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# **BURKE MODEL DKJ WING**

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## **MAINTENANCE AND PARTS MANUAL**



REVISION 1-A  
JULY 2013



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## SAFETY NOTES AND WARNINGS

NOTE: Appropriate maintenance methods and operation procedures are required for safe, reliable operation of the unit as well as for the safety of operators and servicing technicians.

This manual provides general and specific directions for the operation of the DKJ Wing.

### AVOID ACCIDENTS

Most accidents, whether they occur in industry, on the farm, at home, or on the highway, are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason, recognizing the real cause and doing something about it before the accident occurs can prevent most accidents.

Regardless of the care used in the design and construction of any type of equipment, there are many conditions that cannot be completely safe-guarded against without interfering with reasonable accessibility and efficient operation.

A careful operator is the best insurance against an accident. The complete observance of one simple rule would prevent many thousand serious injuries each year. That rule is:

**NEVER ATTEMPT TO CLEAN, OIL, OR ADJUST A MACHINE WHILE IT IS IN MOTION.**

*NATIONAL SAFETY COUNCIL*

We cannot anticipate every possible circumstance that might involve a potential hazard. Anyone deviating from the instructions provided must first establish that personal safety, system, and/or vehicle integrity is not compromised. Throughout this manual, Dangers, Warnings, Cautions, and Notes provide specific guidelines for the safe and proper operation and service of the equipment.

- **DANGER**: Indicates an imminently hazardous situation, which, if not avoided, **WILL** result in death or serious injury.
- **WARNING**: Indicates a potentially hazardous situation, which, if not avoided, **COULD** result death or serious injury.
- **CAUTION**: Indicates a potentially hazardous situation, which, if not avoided, **MAY** result in minor or moderate injury and property damage. It may also be used to alert against unsafe practices.
- **NOTE**: Highlights information that is beneficial while following a procedure or to avoid an unwanted situation.

This information is furnished to prevent damage to equipment and/or injury to personnel. Be fully aware of the dangers inherent to heavy equipment operation and snow removal.

## ILLUSTRATIONS

For pictorial clarity, some illustrations in this manual may show shields, guards, or plates open or removed. Under no circumstance should this equipment be operated without these devices securely fastened in place.

## PERSONAL SAFETY

- Keep clothing and limbs away from moving parts.

## OPERATION SAFETY

### **WARNING**

*Equipment operated improperly or by untrained personnel can be dangerous. Familiarize yourself with the location and proper use of all controls. Inexperienced operators should receive instruction from someone familiar with the equipment before being allowed to operate the machine.*

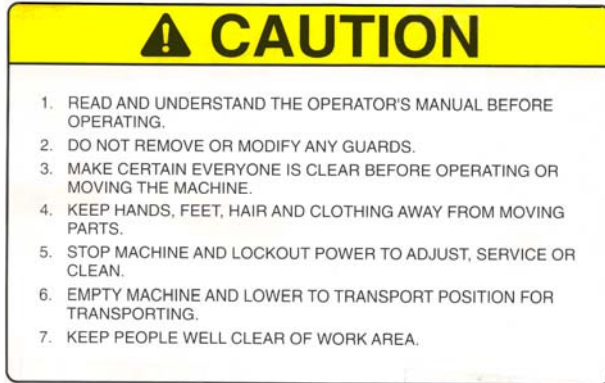
- Safety is dependent upon the awareness, concern, and prudence of those who operate or service the equipment. Never allow minors to operate any equipment.
- Read and understand all operating manuals pertaining to operation. It is your responsibility to read this manual and all publications associated with this equipment (engine manual, accessories, and attachments). If the operator cannot read English, it is the owner's responsibility to explain the material contained in this manual to them.
- Learn the proper use of the machine, the location and purpose of all the controls and gauges before you operate the equipment. Working with unfamiliar equipment can lead to accidents. Familiarize yourself with the driving and handling of the machine before actually plowing snow. Practice plowing in a non-congested area before on-the-job operations.
- Never allow anyone to operate or service the machine or its attachments without proper training and instructions; or while under the influence of alcohol or drugs. Never work on the machine with components running.
- Wear all the necessary protective clothing and personal safety devices to protect your head, eyes, ears, hands, and feet. Operate the machine only in daylight or in good artificial light.
- Inspect the area where the equipment will be used. Beware of overhead obstructions (low tree limbs, etc.) and underground obstacles. Enter a new area cautiously. Stay alert for hidden hazards.
- Never direct discharge of debris toward bystanders, nor allow anyone near the machine while in operation. The owner/operator can prevent and is responsible for injuries inflicted to themselves, bystanders, and damage to property.
- Never operate equipment that is not in perfect working order or is without decals, guards, shields, discharge deflectors, or other protective devices securely fastened in place.
- Never disconnect or bypass any switch.
- Carbon monoxide in the exhaust fumes can be fatal when inhaled. Never operate the engine without proper ventilation.
- Fuel is highly flammable, handle with care.
- Keep the engine clean. Allow the engine to cool before storing and always remove the ignition key.

- Always engage parking brake when leaving machine. Always disengage components when leaving the machine.
- Equipment must comply with the latest federal, state, and local requirements when driven or transported on public roads. Check to be certain all lights are functioning, i.e. turn signal, brake lights, head lights, flasher, etc. Check to be certain back up alarm is working.
- Never use your hands to search for oil leaks. Hydraulic fluid under pressure can penetrate the skin and cause serious injury.
- To prevent tipping or loss of control, do not start or stop suddenly; reduce speed when making sharp turns. Use caution when changing direction on slopes.
- Keep legs, arms and body inside the seating compartment while the vehicle is in motion. Always wear seat belts.
- Clean all glass areas (windows and mirrors) for better visibility. Remember to adjust mirrors when you switch seats.
- Never work under machinery without using approved safety supports.
- Use caution when removing objects such as wire, rope, cable, etc.
- Always use extreme caution when backing up.



## SAFETY DECALS

For safety decals and information not included here refer to the appropriate Appendix or OEM vendor documentation.



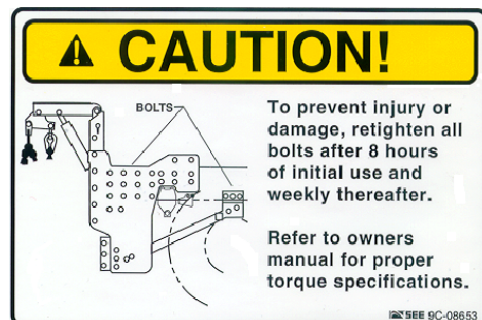
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9C-08652



9C-08649



9C-08653



9C-08650



9C-08655



**9C-08651**

NOTE: If your safety decals are damaged or destroyed, please call us at (888) 249-9788 or (608)249-9788 and we will provide you with new decals at no charge to you. Use the 9C-XXX part number located in the lower right hand corner of decal or the 9C-XXX number located under the decal, on the left hand side, in this manual.

## SERVICE

- Never attempt to clear obstructions or work in plow area while the unit is running. Always stop engine with ignition key off.
- Always disconnect battery when:
  - Installing new equipment
  - Connecting or disconnecting electrical components
  - Welding
- Do not use damaged or broken parts
- Use only authorized parts and components
- Do not use unapproved lubricants/fluids
- Cover all exposed openings when removing parts or hoses
- Do not attempt to remove or disassemble components under pressure (e.g. hydraulic system, engine)
- A variety of **CAUTION** and **WARNING** labels are located in the cab and on the machine. Operators and service technicians must heed these notices for personal safety and operation.

### **CAUTION**

*If a problem occurs, make repairs immediately. Do not continue to operate machine.*

By following all instructions in this manual, you will prolong the life of your machine and maintain its maximum efficiency. Adjustments and maintenance should always be performed by a qualified technician. If additional information or service is needed, contact your authorized Burke Equipment dealer who is kept informed of the latest methods to service this equipment and can provide prompt and efficient service.

## DRIVING SAFETY

Observe the following warning to insure maximum performance, avoid equipment damage, and prevent serious personal injury or death.

### **WARNING**

*Adding equipment to a vehicle will alter the handling and performance characteristics of the carrier vehicle. These changes may include, but are not limited to, steering, acceptable work and travel speeds, unit weight, center of gravity, fuel consumption, and vehicle wear and tear.*

*During the original installation, we may install or modify additional equipment to support the plow. Any subsequent removal, replacement, or alteration of the unit can result in unpredictable operating characteristics that the Original Equipment Manufacturers of record may not support.*

- When working on this equipment for maintenance, adjustments, or hydraulic work, make sure equipment is lowered and resting on level ground.
- When equipment has to be raised to perform maintenance work, equipment such as blowers, plows, brooms, drive frames, etc. should be supported by a solid structure resting on level ground.
- When equipment is ready to be raised, lowered, or reversed, make sure to STAND CLEAR.
- It is the operator's responsibility to be familiar with the handling characteristics of the equipment and to discriminate between safe and unsafe practices based on these characteristics and on the environmental conditions at the time of operation.

## UNITS INVOLVED IN ACCIDENTS

If a machine is involved in an accident, inspect, and repair it before putting it back into service.

- Replace or repair any damaged parts and components
- Ensure that moving parts are not binding or otherwise restricted
- Ensure that attaching hardware is properly fastened and tightened
- Repair any fluid leaks. Ensure that fluid levels are full

## 1. INTRODUCTION

The purpose of this manual is to provide the operator with the information necessary to safely operate this unit. We strongly recommend that personnel thoroughly familiarize themselves with the operation and maintenance information contained in this manual.

The DKJ Wing, dual A-frame lift steel wing increases the cutting swath width of both one-way and reversible snowplows. The dual A-frame lift provides up to 18 inches of float capability.

The trip edge is designed to trigger upon contact with an obstacle, then reset to continue to move snow. The trip mechanism features heavy-duty construction with adjustable horizontal torsion springs.

The truck hood can be accessed without removing the DKJ wing.

NOTE: Chassis manufacturer's dimensions may vary. Check with factory to verify hood clearance.

## **2. SERVICE PROCEDURES**

### **2.1 Initial Service Procedure**

- Check bolts for tightness. Torque loose bolts to the limits set forth in the Torque Specification Chart listed in Table 3 on Page 19.
- Check that all pins are equipped with a keeper
- Adjust lifting or carrying devices for desired plow action
- Grease all fittings and exposed threads on adjusting screws
- Inspect all hydraulic hoses for possible chaffing or pinching
- Inspect all hydraulic fittings for signs of leakage

NOTE: If a problem is discovered, make repairs immediately. Do not continue to operate machine.

