

# **SKID STEER HAY ACCUMULATOR GRAPPLE MANUAL**

**Model: HAG-12-24Q**



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## I . Preface

This product is carefully designed and manufactured to provide you with many years of reliable service. Only small maintenance (such as cleaning and lubrication) is required to keep it in top working condition. Be sure to follow all maintenance procedures and safety precautions in this manual, as well as any safety labels on the product.

This manual is designed to help you take your job better and more safely. Please read this manual carefully and familiarize yourself with its contents. Do not allow anyone to operate this device without reading this manual.

The illustrations and data used in this manual are up to date at the time of printing (based on the information available to us), but we reserve the right to redesign and change attachments if necessary without notice. Ensure that only personnel who have been trained, read, and understand this manual are allowed to operate the equipment. If you do not understand this manual or features of this equipment, please contact your local authorized distributor or manufacturer for further assistance.

## II . Security Statement

**Improper installation, operation or maintenance of the equipment can cause serious personal injury or even death.**

This manual and all manuals related to this equipment and prime mover shall be carefully read by operators and maintenance personnel before starting installation, operation or maintenance. Follow all safety instructions in this manual and prime mover manual.

**Read and understand all safety statements. Read the warning labels and safety statements in all manuals before operating or using this device.**

Understand and comply with all regulations, local laws and other professional guidelines. Understand and follow good working practices when assembling, maintaining, repairing, installing, removing or operating the equipment.

**Learn about the performance, size of your device before operation.**

Visually inspect the equipment before starting up. It is strictly prohibited to operate the equipment that does not work normally when all safety devices are in good condition. Check all the hardware to be tightened. Ensure that all locks, pins, and connections are properly installed and secured. Remove and replace any damaged or excessively worn parts. Ensure that all security decals are in place and legible. Keep warning labels clean and replace them if they are worn or difficult to read.

### III. Warning Label

#### Position of Warning Label

Figure 1-1 is the location of the warning label. Warning labels are identified by their part number, The Figure 1-2 is the instruction of the warning labels. Use this information to buy new warning labels for replacing the damaged ones. Before handling attachments, be sure to read all warning labels which include the information you need to understand and the safety and life span of the attachment.

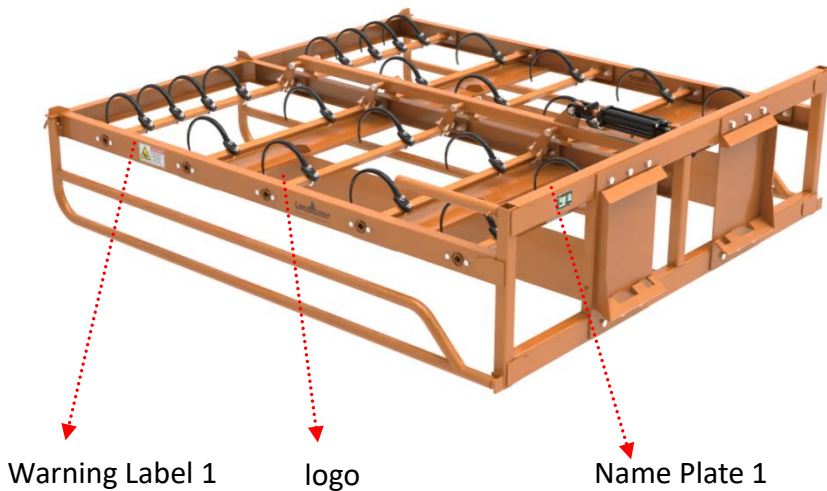
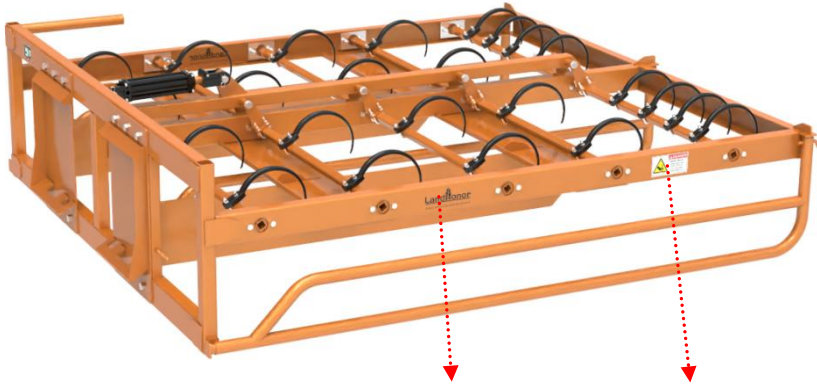


