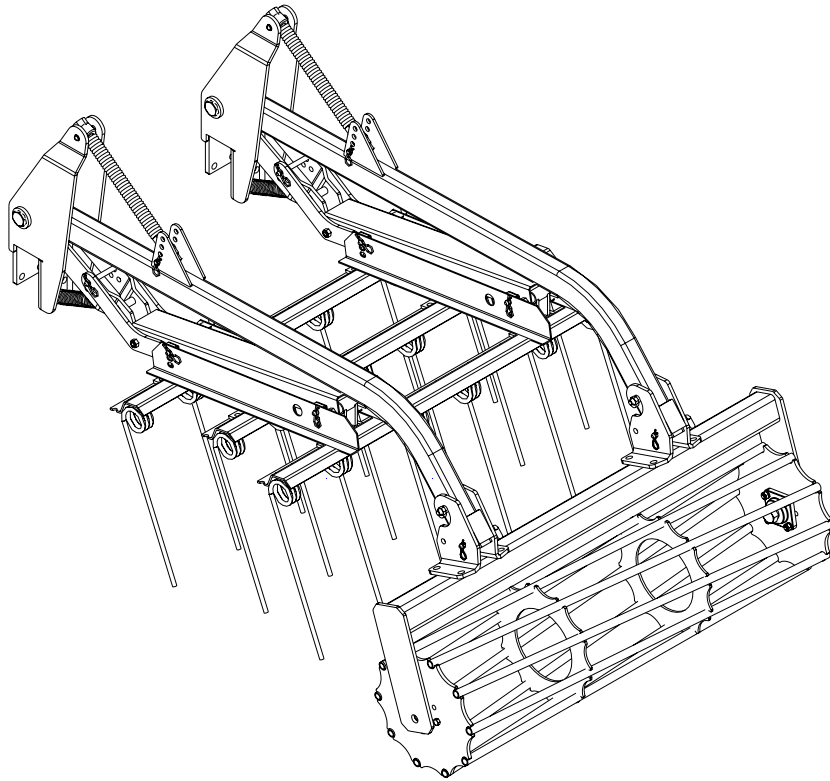




ASSEMBLY/OPERATORS MANUAL



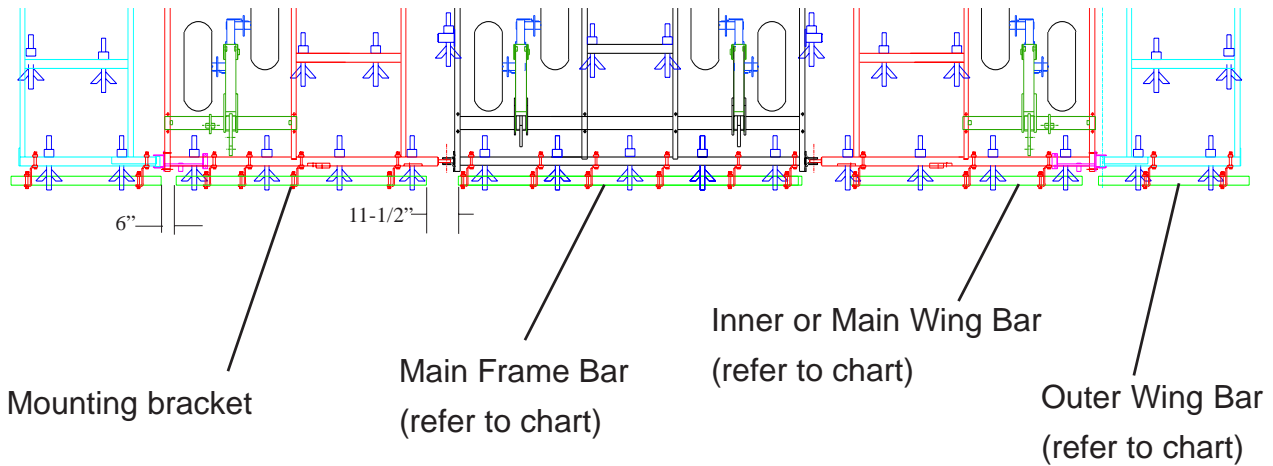
COIL TINE HARROW WITH BASKET

 **WIL-RICH**

PO Box 1030
Wahpeton, ND 58074
PH (701) 642-2621
Fax (701) 642-3372
WWW.WIL-RICH.COM

HARROW/BASKET ASSEMBLY INSTRUCTION (74293) 2/09

DCIII CULTIVATOR COIL TINE HARROW/BASKET ARM MNTG INSTRUCTION



Mounting - Harrow basket rear bar

Before mounting the rear bar make certain the main unit is completely assembled to include all shanks and hydraulics. Locate the appropriate mounting bars for the required main frame/wing combinations (see tube position chart) Position the mounting bracket, tie plates and required hardware in the approximate positions shown. (see arm/basket arm assembly for instructions on bracket orientation) Loosely position and mount the brackets to the rear of the main frame and wing tubes.

NOTE: Position the mount brackets as close to the ends of the rear bars as possible. Also position the mount brackets as close to the front to rear cultivator frame members as possible.

