KT133 for GAC225 Series on Deutz BF6L912 and BF6L913 with Bosch Fuel Injection Pump

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1 INTRODUCTION

The KT133 Series Governor System Installation kit provides the bracket, cables and hardware necessary to install a GAC precise Electronic Governor on a Deutz BF6L912 and BF6L913 engines equipped with a Bosch fuel injection pump. The GAC 225 series actuator is the correctly sized servo for either 12 or 24 volt systems.

KT133 and these installation instructions are intended for use with the following product (sold separately). This kit does not include these items:

- A GAC 225 Series Actuator, specifically an ADC225S-12 or -24. Other 225 Series Actuators may require alternate installation steps. See your actuators Installation Manual for details.
- ESD5500E or another suitable controller
- MSP675 Magnetic Pickup
- Optional TP501 5K 1 Turn potentiometer

2 KIT CONTENTS

The installation kit includes the following items as shown in Figure 1:

ITEM	PART NUMBER	DESCRIPTION	QTY
1	BK133	BRACKET	1
2	HW04-400	LINKAGE ROD, THREADED, 1/4-28 8.25 Inches	1
3	BB110	1/4-28 FEMALE ROD END KW-4K	2
4	HW03-300	HEX NUT, 1/4-28	2
5	HW05-512	HEX HEAD SCREW M8X16	3
6	HW06-603	LOCK WASHER, SPLIT SPRING M8	3
7	HW06-618	FLAT WASHER M8	3
8	HW01-112	HEX CAP SCREW, 5/16-18X1.25	2
9	HW03-304	HEX NUT, 5/16-18	2
10	HW02-210	FLAT WASHER 5/16	2
11	HW02-211	LOCK WASHER, SPLIT 5/16	2
12	HW01-107	HEX CAP SCREW, 1/4-20X1.00	1
13	HW02-207	FLAT WASHER 1/4	2
14	HW03-301	HEX NUT, STOVER LOCK, 1/4-20	2
15	HW01-113	HEX CAP SCREW, 1/4-20X1.50	1
16	HW11-001	SPACER, ROUND	1

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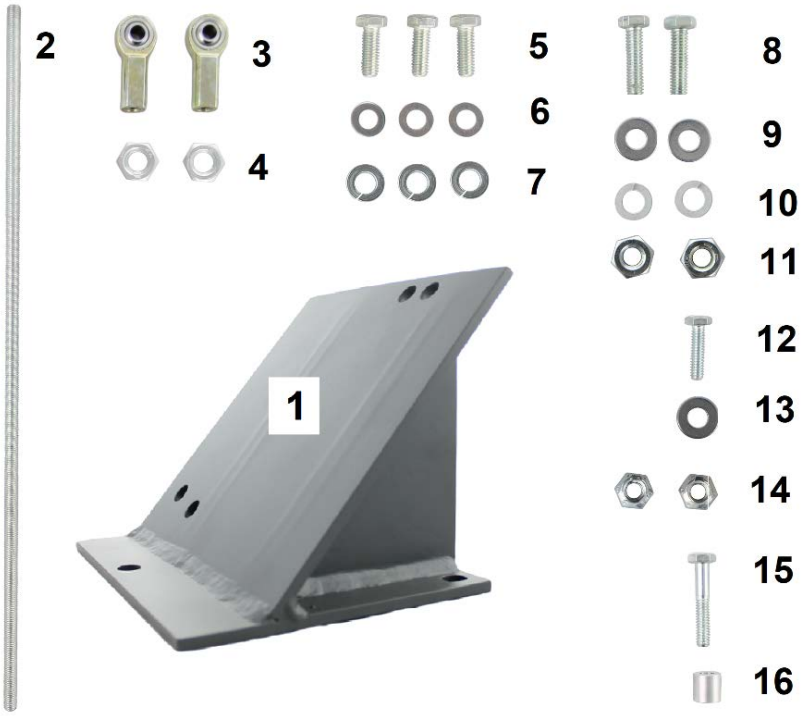
FIGURE 1 KIT PARTS LIST



3 BEFORE YOU BEGIN

Before you start installation with this kit:

1. Review the installation instructions included with your actuator and other related equipment in order to allow for wiring and other issues prior to installing the actuator bracket on the engine.
2. Before installation adjust the mechanical governor to approximately 10% over the operating speed.
3. Lock the mechanical governor in place and stop the engine.
4. Disconnect the battery cables (negative first) to prevent accidental start.

