



MODEL H8368 ELECTRIC POWER DRAWBAR INSTRUCTIONS

Specifications

Motor220V 60Hz Single-Phase
 Maximum Amp Draw7.5 A
 Speed 2100 RPM
 Torque240 ft/lbs

Inventory

Refer to **Figure 1** and the table below to inventory the contents of the shipping box.

REF	PART #	DESCRIPTION
1	PH8368001	MOTOR COVER
2	PH8368002	MOTOR 220V 60HZ 1PH
3	PH8368003	MOUNTING PLATE
4	PH8368004	SWITCH ASSEMBLY
5	PH8368005	DRAWBAR BOLT HEAD
6	PH8368006	DRAWBAR SHAFT 7/16-20 X 21-1/2 (R8)
7	PH8368007	COMPLETE BOLT BAG

Bolt Bag Contents	Qty
Cap Screws M6-1 x 25.....	3
Lock Washers 6mm.....	3
Cap Screws M6-1 x 12.....	2
Flat Washers 6mm	2
Cap Screw M4-.7 x 8.....	3
Pins 4 x 23mm	2
Cable Tie	1

If any nonproprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

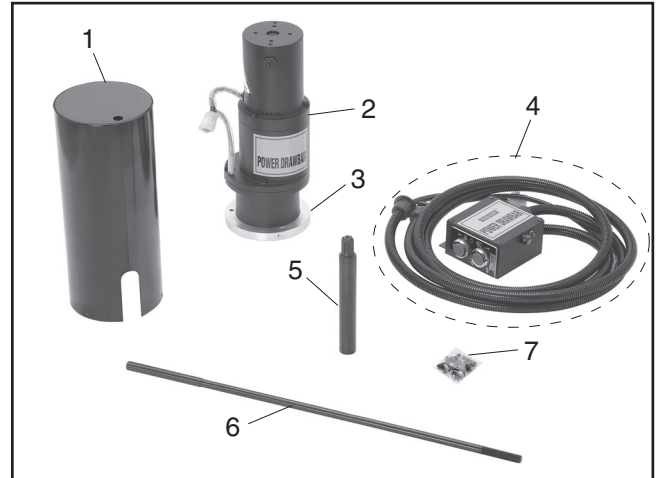


Figure 1. Model H8368 inventory.

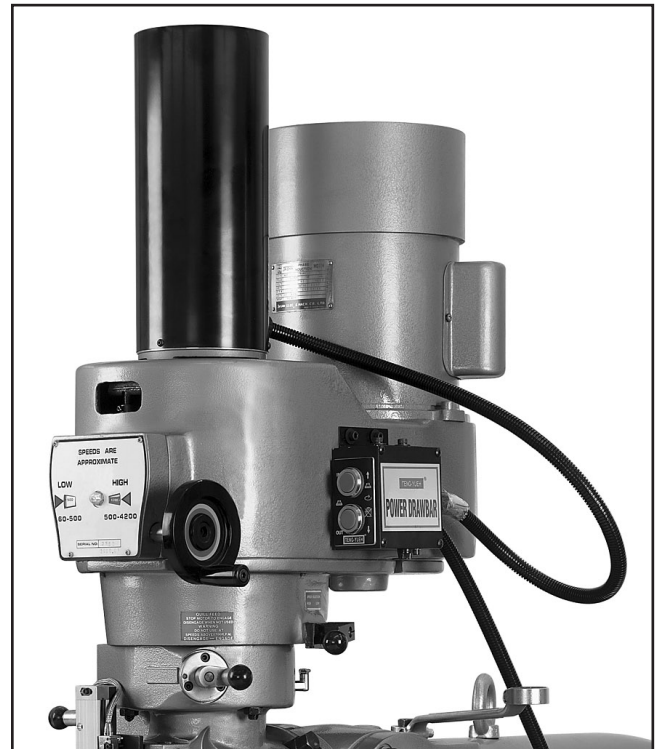


Figure 2. Example of the Model H8368 power drawbar mounted on a mill.

