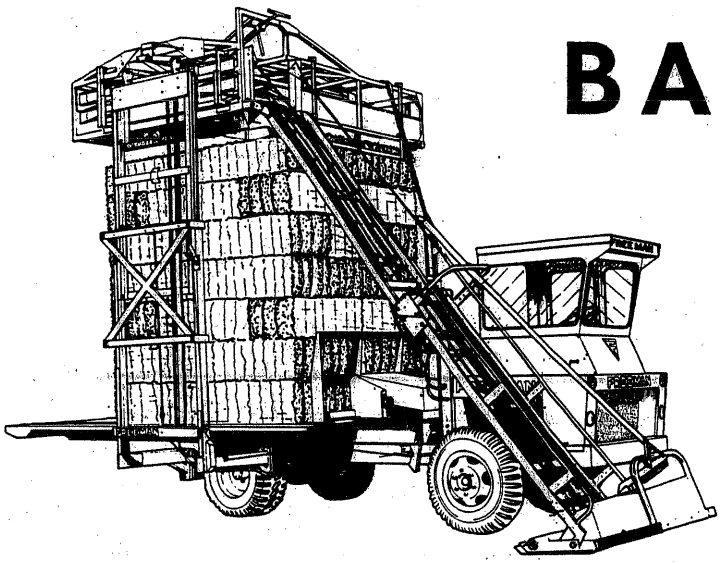
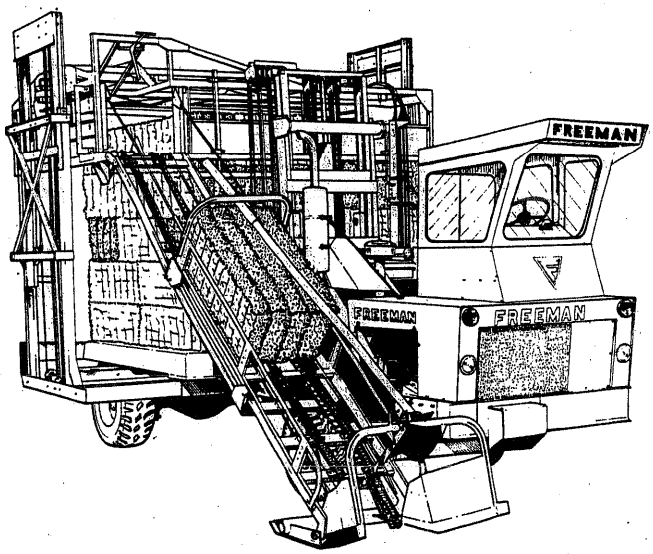
FREEMAN

ROADSIDER AND BALE WAGON





OWNERS MANUAL

manufactured and distributed by

J. A. FREEMAN & SON, INC.

PORTLAND, OREGON

5/1/79

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SAFETY PRECAUTIONS

The majority of Agricultural/Farm Equipment Accidents can be avoided if you, the Operator, will observe a few simple safety precautions. It is said **"THE BEST SAFETY DEVICE IS A CAREFUL OPERATOR."** We request you be that kind of operator and you can be if you will apply the following Safety Precautions and common sense.

Don't clean, lubricate, or make adjustments, on the equipment, while it is in motion.

Don't engage the equipment until you know everyone is clear and have made sure no tools are laying on the machine.

Don't carry passengers or a second person on the equipment.

Don't work around equipment in loose clothing, which might catch in any of the moving parts.

Don't leave the driving seat while the equipment is in operation or any of the moving parts remain in motion.

Do not attempt to service any equipment while the engine is running or the hydraulic system is in operation or under pressure.

Do not attempt to use the Lever Lock Brake System as a full time Emergency Brake or equipment securing device. Block the wheels of the Bale Wagon or Roadsider when you, the operator, are not in the operator's deck.

After Servicing, **DO NOT** place the equipment back into operation until all Safety Shields and Devices have been replaced. Equipment operation without Safety Shields and Safety Devices in place, can place the operator in a Hazardous situation.

DO NOT GO BENEATH ANY EQUIPMENT until all moving parts are stopped, the Drive Engine is stopped and off, the equipment is secured to prevent accidental movement of parts, and wheels are blocked to prevent forward or backward motion.

DO NOT ALLOW ANYONE UNDER OR NEAR LOAD, while it is being raised.

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A NOTE TO THE OWNER

Your purchase of an Automatic Squeeze Lift Bale Wagon or a Roadsider manufactured by J.A. Freeman and Son, Inc. specialist in hay baling and hauling equipment, is a wise investment. Years of thought, research, engineering and improvement both at the factory and under field conditions have gone into the development of your Freeman Bale Wagon and Roadsider. Hundreds of users, from all over the world, are more than pleased with the high volume hay hauling and handling results they have obtained from their Freeman Equipment. We are confident that with proper adjustment, reasonable care, and periodic service your Bale Wagon and Roadsider will provide you the efficient and economical service for which it was designed.

This manual contains information concerning the operation and lubrication of your Bale Wagon or Roadsider. Please read it carefully and require all your equipment operators read it carefully to become familiar with the Freeman Bale Wagon or Roadsider and its operation.

KEEP THIS MANUAL AVAILABLE FOR READY REFERENCE.

We at J.A. Freeman and Son, Inc. and your Freeman Dealer are interested in your obtaining the most from your investment. We will be glad to answer any questions you may have about your Freeman Bale Wagon or Roadsider or any other Freeman Equipment. The way you operate and care for this machine will have much to do with its successful performance.

Rely on your authorized Freeman Dealer to supply you with the highest quality Freeman Service Parts and assist you in developing your needs for further Freeman manufactured equipment.

The Safety Alert Symbol indicates **important** safety messages in this Manual. When you see the symbol, be alert to the possibility of personal injury and carefully read the message which follows.

INSTRUCT ALL OPERATORS ON SAFETY PRECAUTIONS.

MAJOR COMPONENT IDENTIFICATION – SQUEEZE LIFT BALE WAGON:

