

# BH

# POWER REVERSIBLE SNOW PLOW

# **PARTS MANUAL**

MODEL: BH
SERIAL #:

#### **INSTRUCTIONS FOR ORDERING PARTS**

Always give the model & serial number.

To obtain parts promptly, give part number & description.

Please specify whether parts will be picked up or shipped by freight, parcel post, or United Parcel Service. Give complete address for shipping.

Inspect all goods received immediately upon receipt. Shortages or errors need to be reported immediately. Damaged product needs to be documented on delivery freight bill. Damage may be the responsibility of the transportation company. No responsibility is assumed for delay or damage to merchandise while in transit.

Universal Truck Equipment, Inc. Hwy 54/93 - N15921 Schubert Rd Galesville, WI 54630 Phone 608-539-4600 www.universaltruckequipment.com

## UNIVERSAL TRUCK EQUIPMENT Introduction

The process of snow removal may be a hazardous duty. Removing the effects of a winter storm in the midst of traffic & physical hazards is a job that requires highly skilled operators who must be alert to their surroundings and familiar with their equipment. Snow removal equipment, in spite of its heavy-duty construction, is susceptible to damage. This damage may seriously affect the equipment's operating safety and efficiency. Snow removal equipment must be cared for and maintained regularly. Daily maintenance and inspection of equipment is a MUST.

Snow removal equipment shouldn't be subjected to uses for which it was not designed. Physical hazards must be avoided. Obstructions may cause damage to snow plow or snow wing. Tripping devices & shear pins are designed to minimize the damages, not to prevent them.

#### IN SEASON MAINTENANCE

- \*Snow removal equipment must be cared for and maintained regularly. Daily or pre-route inspection and maintenance are necessary. Failure to do so may affect efficiency and safety.
- \*A visual inspection must be carried out after every eight hours of operation. Look for damaged components, bends, cracked welds or hydraulic leaks. Repair immediately. It is recommended to retorque all bolts after the first eight hours of use and to regularly check for loosened or missing fasteners. Replace any damaged fasteners immediately.
- \*Because of the environment in which snow equipment is expected to operate, hydraulic lines, fasteners, wearable or replaceable items may become damaged by snow, ice, and road debris. These items must be inspected daily and replaced if necessary to avoid equipment damage or personal injury.
- \*Lubrication of moving parts is of the utmost importance. Exposure to snow, ice, salt, and road debris will wash away lubrication quickly and it may be necessary to inspect and reapply lubrication more than once a day.

#### **OFF SEASON MAINTENANCE**

- \*Thoroughly inspect equipment for any defects or worn parts that can be replaced or fixed during the off-season.
- \*Care should be taken not to mix or misplace bolts and hardware when equipment is removed during the off-season. Be sure to replace any fasteners with damaged threads.
- \*All hydraulic cylinders should be fully retracted when stored, if possible, during off-season to prevent damage, corrosion, or contamination. Remaining exposed shaft surface is to be coated with a moisture displacement, such as thick grease, which should be removed before returning to regular service.
- \*When disconnecting hydraulic lines, valves and so forth to insure that dirt and other forms of contamination do not enter the systems. Use caps for covering hydraulic hose fittings and install in hydraulic ports.

#### **COMPLETE WARRANTY PROVISIONS**

#### PARTS REPLACEMENT AND REPAIR:

Universal Truck Equipment, Inc. warrants its manufactured products to be free from defects in material or workmanship for a period of one-year. This warranty of our products under normal use and service is limited to replacement and repair at our facility, of any parts returned and after our examination were found to be defective. Expendable items are excluded from this warranty.

#### **EXCLUSIONS:**

\*This warranty is expressly limited to parts replacement and repair, and is not transferable. Any expressed warranty not herein provided, and any remedy for breach of contract is excluded and disclaimed. The implied warranties of parts and repairs for any particular purpose are limited to one year from delivery to original user.

\*Any component or parts manufactured by others will carry that manufacturers warranty, and in no case will Universal Truck Equipment be liable, either expressed or implied, for warranties in excess of those made by the original manufacturer.

\*Under no circumstances will Universal Truck Equipment be liable to purchaser, or any other person, for any incidental or consequential damages. The user assumes liability for all personal injury or property damage resulting from handling, possession, or use of this product.

\*Repairs or modifications done by others, or parts from other sources outside the Universal Truck Equipment are not covered by this warranty.

#### WARRANTY PROCEDURE

- 1. Prior authorization by Universal Truck Equipment must be obtained for all warranty work.
- 2. Contact Universal Truck Equipment giving complete details of your request, the unit involved, including serial number, date purchased and the nature of or reason for the claim. All defective parts that Universal Truck Equipment has requested must be returned within 30 days. If not returned within 30 days any/all warranty will be cancelled and void.
- 3. When parts are shipped on a warranty request, you may be required to return the defective parts for inspection by Universal Truck Equipment or the original manufacturer. In this case, you will be issued an RAN (return authorization number) for your return and you will be invoiced for shipment of new components until the old unit is returned and inspected by Universal Truck Equipment or the original manufacturer. Payment on warranty pending invoice will need to be paid on regular 30-day net terms. If parts need to be sent out for inspection this can delay the processing the claim. If any labor is involved it must be approved by Universal Truck Equipment.

\*\*\*Persons who install, mount, operate, or service this equipment must be properly instructed and warned. Do not let anyone operate equipment without instruction.

\*\*\*Unauthorized modifications to the snowplow and related components may impair the function and/or safety.

# **SAFETY INFORMATION**

This symbol means **ATTENTION!** 

# Please read and understand completely before operating!

Improper use of this equipment can result in serious injury.

#### **PREPARATION**

Know your controls. Read this instruction manual. Learn how to stop the equipment quickly in an emergency.

Do not allow children to operate machine; nor adults to operate it without proper instructions.

Keep all individuals not involved in use of the equipment a safe distance away.

#### **OPERATION**

Observe and shut off all equipment controls before starting engine so equipment will not unintentionally operate with engine is started.

Always check area around machine before engaging or operating controls.

Always wear relatively tight and belted clothing when operating equipment. Loose jacket, shirts, sleeves or other loose clothing should not be worn because of the danger of catching them in moving parts for controls.

Stop and inspect equipment if unusual movement sounds or noises are observed. Repair damage before restarting and operating the equipment.

Disengage power to all operating equipment: (1) before leaving operator's position, (2) before making any repairs, adjustments, or cleaning, or (3) when not in use.

Take all possible precautions when leaving the equipment unattended; such as disengaging the hydraulic system from the vehicle engine, shifting vehicle out of gear, setting parking brake, shutting off engine and removing key.

## **NOTICE:**

It is the responsibility of the owner of this equipment to replace any or all safety decals which become unreadable or otherwise defaced, and to apply the new decals to the equipment in a secure manner in the same location as the old decals.

Read and observe all safety decals appearing on equipment.

The following safety decals appear in various locations on your equipment. Refer to this manual for location of safety decals on your equipment.

# THE SAFETY-ALERT SYMBOL

This symbol is on safety signs on the equipment and in the manual.

This symbol indicates to you the potential for personal injury and/or property damage.



# HAZARD LEVELS

The **DANGER** signal word indicates - immediate hazards which WILL result in severe personal injury or death.



The **WARNING** signal word indicates - hazards or unsafe practices which COULD result in severe personal injury or death.



The CAUTION signal word indicates - hazards or unsafe practices which COULD result in a minor personal injury or product or property damage



# SAFETY INFORMATION FOR OPERATION OF SNOW PLOWS



Person who install, operate, or service this equipment must be instructed and warned regarding the proper use of this equipment.



Read the operator's manual and safety decals completely before operating the equipment and observe these messages during use or maintenance.



Stop the spreader and turn off the power before leaving the truck.



Check the unit regularly to insure that all covers and shields are in place, and safety decals are in place and readable. Replace any missing or damaged safety shields or decals.



Observe instructions and cautions for dump boy use as indicated in the dump body operator's manual, especially being sure to set the body prop before starting any service or maintenance to hoist or underbody area.



Lower the snow plow when the vehicle is parked. The snow plow could drop unexpectedly, causing bodily harm or injuries.



Clear the area around the snow plow while operating or servicing the snow plow.



A loaded body will descend more rapidly than an empty one. So when lowering the hoist with a loaded body, use care to slowly, and only slightly, open the valve to control the descent.



