# **IIIALANO MISCELLANEOUS** MODELS INFORMATION 8 SERVICE BULLETINS Manual P/N 0298 (05/04)

### Alamo Industrial

P. O. Drawer 549 Seguin, Texas 78155 830-372-3551 2004 Edition



# BOOK INTRODUCTION INFORMATION & SERVICE BULLETINS This Book is divided into two Sections

### **Section One - Technical Information Bulletins**

- Technical Information Bulletins: Information Bulletins are listed by Bulletin Number (Date). Example the oldest Bulletin will be listed first and the most recent bulletin will be listed last. Bulletin No. 021002 = first & second digits are the month, the third & fourth digits are the day of the month and the fifth & sixth digits are the year this means, the bulletin was written on Feb, 10, 2002. If more than one bulletin was written on that day the a dash with a number will added, example -1, -2 etc.
- 2. **Authorize Repairs:** Technical Information Bulletins **do not authorize** any repairs to be made under warranty or any other circumstance unless specifically instructed to do so.
- 3. **Bulletin Reference:** Some Technical Information Bulletins will refer to the corresponding Service Bulletins for repairs and some are for information only.
- 4. **Bulletin Instructions:** Technical Information Bulletins should have all the instructions as to what you need, but may not have all the information needed to make an installation complete. In some cases it may be required to refer to other manuals for more complete information, this should be suggested in the Technical Information Bulletin.
- 5. All Technical Information Bulletins printed in this Manual will void any previously printed Bulletin. Any changes in these bulletins are the final version as of the date of this manual.

### **Section Two - Service Bulletins**

- Service Bulletin No: Service Bulletins are listed by Bulletin Number (Date). Example the oldest Bulletin will be listed first and the most recent bulletin will be listed last. Bulletin No. 021004 = first & second digits are the Year, the third & fourth digits are the day of the month and the fifth & sixth digits are the month, this means the bulletin was written on Apr, 10, 2002. If more than one bulletin was written on that day the a dash with a number will added, example -1, -2 etc.
- 2. **Repairs:** Service Bulletins are intended to authorize only the repairs listed on It to be made under warranty or any other circumstance unless specifically instructed to do so.
- 3. **Parts:** This is the Rate at which compensation will be allowed under warranty for repair parts.
- 4. **Labor:** This is the amount of labor (hours) that are allowed to make this repair under warranty.
- 5. **Parts Disposition:** Service Bulletins list the disposition of any parts that are removed during the repair. If listed removed parts must be held awaiting return to factory if instructed to do so.
- 6. **Termination Date:** Service bulletins show a termination date, this is the date that the Bulletin will be discontinued, Any repairs must be made and all warranty applications filed by the listed date.
- 7. All Service Bulletins printed in this Manual will void any previously printed Bulletin. Any changes in these bulletins are the final version as of the date of this manual.

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# NOTES

# **SECTION 1**

# TECHNICAL INFORMATION BULLETINS

# (This Book is divided into two Sections)

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### MISCELLANEOUS MODELS



Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

<b>Models:</b> Interstaters (in Frame Colling), Versa pro, Grounds Keeper, Grass King & Hydro 88	Bulletin No: 081594 (old # 940012)	<b>Date:</b> Aug. 15, 1995
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### Motor High Pressure Seal Kit:

### Subject:

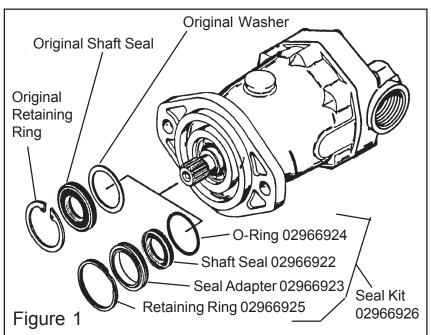
There is a high pressure shaft seal kit available for the piston motors used on above products, kit P/N 02966926. If the shaft seal has been blowing out, replace with this kit. Note: the new motors shipped in the future will have this high pressure seal already installed.

#### **Disassembly:**

Work in clean area, cleanliness is extremely important when repairing hydraulic components. Before disconnecting any thing, clean the entire motor area, your work area and your tools of any debris that might get into the system. Disconnect and plug hydraulic lines, remove motor from the mower. Cover the spindle where motor was removed to keep it clean. Thoroughly clean the outside of the motor, drain any oil left in mount into proper container. Remove original retaining ring from motor housing. Pry original shaft seal from the housing, take care not to damage shaft or housing. Remove original washer from housing.

### Assembly:

Lubricate new seal adapter, O-ring and fill the snap ring groove in motor housing with lithium based # 2 grease. Install O-Ring and shaft seal into the adapter. (Seal lip should face shoulder of adapter). Install adapter in motor housing, with shaft seal side into housing first, by pressing it into place with finger pressure. Light tapping may be used, however, be careful not to cock the adapter as it is pressed by the snap ring groove, as this would cause O-Ring damage. Install the new retaining ring. Reinstall motor on machine. Run and test for operation.



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# NOTES

### MISCELLANEOUS MODELS



Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

<b>Models:</b> 15' & 17' Minute Man - 17', 20' & 23' RMB, 17', 20', 23' & 28' A-Boom - 17', 20' & 23' Versa Boom	011095	<b>Date:</b> Jan. 10, 1995
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### King Post Attachment:

#### Subject:

King post Attachment, A great deal of confusion exist regarding replacement parts for Alamo Industrial King Post. This bulletin should clarify which parts are currently being used in our King Post Assemblies. Refer to the Operators / Parts manual parts pages for exact part numbers.

The current King Post at this time uses a Steel connex Bushing. The bushings in the king post lift cylinder lug and turning arm are Teflon. Chrome Plated Pins must be used with Teflon Bushings always.

Note: An optional rear swing turning arm is available with a steel swing cylinder bushing, however, a greasable turning arm pin must be used with it.

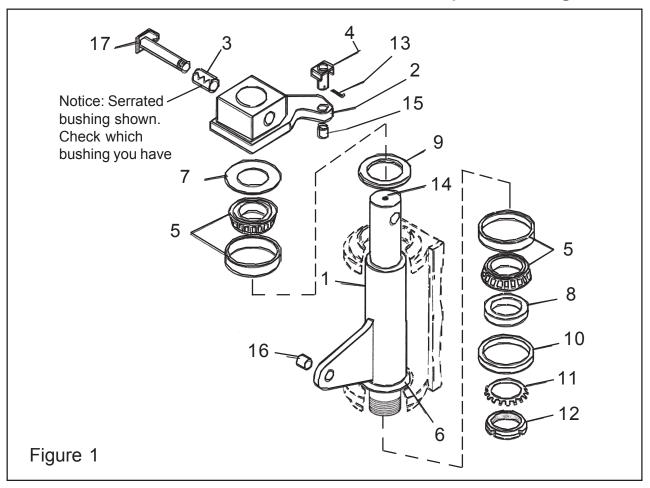
#### Parts:

ltem	Part No.	Qty	Description
1.	02956821	1	King Pin w/ Bushing
2.	02967171	1	Rear Turning Arm w/ Teflon Bushing
	02956830	ref	Rear Turning Arm w/ Steel Bushing
	02967397	1	Front Turning Arm w/ Teflon Bushing
	02956831	ref	Front Turning Arm w/ Steel Bushing
3.	02958345	1	Bushing, Steel
4.	02966767	1	Turning Arm Pin, Chrome use w/ Teflon Bushing Only
	02960458	ref	Turning Arm Pin, Greasable use w/ Steel Bushing Only
5.	02957008	2	Bearing Cup and Cone Assembly
6.	02956882	1	Ring, Bottom Bearing Seal
7.	02956941	1	Ring, Top Bearing Seal
8.	02956818	1	Bearing Support Collar
9.	02958636	1	Seal
10.	02958637	1	Seal
11.	02956838	1	Lockwasher
12.	02956839	1	Nut

### MISCELLANEOUS MODELS

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### Information Bulletin 011095 Continued from previous Page



ltem	Part No.	Qty	Description
13.	00606000	1	Cotter Pin
14.	00752176	1	Grease Fitting
15.	02965548	1	Bushing, Teflon 1-1/4" OD
	02957501	ref	Bushing, Steel 1-3/8" OD
16.	02959225	1	Bushing
17.	02965538	1	Main Pin Weldment (Non greasable)
	02967490	ref	Main Pin Weldment (Greasable)

#### Parts:

If a customer orders a king post, P/N 02965545 with a solid steel bushing (P/N 02965536) and has an A-boom or Versa Boom with a rear swinging boom, he will be shipped a retro fit kit P/N 02967237. For a Minute Man or Rear Mount boom they need P/N 02968881 Kit.

# TECHNICAL INFORMATION BULLETIN No. 011095

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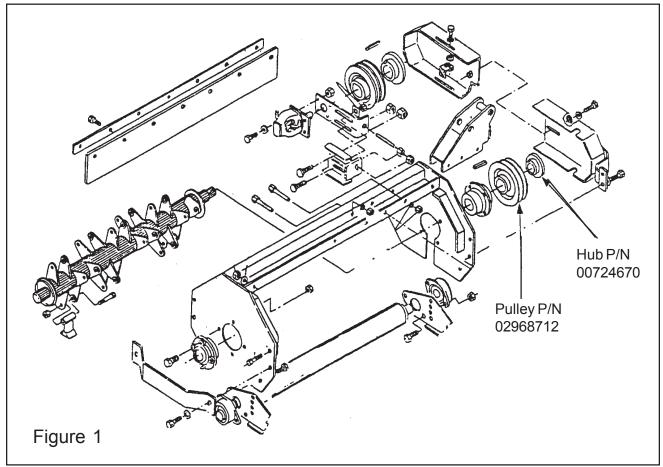


Models: All Boom Mowers using Flail Axe Head	Bulletin No: 012095	<b>Date:</b> Jan. 20, 1995
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### Pulley Fastening to Cutter Shaft of Flail Axe Head:

### Subject:

A new method has been devised to secure the pulley to the cuttershaft. A new pulley, P/N 02968712 and a QD Pulley Hub P/N 00724670 has replaced the old pulley with setscrew, washer, lockwasher and bolt. The new pulley and hub are a keyed, taper lock design which will provide a better fit and longer service life for the shaft.



