

© Miller Loaders www.millerloader.com email: sales@millerloader.com Install Center/Shipping/Receiving: 1242 Arizona Ave Larchwood, IA 51241 (800) 570-8205 (712) 477-2795 FAX (712) 477-2500

Jan 2011

### PREFACE

This manual describes the installation, operation and maintenance of the Miller M30 farm loader. Please read and understand this manual in its entirety before performing installation, operation, or maintenance procedures to ensure the satisfactory performance and durability of the loader. Read and follow all safety and precautionary notes included in this text. Any questions related to this product should be directed to Miller Loader Customer Service atl-800-570-8205 (712- 477-2795).

### **CONTENTS**

Safety Statements	2
General Precautions	2
Installing Mount Kit onto the tractor	3
Mounting the Loader onto the tractor	4-5
Dismounting the Loader from the tractor	6-7
Parts Listing	8-16
Maintenance	17
Specifications	18
Warranty	19
Return Policy	20

## SAFETY STATEMENTS



This statement is used where serious injury or death will result if the instructions are not followed properly.

This statement is used where serious injury or death could result if the instructions are not followed properly.

This statement is used where minor injury could result if the instructions are not followed properly.

This statement is used where equipment or property damage could result if the instructions are not followed properly.

### **GENERAL PRECAUTIONS**

### **OREAD MANUAL PRIOR TO INSTALL or OPERATION**

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read all manuals related to this equipment thoroughly before beginning installation, operation, or maintenance.

### $\diamond$ AVOID ESCAPING FLUID that is under PRESSURE

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes which eject fluids under high pressure.

### **O PROTECT AGAINST FLYING DEBRIS**

When driving connection pins, always guard against injury from flying pieces of metal or debris. <u>WEAR GOGGLES OR SAFTEY GLASSES</u>.

### **O SUPPORT RAISED EQUIPMENT**

Do not work under raised loader booms, buckets or grapples without supporting them. Lower booms, buckets and grapples onto blocks. When mounting and dismounting the loader, do not move the stand legs from their store position to park position (or vice versa) without the bucket resting on the ground.

### $\diamond$ DO NOT MODIFY LOADER

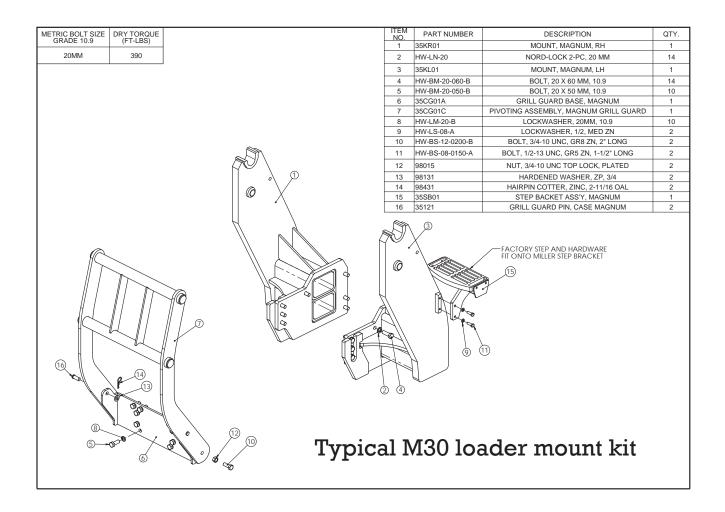
Do not modify the loader in any way without written authorization and instructions from Miller Loader Customer Service at 1-800-570-8205 (712-477-2795). Modifications may weaken the integrity of the loader and may impair the function, safety, usable life, and performance of the loader.

# INSTALLING MOUNT KIT ONTO THE TRACTOR

# <u> DANGER</u>

### THE LOADER MOUNTS ARE APPROXIMATELY 500 POUNDS EACH. INSTALLA-TION SHOULD BE DONE WITH A OVERHEAD CRANE OR HOIST THAT IS RATED TO HANDLE THIS MUCH WEIGHT.

