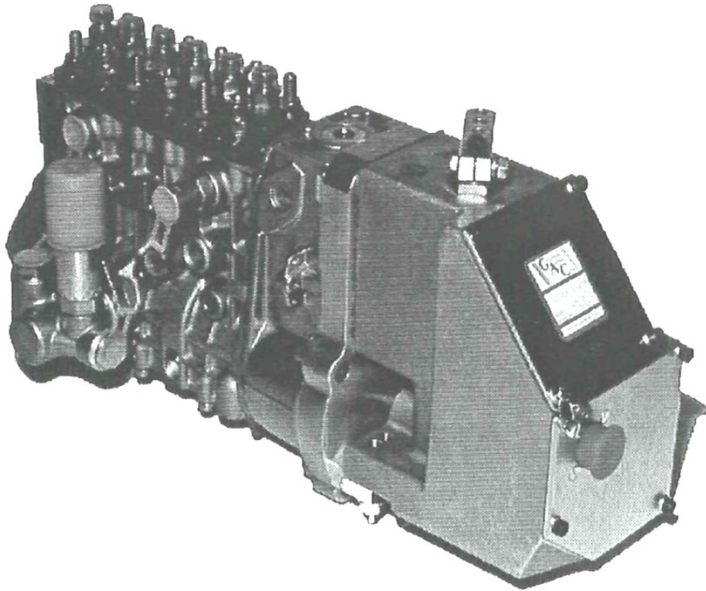


# ACB275H Actuator Installation on a Bosch MW Fuel Injection Pump

## 1 INTRODUCTION

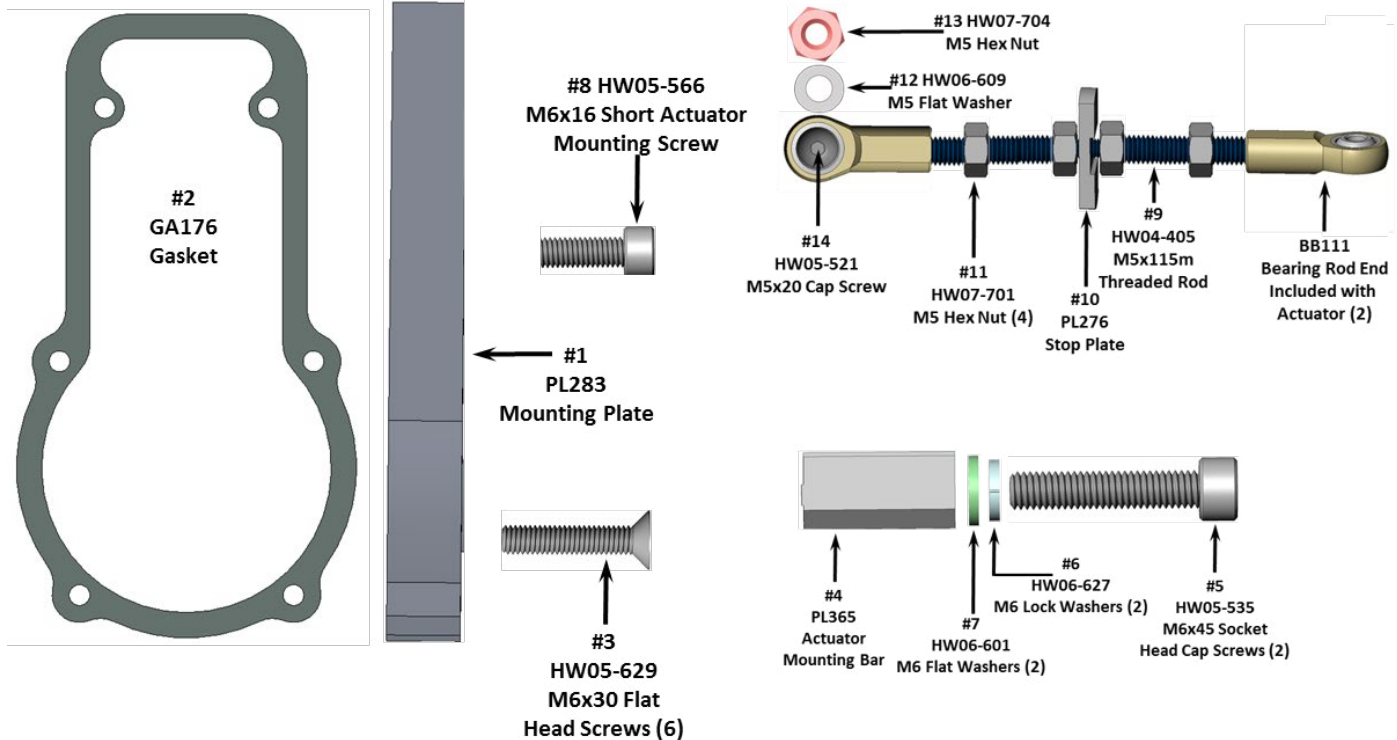
Adding the GAC ACB275H actuator to a Bosch MW fuel injection pump enables direct access to the actuator.



