

Thank you for purchasing the Ponsness-Warren Hydro-MultiSpeed.

NOTICE: The Hydro-MultiSpeed comes pre-assembled. Installing this unit will be easily accomplished by carefully following the step-by-step instructions. All adjustments are to be made on the hydraulic unit, not on you reloader.

THREE SPEEDS OF OPERATION (SEE FOOTNOTE FOR SPOLAR OWNERS) ^①

The Hydro-MultiSpeed has been pre-assembled at the factor in the #1 (slowest) speed position. DO NOT change the rate of speed until the unit is installed on the reloader and you are familiar with its operation. There are three (3) different speed settings marked on the Stub Handle (part # 6) and the Long Mounting Bracket (part # 2), just below the Rear Adjusting Block.

ALIGNMENT OF SPEED SETTINGS AND RATE OF SPEED

The Speed Adjusting Block (part # 6) and the Rear Adjusting Block (part # 18) are to be positioned as follows:

#1 Speed Setting: The top edge of the Speed Adjusting Block (# 9) is to be flush with the top of the Stub Handle (# 6). The back edge of the Rear Adjusting Block (#18) is to be even with the line marked #1 on the right side of the Long Mounting Bracket (#2).
Slowest Speed

#2 Speed Setting: The top edge of the Speed Adjusting Block (# 9) is to be even with the line marked #2 on the Stub Handle (# 6). The back edge of the Rear Adjusting Block (#18) is to be even with the line marked #2 on the right side of the Long Mounting Bracket (#2).
Medium Speed

#3 Speed Setting: The Speed Adjusting Block (# 9) is to be all the way down on the Stub Handle (#6). The back edge of the Rear Adjusting Block (#18) is to be even with the line marked #3 on the right side of the Long Mounting Bracket (#2).
Fastest Speed

CHANGING THE RATE OF SPEED

There are three steps that must be completed to change the rate of speed. Firstly, loosen the two set-screws (#12) on the Speed Adjusting Block (#9), move to the desired speed setting, and re-tighten the set-screws. Secondly, remove the S.H.C.S. (#15) in the back of the Rear Adjusting Block (#18), place the Rear Adjusting Block in the same speed setting as the Speed Adjusting Block, and re-tighten with S.H.C.S. Thirdly, re-set the amount of travel on the hydraulic cylinder shaft by repeating steps 10 through 13 on the instruction sheet. It is important to remember that the Speed Adjusting Block and the Rear Adjusting Block must BOTH be set in the SAME SPEED SETTINGS. DO NOT operate the unit if either speed settings are NOT THE SAME. Also, doing so will cause “racking” or “bending” of the reloader and Hydro-MultiSpeed.

REAR ADJUSTING BLOCK

There are two different Rear Adjusting Blocks available for the Hydro-MultiSpeed. One is for 800 B machines only. This block is painted BLACK in color. The second is the 800 C, 800 CVT, 900, 950, and L/S-1000 machines. This block is not painted. It is important that you use the correct Rear Adjusting Block, as there is a difference in the handle distance in the 800 B reloaders.

DESCRIPTIONS
(SEE SCHEMATIC BELOW)
INSTALLATION INSTRUCTIONS
(For reference numbers listed below, see drawing at the end of this section.)

1. Empty your reloader of all shells. Make sure that the shot and powder shut-offs are in the “OFF” positions and the Primer Feed Gate is closed.
2. Remove the metal plug from hydraulic tank and install the vent cap plug.
3. Remove the four bolts from the mounting holes (#1) that are anchoring your reloader to your bench.
4. Place the long Mounting Bracket (#2) under the right side of the reloader and the Short Mounting Bracket (not shown) under the left side of the reloader and bolt to bench. It may be necessary to use longer mounting bolts.
5. Secure the back of the Long Mounting Bracket (Right Side) by drilling a ¼” hole (#3) through your reloading bench and fasten securely with a ¼” bolt and nut.

NOTE: The bracket needs to be at a 90° angle with the base of the reloader. Use a Carpenter’s Square to properly line up the Long Mounting Bracket with the base of the reloader. (See picture A).

6. Remove the operating handle on the reloader by loosening the set-screw (#4) in the end of the cross-shaft.
7. Place the Stub Handle (#6) into the hole where the operating handle was. DO NOT remove the Stub Handle from the Speed Adjusting Block. (#9). Make sure that the Stub Handle is bottomed out in the cross-shaft. By using a square, align the Speed Adjustment Block with the Rear Adjustment Block (#18) and tighten the set-screw. (See picture “B”).
8. Attach the back of the MultiSpeed Cylinder (#16) to the Rear Adjustment Block (#18) by using one of the shoulder bolts (#14), included. (See picture “C”).
9. Attach the two Quick Disconnect hoses (#5) to the MultiSpeed Cylinder.
10. With the hydraulic motor in the OFF position, plug the unit into a 110 outlet.
11. Attach the Rod End (#17) to the Speed Adjustment Block (#9); using included bolt (#14). (See picture “D”).