A mounting kit includes a right side mount and a left side mount. Other items (depending on the tractor model) such as a grill guard and step relocation brackets may also be included. The image below shows a typical M30 loader mount kit. The most important aspect of attaching the mounts is proper tightening of the mount bolts. Nearly all large tractor mounts utilize 20mm metric bolts, grade 10.9. With dry threads, this bolt size should be torqued to 390 ft-lbs. Any mating surface between the mounts and the tractor should have the paint removed also.



# **MOUNTING THE LOADER ONTO THE TRACTOR**

**STEP 1** (See Figure 1) Slowly drive into the parked loader.

**STEP 2** (See Figure 2) Connect the loader hydraulics.

**STEP 3** (See Figures 3a, 3b)

Using the bucket tilt cylinders, slowly roll the bucket forward to lower the shafts towards and into the saddles on the mounts. You may also need to move the tractor slightly to help line things up.



# **MOUNTING THE LOADER ONTO THE TRACTOR**

### **STEP 4** (See Figure 4)

Once the large shafts are seated in the mount saddles, use the loader lift cylinders to rotate the legs of the loader so that the holes line up as shown.

### **STEP 5** (See Figure 5)

Install the lock pins - one in each mount. Secure the lock pins with a lynch pin on the back side of the the mount.

### **STEP 6** (See Figure 6)

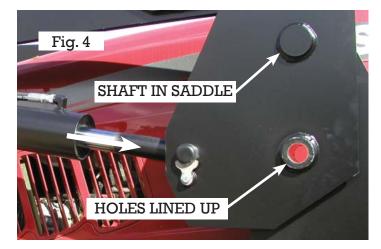
Roll the bucket onto its edge as shown. Shorten the stand legs to their shorter length and secure the lower sliding legs by placing the silver pin in the upper hole.

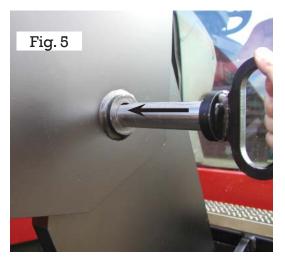
#### **STEP 7** (See Figure 7)

Un-pin the stand legs from the brackets on the bottom side of the cross tube and remove them from the brackets. Lower the bucket to the ground in a flat position.

#### STEP 8 (See Figure 8)

Install the stand legs to their "carry" position and secure using the stand leg handle plate with it's two hairpin cotters as well as the 1" upper pin and it's cotter.







# DISMOUNTING THE LOADER FROM THE TRACTOR

#### **STEP 1** (See Figure 1)

Drive onto flat, solid ground. Lower the bucket to the ground and remove the stand legs from their store position.

#### STEP 2 (See Figure 2)

Position the bucket on its cutting edge as shown and pin the stand legs into their park position brackets on the bottom of the cross-tube (see inset photo).

#### **STEP 3** (See Figure 3)

Extend the stand legs to their longer length and secure the lower sliding legs by placing the silver pin in the lower hole.

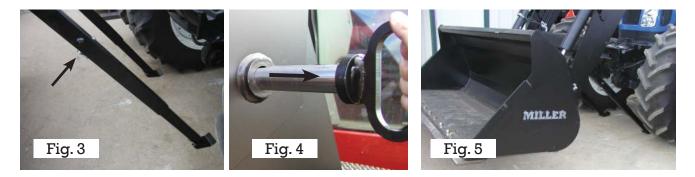
### STEP 4 (See Figure 4)

Remove the lock pins.

#### STEP 5 (See Figure 5)

Flatten the bucket and slowly lower the loader until the parking stands rest on the ground. Please note that the stands are designed to support the weight of the loader only- they are not designed to handle the full downward force that the loader can generate (which is several tons).





# DISMOUNTING THE LOADER FROM THE TRACTOR

### **STEP 6** (See Figure 6)

Tilt the bucket downward until the bucket cutting edge is resting on the ground along with the stand legs.

### **STEP 7** (See Figure 7)

Retract the lift cylinders to rotate the lower part of the upright legs forward.