Beginning with the main frame tube, slide the noted tube into the brackets, centering the tube on the main frame. Slide the wing tubes into the brackets from the outside. Loosely secure the rear bar tubes to the brackets with the plates and hardware provided.

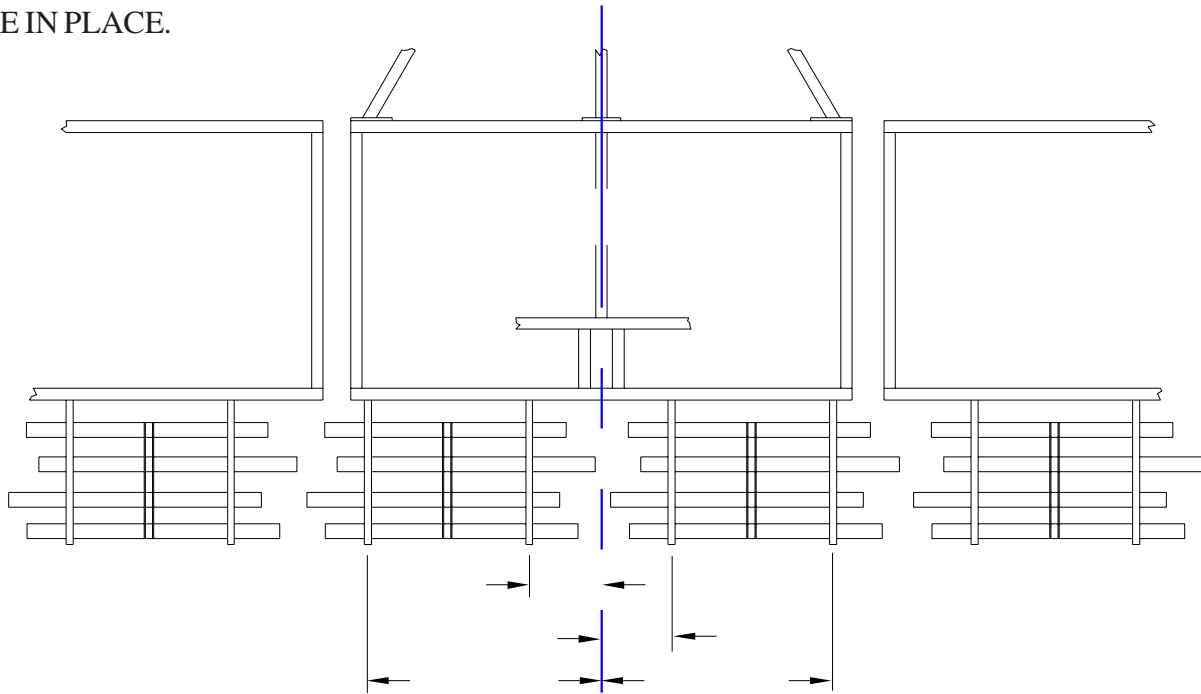
NOTE: Tubes need to be positioned far enough apart laterally at the hinges to allow the wings to fold. Approximate distance between tube ends is shown above.

TUBE POSITION CHART

Frame/Wing Size	Rear Bar Part #	Rear Bar Length (in)
11' Main Frame	234866	128"
13' Main Frame	234865	156"
16' Main Frame	234863	184"
7' Inner Wing	234868	68"
9'4" Inner Wing	234867	96"
11'8" Inner Wing	234862	124"
3' Outer Wing	234869	36"
5' Outer Wing	234864	50"
7' Outer Wing	234870	72"

11' MF XL² CULTIVATOR COIL TINE HARROW W/BASKET

NOTE: EXACT ARM LOCATION COULD VARY EITHER DIRECTION, DEPENDENT ON IMPLEMENT ACCESSORIES. DO NOT TIGHTEN ARMS COMPLETELY UNTIL ALL SECTIONS ARE IN PLACE.



