

**HL1000**  
**Single Cylinder**  
**Retrofit Hatch Lifter System**  
**Installation Instructions**

**Electrical**

**Step 1.** With #10 x 1" mounting screws, mount hatch lift manifold to bulkhead. Manifold should be within 12" of Hydraulic Power Unit (HPU). Connect one end of ground wire to either mounting screw (B) on manifold and the other to end to either stud on back of HPU or other convenient ground.

**Step 2.** With tabs in full up position, remove cover of HPU. Unplug HPU from wire harness. Remove green valve wire (A) from HPU connector by using a sharp object to push in barb connector. Wrap unneeded wire around valve.

**Step 3.** Unscrew green wire solenoid valve body (A) from HPU, and remove plunger and spring. Discard plunger and spring, Replace valve body. NOTE: Leave valve seat and O-rings in place.

**Step 4.** Insert green wire (C) from right hand valve on manifold in place of green wire just removed from HPU connector in step 2.

**Step 5.** Plug "Y" (4 wire) harness segment between HPU and existing trim tab wire harness. Plug in hatch lift wire harness to remaining connector (3 wire) SEE DIAGRAM.

**Step 6.** Select a convenient location for the hatch lift control. Cut hole to mount. Run wire harness through hole, cut to length, and attach to control per diagram. Mount and fasten control. NOTE: Red wire in harness is not used.

**Step 7.** Attach orange hot lead to positive 12 volt power source.

**Hydraulic**

**Step 8.** Unscrew compression nut with tubing from "starboard" side of HPU (G) and reattach to vertical brass fitting (H) on left side of manifold.

**Step 9.** Install new tubing from "starboard" side of HPU (G) to right hand brass elbow (I) on front of manifold. To install nut with ferrule: push tubing into nut with ferrule and into fitting until it bottoms, tighten finger tight. Still bottoming the the tubing, tighten nut one full turn...NO MORE / DO NOT OVERTIGHTEN. To prevent kinking install tube bending clips on tubing for 90 degree bends.

**Step 10.** Standard hatch lift cylinders have a stroke of 18". Closed length is 23-3/8" (Closed 24" stoke cylinder length is 29-3/8", Closed 12" stroke cylinder length is 17-3/8"). With enclosed mounting brackets position closed cylinders so that closed hatches lie flat. Mount top and bottom of cylinders.

**Step 11.** Connect tubing between hatch lift cylinders and remaining brass elbows on front of manifold. (J) to (K).

**Step 12.** Using control push hatch up for ten seconds, then hatch down for ten seconds. Repeat this 3-4 times. This procedure bleeds the system. Note: Hatch may stutter until air is completely bled from the system.

**Step 13.** With hatches closed and trim tabs in full up position check fluid level in reservoir and add if necessary.

**Step 14.** Move hatch cylinders to fully extended position and both trim tabs to full down to check connections for possible leaks.

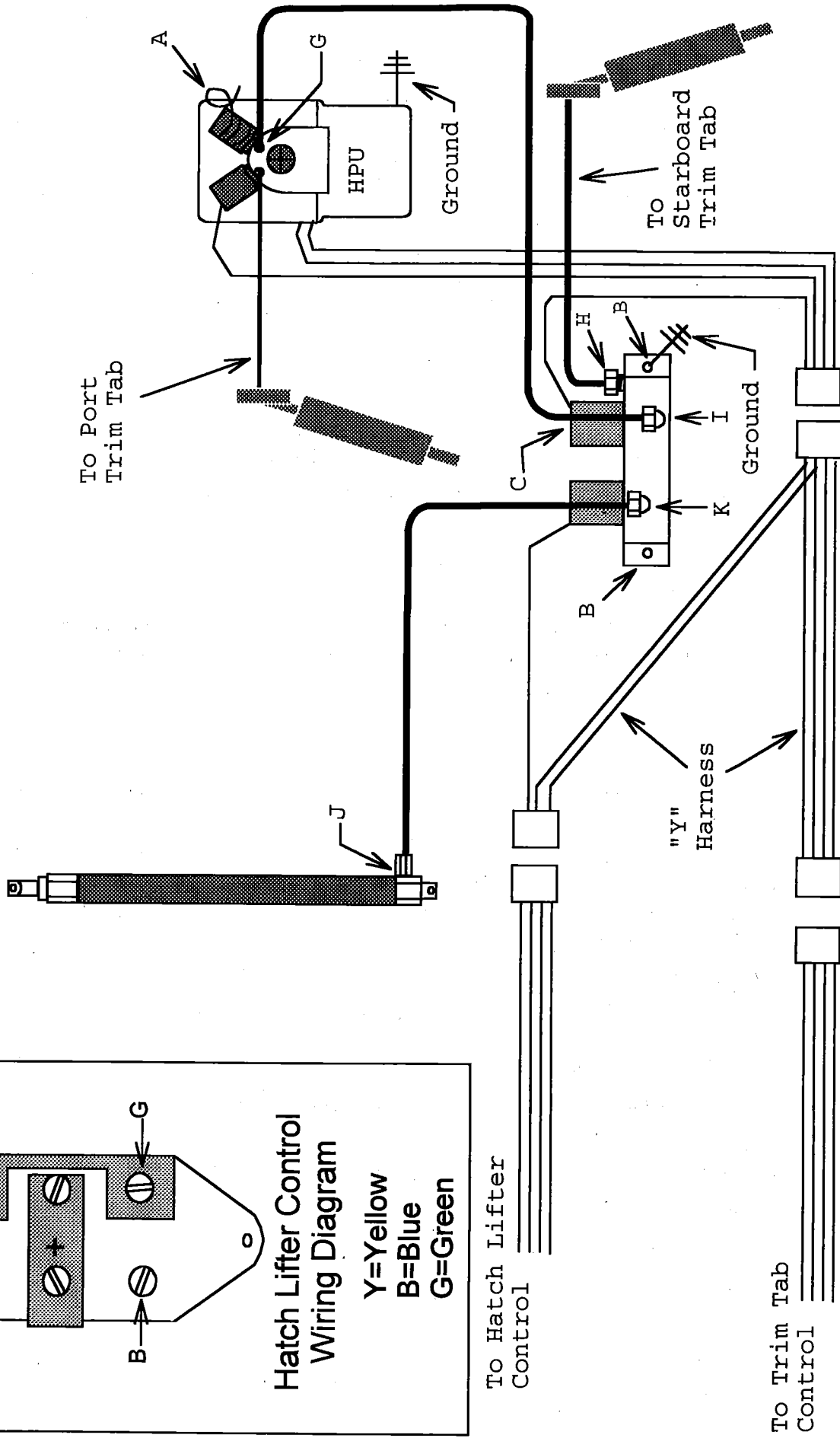
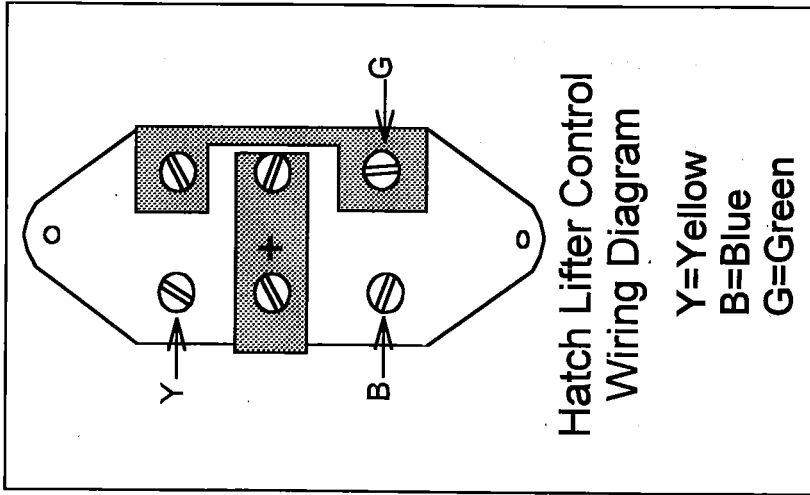
**Bennett Marine**

