

MINI-MOVER CONVEYORS

OWNER'S MANUAL

LITE SERIES Conveyor (INTEGRAL DRIVE)



MADE IN THE U.S.A.



SEE
SAFETY WARNINGS ON
PAGES i AND 2

Visit us on the web at www.mini-mover.com

UNPACKING YOUR NEW CONVEYOR

Thank you for your purchase of this new Lite Series Mini-Mover Conveyor.

Please read this manual thoroughly before you unpack and install your conveyor. We suggest that you keep the manual and enclosed warranty information for future reference.

You can also access this manual online via your Smart Phone, by scanning the QR Code label located on the conveyor siderail.

1. Open both ends of the carton.
2. Do not tip carton on end.
3. Locate the end where the drive package is visible.
4. Grasp the drive package and conveyor siderail, and pull the conveyor from the carton.
5. Carefully remove the packing material.
6. The conveyor module is completely assembled and ready for installation. No further adjustment should be necessary.
7. If any questions arise from initial operation following assembly, refer to “Electrical Troubleshooting” on Pg. 6 or call Customer Service — 866-380-5128 — for immediate assistance.

Retain the carton and packing material, in the event the conveyor must be returned for service.



IMPORTANT!

**Read First, Before
Operating Conveyor**

Due to the variety of drive types, drive positioning & belt configurations, point-of-installation guarding is the responsibility of the end user.

As a result, the purchaser and/or end user of this product acknowledges that Whipple Enterprises Mini-Mover Conveyors cannot reasonably foresee the methods employed by the purchaser and/or end user regarding point-of-installation guarding; as a result, the purchaser and/or end user agrees to hold Whipple Enterprises harmless in the event that any claim is made against Whipple Enterprises as a result of the purchaser's and/or end user's activities with respect to point-of-installation guarding, or any other aspect of the installation and use of this product that is not in conformity with the provisions of your Mini-Mover Owner's Manual.

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IMPORTANT SAFETY INSTRUCTIONS

To reduce the risk of fire, electrical shock and injury, always follow these basic safety precautions when using your conveyor.

1. Read and follow all instructions. Follow all warnings and instructions marked on your conveyor. Save these instructions.
2. **Connect the conveyor to a properly grounded power source.** Operating the conveyor beyond the voltage or frequency parameters of the drive package will void the Whipple Mini-Mover product warranty (see Pg. 10). Check with a qualified electrician if you are not sure if the power source is grounded properly.
3. Do not overload power source or use extension cords. This can increase the risk of fire or electrical shock.
4. Do not allow anything to rest on the power cord. Do not install the conveyor where people will walk on the power cord.
5. **Disconnect the conveyor from the power source before cleaning or maintenance.** Do not use liquid or aerosol cleaners. When necessary, clean using a soft cloth moistened with a mild detergent solution.
6. Do not locate the conveyor in areas where water or other fluids may splash on the motor or electrical control box.
7. Do not place the conveyor on an unstable cart, stand, or table. A fall could cause serious damage to the worker and/or conveyor.
8. The conveyor gearmotor is air cooled. The gearmotor should not be placed in a built-in enclosure unless proper ventilation is provided.
9. Do not operate the conveyor during an electrical storm. If your area gets frequent thunder storms, we strongly recommend connecting your conveyor into a power surge protector.
10. Disconnect the conveyor from the power source and consult a qualified service representative in any of the following situations.
 - A. When the power supply cord is frayed or damaged.
 - B. If liquid is spilled on the motor housing or electrical control box.
 - C. If the conveyor does not operate normally when following the basic operating instructions.
 - D. If the conveyor has been dropped or the motor, gearhead, or electrical control box is damaged.
11. Keep all loose clothing away from conveyor belt.
12. Due to the variety of drive types, drive positioning & belt configurations, **point-of-installation guarding is the responsibility of the end user.**

Note: As a result, the purchaser and/or end user of this product acknowledges that Whipple Enterprises cannot reasonably foresee the methods employed by the purchaser and/or end user regarding point-of-installation guarding; as a result, the purchaser and/or end user agrees to hold Whipple Enterprises harmless in the event that any claim is made against Whipple Enterprises as a result of the purchaser's and/or end user's activities with respect to point-of-installation guarding, or any other aspect of the installation and use of this product that is not in conformity with the provisions of this owner's manual.

