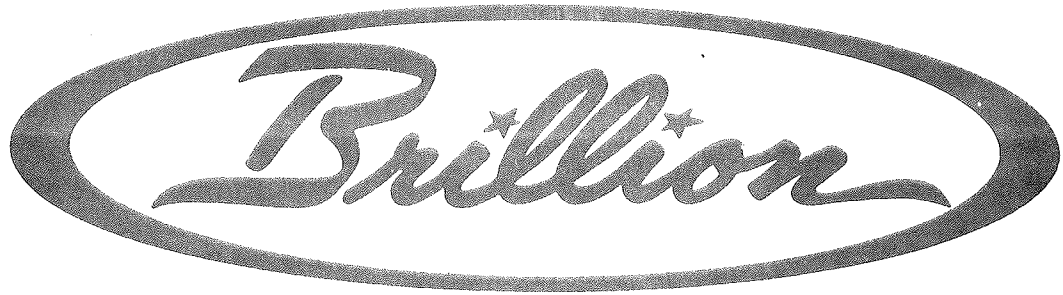
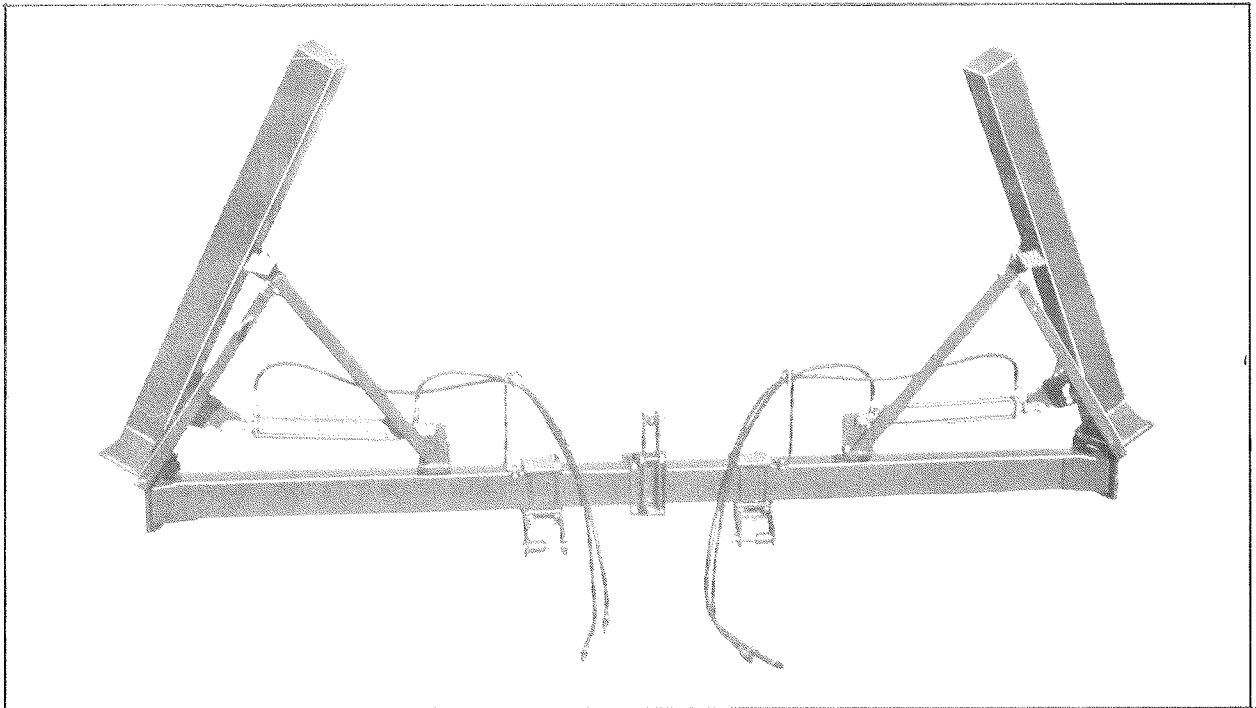


REPAIR PARTS CATALOG and OPERATOR'S MANUAL



FOLDING TOOLBAR

MODELS: FTB-1
FTB-2



MODEL NO.

DATE PURCHASED



BRILLION IRON WORKS
BRILLION, WISCONSIN 54110
A DIVISION OF BEATRICE FOODS CO.

FORWARD

Your Brillion folding toolbar is built with the best materials and workmanship available. It has been designed to give years of trouble-free operation, and proper care and operation will insure the service and long life built into it.

Study this manual carefully before attempting to assemble or operate the unit.

The folding toolbar is designed primarily for the Brillion row crop cultivator gangs. It can also be used on other row crop tools that can be raised upside down for transportation. The folding toolbar attaches directly to the tractor 3-point lift. The tractor requires dual hydraulic systems to operate the two hydraulic cylinders which raise the wings independently into the upright position for transportation.

When application of the folding toolbar is with the Brillion row crop cultivators, refer to the 9D-62 repair parts catalog and the 9D-63 operators manual. Follow the instructions in these manuals for the proper gang and extension placements of the individual units onto the toolbar. All gangs and optional equipment are mounted to the folding toolbar in the same sequence and location as they are on the Brillion rigid toolbars.

FOLDING TOOLBAR SPECIFICATIONS

Model No. - - - - -	FTB-1 (used on BRCF-640 & 830)
	FTB-2 (used on BRCF-840)
Wing Sizes - - - - -	48" (used on FTB-1)
	80" (used on FTB-2)
Toolbar Tube Size - - - - -	7" square x 1/4" wall
Center Frame (O.A.L.) - - - - -	14 feet, 6 inches
Working Width (O.A.L.) - - - - -	FTB-1 22 feet, 2 inches
	FTB-2 27 feet, 6 inches
Transport Width (O.A.L.) - - - - -	FTB-1 15 feet, 8 inches
	FTB-2 15 feet, 8 inches
Wing Movement (from working position to transport position) - - - - -	120 degrees
Tractor Mounting - - - - -	3 pt. lift - Category II & III, and quick coupler
Hydraulic Cylinders - - - - -	3" dia. x 24" stroke, double acting, 2500 P.S.I. pressure
Weight - - - - -	FTB-1 960#
	FTB-2 1080#

SETTING UP INSTRUCTIONS

Study the illustrations in this manual and identify the individual parts before attempting to assemble the toolbar. Do not tighten any of the hardware until the unit is completely assembled. "Right, left, front, back" refer to operators directions when he stands behind the toolbar, facing the direction of travel.

