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A DIV. OF NORTHERN STAR INDUSTRIES, INC.  
P.O. BOX 788 IRON MOUNTAIN, MICHIGAN 49801

# **BLADE WING EXTENSION OPTION KIT INSTALLATION INSTRUCTIONS**

**Kit Number:  
MSC08042**

**WARNING**

Many newer trucks are equipped with air bags. DO NOT under any circumstances disable or remove or relocate any sensors or other components related to the operation of the air bags.

**WARNING**

Always follow the vehicle manufacturer's recommendations relating to snowplow installation. For recommended vehicle models refer to the Boss Snowplow Application Chart and Selection Guide.

**WARNING**

Vehicles equipped with air bags are designed such that the air bags will be activated in a frontal collision equivalent to hitting a solid barrier (such as a wall) at approximately 14 mph or more, or, roughly speaking, a frontal perpendicular collision with a parked car or truck of similar size at approximately 28 mph or more. Careless or high speed driving while plowing snow, which results in vehicle decelerations equivalent to or greater than the air bag deployment threshold described above, would deploy the air bag.

**WARNING**

Read this manual carefully before using Blade Wing Extensions.

**WARNING**

Keep all body parts away from mating areas when attaching and detaching Blade Wing Extensions.

**WARNING**

**ALWAYS** detach Blade Wing Extensions before transporting plow.

**WARNING**

When transporting, position plow so as not to block vision or plow headlights.

**WARNING**

DO NOT change blade position when traveling.

**WARNING**

DO NOT exceed 40 mph when transporting plow.

**WARNING**

DO NOT exceed 14 mph when plowing.

**WARNING**

Always lower blade when vehicle is not in use.

**WARNING**

Make sure plow is properly attached before moving vehicle.

## Blade Wing Extension Option Kit Installation Procedure

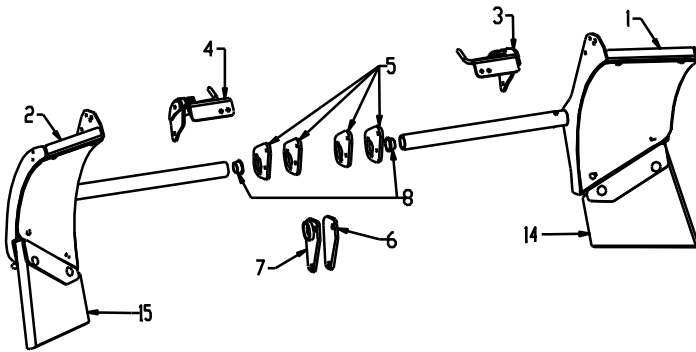


Figure 1. Blade Wing Parts **G10353**

ITEM #	QTY.	PART #	DESCRIPTION
1	1	BAL08008	DRIVER SIDE BLADE WING
2	1	BAR08018	PASSENGER SIDE BLADE WING
3	1	BAL08009	DRIVER SIDE SPRING PIN BRACKET
4	1	BAR08019	PASSENGER SIDE SPRING PIN BRACKET
5	4	BAX08035	PLOW RIB BRACKET
6	1	BAL08029	DRIVER SIDE TRIP-EDGE BRACKET
7	1	BAR08039	PASSENGER SIDE TRIP-EDGE ATTACH BRACKET
8	1	MSC08040	TUBE PLUG
9	10	HDW01728	1/2"-13 X 1-1/2" HHCS
10	10	HDW01748	1/2"-13 NYLON LOCK NUT
11	2	HDW05576	3/8"-16 X 1-1/4" CARRIAGE BOLT
12	2	HDW01720	3/8"-16 NYLON LOCK NUT
13	4	HDW01733	3/8" FLAT WASHER
14	1	BAL08017	DRIVER SIDE CUTTING EDGE
15	1	BAR08027	PASSENGER SIDE CUTTING EDGE

**Note:** This instruction manual is to be used for the installation of the Blade Wing Extension Option Kit **MSC08042** on BOSS plows, not including the Standard Duty Trip-Edge or 10' models.