## 2 KT166 - PARTS LIST

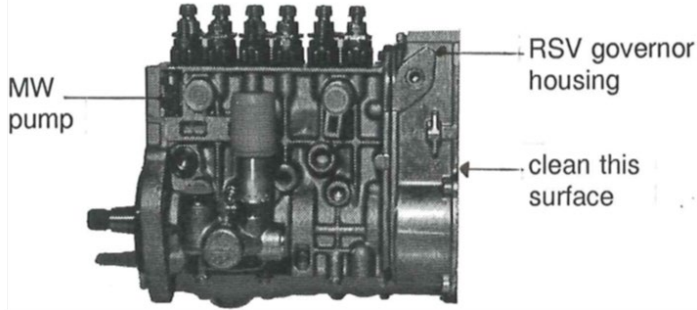
ITEM NUMBER	PART NUMBER	QTY	DESCRIPTION:
1	PL283	1	Mounting Plate
2	GA176	1	Mounting Plate Gasket
3	HW05-629	6	M6x30 Flat Head - Mounting Plate Retaining Screws
4	PL365	1	Actuator Mounting Bar
5	HW05-535	2	M6x45 Socket Head Cap Screws
6	HW06-627	2	M6 Lock Washers
7	HW06-601	2	M6 Flat Washers
8	HW05-566	1	M6x16 Actuator Retaining Screw
9	HW04-405	1	Linkage - M5x115 Threaded Rod
10	PL276	1	Stop Plate - Linkage Assembly
11	HW07-701	4	M5 Hex Nuts
12	HW06-609	1	M5 Flat Washer
13	HW07-704	1	M5 Castle Nut w/ Plastic Insert
14	HW05-521	1	M5x20 Button Head Cap Screw