550 Northwest 12th Avenue Deerfield Beach, Florida 33442

Phone: (954) 427-1400 Fax: (954) 480-2897

Web: [www.BennettTrimTabs.com](http://www.BennettTrimTabs.com)

# HL1000 Single Cylinder Retrofit Hatch Lifter System



**HL2000**  
**Dual Cylinder Simultaneous Movement**  
**Retrofit Hatch Lifter System**  
**Installation Instructions**

**Electrical**

**Step 1.** With #10 x 1" mounting screws, mount hatch lift manifold to bulkhead. Manifold should be within 12" of Hydraulic Power Unit (HPU). Connect one end of ground wire to either mounting screw (B) on manifold and the other to end to either stud on back of HPU or other convenient ground.

**Step 2.** With tabs in full up position, remove cover of HPU. Unplug HPU from wire harness. Remove green valve wire (A) from HPU connector by using a sharp object to push in barb connector. Wrap unneeded wire around valve.

**Step 3.** Unscrew green wire solenoid valve body (A) from HPU, and remove plunger and spring. Discard plunger and spring, Replace valve body. NOTE: Leave valve seat and O-rings in place.

**Step 4.** Insert green wire (C) from right hand valve on manifold in place of green wire just removed from HPU connector in step 2.

**Step 5.** Plug "Y"(4 wire) harness segment between HPU and existing trim tab wire harness. Plug in hatch lift wire harness to remaining connector (3 wire) SEE DIAGRAM.

**Step 6.** Select a convenient location for the hatch lift control. Cut hole to mount. Run wire harness through hole, cut to length, and attach to control per diagram. Mount and fasten control. NOTE: Red wire in harness is not used.

**Step 7.** Attach orange hot lead to positive 12 volt source.

**Hydraulic**

**Step 8.** Unscrew compression nut with tubing from "starboard" side of HPU (G) and reattach to vertical brass fitting (H) on left side of manifold. To install nut with ferrule: push tubing into nut with ferrule and into fitting until it bottoms, tighten finger tight. Still bottoming the tubing, tighten nut one full turn...NO MORE / DO NOT OVERTIGHTEN.

**Step 9.** Install new tubing from "starboard" side of HPU (G) to left hand brass elbow (I) on front of manifold. To prevent kinking install tube bending clips on tubing for 90 degree bends.

**Step 10.** Standard hatch lift cylinders have a stroke of 18". Closed length is 23-3/8" (Closed 24" stroke cylinder length is 29-3/8", Closed 12" stroke cylinder length is 17-3/8"). With enclosed mounting brackets position closed cylinders so that closed hatch will lay flat. Mount top and bottom of cylinders.