Use low speed, not exceeding 20-25 mph, during highway spreading, and reduce speed on curves or turns, especially when the hoist is partially raised.



Whenever the hoist is partially raised during highway spreading, reduce speed on curves or turns, especially when the hoist is partially raised.



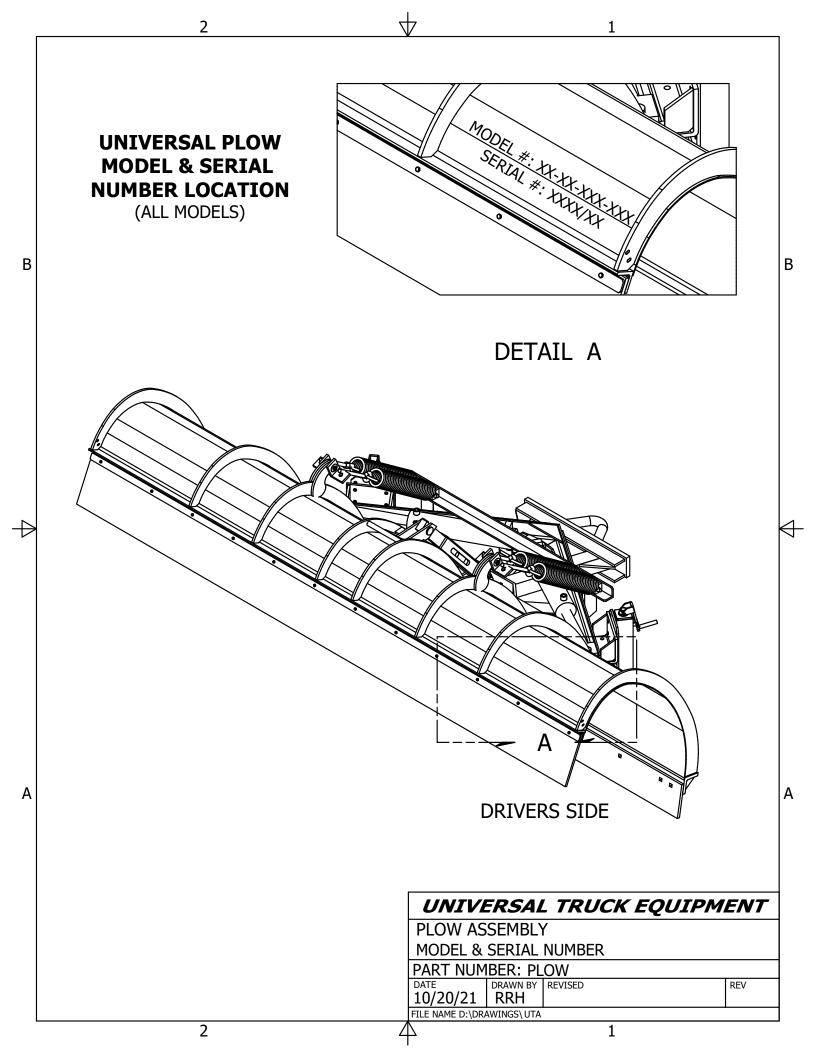
Whenever the hoist is partially raised during highway spreading, use special care to anticipate road conditions, curves, stops, turns, or obstructions such as trees, power lines, overpasses, etc., which could contribute to damaging, or potentially overturning the vehicle.

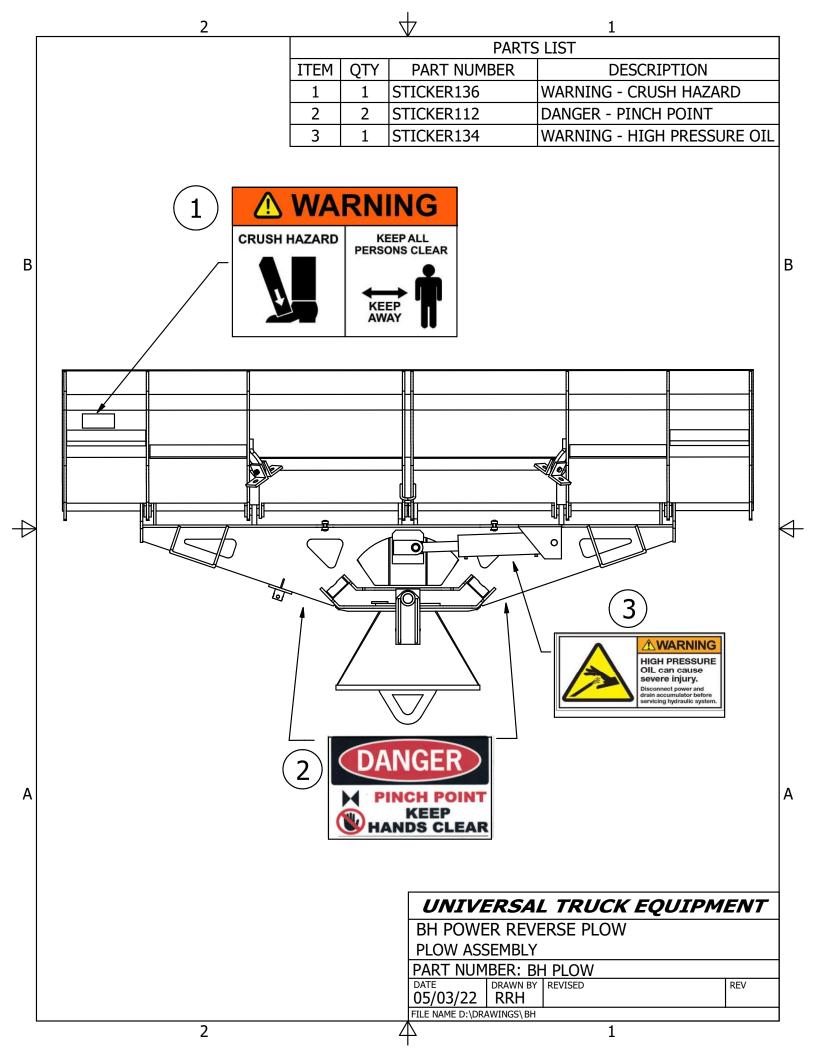


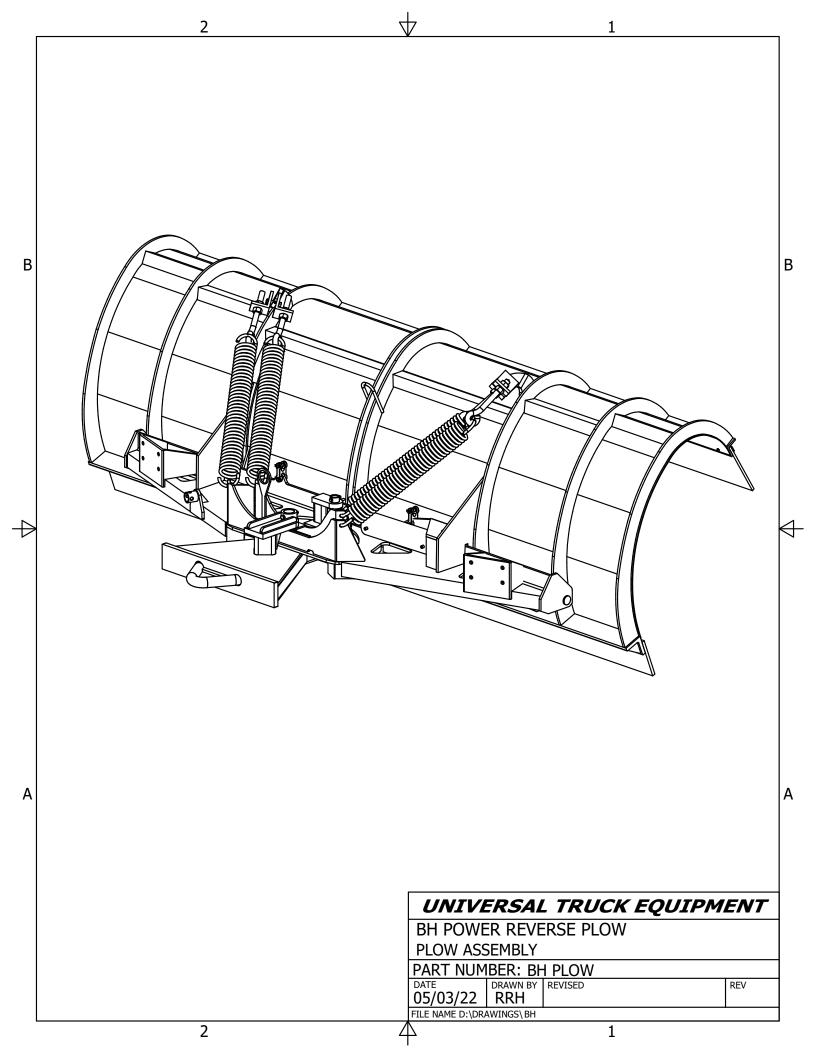
Be sure the body is lowered onto the frame when leaving the road, or when driving off-road.

