



## 2004 Assembly & Operation Manual

Blizzard® Power Plow® Snowplow Models 810 & 8611

### Introduction

Congratulations on purchasing the most advanced snowplow available! The Blizzard Power Plow snowplow is clearing new trails for innovative design, rugged durability, quality craftsmanship and superior performance. Our exclusive products are manufactured and tested in Michigan's Upper Peninsula, the snow capital of the Midwest. With an annual snowfall averaging over 250," we couldn't imagine building snow removal products anywhere else!

Your Blizzard Power Plow snowplow is equipped with versatile features designed for years of dependable service. The hydraulic draw latch mounting system positively aligns the plow for fast installation or removal. 12" (24" on the 8611) expanding wings automatically transform a compact 8' (8'-6") blade into a massive 10' (11'-3") machine. Also, the independent wings can pivot forward to form our 9'-3" (9'-10") BucketBlade™ position. Now you can carry more snow even further. Safety features include full moldboard trip action, enclosed hydraulics and cylinder pressure relief.

To ensure years of optimum snowplow performance, review the contents of this manual. It contains assembly information, detailed diagrams, complete parts listings, maintenance guidelines and troubleshooting tips.

Should you need additional information, contact your local Blizzard Power Plow snowplow dealer. Their knowledgeable staff is well informed on the latest Power Plow snowplow information. They are also your source for complete replacement parts, technical assistance and all service repairs.

Comments, suggestions or concerns? Address all correspondence to:

**Blizzard Corporation Customer Service Department** 95 Airpark Boulevard Calumet, MI 49913

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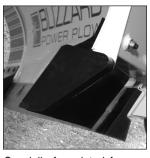
### Warranties

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## **Snowplow Accessories**

All of the accessories pictured below are currently offered for your snowplow. See your local authorized Blizzard dealer for pricing and availability. Visit www.blizzardplows.com to view new snowplow accessories and the latest Blizzard snowplow wearables.

See page 25 for additional Power Plow snowplow accessories.



Polyurethane Moldboard & Wing **Cutting Edges (with Hardware)** P/N 61536 (810) P/N 61539 (8611)

Durable and long lasting, the Power Plow polyurethane moldboard and wing cutting edges will keep you plowing longer and safer!

Specially formulated for snowplowing applications, Blizzard poly edges resist gouging, provide superior wear life and effectively reduce plowing noise. Ideal for all plowing conditions. Edges are shipped with mounting hardware.



## **Touch Pad Control Station** P/N 62141

Small and compact, the Power Plow snowplow touch pad control offers ergonomic comfort behind the wheel. Whether you hold it in your hand, strap it on your leg, wrap it around your seat or mount

it to the dashboard, this control will provide the flexibility you need! Control is shipped with a molded plastic leg tray, adjustable Velcro® strap and extra Velcro® patches. Measures 3-1/4" x 3-1/4" x 1-5/16".



## **Auxiliary Manifold for Central Hydraulics** P/N 60310

Get the response you demand from your plow with this easy-toinstall add-on and experience increased power and speed to all of the plow hydraulic functions! The

auxiliary manifold bolts right up to the existing manifold and pump bracket without any modifications needed. Manifold provides up to 30 gpm input (4000 psi max.) from the vehicle pump and 2-3 gpm output (2500 psi max.) to the existing hydraulic manifold. Hydraulic hoses, fittings and pump not included.



## **Blizzard Snowplows Emergency Parts Kit** P/N 63074

Be prepared for unexpected plow emergencies! This kit includes the most common replacement parts conveniently packaged in a small, durable plastic case. Custom foam

insert holds the following plow parts: Angle cylinder hose, lift cylinder hose, hitch pin w/hair pin cotter, angle cylinder clevis pin w/cotter, 90° angle cylinder fitting, solenoid, Power Hitch™ toggle switch, corrosion preventive compound (2 oz.) and 10A fuse. The compact case (13.5" x 9" x 3.3") allows for easy storage behind or under your seat.



## **Rubber Snow Deflector** P/N 61241

Plow safer and easier with our custom rubber snow deflector. This easy-to-install accessory keeps snow off of your windshield and in its place—on the ground! Rugged and durable, the 3/8"

thick, 2-ply construction is made to last. The one piece rubber design allows for wing clearance and provides optimum snow deflection. The deflector is shipped with a "Blizzard Power Plow" vinyl decal and complete mounting hardware.



## **Blizzard Snowplow Airfoil** P/N 52093

Help channel air flow to your truck radiator during the long haul over the road. Mounted front and center. our custom airfoil redirects air over the top of the blade and into the grill of your vehicle. Don't get stuck

on the side of the road! Keep trucking with this easy-to-install accessory. The airfoil is shipped with complete mounting hardware.

## **Warning!**

**WARNING:** 

**CAUTION:** 

Prior to operating your Power Plow snowplow, review the WARNING! label at the passenger's side rear of the moldboard (shown below).

Note: Read and understand all warnings indicated in this manual prior to operating the snowplow. Warnings and cautions in the manual are indicated by the icons shown to the left.

# ⚠ WARNING

- 1. Properly mount the snowplow prior to moving the vehicle.
- 2. To prevent accidental plow activation, turn the Power switch on the snowplow control to the "OFF" position when not in use.
- Stand clear of the attachment area when mounting the snowplow to the undercarriage and operating the Power Hitch Connect/Disconnect switch. Failure to do so may result in serious injury or death.
- 4. Securely position all mounting pins prior to operating your snowplow.
- 5. Do not position your body between the snowplow and the vehicle when servicing
- 6. Position the snowplow in such a manner as to not block your vision or plow lights while in transit.
- 7. Always travel with the wings fully retracted. Depending on local and state regulations, you may be exceeding the legal vehicle width when the wings are fully or partially extended.
- 8. Do not change the position of the snowplow while in transit.
- 9. Do not exceed 40 mph when transporting the snowplow.
- 10. Do not exceed 10 mph when plowing.
- 11. Always lower the snowplow when the vehicle is parked.
- 12. Vehicles equipped with air bags are designed to be activated in a frontal collision equivalent to hitting a solid object or barrier at approximately 14 mph or more.

## **△ WARNING**

Careless or high speed driving while plowing snow, which results in vehicle impact deceleration equivalent to or greater than the airbag deployment threshold described above, would deploy the airbag.

The Blizzard Power Plow snowplow is protected by U.S. Patents 5,899,007; 5,638,618 and 6,276,076 B1. Other patents pending

Do not exceed the (GVWR) **Gross Vehicle Weight Rating** or (GAWR) Gross Axle Weight Rating including the snowplow and ballast. Refer to your vehicle Owner's Manual for the proper weight ratings.

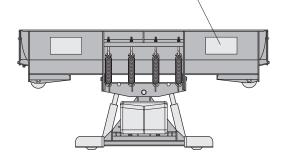
READ OWNER'S MANUAL THOROUGHLY PRIOR TO OPERATING  $\mathsf{PLOW}_{-}$ 



Calumet, MI 49913

BLZ 1005

Should the WARNING! label or any of the labels that came with your snowplow become hard to read or wear off, contact your local authorized Blizzard dealer for replacements.



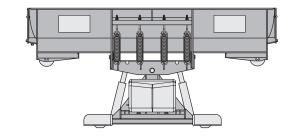
## **Snowplow Operation**

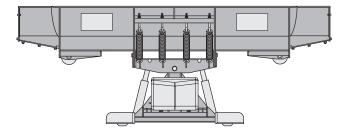
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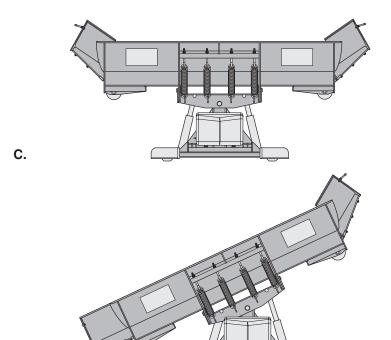
В.

D.

Your Blizzard Power Plow snowplow is the most advanced and versatile snowplow on the market. The easy-to-use controls allow you to automatically adjust the plow blade and wings into an infinite number of plowing positions. Review the illustrations below to determine the best position for your plowing needs.







### A. Compact Position (8' or 8'-6" Blade Width)

- · Primary position when transporting the snowplow
- · For use in heavy snow conditions with poor visibility, initial clearing and tight quarters
- · Ideal application: Residential driveways, small roads

## B. WidePass™ Position (10' or 11'-3" Blade Width)

- · Primary position for clearing large surfaces
- For use in light snow conditions with good visibility, final clearing and clean-up
- · Ideal application: Large parking lots, widening roadways

## C. BucketBlade™ Position (9'-3" or 9'-10" Blade Width)

- · Primary position for transporting snow
- · For use in initial clearing with decent visibility, transporting large volumes of snow, final clean-up
- · Ideal application: Roadway intersections

## D. WidePass™ Position Angled with Wing Forward

- · Primary position for accelerated angled plowing
- · For use in directional plowing, cornering, diverting snow away from objects or buildings
- · Ideal application: Plowing adjacent to buildings, driveway/road intersections

### \*\*\*\*\* IMPORTANT \*\*\*\*\*

To prevent premature failure of the power contactor (solenoid), initiate the plow function and return the rocker switch and/or joystick to its neutral or center position. DO NOT hold a rocker switch and/or joystick in any position that allows the pump to continuously run after the main blade or wing has reached its maximum degree of movement. This will reduce the useful life of the solenoid.

## **Assembly Instructions**

## **Unpacking & Inspection**

Your Blizzard Power Plow snowplow has been packaged to withstand transit and weather related damage. Fully inspect all components upon receipt of your plow. In the event of shipping damage or missing parts, immediately contact our Customer Service Department at 1-888-680-8600.

Begin unpacking and inspection in the following order:

- 1. Remove the shipping document from the end panel of the pallet wrap. Retain all documentation for your records.
- 2. All wood framing and polyethylene material should be removed from the pallet for easy access to the snowplow.
- 3. Due to the odd shaped components and size of several assembly parts, various cable ties and corrugated material are used for scratch resistance and package orientation. Please remove these items prior to assembly.
- 4. Place the main blade assembly on a flat, level surface.

Once you have inspected all parts and removed all packaging materials, your snowplow is ready to be fully assembled.

## Date of Purchase Dealer/Distributor Telephone Number Snowplow Serial Number Hydraulic Pump Serial Number

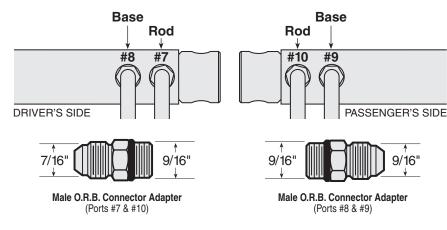
### Pallet Wrap End Panel

The tear-resistant, woven polyethylene pallet wrap contains a moisture barrier to help protect all packaged components and keep out the most inclement weather during shipping and storage. The end panel of the pallet cover contains important information regarding the snowplow model and the plow's serial number. Both of these numbers are given together. The first three (four) digits of the number indicated is always the plow model - 810 (or 8611) and the entire number is the serial number (Ex: 810-00001 or 8611-00001). The shipping document is also attached to the end panel. Be sure to retain this list for your records.



## **Moldboard & A-Frame Assembly**

 Begin the moldboard assembly by first removing each dust cap from both of the SLIDE BOX CYLINDERS located at the center/rear of the MOLDBOARD. Attach one 7/16"-20 x 9/16"-18 MALE O.R.B. CON-NECTOR to each of the retract ports (#7 & #10) and one 9/16"-18 x 9/16"-18 MALE O.R.B. CONNECTOR to each of the extend ports (#8 & #9). Review the diagram below. Note: All of the hydraulic adapters can be found packaged with the manifold assembly. Reference the table on page 21 for proper torque specifications.

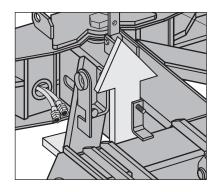


- 2. Connect the hoses to each of the hydraulic adapters on the cylinders. Ports #7 & #10 receive a 1/4" x 36" HYDRAULIC HOSE (P/N 60019). Note: Review the label on each hose for the appropriate part number. Ports #8 & #9 receive a 3/8" x 36" HYDRAULIC HOSE (P/N 60224).
- 3. Next, position the PIVOT BEAM and the A-FRAME, near the mount locations at the rear of the blade, between the two center support ribs. Place the right and left group of hydraulic hoses (connected to the slide box cylinders) through the 1-1/2" diameter rubber grommet openings in the front face of the pivot beam. See the diagram to the right.
- 4. Position the pivot beam between the two support ribs until the connecting points on the beam align with those on the plow. Insert one 3/4" DIA. x 3" CLEVIS PIN through each mounting hole and secure them with one 1/4" DIA. x 1-1/2" COTTER PIN.

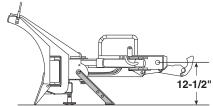
Note: Mount the kickstand to the end of the pivot beam (driver's side) using the 1/2"-13 x 4-1/2" bolt provided. The spring, bushing and lock nut locate on the inside of the pivot beam. Review the diagram to the right and on page 26. Upon installation, rotate the spring loaded kickstand clockwise until it locks into place. Adjust the foot on the stand arm so the height of the A-frame, at its mount points, is 12-1/2" to level ground. Tighten both of the 1/2"-13 top lock nuts on the kickstand.

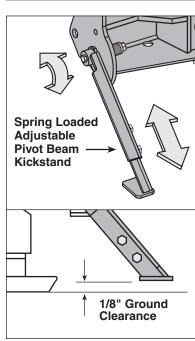
Note: To prevent the kickstand from hitting the ground before the snowplow cutting edges, causing stress on the kickstand lock pin, adjust the kickstand foot approximately 1/8" short of level ground. This procedure will provide clearance for the kickstand when the snowplow is lowered with the kickstand in the down position.

5. Position each ANGLE CYLINDER with the rod end of the cylinder in the pivot beam and the hydraulic hose port facing away from the

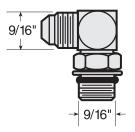


Feed each group of hoses (two per side) through the grommets in the pivot beam and up through the openings in the A-frame. Positioning the hoses through the pivot beam supports the hoses while the snowplow is in use and prevents them from dragging on the ground.





The kickstand mounts to the side of the pivot beam with one 1/2"-13 x 4-1/2" hex cap screw and top lock nut. To pivot the kickstand, simply pull the spring loaded leg out and rotate it until the pin locks into place. The kickstand also has an adjustable foot that can be moved to accommodate varying vehicle heights. Adjust the kickstand foot approximately 1/8" short of level ground. This will prevent the kickstand from hitting the ground before the plow cutting edges. The proper height of your snowplow mounting points to level ground should be set at 12-1/2".



90° Adjustable Elbow O.R.B. Adapter

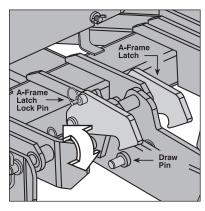


45° Adjustable Elbow O.R.B. Adapter



Male O.R.B. Connector Adapter

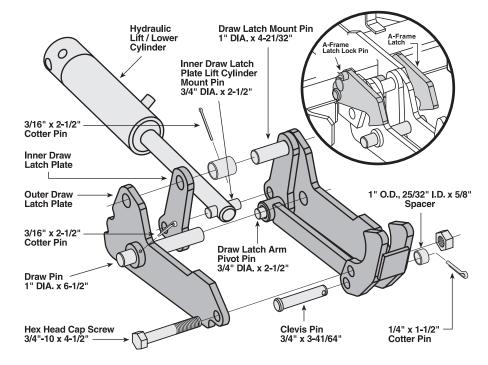
## **Draw Latch Assembly**



To mount the Power Plow snowplow, the A-frame latch should be lowered over the draw pin—this allows the draw latch to pull the plow into the undercarriage. Once the plow is safely attached to the undercarriage, rotate the A-frame latch counterclockwise until the lock pin snaps into place. The A-frame latch is only used to mount the plow. Do not allow the lock pin to set behind the pin catch hole in the raised position. The A-frame latch should always be locked in place when not in use.

A-frame. Secure the cylinder to the pivot beam with one 3/4" x 5" CLEVIS PIN and one 1/4" x 1-1/2" cotter pin. Extend each cylinder rod until the cylinder base mounting hole aligns with the hole on the A-frame angle cylinder bracket. At this point, insert another clevis pin and secure it with a cotter pin. Repeat the same installation for the opposite angle cylinder.

- 6. Remove each dust cap from both of the hydraulic angle cylinder ports and attach one 9/16"-18 x 9/16"-18 90° ADJUSTABLE ELBOW O.R.B. ADAPTER to each port. Each adapter should be angled toward the top of the moldboard. Connect one 3/8" x 24" (26" for 8611) hydraulic hose (P/N 60091 or 60223) to each angle cylinder adapter. Be careful not to overtighten the hose connections. Route both hoses over the TOP of each cylinder. This will prevent them from hanging or being pinched.
- 7. Next, remove both of the plastic dust caps from the HYDRAULIC LIFT CYLINDER ports. Attach one 9/16"-18 x 9/16"-18 45° ADJUST-ABLE ELBOW O.R.B. ADAPTER to the driver's side port (base end) and one 9/16"-18 x 9/16"-18 MALE O.R.B. CONNECTOR ADAPTER to the passenger's side port (rod end). Once the adapters have been installed on the cylinder, connect the hydraulic hoses. Note: Position the 45° fitting in the cylinder port such that the hoses install directly in the center of the A-frame access holes. A hose installed too close to the edge of the opening may work itself free with the operation of the lift cylinder and/or movement of the plow. The 45° adapter receives a 3/8" x 17" hydraulic hose (P/N 60273). Connect the 45° angle on the hose to the hydraulic adapter on the cylinder. The male connector adapter receives a 3/8" x 15" hydraulic hose (P/N 60274). Tighten the 45° end of the hose to the hydraulic adapter on the cylinder. Both hoses should be routed through the triangular openings in the A-frame.



