

Low Speed Floor Machine

OPERATOR'S MANUAL

Rev C 20250520


 **WARNING** Read and understand the Operator's Manual before use. Failure to follow instructions may result in electrocution and/or serious injury.

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Technical Support


Technical support is available by submitting a Technical Ticket (helpdesk ticket) at onyxsolutions.com/support, or by contacting us at 704-827-9368.


Safety Precautions

This machine is suitable for indoor commercial floor scrubbing, polishing, stripping, and cleaning. All of other uses are not approved.

The following terms and symbols are used to identify statements of potential hazards which affect safety of yourself and others. Read and observe all safety statements found on this Operator Manual and on your machine.

 **DANGER:** The signal word DANGER indicates a hazardous situation which, if not avoided according to the instruction found in this Operator Manual or on your machine, will result in death or serious bodily injury.

 **WARNING:** The signal word WARNING indicates a hazardous situation which, if not avoided according to the instruction found in this Operator Manual or on your machine, could result in death or serious bodily injury.

 **CAUTION:** The signal word CAUTION indicates a hazardous situation which, if not avoided according to the instruction found in this Operator Manual or on your machine, could result in minor or moderate injury or damage to your engine or property.

The following safety symbols are used on the product and in this manual to alert the operator of potential safety hazards. Read them carefully, and understand their meaning.



Indicates **DANGER**, **WARNING**, or **CAUTION**



WARNING: Read and understand the Operator Manual before use. Failure to follow instructions may result in electrocution and/or serious injury.



WARNING: Electrocution risk. Unplug the machine cord from wall outlet before servicing the machine.




WARNING: Use caution to avoid slipping or falling when using machine on wet/slippery surfaces.



WARNING: Keep hands and feet clear of rotating parts such as pad, pad driver, brush, or motor parts.

 **WARNING:** The following information explains other safety precautions and potential hazards during machine operation:


- Do not operate the machine unless you have read and understood the operator manual.
- Do not operate unless you have been trained and authorized.
- Do not operate the machine unless all safety equipment such as guards and shrouds are in place.
- Do not operate the machine if the machine is not functioning normally.
- Only operate the machine when it is in an upright position.
- Do not operate the machine if any blockage prevents normal pad/brush rotation.
- This machine has rotating parts. Do not wear loose clothing/jewelry and secure long hair. Entanglement can cause serious injury.
- Stop the machine immediately and have the machine serviced by qualified personnel if you feel, hear, or experience any vibration or unusual noise.
- Take care to avoid slipping or falling.
- Do not operate the machine on sloped surfaces.
- Wear appropriate anti-skid shoes.
- Walk slowly, especially during turning and stopping. Avoid quick or sharp changes in direction.
- Pay attention for bystanders and keep distance.
- Proceed slowly and carefully when approaching a location of poor visibility, such as the end of an aisle or where walkways intersect.
- Look behind yourself prior to operating machine in reverse. Use caution and remain aware when operating machine in reverse.
- Turn off machine and disconnect power cord from wall outlet before attempting to make any adjustments.
- Collect and dispose any residual liquid waste in accordance with local rules and regulations.
- Operate the machine in a clear, unobstructed area. Remove any debris, clutter, or obstacles from the floor before use.

 **WARNING:** The following information explains other safety precautions regarding electrical safety:

- Inspect the power cord for damage prior to each use. Do not operate the machine if the power cord is damaged.
- Do not pull on the power cord. Do not drag the machine by the power cord or use the power cord as a handle.
- Keep power cord clear of any hot surfaces, sharp edges, moving parts, or any other hazards which may damage the power cord.
- Do not use extension cords, other than authorized by manufacturer.
- Do not connect the machine to an outlet without proper grounding.
- Do not attempt to power multiple machines or any other appliances the same outlet or from outlets that are connected to the same circuit.