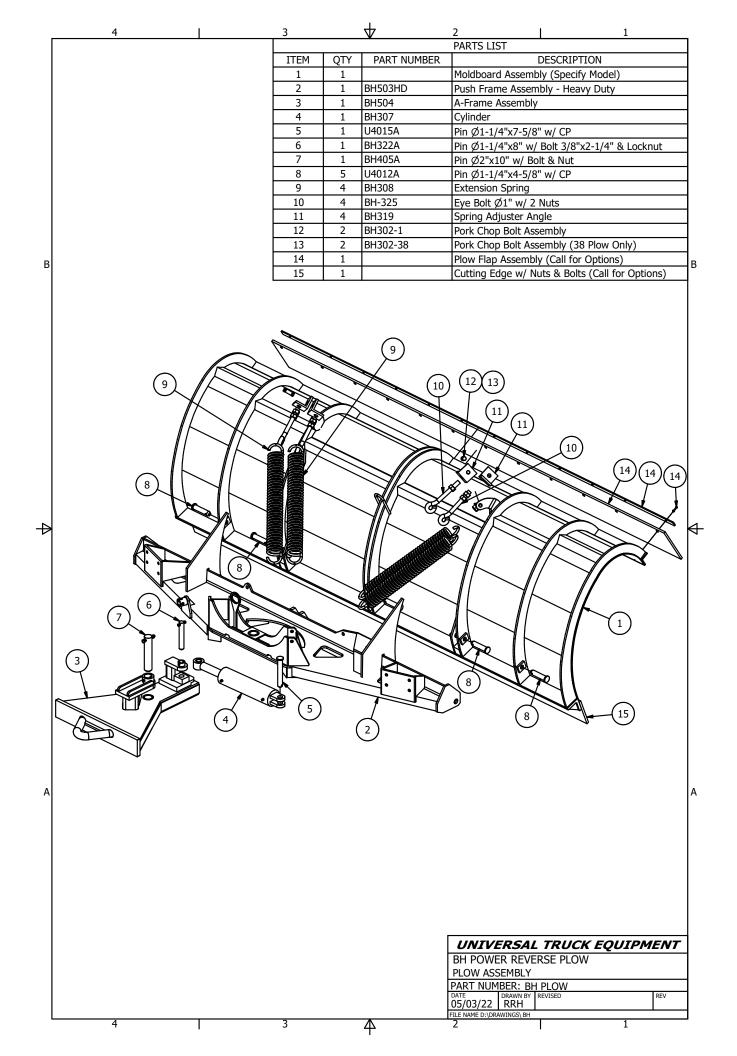


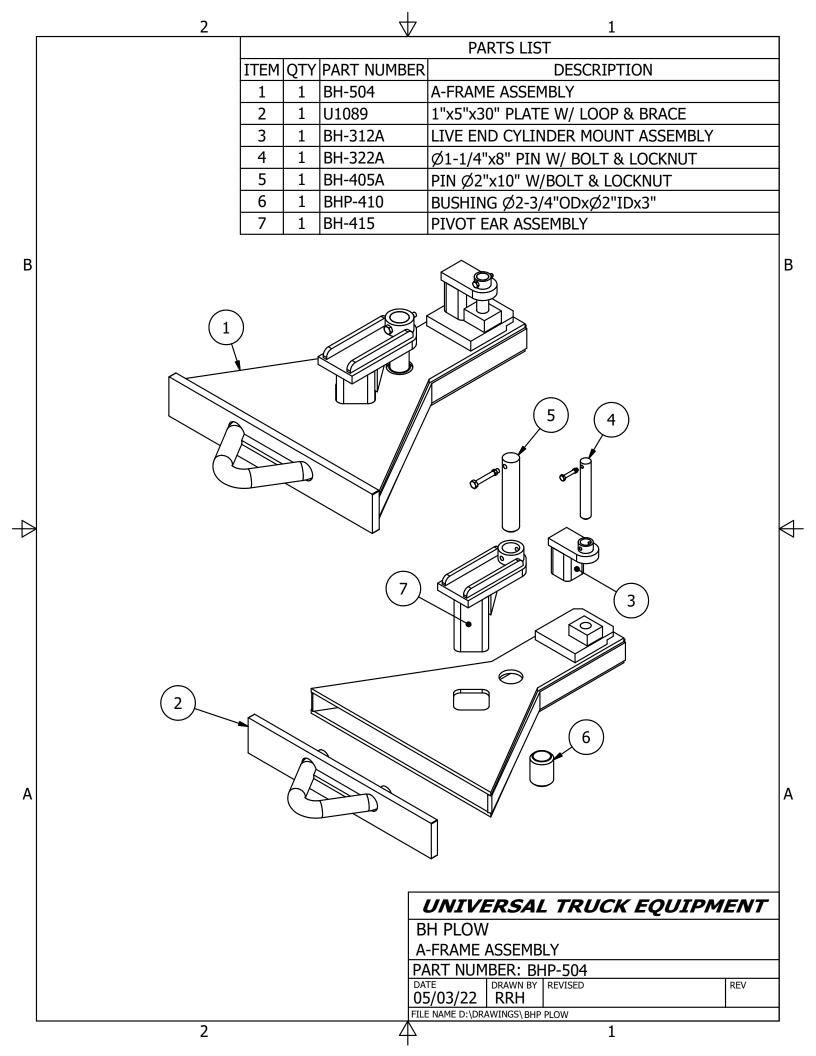
Always wear your seatbelt when operating a truck.











\*\*\*WARNING\*\*\* SPRING IN ASSEMBLY IS UNDER PRESSURE. DO NOT DISASSEMBLE. PLEASE CALL UNIVERSAL TRUCK EQUIPMENT (608)539-4600 TO DISASSEMBLE \*\*\*WARNING\*\*\*

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	PARTS LIST									
ITEM QTY PART NUMBER				DESCRIPTION						
1 1 TE				UPPER FROG						
	2	1	L TE	LOWER FROG						
	3	1	L TE	TRIP SPRING						
	4	2	2 TE	TRIP EDGE PIN						
	5	2	2 TE	TRIP EDGE PIPE						

- PLEASE SPECIFY PLOW SERIAL NUMBER -TRIP EDGE SHOWN VARIES FROM MODEL & LENGTH

В

# **UNIVERSAL TRUCK EQUIPMENT**

REV

UNIVERSAL SNOW PLOW TRIP EDGE ASSEMBLY

PART NUMBER: TRIP EDGE DRAWN BY REVISED

08/20/21 RRH
FILE NAME D:\DRAWINGS\UTA

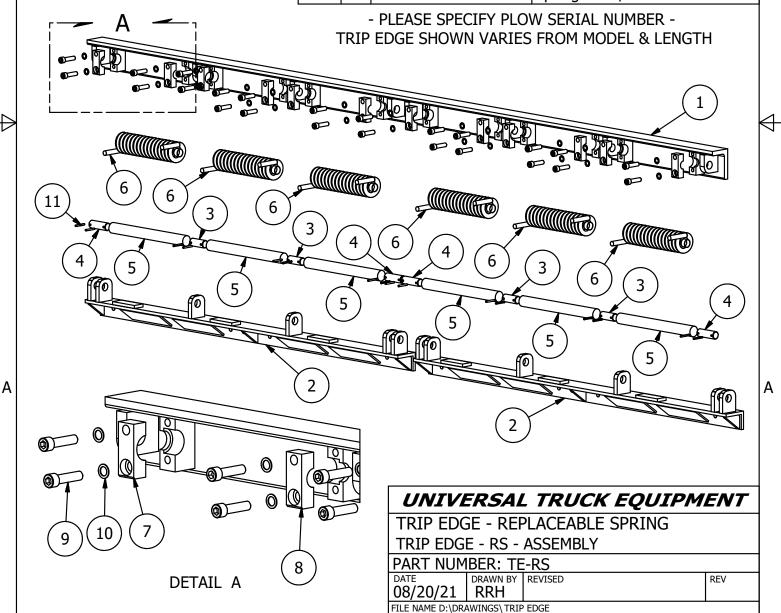
# \*\*\*WARNING\*\*\* SERIOUS INJURY COULD OCCUR