**Step 11.** Connect tubing between hatch lift cylinders (J) and (J1) to (L) and (L1) connections on brass "T".

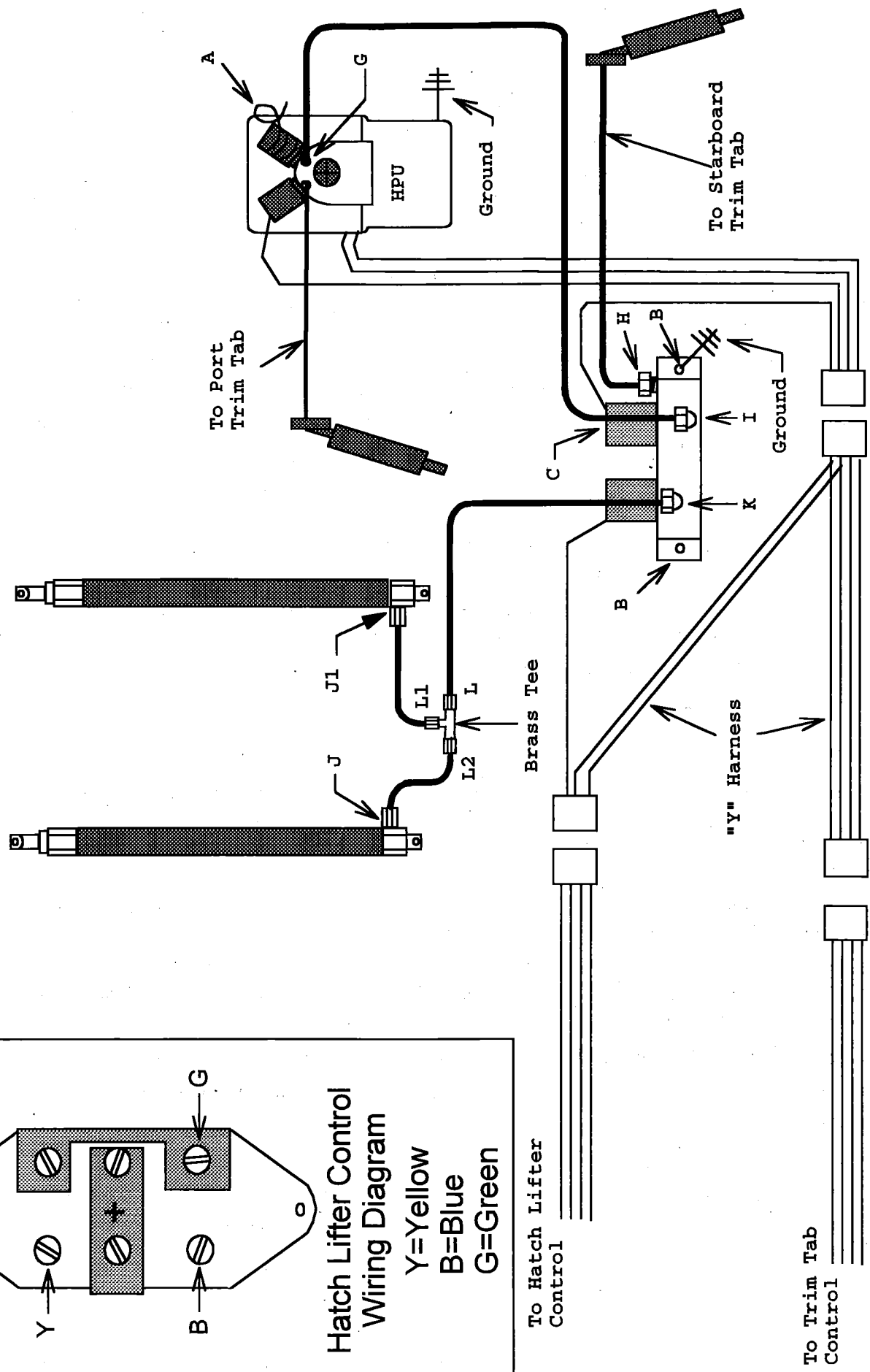
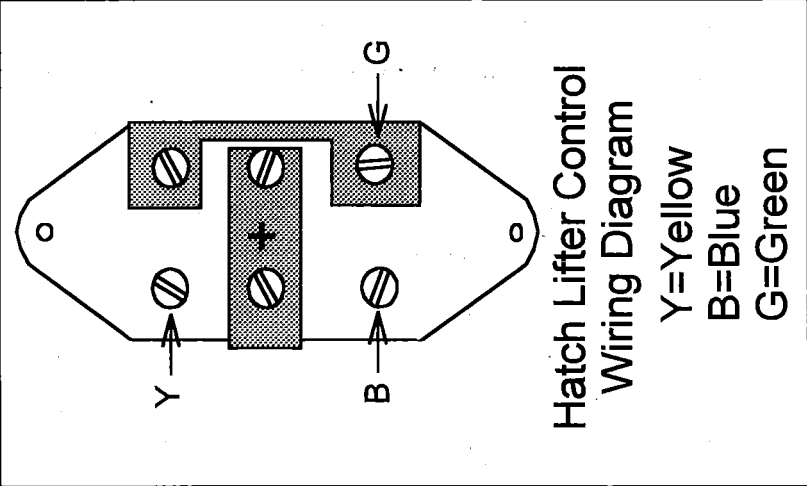
**Step 12.** Connect tubing between remaining brass "T" connection (L2) and remaining brass elbow on manifold (K).

**Step 13.** Using control push hatch up for ten seconds, then hatch down for ten seconds. Repeat this 3-4 times. This procedure bleeds the system. Note: Hatch may stutter until air is completely bled from the system.

**Step 14.** With hatches closed and trim tabs in full up position check fluid level in reservoir and add if necessary.

**Step 15.** Move hatch cylinders to fully extended position and both trim tabs to full down to check connections for possible leaks.

# HL2000 Dual Cylinder Simultaneous Movement Retrofit Hatch Lifter System



**HL3000**  
**Dual Cylinder Independent Movement**  
**Retrofit Hatch Lifter System**  
**Installation Instructions**

**Electrical**

**Step 1.** With #10 x 1" mounting screws, mount hatch lift manifold to bulkhead. Manifold should be within 12" of Hydraulic Power Unit (HPU). Connect one end of ground wire to either mounting screw (B) on manifold and the other to end to either stud on back of HPU or other convenient ground.

**Step 2.** With tabs in full up position, remove cover of HPU. Unplug HPU from wire harness. Remove green valve wire (A) from HPU connector by using a sharp object to push in barb connector. Wrap unneeded wire around valve.

**Step 3.** Unscrew green wire solenoid valve body (A) from HPU, and remove plunger and spring. Discard plunger and spring. Replace valve body. Note: Leave valve seat and O-rings in place.

**Step 4.** Repeat Step 2 & 3 for red wire solenoid valve (A1).

**Step 5.** Insert green wire (C) from left hand valve on manifold in place of green wire just removed from HPU connector. Do the same with the red wire (C1) on right side of manifold, with red wire just removed from HPU connector.

**Step 6.** Plug "Y" harness segment between HPU and existing trim tab wire harness. Plug in hatch lift wire harness to remaining connector (see diagram).

**Step 7.** Select a convenient location for the hatch lift control. Cut hole to mount. Run wire harness through hole, cut to length, and attach to control per diagram. Mount and fasten control.

**Step 8.** Attach orange hot lead to positive 12 volt power source.

**Hydraulic**

**Step 9.** Unscrew compression nut with tubing from "starboard" side of HPU (G) and reattach to vertical brass fitting (H) on left side of manifold.

**Step 10.** Install new tubing from "starboard" side of HPU (G) to left hand brass elbow (I) on front of manifold. Do the same for "port" side port side of HPU (G1) to right hand brass elbow (I1) on front of manifold. To install nut with ferrule: push tubing into nut with ferrule and into fitting until it bottoms, tighten finger tight. Still bottoming the tubing, tighten nut one full turn...NO MORE / DO NOT OVERTIGHTEN. Repeat procedure for "port" side of HPU (G1) to brass fitting (H1) on right side of manifold. To prevent kinking install tube bending clips on tubing for 90 degree bends.

