##  <br> by Fan: King

# OPERATOR AND PARTS MANUAL 

Hydraulic Snowblower
Model 6025, 6035, 7225, 7235, 8425, \& 8435


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## Introduction

For more than a generation，Allied has been building the most popular snowblowers used on farms，airports，and municipalities throughout the North American snow－belt．Now，all that experience brings you the rugged hydraulic snowblowers to handle more demanding snow clearing jobs．

High flow units are suited for more demanding snow moving jobs utilizing equipment with high capacity hydraulics．The 72＂and 84＂high flow models also have increased cutting height and large fan diameter for increased throwing capacity．Optional standard flow（SF）and high flow （HF）width extension kits are offered to increase the cutting width of any model by 6 ＂（ 15.2 cm ）．An optional truck spout is available for 72＂and 84＂high flow models．

The rugged design of the Allied Hydraulic Snowblower is meant to provide many years of trouble－free operation．The direct drive auger and fan means there are no drive chains，U－joints， or driveshafts in key areas that need lubrication，adjusting，or replacing．The cutting edge and skid shoes provide for simple bolt on replacements．The hydraulic system is designed for efficient operation without requiring any adjustments，provided that a 23 GPM flow rate is supplied at 3300 psi for SF models，and a 36 GPM flow rate is supplied at 3300 psi for HF models．The remote in－cab control with optional wiring harness allows the operator to conveniently control the snow discharge path during operation．

Keep this manual handy for frequent reference．All new operators or owners must review the manual before using the equipment and at least annually thereafter．Contact your Allied Dealer if you need assistance，information，or additional copies of the manual．Visit our website at www．farm－king．com for a complete list of dealers in your area．

The directions left，right，front and rear，as mentioned throughout this manual，are as seen facing in the direction of travel of the implement．

Manufacturer＇s statement：for technical reasons Buhler Industries Inc．reserves the right to modify machinery design and specifications provided herein without any preliminary notice． Information provided herein is of descriptive nature．Performance quality may depend on soil fertility， applied agricultural techniques，weather conditions and other factors．

## Safety

## Safety Instructions

Remember, YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.


The safety alert symbol means...
ATTENTION! BECOME ALERT!YOUR SAFETY IS INVOLVED!


CAUTION
The caution symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.


WARNING
The Warning Symbol indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.


DANGER
The Danger Symbol indicates an imminently hazardous situation that, if not avoided will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

## General Safety Instructions

－Have a first－aid kit available for use and know how to use it．
－Have a fire extinguisher available，stored in a highly visible location，and know how to use it．
－Wear appropriate protective gear．This list may include but is not limited to：
－hard hat
－protective shoes with slip resistant soles
－protective glasses or goggles
－heavy gloves
－wet weather gear
－hearing protection
－respirator or filter mask
－Read and understand the Operator＇s Manual and all safety signs before operating，servicing， adjusting，repairing，or unplugging the equipment．
－Do not attempt any unauthorized modifications to your Allied by Farm King product as this could affect function or safety，and could affect the life of the equipment．
－Never start or operate the snowblower except from the operator＇s station on the power unit．
－Inspect and clean the working area before operating．
－Keep hands，feet，clothing，and hair away from moving parts．
－Ensure bystanders are clear of the area before operating．

## Start－Up Safety

－Do not let inexperienced operators or children run this equipment．
－Place all tractor and machine controls in neutral before starting．
－Operate only with ROPS and seatbelt equipped tractors．
－Do not operate inside a building unless there is adequate ventilation．
－Ensure all shields are in place and in good condition before operating．

## Operation Safety

－Do not permit riders．
－Do not wear loose fitting clothing during operation．
－Do not allow anyone other than the operator close to the auger when in operation．
－Stay clear of snowblower augers．
－Stay clear of snowblower discharge chute．Rocks or debris can be picked up and thrown．
－Never operate equipment in the raised position．

## Transport Safety

- Review Transport Safety instructions in tractor manual before moving.
- Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.
- Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.
- Never have the equipment in operation during transport.
- Always travel at a safe speed.


## Service and Maintenance Safety

- Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.
- Support the equipment with blocks or safety stands before working beneath it.
- Follow good shop practices including:
- keep service area clean and dry
- be sure electrical outlets and tools are properly grounded
- use adequate light for the job.
- Use only tools, jacks, and hoists of sufficient capacity for the job.
- Replace and secure all shields removed during servicing before operating.
- Use heavy leather gloves to handle sharp objects.
- Check hydraulics regularly for leaks. Use cardboard to look for leaks, and use hand and eye protection.
- Relieve pressure on hydraulic system before repairing or adjusting.


## Storage Safety

- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Support the frame on stands and blocks to provide a secure base.


## Safety Signs

- The following illustration shows the approximate location and detail of safety signs.
- Keep all safety signs clean and legible and replace any that are damaged or missing.
- When original parts are replaced, any safety signs affixed to those parts should be replaced as well. Replacement safety signs are available from your local dealer using part number shown in the corner of the sign.




