

LAND GRADER ASSEMBLY INSTRUCTIONS

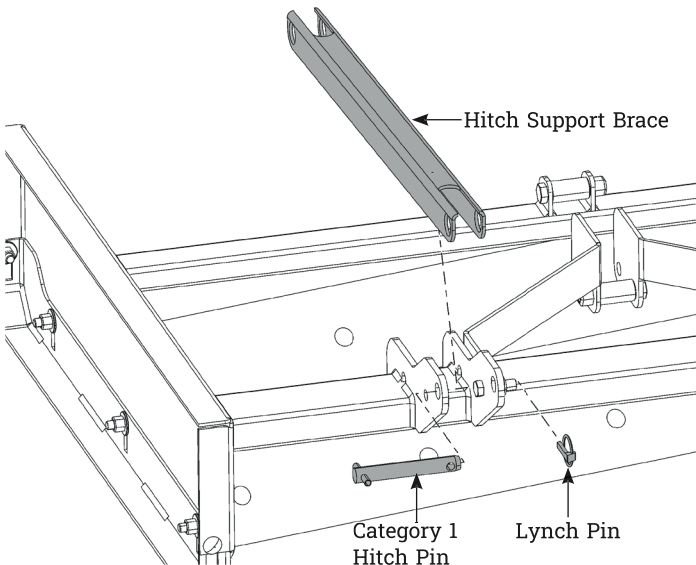
4.5' (54") LAND GRADER ASSEMBLY

Your Land Grader ships with the A-Arms and Hitch Support Brace secured flat to the Land Grader frame. The bottom of each A-Arm is bolted to the main hitch brace. Follow the assembly steps below before attempting to use the implement.

WARNING

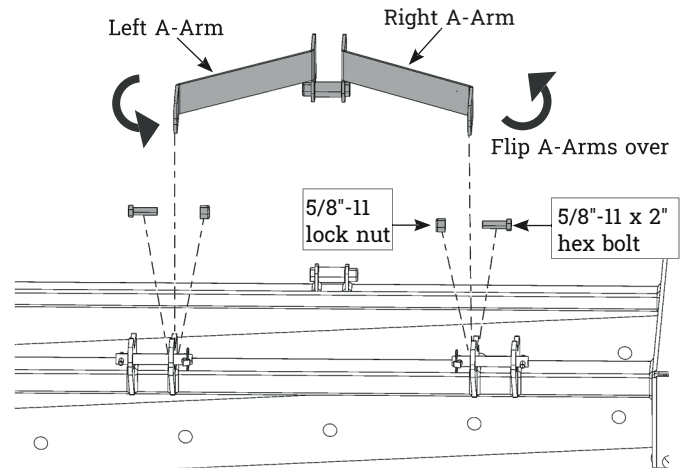
- Assemble implement on level ground.
- Wear appropriate personal protective gear.
- Watch for possible pinch points and crushing hazards.

1. Cut the zip tie securing Hitch Support Brace to Land Grader frame. Discard zip tie and cardboard padding.
2. Remove the Category 1 hitch pin securing the other end of the Hitch Support Brace. Set the Hitch Support Brace aside and re-install the Category 1 hitch pin onto the Land Grader frame.



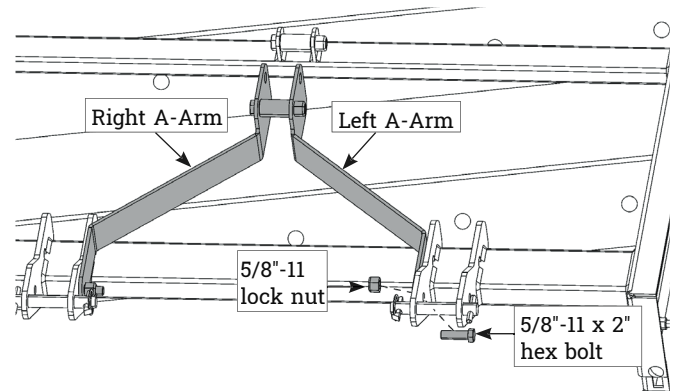
Remove Category 1 hitch pin and Hitch Support Brace.
Re-install Category 1 hitch pin.

3. Loosen and remove the two 5/8"-11 x 2" hex bolts securing the A-Arms to the Land Grader Frame.
4. Flip the A-Arms over, then realign the A-Arm bolt holes with the bolt holes on the inside of the main hitch brace.



Remove lock nuts, hex bolts, and A-Arms. Flip A-Arms over.

5. Reinsert the 5/8"-11 x 2" hex bolts through the Land Grader frame and A-Arms and secure with 5/8"-11 nylon lock nuts. (Do not fully tighten the lock nuts at this time.)