### STEP 8 (See Figures 8a, 8b)

Using the bucket tilt cylinders, slowly flatten the bucket until the upright legs lift up and out of the mounts. It may be necessary to wiggle the bucket up/down with the tilt cylinders to release the legs from the mounts. Do not have the tractor transmission in Park during this step as in may be helpful to creep forward slightly as the loaders legs are lifting out of the mounts.

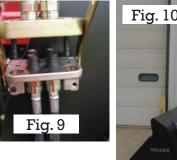
**STEP 9** (See Figure 9) Disconnect the hydraulics.

**STEP 10** (See Figure 10) Slowly back away from the parked loader.

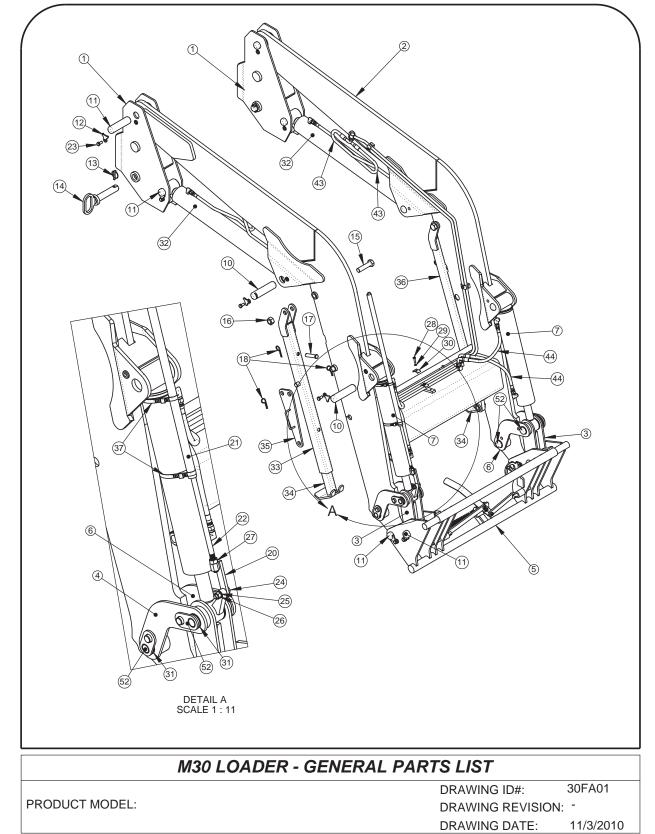










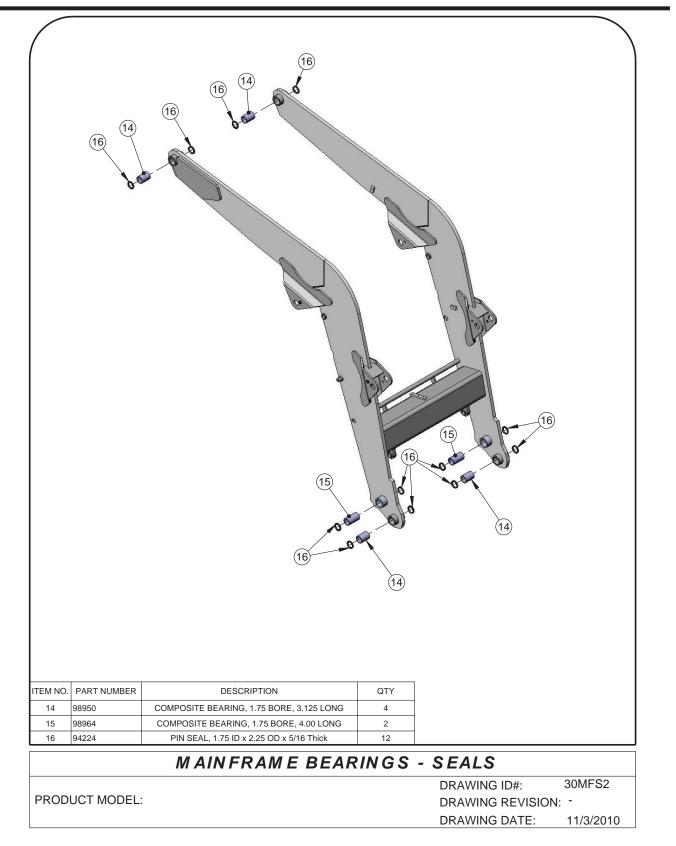


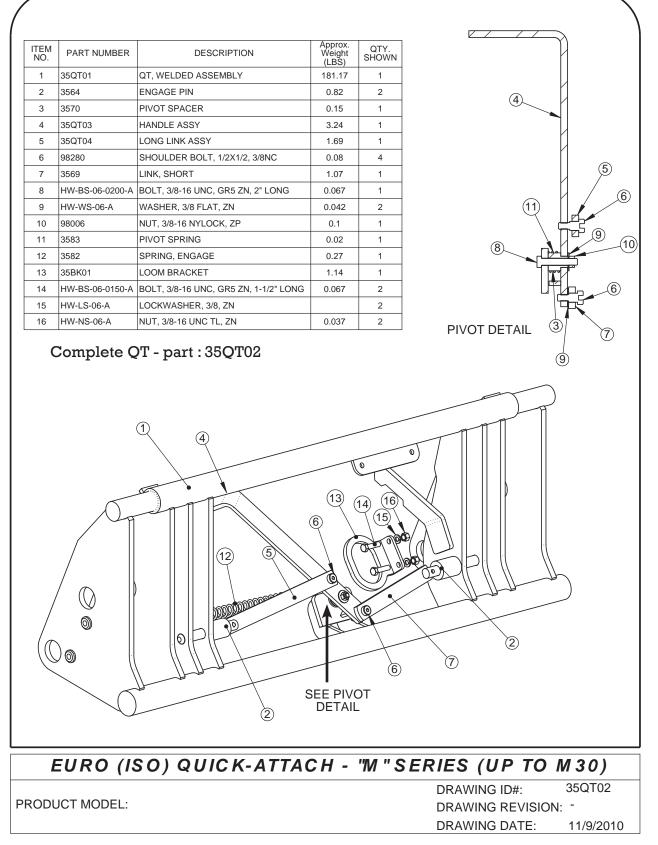
ITEM NO.	IO. PART NUMBER DESCRIPTION		Default/QTY.	
1	35LR01	LEG	2	
2	30MF02	MAINFRAME	1	
3	35AL03	LINKAGE, QT	2	
4	35DL01	DOG LINK WITH PEGS	2	
5	35QT02	QT, COMPLETE ASSEMBLY	1	
6	3504	DOGLINK, NO BUTTONS	2	
7	35CB03	BUCKET CYLINDER	2	
10	3527B	PIN, 1-3/4 X 7-1/4	4	
11	3527A	PIN, 1-3/4 X 6-1/2	8	