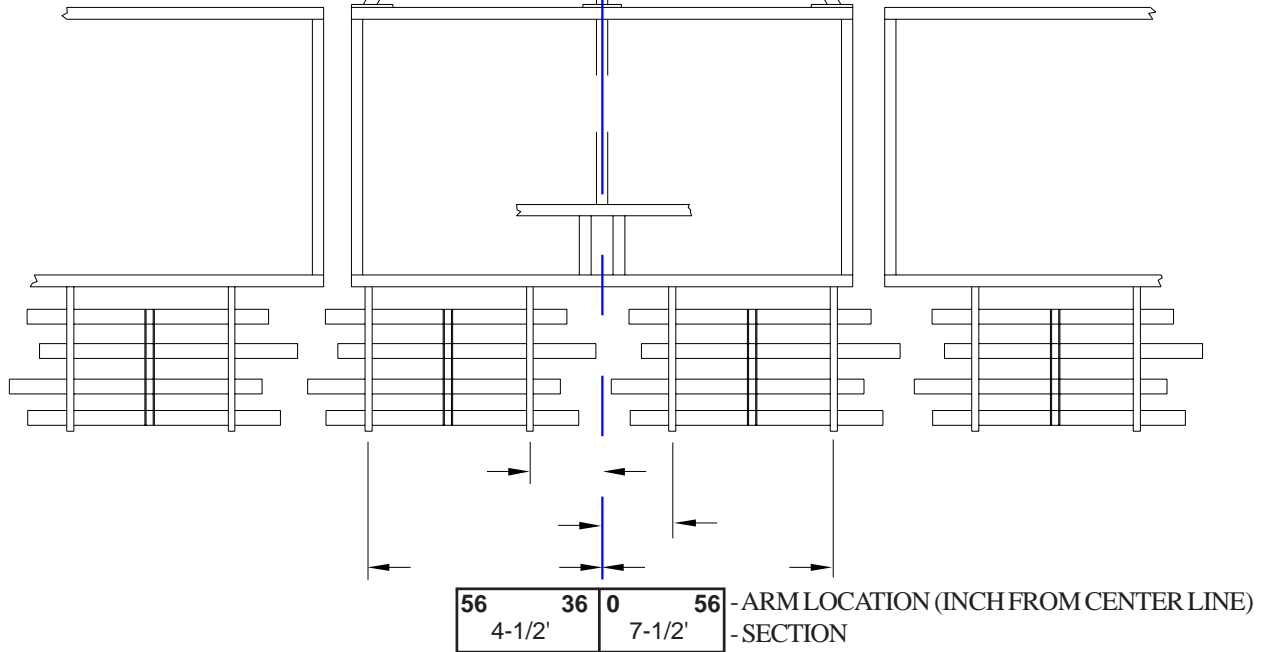
56	36	0	56
4-1/2'	7-1/2'		

 - ARM LOCATION (INCH FROM CENTER LINE)
 - SECTION

	WING'S				MAIN FRAME				WING'S							
11 XL 19-20	113	89			60	35	4	55	89	113						
	4-1/2'				4-1/2' 7-1/2'				4-1/2'							
11 XL 19-22	119	98			62	10	32	62	98	119						
	4-1/2'				7-1/2' 6'				4-1/2'							
11 XL 25	144	90			52	21	22	52	94	146						
	7-1/2'				6' 6'				7-1/2'							
11 XL 25-26	148	98			62	10	32	62	98	148						
	7-1/2'				7-1/2' 6'				7-1/2'							
11 XL 25-27	148	98			62	10	32	62	98	148						
	7-1/2'				7-1/2' 6'				7-1/2'							
11 XL 25-30	176	156	122	96	62	14	22	62	94	120	146	174				
	4-1/2' 4-1/2'				7-1/2' 6'				4-1/2' 4-1/2'							
11 XL 30	174	152	124	98	62	14	22	62	94	120	146	172				
	4-1/2' 4-1/2'				7-1/2' 6'				4-1/2' 4-1/2'							
11 XL 30-31	174	144	106	90	58	18	14	54	90	108	140	174				
	6' 4-1/2'				6' 6'				4-1/2' 6'							
11 XL 30-32	184	152	122	98	62	12	24	64	94	118	152	184				
	4-1/2' 6'				7-1/2' 6'				6' 4-1/2'							
11 XL 30-34	202	160	128	92	50	14	14	50	92	128	160	202				
	6' 6'				6' 6'				6' 6'							
11 XL 30-36	210	188	150	98	62	12	24	62	102	154	186	208				
	4-1/2' 7-1/2'				7-1/2' 6'				7-1/2' 4-1/2'							
11 XL 30-39	228	188	150	98	62	12	24	62	102	154	188	228				
	6' 7-1/2'				7-1/2' 6'				7-1/2' 6'							
11 XL 30-40	230	196	160	146	106	76	50	14	14	50	92	106	146	160	202	230
	6' 4-1/2' 4-1/2'				6' 6'				4-1/2' 4-1/2' 6'							