You will also need:

- Hacksaw or other to cut the linkage rod to size.

4 INSTALLATION PROCEDURE

The fuel pump shutoff lever must be on the outboard side.

1. If necessary, move the fuel pump shutoff lever to the outboard side and remove the shutoff lever return spring.
2. Mount the actuator bracket (item 1) on the engine block behind the fuel pump using three M8x16mm screws, lock washers, and flat washers (items 5 - 7).

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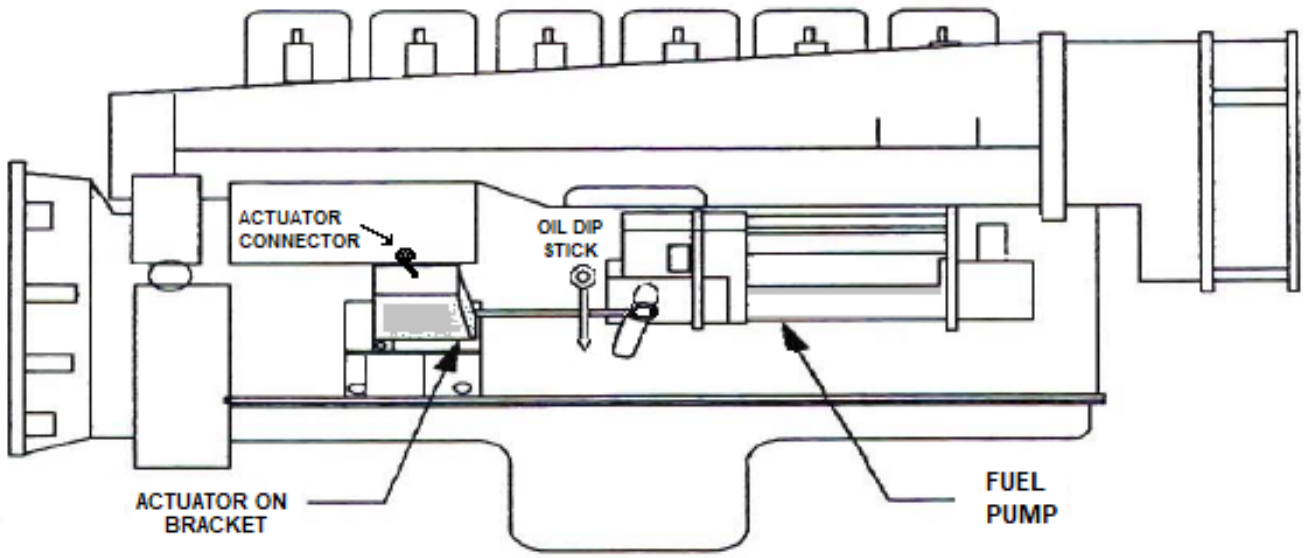
FIGURE 2 BRACKET AND ACTUATOR MOUNTING



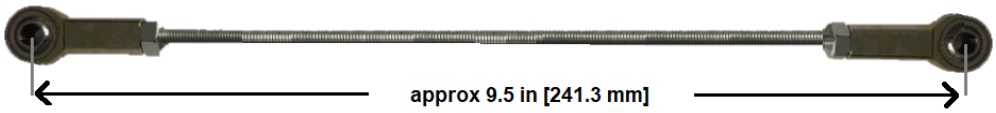
3. Install the actuator on the bracket with its connector pointing up and its label facing the front of the engine.

4. Attach the actuator to the bracket using two 5/16 x 18 x 1.25 screws, flat washers, lock washers and nuts (items 8 - 11) . Tighten all nuts and screws.