## Assembly Instructions

1. Unpack all components and remove from shipping material. Verify quantities provided with parts listing.

NOTE: Depending on your shipping/assembly configuration, steps 2-3 may already be completed.
2. Begin with spout to snowblower assembly:

- Place UHMV spout ring (815503) on top of spout base plate of snowblower fan housing.
- Assemble spout retainer components (815506, 815507, 812364, 84048, 811791, 812363, $81570,815508,811795$ ) to left hand set of holes according to the assembly views and tighten all three bolts.

NOTE: Ensure bolts are placed facing upwards so that nuts and washers are on top or damage to the snowblower will result.

NOTE: Avoid over tightening spout hardware. UHMW spout ring will deform/compress from over torqued hardware (see Bolt Torque page) and cause binding in spout rotation.

- Slip spout base into assembled spout retainer and align so that right hand set can be assembled using similar technique. Ensure spout rotates freely once hardware is tightened.
- Remove spout chain shield (815499) and install rotator chain (815496). Rotator motor mounting holes are slotted to allow for installation and tightening of chain once connected. Adjust position of sprocket (815497) on motor shaft so that sprocket is in line with chain tab of spout. Adjust chain tightness and reattach chain shield.

3. Final hydraulic assembly

- Attach deflector cylinder (24930M) to spout in direction shown in photo 10 and install adaptors into ports of cylinder as well as deflector ports of hydraulic manifold. Attach deflector hoses as shown in photo 10, ensuring bottom port of cylinder attached to bottom port of manifold. Install hose retaining hardware and tighten hoses and hardware once suitable routing is established. Spout may need to be rotated part way to the left during hose routing and tightening so that hoses do not become excessively twisted during CCW spout travel.
- Install and tighten remaining two adaptors onto manifold.
- Install and tighten male and female quick couplers to the straight ends of supply hoses and connect elbow ends to adaptors just installed. The top port is system input and male-tipped hose should be connected to this port for most applications. Orientate elbow ends to the right, ensuring hose routings are free from points where damage may occur and tighten.

NOTE: Hoses will be looped rearwards at a later time as shown in photo 2.
4. Universal Wiring Harness Installation (Optional): A three piece universal wiring harness (816225) allows quick and easy disconnects and hookups. The snowblower segment is to be left permanently installed to snowblower and has a coupling that can be connected/disconnected conveniently with main hydraulics. The cab harness segment is also easily detachable so the spout control unit can be removed from the skid steer cab when not needed. The main harness segment is designed to stay installed in skid steer while allowing normal use and maintenance of skid steer.

If snowblower is to be operated between two or more skid steer units, extra main harness segments $(816220,816221)$ can be ordered and installed in each allowing quick change outs between units.

Beginning at the engine compartment of the skid steer, identify a pathway where both branches of the main harness can be safely routed. The snowblower harness branch should usually follow the hydraulic lines running along the lift arm and a coupler should be located next to main hydraulic disconnects. The cab control harness branch should usually follow the routing of the skid steer main electrical harness and enter the cab in a suitable location (usually in same area main harness enters cab). The coupler should be located in a convenient, but out of the way, location somewhere within the cab.

NOTE: Skid steer cab will most likely need to be lifted into maintenance position to perform this routing. Consult appropriate service personnel before proceeding.

When routing harness, keep all portions of harness away from points of wear, excessive heat, and pinching areas. Use cable ties where required to keep harness secured to existing lines, harnesses, or other retaining points. See photos 2 to 9 for a typical routing example. Coil up any excess length of harness and secure in a suitable location in engine compartment (next to battery for example, see photo 7). With battery ground terminal disconnected, connect positive ring terminal of harness (end of fuse) to a switched or unswitched power source. Typical examples may include battery post, auxiliary terminal post (if equipped) or hot terminal of starter solenoid.

NOTE: Contact appropriate service personnel before making such connection.

Connect other ring terminal to a suitable ground location and reconnect battery ground strap. Inside cab, place control box in a convenient location out of the way of other controls and connect other end to coupling previously located inside cab from main harness. Coil up any excess length in an out of the way location after routing harness appropriately.

On snowblower, remove manifold shield and connect snowblower harness segment in arrangement shown in photo 1. Replace shield, making sure that harness exits freely through recess in shield. Harness should then be cable tied to one of the main supply hoses for its entire length. Install hose retainer loop onto one of shield retaining bolt locations using $3 / 8 " \times 1-1 / 4$ " bolt and 1-1/2" washer. Route supply hoses through it towards skid steer as shown in photo 2. Arrangement may be changed to suit other applications.

NOTE: Spout controls may behave erratically until hydraulic system is primed.
"byramikdice

## Start-up and Operation Instructions

The hydraulic system of the snowblower is configured so that the fan motor is prevented from stalling in a snow overload condition. A significant increase in fan loading increases the hydraulic pressure drop across the fan motor, which in turn diverts flow away from the auger motor, thereby reducing/stopping further fan loading and simultaneously providing more power to clear the fan. When the fan clears and pressure returns to normal, flow returns to auger so normal operation can proceed. The fan should not require unclogging, other than a situation where a rock or other hard material becomes jammed in it.

Depth of cut at ground level can be controlled both by tilting the snowblower forward/rearward and by using one of the three desired height sets of the skids. If it is preferred that the skids not be used to control cut depth, a fourth set of holes are provided (skid in highest position) but use is not recommended due to the premature cutting edge wear that may result. Snowblower should not be operated with skids completely removed as damage to housing may result.

