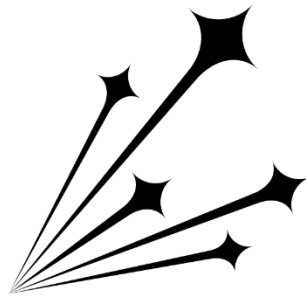


KAMIMURA TRIDENT MANUAL

2x48 Belt Grinder Setup, Maintenance and Troubleshooting



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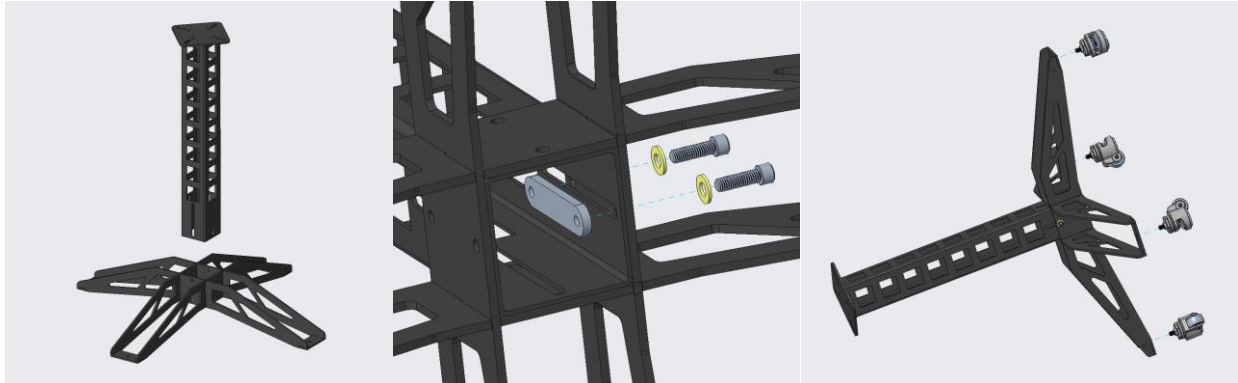
AmeriBrade LLC
Rev-A1 05/05/2022



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1. Assemble the Pedestal Stand if you ordered one. Skip to Step 2 if you did not order a Pedestal Stand.



- a. Hardware and feet will be included in a small white box labeled as follows:



- b. The 3/8 cap screws require a 5/16 allen wrench
- c. The leveling casters use a 3/4 wrench or socket
- d. Watch this video to see more details about Pedestal Stand Assembly:

<https://youtu.be/IMoHw2YIHoQ>



2. Mount the Grinder Frame to your bench top, or your Pedestal Stand (whichever is applicable).



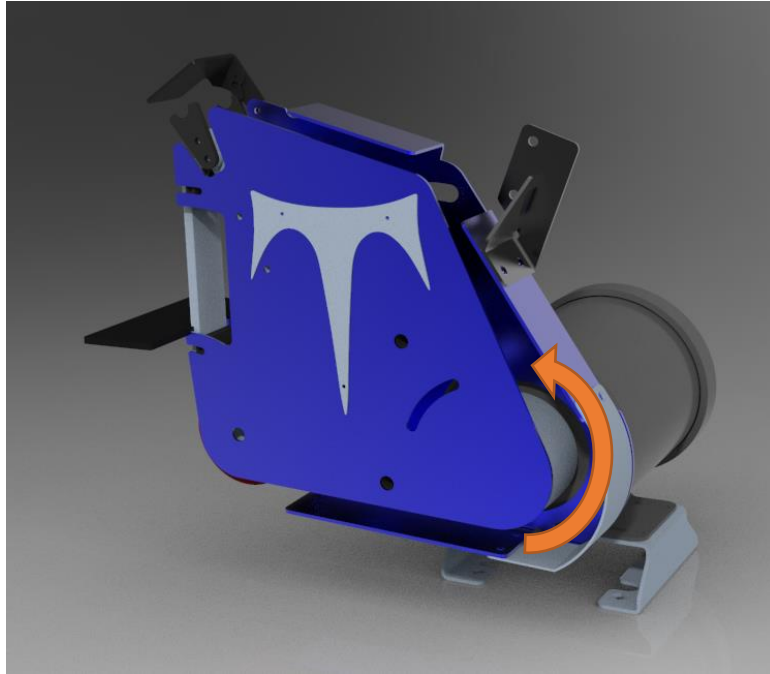
- a. Where to find the hardware:
 - i. Bench Top: If you are mounting the grinder to your own platform, you will need to provide the appropriate length hardware based on the thickness of your mounting surface. We suggest 3/8" diameter fasteners.
 - ii. Direct to Pedestal Stand (no horizontal mount): the hardware can be found with the rest of the pedestal hardware in a small bag labeled as follows:

