



OPERATOR AND PARTS MANUAL

Rear Blade

80 Series

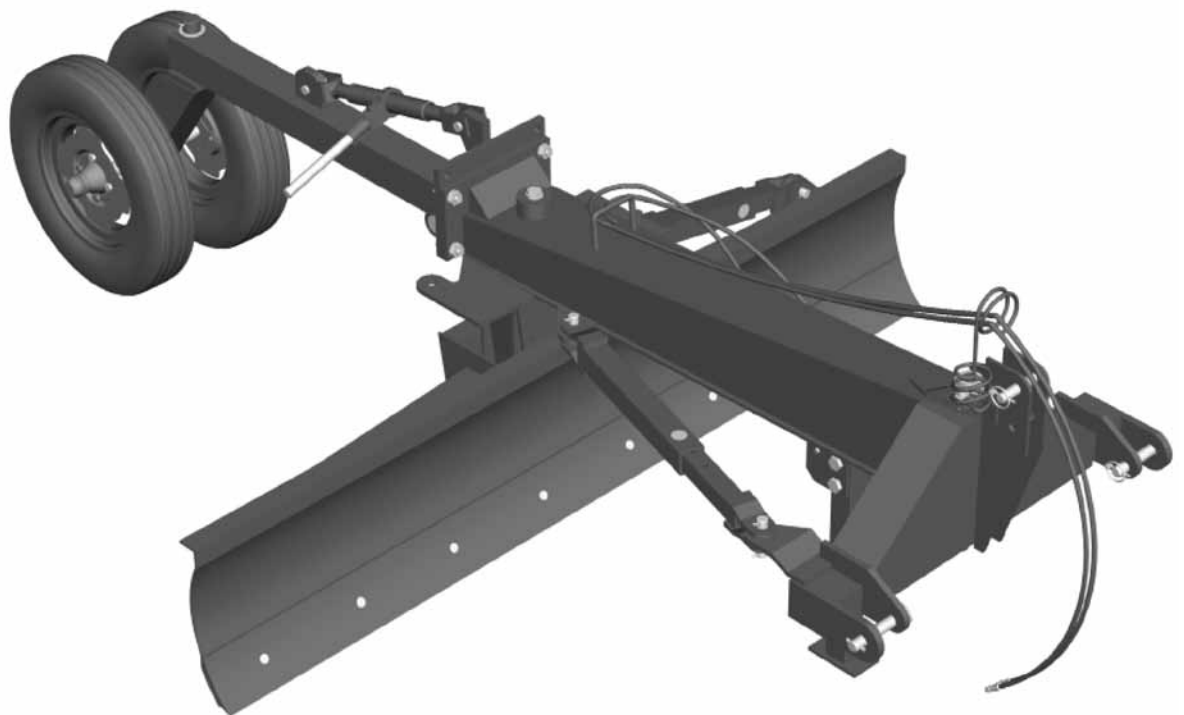


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Manufacturer’s statement: for technical reasons Buhler Industries Inc. reserves the right to modify machinery design and specifications provided herein without any preliminary notice. Information provided herein is of descriptive nature. Performance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

Introduction

Allied has been building a wide variety of rear blades for several decades. These blades are built using more steel, which adds strength, longevity and durability to each blade. Allied rear blades are capable of tackling tough scraping projects.

These rear blades have been precisely built, with particular attention to the pivot point. The tight tolerances minimize metal-on-metal wear and allows for accurate adjustments and longer blade life.

Allied Rear Blades are quick hitch compatible and the parking stand is standard equipment.

Series 80 (to 80 hp) comes in 7', 8' and 9' widths. Angle adjustment, offset and tile can be fitted with either hydraulic cylinders or mechanical linkage.

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.buhlerindustries.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.

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 product as this could affect function or safety, and could affect the life of the equipment.
- Inspect and clean the working area before operating.
- Ensure bystanders are clear of the area before operating.

Start-up Safety

- Do not let inexperienced operators or children run this equipment.
- Operate only with ROPS and seatbelt equipped tractors.

