

Installation Instructions

HD PLOW WING KIT 16021510

EX PLOW WING KIT 16021610



WARNING

Stay clear of plow's cutting edge while moving the plow wings. Maximum over-the-road width 102", exceeding this width may result in a traffic violation.

Adding wings will increase the weight of the plow, it is the operator's responsibility to verify vehicle's weight ratings are not exceeded.

Fold back the plow wings for transportation purposes only.

Damage to vehicle may occur when plowing with plow wings in the folded back position.

Before you begin:

It is recommended to assemble wings to a plow that is equipped with a new or nearly new cutting edge.

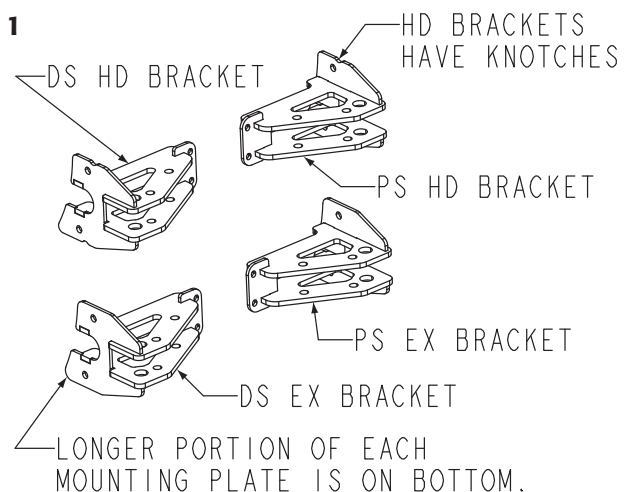
Verify you have received all of the required parts.

If plow already has bracket mounting holes in the end ribs skip to step 3. Otherwise, start at step 1.

1. Locate **passenger's side** mount bracket and place

it on the **driver's side** of the plow as shown and mark the position of the two 17/32" holes. Make sure the curved surface of the mount bracket is flush with the front of the rib. Repeat this step using the **driver's side** mount bracket as a template on the **passenger's side** of the plow. See figure 1 & 2.

Fig. 1



—continued inside

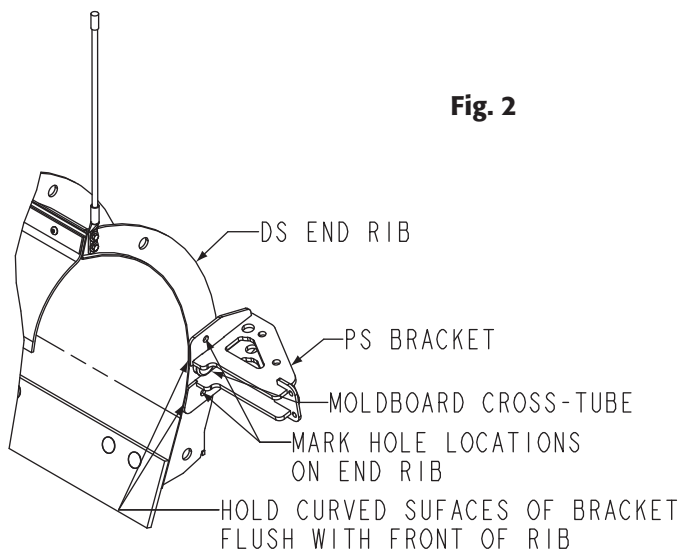


Fig. 2

- 2.** Drill two 17/32" holes in each end rib in the positions marked in step 1.
- 3.** Assemble each mount bracket to the plow by first attaching the bracket to the plow's cross-tube with one u-bolt and two nuts supplied. Do not tighten at this time.
- 4.** Bolt each mounting bracket to the end ribs using two 1/2-13 x 1.5" bolts, 1/2" flat washers, and lock nuts supplied. The head of the bolts must be on the outside of the plow blade in order for the wing to assemble properly. Tighten the four mounting bolts making sure the front of each bracket is flush with the front of each rib. See figure 3.

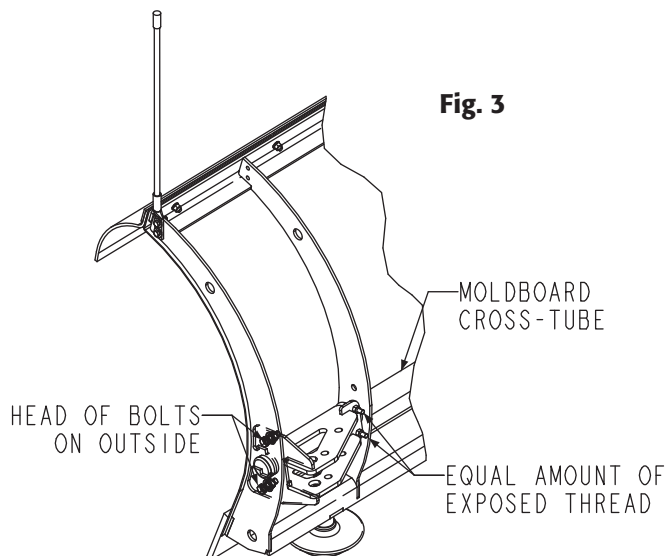


Fig. 3

5. Tighten each u-bolt. Make sure that the u-bolt has an equal amount of threads exposed on each side. This will ensure that the wing will not interfere with the u-bolt when it is in the stowed position.