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### MISCELLANEOUS MODELS

# NOTES

### MISCELLANEOUS MODELS

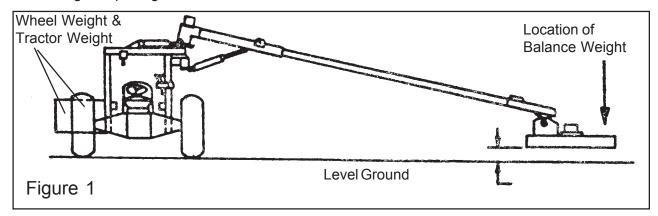


<b>Models:</b> Slope Mower, Boom Axe Balance	Bulletin No: 061995 (old #IB-61995-4)	<b>Date:</b> Jun. 19, 1995
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### **Boom Balance Recommendations:**

### Introduction:

To insure the safety of the operator against instability of the tractor, it is crucial that the left rear tire of the tractor exert a minimum force (weight) of 1,000 pounds on the ground when the boom is at full extension and the cutter head is horizontal and two feet off the ground (Figure 1). An installation not meeting this requirement is dangerous and should not be operated as overturning the unit can occur resulting in injury or death. An installation meeting this requirement allows operation of the unit on slopes not exceeding 5°. For operating on slopes greater than 5°, contact Alamo Industrial Technical Service Dept. for additional information. The head and boom must be resting on the boom rest or the ground prior to removing or repairing Left rear Tire.



### 1. Tractor / Boom Mower Stability -Test Methods:

There are two acceptable methods for determining if the above requirements have been achieved.

### A. Drive -on floor Scale (Best Method)

- 1. Position the Boom as shown in Figure 1.
- 2. Drive the tractor onto the scale so that only the left rear tire is on scale
- 3. Note the weight, If the weight is below 1,000 pound, refer to the section on "Improving Stability". If the weight is 1,000 pounds or more, the unit has passed and is safe to operate as explained above.

### MISCELLANEOUS MODELS

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### B. Balance Weight (Acceptable Method)

- 1. Position the Boom as shown in Figure 1.
- 2. Place a 210 pound weight at the outer edge of the mower head as shown in figure 1.
- 3. If the left rear tire lifts off the ground, refer to the section on "Improving Stability". If the left rear tire remains firmly on the ground, then the unit has passed and is safe to operate as explained earlier.

#### 2. Example: Slope Mower

Alamo Industrial has determined that the following tractor specifications will meet the 1,000 pound requirement for a slope mower.

Tractor Weight	5,500 lbs.
Rear Tire Size	18.4 - 30
Adjustable Wheels	Adjusted to 8 ft. (96") outside measurement
	Left rear proximately 50" from tractor
center	line and right rear proximately 46"
from center lin	e
Tire Ballast	Left rear tire filled with 960 pounds of calcium
chlorid	e water solution. Use five pounds of

calcium chloride per gallon of water.

### 3. Improving Stability:

It is difficult to send out a "standard" counterweight package which works well on all tractors due to the many makes and models used for boom machines. At times it may be necessary to add wheel weights in addition to the standard practice of adding a full charge of calcium chloride to the left rear tire and spreading the rear tires to a minimum to 96" if possible, it is also advantageous to spread the rear tires to wider than ti minimum 96"

#### Tire Spacing;

The rear tire spacing of the tractor is very important. As the tire spacing is narrowed it reduces the effectiveness of the tractor weight and wheel weight in counter balancing the boom. Therefore any spacing narrower than the 8 ft. (96") previously referred to will require more application where tire spacing is less than 8 ft.

#### Boom Extension;

As the boom length at maximum extension is decreased, the amount of counterweight necessary for balancing the unit is reduced. This is accomplished by relocating the boom stop. The factory should be consulted on application where this method is used.

#### **Tractor Weight;**

Tractor weight is extremely important to the balance of the unit. The left rear tire tends to tip upward and therefore any weight to the left of the right rear tire acts as a counterweight, tractor included. An increase in tractor weight will allow a decrease in the amount of counterweight necessary. The following table lists possible combinations of tire size, weight of calcium chloride water solution, and left rear wheel weights necessary to achieve the proper counterweight. This table assumes the tire spacing is 8 ft (96") outside, left rear tire 50" from tractor center line and right rear tire 46" from tractor center line (or wider).

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# BOOM MOWERS Wheel Weights (Pounds)

14.9-24 Tire Size w/ Tractor 18.4-30 Tire Size w/ 16.9-24 Tire Size w/ 16.9-28 Tire Size w/ Weight 507 lbs. of Calcium 960 lbs. of Calcium 654 lbs. of Calcium 747 lbs. of Calcium lbs. Chloride (Mix 72 gal. Chloride (Mix 49 gal. Chloride (Mix 38 gal. Chloride (Mix 56 gal. water to 245 lbs water to 190 lbs water to 360 lbs water to 280 lbs Calcium Cloride) Calcium Cloride) Calcium Cloride) Calcium Cloride) Х 4500 Х Х Х Х Х Х 4600 400 Х 400 Х Х 4700 Х 4800 350 Х Х Х Х 4900 300 Х Х Х Х 5000 250 Х 400 Х 5100 200 Х Х 350 5200 150 Х 5300 100 300 400 Х 5400 50 250 350 200 300 Х 5500 0 0 250 400 5600 150 5700 100 200 350 0 50 150 300 5800 (865) A 0 100 250 5900 (820) A 6000 (770) A 0 50 200 6100 150 (720) A (720) A 0 6200 (675) A (675) A 0 100 (630) A (630) A 50 6300 (630) A 6400 (580) A (580) A (580) A 0 6500 (530) A (530) A (530) A 0

X = Not recommended for mounting boom on tractor of this weight.

A = No wheel weights are necessary. The weight of calcium chloride water solution may be reduced to the amount in the brackets
Note: If your tractor is equipped with a tire size not shown, contact the Alamo Industrial Engineering Department for assistance in determining the amount of counter weight you will need.

### MISCELLANEOUS MODELS

# Information Bulletin 061995 Continued from previous Page Tire Balance for Booms Specifications

(Rear Tire Pressure and Permissible Loads) the following chart gives the carrying capacity of the axle at the pressure indicated

Tire	PLF		Inflation Pressures lbf/in <sup>2</sup>							
Size	Rating	16	17	19	20	21	23	25	26	29
			Per	missib	le Loac	Capad	city per	axle lb	).	
19.9/14-30	6	7630	8000	8380						
	8	7630	8000	8380	8640	9275	9225	9880		
	10	7630	8000	8380	8640	9275	8525	9880	10185	10820
16.9/14-34	6	8070	8470	8880						
	8	8070	8470	8880	9300	9810	10100	10490		
	10	8070	8470	8880	9300	9810	10100	10490	10825	11480
16.9/14-38	6	8550	8990	9390						
	8	8550	8990	9390	9830	10365	10690	11110		
	10	9605	9860	10940	11350	11755	12040			
18.4/15-26	6	8775								
18.4/15-30	6	9350								
	8	9350	9750	10205	10650					
	10	9350	9750	19205	10650	11235	11430	12135	12360	
18.4/15-34	6	9920								
	10	9920	10410	10870	11310	11925	12230	12695	13180	

When mounted implements are used, rear tire loads may be increased by up to 20 % with no increase in inflation pressure when operaterd at speeds not to exceed 12 MPH. The above table is for guidance only. For exact information regarding inflation pressures and loads for your particular tires consult your authorized tractor dealer.

# TECHNICAL INFORMATION BULLETIN No. 061995

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Models: All Hydraulic mowers using the 02964028 Push-Pull Switch	Bulletin No:	Date:
	092895	Sep. 28, 1995

### Failures of the mower push-pull switch:

Alamo has recently received reports of failures of the referenced switch. The failures modes are:

- (a) Knob pulls off rod.
- (b) Rod and Knob pulls out of switch body.

Test performed on numerous switches indicates that the (b) failures are due to excessive force being applied to the knob when shutting off the mower. Specifically, the knobs are usually roughly slapped to turn the mower off. After internal parts of the switch are damaged, the rod can then be pulled out easily. The (a) failures are due to the knobs not being securely tightened.

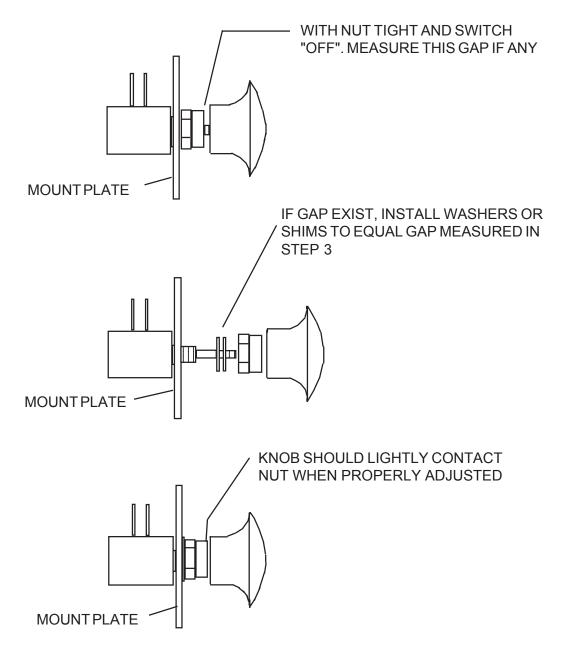
To prevent these failures from occurring, or to replace a damaged switch, use the following procedure to adjust the travel of the switch. (See attached diagram).

- 1. Install the switch body in the holder and tighten the nut.
- 2. Screw the Knob on the rod to the bottom of the thread, but do not overtighten. It will probably be necessary to hold the rod with pliers to get the knob tight, if you do use caution not to score the rod with the pliers.
- 3. Measure the distance (if any) between the knob and the nut. Record the measurement.
- 4. If a Gap exists between the knob and the nut, remove the knob.
- 5. Remove the nut and install the same thickness of flat washers that was measured in step 3. Install and tighten the nut> DO NOT install more washers than needed to take up the space. Flat Washer Part No. 00023500 or equivalent can be used.
- 6. Install the Knob, using Locktite or similar thread locking compound. Thread the knob on the rod all the way. Test to make sure that when the switch is "Off" (with rod pushed in) that the knob can not travel further into the switch.

