

Supplement 928-1016

Date: 12-95

Insert with-

Title: GEA Series Service Manual

Number: 928-0501

PURPOSE

This supplement adds information for the GEAF Spec A and GEA series Spec B gensets.

SUPPLEMENT USE

Insert this supplement inside the front cover on the GEA Series Service Manual 928-0501. Mark the following note on the pages inside the service manual for reference to this supplement.

Write ***Refer to Supplement*** on pages 3-5, 6-1, 6-6, 6-7, 7-3, 7-4, and 7-5.

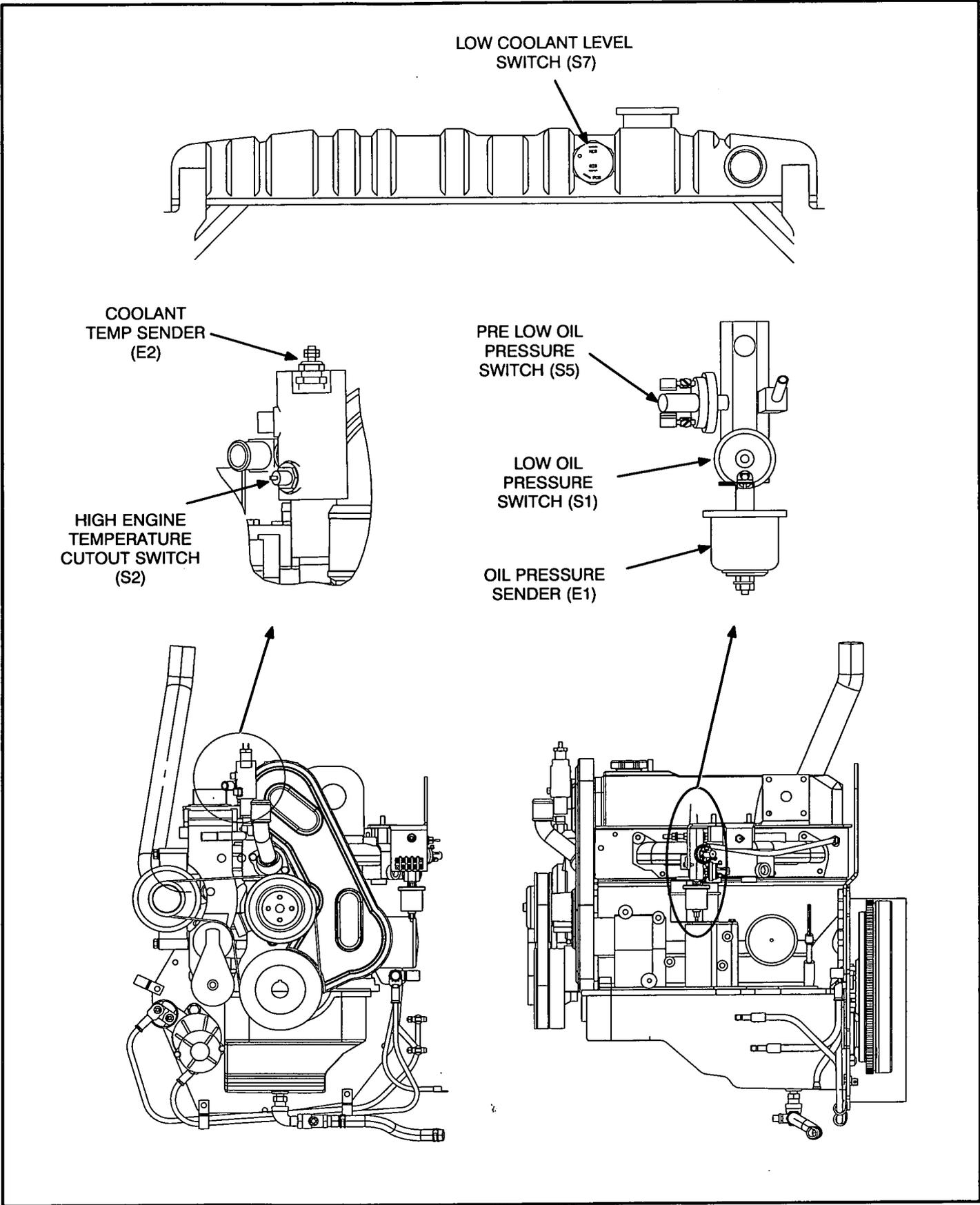


FIGURE 1. ENGINE SENSOR AND SWITCH LOCATIONS ON SPEC B GENSETS

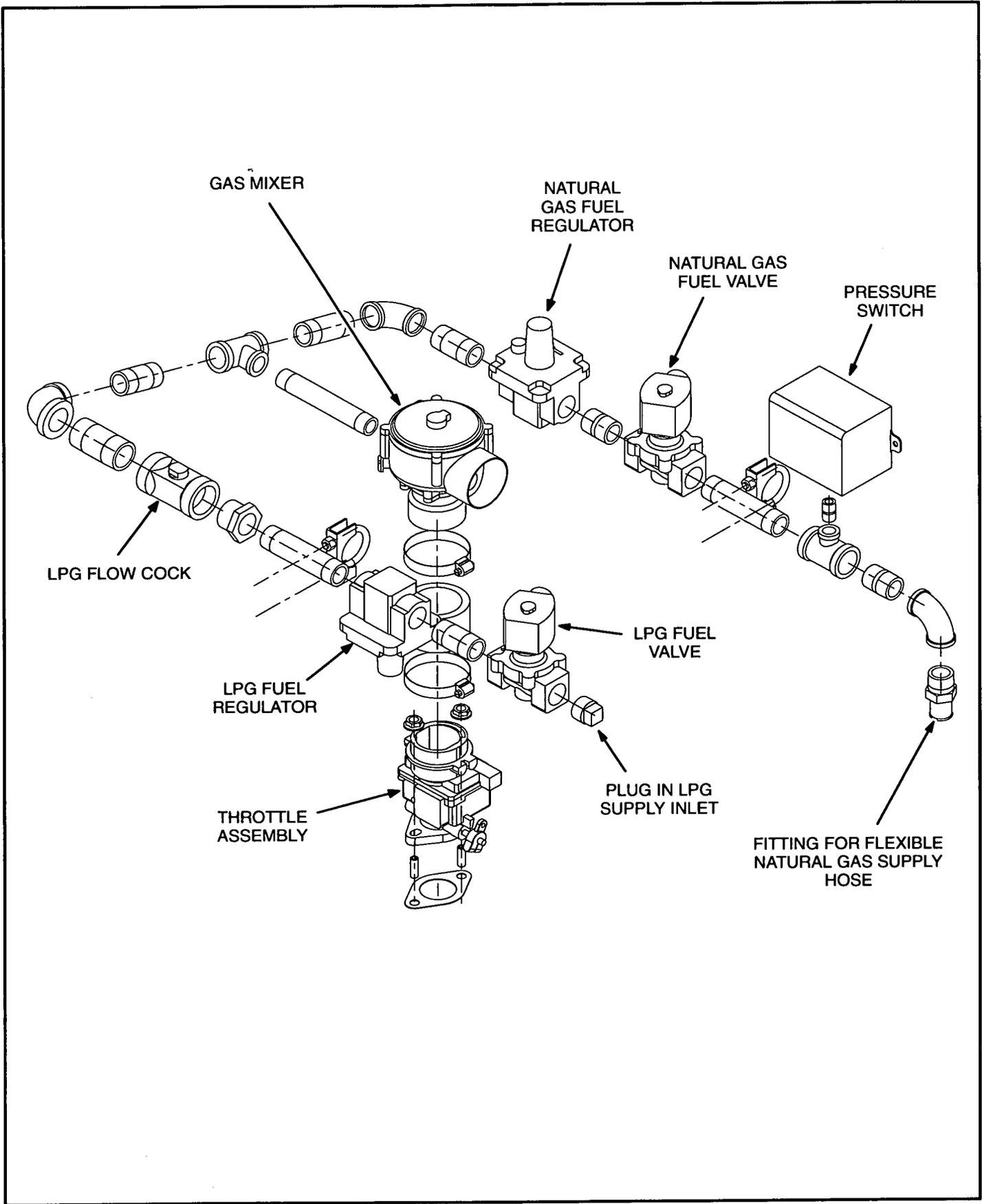


FIGURE 2. FUEL SYSTEM COMPONENTS ON GEAE SPEC B GENSETS

NOTES:

1. MOUNT HOSE CONNECTIONS AT 30° ANGLE FROM VERTICAL AS SHOWN
2. MOUNT LOAD ADJUSTING VALVE AT 30° ANGLE FROM VERTICAL AS SHOWN
3. MOUNT AIR CLEANER AT 45° FROM VERTICAL AS SHOWN