6. Lift plow and carefully place a board under each end of the cutting edge. Lower the plow securely onto the boards.

7. Assemble the plow wing assemblies into the mounting brackets using 1" clevis pin and 3/16" lynch pin supplied.

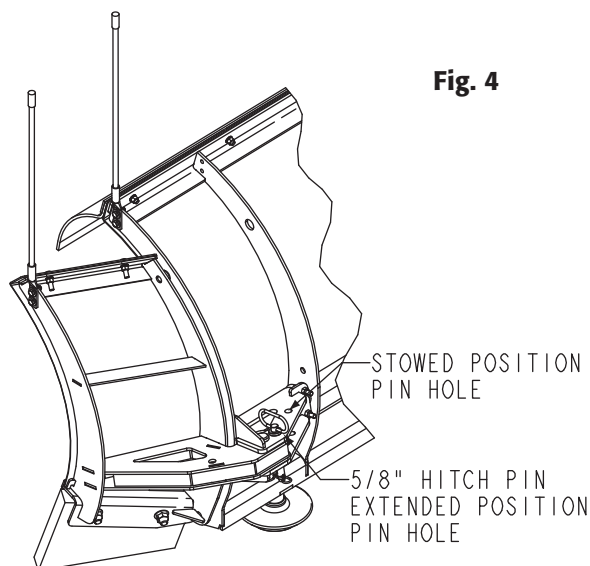
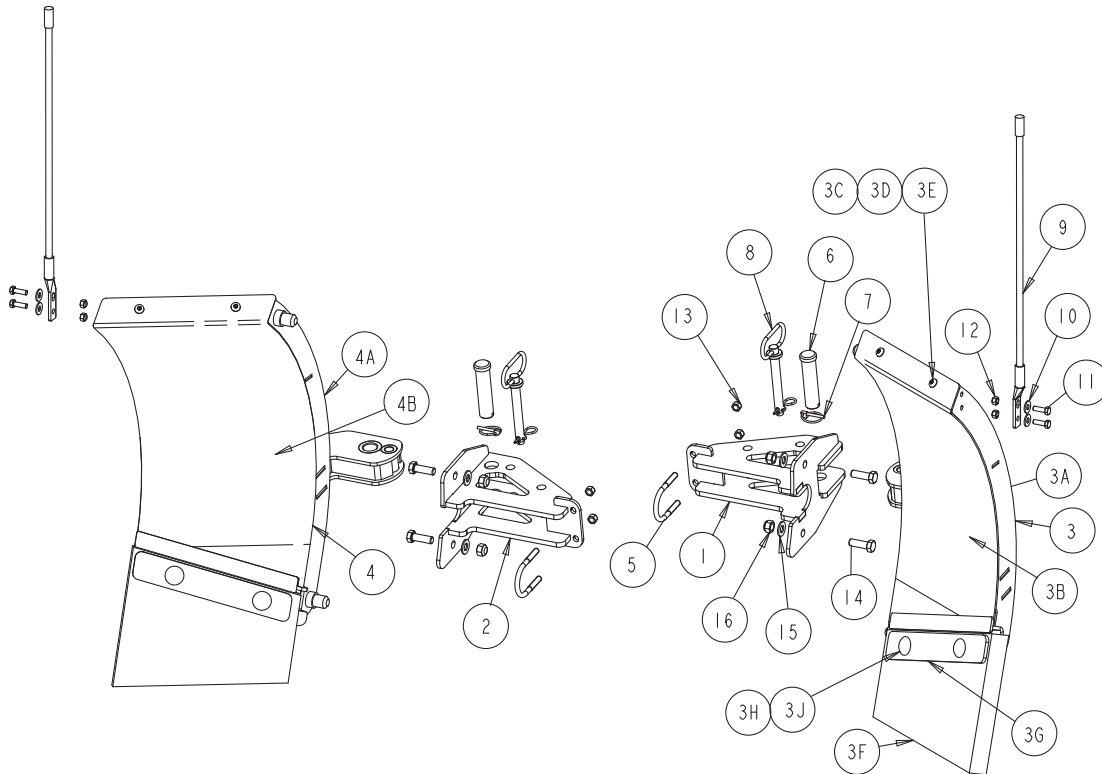


Fig. 4

8. Verify the wings will rotate from the stowed position to the extended position. In each position assemble a 5/8" hitch pin into the appropriate holes. It may be required to remove the end plugs from the moldboard cross-tube to get the wings into the fully extended position.