### MISCELLANEOUS MODELS

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# TECHNICAL INFORMATION BULLETIN No. 092895

Contact: Alamo Industrial Technical Services Department 1502 East Walnut Seguin, Texas 78155 Ph; 830-372-2708 Fax; 830-372-9603

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### MISCELLANEOUS MODELS



Models: Grass King (units produced prior to Oct. 1995)	Bulletin No: 100595	<b>Date:</b> Oct. 5, 1995
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Main Frame Reinforcement / Repair Kit:

### Subject:

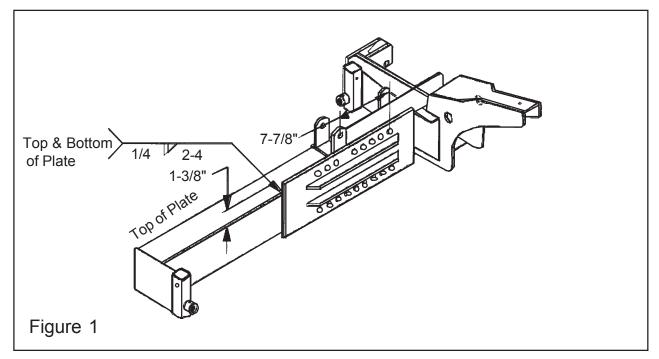
A kit is now available to repair or reinforce the main frame of the Grass King mowers. The kit is designed to be installed on undamaged frames, but can be used on damaged frame if the frame can be straightened and is structurally sound. Instructions and decals are included in the kit as well as the plate weldment that is to be installed

### Parts Needed:

Qty 1 of P/N 02969710 Frame Reinforcement Kit

### **Procedure:**

The repair procedure is shown in instruction sheet P/N 02969709



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# NOTES

### MISCELLANEOUS MODELS



Models:	Rear Mounted Boom, A-Boom and Versa Boom	Bulletin No: 121295 (old # 1212)	<b>Date:</b> Dec. 12, 1995

Convert Turning Arm to Greasable, Steel Bushing:

### Subject:

The Current production Booms are equipped with Teflon Bushings and Chrome Pins at the Swing Cylinder / Turning Arm connections. Some customers prefer greasable joints. Use the information provided in this bulletin to convert to a greasable, steel bushing arrangement.

There are three procedure types (methods) of repair that can be used. The method used depends on the condition of the bushing bore (A) on the turning arm. All procedures start with the mowing Head at rest on the floor (Ground) and all Hydraulic pressure relieved from system.

### Procedure Type 1: No damage to bushing bore

Parts required for this Procedure:

1 ea. of P/N 02969988 Retro Fit Kit

- 1. Remove center pin and turning arm Pin (1). Move the swing cylinder out of the way.
- Using a suitable driver, remove the old bushing (2) and install a new bushing P/N 02969987. 2.
- Replace two bushings in the cylinder clevis (3) with P/N 02959890 bushing, use suitable driver. 3.
- Align cyl. clevis with turning arm bore and install new P/N 02960458 Pin and cotter pin. 4.
- Lubricate pin, and test for proper operation. 5.

### Procedure Type 2: Slight damage to bushing bore (Diameter does not exceed 1-3/8")

Parts required for this Procedure:

1 ea. of P/N 02957501 Bushing, 1-3/8" OD 2 ea. of P/N 02959890 Bushing

1 ea. of P/N 02960458 Pin, Turning Arm

- 1 ea. of P/N 00606000 Cotter Pin
- Remove center pin and turning arm Pin (1). Move the swing cylinder out of the way. 1.
- If Bushing bore cannot be drilled in place, the turning arm will have to be removed. If so remove 2. the turning arm from the king post. See the Operators / Service Manual for Turning arm removal.
- 3. Bore or drill the hole for the bushing to 1-3/8"
- Install the P/N 02957501 (1-3/8" OD Bushing), using a suitable driver. 4.
- Reinstall the turning arm on the king post. It may be advisable to replace the main pin bushing 5. and/or main pin at the same time.
- 6. Replace two bushings in the cylinder clevis (3) with P/N 02959890 bushing, use suitable driver.
- Align cyl. clevis with turning arm bore and install new P/N 02960458 Pin and cotter pin. 7.
- Lubricate pin, and test for proper operation. 8.

### MISCELLANEOUS MODELS

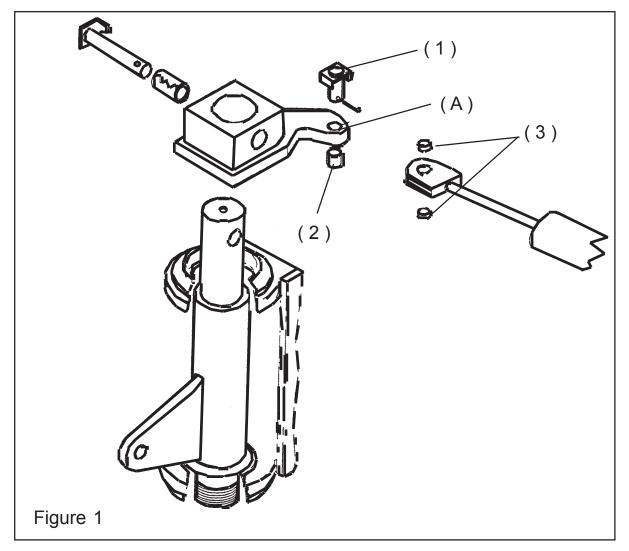
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### Information Bulletin 121295 Continued from previous Page

### Procedure Type 3: Bushing bore worn more than 1-3/8"

Parts required for this Procedure:

- 1 ea. of P/N 02956830 Rear Turning Arm or
- 1 ea. of P/N 02956831 Front Turning Arm 2 ea. of P/N 02959890 Bushing
- 1 ea. of P/N 02960458 Pin, turning Arm 1 ea. of P/N 00606000 Cotter Pin
- 1. Remove center pin and turning arm Pin (1). Move the swing cylinder out of the way.
- 2. remove turning arm from king post.
- 3. Replace Turning Arm with new turning arm with steel bushing (use rear turning arm P/N 02956830 or front turning arm P/N 02956831, one or the other but not both).
- 4. Replace two bushings in the cylinder clevis (3) with P/N 02959890 bushing, use suitable driver.
- 5. Align cyl. clevis with turning arm bore and install new P/N 02960458 Pin and cotter pin.
- 6. Lubricate pin, and test for proper operation.



# TECHNICAL INFORMATION BULLETIN No. 121295

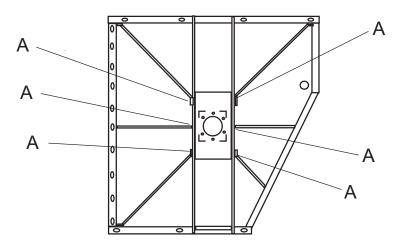
This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



Models: Rear Mount Booms, Machete Boom Axe, Versa Boom, A-Boom and	Bulletin No:	Date:
Slopemower	121495	Dec. 14, 1995

Repair Procedure for Welding Cracks in Boom Heads:



If cracks appear in the welds at points "A" as shown above, use the following procedures to repair head.

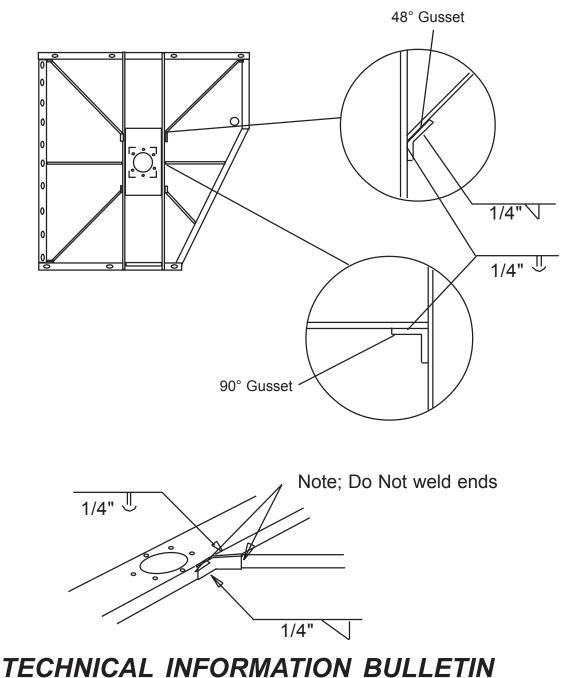
### Parts Needed:

Part No.	Qty	Description
02970111	2	90° Gusset
02970112	4	48° Gusset

### Welding Procedure:

- 1. Grind a groove at the site of the crack and clean the area to be welded.
- 2. Weld the crack making a 100% weld.
- 3. After repairing the cracks, prepare the sites for installation of the gussets.
- 4. Position the reinforcing bar gusset part no. 02970111 if 90° or part no. 02970112 if 48° over the X-Bar as shown in drawing next page. Weld with a 1/4" fillet weld on the bottom and an edge weld on top. DO NOT weld the ends.
- 5. Clean and paint the area.
- 6. Reassemble any parts that were removed.

### MISCELLANEOUS MODELS



Contact: Alamo Industrial Technical Services Department 1502 East Walnut Seguin, Texas 78155 Ph; 830-372-2708 Fax; 830-372-9603

This document does not authorize the repair or replacement of parts under warranty

### **MISCELLANEOUS MODELS**



Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

Models:	All Hydraulic Units using P/N 00768991 Speed Increaser	Bulletin No:	Date:
		011296	Jan. 12, 1996

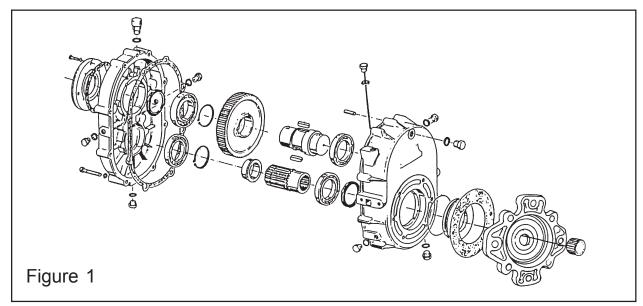
### New Sealing Washers Used on Plugs of Speed Increaser:

Speed Increaser Assembly P/N 00768991: Plug Seal Update, There have been some isolated reports of the case plugs backing out on the above mentioned Speed Increasers, causing loss of oil and cataastrophic failures of the gearbox.

Test conducted by Alamo Industrial revealed when ambient temperatures exceeded approximately 100° F. the nylon and plastic washers on the plugs would get soft or melt, this allowed the plug to back out.

We have contacted our supplier of these parts and had the material specifications changes for these washers. The new washers are made of aluminum istead of the old nylon or plastic. The part number for the washers (P/N 00754536 and 00755424) will remain the same as there will be no changes in the way they fit, only in the type material they are made out of.

All units operating in warm temperature of 100° F. or higher should be changed right away to prevent plugs from backing out.