### **2.2 Service Procedures After the First 4 Hours**

- Check all bolts for tightness and replace as required
- Inspect all pins for loose or broken cotter pins

### **2.3 Service Procedure – 8 to 10 Hours**

- Grease all adjusting screws and grease fittings
- Spray lubricant on all pivot points on the hitch
- Check all bolts for looseness or breakage and replace as required
- Inspect hydraulic components for leaks or wear
- Check cutting edge for wear. Do not allow cutting edges to wear closer than 1/2 to 3/8 inches to the bottom of the moldboard
- Check curb shoes for wear and replace if necessary

### **2.4 Annual Service Procedure**

- Protect exposed cylinder rods with a thin film of grease during storage
- Cover all quick couplers with the appropriate plugs and caps
- Prime and paint all exposed metal surfaces
- Drain and flush hydraulic system, if so equipped, and clean the tank and filter screen
- Refill with high grade hydraulic oil
- Change the filter every 500 hours or annually, whichever comes first
- Store the wing off of the ground

### 3. MOUNTING INSTALLATION PROCEDURES

#### 3.1 Preparation

Unpack and inspect the unit and all loose parts for any damage that might have occurred during shipping. If any damage is found, or any shortages noted, notify your dealer immediately.

Standard tools are required for installation and maintenance, some welding is required.

NOTE: All illustrations and instructions are for a right hand wing. Right hand refers to the operator's right when they are seated in the truck. If installing a left hand wing, reverse all mounting procedures. If installing two wings, contact the dealer for parts and instructions.

#### 3.2 Mounting

##### 3.2.1 Truck Requirements

###### **WARNING**

*Use only lifting devices that meet or exceed OSHA standards. Never lift equipment above personnel. Loads may shift or fall if improperly supported, causing injury.*

The truck must have a minimum front axle capacity of 18,000 pounds to install a DKJ Wing with a plow. The right front corner requires an additional 2,000 pounds of leaf spring or air bag to keep the truck level when the wing is raised.

##### 3.2.2 Hydraulic Requirements

Maximum Pressure: 2,500 PSI

##### 3.2.3 Front Side Plates

The DKJ Wing requires special side plates that are included in the mounting kit.

###### **CAUTION**

*Do not weld directly to truck frame. Such welding could lead to fatigue cracking.*

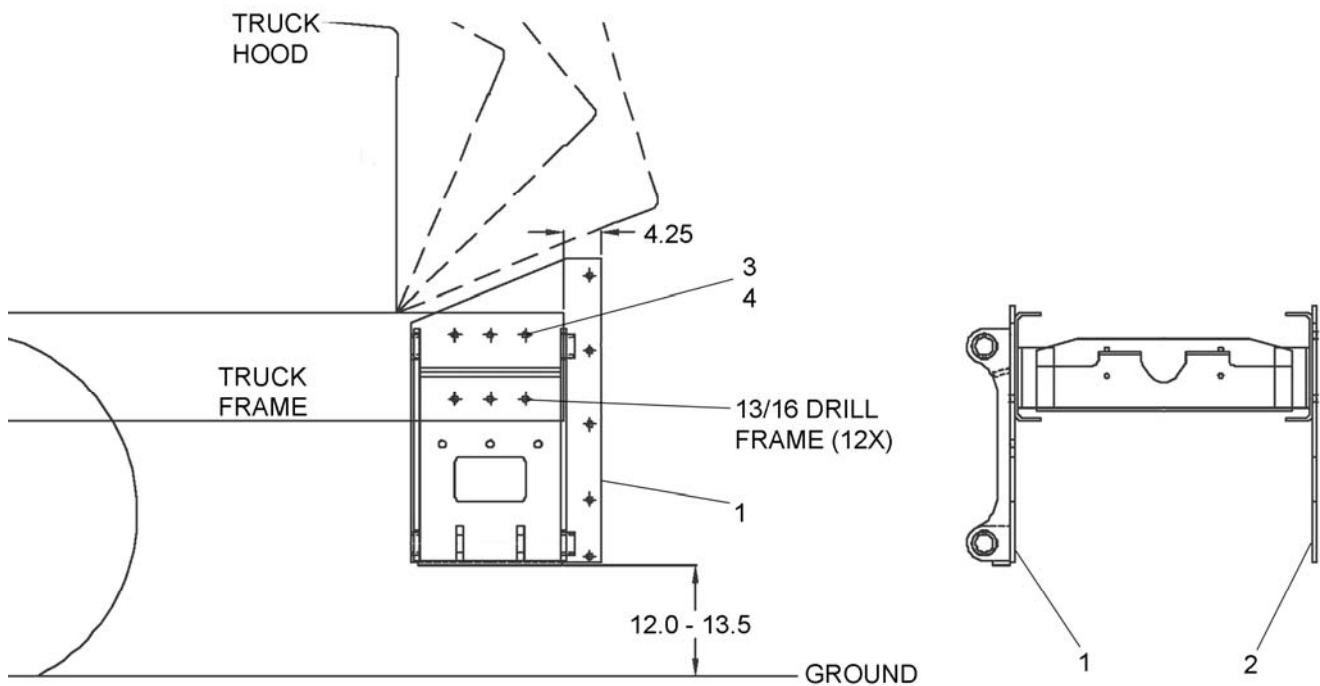
###### **WARNING**

*Before welding, the electrical system must be isolated.*

###### **CAUTION**

*Do not drill holes in top or bottom flanges. Doing so may void truck manufacturer's warranty. Drill only through vertical web portions of the truck frame, a minimum of 2.00" from the top or bottom flanges.*

**Figure 1. Side Plate Installation**



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Item	Description	Qty	Notes
1	RH SIDE PLATE WELDMENT	1	
2	SIDE PLATE	1	
3	CAP SCREW 3/4 X 2-1/2	12	
4	LOCK NUT 3/4	12	

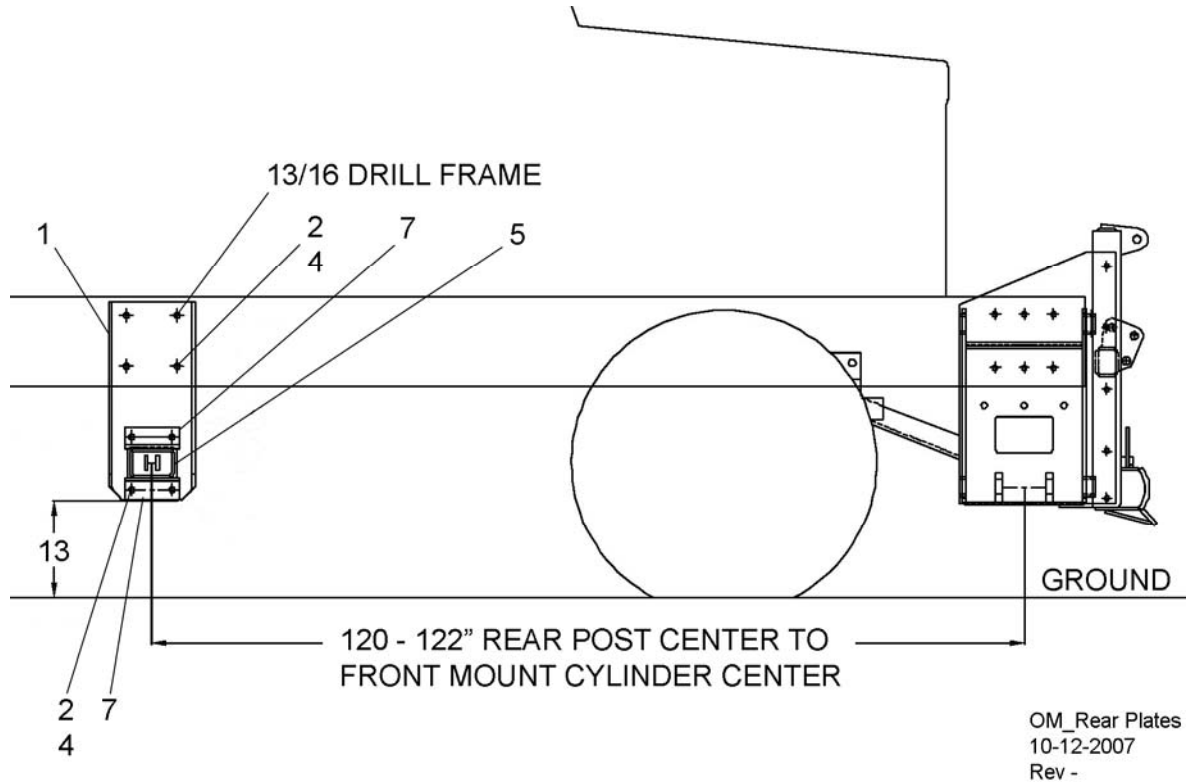
NOTE: Do not weld to truck frame

- Open truck hood and position Side Plates (Items 1 & 2) as far back as possible without touching the hood as shown in Figure 1.
- Mark hole locations on the truck frame.
- Align hole locations from one frame rail to the other and drill twelve 13/16" holes.
- Make sure front of side plate is 4.25 inches from the front of the truck frame and modify truck frame as necessary.
- Install Front Plates with Cap Screws and Lock Nuts (Items 3 & 4).
- Assemble front mount as shown in Figure 16 on Page 25.
- Refer to the plow manual for truck hitch installation instructions.



### 3.2.4 Rear Plates and Post

Figure 2. Rear Plates and Post



Item	Description	Qty	Notes
1	REAR PLATE	2	
2	CAP SCREW 3/4 X 2-1/2	12	
3	CAP SCREW 3/4 X 6-1/2	2	
4	LOCK NUT 3/4	14	
5	REAR POST	1	
6	FLAT 2-1/2 X 1/2 X 16	2	
7	ANGLE, RH	2	
8	ANGLE, LH	2	

NOTE: Do not weld to truck frame

- Clamp Rear Plate (Item 1) to right side of the truck frame so Rear Post (Item 5) pin ears will be centered 120-122 inches from center of front mount cylinder as shown in Figure 2.