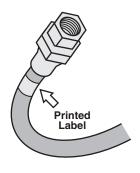
 Begin the draw latch installation by first removing the DRAW LATCH MOUNT PIN, SPACER & COTTER PIN from the assembly. By removing this pin, the INNER DRAW LATCH PLATES can swing free. Proceed to remove the INNER DRAW LATCH PLATE LIFT CYL. MOUNT PIN. Position the plates on either side of the lift/lower cylinder rod and insert the pin through the plates and cylinder rod. With the cylinder connected to the inner draw latch plates, rotate the draw latch assembly toward the draw latch mount holes on the A-frame. Align the holes in the outer draw latch plate with those of the inner draw latch plates and the A-frame. Note: The A-FRAME LATCH, located at the rear center of the A-frame, should be raised up to insert the draw latch mount pin. Pull the A-FRAME LATCH PULL PIN out and rotate the latch counterclockwise if it is locked into position. Secure the assembly to the A-frame by replacing the draw latch mount pin, spacer and cotter pin. Reset the A-frame latch so the A-frame latch pull pin locks into place.

Once you have completed the draw latch installation, proceed to assemble the manifold. The manifold, pump and coil harness have been joined together at the factory; however, the manifold contains several components that you will need to install prior to securing the assembly to the A-frame.

9. Each of the 8 HOSE PORTS on the HYDRAULIC MANIFOLD are covered with stretch wrap. Remove the wrap and install the appropriate fitting (illustrated below) in its respective port.

Note: All ports are identified by a stamped number on the manifold. The numbers also identify the hydraulic functions, which can be referenced on the label under the hydraulic pump and manifold cover (see illustration on page 8).

Note: The gray arrows shown on the manifold illustration below indicate the direction the 90° adapters should face to receive the hydraulic hoses.

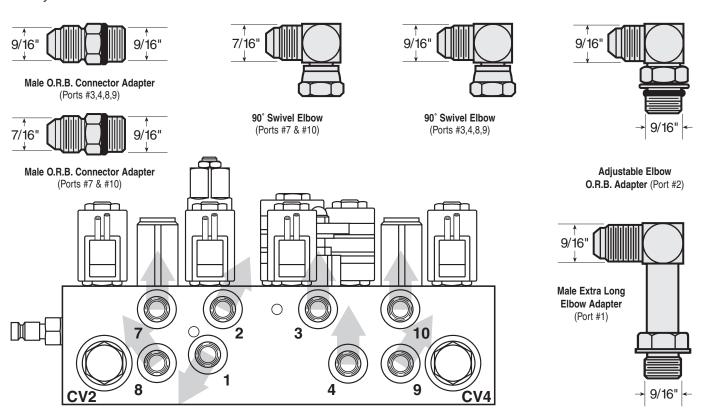


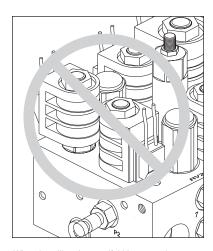
All of the hoses shipped with the snowplow contain a printed label (with a part number) applied to the hose. Install the following hoses to their respective ports on the manifold:

Hose P/N 60091 or 60223	Ports #1 & #2
Hose P/N 60273	Port #3
Hose P/N 60274	Port #4
Hose P/N 60019	Ports #7 & #10
Hose P/N 60224	Ports #8 & #9
Note: See diagram on page 8.	

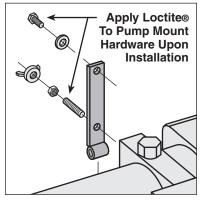
### **Installing The Manifold Adapters**

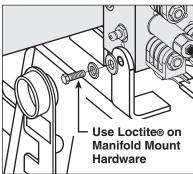
There are a total of 14 hydraulic adapters to install. All of the adapters can be found packaged with the manifold assembly. Remove the protective stretch wrap from the manifold in a clean area. DO NOT let any foreign objects enter into the open ports. The valves can become contaminated and greatly hinder the plow's performance. Review the table on page 21 for proper torque specifications.





When installing the manifold between the mount brackets on the A-frame, **DO NOT** handle the manifold by the coils. The solenoid cartridges can bend, causing them to stick when activated. Always carry the manifold by the sides of the aluminum block.





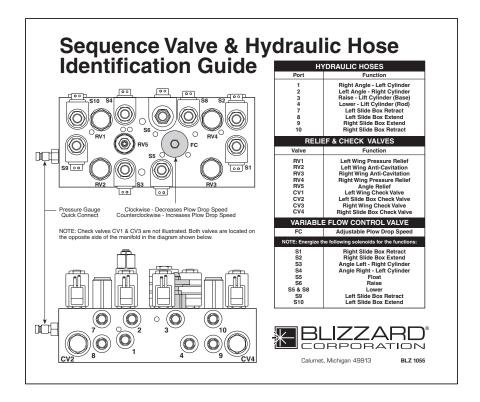
A medium strength threadlocker, such as Loctite® 242®, should be used to properly secure the mount hardware for the pump and manifold. This will help prevent the hardware from working free from vibration and plow use. Apply a liberal amount of threadlocker to both threaded fasteners and the threads in the pump (top diagram). The manifold receives two 3/8"-16 x 1-1/4" hex cap screws—one on each side of the A-frame. Likewise, use threadlocker on these fasteners and the tapped holes in the manifold (bottom diagram).

10. Next, align the mount holes in the pump with the holes in the hinged bracket, located on the A-frame. Note: To help facilitate the pump mount, first angle the hinged bracket as needed and tighten the bracket hardware, locking it in place.



CAUTION: When installing the manifold between the mount brackets on the A-frame, hold the manifold at the sides of the block. Never handle the manifold by coils. Doing so can cause a solenoid cartridge to bend, causing the cartridge to stick when activated.

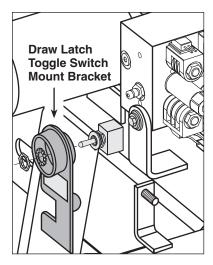
Secure one 3/8"-16 x 3/4" hex head cap screw and 3/8" flat washer through the top mount hole in the bracket and into the pump. Insert one 3/8"-16 x 1-3/4" threaded stud and 3/8"-16 jam nylon insert lock nut through the bottom mount hole in the bracket and into the pump. The threaded stud should bottom out in the pump. Note: A medium strength threadlocker, such as Loctite® 242® should be used on both of the pump mount fasteners. This will help prevent the fasteners from working free.



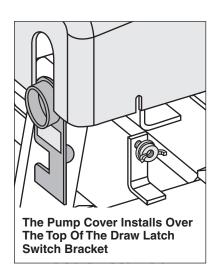
11. Once the pump and manifold assembly is in place, connect the hydraulic hoses to their respective adapters on the manifold. Review the label under the pump cover to identify which hoses connect to each port. Note: All hoses, except #1 & #2 (angle cylinders) should be routed through the triangular openings in the A-frame. Position these hoses over the A-frame angle and to their respective manifold ports. Note the positions for the rod- and base-end slide box hoses. The hoses that operate the retract functions (rod) of the cylinders are closest to the base of each cylinder. Likewise, the hoses that operate the extend functions (base) of the cylinders are closest to the rod of each cylinder. Review the diagram on page 5 and the hose installation list on page 7.

- 12. Next, secure the manifold to the A-frame. Remove both 3/8" flat washers, 3/8" split lock washers and 3/8"-16 x 1-1/4" hex head cap screws from the manifold and align the mount holes with the A-frame brackets. Properly replace and tighten all hardware. Note: A medium strength threadlocker, such as Loctite® 242® should be used to secure the manifold mount fasteners.
- 13. Hook each EXTENSION SPRING to the receiving holes located on the pivot beam and connect the opposite end of the spring to their respective SPADE BOLTS. Install the 5/8"-11 x 6-3/8" spade bolts through the EXTENSION SPRING MOUNTING ANGLE on the top rear of the blade. Secure each spade bolt by placing one 5/8" flat washer on the bolt and thread one 5/8"-11 nylon insert lock nut. Tighten each lock nut until a piece of paper can pass between the 3th & 4th coils on the spring.
- 14. Install the flexible BLADE GUIDES at each end of the moldboard. Insert the 5/16"-18 x 1" hex head cap screw through the holes at the top of the wing reinforcement rib. Tighten all screws using the nylon insert lock nuts provided.

Congratulations! You have successfully completed half of the installation. Don't quit now, you're nearly out of the garage!



The draw latch toggle switch installs through the rear of the bracket with the protective hood. Align the key washer with the slot cut in the bracket to prevent the switch from turning. Secure the switch with the hardware provided. Note: Use the square notch in the bracket (below the protective hood) to position the braided harness. Use another cable tie to hold the harness against the bracket.



To properly secure the pump and manifold cover on the A-frame, position the cover over the top of the protective hood on the draw latch switch mount bracket. Align the slots in the cover with the welded bolts on the A-frame bracketssecure the cover using three flanged wing nuts.

## **Electrical Assembly - Plow Harness**

- Begin the electrical assembly by connecting the RED POWER WIRE from the PLOW ELECTRICAL HARNESS to the PUMP motor terminal stud using the hardware provided on the pump.
- Place one 3/8" INTERNAL/EXTERNAL TOOTH LOCK WASHER, the BLACK GROUND WIRE (from the harness) and the RED GROUND WIRE on the COIL WIRE HARNESS (from the manifold) over the tapped hole on the pump and secure the ground using one 3/8"-16 x 3/4" hex head cap screw.
- 3. Remove the hex jam nut and external tooth lock washer from the POWER HITCH CONNECT/DISCONNECT TOGGLE SWITCH and insert it through the back of the mounting bracket on the A-frame. Align the notch in the key washer on the switch to the notch on the bracket. Replace the lock washer and jam nut and tighten until the switch is firmly in place. Next, attach the connector on the plow harness to the switch. Note: Use caution when making the connection. Switches can break if done forcefully.
- 4. Continue the harness installation by connecting the PLASTIC FEMALE ELECTRICAL CONNECTOR on the harness to the PLASTIC MALE ELECTRICAL CONNECTOR found on the coil wire harness.
- 5. Finalize the harness installation by positioning the wire harness braid in the notch on the switch bracket and secure it with a cable tie. Note: The DIODE LOOP HARNESS should be positioned inside of the pump cover.
- 6. To install the PUMP & MANIFOLD COVER, align the notches in the cover with the welded bolts on the A-frame brackets. Secure the cover with two 3/8" FLANGED WING NUTS. Verify the cover is positioned over the protective toggle switch hood. Pop the front of the cover on the threaded stud and secure it with the remaining wing nut.

Congratulations! You have just completed building the finest snowplow available! However, the vehicle wire harness still needs to be installed. That is the focus of the second half of the electrical assembly instruction.

## **Electrical Assembly - Vehicle Harness**



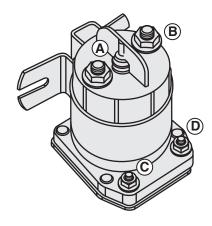
CAUTION: Always perform the vehicle wire harness assembly with the vehicle off and the keys out of the ignition. Use caution when testing the electrical wires for the vehicle's headlight functions.

- 1. Begin the installation of the electrical harness under the hood. Insert the WHITE POWER CONNECTOR & RED POWER WIRE (with FUSE) end of the harness through the driver's side fire wall access panel into the vehicle cab. Note: You may need to widen an opening or cut access to the cab interior to facilitate the assembly. Loosely position the remaining portion of the harness over the driver's side fender well and place the MOLDED RUBBER POWER CONNECTOR near the bumper. Note: Keep the plow and vehicle rubber power connector pins lubricated with a liberal amount of dielectric grease. Always replace the protective RUBBER WEATHER CAPS when the plow is disconnected from the vehicle.
- 2. Next, attach the POWER CONTACTOR (SOLENOID) to the driver's side wheel well or engine fan guard using two 12-14 x 3/4" hex washer self-drilling screws. Note: Some model vehicles provide mounting locations for accessory components. Always mount the solenoid with the terminals facing up. This will extend the useful life of the solenoid. Connect the 24" BLACK GROUND WIRE to either small terminal on the solenoid and attach the opposite end to the vehicle with one hex washer self-drilling screw. Locate the BROWN/WHITE PUMP SOLE-NOID ACTIVATION WIRE on the wire harness and position the eyelet over the remaining small terminal on the contactor. Secure it with the hardware provided on the solenoid.
- 3. Proceed to connect the BLACK VEHICLE WIRE HARNESS GROUND WIRE to the negative terminal on the vehicle's battery. Cut the wire to length and crimp a 3/8" DIA. END RING TERMINAL on the wire. It is also recommended that the ring terminal be soldered. Note: The harness should be secured to the vehicle prior to taking the necessary measurement. Measure the distance needed for the RED POWER WIRE to reach the solenoid and properly secure an end ring terminal to it. Connect the power wire to either large terminal on the solenoid.



CAUTION: Do not fasten the wire harness to areas that come in contact with moving engine parts or possess extreme heat. The harness could become tangled and/or melt causing electrical failure and vehicle damage.

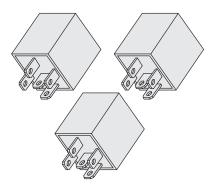
- 4. Attach and solder an end ring terminal to both ends of the remaining length of the red 4 gauge wire. Connect one end of the wire to the open terminal on the solenoid and the remaining end to the positive terminal on the battery.
- 5. With the vehicle harness secured to the truck, position the MAIN LIGHTING HARNESS such that both of the large, gray VEHICLE HEADLIGHT CONNECTORS are near the truck headlights and the smaller, black PLOW HEADLIGHT CONNECTORS are near the grill of the vehicle.



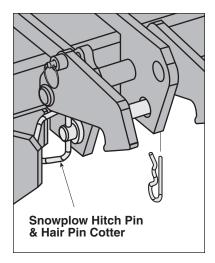
### Power Contactor (Solenoid)

There are four wires that need to be attached to the power contactor:

- (A) Red Power Battery Wire
- (B) Vehicle Wire Harness Red Power Wire
- (C) 24" Black Ground Wire
- (D) Brown/White Pump Solenoid Activation Wire



The vehicle wire harness is packaged with three 12V quick connect, sealed headlight relays. The relays install into the black receptacles located on the main lighting harness. Review the diagram on page 34.



In the event you should lose hydraulic power while snowplowing, raise the snowplow into a pile of snow and insert the emergency hitch pin provided with your plow. The pin will lock the plow in a temporary raised position until proper service can be performed to restore hydraulic power. Note: For clarity, the draw latch is not illustrated.

- 6. Plug the HEADLIGHT GROUND/RELAY (BLACK & GREEN/YELLOW) CONNECTOR, from the vehicle wire harness, into the connector on the main lighting harness. With the connection made, plug each HEADLIGHT RELAY into the receptacles. Securely mount the receptacles to the vehicle with the terminal wires facing down and the relays facing up. Installing the relays in this position will allow moisture to drain from the relay.
- 7. Next, remove the front directional light assembly on the driver's side of the vehicle. Feed the VIOLET, turn light wire and GRAY, run light wire from the main lighting harness through the opening in the directional light housing. At this point, use a test light or ohm meter to determine the proper wires in the vehicle's electrical system to splice into. Once you have identified the proper wires, position one end of the turn or run light wire into a SPLICE LOCK CONNECTOR provided. Attach the vehicle wire to the opposite side of the splice lock connector. Complete the splice by pinching both wires together and locking the connector. Repeat the splice procedure for the remaining wire. The passenger's side directional light assembly requires the same installation; however, only one wire, the PINK, turn light, needs to be spliced.
- 8. Connect the vehicle headlights to the main lighting harness using a HEADLIGHT ADAPTER KIT. Due to differences in the construction of the adapter kits, and the various make and model vehicles Blizzard snowplows are installed on, a headlight adapter kit is not packaged with your snowplow. Contact your local Blizzard dealer to obtain the appropriate adapter for your vehicle.
- 9. Begin the adapter kit installation by removing the existing vehicle head-light connector from the headlight. Attach the HEADLIGHT ADAPTER CONNECTOR to the existing vehicle headlight connector. Next, plug the BLACK, FIVE-PIN CONNECTOR on the headlight adapter into the gray, five-pin connector on the vehicle wire harness. Lastly, plug the HEADLIGHT ADAPTER CONNECTOR into the vehicle headlight receptacle. Note: If more than one plug is present, match the colors of each connector (ie gray to gray, black to black, Chevrolet daylight running is clear to gray). Repeat the installation for the opposite headlight.
- 10. Once the headlight adapter connections are completed, proceed to secure the braided harness to the vehicle. Safely route all harness lengths around the engine components and attach them to the vehicle with cable ties. Extend the PLOW HEADLIGHT CONNECTORS, from the main lighting harness, through the grill of the vehicle and position the HARNESS POWER PLUG and WEATHER CAP near the bumper. Cable tie the power plug to the vehicle bumper or tow hook to keep the harness from hanging too low.
- 11. Return to the driver's side cab interior to install the remainder of the vehicle wire harness. Connect the RED POWER WIRE (with 15 AMP FUSE) to a switched power source with a minimum of 15 amps. *Note:* The red power wire MUST be fused and switched on and off with ignition. Secure all loose wires under the dash.
- 12. Next, install the LIGHT TOWER. Position the tower arms into the receiving pockets located on the undercarriage. Each pocket has a lock pin that secures both light tower arms. Pull out and twist each

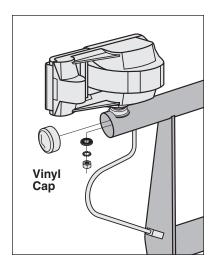
handle to temporarily unlock the pins. Place the light tower into the pockets and relock the pins.