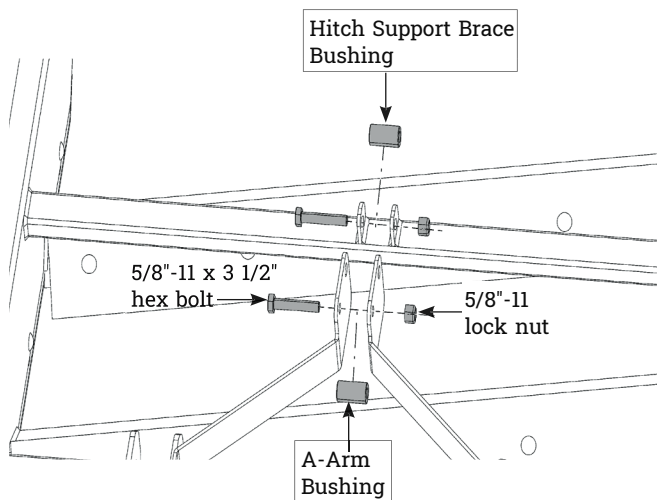


Loosely secure A-Arms with hex bolts and lock nuts.

6. Remove the 5/8"-11 x 3 1/2" hex bolt and the spacer bushing from the hitch support brace attachment point located on the center support tube of the Land Grader frame and set the hardware aside.
7. Remove the 5/8"-11 x 3 1/2" hex bolt and the spacer bushing from A-Arms.

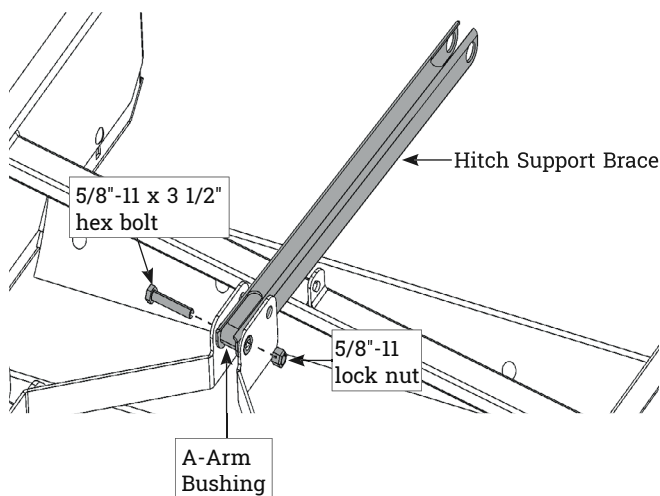
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LAND GRADER ASSEMBLY INSTRUCTIONS



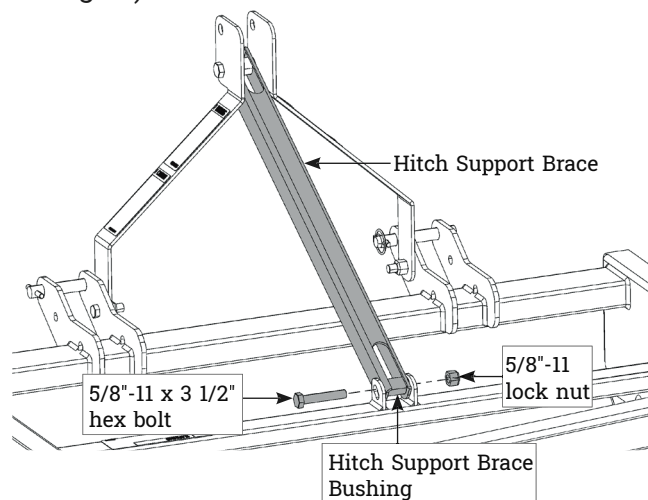
Remove A-Arm Bushing and Hitch Support Brace Bushing.

- Align the A-Arm spacer bushing with one end of the Hitch Support Brace, Then align the bolt holes with the lower bolt holes on the A-Arms. (Ensure the curved edge of the Hitch Support Brace faces down.)
- Insert the 5/8"-11 x 3 1/2" hex bolt through the A-Arm, Hitch Support Brace and spacer bushing. Secure the hex bolt with 5/8"-11 nylon lock nut. (Do not fully tighten the lock nut at this time.)



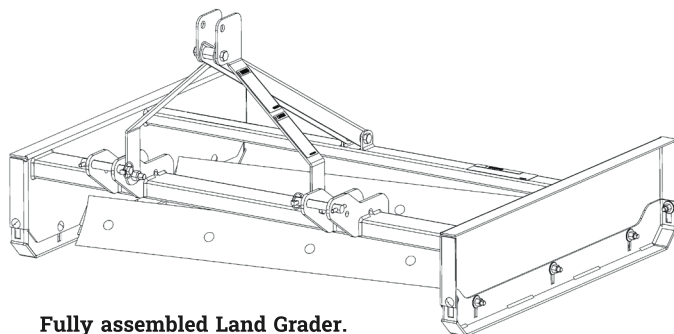
Attach Hitch Support Brace to A-Arms.

- Grasp the Hitch Support Brace and push forward, raising the A-Arms until they are perpendicular to the Land Grader frame.
- Align the hitch support brace spacer bushing inside the ends of the Hitch support brace.
- Align the bolt holes on the end of the Hitch Support Brace with the attachment point located on the center support tube of the Land Grader frame.
- Insert the 5/8"-11 x 3 1/2" hex bolt through the hitch support brace attachment point, Hitch Support Brace, and hitch support brace spacer bushing. Secure with 5/8"-11 nylon lock nut and torque to proper specifications (See Torque Specifications on Page 8).