NOTE: Bottom of Rear Plates (Item 1) should be 13" from the ground.

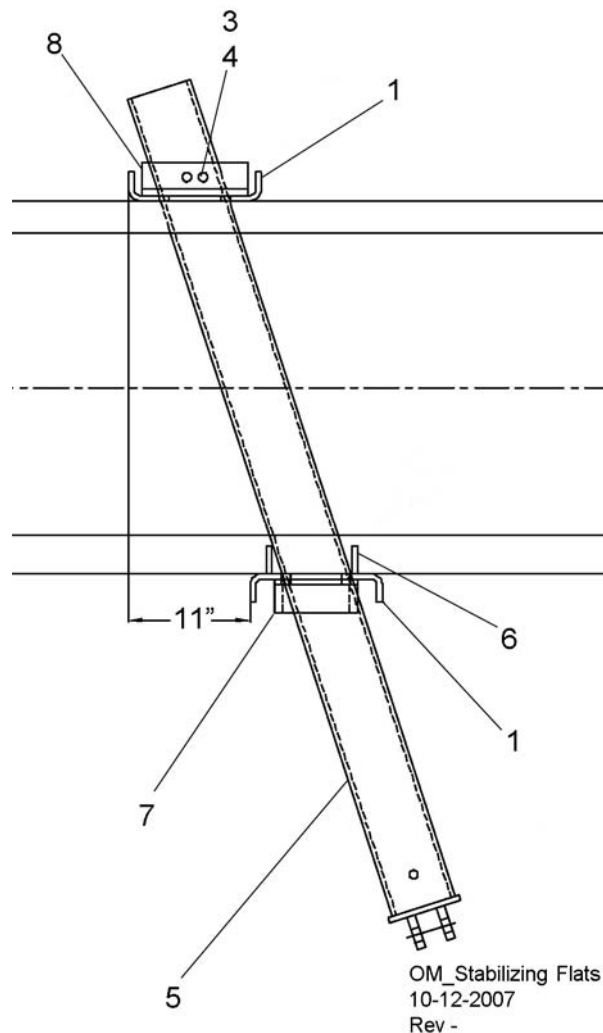
- Position the second Rear Plate (Item 1) on opposite side of truck frame 11 inches further back as shown in Figure 3 on Page 6.
- Mark hole locations on truck frame and make sure all holes in truck frame will be at least 2 inches from top and bottom of rail.

- Drill 13/16" holes and attach with Cap Screws and Lock Nuts (Items 2 & 4).
- Position Flats (Item 6) against right Rear Plate (Item 1) and bottom of truck frame rail on both sides of Rear Post opening as shown in Figure 3.
- Weld to Rear Plate (Item 1) on outside only.

**CAUTION**

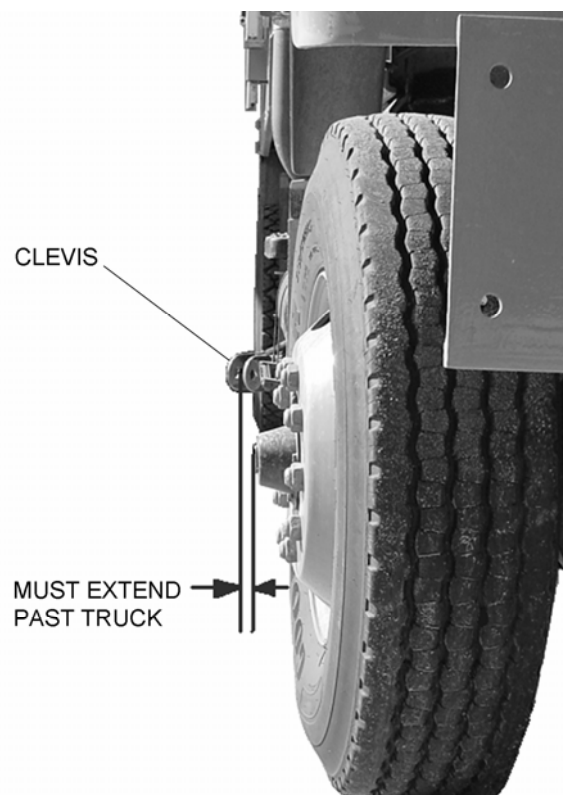
*Rear post clevis pin must extend past all truck parts, see Figure 4 on Page 7. Wing stop (not provided) must be installed to maintain clearance when wing is lifted, otherwise, truck and wing could be damaged.*

**Figure 3.. Stabilizing Plates**



Item	Description	Qty	Notes
1	REAR PLATE	2	
2	CAP SCREW 3/4 X 2-1/2	12	
3	CAP SCREW 3/4 X 6-1/2	2	
4	LOCK NUT 3/4	14	
5	REAR POST	1	
6	FLAT 2-1/2 X 1/2 X 16	2	
7	ANGLE, RH	2	
8	ANGLE, LH	2	

**Figure 4. Wing Clearance**

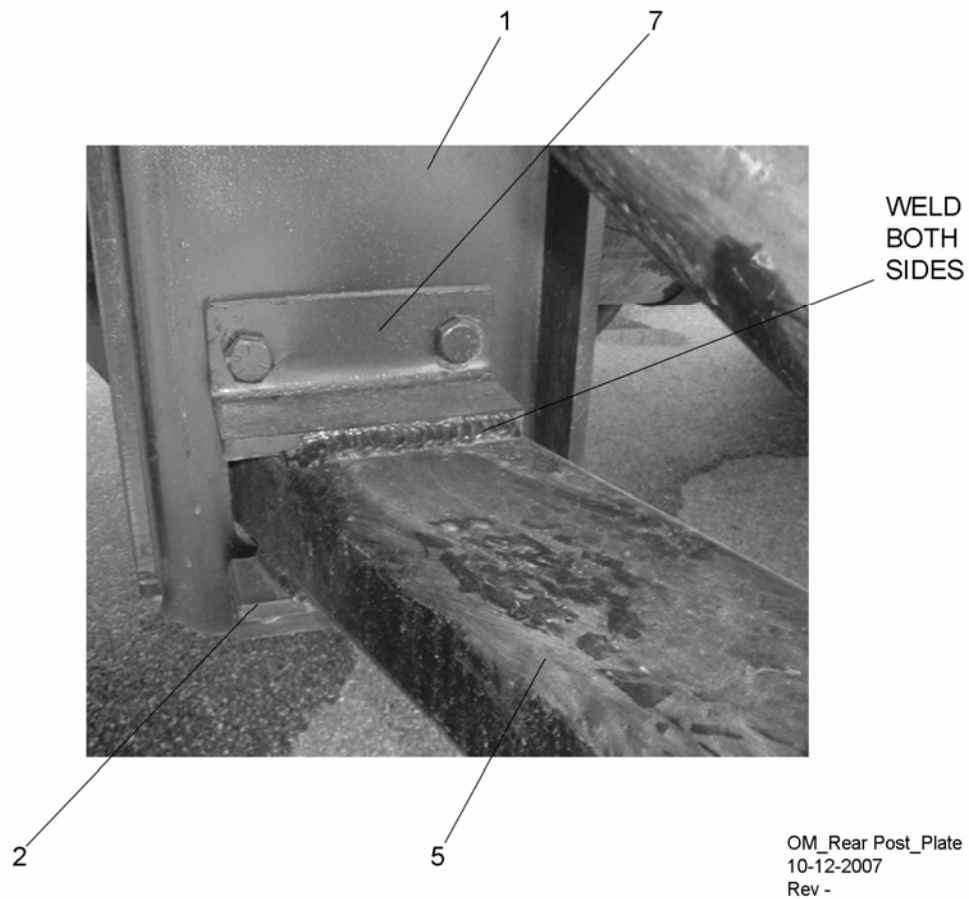


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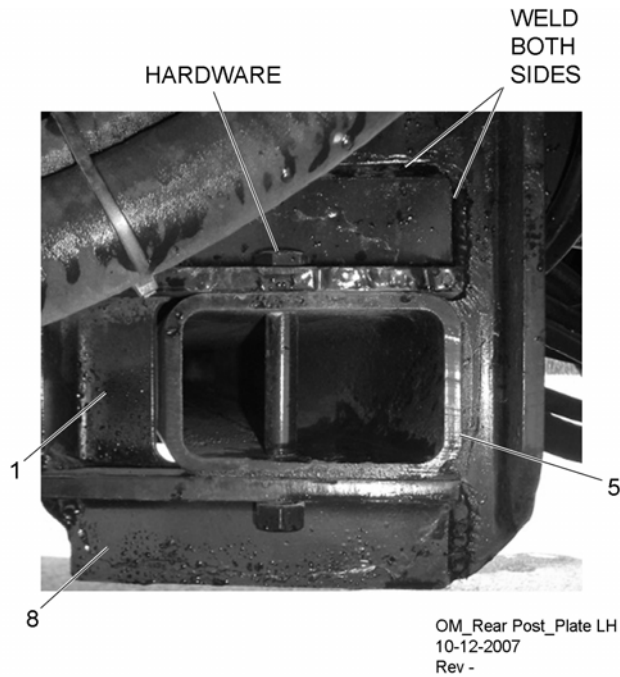
- Attach Angles (Item 7) with two holes to Rear Plate (Item 1) on right side using Cap Screws and Lock Nuts (Items 2 & 4) as shown in Figure 5 on Page 8.
- Slide Rear Post (Item 5) through Rear Plates with ears on right side. Make sure hole in ear is to outermost point on truck by 2 to 4 inches.
- Center remaining Angles (Item 8) on top and bottom of Rear Post (Item 5) on left side as shown in Figure 6 on Page 9.
- Mark hole location on Rear Post (Item 5), remove and drill 11/16" hole through both sides.

- Reinsert Rear Post (Item 5) and attach Angles (Item 8) with Cap Screws and Lock Nuts (Items 3 & 4).
- Weld left side Angles (Item 8) to Rear Plate (Item 1).
- Weld right side Angles (Item 7) to Rear Post (Item 5).