NOTE: It may be necessary to extend the hydraulic cylinder shaft approximately 1”. This is done by turning the hydraulic motor ON and gently, slowly pressing down on the front of the Foot Control Valve (#7).

12. Turn the hydraulic motor ON and fully extend the hydraulic cylinder shaft. In this position, it is important to have a space of approximately 0.010” (the thickness of a shell box lid) between the Speed Adjustment Block (#9) and the Handle Stop Block (#8 – located at the right-front of the reloader base).

NOTE: To make this adjustment, turn the motor OFF. Then, loosen the jam nut (#10) on the Cylinder Shaft with a 9/16” wrench and turn the Rod Adjusting Collar (#11) using a ¾” wrench. Turning clockwise will extend the shaft and counter clockwise will retract (shorten) the shaft. When the adjustment is completed, re-tighten the jam nut.

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13. Slowly, lower the Crosshead down until it is just touching the stop behind the reloader. This is done by pressing down on the back portion of the Foot Control Valve (#7).

NOTE: 800 Series reloaders do not have a stop in the back of the reloader. The crosshead will be down when you hear the “click” of the index pin.

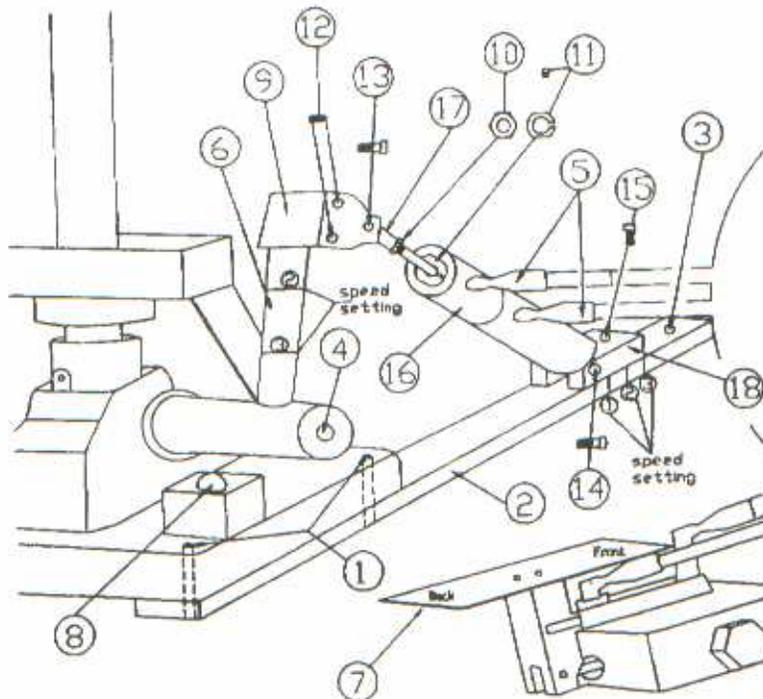
14. Turn the hydraulic motor OFF.
15. Loosen the set-screw on the rod Adjusting Collar (#11), slide this to the back (rear) as far as possible, and re-tighten the set-screw. When steps 10 – 13 are done correctly, there will be no “racking” or “bending” of the reloader or hydro-MultiSpeed during operation. Rod Adjusting Collar’s placement is relatively critical. You want to place it such that the cylinder’s retraction is controlled by this placement.

NOTE: When the cylinder is completely extended, you want the stub shaft to be gently setting on the Handle Stop Block (#8). If this you permit the cylinder to extend too far and contact at this point is too much, you will get an unnecessary torque of the reloader’s base. Too little cylinder shaft extension and the reloader will not index.

16. Turn the hydraulic motor ON and cycle the reloader. You are not ready to start reloading. If your reloader will not index, repeat steps 10 – 13. We suggest that you begin slowly because you are getting used to the Hydro-MultiSpeed unit.

** WARNING: DO NOT permit shells to lie under the hydraulic cylinder.

** WARNING: DO NOT place hands of the Handle Stop Block (#8), when reloading and/or when the hydraulic motor is ON. This could result in serious injury by a “pinching.”