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#TS10500 PRINTED IN TAIWAN

Drawbar Assembly

The goal of these procedures is to fabricate an entirely new drawbar that will extend down through the spindle the same length as your mill's existing drawbar. Also, you must ensure that the top shoulder of the new bolt head will be flush with the mounting surface of the motor assembly.

To assemble the drawbar:

1. Use a caliper to measure the diameter of your mill's drawbar bolt head (see **Figure 3**).

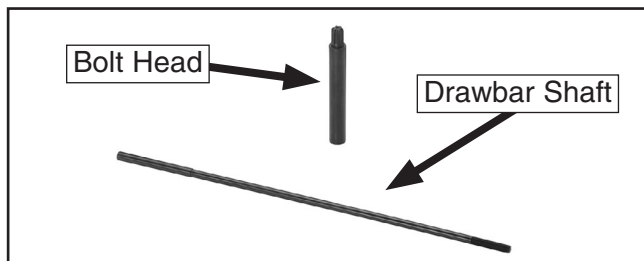


Figure 3. Bolt head and drawbar shaft.

—If the diameter of your mill's existing bolt head is 24mm, then proceed to **Step 2**.

—If your existing drawbar is an NT40, use a lathe to turn the new bolt head to match the diameter of the your mill's existing bolt head (see **A** in **Figure 4**).

Note: *The splines of the new bolt head are specifically designed to match the socket of the drawbar motor. DO NOT damage them.*

—If your existing drawbar is an NT50, remove the top section of your existing bolt head (see **Step 2**), then attach it to the new bolt head (see **B** in **Figure 4**).

—If your existing drawbar is a type -B NT40 or NT50, then you must build a drawbar motor mounting extension ring that will allow only the full spline to be above the mounting surface (see **Figure 5**).

Note: *Before making any alterations to the new drawbar, read through the rest of the instructions to calculate the correct lengths.*

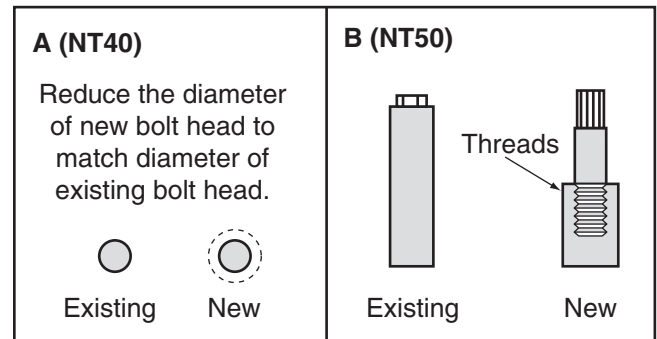


Figure 4. Examples of making the diameter of the new bolt head equal that of the existing bolt head (NT40 and NT50).

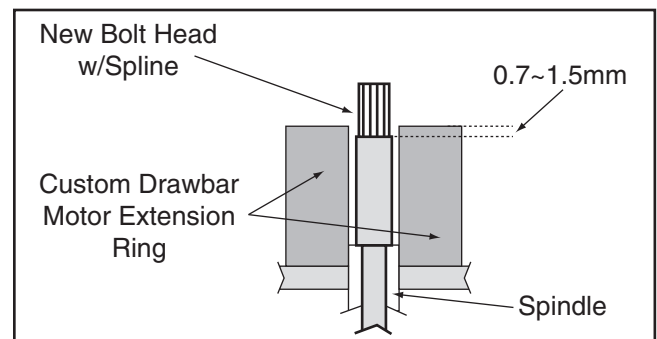


Figure 5. Example a custom drawbar motor extension ring (type-B NT40 or NT50).

2. Measure the length of your mill's existing drawbar from the bottom of the bolt head to the end of the drawbar shaft, then add 1½" (see **Figure 6**).