Each season, the chute rotator chain should be lubricated and checked for excess slack (chain can be tightened by taking advantage of the mounting motor slots). Also, the right hand auger bearing should be greased each season and every 10 hours of use thereafter. Run the snowblower at low RPM to check all operation before blowing snow. Periodically check bolt tightness, particularly the fan motor and auger motor housing bolts.

Always disengage hydraulics and shut off the power unit before doing any servicing or unplugging. When replacing bearings or tightening a loose bearing collar, always tighten collar in the direction of shaft rotation using a center punch or a similar tool.

If the fan should need to be removed, use an appropriate two jaw puller using the slots provided in the fan and fan housing backplate. Prior to reassembly, tapered surfaces need to be completely clean (no paint or rust) with a coating of anti-seize compound applied. Castle nut must be torqued to at least 140 ft -lbs and aligned such that the nut can then be retained with new cotter-pin.

If auger motor is removed from auger, its surfaces should also be cleaned and coated with antiseize compound before re-assembly.

CAUTION
The locking pins must extend through the holes in the attachment when mounting the snowblower to an implement. Levers must be fully down and locked. Failure to secure pins can allow attachment to come off and cause injury or death.

## Theory of Operation

Fan Blade Rotation


Rotate Spout Left or Right



## Specifications

| Model | 6025 | 7225 | 8425 | 6035 | 7235 | 8435 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall Width | $\begin{gathered} 62 " \\ (1575 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 74^{\prime \prime} \\ (1880 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 86 " \\ (2184 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 62 " \\ (1575 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 74^{\prime \prime} \\ (1880 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 86 " \\ (2184 \mathrm{~mm}) \end{gathered}$ |
| Overall Height | 62" (1575 mm) |  |  |  | 67" (1702 mm) |  |
| Depth | 36" (914 mm) |  |  |  |  |  |
| Intake Height | 25 " (635 mm) |  |  |  | 35 " (889 mm) |  |
| Intake Width | $\begin{gathered} 60 " \\ (1524 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 72^{\prime \prime} \\ (1829 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 84 " \\ (2134 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 60 " \\ (1524 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 72^{\prime \prime} \\ (1829 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} 84 " \\ (2134 \mathrm{~mm}) \end{gathered}$ |
| Fan Depth | 6" (152 mm) |  |  |  |  |  |
| Fan Diameter | 20" (508 mm) |  |  |  | 24" $(607 \mathrm{~mm})$ |  |
| Throwing Distance | 40' (12.2 m) |  |  | 30' (9.1 m) | 40' (12.2 m) |  |
| FanTip Speed | $60 \mathrm{mph}(96 \mathrm{kph})$ |  |  | 45 mph (72 kph) | $54 \mathrm{mph}(87 \mathrm{kph})$ |  |
| Auger Diameter | 14" (356 mm) |  |  |  | 18" (457 mm) |  |
| Auger to Housing Clearance | 1" (25 mm) |  |  |  |  |  |
| Flighting Pitch | 10" (254 mm) |  |  |  |  |  |
| Chute Rotation | Hydraulic Motor 270 Deg |  |  |  |  |  |
| Deflector Control | Hydraulic Cylinder <br> 16 Deg Below Grade to 73 Deg Above Grade |  |  |  |  |  |
| Hydraulic Type | Standard Flow |  |  | High Flow |  |  |
| Hydraulic Flow | 23 GPM (87 LPM) |  |  | 36 GPM (136 LPM) |  |  |
| Hydraulic Power Max. | $44 \mathrm{hp}(33 \mathrm{kw})$ |  |  | $77 \mathrm{hp}(57 \mathrm{kw})$ |  |  |
| Side plate thickness | 0.25" (6 mm) |  |  |  |  |  |
| Main body thickness | 0.179" ( 5 mm ) |  |  |  |  |  |
| Cutting Edge | $\begin{gathered} \text { Bolt On } \\ 1 / 2^{\prime \prime} \times 4^{\prime}(13 \times 102 \mathrm{~mm}) \end{gathered}$ |  |  |  |  |  |
| Skid Shoes | 4 Position Adjustable / Replaceable |  |  |  |  |  |
| Weight | $\begin{aligned} & 828 \mathrm{lbs} \\ & (376 \mathrm{~kg}) \end{aligned}$ | $\begin{aligned} & 923 \mathrm{lbs} \\ & (419 \mathrm{~kg}) \end{aligned}$ | $\begin{aligned} & 951 \mathrm{lbs} \\ & (431 \mathrm{~kg}) \end{aligned}$ | $\begin{aligned} & 830 \mathrm{lbs} \\ & (377 \mathrm{~kg}) \end{aligned}$ | $\begin{aligned} & 1084 \mathrm{lbs} \\ & (431 \mathrm{~kg}) \end{aligned}$ | $\begin{aligned} & 1108 \mathrm{lbs} \\ & (503 \mathrm{~kg}) \end{aligned}$ |