9. Assemble the markers to each wing assembly using two 5/16 bolts, washers and lock nuts supplied.






16021610 EX Wing Kit Parts

ITEM	PART NO.	QTY.	DESCRIPTION
1	16221620	1	Mount Bracket, DS EX Wing
2	16221630	1	Mount Bracket, PS EX Wing
3	16221640	1	Wing Assembly, DS EX Plow
3A	16221642	1	Frame Weldment, DS EX Wing
3B	16221644	1	Skin, DS EX Wing, SST
3C	-	2	Screw, Hex Socket Bhcs, 3/6-16x1.50, SST
3D	-	2	Washer, Lock Rhs-3/8 SST
3E	-	2	Nut, 3/8-16 Hex SST
3F	16221646	1	Edge, Cutting, Plow Wing
3G	16221648	1	Bar, Clamp, Cutting Edge
3H	-	2	Bolt, Rhsqn, 5/8-11x3 Gr5 ZN
3J	-	2	Nut, Serrated Flange 5/8-11 ZN
4	16221650	1	Wing Assembly, PS EX Plow
4A	16221652	1	Frame Weldment, PS EX Wing
4B	16221654	1	Skin, PS EX Wing, SST
3C	-	2	Screw, Hex Socket Bhcs, 3/6-16x1.50, SST
3D	-	2	Washer, Lock Rhs-3/8 SST
3E	-	2	Nut, 3/8-16 Hex SST
3F	16221646	1	Edge, Cutting, Plow Wing
3G	16221648	1	Bar, Clamp, Cutting Edge
3H	-	2	Bolt, Rhsqn, 5/8-11x3 Gr5 ZN
3J	-	2	Nut, Serrated Flange 5/8-11 ZN
N/S	16221656	1	Hardware Kit, Cutting Edge
3H	-	4	Bolt, Rhsqn, 5/8-11x3 Gr5 ZN
3J	-	4	Nut, Serrated Flange 5/8-11 ZN
N/S	16221658	2	Hardware Kit, Wing Skin
3C	-	2	Screw, Hex Socket Bhcs, 3/6-16x1.50, SST
3D	-	2	Washer, Lock Rhs-3/8 ST
3E	-	2	Nut, 3/8-16 Hex ST
N/S	16122100	1	Blade Guide Kit (pair)
9	-	2	Marker, Blade Guide
10	-	4	Washer, 5/16 USS Flat, ZN
11	-	4	Screw, Cap Hex 5/16-18 X 1 Gr5 ZN
12	-	4	Nut, Nylock 5/16-18 ZN
N/S	16221660	2	Hardware Kit, Plow Wings (all items below)
5	16221662	1	U-Bolt, Round, Wing Bracket
6	16221664	1	Pin, Clevis, Plow Wings
7	16221666	1	Pin, 3/16 Lynch
8	16221668	1	Hitch Pin, w/ Cotter, ZN
N/S	16221670	2	Hardware Bag, Plow Wings (all items below)
10	-	2	Washer, 5/16 USS Flat, ZN
11	-	2	Screw, Cap Hex 5/16-18 X 1 Gr5 ZN
12	-	2	Nut, Nylock 5/16-18 ZN
13	-	2	Nut, Nylock 3/8-16 X 7/16 ZN
14	-	2	Screw, Hex Head Cap, 1/2-13x1.5, Gr.5, ZN
15	-	2	Washer, Flat 1/2 Sae ZN
16	-	2	Nut, Nylock 1/2-13 ZN