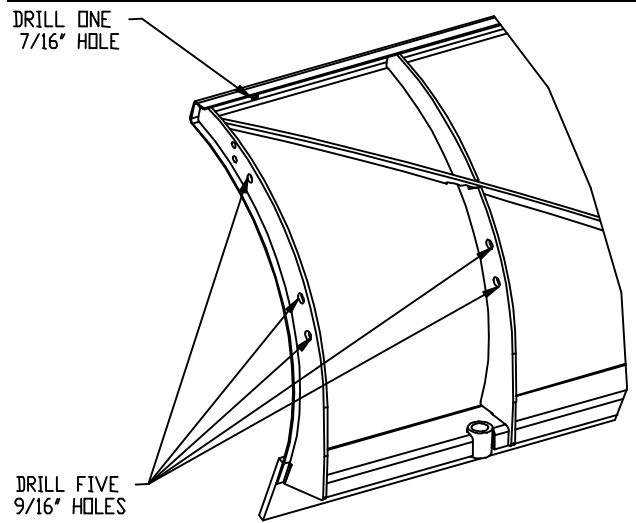


Figure 2. Drilled Hole Locations (8'0" Straight Blade) **G10354**

- 1) Place plow in storage position detached from vehicle with coupler tower rotated forward.
- 2) On Driver Side of plow, measure, mark, and drill one 7/16" diameter hole in Blade Top. See Figure 10.
- 3) Use provided template (see inserts) to mark three 9/16" diameter holes on Outside Plow Rib. Drill top 9/16" hole only. See Figure 2.
- 4) Mount Driver Side Spring Bracket (3) to plow using one 1/2"-13 X 1-1/2" HHCS (9), one 1/2"-13 Nylon Lock Nut (10), one 3/8"-16 X 1-1/4" Carriage Bolt (11), and one 3/8" -16 Nylon Lock Nut (12). Tighten fasteners. See Figure 3.

**Note:** Use 3/8" Flat Washers (13) to shim between Driver Side Spring Pin Bracket (3) and top of blade if necessary.

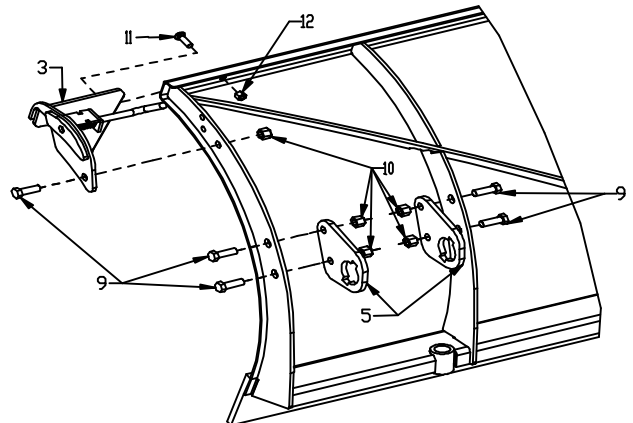


Figure 3. Mount Bracket Locations (Straight Blade) **G10355**

## Blade Wing Extension Option Kit Installation Procedure

- 5) Clamp Plow Rib Bracket (5) to inside of Outside Plow Rib. See Figure 3.
- 6) Pull back Spring Pin and rotate upward into lock position.
- 7) Skip to step 17 if installing on 7'6" or 8'0" Super Duty Trip-Edge
- 8) Insert Driver Side Blade Wing (1) into first Plow Rib Bracket (5).
- 9) Insert second Plow Rib Bracket (5) onto Blade Wing Tube.
- 10) Slide Driver Side Blade Wing (1) in until Attach Pin passes through first Plow Rib Bracket (5). See Figure 4.
- 11) Rotate Driver Side Blade Wing (1) until profile lines up with moldboard. Engage Spring Pin through hole corresponding to plow type. See Figure 6. Position Driver Side Blade Wing (1) so it's inside rib is parallel with Outside Plow Rib and Driver Side Cutting Edge (14) is contacting ground. Adjust Driver Side Cutting Edge (14) as necessary. See Figure 8.
- 12) Push second Plow Rib Bracket (5) against 2<sup>nd</sup> Plow Rib and clamp into place. See Figure 4.
- 13) Mark and drill two 9/16" holes in 2<sup>nd</sup> Plow Rib using Plow Rib Bracket (5) holes.
- 14) Drill remaining 9/16" holes in Outside Plow Rib.
- 15) Attach Plow Rib Brackets (5) to Outside and 2<sup>nd</sup> Plow Rib using four 1/2"-13 X 1-1/2" HHCS (9) and four 1/2"-13 Nylon Lock Nuts (10). See Figure 3. Tighten fasteners.

