

# Operator's/Parts Manual

24' & 30' Folding No-Till Drill  
Harrow

# Great Plains

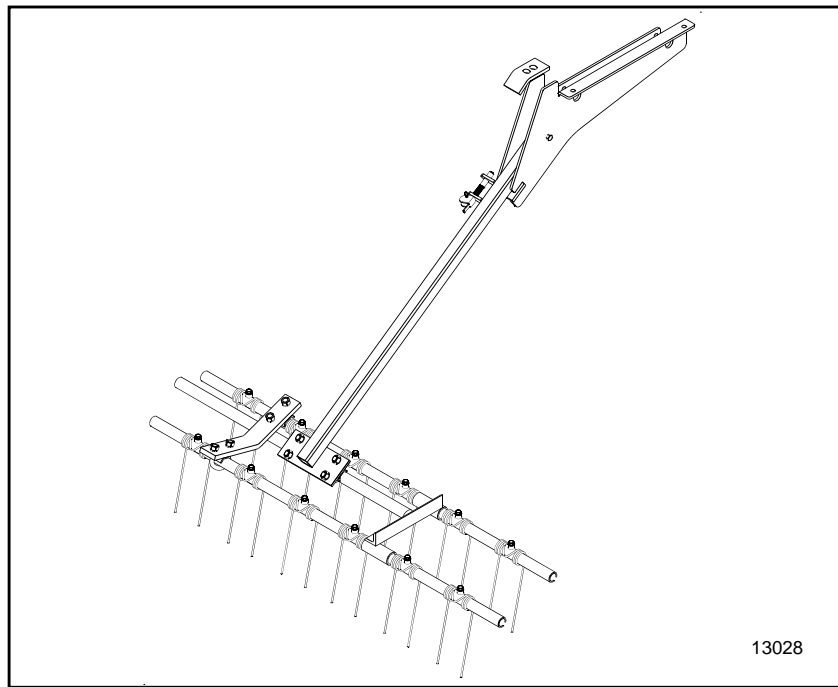
Manufacturing, Inc.

P.O. Box 5060 • Salina, Kansas 67402-5060



Read the Operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

# Great Plains



*Cover illustration may show optional equipment not supplied with standard unit.*

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# General Information

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## Important Notice

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### **This Operator's Manual applies to the Folding No-Till Harrow listed below:**

116-137A     30' 2 Section No-Till Harrow Assembly  
116-138A     24' 2 Section No-Till Harrow Assembly

# Owner's Information

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Name: \_\_\_\_\_

Name of Dealership \_\_\_\_\_

Address \_\_\_\_\_

Dealer's Name \_\_\_\_\_

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Phone \_\_\_\_\_

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Date Purchased \_\_\_\_\_

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## Section 1 Assembly Instructions & Set-Up

### Torque Values Chart

Bolt head identification marks are as per grade.

NOTE: Manufacturing marks will vary.

Bolt Size		Grade 2				Grade 5				Grade 8*			
		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters	
inches	mm	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4"	6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	20.3
5/16"	7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3
3/8"	9.53	20	23	27.1	31.2	35	42	47.5	57.0	45	54	61.0	73.2
7/16"	11.11	30	35	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9
1/2"	12.70	45	52	61.0	70.5	80	96	108.5	130.2	110	132	149.2	179.0
9/16"	14.29	65	75	88.1	101.6	110	132	149.2	179.0	160	192	217.0	260.4
5/8"	15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	254	298.3	358.0
3/4"	19.05	150	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3
7/8"	22.23	160	200	216.8	271.0	400	480	542.4	650.9	600	720	813.6	976.3
1"	25.40	250	300	338.8	406.5	580	596	786.5	943.8	900	1080	1220.4	1464.5
1 1/8"	25.58					800	880	1084.8	1193.3	1280	1440	1735.7	1952.6
1 1/4"	31.75					1120	1240	1518.7	1681.4	1820	2000	2467.9	2712.0
1 3/8"	34.93					1460	1680	1979.8	2278.1	2380	2720	3227.3	3688.3
1 1/2"	38.10					1940	2200	2630.6	2983.2	3160	3560	4285.0	4827.4

NOTE: Torque requirements listed above do not apply to self-locking nuts. For self-locking nuts increase the torque requirements listed by 15%.