**Figure 5. Rear Post and Plate, RH**



**Figure 6. Rear Post and Plate, LH**



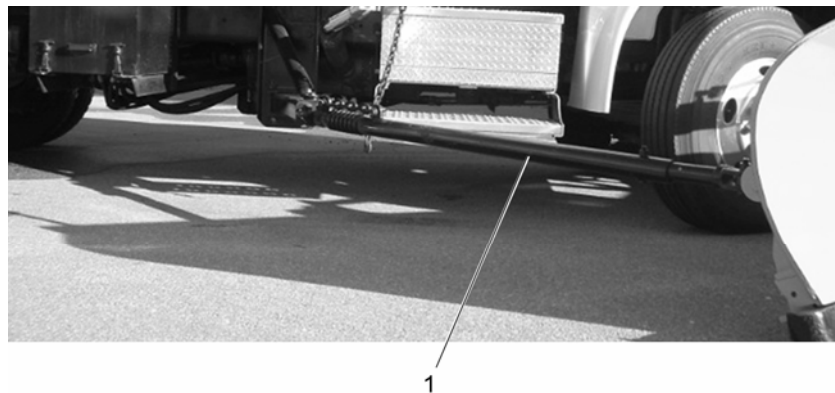
### 3.2.5 Moldboard

#### **CAUTION**

*Secure wing to a crane so it cannot fall backwards or forwards before teletube and cylinders are installed.*

- Attach Moldboard to front mount hinge weldment using the hardware provided.
- Install Teletube (Item 1) between wing and rear support and secure with pins (Items 2 & 3).

**Figure 7. Teletube Install**



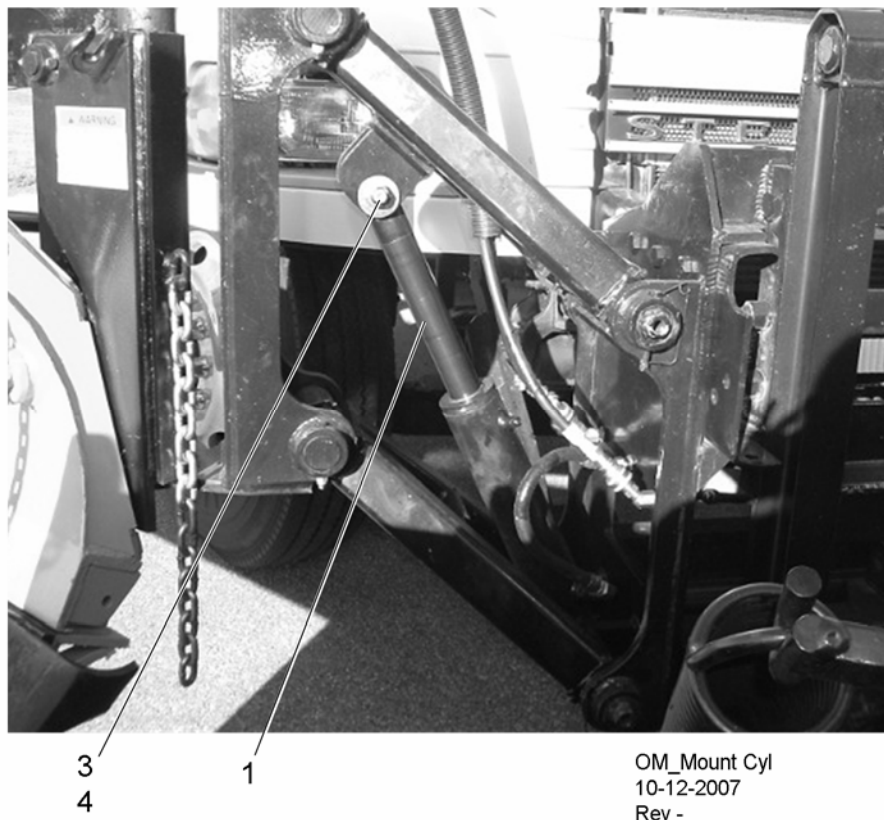
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Item	Description	Qty	Notes
1	TELETUBE	1	
2	PIN 1-1/4 X 4-11/16	2	
3	HAIR PIN	2	

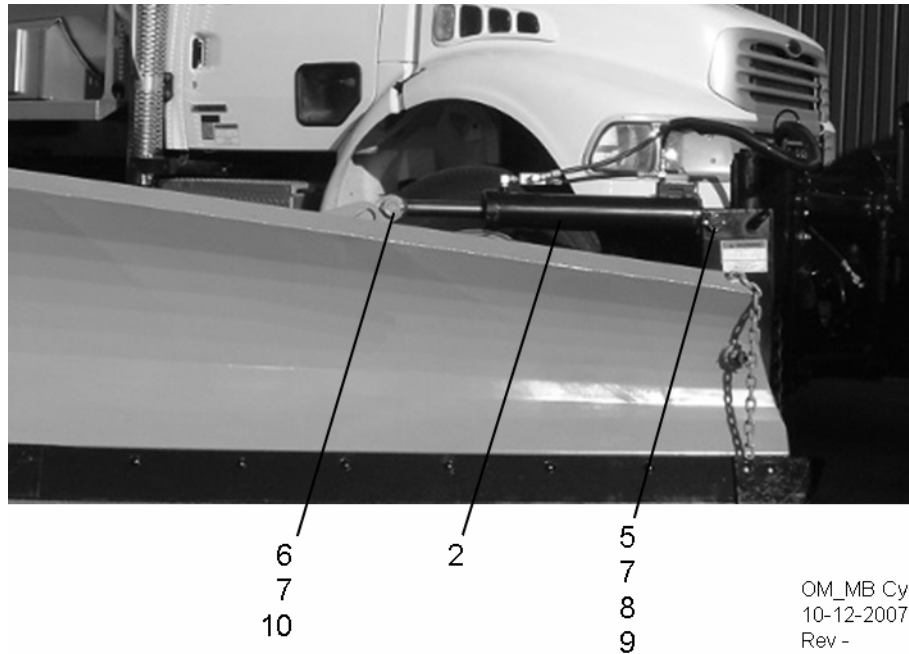
### 3.2.6 Cylinders

- Install Mount Cylinder (Item 1) on front mount assembly as shown in Figure 8 and secure with Cap Screws and Lock Nuts (Items 3 & 4), provided.
- Position Moldboard Cylinder (Item 2) base against front mount assembly with hydraulic ports facing up as shown in Figure 9 on Page 11. Insert Pin (Item 5) and secure with Hardware (Items 7–9).
- Attach hydraulic hoses to Moldboard Cylinder (Item 2) ports.
- Carefully extend Moldboard Cylinder (Item 2) with hydraulic power until rod aligns with moldboard float. Insert Hinge Pin (Item 6) and secure with Hardware (Items 7 & 10).

**Figure 8. Mount Cylinder**



**Figure 9. Moldboard Cylinder**



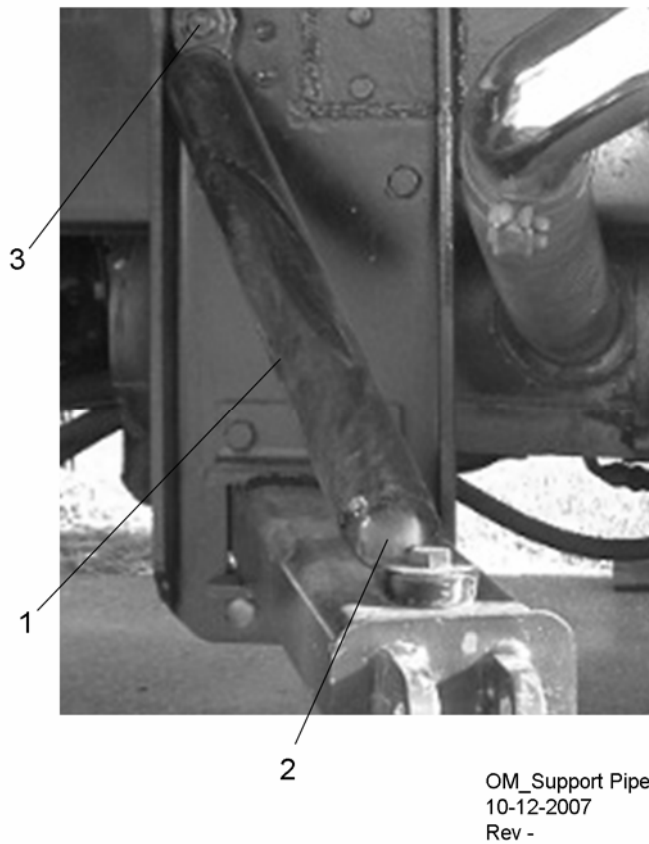
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Item	Description	Qty	Notes
1	CYLINDER, MOUNT	1	
2	CYLINDER, MOLDBOARD	1	
3	CAP SCREW 3/4 X 4-1/2	1	
4	LOCK NUT 3/4	1	
5	PIN 1-1/4 X 4-3/8	1	
6	HINGE PIN	1	
7	CAP SCREW 3/8 X 3	2	
8	LOCK WASHER 3/8	1	
9	HEX NUT 3/8	1	
10	LOCK NUT 3/8	1	

### 3.2.7 Support Pipe

- Position Support Pipe (Item 1) from rear support to truck frame and align with Teletube for best strength distribution.
- Mark hole location on truck frame.
- Remove and make sure hole is at least two inches from the top and bottom of rail before drilling.
- Install Ball (Item 2) loosely on truck frame, see Figure 10 on Page 12.
- Weld or bolt second Ball (Item 2) to rear support as shown in Figure 10 on Page 12.
- Cut Support Pipe (Item 1) as needed.
- Weld Support Pipe (Item 1) to Balls (Item 2).
- Tighten Hardware (Item 3).

**Figure 10. Support Pipe**



Item	Description	Qty	Notes
1	SUPPORT PIPE	1	
2	BALL	2	
3	HARDWARE NOT SUPPLIED	—	

### **3.2.8 Installation Check**

**CAUTION**

*Make sure the wing is securely attached to the truck body. Periodically check hardware and welds to make sure they are secure. Re-tighten hardware or repair welds as required.*

Check entire wing to be sure all fasteners are in place and hardware is properly tightened per the Torque Specification Chart listed in Table 3 on Page 19.



### 3.3 Spring Replacement

#### **WARNING**

*Never remove all four bolts on the spring retainer blocks at one time. The spring may fly out of position and cause injury to personnel in its path.*

- Lay plow, with plowing surface down, on a level surface and place supports under the cutting edge to hold springs at a good working height.
- Change one spring at a time so there is always tension against the cutting edge.