## Bolt Torque

## Checking Bolt Torque

The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

| Bolt Torque* |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\infty$ |  |  |  |  |  |
| Bolt Diameter | Grade 2 Bolts |  | Grade 5 Bolts |  | Grade 8 Bolts |  |
| (inches) | SAE 2 |  | SAE 5 |  | SAE 8 |  |
| " ${ }^{\prime \prime}$ | (lb-ft) | (N.m) | (lb-ft) | (N.m) | (lb-ft) | (N.m) |
| 0.25 (1/4) | 6 | 8 | 9 | 12 | 12 | 17 |
| 0.313 (5/16) | 10 | 13 | 19 | 25 | 27 | 36 |
| 0.375 (3/8) | 20 | 27 | 33 | 45 | 45 | 63 |
| 0.438 (7/16) | 30 | 42 | 53 | 72 | 75 | 100 |
| 0.5 (1/2) | 45 | 61 | 80 | 110 | 115 | 155 |
| 0.563 (9/16) | 70 | 95 | 115 | 155 | 165 | 220 |
| 0.625 (5/8) | 95 | 128 | 160 | 215 | 220 | 305 |
| . 75 (3/4) | 165 | 225 | 290 | 390 | 400 | 540 |
| 0.875 (7/8) | 170 | 230 | 420 | 570 | 650 | 880 |
| 1 | 225 | 345 | 630 | 850 | 970 | 1320 |

Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or hex bolts unless otherwise specified in this manual. When using locking elements, increase torque values by $5 \%$.

* Torque value for bolts and hex bolts are identified by their head markings.


## Troubleshooting

| Symptom | Probable Cause | Remedy |
| :---: | :---: | :---: |
| Nothing works | - Hydraulic valve not engaged <br> - One or more quick couplers not completely engaged <br> - Incorrect flow direction <br> - Defective quick coupler <br> - Hydraulic pump low on fluid | - Engage to full detent <br> - Fully engage all couplers <br> - Switch flow direction using controls or swapping hose ends <br> - Replace defective quick couplers <br> - Top up fluid level |
| Fan turns too slow | - Inadequate hydraulic flow for snowblower | - Check the gpm of your system, ensure auxilliary pump is engaged on power unit for high flow models |
| Fan and auger work but chute controls do not work properly | - Electrical connections to battery <br> - Fuse blown <br> - Connector from switches to harness not connecting <br> - Air in hydraulic system <br> - Insufficient hydraulic power | - Ensure that the clamps are making proper connection <br> - Replace fuse <br> - Ensure the connector is fully engaged. Check for broken wires. <br> - Check fluid level of power unit, purge air <br> - Check specifications and flow setting |
| Chute rotation seems to lack power to turn. | - Broken/disconnected chain <br> - Debris/ice caught in chain <br> - Chute retainer hardware too tight | - Check chain condition <br> - Clear chute and chain of obstructions <br> - Loosen hardware so that chute can be turned by hand with chain disconnected |


| Symptom | Probable Cause | Remedy |
| :--- | :--- | :--- |
| Fan stops/slows when <br> raising or turning skid steer | - Insufficient hydraulic <br> power | - Check that operating at <br> full engine RPM <br> Check flow rate and PSI <br> w/ requirements |
| Skid steer unable to lift <br> snowblower | - Size mismatch of <br> snowblower vs. skid steer | - Match lifting capacity of <br> skid steer with weight of <br> snowblower plus snow <br> load |
| Chute controls operate <br> backwards | - Control box mounted in <br> wrong orientation <br> Wiring connected <br> improperly on valve <br> manifold | - Mount in appropriate <br> orientation (if not <br> possible, connections <br> may be swapped <br> underneath manifold <br> cover |
| One control switch operates <br> two different chute functions | - Wires connected <br> improperly on valve <br> manifold | - Connect wires in proper |
| arrangement |  |  |

## Part Identification

Hydraulic Snowblower - All Models



## When Ordering Parts

Always give your dealer the Model, Color and Serial Number of your machine to assist them in ordering and obtaining the correct parts. Use the exploded view and tabular listing of the area of interest to exactly identify the required part.