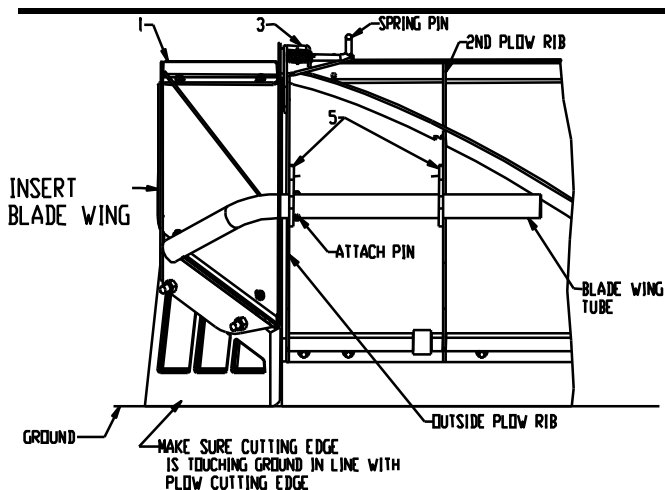


Figure 4. Blade Wing Extension Assembly

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- 16) Attach and detach Driver Side Blade Wing (1) several times to ensure proper fit (See steps 10 & 11). Attach plow to truck and determine if all cutting edges are contacting ground. If not, loosen fasteners, adjust to proper orientation, and re-tighten. Skip to step 20.
- 17) If installing on 7'6" Super Duty Trip Edge, Blade Wing Tube must be cut off to avoid interference with Pushframe Attachment Bar. Cut tube parallel 20 1/4" from inside rib of Driver Side Blade Wing (1). See Figure 6.
- 18) Insert Driver Side Blade Wing (1) into first Plow Rib Bracket (5).
- 19) Attach Driver Side Trip Edge Bracket (7) using existing 3/4"-10 X 2" HHCS and 3/4"-10 Nylon Lock Nuts. See Figure 4. Insert tube from Driver Side Blade Wing (1) into Driver Side Trip Edge Bracket (6). Rotate forward and engage Spring Pin through corresponding hole in Driver Side Blade Wing (1). Make sure Driver Side Blade Wing (1) is aligned properly and tighten fasteners. Execute step 16 before continuing.

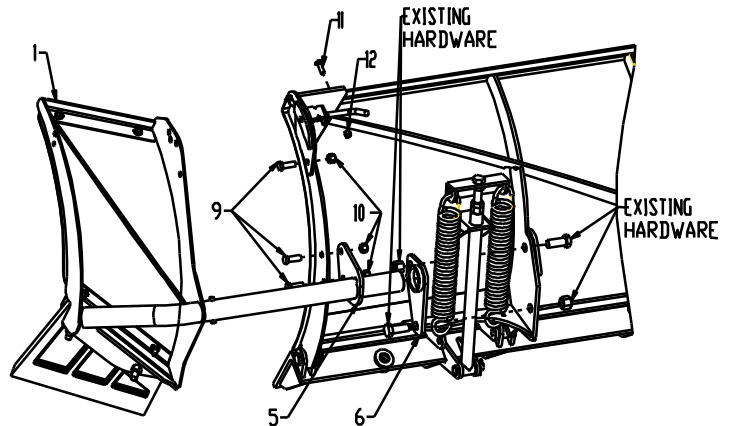


Figure 5. Trip Edge Bracket Installation

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**Blade Wing Extension Option Kit Installation Procedure**

20) Make sure all fasteners are tightened. DO NOT OVER TIGHTEN. See bolt torque guide located in this manual.