See your local Blizzard dealer for complete installation instructions for your vehicle undercarriage.

- 13. Proceed to install the PLOW HEADLIGHTS. Align one HEADLIGHT BALL STUD MOUNT ADAPTER on the light tower tube with the mounting hole and insert the threaded stud through each. Secure the headlight with one 1/2" galvanized washer (neoprene facing up), one 7/16" external tooth lock washer and hex nut. Note: All snowplows are shipped with two BLACK VINYL CAPS that install at either end of the *light tower.* Connect the terminals from the plow lights to the terminals on the main lighting harness. Repeat the installation for the opposite headlight.
- 14. Next, position the ROCKER SWITCH/JOYSTICK CONTROL STATION on the front radius of the seat. Wrap the VELCRO® STRAP around the bench, through the 2" metal D-ring and fasten. Finally, connect the white power connector from the vehicle wire harness to the connector on the control station. The power switch should be in the "MIDDLE" or "OFF" position. Note: The operation of the draw latch can only be controlled when the power switch is located in the "UP" position and the "RAISE/LOWER" rocker switch is in the neutral or center position. See the diagram below.



This completes the electrical assembly installation for the vehicle wire harness and main lighting harness. You are now ready to perform all of the test functions on the snowplow.



The black vinyl caps provided with your snowplow install at each end of the light tower. Adjust the plow headlights as desired, secure each with hardware provided and finish the installation by capping the light tower ends.



Your Blizzard Power Plow snowplow will use approximately 4 quarts of Blizzard Rapid Action Hydraulic Oil. Blizzard hydraulic oil is also available by the case (P/N 63071), gallon (P/N 63072) or gallon case (P/N 63069). See your local authorized Blizzard dealer for price and availability.

## **Testing The Snowplow**

- 1. Fill the HYDRAULIC PUMP FLUID RESERVOIR with BLIZZARD SNOWPLOW RAPID ACTION HYDRAULIC OIL (P/N 63070) until it is approximately 3/4" from the top of the tank. Replace the cap on the reservoir. Proceed to remove the weather caps from each of the plow and vehicle wire harnesses and connect the plugs. Start the vehicle and turn the POWER SWITCH on the control station in the cab to the "ON" position. You now have power to the snowplow. Once all of the hydraulic functions have been executed, the system will have been filled with approximately four quarts of hydraulic oil.
- 2. To raise the POWER HITCH on the snowplow, turn the power switch on the control station to the "UP" or "ON" position. Push and hold the toggle switch on the A-frame upward into the "CONNECT" position. Notice the action of the fluid in the reservoir. By activating the initial hydraulic function, the fluid begins to fill the system. Push and hold the toggle switch in the "DISCONNECT" position, the Power Hitch will lower. Refill the reservoir until the fluid is approximately 3/4" from the top of the tank.
- 3. Position the vehicle such that the Power Hitch is below the push beam and the mounting points on the A-frame are in line with the mounting points on the undercarriage. Pull out the A-FRAME LATCH PIN and rotate the A-FRAME LATCH clockwise until the latch is resting on the DRAW PIN (See diagram on page 16). Move the snowplow in position by activating the Power Hitch connect switch and release.



WARNING: Always use caution when operating the Power Hitch CONNECT/DISCONNECT switch. Keep your hands and feet away from the operation of the Power Hitch and the main blade. The action of the Power Hitch moves the snow-plow in position for proper attachment to the vehicle. Failure to follow this caution may result in serious injury or death.

The Power Hitch will raise until it hits the push beam and the DRAW LATCH FINGERS will pull the plow into the vehicle. The mounting points on the plow and vehicle are now positively aligned. Rotate the A-frame latch counterclockwise until the latch is in the raised position. Note: The A-frame latch pin should always lock in place. Do not set the pin past the lock point on the A-frame. Insert the two HITCH PINS through the mounting holes on the A-frame and secure each with one hair pin cotter. The snowplow is now securely mounted to the vehicle.

4. Return to the interior of the vehicle. With the plow securely in place, you can now execute the remaining functions of the snowplow. The system power on the control station should be in the "ON" position. Next, raise the plow to its maximum height by pulling the joystick back (or down). Initiate the driver's side wing by pushing and holding the "LEFT WING EXTEND" rocker switch until the wing pivots forward. Notice the staggered pace the wing extends. The hydraulic fluid is filling the hose and replacing the air in the system.

Push and hold the "LEFT WING RETRACT" rocker switch to return the wing. Continue testing the remaining rocker switch functions. To lower the plow to the ground, push the joystick ahead (or up). Note: To set the "FLOAT" function on the plow, push and momentarily hold the joystick in the "RAISE" (up) position. The L.E.D. light will come on when the snowplow is in float mode. Initiate the driver's side wing by pushing and holding the "LEFT WING EXTEND" rocker switch until the wing pivots forward. Notice the staggered pace the wing extends. The hydraulic fluid is filling the hose and replacing the air in the system. Monitor the fluid level in the reservoir and fill to 3/4" from the top of the tank if needed. Also, look for any hydraulic fluid leaks around the manifold, pump, hydraulic hoses and all cylinders.

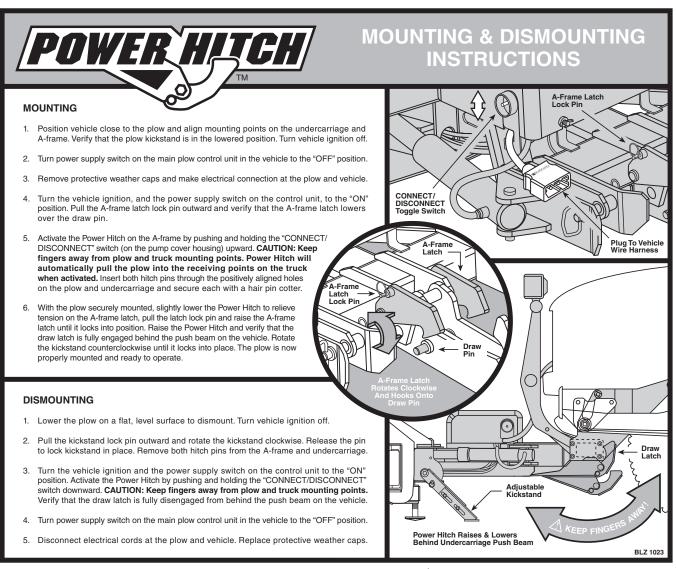
5. Lastly, check that the vehicle and plow headlights are in proper working condition including the turn signals. If necessary, adjust the plow headlight beams with the plow in the raised position.

Congratulations on a successful assembly and installation! Once all of the blade and electrical functions have been tested your Blizzard Power Plow snowplow is ready for action. Should you need additional support during a plow assembly or undercarriage installation, contact your local authorized Blizzard dealer.

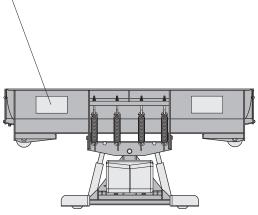


## **Power Hitch™ Instruction**

Prior to operating your Power Plow snowplow review the Mounting & Dismounting Instructions label at the driver's side rear of the moldboard.



Should the Mounting & Dismounting Instructions label or any of the labels that came with your snowplow become hard to read or wear off, contact your local authorized Blizzard dealer for replacements.



# **Notes**

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Maintenance Schedule  Maintenance Performed	<b>e</b> Date
iviairiteriarice Performed	Date

## Regular Maintenance

Your Blizzard Power Plow snowplow has been designed for years of rugged, dependable service with low maintenance. To ensure proper working condition, follow the maintenance guidelines below and on the next page.



CAUTION: Always follow the maintenance guidelines in a timely fashion. Failure to observe maintenance guidelines may result in poor snowplow operation, increased component wear or possibly lead to part failure.

Routinely inspect the following items – perform maintenance as needed:

- 1. All fasteners, pins, nuts and bolts for tightness. See the recommended maximum bolt torque chart on page 21.
- 2. All hydraulic hoses and hydraulic hose adapters for wear and leaks. See the recommended hydraulic adapter torque values on page 21.
- 3. All cylinders for leaks; inspect rod ends for corrosion and pitting.
- 4. Cutting edges and plow shoes for wear. Do not discard plow shoe washers. These should be retained for different shoe adjustments.
- Clean and lubricate all electrical plugs, headlight connections, ground and battery cables, solenoid connections and switch connections to prevent corrosion. Apply dielectric grease for every 25 hours of snowplow use. You may need to grease more frequently depending on your plowing environment.
- Lubricate all pins and bushings to prevent corrosion and to maintain consistent operation, including the A-frame latch. The inner slide boxes should also be lubricated to provide free travel. A NLGI Grade 2 multi-purpose lithium complex grease with molybdenum (MPGM) is recommended for lubrication.
- Clean and cover deep scratches or exposed metal with Blizzard Snowplow white (P/N 61219) or black (P/N 63073) touch-up paint. Contact your local Blizzard dealer for availability.
- Check the hydraulic oil level in the hydraulic pump fluid reservoir. Fill the fluid to within 3/4" from the top of the reservoir. Do not exceed this level. Never mix different types of fluids. Contact your local dealer for replacement Blizzard Snowplow Rapid Action Hydraulic Oil (P/N 63070).
- 9. Check the trip spring adjustment. Properly adjusted tension will allow a sheet of paper to pass between the 3rd and 4th coils of the spring.
- 10. Each wing uses one extension spring to help return it from the forward or scoop position. Adjust the tension on the installed spring as needed or install and optional second extension spring for increased return speed.
- 11. To adjust the snowplow drop speed, use the variable flow control valve (FC) on the manifold (see label under pump & manifold cover). Turn the dial on the valve clockwise to decrease the drop speed. Turn the dial counterclockwise to increase the drop speed. See the Troubleshooting Guide on page 38 & 39 for additional instructions.
- 12. Do not allow snow and ice to build-up on the pump and manifold cover. Excessive build-up may cause bumper damage when the plow is raised.

## **Storing Your Snowplow**

## **Placing Your Plow In Storage**

- 1. Position your plow on a flat, level surface for storage. Follow the dismounting procedure illustrated on page 16.
- 2. Pressure wash and dry the entire snowplow prior to placing in storage.
- 3. Apply a liberal amount of dielectric grease to all electrical plugs and connections. Clean and install all dust caps.
- 4. Lubricate all exposed hydraulic cylinder rod ends with liquid white lithium grease to prevent corrosion.
- Lubricate all pins and bushings to prevent corrosion and to maintain consistent operation, including the A-frame latch and inner slide boxes. A NLGI Grade 2 multipurpose lithium complex grease with molybdenum (MPGM) is recommended for lubrication.
- 6. Clean and cover deep scratches or exposed metal with Blizzard Snowplow white (P/N 61219) or black (P/N 63073) touch-up paint. Contact your local Blizzard dealer for availability.
- 7. Remove and properly discard the fluid from the pump reservoir. Clean the pump filter and replace the hydraulic oil to within 3/4" from the top of the reservoir. Changing the fluid annually will prolong the life of your pump and manifold. Never mix different types of hydraulic oil. Contact your local dealer for replacement Blizzard Snowplow Rapid Action Hydraulic Oil (P/N 63070).
- 8. Cover the snowplow with a tarp if stored outside. This will protect your plow from sun fading and inclement weather which can lead to accelerated corrosion.

## **Removing Your Plow From Storage**

- 1. Perform all regular maintenance indicated on the previous page.
- 2. If you have not replaced the hydraulic oil in the pump reservoir, it is strongly encouraged that you do so prior to operating your plow. Prolonged storage could result in condensation build-up.
- 3. Follow the mounting procedure illustrated on page 16.
- 4. Once the plow has been properly mounted to the vehicle and all electrical connections have been made, initiate all of the functions of the snowplow. Monitor the fluid level in the reservoir and fill to 3/4" from the top of the tank if needed.
- 5. Adjust the snowplow headlights as needed.