3/8 Carriage Bolt Kit

Used for Mounting:

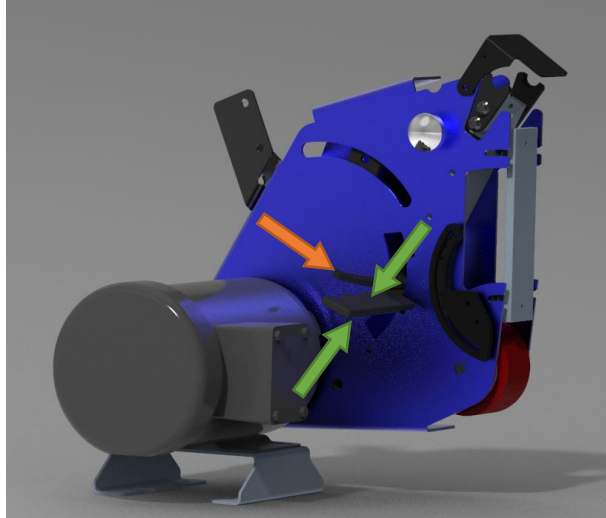
Grinder to Horizontal Mount or
Horizontal Mount to Pedestal or
Grinder to Pedestal

3. Test your motor for proper forward rotation without a belt by plugging in the grinder and starting the motor.
 - a. If your motor is rotating the wrong direction, contact AmeriBrade for help with correcting the issue. (760)-998-9602

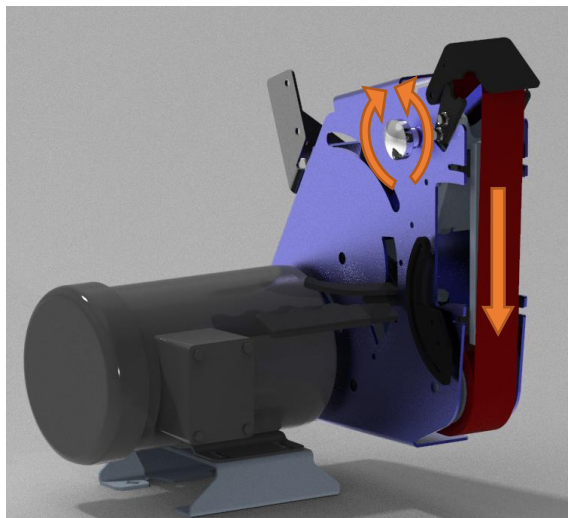


4. Install and Tension a Belt.

- a. Disengage the ratchet by pulling in on the finger lever (indicated with orange arrow below).
- b. Add or remove belt tension by lifting or lowering the tension handle (green arrow below).



- c. Spin the belt by hand for 2 to 4 full revolutions in the forward direction while roughly adjusting the tracking knob as indicated below to ensure the belt will not collide with the blue frame when the motor is started



- d. Run the motor slowly and re-adjust the tracking until the belt is accurately centered on the rubber contact wheel.
- e. You should now be ready to Grind!

5. Shut Down

- a. Variable Speed Units:
 - i. Push the Start/Stop switch down to shut down the machine and wait for the grinder to slow to a stop. Do not leave the Fwd/Stop/Rev switch in the center Stop position for extended periods of time without shutting off the Start/Stop switch. This may shorten the life of your motor and/or controller.
- b. Single Speed Units:
 - i. Push the large red Stop paddle until there is an audible click and wait for the grinder to slow to a stop.

6. Maintenance

- a. If the grinder will not be in use for extended periods of time, unplug the machine from power and release the belt tension.
- b. Keep threaded components clear of grinding dust to extend their life.
- c. Do not store rubber wheels in the sun or against flat surfaces. Extended time in the sun will degrade the rubber and extended time against a flat surface may cause flat spots.