SCHEMATIC DESCRIPTIONS

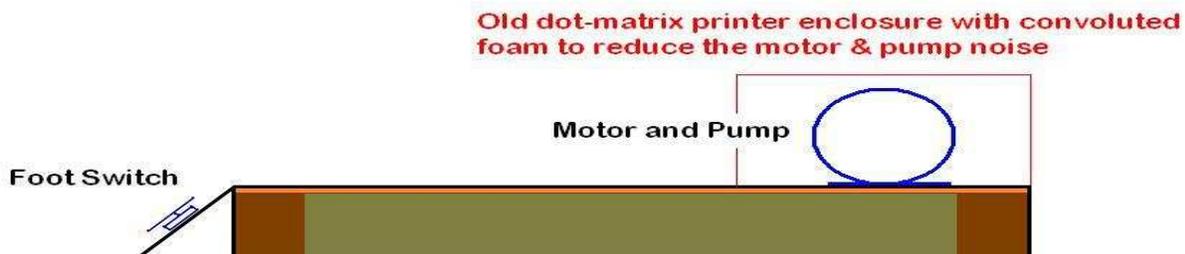
#1	Mounting Holes	
#2	HYDMS-51	Long Mounting Bracket
#3	1/4" Rear Mounting Hole	
#4	Set-Screw	
#5	Quick Disconnects	
#6	HYDMS-54	Stub Handle
#7	Foot Control Valve	
#8	S-260300	Handle Stop Block
#9	HYDMS-52	Speed Adjusting Block
#10	HYDMS-58	9/16" Jam Nut
#11	HYDMS-57	3/4 Rod Adjusting Collar, (Not shown fully)
#12	D-120200	Set Screws
#13	D-06a000	Shoulder Bolt
#14	D-06a000	Shoulder Bolt
#15	METT13000	Socket-Head Cap Screw
#16	HYDMS-55	Multi-Speed Cylinder
#17	HYDMS-56	Rod End
#18	HYDMS-53	Rear Adjusting Block
	HYDMS-59	800 B Rear Adjusting Block
#19	HYDMS-50	Short Mounting Bracket

- ❶ Spolar reloaders do NOT use a three-position adjusting block. They use a fixed-length stub shaft. These are available only from Spolar and are approximately \$50 delivered. You can NOT use the PW adjustable stub shaft due to the stop block's position on the Spolar units.

NOTE: I also offer a split stop-collar similar to part number HYDMS-0011 that had TWO Allenhead screws for mounting and the two screws make it easier to install. You do not have to remove the Rod End to do so and the two screws do a better job of staying in place without stripping out the small Allenhead screw in the factory supplied version.

Personal thoughts on mounting and assembling the hydro:

1. I mounted the motor on a plywood platform sized and screwed to redwood 2x2's. I had some extra redwood deck rails left over from building a deck.
2. The front is sloped down to the floor where I mounted my foot-switch; giving my right foot a better and more comfortable angle (see drawing). It is actually sloped at more like a 30° angle than the 45° below.
3. I messed around with the factory's instructions about mounting the stub shaft in position #3, then I went to position #2, and finally I said "screw it" and I went with position #1. This placed the aluminum block on the stub shaft down as far as it will go. In position #1 the arm operates the reloader fastest, but it still is not as fast as by hand, but it is the best position available.
4. It is VERY critical that you screw-in the front clevis to fit the aluminum block far enough forward to ensure that the cylinder is fully extended (barely touching the stop block). The machine **SHOULD NOT FLEX** in EITHER direction, and make darn sure the machine is bolted down **TIGHTLY**.
5. The small round, black coupling on the hydro shaft must be set such that on the return stroke to home position, the reloader also **DOES NOT FLEX**. This can take some time, but do it correctly and the hydro and reloader will work perfectly. I offer a two-screw coupling that is easier to install AND two screws holds it tighter on the shaft.



MEMORANDUM

ATTENTION: P/W hydraulic System Users

Regarding: Changing Pressure Settings... you really cannot increase the pressure a noticeable amount because in order to do so, you would need to increase the volume flow. This would entail changing to larger hoses and fittings.

If your reloader is equipped with a P/W Hydraulic System, please follow the instructions below regarding pressure settings.

Check the serial number tag on the hydro unit on the metal plate located on the On-Off switch box to determine if you have a "Hydro-Multi-Speed" or "Hydro-Matic" model unit.

INSTRUCTIONS FOR HYDRO-MULTISPEED UNITS

If you have the Multi-Speed unit, and the serial number is below #1069, you must change the pressure setting as follows:

1. Remove the hex-head cap on the rear side of the pump housing (located on the opposite side of the On-Off switch), exposing the pressure adjusting screw.
2. Place a standard slotted-head screwdriver in the pressure adjusting screw and **BACK** it out TWO complete turns. You will be turning the pressure adjusting screw counter-clockwise.
3. Replace the hex-head cap back into position.

INSTRUCTIONS FOR THE HYDRO-MATIC UNITS (OLDER MODEL)

If you have the "Hydro-Matic" unit with the dual cylinders system, a very old designed system, you do not need to adjust anything.

If you have a "Hydro-Matic" unit and are using the single ("Multi-Speed") cylinder, please call our technical advisor, Jim White of S&W Supply, LLC for instruction on adjusting at (605) 341-4412. Jim is located in Rapid City South Dakota and handles our hydraulic market.