21) Repeat steps 2-20 for Passenger Side.

22) Attach plow to truck. Make sure plow sits level and all cutting edges are contacting ground.

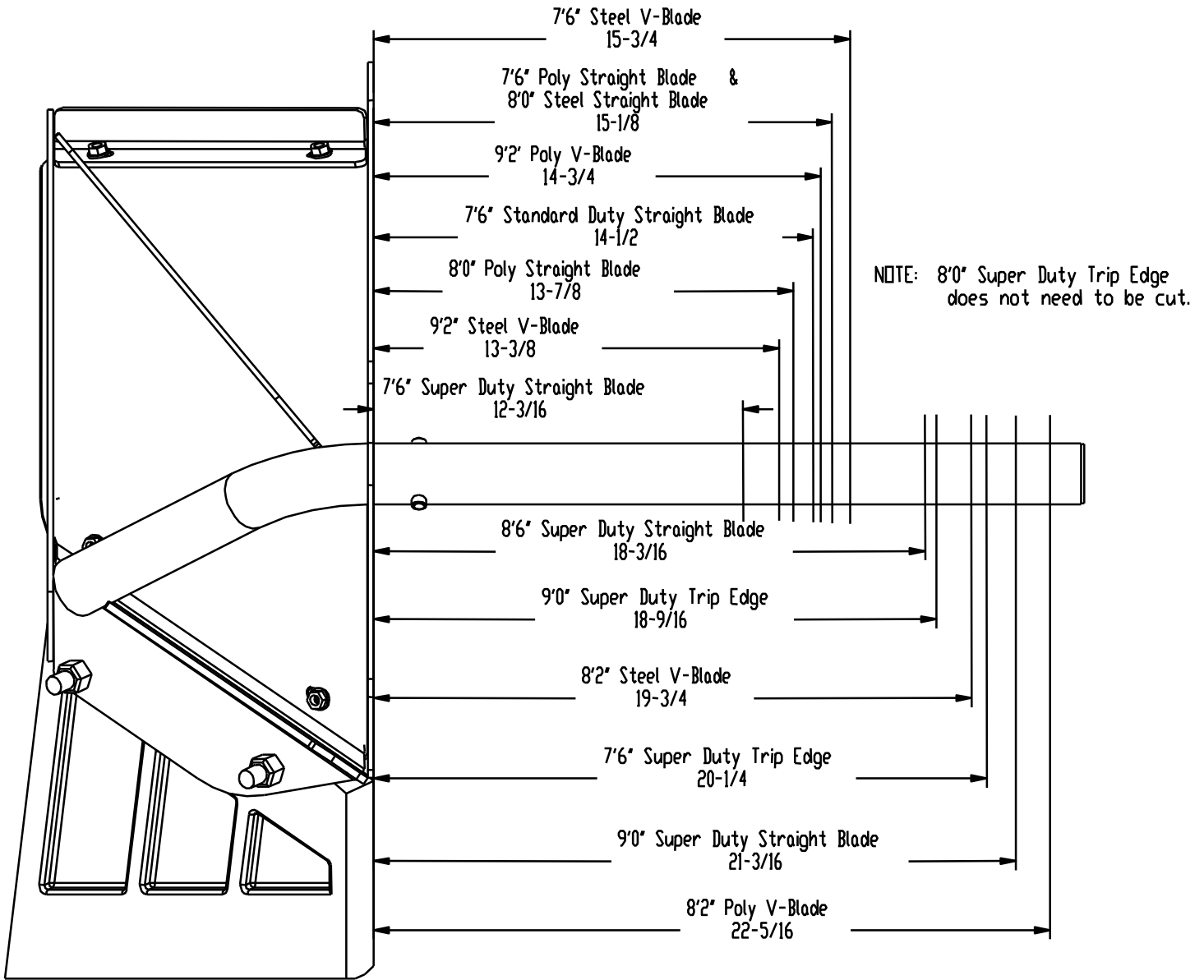
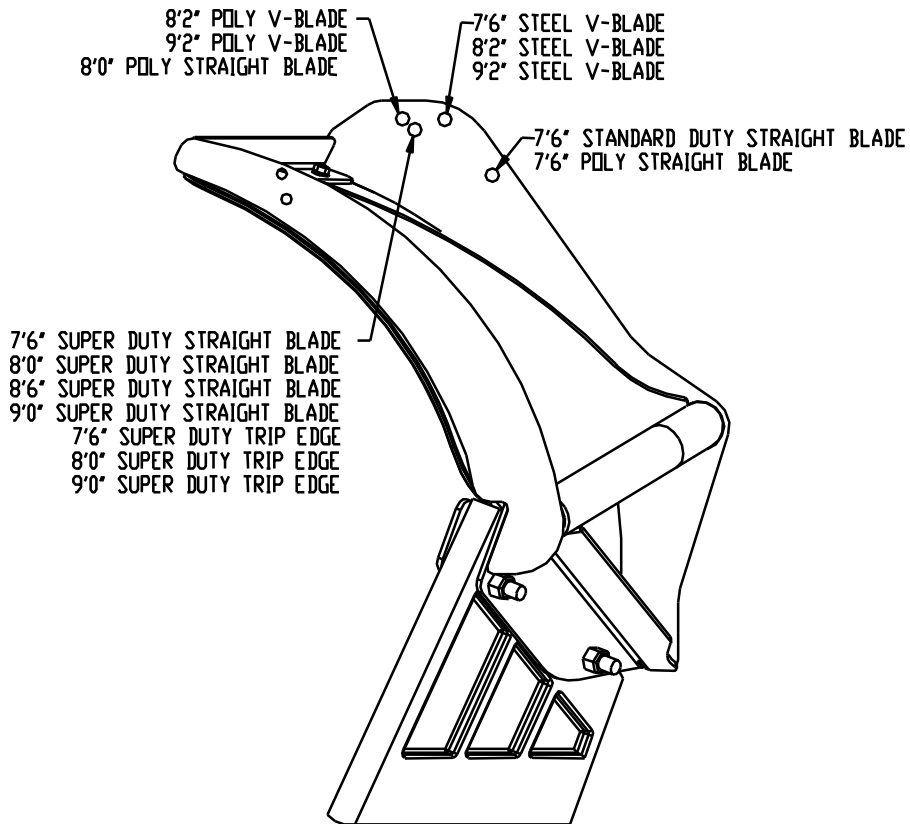