Operation Safety

- Do not permit riders.
- Do not wear loose fitting clothing during operation.

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.
- Always travel at a safe speed.
- Inflate transport tires to recommended tire pressure.

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.
- 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.

Storage Safety

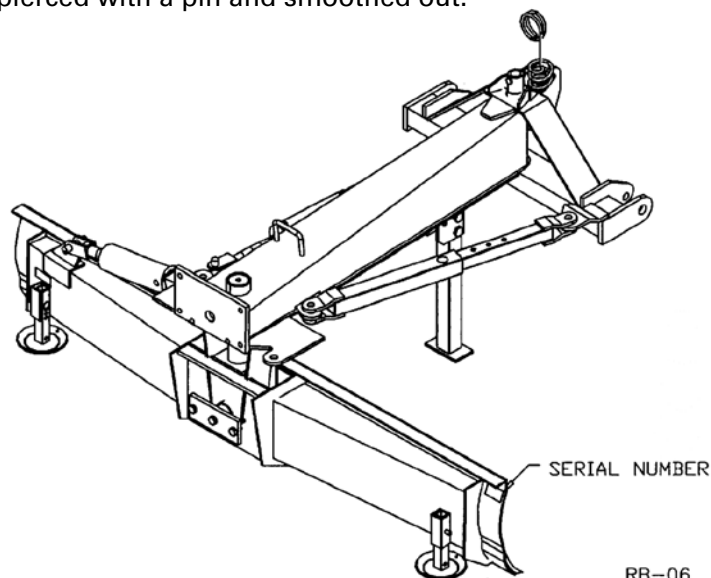
- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Support the frame on stands and blocks to provide a secure base.

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.

Installation

- To install safety signs, ensure the installation area is clean and dry. Decide on the exact position before you remove the backing paper. Remove the smallest portion of the split backing paper and align over the specified area. Carefully press in place.
- Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.