12	3529	RETAINER	12	
13	98441	LYNCH PIN, 7/16 X 1-3/4	2	
14	35RP01	RETAINING PIN	2	
15	98216	BOLT, 1-14 UNF, Gr8 ZN, 4" LONG	2	
16	HW-NS-16-E	NUT, 1-14 UNF GR8 TL, ZN	2	
17	PIN1-006	CLEVIS PIN, 3/4 X 3 1/2 ZNC	2	
18	PIN1-017	HAIRPIN COTTER, 2-11/16 LONG	6	
20	35VL01	ADJUSTMENT TAB ASSY	1	
21	35VL02	SLIDE TUBE ASSY	1	
22	LV01-03	LEVEL INDICATOR ROD, 5/8 x 48	1	
23	98217	BOLT,1/2-13 UNC, Gr8 ZN, 1" LONG	12	
24	HW-BS-08-0200-A	BOLT, 1/2-13 UNC, GR5 ZN, 2" LONG	1	
25	HW-LS-08-A	LOCKWASHER, 1/2, MED ZN	1	
26	HW-NS-08-A	NUT, 1/2-13 UNC, ZN	1	
27	HW-NS-10-A	NUT, 5/8-11 UNC GR8, ZN	1	
28	HW-BS-05-0125-A	BOLT, 5/16-18 UNC, GR5 ZN, 1-1/4" LONG	10	
29	HW-LS-05-A	LOCKWASHER, 5/16, ZN	10	
30	PC06X2	PIPE CLAMP	10	
31	98450	EXTERNAL SNAP RING, FSE-0175	8	
32	35CL03	LIFT CYLINDER	2	
33	30SL01	STAND LEG TOP, RH	1	
34	30SL02	BOTTOM TUBE ASSEMBLY	2	
35	30SL03	HANDLE ASSEMBLY	2	
36	30SL04	STAND LEG TOP, LH	1	
37	90703	HOSE CLAMP, WORM GEAR	2	
43	3598	HOSE, LIFT CYLINDER	4	
44	3599	HOSE, TILT CYLINDER	4	