#### **CAUTION**

*Make sure wing is properly braced and cannot fall before removing and/or replacing springs.*

- Remove hardware from clamp blocks at both ends of spring to be removed and replace with a 5/8" x 6 inch bolt and flat washer.
- Loosen both bolts of the spring approximately five turns.
- Loosen each of the remaining four bolts holding the spring until the spring become loose.
- Clean and grease plow hinge and replace spring(s)
- Place clamp blocks back on plow, secure with hardware and tighten per the Torque Specification Chart listed in Table 3 on Page 19.

### 3.4 Spring Installation

- Remove springs following the procedures listed in Section 3.3.

NOTE: Clean out all threaded holes on the clamp blocks with a tap. Use an air nozzle to blow out the holes and apply anti-seize.

- Coat the underside of the moldboard angle next to the spring and the tang of the spring with grease to assist in spring installation.
- Place the tang of the spring into the drilled hole in the lower moldboard angle.
- Slide the spring rod through the spring until it is nestled in the clamp block.
- Place the top half of the clamp block over the right hand side of the rod and start the hardware into the clamp block.

NOTE: Make sure to apply anti-seize to the bolts.

- With an impact tool turn the bolts in as far as spring tension will allow.
- Place the top half of the clamp block over the left hand side of the rod and replace the hardware in the clamp block
- Re-tighten the bolts on the right hand side clamp block.

## 4. OPERATION

### 4.1 Raising and Lifting Plow

- Raise the wing into a shelving or benching position up to 18" from the ground by extending the mount cylinder.

**Figure 11. Plow Shelving Position**



- Lift the wing into a vertical position when not in use by extending the moldboard cylinder.

**Figure 12. Plow Raised Position (Not in Use)**



**NOTE:** The wings trip edge will automatically move when it contacts an obstacle and then reset for continuous operation.

## 5. CLEAN UP AND STORAGE

### 5.1 Clean Up

For maintaining minimum maintenance operations, hose the unit down under pressure to free all sticky and frozen material.

It is important that the hitch be thoroughly cleaned at the end of each operating season. All service procedures listed in this section should be closely followed.

### 5.2 Storage

Plug the hydraulic system to prevent dirt from entering the hydraulic system.

Store the wing off of the ground, if possible.

## 6. FLUIDS/LUBRICANTS

### CAUTION

*The use of unapproved alternate lubricants/fluids may cause serious damage and can void warranty.*

**Table 1. Fluids and Lubricants**

Description	Fluid	Qty
Plow Hinge	Extreme Pressure Grease	AR
Wing Assembly	Extreme Pressure Grease	AR
Wing Post	Extreme Pressure Grease	AR

### 6.1 O Rings, Wear Rings, and Miscellaneous

Table 2. provides a quick reference for common parts. Refer to Section 7 Parts for detailed part descriptions and breakdowns.

**Table 2. O'Rings, Wear Rings, and Miscellaneous**

	Part Number	Description	Where Used	Qty
O'Rings	18214	O'Ring	Single Acting Lift Cylinder Double Acting Lift Cylinder	1
	18342	O'Ring	Double Acting Lift Cylinder	1
	18226	O'Ring	Single Acting Lift Cylinder	1
	18336	O'Ring	Single Acting Lift Cylinder	1
Wear Rings	30403	Wear Ring	Double Acting Lift Cylinder	1
	30225	Wear Ring	Double Acting Lift Cylinder	1
	30300	Wear Ring	Single Acting Lift Cylinder	1

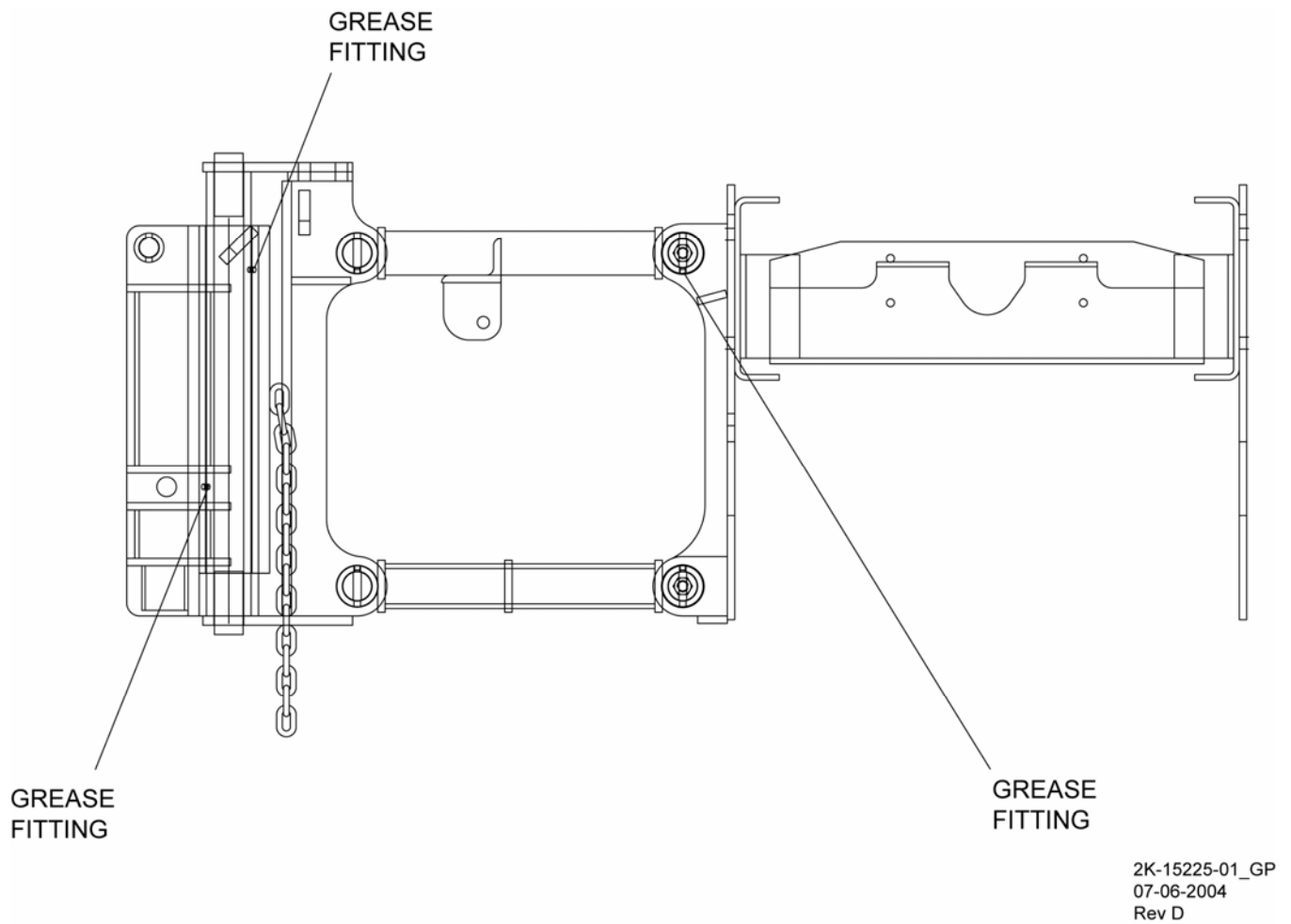
080-046H

Wing Heel (Decel) Cylinder Seal Kit

## 6.2 Grease Points

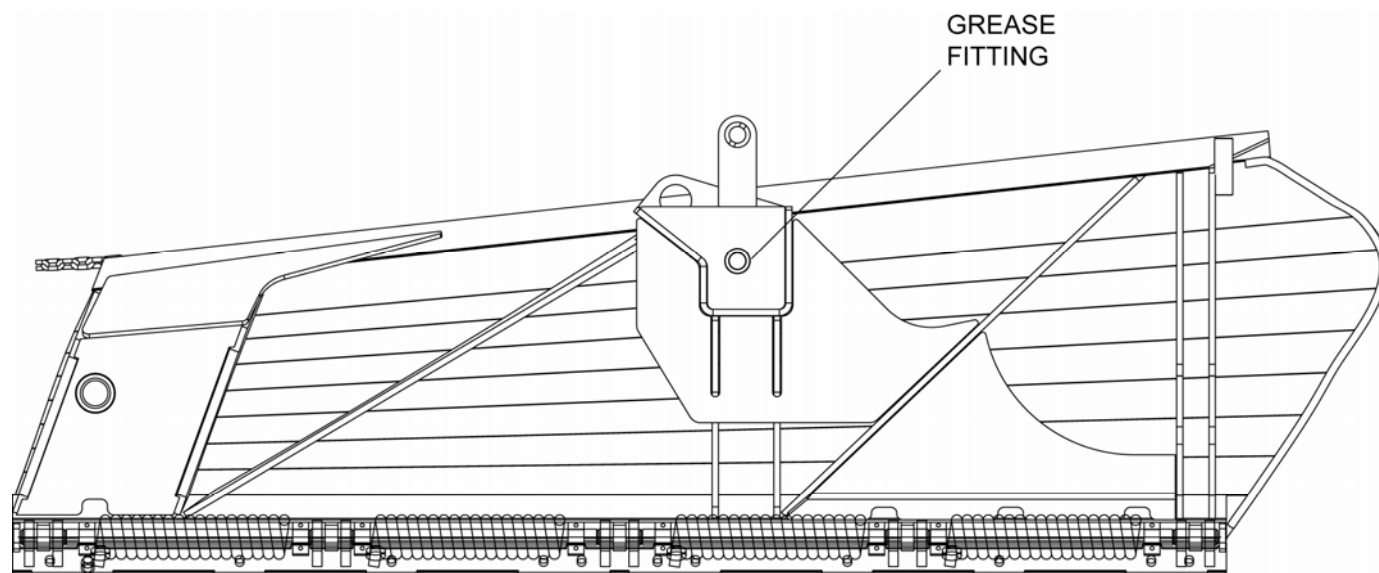
### 6.2.1 Wing Post Grease Points

Figure 13. Wing Post Grease Points



## 6.2.2 Wing Assembly Grease Points

Figure 14. Wing Assembly Grease Points



2A-15308\_GP  
04-13-2005  
Rev B

## 7. PARTS

### HOW TO USE THIS MANUAL

The documentation for the DKJ Wing is organized by Volume, Section, Figure (or Subsection), and Page. Below is a brief description:

Volume	Section	Description
1 – Maintenance Manual	1	Introduction
	2	Service Procedures
	3	Mounting and Installation Procedures
	4	Operation
	5	Clean Up and Storage
	6	Fluids/Lubrication
2 – Parts Manual	7	Parts
	Introduction	How to Use This Manual, Abbreviations, and General Information

### PAGE NUMBER

Each section in the manual is numbered separately from the rest of the manual. The model number, page number, and revision of the manual are located on the lower center of the page in the footer.