Annual Fluid Replaceme	
Type & Quantity of Fluid Replaced	Date

# **Plow Specifications**

Length   Model 810	Moldboard	
Model 810         .96" (81-6")           Thickness         .102" (81-6")           Model 810         .12 Gauge           Model 8611         .11 Gauge           Height         .31"           Model 8611         .34"           Reinforcement         .4 Ribs @ 1/4"           Cutting Edge         .1/2" x 6" (1080)           Finish         .Powder Coat - White           Wings		
Model 8611         102" (8'-6")           Thickness         Model 810         12 Gauge           Model 8611         11 Gauge           Height         34"           Model 8611         34"           Reinforcement         4 Ribs @ 1/4"           Cutting Edge         1/2" x 6" (1080)           Firish         Powder Coat - White           Wings         Length           Model 810         12"           Model 8611         23"           Thickness         Model 8611         7 Gauge           Height         31"           Model 861         31"           Model 810         31"           Model 861         34"           Reinforcement         1 Rib each @ 1/4"           Cutting Edge         Model 810         1/4" x 10" (T1)           Model 861         38" x 12-1/2" (T1)           Finish         Powder Coat - White           Trip Spring Type           Model 861         (4) 3/8" Hooked Extension           Trip Spring Type         Model 8611         (8) 3/8" Hooked Extension           Trip Spring Adjustment         5/8"-11 x 6-3/8" Spade Bolts           A-frame         Material         Rectangular Tube & Channel Type </td <td></td> <td></td>		
Thickness   Model 810		,
Model 8611		( , ,
Height   Model 810	Model 810	12 Gauge
Model 810.         .34"           Model 8611         .34"           Reinforcement         .4 Ribs @ 1/4"           Cutting Edge         .1/2" x 6" (1080)           Finish         Powder Coat - White           Wings         Length           Length         .23"           Model 810.         .12"           Model 8611         .7 Gauge           Model 810.         .31"           Model 8611         .34"           Reinforcement         .1 Rib each @ 1/4"           Cutting Edge         Model 810.           Model 8611         .3/8" x 12-1/2" (T1)           Finish         Powder Coat - White           Trip Spring Type           Model 8611         .(4) 3/8" Hooked Extension           Model 8611         .(5) 3/8" Hooked Extension           Model 8611         .(6) 3/8" Hooked Extension           Model 8611         .(8) 3/8" Hooked Extension           Model 8611         .(9) 3/8" Hooked Extension           Trip Spring Adjustment         .5/8"-11 x 6-3/8" Spade Bolts           A-frame           Material	Model 8611	11 Gauge
Model 8611	Height	_
Reinforcement	Model 810	31"
Cutting Edge	Model 8611	34"
## Wings   Length   Model 810		
Length		
Length   Model 810	Finish	Powder Coat - White
Length   Model 810	Wings	
Model 810         .12"           Model 8611         .23"           Thickness         .11 Gauge           Model 810         .11 Gauge           Model 8611         .7 Gauge           Height         .31"           Model 810         .34"           Reinforcement         .1 Rib each @ 1/4"           Cutting Edge         .1/4" x 10" (T1)           Model 810         .1/4" x 10" (T1)           Model 8611         .3/8" x 12-1/2" (T1)           Finish         .Powder Coat - White           Trip Mechanism           Trip Spring Type         .40 3/8" Hooked Extension           Model 8611         .60 3/8" Hooked Extension           Model 8611         .60 3/8" Hooked Extension           Trip Spring Adjustment         .5/8"-11 x 6-3/8" Spade Bolts           A-frame	=	
Model 8611	•	12"
Model 810		
Model 8611	Thickness	
Height   Model 8611	Model 810	11 Gauge
Model 810	Model 8611	7 Gauge
Model 8611         34"           Reinforcement         1 Rib each @ 1/4"           Cutting Edge         Model 810         1/4" x 10" (T1)           Model 8611         3/8" x 12-1/2" (T1)           Finish         Powder Coat - White           Trip Mechanism           Trip Spring Type         Model 810         (4) 3/8" Hooked Extension           Model 8611         (5) 3/8" Hooked Extension           Trip Spring Adjustment         5/8"-11 x 6-3/8" Spade Bolts           A-frame           Material         Rectangular Tube & Channel Type           Hitch Pins         3/4" x 6" Yellow Zinc           Finish         Powder Coat - Black           Pump         Construction         Steel Housing w/Clear Plastic Tank           Type         Internal Gear Pump           Size         Model 810         2.5 cc           Model 8611         3.1 cc           Motor         12V Starter           Volume Per Minute         Model 861         1.8 GPM @ 2000 PSI           Model 861         1.8 GPM @ 2000 PSI           Meight         32 lb.           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls	Height	_
Reinforcement	Model 810	31"
Cutting Edge         Model 810	Model 8611	34"
Model 810	Reinforcement	1 Rib each @ 1/4"
Model 8611         3/8" x 12-1/2" (T1)           Finish         Powder Coat - White           Trip Mechanism         Trip Spring Type           Model 810         (4) 3/8" Hooked Extension           Model 8611         (6) 3/8" Hooked Extension           Trip Spring Adjustment         5/8"-11 x 6-3/8" Spade Bolts           A-frame         Material         Rectangular Tube & Channel Type           Hitch Pins         3/4" x 6" Yellow Zinc           Finish         Powder Coat - Black           Pump         Construction         Steel Housing w/Clear Plastic Tank           Type         Internal Gear Pump           Size         Model 810         2.5 cc           Model 8611         3.1 cc           Motor         12V Starter           Volume Per Minute         Model 8611         1.6 GPM @ 2000 PSI           Model 810         1.6 GPM @ 2000 PSI           Weight         32 lb.           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Red Anodized Aluminum           Model 811         Black Anodized Aluminum           Hose Ports         8 <td< td=""><td>Cutting Edge</td><td></td></td<>	Cutting Edge	
Finish         Powder Coat - White           Trip Mechanism         Trip Spring Type         Model 810         (4) 3/8" Hooked Extension           Model 8611         (6) 3/8" Hooked Extension         Trip Spring Adjustment         5/8"-11 x 6-3/8" Spade Bolts           A-frame         Material         Rectangular Tube & Channel Type Hitch Pins         3/4" x 6" Yellow Zinc Finish           Pump         Construction         Powder Coat - Black           Pump         Construction         Steel Housing w/Clear Plastic Tank Type         Internal Gear Pump Size           Model 810         2.5 cc         Model 8611         3.1 cc           Motor         12V Starter         Volume Per Minute         Model 8611         1.6 GPM @ 2000 PSI Weight         32 lb.           Mount         A-frame Install w/Hex Head Screws         Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction         Model 8611         Black Anodized Aluminum           Model 8611         Black Anodized Aluminum         Model 8611         Black Anodized Aluminum           Model 810         Red Anodized Aluminum         As Cartridge Valves         9           Relief Valve         5         Flow Control Valve         1 <t< td=""><td>Model 810</td><td>1/4" x 10" (T1)</td></t<>	Model 810	1/4" x 10" (T1)
Trip Mechanism           Trip Spring Type         Model 810         (4) 3/8" Hooked Extension           Model 8611         (6) 3/8" Hooked Extension           Trip Spring Adjustment         5/8"-11 x 6-3/8" Spade Bolts           A-frame         Rectangular Tube & Channel Type           Hitch Pins         3/4" x 6" Yellow Zinc           Finish         Powder Coat - Black           Pump         Construction           Construction         Steel Housing w/Clear Plastic Tank           Type         Internal Gear Pump           Size         Model 810           Model 8611         3.1 cc           Motor         12V Starter           Volume Per Minute         Model 861           Model 861         1.6 GPM @ 2000 PSI           Model 8611         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Red Anodized Aluminum           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hodel 810         Red Anodized Aluminum           Hodel 810         Black Anodized Aluminum		` ,
Trip Spring Type   Model 810	Finish	Powder Coat - White
Trip Spring Type   Model 810	Trin Manhanian	
Model 810	•	
Model 8611         (6) 3/8" Hooked Extension           Trip Spring Adjustment         5/8"-11 x 6-3/8" Spade Bolts           A-frame         Material         Rectangular Tube & Channel Type           Hitch Pins         .3/4" x 6" Yellow Zinc           Finish         Powder Coat - Black           Pump         Construction         Steel Housing w/Clear Plastic Tank           Type         Internal Gear Pump           Size         Model 810         2.5 cc           Model 8611         3.1 cc           Motor         .12V Starter           Volume Per Minute         Model 8611         1.8 GPM @ 2000 PSI           Meight         .32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         .2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Red Anodized Aluminum           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1		(4) 0/01111
Trip Spring Adjustment       .5/8"-11 x 6-3/8" Spade Bolts         A-frame       Material       Rectangular Tube & Channel Type         Hitch Pins       .3/4" x 6" Yellow Zinc         Finish       Powder Coat - Black         Pump       Steel Housing w/Clear Plastic Tank         Type       .Internal Gear Pump         Size       Model 810       2.5 cc         Model 8611       3.1 cc         Motor       .12V Starter         Volume Per Minute       Model 810       1.6 GPM @ 2000 PSI         Model 8611       1.8 GPM @ 2000 PSI         Weight       .32 lb         Mount       A-frame Install w/Hex Head Screws         Reservoir Capacity       .2 quarts         Controls       Toggle & Rocker Switch/Joystick         Manifold       Red Anodized Aluminum         Model 810		
A-frame         Material         Rectangular Tube & Channel Type           Hitch Pins		
Material         Rectangular Tube & Channel Type           Hitch Pins		
Material         Rectangular Tube & Channel Type           Hitch Pins		
Hitch Pins	Trip Spring Adjustment	
Pump         Construction         Steel Housing w/Clear Plastic Tank           Type	Trip Spring Adjustment  A-frame	5/8"-11 x 6-3/8" Spade Bolts
Construction         Steel Housing w/Clear Plastic Tank           Type         Internal Gear Pump           Size         Model 810         2.5 cc           Model 8611         3.1 cc           Motor         12V Starter           Volume Per Minute         Model 810         1.6 GPM @ 2000 PSI           Model 8611         1.8 GPM @ 2000 PSI           Weight         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment  A-frame  Material	
Construction         Steel Housing w/Clear Plastic Tank           Type         Internal Gear Pump           Size         Model 810         2.5 cc           Model 8611         3.1 cc           Motor         12V Starter           Volume Per Minute         Model 810         1.6 GPM @ 2000 PSI           Model 8611         1.8 GPM @ 2000 PSI           Weight         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment  A-frame  Material  Hitch Pins	Rectangular Tube & Channel Type84" X 6" Yellow Zinc
Type         Internal Gear Pump           Size         Model 810         2.5 cc           Model 8611         3.1 cc           Motor         12V Starter           Volume Per Minute         Model 810         1.6 GPM @ 2000 PSI           Model 8611         1.8 GPM @ 2000 PSI           Weight         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment  A-frame  Material  Hitch Pins	Rectangular Tube & Channel Type84" X 6" Yellow Zinc
Size         Model 810         2.5 cc           Model 8611         3.1 cc           Motor         12V Starter           Volume Per Minute         1.6 GPM @ 2000 PSI           Model 810         1.8 GPM @ 2000 PSI           Weight         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	Rectangular Tube & Channel Type3/4" x 6" Yellow ZincPowder Coat - Black
Model 810         2.5 cc           Motor         3.1 cc           Motor         12V Starter           Volume Per Minute         1.6 GPM @ 2000 PSI           Model 810         1.8 GPM @ 2000 PSI           Weight         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	Rectangular Tube & Channel Type3/4" x 6" Yellow ZincPowder Coat - BlackSteel Housing w/Clear Plastic Tank
Model 8611       3.1 cc         Motor       12V Starter         Volume Per Minute       1.6 GPM @ 2000 PSI         Model 810       1.8 GPM @ 2000 PSI         Weight       32 lb         Mount       A-frame Install w/Hex Head Screws         Reservoir Capacity       2 quarts         Controls       Toggle & Rocker Switch/Joystick         Manifold       Construction         Model 810       Red Anodized Aluminum         Model 8611       Black Anodized Aluminum         Hose Ports       8         Cartridge Valves       9         Relief Valve       5         Flow Control Valve       1         Weight       23.1 lb         Mount       A-frame Install w/Hex Head Screws	Trip Spring Adjustment	Rectangular Tube & Channel Type3/4" x 6" Yellow ZincPowder Coat - BlackSteel Housing w/Clear Plastic Tank
Motor         12V Starter           Volume Per Minute         1.6 GPM @ 2000 PSI           Model 810         1.8 GPM @ 2000 PSI           Meight         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Volume Per Minute         1.6 GPM @ 2000 PSI           Model 810         1.8 GPM @ 2000 PSI           Model 8611         1.8 GPM @ 2000 PSI           Weight         32 lb           Mount         A-frame Install w/Hex Head Screws           Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Model 810       1.6 GPM @ 2000 PSI         Model 8611       1.8 GPM @ 2000 PSI         Weight       32 lb         Mount       A-frame Install w/Hex Head Screws         Reservoir Capacity       2 quarts         Controls       Toggle & Rocker Switch/Joystick         Manifold       Construction         Model 810       Red Anodized Aluminum         Model 8611       Black Anodized Aluminum         Hose Ports       8         Cartridge Valves       9         Relief Valve       5         Flow Control Valve       1         Weight       23.1 lb         Mount       A-frame Install w/Hex Head Screws	Trip Spring Adjustment	Rectangular Tube & Channel TypePowder Coat - BlackSteel Housing w/Clear Plastic TankInternal Gear Pump2.5 cc3.1 cc
Model 8611       1.8 GPM @ 2000 PSI         Weight       32 lb         Mount       A-frame Install w/Hex Head Screws         Reservoir Capacity       2 quarts         Controls       Toggle & Rocker Switch/Joystick         Manifold       Red Anodized Aluminum         Model 810       Black Anodized Aluminum         Model 8611       Black Anodized Aluminum         Hose Ports       8         Cartridge Valves       9         Relief Valve       5         Flow Control Valve       1         Weight       23.1 lb         Mount       A-frame Install w/Hex Head Screws	A-frame Material Hitch Pins Finish  Pump Construction Type Size Model 810 Model 8611 Motor	Rectangular Tube & Channel TypePowder Coat - BlackSteel Housing w/Clear Plastic TankInternal Gear Pump2.5 cc3.1 cc
Weight         .32 lb.           Mount         .A-frame Install w/Hex Head Screws           Reservoir Capacity         .2 quarts           Controls         .Toggle & Rocker Switch/Joystick           Manifold	A-frame  Material Hitch Pins Finish  Pump Construction Type Size Model 810 Model 8611 Motor Volume Per Minute	
Mount	A-frame Material Hitch Pins Finish  Pump Construction Type Size Model 810 Model 8611 Motor Volume Per Minute Model 810	
Reservoir Capacity         2 quarts           Controls         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Manifold         Toggle & Rocker Switch/Joystick           Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb.           Mount         A-frame Install w/Hex Head Screws	A-frame  Material Hitch Pins Finish  Pump Construction Type Model 810 Model 8611 Motor Volume Per Minute Model 810 Model 811	
Manifold         Construction           Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb.           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Construction         Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Model 810         Red Anodized Aluminum           Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Model 8611         Black Anodized Aluminum           Hose Ports         8           Cartridge Valves         9           Relief Valve         5           Flow Control Valve         1           Weight         23.1 lb           Mount         A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Hose Ports       8         Cartridge Valves       9         Relief Valve       5         Flow Control Valve       1         Weight       23.1 lb.         Mount       A-frame Install w/Hex Head Screws	Trip Spring Adjustment	
Cartridge Valves       9         Relief Valve       5         Flow Control Valve       1         Weight       23.1 lb.         Mount       A-frame Install w/Hex Head Screws	A-frame  Material Hitch Pins Finish  Pump  Construction Type Model 810 Model 8611 Motor Volume Per Minute Model 810 Model 810 Model 810  Model 810  More Volume Per Minute Model 810 Model 8611  Weight Mount Reservoir Capacity Controls	
Relief Valve       5         Flow Control Valve       1         Weight       23.1 lb.         Mount       A-frame Install w/Hex Head Screws	A-frame  Material Hitch Pins Finish  Pump Construction Type Model 810 Model 8611 Motor Volume Per Minute Model 810 Model 8611 Weight Mount Reservoir Capacity Controls  Manifold Construction Model 810  Construction Model 810	
Flow Control Valve	A-frame  Material Hitch Pins Finish  Pump Construction Type Size Model 810 Model 8611 Motor Volume Per Minute Model 8611 Weight Mount Reservoir Capacity Controls  Manifold Construction Model 810 Model 810 Model 810 Model 8611 Mount Reservoir Capacity Controls  Manifold Construction Model 810 Model 811 Model 811	
Weight	A-frame  Material Hitch Pins Finish  Pump Construction Type Size Model 810 Model 8611 Motor Volume Per Minute Model 8611 Weight Mount Reservoir Capacity Controls  Manifold Construction Model 810 Model 8110 Model 8611 Hose Ports	
Mount	A-frame  Material Hitch Pins Finish  Pump  Construction Type Size Model 810 Model 8611 Motor Volume Per Minute Model 8611 Weight Mount Reservoir Capacity Controls  Manifold Construction Model 810 Model 810 Construction Model 811 Hose Ports Cartridge Valves Relief Valves	
	A-frame  Material Hitch Pins Finish  Pump  Construction Type Model 810 Model 8611 Motor Volume Per Minute Model 810 Model 8611 Weight Mount Reservoir Capacity Controls  Manifold Construction Model 8611 Hose Ports Cartridge Valves Relief Valve Flow Control Valve	
Maximum Flow Capacity3.0 gpm	A-frame  Material Hitch Pins Finish  Pump  Construction Type Size Model 810 Model 8611 Motor Volume Per Minute Model 810 Model 8611 Weight Mount Reservoir Capacity Controls  Manifold Construction Model 810 Model 810 About Model 811 Mount Reservoir Capacity Controls  Manifold Construction Model 810 Hose Ports Cartridge Valves Relief Valve Flow Control Valve Weight	
	A-frame Material Hitch Pins Finish  Pump Construction Type Size Model 810 Model 8611 Motor Volume Per Minute Model 8611 Weight Mount Reservoir Capacity Controls  Manifold Construction Model 810 Model 8611 Hose Ports Cartridge Valves Relief Valve Flow Control Valve Weight Mount Meight Mount Model 810 Model 8611 Hose Ports Cartridge Valves Relief Valve Flow Control Valve Weight Mount	

Cylinders
Angle Cylinders2
Stroke
Model 81010"
Model 8611
Ram Diameter
Model 8101-3/4"
Model 86112"
Bore Diameter
Model 8102"
Model 86112-1/4"
Lower/Raise Cylinder1
Stroke
Ram Diameter
Bore Diameter
Model 810
Model 86113-1/2"
Clide Pay Culindare
Slide Box Cylinders2 Stroke
Model 81013-15/16"
Model 861118-7/16"
Ram Diameter
Model 8101"
Model 86111-1/8"
Bore Diameter
Model 8101-1/2"
Model 86111-3/4"
Plow Headlights
TypeLow Profile w/Turn Signals
TypeLow Profile w/Turn Signals  Measurements
TypeLow Profile w/Turn Signals
Type
TypeLow Profile w/Turn Signals  Measurements
Type
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Wiscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 810           Model 810         Approx. 155A           Model 8611         Approx. 155A           Model 8611         Approx. 175A
Type
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8610         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 810         96" (8'-0")
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 810         96" (8'-0")           Model 8611         102" (8'-6")
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         102" (8'-6")
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Wiscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         102" (8'-6")           Model 810         120" (10'-0")
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 861         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         102" (8'-6")           Model 810         120" (10'-0")           Model 8610         120" (10'-0")           Model 8611         132" (11'-3")
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Wiscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 8611         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         Model 810         120" (10'-0")           Model 8611         132" (11'-3")           BucketBlade™ Plow Width
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 810         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 861         96" (8'-0")           Model 861         96" (8'-0")           MidePass™ Plow Width         102" (8'-6")           Model 861         120" (10'-0")           Model 861         120" (10'-0")           Model 861         132" (11'-3")           BucketBlade™ Plow Width         132" (11'-3")           Model 810         111" (9'-3")
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 861         Approx. 155A           Model 861         Approx. 175A           Compact Plow Width         96" (8'-0")           Model 861         96" (8'-0")           WidePass™ Plow Width         Model 861         120" (10'-0")           Model 861         132" (11'-3")           BucketBlade™ Plow Width         Model 810         111" (9'-3")           Model 861         111" (9'-3")           Model 861         111" (9'-3")           Model 861         118" (9'-10")
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 861         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         Model 861         120" (10'-0")           Model 8611         132" (11'-3")           BucketBlade™ Plow Width         Model 8610         111" (9'-3")           Model 8611         118" (9'-10")           Adjustable Plow Shoes         (2) Heavy-Duty Cast Steel
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Wiscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 861         96" (8'-0")           Model 8611         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         Model 8611         132" (11'-3")           BucketBlade™ Plow Width         Model 861         111" (9'-3")           Model 8611         118" (9'-10")           Adjustable Plow Shoes         (2) Heavy-Duty Cast Steel           Mount Mechanism         Hydraulic Power Hitch
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Miscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 861         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         120" (10'-0")           Model 8611         132" (11'-3")           BucketBlade™ Plow Width         111" (9'-3")           Model 8611         118" (9'-10")           Adjustable Plow Shoes         (2) Heavy-Duty Cast Steel           Mount Mechanism         Hydraulic Power Hitch           Standard Control Station         Rocker Switch/Joystick
Type         Low Profile w/Turn Signals           Measurements         12" W x 5"H x 5-1/4"D           Housing         Plastic Composite           Mount         Adjustable Ball Type           Bulb Type         High/Low Sealed Beam Hal., 12V Rect.           Switch Type         Integrated On/Off Control Station Switch           Wiscellaneous         Plow Weight*           Model 810         Approx. 950 lb.           Model 8611         Approx. 1470 lb.           Amperage Draw**         Model 8611         Approx. 155A           Model 8611         Approx. 175A           Compact Plow Width         Model 861         96" (8'-0")           Model 8611         96" (8'-0")           Model 8611         102" (8'-6")           WidePass™ Plow Width         Model 8611         132" (11'-3")           BucketBlade™ Plow Width         Model 861         111" (9'-3")           Model 8611         118" (9'-10")           Adjustable Plow Shoes         (2) Heavy-Duty Cast Steel           Mount Mechanism         Hydraulic Power Hitch

<sup>\*</sup>Plow weight does not include vehicle undercarriage.

Unless otherwise indicated, all specifications are for Models 810 & 8611 Power Plow snowplows.

Blizzard Corporation reserves the right, under its Continuous Improvement Policy, to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications.

<sup>\*\*</sup>Amperage draw specifications are based on the snowplow lift operation, at a shop temperature of 65°F, using Blizzard Snowplow Rapid Action Hydraulic Oil. Amperage will vary with temperature, oil viscosity and meter accuracy. Deadheading a plow function will result in significantly increased amperage.