## 3 COMPONENT DESCRIPTION

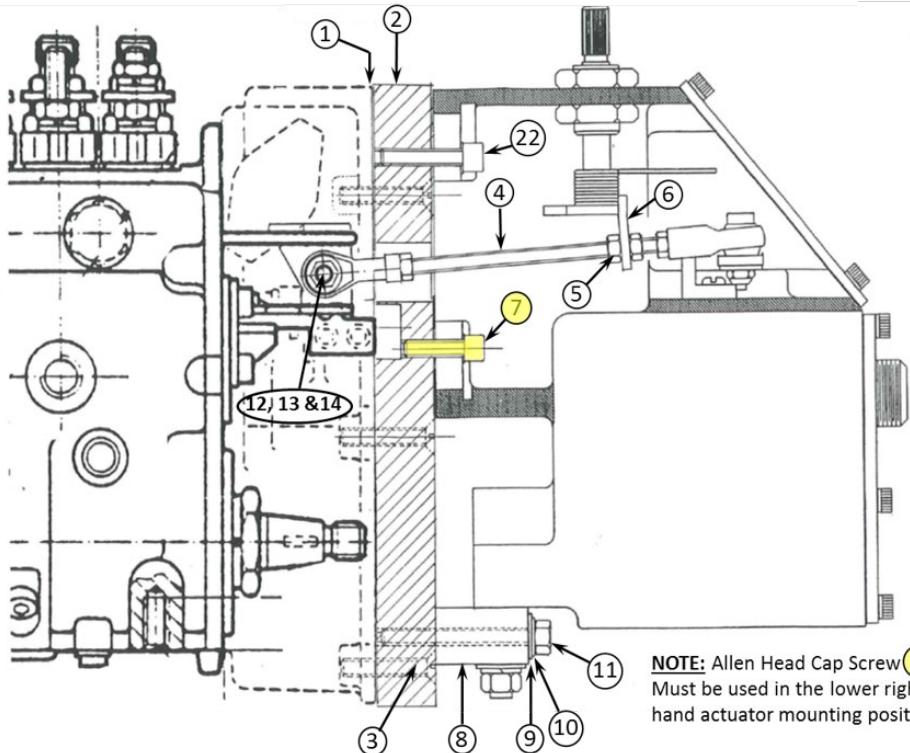
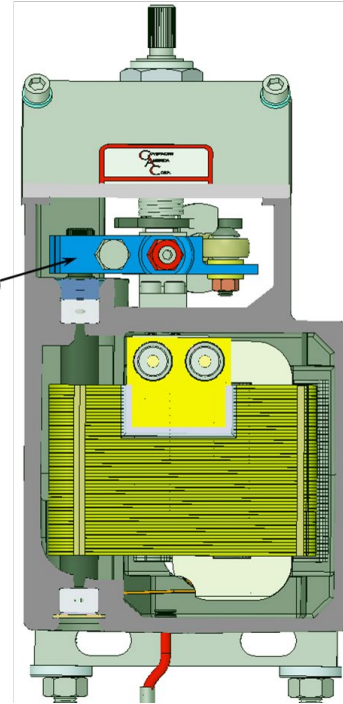
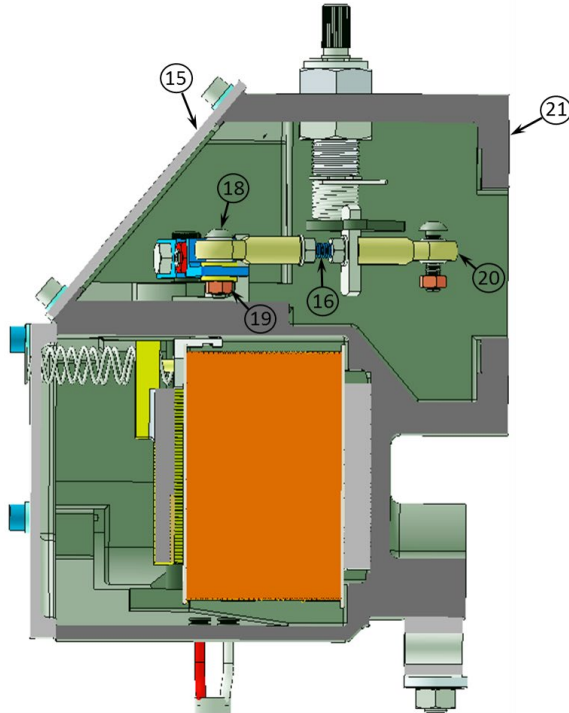


## 4 FUEL PUMP PREPARATION

Remove the back governor cover and all internal parts from the existing RS/RSV mechanical governor per Bosch service instructions.

