<u>1770/75 WEIGHT TRANSFER SYSTEM</u>

(12/16 ROW)

INSTALLATION INSTRUCTIONS



MARTIN PLANTER ATTACHMENTS

Martin Industries LLC

206 Elk Fork Road

Elkton, KY 42220

Telephone: 270-265-5817

E-Mail: martin@martintill.com

BEFORE INSTALLATION BEGINS EVALUTE POSSIBLE CLEARANCE ISSUES

It is important to verify that you do not have any installed accessories that may cause an interference problem when the planter is folded for transport. Mounting of liquid fertilizer tanks, air compressors, or other accessories along the center spine of the planter must be evaluated for interferences before and carefully confirmed after the initial installation upon the first time folding the planter. Every effort has been made to minimize the possibility of interferences, however any customizations or accessories mounted <u>MUST</u> be carefully evaluated by the installer to prevent the possibility of equipment damage.



Determine if you will need to use NORMAL or REVERSE mounting methods for the front bracket to avoid Hydraulic fitting bulkheads , wiring/hose looms, supports or fertilizer tanks.



NORMAL MOUNTING METHOD



MOUNTING WITH FRONT BRACKET REVERSED

In some cases for earlier model planters, or planters with custom fertilizer tanks installed, it may be desirable to relocate the cylinders closer to the center of the toolbar. In this case, it is possible to reverse the front brackets as shown below during the installation process, to change the cylinder position to eliminate interferences with tanks or equipment when the planter is folded for transport.



STEP 1 : SUPPORT THE ROW UNIT AND REMOVE U-BOLTS

Mark the position of the row units on either side of the wing so you can ensure that they are returned to the proper position. Properly support the row units in such a way that they do not fall, and remove the U-bolts attaching the row unit to the toolbar.



STEP 2 : PLACE THE TOP PLATE AND FRONT BRACKET

Place the top plate (900078) on top of the toolbar centered on the location of the row unit . Place the front bracket (900080) on the front of the toolbar as shown, aligning the slots in the bracket with the tabs on the top plate. Install the 2, 5/8-11 X 1-1/2 flange bolts through the two upper holes in the front bracket and the angles on the top plate, install the 5/8 flange nuts finger tight to hold the assembly together for the remaining steps



STEP 3 : INSTALL THE L-BOLTS AND LINK PLATES

With the top plate and front brackets in place, insert the L bolts from underneath the toolbar inserting them in the two outermost holes in the top plate(900078). Start the 5/8 flange nuts on the L bolt to retain it in the hole, then place the bottom leg of the L bolt in the slot aligned with the hole, place the link plate(800201) over the L bolt with the flat edge of the plate to the inside of the bracket, the profile of the link plate should match the profile of the bracket . Install the second L bolt in the same manner in the opposite hole. Leave the L bolts finger tight , they will be tightend in step 4(NOTE: The two inner holes are for use when the factory fertilizer opener is to be installed)



STEP 4: RE-MOUNT THE ROW UNITS

Insert the 4 row unit mount bolts through the 900080 bracket to the Row Unit mounting plate (W-Plate) and secure with the provided 5/8-11 flange nuts. (NOTE:The top 2 bolts only, require the use of the heavy washers supplied in the hardware kit) Verify the proper location of the row unit and refer to the figure below for the approximate location of the row units/brackets. Tighten the 4 bolts to sufficient torque to hold the row unit in place. Tighten the 2 ea 5/8 X 1-1/2 bolts to 150 ft/lbs (dry). Next, tighten the 4 row unit bolts to 150 ft/lbs .Next, tighten the 5/8 flange nuts on the L bolts evenly , taking care that the bolts are located properly to the surfaces of the toolbar, final torque to 150 ft/lbs.



This view from the Row unit side of the planter toolbar

STEP 5: ATTACH THE HYDRAULIC CYLINDERS

Install the cylinders to the bracket assemblies using the supplied clevis and cotter pins. The cylinder should be installed so that the base end hydraulic port is facing the rear of the planter on the right side.. The cylinder's base end must be attached to the bracket of the center section of the planter for the WTS system to work properly. Install the brass breather vent (800192) on the Gland port (rod end) of the cylinder to allow venting of the gland side during operation. Note that the mounting configuration of the cylinders places the vent facing downward to prevent water entrapment.