Secure Hitch Support Brace to attachment point.

- Tighten nylon lock nut securing Hitch Support Brace to A-Arms. Torque to proper specifications.
- Tighten the two lock nuts securing A-Arms to Land Grader frame. Torque to proper specifications.
- Your Land Grader is now fully assembled and ready for use.



Fully assembled Land Grader.

LAND GRADER ASSEMBLY INSTRUCTIONS

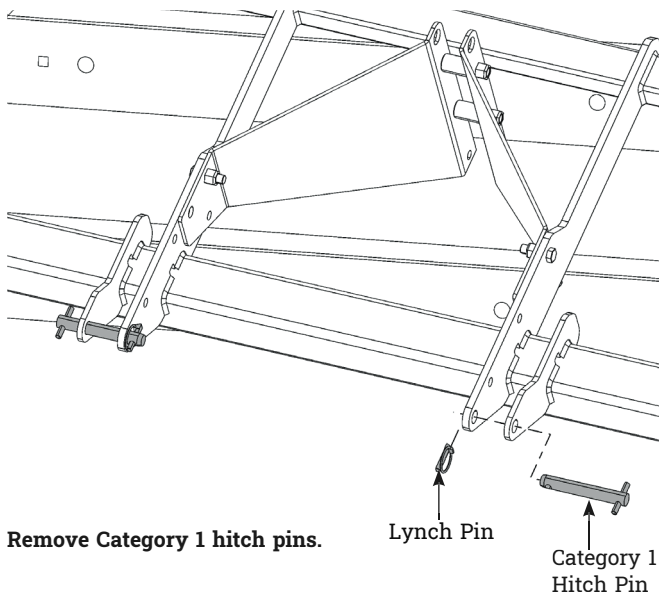
5' (60")/6' (72") LAND GRADER ASSEMBLY

Your Land Grader ships with the A-Arms secured flat to the Land Grader frame. The top of each A-Arm is bolted to the main hitch brace. Follow the assembly steps below before attempting to use the implement.

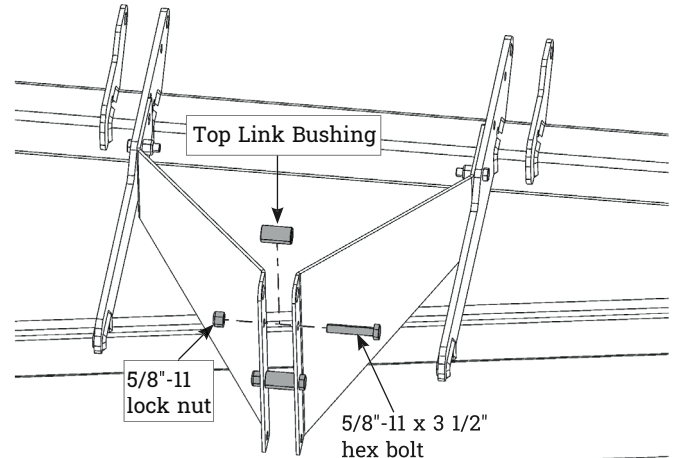
WARNING

- Assemble implement on level ground.
- Wear appropriate personal protective gear.
- Watch for possible pinch points and crushing hazards.

1. Remove the two Category 1 hitch pins from the Land Grader frame and set aside.

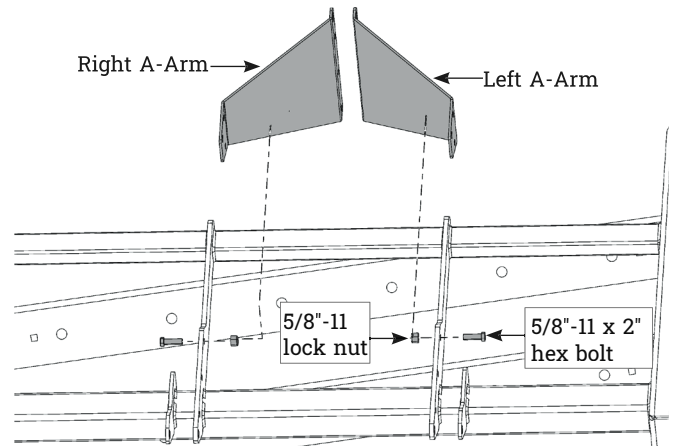


2. The two top link bushings ship bolted to the bottom of the A-Arms. Loosen the 5/8"-11 nylon lock nut and 5/8"-11 x 3 1/2" hex bolts securing the bushings to the A-Arms. Remove the hardware and bushings and set aside.



Remove lock nuts, hex bolts, and top link bushings.
(Center support tube removed from image to show detail)

3. Loosen and remove the two 5/8"-11 x 2" hex bolts securing A-Arms to Land Grader hitch brace and lift each A-Arm away from the frame.