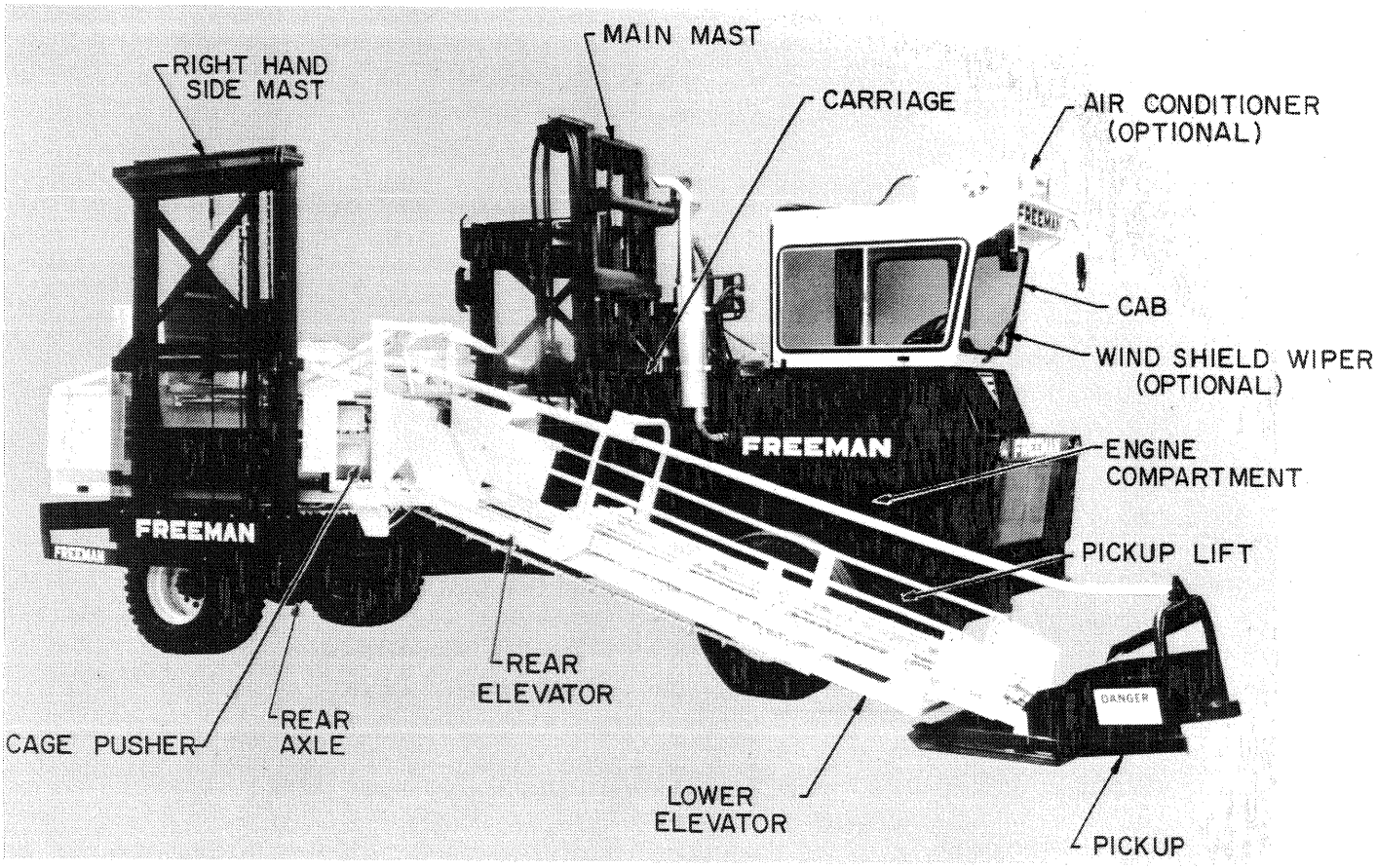


Figure 1.

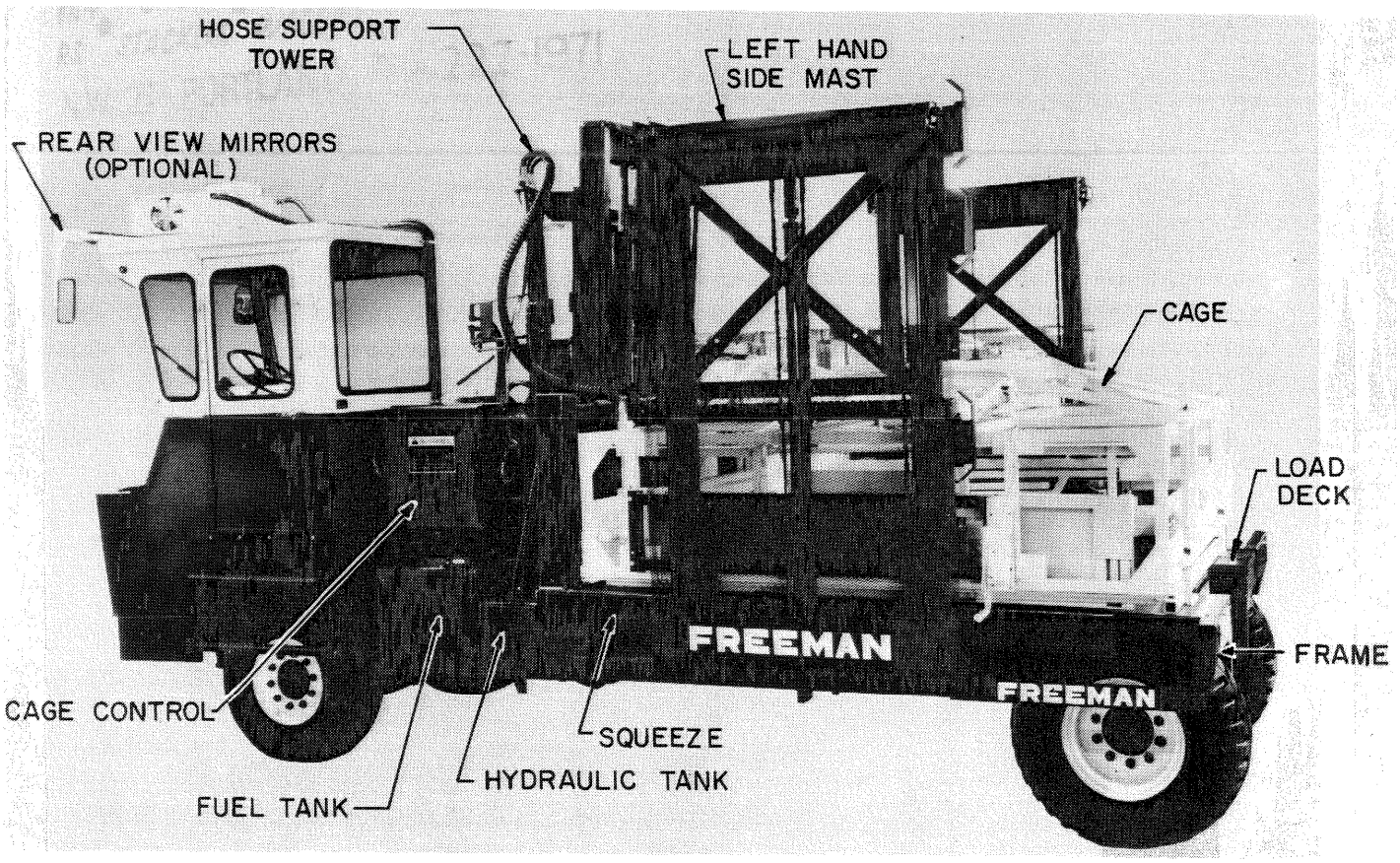


Figure 2.

MAJOR COMPONENT IDENTIFICATION – ROADSIDER BALE WAGON:

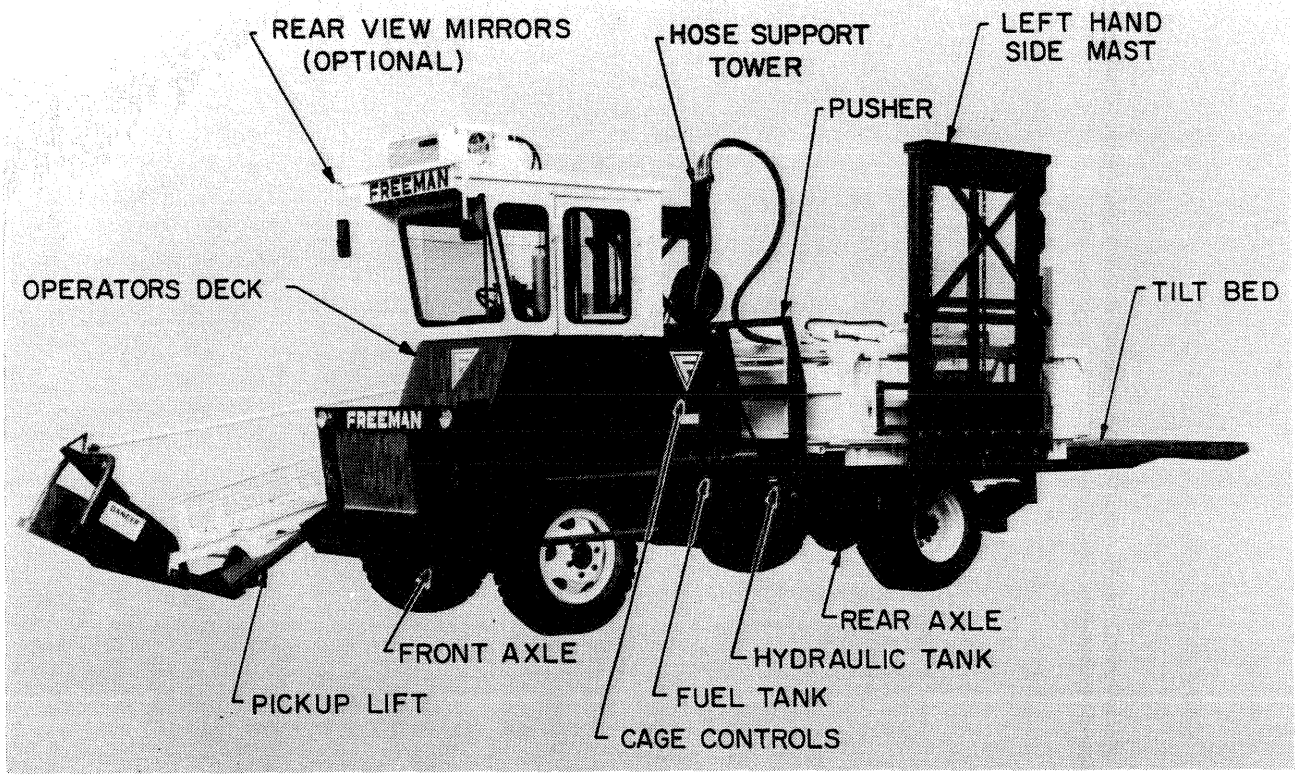


Figure 3.