INSTALLATION & OPERATION

Read all unpacking and safety instructions given on pgs. 1 and 2 before performing the following installation or operation procedures on your conveyor.

A. Tools You Need (Supplied with Unit)

Your Lite Series conveyor comes with a tool kit containing the following items. The hex keys are used during installation and maintenance procedures. The tensioning tool is used after belt replacement or for adjustments. Two spare fuses are also provided, if applicable, as backups; the fuse amperage will match what's needed for gearmotor/controller option equipped on your unit.

<u>Tool:</u>	<u>Where used:</u>
• 3/16" hex key	Conveyor module: Belt tension lock screw
• 5/32" hex key	Conveyor module: Siderail (maintenance access screws)

B. Conveyor Installation

1. During setup, place your conveyor module on any stable surface, mounted to stand, surface or machine mounting brackets or other sturdy fabricated bracket.
2. Ensure that the conveyor unpacking & assembly location is dry and **not exposed to water or other liquids** that could damage the gearmotor or electrical control box.
3. **Do not tighten or otherwise adjust the tension of the belting**, which is pre-installed prior to shipment. It is properly tensioned and tracked at the factory, and is ready for operation right out of the carton.

***Tip:** From the underside of the module, push the belting upward toward the bedplate to establish the normal amount of "slack" for the belt material on your unit. Use this as your tension benchmark for future belt maintenance. A properly adjusted belt prolongs component life. (See Pg. 8, Belt Tensioning.)*

4. Ensure the conveyor's installed location provides sufficient siderail access (blank siderail, per Fig. 2a) for future cleaning and maintenance.

C. Conveyor Operation

1. Your conveyor is ready, in most cases, for installation out of the carton. If your particular unit requires other actions, any additional instructions will accompany the shipment.
2. The belt has already been tensioned at the factory. Do not tighten further.
3. Connect the power cord to a properly grounded power source.
4. For fixed-speed controllers, move the On/Off switch to the On position.
5. For variable-speed controllers, refer to the operating guide provided for your controller.

If additional accessories have been ordered with your Mini-Mover conveyor, proceed to the next page for more information.

ADDITIONAL SETUP OPTIONS

A. Installation of Accessories

Many accessories are available for Mini-Mover conveyors, such as leg stands, part stops, mounting brackets, discharge ramps and more. When unpacking your conveyor, ensure all accessory items are set aside for assembly after the basic conveyor installation has been completed. Call Customer Service if you have any questions about accessory installation.

B. Conveyor Belt Speed & Reversing Direction of Travel

1. Belt Running Speed

If your unit is equipped with a factory-supplied drive package, there are two general categories:

- **Fixed Speed:** Conveyor will run at a single speed, determined by the gear-ratio the user selects to be installed on the motor at the factory. Changes in speed are accomplished by changing the gearhead on the motor.
- **Variable-Speed:** Conveyor will run within a range of speeds. Mini-Mover Conveyors offers several different options that users may order to best suit the operating speed ranges, user controls, programmability and other features that the application requires. *For this reason, the detailed operating guides for our Variable Speed controller packages are provided separately from this manual.*

2. Factory-Standard Belt Direction — “Pull”

The standard, factory-set direction of belt travel is called a “pull” configuration, meaning that the gearmotor “pulls” the belt (and product loaded onto it) toward the gearmotor. Pull configuration allows the gearmotor to deliver maximum torque and carrying capacity.