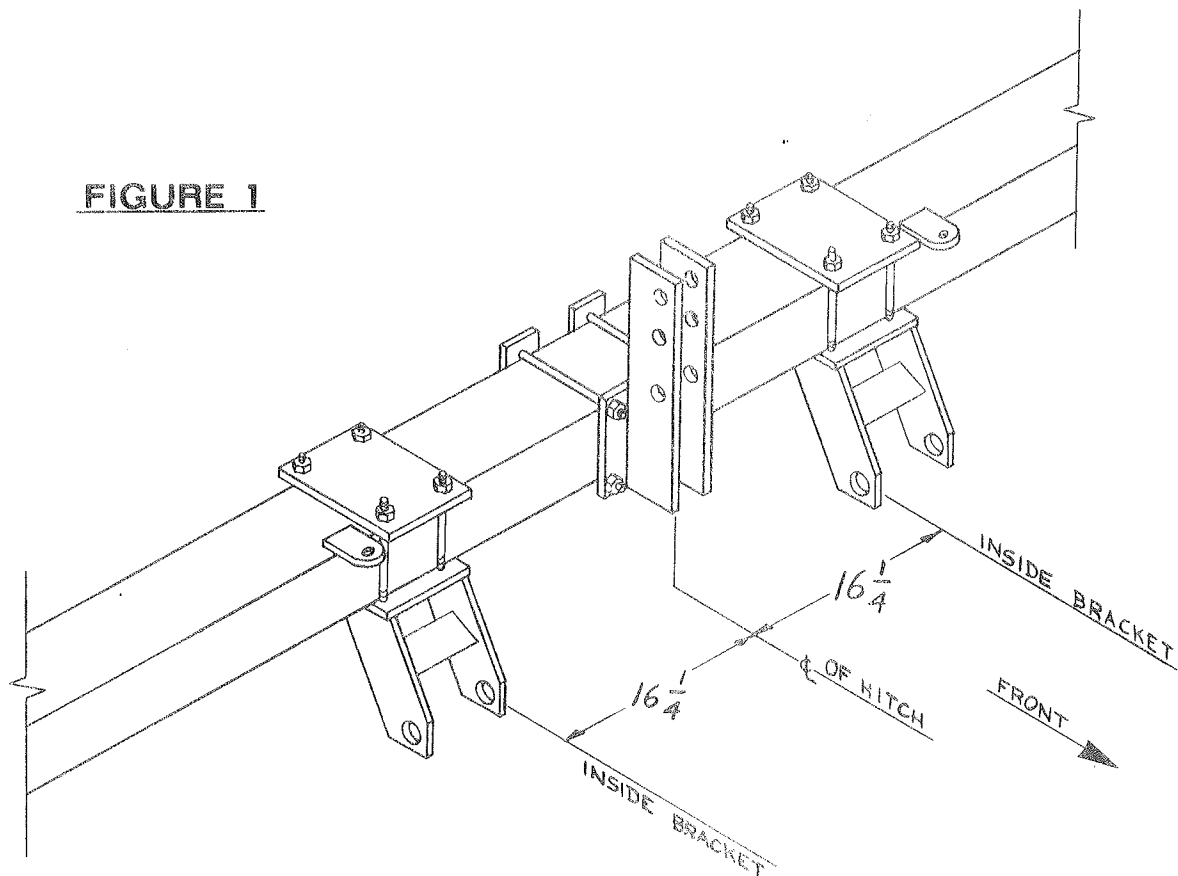
HITCH BRACKET AND MAST ASSEMBLY

Set the center frame on blocks high enough for clearance to fasten the lower hitch brackets to the tube. Locate and mark the center of the frame tube. Place the hitch mast in front of the frame tube at the center mark with the mast plates up. Clamp the mast to the frame tube with the two straps and the four 5/8" studs. Use 5/8" locknuts on one end of the studs with a minimum of one thread through the nut. Use a regular hex nut and lockwasher on the other end. Make sure that the mast is centered on the frame tube and then tighten securely so it will not slip off position.

Locate the lower hitch brackets under the frame tube and the clamp plates above the frame tube. Attach these brackets using 5/8" studs. Again use a locknut on one end and a regular hex nut and lockwasher on the opposite end. See Figure 1.

WING ASSEMBLY

Identify the left hand and right hand wings and place, in line, near the ends of the center frame hinge plates. Place the wings on blocks so they are at the same level as the center frame. Slide each wing against the center frame until the hinge tubes are aligned. Slide the hinge pin through the wing transport brace and then through the hinge bushings. Note: The hinge pin is inserted from the front of the machine.



SETTING UP INSTRUCTIONS

FOR BRCF-841 ONLY

Study the illustrations in this manual and identify the individual parts before attempting to assemble the toolbar. Do not tighten any of the hardware until the unit is completely assembled. "Right, left, front, back" refer to operators directions when he stands behind the toolbar, facing the direction of travel.

