

# Retrofitting the HCM-5080 Controller



The HCM-5080 Automatic Controller can be retrofitted to most concrete compression machines available in the market today. These instructions provide a basic explanation of how to prepare and existing compression machine for retrofitting and installing the HCM-5080 to it.

## **Initial Preparation**

To begin retrofitting you existing compression machine with the Humboldt HCM-5080 Automatic Controller, you will need to remove the existing controller and pump. To begin this process:

1. Place a bucket or other container, capable of holding all the oil in the system, under the oil drain of the compression machine.
2. Remove oil plug and allow the oil to drain into the container.
3. Once the oil is drained, replace the drain plug.
4. Remove the existing pump and controller from your compression machine, including all brackets and mounting hardware.

## **Installing Humboldt Pump Bracket**

To begin installing the new Humboldt pump, locate the pump mounting bracket, and using the bracket as a guide, mark the position for two mounting holes on the lower section of the compression machine. To ensure that the mounting plate and the pump are level, use a bubble level to make sure the mount is level.

1. Drill and tap two (2) 1/4 -20 UNC holes using the placement determined above.
2. Using the supplied bolts and the bracket, bolt the bracket to the compression machine. See photo #1 on next page.



Photo #1— mounting pump support bracket

### **Mounting the Hydraulic Pump**

To begin mounting the pump for your compression machine, first mount it to the pump support bracket. The pump is attached by four (4) threaded studs, which thread into the holes on the bottom of the pump and are secured to the mounting bracket with (4) lock washers and nuts from the underside of the mounted bracket. When installing be sure to insert the rubber shock spacers to each threaded stud between the pump and the top of the bracket.



Photo #2— Installing rubber shock spacers

Your machine with the mounted pump assembly should look like the photo below.



Photo #3— Pump mounted to support bracket

### **Installing Humboldt HCM-5080 Controller**

To install the Humboldt Controller, locate the controller mounting bracket, and using the bracket as a guide, mark the position for two mounting holes on the upper section of the compression machine. To ensure that the mounting plate and the pump are level, use a bubble level to make sure the mount is level.

1. Drill and tap two (2) 1/4 -20 UNC holes using the placement determined above.
2. Using the supplied bolts and the bracket, bolt the bracket to the compression machine. See photo #4 below.
3. Mount the HCM-5080 Controller to the bracket you just attached to the compression machine. See photo #5 below. There are four (4) bolts supplied for this step.



Photo #4— mounting controller bracket



Photo #5— attaching controller to support bracket

4. Your compression machine should look like Photo #6 (see next page) when you are done.



Photo #6— Controller and Pump mounted to Compression Machine

## Hydraulic Pump Installation

5. Using the supplied hydraulic hose, connect one end to the “U” fitting on the HCM-5080’s hydraulic pump assembly (Photo #7). Be sure to wrap the threads with Teflon tape.

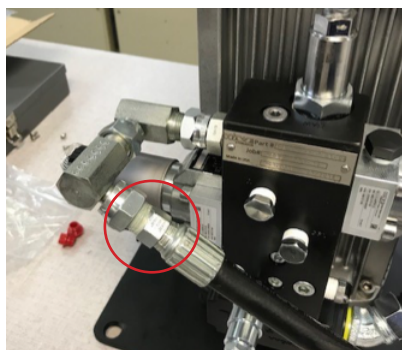


Photo #7— Attach hose to hydraulic line on pump.

**Hydraulic Pump Installation, cont.**

- Next, connect the other end of the hydraulic hose to the compression machine's piston (Photo #8).



Photo #8— connecting the hydraulic hose to the compression machine

- Unscrew the red oil cap located on the top of the hydraulic pump assembly. (Photo #9).



Photo #9— Location of red oil cap, which needs to be removed.

8. Insert funnel and fill pump reservoir with 2 gallons of VG 46 hydraulic oil. (Photo #10) Then replace red oil cap and seal.



Photo #10— Fill pump with hydraulic oil.

9. Connect gray cable with 8-pin round connector coming from the hydraulic pump controller to the HCM-5080 controller, (Photo #11).



Photo #11— connecting the pump controller to the HCM-5080 controller.



10. Now, install the AC power connector coming from the hydraulic pump controller to the back of the HCM-5080 controller. (Photo #12).



Photo #12— connecting AC hookup from the pump controller to the HCM-5080 controller.

11. Connect the cable with the 6-pin circular connector to the end of the Pressure Transducer. (Photo #13).

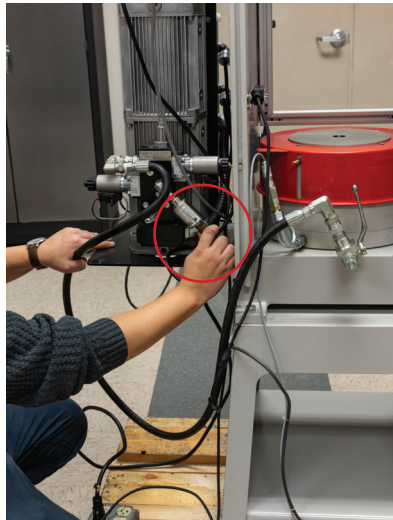


Photo #13— connecting cable with the 6-pin connector to the Pressure Transducer.

12. Connect the cable from the transducer to Channel One on the back of the HCM-5080 Controller. (Photo #14).

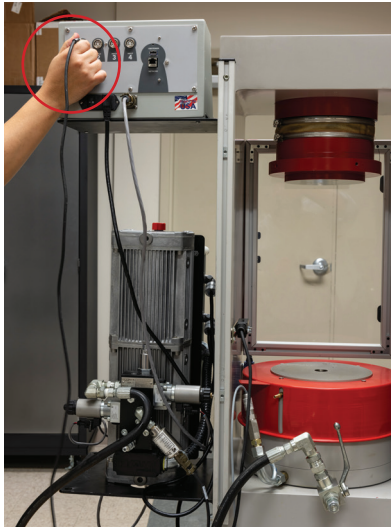


Photo #14— connecting the transducer cable to Channel One of the HCM-5080.

13. Connect the AC power cable from the pump controller to an AC outlet (Photo #15).

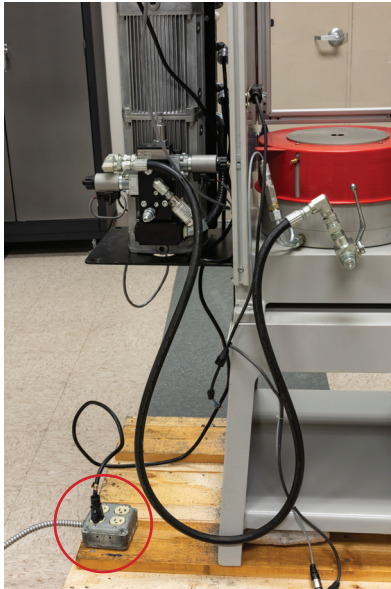


Photo #15— Connecting AC power cable to AC power outlet.

14. Prior to testing, be sure to calibrate the machine by a certified service to ensure accuracy (Photo #16).



Photo #16— Connecting AC power cable to AC power outlet.

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