3. Reversing Belt Direction in the Field— Changing to “Push”

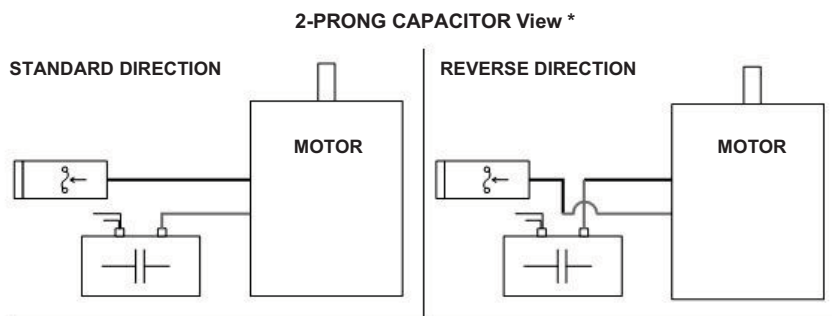
Sometimes space limitations or other factors require the user to change the direction of belt travel, so that product is pushed away from the gearmotor, hence “push” configuration. The gearmotor delivers slightly less torque, but the tradeoff is the space-savings at the conveyor’s discharge end.

Change Direction on Fixed-Speed Drive Package

- Disconnect the power source.
- Wait 2 minutes, then open the electrical control box to access wiring.
- Swap wires or connectors per the wiring diagram located inside of the control box cover; a general diagram also appears as Fig. 1 below.
- Replace the electrical control box cover before reconnecting the to the power source.

Change Direction on Variable-Speed Drive Package

Refer to the manufacturer’s operating guide for your controller package, which is provided separately from this manual.



* For 4-PRONG CAPACITOR version: Move the connector with 2 wires to vacant prong

Fig. 1 — Fixed-Speed Only: Control Box Wiring Diagram

LITE COMPONENT DIAGRAMS & DESCRIPTIONS

These illustrations provide location of conveyor controls, maintenance access screws, gearmotor, gearhead and belt adjustment points.

- 1 **Accessory Mounting Holes.** Tapped 10-32.
- 2 **Drive Pulley Lock Screw.** Locks drive pulley in position after belt tracking adjustment is completed. (Located on opposite, or blank, side of the drive pulley.)
- 3 **Pulley Bearing Positioning Pins.** Locks position to prevent bearing adapter rotation.
- 4a **Mounting Holes.** Drilled and tapped 1/4 -20 to accept optional mounting bracket or stands.
- 4b **Maintenance Access Screws.** Allow attachment of standoffs, if equipped, and siderails to bedplate. Use 5/32" hex key.
- 5 **Belt Tension Lock Screws.** Locks idler pulley in place after adjusting belt tension. Use 3/16" hex key.
- 6 **Gearmotor.** Fractional HP. Includes motor and gearhead. Lubricated for life.

Fixed-Speed Controls

(For units equipped with **Variable Speed Controls**, refer to the manufacturer's operating guide, which is supplied separately from this manual)

- 7 **On/Off Switch.** Switches power to motor capacitor and winding.
- 8 **Electrical Control Box.** Houses motor capacitor, wiring, On/Off switch, indicator light and fuse holder.

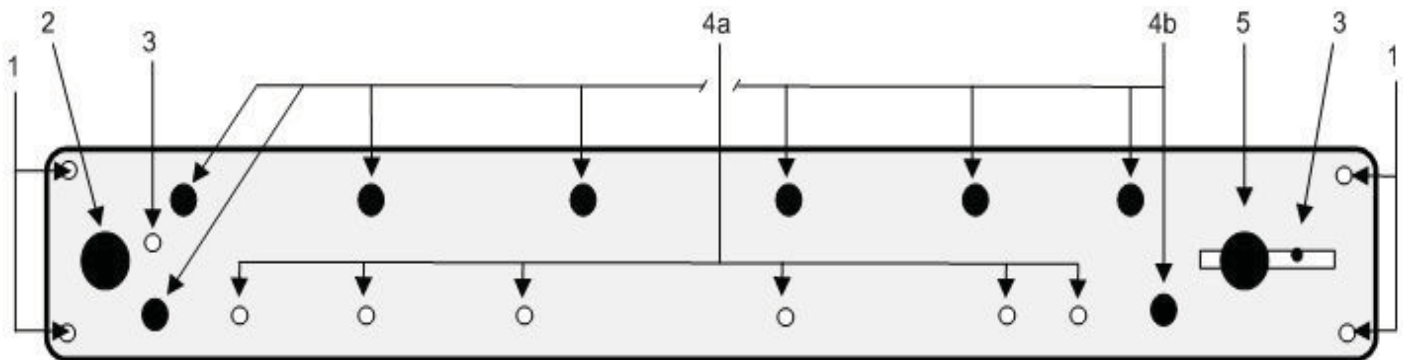


Fig. 2a — Conveyor Side View (blank side)

