

TROLLEY TRACK HOIST

TT1000 AND TT400

Instruction and safety information

Read before operating the Trolley Track Hoist

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WARNING

- Do not erect the Trolley Track Hoist near overhead cables, electrical power lines or wires.
- Erect Trolley Track Hoist on firm and level roof.
- Tighten all bolts and nuts securely and clip all locking pins or Trolley Track Hoist failure will occur under load and may cause damage or injury.
- Always keep the instruction manual with the equipment for reference.
- Do not exceed the rated capacity of the Trolley Track Hoist.
- Minimum ballast weight must be kept at 1.5:1 ratio (1.5 pounds of ballast for 1 pound of load). Refer to your province / state regulations as some provinces requirement is 2:1 (2 pounds of ballast for 1 pound of load)
- Inspect all joints, cables, brake and connections before each use. Replace if damaged.
- Do not run cable completely out from the drum. Leave at least 4 turns of cable on the drum.
- Do not remove safety cover when engine is running.
- Read the engine manual and follow the instructions and warnings.

Warning labels have been included on the equipment. If the warning labels wear off, please request new ones.

Misuse of the Trolley Track Hoist may result in injury or damage. SPAR-Marathon provides instructions for its safe use and relies on the purchaser to ensure that these instructions are given to the personnel who will actually be using the equipment.

It is the responsibility of the purchaser to ensure that the personnel operating the Trolley Track Hoist are trained in the proper operating procedures and all safety regulations.

The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury.

Regulations governing the use, selection and maintenance of personal protective and lifesaving equipment as stated in safety regulations must be followed.

The SPAR-Marathon Trolley Track Hoist is designed and manufactured for hoisting material only. Any other use of this equipment will void any warranty or responsibility, expressed or implied, on the part of the manufacturer.

Only experienced personnel should operate the Trolley Track Hoist. It is a good idea to barricade the hoisting area and to keep unauthorized persons away from it.

Introduction

SPAR-Marathon Trolley Track Hoist is designed for easy operation, providing excellent lifting performance and easy maintenance. It lifts roofing materials to the roof easily and effectively. All sheaves, pulleys and bearings used sealed ball bearings to reduce maintenance and provide longer Trolley Track Hoist life.

The Trolley track Hoist is shipped in sections for ease of transport and can be assembled in minutes with no special tools.

Mark down the model number and serial number from the Hoist / Power Pack frame and always use it for ordering parts. These numbers can be found on the serial number plate located on the frame.

Model #:

Serial #:

Safety features

Dual controls, one lever for raising and one lever for lowering load.
Brake will automatically activate if control lever is released.
Safety ratchet is provided and must be used when raising the load.

SPECIFICATIONS

	<u>TT1000</u>	<u>TT400</u>
Maximum Hoist capacity (2 parts of line)	1000 lbs	400 lbs
Hoist speed (maximum)	170 ft/min	150 ft/min
Cable length supplied	200 ft	200 ft
Trolley rail weight	150 lbs	94 lbs
Rear leg assembly weight	100 lbs	70 lbs
Front frame assembly weight	180 lbs	145 lbs
Power unit weight	230 lbs	184 lbs
Ballast weight required	1500*lbs	600*lbs
Ballast blocks required (55 lbs each)	28*pcs	11*pcs

*Refer to your province / state regulations

Specifications are subject to change without notice.

Raising sections to roof

Note: Before raising the track, make sure to lock the trolley support to the front end of the trolley track assembly by inserting short hoist pin #12 into the locking hole at point “M or E”.

Position all sections at the base of the building below the hoisting site.

With two men on the roof lower a rope to the ground, another man on the ground tie the rope on the section. Tie another tag line to the other side of the section. Raise the section up by pulling the rope slowly, while the person on the ground use a tag line and guide the section against hitting the wall.

Raise the rear leg assembly first and place it 25 feet away from the roof edge.

Raise the front frame assembly and place it 10 feet away from the roof edge.

Raise the trolley track assembly and place it between rear leg and front frame assembly.

Assembly of Trolley Track Hoist

⚠ Warning Do not set up hoist over doorway.
Erect hoist on firm and level roof.
Do not erect the Trolley Track Hoist near overhead cables, electrical power lines or wires.
Tighten all bolts and nuts securely and clip all locking pins or Trolley Track Hoist failure will occur under load and may cause damage or injury.
For safety reason, assembly of the hoist should be done way back from the roof edge.