HITCH BRACKET AND MAST ASSEMBLY

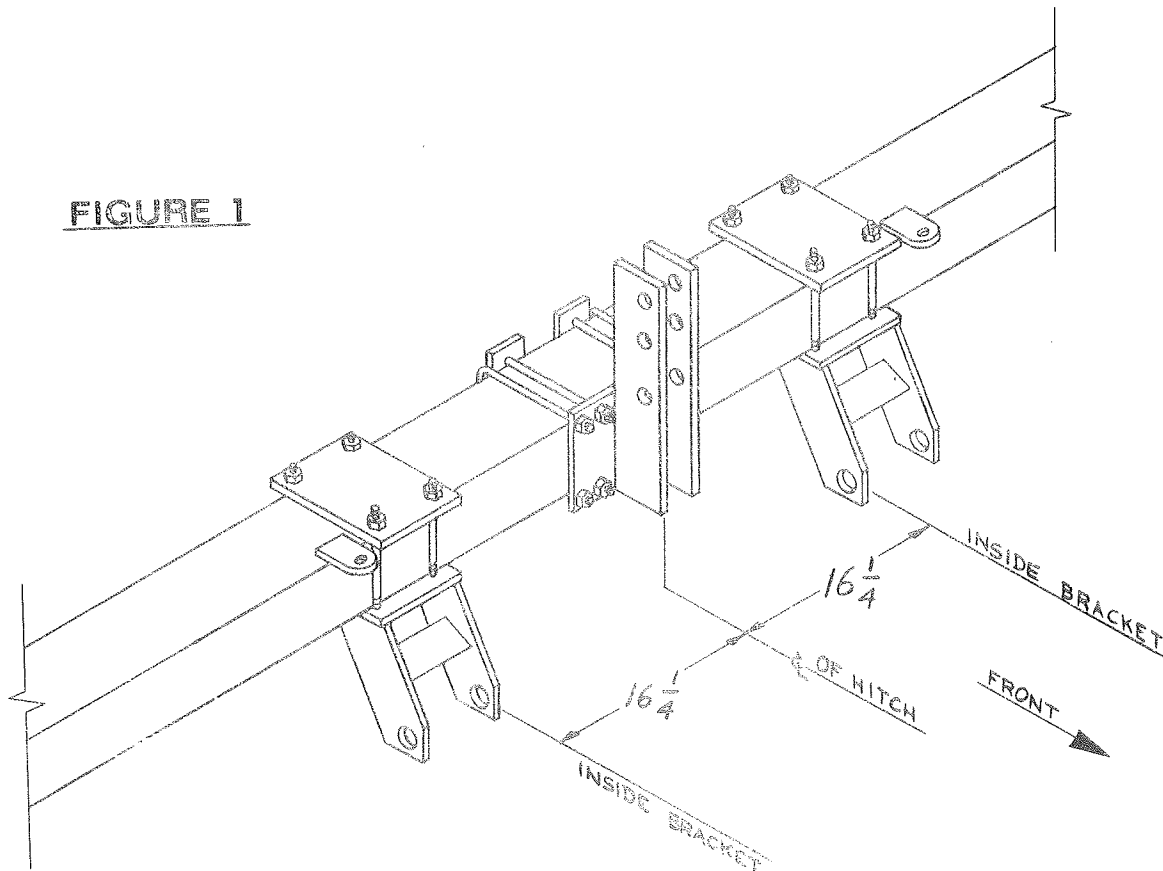
Set the center frame on blocks high enough for clearance to fasten the lower hitch brackets to the tube. Locate and mark the center of the frame tube. Place the hitch mast in front of the frame tube at the center mark with the mast plates up. Clamp the mast to the frame tube with the two straps, four 5/8" studs and two 5/8" U-bolts. Use 5/8" locknuts on the U-bolts and one end of the studs with a minimum of one thread through the nut on the studs. Use a regular hex nut and lockwasher on the other end. Make sure that the mast is centered on the frame tube and then tighten securely so it will not slip off position.

Locate the lower hitch brackets under the frame tube and the clamp plates above the frame tube. Attach these brackets using 5/8" studs. Again use a locknut on one end and a regular hex nut and lockwasher on the opposite end. See Figure 1.

WING ASSEMBLY

Identify the left hand and right hand wings and place, in line, near the ends of the center frame hinge plates. Place the wings on blocks so they are at the same level as the center frame. Slide each wing against the center frame until the hinge tubes are aligned. Slide the hinge pin through the hinge tubes and secure with the roll pin. Slip the wing transport brace over the end of the hinge pin, then add the machinery bushing and secure with a 1/4 x 2 cotter pin.

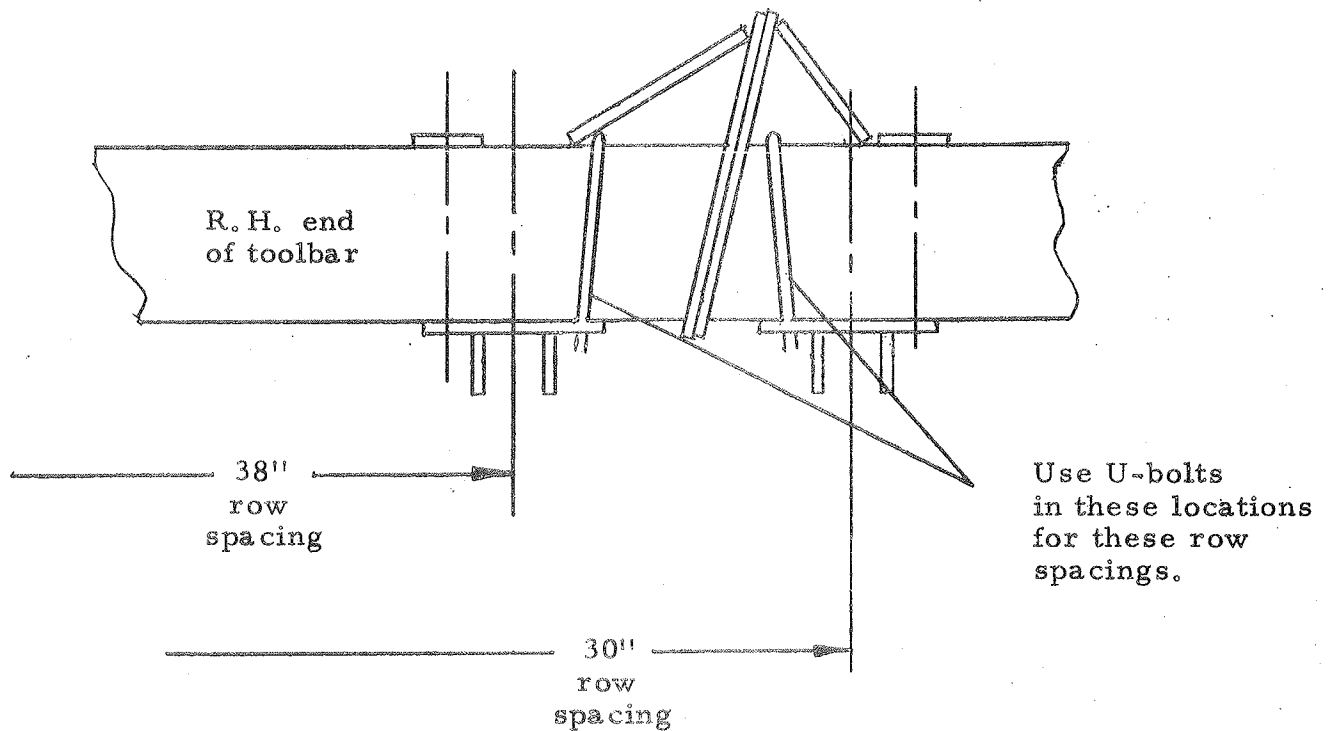
FIGURE 1



30" & 38" ROW SPACING - BRCF RO-CROP CULTIVATORS

When assembling Ro-Crop Cultivator gangs to folding toolbars, there may be interference with the clamp strap nearest the hinge on 30" and 38" row spacing. Replace the clamp strap and two studs nearest the hinge with the U-bolts furnished. This will allow correct spacing of gang assemblies.