Figure 6. Blade Wing Tube cut locations

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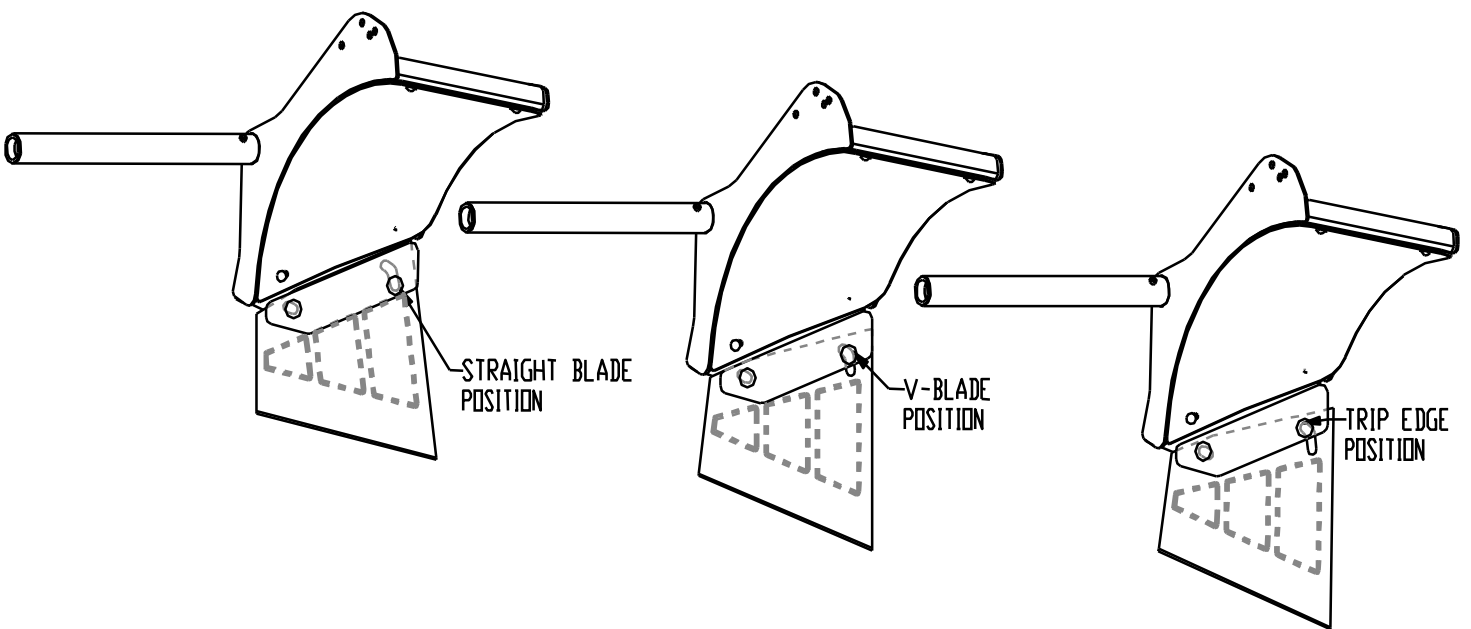
23) **This step is optional.** After installation is complete, Blade Wing Tube can be shortened by marking and cutting end of tube to 1/2" beyond inside of second Plow Rib Bracket (5). See Figure 6 for reference