This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



Models:	FM Severe Duty Shredders	Bulletin No: 011596	<b>Date:</b> Jan. 15, 1996
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### Knife and Retaining Rod Replacement Procedure:

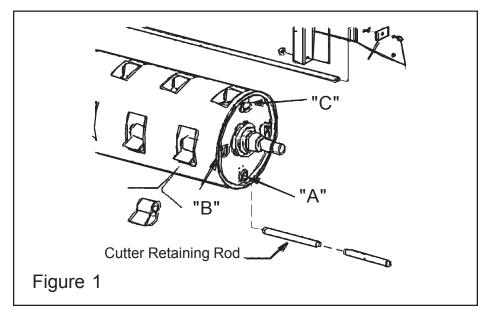
### Subject:

The Cutter retaining Rod is a normal wear item and should be replaced when they show signs of excessive wear. Under normal cutting conditions they can be reused through three to five cutter flail changes. Use the following procedure when changing flail knives and retaining rod.

### Procedure:

Note the position of each rod before disassembly, this can be marked any way that is identifiable by you. Remove all the cutter retaining rods (bars) and cutting flails (knives) as described in the maintenance section of the operators manual.

Reinstall each rod one position clockwise from the position it was originally installed. For example, if the rod was removed from position "A" (see figure 1), then replace it into position "B", removed from position "B" is moved to position "C" and etc. around the cutter shaft. This will position the cutter flails over an unworn area on rods.



# This document does not authorize the repair or replacement of parts under warranty MISCELLANEOUS MODELS



Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

Models:	All Models using Single Acting Hydraulic Cylinder	Bulletin No:	Date:
		040896	Apr. 8, 1996

### Oil Leaking from new single Acting Hydraulic Cylinders:

There have been numerous cases of the dealers and customers replacing single acting hydraulic cylinders on new machines due to oil leakage out of the vent plug in the cylinder.

In many of these instances, no defect could be found in the cylinders. Further investigation has revealed that he manufacture of our cylinders is leaving oil in the cylinders after their testing. The Oil is left to help protect the interior of the cylinders during storage. When the cylinders are fully actuated, they are forcing this oil out the vent plug, causing what appears to be a leaking cylinder through the vent plug. Even the oil is cleaned off the cylinder after testing there is enough oil still inside the cylinder to bleed out when used.

If you have a New Cylinder that appears to be leaking from the vent plug, The oil should be cleaned off and unit ran for a few days to a week to determine if the Cylinder is leaking, or if it is the oil that was left in the cylinder to protect it. It has been found that in some cases it has taken as much as a week for this to appear that it is not leaking.

If after running and cycling the cylinder during operation and the cylinder continues to leak then the necessary repair should be performed.

Cylinders that are attracting dust around them is not considered to be leaking. This dust collecting around them is considered normal.

All Cylinder that are returned as leaking will be pressure tested for leakage to determine the condition of the Cylinder and its components.

This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

Models: Booms	All New Holland Tractors with Alamo Industrial Mounted	Bulletin No:	Date:
		042996	Apr. 29, 1996

### **Dead Batteries on New tractors:**

There have been several reports recently of dealers receiving machines with dead batteries, some of which could not be satisfactorily recharged. Please see the attached copy of a tag which is coming with the new tractors.

The "small electrical discharge" being mentioned amounts to a constant drain on the battery. If the battery cable (+ Post) is left connected for a long enough time with the tractor inactive, the battery will become sulfated (permanently damaged) and will not accept a charge. Sulfated batteries are not warranted through the battery manufacturer.

At present, the only alternative to removing the battery cable would to be install a battery disconnect switch in the negative cable, which would allow the battery to be easily isolated. These switches are available at most major tractor dealers. USE CAUTION when installing any thing on battery cables, disconnect the positive cable before installing disconnect switch and make sure after switch is installed that it is "OFF" before reconnecting Positive Cable.

ATTENTION ! BATTERY CARE
Your new Tractor has electronics which cause a very small electrical demand on the battery. If the tractor in not in use for an extended period, disconnect battery to avoid damage by excessive discharge
Recharge Battery if voltage is less than 12.3V (S.G. less than 1.140) Lataa Akku uudelleen, jos jannite on alle 12.3V (ominaispaino alle 1.140) Ricaricare la batteria se il voltaggio e inferiore a 12.3V (G.S. inferiore a 1.140) Batteria recarregavel se a voltagem for inferior a 12.3V (Gravidade especifca inferior a 1.140) Laddt de batterijweer op wanneer de voltage lager is dan 12.3V (S.G. Minder dan 1.140) Recharger la batterie si la tension est inferieure a 12.3V (Densite inferieure a 1.140) Batterie wieder aufladen. wenn spanning unter 12.3V (Spez gewicht unter 1.1.40 IST) Recarcar la bateria si el voltage es inferior a 12.3V (S.G. inferior a 1.140) Batteriet ma lades opp hvis spenningen er mindre enn 12.3V (Spesifikk vekt under 1.1.40) Part No. 8200181

This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



Models: All Mowers Using P/N 02960565	Bulletin No:	<b>Date:</b>
Motor Control valve	100296-1	Oct. 2, 1996

Logic Valve Seal Kit:

### Subject:

New Seal Kit used on Logic Valve Assembly P/N 02971267. In early 1996, changes were made to the Logic Valve used in the P/N 02960565 motor control valve used on a number of machines. The change were made to improve the service life of the seals. The seal grooves on the logic valve were widened and the backup rings were added to both O-Ring Seals. The Seal Kits were also changed to include the Back-Up Rings. the three O-Rings remained the same.

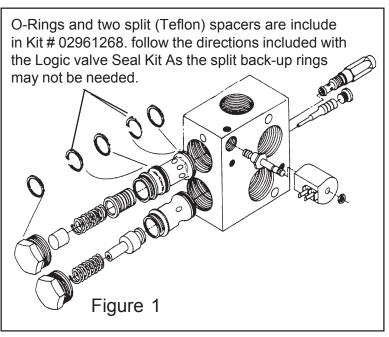
When using the Seal Kits to reseal the former Valves, the seal grooves are not wide enough to accept the O-Rings and the Back-up Rings. The Back-Up Rings will have to be discared and not used.

### Parts Needed:

Qty 1 of P/N 02961268 Seal Kit

### Procedure:

O-Rings and two split (Teflon) spacers are include in Kit # 02961268 follow the directions included with the Logic valve Seal Kit As the split back-up rings may not be needed.



This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



Models: AllBoom Axe Mowers, A-Boom, Versa Boom and Slopemower	Bulletin No: 071897	Date:
	(Old # 0711897A)	Jul. 18, 1997

### Remote Control Cable Update:

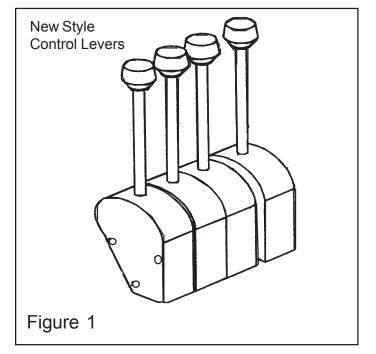
Early in October of 1996, the control valve remote operating system design for the mowers listed above was updated to facilitate much easier operation of the mower control functions. The retrofit Kit is available which can be used to update the former remote control system to the new design on those machines utilizing the old system. The old style controller is identified as a rectangular metal box utilizing a cable linkage system

### Parts Needed:

Qty 1 of P/N 02971493 Retrofit Kit (contains the controller and all necessary mounting pieces). Qty 4 of P/N ------ Valve Cables (The Length of the cables must be specified when ordering). (Cable Length 48", 60", 72" or 102" Specify which is needed)

### Procedure:

All the required Procedure instructions should be included in a instruction sheet that should be included in with the retrofit kit when ordered. Instruction Sheet P/N 02971261.



# This document does not authorize the repair or replacement of parts under warranty MISCELLANEOUS MODELS



Models:	McConnel Boom Units	Bulletin No: 080897	<b>Date:</b> Aug. 8, 1997
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### Specifications For McConnel Boom Flail Units:

The McConnel boom hydraulic systems were designed using metric standards. The metric units have been converted to gallons and pounds per square inch so they are easier for our customers and dealers to use.

The flow and pressure figures provided can be used when comparing specifications and for answering questions from prospective customers. To avoid rotor shaft vibration, special attention must be paid to the note below concerning tractor engine speed and the resulting Power-Take-Off shaft revolutions per minute (RPM).

### Flail Rotor Speed:

Note the recommended rotor speeds is a maximum of 2500 RPM which is obtained at 490 RPM PTO Speed on all products except the PA-91. The PA-91 rotor is balanced to operate at 2475 RPM which is obtained at 450 RPM PTO speed.

Operating the McConnel Flail Units at 540 RPM PTO speeds will drive the rotors at 2755 RPM on all units except the PA-91 which will turn 2970 Rotor RPM at 540 PTO RPM. If the McConnel units are operated at this high PTO RPM harmful vibration may develope at high rotor speeds and damage unit. When operating the McConnel units it is required that you compute what engine speed is needed to operate the PTO at the require speed of 490 PTO Speed except for the PA-91 which requires 450 PTO RPM.

### Horse Power Calculations:

To calculate the horsepower required to operate any hydraulic system GPM \*\*\* times PSI times 0.00058, \*\*\* This calculation requires US Gallons not imperial Gallons.

MISCELLANEOUS MODELS

Continued Next Page

Specifications For McConnel Boom Flail Units							
Feature	Min. Trac. HP / Wgt	Hyd. Fluid Cap. Req. US gal.	Wgt. with Hyd. Ibs.	Pump GPM F/ Rotor Oil	Pump GPM F/ Cyls	Relief Valve Setting F/ Rotor	
PA-91	25 HP	24 gal.	1366#	15.5 gpm	3 gpm	3045 PSI	
PA-92	60 HP	31 gal.	1951#	27 gpm	5.2 gpm	2750 PSI	
PA-93	60 HP	31 gal.	1951#	27 gpm	5.2 gpm	2750 PSI	
PA-94	60 HP	31 gal.	1951#	27 gpm	5.2 gpm	2750 PSI	
PA-95	65 to 75 HP	31 gal.	2017#	27 gpm	5.2 gpm	2750 PSI	
PA-96	65 to 75 HP	31 gal.	2566#	27 gpm	5.2 gpm	2750 PSI	
PA-97	9000 lbs.	31 gal.	2850#	27 gpm	5.2 gpm	2750 PSI	
PA-2060	65 to 75 HP	31 gal.	3582#	27 gpm	5.2 gpm	2750 PSI	
PA-2070	65 to 75 HP	31 gal.	3681#	27 gpm	5.2 gpm	2750 PSI	
PA-2080	10000 lbs.	31 gal.	3791#	27 gpm	5.2 gpm	2750 PSI	

Contact: Alamo Industrial Technical Services Department 1502 East Walnut Seguin, Texas 78155 Ph; 830-372-2708 Fax; 830-372-9603

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### **MISCELLANEOUS MODELS**



Models:	Models mounted on New Holland TS Series Tractors	Bulletin No:	Date:
		031000	Mar. 10, 2000

### New Holland TS Series Fuel Filter:

New Holland ships TS100 Tractors to Alamo Industrial with a #87801634 fuel filter installed.