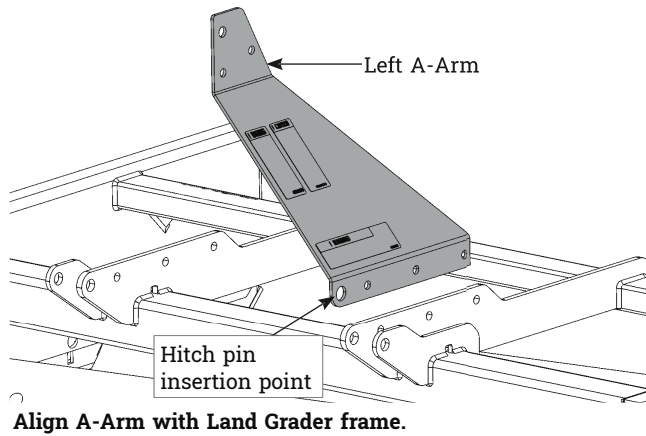


Remove lock nuts, hex bolts, and A-Arms.

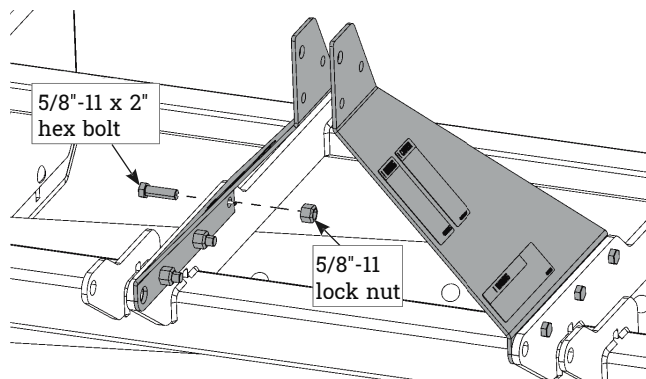
4. Each A-Arm connects to the Land Grader main hitch brace with three 5/8"-11 x 2" hex bolts secured with 5/8"-11 nylon lock nuts (six bolts and nuts total for both A-Arms). Align the bolt holes of one A-Arm with bolt holes on the inside of the main hitch brace. The forwardmost bottom connection point should align with the insertion point for the Category 1 hitch pin. The two vertical bolt holes on the top of the A-Arm should face forward.

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LAND GRADER ASSEMBLY INSTRUCTIONS

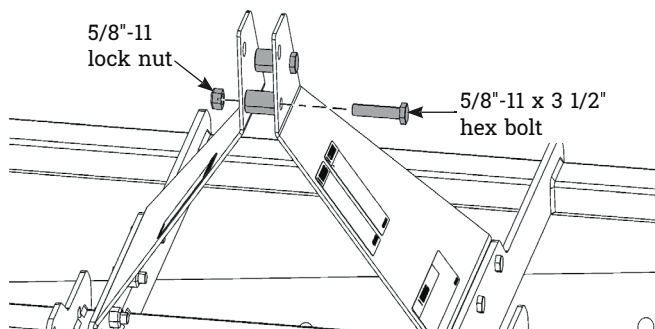


5. Insert a 5/8"-11 x 2" bolt from the supplied hardware kit through each bolt hole. Secure each bolt with a 5/8"-11 nylon lock nut (Do not fully tighten the bolts and lock nuts at this time).
6. Repeat Step 4 and 5 for the second A-Arm.



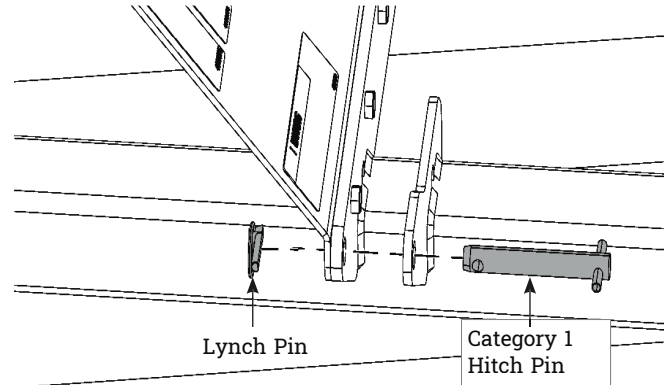
Loosely secure each A-Arm with bolt and lock nut.

7. Install the two top link bushings onto the A-Arms using the 5/8"-11 x 3 1/2" hex bolts and 5/8"-11 nylon lock nuts. Tighten lock nuts until they are snug tight.



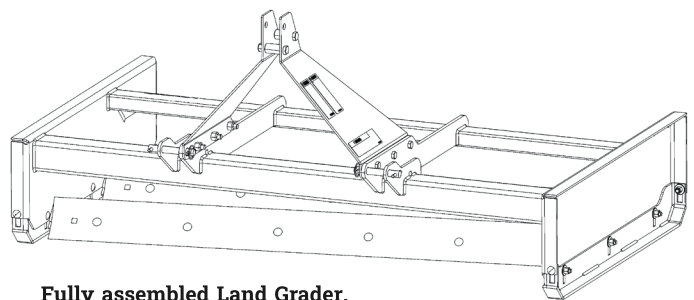
Align bushings and secure with hex bolts and lock nuts.