 **WARNING:** The following information explains other safety precautions and potential hazards during machine storage:

- Turn off machine and disconnect power cord from wall outlet before storing.
- Do not let children play on or around the machine.
- Do not leave the machine unattended in places populated with bystanders
- Do not store the machine in places where unauthorized or untrained personnel could access or use the machine.

 **WARNING:** The following information explains other safety precautions and potential hazards during machine repair & maintenance:

- Turn off the machine and disconnect power cord from wall outlet before conducting any machine repair.
- Do not wear loose jacket, shirt, or over sleeve.
- Wear protective gloves and eye protection when conducting any machine repair, and especially when contacting wires or other electronic components.
- Use only the replacement parts provided or recognized by the manufacturer.
- All maintenance and repairs must be carried out by qualified personnel.
- Do not alter the machine in any way, other than advised by the manufacturer.
- Some parts including motor and electrical parts can become hot enough to cause burns. Allow these parts to cool before conducting any maintenance or repairs.

 **WARNING:** The following information explains other safety precautions and potential hazards during machine transport:

- Turn off the machine and disconnect the power cord from wall outlet before transporting the machine.
- Secure the machine with rope or straps, when transporting on truck or trailer.
- The machine is heavy. Take care when pushing the machine up or down a ramp. Do not attempt to use a ramp with excessive incline angle or a ramp that is wet or slippery.