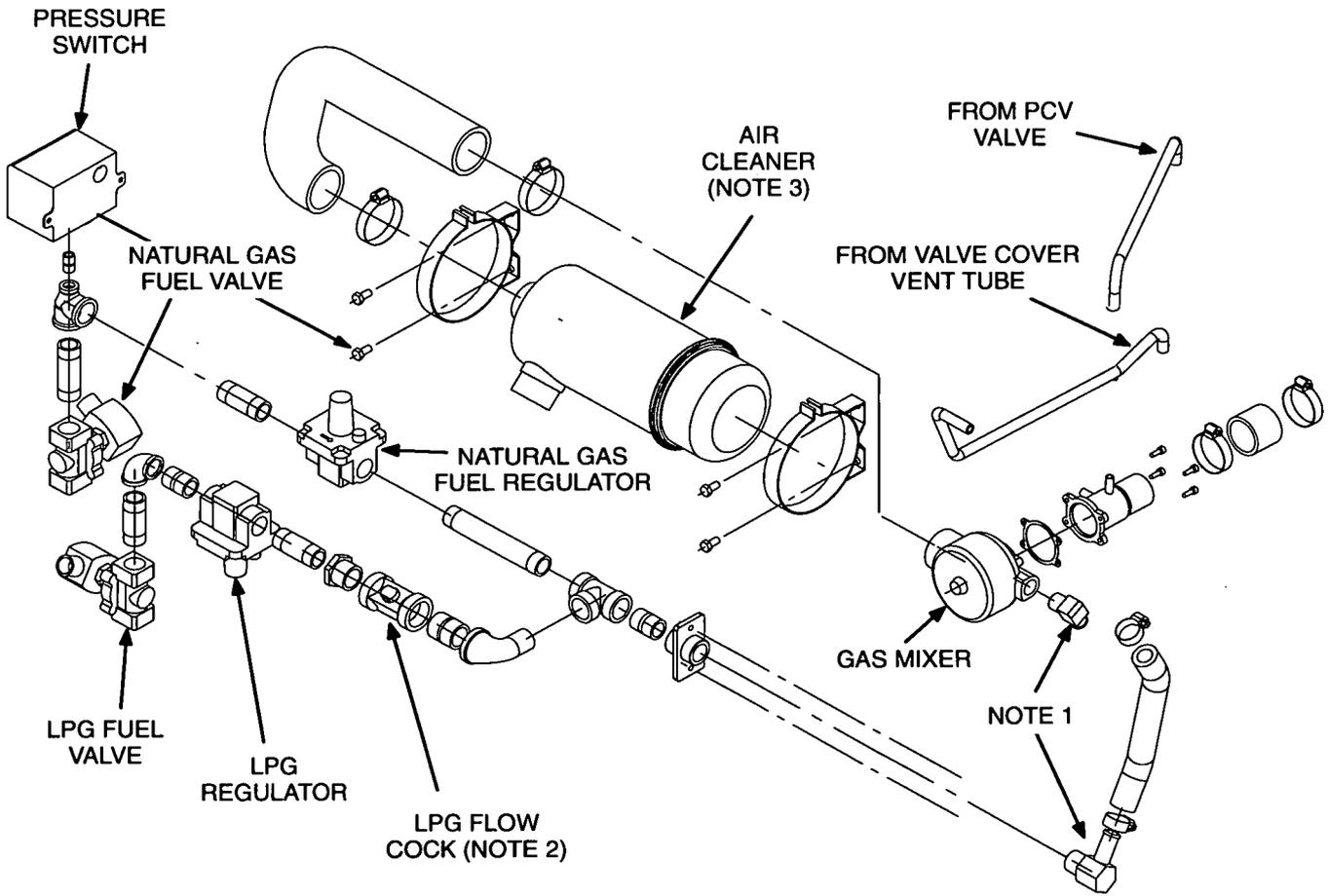


FIGURE 3. FUEL SYSTEM COMPONENTS ON GEAF SPEC B GENSETS

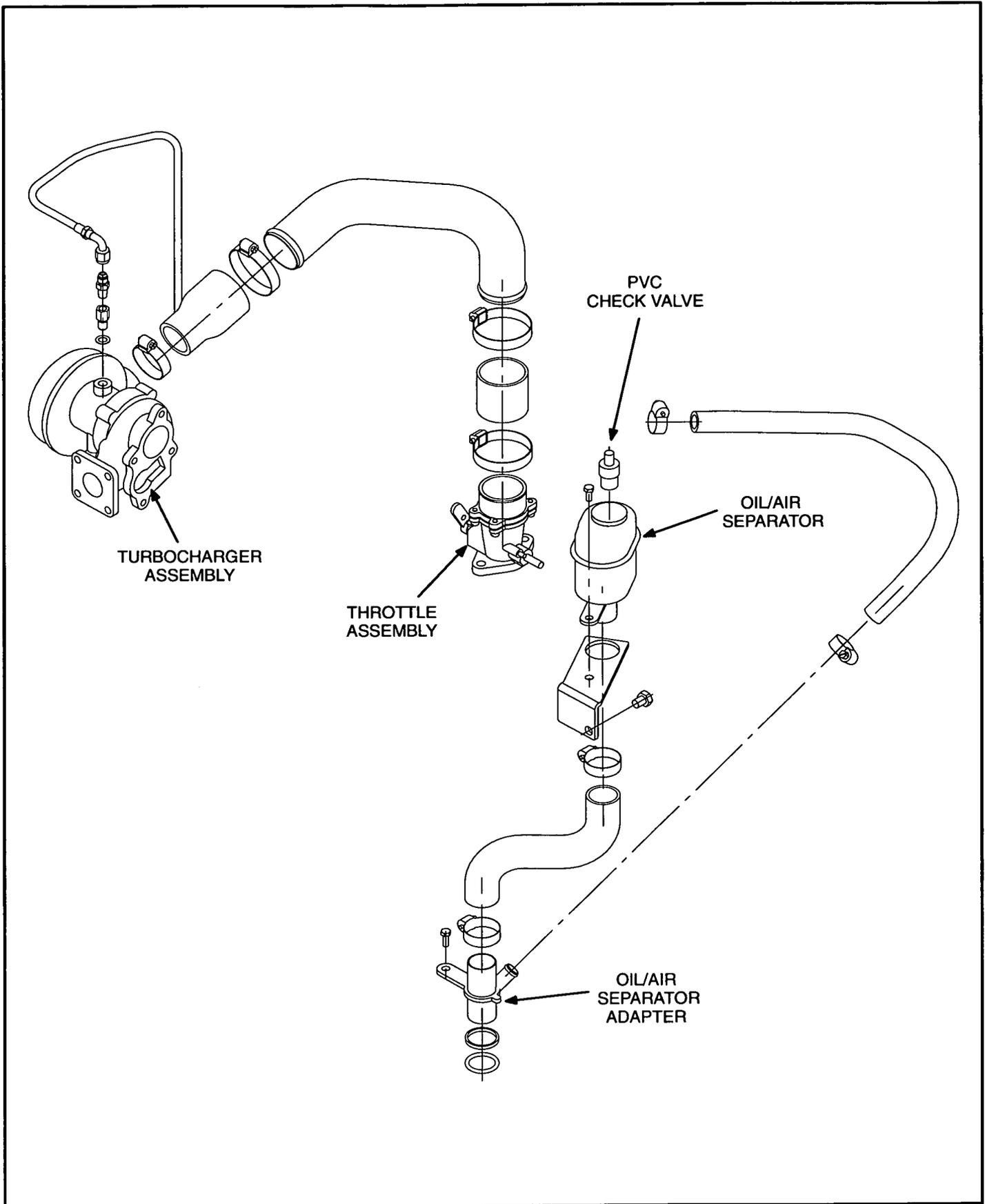


FIGURE 4. FUEL SYSTEM COMPONENTS ON TURBOCHARGED SPEC B GENSETS

ELECTRONIC GOVERNOR (25 GEAF SPEC A)

If necessary, adjust the gas mixture and governor linkage as instructed in this section before adjusting the governor controller. Make sure that the governor assembly is securely mounted. Make sure that the governor linkage does not bind or have play in it.