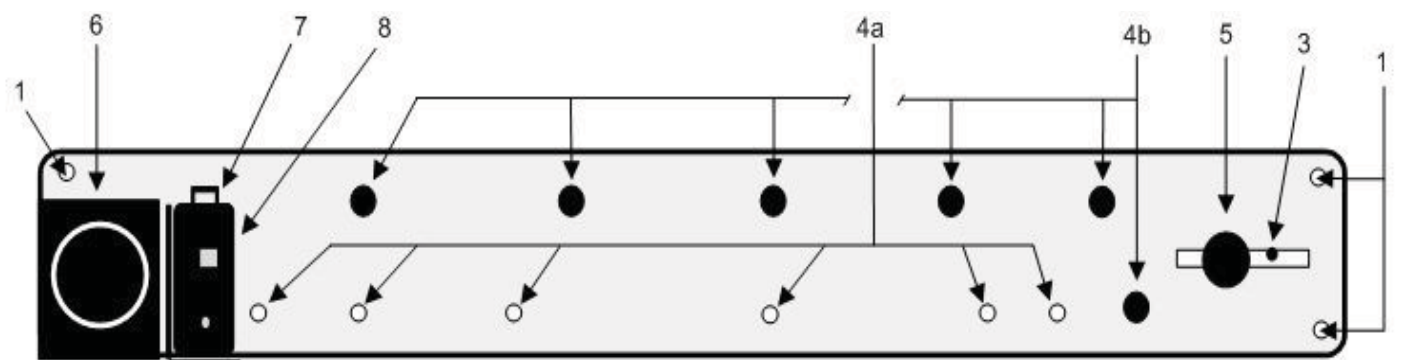


Fig. 2b — Conveyor Side View (drive side). *Fixed Speed power controls shown above*

ELECTRICAL TROUBLESHOOTING

Upon initial unpacking and installation, it is recommended that you inspect and test the condition of the conveyor's main electrical components to ensure smooth operation. In the event that any connections have loosened during shipment, the following are frequently checked areas. If you continue to experience problems with your unit, call our Customer Service Dept. at 866-380-5128 for immediate assistance.

COMPONENT *	SYMPTOM	START CONDITION	ACTION
Fixed Speed Control	No indicator light. Conveyor will not run.	Power connected. Power switch ON.	Unplug & check fuse connection. Check wire connections. Replace fuse if needed.
Fixed Speed Control	Indicator light ON. Conveyor will not run.	Power connected. Power switch ON.	Unplug & check connections inside control box.

* For conveyor equipped with **Variable Speed Control** package, refer to the manufacturer's operating guide, provided separately with this unit

CONVEYOR MODULE MAINTENANCE

Utilizing an integral gearmotor drive, rugged aluminum frame, sealed bearings, and reinforced endless belting, Mini-Mover Lite series conveyors are designed for years of trouble-free service. To maximize belt life and reduce the risk of damaging the bed plate and side rail surfaces, removal of debris and cleaning the conveyor belt on a regular basis is recommended. Removal of the blank siderail is important for thorough access to clean the needed surfaces.

A. Removing the Blank Siderail:

(See figs, 2a & 2b on Pg. 5)

1. Turn the unit off (On/Off Switch) and disconnect the conveyor drive from the electrical power source.
2. Remove the unit from the stand or other mounting, and place it on a flat, stable surface.
3. Locate the belt tension lock screws (see figs. 2a and 2b, # 5) and loosen -- do not remove -- using a 3/16" hex key.
4. Turn the unit on its side with the drive package facing down.
5. Using a 5/32" hex key, remove the maintenance access screws (Fig. 2a and 2b, #4b).
6. Lift the siderail straight up to access the belt and bedplate, and set aside.