Figure 1-1



logo

Warning Label 1



logo



Warning Label 1



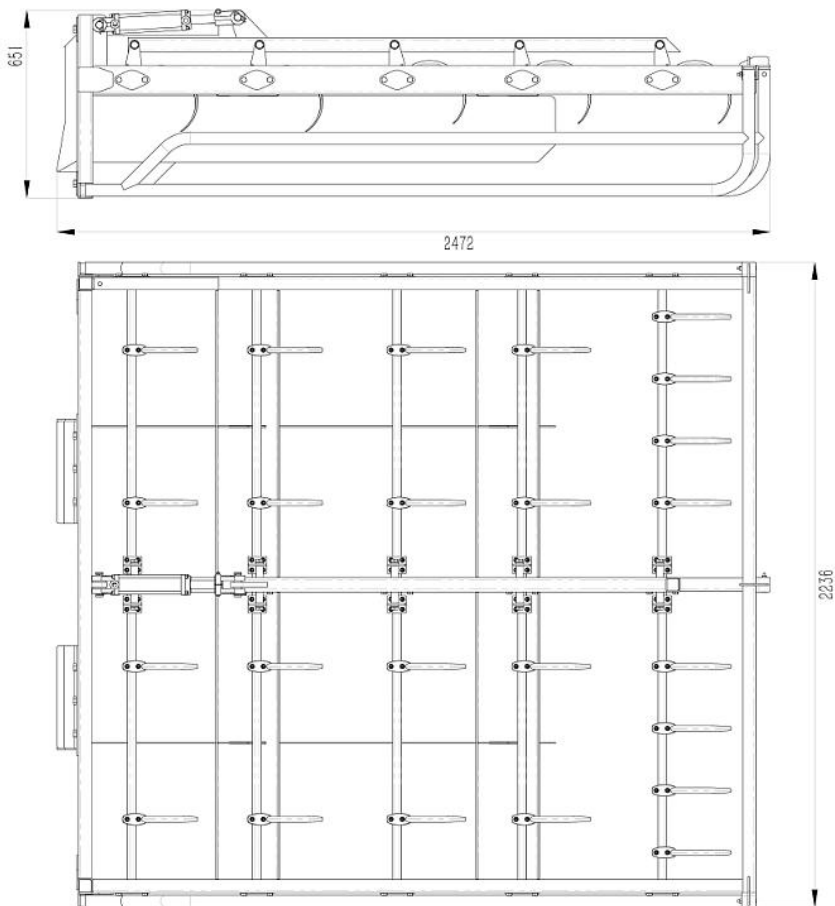
Name Plate 1



Name Plate 1

Figure 1-2

## IV. Technical Parameter



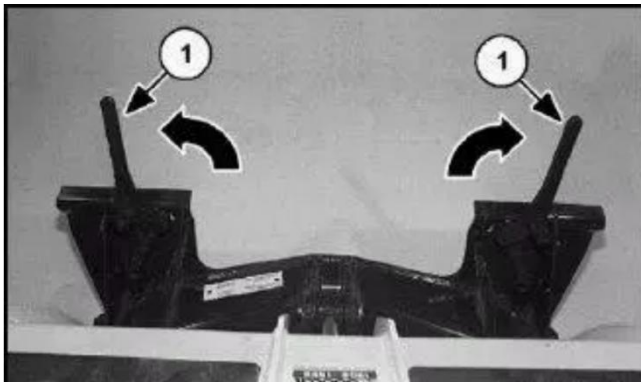
Overall Height	25"
Overall Width	88"
Overall Length	95.4"
Overall weight	730 lbs
Hyd flow required	12-20 Gpm
Hyd Max pressure	3000Psi
Axis rotation angle	77°
Hyd cylinder	2"Bore 6"Stroke 1.125"Rod
Standard hay bale size	14"x18"x39"
Standard hay bale weight	40lbs
Bale Capacity	8-10 Square Bales
Number of Hooks	24