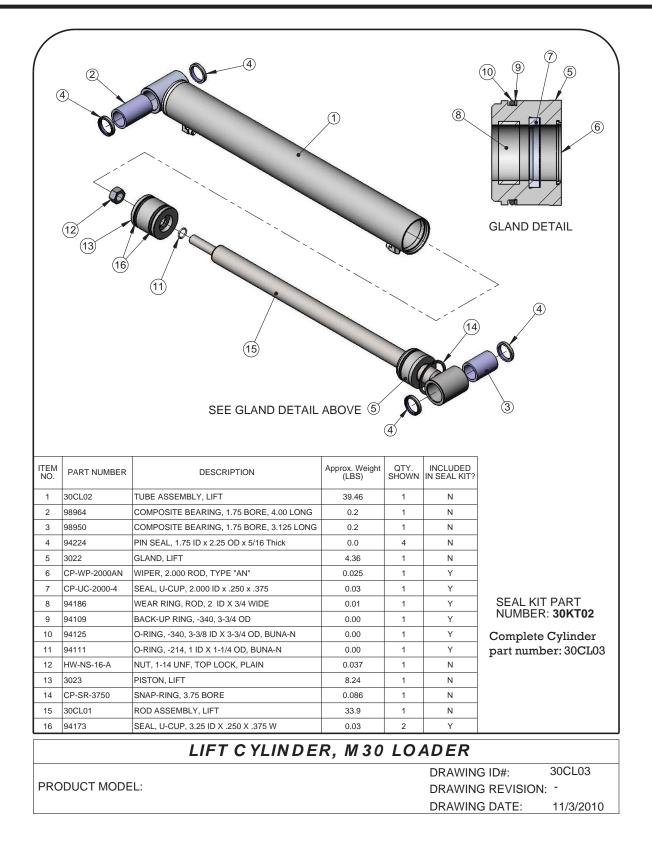
### PARTS INDEX

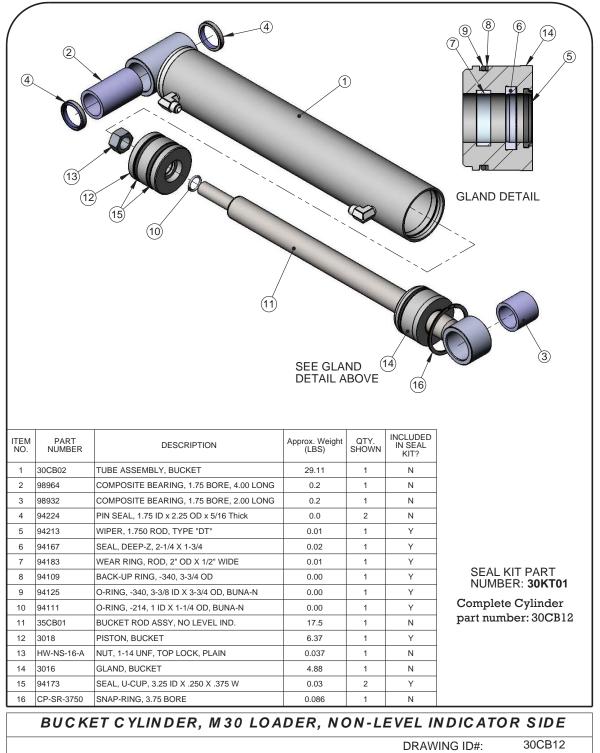
DRAWING ID#: 30FA01 DRAWING REVISION: -DRAWING DATF: 11/3/2010