1. Check the dip switch settings (Figure 5) to make sure they are set properly, as follows:

SW1	SW2	SW3	SW4
Off	Off	On	Off

2. Start the set, let the engine warm up under a partial load (at least 1/4 rated load) and then disconnect all loads.
3. Adjust the gain 1 pot until the engine is stable and responsive to governor control. Adjust the stability 1 pot to minimize overshoot. Check stability under a range of loads; from no-load to full-load.
4. Adjust the Speed Trim pot until the desired speed is obtained.
5. Shut down and restart the genset to check for overspeed shutdown on startup.

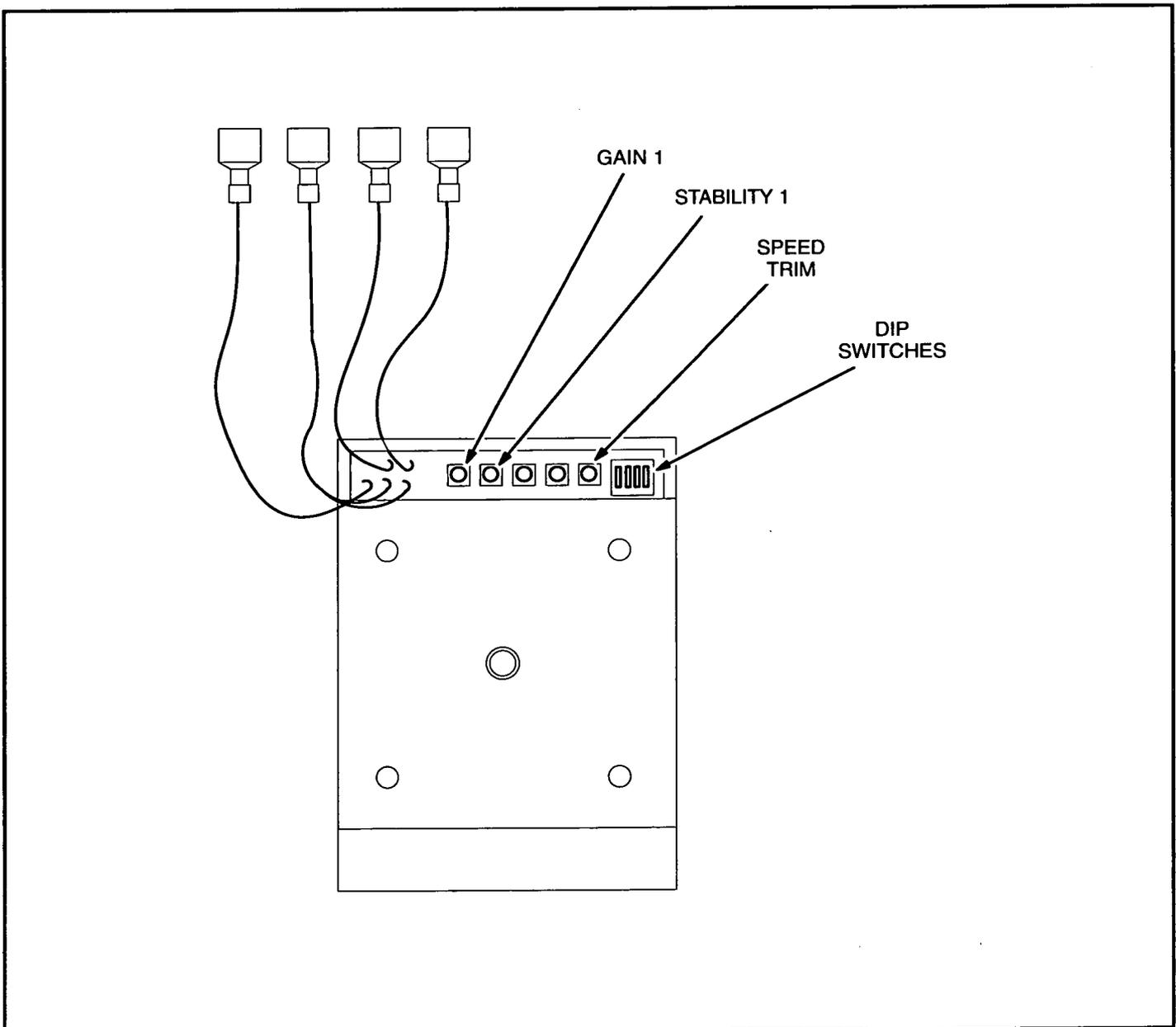


FIGURE 5. GOVERNOR CONTROLLER

GOVERNOR LINKAGE (25 GEAF SPEC A)

Figure 6 illustrates the governor linkage. Make sure that the governor controller is securely mounted to the engine bracket. To adjust the linkage:

1. Remove the governor rod mounting screw at the throttle lever.
2. Loosen the locknuts securing the rod ends to the governor rod.
3. While holding the throttle lever against the idle speed stop, adjust the length of the governor linkage so that the rod end lines up with the hole in the throttle lever. Make sure that at least three to four threads are engaged at each rod end.
4. Tighten the lock nuts and secure the rod end to the throttle linkage.