## **Torque Specifications**



#### Grade Identification Marking for J429 - Grade 5 Bolt

- Material: Medium carbon steel: quenched and tempered
- Minimum Proof Strength: 85,000 psi
- Minimum Tensile Strength: 120,000 psi
- Core Hardness Rockwell (min.): C25, (max.): C34
- Minimum Yield Strength: 92,000 psi



### Grade Identification Marking for J429 - Grade 8 Bolt

- Material: Medium carbon alloy steel:quenched and tempered
- Minimum Proof Strength: 120,000 psi
- Minimum Tensile Strength: 150,000 psi
- Core Hardness Rockwell (min.): C33, (max.): C39
- Minimum Yield Strength: 130,000 psi

Nominal	minal SAE J429 - Grade 5		5	Nominal	SAE J429 - Grade 8			
Thread	Thread Clamp Loads		ng Torque	Thread	Clamp Loads	Tighteni	ng Torque	
Size	(Pounds)	"Lubricated"	"Dry"	Size	(Pounds)	"Lubricated"	"Dry"	
1/4-20	2,000	6.25 ft-lbs	8.34 ft-lbs	1/4-20	2,850	8.92 ft-lbs	11.93 ft-lbs	
5/16-18	3,350	13.25 ft-lbs	17.5 ft-lbs	5/16-18	4,700	18.35 ft-lbs	25.44 ft-lbs	
3/8-16	4,950	23 ft-lbs	31 ft-lbs	3/8-16	6,950	32.5 ft-lbs	44 ft-lbs	
7/16-14	6,800	37 ft-lbs	50 ft-lbs	7/16-14	9,600	53 ft-lbs	70 ft-lbs	
1/2-13	9,050	57 ft-lbs	75 ft-lbs	1/2-13	12,800	80 ft-lbs	107 ft-lbs	
9/16-12	11,600	82 ft-lbs	109 ft-lbs	9/16-12	16,400	115 ft-lbs	154 ft-lbs	
5/8-11	14,500	113 ft-lbs	151 ft-lbs	5/8-11	20,300	159 ft-lbs	211 ft-lbs	
3/4-10	21,300	200 ft-lbs	266 ft-lbs	3/4-10	30,100	282 ft-lbs	376 ft-lbs	
7/8-9	29,435	321 ft-lbs	430 ft-lbs	7/8-9	41,550	454 ft-lbs	606 ft-lbs	
1-8	38,600	482.5 ft-lbs	640 ft-lbs	1-8	54,540	680 ft-lbs	900 ft-lbs	



### Grade Identification Marking for Metric - Grade 8.8 Bolt

- Material: Medium carbon steel: quenched and tempered
- Minimum Proof Strength: 580 MPa
- Minimum Tensile Strength: 800 MPa
- Core Hardness Rockwell (min.): C22, (max.): C32
- Minimum Yield Strength: 640 MPa



### Grade Identification Marking for Metric - Grade 10.9 Bolt

- Material: Low carbon alloy steel: quenched and tempered
- Minimum Proof Strength: 830 MPa
- Minimum Tensile Strength: 1040 MPa
- Core Hardness Rockwell (min.): C32, (max.): C39
- Minimum Yield Strength: 940 MPa

Diameter		Metric Class 8.8	_	Diameter		Metric Class 10.9	)
(millimeters)	Clamp Loads	Tighteni	ng Torque	(millimeters)	Clamp Loads	Tighteni	ng Torque
	(Pounds)	"Lubricated"	"Dry"		(Pounds)	"Lubricated"	"Dry"
5	1,389	3.42 ft-lbs	4.56 ft-lbs	5	1,987	4.89 ft-lbs	6.52 ft-lbs
6	1,965	5.81 ft-lbs	7.80 ft-lbs	6	2,812	8.34 ft-lbs	11.07 ft-lbs
7	2,826	9.74 ft-lbs	12.99 ft-lbs	7	4,044	13.95 ft-lbs	18.60 ft-lbs
8	3,579	14.10 ft-lbs	18.82 ft-lbs	8	5,121	20.15 ft-lbs	26.94 ft-lbs
10	5,672	27.90 ft-lbs	37.27 ft-lbs	10	8,116	39.92 ft-lbs	53.28 ft-lbs
12	8,243	48.71 ft-lbs	64.94 ft-lbs	12	11,796	69.74 ft-lbs	92.25 ft-lbs
14	11,246	77.49 ft-lbs	103.32 ft-lbs	14	16,092	110.70 ft-lbs	147.60 ft-lbs
16	15,882	125.46 ft-lbs	166.79 ft-lbs	16	21,970	173.43 ft-lbs	231.00 ft-lbs
18	19,423	171.95 ft-lbs	229.52 ft-lbs	18	26,868	238.37 ft-lbs	317.34 ft-lbs
20	24,784	243.54 ft-lbs	325.46 ft-lbs	20	34,284	338.00 ft-lbs	450.18 ft-lbs

	37° JIC Flare Torque Values					
Turns	Size ft-lbs min./max.		Assembly Steps w/Visual Check			
N/A N/A 2 2 1-1/2 1-1/2 1-1/4 1 1 1	-02 -03 -04 -05 -06 -08 -10 -12 -14 -16 -20 -24 -32	6 - 7 8 - 9 11 - 12 14 - 15 18 - 20 36 - 39 57 - 63 79 - 88 94 - 103 108 - 113 127 - 133 158 - 167 245 - 258	1. Make sure the tubing and threads are clean. 2. Lubricate the threads with 10W hydraulic oil. 3. Hand tighten the nut/sleeve to appox. 30 in-lbs. 4. Make alignment marks on the nut and fitting. 5. Proceed to tighten to turns or ft-lb values. 6. When fully tightened make a 2nd set of alignment marks at the fully tightened position.  Note: Torque values specified are for threads lubricated with 10W hydraulic oil.  Sizes -02 through -08 are less tolerant to over-torque abuse. This will reduce the clamping force resulting in loss of seal and reduction in flow.			

O-Ring Boss Torque Values				
ft-lbs min./max.	O-Ring Boss Assembly			
6 - 7 8 - 10 13 - 15 17 - 21 22 - 25 40 - 43 43 - 57 68 - 75 90 - 99 112 - 123 146 - 200 154 - 215 218 - 290	1. Verify the port, O-ring, sealing surfaces, and threads are clean and free of damage. 2. Lubricate the threads and the O-ring with 10W hydraulic oil. 3. For an adjustable O.R.B., completely back-off the lock nut and the washer. 4. Hand tighten the fitting until it contacts the port spotface. Point the elbow or tee in the desired direction and hold. 5. Proceed to tighten to the proper specified torque value.  Note: Torque values specified are for threads lubricated with 10W hydraulic oil.			
	ft-lbs min./max.  6 - 7 8 - 10 13 - 15 17 - 21 22 - 25 40 - 43 43 - 57 68 - 75 90 - 99 112 - 123 146 - 200 154 - 215			

Disclaimer: All torque values included in the charts above are advisory only, and their use by anyone is entirely voluntary. Reliance on the contents for any purpose by anyone is the sole risk of that person and Bilizzard Corporation is not responsible for any loss, claim or damages arising therefrom. Bilizzard Corporation has made an effort to present the above contents accurately, but we do not guarantee its completeness or validity. This information is subject to change at any time, without notice. Bilizzard Corporation makes no representations or warranties, express or implicit, in connection with the information.

				MODELS 810 & 8611 PARTS LIST	
Ref.	Part	Build	l Qty.	Part Description	
No.	Number	810	8611	·	
				Moldboard & Wing Assembly Parts	
1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13A 13 14 15 16 16 17 18 19 20A 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	52074 52085 61086 61082 61180 61292 11962 61196 61365 51042 51100 61083 63065 51048 51069 50057 50075 63113 61220 61101 61103 63063 61383 11871 61384 61049 61051 61052 51043 51101 61084 63064 51047 51070 61418 61361 61362 50058 50074 61416 61398 61099 61385 61028 51009 61385 61028 51009 61385 61029 61385 61029 61385 61028 51009 61385 61029 61385 61029 61385 61029 61385 61029 61385 61029 61385 61029 61385 61099 61385 61099 61385 61099 61385 61099 61385 61099 61385 61099 61385 61099 61385	1 N/A 1 1 1 1 N/A 1 1 1 N/A 1 N/A 1 N/A 1 N/A 2 2 2 36 2 1 4 4 4 4 2 4 4 1 N/A 1 N/A 2 N/A 2 2 2 2 2 2 4 4 4 1 N/A 1 N/A 2 N/A 2 N/A 2 N/A 2 2 N	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Moldboard Weldment - Model 810 Moldboard Weldment - Model 8611 Label, WARNING! (BLZ 1005) Decal, Center Moldboard (BLZ 1000) Label, Power Hitch** Mounting & Dismounting Instructions (BLZ 1023) Cutting Edge (1080), Moldboard - Model 810 Cutting Edge (1080), Moldboard - Model 8611 Bolt, Carriage, 1/2** 13 x 1-1/2* Grade & P Nut, Flanged Lock, 1/2*-13 Z Wing Weldment, Driver's Side - Model 810 Wing Weldment, Driver's Side - Model 810 Wing Weldment, Driver's Side - Model 810 Decal, Wing, Driver's Side (BLZ 1033) - Model 8611 Decal, Wing, Driver's Side (BLZ 1033) - Model 8610 Cutting Edge Weldment (T1), Wing, Driver's Side - Model 810 Cutting Edge Weldment (T1), Wing, Driver's Side - Model 8610 Slide Box Weldment, Driver's Side - Model 8611 Slow Spacer, 1-1/8* I.D., 1-5/8* 0.D. x 1-1/2* YZ Washer, Flat, 1*, 1-1/1016* I.D., 1-3/4* 'O.D. YZ Pin, Linch, 7/16* x 1-3/4* 'YZ Label, Serial Number, Sequentially Numbered (BLZ 1049) Screw, Hex Head Cap, 5/16*-18 x 2-1/4* Grade 8 YZ Pin, Slide Box Stop, 1* Dl.X. x 4-3/4* (with 3/8* DlA. hole) Nut, Top Lock, 5/16*-18 Grade C Z Plow Guide Assembly; (2)-20 & 21 Screw, Hex Head Cap, 5/16*-18 X 1* Grade 5 Z Nut, Nylon Insert Lock, 5/16*-18 X 1* Grade 5 Z Nut, Nylon Insert Lock, 5/16*-18 X 1* Grade 5 Z Nut, Nylon Insert Lock, 5/16*-18 X 1* Grade 5 Z Nut, Nylon Insert Lock, 5/16*-18 X 1* Grade 8 P - Model 810 Decal, Wing, Passenger's Side - Model 8611 Bolt, Carriage, 1/2*-13 x 5-1/2* Grade 8 P - Model 8611 Bolt, Carriage, 1/2*-13 x 5-1/2* Grade 8 P - Model 810 Bolt, Carriage, 1/2*-13 x 5-1/2* Grade 8 P - Model 810 Bolt, Carriage, 1/2*	
49 50 <b>51A</b> 51 52 53 54 55 56 57 58	41041 41052 61357 <b>41039</b> 41047 41038 61057 61026 61020 61152 61293 41037	1 N/A 8 1 1 1 2 2 3 1 1	N/A 1 8 1 1 2 2 3 1 1 1	Pivot Beam & A-frame Assembly Parts  Pivot Beam Weldment - Model 810 Pivot Beam Weldment - Model 8611 Pin, Cotter, 1/4" x 1-1/2" Z  Kickstand Assembly: (1) - 51 & 52, 56-58, (2) - 53 & 54, (3) - 55  Kickstand Foot Weldment  Kickstand Leg Weldment  Kickstand Leg Weldment  Screw, Hex Head Cap, 1/2"-13 x 1-1/4" Grade 8 YZ  Washer, SAE Mil-Carb High-Strength, 1/2", 1-1/16" O.D., 17/32" I.D. YZ  Nut, Top Lock, 1/2"-13 Grade C Z  Screw, Hex Head Cap, 1/2"-13 x 4-1/2" Grade 8 YZ  Spring, Compression, 2" O.A.L. x 1.101" O.D., 0.207" Wire Diameter  Bushing, Stepped, 1.13" O.D., 0.53" I.D. x 3/8" Stainless Steel	

				MODELS 810 & 8611 PARTS LIST
Ref.	Part	Build	l Qty.	Part Description
No.	Number	810	8611	
				Pivot Beam & A-frame Assembly Parts (Continued)
59	50069	2	2	Pin, Clevis, 3/4" DIA. x 3" YZ
60 61	41051 61330	4	4 1	Pin, Clevis, 3/4" DIA. x 5" YZ Screw, Hex Head Cap, 1"-8 x 9" (with 7-3/4" Shank) Grade 8 P
62	61008	1 4	1 4	Nut, Top Lock, 1"-8 Grade C Z
63 64	61217 60029	2	N/A	Grommet, 1-1/2" I.D., 2-1/8" O.D. Black Rubber, 60 Durometer Hydraulic Cylinder, Plow Angle - Model 810
65	60221 60091	N/A 2	2 N/A	Hydraulic Cylinder, Plow Angle - Model 8611 Hydraulic Hose, Plow Angle (Ports #1 & #2), 3/8" x 24" - Model 810
	60223	N/A	2	Hydraulic Hose, Plow Angle (Ports #1 & #2), 3/8" x 26" - Model 8611
66 67	60005 60255	3	3 N/A	Hydraulic Adapter, 9/16"-18 x 9/16"-18 90° Adjustable Elbow O.R.B. Hydraulic Cylinder, Plow Raise/Lower - Model 810
	60237	N/A	1	Hydraulic Cylinder, Plow Raise/Lower - Model 8611
68 69	40124 60273	1 1	1 1	Pin, Clevis, 3/4" DIA. x 6" YZ Hydraulic Hose (Port #3), Straight/45°, 3/8" x 17" - Plow Raise/Lower, Extend (Base End)
70 71	60272 60274	1	1 1	Hydraulic Adapter, 9/16"-18 x 9/16"-18 45° Adjustable Elbow O.R.B. Hydraulic Hose (Port #4), Straight/45°, 3/8" x 15" - Plow Raise/Lower, Retract (Rod End)
72	61358	3	3	Nut, Flanged Wing, 3/8"-16
73 74	61012 61016	2	2 3	Screw, Hex Head Cap, 3/8"-16 x 3/4" Grade 8 YZ Washer, SAE Mil-Carb High-Strength, 3/8", 13/16" O.D., 13/32" I.D., YZ
75	61014	1	1	Nut, Jam Nylon Insert Lock, 3/8"-16 Z, Type NTE
76 77	61359 40004	1 1	1 1	Stud, Threaded, 3/8"-16 x 1-3/4" Hinge Weldment, Pump Mount
78 79	61218 61034	1	1 1	Screw, Hex Head Cap, 3/8"-16 x 2" Grade 8 YZ Nut, Top Lock, 3/8"-16 Grade C Z
80	62038	1	1	Switch, Toggle, DPDT, (On)-Off-(On), 16A, 115V AC - Draw Latch Connect/Disconnect
81A	40106 40108	1 N/A	N/A 1	A-frame Assembly - Model 810: (1) - 77-79, 81 (40090), 84-86, 90, (2) - 89, (4) - 87 & 88 A-frame Assembly - Model 8611: (1) - 77-79, 81 (40107), 84-86, 90, (2) - 89, (4) - 87 & 88
81	40090	1	N/A	A-frame Weldment - Model 810
82	40107 61426	N/A 3	3	A-frame Weldment - Model 8611 Pin, Hitch, 3/4" x 6" YZ
83 84	61105 61309	3	3	Pin, Hair Cotter, 9/64" DIA. x 2-11/16" Z Ring, Standard Split, Stainless Steel
85	61000	3	3	Spring, Compression, 0.94" O.A.F.L. x 0.36" O.D., 0.029" Wire Diameter, Stainless Steel
86 87	40079 61312	3 4	3 4	Pin, A-frame Latch, 3/8" DIA. x 1-3/4", Stainless Steel Screw, Hex Head Cap, 5/16"-18 x 3/4" Grade 8 YZ
88 89	61011	4 2	4 2	Washer, Split Lock, 5/16" YZ High-Alloy Bushing, A-frame Pivot, Replaceable
90	40088 61295	1	1	Label, Power Hitch Connect/Disconnect Switch (BLZ 1037)
				Draw Latch Assembly Parts
<b>91A</b> 91	<b>40109</b> 40080	1	1 1	Draw Latch Assembly: (1) - 50, 91, 92, 94, 96-98, 100-104, (2) - 93, 95 & 99  Outer Draw Latch Plate Weldment, Driver's Side
92	40110	1	1	Pin, Draw, 1" DIA. x 6-1/2" (with 13/64" DIA. Cotter Pin Hole) YZ
93 94	61363 61004	2	2	Pin, Cotter, 3/16" DIA.x 2-1/2" Z Screw, Hex Head Cap, 3/4"-10 x 4-1/2" Grade 8 YZ
95	40074	2	2	Inner Draw Latch Plate
96 97	40070 40114	1 1	1 1	Pin, Draw Latch Mount (To A-frame), 1" x 4-21/32" YZ Draw Latch Arm Weldment
98 99	40123 40042	1 2	1 2	Draw Latch Finger Weldment Pin, 3/4" x 2-1/2", Draw Latch Arm Pivot Pin/Hydraulic Cylinder Rod End, Plow Raise/Lower
100	40093	1	1	Bushing, 1-1/4" O.D., 1-1/16" I.D. x 1-1/2" YZ
101 102	40081 50071	1 1	1 1	Outer Draw Latch Plate Weldment, Passenger's Side Pin, Clevis, 3/4" DIA. x 3-41/64" YZ
103	40116	1	1	Spacer, 1" O.D., 25/32" I.D. x 5/8" YZ
104	61006	1	1	Nut, Top Lock, 3/4"-10 Grade C Z  Hydraulic Pump & Manifold Assembly Parts
105A	60101	1	N/A	Hydraulic Pump Assembly (Fenner Fluid Power-DB1484): (1) - 105-108, 60128, 60215, 60218, 60312-17, (4) - 61268
	60351	N/A	1	Hydraulic Pump Assembly (Fenner Fluid Power-DB1597): (1) - 105-108, 60128, 60215, 60218, 60312, 60353, 60314-17, (4) - 61268
105	60047	1	1	Motor, 12VDC, Hydraulic Pump (Fenner - 1787-AC)
106 107	60044 60046	1 1	1 1	Hex Cap, Relief Valve, Hydraulic Pump (Fenner - S3-1015-07) Reservoir Cap, Hydraulic Pump (Fenner - 8060-CC)
108	60045	1	1	Reservoir, Hydraulic Pump (Fenner - 3853-AC)
109 N/A	61307 60215	1 1	1 1	Washer, Internal/External Tooth Lock, 3/8" O-Ring, -348 Nitrile (Fenner - G1-1073-48)
N/A N/A	61268 60128	4	4	Bolt, Hex Washer Head, #12-24 x 0.50 (Fenner - 3346-AA) Filter, 149 Micron, 1.5" x 1.0" L2574 (Fenner - 4303-AA)
N/A	60218	1	1	Elbow, Nylon, X-111 (Fenner - T2-5001-00)
N/A N/A	60312 60313	1	1 N/A	Pin, 1/8" x 1/4" (Fenner - F6-4000-25) Pump Assembly, Short Spline (Fenner - PS-2.5) - Model 810
N/A	60353	N/A	1	Pump Assembly, Short Spline (Fenner - PS-3.1) - Model 8611
N/A N/A	60314 60315	1 1	1 1	Coupling, SAE 9T-20/40 1.260" (Fenner - 1118-AA) Spring, RV 3000-4000 PSI, Black (Fenner - C1-1009-01)
N/A N/A	60316 60317	1	1	Adjustment, Valve Screw, B-1 (Fenner - W5-1020-95) Ball, Steel (G50), 0.375" (Fenner - 1172-AA)
13/73	00017			2.5. (5.5.), 5.5. (1.5.) (1.5.) (1.5.) (1.5.)