| Item | Part Number | Description | Qty |
| :---: | :---: | :---: | :---: |
| 1 | 24930M | Cyl 1.75 Dia x 5.0 9/16 Orb | 1 |
| 2 | 811791 | Bolt Hex 0.500Nc $\times 2.0 \mathrm{Gr} 5$ (PI) | 4 |
| 3 | 811795 | Bolt Hex 0.375Nc x 2.00 Gr5 (PI) | 4 |
| 4 | 812259 | Bolt Hex 0.375Nc $\times 5.50 \mathrm{Gr} 5$ (PI) | 4 |
| 5 | 812026 | 5/16" x 1" Hex Bolt (PI) | 2 |
| 6 | 812086 | Adaptor Str 9/16 Morb x 9/16 Mjic | 6 |
| 7 | 812363 | Nut Lock (Steel) 0.375 Grb (PI) | 20-22 |
| 8 | 812364 | Nut Lock (Steel) 0.500Nc Grb (PI) | 8 |
| 9 | 812482 | Nut Lock (Steel) 0.625Nc Grb (PI) | 4 |
| 10 | 812639 | Washer 0.625 SAE Flat Bs (PI) | 4 |
| 11 | 812661 | Adaptor Str 1-1/16 Morb x 1-1/6 Mjic | 4 |
| 12 | 812723 | Adaptor Str 7/8 Mjic x 7/8 Morb | 2 |
| 13 | 812734 | Elbow 90 7/8 Morb x 7/8 Mjic | 2 |
| 14 | 812838 | Adaptor Str 7/16 Morb x 9/16 Mjic | 2 |
| 15 | 813208 | Adaptor Str 1-1/16 Mjic x 7/8 Morb | 2 |
| 16 | 813581 | Washer Flat $1.5 \times 0.531 \times 0.25$ (PI) | 1 |
| 18 | 815439 | Hyd SB Spout Weldt | 1 |
| 19 | 815440 | Hydraulic SB Fan Weldt - SF \& 60" HF Models | 1 |
|  | 815527 | Hydraulic SB Fan Weldt - 72" \& 84" HF Models | 1 |
| 20 | 815441 | Hyd SB Skid Shoe Weldt | 2 |
| 21 | 815444 | Hyd SB Auger Motor Mount | 1 |
| 22 | 815541 | 60" Hyd SB Auger Weldt | 1 |
|  | 815445 | 72" SF Hyd SB Auger Weldt | 1 |
|  | 815530 | 72" HF Hyd SB Auger Weldt | 1 |
|  | 815946 | 84" SF Hyd SB Auger Weldt | 1 |
|  | 815957 | 84" HF Hyd SB Auger Weldt | 1 |
| 23 | 81546 | Washer 0.313 Flat Std Hs (PI) | 4 |
| 24 | 815939 | 60" Snowblower Cutting Edge | 1 |
|  | 815495 | 72" Snowblower Cutting Edge | 1 |
|  | 815951 | 84" Snowblower Cutting Edge | 1 |
| 25 | 815496 | Hyd SB Spout Chain | 1 |
| 26 | 815497 | 19T 1/2" Pitch Spout Rotation Sprocket | 1 |
| 27 | 815498 | Hydraulic Manifold - Shield | 1 |
| 28 | 815499 | Spout Rotation Motor - Shield | 1 |
| 29 | 815503 | UHMW Spout Ring | 1 |
| 30 | 815505 | Flat Head Socket Cap 3/8-16 x 1.25 | 8-10 |


| Item | Part Number | Description | Qty |
| :---: | :---: | :---: | :---: |
| 31 | 815506 | Snowblower Spout Spacer | 2 |
| 32 | 815507 | Snowblower Spout Clamp | 2 |
| 33 | 815508 | Spout Bushing | 4 |
| 34 | 81925 | Hex Bolt 5/16" x 1-34" (PI) | 5 |
| 35 | 815608 | Block Polypropelene 3/8 Pair | 4 |
| 37 | 81570 | Washer 0.375 Flat St Hs (PI) | 36-38 |
| 38 | 816041 | Hyd SB SF \& 60" HF Manifold (Comatrol) | 1 |
|  | 816376 | Hyd SB 72" \& 84" HF Manifold (Comatrol) | 1 |
| 39 | 816042 | Hydraulic Snowblower - SF Fan Motor | 1 |
|  | 816043 | Hydraulic Snowblower - HF Fan Motor | 1 |
| 40 | 816044 | Hyd SB SF/HF Auger Motor | 1 |
| 41 | 816045 | Hyd SB SF/HF Spout Motor | 1 |
| 42 | 816054 | 5/8" Block Polypropelene Pair | 1 |
| 43 | 816057 | Adaptor Str 10 Morb $\times 6$ Mjic | 2 |
| 44 | 81966 | Nut Lock (Nylon) 0.500Nc (PI) | 6 |
| 45 | 84048 | Washer 0.500 Flat SAE Bs (PI) | 14 |
| 46 | 84072 | 3/8" $\times 3 / 4$ " Hex Bolt (PI) | 9 |
| 47 | 84270 | Bolt Hex $0.625 \times 1.75$ Gr5 (PI) | 4 |
| 48 | 84277 | Bolt Hex 0.500Nc x $1.50 \mathrm{Gr5}$ (PI) | 6 |
| 49 | 84541 | Lock Nut (Nylon) 0.313 Nc | 2 |
| 50 | 86171 | Bolt Hex 0.375 Nc $\times 1.25$ | 5 |
| 51 | 87553 | Bolt Hex 0.500Nc x 1.75 Gr5 (PI) | 4 |
| 52 | 909277 | Manual Holder 3.5" Dia. | 1 |
| 53 | 961876 | 1/2" x 1-1/2" Clev Pin (PI) | 2 |
| 54 | 966314 | Hydraulic Hose Holder | 1 |
| 55 | 968632 | Housing w/ Brg 4-Bolt Ti F208 | 1 |
| 56 | 9812430 | Cotter Pin $0.125 \times 1.00$ (PI) | 2 |
| 58 | 816052 | 3/4 Block Polypropelene Pair | 1 |
| 59 | 816051 | 3/4 Hose Clamp Cover Plate | 1 |
| 60 | 810640 | Hex Bolt 0.313 Unc x 2.00 | 1 |
| 61 | 29256 | Cover Plate | 5 |
| 63 | 816693 | AUGER HOSE COVER SHIELD | 1 |