**Step 11.** Standard hatch lift cylinders have a stroke of 18". Closed length is 23-3/8" (Closed 24" stroke cylinder length is 29-3/8", Closed 12" stroke cylinder length is 17-3/8"). With enclosed mounting brackets position closed cylinders so that closed hatches lie flat. Mount top and bottom of cylinders.

**Step 12.** Connect tubing between hatch lift cylinders and remaining brass elbows on front of manifold. (J) to (K) and (J1) to (K1).

**Step 13.** Using control push hatch up for ten seconds, then hatch down for ten seconds. Repeat this 3-4 times for each cylinder. This procedure bleeds the system. Note: Hatch may stutter until air is completely bled from the system.

**Step 14.** With hatches closed and trim tabs in full up position check fluid level in reservoir and add if necessary.

**Step 15.** Move hatch cylinders to fully extended position and both trim tabs to full down to check connections for possible leaks.

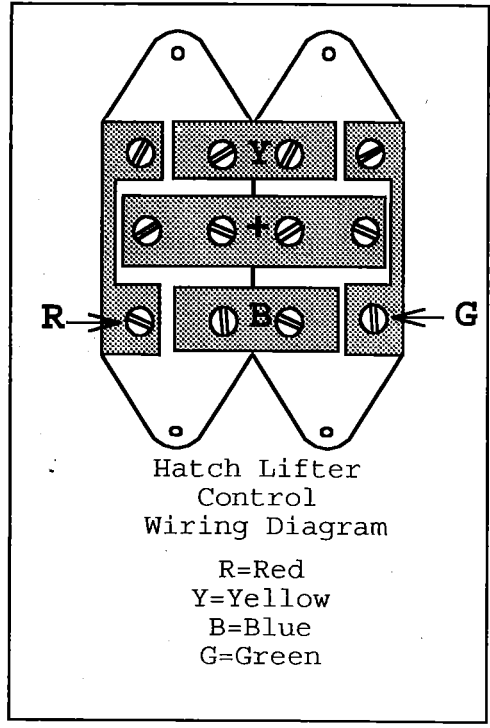
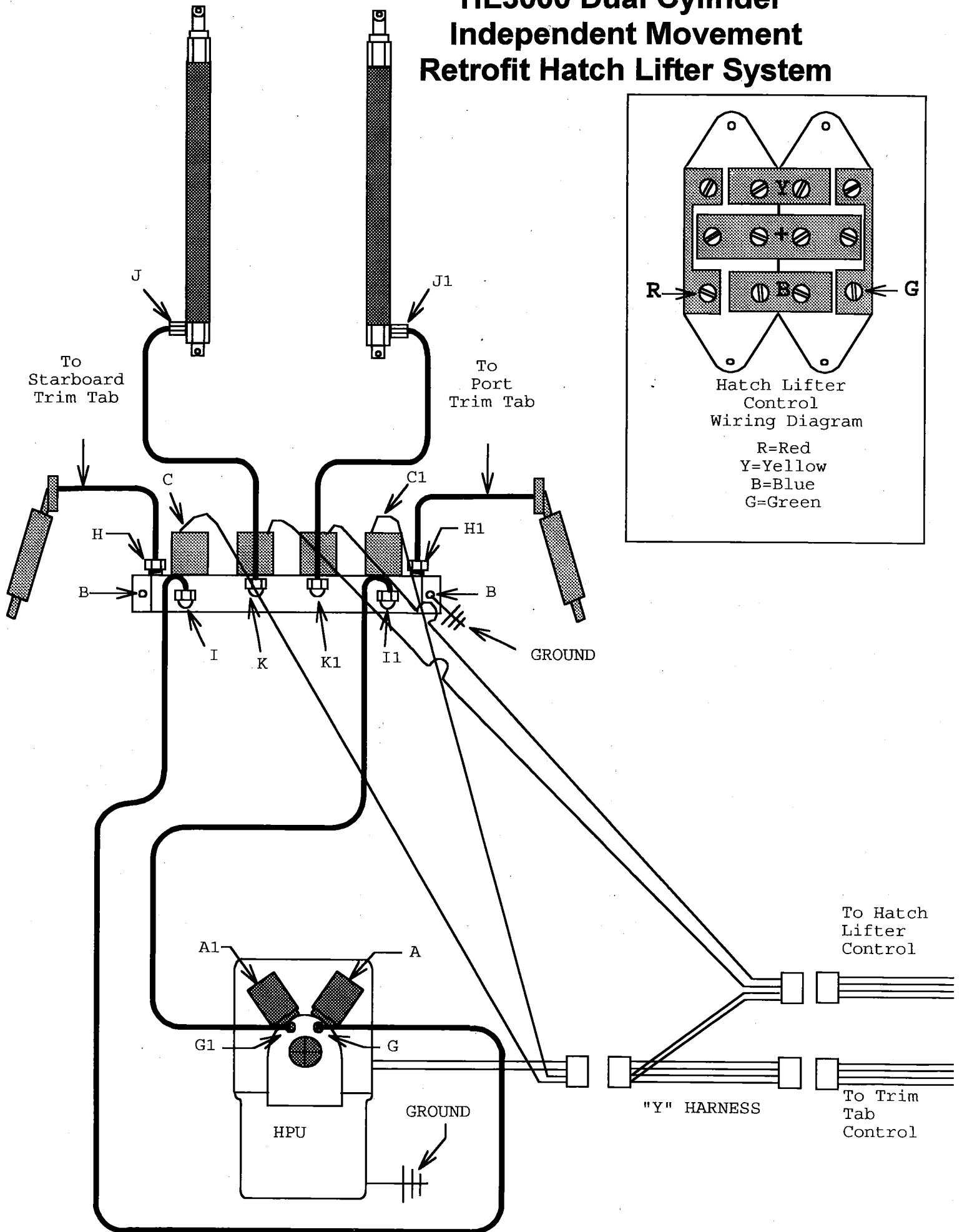
**Bennett Marine**

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Phone: (954) 427-1400 Fax: (954) 480-2897

Web: [www.BennettTrimTabs.com](http://www.BennettTrimTabs.com)

# HL3000 Dual Cylinder Independent Movement Retrofit Hatch Lifter System



**HL1351**  
**Single Cylinder**  
**Independent Hatch Lifter System**  
**Installation Instructions**

**Step 1.** Install hydraulic power unit (HPU) in a convenient location. **HPU must be mounted in a dry location to avoid getting wet from drenching or submersion.** Mount HPU on a vertical surface, allowing clearance overhead so it may be removed. Layout upper holes on HPU mounting bracket 4-5/8" apart and start screws (#10 x 1" provided). Then fasten lower screws. HPU slides into bracket from above.