## V. Installation

Please check the quick-change device before installing the Digger Backhoe.

### **Manual-controlled Quick-change Device:**

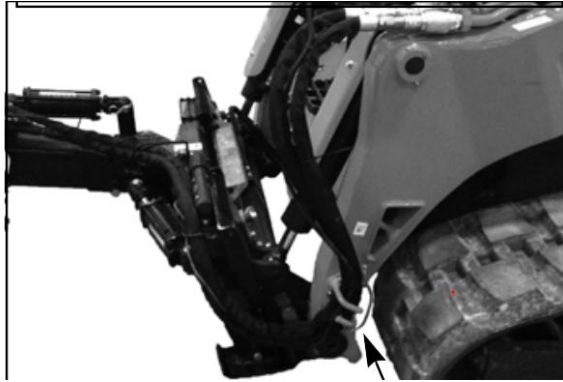
Pull the lever of quick-change device completely open. (as shown below)



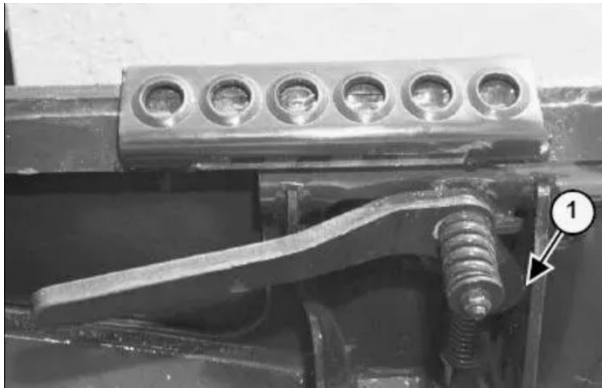
Get into the cab, fasten your seat belt, depress the safety bar, and start the engine. Loosen hand brake.

Tilt the quick-changing unit towards the front. Slowly move the machine forward so that the top edge of the quick-change device is fully integrated into the mounting flange of the snow blade.

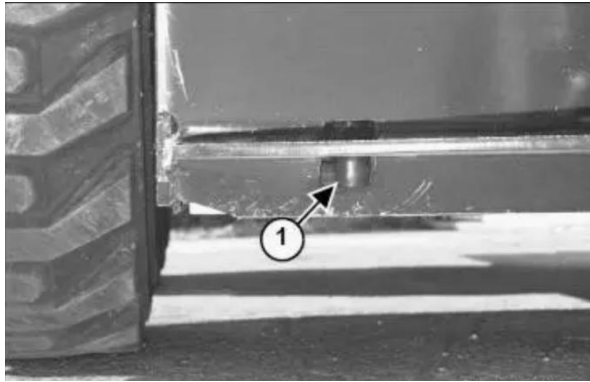
Make sure that the pull rod of the quick-change device does not collide with the Hay Accumulator Grapple. Retract the quick-change device until the Hay Accumulator Grapple is completely off the ground. (as shown below)



Turn off the engine and leave the cab. Depress the pull rod of the quick-change device until the locking pin is fully inserted into the pin hole of the mounting plate and locked. (as shown below)



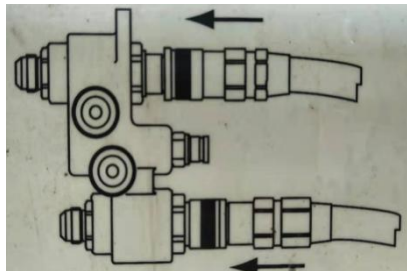
The locking pin of the quick-change device is completely inserted into the pin hole of the mounting plate and locked, so that Hay Accumulator Grapple and the quick-change device are tightly combined. (as shown below)



**Warning:** The locking pin of the quick-change device must be inserted into the pin hole of the attachment, and the pull rod must be fully depressed and locked. Otherwise, Hay Accumulator Grapple may fall off the support of the host, resulting in serious injury, even death.