New Holland has circulated a service bulletin stating that a longer or taller filter is the replacement part for the fuel filter and the filter should be changed at the recommended time.

Alamo Industrial TS Series mount kit components will interfere with the longer / taller filters.

Please continue using the # 87801634 filter when replacing the fuel filter on the TS Series tractors equipped with the Alamo Industrial products. Alamo Industrial attachments do not stress or "Work" the tractor engines in a manner that would be considered extreme service. The part # 87801434 fuel filter will provide adequate protection when the engine of a TS Series New Holland tractor is powering Alamo Industrial Side or Boom Mounted products.

This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

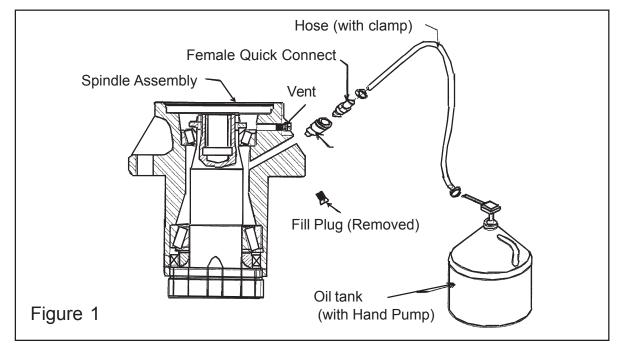
<b>Models:</b> All Machete, A-Boom, Versa, Rear Mount, Slopemower, Brahma, EKII, Hydro 60, Hydro 72 & Hydro 15	Bulletin No:	Date:
All Hydraulic powered Rotary Mower heads that utilize the # 02960553B, 02960553C and 02968859A Spindle Assemblies.	080300	Aug. 3, 2000

### Spindle Oil Filler Kit P/N 02976501:

A Spindle oil filler kit has been developed to provide accurate an easy fill of oil into the spindles used on all hydraulic powered mowers. The Oil filler Kit P/N 02976501 is available through Alamo Industrial Parts dept.

Installation requires the replacement of the fill plug with the female quick connect fitting. To fill the spindle. attach the hose and oil bottle to the spindle by utilizing the quick connect fittings. remove the vent plug and pump in the oil untill oil is seen at the vent plug opening. reinstall the vent plug and remove the bottle at the quick connect fitting. The female quick disconnect is designed to be left on the spindle in place of the fill plug.

Utilization of this spindle fill kit should decrease maintance time and failures by providing accurate oil fill of the spindle assembly.



This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

Models:	All Alamo Industrial Products are affected.	Bulletin No:	Date:
		040901	Apr. 9, 2001

### Change in the availability of rebuilt components:

This bulletin has been published to inform you of a change in the availability of rebuilt parts. In the past, rebuilt components such as pumps and motors were available for use as spare parts. That will no longer be the case. The major factor in this decision was the lack of cores that are returned from the customer.

Since Alamo Industrial will no longer offer rebuilt parts an effort will be made to offer customers a complete parts listing of all components that are needed as service repairs. The most common service parts are pumps and motors will now be available for order through Alamo Industrial Customer Service Department. Likewise, a parts breakdown with Alamo Industrial part numbers will be provided. The Eaton Pumps and Motors, Danfoss Control Valves will be the first components available with such a parts breakdown.

It is Our intention to provide a better and more reliable service parts system. This transition will better suit customer, and provide more timely and efficient parts delivery.

This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



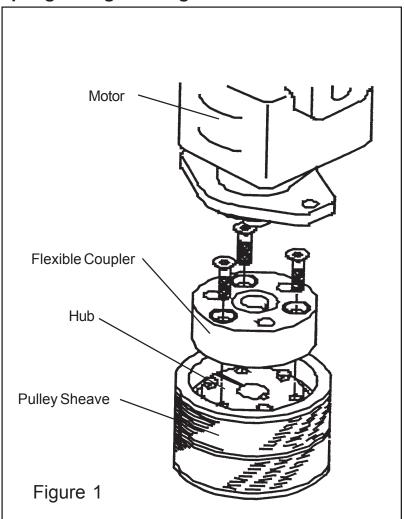
## **TECHNICAL INFORMATION BULLETIN No. 041101**

Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

<b>Models:</b> All Alamo Industrial Products using the Buzz Bar Head are affected.	Bulletin No:	Date:
	041101	Apr. 11, 2001

#### **Buzz Bar Drive Coupling Design change:**

There has been a design change to the drive coupler assembly for the Buzz bar Cutting Head. If a flexible coupler, Alamo Industrial P/N 02974245 (for Machete) or P/ N 02974246 (for A-Boom & Slopemower), are ordered they will be a different design. The new flexible coupler design will be molded rubber with metal inserts. The new molded rubber version will directly replace the machined design using the same part number. An installation drawing, that describes the assembly in detail, will be shipped if a new coupler is ordered. this bulletin is to inform you of the design change (see Figure 1) If there are further questions please contact Alamo Industrial's Technical Service Department.



This document does not authorize the repair or replacement of parts under warranty

#### MISCELLANEOUS MODELS



## **TECHNICAL INFORMATION BULLETIN No. 101802**

Alamo Industrial ™ Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

<b>Models:</b> All EKII, Hydro 60, Hydro 72, All Machete, All A-Boom, All Versa, All Rear Mount, All Slopemower, All Brahma & All Hydro 15	Bulletin No:	Date:
All Hydraulic powered Rotary Mower heads that utilize the # 02960553B, 02960553C and 02968859A Spindle Assemblies.	101802	Oct. 18, 2002

#### Spindle Bearing Lubrication Update:

Normal maintenance of the # 02960553B, 02960553C and 02968859A Spindle assemblies has included the addition of NLGI 000 grease to provide proper lubrication of the bearing assemblies. Due to repeated customer requests, this lubrication requirement has been changed to NLGI EP, # 2 Lithium Wheel Bearing Grease.

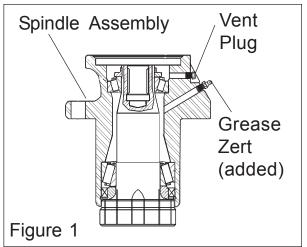
Implementation of this grease will allow improved lubrication especially to the top bearing as well as substantial improvement of the daily maintenance requirements.

#### Conversion:

- 1. Remove the existing fill plug from the spindle housing and discard it. (this is the lower plug in figure 1)
- 2. Install a standard 1/4" fine thread grease zert into the fill plug port as shown in figure 1.
- 3. Remove the Vent plug (Top plug in figure 1)
- Fill the housing with NLGI EP, # 2 Lithium Grease or equivalent from a standard grease gun until the new grease is seen in the vent plug hole. (Approximately 2 standard grease tubes will be required when Spindle Assembly is empty).
- 5. Clean off any excess or over flow grease and reinstall vent plug.
- 6. Maintain proper lubrication with 5 pumps of grease into the spindle every 8 hours of use. This will keep the Spindle bearings lubricated.
- 7. Always clean excess Grease away from Spindle after greasing Spindle.

#### This document does not authorize the repair or replacement of parts under warranty

### MISCELLANEOUS MODELS



## NOTES

## MISCELLANEOUS MODELS



Models:	All Non-Cab Models with Expanded Metal Side Screens	Bulletin No:	Date:
Retro F	Fit Kit P/N 02980005	102103	Oct. 21, 2003

### Lexan® (Polycarbonate) Shield Upgrade Kit P/N 02980005: (field Install)

Alamo Industrial has designed a Lexan® (Polycarbonate) Shield that will install on the expanded metal screen currently used on the Non-Cab models. This is a retro fit kit that is designed to be customer installed over the expanded metal screen. The Lexan® Sheets will require trimming and the Holes will have to be drilled in the Lexan® sheets as well as through the existing expanded metal screen frame

#### **Recommended Tools:**

- Jig Saw or Circular Saw (hand held or table) equipped with plastic cutting blade. 1.
- Electric Hand Drill, preferably a variable Speed Drill. 2.
- 3. 3/8" and 1/4" High Speed Steel Drill Bit. (Drill bit should be sharp and in good condition).
- Measuring Tape or other measuring device. 4.
- Hand Wrenches for tightening Bolts, do not use air tools to tighten bolts. 5.
- Straight edge and marker that will write on Lexan. 6.

#### Lexan Shield Kit Components: (Retro-Fit Kit P/N 02980005 includes:

Part No.	Qty	Description	Part No.	Qty	Description
02980003	1	Lexan Sheet, Upper	02970004	1	Lexan Sheet, Lower
0461600	20	Bolt, Hex Head 1/4"-20	00024100	20	Flatwasher, Std. 1/4"
02980068	20	Fender Washer, 1/4"	32901C	20	Locknut, 1/4"-20
Dratatia	n of I or	con Chaotai			

#### Protection of Lexan Sheets:

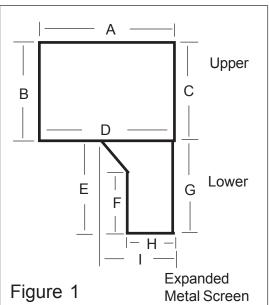
- 1. Do not remove protective sheet (Paper) from the Lexan® Sheet. This will protect it while you are working with it. You can drill through this protective sheet as well as cut through it.
- There are two Lexan® Sheets sent, an upper and a lower. Identify these and mark them to 2. designate front to rear, inside to outside because once you cut to size to match the existing Expanded Metal Screen, they cannot be turned around. Cutting these is permanent. **Installation Procedure:**
- Use the measuring tape to get the measurements around your existing Expanded Metal Screen 3. and write them down, Note there is an Upper and Lower section (See Figure 1).
- Place the Lexan ® Sheets (Upper and Lower Sheets) on a clean work suface and transfer 4. your measurements from step 1 to the the Lexan ® Sheets using a Pen or other marker. RE-CHECK your measurement and when certain they are correct. Cut the sheets out to match your measurements. Lightly sanding the cut edges will smooth them out and round the outer edge slightly helping to protect it. Sheets should look like sheets in Figure 2, note the holes will not be drilled in them yet.