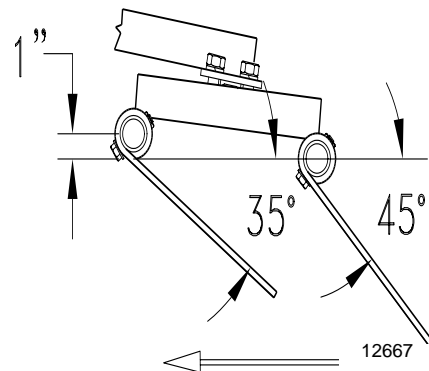
\* Thick nuts must be used with Grade 8 bolts

## Section 1 Assembly Instructions & Set-Up

### Refer to Figure 1-2 unless otherwise noted:

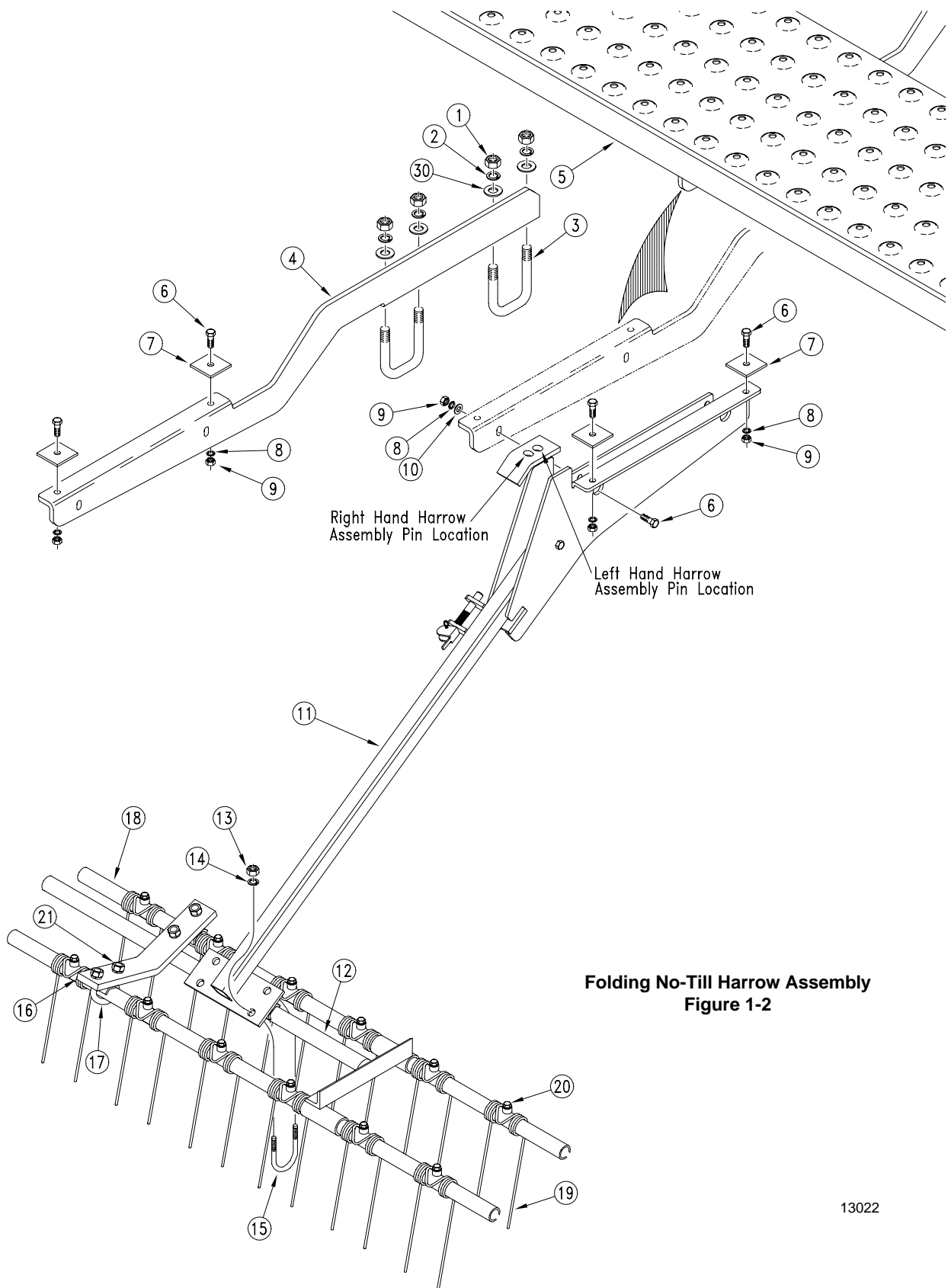
1. Set the drill in field position. Place the harrow frame assemblies (#12) behind the drill and maintain the spacing, Figure 1-3, from the ends of the tine tubes (#18) to the box ends at the center of the drill.
2. Locate the hanger assemblies (#11) and walkboard supports (#4) under the walkboard so that the hanger arms (#11) will be close to the end of harrow tube frame (#12). Location of support may vary depending on opener spacing, Figure 1-4.
3. Bolt the walkboard supports (#4) to the opener mounting tubes using 5/8" x 2" x 4 3/8" u-bolts (#3), 5/8" lock washers (#2) and 5/8" hex nuts (#1). Bolt the walkboard supports to the walkboard with a 3/8" x 1" bolt (#6), support tab (#7), 3/8" lock washers (#8), and 3/8" nuts (#9).
4. Attach the hanger assemblies (#11) to the support (#4) and the walkboard using 3/8" x 1" bolts (#6), support tab (#7), 3/8" lock washers (#8), 3/8" flat washers (#10) and 3/8" nuts (#9).
5. Place the harrow frame tube (#12) under the channels at the lower end of the hanger arms (#11). Bolt the harrow frame (#12) to the hanger arm plate with the 1/2" x 1 3/8" x 3" long u-bolts (#15), 1/2" lock washers (#14), and 1/2" hex nuts (#13). Leave the u-bolts loose.
6. Position the harrow frame (#12) by rotating it on the u-bolts (as shown in Figure 1-1) and tighten the hex nuts on the u-bolts.
7. Loosen the four 1/2" hex nuts (#21) on the 1/2" u-bolts (#17) on the center support bar (#16). Rotate the tine tubes (#18) so that the spring tines (#19) are against the spring stop bushing (#20) and are angled back for no-till drilling as shown in Figure 1-1 below. Retighten the hex nuts on the u-bolts.