	MODELS 810 & 8611 PARTS LIST						
Ref. Part		Build Qty.		Part Description			
No.	Number	810					
				Hydraulic Pump & Manifold Parts (Continued)			
110	60038	2	2	O-ring, 3/32" C.S.W., 9/16" I.D., 3/4" O.D. Neoprene, 70 Durometer			
111	40119	1	1	Cover, Hydraulic Pump & Manifold, 1/4" Polyethylene			
112	63100	1	1	Label, Sequence Valve & Hydraulic Hose Identification Guide (BLZ 1055)			
113 114	61214 61222	2 2	2 2	Screw, Hex Head Cap, 3/8"-16 x 1-1/4" Grade 8 YZ Washer, Split Lock, 3/8" High-Alloy YZ			
115	61010	2	2	Washel, Shit Euck, 30 Tight-Milly 12 Screw, Hex Head Cap, 5/16"-18 x 3-3/4" Grade 8 YZ			
116A	60264	1	N/A	Manifold Assembly - Model 810: (1)-66, 116 (60266), 120, 123, 125A, 130, 132-134, (2)-41, 118, 121, 127-129, (3)-117,			
	60265	N/A	1	(4)-39, 119, 122, (5)-124, (9)-126 Manifold Assembly - Model 8611: (1)-66, 116 (60271), 120, 123, 125A, 130, 132-134, (2)-41, 118, 121, 127-129, (3)-117,			
116	60266	1	N/A	(4) - 39, 119, 122, (5)-124, (9)-126   Manifold Block (with Cross Port Relief), Red Anodized Aluminum - Model 810			
	60271	N/A	1	Manifold Block (with Cross Port Relief), Black Anodized Aluminum - Model 8611			
117 118	60050 60009	3 2	3 2	Plug, Hollow Hex, -6 SAE (61010007) Hydraulic Adapter, 7/16"-20 90° Swivel Elbow			
119	60006	4	4	Hydraulic Adapter, 9/16"-18 90° Swivel Elbow			
120	60072	1	1	Hydraulic Adapter, 9/16"-18 x 9/16"-18 Male Extra Long Elbow			
121	60228	2	2	Piston Assembly (34952123)			
122 123	60225 60173	4	4	Valve, Check, 50 PSI (86020028) Coupling, Test Port, 7/16"-20 O.R.B. (61600095)			
124	60166	5	5	Valve, Spool, Three-Way, Two Position (86020195 w/o screen)			
125A	62147	1	1	Coil Harness Assembly: (1) - 131, 62045, 62116, 62118, (8) - 125, (9) - 62096, 62097			
125 126	62114 60052	8	8	Coil, PDL 10V DC Nut, Hex Jam, 1/2"-20 YZ			
N/A	62045	1	1	Connector, Electric, Male, Plastic			
N/A	62096	19	19	Seal, Cable, Silicone, Orange (18 AWG)			
N/A N/A	62116 62097	1   9	9	Cavity Plug, Silicone, White (18-16 AWG) Terminal, Male (18-16 AWG)			
N/A	62118	1	1	Terminal, End Ring, 3/8" I.D. Copper, 6 Gauge			
127	60278	2	N/A	Valve, Relief, 1700 PSI (85020411 tamper proof) - Model 810			
128	60226	N/A	2	Valve, Relief, 2800 PSI (85020362 tamper proof) - Model 8611 Valve, Relief, 1500 PSI (85020410 tamper proof) - Model 810			
128	60279 60227	2 N/A	N/A 2	Valve, Relief, 1500 PSI (85020361 tamper proof) - Model 8611			
129	60167	2	2	Valve, Spool, Four-Way, Two Position C.C. (86020197 w/o screen)			
130	60168	1	1 1	Valve, Relief, 3000 PSI (85020340)			
131 132	62115 60170	1 1	1 1	Coil, DDL 10V DC Valve, Spool, Three-Way, Two Position (85002279 w/o screen)			
133	60169	i	i	Valve, Flow Control (85002054)			
134	60165	1	1	Valve, Two-Way N.C. (86020190)			
				Snowplow Wire Harness Assembly Parts			
135A	62039	1	1	Wire Harness Assembly, Plow: (1) - 135, 136, 61439, 62046 & 62167, (10) - 62093 & 62096			
135	62057	1	1 1	Wire Harness, Plow			
136 N/A	62001 62046	1 1		Weather Cap, Rubber, Plow Wire Harness Connector, Electric, Female, Plastic			
N/A	62093	10	10	Terminal, Female (18-16 AWG)			
N/A	61439	2	2	Cable Tie, 13", Black			
N/A	62167	1	1	Harness, Diode Loop			
4.6=-				Vehicle Wire Harness Assembly Parts			
137A	62149	1	1	Wire Harness Assembly, Vehicle - Triple Relay Version: (1) - 137, 138, 61439, 62124, 62151, 62008, 62009, 62056, (2) - 62035, (3) - 61031, 62016, 62144, (4) - 62072			
137	62150	1	1	Wire Harness, Vehicle - Triple Relay Version			
138	62000	1	1	Weather Cap, Rubber, Vehicle Wire Harness			
N/A N/A	62124 62151	1 1	1 1	Fuse, 1/4" DIA. x 1-1/4" BUSS AGC 15A, 32V Main Lighting Harness - Triple Relay Version			
N/A N/A	62035	2	2	Weather Cap, Rubber, Main Lighting Harness			
N/A	62144	3	3	Headlight Relay, CB1-D-12V, Standard Quick Connect w/Diode Inside			
N/A N/A	62178 62056	1 1	1	Power Contactor (Solenoid), 12VDC-225A Continuous, High Performance Ground Wire, Power Contactor, 24"			
N/A N/A	62072	4	4	Terminal, End Ring, 3/8" I.D. Copper, 4 Gauge			
N/A	62008	1	1	Fuse Clip, Mini			
N/A	62009	1 3	1 3	Fuse Clip, Auto Blade Connector, Splice Lock (18-14 AWG)			
N/A N/A	62016 61031	3	3	Screw, Hex Washer Self-Drilling, 12-14 x 3/4"			
139A	61106	2	2	Headlight Assembly, Plow (Specify Driver's or Passenger's Side): (1) - 139/140, 141-145, 62061			
139	61107	1	1	Headlight, Plow, Driver's Side			
140 141	61108 62032	1 2	1 2	Headlight, Plow, Passenger's Side Wire Harness (with 5-pin plug), Plow Headlight			
N/A	62061	2	2	Bulb, Sealed Beam Halogen, Glass, Plow Headlight (H6545/H4666)			
N/A	62062	1	1	Corrosion Preventive Compound (2 fl.oz.)			
142 143	61231 61550	2 2	2 2	Adapter, Ball Stud Mount, Headlight Washer, Neoprene Backing, 1/2" I.D., 1" O.D., Galvanized			
143	61112	2	2	Washer, External Tooth Lock, 7/16" YZ			
145	61111	2	2	Nut, Hex, 7/16"-14 Grade 8 YZ			
146 147	61427 39032	2	2 N/A	Cap, 2-1/4" I.D., 2-3/8" O.D. x 3/4", Black Vinyl Light Tower - Model 810			
'-'	39032	N/A	1	Light Tower - Model 8611			

MODELS 810 & 8611 PARTS LIST						
	Part	Build Qty.		Part Description		
No.	Number	810	8611			
				Vehicle Wire Harness Assembly Parts (Continued)		
148A 148 149 150 151 152 153 154 155 156 157 158 N/A N/A N/A 159 160	62109 61296 62065 61127 62130 62177 62130 62177 62129 63098 62066 61035 61169 61036 62183 62184 30042 61085	1 1 1 1 1 1 1 1 1 2 4 1 4 1 1 1	1 1 1 1 1 1 1 1 1 2 4 1 4 1 1 1	Rocker Switch/Joystick Control Station Assembly Relay Ver.: (1) - 148-155, 158, 62183, 62184, (2) - 156, (4) - 157, 61036 Housing, Rocker Switch/Joystick Control Station, 1/8" ABS Plastic Switch, Rocker, SPST, Off-None-On, Black/White 15A, 250V AC - Power/Plow Lights (50-0251-00) Housing Plate, Rocker Switch Control Station, 1/8" ABS Plastic Strap (61" Velcro with 2" Metal D-Ring), Black (50-0278-00) Connector, Electrical - 12-pin & 2-pin Plugs Joystick, Four-Way, Subminature, No Switches (50-2757-10) Switch, Rocker, SPDT, On-Off-On, Black 10A, 250V AC - Sys. Power On - Sys. Power Off - Hitch Sys. On (50-0250-00) Label, Plow Lights/Power Switch ON/OFF (BLZ 1053) Switch, Rocker, DPDT, (On)-Off-(On), White 10A, 250V AC-Wing Extend & Retract - Drive. & Pass. Sides (50-2694-10) Screw, Pan Head Machine, 10-24 x 1/2" Z (43-0878-00) Label, Rocker Switch/Joystick Control Station (BLZ 1028) U-Clip, 10-24 (43-2102-00) Circuit Board with Switches (50-0246-00) Timed Delay, 0.5 Sec. SSAC MSM 10.5W6 (50-0252-00) Undercarriage Weldment, 1999-Current, Chevrolet/GMC 2500 Series Decal, Undercarriage Push Beam, 2-1/4" x 13-7/8" (BLZ 1003)		
			'	Miscellaneous Assembly Parts		
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	61352 61356 60275 60280 60286 61430 52067 52095 61431 61387 51104 51103 61321 52117	1 N/A 1 N/A 1 N/A 1 N/A 1 N/A 1 N/A	N/A 1 1 N/A 1 1 N/A 1 N/A 1 N/A 1 N/A 1 N/A 1 N/A 1	Kit, Hardware, Snowplow Assembly Parts - Model 810: (1) - 74-76, 109, (2) - 59, 73, (3) - 72, (4) - 46-48, 60, (6) - 50 Kit, Hardware, Snowplow Assembly Parts - Model 8611: (1) - 74-76, 109, (2) - 59, 73, (3) - 72, (4) - 60, (6) - 46-48 & 50 Kit, Hydraulic Adapter: (1) - 70, 120, (2) - 118, (3) - 66, (4) - 41 & 119, (7) - 39 Kit, Hydraulic Hose - Model 810: (1) - 69 & 71, (2) - 40, 42 & 65 Kit, Hydraulic Hose - Model 8611: (1) - 69 & 71, (2) - 40, 42 & 65 Kit, Hardware, Moldboard Cutting Edge: (7) - 6 & 7 Kit, Cutting Edge, Moldboard w/Hardware - Model 810: (1) - 5 & 61430 Kit, Cutting Edge, Moldboard w/Hardware - Model 8611: (1) - 5 & 61430 Kit, Hardware, Wing Cutting Edge - Model 810: (1) - 25-27, (3) - 7 Kit, Hardware, Wing Cutting Edge - Model 8611: (1) - 25, 27, 28, (3) - 7 Kit, Cutting Edges, Wing w/Hardware - Model 810: (1) - 10, 24, (2) - 61431 Kit, Cutting Edges, Wing w/Hardware - Model 8611: (1) - 10, 24, (2) - 61387 Kit, Moldboard & Wing Cutting Edges w/Hardware - Model 8611: (1) - 52095 & 51104 Kit, Moldboard & Wing Cutting Edges w/Hardware - Model 8611: (1) - 52095 & 51103		

## **Snowplow Accessories (continued from page 1)**



Blizzard Snowplow Rapid Action Hydraulic Oil P/N 63070 (Quart) P/N 63071 (12 Quarts/Case) P/N 63072 (Gallon) P/N 63069 (4 Gallons/Case)

Blizzard hydraulic oil is specially formulated for use in Blizzard snowplows. This zinc-free product can significantly enhance the operation and perform-

ance of the hydraulic system in the most inclement weather conditions. Blizzard hydraulic oil maintains its viscosity to temperatures as low as -60°F. Blizzard oil is available by the quart, gallon or case.



Blizzard Snowplow Touch-Up Paint P/N 61219 (Gloss White) P/N 63073 (Gloss Black)

Putting your snowplow away for the winter? Have a deep scratch to cover? Clean up your blade and plow parts with our gloss spray paints. Blizzard snowplow touch-up paint provides an excellent finish to help

keep your snowplow looking its best. Paint provided in 12 oz. spray cans.



Adjustable Pedestal Mount (For use with all controls) P/N 63078 (12" Shaft)

Easy-to-install and flexible, our adjustable pedestal mount will position your Power Plow snowplow control station how you want it! Available in a 12" extension, this quality built accessory will install on either Blizzard Power Plow snowplow control station

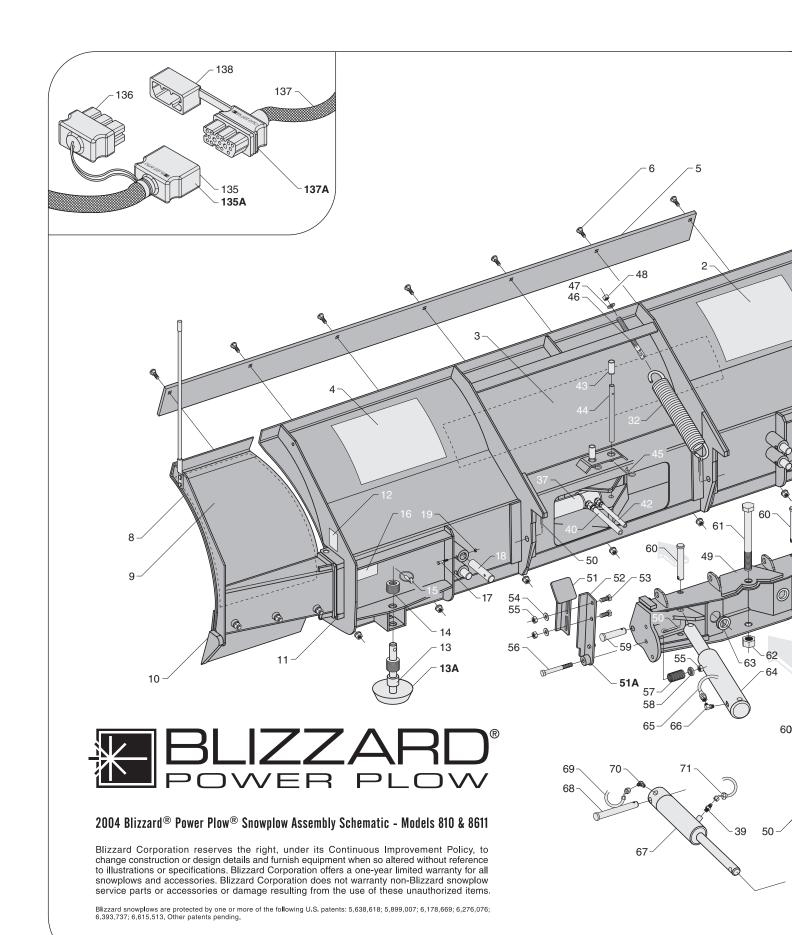
in minutes! Ideal for bucket seat vehicles with low center consoles. Pedestal accessory shipped with complete hardware and adapter plate.