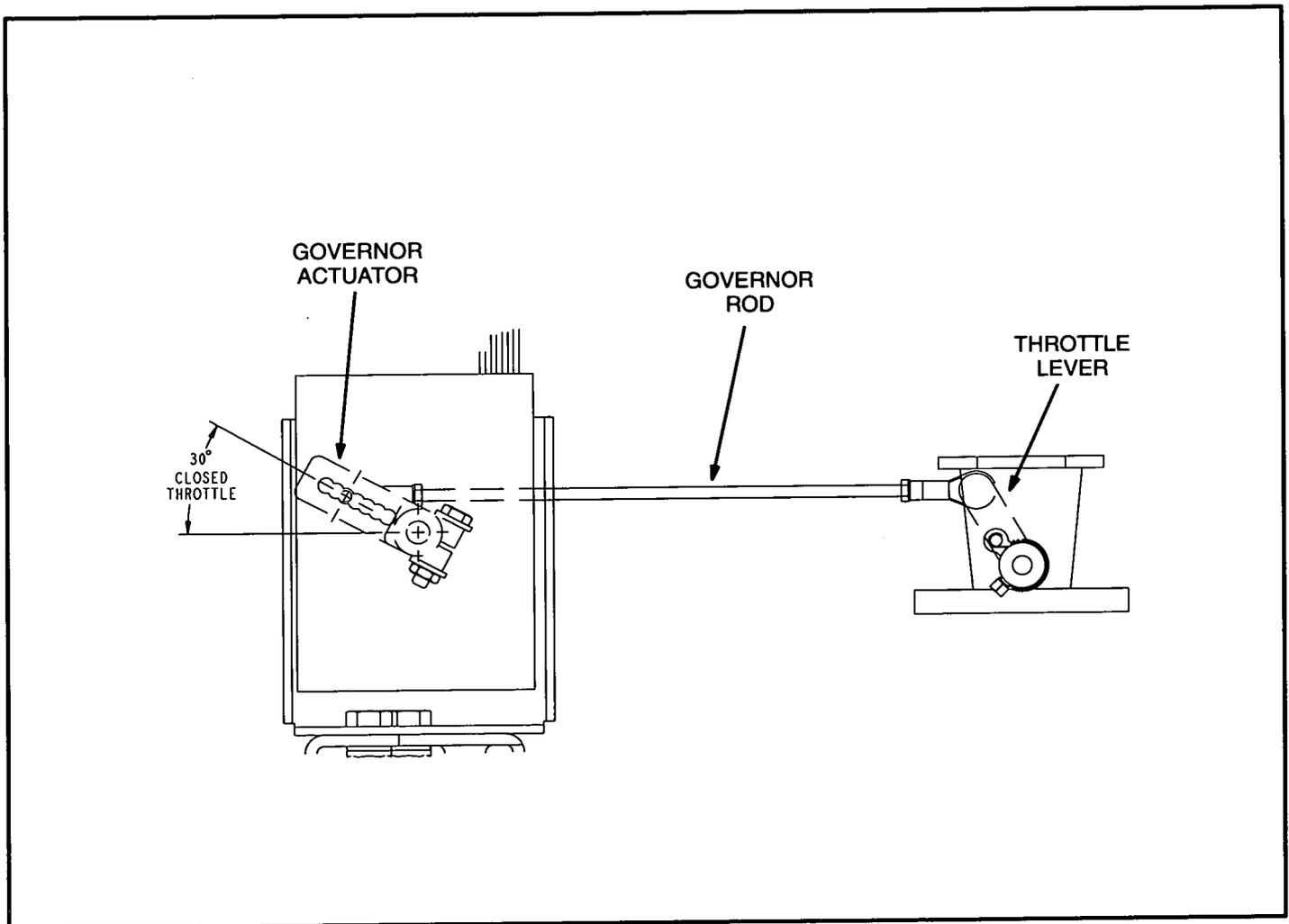


FIGURE 6. GOVERNOR LINKAGE

ELECTRONIC GOVERNOR (20 GEAE SPEC B)

If necessary, adjust the gas mixture and governor linkage as instructed in this section before adjusting the governor controller. Make sure that the governor assembly is securely mounted. Also make sure that the governor linkage does not bind or have excessive play in it.

1. Check the dip switch settings (Figure 7) to make sure they are set properly, as follows:

SW1	SW2	SW3	SW4
OFF	ON	ON	ON

2. Start the set, let the engine warm up under a partial load (at least 1/4 rated load) and then disconnect all loads. (If the governor has been replaced, adjust the gain 1 and stability 1 pots to their center settings.)

3. Adjust the gain 1 pot until the engine is stable and responsive to governor control. (Adjust the gain 1 pot counterclockwise to eliminate hunting.) Bump the throttle lever a couple of times to check for hunting. The unit should respond quickly but should not hunt.
4. Apply full load to the genset and adjust the stability 1 pot to minimize overshoot. (Adjust the stability 1 pot clockwise to increase stability.) Check stability under a range of loads; from no-load to full-load.
5. Attach a tachometer or frequency meter to the generator output leads if control panel does not come equipped with one of these meters. Adjust the Speed Trim pot until the desired speed is obtained.
6. Shut down and restart the genset to check for overspeed shutdown on startup.

