1770 WEIGHT TRANSFER SYSTEM

(24 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.



It is strongly suggested that you read this installation manual completely and understand it fully before beginning the assembly process .

STEP1: REMOVE CCS TUBE BRACKETS

Remove the bolts holding the CCS tube guide bracket on the inner wing portion just above the wing pivot pin. Move this bracket away from the hinge joint towards to wing fold pivot to clear the area for the inner bracket installation. Depending on your particular planters tube routing setup it may be necessary to remove the first clamp bracket on the outer wing just past the hinge point, to get sufficient slack in the tube to install the inner bracket. Set the clamp parts aside for reinstallation later.

Repeat this procedure for the Right wing of the planter (Left wing shown)



STEP 2 : INSTALL THE INNER WING BRACKET

Place the inner wing bracket (900262) over the top of the upper beam and locate so that the slots are beyond the edge of the beam(fig.1). Next, insert the front tab plate (800214) with the flush side towards the inner wing, into the space between the main plates of the inner wing. Lift the plate so that the 5/8-11 stud goes through the hole in the bottom of the inner wing bracket, and align the tabs to fit the slots. Start a 5//8 flange nut on the threaded stud to hold the tabs engaged in the slots (fig.2). With the tab plate suspended insert the 1/2-13 x 2 " bolt through the tab plate and the inner wing plate(fig.3). Install a 1/2" flange nut (to do this you will need to reach through the access port or reach the bolt from the opposite side of the bar)



Fig.1





Next install the 5/8 x 2 flange head bolts in the holes on either side of the bracket as shown in fig.4 with the flange nuts on the inside of the frame ,access is through the port shown or from the front side of the planter frame adjacent to the wing fold cylinder. Install the 1" x 25 " bolts with flat washers(fig.5) through the two holes in the opposite sides of the bracket. Place the 800401 clamp bar over the bolts from the bottom with the notched area next to the row unit to allow for row unit arm clearance. Install the nuts on the bolts finger tight to hold the clamp bar in place. After verifying clearances of the clamp bar to the row unit , tighten the 1" nuts evenly to ensure that the clamp bar remains flat to the bottom of the toolbar, tighten to 644ft/lbs . Tighten the 1/2-13 x 2" bolt to 75 ft/lbs, then tighten the two 5/8 x 2 bolts to 150 ft lbs , finally tighten the 5/8 flange nut on the 800214 to 75 ft/lbs



Fig.4

Fig.5

STEP 3 : INSTALL THE OUTER WING BRACKET

Remove the four M16 bolts from the end of the wing brace plate as shown in fig 6 below. Carefully place the outer wing bracket assembly (900264) over the top of the wing and the CCS tubes, and locate on the holes where you just removed the bolts. Align the holes and place the new bolts (709034) with a flat washer in the holes . Install the four 5/8 flange nuts and tighten to 150 ft/lbs. Carefully check the routing of the CCS tubes to ensure that they are not bent or kinked to prevent seed flow. And re-install/ tighten the CCS tube clamp if loosened or removed (fig.7)



Fig.6



STEP 4 : ATTACH THE HYDRAULIC CYLINDERS

Install the cylinders to the bracket assemblies as shown using the supplied clevis and cotter pins. Install the base end of the cylinder to the outer wing bracket using the long clevis pin (800442) with flat washers (788912)and cotter pins (709031) and the rod end using the short clevis pin (800441). Install the cylinders with the ports facing down as shown , this will prevent water entry into the vent port on the rod end of the cylinder through the supplied breather vent (800192)



STEP 5: HYDRAULIC AND ELECTRICAL CONNECTIONS

The supplied valve may be mounted in any desired location but typically would be installed within 2 feet of one or the other wing cylinders to reduce hose length. 2 different valve types are used, Delta power , and Hydraforce. The Delta valve is Black anodized, ,while the Hydraforce 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 protect 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	2	1
DESCRIPTION	ASSY, INNER WING, 1770 24 WTS	ASSY, OUTER WING, 1770 24 WTS	CYL, HYDRAULIC, 3.5 BORE, 24" STK	PKG, WTS CONTROL
PART NUMBER	900263	900264	800435	080006
ITEM NO.	-	2	3	4





QTY.	-	-	2	-	-	2	3	3	3	2	2	2	2	2
DESCRIPTION	BRACKET ASSY, 1770 24 ROW	STRAP, BOTTOM CLAMP 1770 24	BOLT, 1-8 X 25 GR8, YELLOW ZINC	PLT, FRONT TAB 1770 24	PIN, CYL, INNER WING 1770 24	WASHER, 1 SAE THICK GR8	NUT, 5/8-11 FL PT GR8	BOLT, 5/8-11 X 2 FL GR8	NUT, 1/2-13 FL GR8	NUT, 1 -8, NON FL, LOCK	PIN, 3/16 X 2 COTTER	BUSHING, PIVOT BU7812	BOLT, 1/2-13 X 2 1/2 FL GR8	WASHER, 1 1/4 SAE THICK GR8
PART NUMBER	900262	800401	709035	800214	800441	788910	785600	783620	785500	784900	709031	800245	783524	788912
ITEM NO.	_	2	е	4	5	9	7	8	6	10	Ξ	12	13	14





The most trusted name in no-till

Established 1991

Martin Industries LLC

206 Elk Fork Road Elkton, KY 42220 Telephone: 270-265-5817