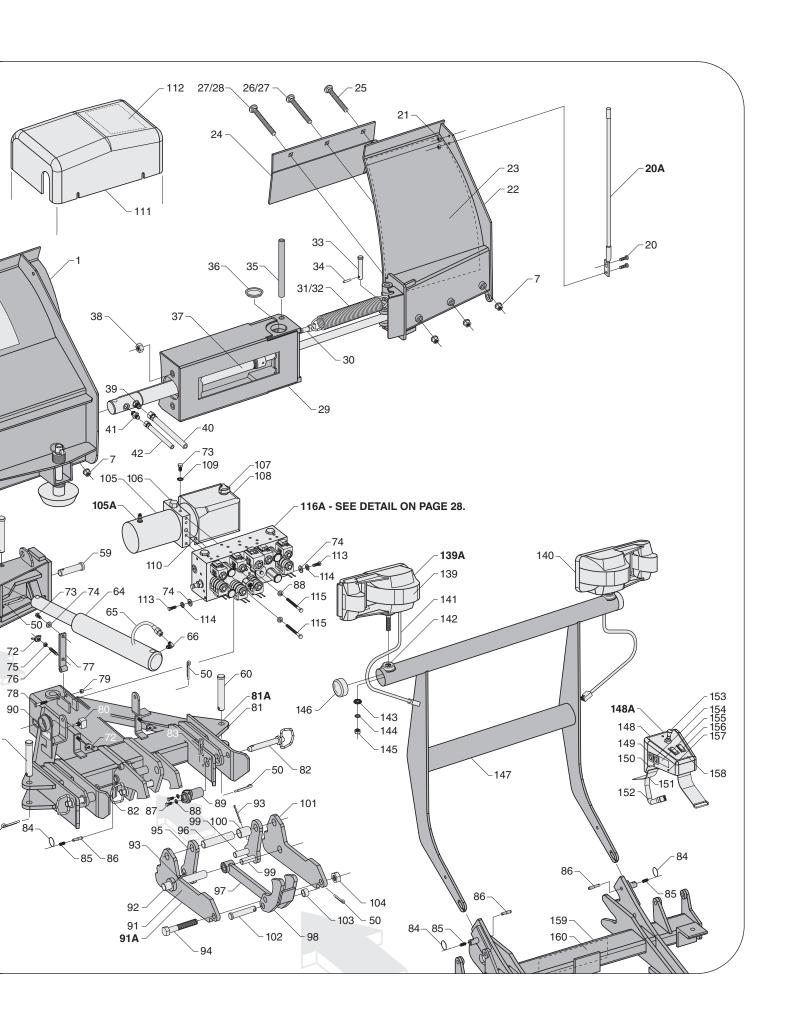


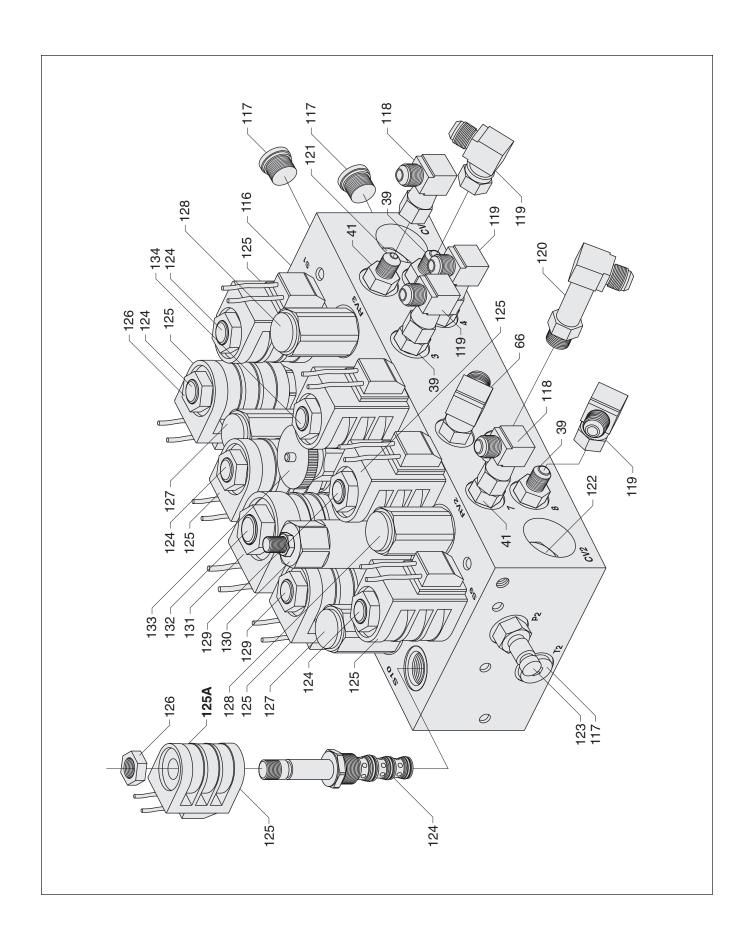
Heavy-Duty 3/8" Wing Cutting Edges with Hardware P/N 61288

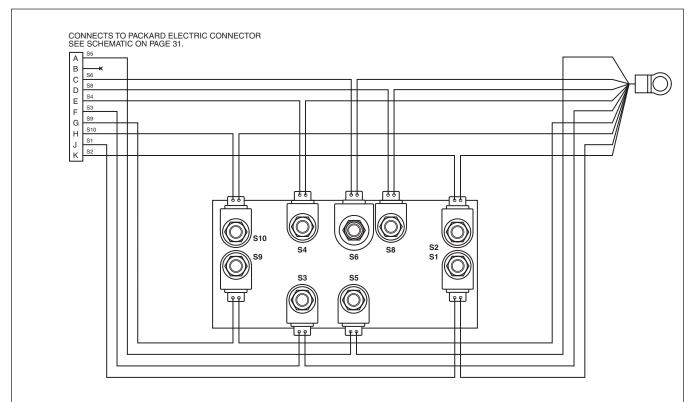
Beef-up your Blizzard Power Plow snowplow with our 3/8" thick wing cutting edges. Made of T1 material, these edges are built to withstand heavy plow use on the roughest road surfaces. These durable wing edges also provide added material for pro-

tection against sidewalk curb wear. Mounting hardware included.

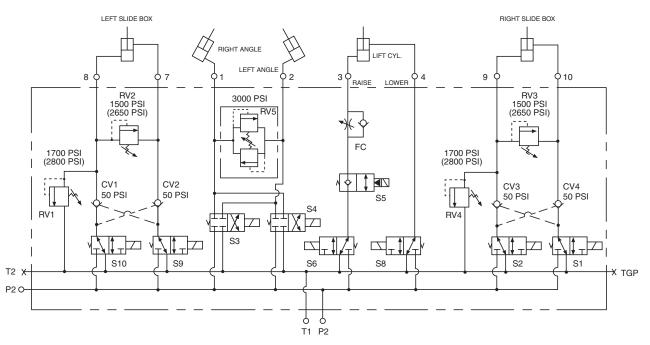






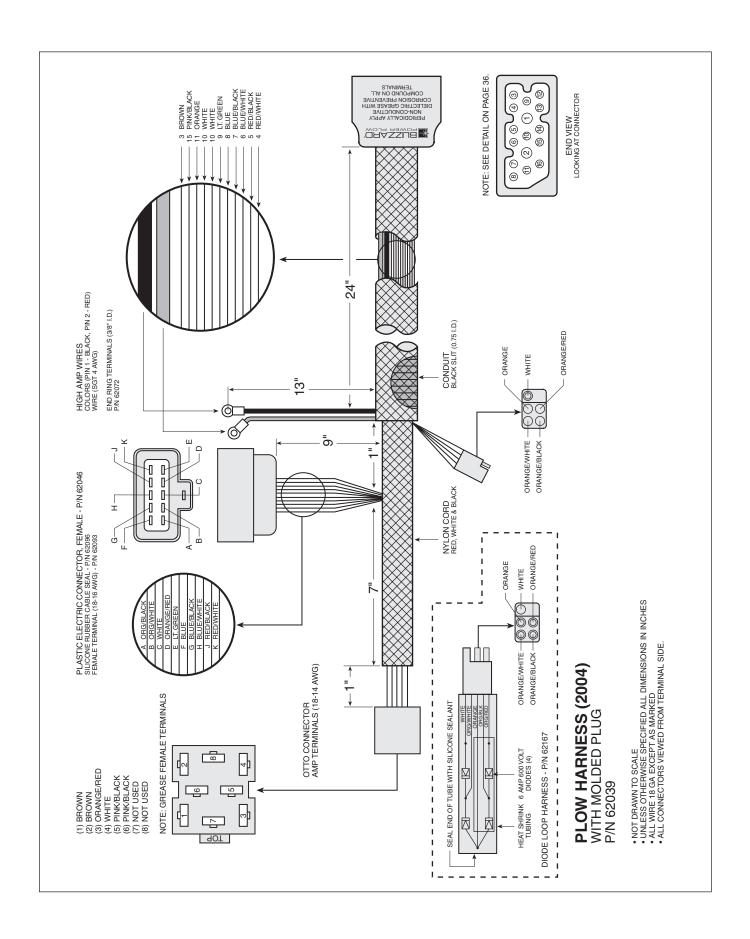


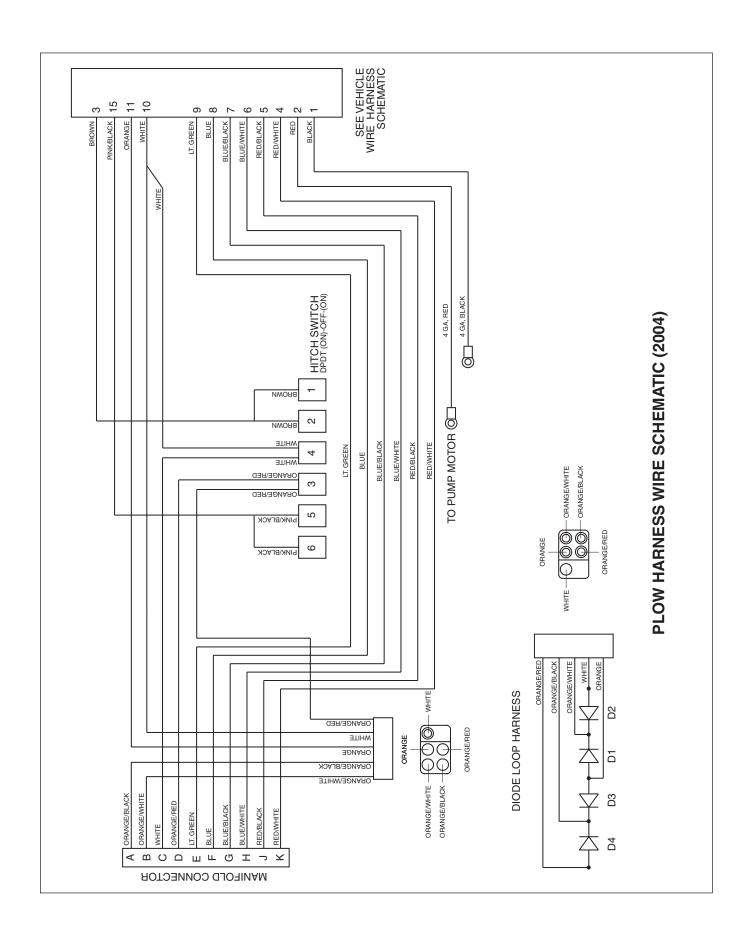
## MODELS 810 & 8611 COIL HARNESS WIRE SCHEMATIC (2004)

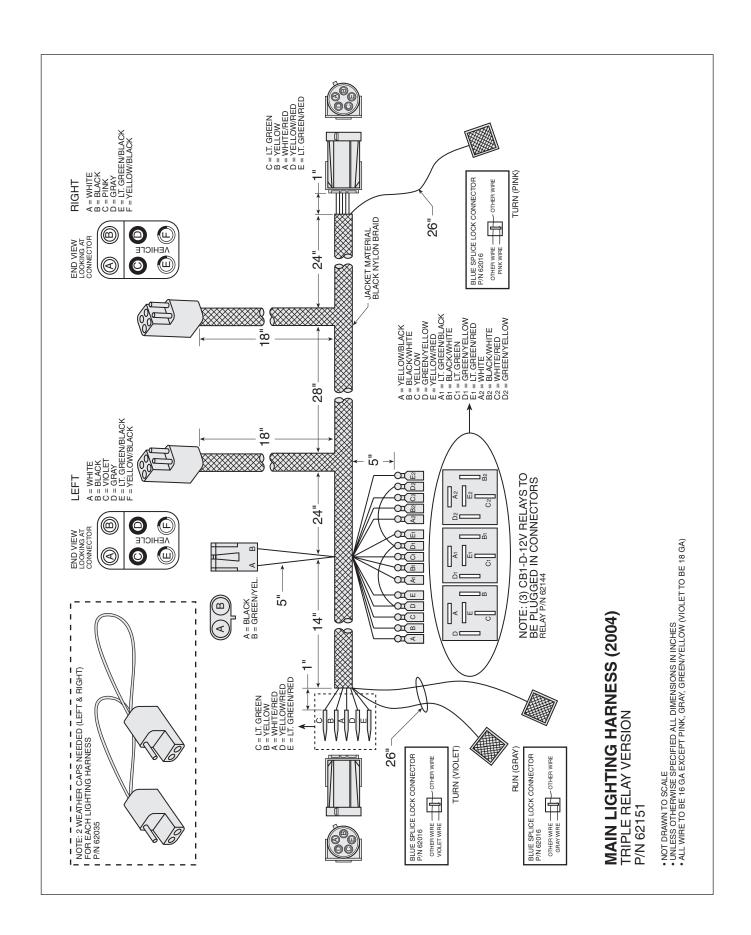


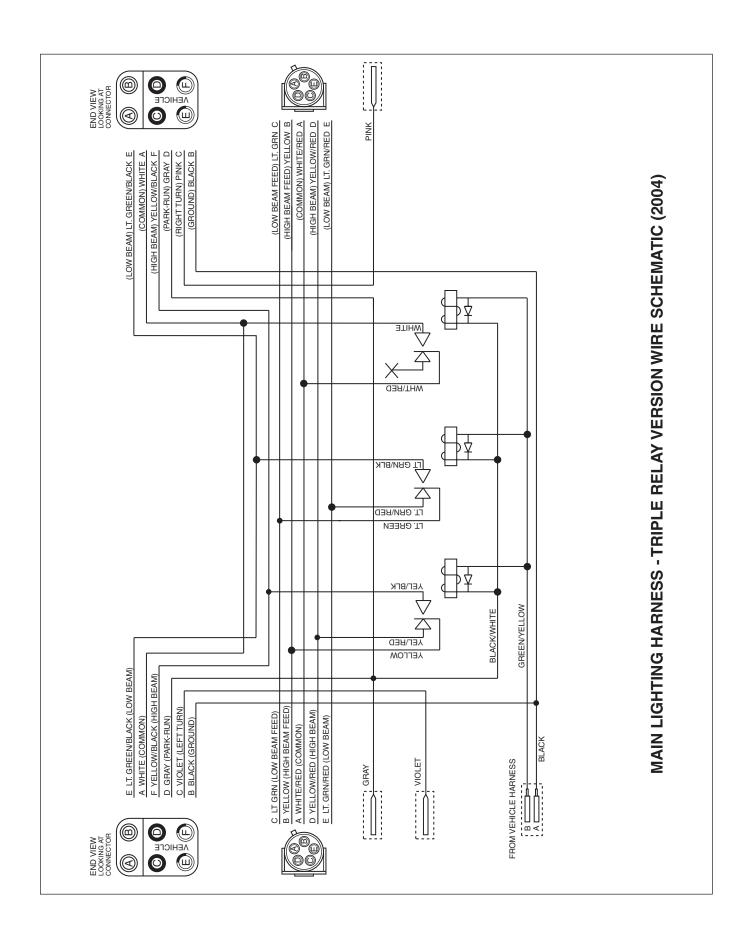
NOTE: WHERE APPLICABLE, MODEL 8611 VALUES ARE INDICATED IN PARENTHESIS.