### LOCATING MATERIAL IN THIS MANUAL

Go to the section that contains the information required. Each section has a detailed table of contents on the first page. Find the specific subject and page in the table of contents.

## HOW TO USE THIS ILLUSTRATED PARTS CATALOG

This Illustrated Parts Catalog has been prepared as a detailed parts guide for the DKJ Wing. The information in this manual is presented two-fold, maintenance information listed first followed by parts illustration.

Replaceable items and/or kits for the unit are detailed on illustrations throughout this manual. The item numbers on the illustration are keyed to each accompanying parts list. The purpose of the item numbers is to provide complete identification, but should not be used for procurement purposes.

### NOTES:

Do not use damaged or broken parts. Use only authorized parts and components.

Use at a minimum, Grade 8 attaching hardware except where noted. For installation safety, substitution of lower grade hardware is NOT recommended or approved.

**Table 3. Torque Specification Chart**

SAE Grade 8 Bolts			
Course Thread	Max. Torque Dry (lbs-ft)	Fine Thread	Max. Torque Dry (lbs-ft)
5/16	25	5/16	25
3/8	45	3/8	50
7/16	70	7/16	80
1/2	110	1/2	120
9/16	150	9/16	170
5/8	220	5/8	240
3/4	380	3/4	420
7/8	600	7/8	660
1.00	900	1.00	1,000
1-1/8	1,280	1-1/8	1,440
1-1/4	1,820	1-1/4	2,000
1-3/8	2,380	1-3/8	2,720
1-1/2	3,160	1-1/2	3,560

### BOLT HEAD IDENTIFICATION



This manual uses the indented parts structure. In the descriptive column, the relationship of items covered is shown by the degree of indentation of each item. In the example below, the 8ft wing assembly is listed with one indentation. The 8' wing moldboard weldment, trip edge weldment, and wing float weldment are indented under the 8ft wing assembly to indicate that these are sub components of the 8ft wing assembly. Ordering the 8ft wing assembly would automatically include the 8' wing moldboard weldment, trip edge weldment, and wing float weldment. Components listed with the same indentation must be ordered separately.

Item	Part Number	Description	Qty	Notes
	2A-15308	WING ASSEMBLY, 8FT		
1	2W-15384	• 8' WING MOLDBOARD WELDMENT	1	
2	2W-15307	• TRIP EDGE WELDMENT, 8' WING	1	
3	2W-15300	• WING FLOAT WELDMENT	1	

- **Item** – Identifies part from illustration
- **Part Number** – Part number to be used for procurement
- **Description** – Part name and relationship to assembly
- **Quantity** – Gives quantity required for assembly (see notes about attaching hardware)
- **Notes** – Directs user to additional information when ordering

There are three distinct types of figure designations in this manual: *Installations* identify assemblies and components related by application such as attaching hardware. These items must be individually ordered; there is no single part number that includes all parts shown. *Assemblies* are part listings that are inclusive of all parts described. When the main assembly is ordered, the sub components are included as part of the order. The third type of figure is a *Listing* that contains similar but unrelated parts. Each part must be ordered separately.

**NOTE:** If a component is damaged, make repairs immediately. Do not continue to operate machine.



## ACRONYMS AND ABBREVIATIONS

The following is a list of terms and abbreviations that may appear in description and drawing nomenclature.

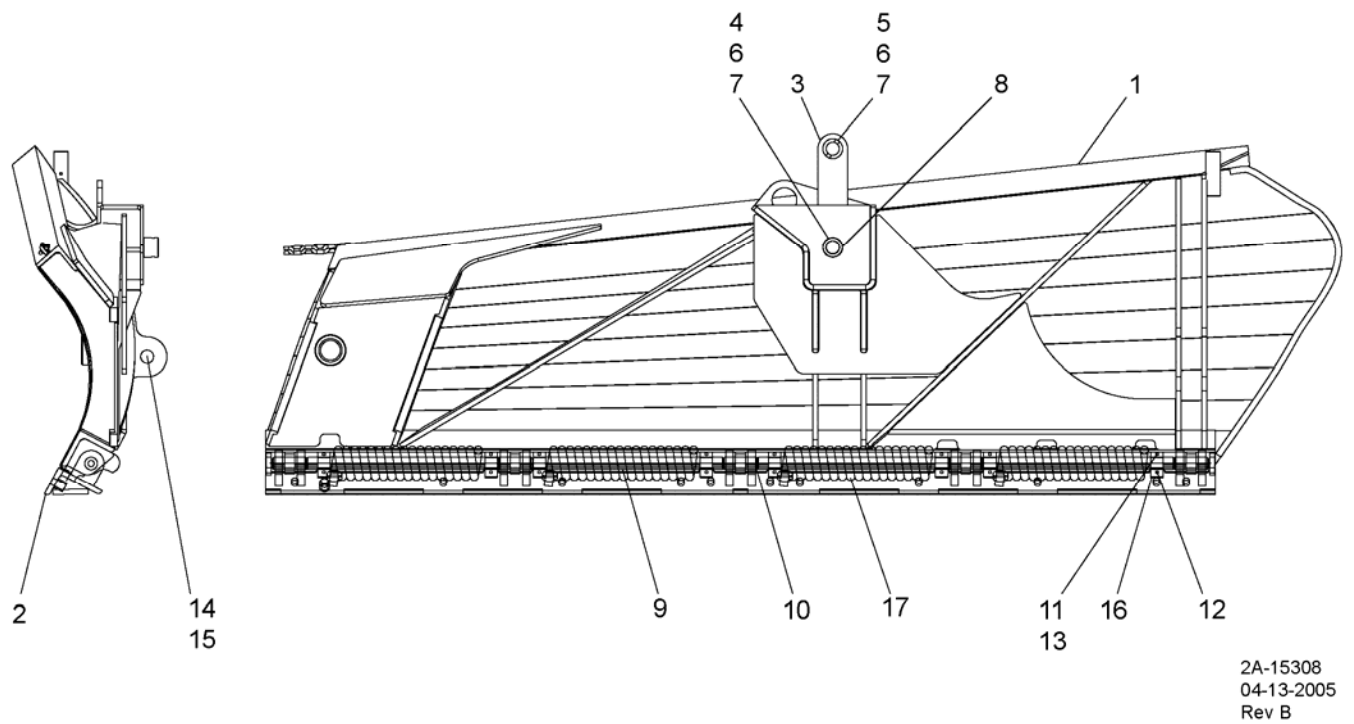
AC	Alternating Current
AR	As Required
ALT	Alternate
AMP	Ampere
ASSY or ASSM	Assembly
AUX	Auxiliary
AWG	American Wire Gauge
CM	Centimeter
CYL	Cylinder
DA	Double Acting
DC	Direct Current
DIA	Diameter
EA	Each
FHMS	Flat Head Machine Screw
FLG HD	Flange Head
GA	Gage
GND	Ground (electrical)
GPM	Gallons Per Minute
HHCS	Hex Head Cap Screw
HHMS	Hex Head Machine Screw
HYD	Hydraulic
ID	Inside Diameter
KG	Kilograms
LG	Long
LH	Left Hand
MAX	Maximum
MISC	Miscellaneous
MM	Millimeter
NP	Non Procurable
NPT	National Pipe Thread
OBS	Obsolete
OD	Outside Diameter
OEM	Original Equipment Manufacturer
PHMS	Pan Head Machine Screw
PLCS	Places
POLY	Polyethylene
PSI	Pounds per Square Inch
PSIA	Pounds per Square Inch Absolute
PSIG	Pounds per Square Inch Gauge
QTY	Quantity
RH	Right Hand
RPM	Revolutions Per Minute
SA	Single Acting

SHCS	Socket Head Cap Screw
SHSS	Socket Head Set Screw
TYP	Typical
WELD'T or WLDMNT	Weldment