PRODUCT MODEL:



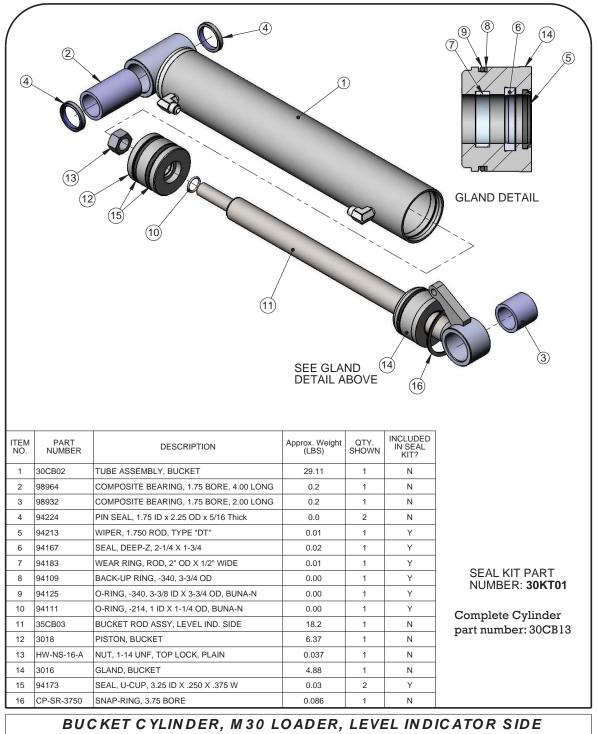






PRODUCT MODEL:

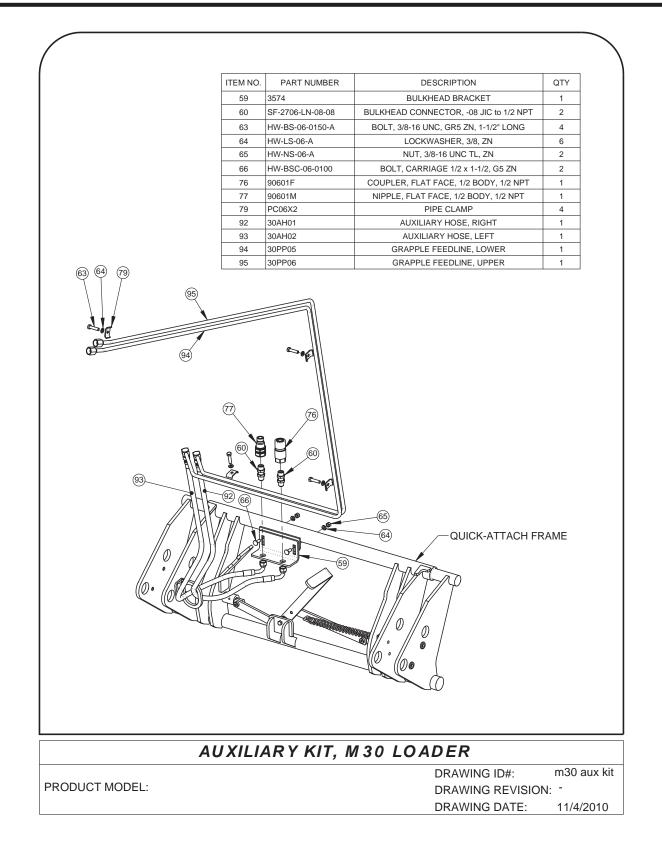
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PRODUCT MODEL:

30CB13 DRAWING ID#: DRAWING REVISION: -DRAWING DATE: 11/3/2010

RCCY	DD END OF E	O CO OCO OCC SHERE		THIS END PINS TO UPPER 1-3/4" HOLE ON QT FRAME
ITEM NO.	PART NUMBER	DESCRIPTION	FREE/QTY.	
1	35AL03	LINKAGE, QT	1	
1	35AL03 98950	LINKAGE, QT COMPOSITE BEARING, 1.75 BORE, 3.125 LONG	1	
1	35AL03	LINKAGE, QT	1	