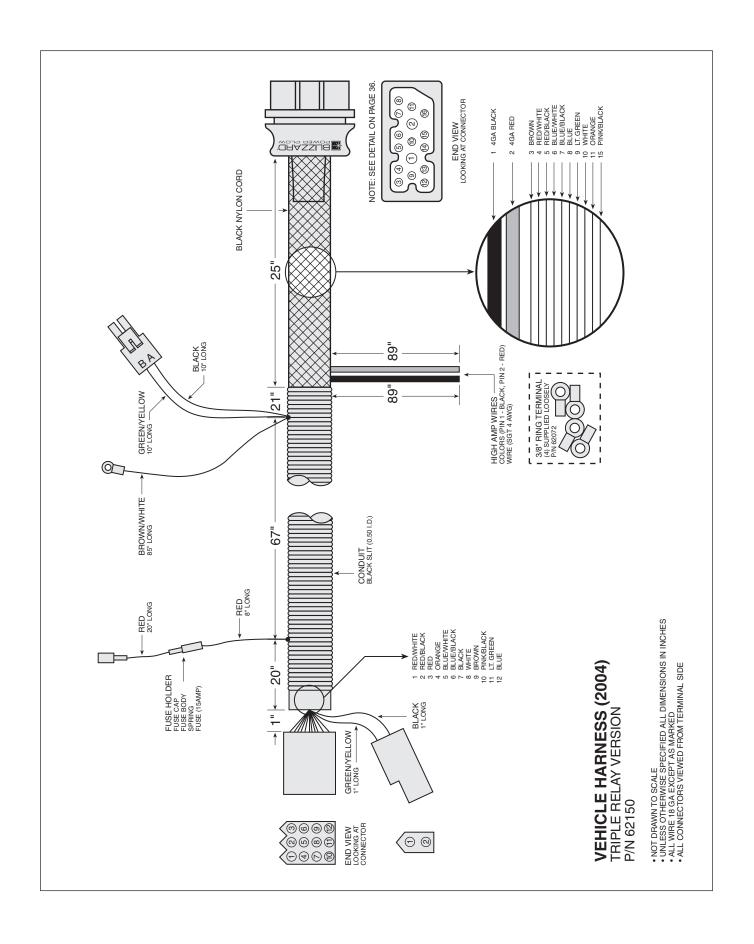
MODELS 810 & 8611 HYDRAULIC MANIFOLD SCHEMATIC (2004)

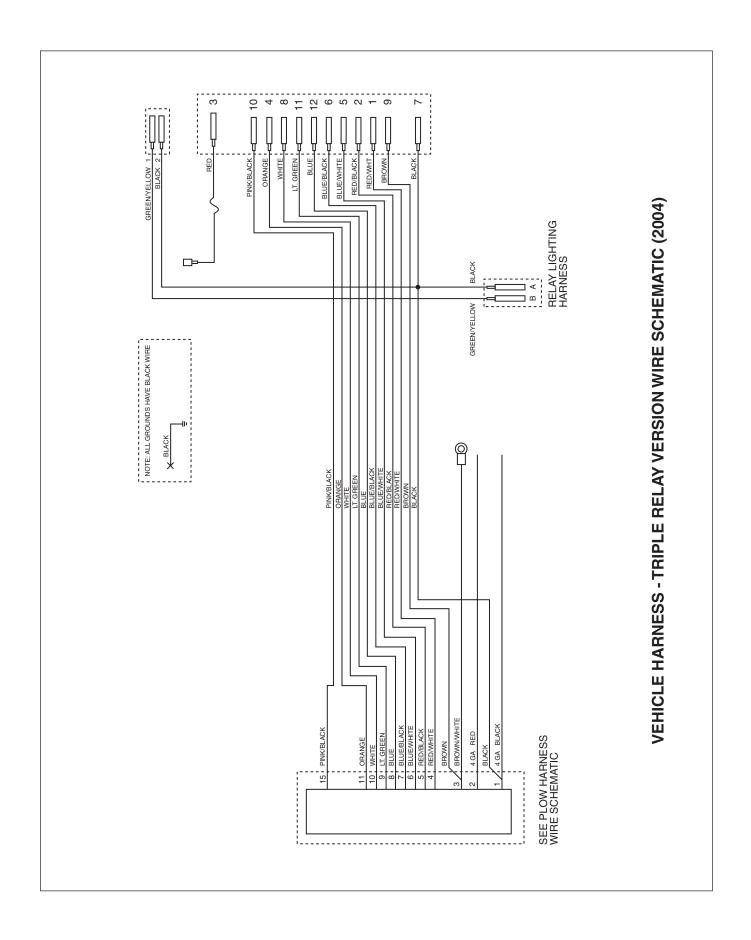


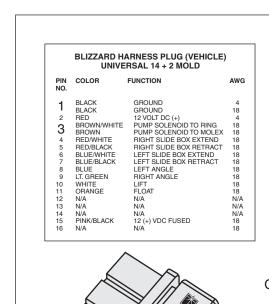


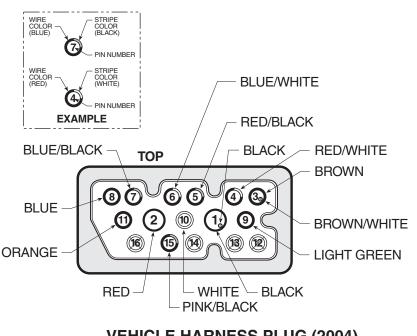




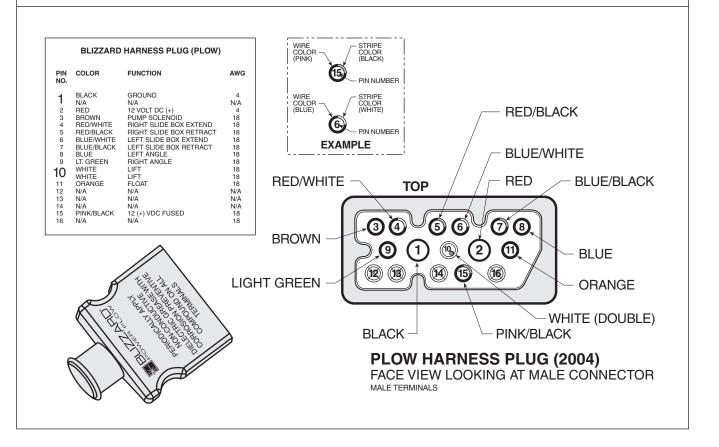












## **Troubleshooting Guide**

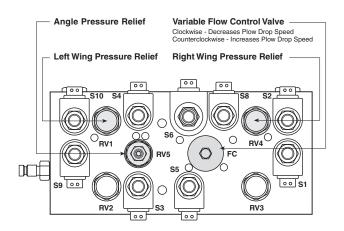
Prior to diagnosing your Power Plow snowplow, verify that all connectors (plow and vehicle wire harness plugs, headlight adapters, control box, fused hot lead, draw latch switch, solenoid ground wire connection, coil wire lead harness, plow headlight harnesses) are free of corrosion and are well lubricated with dielectric grease. Insuring that all connectors are in good working order will save time in determining your snowplow's service needs.

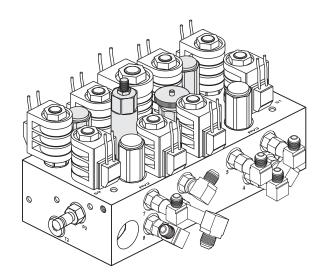
Problem	Probable Cause(s)	Suggested Remedy
Pump will not run.	Plow wire harness may not be properly connected to the vehicle wire harness.	Verify the wire harnesses are properly connected. Review the instruction on pages 10-13.
	Power or ground cables to the battery, pump or solenoid may not be properly connected.	Properly connect all cables. Clean and lubricate with dielectric grease. If power does not resume, check the continuity of all cables to find the break.
Pump will not run, power to the solenoid.	The black ground wire and brown/white activation wire on the solenoid are not properly connected.	Properly connect both cables. Test for power by initiating any joystick function except the float. Note: The POWER rocker switch must be in the "ON" position to properly test any plow function. If the solenoid is grounded and no power exists, diagnose the plow & truck wire harnesses.
Pump will not run with power to the solenoid. Brown/white activation wire and ground are properly connected.	The red, hot wire to the pump motor is not properly connected.	Connect red wire and check the black ground wire. If problem is not resolved, the solenoid could be inoperable or the pump motor may be worn. Replace the solenoid if there is no power to the pump. Replace the pump motor if it is receiving power.
Pump will not turn off. Do not allow the pump motor to continuously run. Unplug the wire harness until the solenoid can be tested or a Blizzard Dealer can diagnose the problem.	Solenoid may be damaged.	Disconnect the brown/white activation wire from the solenoid. If the problem is not resolved, replace the solenoid.
a blizzard bealer carr diagnose the problem.	Short in the joystick control or wire harness.	Disconnect the joystick in the cab. If the pump turns off, there is a short in the electrical system.
Pump runs but plow functions are slow.	Fluid level in the pump reservoir is low. Fluid is leaking.	Add fluid to within 3/4" from the top of the tank. Check for leaks around the pump, manifold and cylinders.
	System pressure may be set too low. Increasing the pressure excessively will increase the amperage draw. This could damage the vehicle wire harness.	Adjust the pressure. Remove the hex cap on top of the pump and turn the screw clockwise. Proper system pressure should be set at 2400 PSI. Test functions and repeat procedure as needed.
	Amperage from the vehicle's alternator is too low.	Repair or replace vehicle alternator. System amperage draw is 155A (175A for 8611) at 1500 PSI.
	Pump filter may be clogged.	Remove the pump tank and thoroughly clean the filter.
A-frame latch will not move.	Draw latch is binding the A-frame latch.	Lower the draw latch to relieve binding on the A-frame latch and reposition the A-frame latch as needed.
Plow will not lift. Pump works properly.	Control station in the cab may not be properly connected.	Connect the power connector from the control to the vehicle wire harness.
	A-frame latch is in the (down) locked position.	Lift the A-frame latch into the raised position.
	Diode loop harness may be corroded or could have failed.	Clean diode loop harness thoroughly and/or replace.

Problem	Probable Cause(s)	Suggested Remedy
Plow will not lift. Pump works properly. (Continued from page 37.)	Coils on the manifold may be damaged.	Remove the S6 coil from the cartridge valve. Position a screwdriver inside of the coil and push the draw latch connect/disconnect toggle switch upward. The screwdriver should be magnetically drawn to the coil. Replace the coil if there is no action.
Plow will not lift with magnification to the S6 coil.	Hydraulic lock in the manifold. This occurs if the voltage is too low on the coils – should be 10 volts.	Loosen cartridge valve S6 to relieve pressure and retighten. DO NOT OVERTIGHTEN! Valves should be torqued to a maximum of 24 ft. lbs.
	Solenoid cartridge valve may be contaminated.	Remove any foreign objects that may be obstructing proper valve operation. Replace if not operating properly after cleaning.
Plow will not stay angled when plowing.	The angle pressure relief valve is set too low.  NOTE: Increasing the pressure relief valve will cause damage to your plow. Do not set the pressure relief greater than 3000 PSI (See illustration on page 39.).	Check the pressure relief by testing the valve inline with the cylinder. Attach a tee fitting to the angle cylinder hydraulic adapter and connect the hose and pressure gauge to the tee. Push the plow against a solid object and record the pressure reading. Note: The setting should not exceed 3000 PSI.
Plow will not angle, pump works.	Review all probable causes above.	NOTE: Verify coils S3 & S4 for angle functions.
Wing will not stay angled when plowing.	The angle pressure relief valve is set too low.  Note: Increasing the pressure relief valve will cause damage to your plow. Do not set the pressure relief greater than 1700 PSI (2650 PSI for 8611).	Test the wing pressure relief. Attach a fluid PSI gauge to the quick connect fitting on the manifold. The pressure relief should not be greater than 1700 PSI (2650 PSI for 8611). Review the illustration on page 39 to increase the pressure relief settings.
Wing will not move, pump works.	Control station, wire harness or cables may be loose or improperly connected.	Verify control station, wire harness and all cables are securely connected. Clean if necessary.
	Hydraulic lock in the manifold has occurred.	Loosen cartridge valves S9 & S10 or S1 & S2 to relieve pressure and retighten. DO NOT OVERTIGHTEN! Valves should be torqued to a maximum of 24 ft. lbs.
	No power to the coils.	Verify coils S1 & S2 (pass. side slide box retract and extend) and S9 & S10 (drive. side slide box retract and extend) are grounded, connected properly and receiving power. If no power is available, diagnose the wire harness. Review the plow wire harness schematic on page 31 and the vehicle wire schematic on pages 33 & 35. If power is present, review the next step.
	Coils are receiving power.	Verify coils are magnetizing. Position a screwdriver inside of the coil. When the respective function is activated, the screwdriver is drawn to the side of the coil. If the coil is not drawn to the screwdriver, replace the coil. If power is present, review the next step.
	Solenoid cartridge may be contaminated or damaged. A bent cartridge will not allow the valve to move freely inside of the cartridge.	Determine a damaged cartridge valve by reversing the driver's side and passenger's side cartridge valves. Replace valve if necessary.
Plow lowers too slow.	Variable flow control valve is not adjusted properly. (See illustration on page 39)	Turn flow control valve counterclockwise in small increments and test. NOTE: Never make adjustments when the plow is in the raised position! Fluid pressure will make the valve difficult to adjust and serious injury or death can occur from a falling plow.
	Review all probable causes for plow will not lift (Page 37).	Verify S5 coil (float) or S5 & S8 coils (disconnect) for magnetism.

Problem	Probable Cause(s)	Suggested Remedy		
Plow drops sporadically.	Variable flow control valve is opened too far.	Turn clockwise 1/16 of a turn and test. NOTE: Never make adjustments when the plow is in the raised position! Fluid pressure will make the valve difficult to adjust and serious injury or death can occur from a falling plow.		
Headlights will not switch from the vehicle to the snowplow.	No power or ground to the headlight relay.	Verify the headlight/ground relay connector is connected. If the connector is properly attached replace the headlight relay(s).		

Should your snowplow develop other problems not indicated in the Troubleshooting Guide, contact your local dealer for technical assistance and/or replacement parts.







## LIMITED CONSUMER WARRANTY

This warranty covers defects in material and workmanship except as set forth below.

#### WARRANTED PARTY:

This warranty applies only to the "Original Purchaser" who purchased this plow from an Authorized Blizzard Dealer, for personal, family or household use.

#### **TERM OF WARRANTY:**

This Blizzard Power Plow snowplow is warranted for the following period: Parts and labor are warranted for one year from date of purchase.

#### **BLIZZARD CORPORATION'S WARRANTY REMEDY:**

Blizzard Corporation will, at its sole discretion, repair or replace defective parts at no charge.

#### **CUSTOMERS RESPONSIBILITY:**

To obtain warranty service, the purchaser must return the defective snowplow to any Authorized Blizzard Dealer. The purchaser must verify the original purchase date. Transportation costs to and from the dealer will be the responsibility of the purchaser.

#### ITEMS NOT COVERED UNDER THIS WARRANTY:

This limited warranty does not cover the following:

- 1. Expendable parts such as cutting edges, plow shoes, hoses, fasteners, blade guides, paint finish, etc.
- 2. Any snowplow or part thereof which has been repaired or altered by anyone other than an Authorized Blizzard Dealer.
- 3. Any snowplow or part thereof which has been subject to neglect, misuse, accident, improper installation, maintenance, or storage. This includes, but is not limited to, corrosion of any electrical components.
- 4. Snowplows mounted on vehicles other than those for whom Blizzard Corporation has provided a specific undercarriage system.
- 5. Blizzard Corporation does not assume liability for damage to the purchaser's vehicle resulting from the attachment and use of a Blizzard Power Plow snowplow. Vehicle risk is the sole responsibility of the purchaser.

### **WARRANTY LIMITATIONS:**

THIS WARRANTY IS OFFERED IN LIEU OF ANY OTHER EXPRESS WARRANTY.

THE DURATION OF ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS WARRANTY.

BLIZZARD CORPORATION'S LIABILITY IS EXPRESSLY LIMITED TO REPAIR OR REPLACEMENT OF DEFECTIVE PARTS. BLIZZARD CORPORATION SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER, EVEN IF DAMAGES ARE CAUSED BY THE NEGLIGENCE OR FAULT OF BLIZZARD CORPORATION.

State Laws: Some states do not allow exclusion of incidental or consequential damages or the limitations on how long an implied warranty lasts, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

This warranty does not apply if you purchased your snowplow for other than personal, family, or household use. If purchased for other than personal, family or household use, refer to the Blizzard Power Plow Commercial Warranty.



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## COMMERCIAL WARRANTY

This warranty covers defects in material and workmanship except as set forth below.

#### WARRANTED PARTY:

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#### **TERM OF WARRANTY:**

This Blizzard Power Plow snowplow is warranted for the following period: Parts and labor are warranted for one year from date of purchase.

### **BLIZZARD CORPORATION'S WARRANTY REMEDY:**

Blizzard Corporation will, at its sole discretion, repair or replace defective parts at no charge.

## **CUSTOMERS RESPONSIBILITY:**

To obtain warranty service, the purchaser must return the defective snowplow to any Authorized Blizzard Dealer within the warranty period. The purchaser must verify the original purchase date. Transportation costs to and from the Dealer will be the responsibility of the purchaser.

#### ITEMS NOT COVERED UNDER THIS WARRANTY:

This warranty does not cover the following:

- 1. Expendable parts such as cutting edges, plow shoes, hoses, fasteners, blade guides, paint finish, etc.
- 2. Any snowplow or part thereof which has been repaired or altered by anyone other than an Authorized Blizzard Dealer.
- 3. Any snowplow or part thereof which has been subject to neglect, misuse, accident, improper installation, maintenance, or storage. This includes, but is not limited to, corrosion of any electrical components.
- 4. Snowplows mounted on vehicles other than those for whom Blizzard Corporation has provided a specific undercarriage system.
- 5. Blizzard Corporation does not assume liability for damage to the purchaser's vehicle resulting from the attachment and use of a Blizzard Power Plow snowplow. Vehicle risk is the sole responsibility of the purchaser.

## LIMITS OF BLIZZARD CORPORATION'S LIABILITIES:

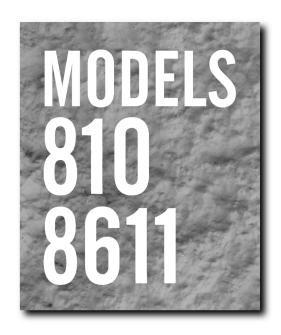
BLIZZARD CORPORATION'S LIABILITY IS EXPRESSLY LIMITED TO REPAIR OR REPLACEMENT OF DEFECTIVE PARTS. BLIZZARD CORPORATION SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER, EVEN IF DAMAGES ARE CAUSED BY THE NEGLIGENCE OR FAULT OF BLIZZARD CORPORATION.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

This warranty does not apply if you purchased your snowplow for personal, family, or household use. In this case, refer to the Blizzard Power Plow Limited Consumer Warranty.



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