8. Tighten all lock nuts on the A-Arm bolts until they are snug tight.
9. Insert the Category 1 hitch pins through Land Grader main hitch braces and A-Arms.



Insert Category 1 Hitch Pin. Secure with Lynch Pin.

10. Check that the A-Arms are aligned with one another, then tighten all lock nuts to proper torque specifications (See Torque Specifications on Page 8).
11. Your Land Grader is now fully assembled and ready for use.



Fully assembled Land Grader.

LAND GRADER ASSEMBLY INSTRUCTIONS

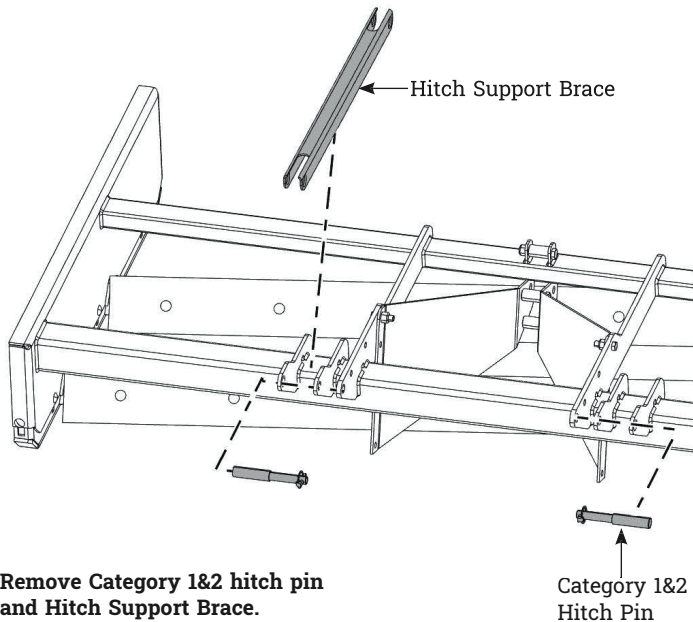
8' (96") LAND GRADER ASSEMBLY

Your Land Grader ships with the A-Arms and Hitch Support Brace secured flat to the Land Grader frame. The bottom of each A-Arm is bolted to the main hitch brace. Follow the assembly steps below before attempting to use the implement.

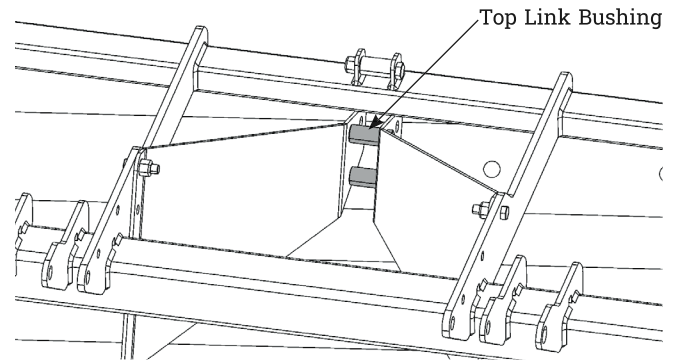
WARNING

- Assemble implement on level ground.
- Wear appropriate personal protective gear.
- Watch for possible pinch points and crushing hazards.

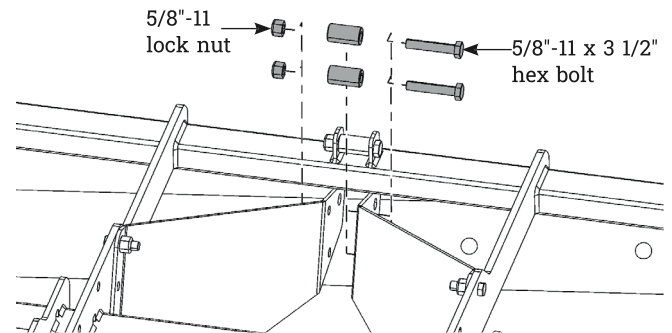
1. Cut the zip tie securing the Hitch Support Brace to Land Grader frame. Discard zip tie and cardboard padding.
2. Remove the Category 1&2 hitch pin securing the other end of the Hitch Support Brace. Set Hitch Support Brace and Category 1&2 hitch pin aside.
3. Remove the other Category 1&2 hitch pin and set aside.



4. The two top link bushings ship bolted to the top of the A-Arms. Loosen the 5/8"-11 x 3 1/2" hex bolt and 5/8"-11 nylon lock nut securing the bushings to the A-Arms. Remove the hardware and bushings and set aside.