FIGURE 3 ACTUATOR MOUNTING EXAMPLE

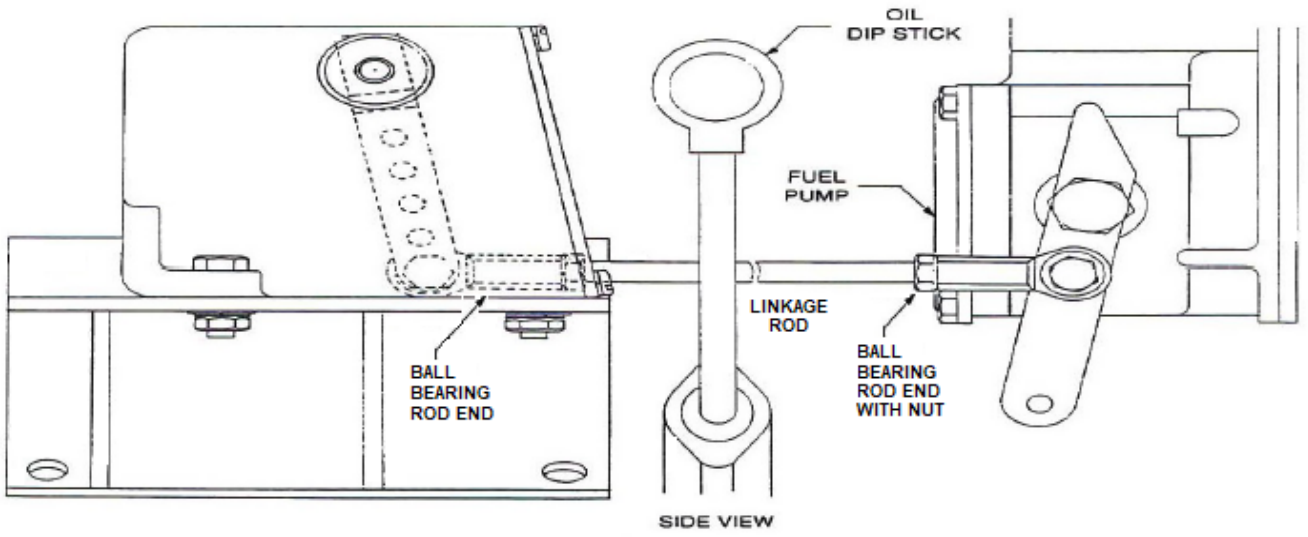
5. Thread a ¼ - 28 hex nut (item 4) on each end of the linkage rod (item 2) and thread the ball bearing rod ends (item 3) approximately ½ onto each end of the linkage rod.

FIGURE 4 LINKAGE ASSEMBLY



6. Adjust the ball bearing rod ends so the hole centers are parallel to each other and the distance is approximately 9.5 in [241.3 mm] center to center. Distances may vary depending on your needs. It is likely you will need to cut the ball bearing rod to size. The length of the ball bearing rod can be used to effect stability.

FIGURE 5 LINKAGE MOUNTING EXAMPLE



7. Attach one end of the linkage rod assembly to the outboard side of the fuel pump shut off lever using the 1/2x20x1.5 bolt, spacer, and stover nut (items 15, 16, 14).

8. Hold the fuel pump shutoff lever towards the front of the engine in the no fuel position. Slide the actuator lever flat side away from the actuator, onto the actuator shaft so the lever is pointing down and the fifth hole from the shaft is aligned with the ball bearing rod end. If necessary adjust the length of the linkage by turning the ball bearing rod end.

9. Adjust the lever on the shaft until the linkage is straight. Attach the linkage to the inboard side of the actuator lever with the 1/2x20x1 screw, flat washer (optional) and locking nut (items 12, 13, 4).

10. Move the linkage assembly through its full travel. There must be no friction or binding in any position. Push the actuator lever and linkage to the maximum fuel position (toward the rear of the engine) and release. It should snap back to the no fuel position with no binding.

11. Tighten all nuts and bolts.