B. Routine Module Cleaning:

1. Follow the procedure above to remove the blank siderail.
2. Slide the belt off both pulleys and set aside.
3. Using a brush (do not use a wire brush) or cloth, remove any debris or other bulk material from the inside surface of the drive siderail and all surfaces of the blank siderail.
4. Use a mild solution of detergent and warm (not hot) water-moistened cloth to clean all surfaces of both siderails, bedplate and pulleys.
5. Proceed to C-1, Routine Belt Cleaning.

Caution: Do not allow liquid to enter the motor housing.

CONVEYOR MODULE MAINTENANCE

C. Cleaning the Belting Material:

1. Routine Belt Cleaning:

- a. For polyurethane & PVC belting materials: Use a mild solution of detergent and warm (not hot) water-moistened cloth to clean all surfaces of both sides of the belt.
- b. For belting made of fabric or specialty textured surfaces, use a soft to medium bristle brush (not a wire brush) to work the above-mentioned detergent solution into the textured surface, and rinse when completed.

2. Periodic Tough Cleaning:

Between routine module or belt cleaning intervals, or to clean tougher debris or buildup, the following are suggested:

- **For occasional wipedown:** Use “409” or equivalent solution. Wet surfaces using a moistened cloth. Let stand for 10 minutes, scrub with cloth and rinse with water-moistened cloth.
- **For infrequent cleaning:** Cleaning solvents may be considered for very tough debris, but first, please consult factory for recommended agents to use on the conveyor.

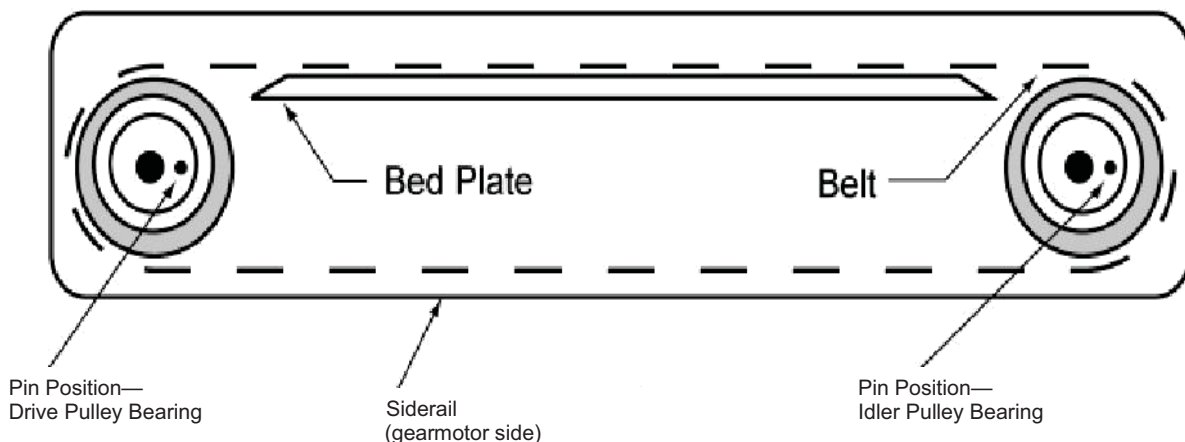
D. Belt Replacement:

1. Follow the procedure on Pg. 6 to remove the blank siderail.
2. Slide the old belt off the pulleys and discard.
3. Slide the new belt over the pulleys and follow the assembly procedures in Step E below.

E. Module Reassembly:

1. Position the belt on the pulleys at both ends of the conveyor, then proceed to Step 2.
2. Position the blank siderail to align the siderail to maintenance access screw holes, and the bearing adaptors to the pulley bearings.
3. Insert and hand tighten the siderail to maintenance access screws.
4. Using a 5/32” short handle hex key, tighten the maintenance access screws until the key handle flexes approximately 1/2.”
5. Proceed to the belt tensioning procedure on Pg. 8

Fig. 3 - Bearing Alignment Pin Positions



BELT TENSIONING & TRACKING

PREPARATION:

Position the conveyor to easily access both sides of the idler end (opposite the drive end).