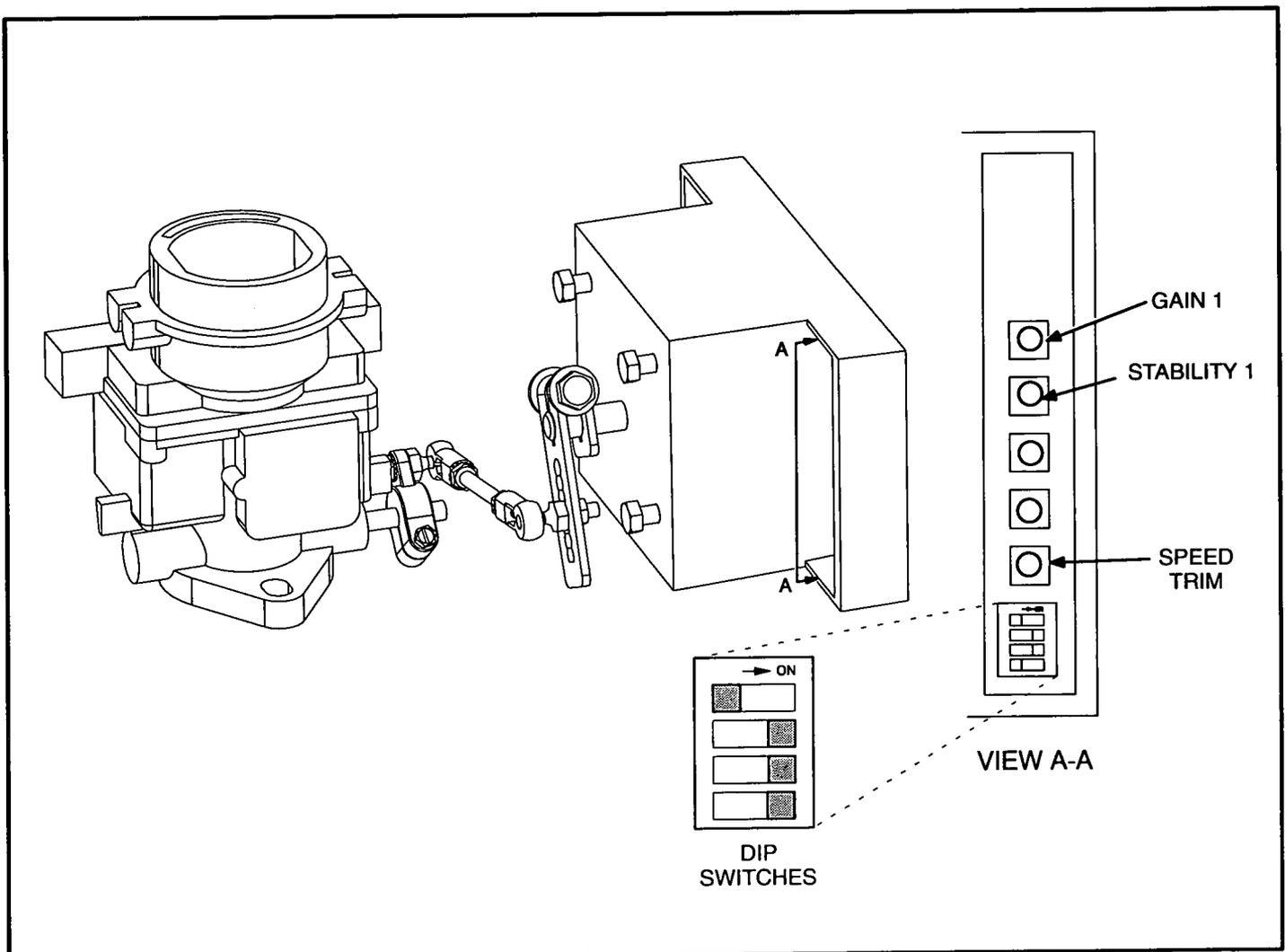


FIGURE 7. GOVERNOR CONTROLLER

GOVERNOR LINKAGE (20 GEAE SPEC B)

Figure 8 illustrates the governor linkage. Make sure that the governor controller is securely mounted to the engine bracket. To adjust the linkage:

1. Remove the governor ball joint from the governor lever.
2. While holding the throttle lever against the idle speed stop, adjust the length of the governor linkage so that the rod end lines up with the center hole in the governor lever.
3. Snap the ball joint back onto the governor lever. Check mounting nuts to make sure that they are secure.