16021510 HD Wing Kit Parts

ITEM	PART NO.	QTY.	DESCRIPTION
1	16221520	1	Mount Bracket, DS HD Wing
2	16221530	1	Mount Bracket, PS HD Wing
3	16221540	1	Wing Assembly, DS HD Plow
3A	16221542	1	Frame Weldment, DS HS Wing
3B	16221544	1	Skin, DS HD Wing, SST
3C	-	2	Screw, Hex Socket Bhcs, 3/6-16x1.50, SST
3D	-	2	Washer, Lock Rhs-3/8 SST
3E	-	2	Nut, 3/8-16 Hex SST
3F	16221646	1	Edge, Cutting, Plow Wing
3G	16221648	1	Bar, Clamp, Cutting Edge
3H	-	2	Bolt, Rhsqn, 5/8-11x3 Gr5 ZN
3J	-	2	Nut, Serrated Flange 5/8-11 ZN
4	16221550	1	Wing Assembly, PS HD Plow
4A	16221552	1	Frame Weldment, PS HD Wing
4B	16221554	1	Skin, PS HD Wing, SST
3C	-	2	Screw, Hex Socket Bhcs, 3/6-16x1.50, SST
3D	-	2	Washer, Lock Rhs-3/8 SST
3E	-	2	Nut, 3/8-16 Hex SST
3F	16221646	1	Edge, Cutting, Plow Wing
3G	16221648	1	Bar, Clamp, Cutting Edge
3H	-	2	Bolt, Rhsqn, 5/8-11x3 Gr5 ZN
3J	-	2	Nut, Serrated Flange 5/8-11 ZN
N/S	16221656	1	Hardware Kit, Cutting Edge
3H	-	4	Bolt, Rhsqn, 5/8-11x3 Gr5 ZN
3J	-	4	Nut, Serrated Flange 5/8-11 ZN
N/S	16221658	2	Hardware Kit, Wing Skin
3C	-	2	Screw, Hex Socket Bhcs, 3/6-16x1.50, SST
3D	-	2	Washer, Lock Rhs-3/8 SST
3E	-	2	Nut, 3/8-16 Hex SST
N/S	16122100	1	Blade Guide Kit (pair)
9	-	2	Marker, Blade Guide
10	-	4	Washer, 5/16 USS Flat, ZN
11	-	4	Screw, Cap Hex 5/16-18 X 1 Gr5 ZN
12	-	4	Nut, Nylock 5/16-18 ZN
N/S	16221660	2	Hardware Kit, Plow Wings (all items below)
5	16221662	1	U-Bolt, Round, Wing Bracket
6	16221664	1	Pin, Clevis, Plow Wings
7	16221666	1	Pin, 3/16 Lynch
8	16221668	1	Hitch Pin, w/ Cotter, ZN
N/S	16221670	2	Hardware Bag, Plow Wings (all items below)
10	-	2	Washer, 5/16 USS Flat, ZN
11	-	2	Screw, Cap Hex 5/16-18 X 1 Gr5 ZN
12	-	2	Nut, Nylock 5/16-18 ZN
13	-	2	Nut, Nylock 3/8-16 X 7/16 ZN
14	-	2	Screw, Hex Head Cap, 1/2-13x1.5, Gr.5, ZN
15	-	2	Washer, Flat 1/2 Sae ZN
16	-	2	Nut, Nylock 1/2-13 Zinc

Recommended Fastener Torque Chart (ft.-lb.)			
Size	 SAE Grade 2	 SAE Grade 5	 SAE Grade 8
1/4-20	6	9	13
5/16-18	11	18	28
3/8-16	19	31	46
3/8-24	24	46	68
7/16-14	30	50	75
1/2-13	45	75	115
9/16-12	66	110	165
5/8-11	93	150	225
3/4-10	150	250	370
7/8-9	150	378	591
1-8	220	583	893

Metric Grade 8.8 (ft.-lb.)			
Size	Torque	Size	Torque
M6	7	M12	60
M8	17	M14	95
M10	35	M16	155

These torque values apply to fasteners except those noted in the instruction.

WARNING

- DO NOT under any circumstances disable, remove or relocate any sensors or components related to the operation of the air bags.
- Always follow the vehicle manufacturers' recommendations relating to snowplow installation.
- To comply with Federal Regulations and to assure a safe vehicle, the Front Gross Axle Weight Rating (FGAWR), Rear Gross Axle Weight Rating (RGAWR), and the Gross Vehicle Weight Rating (GAWR) must not be exceeded at any time.
- Due to the variety of equipment that can be installed on this vehicle, it is necessary to verify that the Front Gross Axle Weight Rating (FGAWR), Rear Gross Axle Weight Rating (RGAWR), and the Gross Vehicle Weight Rating (GAWR) are not exceeded at any time. This may require weighing the vehicle and adding ballast as necessary. It may also limit payload capacity of the vehicle. It is the operator's responsibility to verify that these ratings are not exceeded.

CAUTION

- Read all instructions prior to assembly
- It is critical that all fasteners be properly torqued for safe plow operation – see chart above.
- Fasteners should be retorqued after 5-8 hours of plow use

FULL ONE-YEAR WARRANTY

Manufacturer will repair, or at manufacturer's discretion will replace any part of this snowplow which proves to be defective in workmanship or material under normal use for a period of one year from the date of delivery to the original purchaser. Any cost incurred in returning the product to the supplier is the responsibility of the consumer.

EXCLUSIONS

Manufacturer shall not be liable for special, incidental, or consequential damages, or for damages resulting from lack of necessary maintenance, from misuse, abuse, acts of God, or alteration of the product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.