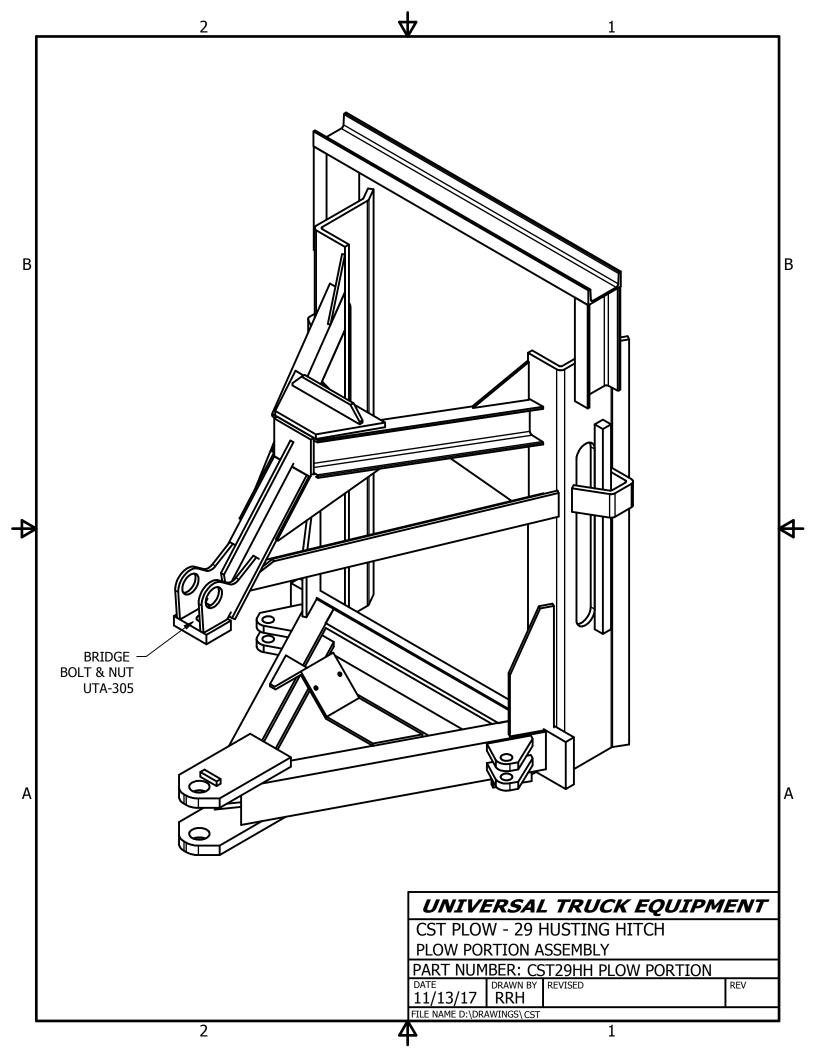
DO NOT LOOSEN BOLTS
DO NOT DISASSEMBLE
SPRING IN ASSEMBLY IS
UNDER PRESSURE
PLEASE CALL UNIVERSAL
TRUCK EQUIPMENT
(608)539-4600 TO DISASSEMBLE
\*\*\*WARNING\*\*\*

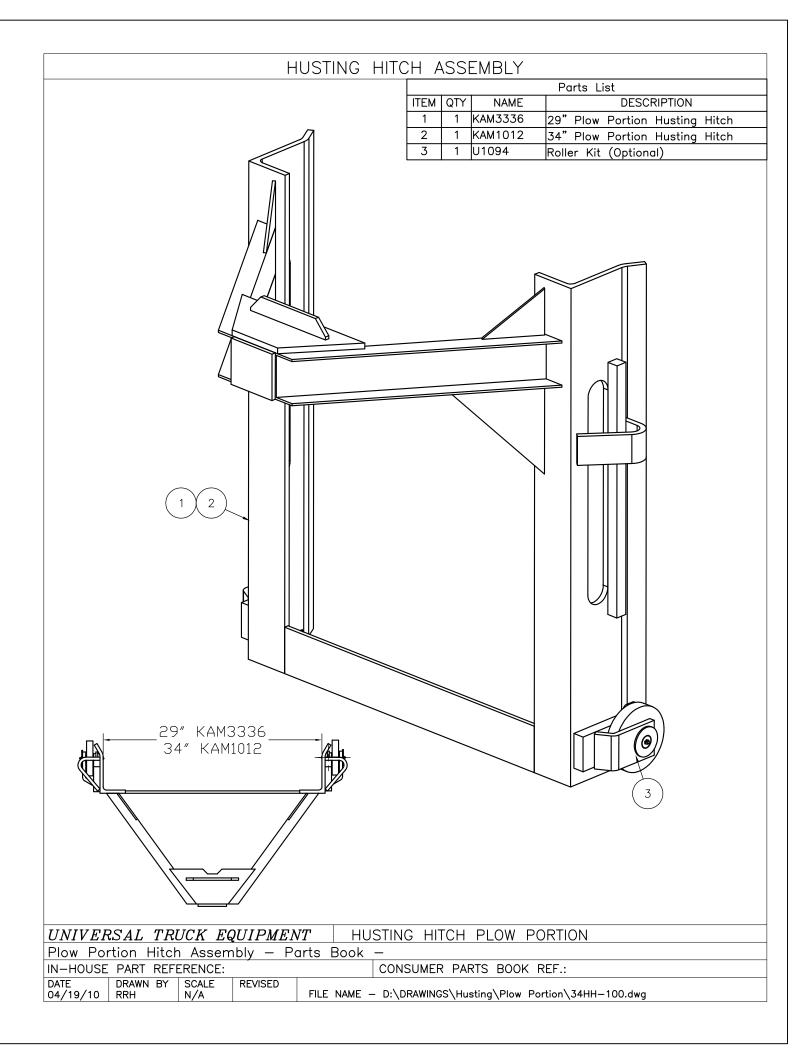
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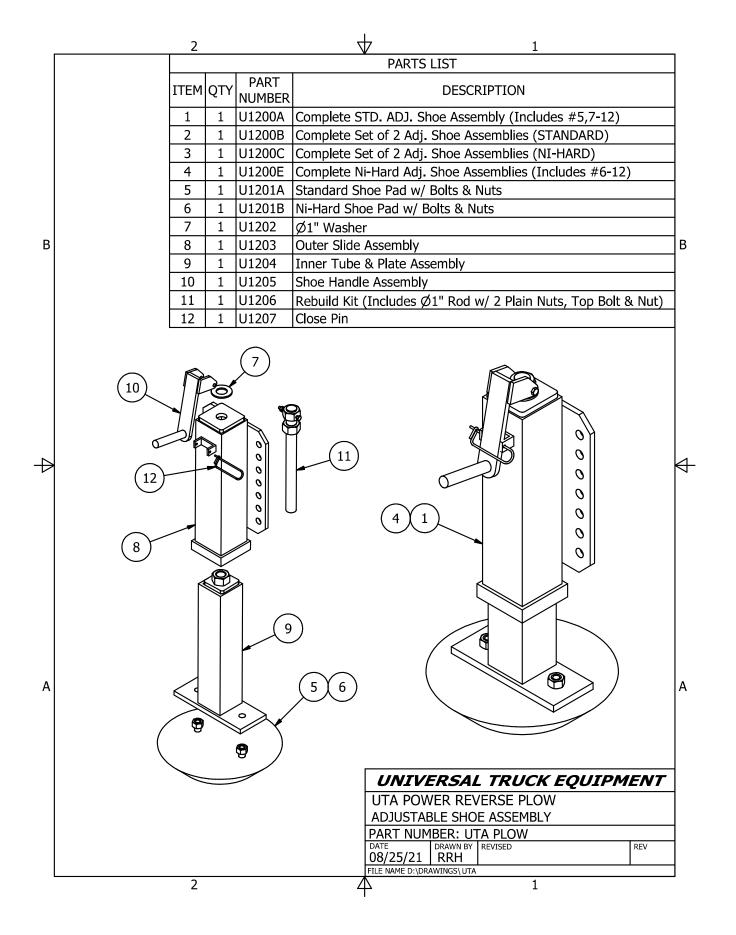
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	PARTS LIST									
ITEM QTY PART NUMBER		PART NUMBER	DESCRIPTION							
1	1	TE-RS-UP	Upper Angle Assembly							
			(Specifiy Length)							
2	1	TE-RS-LOW	Lower Angle Assembly							
			(Specify Thickness & Length)							
3	4	TE-RS-PIN-125-3	Pin Ø1-1/4"x3"							
4	4	TE-RS-PIN-125-375	Pin Ø1-1/4"x3-3/4"							
5	6	TE-RS-PIN-175-17	Pin Ø1-3/4"x17"							
6	6	TE-SPRING-BH500	Spring							
7	6	TE-RS-LEMON-DROP-	Left Cap	В						
		LH-CAP								
8	6	TE-RS-LEMON-DROP-	Right Cap							
		RH-CAP								
9	24		Bolt 5/8"x2-1/2"							
10	24		Nord-Lockwasher 5/8"							
11	16		Spring Pin 1/4"x2"							