NOTE: one U-bolt is used on each end of toolbar adjacent to hinge.



9D-497

WING SUPPORT & BRACE ASSEMBLY

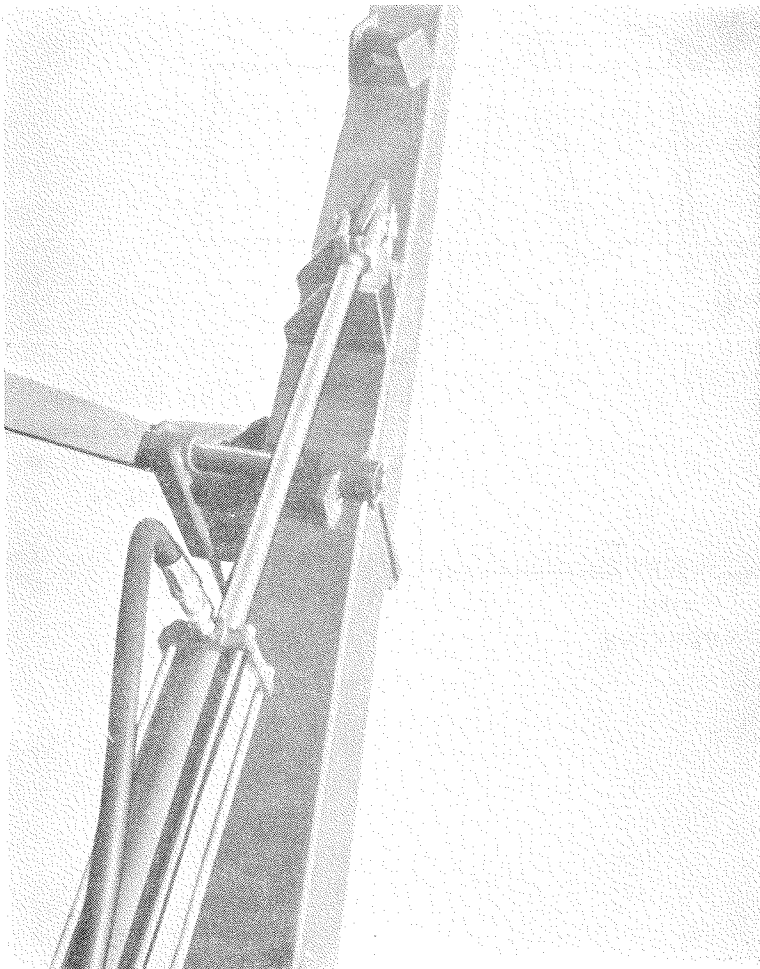
Before mounting the wing transport support and brace, study the illustrations to determine their location. Bolt the wing supports to the mating plate on the center frame cylinder mounting lug. Fasten with the 5/8" x 1-3/4" long capscrews and the 5/8" locknuts. Swing the transport brace up and bolt to the wing support lug with 5/8" x 1-3/4" long capscrews and 5/8" locknuts. Engage the slot in the hinge pin locking arm with the wing hinge plate. Secure the hinge pin with a machinery bushing and a 1/2" roll pin.

The additional hole in the brace is for storage of the 5/8" dia. x 5-1/2" long clevis pin and the hairpin cotter. This is a safety pin to lock the wings into transport position in the event that the hydraulic cylinders are removed or do not operate.

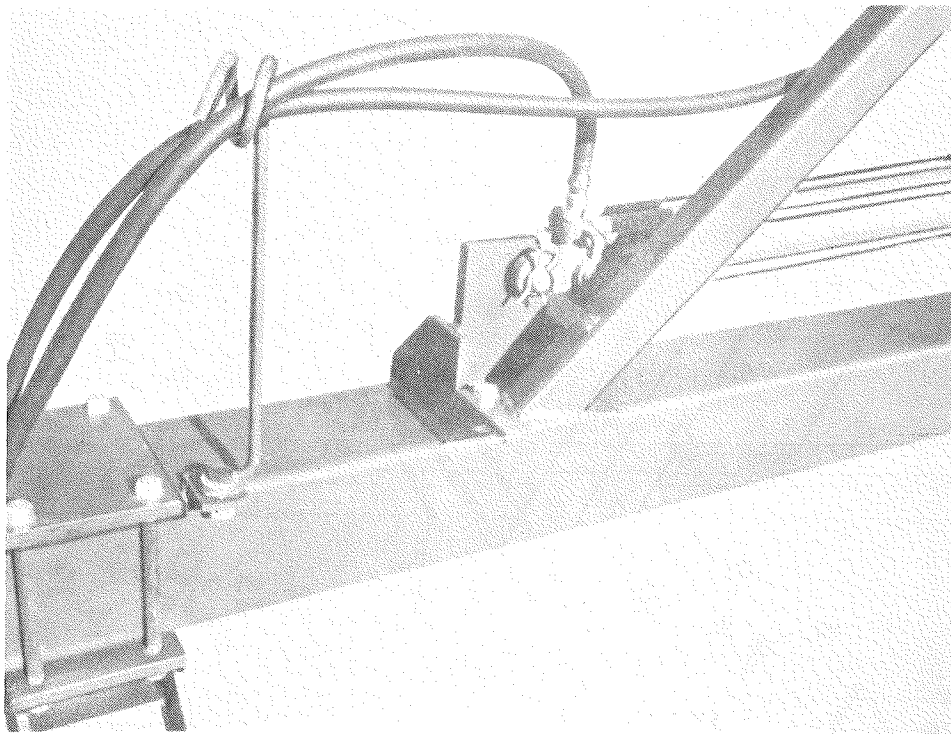
MOUNTING OF CYLINDERS

Before mounting the hydraulic cylinders to the mating cylinder lugs, insert a flow restrictor into each port of the cylinder body. This restrictor is necessary to control the speed of travel in which the wings will raise and lower hydraulically. Mount the cylinders to the mating cylinder lugs with the clevis pins provided. Position the cylinders so the rod end is connected to the wing.