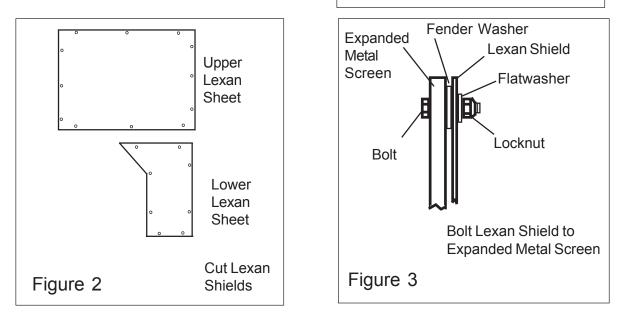
## **MISCELLANEOUS MODELS**

**Continued Next Page** 

#### Information Bulletin 102103 Continued from previous Page

- 5. Securely clamp the cut Lexan sheets onto the expanded metal screen aligning the outer edges, this can be done upper or lower sheet first. Using a 3/8" drill bit drill the mounting holes through the lexan sheet in a pattern as in Figure 2. When drilling the holes in the Lexan Sheet use the drill to mark the metal frame of the expanded metal screen on all the holes. When all the holes are drilled into the lexan sheet and marked into the metal frame, remove the clamps and the lexan sheet.
- 6. Using a 1/4" Bit, drill the holes into the frame of the expanded metal screen with the Lexan removed. Note you drilled 3/8" holes in the Lexan and 1/4" holes in the frame work. This is so that the Lexan will not have a binding fit.
- 7. Install the Bolts as shown in Figure 3. 1 st. bolt through frame, 2 nd. install the fender washer, 3 rd. remove the protective cover sheet from the inner side and install the Lexan sheet, 4 th. install the Flatwasher, 5 th start the Locknuts onto the bolts but do not tighten them.
- 8. Once all the bolts, washers and nut are installed begin to tighten them. DO NOT over tighten these Locknuts and put the Lexan sheet in a bind which will crack it. Tighten the Nuts evenly and only snug them so the Lexan sheet will not move. Do this with the upper and lower Sheet. Then remove the protective cover from the outside of the sheet.





## TECHNICAL INFORMATION BULLETIN No. 102103

## This document does not authorize the repair or replacement of parts under warranty **MISCELLANEOUS MODELS**

## NOTES

### MISCELLANEOUS MODELS

# **SECTION 2**

## SERVICE BULLETINS

## (This Book is divided into two Sections)

## **Section Two - Service Bulletins**

- Service Bulletin No: Service Bulletins are listed by Bulletin Number (Date). Example the oldest Bulletin will be listed first and the most recent bulletin will be listed last. Bulletin No. 021004 = first & second digits are the Year, the third & fourth digits are the day of the month and the fifth & sixth digits are the month, this means the bulletin was written on Apr, 10, 2002. If more than one bulletin was written on that day the a dash with a number will added, example -1, -2 etc.
- 2. **Repairs:** Service Bulletins are intended to authorize only the repairs listed on It to be made under warranty or any other circumstance unless specifically instructed to do so.
- 3. **Parts:** This is the Rate at which compensation will be allowed under warranty for repair parts.
- 4. **Labor:** This is the amount of labor (hours) that are allowed to make this repair under warranty.
- 5. **Parts Disposition:** Service Bulletins list the disposition of any parts that are removed during the repair. If listed removed parts must be held awaiting return to factory if instructed to do so.
- 6. **Termination Date:** Service bulletins show a termination date, this is the date that the Bulletin will be discontinued, Any repairs must be made and all warranty applications filed by the listed date.
- 7. All Service Bulletins printed in this Manual will void any previously printed Bulletin. Any changes in these bulletins are the final version as of the date of this manual.

#### MISCELLANEOUS MODELS



<b>Models:</b> A-Boom - Versa Boom - Versa Mower - Boom Axe Slopemower and Interstater mounted on Ford 5640, 6640 & 7740 mounted prior to jul. 16, 1992 using front pump drivelines.			Bulletin N 922909 (Old # 92-	-	<b>Date:</b> Sep. 29, 1992
Parts: 100 % at Dealer Net	Labor: 1.0 hr. at Dealer registered Shop Rate	Old Parts Dis No Returnable involved			nination Date: 30, 1992

#### Pulley Adapter Mounting Bolts Ford 56, 66 & 7740 Tractors:

#### Subject:

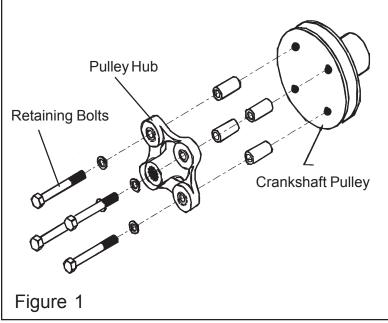
7/16" bolts holding Hub to Tractor Crankshaft Pulley found to need more engagement into pulley (longer bolts required).

#### Service Required:

- 1. Remove the four retaining bolts from Hub where it mounts to Tractor crankshaft Pulley. The old bolts were 3-1/4" long (P/N LH0B128B) the new replacement bolts need to be 3-1/2" long (P/N 02965355 longer bolts).
- 2. Use "locktite on new bolts and install them into the hub and pulley, tighten the bolts to retain hub to crankshaft pulley.
- 3. Run and test for operation.

#### Parts Required:

Part No. Qty Description 02965355 4 Bolts 3-1/2" long



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



## SERVICE BULLETIN No. 930410

Alamo Industrial Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

Slopemower and Inte	<b>Models:</b> A-Boom - Versa Boom - Versa Mower - Boom Axe Slopemower and Interstater mounted on Ford 5640, 6640 & 7740 mounted prior to jul. 16, 1992 using front pump drivelines.				<b>Date:</b> Oct. 4, 1993
Parts: 100 % at Dealer Net	Labor: 1.0 hr. at Dealer registered Shop Rate	Old Parts Dis No Returnable involved			<b>nination Date:</b> 5, 1993

## Pulley Adapter Spacers Ford 56, 66 & 7740 Tractors: Subject:

Spacers used in driveline between Hub and crankshaft pulley change. Spacers and bolts between hub and pulley on ford 5640, 6640 and 7740 tractors need to be longer.

Service Required: (Note the 5640 uses different spacer and bolts.)

- 1. Remove the four retaining bolts from Hub where it mounts to Tractor crankshaft Pulley, remove the 4 spacers P/N 107620. Discard these spacers they will not be used.
- 2. Using the existing 4 bolts P/N 02965355 (3-1/2 long) and lockwasher P/N 00022200, reinstall the hub using the new one piece spacer P/N 02966404. (6640 & 7740 Models Only)

Note: 5640 model tractor use Kit 02965750 instead of parts listed above in step 2, the kit will include

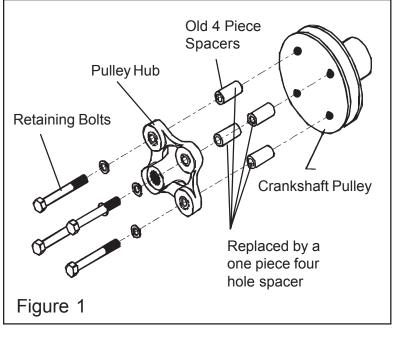
spacer and four new 4" bolts for the 5640 model Tractor. The procedure will be the same but the parts will be different.

#### Parts Required: 6640 & 7740

Part No.	Qty	Description
02965355	4	Bolts 3-1/2" long
02966404	1	Spacer, 4 hole

#### Parts Required: 5640

Part No.	Qty	Description
02965750	1	Spacer Kit



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



Models: Versa	Pro Flail Mounted to a Ford Versa	o Flail Mounted to a Ford Versatile 9030 Tractor			<b>Date:</b> Oct. 5, 1993
Parts: 100 % at Dealer N	et .0 hrs. No Hours allowed	Old Parts Dis No Parts	position:		<b>nination Date:</b> 31, 1993

#### Implement Control Valve Modification:

#### Subject:

Implement control valves used to raise and lower wings needs to be converted to "Float" style valve. This is to allow wings to freely move or float up and down without causing excessive forces on the cylinder mounting lugs on the mainframe. Read all directions completely before beginning any repairs as there are somethings that are do not do listed in instructions.

#### Service Required:

The Detent valve needs to have a detent spacer removed from valve section in order to have "float". Standard Valve Section needs to be removed and replaced with a float valve section P/N 002495 (Ford P/N 9703919). See following steps for installation.

#### **Tractor Preparation:**

- 1. Locate the tractor on a level floor where an overhead crane can be used to raise the cab. Put 3/4" pipe plug in filler neck of hydraulic reservoir and tighten to prevent air entry into reservoir. Install the articulation lock pin. Put forward / reverse lever in neutral and set parking brake.
- 2. Use a suitable floor jack to raise right-hand, cab end wheel assembly off the floor. Remove wheel assembly and set it aside. Note: reference to right hand left hand side is viewed from operators seat facing forward. Place a 2500 lb. or more capacity jack stand under the right hand side to support tractor where wheel was removed.
- 3. Support the right hand side of the cab with a hoist attached to a chain which is hooked into the hole in the cab frame for the heater hose. Remove the nuts and lockwashers from the right hand cab supports and take the weight off the bolts with the hoist. Note: If a hoist is not available, the cab can be raised with a jack. Be careful when using a jack as it can slip. Always keep adding blocking near the center of the cab.
- 4. Remove the cab support bolts and continue to raising the cab as high as possible taking care not to stretch any hoses, cables or wires. The wire to the fuel sender must be removed and the sender and straightened out and reinstalled before cab can be fully raised. Wire to potentiometer on the end of the rockshaft must be removed or plastic tie cut to allow sufficient slack.

The hose to the right hand steering cylinder mut be removed from the metal loop under the cab floor. Do not replace it in the metal loop, but connect it directly to the cylinder.

