

## **INSTALLATION INSTRUCTIONS FOR U.M.I. RACING (SOFTAIL FRAME) FORWARD CONTROLS WITH MASTER CYLINDER.**

Thank you for purchasing U.M.I. Racing forward controls. We feel that we manufacture the finest forward controls available. If you have any difficulties installing our kit or have any comments about their quality we would appreciate hearing from you. We hope that they provide you with years of trouble free riding. Please take a moment to read these instructions entirely prior to installation. We recommend the use of red loctite on all fasteners (except nyloc nuts).

List of contents included.

- 1~3.00" Ext. softail shift side assembly in plastic bag with vinyl cap
- 1~3.00" Ext. FXR brake side with master cylinder assembly in plastic bag
- 1~Set of passenger pegs (HD-08020=banded or HD-08019=unbanded)
- 1~HD-18505 softail shift linkage rod S.S.

Hardware kit included.

PART #	QTY.	DESCRIPTION
	1	Instructions
PG-82003	1	.375-16 x .750 SHCS polished chrome
PG-82007	4	.375-16 x 1.25 SHCS polished chrome
PG-82002	4	.375 AN washer chrome plated
PG-82009	4	.3125-18 x 1.00 SHCS polished chrome
PG-82010	1	.3125-18 x 1.25 FHSC chrome plated
PG-82011	4	.3125 AN washer chrome plated
PG-82012	1	.3125-18 nyloc nut chrome plated
HD-18108	2	5/16-24 linkage nut S.S.
PG-83110	1	P/N: CW5=rod end

NOTE: Polymer Bearings do not need to be lubricated. They have lubricating properties. In order to work properly they need to be clean and free from all debris. If you feel the need to lubricate them , use only an organic or petroleum base lubricant. DO NOT USE SYNTHETIC OR SILICON BASE LUBRICANTS.

### **SHIFTER SIDE**

- 1) Remove shift linkage leaving rear rod end attached to transmission shift arm.
- 2) Remove side stand assembly spring side first.
- 3) Remove (3) bolts retaining shift bracket to frame.
- 4) Install the new shift assembly to frame using (3) 3/8 x 1 1/4" allen bolts and washers (supplied).

- 5) Install the U.M.I. long shifter rod and tapered locknuts (provided) by screwing the rod into the rod end still attached to the transmission shift arm. Then using the provided rod end attach the other end to the new forward control shifter arm using the 5/16" x 1 1/4" flat head provided.
- 6) Install kickstand assembly to shift mount plate using (4) 5/16 x 1" allen bolts and washers (supplied).
- 7) Install footrest and springwasher (supplied) and secure with 3/8 x 1 1/4" button head allen bolt and nyloc nut (supplied).

NOTE: The height of your shift pedal can be raised or lowered by adjusting the rod ends on the shift rod. Always remember to tighten jam nuts after adjustment.

### **BRAKE SIDE**

**Important Note: U.M.I. master cylinders use a special internal spring built especially for them. When rebuilding one of our master cylinders it is imperative that this spring is used. The spring only, or the entire rebuild kit may be ordered directly from U.M.I. at 800.275.1615. Part #'s HD-28112; spring only, PG-83306; entire rebuild kit.**

- 1) Remove front exhaust pipe.
- 2) Remove stock brake pedal, footrest assembly, slave cylinder, brake line and master cylinder. Refer to your service manual for these procedures. Retain brake switch from stock brake line, you will need it later.
- 3) Remove the 5/16" x 1 1/4" flat head bolt (figure 4) #9, lock nut #10 and washer #11 from the master cylinder actuating arm #26.
- 4) Remove the master cylinder boot (figure 6) #56, external return spring #57 and washer #58. Note: it is very important to bleed the master cylinder and brake system with the return spring and washer removed.
- 5) Remove the 3/8" x 3/4" allen bolt (figure 4) #5 from the end of the brake side pivot shaft #16. The end cap #6, polymer thrust bearing #7 and spring washer #8 will also come off.
- 6) Remove the stainless steel pivot shaft (figure 4) #16 using a 3/4" open end wrench on the flats #18 machined into the shaft. This will fully expose the lower mounting bolt #17 and hole #19 on the mounting plate.
- 7) The 3/8" x 1.0" hex bolt (figure 4) #20 must stay in its slot during this procedure. Insert the 3/8" x 3/4" allen head bolt #17 into the lower mounting hole #19 of the mounting plate. Fasten using red loctite. Install the 3/8" x 16 x 1.0" #25 into upper mounting hole #21 and fasten using red loctite.

- 8) Re-install the pivot shaft (figure 4) #16 onto 3/8" x 1.0" hex bolt #20. Use red loctite. Install polymer thrust washer #15, hub and lever #27A, 27, wave washer #8 and end cap #6. Fasten with 3/8" x 3/4" allen bolt #5. Use red loctite on allen bolt.
- 9) Re-install actuating rod (figure 4) #26. Leave Boot (figure 6) #56 return spring #57 and washer #58 out of assembly until brake system is bled.
- 10) Install footrest (figure 4) #28 using 3/8" x 1 1/4" button head allen bolt #21, spring washer #23 (supplied) and locknut #22.
- 11) Bleed master cylinder prior to installing brake line.
- 12) Install brake line. We recommend using a 10mm banjo fitting on the master cylinder junction. During our installations we used Russell Buildable brake line components and achieved excellent results.
- 13) A 35 degree banjo is used at both master cylinder and rear brake caliper junctions. The brake "T" is bolted to the transmission doors rear lower mounting bolt. Use the stock brake switch retained from step 2. The 23" brake hose will fit between the master cylinder and "T" and the 15" will fit from the "T" to the caliper. The two adapter fittings will allow the brake hoses to mount to the "T".
- 14) Bleed brake system.
- 15) Adjust brake actuating rod (figure 6) #55 by loosening jam nut #54. Adjust actuating rod so that there is **no less** than 1/8" – 3/16" freeplay prior to engagement. Tighten jam nut #54.
- 16) Remove brake-actuating rod by removing the bolt (figure 4) #9, locknut #10 and washer #11. Install washer (figure 6) #58, spring #57 and boot #56.
- 17) Re-install actuating rod.

NOTE: These are the components we used for installations on stock Softail. Custom application may vary. The complete kit listed above is available from Surgical Steeds 602.661.1990 or should be available from your local distributor or Dealer. Thank you for choosing U.M.I. Racing products, if you have any question please call us at 602.951.9029/800.275.1615.