A. TO TENSION THE BELT:

1. Position the conveyor to easily access both sides of the idler end (opposite the drive end).
2. Install the belt tensioning tool with hook connector over the belt tension lock screw washers. (See arrows, figs. 4 & 5.)
3. Turn the knurled adjustment knob(s) on the tensioning tool clockwise until the tensioning cross brace is against the conveyor siderail ends. On the 2-knob tensioning tool, alternately turn the knobs on either side in $\frac{1}{2}$ -turn increments to maintain equal distance between fixed and tensioning cross-braces. (See arrows, figs. 4 & 5)
4. Using a $\frac{3}{16}$ " hex key loosen both the belt tension lock screws. On the 2-knob tensioning tool, to assure no side-loading during tensioning operation, use a ruler to measure distance at two points between fixed and tensioning braces, and adjust knob as needed to align braces.
5. To tension belt:
 - 1-knob version -- Tighten (clockwise) the tensioning tool knurled adjustment knob in $\frac{1}{2}$ - turn increments until hand tight.
 - 2-knob version -- Tension via alternately turning knobs $\frac{1}{2}$ turn until belt is tensioned; to assure proper pulley alignment, measure with a ruler as in Step 4 above.

CAUTION: Do not over-tension belt. Hand-tighten the adjustment knobs. Use only that force which can be applied by thumb and forefinger on the tensioning tool adjustment knob.

6. Using the $\frac{3}{16}$ " hex key, tighten both tension belt adjustment screws until key handle flexes approximately $\frac{1}{2}$ ".
7. Proceed to Step B for the belt tracking procedure on Pg. 9.

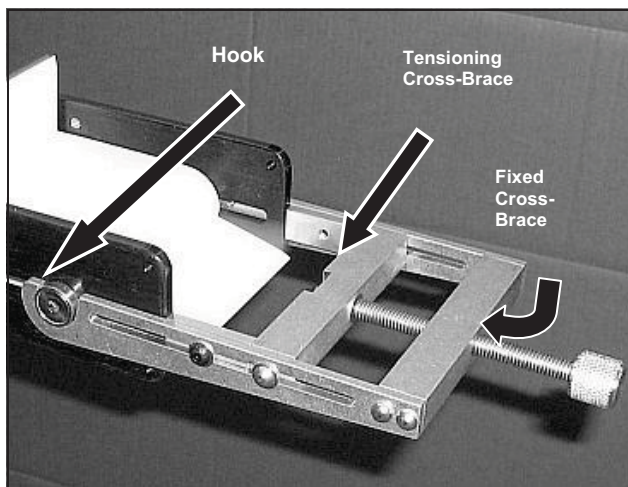


Fig. 4 — 1-knob tensioning tool (belt widths ≤ 10 in.)

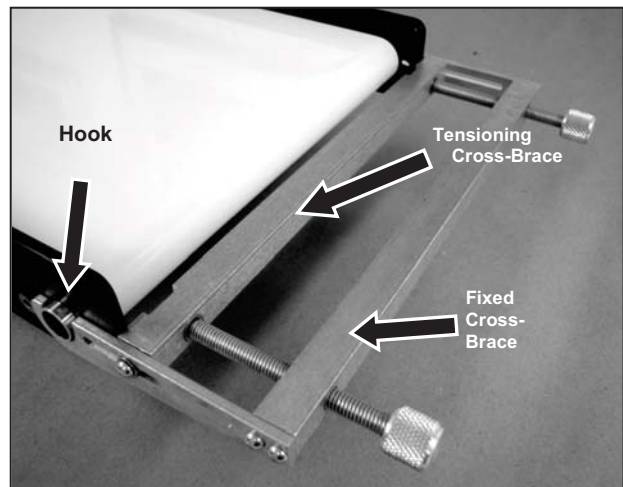


Fig. 5 — 2-knob tensioning tool (belts 12 in. and wider)

BELT TENSIONING & TRACKING

B. TO TRACK THE BELT

Mini-Mover conveyors utilize precision crowned pulleys for superior belt tracking. Belt tension and tracking are initially set at the factory prior to shipment. Over time, belt tracking may require adjustment in the field.