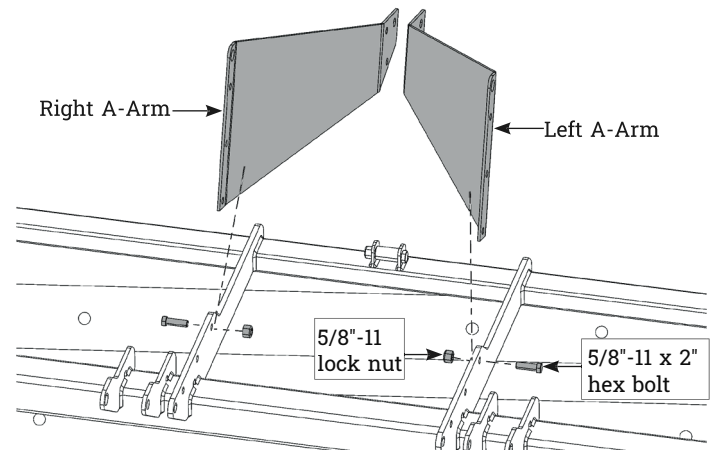


Top link bushings ship bolted to A-Arms.



Remove lock nuts, hex bolts, and top link bushings.

5. Loosen and remove the two 5/8"-11 x 2" hex bolts securing A-Arms to Land Grader main hitch brace and lift each A-Arm away from the frame.

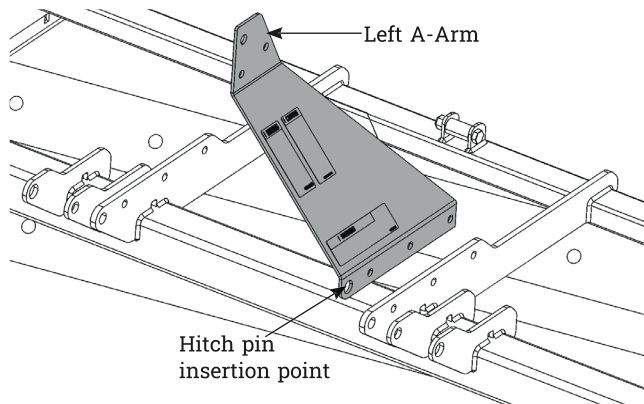


Remove lock nuts, hex bolts, and A-Arms.

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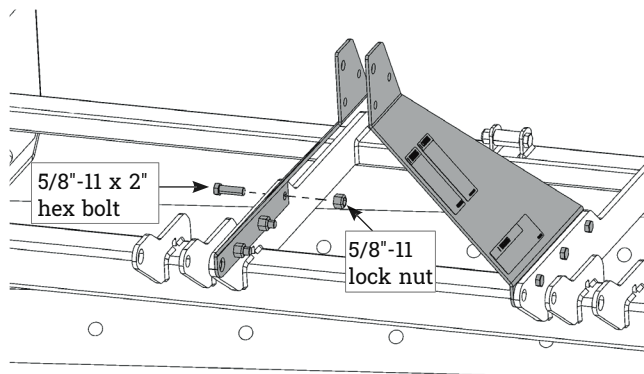
LAND GRADER ASSEMBLY INSTRUCTIONS

- Each A-Arm connects to the Land Grader main hitch brace with three 5/8"-11 x 2" hex bolts secured with 5/8"-11 nylon lock nuts (six bolts and nuts total for both A-Arms). Align the bolt holes of one A-Arm with bolt holes on the inside of the main hitch brace. The forwardmost bottom connection point should align with the insertion point for the Category 1&2 hitch pin. The two vertical bolt holes on the top of the A-Arm should face forward.



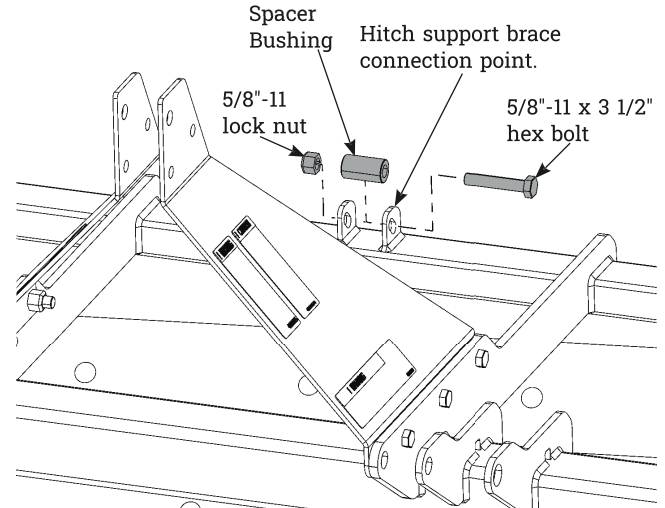
Align A-Arm with Land Grader frame.

- Insert a 5/8"-11 x 2" bolt from the supplied hardware kit through the three bolt holes. Secure each bolt with a 5/8"-11 nylon lock nut (Do not fully tighten the bolts and lock nuts at this time).
- Repeat Step 6 and 7 for the second A-Arm.