NOTE: Figure 1-1 shows the most successful position of the harrow in no-till conditions. However, your field conditions may differ because of moisture, trash levels, or trash types. Some adjustment of the tines (#19) or harrow tube frame (#12) may be required.



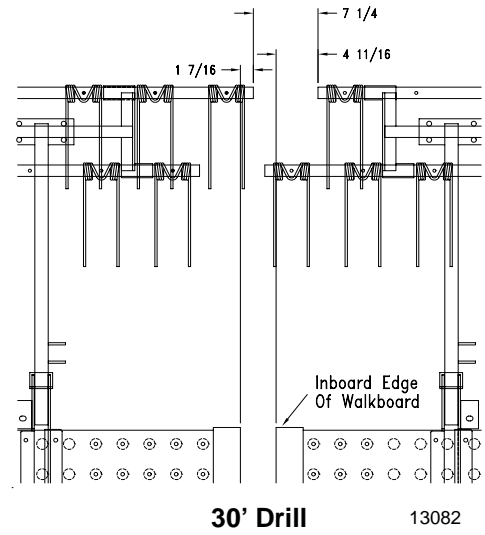
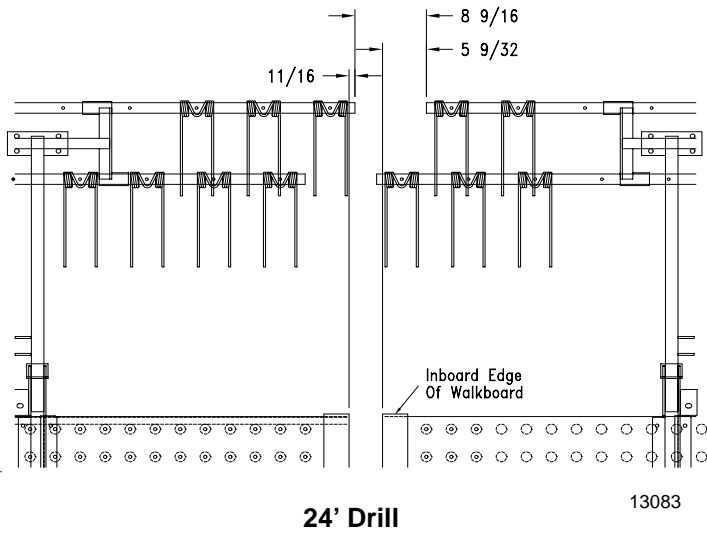
Spring Angle For No-Till Drilling  
Figure 1-1

8. Folding No-Till Harrow Assembly for road transport. Fold right hand harrow assembly up until locking pin engages into the first slot on harrow bracket. Then fold left hand harrow assembly up until locking pin engages into the second slot on the harrow bracket. Figure 1-2. This will allow the harrow assemblies to miss each other when the drill is folded to the road transport position.