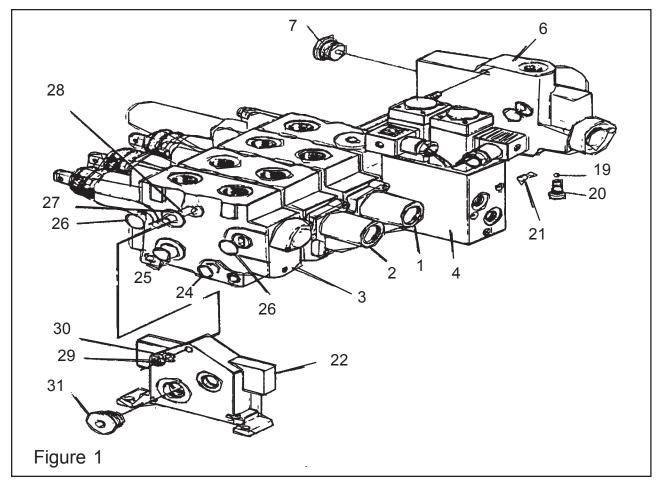
### MISCELLANEOUS MODELS

#### **Continued Next Page**

### Service Bulletin 930510 Continued from previous Page

#### Removal of Standard Valve: (see Figure 1)

- 1. Remove the spool control link of the standard valve section (item 3) at the control shaft arm by removing the cotter pin and the drilled in on the end of the valve section.
- 2. Remove the hoses that are connected to the valve end plate and the hoses connected to the standard valve section.
- **3.** Remove the valve assembly support bolt on right hand side. Remove nuts and lockwashers from the three valve tie bolts (item 29 & 30).
- 4. Remove the Valve end section (item 22). Note there are shims between each section on the same side as the O-Rings, one shim per tie bolt, do not lose them (See Figure 1).
- 5. Remove the flow control adjustment cable from the standard valve section and remove the section. Turn the spool until the setscrew is accessible.
- 6. Install O-Rings in the new Float Valve Section using a small amount of white lithium grease to hold them in place. Transfer the spool control link from the Standard Valve Section to the new Float Valve Section



#### **Reinstall Modified Valve:**

- 1. Reinstall float valve section in place of standard valve section in reverse of removal making certain there is one shim on each tie bolt between each section. Make certain all O-Rings are in place, keep close watch on O-Rings to make ceratin none fall out during assembly.
- 2. Install flow control cable before installing end section. Flow control spool should be set at the minimum setting all the way clockwise. The flow control knob in cab should also be turned to the minimum setting. Securely tighten the setscrew.

## MISCELLANEOUS MODELS

#### Continued Next Page

### Service Bulletin 930510 Continued from previous Page

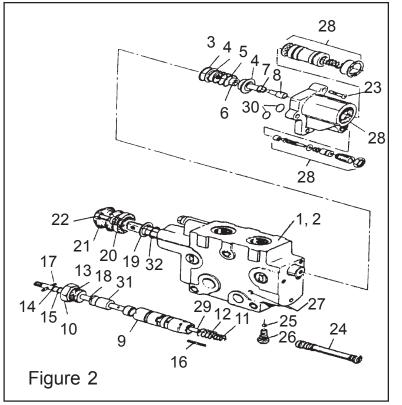
- **3.** Replace the end section and snug up nuts on the tie bolts.
- 4. Install the Valve assembly support bolt. Tighten until snug without any looseness, Do not over tighten or the valve may distort.
- **5.** Tighten the tie bolts nuts to 20 22 ft. lbs, tighten them in alternating pattern so that they valve is compressed evenly.
- 6. Reinstall all hoses to the correct ports, install spool control link to the shaft arm.

#### Removal of Detent Spacer:

- 1. Remove detent assembly (item 28) from detent valve section.
- 2. Remove detent spacer (item 6) as shown in figure 2 and reinstall detent assembly. This will allow the detent valve to be positioned in float.

#### Tractor Start-up:

- 1. Be sure tractor is securely blocked, transmission is in neutral / park. The forward / reverse lever is in neutral.
- 2. Remove the pipe plug from the reservoir and install the cap. Check the oil level. Replace any lost oil with Mercon or Dextron II.
- 3. Start the tractor and run at idle. Activate the valve handles to pressurize valve sections and hoses. Stop the engine and check for any leaks.
- 4. Lower the cab. Watch for any wires, fuel lines or any other comp-



onents that might be crushed as cab is being lowered. Make sure the brake shaft does not cause fuel line to be pinched.

- 5. Install cab support bolts, spacers and large flat washers, tighten the bolts. Tighten the Valve assembly support bolt until it is snug.
- 6. Recheck and replace any lost oil with Mercon or Dextron II or as specified for tractor by the tractor manufacturer.
- 7. Reinstall the right wheel assembly ant tighten the retaining bolts 180 to 200 ft lbs of torque.
- 8. Wash and clean any spilled oil off of tractor around valve or cab. Do not operate a tractor the has oil spilled on it as it could be a fire hazard..

## SERVICE BULLETIN No. 930510

Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

### MISCELLANEOUS MODELS



Models: Versa Pro S/N VP21-01003, 01005, 01006, 01007, 01008 & 01009			Bulletin No: 942801 (Old # 940005)		<b>Date:</b> Jan. 28, 1994
Parts: 100 % at Dealer Net	Labor: 1.0 hr. at Dealer registered Shop Rate	Old Parts Dis Scrap removed		1	<b>nination Date:</b> 30, 1994

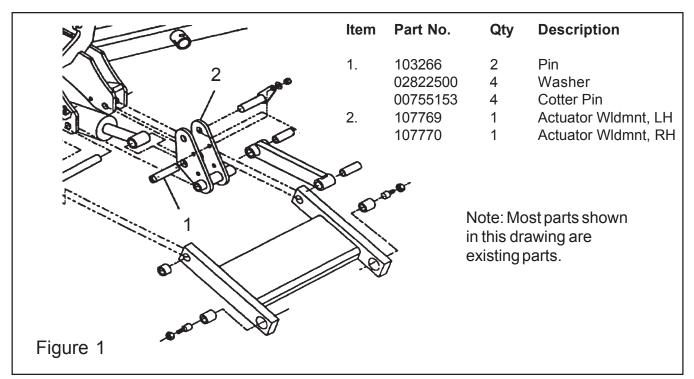
#### Mechanical Float Kit:

#### Subject:

Mechanical Float Components Kit will be shipped no charge to the dealers with the above listed serial number units. All outbound freight will be shipped prepaid by Alamo. This is to eliminate the requirement for the tractor to have remote valves with float.

#### Service Required:

Replace actuators with weldments (item 8) and pins with components that were sent. Pins and Hardware will have to be changed to complete this repair.



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



Models: A-Boo				<b>No:</b> 0007)	<b>Date:</b> Jun. 1, 1994
Parts: 100 % at Dealer N	et 0.7 hr. at Dealer registered Shop Rate	Old Parts Dis No Returnable involved			<b>nination Date:</b> 1, 1994

## Swing Cylinder Bushing & Pin Replacement:

Subject:

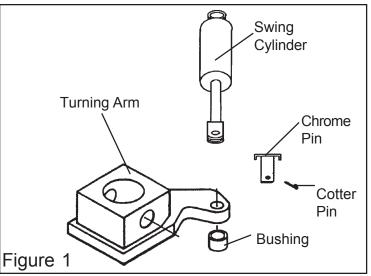
Premature wear of teflon coated swing cylinder bushing. To replace the swing cylinder bushing on unit built prior to June 1994 if premature wear in swing cylinder bushing occurs.

#### Service Required:

- 1. With Boom Arm extended outward and Head resting on the ground, Tractor secured in a safe manner. You will not have to remove any hydraulic lines to perform this repair.
- 2. Remove Swing cylinder pin, this is the old pin that connects it to the turning arm. The swing cylinder will pull away from turning arm far enough that only this end needs be disconnected.
- 3. Using a suitable driver remove the old bushing from the turning arm.
- 4. Check the condition of the bore in the turning arm, if damaged repair or replace turning arm.
- 5. Install new bushing (P/N 02965548) using a suitable driver. Slide cylinder back and align the holes, insert the new chrome pin (P/N 02966767), install the cotter pin (P/N 00606000).
- 6. Run and test operation of unit.

#### **Parts Required:**

Part No.	Qty	Description
02966767	1	Chrome Pin
02965548	1	Bushing
00606000	1	Cotter Pin



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



Models: Versa Pro Flail		Bulletin No: 941710 (Old # 940019)		<b>Date:</b> Oct. 17, 1994	
Parts: 100 % at Dealer Net	Labor: 0.0 hr. None	Old Parts Disposition: No Returnable Parts involved			n <b>ination Date:</b> 30, 1994

#### Leveling Center Mower:

#### Subject:

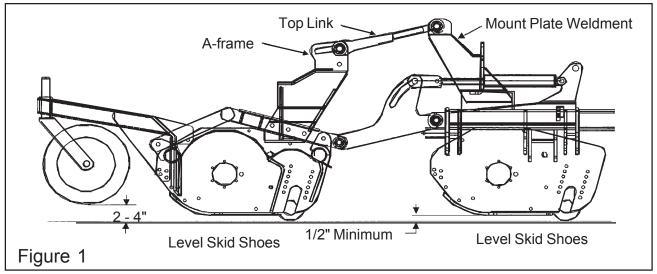
Leveling front center mower to prevent damage to the linkage between the main frame and the center mower due to improper leveling of the center unit.

#### Service Required:

Level front mower by adjusting top link, being sure shoes are level with ground. When leveled, check the front caster wheels. If the unit was leveled properly, the wheels should be two to four inches above the ground.

#### Important:

If the front mower is not leveled as described above, the amount of vertical movement available for the front mower, when higher terrain is encountered is severely restricted resulting in binding and bending or breakage of the a-frame and mount plate weldments. The front mower must be re-levelled each time the cutting height is changed.



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



## SERVICE BULLETIN No. 953011

Alamo Industrial Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

Models: 17', 20' & 23' A-Boom - Versa Boom - Rear Mounted Boom - 15' & 17' Minute Man Boom			Bulletin N 953011 (Old # 9500		<b>Date:</b> Nov. 30, 1995
Parts: 100 % at Dealer Net	Labor: 0.7 hr. at Dealer registered Shop Rate	Old Parts Dis Scrap removed		1	<b>nination Date:</b> 1, 1996

## Dipper Cylinder Pin Replacement:

Subject:

Replace Old Pin P/N 02966936 dipper cylinder pin with New Pin P/N 02969980, P/N 02030300 Nut and P/N 00749946 Washer. **Mowers equiped with 02966936 dipper pin (old pin can be identified by absence of a nut on the** 

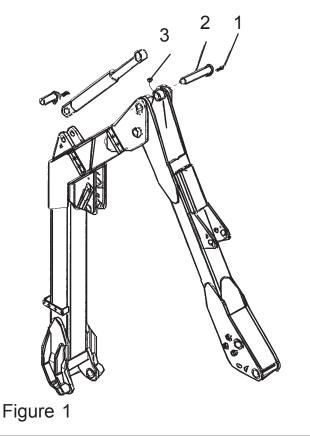
end of the pin).