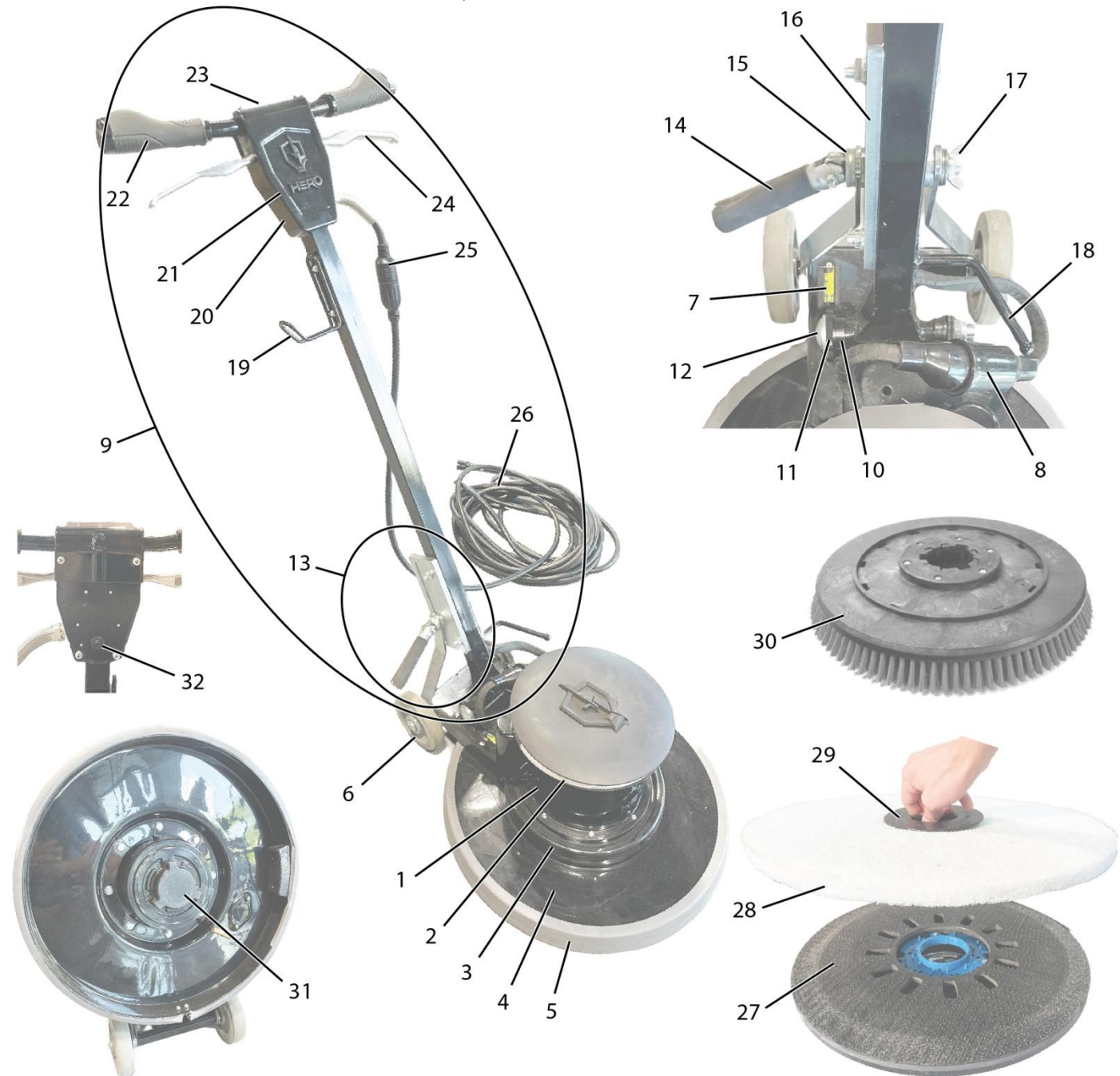
Machine Specifications

Head Sizes	13, 17, 20 inch (interchangeable)
Motor Power	1.5 HP
RPM	175
Voltage	110-120V (AC)
AMPS	12.5A
Frequency	60 Hz
Power Cord	50 ft, 14/3 STO, Yellow
Transmission	Triple Planetary, Cast Iron w/Hardened Steel Gears
Handle Length	42 inch
Solution Tank	4 Gal Tank Available
Weight Kit	28 lb Kit Available
Dust Port & Skirt	Available
Headlight	LED Light Strip Included

Components & Controls

The following components and controls are found on your machine and referred to throughout this Operator's Manual. You must learn the names and locations of these components and controls, and understand their functions:

- | | | |
|---------------------------|--|-----------------------|
| 1. Motor | 12. Carriage Bolt & Nut (T-Handle Pivot) | 23. Safety Switch |
| 2. LED Light | 13. T-Handle Lock Assembly | 24. Engagement Levers |
| 3. Deck | 14. T-Handle Locking Lever | 25. Pig Tail |
| 4. Apron | 15. T-Handle Friction Gaskets | 26. Power Cord |
| 5. Bumper Guard | 16. T-Handle Locking Bracket | 27. Pad Driver |
| 6. Transport Wheels | 17. T-Handle Locking Adjustment Wingnut | 28. Pad |
| 7. Bubble Level | 18. Power Cord Wrapping Post | 29. Pad Retainer |
| 8. Motor Power Connection | 19. Pad Driver Hanger | 30. Brush |
| 9. T-Handle | 20. Switch Compartment | 31. Motor Coupler |
| 10. T-Handle Bushings | 21. Switch Cover Plate | 32. Circuit Breaker |
| 11. Pivot Bracket Tabs | 22. Grips | |



Machine Preparation

Unpacking Machine

1. Open the top panel of corrugated carton, and remove any foam or corrugated packing.
2. Identify and remove all components:
 - a. Motor Head (including Motor, Deck, Apron)
 - b. T-Handle
 - c. Power Cord
 - d. Parts Bag
3. Dispose/recycle carton material in accordance with local rules and regulations.

T-Handle Installation

1. Make sure the T-handle bushings are properly installed outside both sides of the T-handle pivot tubing.
2. Remove the large carriage bolt and nut, which will serve as T-handle pivot.
3. Insert the T-handle (with bushings) between the pivot bracket tabs on deck. Make sure the T-handle is oriented properly by checking that the grips are angled toward machine rear. The T-handle can be laid down on the ground during assembly.
4. Insert ("thread") the large carriage bolt through the first tabs of the pivot bracket, the pivot hole on the T-handle, and the second tab of pivot bracket. Fully insert the carriage bolt, so its square neck mates with the square hole in first pivot bracket.
5. Install and tighten the large nut.
6. Install the handle locking bracket to the T-handle, using the two provided (smaller) carriage bolts and nuts.