### Hydraulic Connection

Connect the high pressure hose and oil-return hose to the auxiliary hydraulic plug on the skid steer loader. Push the joint toward the locking position after alignment and insertion. (as shown below)



## VI. Operation

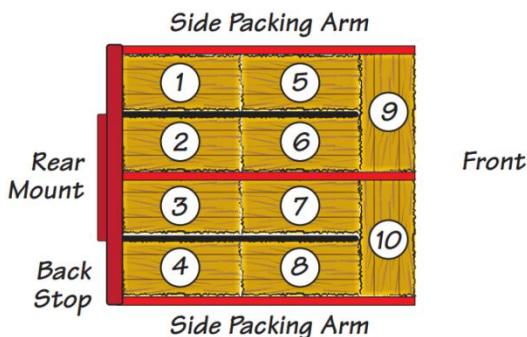
### 1. Going to the field

After starting skid steer, lift the boom so that the Hay Accumulator Grapple is high enough off the ground to avoid contact with any obstacles. Be aware of your surroundings and move in the direction of travel at a safe speed remembering the increased length and swing radius created with the Hay Accumulator Grapple skid loader combination. Before you begin, make sure each of the Hay Accumulator Grapple side packing arms is fully extended to accommodate the width of the bale. There are holes in the frame to fine tune the arms for loading or unloading mode.

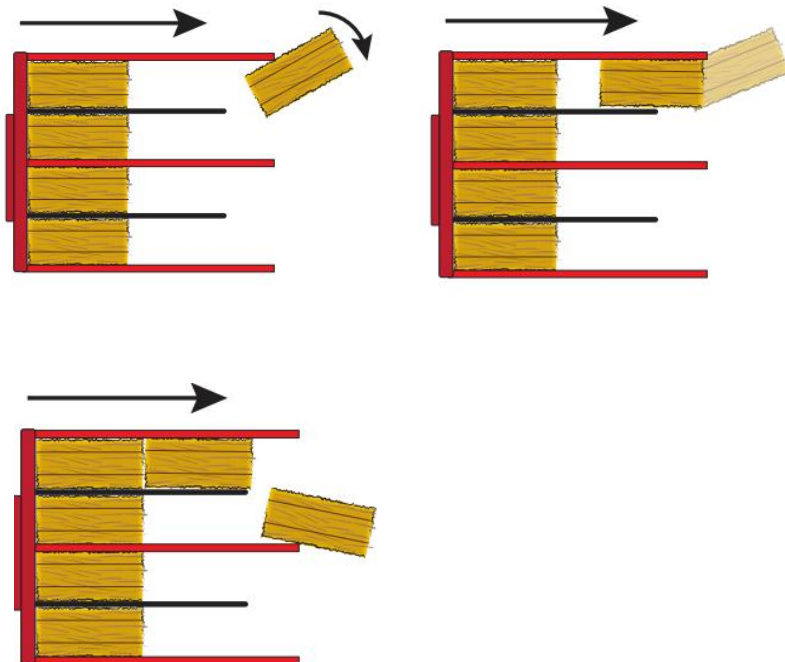
### 2. Gathering Bales

As you approach your first bale, keep in mind that the Hay Accumulator Grapple will act like a gentle hand, pushing the bales from the rear with the headboard or by the bales behind. There should be little if any down pressure on the bales. The Hay Accumulator Grapple should float over them until you are ready to set the hooks, lift the bales, and the Hay Accumulator Grapple. Now roughly line up your first bale with one of the open slots of the