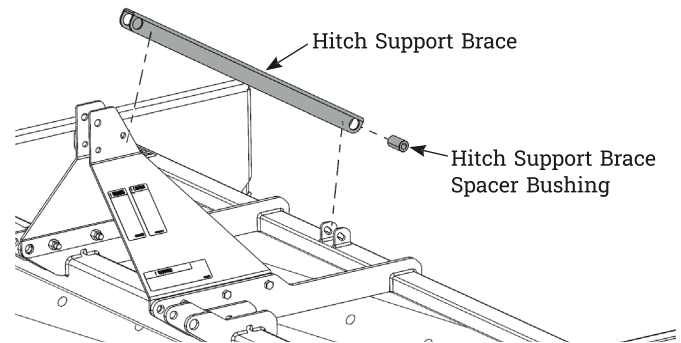
Loosely secure each A-Arm with bolt and lock nut.

- Remove the 5/8"-11 x 3 1/2" hex bolt and the spacer bushing from the hitch support brace attachment point located on the center support tube of the Land Grader frame and set hardware aside.



Remove lock nut, hex bolt, and spacer bushing.

- Align the spacer bushing from Step 9 with the bolt holes on one end of the Hitch Support Brace.
- Align the bolt holes of the Hitch Support Brace and spacer bushing with the attachment point located on the center support tube of the Land Grader frame. (Ensure the curved edge of the Hitch Support Brace faces down).



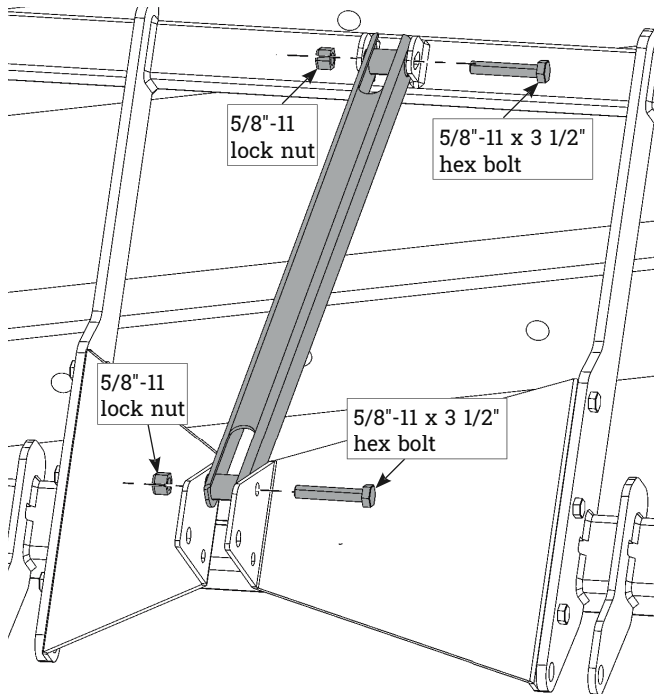
Align spacer bushing with Hitch Support Brace.

- Insert a 5/8"-11 x 3 1/2" hex bolt through the hitch support brace attachment point, Hitch Support Brace, and spacer bushing. Secure with 5/8"-11 lock nut (Do not fully tighten the bolt and lock nut at this time).
- Align an A-Arm spacer bushing from Step 4 with the bolt holes on the other end of the Hitch Support Brace.

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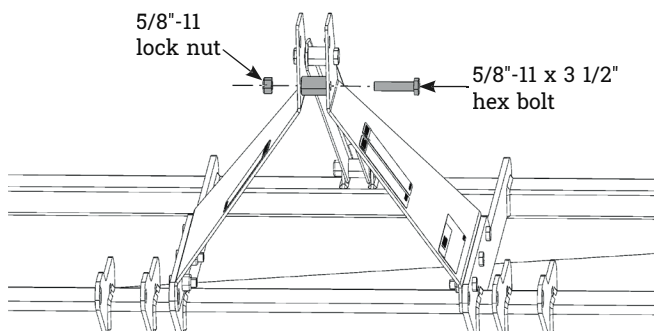
LAND GRADER ASSEMBLY INSTRUCTIONS

14. Align the bolt holes of the Hitch Support Brace and spacer bushing with A-Arm bolt holes, then insert a 5/8"-11 x 3 1/2" hex bolt through the A-Arm, Hitch Support Brace, and spacer bushing. Secure the bolt with 5/8"-11 nylon lock nut. (Do not fully tighten the bolt and lock nut at this time).



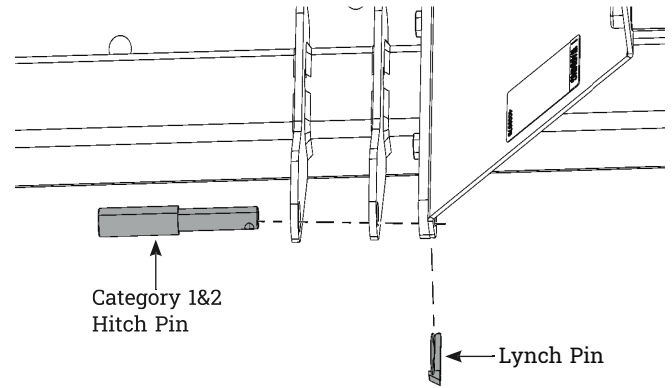
Secure Hitch Support Brace and spacer bushings with hex bolt and lock nuts.