Fasten the hose holders to the lugs next to the lower hitch brackets with the 5/8" x 1-3/4" long capscrews, flat washers, and locknuts provided. Four hydraulic hose assemblies (not included) are needed to operate the double acting cylinders. After assembling the hoses to the cylinders, pass the ends through the loop in the hose holder to keep them free of the tractor tire.

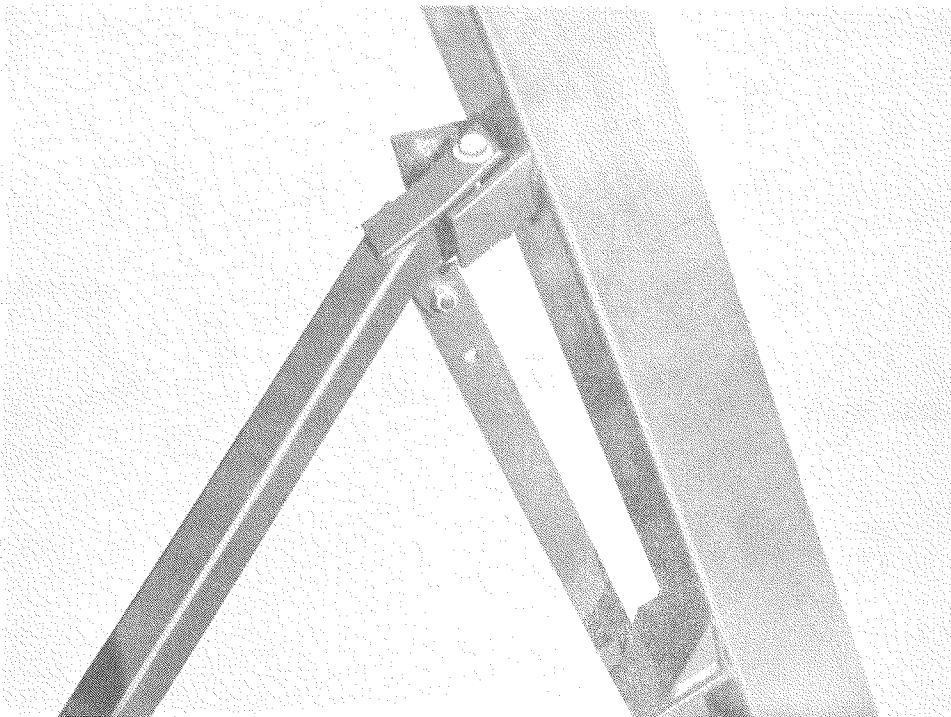


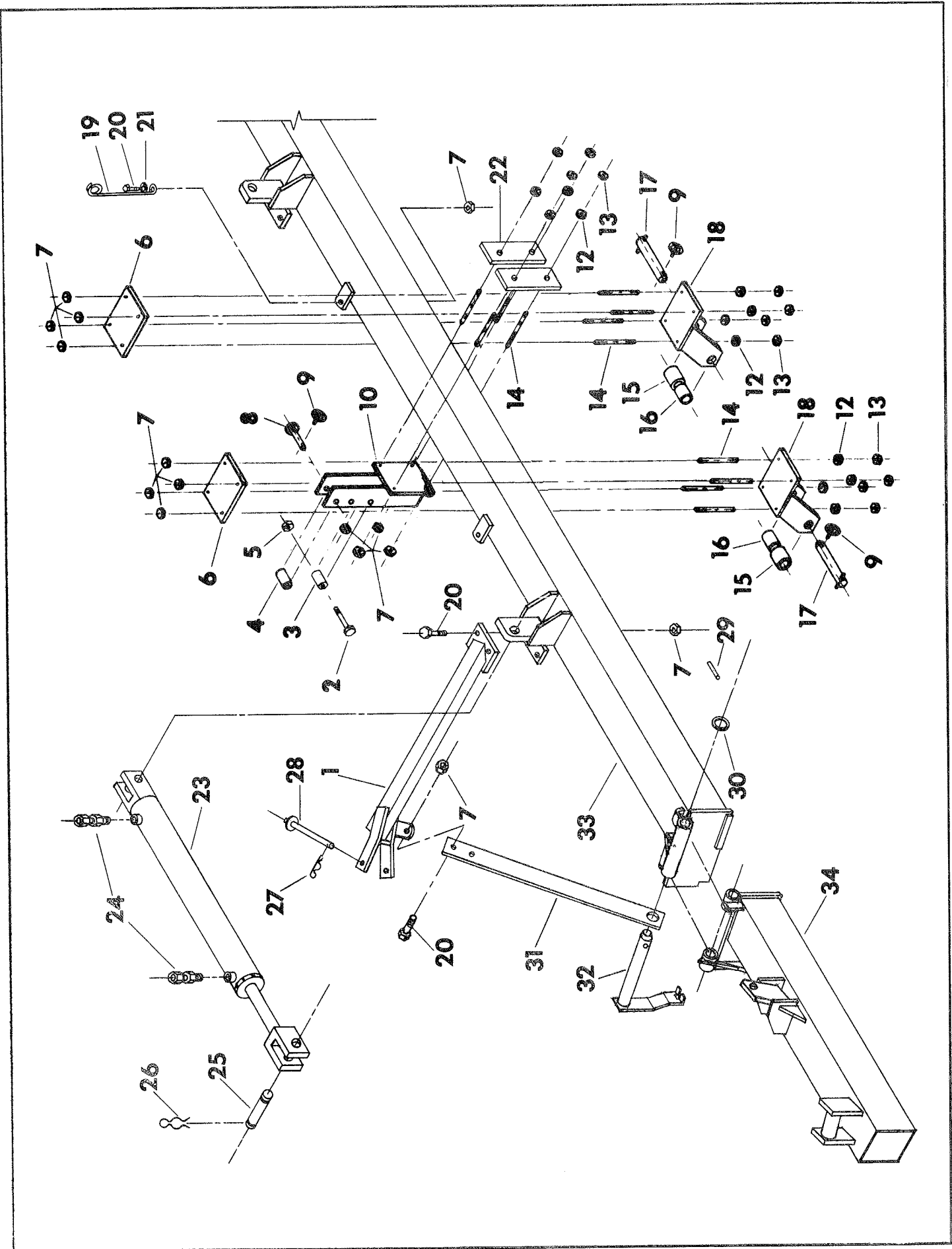
TOP VIEW OF RIGHT HAND HINGE
AND CYLINDER ASSEMBLY.