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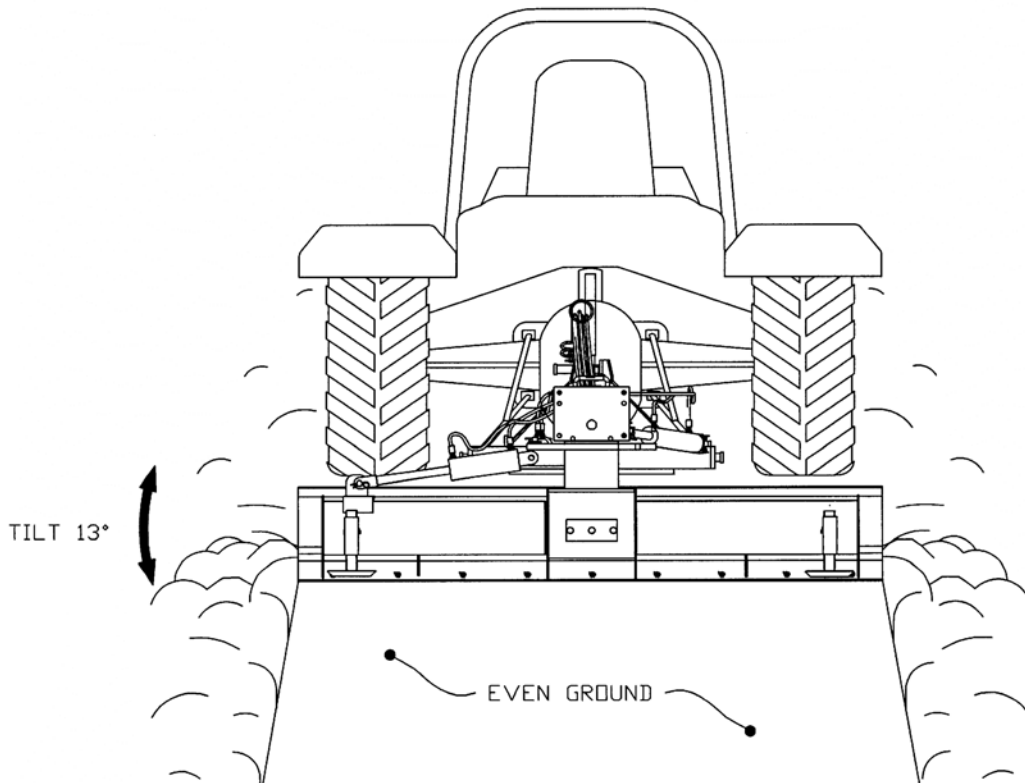
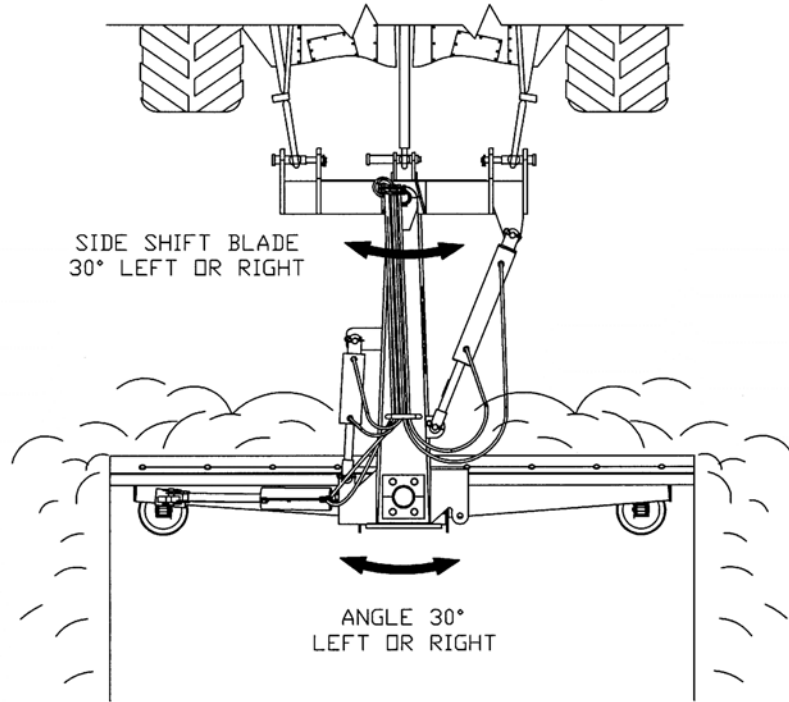
Assembly Instructions

1. Remove the Blade Pin (#4) and the Clamp Plate (#5) from the blade assembly. Insert the King Pin Weldment (#6) into the blade assembly and assemble the Blade Pin and Clamp Plate using the hardware supplied.
2. Slide the Arm Weldment (#8) onto the King Pin Assembly. The Arm Weldment is held in place using a 3-1/2" O.D. disk (#42) and a 3/4" x 2" bolt and lock washer (#43 & #44).
3. Bolt the Stand (#7) to the Arm Weldment.
4. Remove the Arm Swivel Pin (#12) from the Hitch Weldment (#9). Slide the Hitch Weldment on to the Arm Weldment and connect using the Swivel Pin. The pin is held in place with a hex bolt and lock nut.
5. Connect the two mechanical links and hydraulic cylinder. Angle Cylinder (#35) is a 3" x 12" cylinder which controls the angle of the arm. Mechanical link (#40 & #41) controls the tilt of the blade. Mechanical link (#10 & #11) controls the offset of the blade. Optional cylinders (#34 & #36) are available for both mechanical links for the 150 series.
6. Attach hydraulic hoses to the hydraulic cylinder. Bolt the Hydraulic Hose Holder (#39) to the hitch.
7. Recheck and tighten all bolts. Grease the bushings at both ends of the Arm Weldment.
8. Optional Wheel Kit:

Bolt the Wheel Kit Bracket (#56) at the end of the Wheel Kit Arm to the back of the blade using 3/4" x 2-1/4" hex bolts, lock washers and hex nuts (#60, #61, & #44). Mount the wheel and tires to the Axle (#58). The shaft at the top of the axle fits through the bushing at the end of the arm and is held on by a washer (#65) and cotter pin (#64). Connect the Ratchet Jack (#57) to the Arm. The Ratchet Jack is used to control the cutting depth of the blade. Grease the bushings at both ends of the Wheel Kit Arm.