Connect Motor Power

1. Locate the power cord and plug coming out of the motor, and also the power cord and plug coming out of the lower part of T-Handle.
2. On both sides, pull back the outer cover to access the electrical connections.
3. Connect both electrical connections:
 - a. Standard 3-prong power plug which provides power to motor.
 - b. Smaller 2-pin connection which provides power to LED light.
4. Mate the two halves of the outer cover, to produce a sealed cover.

Pad and Pad Driver Installation

1. Remove the pad retainer from pad driver.
2. Install pad to the gripper surface of pad driver, paying attention to center the pad.
3. Secure the pad by installing the pad retainer, and tightening it by turning it clockwise.
4. Lock the T-handle in most forward position and rock the machine back, to gain access to motor coupler.
5. Install pad driver coupler to motor coupler by align the three gaps on pad driver coupler with the three tabs on motor coupler.
6. Turn the pad driver counterclockwise (quickly) to seat it in position.

Connect Main Power Cord

1. Locate the pig-tail near the top of T-handle.
2. Locate the rotational plug connection on the main power cord.
3. Insert the 3 prongs into the three slots, noting that there is a notched prong that must insert into the notched slot.
4. After inserted, rotate/twist the two connections to lock them together.

Power Cord Management

1. When the machine is to be transported or stored, the power cord can be wrapped on the machine:
 - a. For the upper wrap support, use the top of T-handle grip.
 - b. For the lower wrap support, use the power cord wrapping post on lower part of T-handle.
2. During use, the power cord should be removed from the machine and laid across the floor.

Machine Operation

Before Engaging the Motor

1. Rock the machine forward, so that the entire weight of the machine is supported by the pad/brush. The transport wheels should be lifted in the air and not be touching the ground.
2. Release the T-handle lock by lifting the locking lever upward with your hand or foot. This will release the T-handle and allow it to pivot freely.
3. Position the T-handle so the grips are at the same height as your belt/waist.
4. Lock the T-handle into this position by pressing down on the locking lever with your foot or hand.
5. Ensure that the T-handle is securely locked. If it is not securely locked, refer to the “Adjust T-Handle Lock” portion of the “Machine Adjustments and Maintenance” section.
6. Unwind the power cord and lay it on the ground behind the machine toward wall outlet.



WARNING: Make sure the power cord is behind the machine and not at risk of making contact with pad or brush. Always pay attention to the position of power cord both before and during operation.

7. Plug the power cord into wall outlet. Note that the LED light will illuminate.
8. Firmly grab the grips with both hands. Additionally, use your midsection (belt line/waist/hips) to add support of T-handle.
9. Slightly lift on the grips to level the deck, as indicated by the bubble level.
10. At this point, you are ready to engage the motor according to next section.

Engage/Disengage Motor



WARNING: Do not attempt to engage the motor or operate machine if you are untrained. If this is your first attempt to operate machine, seek training from an experienced operator, supervisor, or trainer. Conduct this training in an open area clear from any walls, obstructions, or bystanders.

1. Use one of your thumbs to press the safety switch forward.
2. Use fingers of your other hand to grab and pull the engagement lever toward the grip, to energize the motor and cause it to spin.
Note: the motor will continue to spin as long as at least one engagement lever is pulled toward grip, but it can be either engagement lever (or both).
Note: The safety switch only needs to be pressed with your thumb during initial start up. Once the motor starts spinning, you do not need to continue pressing on the safety switch.
3. To disengage the motor, simply release both engagement levers.



WARNING: Operation of this machine requires your complete attention. If you are distracted or if you feel yourself losing control for any reason, immediately release the engagement levers to disengage the motor. Attempt to regain control with the motor engaged can result in operator injury and/or property damage.