Note: *The additional 1½" is the amount of the new shaft that will be inserted into the new bolt head in a later step.*

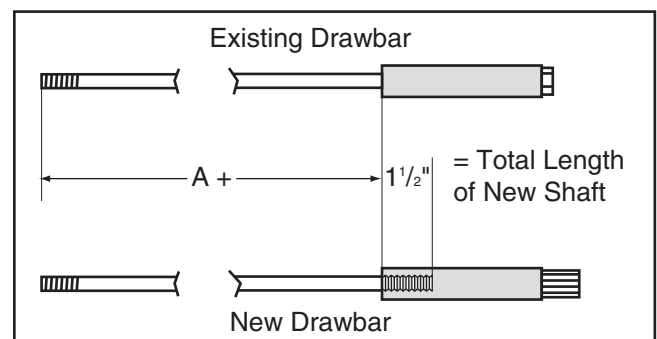


Figure 6. Calculating the length of the new shaft.

3. Remove the necessary amount, if any, from the top of the new drawbar shaft to make the total length of the shaft equal to the total length calculated in **Step 2**, then turn threads into the last 1½".



4. Insert the new bolt head into the top of the spindle, then measure the distance from the top shoulder of the bolt head to the mounting surface of the motor assembly (see **Figure 7**).

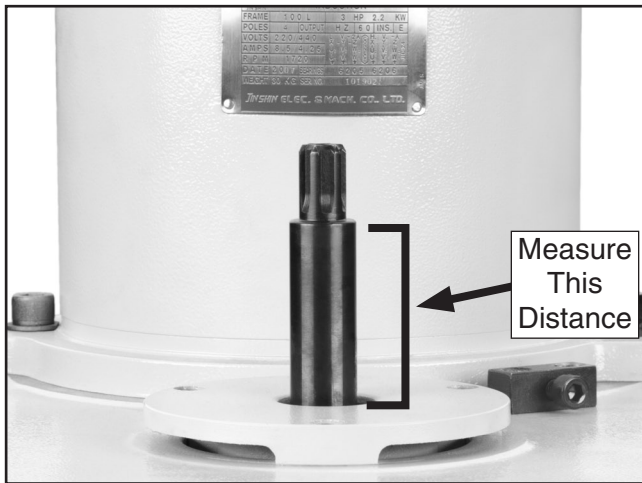


Figure 7. New bolt head inserted in the mill for measurement.

5. Remove the amount measured in **Step 4** from the **bottom** of the new bolt head (see **Figure 8**).

Note: *The top shoulder of the new bolt head below the spline must be 0.7–1.5mm below the mounting surface on the mill to properly engage with the drawbar motor.*

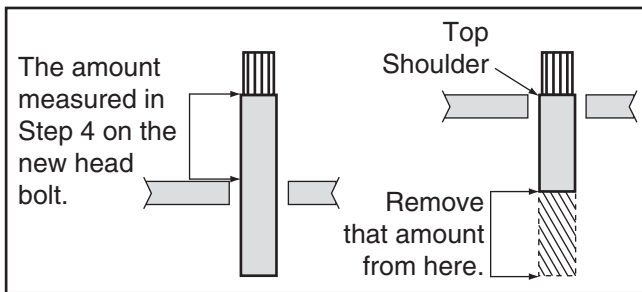


Figure 8. Measuring the amount of the new drawbar head bolt to remove.

6. Drill and tap $1\frac{3}{4}$ " into the bottom of the new bolt head with threading to match the top of the new drawbar shaft from **Step 3**.

7. Thread the new drawbar shaft into the bottom of the new bolt head, as shown in **Figure 9**.

Note: *We recommend the addition of four M5-.8 x 10 set screws applied through the bolt head to further secure the drawbar shaft, as shown in **Figure 9**.*

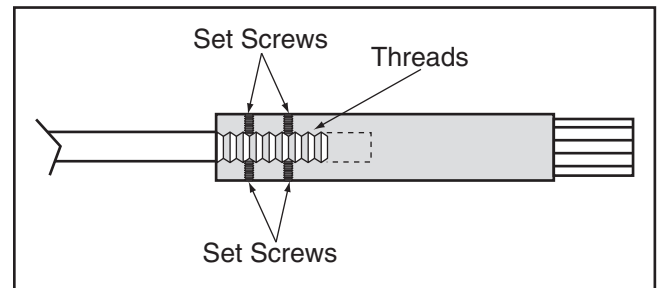


Figure 9. Example of new drawbar.