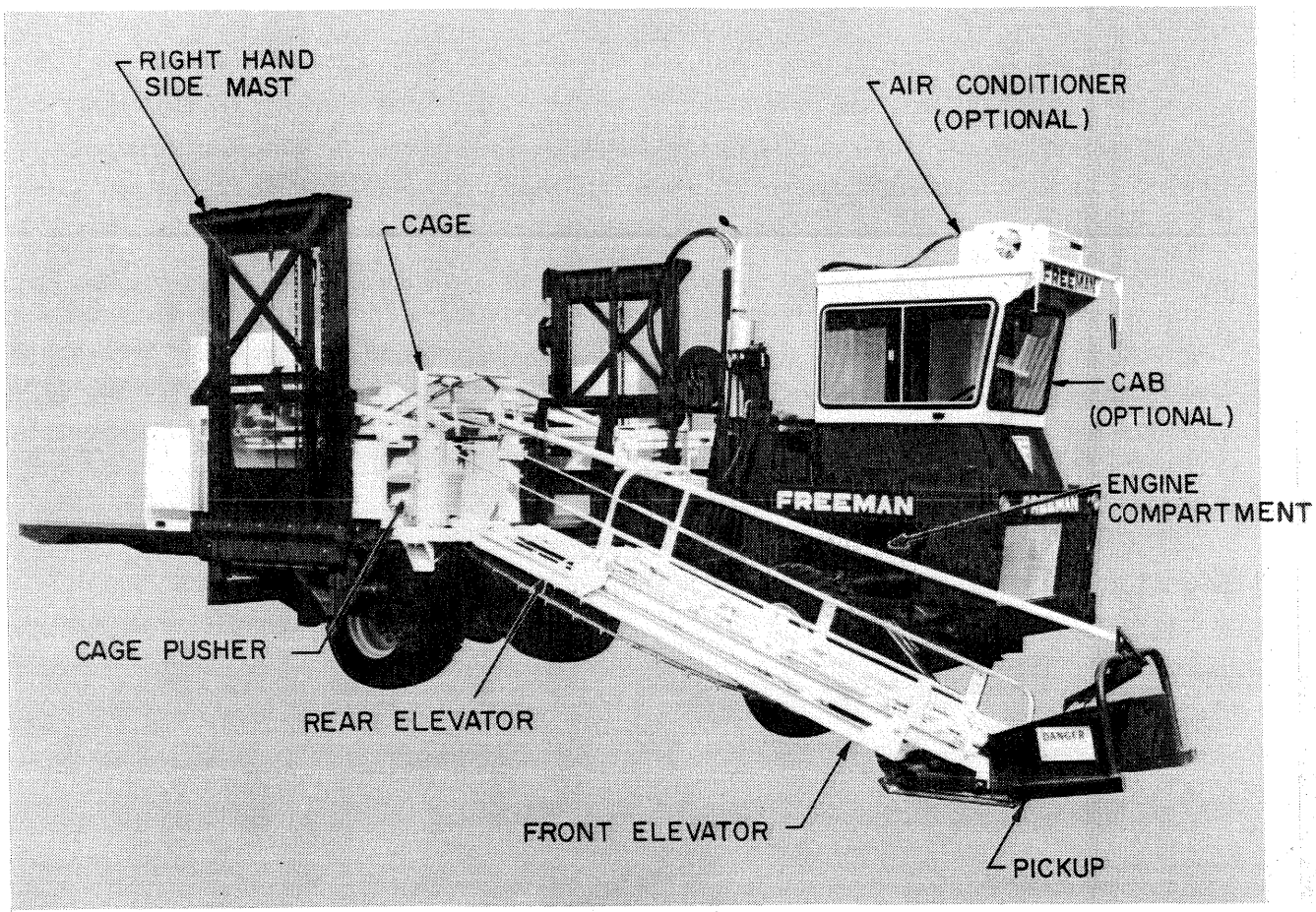


Figure 4.

EQUIPMENT SPECIFICATIONS

	SQUEEZE LIFT BALE WAGON	ROADSIDER BALE WAGON
WEIGHT: (Approximate)	18,500 lbs. (8325 kg)	16,000 lbs. (7200 kg)
LENGTH:	23'8" (722 cm)	28' (854 cm)
WIDTH:		
Working	12'9" (391 cm)	12'9" (391 cm)
Without Loading Mechanism	8' (244 cm)	N/A
HEIGHT:		
Loaded	14'0" (427 cm)	14'2" (432 cm)
Unloaded	11'9" (358 cm)	10'9" (338 cm)
With Cage Fully Raised	17'8" (539 cm)	17'4" (528 cm)
WHEEL BASE:	14'2" (432 cm)	10'2" (310 cm)
WHEEL TREAD:		
Front	7' (214 cm)	7' (214 cm)
Rear	7'7" (232 cm)	7'7" (232 cm)
TIRE:		
Front	14 x 17.5	900 x 20
Rear	40 x 19 x 19.5	40 x 19 x 19.5
BRAKES – Power	4 Wheel	4 Wheel
STEERING:	Power	Power
POWER – Diesel Engine	300 cu. in./or optional	300 cu. in./or optional
FUEL CAPACITY:	45 Gal. (171 ltr.)	45 Gal. (171 ltr.)
TRANSMISSION:	5 Speed 9 Pints Capacity	5 Speed 9 Pints Capacity
REAR AXLE:	2 Speed 6.17 to 1 8.58 to 1 24 Pints Capacity	2 Speed 6.17 to 1 8.58 to 1 24 Pints Capacity
HAULING CAPACITY:		
3-Tie	56 Bales	56 Bales
2-Tie	67 Bales	67 Bales
TRIPS:	Solid State Electronic With Manual Override	Solid State Electronic With Manual Override
STACK UNLOADING SYSTEM:	Squeeze Type Lift Double Stack 14 High – 18'8" (572 cm)	Tilt Deck Pushoff 7 High - 9'4" (284 cm)
OPTIONAL EQUIPMENT:		
Cab	Radio, AM	
Air Conditioner	Radio, CB	
Blowers	Scales for Bale Wagon	
Side Mirrors	Windshield Wipers	

OPERATIONS

OPERATOR'S FAMILIARIZATION:

The owner should make certain whoever operates the Bale Wagon or Roadsider is thoroughly familiar with safety precautions, instructions and directions before attempting to operate the equipment. For his own safety the operator should take every step and precaution to insure complete understanding of instructions and directions before he operates the equipment.

DAILY PRE-STARTING INSPECTION:

1. Complete daily and periodic lubrication from the first day of use.
2. Check wheels for correct tire pressure and lug bolt tightness.
3. Perform complete visual inspection, looking for loose bolts, chains, cables, and etc.
4. Check engine compartment and complete unit and remove loose hay and debris, which may become a possible fire hazard.
5. Check fuel filter and remove sediment and water.
6. Insure air pre-cleaner and cleaner are free of dirt and dust.
7. Insure crankcase and hydraulic oils are at proper levels.
8. Check and maintain radiator coolant level.
9. Check battery water level.
10. Clean cab windows to insure good visibility, if necessary.
11. Start engine in accordance with Engine Manual, warm up before operating unit under full load, do not race engine during warm up. Proper warm up will allow hydraulic system to operate normally. Engine speed should be between 800 and 2400 RPM.

OPERATOR'S DECK CONTROLS:

DASH BOARD: Refer to Figure 5.

