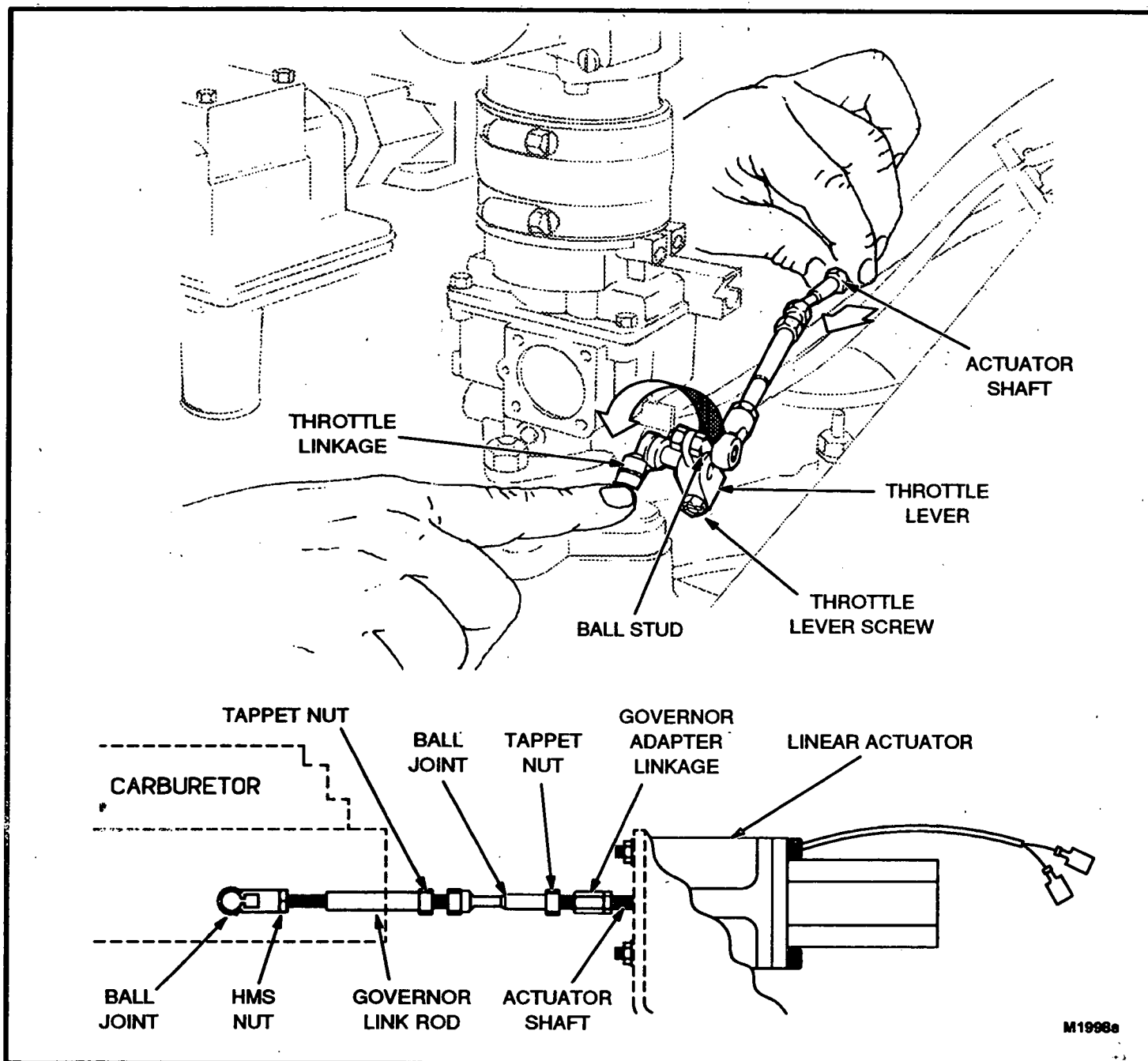


FIGURE 2. ELECTRIC GOVERNOR LINKAGE