7. Troubleshooting

Trips Breaker

- *Possible Causes*
 - There is a GFI/GFCI somewhere in the circuit. Variable speed units should not be run on a circuit with a GFI/GFCI anywhere in line.
 - Solution: plug into a circuit that does not contain a GFI/GFCI
 - Too long of a run for the wire size supplying the power
 - Solution: Eliminate extension cords and/or use larger wire
 - Too small of a circuit breaker. Typically, this is only an issue if the trip is occurring during heavy grinding. Trips during motor startup are a sign of a different problem.
 - Solution: Use a minimum 15 amp breaker for 110V units and minimum 20 amp breaker for 220V units. Also, make sure no other equipment is using excessive power simultaneously on the same circuit.

Bogs Down Easily Under Load

- *Possible Causes*

- Maximum Speed is set too high (Variable Speed Units Only)
 - Solution: Turn the MAX trimpot counterclockwise but no lower than the 10' o clock position (shown below in 12' o clock position): *Always make sure the machine is disconnected from power before opening the speed controller or motor.*



- Poor Wiring Connections
 - Always make sure the machine is disconnected from power before opening the speed controller or motor*
 - Solution: Double check wire connections are tight and making good contact in the following locations:
 - Wires inside the speed controller coming from the motor or power cord. (Make sure screw terminals are tight and wires do not pull out of crimped terminal ends)
 - Wires inside motor conduit box. (Make sure wires do not easily pull out of crimped connectors)
 - Inside male and female ends of twist-lock-plug between motor and speed controller. (Open the plug and make sure individual wires do not easily pull out and make sure the screws securing the wires are clamping directly on the copper instead of the outer insulation. Clamping on the insulation will result in a poor connection)

Slows Down and Speeds Up Spontaneously

- *Possible Causes*
 - Acceleration Setting needs tuning (Variable Speed Units Only)
 - Solution: Adjust the ACCEL trimpot in 1/8th turn increments (maximum ¼ turn each way from original setting). First clockwise, then counterclockwise. *Always make sure the machine is disconnected from power before opening the speed controller or motor*



- Deceleration Setting needs tuning (Variable Speed Units Only)
 - Solution: Adjust the DECEL trimpot in 1/8th turn increments (maximum ¼ turn each way from original setting). First clockwise, then counterclockwise. *Always make sure the machine is disconnected from power before opening the speed controller or motor*



Won't Start

- *Possible Causes*
 - Breaker is Tripped
 - Solution: Reset Breaker. If problem persists, see “Trips Breaker” section above
 - Fwd/Stop/Rev switch is set in the center “Stop” position (Variable Speed Units Only)
 - Solution: Make sure a direction is selected by pushing the Forward/Reverse Switch up for forward or down for reverse
 - Start/Stop switch is not being pushed all the way into the start position
 - Solution: Push the Start/Stop switch up after the fwd/stop/rev switch is in the fwd or rev position
 - Start button on Start/Stop paddle switch is not being pushed all the way (Single Speed Units Only)
 - Solution: Push the green start button hard enough to cause an audible click

Other VFD Errors

1HP DRIVE OPERATING CONDITION AND STATUS LED INDICATOR

LED INDICATORS ARE ONLY VISIBLE WITH THE COVER REMOVED

Drive Operating Condition	LED and Flash Rate ¹ Information	
	ST (Green)	OL (Red)
Normal operation	Slow Flash	Off
Overload (120% – 160% Full Load)	Off	On ²
I ² t (Drive Timed Out)	Off	Quick Flash
Short Circuit	Off	Slow Flash
Undervoltage	Quick Flash ³	On
Overvoltage	Slow Flash ³	On
Stop	On	On

Notes: **1.** Slow Flash = 1 second on and 1 second off. Quick Flash = 0.25 second on and 0.25 second off. **2.** When the Overload is removed, before the I²t times out and trips the drive, the “ST” LED will flash green and the “OL” LED will turn off. **3.** In Manual Restart Mode, when the Undervoltage or Overvoltage condition is cleared, the “ST” and “OL” LEDs will flash red / (red and green) / green.