measurements. Tube Plug (8) must be inserted in end of Blade Wing Tube following cut to prevent corrosion.

**Blade Wing Extension Option Kit Installation Procedure**



**Figure 7.** Individual Blade Spring Pin Location

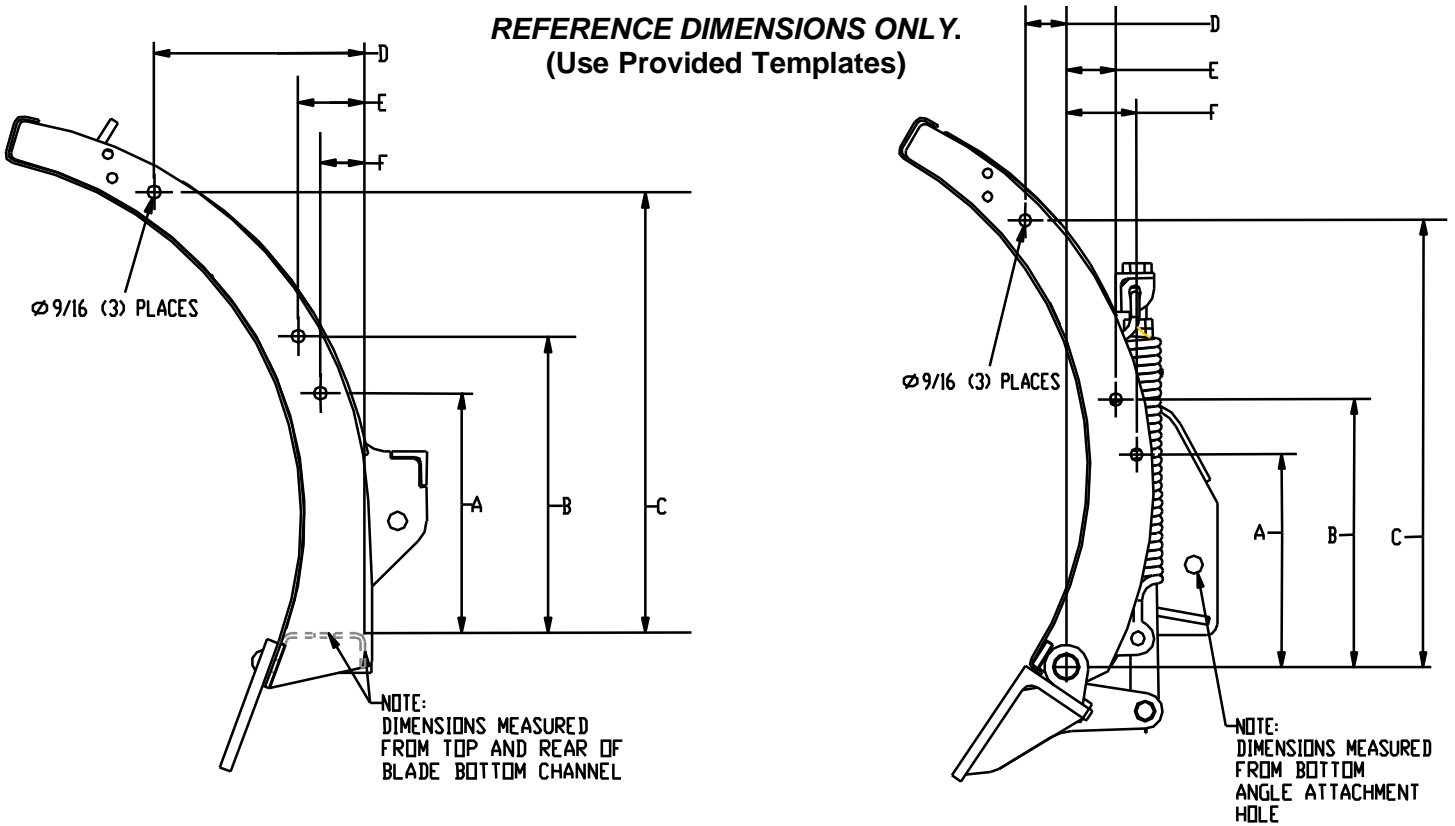
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**Figure 8.** Cutting Edge Adjustment