15. Install the second spacer bushing from Step 4 into the lower bolt holes at the top of the A-Arms. This spacer bushing serves as a quick hitch attachment point and connects to the A-Arms with a 5/8"-11 x 3 1/2" hex bolt secured with a 5/8"-11 nylon lock nut (Tighten lock nut until it is snug tight).



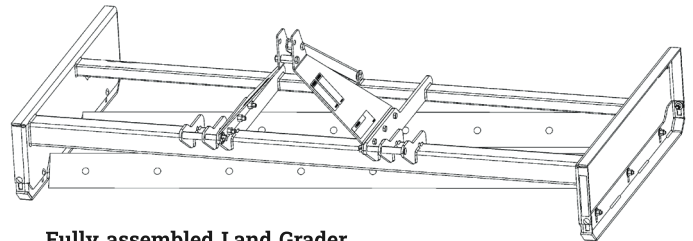
Align bushing and secure with hex bolt and lock nut.

16. Tighten all lock nuts on the Hitch Support Brace and A-Arm bolts until they are snug tight.
17. Insert the Category 1&2 hitch pins through Land Grader frame and A-Arms and secure with lynch pins.



Insert Category 1&2 Hitch Pin. Secure with Lynch Pin.

18. Check that the A-Arms are aligned with one another, then tighten all lock nuts to proper torque specifications (See Torque Specifications on Page 8).
19. Your Land Grader is now fully assembled and ready for use.



Fully assembled Land Grader.

TORQUE SPECIFICATIONS

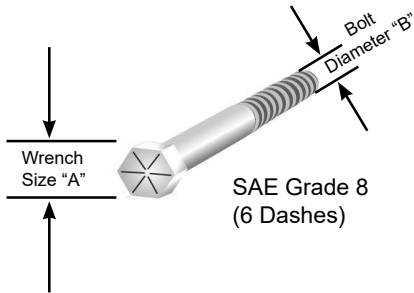
AMERICAN Bolt Head Markings



SAE Grade 2
(No Dashes)



SAE Grade 5
(3 Dashes)

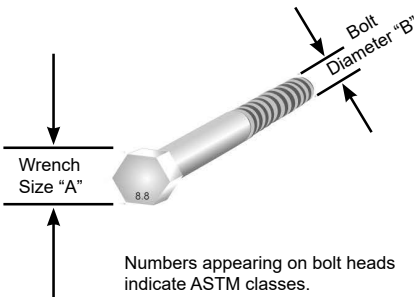


SAE Grade 8
(6 Dashes)

Proper torque for American fasteners used on manufactured implement.
Recommended Torque in Foot Pounds (Newton Meters).*

WRENCH SIZE (IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 -20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 -24 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 -18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 -24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 -16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 -24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 -14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 -20 UNF	36 (49)	55 (75)	78 (106)
3/4	1/2 -13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 -20 UNF	55 (75)	85 (115)	120 (163)
7/8	9/16 -12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 -18 UNF	79 (107)	122 (165)	172 (233)
15/16	5/8 -11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 -18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 -10 UNC	144(195)	266 (360)	376 (509)
1-1/8	3/4 -16 UNF	192 (260)	297 (406)	420 (569)
1-5/16	7/8 -9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 -14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1-8 UNC	250 (339)	644 (873)	909 (1232)
1-1/2	1 -12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1-14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 -7 UNC	354 (480)	795 (1077)	1288 (1745)
1-11/16	1-1/8 -12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 -7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 -12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 -6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 -12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 -6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 -12 UNF	979 (1327)	2194 (2973)	3557 (4820)

METRIC



Numbers appearing on bolt heads indicate ASTM classes.

Proper torque for metric fasteners used on manufacturer implement.
Recommended Torque in Foot Pounds (Newton Meters).*

WRENCH SIZE (mm) "A"	BOLT DIA. (mm) "B"	ASTM 4.6	ASTM 8.8	ASTM 9.8	ASTM 10.9
8	5	1.8 (2.4)		5.1 (6.9)	6.5 (8.8)
10	6	3 (4)		8.7 (12)	11.1 (15)
13	8	7.3 (10)		21.1 (29)	27 (37)
16	10	14.5 (20)		42 (57)	53 (72)
18	12	25 (34)	74 (100)	73 (99)	93 (126)
21	14	40 (54)	118 (160)	116 (157)	148 (201)
24	16	62 (84)	167 (226)	181 (245)	230 (312)
30	20	122 (165)	325 (440)		449 (608)
33	22		443 (600)		611 (828)
36	24	211 (286)	563 (763)		778 (1054)
31	27		821 (1112)		138(1542)
46	30	418 (566)	1119 (1516)		1547(2096)

*Use 75% of the specified torque value for plated fasteners. Use 85% of the specified torque values for lubricated fasteners.