## 8. WING ASSEMBLIES, LH AND RH

### 8.1 Wing Assembly, 8FT

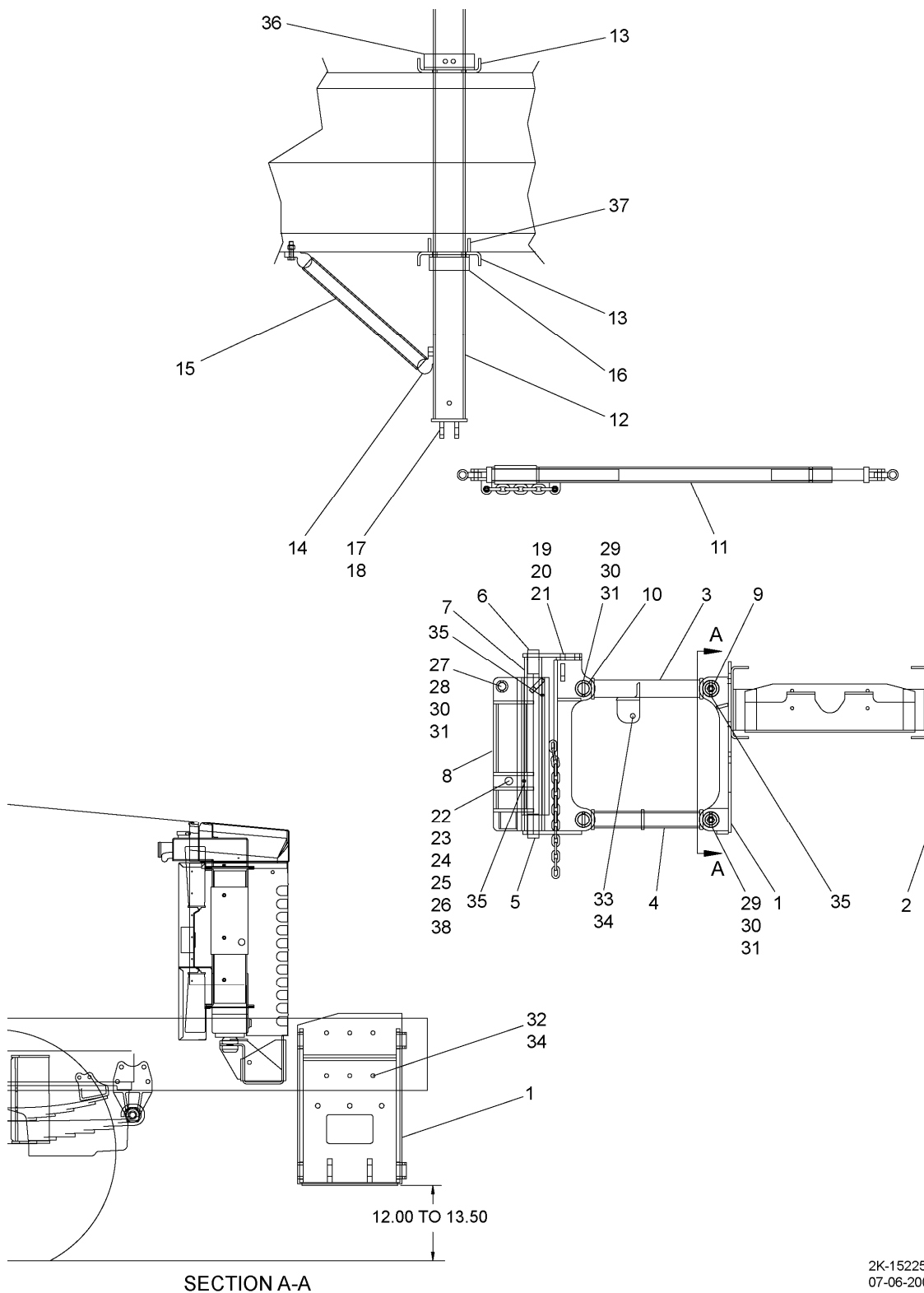
Figure 15. Wing Assembly, 8FT



Item	Part Number	Description	Qty	Notes
	2A-15308	WING ASSEMBLY, 8FT - RH	1	
	2A-15810	WING ASSEMBLY, 8FT - LH		
	2A-15420	WING ASSEMBLY, 9FT - RH		
	2A-15616	WING ASSEMBLY, 10FT - RH		
1	2W-15384	• 8' WING MOLDBOARD WLDMT, RH	1	
	2W-15811	• 8' WING MOLDBOARD WLDMT, LH		
	2W-15428	• 9' WING MOLDBOARD WLDMT, RH		
	2W-15597	• 10' WING MOLDBOARD WLDMT, RH		
2	2W-15307	• TRIP EDGE WLDMT, 8' WING, RH & LH	1	
	2W-15418	• TRIP EDGE WLDMT, 9' WING, RH		
	2W-15584	• TRIP EDGE WLDMT, 10' WING, RH		
3	2W-15300	• WING FLOAT WLDMT	1	
4	2P-15429	• HINGE PIN	1	
5	2P-15304	• HINGE PIN	1	
6	9C-00216	• HHCS, 3/8 NC x 3" LG	2	
7	9C-00641	• NUT, NYLOCK 3/8 NC	2	
8	9C-01087	• GREASE ZERK, 1/8 NPT	1	
9	4P-01074-010	• 1-1/4" DIA BAR X 19-1/8" LG, 8FT	4	
	4P-01074-011	• 1-1/4" DIA BAR X 22-1/8" LG, 9FT		
	4P-01074-013	• 1-1/4" DIA BAR X 19-3/8" LG, 10FT		
10	4P-01074-009	• 1-1/4" DIA BAR X 3-1/2" LG	5	
11	9C-00266	• HHCS, 5/8 NC x 3" LG	AR	
12	9C-06607	• SHCS, 5/8 NC X 2" LG	AR	
13	9C-00139	• LOCK WASHER, 5/8	AR	
14	2P-15282	• PIN, 1-1/4 DIA X 4-11/16 LG	1	
15	9C-03474	• HAIR PIN COTTER	1	
16	2P-15407	• SPRING CLAMP BLOCK	AR	
17	124-226	• TORISON SPRING	AR	

## 8.2 Wing Post Installation, LH and RH

Figure 16. Wing Post Installation



2K-15225-01  
07-06-2004  
Rev D

Item	Part Number	Description	Qty	Notes
	2K-15225-01	WING POST INSTALLATION, RH	1	
	2K-15225-02	WING POST INSTALLATION, LH		
1	2W-15237-01	• FRONT SIDE PLATE, RH	1	
	2W-15237-02	• FRONT SIDE PLATE, LH		
2	2P-15243	• SIDE PLATE, OPPOSITE	1	
3	2W-15226	• WING POST ARM, TOP	1	
4	2W-15227	• WING POST ARM, BOTTOM	1	
5	2W-15245-01	• WING POST, RH	1	
	2W-15245-02	• WING POST, LH		
6	2W-15220	• WING POST BRACKET WELDMENT	1	
7	2P-16012	• TUBE	1	
8	2W-15255	• SLIDE PLATE RH	1	
	2W-15255-02	• SLIDE PLATE LH		
9	2W-15223	• HINGE PIN - A-Arms w/ Nut welded on	2	
10	2P-15236	• HINGE PIN - A-Arms, Top Pivot Pin	2	
11	2A-15262	• TELE-TUBE (PUSHBRACE) ASSEMBLY	1	1.
12	2W-15232	• REAR POST WELDMENT	1	
13	2P-15244	• REAR SIDE PLATE	2	
14	9C-07359	• BALL FOOT CASTINGS	2	
15	2P-03043-012	• PIPE, 2-1/2" SCH 80 X 36" LG	1	
16	2P-15251	• FORMED ANGLE	2	
17	2P-15282	• PIN, 1-1/4" DIA X 4-11/16" LG	1	
18	9C-03474	• HAIR PIN COTTER	1	
19	9C-00287	• HHCS, 3/4 NC X 3" LG	4	
20	9C-00098	• HEX NUT, 3/4 NC	4	
21	9C-00141	• LOCKWASHER, 3/4	4	
22	2P-02395-014	• TUBE, 2 OD X 1-5/16 ID X 3-3/4	1	
23	2P-15283	• WASHER	1	
24	2P-15740	• HEX HEAD BOLT, MODIFIED	1	
25	9C-04421	• HEX NUT, 1-1/4 NC SLOTTED	1	
26	9C-00187	• HHCS, 1/4 NC X 2-1/2" LG	1	
27	2P-15284	• PIN, 1-1/4" DIA X 4-3/8" LG	1	
28	9C-00216	• HHCS, 3/8 NC X 3" LG	1	
29	9C-00218	• HHCS, 3/8 NC X 3-1/2" LG	4	
30	9C-00092	• HEX NUT, 3/8 NC	5	
31	9C-00135	• LOCKWASHER, 3/8	5	
32	9C-00285	• HHCS, 3/4 NC X 2-1/2" LG	12	
33	9C-00292	• HHCS, 3/4 NC X 4-1/2" LG	1	
34	9C-00647	• NUT, NYLOCK - 3/4 NC	13	
35	9C-01086	• GREASE ZERK, 1/8 NPT	8	2.
36	2P-15285	• FORMED ANGLE	2	
37	8P-00622-028	• FLAT, 1/2 X 2-1/2 X 16" LG	2	
38	9C-10469	• NUT, LOCK 1/4 NC RAMCO	1	

210-076

Wing King Bolt with Castle Nut

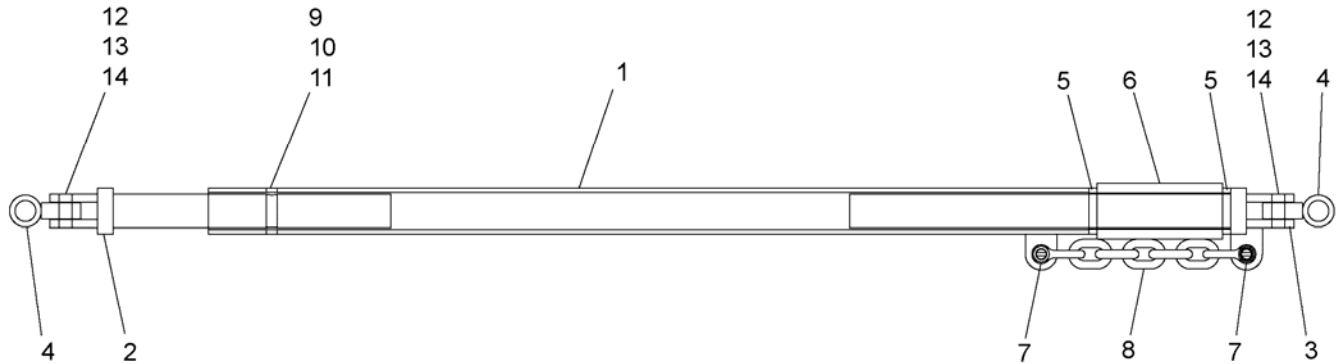
1

NOTE:

1. See Figure 17 on Page 28 for parts breakdown.
2. Grease zerks face up.

## 9. TELETUBE (PUSHBRACE) ASSEMBLY

Figure 17. Teletube (PushBrace) Assembly



2A-15262  
06-24-2004  
Rev A

Item	Part Number	Description	Qty	Notes
—	2A-15262	TELETUBE (PUSHBRACE) ASSEMBLY	1	
1	2W-15263	OUTER TUBE WELDMENT	1	
2	2W-15264	INNER TUBE WELDMENT (Wing Side)	1	
3	2W-15265	INNER TUBE WELDMENT (Spring Side)	1	
4	2W-15252	SWIVEL EAR	2	
5	124-130	SPACER (A45146)	2	
6	124-129	SPRING (A45145)	1	
7	9C-07185	SHACKLE, 1/2"	2	
8	9C-06790-009	CHAIN, 1/2" (5 LINKS)	1	
9	9C-00270	HHCS, 5/8 NC X 4" LG	1	
10	9C-00096	NUT, HEX 5/8 NC	1	
11	9C-00139	LOCKWASHER, 5/8	1	
12	9C-00289	HHCS, 3/4 NC X 3-1/2" LG	2	
13	9C-00098	NUT, HEX 3/4 NC	2	
14	9C-00141	LOCKWASHER, 3/4	2	