**Step 2.** Standard hatch lift cylinders have a stroke of 18". Closed length is 23-3/8" (Closed 24" stroke cylinder length is 29-3/8", Closed 12" stroke cylinder length is 17-3/8"). With enclosed mounting brackets position closed cylinder so that closed hatch will lay flat. Mount top and bottom of cylinders.

**Step 3.** Run hydraulic tubing from cylinder to HPU and cut to length.

**Step 4.** Insert hydraulic tubing through nut and ferrule on cylinder and into fitting until it bottoms, tighten finger tight. Still bottoming the tubing, tighten nut one full turn...**NO MORE / DO NOT OVERTIGHTEN.** To prevent kinking clamp bending clips on tubing for 90 degree bends. Connect hydraulic tubing to HPU fitting as described above.

**Step 5.** Attach HPU ground wire (black) to convenient ground.

**Step 6.** Select a convenient location for the hatch lift control. Cut hole to mount. Run wire harness through hole, cut to length, and attach to control per diagram. Mount and fasten control. **NOTE:** Red wire in harness is not used.

**Step 7.** Attach orange hot lead to power source.

**Step 8.** Fill reservoir of HPU to full line with any type automatic transmission fluid (ATF).

**Step 9.** Using control push hatch up for ten seconds, then hatch down for ten seconds. Repeat this 3-4 times. This procedure bleeds the system. **Note:** Hatch may stutter until air is completely bled from the system.

**Step 10.** With hatches closed check fluid level in reservoir and add if necessary.

**Step 11.** Move hatch cylinder to fully extended position and check connections for possible leaks.

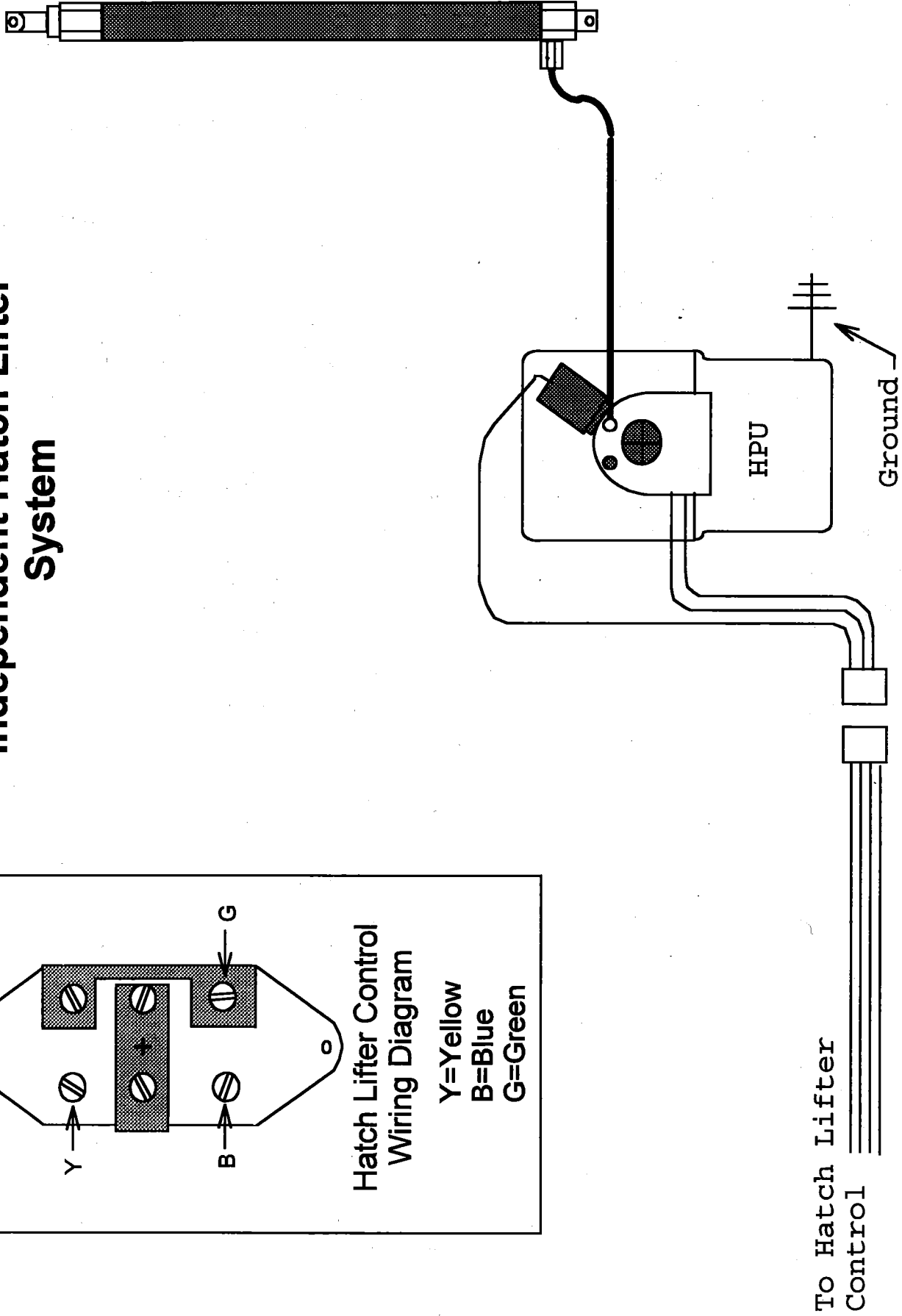
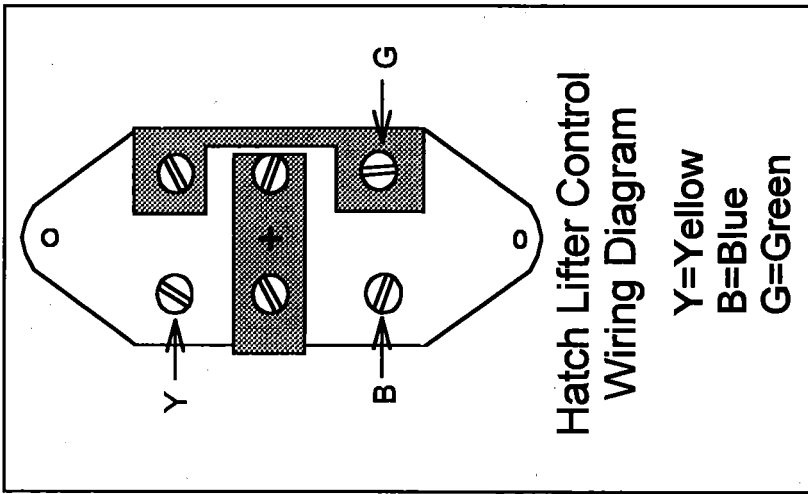
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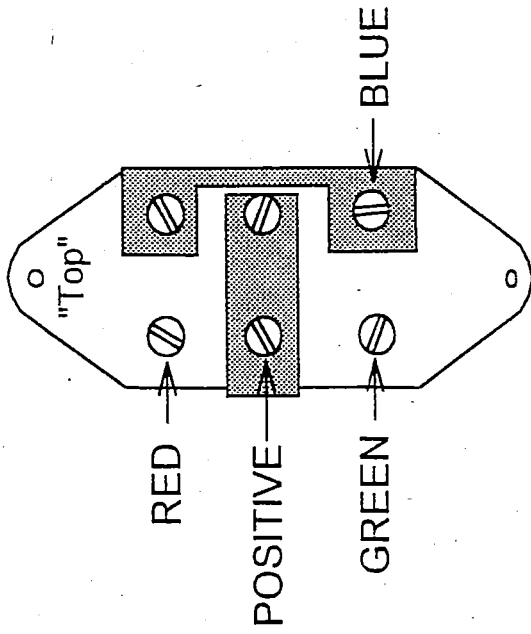
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# HL1351 Single Cylinder Independent Hatch Lifter System