## MAINTENANCE

# NOTE

All loader pivot points are equipped with zero-maintenance bushings. There are no grease zerks on the main loader, but the pins on the quick-attach that engage the attachment are greaseable. The zero-maintenance pin system on the loader has proven to provide years and years of service in severe duty environments, provided the following precautions are met:

**\lapha IF YOU REMOVE A PIVOT PIN, MAKE SURE IT IS CLEAN AND DRY BE-**FORE YOU REINSTALL IT.

**\&>** IF YOU REMOVE A PIVOT PIN, DO NOT PERFORM ANY GRINDING OR WELDING THAT WOULD ALLOW PARTICLES TO ENTER THE BEARING HOUSING.

 $\diamond$  DO NOT ATTEMPT TO LUBRICATE THE PINS WITH ANYTHING.

**\lapha IF A DUST SEAL (WIPER SEAL) THAT PROTECTS THE BEARING HOUS-ING IS DAMAGED, REPLACE IT.** 

**O DO NOT REPLACE A PIVOT PIN WITH ANYTHING OTHER THAN A** MILLER PIVOT PIN MADE FOR YOUR LOADER. THE EXTREMELY DU-RABLE AND HARD CHROME FINISH OF THEPINS IS IMPORTANT FOR THE LIFE OF THE BUSHINGS AND FOR THE RESISTANCE TO CORRO-SION IN THE PIN HOUSING.

PROCEDURE	INTERVAL	NOTES
Check for hydraulic fluid leaks	Daily	Look at hose connections and hose fittings
Check bolt tightness	Daily	Torque mounting bolts to recommended torque (20mm bolts dry - 390 ft-lb)
Check for build-up around pivot areas	Daily	Remove ice, ground hay or any other debris from all pivot areas.

## **MAINTENANCE PROCEDURES**

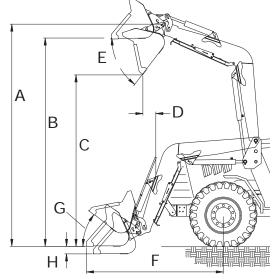
# **M30 loader SPECIFICATIONS**

Specification	Miller M30
A -Max Lift height (in.)	175
B -Max height under level bucket (in)	163
C -Clearance with bucket dumped 45 deg (in)	135
<b>D</b> -Reach at Max Lift and 45 deg dump (in)	24
E -Max dump angle (deg)	54
F -Reach on Ground with 35" deep bucket (in)	100
G -Bucket Rollback angle (deg)	37
H -Dig Depth (in)	6
Max Breakaway Lift Force with load 31.5" (800mm) ahead of Bucket Pivot Pin	7,600
Max Bucket Rollback Force with load 31.5" (800mm) ahead of Bucket Pivot Pin	10,600
Cylinder Bore [all] (in)	3.75
Raise Time @ 30 GPM (sec)	5.4
Optional Self-Leveling	2-way Hyd
Pivot Pin Diameter (in)	1.75
Loader Weight without Bucket or Mounts (Ib)	2,250

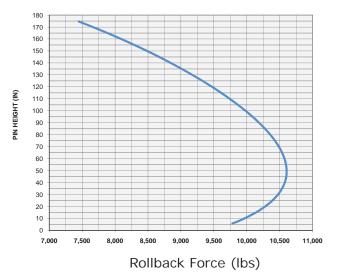
All Specifications <u>and graphs</u> based on ASAE S301.3 Standard using hydraulic pressure of 3000 psi and load 31.5" (800mm) ahead of bucket pivot pin with general purpose bucket in horizontal position.