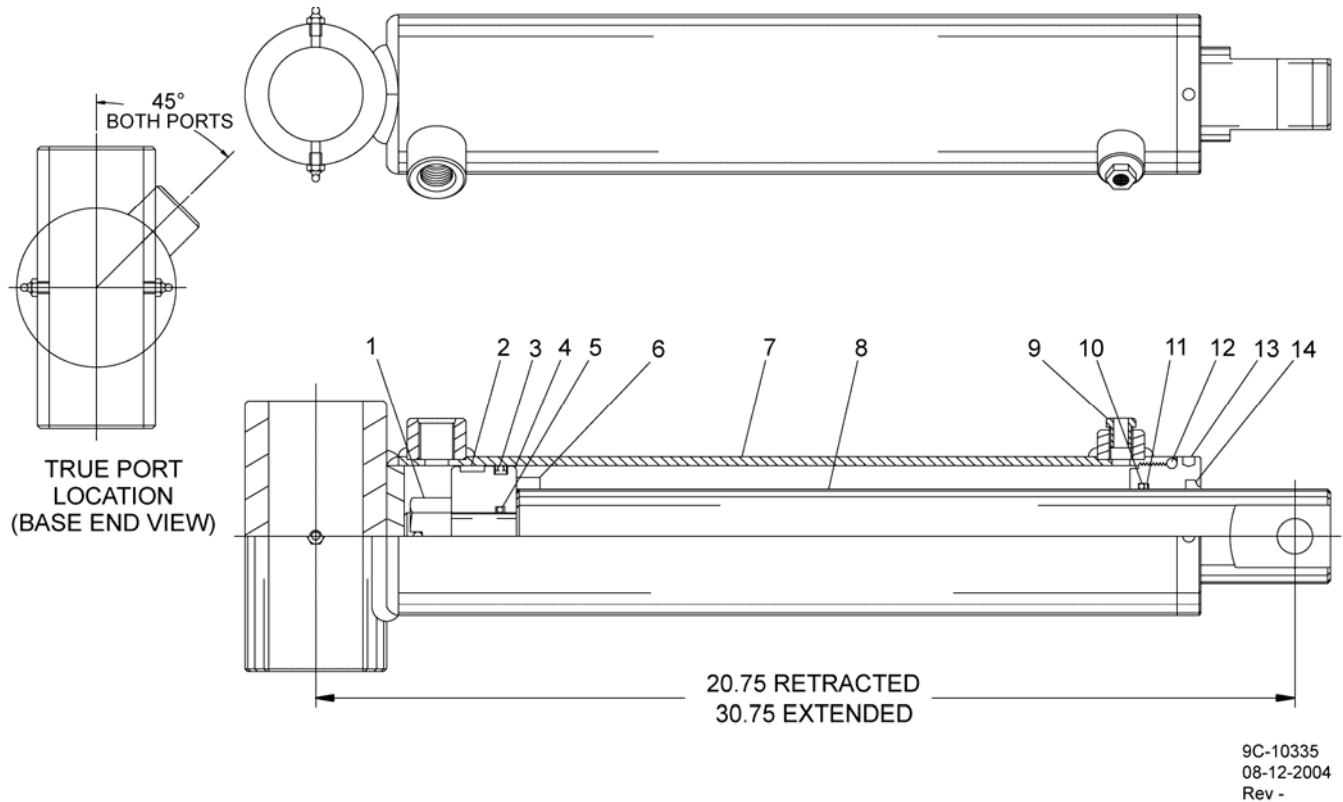
4 210-504 Swivel Ear Weldment -HD



## 10. CYLINDERS

### 10.1 Single Acting Wing Toe Cylinder

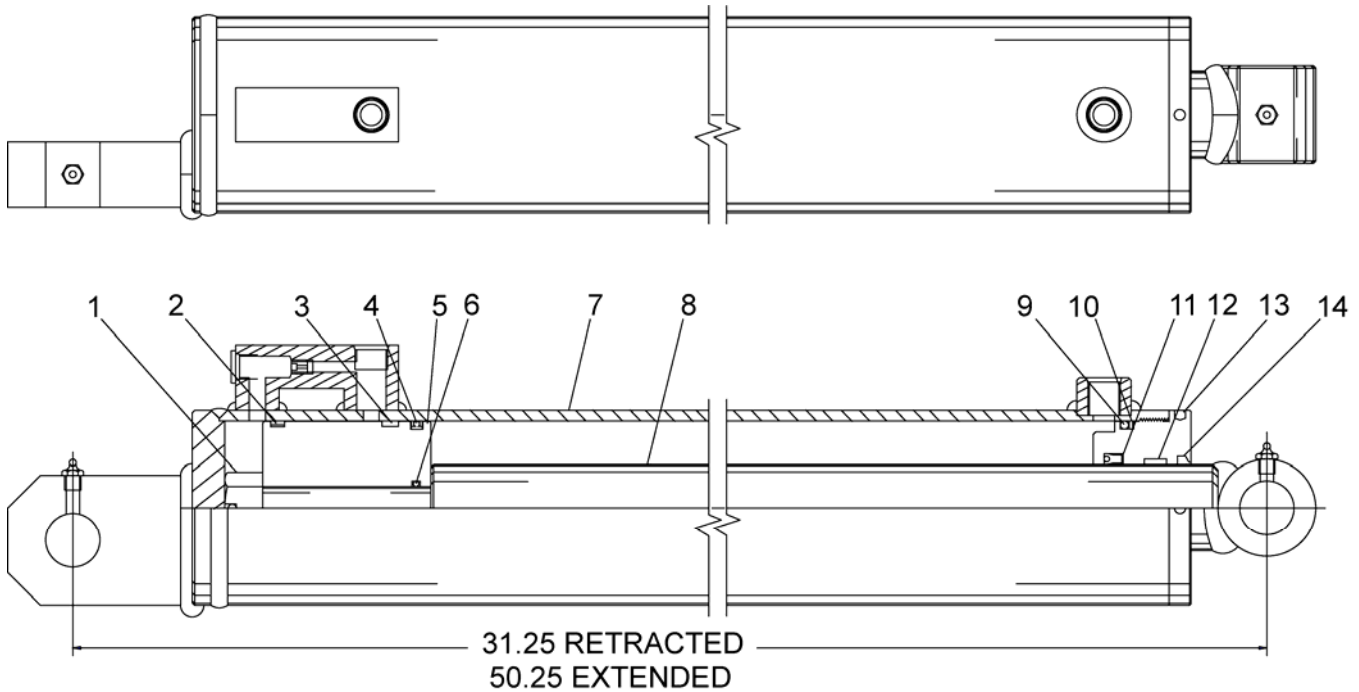
Figure 18. Wing A-Frame 3" Bore x 10" Stroke, SA Toe Cylinder



NOTE: MUST SPECIFY LENGTH OF MACHINED FLATS ON ROD AT THE EYE!  
WIDE FRAME TRUCKS REQUIRE THE TOE CYLINDER WITH A SHORT ROD.

## 10.2 Double Acting Wing Heel Cylinder (DECEL)

Figure 19. Wing Moldboard 4" Bore x 19" Stroke, DA Wing Heel Cylinder



080-46H Wing Decel Seal Kit

9C-10336  
08-12-2004  
Rev -

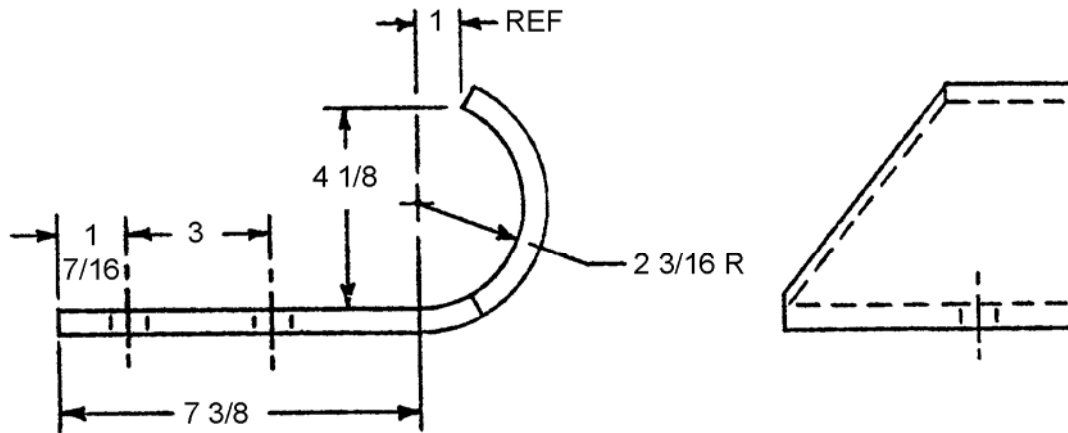
090-043 Wing Decel Cylinder Counter Balance Valve

Item	Part Number	Description	Qty	Notes
	081-018	WING MOLDBOARD, 4 X 19 DA WING HEEL CYLINDER (DECEL - 140421)	1	
1	23103	• SLOTTED NUT	1	
2	—	• CAST IRON RING	1	
3	30403	• WEAR RING	1	
4	21405	• T-SEAL	1	
5	—	• PISTON (STEEL)	1	
6	18214	• O'RING	1	
7	—	• JACKET ASSEMBLY	1	
8	—	• PISTON ROD	1	
9	18342	• O'RING	1	
10	39342	• BACKUP WASHER	1	
11	21204	• POLYPAK, TYPE B	1	
12	30225	• WEAR RING	1	
13	14440	• HEAD STOCK	1	
14	12200	• ROD WIPER	1	

NOTE: MUST SPECIFY RH OR LH, ALSO THE MEASUREMENT FROM JACKET END TO EAR EYE CENTER.

## 11. CURB BUMPER

Figure 20. Curb Bumper, LH and RH



FORMED VIEW - RH SHOWN

9C-02787  
02-03-1983  
Rev-

Item	Part Number	Description	Qty	Notes
—	CALL	CURB BUMPER, RH (1/2, 5/8, or 3/4)	1	
—	CALL	CURB BUMPER, LH (1/2, 5/8, or 3/4)	1	