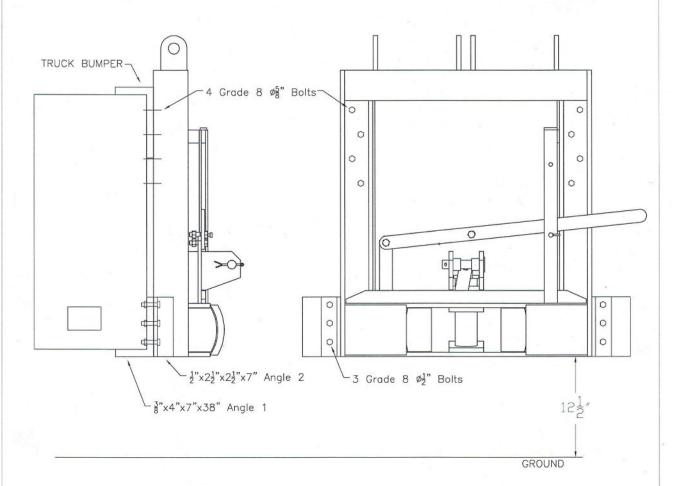








# PLOW w/ BIG WING



WELD ANGLE 1 TO

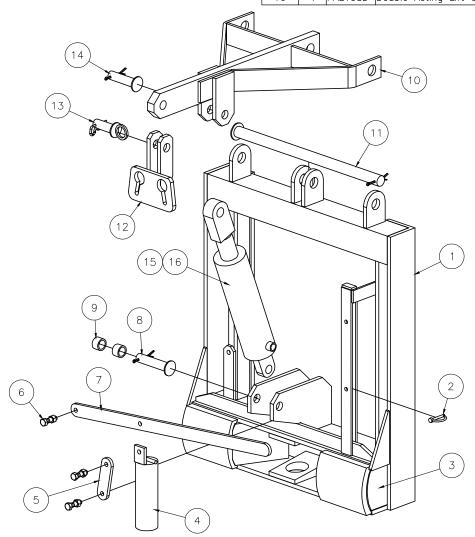
WELD ANGLE 2 TO HITCH

BOLT ANGLE 1 TO ANGLE 2

UNIVER	RSAL TR	UCK $E$	QUIPMEN	VT PIN	& LOOP TRUCK PORTION					
Truck Po	Truck Portion Assembly — Parts Book —									
IN-HOUSE	PART REF	ERENCE:	PAL101		CONSUMER PARTS BOOK REF.: PAL101					
DATE 09/13/07	DRAWN BY RRH	SCALE N/A	REVISED	FILE NAME -	- D:\DRAWINGS\Plow Hitches\PNL\TRUCK PORTION\PAL101.dwg					

# PIN & LOOP TRUCK PORTION ASSEMBLY

			Parts List				
ITEM	1 QTY	NAME	DESCRIPTION				
1	1	PAL101	Hitch Assembly (Includes Items #2-14)				
2	1	PAL102	Pin Handle Stop				
3	1	PAL118	Lower Portion Assembly w/o Cylinder Ears				
4	1	PAL104	ø2-1/2" Loop Pin				
5	1	PAL105	Handle Link				
6	3	PAL114	Bolt & Nut				
7	1	PAL103	Handle				
8	1	PAL106	ø1"x4-3/4" Dead End Cyl. Pin w/ CP				
9	2	PAL107	Dead End Cyl. Bushing				
10	1	PAL110	Lift Arm Assembly				
11	1	PAL109	Lift Arm Pin w/ CP				
12	1	PAL111	Chain Hanger Assembly				
13	1	PAL112	Chain Adjuster Pin w/ Hair Pin Key				
14	1	PAL113	ø1"x4" Live End Cyl. Pin w/ CP				
15	1	PAL108	Single Acting Lift Cylinder				
16	16 1 PAL108D Double Acting Lift Cylinder						



UNIVER	SAL TR	UCK E	QUIPMEN	T PIN	I & LOOP TRUCK PORTION
Truck Po	rtion Ass	embly -	– Parts B	ook -	
IN-HOUSE	PART REFI	ERENCE:	N/A		CONSUMER PARTS BOOK REF.: N/A
DATE DRAWN BY SCALE REVISED 07/18/07 RRH N/A 05/01/13 FILE NAME -				FILE NAME -	- D:\DRAWINGS\Plow Hitches\PNL\TRUCK PORTION\PAL101.dwg

#### ADJUSTABLE PIN & LOOP TRUCK PORTION ASSEMBLY Parts List ITEM QTY NAME DESCRIPTION 1 PAL101EXT Hitch Assembly (Includes Items #2-16) 2 PAL102 Pin Handle Stop 3 PAL118 Lower Portion Assembly w/o Cylinder Ears PAL104 4 1 ø2−1/2" Loop Pin 5 PAL105 1 Handle Link 6 3 PAL114 Bolt & Nut 1 PAL103 Handle PAL106 ø1"x4-3/4" Dead End Cyl. Pin w/ CP Dead End Cyl. Bushing 8 9 PAL107 2 10 PAL116 ø1"x5" Pin w/ Hair Pin Key 11 PAL109EXT Lift Arm Pin w/ CP PAL111EXT 12 Chain Hanger Assembly 13 PAL115 Chain Adjuster Pin w/ Hair Pin Key 14 PAL113 ø1"x4" Live End Cyl. Pin w/ CP Inner Tube 15 PAL117 PAL110EXT 16 Extendable Lift Arm Assembly 17 PAL108 Single Acting Lift Cylinder 18 PAL108D Double Acting Lift Cylinder 16 0 0 0 0 O 18 000 UNIVERSAL TRUCK EQUIPMENT PIN & LOOP TRUCK PORTION Adjustable Truck Portion Assembly - Parts Book -IN-HOUSE PART REFERENCE: N/A CONSUMER PARTS BOOK REF .: N/A DRAWN BY RRH SCALE REVISED