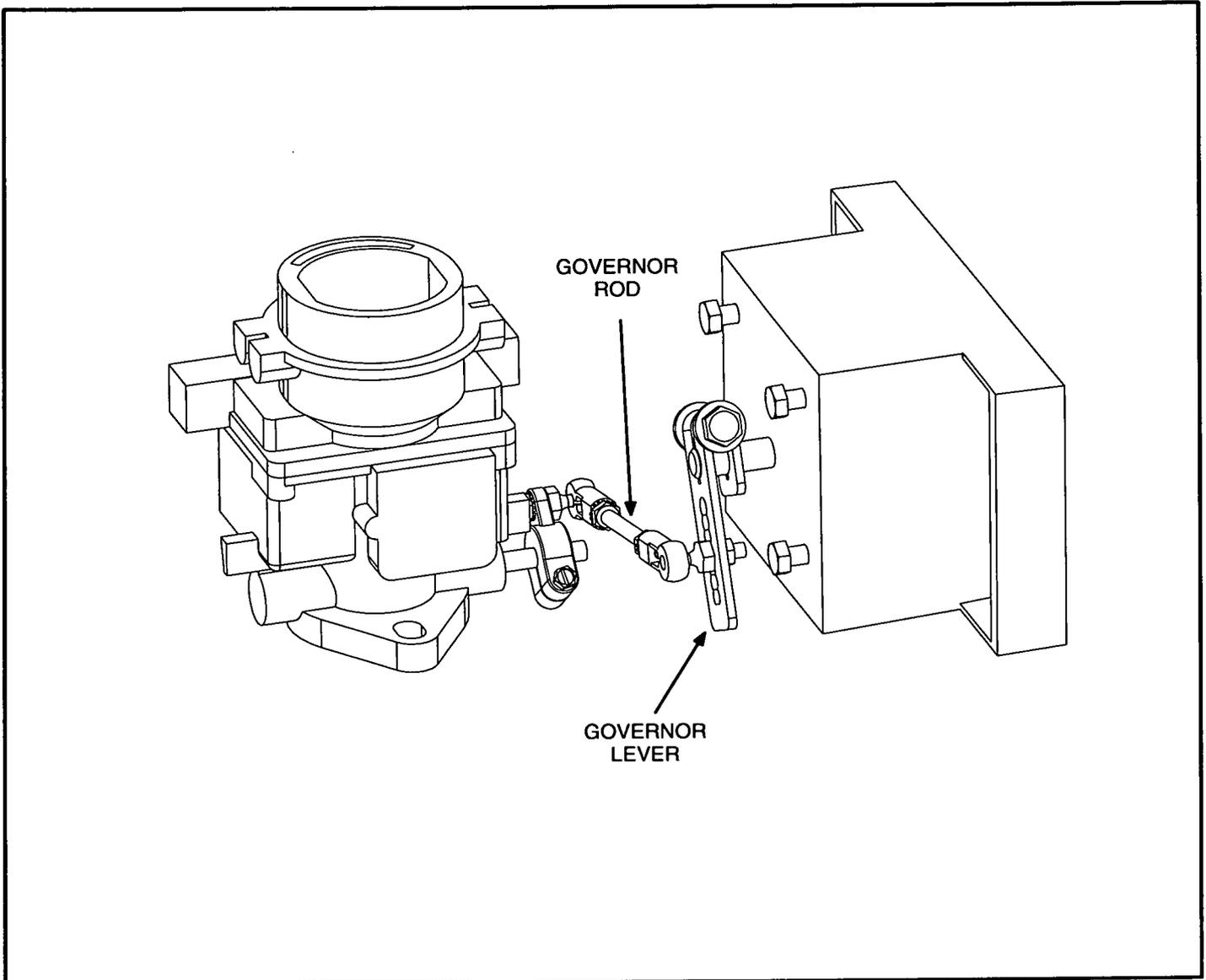


FIGURE 8. GOVERNOR LINKAGE

ELECTRONIC GOVERNOR (25 GEAF SPEC B)

If necessary, adjust the gas mixture and governor linkage as instructed in this section before adjusting the governor controller. Make sure that the governor assembly is securely mounted and that the throttle return spring is in place. Also make sure that the governor linkage does not bind or have excessive play in it.

1. Check the dip switch settings (Figure 9) to make sure they are set properly, as follows:

SW1	SW2	SW3	SW4
OFF	ON	ON	OFF*

* Switch 4 could be set to ON or OFF, either setting will work.

2. Start the set, let the engine warm up under a partial load (at least 1/4 rated load) and then

disconnect all loads. (If the governor has been replaced, adjust the gain 1 and stability 1 pots to their center settings.)

3. Adjust the gain 1 pot until the engine is stable and responsive to governor control. (Adjust the gain 1 pot counterclockwise to eliminate hunting.) Bump the throttle lever a couple of times to check for hunting.
4. Apply full load to the genset and adjust the stability 1 pot to minimize overshoot. (Adjust the stability 1 pot clockwise to increase stability.) Check stability under a range of loads; from no-load to full-load.
5. Attach a tachometer or frequency meter to the generator output leads if control panel does not come equipped with one of these meters. Adjust the Speed Trim pot until the desired speed is obtained.
6. Shut down and restart the genset to check for overspeed shutdown on startup.