- 1) Remove spring lock pin #11 at the base of the rear leg assembly and rotate the rear leg to upright position.
- 2) Loosen the two lock screws #20 on the brace socket and move it to the lowest position, then tighten the lock screws.
- 3) Raise the trolley track assembly and insert the brace bar #8 into the track.
- 4) Align the trolley track with the projection on the top of the brace socket. Insert short hoist pin #12 through the holes.
- 5) Align the holes on the brace bar with the matching holes on track. Insert the short

hoist pin #12 through the holes.

- 6) Raise the front frame brace #5 and temporarily tie to the top of the front leg assembly.
- 7) Hold the front frame assembly #1 in vertical position. Raise the trolley track assembly with the front mounting hole aligns with the front frame assembly. Attach with lock pin #16.
- 8) Untie the front frame brace and rotate down to align the mounting hole with the matching hole on the trolley track. Attach with long hoist pin #13.
- 9) Raise the trolley track rail assembly to operating height (usually the maximum height of the frame). Insert spring lock pin #11 to both front and rear legs assembly and allow the trolley track assembly to rest on the spring lock pins. Tighten all hand screws.
- 10) If trolley track is not set to maximum height, insert spring lock pin to the hole just above the brace socket at the rear leg assembly.

Note: Set trolley track assembly slightly lower at the rear leg to help pulling the load while operating. Make sure the top safety pin is always secure at the top of the rear leg's assembly.

- 11) Align ballast tray hole with matching hole on rear leg assembly and lock with spring lock pin #11 that was removed from there before.
- 12) Attach operator fence on both sides of the front frame assembly with spring lock pin #11.
- 13) Move the entire hoist assembly to the edge of the roof. The front frame leg should rest on a level roof and leave few inches away from the roof edge. Secure the front leg to the roof with screws or nails through the holes on the bottom cross-link bar #17 at point "A".
- 14) Attach the stay wire provided to a fixed fixture on the roof.
- 15) Place required counter weight as per your province / state requirements on the ballast tray and secure ballast blocks with rope to the tray.
- 16) Check and make sure all lock pins are inserted and clipped. All nuts and bolts are tightened and all hand screws are tightened.

Raising the power unit to the roof with its own power

Note: Read the engine manual before operating the engine.

Make sure enough counterweights are secured properly on the ballast tray.

- 1) Place power unit on the level ground directly under the hoist on the roof.
- 2) While releasing the brake, uncoil enough cable and raise the cable to the roof.
- 3) Hook the cable to the trolley support hanger #28 on the trolley support.
- 4) Reeve cable through pigtail on top of the power unit frame.
- 5) Remove the short hoist pin #12 from point "M or E". Slide the trolley support #25 all the way to the front. Reinsert pin #12 at point "M" to prevent the support from rolling back when lifting the power unit.
- 6) Remove spring lock pin from clutch lever. Adjust the clutch lever handle to the horizontal position and reinsert the lock pin.
- 7) Attach 3/8" rope to the clutch lever handle. Reeve the rope through the top of the frame and raise it to the operator on the roof.
- 8) Attach tag line to the power unit frame for the ground operator to guide the power unit against hitting the wall.
- 9) Start the engine according to the engine manual and let it warm up for few minutes.
- 10) Set throttle to approximately 1/3 speed.
- 11) To raise the power unit, the operator on the roof pulls the 3/8" rope to engage the clutch while the operator on the ground use the tag line to guide the unit up.

⚠ Warning Stand clear of the power unit hoisting area at all times. If engine stalls while raising the power unit, release the rope's tension to release the clutch and engage the brake.

- 12) When the power unit reaches up, release the rope and brake will automatically be applied.
- 13) Remove the short hoist pin from point "M" and slide the trolley support #25 to the rear end of track and reinsert the pin.