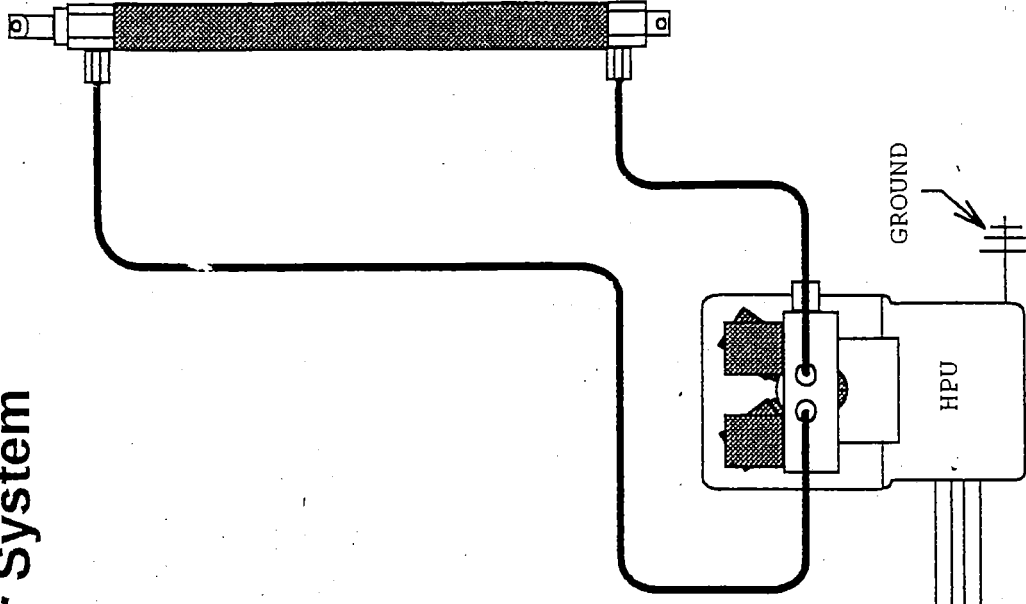




# HL1351DA Dual Acting Independent Hatch Lifter System



Hatch Lifter Control  
Wiring Diagram  
Yellow Wire Is Not  
Used



To Hatch Lifter  
Control

**HL2351**  
**Dual Cylinder Simultaneous Movement**  
**Independent Hatch Lifter System**  
**Installation Instructions**

**Step 1.** Install hydraulic power unit (HPU) in a convenient location. **HPU must be mounted in a dry location to avoid getting wet from drenching or submersion.** Mount HPU on a vertical surface, allowing clearance overhead so it may be removed. Layout upper holes on HPU mounting bracket 4-5/8" apart and start screws (#10 x 1" provided), then fasten lower screws. HPU slides into bracket from above.

**Step 2.** Standard hatch lift cylinders have a stroke of 18". Closed length is 23-3/8" (Closed 24" stroke cylinder length is 29-3/8", Closed 12" stroke cylinder length is 17-3/8"). With enclosed mounting brackets position closed cylinders so that closed hatch will lay flat. Mount top and bottom of cylinders.

**Step 3.** Run hydraulic tubing from cylinder to HPU and cut to length. Refer to diagram for tubing layout and location of brass "T" fitting.

**Step 4.** Insert hydraulic tubing through nut and ferrule on cylinder and into fitting until it bottoms, tighten finger tight. Still bottoming the tubing, tighten nut one full turn...**NO MORE / DO NOT OVERTIGHTEN.** To prevent kinking, install tube bending clips on tubing for 90 degree bends. Connect hydraulic tubing to brass "T" and HPU fitting as described above.

**Step 5.** Attach HPU ground wire (black) to convenient ground.

**Step 6.** Select a convenient location for the hatch lift control and cut hole to mount. Run wire harness through hole, cut to length, and attach to control per diagram. Mount and fasten control. **NOTE:** Red wire in harness is not used.