Operation Instructions

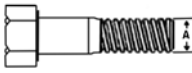



Theory of Operation



Bolt Torque

Checking Bolt Torque

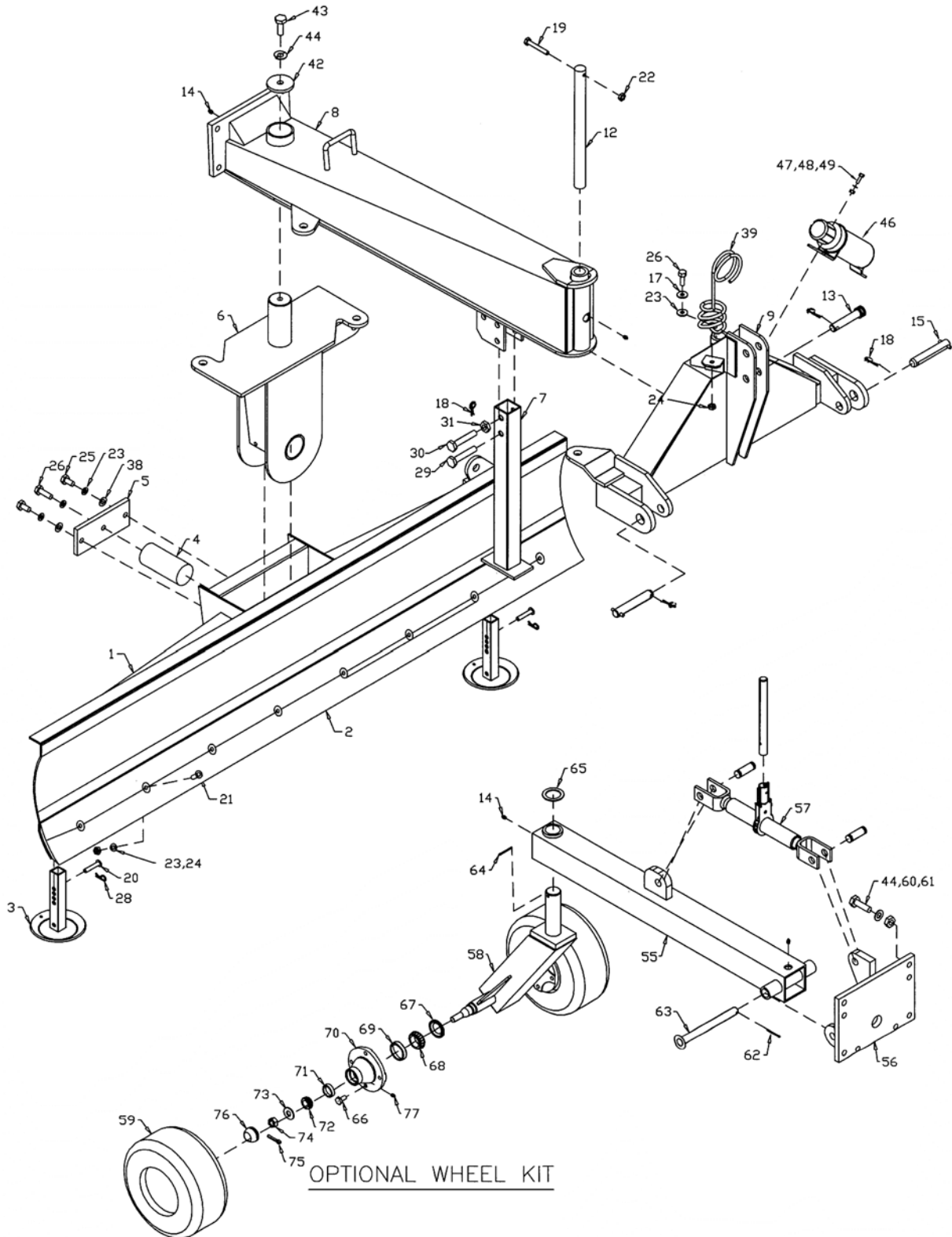
The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