Lowering the power unit to the ground with its own power

- 1) After operating, pull the trolley support #25 all the way back to the rear leg.
- 2) Insert short hoist pin #12 into hole at point "M" on trolley track to stop it from moving.
- 3) Rewind the cable back to the drum and tie cable end to the frame.
- 4) Adjust the brake lever to the horizontal position.
- 5) Release spring lock pin #11 on the power unit attached with the trolley support. Slide power unit off the trolley support and place on roof under the trolley support hanger #28.
- 6) Attach 1/4" rope to the brake lever. Reeve the rope through the top of the frame and lower it to operator on the ground.
- 7) Attach tag line to the frame of the power unit.
- 8) Attach the cable safety hook to the hanger #28 on the trolley support.
- 9) Raise the power unit to clear the roof.
- 10) Remove the short hoist pin #12 from the trolley track at point "M", slide the trolley support out and insert pin back to the trolley track at point "M" to avoid the trolley support from rolling back.

⚠ Warning Do not operate the brake with the rope from the roof.

- 11) To lower the power unit, the operator on the ground pulls the 1/4" rope to release the brake while the other operator on the ground use the tag line to guide the power unit away from the wall.
- 12) To stop or slow the descent of the power unit, the operator releases the tension on the rope.
- 13) After the power unit has been lowered to the ground, remove the short hoist pin #12 from the trolley track at point "M" and slide the trolley support back to the rear end of the trolley track. Insert the pin back into the hole at point "M".
- 14) Remove cable safety hook from the hanger and lower the cable to the ground with a rope.

Mounting the power unit

Have the trolley support slide toward the rear leg and insert the short hoist pin #12 into trolley track hole at point “E”. Move the power unit to the roof under the rear of the trolley support.

With four people raising the power unit, slide the socket of power unit to the trolley support end and lock it with spring lock pin #11. Rotate the power unit brace up to the trolley support mounting bracket and secure with bolt and nut provided with brace.

Reeving the cable

Remove the spring lock pin from the block bumper #22 at the front end of the trolley support. Lower the block bumper from its shipping position and lock with the same lock pin to the working position.

Hang the block pulley #21 to the pulley hanger. Release the brake by raising the brake lever. Pull enough cable out from the drum.

For single line operation:

(500lbs maximum loading for TT1000, 200lbs maximum loading for TT400)

Reeve the cable through the block pulley #21.

Fasten shackle #23 and safety hook #24 to the cable.


For double line operation:

(1000lbs maximum loading for TT1000, 400lbs maximum loading for TT400)

Reeve the cable through the block pulley #21, then through the block pulley #29.

Fasten shackle #23 to the cable and to the trolley support hanger #28

Operation

 Warning Do not operate the hoist before reading and understanding the instruction manual and engine manual.

Only well trained personnel should be allowed to operate the hoist.

Safety pawl must be used when raising the load to avoid sudden lowering of the load.

Do not engage the safety pawl when lowering the load. Equipment damage or personal injury may occur. Do not use safety Pawl as an emergency brake.

Always raise and lower load smoothly. Avoid sudden starts and stops.

The power unit has three handles. These handles can be positioned to suit the operator. The clutch handle is used for hoisting. When lifted up it will release the brake automatically. Brake handle releases the brake and is used for lowering.

To raise the load:

Engage the safety pawl by turning the safety pawl lever counter clockwise to avoid load from sudden lowering.

Raise the clutch handle to engage the clutch and load will move up.

Stabilizer handle can be used to as a support to control the power unit.

Release the clutch handle to stop the load when load reaches the required height. Pull load onto roof by using stabilizer handle.

To lower the load:

Disengage the safety pawl by turning the safety pawl lever clockwise to allow the load to move down. If safety pawl is jammed, raise the clutch handle just to free the safety pawl.

Raise the brake handle to disengage the brake and load will move down.

Release the brake handle slowly to engage the brake to stop the load.

Brake Adjustment

For proper operation, the brake should hold the capacity load when the brake handle is released.

If the load drifts down, the brake needs adjustment.

Note: If the brake is wet, it may not function properly and may not hold the capacity load. If this is the case, let the brake dry and test if the brake holds the capacity load.

During the brake adjustment, do not raise the load more than a few inches above the ground when testing the brake. Failure to do so may cause equipment damage or serious personal injury. Keep people away from hoisting area.

Tighten the two nuts below the springs to compress the two springs on the brake equally.

Tighten the two nuts half turn each time. If load still drifts down, repeat tightening the two nuts half turn until the brake holds the capacity load.

Loosen the two top nuts holding the brake lever.

Adjust the two bottom nuts so that there is 1/4 to 3/8 of an inch gap between the clutch and brake lever.

Tighten or loosen the two top nuts holding the brakes lever to leave 1/16 on inch gap between the nuts and brake lever.