13' MF XL²/QX² CULTIVATOR COIL TINE HARROW W/BASKET

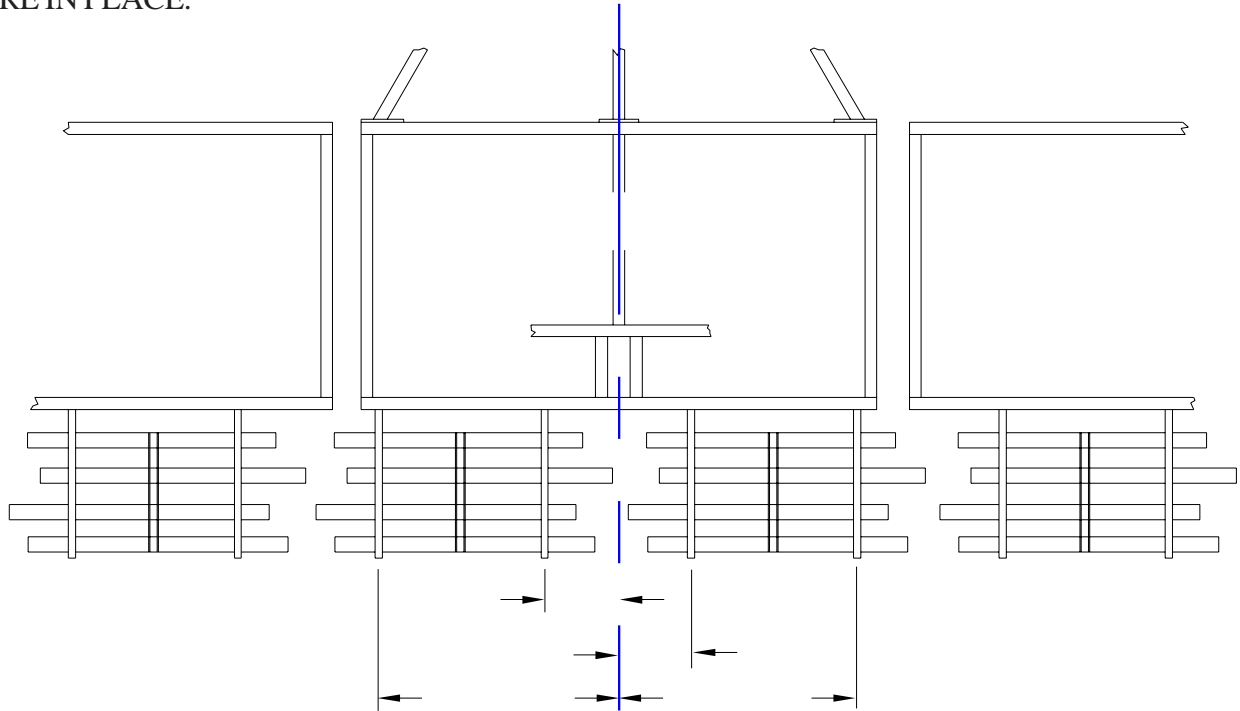
NOTE: EXACT ARM LOCATION COULD VARY EITHER DIRECTION, DEPENDENT ON IMPLEMENT ACCESSORIES. DO NOT TIGHTEN ARMS COMPLETELY UNTIL ALL SECTIONS ARE IN PLACE.



	WING'S	MAIN FRAME	WING'S
13 XL/QX 32	189 169 141 110 4-1/2' 6'	70 13 20 70 7-1/2' 6'	110 141 169 189 6' 4-1/2'
13 XL/QX 32-34	189 169 140 110 4-1/2' 6'	70 20 20 70 7-1/2' 7-1/2'	110 141 169 189 6' 4-1/2'
13 XL/QX 32-37	218 176 148 110 6' 6'	70 20 20 70 7-1/2' 7-1/2'	110 148 176 218 6' 6'
13 XL/QX 32-42	244 214 186 160 130 110 6' 4-1/2' 4-1/2'	70 20 20 70 7-1/2' 7-1/2'	110 130 160 186 214 244 4-1/2' 4-1/2' 6'
13 XL/QX 32-45	268 232 186 160 130 106 7-1/2' 4-1/2' 4-1/2'	70 13 20 70 7-1/2' 6'	110 130 160 186 232 268 4-1/2' 4-1/2' 7-1/2'
13 XL/QX 37	218 176 148 110 6' 6'	70 20 20 70 7-1/2' 7-1/2'	110 148 176 218 6' 6'
13 XL/QX 37-39	218 176 148 110 7-1/2' 6'	70 13 20 70 7-1/2' 6'	110 148 176 218 6' 7-1/2'
13 XL/QX 37-42	250 230 200 160 130 110 4-1/2' 6' 4-1/2'	70 20 20 70 7-1/2' 7-1/2'	110 130 160 200 230 250 4-1/2' 6' 4-1/2'
13 XL/QX 37-47	268 238 200 186 150 110 6' 4-1/2' 7-1/2'	70 13 20 70 7-1/2' 6'	110 150 186 200 238 268 7-1/2' 4-1/2' 6'
13 XL/QX 37-50	288 250 200 178 140 110 6' 6' 6'	70 20 20 70 7-1/2' 7-1/2'	110 140 178 200 250 288 6' 6' 6'

16' MF XL²/QX²CULTIVATOR COIL TINE HARROW W/BASKET

NOTE: EXACT ARM LOCATION COULD VARY EITHER DIRECTION, DEPENDENT ON IMPLEMENT ACCESSORIES. DO NOT TIGHTEN ARMS COMPLETELY UNTIL ALL SECTIONS ARE IN PLACE.