Hose Assemblies - 60" Standard Flow

| Item |  |  |
| :---: | :---: | :--- |
| 1 | 816191 | Dest Number |
| 1 | Hose $3 / 8 \times 669 / 16$ Fjic $\times 9 / 16$ F90 |  |
| 2 | 816206 | Hose $3 / 4 \times 23.81-16$ Fjic Jic 45 |
| 3 | 816207 | Hose $3 / 4 \times 27.31-1 / 16$ Fjic $\times 45$ |
| 4 | 816208 | Hose $5 / 8 \times 257 / 8$ Fjic $\times 7 / 8$ Jic 45 |
| 5 | 816209 | Hose $3 / 8 \times 23-9 / 16$ Fjic $\times$ Jic 45 |
| 6 | 816212 | Hose $3 / 8 \times 399 / 16$ Fjic 90 |
| 7 | 816452 | Hyd SB Main Return Hose |
|  | 816189 | $1 / 2$ " Body, Male FF Coupler |
|  | 816453 | Hose $3 / 4 \times 91.31-1 / 16$ Morb $\times$ Jic |
| 8 | 816454 | Hyd Main Pressure Hose |
|  | 816190 | $1 / 2$ " Body, Female FF Coupler |
|  | 816453 | Hose $3 / 4 \times 91.31-1 / 16$ Morb $\times$ Jic |

Hose Assemblies - 60" High Flow

| Item |  |  |
| :---: | :---: | :--- |
| 1 | 816191 | Description |
| 1 | Hose $3 / 8 \times 669 / 16$ SWFJIC $\times 9 / 1690-$ SWFJIC |  |
| 2 | 816206 | Hose $3 / 4 \times 23.81-1 / 16$ SWFJIC $\times 1-1 / 1645-$ SWFJIC |
| 3 | 816207 | Hose $3 / 4 \times 27.31-1 / 16$ SWFJIC $\times 1-1 / 1645-$ SWFJIC |
| 4 | 816208 | Hose $5 / 8 \times 257 / 8$ SWFJIC $\times 7 / 845-$ SWFJIC |
| 5 | 816209 | Hose $3 / 8 \times 239 / 16$ SWFJIC $\times 9 / 1645-$ SWFJC |
| 6 | 816212 | Hose $3 / 8 \times 399 / 1690-$ SWFJIC $\times 9 / 1690-$ SWFJIC |
| 7 | 816967 | HF Return Hose Assembly |
|  | 816966 | $3 / 4$ Body Male Flat Faced Coupler |
|  | 816210 | Hose $3 / 4 \times 871-1 / 16$ Morb $\times 45-$ SWFJIC |
| 8 | 816968 | HF Pressure Hose Assembly |
|  | 816965 | $3 / 4$ Body Female Flat Faced Coupler |
|  | 816210 | Hose $3 / 4 \times 871-1 / 16$ Morb $\times 45-$ SWFJIC |

Hose Assemblies - 72" Standard Flow

| Item Part Number |  |  |
| :---: | :---: | :--- |
| 1 | 816191 | Hose $3 / 8 \times 669 / 16$ Fjic $\times 9 / 16$ F90 |
| 2 | 816206 | Hose $3 / 4 \times 23.81-16$ Fjic Jic 45 |
| 3 | 816207 | Hose $3 / 4 \times 27.31-1 / 16$ Fjic $\times 45$ |
| 4 | 816209 | Hose $3 / 8 \times 239 / 16$ Fjic $\times$ Jic 45 |
| 5 | 816211 | Hose $5 / 8 \times 29.57 / 8$ Swfjic 45 |
| 6 | 816212 | Hose $3 / 8 \times 39-9 / 16$ Fjic 90 |
| 7 | 816452 | Hyd SB Main Return Hose |
|  | 816189 | $1 / 2$ " Body, Male FF Coupler |
|  | 816453 | Hose 3/4 $\times 91.31-1 / 16$ Morb $\times$ Jic |
| 8 | 816454 | Hyd Main Pressure Hose |
|  | 816190 | $1 / 2$ " Body, Female FF Coupler |
|  | 816453 | Hose $3 / 4 \times 91.31-1 / 16$ Morb $\times$ Jic |

Hose Assemblies - 72" High Flow

| Item | Part Number | Description |
| :---: | :---: | :---: |
| 1 | 816059 | Hose $3 / 8 \times 43.4$ 9/16 Fjic 45 |
| 2 | 816060 | Hose $5 / 8 \times 327 / 8$ Fjic $\times 7 / 8$ Jic 45 |
| 3 | 816061 | Hose 3/8 x 27.7 9/16 Fjic $\times$ Jic 45 |
| 4 | 816191 | Hose 3/8 $\times 66$ 9/16 Swfjic $\times$ 9/16 90-Swfjic |
| 5 | 816967 | HF Hyd SB Main Return Hose |
|  | 816966 | 3/4" Male Flat Face Coupler |
|  | 816210 | Hose 3/4 x 87 1-1/16 Morb x Jic 45 |
| 6 | 816215 | Hose 3/4 x 30.5 1-1/16 Morb $\times$ Jic 45 |
| 7 | 816216 | Hose $3 / 4 \times 31.5$ 1-1/16 Morb $\times$ Jic 45 |
| 8 | 816968 | HF Hyd SB Main Pressure Hose |
|  | 816965 | 3/4" Female Flat Face Coupler |
|  | 816210 | Hose $3 / 4 \times 87$ 1-1/16 Morb $\times$ Jic 45 |