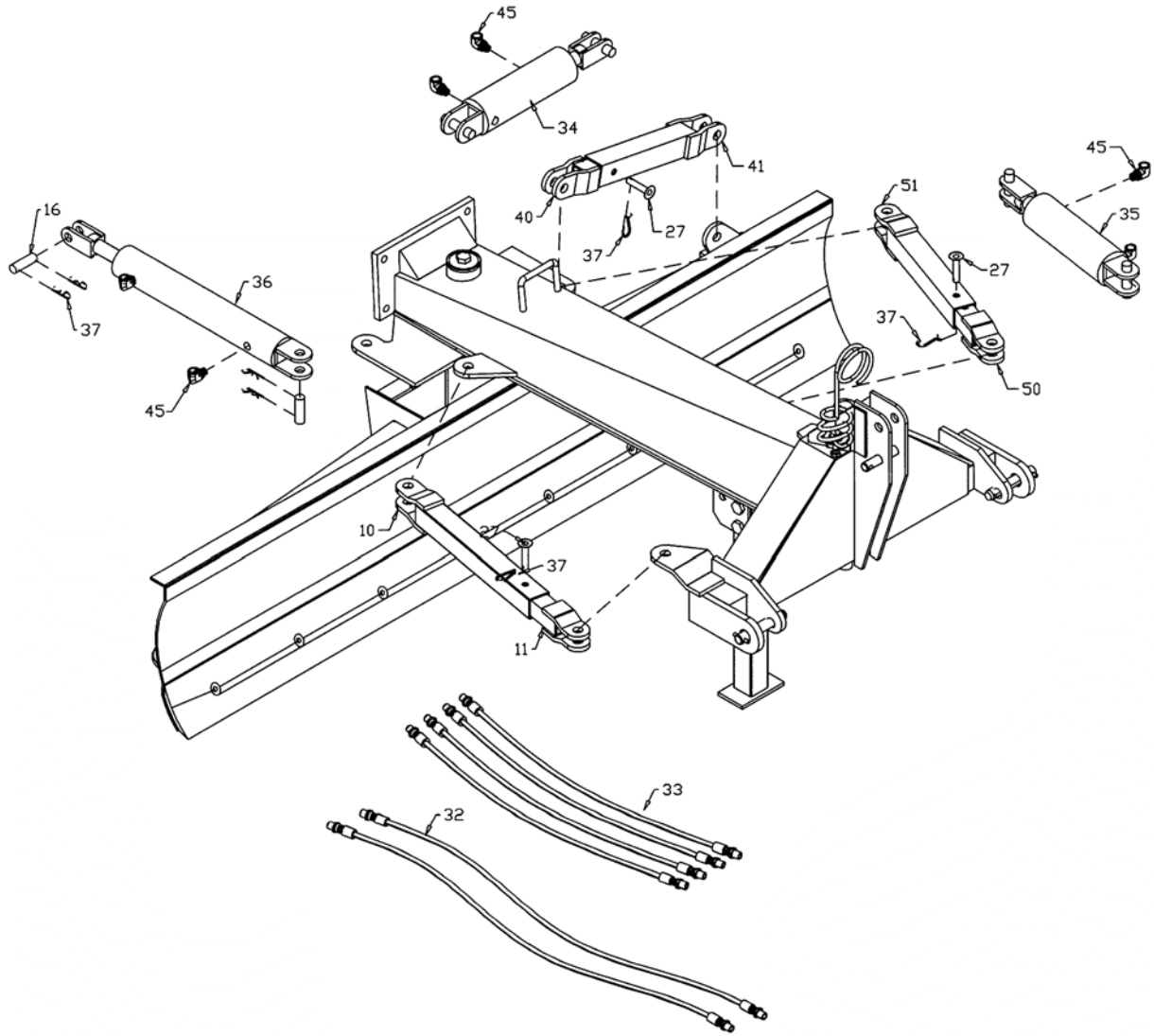
Bolt Torque*						
						
Bolt Diameter (inches)	Grade 2 Bolts SAE 2		Grade 5 Bolts SAE 5		Grade 8 Bolts SAE 8	
"A"	(lb-ft)	(N.m)	(lb-ft)	(N.m)	(lb-ft)	(N.m)
0.25 (1/4)	6	8	9	12	12	17
0.313 (5/16)	10	13	19	25	27	36
0.375 (3/8)	20	27	33	45	45	63
0.438 (7/16)	30	42	53	72	75	100
0.5 (1/2)	45	61	80	110	115	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.

Rear Blade Drawings





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When Ordering Parts

Always give your dealer the Model, Color and Serial Number of your machine to assist him 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.

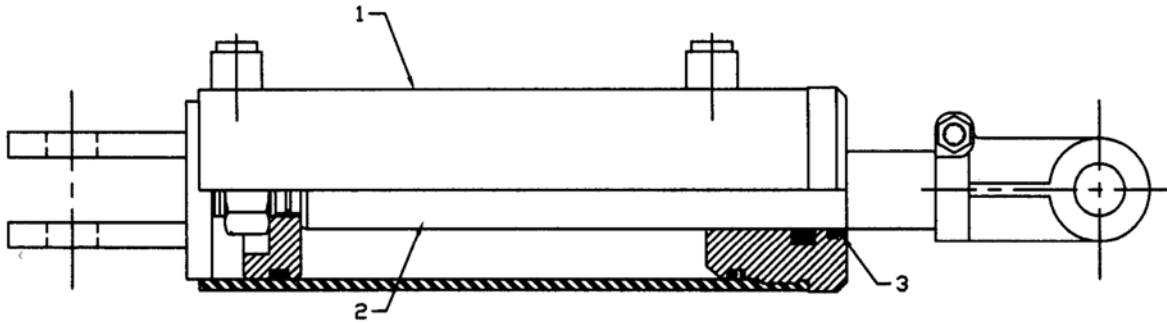
Item	Part Number	Description
1	902474	7' Blade
	902475	8' Blade
	902476	9' Blade
2	967522	7' Cutting Edge
	967523	8' Cutting Edge
	900457	9' Cutting Edge
3	902477	Skid Plate Weldment
4	902388	Blade Pin
5	902469	Clamp Plate