1. Turn Signal Control Switch:
2. Temperature Guage:
3. Light Switch;
4. Unload Master Switch: "Out" for Unload and "In" for Load. Electronic controls for Squeeze Carriage, and Main Mast are deactivated when switch is pushed "In";
5. Ignition Switch:
6. Pre-Heater Switch: For starting AC diesel engines.
7. 2-Speed Axle Selector Control:
8. Oil Pressure Guage:
9. Alternator Indicator Light: Low charge type.
10. Lever Lock Brake:
11. Hand Throttle:

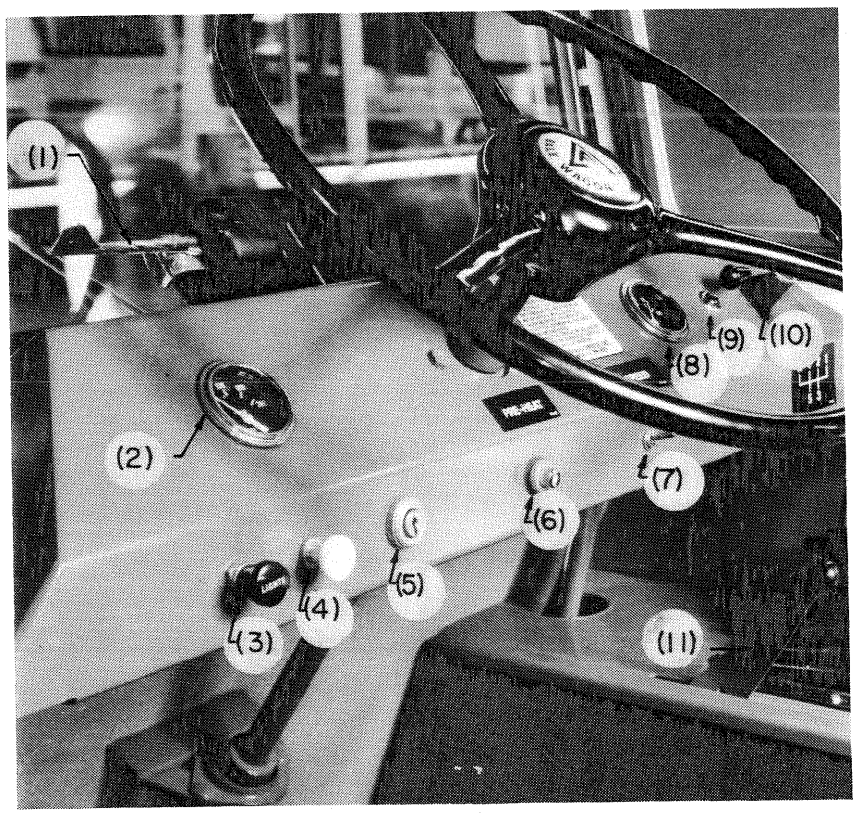


Figure 5.

MAIN MAST AND SQUEEZE CONTROLS:
Bale Wagon Only. See Figure 6.

1. System Selector Lever: Should be in "unload" position except when loading bales.

2. Carriage "In" and "Out": Controls forward and reverse movement of Main Mast Carriage.

   NOTE: Cage should be raised to its highest position before operating Carriage.

3. Squeeze "In" and "Out": Controls operation of Squeeze Arms.

4. Mast "Up" and "Down": Raises and lowers Squeeze.

   NOTE: Use Caution when lifting a load if Carriage **is not** fully extended. Cage could be damaged if load is raised too high.

5. Tilt "Up" and "Down": Used to level or position load.

6. Side Shift "Left" and "Right": Centers Squeeze Mechanism and positions load during stacking.

CAUTION: Main Mast and Squeeze Arms are not recommended for lifting or handling loads in excess of 9,000 pounds. If unit is off level in any direction (front, either side or rear) lifting capacity must be reduced.

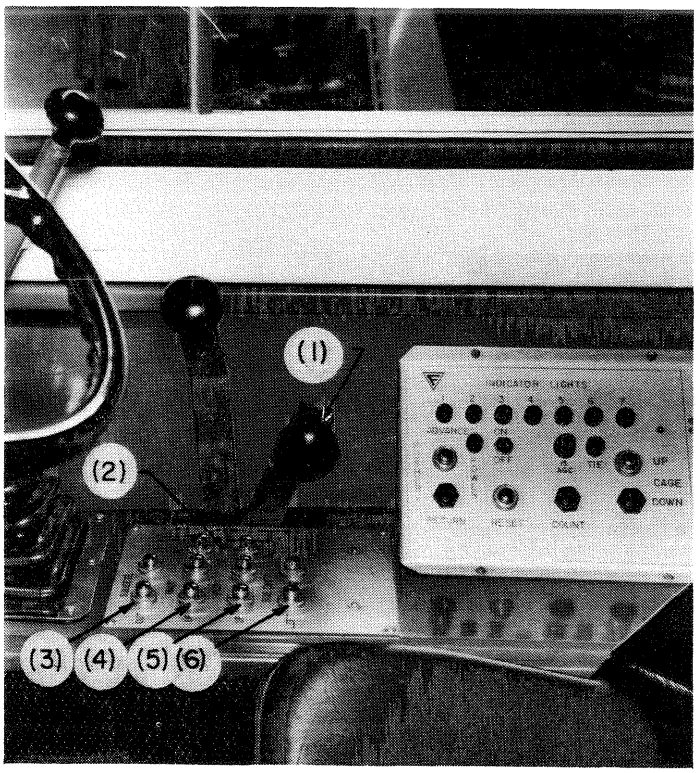


Figure 6.

CAGE AND PICKUP CONTROLS:
See Figure 7A.

1. Pickup Control Lever: Controls operation of Lower Elevator Chain and position of Pickup Shoe.

2. System Selector Lever: Controls Load and Unload hydraulic fluid flow.

   NOTE: Keep Lever in "Unload" position, except when loading bales.

   NOTE: Lights on Cage Control Panel are to indicate loading action of Cage during tie tiers.

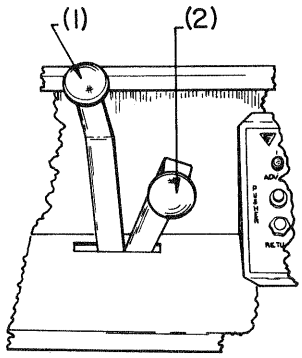


Figure 7A.

UNLOADING CONTROLS:
Roadsider Model Only. See Figure 7B.

1. "Tilt" and "Return": Controls tilt of Tilt Bed. NOTE: Tilt Bed Release Latches are not released until Cage is fully raised.

2. "Push" and "Return": Controls Pusher Carriage forward and reverse movement. Used to push load off Tilt Bed and securely place that load against stack.

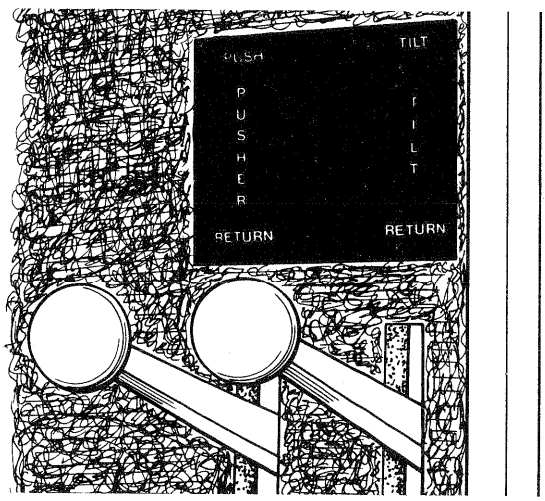


Figure 7B.

CAGE AND CONTROL PANEL OPERATION

Bale Wagons were designed to collect, mechanically load, and tier stack bales into a tight square load. The load is normally 7 tiers high and slightly less than 8 feet (240 cm) square, making it ideal for truck and/or trailer hauling.