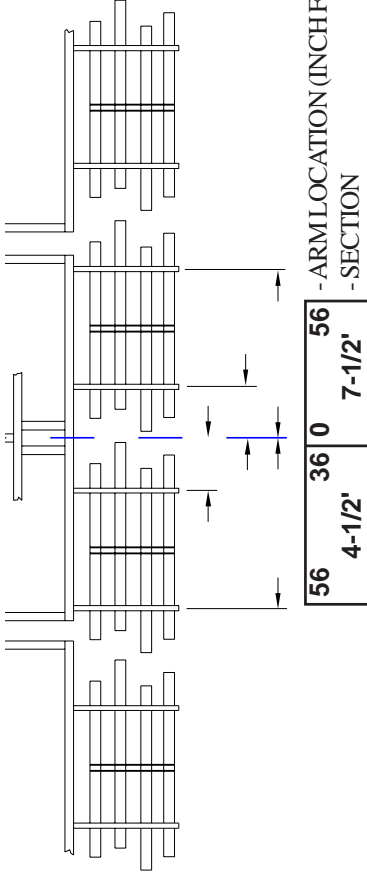


56	36	0	56	- ARM LOCATION (INCH FROM CENTER LINE)
4-1/2'		7-1/2'		- SECTION

	WING'S				MAIN FRAME						WING'S							
16EXC/QX 39	226	188	154	116	80	48	10	10	48	80	116	154	188	226				
	6'		6'		6'		4-1/2'		6'		6'		6'					
16EXC/QX 39-40	230	202	164	124	92	50	20	20	50	92	124	164	202	230				
	6'		6'		6'		6'		6'		6'		6'					
16EXC/QX 39-41	196	174	144	104	80	48	14	14	48	80	104	144	174	196				
	6'		7-1/2'		6'		4-1/2'		6'		7-1/2'		6'					
16EXC/QX 39-45	266	242	212	190	154	120	80	42	14	14	42	80	120	154	190	212	242	266
	4-1/2'		4-1/2'		6'		6'		4-1/2'		6'		6'		4-1/2'		4-1/2'	
16EXC/QX 39-46	266	246	222	196	164	124	92	50	20	20	50	92	124	164	196	222	246	266
	4-1/2'		4-1/2'		6'		6'		6'		6'		6'		4-1/2'		4-1/2'	
16EXC/QX 39-48	286	268	230	202	154	120	80	42	14	14	42	80	120	154	202	230	268	286
	4-1/2'		6'		6'		6'		4-1/2'		6'		6'		6'		4-1/2'	
16EXC/QX 39-50	284	264	217	201	163	124	88	52	21	21	52	88	124	163	201	217	264	284
	6'		4-1/2'		6'		6'		6'		6'		6'		4-1/2'		6'	
16EXC/QX 39-52	284	264	217	201	163	124	88	52	21	21	52	88	124	163	201	217	264	284
	7-1/2'		4-1/2'		6'		6'		6'		6'		6'		4-1/2'		7-1/2'	

13' MF 5 SECTION XL²/QX² CULTIVATOR COIL TINE HARROW W/BASKET

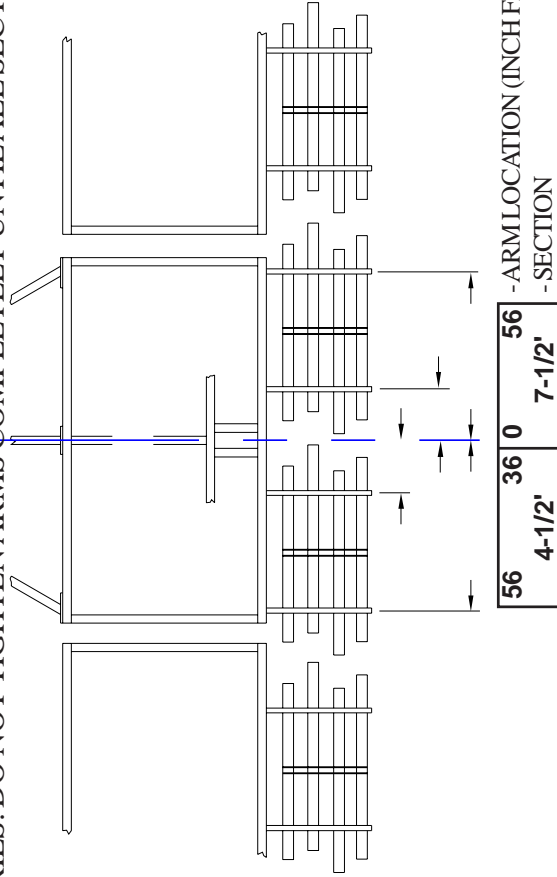
NOTE: EXACT ARM LOCATION COULD VARY EITHER DIRECTION, DEPENDENT ON IMPLEMENT ACCESSORIES. DO NOT TIGHTEN ARMS COMPLETELY UNTIL ALL SECTIONS ARE IN PLACE.



	OUTER WINGS		INNER WINGS		MAIN FRAME		INNER WINGS		OUTER WINGS														
13 5SECT 46	270	230	194	164	134	110	75	20	26	70	110	134	164	194	230	270							
	7-1/2'		4-1/2'		4-1/2'		7-1/2'		6'		6'	4-1/2'		4-1/2'		7-1/2'							
13 5SECT 46-48	270	230	194	164	134	110	75	20	26	70	110	134	164	194	230	270							
	7-1/2'		6'		4-1/2'		7-1/2'		6'		4-1/2'		6'		7-1/2'								
13 5SECT 46-50	270	230	194	164	134	110	75	20	26	70	110	134	164	194	230	270							
	7-1/2'		6'		4-1/2'		7-1/2'		7-1/2'		4-1/2'		6'		7-1/2'								
13 5SECT 50	298	244	206	177	131	110	65	25	20	65	110	131	177	206	244	298							
	7-1/2'		6'		6'		7-1/2'		6'		6'		6'		7-1/2'								
13 5SECT 50-53	312	264	217	177	131	110	65	25	20	65	110	131	177	217	264	312							
	7-1/2'		7-1/2'		6'		7-1/2'		6'		6'		6'		7-1/2'								
13 5SECT 55	327	301	271	253	217	177	145	110	75	49	20	20	49	75	110	145	177	217	253	271	301	327	
	4-1/2'		4-1/2'		6'		6'		4-1/2'		6'		4-1/2'		6'		6'		6'	4-1/2'		4-1/2'	4-1/2'
13 5SECT 55-58	342	315	287	241	217	177	145	110	75	49	20	20	49	70	110	145	177	217	241	287	315	342	
	4-1/2'		6'		6'		6'		4-1/2'		6'		4-1/2'		6'		6'		6'	6'		6'	4-1/2'
13 5SECT 55-60	346	315	287	241	217	177	145	110	75	20	26	70	110	145	177	217	241	287	315	346			
	6'		6'		6'		6'		7 1/2'		6'		6'		6'		6'		6'	6'		6'	6'

