



# Owner and Operation Manual



888.323.8737 info@cardinalmfg.net

#### Contents

1.	Mule 628T Overview	2
2.	Remote Control Belly Pack Overview	3
3.	Basic Controls	.4
4.	Basic Operation	5
5.	Dangers, Warnings, Cautions, & Notices	.6
6.	Service Schedule	.9
7	Track Installation Instructions	11

# 1. Mule 628T Overview

#### **Description of Main Parts**

- 1. Left Drive Control Lever
- 2. Right Drive Control Lever
- 3. Tail, Raise/ Lower
- 4. T-Bar, Raise/ Lower
- 5. Mast, (A)Raise/ Lower; (B)Tilt Left/Right
- 6. Throttle
- 7. Mast Float
- 8. Engine Key Switch
- 10. Information Center
- 11. Light Switch (optional)
- 12. Auxiliary Tail Up/Down Switch
- 13. Auxiliary Mast Up/Down Switch
- 14. Low/High Drive Control Switch
- 15. Rear Mast Upright
- 16. Mast Lock Pin (5K only)
- 17. T-Bar
- 18. T-Bar Pad
- 19. Lift Cylinder
- 20. Left Fork
- 21. Right Fork
- 22. Upper Parallel Link Arms
- 23. Lower Parallel Link Arms
- 24. Front Mast Upright
- 25. Right Barn Hook
- 26. Left Barn Hook
- 27. Fork Receiver Tube
- 28. Drive Torque Hub
- 29. Track
- 30. Hydraulic Oil Tank
- 31. Power Rotator (10K only)
- 32. Mast Tilt Cylinder
- 33. Mast Pivot Pin
- 34. Wireless Remote Control Transmitter (more details on page 3)
- 35. Track Float Switch
- 36. Power Rotate Button (10K only)

30





# 2. Wireless Remote Control Belly Pack Overview





- #1 Left Drive Control Lever
- #2 Right Drive Control Lever
- #3 Raise & Lower T-Bar Switch
- #4 Raise & Lower Tail Switch
- #5 A & B Mast Raise / Lower, Tilt Right/Left Control Lever
- #7 Mast Float Switch
- #13 High/Low Travel Speed Switch\*
- #39 Wireless Remote Control ON/OFF Switch
- #40 Engine START/STOP Switch
- #41 Engine START/STOP Switch Enable Button
- #42 Emergency Stop Button
- #43 Recharging & Tether Cord Plug
- #44 Mast Rotate (used on 10K only)
- #45 12V Charging Cord
- #46 120V Charging Cord
- #47 Track Float Switch

#### -\*Warning-

-Always keep Travel Speed switch in LOW when attaching, detaching, or moving a load!

#### 3. BASIC CONTROLS: (onboard controls)\*

The two Drive Control Levers (1 & 2) control the driving functions of the machine. Moving the left Lever (1) forward causes the left track to turn forward; moving the left Lever (1) back causes the left track to turn in reverse. Moving the right Lever (2) forward causes the right track (29) to turn forward; moving the right Lever (2) back causes the right track (29) to turn in reverse. Moving both Levers forward at the same time causes both tracks to turn forward and causes the machine to move forward in a straight line; moving both Levers back at the same time causes both tracks to turn in reverse and causes the machine to move in reverse in a straight line.

The Mast Raise/Lower, Tilt Control Lever (5) controls the Up / Down and Tilt movements of the Mast. To raise the Mast pull the Lever (5) back, to lower the Mast push the Lever (5) forward. MULE MUST ALWAYS BE AT A COMPLETE STOP BEFORE RAISING OR LOWERING THE MAST.

To tilt the Mast to the right and left, move the Lever (5) to the right and left, respectively. THE MAST FLOAT SWITCH (7) MUST AWAYS BE IN THE "FLOAT" POSITION WHEN ATTACHED TO AN OBJECT. FAILURE TO DO SO CAN LEAD TO VERY DANGEROUS OPERATING CONDITIONS AND CAUSE MACHINE DAMAGE.