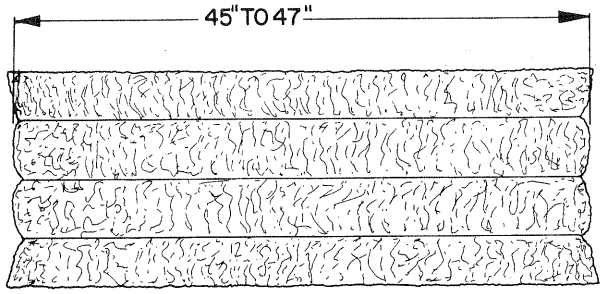


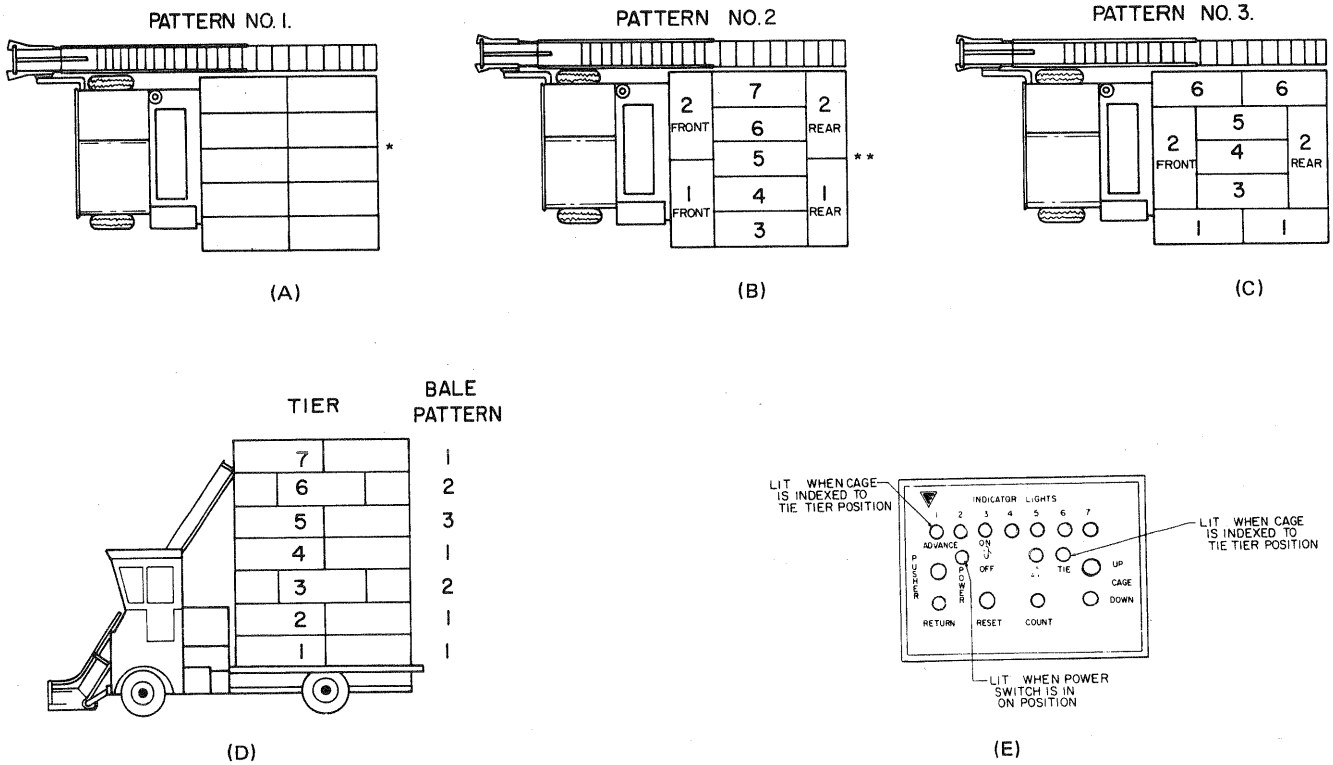
Figure 8.

A Good Load starts with Good Bales!

Before the operator starts loading he should be sure the bales are square, solid, and 45" to 48" long so 2 together are slightly less than 96" long. To measure a bale, see Fig. 8, pull in tufts of material and measure solid part of bale.

Tier stacking pattern for 2 tie and 3 tie bales are different. Prior to loading bales, the operator must insure Bale Tie Selector Switch, on Relay Chassis, is set to correct position.

STACK TIE PATTERNS FOR 2-TIE BALES



* During Loading only Power Light is lit.

** Numbers in Patterns 2 and 3 indicate which light on Cage Control Panel is lit, in addition to Power and Tie Lights.

Figure 9.

LOADING SEQUENCES FOR 2 TIE BALES:

PATTERN 1 (straight) – Figure 9A.

Whenever 2 bales enter the Cage they are pushed straight across loading area until 10 bales are loaded. Cage will then automatically index (raise to next highest position) to next tier. The only Cage Control Panel Light that is lit is the Power ON Light. This pattern is developed in Tiers 1, 2, 4, and 7. See Figure 9D.

PATTERN 2 (tie) – Figure 9B.

This pattern is developed in Tiers 3 and 6. See Figure 9D, and is accomplished as follows:

1. When Cage indexes, to either Tier 3 or 6, Tie Light and Indicator Light 1 goes on. See Figure 9E.

2. Two bales enter Cage, are turned by Pusher, and placed on a long stroke to positions 1 front and 1 rear, see Figure 9B.

3. Pusher returns - Light 1 goes out and Light 2 goes on.

4. Two more bales enter Cage, are turned by Pusher, and placed in Positions 2 front and 2 rear, see Figure 9B.

5. Pusher returns - Light 2 goes out and Light 3 goes on.

   NOTE: While Cage is placing Center Bales it is important the Operator uses the Pickup Control Lever to hold bales on Lower Elevator until Pusher returns.

6. Operator uses Pickup Control Lever to release one bale to Upper Elevator. Bale will enter Cage, trip Center Switch, and be placed in Position 3, see Figure 9B.

7. Pusher returns - Light 3 goes out and Light 4 goes on.

8. With Operator releasing bales, from Lower Elevator, the Cage will repeat Steps (6) and (7), above, until bales are placed in Positions 4, 5, 6, and 7, see Fig. 9B. When Pusher places the last bale, Cage will automatically index to next Tier and Light 7 and Tie Light will go out.

PATTERN 3 (interlocking tie) – Figure 9C.

This pattern is developed in Tier 5, see Fig. 9D, and is accomplished as follows:

1. When Cage indexes, to Tier 5, Tie Light and Indicator Light 1 goes on, see Fig. 9E.

2. Two bales enter Cage and are placed on a long stroke to Position 1, see Fig. 9C.

3. Pusher returns, Light 1 goes out and Light 2 goes on.

4. Two more bales enter Cage, are turned by Pusher, and placed on a short stroke to Position 2 front and 2 rear, see Fig. 9C.

5. Pusher returns, Light 2 goes out and Light 3 goes on.

   NOTE: While Cage is placing Center Bales it is important the Operator uses the Pickup Control Lever to hold bales on Lower Elevator until Pusher returns.

6. Operator uses Pickup Control Lever to release one bale to Upper Elevator. Bale will enter Cage, trip Center Switch, and be placed in Position 3, see Fig. 9C.

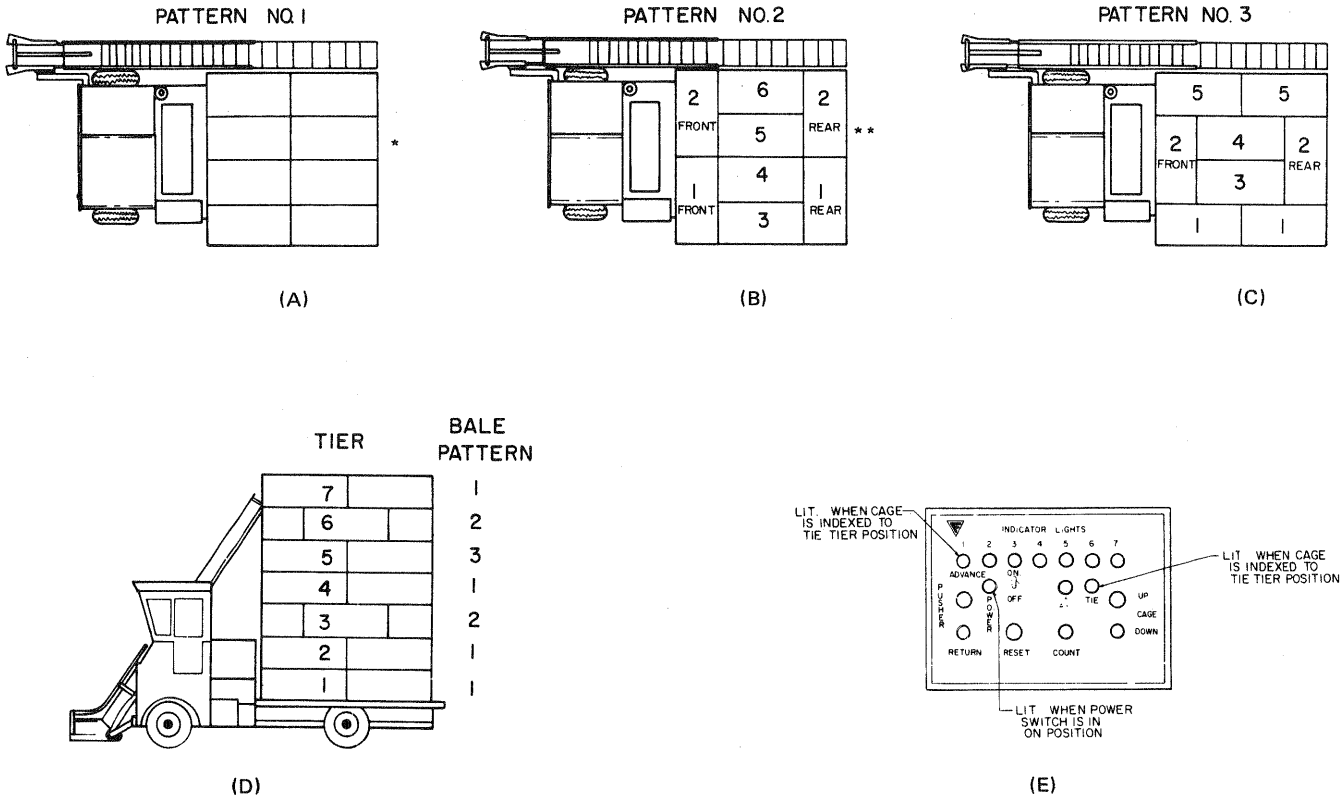
7. Pusher returns, Light 3 goes out and Light 4 goes on.