16' MF 5 SECTION XL²/QX² CULTIVATOR COIL TINE HARROW W/BASKET

NOTE: EXACT ARM LOCATION COULD VARY EITHER DIRECTION, DEPENDENT ON IMPLEMENT ACCESSORIES. DO NOT TIGHTEN ARMS COMPLETELY UNTIL ALL SECTIONS ARE IN PLACE.



	OUTER WINGS		INNER WINGS		MAIN FRAME		INNER WINGS		OUTER WINGS	
16 5SECT 53	313	268 7-1/2'	228	201 163 134 91 4-1/2' 6'	62 20 20 62 91 7-1/2' 6'	56 0 56 4-1/2' 7-1/2'	134 163 201 228 6' 4-1/2'	268 313 7-1/2'		
16 5SECT 53-54	325	274 7-1/2'	228	201 154 125 91 6' 6'	21 21 50 91 6' 6'		125 154 201 228 6' 6'	274 325 7-1/2'		
16 5SECT 53-55	325	274 7-1/2'	228	201 154 125 91 6' 6'	21 21 50 91 6' 6'		125 154 201 228 6' 6'	274 325 7-1/2'		
16 5SECT 58	342	303 275 248 6' 4-1/2'	217	177 150 125 91 6' 4-1/2'	21 21 50 91 6' 6'		125 150 177 217 4-1/2' 6'	248 275 303 342 4-1/2' 6'		
16 5SECT 58-59	352	314 284 259 6' 4-1/2'	230	190 159 131 91 6' 4-1/2'	62 20 20 62 91 7-1/2' 6'		131 159 190 230 4-1/2' 6'	259 284 314 352 4-1/2' 6'		
16 5SECT 58-60	352	314 284 259 6' 4-1/2'	230	190 159 131 91 6' 4-1/2'	62 20 20 62 91 7-1/2' 6'		131 159 190 230 4-1/2' 6'	259 284 314 352 4-1/2' 6'		

DCIII DISK CULTIVATOR COIL TINE HARROW/BASKET ARM MOUNING LOCATIONS

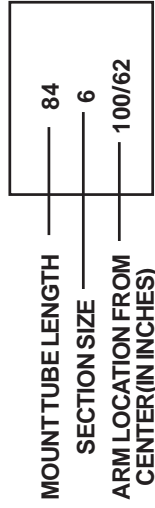
42	22	27	60
4-1/2'		7-1/2'	