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**Blade Wing Extension Option Kit Installation Procedure**



PLOW SIZE	TYPE	A	B	C	D	E	F
7'6" STANDARD	STEEL STRAIGHT	10 5/16	13 7/16	17 19/32	5 1/8	1 9/16	19/32
7'6" SUPER	STEEL STRAIGHT	10 9/16	13 1/16	19 13/32	9 1/32	2 7/8	1 29/32
8'0" SUPER	STEEL STRAIGHT	10 9/16	13 1/16	19 13/32	9 1/32	2 7/8	1 29/32
8'6" SUPER	STEEL STRAIGHT	10 9/16	13 1/16	19 13/32	9 1/32	2 7/8	1 29/32
9'0" SUPER	STEEL STRAIGHT	10 9/16	13 1/16	19 13/32	9 1/32	2 7/8	1 29/32
7'6" SUPER	POLY STRAIGHT	9 7/8	12 3/8	16 13/32	6	2 7/32	1 9/32
8'0" SUPER	POLY STRAIGHT	10 1/16	12 9/16	19 1/32	9 29/32	2 13/16	1 7/8
7'6"	STEEL V	9 3/4	12 1/4	20 3/8	3 23/32	9/16	3/8
8'2"	STEEL V	9 3/4	12 1/4	20 3/8	3 23/32	9/16	3/8
9'2"	STEEL V	9 3/4	12 1/4	20 3/8	3 23/32	9/16	3/8
8'2"	POLY V	8 7/16	10 31/32	19 9/16	5 17/32	3/4	7/32
9'2"	POLY V	8 7/16	10 31/32	19 9/16	5 17/32	3/4	7/32
7'6" SUPER	TRIP EDGE	9 11/16	12 3/16	20 5/16	1 7/8	2 1/4	3 1/4
8'0" SUPER	TRIP EDGE	9 11/16	12 3/16	20 5/16	1 7/8	2 1/4	3 1/4
9'0" SUPER	TRIP EDGE	9 11/16	12 3/16	20 5/16	1 7/8	2 1/4	3 1/4