6	903133	King Pin Weldment w/ Grease Zerk
7	900417	Stand
8	906717	Arm Weldment
9	902443	Hitch Weldment
10	902482	Mechanical Link - Offset Outer Sleeve
11	902483	Mechanical Link - Offset Inner Sleeve
12	902454	Arm Swivel Pin
13	965910	Top Link Pin Category 2
14	967164	Tap-in Grease Zerk
15	965966	Lift Pin Category 2-3
16	103753	1"Dia x 4" Cylinder Clevis Pin
17	81638	1/2" Flat Washer (pl)
18	965911	7/16" Linch Pin
19	967488	3/8" x 2-3/4" Hex Bolt (pl)
20	901435	1/2" x 2-1/2" Clevis Pin (pl)
21	967524	1/2" x 1-1/2" Plow Bolt
22	812363	3/8" Lock Nut (pl)
23	81637	1/2" Lockwasher (pl)
24	81636	1/2" Hex Nut (pl)
25	81619	1/2" x 1" Hex Bolt (pl)
26	84277	1/2" x 1-1/2" Hex Bolt (pl)
27	902486	5/8" x 3-1/8" Pin
28	961012	#16 Hair Pin Clip
29	965807	Category 1 Top Link Pin
30	811790	3/4" x 4-1/2" GR5 (pl) Hex Bolt
31	812365	3/4" Lock Nut GRB (pl)
32	114905	144" Hydraulic Hose (Optional)