Trouble Shooting

Trouble: Power unit does not lift load

Cause: Load is in excess of capacity.

Remedy: Examine the load weight including accessories. Reduce load to the specified capacity.

Cause: Slipperiness of belt.

Remedy: Belt might have been stretched, glazed or worn out. Replace or adjust the belt. Check for clutch handle restriction and correct if any.

Cause: Broken belt or belt out of sheave / pulley groove.

Remedy: Replace belt if broken. Reposition belt if it out of groove. Adjust belt and guides to engage properly.

Cause: Brake dragging.

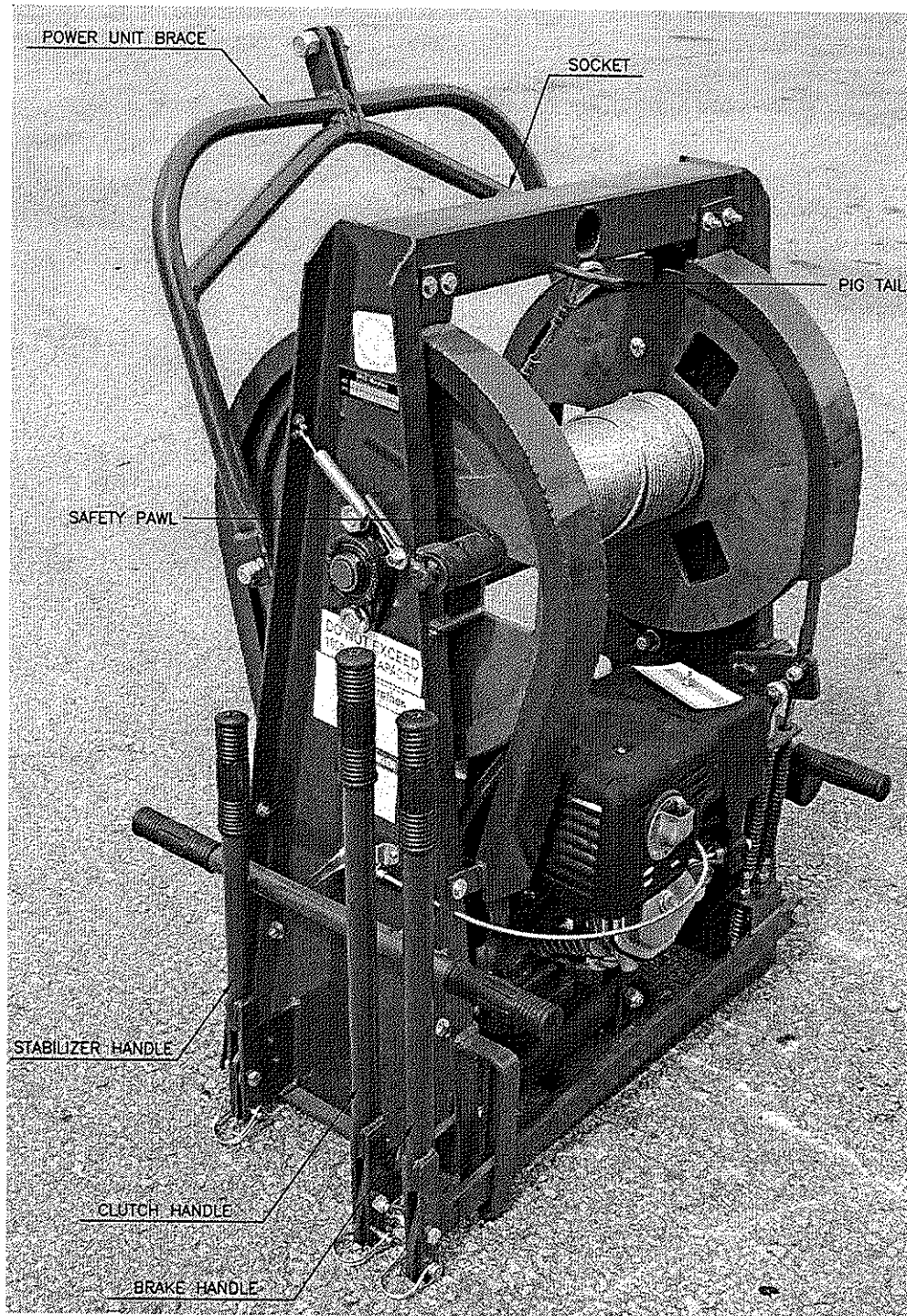
Remedy: Brake must be released while raising the load. Examine and adjust brake. See brake adjustment section.