Installation

1. Prepare the top of your mill so that the aluminum mounting plate of the power drawbar motor is center-aligned to the spindle.
2. If the mounting holes in the mounting plate do not align with threaded holes in the mill to accept the M6-1 x 25 cap screws, drill new holes in the mounting plate.

Note: *The power drawbar motor must be mounted flat with and fully supported by the mill, exactly centered over the spindle opening.*

3. Insert the new drawbar assembly, then mount and secure the power drawbar motor to the mill with the electrical connector facing to the rear.
4. Temporarily support the switch assembly, then connect the switch electrical plug with the motor electrical plug.

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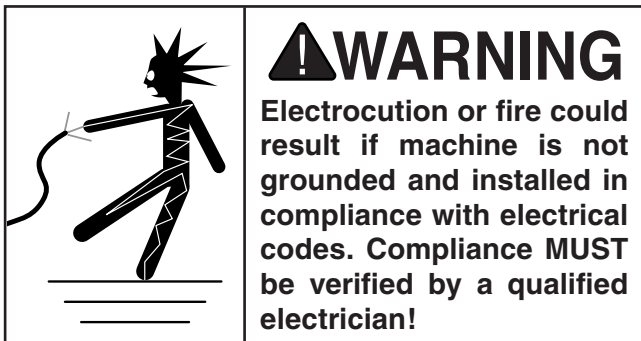
5. Tuck the plugs and cords around the top part of the motor, then slide the motor cover over the motor so that the switch cord strain relief mounts to the slot in the cover.
6. Secure the motor cover to the aluminum mounting plate with the three M4-.7 x 8 cap screws.
7. Mount the switch in a convenient position on your mill (see **Figure 2** on **Page 1**).

If you need help with your new electric power drawbar, call our Tech Support at: (570) 546-9663.

Power Supply Circuit Requirements

You **MUST** connect the electric power drawbar to a grounded circuit that is rated for the amperage given below. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.**

Minimum 220V Circuit Size 15 Amps



Full Load Amperage Draw

This machine draws the following amps under maximum load:

Amp Draw 7.5 Amps

Power Connection Device

The type of plug required to connect your machine to power depends on the type of service you currently have or plan to install. We recommend using the plug shown in **Figure 10**.

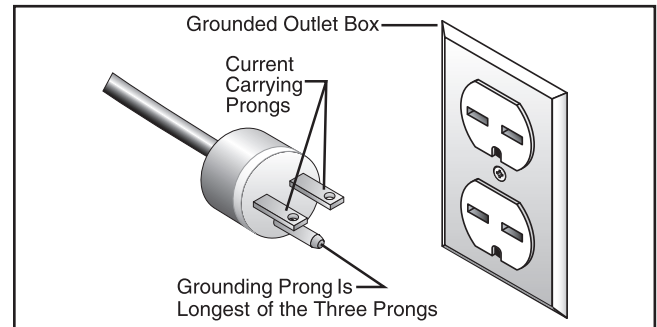


Figure 10. NEMA 6-15 plug and receptacle.

Operation

1. Connect the drawbar unit to power.



2. To install tooling:
 - a. Insert the tooling into the spindle in the normal manner that is correct for your mill, and up against the bottom of the drawbar assembly.
 - b. Press the IN button on the drawbar switch to activate the drawbar motor and thread the drawbar into the tooling.

Note: When the tooling is fully secure and you can hear the drawbar motor begin to "ratchet", release the IN button. **DO NOT** overly tighten the tooling.

3. To un-install tooling, press the OUT button of the drawbar switch to release and unthread the tooling.

Note: As the tooling is released from the drawbar, it could suddenly drop out of the spindle.