Item	Part Number	Description
33	114906	120" Hydraulic Hose (angle)
34	24791	Tilt Cylinder 3" x 8" (Optional)
35	24794	Angle Cylinder 3" x 12"
36	24797	Offset Cylinder 3-1/2" x 16" (Optional)
37	12779	#9 Hair Pin Clip
38	84048	1/2" Flat Washer S.A.E. (pl)
39	966314	Hydraulic Hose Holder 10-3/4"
40	902707	Mechanical Link - Tilt Inner Sleeve
41	902706	Mechanical Link - Tilt Outer Sleeve
42	902785	3/8" x 3-1/2" O.D. Disk
43	84467	3/4" x 2" Hex Bolt (pl)
44	81701	3/4" Lock Washer (pl)
45	905392	Elbow 3/4 MORB x 3/4 FORB
46	909277	Manual Holder
47	812026	5/16" x 1" Hex Bolt (pl)
48	81569	5/16" Lock Washer (pl)
49	81568	5/16" Hex Nut (pl)
50	905426	Mechanical Link - Angle Inner Sleeve
51	905425	Mechanical Link - Angle Outer Sleeve

Optional Wheel Kit		
55	906733	Wheel Kit Arm
56	906729	Wheel Kit Bracket
57	967499	Ratchet Jack
58	906740	Axle
59	F253	Tire Mounted 6.70
	F7110	Wheel 15" x 4.5 x 4 Bolt
60	84346	3/4" x 2-1/2" Hex Bolt (pl)
61	81700	3/4" Hex Nut (pl)
62	967162	5/16" x 3" Cotter Pin (pl)
63	906735	Swivel Pin 1-1/4" x 10-3/8"
64	81210	1/4" x 2" Cotter Pin (pl)
65	967153	Narrow Rim Washer 2" x 10ga (pl)
66	968404	1/2" x 1-1/4" Wheel Bolt (pl)
67	961891	Oil Seal CTD (SE11)
68	967712	Outer Bearing Cone (LM67048)
69	968405	Bearing Cup (LM11910)
70	105173	4-Bolt Hub (411) w/ Cup (LM67010)
71	967711	Outer Bearing Cup (LM67010)
72	968406	Outer Bearing Cone (LM11949)
73	9812416	Washer 3/4" SAE (br)

Item	Part Number	Description
74	81834	3/4" Slotted Hex Nut (br)
75	981309	1/8" x 1-1/4" Cotter Pin
76	968409	Dust Cap (DC12)
77	967900	1/4" Grease Fitting

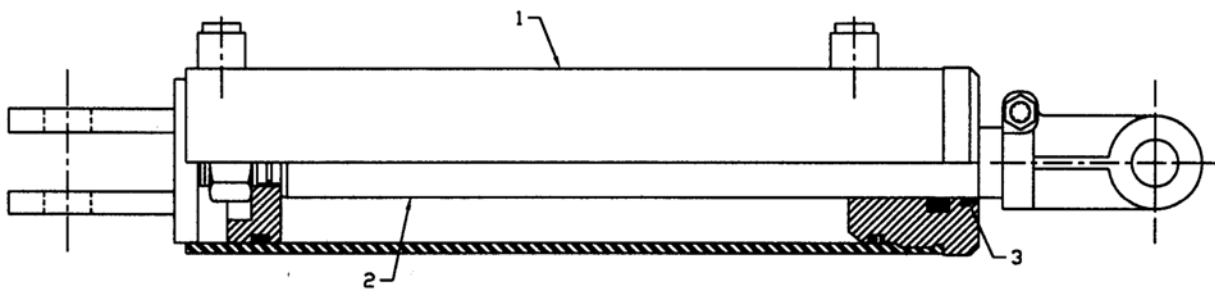
3 x 8 Cylinder Assembly Drawing



24791

Item	Part Number	Description
	24791	Cylinder Complete
1	24827	Tube Weldment
2	113934	Piston Rod 1.5 Diameter
3	X2415	Seal Kit