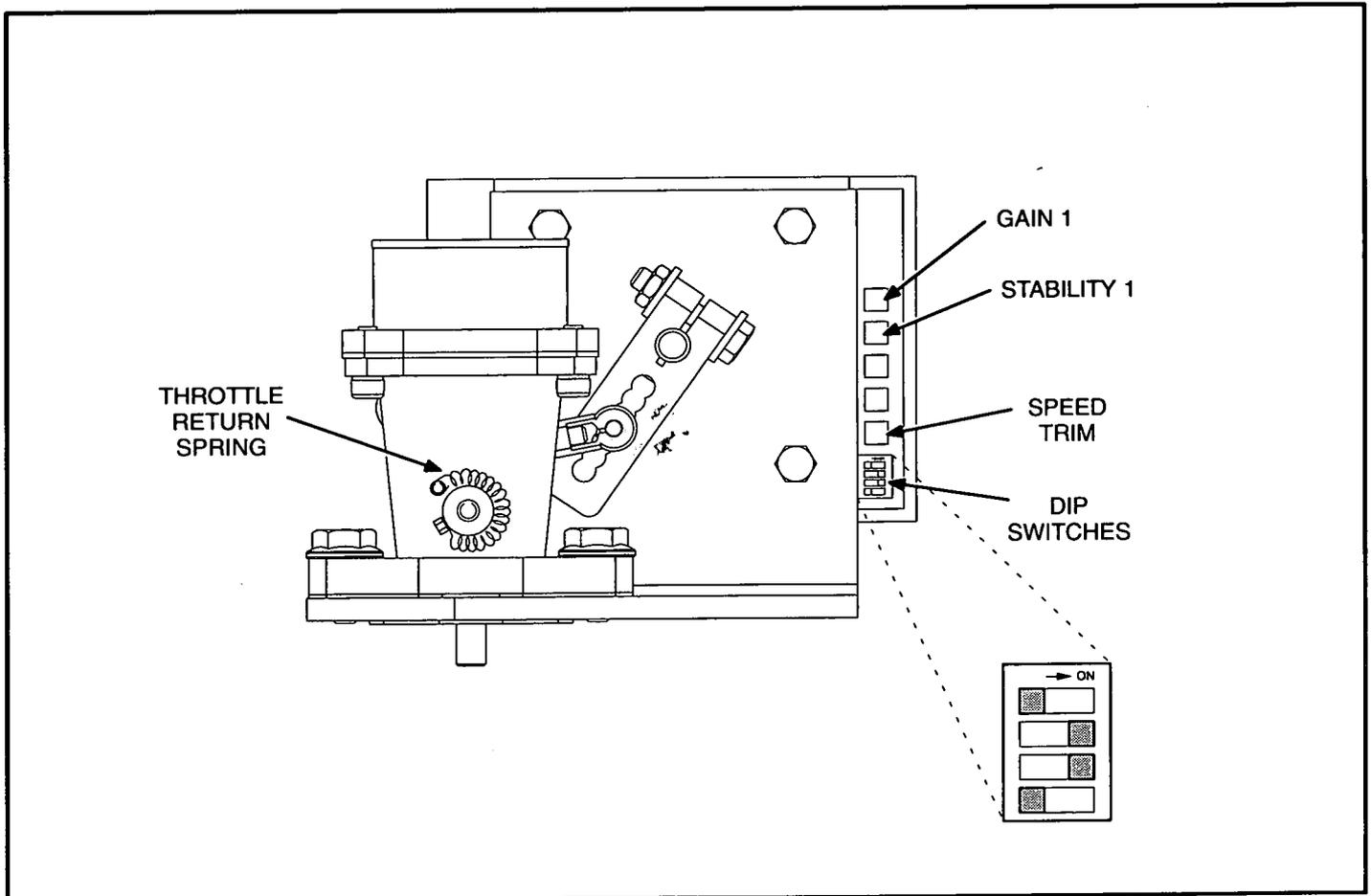


FIGURE 9. GOVERNOR CONTROLLER

GOVERNOR LINKAGE (25 GEAF SPEC B)

Figure 10 illustrates the governor linkage. Make sure that the governor controller is securely mounted to the engine bracket. The following instructions describe adjustment and removal of the governor linkage.

1. With the genset stopped, check the angle of the throttle lever and governor actuator. Adjust governor lever if required.

2. If the governor rod is being replaced, pull it off at the ball joints or remove the ball stud mounting nuts. Make a preliminary adjustment to the replacement governor rod length as shown in Figure 10.
3. Attach the governor rod to throttle lever. While holding the throttle lever against the idle speed stop, adjust the length of the governor linkage so that the rod end lines up with the center hole in the governor lever.
4. Secure the governor rod to the governor lever.

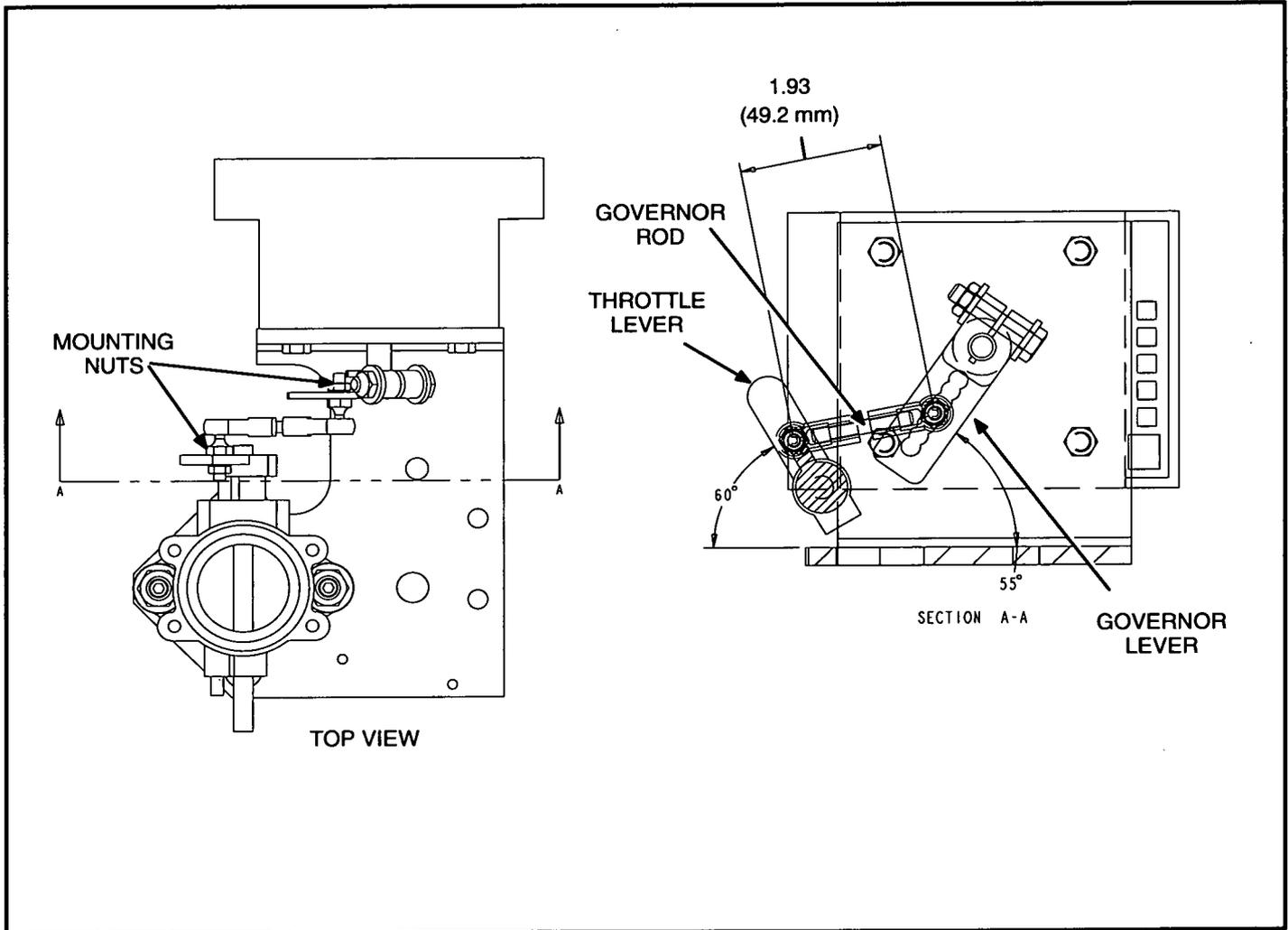


FIGURE 10. GOVERNOR LINKAGE