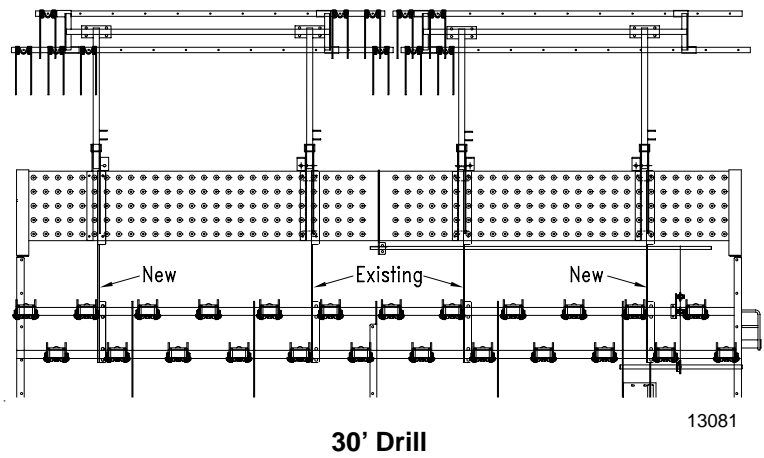
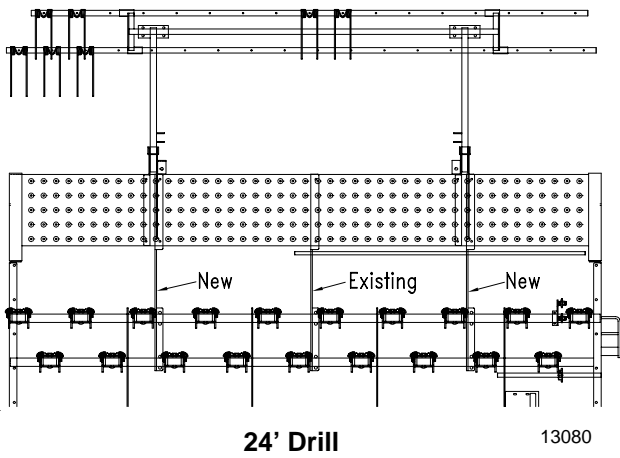


Folding No-Till Harrow Assembly  
Figure 1-2

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Center Tine Spacing  
Figure 1-3