Operation Tips

- Always start the machine in an open area clear of walls, obstructions, or bystanders.
- Once the motor is engaged, first keep it level and stable in place. Then begin moving the machine slowly using very gentle adjustments.
- This machine operates using a side-to-side “swinging” motion. The swing is controlled by slightly raising or lowering the T-handle grips.
- Use your body’s midsection (belt line/waist/hips) to help support the machine. Holding the handles away from your body increases fatigue and reduces control.
- Always maintain a firm grip with both hands.
- The machine will naturally push slightly against you. This is normal and helps you maintain control.
- Don’t fight the machine. Work with it by making small, subtle movements and using your body weight as an anchor. Let the machine do the work.
- Do not swing the machine too fast. Doing so risks operator fatigue, loss of control, and poor/inconsistent results on the floor.
- Always remain aware of power cord position. Keep it away from pad/brush to avoid contact or tangling. Keep away from your feet to avoid stepping or tripping on it.

Machine Adjustments & Maintenance

Adjust T-Handle Lock

The T-handle lock assembly relies on clamping force to “lock” the T-handle position. Proper adjustment of the clamping force shall result in the following characteristics:

1. When pushing the T-handle locking lever into the locked position, the lever action is firm and “crisp”.
2. When the T-handle lock is locked, the T-handle is secure and not able to pivot.
3. The T-handle locking lever is easy to release.
4. When the T-handle lock is released, the T-handle can pivot freely and smoothly.

Over time, the clamping force may require adjustment to the T-handle locking adjustment wingnut, as follows:

1. To tighten the clamping force, turn the T-handle locking adjustment wingnut clockwise.
2. To loosen the clamping force, turn the T-handle locking adjustment wingnut counterclockwise.

Replace Pad

1. Position the T-handle to its most forward position, and lock the position.
2. Pull back on the T-handle and lay it on the ground, causing the pad to be lifted vertically into the air.
3. Position yourself in front of the pad driver/brush, so that you are looking at the bottom of the pad/brush.
4. Remove the pad retainer, by turning it counterclockwise.
5. Remove the pad.
6. Install new pad onto pad driver gripper surface, making sure it is centered with pad driver.
7. Reinstall the pad retainer, turning it clockwise to secure the pad.
8. Raise the T-handle to return the machine to operation or transport position.

Replace Pad Driver/Brush

1. Position the T-handle to its most forward position, and lock the position.
2. Pull back on the T-handle and lay it on the ground, causing the pad driver/brush to be lifted vertically into the air.
3. Position yourself in front of the pad driver/brush, so that you are looking at the bottom of the pad/brush.
4. Grab two opposite edges of the pad driver/brush and quickly rotate clockwise, in a short and jerky motion. This will loosen the pad driver/brush from the motor coupler.
Note: if the pad driver/brush is tight and difficult to loosen, you can press a flat tip screw driver between one of the three driving tabs on motor coupler and the driven tab on pad driver/brush coupler, and then twist the screw driver to pry the two components apart from each other.
5. Once loose, align the three tabs of the motor coupler with the three gaps in the pad driver/brush coupler, allowing the pad driver/brush to be removed.
6. To reinstall a pad driver/brush, reverse the steps above.

General Maintenance

Prior to each use, check the following components and function. Arrange an authorized service provider to replace/repair parts as necessary:

- All fasteners are tight and secure
- Power cord is free from wear/damage
- Grips are installed properly and free from wear/damage
- Engagement levers and safety switch are in good working order
- Motor engages properly and rotates smoothly
- LED light illuminates properly
- Bumper guard is securely in place and free from damage/wear
- Pad/brush are in good condition
- T-handle lock is functioning properly and T-handle pivots freely when released
- No abnormal sounds or vibrations from machine

Machine Transport

To transport the machine within a facility:

1. Position the T-handle to its most forward position, and lock the position.
2. Disconnect the power cord from wall outlet.
3. Wrap the power cord on machine:
 - a. For the upper wrap support, use the top of T-handle grip.
 - b. For the lower wrap support, use the cord wrapping post on lower part of T-handle.
4. Grab grips with both hands, and rock the machine rearward allowing the transport wheels to contact floor and support the machine.
5. Roll the machine on its rear wheels using the dolly-style method, keeping the pad or brush off the floor.