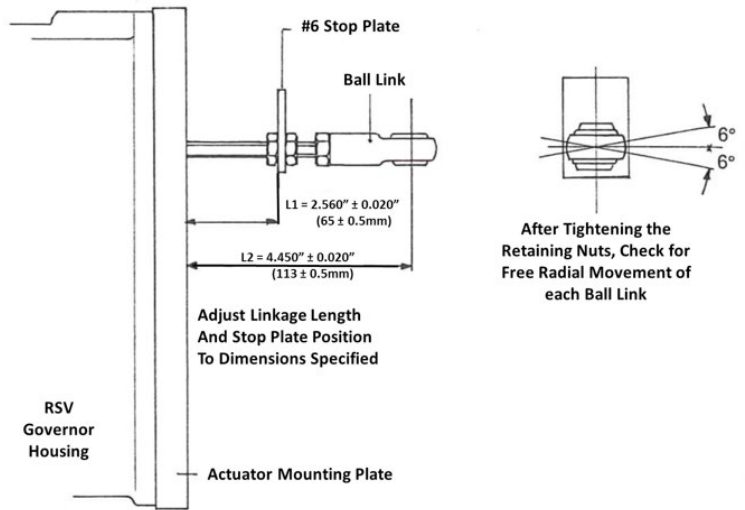


1. Remove the top cover (15) of the ACB275H actuator and remove the existing linkage (16) from the actuator operating lever (17) by removing screw (18) and nut (19).
2. Remove the two ball links (20) from the existing linkage.
3. Install one ball link (20) onto the fuel control rack with screw (12), washer (13) and hex nut (14) from KT166. Tighten nut (14) to 30-40 in-lbs (3.5-4.5 Nm). Check to make sure the ball link can move freely without binding.
4. Screw the threaded linkage rod (4) into this ball link until bottomed and secure with M5 hex nut (5) torqued to 30-40 in-lbs (3.5-4.5 Nm). Recheck the ball link for freedom of movement.



**NOTE:** Allen Head Cap Screw (7) Must be used in the lower right hand actuator mounting position.

5. Apply Loctite 5999 or equivalent sealing compound to gasket (1) and position the gasket onto the RSV housing. Slide the mounting plate (2) with its counter-bored side facing the RSV housing, over the linkage rod and install the 6 flat-head retaining screws (3). Torque the retaining screws equally to 70-80 in-lbs (8-9 Nm)
6. Place the stop plate (6) with two retaining nuts onto the linkage rod. Pull the rod completely out and adjust the stop plate position to  $2.560'' \pm 0.020''$  ( $65 \pm 0.5\text{mm}$ ) as shown. Tighten the locknuts (5) to 30-40 in-lbs (3.5-4.5 Nm). Be sure the stop plate is in the vertical position and that the rod moves freely in both radial direction.
7. Screw on the outer ball link with its locknut and adjust its position to  $4.450'' \pm 0.020''$  ( $113 \pm 0.5\text{mm}$ ). Position the ball link horizontally and tighten the lock nut to 30-40 in-lbs (3.5-4.5 Nm). Check to be sure the linkage moves freely for about  $6^\circ$  from horizontal centerline in each direction.
8. Pull the linkage to its full outward position. Apply a coating of Loctite 5999 or equivalent sealant to the actuator face gasket (21) and place it onto the actuators mounting surface.
9. Place the actuator onto the mounting plate and screw in the top two retaining screws (22) hand tight. The two bottom retaining screws can be installed with a ball end hex wrench.  
NOTE: The shorter M6x16 cap screw (7), supplied with KT166, must be installed in the lower right hand position. This is important, otherwise the fuel rack will not move to the no-fuel position!
10. Install the lower mounting block (8) with two M6x45mm socket head cap screws (11), lockwasher (10) and flat washer (9) and torque to 70-80 in-lbs (8-9 Nm).
11. Check to be sure the cam on the manual shut-off lever shaft can push the linkage all the way to the zero fuel position.
12. Tighten all four actuator retaining screws to (22 & 7) to 70-80 in-lbs (8-9 Nm)
13. Install linkage retaining screw (12) through the ball link. Place the washer (13) between the ball link and operating lever and install locknut (14). Install loosely so the linkage can still be adjusted.



14. Pull the linkage all the way out of the pump, then move it in toward the pump  $0.020''$  ( $0.5\text{mm}$ ). Hold it in this position and tighten the operating lever stop nut to 30-40 in-lbs (3.5-4.5 Nm). Make sure the linkage can still be moved radially approximately  $6^\circ$  in either direction. Move the operating lever manually to the extreme forward position and release it. It must snap back without binding or friction.
15. The maximum fuel stop screw can be set for full power. Refer to the engine manufacturers specifications for the proper setting.
16. Re-install the actuator top cover (15) and tighten the for cover screws to 4-9 in-lbs (0.5-1.0 Nm)