FILE NAME - D:\DRAWINGS\Plow Hitches\PNL\TRUCK PORTION\PAL101EXT.dwg

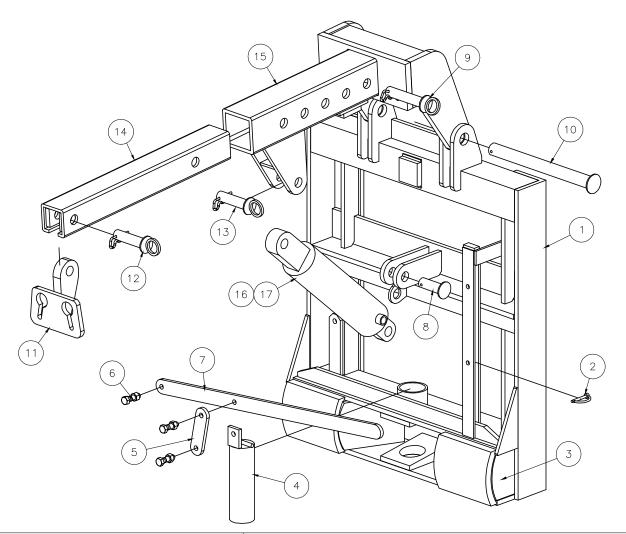
07/24/07

N/A

05/01/13

#### FOLDING ARM PIN & LOOP TRUCK PORTION ASSEMBLY

			Parts List				
ITEM	QTY NAME		DESCRIPTION				
1	1	PAL101EXT-FOLD	Hitch Assembly (Includes Items #2-15)				
2	1	PAL102	Pin Handle Stop				
3	1	PAL118	Lower Portion Assembly w/o Cylinder Ears				
4	1	PAL104	ø2−1/2" Loop Pin				
5	1	PAL105	Handle Link				
6	3	PAL114	Bolt & Nut				
7	1 PAL103		Handle				
8	1	PAL106	ø1"x4-3/4" Dead End Cyl. Pin w/ CP				
9	2	PAL116	ø1"x5" Pin w/ Hair Pin Key				
10	1	PAL109EXT	Lift Arm Pin w/ CP				
11	1	PAL111EXT	Chain Hanger Assembly				
12	1	PAL115	Chain Adjuster Pin w/ Hair Pin Key				
13	1	PAL113	ø1"x4" Live End Cyl. Pin w/ CP				
14	1	PAL117-FOLD	Inner Tube — FOLD				
15	15 1 PAL180B		Top Arm Assembly				
16	1	PAL108	Single Acting Lift Cylinder				
17	17 1 PAL108D		Double Acting Lift Cylinder				



UNIVERSAL TRUCK EQUIPMENT FOLDING ARM - PIN & LOOP TRUCK PORTION Folding Arm — Truck Portion Assembly — Parts Book — IN-HOUSE PART REFERENCE: N/A CONSUMER PARTS BOOK REF.: N/A REVISED

DATE 09/29/14 DRAWN BY RRH SCALE N/A  $\label{lem:file_name_policy} \mbox{File_NAME} - \mbox{D:\DRAWINGS\Plow} \mbox{ Hitches\PNL\TRUCK PORTION\PAL101EXT-FOLD.dwg} \\$ 

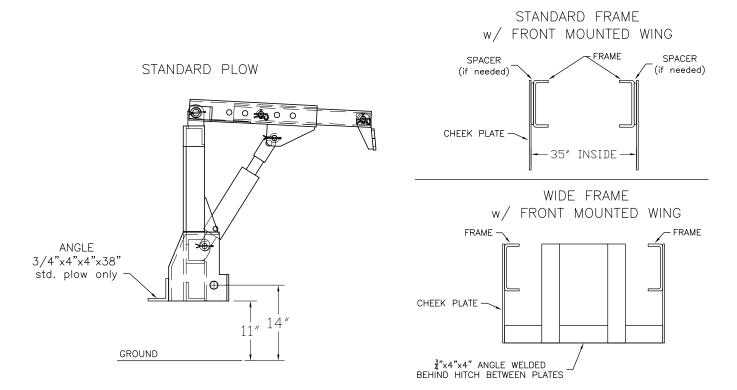
#### SNAP LINK MOUNTING INSTRUCTIONS

14" from ground to center of pin. Set jack stand at 11" and set outside of hitch pockets on stands to give you the 14" to center of pin. On a standard set up plow only bolt hitch to bumper with 4 or  $5\frac{5}{8}$ " grade 8 bolts and weld a  $\frac{3}{4}$ "x4"x38" angle iron to backside of hitch flush with bottom for a place to put S-Irons.

Mounting a SNAP Link on a truck with a big wing and std. frame 34" wide.

Spacers must be added between frame and cheek plate to reach 35" from inside of cheek plate to inside of cheek plate. Use 4 or  $5\frac{5}{8}$ " grade 8 bolts to bolt to bumper and completely weld hitch pockets to cheek plates where the hitch slips inside of cheek plates.

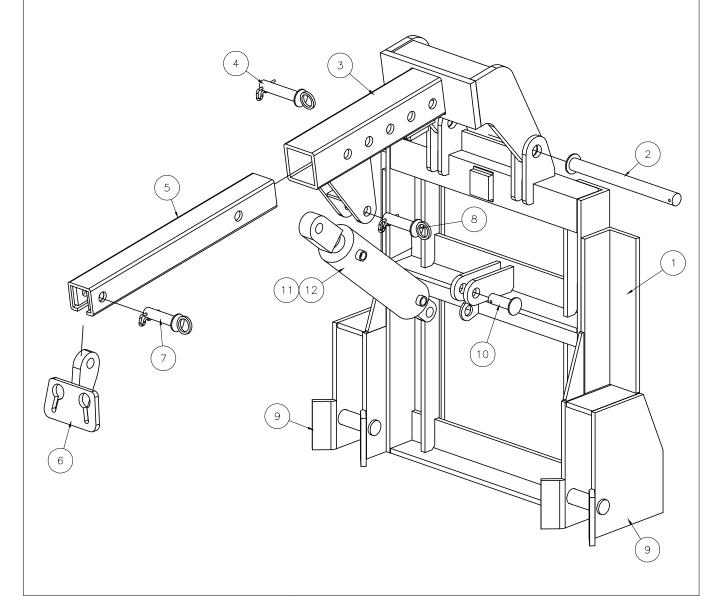
On a wide frame truck no spacer between cheek plate and frame are needed the only thing different is a piece of  $\frac{3}{4}$ "x4"x4" angle welded between cheek plates tight to back of hitch. Welded on all 4 sides and then a gusset is added between cheek plate and outside pocket gusset is made out of  $\frac{1}{2}$ " cut to fit. Weld all sides.



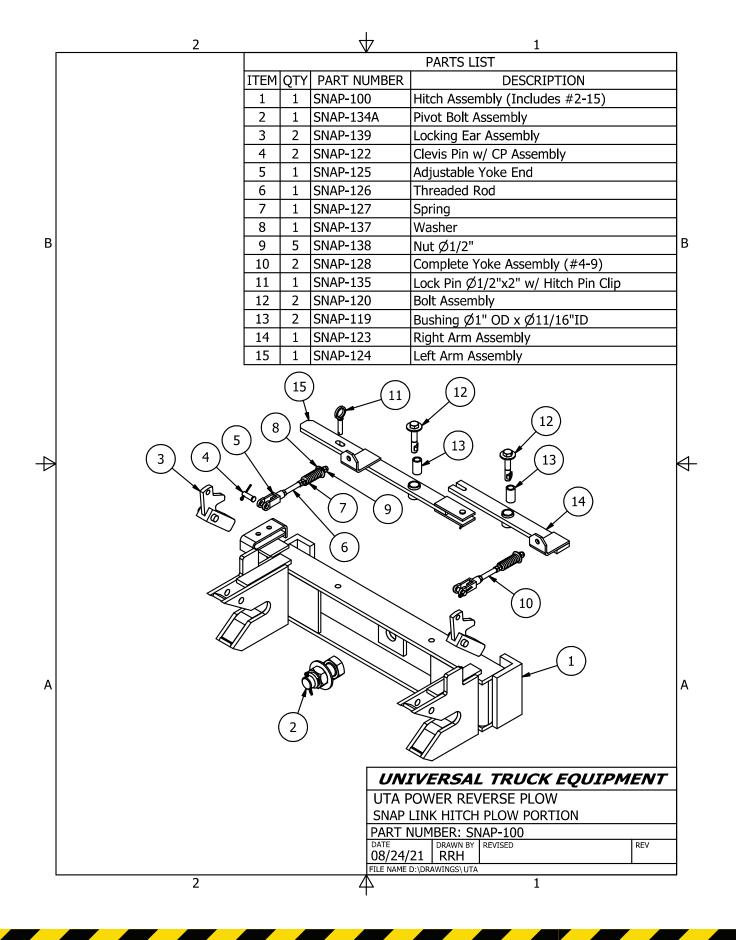
#### SNAP LINK HITCH TRUCK PORTION ASSEMBLY Parts List ITEM QTY NAME DESCRIPTION SNAP200 Hitch Assembly (Cylinder NOT Included) 2 SNAP201 Lift Arm Pin w/ CP 3 SNAP202 Extendable Lift Arm Assembly SNAP203 4 ø1"x5" Pin w/ Hair Pin Key 5 SNAP204 Inner Tube 6 SNAP205 Chain Hanger Assembly ø1"x4" Pin w/ Hair Pin Key ø1"x4" Cyl. Pin w/ CP SNAP206 8 SNAP207 Single Acting Lift Cylinder 9 PAL108 10 PAL108D Double Acting Lift Cylinder SNAP136 11 Pocket Only (Side Plates, Back, Ears & Pin) 12 SNAP208 ø1" x 3" Pin w/ CP 0 0 0 0 0 10 11 12 11 UNIVERSAL TRUCK EQUIPMENT SNAP LINK HITCH TRUCK PORTION Adjustable Truck Portion Assembly — Parts Book — IN-HOUSE PART REFERENCE: N/A CONSUMER PARTS BOOK REF.: N/A DATE 07/26/07 DRAWN BY SCALE REVISED FILE NAME - D:\DRAWINGS\Plow Hitches\SnapLink\TRUCKPORTION\SNAP200.dwg RRH 05/01/13