8. With Operator releasing bales from Lower Elevator, the Cage will repeat Steps (6) and (7), above, until bales are placed in Positions 4 and 5. See Fig. 9C. When Pusher has finished placing a bale in Position 5 and returns, Light 5 will go out and Light 6 will go on.

9. Two bales are allowed to enter Cage and are placed in Position 6, see Fig. 9C.

10. When Pusher has placed the last 2 bales and returns, Cage will automatically index to Tier 6, Light 6 will go out and Control Circuits will reset.

STACK TIE PATTERNS FOR 3-TIE BALES



* During Loading only Power Light is lit.
** Numbers in Patterns 2 and 3 indicate which light on Cage Control Panel is lit, in addition to Power and Tie Lights.

Figure 10.

LOADING SEQUENCES FOR 3 TIE BALES:

PATTERN 1 (straight) – Figure 10A.

Whenever 2 bales enter Cage they are pushed straight across loading area until 8 bales have been loaded. When 8 bales are loaded the Cage will automatically index to next tier. Power on Light is the only Cage Control Panel Light lit. This pattern is developed in Tiers 1, 2, 4, and 7. See Fig. 10D.

PATTERN 2 (tie) – Figure 10B.

This pattern is developed in Tiers 3 and 6, see Fig. 10D, and is accomplished as follows:

1. When Cage indexes, to either Tier 3 or 6, Tie Light and Indicator Light 1 goes on. See Fig. 10E.
2. Two bales enter Cage, are turned by Pusher, and are placed on a long stroke to Positions 1 front and 1 rear. See Fig. 10B.
3. Pusher returns, Light 1 goes out and Light 2 goes on.
4. Two more bales enter Cage, are turned by Pusher, and placed in Positions 2 front and 2 rear. See Fig. 10B.
5. Pusher returns, Light 2 goes out and Light 3 goes on.

   NOTE: While Cage is placing Center Bales it is important the Operator uses the Pickup Control Lever to hold bales on Lower Elevator until Pusher returns.
6. Operator uses Pickup Control Lever to release 1 bale to Upper Elevator. Bale will enter Cage, trip Center Switch, and be placed in Position 3. See Fig. 10B.
7. Pusher returns, Light 3 goes out and Light 4 goes on.
8. With Operator releasing bales from Lower Elevator, the Cage will repeat Steps (6) and (7), above, until bales are placed in Positions 4, 5, and 6, see Fig. 10B. When Pusher has placed the last bale and returned, Cage will automatically index to next Tier and Light 6 and Tie Light will go out.

PATTERN 3 (interlocking tie) – Figure 10C.

This pattern is developed in Tier 5, see Fig. 10D, and is accomplished as follows:

1. When Cage indexes to Tier 5, Tie Light and Indicator Light 1 goes on. See Fig. 10E.
2. Two bales enter Cage and are placed on a long stroke to Position 1. See Fig. 10C.
3. Pusher returns, Light 1 goes out and Light 2 goes on.
4. Two more bales enter Cage, are turned by Pusher, and placed on a short stroke to Position 2 front and 2 rear. See Fig. 10C.
5. Pusher returns, Light 2 goes out and Light 3 goes on.

   NOTE: While Cage is placing Center Bales it is important the Operator uses the Pickup Control Lever to hold bales on Lower Elevator until Pusher returns.
6. Operator uses Pickup Control Lever to release 1 bale to Upper Elevator. Bale will enter Cage, trip Center Switch, and be placed in Position 3. See Fig. 10C.
7. Pusher returns, Light 3 goes out and Light 4 goes on.
8. Operator releases 1 more bale which enters Cage, trips Center Switch, and is placed in Position 4. See Fig. 10C.
9. Pusher returns, Light 4 goes out and Light 5 goes on.
10. Two bales enter Cage and are placed in Position 5. See Fig. 10C.
11. When Pusher has placed last 2 bales, and returned, Cage will automatically index to Tier 6 and reset.

RESET LOADING PATTERN SEQUENCE

If Loading Sequence is interrupted it is necessary to use Reset and Count Buttons to reset Control Circuits and return System and Indicator Lights to their proper position. When the Operator notices there is a Loading Malfunction the following process is used to re-establish correct Loading Pattern Sequence.

1. Stop Machine, put System Selector Lever in "Unload" position, move Pickup Control Lever to "Stop," and turn Cage Power Switch "Off."
2. **Turn Off Engine** and block wheels, if necessary.

⚠ **CAUTION: If there is a possibility of the unit moving, it is parked on a hill or slope, or it is being worked on, the Bale Wagon or Roadsider Wheels should be blocked. Do not use the Lever Lock Brake Control System as the prime method for securing the unit.**

3. Clear the problem and check Loading Pattern to determine which step Cage should be loading.

⚠ **CAUTION: Never enter Cage until System Control Lever is in Unload Position and Engine is stopped.**

4. Unblock wheels, start engine, turn Cage Power Switch "On," and press Reset Button to clear control circuits and light Indicator Light 1.
5. Press Count Button to step control circuits and move Indicator Light to position Cage should be loading.
6. Put System Selector Lever to "Load" position, start machine moving, use Pickup Control Lever to start Lower Elevator, and complete interrupted loading step.
7. When the interrupted step is completed the machine will continue to load automatically.

   EXAMPLE: Bale that was to go into Position 2 front, see Fig. 10B, has broken, Pusher has already placed a bale in Position 2 rear, and returned causing Indicator Light 3 to go on. See Fig. 10E.

   Using the above process stop Bale Wagon, remove broken bale, and check load for Loading Sequence Pattern position.

⚠ **CAUTION: Do not enter Cage until System Selector Lever is in "Unload" position, Bale Wagon Engine is stopped, and wheels are blocked.**

Still using the above process re-enter Operator's Deck, press Reset Button to reset control circuits and cause Indicator Light 1 to light. Press Count Button to cause Indicator Light 2 to light. Start Bale Wagon and use Pickup Control Lever to release 1 bale to Upper Elevator. As bale clears front of Cage press Pusher Advance Button, bale will stop, be turned by Pusher and be placed in Position 2 front. When Pusher returns Light 2 goes out and Light 3 goes on and Bale Wagon is ready to continue.

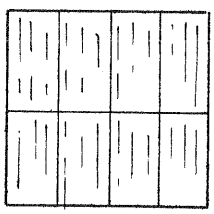
When the Operator has learned Cage Light Indicating Sequence and determined bales are suitable for loading, he must determine the best and most direct access to the loading and stacking area, note any low clearance areas and/or electrical power lines, which may create a personal or equipment danger, and determine if there is enough clearance for the machine. Refer to STACK DEVELOPMENT, of this Section, for further requirements necessary for starting a stack.

LOADING PROCEDURES: During loading process learn to use the left hand for steering the Bale Wagon or Roadsider, freeing the right hand to operate Pickup Control Lever and Cage Controls. Bale Wagons will normally be operated in 1st and 2nd Gear and Low or High Range dependent upon terrain, distance between bales, and experience of Operator. We recommend the Operator uses lower speeds and keeps Engine RPM up until he has become familiar with the operation of the Bale Wagon or Roadsider.