FRONT VIEW OF CENTER FRAME
WITH WING SUPPORT ASSEMBLY
AND HOSE HOLDER.

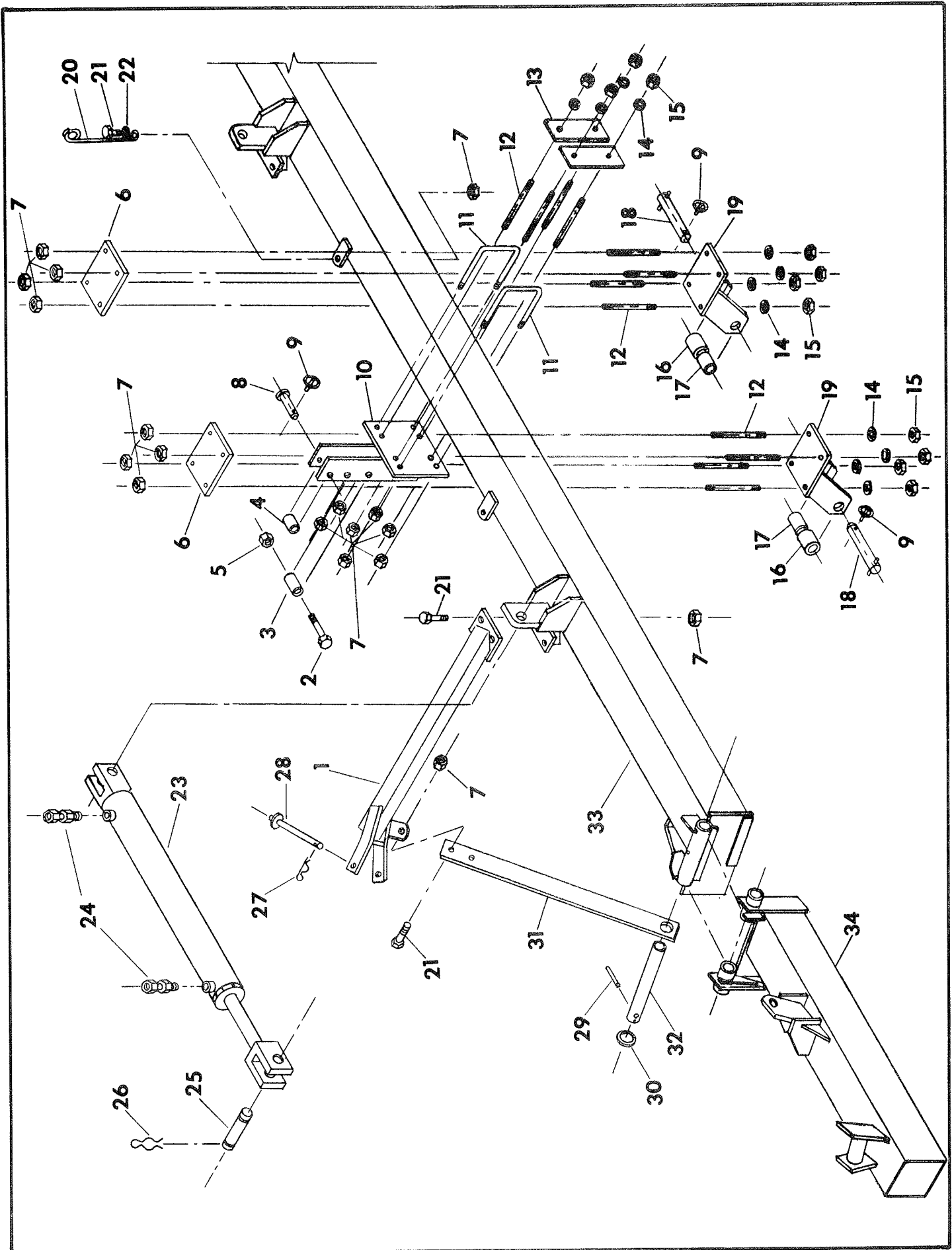
BACK VIEW OF RIGHT HAND WING
LOCKED IN TRANSPORT POSITION.





FOLDING TOOLBAR COMPONENTS
FOR BRCF 640 & 830

Index No.	Part No.	Description	No. Req'd.	Weight
1	9D-361	L. H. Wing Support	1	28.0
*	9D-362	R. H. Wing Support	1	28.0
2	8D-922	Capscrew (1"-8 NC x 4-1/2" Lg., Grade 5)	1	1.3
3	6D-988	Spacer	1	.2
4	5D-157	Sleeve	1	.2
5	6D-306	Stover Nut (1"-8 NC Hex)	1	.1
6	8D-919	Plate	2	11.7
7	5C-461	Stover Nut (5/8"-11 NC Hex)	24	.1
8	6D-529	Clevis Pin (1" Dia.)	1	1.1
9	5D-110	Klik Pin	3	.1
10	9D-3	Mast	1	31.0
12	1B-166	Lockwasher (5/8" Std.)	12	
13	1C-392	Nut (5/8" - 11 NC Hex)	12	
14	8D-900	Stud - 9-3/4" Long	12	.9
*	9D-112	U-Bolt (5/8" - 11 NC Thread)	2	
15	8D-425	Spacer	2	1.6
16	5D-158	Sleeve	2	.5
17	8D-424	Pin Assembly	2	2.5
18	9D-8	Hitch Bracket	2	24.9
19	6D-333	Hose Support	2	1.8
20	6C-421	Capscrew (5/8" - 11 NC x 1-3/4 Long, Grade 5)	8	.13
21	1C-122	Flat Washer (5/8" Std.)	2	.09
22	8D-985	Strap	2	5.0
23	9D-327	Hydraulic Cylinder	2	42.0
24	6D-716	Hydraulic Flow Restrictor	2	.9
25	5D-2	Cylinder Pin	2	.9
26	6D-413	Hair Pin Clip	4	.04
27	4C-856	Hair Pin Cotter	2	.04
28	9D-369	Clevis Pin	2	.12
29	6D-854	Roll Pin (1/2" x 2")	2	
30	7C-122	Machinery Bushing	4	.08
31	9D-366	Brace	2	11.0
32	1J-623	Hinge Pin	2	5.2
33	9D-333	Center Frame (169-1/2")	1	405.0
34	9D-350	L. H. Wing (48")	1	122.0
*	9D-349	R. H. Wing (48")	1	122.0
*Parts not shown				