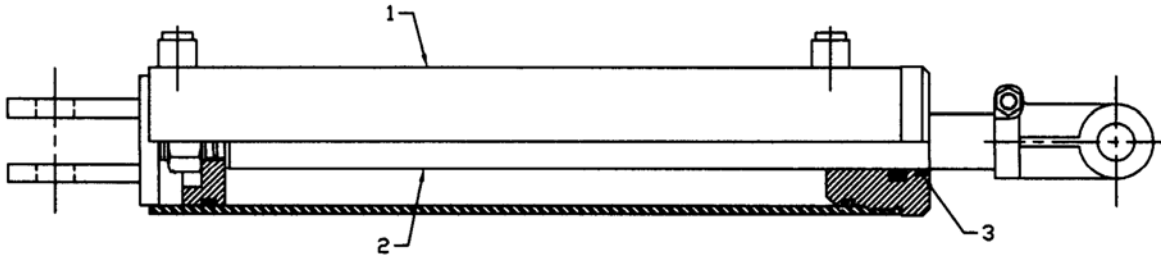
3 x 12 Cylinder Assembly Drawing



24794

Item	Part Number	Description
	24794	Cylinder Complete
1	24828	Tube Weldment
2	113935	Piston Rod 1.5 Diameter
3	X2415	Seal Kit

3.5 x 16 Cylinder Assembly Drawing



24797

Item	Part Number	Description
	24797	Cylinder Complete
1	24829	Tube Weldment
2	114779	Piston Rod 1.5 Diameter
3	X2098	Seal Kit

Shipping Kit and Bundle Numbers

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

Quantity	Bundle Number	Description
C7080 - 7' Rear Blade - c/w Hydraulic Angle Adjust and Mechanical Tilt and Offset Adjust		
1	F6698	Crate of Parts w/ Cylinder
1	F0338	7' Bundle
C7081 - 7' Rear Blade - c/w Cylinders and Hoses		
1	F0329	Crate of Parts w/ Cylinders
1	F0338	7' Bundle
C7082 - 7' Rear Blade - Less Cylinder and Mechanical Links		
1	F0790	7' Bundle
C8080 - 8' Rear Blade - c/w Hydraulic Angle Adjust and Mechanical Tilt and Offset Adjust		
1	F6698	Crate of Parts w/ Cylinders
1	F0339	8' Bundle
C8081 - 8' Rear Blade - c/w Cylinders and Hoses		
1	F0329	Crate of Parts w/ Cylinders
1	F0339	8' Bundle
C8082 - 8' Rear Blade - Less Cylinder and Mechanical Links		
1	F0791	8' Bundle
C9080 - 9' Rear Blade - c/w Hydraulic Angle Adjust and Mechanical Tilt and Offset Adjust		
1	F6698	Crate of Parts w/ Cylinders
1	F0340	9' Bundle
C9081 - 9' Rear Blade - c/w Cylinders and Hoses		
1	F0329	Crate of Parts w/ Cylinders
1	F0340	9' Bundle
C9082 - 9' Rear Blade - Less Cylinder and Mechanical Links		
1	F0792	9' Bundle

Optional Bundle Numbers

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

Quantity	Bundle Number	Description
1	C9151	Dual Gauge Wheel w/Tires
1	F6598	Skid Shoe Set
1	F6680	Mechanical Link - Tilt
1	F6683	Hydraulic Cylinder and Hoses - Tilt
1	F6718	Mechanical Link - Angle
1	F6684	Hydraulic Cylinder and Hoses - Angle
1	F6682	Mechanical Link - Offset
1	F6685	Hydraulic Cylinder and Hoses - Offset

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. Defective parts will receive an extra 10% discount to assist with freight or other incidental costs.

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.

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON BUHLER INDUSTRIES INC.'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON PRODUCTS MANUFACTURED BY BUHLER INDUSTRIES INC. ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL BUHLER INDUSTRIES INC. BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT.

(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.

www.farm-king.com



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