- ARM LOCATION (INCH FROM CENTER LINE)
- SECTION

LEFT WING MAIN FRAME RIGHT WING

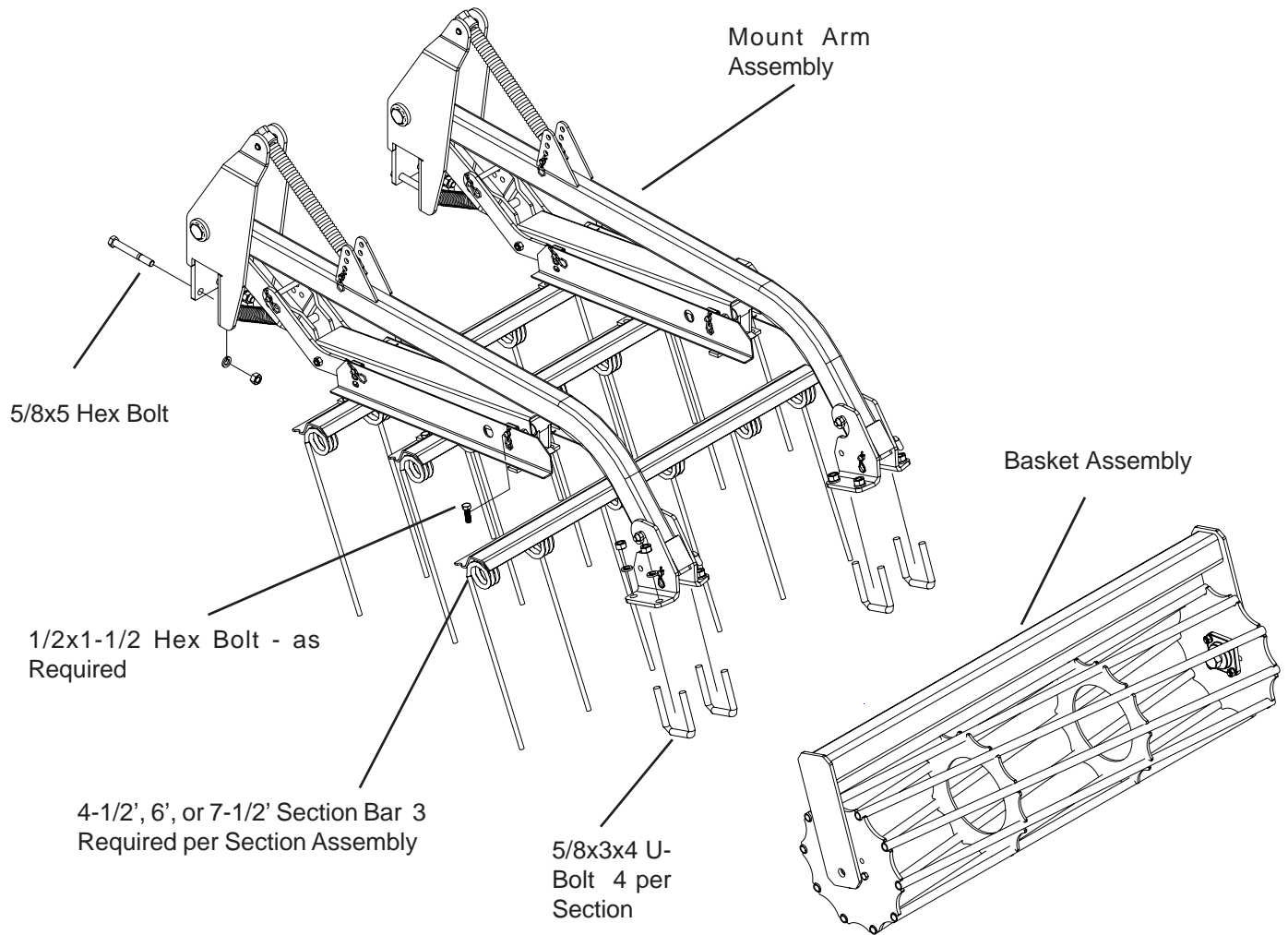
11 DC III 19	108	79	43	79	108
		6'			6'
11 DC III 19-22	108	79	22	43	79
		7-1/2'	4-1/2'		7-1/2'
11 DC III 25	144	108	27	61	108
		6'	7-1/2'		6'
11 DC III 25-28	148	98	10	62	98
		7-1/2'	7-1/2'		7-1/2'
11 DC III 31	180	158	27	59	131
		4-1/2'	6'		6'
14 DC III 34	194	157	22	57	121
		6'	7-1/2'		4-1/2'
14 DC III 34-37	209	157	22	57	121
		7-1/2'	7-1/2'		4-1/2'
				95	131
				6'	4-1/2'
				103	121
				4-1/2'	6'
				103	121
				4-1/2'	7-1/2'
				103	121
				4-1/2'	7-1/2'
				158	180

614NT DISC COIL TINE HARROW/BASKET ARM MOUNTING LOCATIONS

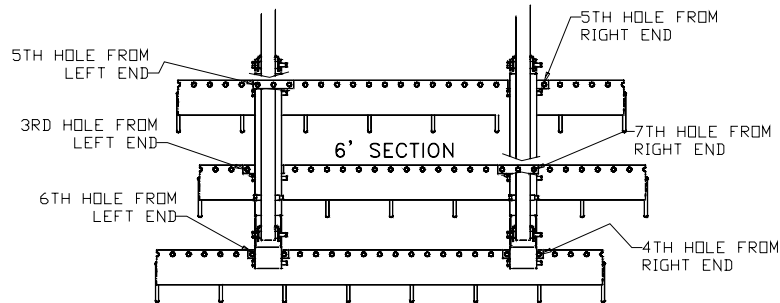
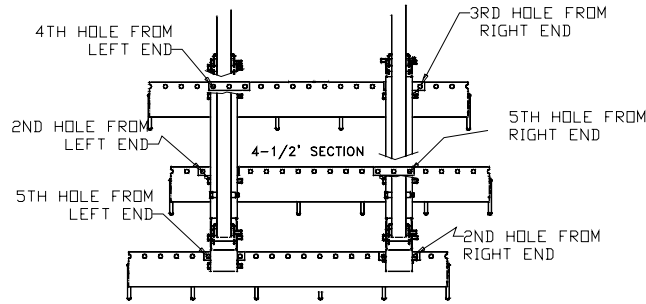


17FT4IN 614NT		84 6 100/62	7-1/2 28/28	84 6 62/100	
23FT8IN 614NT	70 7-1/2 136/82	4-1/2 48/24	102 5/48	70 7-1/2 82/136	
26FT10IN 614NT	70 7-1/2 156/98	7-1/2 63/7	132 24/63	70 7-1/2 98/156	
30FT 614NT	102 6 166/133	4-1/2 103/80	102 5/48	102 4-1/2 80/103	6 133/166
33FT2IN 614NT	120 6 188/152	6 116/79	102 5/48	120 6 79/116	6 152/188
36FT4IN 614NT	120 6 213/173	6 140/100	132 24/63	120 6 100/140	6 173/213