The procedure for adjusting the belt tracking using the belt tension tool is as follows:

1. Perform the belt tensioning procedure on Pg. 8.
2. Start the conveyor and run the belt without load for 30 seconds. While facing the idler (non-motor) end of the conveyor, observe the belt tracking position.
 - a. If the belt is correctly center-tracking and needs no adjustment, proceed to Step 4 below.
 - b. If the belt tracks to either left or right, loosen the belt tension lock screw on the same side to which the belt is tracking.
3. To adjust the belt tracking, tighten (clockwise) the tensioning tool knurled adjustment knob in about 1/16-turn increments until the belt is center tracking. See Fig. 6 below.
4. Run the conveyor an additional 1-2 minutes to assure the belt continues to center track. Make any final adjustments required, per Fig. 6 below.
5. Using a 3/16" short handle hex key, tighten the belt tension lock screw until the wrench handle flexes approximately 1/2".
6. Remove the tension tool by loosening the adjustment knob. (This tool may be stored between uses; it does not need to remain attached to the conveyor.)

The conveyor is now ready to return to service.

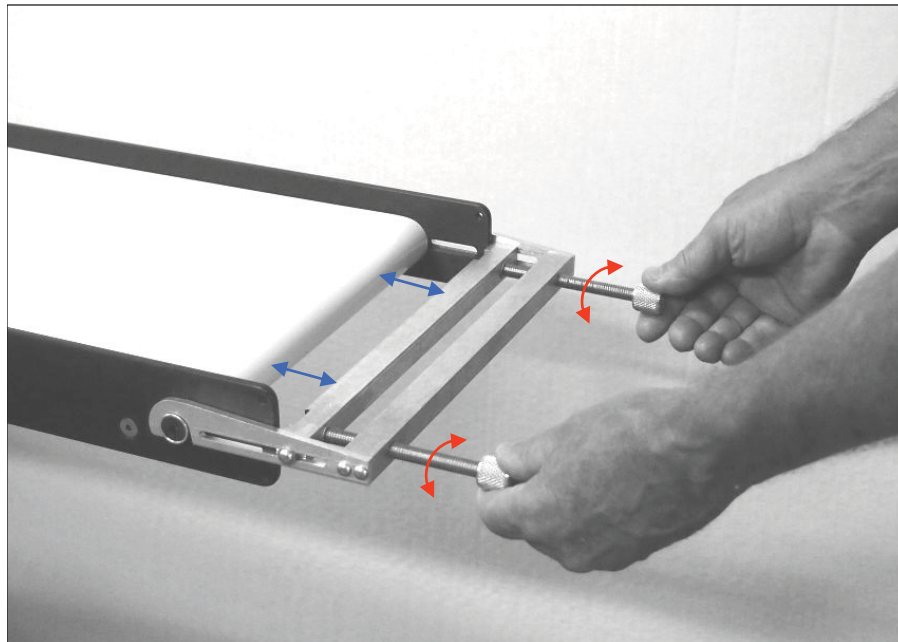


Fig. 6 — Belt tensioning tool used for tracking at the idler end

PRODUCT WARRANTY

MINI-MOVER CONVEYORS
div. of Whipple Enterprises, Inc.

Lite Series Conveyor Limited Lifetime Warranty

Warranty Service Provided

Whipple Enterprises warrants its Mini-Mover Lite Series Conveyors against defects in material or workmanship for the usable lifetime of the product following the original date of purchase. Whipple Enterprises' responsibility under this warranty is limited to the repairing or replacing, at its sole option, any defective product. The warranty begins on the date of the original purchase from the factory for its usable lifetime and is not transferrable to any third parties. This lifetime warranty is voided once the original purchaser sells or rents the unit, the unit has been significantly abused or has been used for purposes beyond the intended parameters of conveyor design and operation. However, in cases where ownership of the unit should transfer to a third party, that party may contact Whipple Enterprises for consideration of possible transfer of this warranty, on a case-by-case basis.

This item is purchased "as-is." There are no warranties that extend beyond the description on the face thereof. Whipple Enterprises makes no other warranty. Whipple Enterprises specifically disclaims any implied warranties, including warranties of merchantability and fitness for any particular purpose. In no event shall Whipple Enterprises be liable for direct, indirect, special or consequential damages.