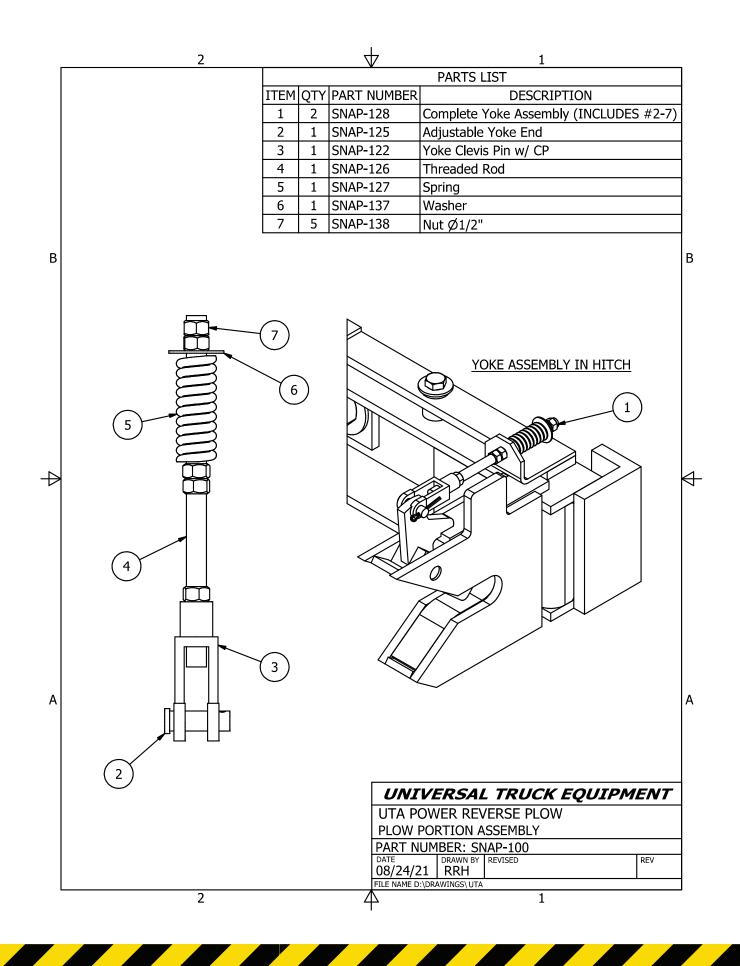
#### FOLDING ARM SNAP LINK HITCH TRUCK PORTION ASSEMBLY

				Parts List
ITEM QTY NAME				DESCRIPTION
I	1	1	SNAP200-FOLD	Hitch Assembly (Includes Items #2-10)
ĺ	2	1	SNAP201	Lift Arm Pin w/ CP
I	3	1	PAL180B	Top Arm Assembly
I	4	1	SNAP203	ø1"x5" Pin w/ Hair Pin Key
Ì	5	1	1 SNAP204	Inner Tube
I	6	1 SNAP205	SNAP205	Chain Hanger Assembly
I	7	1	SNAP206	ø1"x4" Pin w/ Hair Pin Key
I	8	2	SNAP207	ø1"x4" Cyl. Pin w/ CP
I	9	2	SNAP136	Pocket Only (Side Plates, Back, Ears & Pin)
I	10	10 1 SNAP208		ø1" x 3" Pin w/ CP
ĺ	11	1	PAL108	Single Acting Lift Cylinder
ı	12 1 PAL108D			Double Acting Lift Cylinder

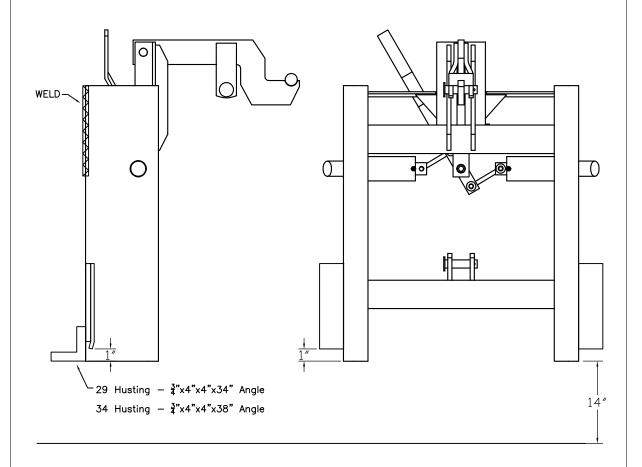


UNIVERSAL TRUCK EQUIPMENT   FOI						ARM	_	SNAP	LINK	HITCH	TRUCK	PORTIO	Ν
Folding .	Parts E	Book -	_										
IN-HOUSE	IN-HOUSE PART REFERENCE: N/A							TS BOO	K REF.:	N/A			
DATE	DRAWN BY	SCALE	REVISED	EUE NAME	D-/ DD	WINICC/	Dlau	, Hitabaa\	Snaplin	r) TRUCK	DODTIONI\ SA	IADOON EOL	D dwa