**Figure 9. Plow Rib Drilled Hole Reference Measurements**

**G10361 & G10362**

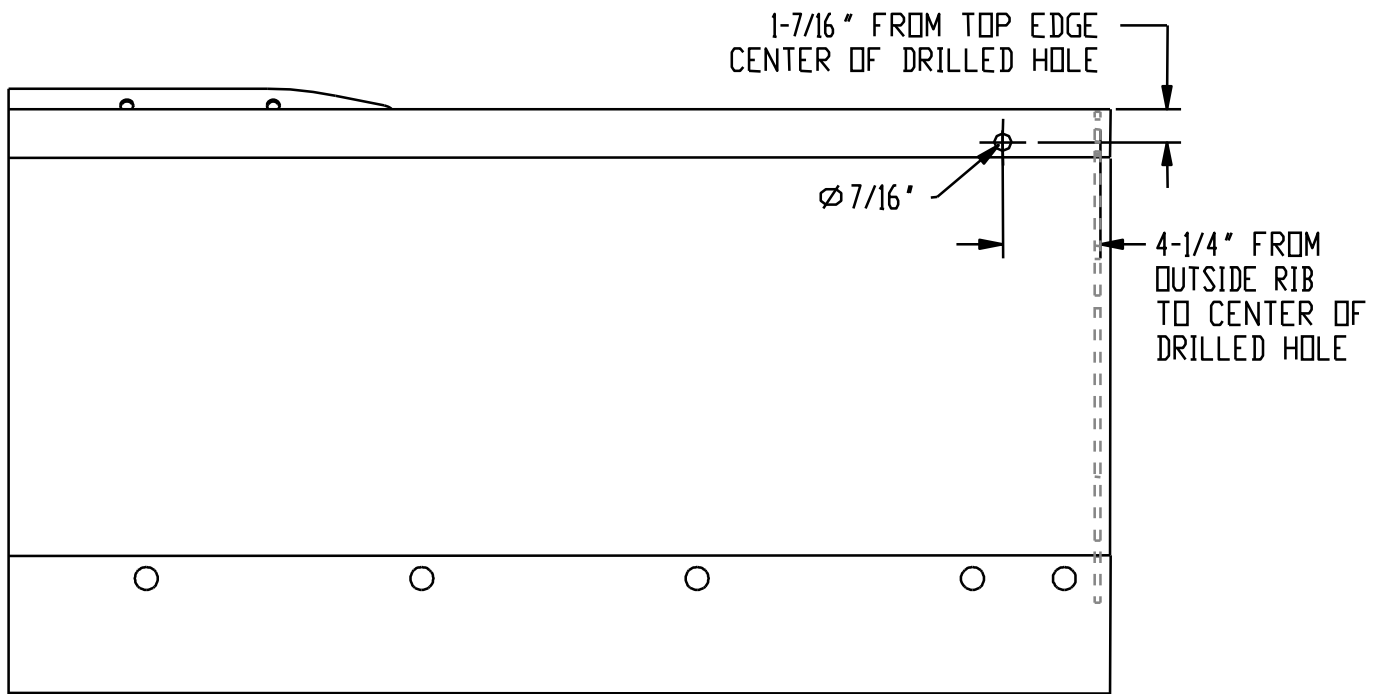


Figure 10. Blade Top Drilled Hole Measurements (ALL PLOW TYPES EXCEPT POLY-V'S. POLY-V HOLES ARE PRE-CUT) G10363

## GUIDE TO RECOMMENDED ASSEMBLY TORQUE

All Torque Values Are In Foot-Pounds (Ft.-Lb.)

DIA./PITCH	CLASS 10.9	GRADE 5	GRADE 8
1/4 - 20		6	9
5/16 - 18		14	19
3/8 - 16		23	33
7/16 - 14		38	53
1/2 - 13		56	80
9/16 - 12		82	116
5/8 - 11		113	159
3/4 - 10		201	283
M10-1.5	49		
M12-1.75	86		

\* The torque values listed above are based on dry, coated bolts, variables such as oil, or other lubrications may appreciably alter these values and must be taken into consideration.

**NOTE:** IT IS IMPORTANT THAT ALL FASTENERS BE PROPERLY TORQUED TO ASSURE A SAFE OPERATING PLOW.