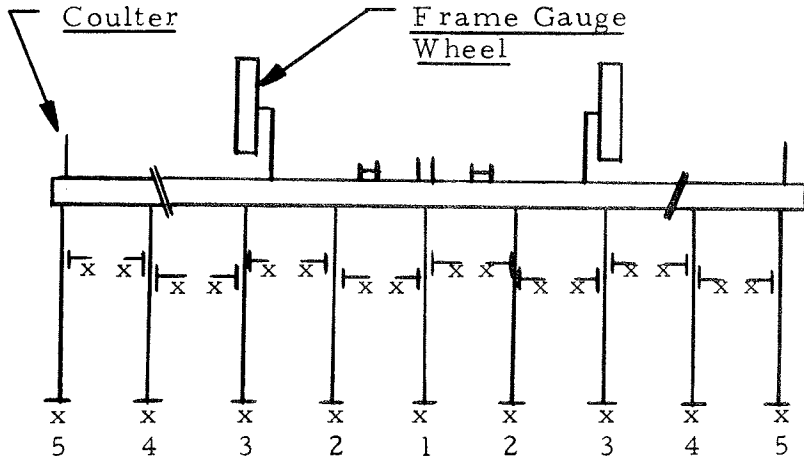
FOLDING TOOLBAR COMPONENTS
FOR BRCF-641, 831 & 841

Index No.	Part No.	Description	No. Req'd.	Weight
1	9D-361	L. H. Wing Support	1	28.0
*	9D-362	R. H. Wing Support	1	28.0
2	8D-922	Capscrew (1" - 8 NC x 4-1/2" Lg., Grade 5)	1	1.3
3	6D-988	Spacer	1	.2
4	5D-157	Sleeve	1	.2
5	6D-306	Stover Nut (1" - 8 NC Hex)	1	.1
6	8D-919	Plate	2	11.7
7	5C-461	Stover Nut (5/8" - 11 NC Hex)	24	.1
8	6D-529	Clevis Pin (1" Dia.)	1	1.1
9	5D-110	Klik Pin	3	.1
10	9D-3	Mast	1	31.0
11	9D-112	U-Bolt (5/8" - 11 NC Thread)	2	1.5
12	8D-900	Stud - 9-3/4" Long	12	.9
13	8D-985	Strap	2	5.0
14	1B-166	Lockwasher (5/8" Std.)	12	
15	1C-392	Nut (5/8" - 11 NC Hex)	12	
16	8D-425	Spacer	2	1.6
17	5D-158	Sleeve	2	.5
18	8D-424	Pin Assembly	2	2.5
19	9D-8	Hitch Bracket	2	24.9
20	6D-333	Hose Support	2	1.8
21	6C-421	Capscrew (5/8 - 11 NC x 1-3/4 Long, Grade 5)	8	.13
22	1C-122	Flat Washer (5/8 Std.)	2	.09
23	9D-327	Hydraulic Cylinder	2	42.0
24	6D-716	Hydraulic Flow Restrictor	4	.9
25	5D-2	Cylinder Pin	2	.9
26	6D-413	Hair Pin Clip	4	.04
27	4C-856	Hair Pin Cotter	2	.04
28	9D-369	Clevis Pin	2	.12
29	6D-854	Roll Pin (1/2" x 2")	2	
30	7C-122	Machinery Bushing	4	.08
31	9D-366	Brace	2	11.0
32	1J-906	Hinge Pin	2	5.2
33	1J-889	Center Frame (169-1/2")	1	405.0
34	2J-171	L. H. Wing (48")	1	122.0
*	2J-172	R. H. Wing (48")	1	122.0
*	1J-900	L. H. Wing (80")	1	192.0
*	1J-903	R. H. Wing (80")	1	192.0
		*Parts Not Shown		

BRILLION RO-CROP CULTIVATOR WITH FOLDING TOOLBAR

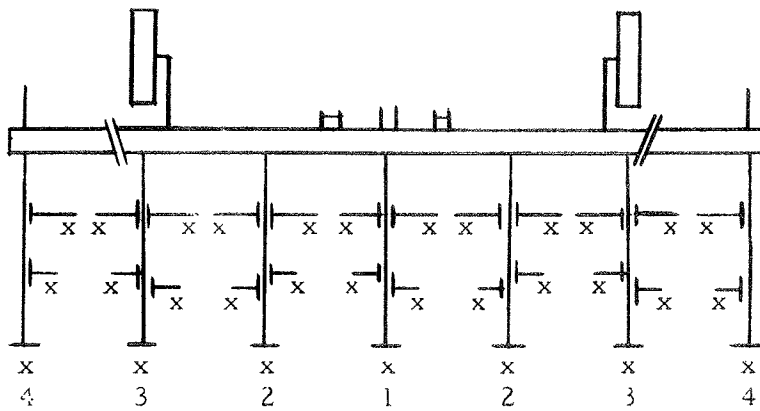
LOCATION OF COULTERS AND FRAME GAUGE WHEELS

When using the Brillion Ro-Crop Cultivators on the folding toolbar, the coulters are mounted on the wings and the frame gauge wheels are mounted on the center frame as shown below.