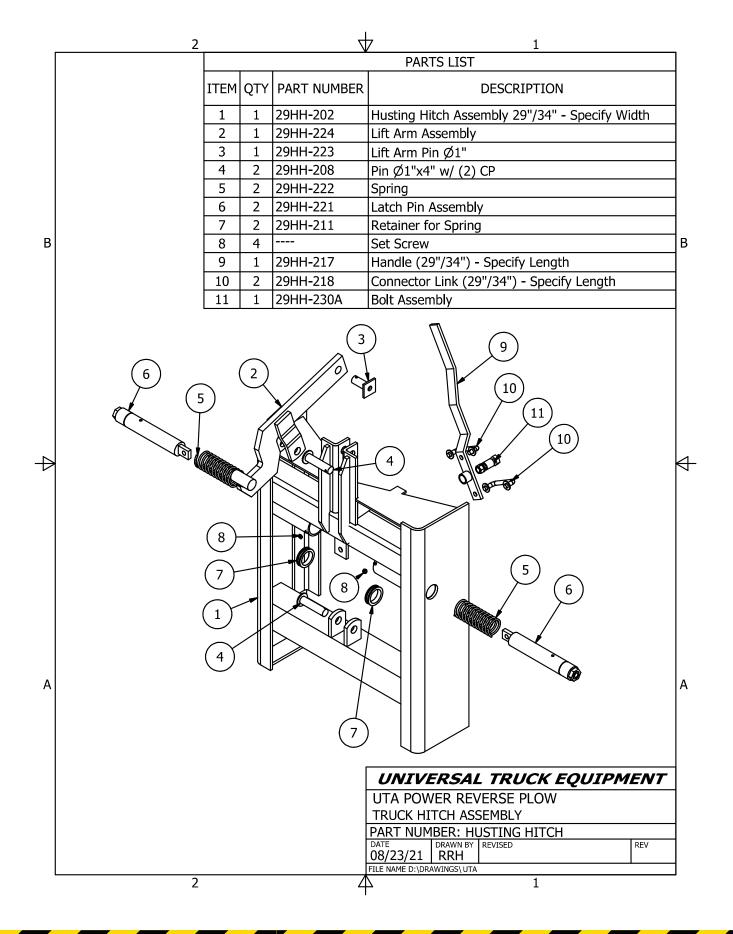
## HUSTING HITCH TRUCK PORTION ASSEMBLY

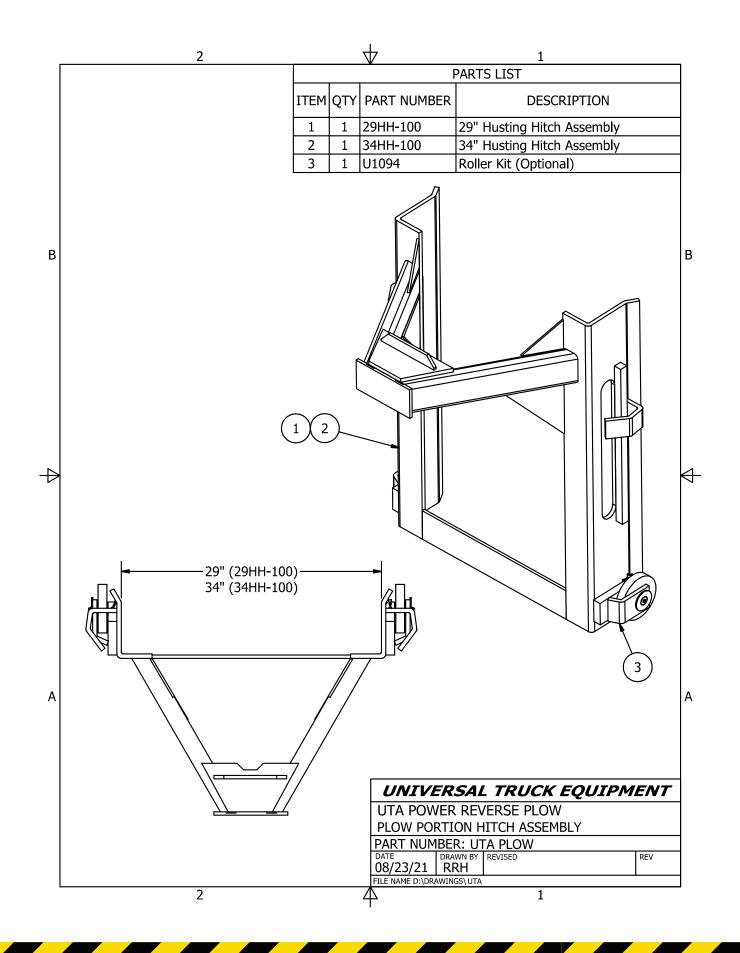


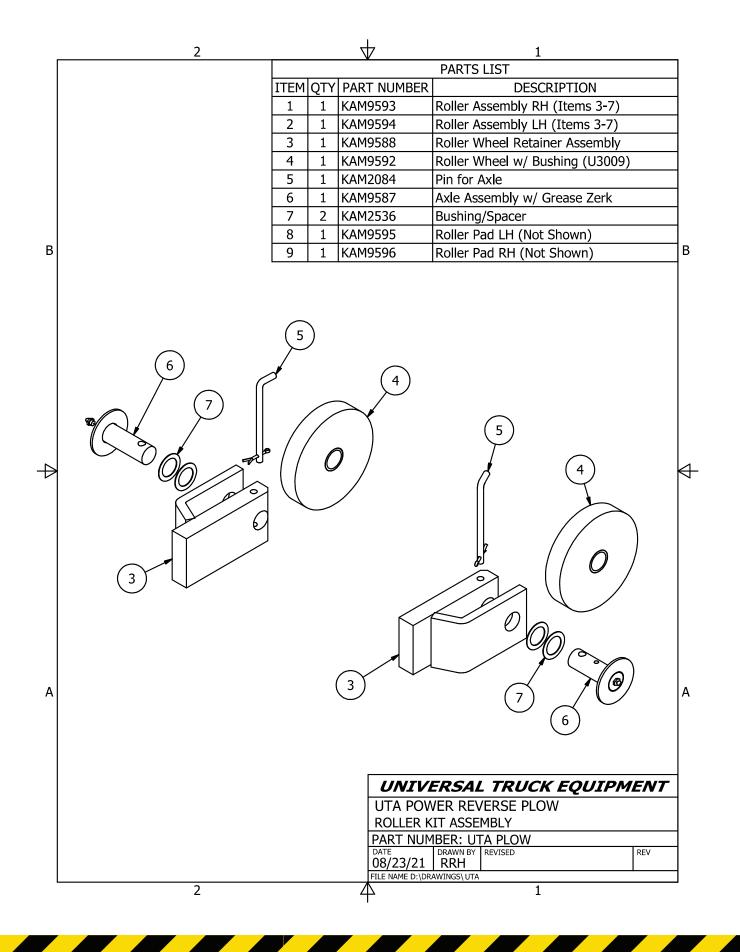
HITCH IS MOUNTED 14" FROM THE GROUND

ROLLER KIT IS MOUNTED 1" UP ON THE HITCH

UNIVERSAL TRUCK EQUIPMENT	Hu	sting Hitch
Husting Hitch - Truck Portion Assemb	bly –	Parts Book —
IN-HOUSE PART REFERENCE:		CONSUMER PARTS BOOK REF.:
DATE DRAWN BY SCALE REVISED FILE	E NAME -	- D:\DRAWINGS\Plow Hitches\Husting\Truck Portion\29\29HH-200.dwg

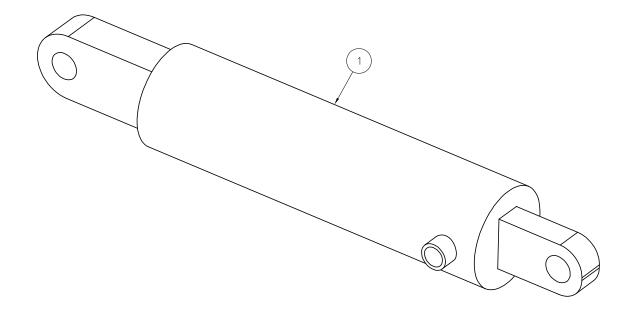






## SINGLE ACTING LIFT CYLINDER

		Parts List							
ITEM	QTY	NAME	DESCRIPTION						
1	1	PAL108	Single Acting Lift Cyl.						
2	1	PAL108SK	Seal Kit (Not Shown)						

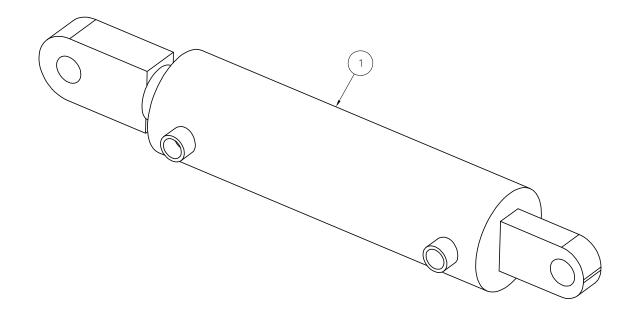


UNIVEF	RSAL TR	UCK E	QUIPMEN	VT PIN	1 & LOOP	TRUCK	PORTION			
SINGLE A	ACTING LIF	T CYLIN	IDER							
IN-HOUSE	PART REF	ERENCE:	PAL108		CONSUMER	PARTS BO	OOK REF.: F	AL108		
DATE 07/18/07	DRAWN BY RRH	SCALE N/A	REVISED	FILE NAME -	- D:\DRAWINGS	 ∖Plow Hitch	es\PNL\TRUC	< PORTION\F	PAL108.dwd	

## DOUBLE ACTING LIFT CYLINDER

Parts List										
ITEM	QTY	NAME	DESCRIPTION							
1	1	PAL108D	Double Acting Lift Cyl.							
2	1	PAL108DSK	Seal Kit (Not Shown)							

NOTE: CUSTOMER REPLACING CYLINDER PARTS VOIDS CYLINDER WARRANTY.



UNIVERSAL TRUCK EQUIPMENT PIN & LOOP TRUCK PORTION					
DOUBLE ACTING LIFT CYLINDER					
IN-HOUSE PART REFERENCE: PAL108D					CONSUMER PARTS BOOK REF.: PAL108D
DATE 07/18/07	DRAWN BY RRH	SCALE N/A	REVISED	FILE NAME -	- D:\DRAWINGS\Plow Hitches\PNL\TRUCK PORTION\PAL108D.dwg



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