The left Thumb Switch (3) raises and lowers the T-Bar, the right Thumb Switch (4) raises and lowers the Tail of the machine. THE TRACK FLOAT SWITCH (36) MUST ALWAYS BE IN THE "FLOAT" POSITION WHEN MACHINE IS ATTACHED TO AN OBJECT(i.e.: building, container, etc.).

The Throttle (6) controls machine engine RPM. Always operate at the lowest adequate engine RPM, but not less than 1/2 throttle.

On the top of the rear upright mast tubing (15) of non-power rotating mast units is the mast locking pin (16). After picking up an object to be moved and the operator wishes to turn, the handle on the locking pin needs to be lifted and turned toward the back to unlock the mast from the center-forward position so the machine is able to turn. ON ANY INCLINE OR WHERE TRACTION FOR THE WHEELS IS NOT SOLID OR ADEQUATE, THE MAST MUST REMAIN LOCKED TO PREVENT SUDDEN SIDE TO SIDE MOVEMENT THAT COULD CAUSE INJURY OR DEATH.

A cylinder inside the front mast tube is used to raise and lower the T-Bar (17) to the most advantageous position before lifting an object. The T-Bar should always be in lowest position when not in use.

<sup>\*</sup> When operating the machine with a Wireless Remote, observe labels on Belly Pack that correspond to on board controls. When the Wireless Remote Control is turned ON, the on board controls are disabled. The Wireless Remote Control Transmitter controls are labeled the same as the on board controls and take over their specific function when it is ON.

# 4. BASIC OPERATION:

When operating machine unattached to any object, the Mast (24) should be raised just enough so that the Forks (20 & 21) clear the ground. The Mast should be kept as low as possible at all times to reduce the danger of tipping the machine on uneven terrain.

To lift an object, lower the Forks (20 & 21) to slide under the floor frame to a position where they will grab a structural member, or can be attached to a structural member, adequate to push and pull on. Then raise the Mast T-Bar (17) to a position on the wall/end where a structural member or reinforcing is adequate to keep the end from caving inward as the load is raised and moved. Now pick up the object and move the Mast Float Switch (7) to the float position before moving.

On non-power rotatoring masts the Mast Lock Pin (11) must be unlocked before making any turns. Other personnel must always be on hand during any move to check for obstructions, clearance issues, safety hazards, or impediments to the safety or integrity of the move and warn the operator to stop. Never proceed unless completely safe to do so.

Loading and unloading the machine on transport vehicle must be done on level ground to prevent tipping of unit and injury or death.

Proper attachment for barn hooks:



#### 5. DANGERS, WARNINGS, CAUTIONS, & NOTICES

Check all parts, including, but not limited to, bolts, welds, pins, plates, hydraulic components, etc., for leaks, misalignment of parts, broken parts, misalignment, looseness and anything that will impair the integrity of the machine and dolly wheels daily. Discontinue use immediately and make proper repairs before proceeding.

Always carry load as low as possible. Never carry over 24 inches off ground, and only then if necessary to clear obstacles. The higher the load is carried the greater the risk of accident and rollover of object.

Anyone initially attempting to use machine or any of seller's equipment must do so under the supervision of someone familiar with the use and functions of the equipment for a period of at least two hours. This shall be done on a level, unobstructed environment at low speeds and shall continue until new operator completely understands and implements all precautions to use equipment safely, effectively, and understands the use and functions fully, even if more than two hours are required. No one shall attempt to use any equipment that they are not familiar with and that they cannot use safely in all aspects.

When operating equipment on an incline, always keep machine and all personnel on the higher side or uphill of the object being moved.

Always have at least one or two extra authorized personnel other than the operator to check for obstructions and hazards to the operator, equipment, objects being moved, surrounding objects, etc. as the object is being moved. Never proceed until it is completely safe to do so.

Always operate engine at the lowest speed possible to adequately perform the operation needed but never less than 1/2 throttle.