Cause: Engine out of adjustment.

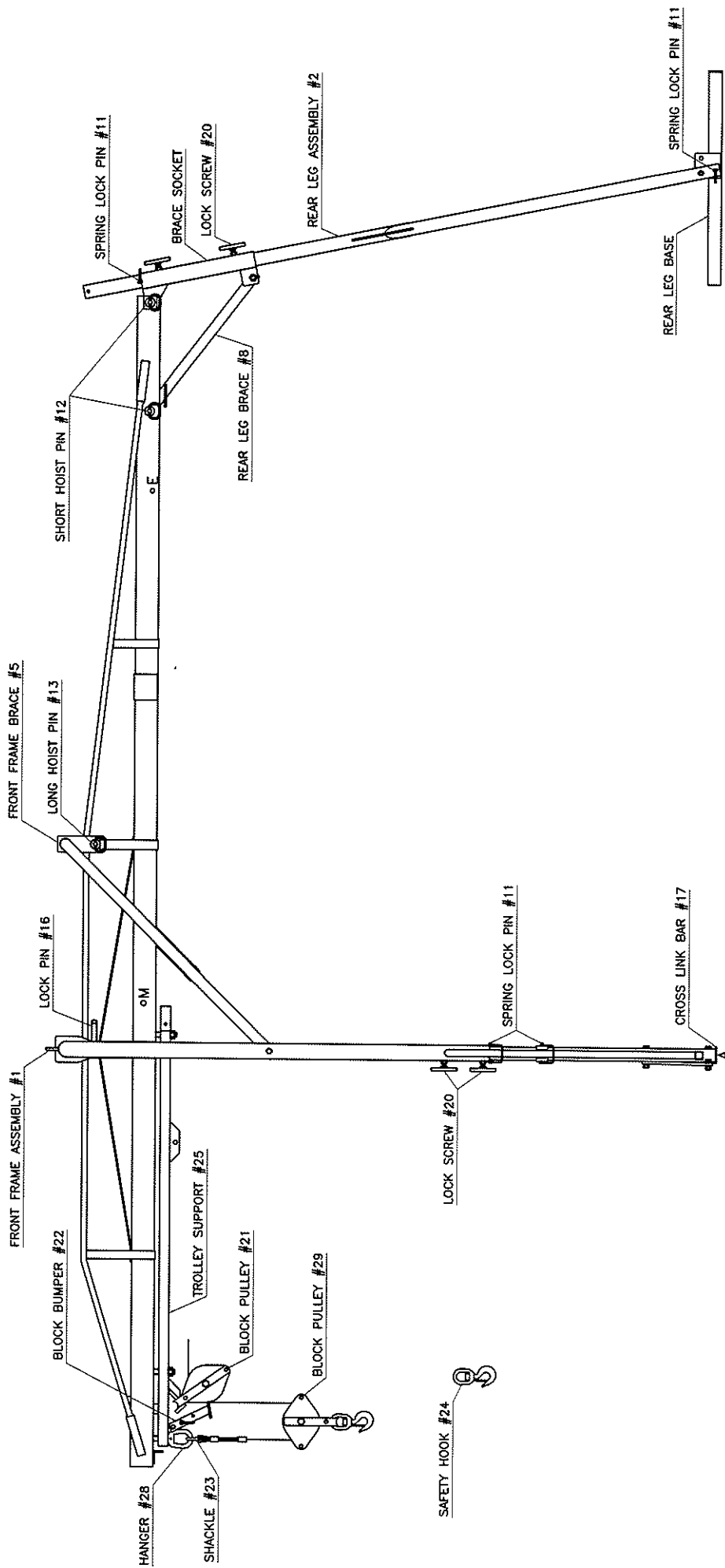
Remedy: Tune engine as per engine manufacturer manual.

Cause: Wire rope build-up on drum.

Remedy: Rewind wire rope correctly on the drum.



POWER UNIT
(TT1000 AS SHOWN)
(TT400 SIMILAR)



TROLLEY TRACK HOIST FRAME
 (TT1000 AS SHOWN)
 (TT400 SIMILAR)