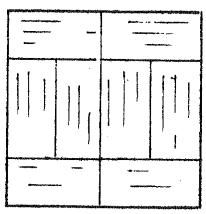
1. Complete the Pre-Starting Inspection and insure fuel tank is full.
2. Check to determine if 2 or 3 Tie Bales are to be loaded, set Bale Tie Selector Switch (in Relay Chassis) accordingly, start engine, and turn Cage Power Switch "On."
3. Move System Selector Lever to "Load" Position to activate Cage Hydraulics.
4. Use Pickup Control Lever to lower Pickup Arm until Shoe is flat on the ground.
5. When approaching a bale, crowd it slightly with either point of the Pickup Guide. This allows smooth contact and helps the inexperienced operator sharpen his skills in using the Pickup Guide Points to straighten bales and to pick up bales at the end of a field.
6. While picking up bales, watch the Pickup Elevator, so bales do not hang or jam, and set the Cage for proper indexing (raising to the next Tier at the proper time.)

   Keep a close eye on the Cage Control Indicator Lights. As long as only the Power On Light is lit and everything is normal the Cage is stacking in Stacking Pattern 1, see Fig. 11A. If Tie Lights and Indicator Light are also lit the Cage is stacking in Stacking Pattern 2 or 3. See Fig. 11B or 11C, dependent upon position of Cage.
7. When Cage is stacking Tie Tiers, Patterns 2 and 3, Control Panel Indicator Lights are lit, and Cage is putting in center bales it is important to hold all bales on Lower Elevator until Pusher returns. Use Pickup Control Lever to stop bales and release them one at a time until Tie Tier is completed.
8. When Cage indexes to 7th Tier, start counting bales being picked up. Count 8 bales if bales are 3 Tie and 10 bales if bales are 2 Tie.
9. As the last Bale is picked up use Pickup Control Lever to raise Pickup Shoe and stop Lower Elevator.
10. Move System Selector Lever to "Unload" to stop Pusher as it reaches the end of its extend stroke. Moving System Selector to "Unload" position turns off Cage hydraulic flow, which clamps the load at top for traveling to stack.
11. Bale Wagon or Roadsider is now ready to drive to loading or stacking area.

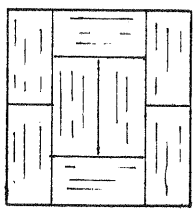
⚠ **CAUTION: While driving to and from stacking or loading area, be sure there is sufficient clearance between Power Lines and other obstructions, and the upper most part of the Cage. Also, insure there is enough clearance to prevent an electrical arc, 10 feet or more, as well as clear the wires physically.**



PATTERN 1
Standard
(A)



PATTERN 2
Standard
(B)



PATTERN 3
Standard
(C)

STACKING PATTERN

Tier	Pattern
7	1
6	2
5	3
4	1
3	2
2	1
1	1

AUTOMATIC STACKING PATTERNS
Figure 11

UNLOADING
SQUEEZE LIFT BALE WAGON

Before starting the unloading process, be sure the Bale Wagon is squared on the Stack, Truck, or other Unloading area and about 12 to 15 feet (366 to 457 cm) away.

CAUTION: The Owner and Bale Wagon operator should insure the roadway between the field, stacking area, and unloading area has sufficient overhead clearance to allow unhindered passage, of the Bale Wagon, even with the Cage fully raised. Special care must be taken to clear High Voltage Power Lines.

1. Move System Selector Lever to "Load" position to activate Cage Hydraulic System.
2. Press "Pusher Advance" to cause Cage Pusher to complete its cycle, release top of load, and Cage to index.
3. When Cage has indexed press "Cage Up" and hold until Cage has raised to top and stopped.
4. Move System Selector Lever to "Unload" and pull unload Master Switch "Out."

   NOTE: The Bale Wagon Engine should be running at idle during unloading process, except when Squeeze Arms are being used to squeeze load. Then engine should be at one-half throttle.
5. Press "Squeeze Out" to open squeeze arms enough to clear deck.
6. Press "Mast Up" until marks on Main Mast are in line. Squeeze arms should be clear of deck.
7. Press "Carriage Out" until Squeeze Frame is snug against load.
8. Align index marks on Mast and center Tilt Guage to place squeeze arms about 1" (3 cm) off deck.
9. Press "Squeeze In" and hold until squeeze arms stop moving.

   NOTE: When using squeeze arms the Engine should be operating at a minimum of one-half (½) throttle.
10. Press "Mast Up" to raise load about 3" (8 cm).
11. Press "Tilt Up" to tilt load clear of deck.
12. Press "Carriage Out" and hold until carriage is fully extended.
13. Press "Mast Up" or "Mast Down" to position load about 6" (15 cm) higher than area on which it is to be placed.
14. Back Bale Wagon to position and if needed use Side Shift "Left" or "Right" to attain final position.

⚠ **CAUTION: When using Side Shift to move load against another do not use force. Force may distort load causing it to lean and possibly fall.**

15. Press "Tilt Down" until load is level with loading area.
16. When load is in position press "Mast Down" until load is in place and lightly touching.
17. For better stack creation, press "Squeeze Out" and slowly release squeeze arm pressure to insure center of load settles first.
18. Press "Mast Up" to raise squeeze arms to clear.
19. Drive forward until squeeze arms are clear of stack or truck.
20. Press "Mast Up" or "Mast Down" to clear deck.
21. Side Shift to center squeeze frame and level with Tilt Controls.
22. Press "Carriage In" and hold until carriage fully retracts.
23. Press "Squeeze Out" to open squeeze arms enough to clear deck.
24. Press "Mast Down" until squeeze arms are resting on frame.
25. Press "Squeeze In" to clamp squeeze arms in place.
26. Move System Selector to "Load" position and push Unload Master Switch "In."
27. Press "Cage Down" and hold until Cage reseats on deck.
28. Move System Selector Lever to "Unload" position. Bale Wagon is ready for another load.

⚠ **CAUTION: DO NOT DRIVE WITH CAGE FULLY RAISED. Be sure Cage is fully lowered so it will clear Electrical Power Lines and low clearance areas. The Cage up and it not stabilized, with a load, could cause damage to Side Masts and Elevators.**

UNLOADING
ROADSIDER

Before starting "Unloading Sequence" be sure Roadsider is squared on stack or unloading area and rear of Tilt bed is lightly touching stack.

⚠ **CAUTION: The Owner and Roadsider Operator should insure the roadway between the field and stacking area has sufficient overhead clearance to allow unhindered passage, of Roadsider, even when its cage is fully raised. Special care must be taken to clear High Voltage Lines.**

1. Move System Selector Lever to "Load" position to activate Cage Hydraulic System.

2. Press "Pusher Advance" to cause Cage Pusher to complete its cycle, release top of load, and Cage to index.

3. When Cage has indexed press "Cage Up" and hold until Cage has raised to top, stopped, and unlatched Tilt Bed.

4. Move System Selector Lever to "Unload" position.

5. Move Tilt Control Lever to "Tilt" and lower rear of the Tilt Bed until it is resting lightly on stack bed surface.

6. Move Pusher Control Lever to "Push" and hold until load is off Tilt Bed.

7. When load is against stack, finish unloading by using the Pusher to move the Tilt Bed from beneath the load. Maintain enough brake pressure to insure Roadsider does not move forward too fast and loosen stack. DO NOT hold brakes too tight, too much movement resistance could cause Pusher to distort stack.

   NOTE: When first developing a stack the Operator may find it necessary to place Roadsider in first gear, low range, and slowly drive from beneath load, while pusher is moving. This procedure is necessary for first load in each stack row.

8. After Pusher has moved Tilt Bed from beneath the load and is fully extended drive forward enough to clear stack.

9. Move Tilt Control Lever to "Return" and hold until Tilt Bed is in place.

10. Move Pusher Control Lever to "Return" and hold until Pusher Carriage is fully retracted.

    NOTE: The Operator may find the Tilt and Pusher Control Levers can be operated at the same time.

11. Move System Selector Lever to "Load" position, press Cage "Down" and hold until the Cage is resting on Tilt Bed. As Cage lowers Tilt Bed Latches are released and Tilt Bed is locked in place.

12. Return System Selector Lever to "Unload" position. The Roadsider is ready to collect another load.

⚠ **CAUTION: DO NOT DRIVE WITH THE CAGE FULLY RAISED. Be sure Cage is fully lowered so it will clear all Electrical Power Lines and other low clearance areas. Driving with the Cage up and it not fully stabilized, by a load, could cause damage to Side Masts and/or Elevators.**

STACK DEVELOPMENT

Building stacks with Freeman Bale Wagons, as is true with other equipment, requires planning and preparation. The ideal stack bed should be flat, a little high to provide good drainage, clear of high voltage power lines and other obstructions, and have a good all weather access road, with adequate clearance and safety.