**Step 7.** Attach orange hot lead to positive 12 volt power source.

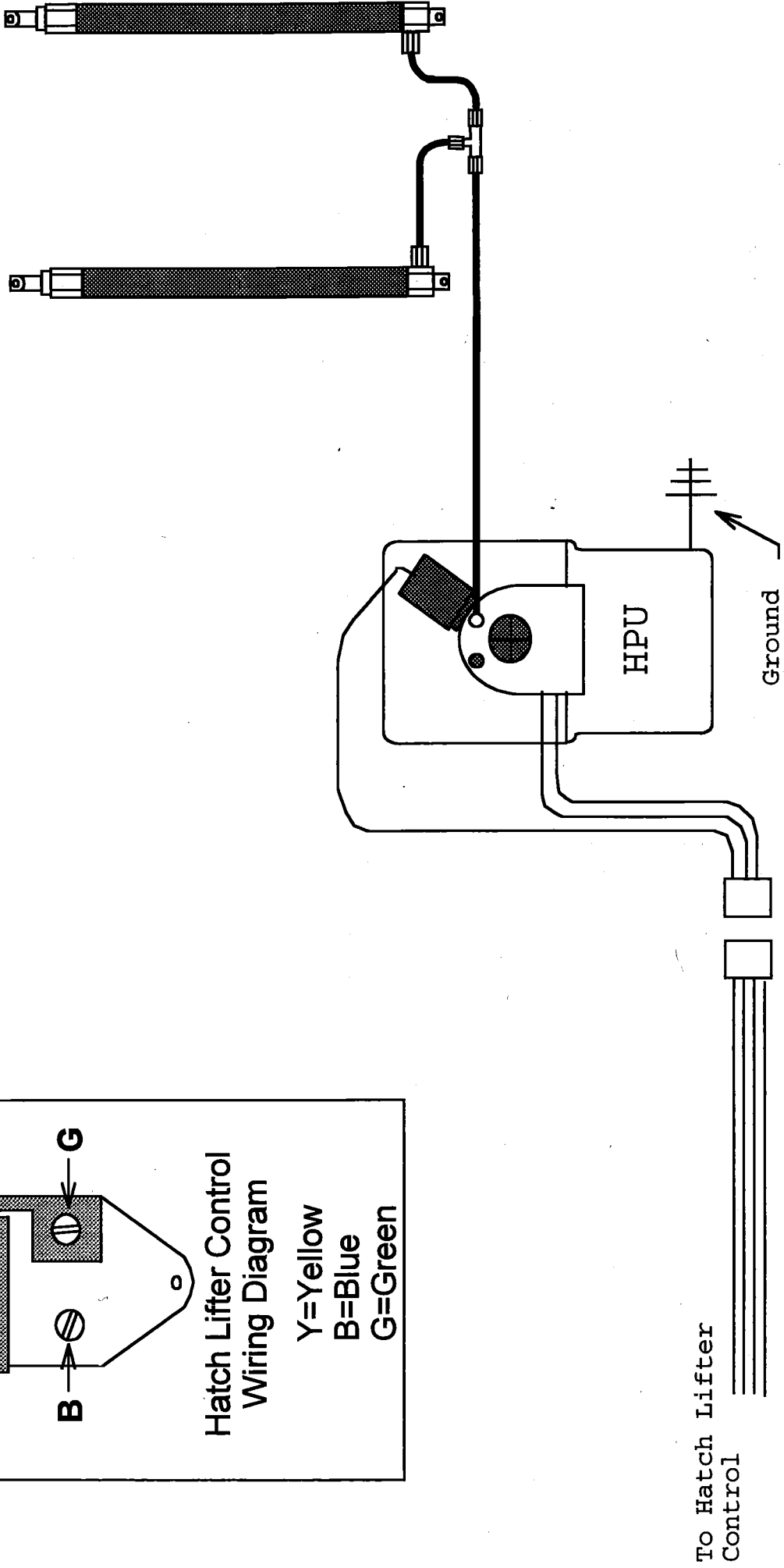
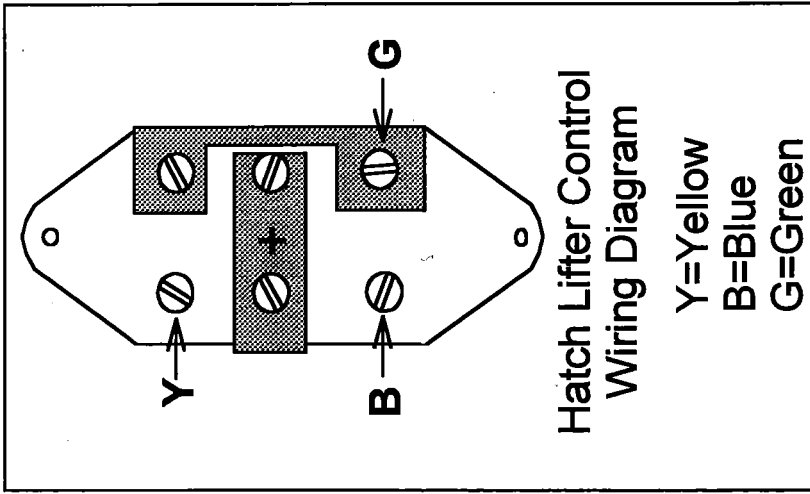
**Step 8.** Fill reservoir of HPU to "full line" with any type automatic transmission fluid (ATF).

**Step 9.** Using control, push hatch up for ten seconds, then hatch down for ten seconds. Repeat this 3-4 times. This procedure bleeds the system by purging air from the lines. **Note:** Hatch may stutter until air is completely bled from the system.