For long distance transport on a trailer or vehicle:

1. Prepare the machine for transport, according to steps above.
2. Position machine on the trailer or vehicle. Lift the machine with two people.
3. For stability, it is recommended to lay the machine down by resting the T-handle grips on the floor of trailer/vehicle.
4. Secure machine using ropes or tie-down straps.

Machine Storage

1. Prepare the machine for transport, according to the steps above in Machine Transport section.
2. Remove the pad driver/brush and hang it on the pad driver hanger (near top of T-handle).
Note: never store the machine with its weight supported by a brush/pad, because this will compress the brush/pad and lead to unevenness or damage and require premature replacement.
3. Inspect the machine for any damage or wear. If needed, have the machine repaired by an authorized service technician.
4. Store the machine in an indoor, climate-controlled location.

Troubleshooting Guide

<u>Problem</u>	<u>Potential Reason</u>	<u>Solution</u>
Motor does not turn on when engagement lever is engaged... ...and LED light is not illuminated.	Machine is not plugged in.	Plug in machine.
	Motor power connection is not plugged in.	Plug in the motor power connection.
	Power cord is damaged.	Repair/replace power cord.
	Facility outlet is faulty or circuit breaker has been tripped.	Check outlet. Reset facility circuit breaker if required. Take care not to run multiple machines or appliances from same circuit.
...and LED light is illuminated.	Motor is damaged/faulty.	Replace motor.
	Switch is damaged/faulty.	Replace switch.
	Electrical issue with internal motor/switch wiring.	Have machine inspected by qualified service technician.
Excessive vibration/noise	Motor is damaged/faulty.	Have motor inspected by qualified service technician.
	Loose fastener.	Tighten fastener.
	Pad is not centered on pad driver.	Reinstall pad in center of pad driver.
	Pad/brush is compressed and uneven.	Install new pad/brush. Note: do not store machine with weight supported by pad/brush.
	Pad driver/brush is not secured properly onto motor coupler.	Reinstall pad driver/brush and properly secure onto motor coupler.
	Rubber dampener(s) is/are missing from pad driver/brush coupler.	Reinstall new rubber dampener(s).
	T-handle lock assembly is loose.	Tighten the T-handle lock assembly.
Motor shuts off and internal circuit breaker requires reset.	Improper power cord or length is causing voltage drop and increase of amp draw.	Use proper power cord with proper length.
	Insufficient supply voltage.	Have facility outlet/circuit inspected by qualified electrician.
	Excessive weight during operation.	Reduce the weight on head.
	Floor is sticky/tacky.	Allow floor finish to harden before using machine.
	Motor is damaged/faulty.	Have motor inspected by qualified service technician.
	Internal loose wire or short circuit.	Have machine inspected by qualified service technician.
Only one of the engagement levers functions properly.	Faulty engagement lever or switch.	Have faulty components replaced by qualified service technician. Note: the machine includes two independent switches, one for each lever, as an intentional redundancy.
Burning smell or smoke observed.	Motor is damaged/faulty.	Have motor inspected by qualified service technician.
	Damage to other electrical component.	Have machine inspected by qualified service technician.
T-handle is not locking.	T-handle locking adjustment wingnut is loose.	Tighten the wingnut.
	The friction gaskets on either side of the T-handle locking bracket are worn/missing.	Reinstall new friction gaskets.
	Other missing/damaged part from T-handle lock assembly.	Replace missing/damaged part.



We believe that tomorrow can, and will, be better than today.

But, it takes a hero to change the world.

It takes you.

BECOME HERO™

B e c o m e **H E R O** . c o m

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