STEP 6: HYDRAULIC AND ELECTRICAL CONNECTIONS

The supplied valve may be mounted in any desired location but typically would be installed in the center of the planter to reduce hose length. 2 different valve types are used, Delta power , and Hydraforce. The Delta valve is Black anodized, ,while the Hy-draforce is silver with the Hydraforce logo on the top of the coil. Plumbing for the Delta valve is as follows: Port 1= Return to tank , Port 2= System supply pressure , Port 3 = Output to cylinders. The ports are numbered differently on the Hydraforce valve, where Port 2=supply, Port 3=return and Port 1= Ouput to cylinders .Normally a "tee" fitting is used to connect both cylinders to this port. The hydraulic flow requirements for this system are very low and typically will be less than 1 gpm.*CAUTION* *The return line* <u>MUST</u> be connected to an unrestricted return to tank port such as hydraulic motor return. Equipment damage may result if the return line is blocked and prevented from returning oil to tank either while in use or if disconnected . Use Parker fitting 0304-170 or Specialty Manufacturing part number S71-4-CV when connecting to tractor hydraluics system.



Due to the unique nature of the installations on each planter the hoses are not supplied with this kit and it is up to the installer/owner to properly route and secure the hoses according to the space available and the accessories installed on each particular planter. The use of 3000 psi rated hose is strongly recommended. A 3000 PSI gauge is supplied and may be connected to the cylinder hydraulic line by means of a "TEE" fitting. The gauge may be remote mounted in an area close to the hitch to allow easy viewing from the tractor cab.

The control box may be located in any convenient area of the cab, and is provided with approximately 10 feet of power supply cable and 15 feet of valve control cable to a 2 pin connector to be secured in an accessible and safe location on the back of the tractor. The power supply cable should be attached to a fused "key on "+12 VDC input, (black lead is +,white=grd) and is supplied with a standard automotive style female blade connector mating to a male blade found on most tractor fuse panels. The controller has an internal self resetting circuit breaker that protects the controller out to the valve. Attach the ground lead to a clean, secure ground connection with the attached female blade connector. A 30 foot valve connection cable is provided to allow for the widest range of valve locations possible and for ample length for transport and operational configurations. The valve cable is provided with a DIN style connector to the valve and the mating 2 pin Deutsch connector mating to the control box lead. The valve connection cable should be carefully routed and located to clear all pinch point areas in transport and operational modes and properly secured with Zip ties or other suitable semi permanent methods to prevent damage. Excess cable should be looped and tied off in a secure manner out of the way of possible physical damage.

QTY.	2	2	4	1
DESCRIPTION	3.00 X 12 HYD CYL	VENT, #8 ORB FLAT BRASS BREATHER	1770 WTS BRKT ASSY	PKG,WTS CONTROL
PART NUMBER	800202	800192	900076	900080
ITEM NO.	-	2	3	4



QTY.	-	-	2	2	4	IER 2	2	10
DESCRIPTION	BRKT, 1770 WT OFFSET FRONT	1770 WT, TOP PLATE	LINK PLATE 1770 WT	5/8" L-BOLT	BOLT,HEX 5/8-11 X 9-1/2 GR8	5/8 GRADE 8 HEAVY FLAT WASH	BOLT, FL 5/8-11 X 2 GR 8	NUT, 5/8-11 FL PT GR8
PART NUMBER	800194	800195	800201	800178	784694	788603	783620	785600
ITEM NO.	l	2	3	4	5	9	2	8



PART NUMBER	DESCRIPTION	QTY.
698008	HYD PROPORTIONAL VALVE	-
900243	WTS CONTROL KIT	-
800428	BRACKET, HYD VALVE	-
800443	BRACKET, WTS GAUGE	-
800458	GAUGE,0-300 PSI , MARTIN TILL	1
227100	NUT,NYLOCK,1/4-20	2
754120	BOLT,HEX 1/4-20 X 2 GR5	2
288700	WASHER, 3/4 SAE MACHINED	-



90080 PKG, WTS CONTROL

NOTES



The most trusted name in no-till

Established 1991

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