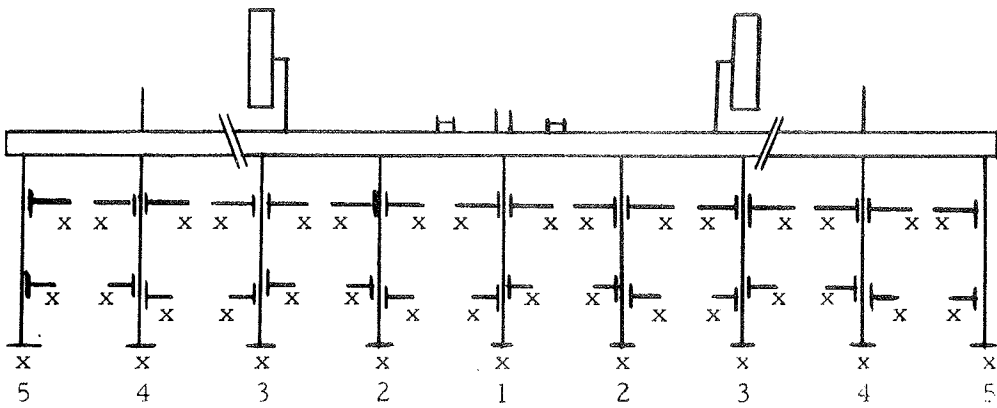


- ┆ = Gang Assembly
- ┆ = Short Extension
- ┆ = Long Extension
- X = Shank Location

8 - 30" ROWS



6 - 40" ROWS

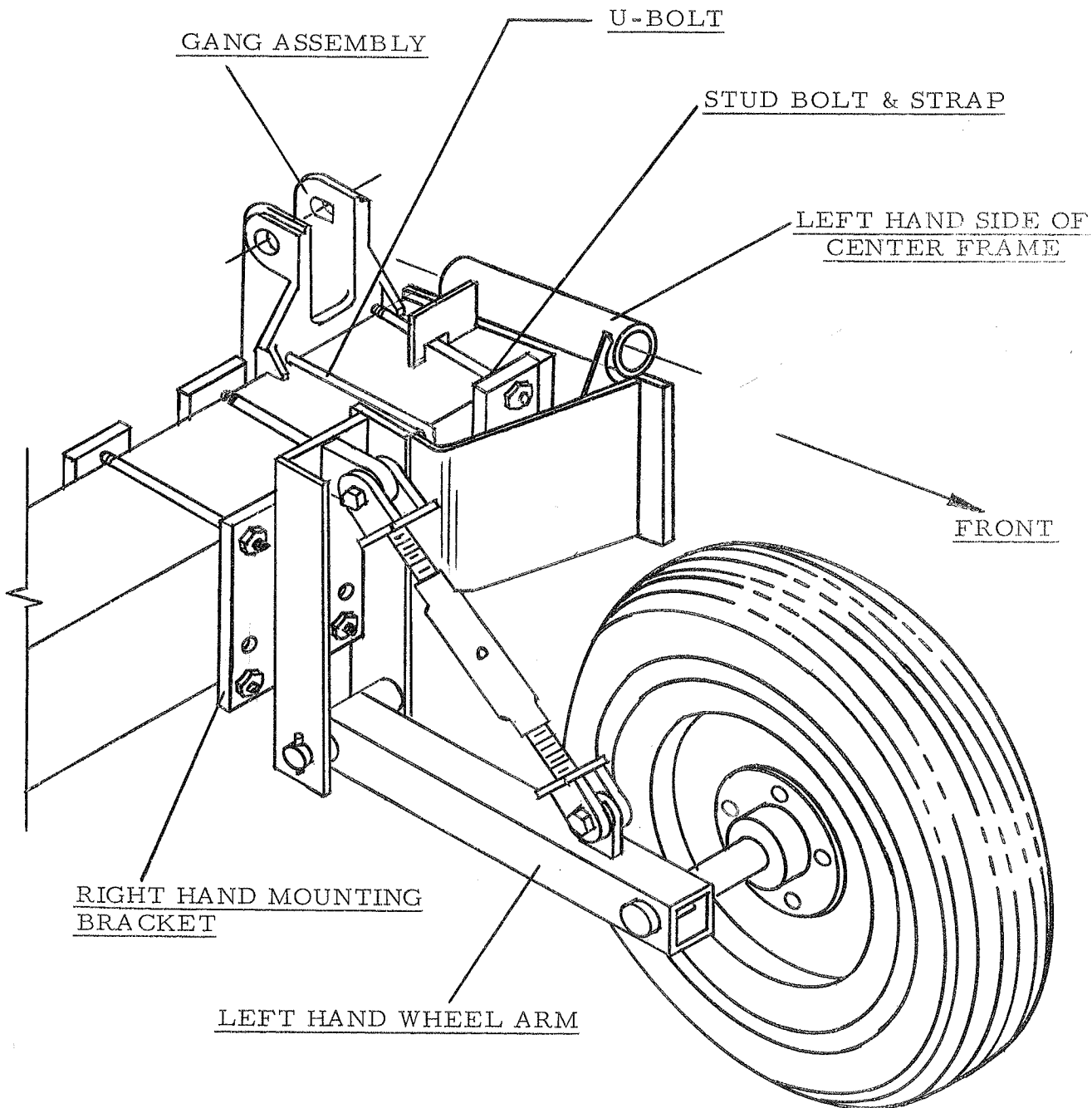


8 - 40" ROWS

GAUGE WHEEL ASSEMBLY ON
BRCF-641 & BRCF-841 MODELS ONLY.
BRILLION RO-CROP CULTIVATOR WITH FOLDING TOOLBAR.

ASSEMBLY INSTRUCTIONS:

1. DISASSEMBLE THE WHEEL ARM & TURNBUCKLE FROM THE MOUNTING BRACKET ON BOTH GAUGE WHEEL ASSEMBLIES AS THEY ARE SHIPPED TO YOU.
2. INTERCHANGE THE MOUNTING BRACKETS AND WHEEL ARMS, THEN REASSEMBLE.
3. MOUNT GAUGE WHEELS TO FRAME INDEPENDENT OF GANG ASSEMBLY AS SHOWN BELOW.
4. THIS ARRANGEMENT PERMITS GAUGE WHEEL TIRE AND GANG ASSEMBLY TO BE POSITIONED ON THE SAME CENTERLINE.



38" ROW SPACING ON BRILLION
RO-CROP CULTIVATOR WITH FOLDING TOOLBAR

ASSEMBLE CULTIVATOR GANGS ONTO TOOLBAR
NEXT TO THE CYLINDER ANCHOR LUG WITH
U-BOLTS PROVIDED AS SHOWN BELOW.