## Hose Assemblies - 84" Standard Flow

| Item Part Number |  |  |
| :---: | :---: | :--- |
| 1 | 816191 | Hose $3 / 8 \times 669 / 16$ Fjic $\times 9 / 16$ F90 |
| 2 | 816206 | Hose $3 / 4 \times 23.81-16$ Fjic Jic 45 |
| 3 | 816207 | Hose $3 / 4 \times 27.31-1 / 16$ Fjic $\times 45$ |
| 4 | 816209 | Hose $3 / 8 \times 239 / 16$ Fjic $\times$ Jic 45 |
| 5 | 816212 | Hose $3 / 8 \times 399 / 16$ Fjic 90 |
| 6 | 816213 | Hose $5 / 8 \times 33.57 / 8$ Swfjic 45 |
| 7 | 816452 | Hyd SB Main Return Hose |
|  | 816189 | $1 / 2$ " Body, Male FF Coupler |
|  | 816453 | Hose 3/4 $\times 91.31-1 / 16$ Morb $\times$ Jic |
| 8 | 816454 | Hyd Main Pressure Hose |
|  | 816190 | $1 / 2$ " Body, Female FF Coupler |
|  | 816453 | Hose $3 / 4 \times 91.31-1 / 16$ Morb $\times$ Jic |

Hose Assemblies - 84" High Flow

| Ptem Number |  |  |
| :---: | :---: | :--- |
| 1 | 816059 | Hose 3/8 $\times 43.4$ 9/16 Fjic 45 |
| 2 | 816061 | Hose 3/8 x 27.7 9/16 Fjic $\times$ Jic 45 |
| 3 | 816191 | Hose 3/8 x 66 9/16 Fjic x 9/16 F90 |
| 4 | 816967 | HF Hyd SB Main Return Hose |
|  | 816966 | $3 / 4 "$ Male Flat Face Coupler |
|  | 816210 | Hose 3/4 x 87 1-1/16 Morb x Jic 45 |
| 5 | 816215 | Hose 3/4 x 30.5 1-1/16 Morb x Jic 45 |
| 6 | 816216 | Hose 3/4 x 31.5 1-1/16 Morb x Jic 45 |
| 7 | 816217 | Hose 5/8 x 37 7/8 Swfjic 45 |
| 8 | 816968 | Hyd Main Pressure Hose |
|  | 816965 | $3 / 4 "$ Female Flat Face Coupler |
|  | 816210 | Hose 3/4 x 87 1-1/16 Morb x Jic 45 |

## Manifold



| Item |  | Part Number |
| :---: | :--- | :--- |
| $\mathbf{1}$ | $\mathbf{8 1 6 4 2 0}$ | Description |
|  | X3929 | Seal Kit |
| $\mathbf{2}$ | $\mathbf{8 1 6 4 2 1}$ | Relief Valve - 72" \& 84" High Flow |
|  | $\mathbf{8 1 6 5 3 4}$ | Relief Valve - Standard Flow \& 60" High Flow |
|  | X3930 | Seal Kit |
| $\mathbf{3}$ | $\mathbf{8 1 6 4 2 2}$ | Plug -Top Right |
|  | X3930 | Seal Kit |
| $\mathbf{4}$ | $\mathbf{8 1 6 4 2 3}$ | Plug - Left Front |
|  | X3932 | Seal Kit |
| $\mathbf{5}$ | $\mathbf{8 1 6 4 2 4}$ | Plug - Left Rear |
|  | X3933 | Seal Kit |
| $\mathbf{6}$ | $\mathbf{8 1 6 4 2 5}$ | Plug - Front |
|  | X3932 | Seal Kit |
| $\mathbf{7}$ | $\mathbf{8 1 6 4 2 6}$ | Plug -Top Left |
|  | X3935 | Seal Kit |
| $\mathbf{8}$ | $\mathbf{8 1 6 4 2 7}$ | Solenoid |
|  | X3934 | Seal Kit |
|  | 816428 | Coil |
|  | 816429 | Coil Nut |
| $\mathbf{9}$ | $\mathbf{8 1 6 4 3 0}$ | Plug -Top Front |
|  | X3931 | Seal Kit |

## Shipping Kit and Bundle Numbers

Bundle Number Description

| 60" Standard Flow - Hydraulic Snowblower (HSB6025SF) |  |  |
| :--- | :--- | :---: |
| F1534 | Full Assembly w/ Hoses | 1 |


| " Standard Flow - Hydraulic Snowblower (HSB7225SF) |  |  |
| :--- | :--- | :---: |
| F1535 | Full Assembly w/ Hoses | 1 |


| $84 "$ Standard Flow - Hydraulic Snowblower (HSB8425SF) |  |  |
| :--- | :--- | :---: |
| F1537 | Full Assembly w/ Hoses | 1 |


| 60" High Flow - Hydraulic Snowblower (HSB6035HF) |  |  |
| :--- | :--- | :---: |
| F1692 | Full Assembly w/ Hoses | 1 |


| 72" High Flow - Hydraulic Snowblower (HSB7235HF) |  |  |  |  |
| :--- | :--- | :--- | :---: | :---: |
| F1536 | Full Assembly w/ Hoses | 1 |  |  |


| $84 "$ High Flow - Hydraulic Snowblower (HSB8435HF) | 1 |  |
| :--- | :--- | :---: |
| F1538 | Full Assembly w/ Hoses |  |

## Optional Bundle Numbers

The following is a list of options available for the Kits listed above.