#### Service Required:

- 1. Rest Head on the floor (or ground) with dipper cylinder accessible. Make certain all hydraulic pressure is relieved from Hoses and cylinder system.
- 2. Secure and support dipper with hoist to prevent movement when pin to dipper cylinder is removed.
- 3. Replace the original pin P/N 02966936 with the new pin P/N 02969980, nut P/N 02030300 and washer P/N 00749946.
- 4 Tighten Nut and retaining bolt. Remove Hoist from dipper.
- 5. Run and test for operation

#### Parts Required:

Part No.	Qty	Description
02969980 02020300	1 1	Dipper Cyl. Pin Nut
00749946	1	Washer



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



Models: Boom Axe 50" S/N 01112 & up, 60" S/N 01167 & up - Versa Mower, 60" S/N 04438 & up, 72" S/N 04401 & up - Slope Mower head S/N 01020 & up - Machete rotary head S/n 01039 & up.			Bulletin No: 970108 (Old # 970009A)		<b>Date:</b> Aug. 1, 1997
Parts: 100 % at Dealer Net	Labor: 1.0 hrs. at Dealer registered Shop Rate	Old Parts Disp Scrap Old Parts			<b>hination Date:</b> 31, 1997

#### Blade Bolt Inspection / Recall:

#### Subject:

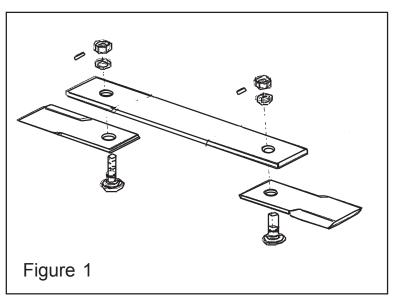
The Blade Bolt Nut Retaining Roll Pin Bore may be oversized and could allow the roll pin to become loose in the bore. The loose roll pin could therfore allow the blade bolt Nut to loose torque.

#### Service Required:

- 1. Visually inspect and check the fit of the roll pin. If it is loose or has come loose replace the Blade Bolt, Blade Bolt Nut and Roll Pin on the above listed serial numbered units.
- 2. Torque the Blade Bolt to 600 ft. lbs. before installing the new Roll Pin.

#### **Parts Required:**

Qty	Description
2	Blade Bolt
2	Nut
2	Roll Pin
	2 2



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



Models: New Holland tractors T7740 & T6640 (S/N Range listed below) New Holland Tractors with Alamo Industrial Units mounted on them (only S/N and model tractors listed below)			Bulletin No 992704 (Old # 9900	-	<b>Date:</b> Apr. 27, 1999
Parts: 100 % at Dealer Net	Labor: 0 hr. (see New Holland Service Bulletin 399)	Old Parts Disp (see New Hollar Bulletin 399)			<b>iination Date:</b> 30, 1999

## New Holland T7740 & T6640 A/C Drier Campaign: Subject:

In order to increase customer satisfaction, New Holland is providing a new Air conditioner Receiver Drier Kit for the S/N units detailed in new Holland Service Campaign 399. The specifics to this bulletin are provided by the New Holland Bulletin, The purpose of this bulletin is only to inform you of the work that needs to be done per New Holland Bulletin and not to authorize any work on the behalf of Alamo Industrial or any of their affiliated companies. If in Question you should consult your New Holland Dealer for details of repairs.

#### Units Serial Numbers: (Model T 7740)

084228B	084349B	084350B	084352B	084359B	084476B	084549B	084550B	084570B	084571B
084599B	084627B	084629B	084632B	084633B	084635B	084636B	084647B	084648B	084652B
084661B	084800B	084850B	084964B	084966B	084967B	085607B	086462B	086470B	086471B
086472B	086503B	086504B	086505B	086589B	086648B	086649B			
(Model T6640)									
084230B	084351B	084411B	084412B	084526B	084529B	084816B	084818B	084832B	084833B
084834B	084847B	084849B	084963B	084965B	086484B	086485B	086486B	086487B	086488B

#### Service Required:

See New Holland Service Campaign 399 for Service details.

#### Parts Required:

See New Holland Service Campaign 399 for Parts requirements

#### **Special Note:**

This Service Bulletin does not authorize any repairs on behalf of Alamo Industrial, its strictly to inform you of New Holland Service Campaign 399.

Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

#### MISCELLANEOUS MODELS



Models: All New Holland TS Tractors w/ Cabs & S/N less than 115012B (date code 8L18) plus All New Holland TS Tractors with or without Cab & S/N less than 110026B (date code 8j09)			Bulletin N 991911 (Old # 9900	-	<b>Date:</b> Nov. 19, 1999
Parts: 100 % at Dealer Net	Labor: 0 hr. (see New Holland Service Bulletin 409)	Old Parts Dis (see New Hollar Bulletin 409)			<b>nination Date:</b> 30, 2000

#### New Holland TS Tractor Inspection Campaign:

#### Subject:

In order to increase customer satisfaction, New Holland is requesting inspection of some tractors (See S/N's listed below) detailed in new Holland Service Campaign 409. The specifics to this bulletin are provided by the New Holland Bulletin, The purpose of this bulletin is only to inform you of the work that needs to be done per New Holland Bulletin and not to authorize any work on the behalf of Alamo Industrial or any of their affiliated companies. If in Question you should consult your New Holland Dealer for details of repairs.

#### **Units Serial Numbers:**

All New Holland TS Tractors w/ Cabs & S/N less than 115012B (date code 8L18) plus All New Holland TS Tractors with or without Cab & S/N less than 110026B (date code 8j09)

#### Service Required:

See New Holland Service Campaign 409 for Service details.

#### Parts Required:

See New Holland Service Campaign 409 for Parts requirements

#### **Special Note:**

This Service Bulletin does not authorize any repairs on behalf of Alamo Industrial, its strictly to inform you of New Holland Service Campaign 409.

Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

### MISCELLANEOUS MODELS



## SERVICE BULLETIN No. 030702

Alamo Industrial Technical Services Department 1502 East Walnut Seguin, Texas 78155 830-372-2708

Models: Rotary Heads using Blade Bolt No. 02782900 with Date Code on Bolt of 11-02 & 02782900 Blade Bolts in Parts Stock with the 11-02 date code.			Bulletin No 030702 (Old #1020	<b>Date:</b> Feb. 7, 2003
Parts: 100 % at Dealer Net	Labor: Will be evaluated on a case by case basis.	Old Parts Disp Hold All Parts fo under Warranty	r Return	mination Date: 15, 2003

## Blade Bolt Inspection:

#### Subject:

Quality inspections revealed the potential for cracking of the Blade Bolt. Cracks are the result of manufacturing procedures and will be present on the bolts prior to installation on the mower. This is pertaining to a Date code which is stamped on the threaded end of the bolt, Date Code 11-02.

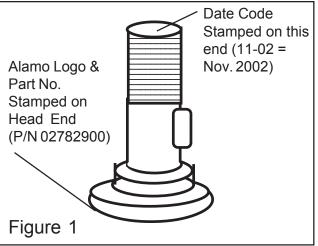
#### Service Required:

- 1. Inspect all Bolts in Parts stock and those on the effected mowers by checking the dated code on the Blade Bolt.
- 2. If Blade Bolts do not have the 11-02 date code no service will be required.
- 3. If the Date code 11-02 is there check the Bolt for any cracks in them, If the bolts are installed on the mower they will have to be removed to check.
- 4. If they check OK reinstall them and torque them to 600 ft. lbs. and reinstall roll pins.
- 5. If they have cracks replace them with new ones, install the new bolts and torque to 600 ft. lbs. Reinstall roll pin.

#### Parts Required:

Part No.	Qty	Description
02782900	a/r	Blade Bolt

Note: Always check Date Code and Part Number of blade bolt before performing any repairs as described in this Service Bulletin as not all Blade will have the same date code. Only Blade bolts with 11-02 date code will be considered for warranty consideration.



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## MISCELLANEOUS MODELS



Models: A-Boom Rotary Heads, HY15, HY60, MR60 Machete Rotary Heads , Rear Mount Rotary Heads, Versa Rotary Heads, BA60 Heads			Bulletin N 050504	0:	<b>Date:</b> May. 5, 2004
Parts: 100 % at Dealer Net	Labor: 1 hr. at Dealer registered Shop Rate	Old Parts Disp Hold All Parts fo tion under Warr Policy	r disposi-		mination Date: . 5, 2004

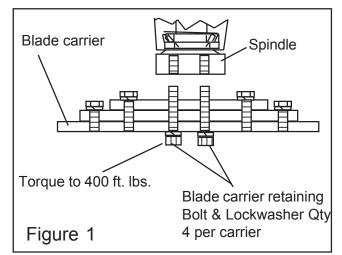
#### Blade Carrier Retaining Bolts:

Subject: Due to the Possibility of Bolts that may not meet Alamo Industrial Standard being used in the production process all bolts that meet the Serial Number list below should be changed. This will apply to bolts that were used at factory during assembly process, This WILL NOT include Bolts that were used as replacement parts. If you have a model with the following serial numbers replace the bolts and Lockwashers. Because there are more than one length of Bolt involved it will be required to use the appropriate Parts Manual to determine the Bolt and Washer Number that applies to your model. Service Required:

- Remove the Four Allen Head Bolts in the center of the Blade Carrier one bolt and Lockwasher 1. at a time. DO NOT remove all four bolts at one time and DO NOT INSTALL bilts that are longer or shorter than bolts that were removed.
- Replace one Bolt and Lockwasher, torque it to 400 ft. lbs. then move on to the next bolt. 2.
- Continued this until all four bolts have been replaced. 3.

#### Parts Required:

Part No.		Qty	Description		
See Manual		4	Allen Head Bo		olt
SeeManu	lal	4	Lockwashers		5
A-Boom	S/N	06045	to	06071	
B/A	S/N	02534	to	02552	
HY15	S/N	02416	to	02418	
HY60	S/N	01211	to	01211	
Machete	S/N	01360	to	01364	&
	S/N	02017	to	02036	
MR60	S/N	02035	to	02035	
RM	S/N	02405	to	02405	
Versa	S/N	05175	to	05178	&
	S/N	06336	to	06394	



Warranty Compensation will be provided following proper filing of warranty claim in accordance with the Alamo Industrial Warranty Policy. Claim allowance may vary in accordance with laws governing a specific region. Any Warranty associated with this service bulletin must be within authorized dates.

## **MISCELLANEOUS MODELS**

## NOTES

## MISCELLANEOUS MODELS



MISCELLANEOUS MODELS Technical Information Bulletin and Service Bulletin Manual

> Manual P/N 0298 (05/04)