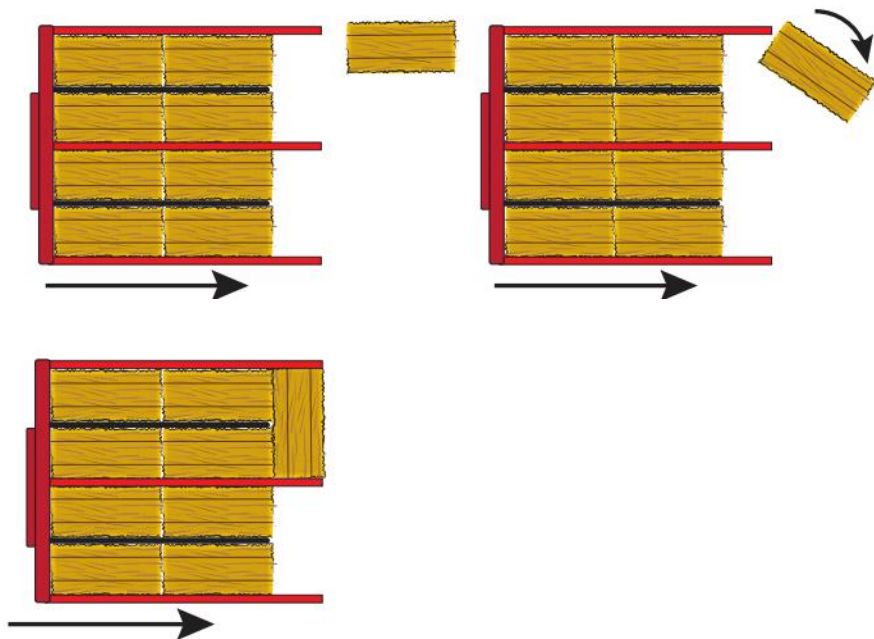
Hay



Accumulator Grapple. Don't worry if you don't get the bale perfectly lined up as long as you can get it in the slot it will align itself and slide in fine.



The last two bales must be loaded perpendicular to the rest. This can most easily be accomplished by touching the bale with the leading vertical pipe of any of the bale packing arm of the center divider bar.



Pushing the round pipe into the divot on the bale where the twine wraps around the bale creates a lever point and the forward motion along with leverage will force the bale into the Hay Accumulator Grapple. This is repeated for bale number 10 and can be done on any one of the three panels. Remember to use the string in the opposite direction you want the bale to turn. If you have a great distance between bales, need to make a turn or avoid an obstacle, simply apply even pressure to the tops of the bales with the Hay Accumulator Grapple and use your secondary hydraulics to engage the hooks so they are secure within the Hay Accumulator Grapple lift and travel as needed. Remember to adjust the position of the Hay Accumulator Grapple when you resume gathering bales.

## VII. Troubleshooting

<b>Problem</b>	<b>Cause</b>	<b>Resolution</b>
Hydraulic oil level goes down during operation	Leak at hoses on attachment	Investigate & repair or contact Dealer
	Leak in skid steer hydraulic system	Investigate & repair or contact Dealer
Grapple Cylinder does not function	Mechanical	Object or other debris is wedged in grapple tine pivot area. Clean.
	Hydraulic flow problem	Quick disconnect couplers not completely connected. Reconnect the couplers. One of the hoses is pinched or damaged. Replace the hose(s) to cylinder. Prime mover problem with its auxiliary circuit. Contact your prime mover's Dealer.
	Hydraulic pressure problem	Contact your prime mover's dealer.

## VIII. Bolt torque specifications

### General torque specification tables

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 8.8 or better when replacing bolts.

### Metric bolt torque specifications

The following torque values are for use with metric Bolt head identification marks as per grade. hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.

Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				Ⓐ Diameter & Thread Pitch (Millimeters)
		MARKING ON HEAD				MARKING ON HEAD				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18 mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0



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