Always lower object attached to the machine to the ground and adequately prohibit it from shifting or moving, and shut off the engine before leaving the machine. Never leave the machine running while unattended.

Never allow any body part to go under the object being moved while it is attached to machine or dolly wheels.

# DANGERS, WARNINGS, CAUTIONS, & NOTICE (Continued)

Never overload machine or dolly wheels.

Keep load centered on machine and dolly wheels. Slopes can greatly shift the center of gravity of the load to one side or the other. Do not use on slopes greater than 5%. Failure to do so could lead to injury or death.

Keep adequately clear of any objects that could move, shift, or fall; causing injury or death.

Keep mast locked in the center-forward position at all times except when needing to turn, and then straighten as quickly as possible and lock mast again.

Do not wear loose or bulky clothing that can be caught in moving parts causing injury or death.

Always shut off engine when leaving the machine. Never leave machine running while unattended.

Do not run the machine while tired or while under the influence of drugs or alcohol.

Do not permit any untrained or unsupervised personnel operate the machine.

Always make sure machine and dolly wheels are securely locked to object being moved before attempting any operation.

Never make any alterations to the factory settings of the machine.

For stability, always put dolly wheels as close as possible to the outside edge of the object being moved.

Before transporting on any vehicle, always make sure machine, dolly wheels, and all equipment is secured adequately and according to Department of Transportation and other applicable regulations to ensure safe transport. Any securing devices supplied by manufacturer may or may not be adequate or meet regulations. User assumes responsibility for adequate security and safe transport.

#### DANGERS, WARNINGS, CAUTIONS, & NOTICE (Continued)

Make sure, daily, that all safety striping and decals are in place, legible, and heeded. All striping and decals that enhance or pertain to the safe use of the machine are available from the manufacturer. Be sure they stay in place!

In case of failure of any component, discontinue use immediately until unit is repaired. For any failure that is covered by a warranty, the manufacturer is only liable to secure and install, or have installed, the failed component. Any loss of time, schedules, profits, etc., and the freight to and from a repair facility or location is not included in any warranty, expressed or implied.

No list of safety guidelines can be complete. Before any operation of machine, always consider safety first in the operation you are planning, and then proceed accordingly. Failure to do so can result in damage to property, serious injury, or death!

# 6. SERVICE SCHEDULE

Check all parts, including, but not limited to, bolts, welds, pins, plates, hydraulic components, etc., for leaks, cracks, misalignment of parts, broken parts, misalignment, looseness and anything that will impair the integrity of the machine or dolly wheels daily. Discontinue use immediately and make the proper repairs before proceeding.

Change the hydraulic filter after the first 5 hours and then after each 100 hours following.

Change hydraulic oil every 400 hours. Mobile 1, 5W-40 oil required

Grease all grease points every 10 hours.

Service engine according to the service manual supplied with the machine for the engine.

Check all fluids daily and then add or service correctly to insure proper function.

Never do any maintenance with the machine running.

#### **Proper Belt Routing**





Left Pump

10. Left Pump

#### Relays, Fuses and Diagnostic Ports -located inside rear hood-



10

# 7. Track Installation Instructions

### **T-SeriesTrack Installation**

- 1. Use blocks under forks and operator platform as necessary to lift tracks off ground
- 2. Remove front lower hood below muffler (Image 1).
- 3. Locate black track tension control valve knob (Image 2), pull out slightly and rotate 1/4 turn either direction to allow it to drop in, which will release track tension
- 4. Apply force to rear idler roller (image 3) to retract it fully toward drive sprocket
- 5. Place track onto front drive sprocket, ensuring track drops into drive teeth (Image 4)
- 6. Work track onto rear idler, rotating drive sprocket slowly and using a prybar as necessary (Image 5 & 6 )
- 7. Rotate drive sprocket slowly until track is seated into place
- 8. Pull out black tension control knob and rotate 1/4 turn to latch out (Image 2)
- 9. Start engine and move one or both drive control levers. Track tension will be applied when rotating track.

Image 1



Image 2



Image 3



Image 4



Image 5

Image 6