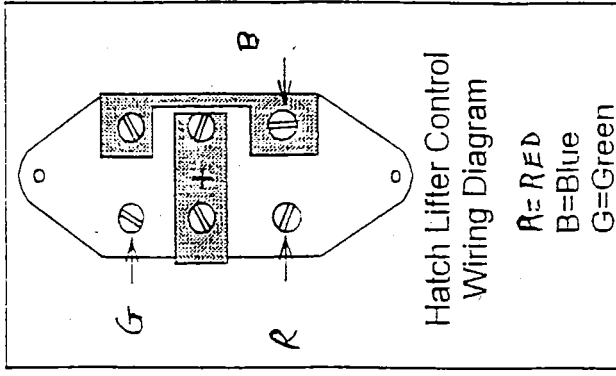
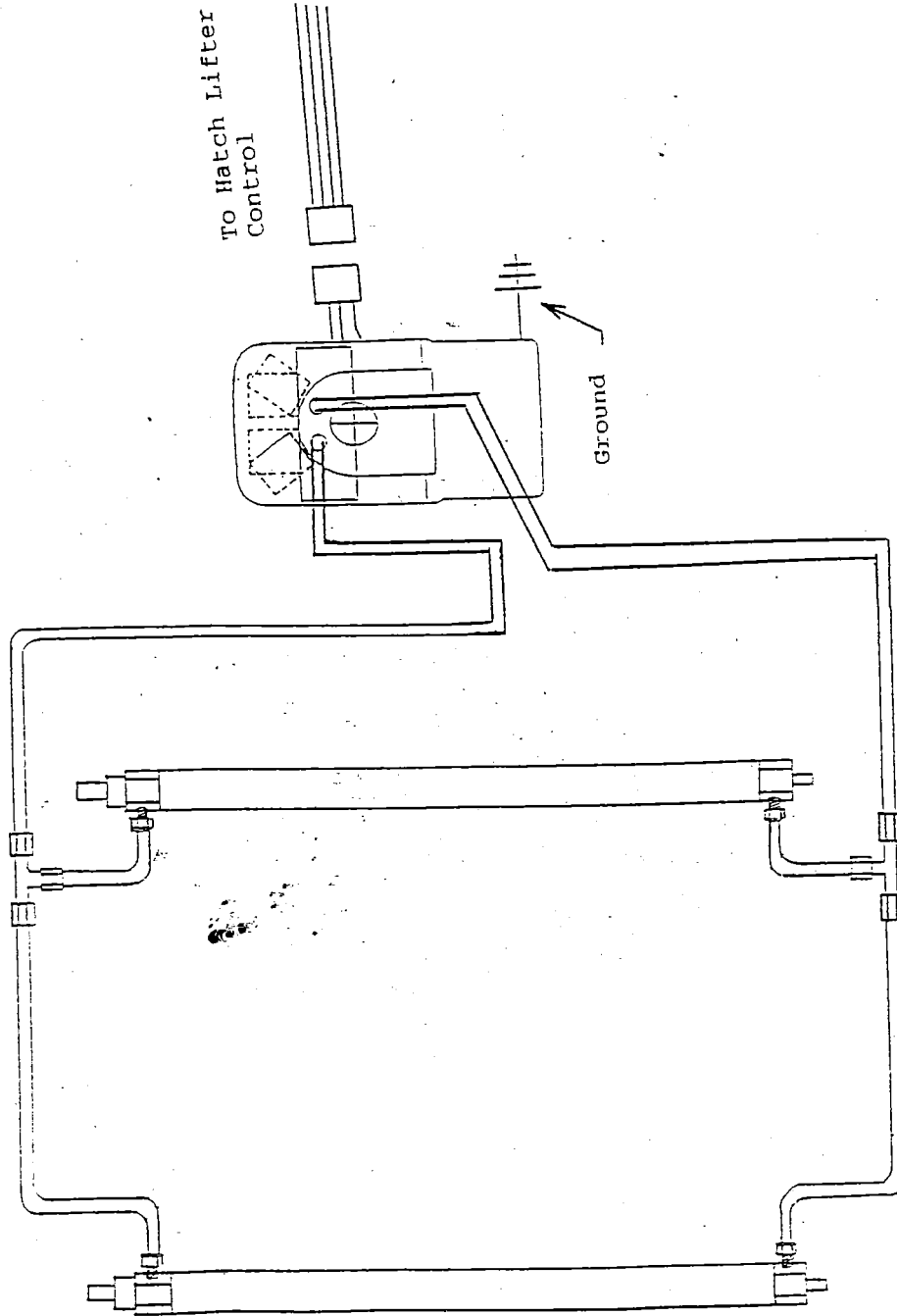
**Step 10.** With hatches closed check fluid level in reservoir and add if necessary.

**Step 11.** Move hatch cylinders to fully extended position and check connections for possible leaks.

# HL2351 Dual Cylinder Simultaneous Movement Independent Hatch Lifter System



**HL2351DA Dual Acting  
Dual Cylinder Simultaneous  
Movement Independent  
Hatch Lifter System**



**HL3351**  
**Dual Cylinder Independent Movement**  
**Independent Hatch Lifter System**  
**Installation Instructions**

**Step 1.** Install hydraulic power unit (HPU) in a convenient location. **HPU must be mounted in a dry location to avoid getting wet from drenching or submersion.** Mount HPU on a vertical surface, allowing clearance overhead so it may be removed. Layout upper holes on HPU mounting bracket 4-5/8" apart and start screws (#10 x 1" provided). Then fasten lower screws. HPU slides into bracket from above.

**Step 2.** Standard hatch lift cylinders have a stroke of 18". Closed length is 23-3/8" (Closed 24" stroke cylinder length is 29-3/8", Closed 12" stroke cylinder length is 17-3/8"). With enclosed mounting brackets position closed cylinders so that closed hatches will lay flat. Mount top and bottom of cylinders.

**Step 3.** Run hydraulic tubing from cylinders to HPU and cut to length. See diagram.

**Step 4.** Insert hydraulic tubing through nut and ferrule on cylinders and into fitting until it bottoms, tighten finger tight. Still bottoming the tubing, tighten nut one full turn...**NO MORE / DO NOT OVERTIGHTEN.** To prevent kinking install tube bending clips on tubing for 90 degree bends. Connect hydraulic tubing to HPU fitting as described above.

**Step 5.** Attach HPU ground wire (black) to convenient ground.

**Step 6.** Select a convenient location for the hatch lift control. Cut hole to mount. Run wire harness through hole, cut to length, and attach to control per diagram. Mount and fasten control.

**Step 7.** Attach orange hot lead to power source.

**Step 8.** Fill reservoir of HPU to full line with any type automatic transmission fluid (ATF).

**Step 9.** Using control push hatch up for ten seconds, then hatch down for ten seconds. Repeat this 3-4 times for each cylinder. This procedure bleeds the system. Note: Hatch may stutter until air is completely bled from the system.

**Step 10.** With hatches closed check fluid level in reservoir and add if necessary.

**Step 11.** Move hatch cylinder to fully extended position and check connections for possible leaks.

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