In addition to the foregoing, Whipple Enterprises specifically disclaims and not honor any warranties with respect to the purchasers and corporation of this product as a component of the purchaser's product sold to other users as an integrated unit. Whipple will only be responsible, under its warranty, for the performance of its product only, and not for any other product in which this product is incorporated. Additionally, the purchaser of this product agrees to hold Whipple harmless and defend and indemnify Whipple Enterprises should any claims be made against Whipple for the use of any such product sold to an end user that incorporated this product in this fashion.

Warranty Service Not Provided

This warranty does not cover normal wear and tear of parts as a result of normal operation over time, nor damage resulting from accident, misuse, abuse, improper installation, unauthorized modification and/or loss of parts. This warranty is voided if any unauthorized person opens, alters, or repairs the unit beyond that which is directed in this manual.

Obtaining Service under Warranty

You must obtain a Return Goods Authorization (RGA) number from Whipple Enterprises' customer service. The product must be returned to Whipple Enterprises with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of purchase.

Product Return Policy

The Return Goods Authorization (RGA) number is required for return of any product to Whipple Enterprises. This number must be clearly visible on the packing carton. Please retain the original shipping carton and packing materials. The original shipping carton is the best shipping container for returning your unit, if required.

CUSTOMER SERVICE

Mini-Mover Conveyors offers you customer service and support throughout all phases of the sale, delivery, setup and ongoing maintenance for the life of your conveyor product. Call or email us if you need any assistance, such as the following areas.

- New conveyor delivery — to report shipping damage
- New conveyor setup support or operating questions
- Troubleshooting assistance
- Add-on accessories or options for your conveyor
- Spare parts for your stock bin
- Returns or exchanges
- Applications consultation

Please note that for returns or exchanges, you will need to contact us for a Returned Goods Authorization (RGA) before shipping anything back to the factory. The RGA gives you more detailed shipping instructions and allows us to track your items for proper credit or exchange.

Mailing and Shipping Address:

Mini-Mover Conveyors
division of Whipple Enterprises
21150 Shake Ridge Rd.
Volcano, CA 95689

Customer Service:

Phone: 866-380-5128
Fax: 866-900-5124
Email: service@mini-mover.com

If you have a question or need that is specific to you conveyor, please have the Serial Number of the unit on hand when contacting us. Each conveyor is built to order, and the serial number allows us to identify each component and manufacturing note regarding your unit and its service history.

Maintenance Tips for Long, Trouble-Free Conveyor Operation:

Your specific application and shop environment will determine the necessary cleaning and adjustment frequency for your conveyor. We suggest you do the following checks at regular intervals. Review pgs. 6-7 of this manual for cleaning and maintenance instructions.

- Check belt tension and alignment on a regular basis. The belt should be just tight enough not to slip and it should track without touching the siderails.
- Inspect the pulleys and remove any collected debris. Accumulated material can stick to the pulleys and cause the belt to misalign.
- Remove any debris from the belt underside that may have collected as well.

FREQUENTLY ASKED QUESTIONS FROM NEW MINI-MOVER OWNERS

“After I unpack the conveyor, do I need to adjust the belt? It doesn’t seem very tight.”

No initial belt adjustment is needed. The belt should not be “tight” when it is tensioned properly. We ship each conveyor with the ideal, ready-to-run belt tension and tracking adjustments already done. In fact, a certain amount of slack is normal. Since different belting materials will vary in thickness, the amount of slack can vary. So when you first unpack your conveyor, make note of how your belt is adjusted (see Pg. 8).

“Does the belt tensioning tool need to stay attached to the conveyor?”

Not at all. The tensioning tool (see Pg. 8) can be put away when you’ve completed your belt maintenance activities. Some customers do leave it on, but you’ll have more room at the end of the conveyor by removing and stowing the tool when it’s not needed.

CUSTOMER SERVICE

Important Notes for your Service Records:

Date of Installation: _____

Serial Number _____

Purchased from: _____
(if other than factory-direct)

*Read instructions for unpacking your conveyor
on the inside front cover of this manual.*

*Read assembly and safety instructions
before using.*

MINI-MOVER LITE SERIES CONVEYOR

MADE IN THE U.S.A.

Visit us on the web at www.mini-mover.com