Part Number Description

| X3926 | SF \& 60" HF Width Extender Kit | 1 |
| :--- | :--- | :--- |
| X3927 | 72" \& 84" HF Width Extender Kit | 1 |
| 816225 | Universal Skid Steer Wiring Harness | 1 |
| 816464 | Bobcat 14 Pin Wire Harness | 1 |
| 816465 | John Deere 14 Pin Wire Harness | 1 |
| 816466 | CAT "B" Series and "C" Series 8 Pin Wire Harness | 1 |
| 816479 | Case "Alpha" Series 14 Pin Wire Harness | 1 |
| 816513 | CAT "B" Series 14 Pin SF Wire Harness | 1 |
| 816514 | CAT "B" Series 14 Pin HF Wire Harness | 1 |
| F1649 | 72" \& 84" HFTruck Spout | 1 |

## Hole Locations for Width Extendor Kits

72" \& 84" HIGH FLOW

5

Item

## Part Number Description

| 1 | 84277 | Bolt Hex 0.500 Nc $\times 1.50 \mathrm{Gr5}(\mathrm{PI})$ |
| :--- | :--- | :--- |
| 2 | 84048 | Washer 0.500 Flat SAE Bs (PI) |
| 3 | 81966 | Nut Lock (Nylon) 0.500 Nc (PI) |

## Maintenance

Hydraulic Snowblower Wiring Schematic 816225


## Part Number Description

| 816049 | Electric Switch Housing - Base |
| :--- | :--- |
| 816050 | Electric Switch Housing -Top |
| 816220 | Hyd SB Harness, Cab |
| 816221 | Hyd SB Harness, Battery |
| 816222 | Hyd SB Harness, Valve |
| 816223 | Eaton Switch - Left \& Right |
| 816224 | Eaton Switch - Up \& Down |
| 816226 | $3-3 / 16 "$ Steel Encased Magnet |

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Pictorial References


Manifold Hookups


Harness secured to hydraulic hose


Top view of snowblower connections
Harness routed with existing





Harness follows existing cab harness



Main Harness power connections
Coupler located behind operator station



Chute hydraulic hook-ups

Warranty - Hydraulic Snowblower
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## Allied by Farm King Limited Warranty

This document limits your warranty rights.

## Base Limited Warranty

Buhler Industries Inc. provides this warranty only to original retail purchasers of its product. Buhler Industries Inc. warrants to such purchasers that all Buhler Industries Inc. manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of 12 months ( 80 days for commercial applications). This limited warranty applies only to those parts and components manufactured by Buhler Industries Inc. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Buhler Industries Inc. reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Buhler Industries Inc. will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Buhler Industries Inc. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance. Also: Buckets and Bucket Tines carry no warranty, Bent Spears carry no warranty, Snowblower Fan Shafts carry no warranty, Mower Blades carry no warranty, Portable Auger Parts Have Two (2) Year Warranty, Loader Parts Have Two (2) Year Warranty. The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Industries Inc. will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

## Repair Parts Limited Warranty

Buhler Industries Inc. warrants Farm King replacement parts purchased after the expiration of the Buhler Industries Inc. Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to Buhler Industries Inc. at the purchaser's expense.

## What is Not Covered

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Buhler Industries Inc.; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/ or repairs that have been made with parts other than those manufactured, supplied, and or authorized by Buhler Industries Inc.

## Authorized Dealer and Labor Costs

Repairs eligible for labor under this limited warranty must be made by Buhler Industries Inc. or an authorized Farm King dealer. Buhler Industries Inc. retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Buhler Industries Inc. determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Buhler Industries Inc. will not approve or pay invoices sent for repairs that Buhler Industries Inc. has not previously approved. Warranty service does not extend the original term of this limited warranty.

## Warranty Requirements

To be covered by warranty, each Farm King new product must be registered with Buhler Industries Inc. within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Buhler Industries Inc. will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

## Warranty Claims:

Warranty requests must be prepared on Buhler Industries Inc. Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty $(30)$ day period from date of failure repair.

## Warranty Labor:

Any labor subject to warranty must be authorized by Buhler Industries Inc. The labor rate for replacing defective parts, where applicable, will be credited at $100 \%$ of the dealer's posted shop rate.

## Exclusive Effect of Warranty and Limitation of Liability

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

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(Note that some provinces or states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from province to province or state to state.

Buhler Industries Inc. neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Buhler Industries Inc. to the purchaser, and Buhler Industries Inc. shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Buhler Industries Inc.'s ability to obtain materials or manufacture replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.

## Government Legislation:

Warranty terms and conditions are subject to provincial or state legislation.
Important Note: This warranty does not apply to rentals.

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