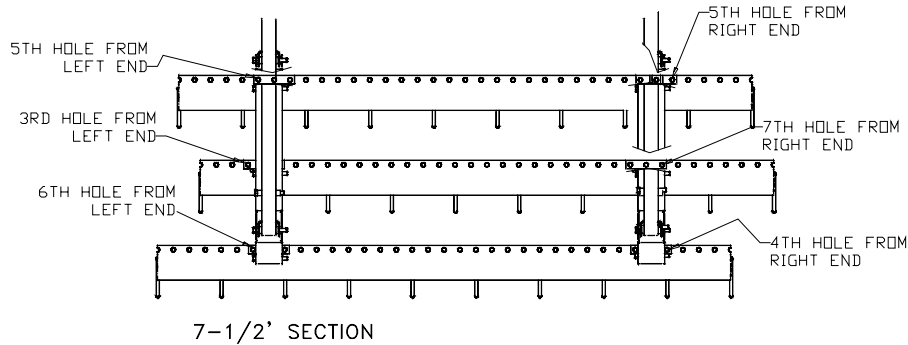
Arm/Basket Arm Assembly



HARROW SECTION BAR MOUNTING



POSITION THE BRACKETS FOR THE TOOTH ADJUST CENTERED BETWEEN THE ARM MOUNTS AS SHOWN. LOCATE THE FRONT AND REAR BRACKETS THE SAME NUMBER OF HOLES FROM THE RIGHT (A).



7-1/2' SECTION

HARROW BAR MOUNTING

Assemble the section bars to the mount arm assemblies as shown above. Hardware (1/2x1-1/2 hex bolts) are provided in the hardware kit. Existing hardware that mounts the tine brackets may need to be removed and replaced with the longer bolts. The harrow mounting arm locations on the mounting arm location chart are based on the assembly of the harrow bars as shown above.

NOTE: Because of changing mounting conditions it may be necessary to move the complete basket arm laterally. In this situation you will need to shift the harrow bars accordingly, move each bar the same number of holes to ensure the correct spacing of the tines.

OPERATION INFORMATION

After all section bars have been mounted, measure to ensure that the main frame sections are centered on the complete main frame. Move the mount arms laterally as required to center the sections and maintain the 9" dimension as shown above.

Once the mount arm assemblies and harrow section bars have been positioned (see page 2-3) on the rear bar the basket arm assemblies can be attached.

Hook the basket arm assembly over the bushing on the mount arm assembly and secure with the 1/2" bent pin and hairpin as shown on the arm/basket arm assembly illustration.

Position the matching basket assembly behind the harrows and loosely mount the baskets with the hardware shown.

Center the main frame baskets behind the harrow sections, leaving approximately 3/4" between the harrow sections as shown.

Once all sections are in position all the mounting hardware can be tightened securely, including the arm and basket mounts.

Once all sections have been securely mounted to the unit slowly fold the wings, making certain that there is not interference between parts of the sections assemblies or parts of the frame. This is most likely to occur at the hinge points where the mount arms from the wing may fold into the main frame arms. If there is a potential interference, one of the interfering mount arm assembly on either the wing or main frame will need to be shifted laterally. Loosen the components of the arm you need to reposition and remove the hardware that attaches the section bars to that arm. Move the arm/basket arm assembly as needed and reattach the section bars.

Fold the unit, check for interference and adjust as required.

On units with outer wings which fold over center, it will be necessary to attach a float limiting bracket to the basket arm assemblies as shown. This bracket will restrict the extension of the basket springs when the wing folds over center, limiting contact with other parts of the basket assemblies.

HARROW/BASKET SETTINGS

There is limited adjustments required to this product, consisting of harrow tool angle and down pressure position and basket down pressure.

The tooth angle adjustment can be used to set the harrow tine angle. By moving the tooth angle bracket the front tine angle can be set to one of three positions. To clear trash the front tines can be set in a less vertical position with the rear tines set more vertical. Set the front and rear settings as desired by moving the adjustment pin to the appropriate hole.

The rear basket down pressure can be controlled by adjusting the spring adjust bolt. Tighten the bolt for more downpressure or loosen to allow more vertical float.

MAINTENANCE REQUIREMENTS

Check the tightness of the hardware components on a regular basis to ensure that components have not worked loose. Tighten as required.

GREASING REQUIREMENTS

There are two places which will require limited greasing, the basket arm pivots and the basket bearings. The basket arm pivots should be lubricated with a quality grease upon initial use and periodically after. One or two shots of grease every 30-40 hours of use should be adequate. Do not overgrease, once grease appears at the pivot point stop greasing. The basket bearings are sealed and should not be overgreased. Give these bearings 1-2 shots of grease upon initial set-up and 1-2 shots every 30-40 hours of use. **DO NOT OVER GREASE THESE BEARINGS AS THE SEALS CAN BE DAMAGED.** If the baskets turn rough or seem noisy it is probably time to grease, again 1-2 shots.