- Solid Plate Lift Arms
- Very rigid, durable construction
- Zero-Maintenance Pivot Pins
- 4-bar Link for consistent bucket power and high tip/dump angles
- ISO-Euro Quick-attach system
- Advanced Two-Way Hydraulic self-leveling is optional



Bucket TILT Performance



## WARRANTY

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1242 Arizona Ave Larchwood, IA 51241 712-477-2795 800-570-8205 712-477-2500 FAX

ALL PRODUCTS MANUFACTURED BY MILLER LOADERS ARE GUARENTEED TO THE ORIGINAL PURCHASER FOR A PERIOD OF ONE YEAR FROM THE DAY OF PURCHASE AGAINST ANY DEFECTS IN MATERIALS AND WORKMANSHIP OF FARM LOADERS AND ATTACHMENTS THAT ARE USED IN NORMAL FARM OPERATIONS.

ALL PARTS SOLD BUT NOT MANUFACTURED BY MILLER LOADERS THAT INCLUDE BUT ARE NOT LIMITED TO ZINC-PLATED PINS, HOSES, VALVES, QUICK COUPLERS, ETC. ARE COVERED ONLY TO THE EXTENT OF THE MANUFACTURE'S WARRANTY ON THESE ITEMS. MILLER LOADERS DOES NOT WARRANTY THESE ITEMS EX-PRESSLY OR IMPLIEDLY.

DEFACEMENT OF ANY PART BY WELDING OR OTHERWISE ALTERING, OR EXCESSIVE WEAR ON GREASE-ABLE PINS CAUSED BY LACK OF LUBRICATION, NULLIFIES THE WARRANTY ON THE MILLER LOADERS PROD-UCT.

MILLER LOADERS ASSUMES NO RESPONSIBILITY AS TO THE PERFORMANCE OR FAILURE OF A TRACTOR'S HYDRAULIC SYSTEM.

THE HYDRAULIC COMPONENTS OF THE MILLER LOADERS PRODUCTS ARE GUARENTEED UP TO A PRESSURE OF 3000 POUNDS PER SQUARE INCH AT A MAXIMUM FLOW RATE OF 30 GALLONS PER MINUTE.

MILLER LOADERS ASSUMES NO RESPONSIBILITY FOR THE FAILURE OF THE PURCHASER TO SECURE THE LOADER TO THE TRACTOR PROPER, WHICH INCLUDES PROPER BOLT TIGHTENING AND SECURING OF ALL CONNECTION POINTS.

ALL ITEMS MANUFACTURED BY MILLER LOADERS REQUIRING WARRANTY CONSIDERATION MUST BE RE-TURNED TO MILLER LOADERS OR A DESIGNATED REPRESENTATIVE BY THE ORIGINAL PURCHASER. ANY ITEM SO RETURNED BY COMMON CARRIER MUST BE PREPAID FREIGHT.

THE WARRANTIES PROVIDED BY MILLER LOADERS AS REFERRED TO ABOVE SHALL BE THE SOLE AND EX-CLUSIVE WARRANTIES. THERE SHALL BE NO OTHER WARRANTIES EXPRESS OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OR ANY OTHER OBLIGATION ON THE PART OF MILLER LOADERS WITH RESPECT TO PRODUCTS COVERED BY THIS WARRANTY.

IN NO EVENT SHALL THE WARRANTIES OF MILLER LOADERS REQUIRE MORE FROM MILLER LOADERS THAN THE REPAIR OR REPLACEMENT OF ANY PART OR PARTS WHICH ARE FOUND TO BE DEFECTIVE WITHIN THE EFFECTIVE PERIOD OF THE WARRANTY, MILLER LOADERS SHALL HAVE NO LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

## **RETURN POLICY**



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#### **RETURNED GOODS POLICY – PARTS**

Items **SHIPPED** in error

Miller Loaders will accept returned items, with prior approval of Miller Loaders (see RGA paragraph below), within 30 days after shipment without a restocking charge, freight collect.

Items **ORDERED** in error

When parts are incorrectly ordered and returned to Miller Loaders, the customer is responsible for freight costs and a 15% restocking fee.

When parts are purchased without reference to a model or serial number and returned to Miller Loaders, the customer is responsible for freight costs and a 15% restocking fee.

**RGA-** Returned Goods Authorization

All return items must have prior approval of Miller Loaders and be assigned an RGA (Returned Goods Authorization) number by either the Miller Loaders sales or parts department and must be returned within 30 days of request.