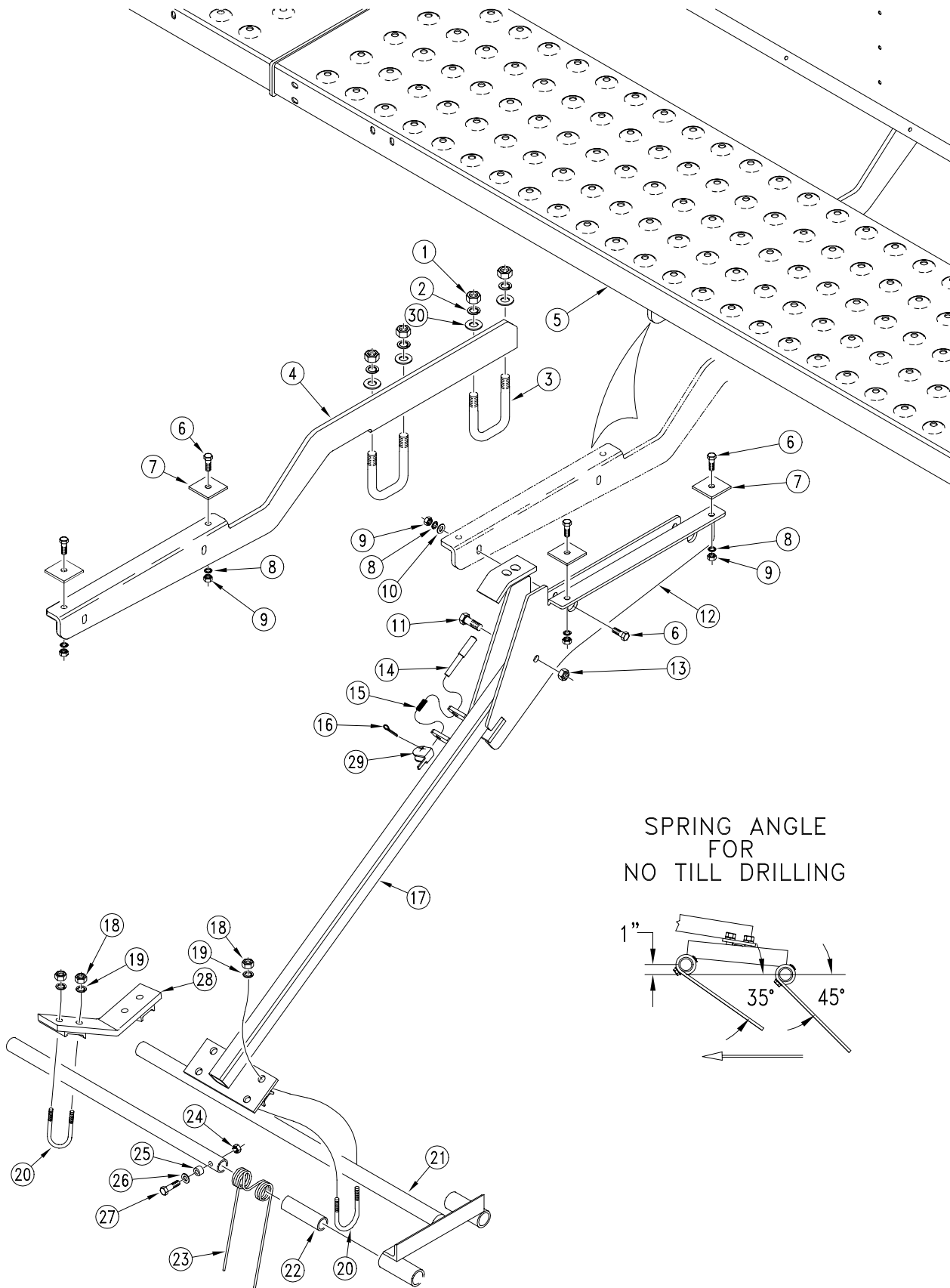


Walkboard Support Locations  
Figure 1-4

*Notes:*

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Section 2 Harrow Assembly



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## Section 2 Harrow Assembly

Ref.	Part No.	Part Description
1.	803-021C	Nut, Hex 5/8"-11
2.	804-022C	Washer, Lock Spring 5/8"
3.	806-113C	U-Bolt, 5/8"-11 x 2 1/32" x 4 3/8"
4.	119-208D	2SNT Walkboard Support
5.		Walkboard
6.	802-079C	Bolt, Hex Head 3/8"-16 x 1 1/4" Long
7.	119-032D	3-Point Step Retainer
8.	804-013C	Washer, Lock Spring 3/8"
9.	803-014C	Nut, Hex 3/8"-16
10.	804-012C	Washer, Flat 3/8" SAE
11.	802-226C	Bolt, Hex Head 1/2"-13 x 2 3/4" Long
12.	116-125H	Harrow Bracket - Left Hand
	116-126H	Harrow Bracket - Right Hand (Shown)
13.	803-147C	Nut, Hex Nylock 1/2"-13
14.	113-164D	Marker Lock Pin
15.	807-031C	Spring, Marker Lock
16.	805-045C	Pin, Cotter 5/32" x 1 1/4" Long
17.	116-127H	Hanger Arm - Left Hand
	116-128H	Hanger Arm - Right Hand (Shown)
18.	803-020C	Nut, Hex 1/2"-13
19.	804-015C	Washer, Lock Spring 1/2"
20.	806-046C	U-Bolt, 1/2"-13 x 1 3/8" x 3" Long
21.	116-064H	20' Frame
	116-065H	15' Frame
22.	116-116D	14' Tine Tube
	116-114D	15' Tine Tube
	116-176D	24' 2SNT Harrow Tine Tube-134
	116-186D	24' 2SNT Harrow Tine Tube-142
23.	807-079C	Spring, Harrow Double Torsion 11"
24.	803-084C	Nut, Hex Nylock 5/16"-18
25.	890-351C	Bushing, 5/8" OD x 11/32" ID
26.	804-010C	Washer, Flat 5/16" USS
27.	802-138C	Bolt, Hex Head 5/16"-18 x 2 1/4" Long
28.	116-062H	Center Brace
29.	116-183D	Harrow Lockup Handle
30.	804-021C	WASHER FLAT 5/8 SAE PLT

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