Vibration

- *Diagnosis/isolation*
 - Run the motor without a belt to see if the source is at the motor or drive wheel.
 - If available, try a different small wheel
 - If the vibration source is not the motor or the small wheel, it may be the tension wheel or rubber contact wheel. Inspect each for signs of wear or damage.
 - Contact AmeriBrade to discuss the results of these experiments and to possibly replace worn/defective wheels
 - (760)998-9602

Belt Tracking

Belt Wobble (Small side to side belt motion)

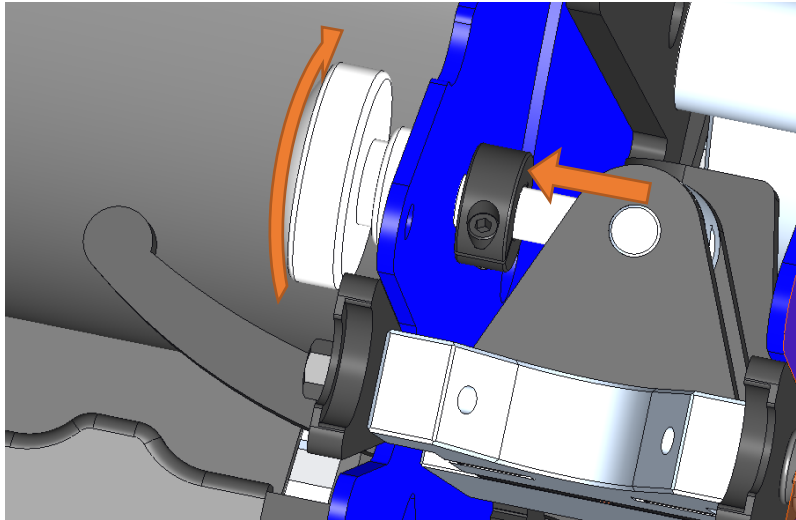
- Belt wobble is normal and varies between belts. It is due to the accuracy of the belt manufacturing process. Surface Conditioning (Scotch-Brite) and Leather belts will exhibit extreme amounts of belt wobble. Double check the other belt tracking problems below to make sure there is not another issue exaggerating the wobble.

Belt Wander (Large Belt Drifting)

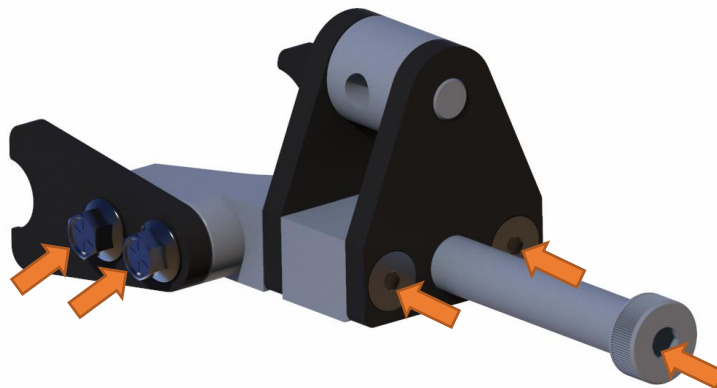
- *Possible Causes*
 - **Low Belt Tension**
 - Solution: lift the tension handle with a moderate amount of force (roughly 10 lbs or more) to take out excessive belt slack.
 - **Worn Wheels**
 - Solution: Replace wheels that show signs of asymmetric/tapered wear.
 - **Loose Tracking Mechanism**
 - Make sure the tracking knob exhibits some resistance to turning. If it turns too freely, loosen the shaft collar on the stud of the tracking knob with a 7/64" allen wrench. Turn the tracking knob counterclockwise several rotations until the spring washers between the knob and the outside of the blue frame begin to bind and



compress (see image below for reference). Hold the shaft collar tight against the inside of the blue frame and re-tighten it with the 7/64" allen wrench. Turn the tracking knob clockwise to return the small wheel holder to a neutral position and use caution when running a belt for the first time to make sure the belt tracking is properly centered.



- Make sure the small wheel holder does not display any free movement when pushed by hand. If there is free play and the tracking knob is already tensioned as described in the previous step, make sure all of the fasteners indicated below are tight in the small wheel holder (mating parts hidden for visibility)





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- Vibration can also cause the belt to wander
 - Solution: Isolate the source of the vibration and eliminate it. See “Vibration” Section above

Belt Tracks Diagonally Across Platen

- *Possible Causes*

- Replaceable platen plate needs adjustment
 - Solution: with a belt installed and centered on the contact wheel, use a 7/16” wrench to loosen the 2 screws holding on the replaceable platen plate and adjust it until the edge aligns with the edge of the belt. Re-Tighten the 2 screws.

Broken Components

Contact AmeriBrade to replace damaged components.

Call: (760)998-9602

Email: info@ameribrade.com

Shipping:

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