There are various stack configurations and those normally built with Freeman Bale Wagons are shown in Figures 12, 13, and 14. The stack shown in Figure 12 is normally used in arid climates, such as Arizona and southern California. The stack in Figure 13 may be used anywhere as an all-weather stack. To provide a crown, for tarps, top outside bales may be moved across center, see "B" and "C" in Figure 14. To build the stack shown in Figure 13 start from left to right and space bottom loads about 8" (20 cm) apart. Position top loads over stack center line, which causes the loads to lean toward each other as they settle.

When starting a new stack and after positioning the bottom loads it is usually a good practice to turn bales across the center, see "A" in Figure 14. This will lace the stack base together creating a more stable stack. Use this method at each end of the stack. To prevent the first top loads from settling and leaning too far, it is a good practice to reduce stacking time lapse by setting the first top load aside, collecting another one, and putting them on the stack one after the other. Use this procedure until there are at least 8 loads in the stack.

Remember, bales always settle and the amount varies according to the type of hay and density of the bales. With a little planning and practice, bales and hay quality can be used to your advantage and a stack will never fall. A good stack job must start with a good job of baling.

⚠ **CAUTION: Be sure to clear all power lines by at least 10' (304 cm).**

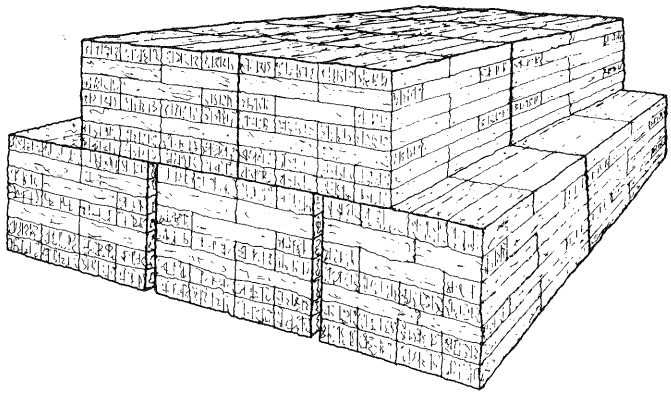


Figure 12

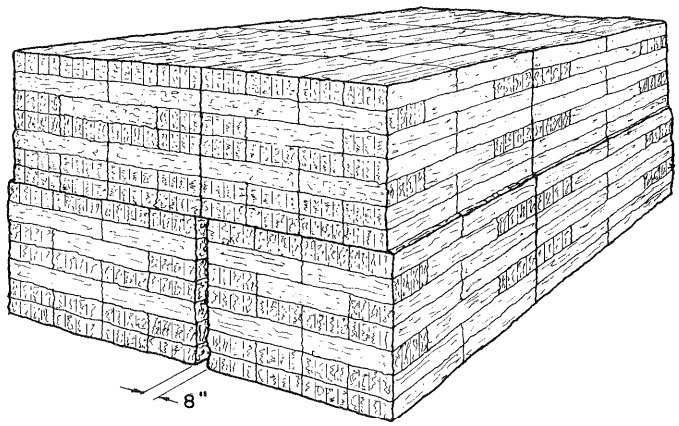


Figure 13

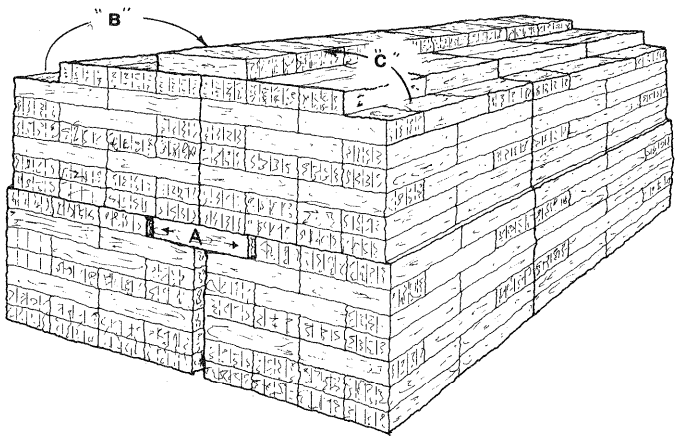


Figure 14

LUBRICATION SERVICE CHART

Lubrication Points	No. of Fittings	Recommended Lubricate	Frequency	Model Applys To RS	BW
PICKUP LIFT					
Top of Support Arm Pivot Tube	2	MPG	Daily	X	X
SIDE MAST					
Lower End of Inner Frame	2	MPG	Daily	X	X
Cage Support Ruller Angles	4	MPG	Daily	X	X
CAGE					
Right Side Pusher Frame	2	MPG	Daily	X	X
Crank Bell Housing	1	MPG	Daily	X	X
Front Connecting Rod Tie Arm	2	MPG	Daily	X	X
Rear Connecting Rod Tie Arm	2	MPG	Daily	X	X
Cam Follower Rollers	4	MPG	Daily	X	X
LOAD PUSHER CARRIAGE					
Pusher Drive Shaft	3	MPG	Daily	X	
LIFT UNIT					
Carriage Drive Shaft	3	MPG	Daily		X
Carriage Roller Bearings	4	MPG	Daily		X
Squeeze Frame	8	MPG	Daily		X
HYDRAULIC TANK			As Needed		
Left Side		HYDO	2" Below Top	X	X
ENGINE					
Engine Compartment		Refer to Engine Operating Manual	Oil Level Within Safe Area with Dip Stick Fully Inserted.	X	X
FRONT AXLE AND STEERING ASSEMBLY					
Drag Link Rod Ends	2	MPG	50 Hours	X	X
RH Steering Knuckles	2	MPG	50 Hours	X	X
LH Steering Knuckles	2	MPG	50 Hours	X	X
RH Spring Shackle Bolts	3	MPG	50 Hours	X	X
LH Spring Shackle Bolts	3	MPG	50 Hours	X	X
Wheel Bearings		WBG	6 Months	X	X
CLUTCH HOUSING					
End of Clutch Release Shaft	2	MPG	50 Hours	X	X
SHIFT MECHANISM					
Shift Lever Rod Ends	1	MPG	50 Hours	X	X
Forward Movement Linkage Rod on Gear Case Right Side	2	MPG	50 Hours	X	X

LUBRICATION SERVICE CHART (cont.)

Lubrication Points	No. of Fittings	Recommended Lubricate	Frequency	Model Applys To RS	BW
TRANSMISSION					
Plug, Right Side Gear Case		MPL	Check-50 Hrs.	X	X
			Change 1000 Hrs.	X	X
CAUTION: Do not overfill Transmission Gear Case. Excess gear oil may be forced out of the front of the gear case through the mainshaft opening.					
DRIVE LINE					
Universal Joint	3	MGP	50 Hours	X	
Universal Joint	4	MGP	50 Hours		X
REAR AXLE					
Electric Shift Unit		EO	Check - 250 Hrs.	X	X
			Change - 1000 Hrs.	X	X
Axle Housing		MPL	Check - 50 Hrs.	X	X
			Change - 1000 Hrs.	X	X
CAUTION: The manufacturers of the Rear Axle and Transmission recommend you never add lubricant to their units unless it is the same make and grade lubcicant, as that already in the unit. If the same lubricant is not available drain and refill with another approved lubricant.					
SEAT ASSEMBLY					
Pivot Tube in Support and Hydraulic Assembly	1	MPG	100 Hours	X	X

MPG – Multipurpose Grease
WBG – Wheel Bearing Grease
EO – SAE 10 Single Viscusity Engine Oil
HYDO – Anti-wear Hydraulic Oil, 150-215 SUS @ 100° F.
Automatic Transmission Oil.
SAE 10-40 Motor Oil.

MPL – Multipurpose Type Gear Lubricant,
API Service GL4 or GL5
Below -10° F. – SAE 80
Up to 100° F. – SAE 90
Above 100° F. Constantly – SAE 140

FASTENER SERVICE

Check and tighten all bolts. — Daily for first 10 days.

All bolts were tightened before unit was shipped from factory. However, shipping stresses and initial operating motion may have caused the bolts to loosen. — Every 1000 hours thereafter.

CAUTION: Do not place the Bale Wagon or Roadsider back into operation until all Safety Shields and Devices have been replaced. Operation without Safety Shields and Devices may place the operator in a hazardous situation.

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CALIFORNIA

Proposition 65 Warning
Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

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