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Additional Maintenance and Repair Instructions **BBM / YBM** Mini Masonry Saw Issue 1 May 2004

NEVER ATTEMPT ANY OF THE INSTRUCTIONS WITH POWER CONNECTED TO SAW!

DISCONNECT ALL POWER TO THE SAW!

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Removing the Motor

- 1. Remove the two plastic plugs in the blade guard to expose the two blade guard mounting screws located under the blade guard.
- 2. Using a 17mm wrench, turn the blade shaft screw clockwise and take the screw and washer out of the end of the shaft. With the blade shaft screw and washer removed, pull both blade flanges outward and off the end of the blade shaft.
- **3.** Insert a Phillips head screw driver into the blade guard screw access holes and remove the two screws holding the blade guard on the cutting head casting.
- 4. From under the blade guard, remove the two screws located at the bottom of the blade shaft housing casting and pull the blade guard outward and off the blade shaft casting housing.
- 5. Using a narrow tip slot screw driver remove the two white motor wires in the terminal block.



6. Remove the air filter.	







Removing the Motor [Continued]

- 7. Using a Phillips head screw driver, remove the four screws in the back of the plastic motor air intake cover and slide the housing outward and off of the motor housing.
- 8. Using a coin or a wide blade screw driver, remove the plastic brush cap and carefully pull the carbon brush out of the motor housing. Remove brushes on both sides before attempting to pull the motor housing off of the armature.
- **9.** Using a Phillips head screw driver, remove the four screws at the front of the motor housing and carefully slide the motor housing outward and off the armature.

10. Pull the plastic motor retaining plate out of the cutting head casting and off the armature.

11.Grab the armature and pull the armature outward and out of the motor housing.

If the armature does not pull out of the housing, remove the blade shaft retaining plate assembly and use a long, wide blade screw driver and rubber mallet to tap the armature out of the cutting head casting. Make sure to place the screw driver against the end of the armature shaft and NOT against the radial bearing race or against the cutting head casting. Once the armature is removed, re-insert the blade shaft retaining plate assembly into the cutting head casting. Align the ears in the blade shaft retaining plate casting with the holes in the cutting head casting and then insert two screws in the top ears and tighten.











Replacing the Armature Bearings

 Use a small gear puller and remove the bearings on both sides of the armature. Inner Motor Bearing P.N. 235122 35mmx15mm bore 6202LB Outer Motor Bearing P.N. 235112 26mmx10mm bore 6000LB 		
 Press the large inner motor bearing onto the fan side of the armature making sure the bearing "seats" against the shoulder on the armature shaft. 		
 Press the small outer motor bearing onto the back side of the armature making sure the bearing "seats" against the shoulder on the armature shaft. 	ĕ	
Replacing the Field Windings		

1.	Use a Phillips head screw driver to remove the two screws holding the field windings in the plastic motor housing.	
2.	Using a pair of needle nose pliers, disconnect the terminals connecting the field winding to the brush holders.	
3.	From the open side of the housing, pull the field winding out of the motor housing.	Pull Out
4.	With the brush connector edge leading, align the hole in the field winding with the holes in the motor housing and then push the new field winding into the motor housing.	E.
5.	Insert the two field winding retaining screws and then use a Phillips head screw driver and tighten.	
6.	Using a pair of needle nose pliers, re-connect the terminals from the field winding to the spade on the brush holders.	

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BBM & YBM INSTRUCTIONS [May 2004]

Installing the Motor

- 1. With both bearings in place, push the fan side of the armature into the cutting head casting until the large inner motor bearing "seats" in the cutting head casting.
- 2. Align the plastic motor retaining plate so that the flat sections of the plate are at the three and six o-clock positions and then push the plastic plate into the cutting head casting until it "seats".
- 3. Slide the plastic motor housing over the armature just enough to insert the two white field winding wires through the hole in the nine o'clock position of the cutting head casting. Route the wires so that they do not come in contact with the fan.
- 4. Rotate the motor housing until the holes in the housing are aligned with the holes in the cutting head casting. Insert the four M5 x 25mm long screws and washers then tighten.
- 5. Insert the brushes and compress the spring then insert the plastic brush caps and tighten brush cap until snug. Do not over-tighten! Over-tightening will damage the brush cap.
- 6. Slide the motor air intake cover over the motor housing and align the screw holes in the intake cover with the holes in the cutting head. Insert the M4 x 16mm long screws and washers into the back of the air intake housing and tighten.
- 7. Insert the air filter into the air motor intake housing. Do not ever operate machine without Air Filter.









Push in



Installing the Motor [Continued]

8. Connect the two white motor field winding wires to the terminal block in the same location as the black and white wire coming from the accessory outlet plug.

9. Push the blade guard onto the blade shaft casting housing and then insert the two screws located at the bottom of the blade shaft housing casting and tighten.

10. Insert a Phillips head screw driver into the blade guard screw access holes and align the two screws holding the blade guard on the cutting head casting and then tighten.

11. Push both blade flanges onto the end of the blade shaft. Then using a 17mm wrench, turn the blade shaft screw counter-clockwise and tighten the screw and washer assembly onto the end of the shaft.

12. Insert the two plastic plugs in the blade guard to protect the two blade guard mounting screws located under the blade guard.

Motor replacement complete











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BBM & YBM INSTRUCTIONS [May 2004]

Adjusting the Cutting Head Depth

- 1. Pull up and twist the pivot lock knob to allow the cutting head to rest in the full upright and raised position. Do not lock the head in position. Make sure the depth lock is disengaged so that the cutting head pivots freely and is as far up as possible.
- 2. Using a 5mm Allen wrench, loosen the set screw on the motor side of the pivot bar. Do not remove the set screw.
- 3. Remove the 17mm hex head cap screw on the motor side of the cutting head pivot bar.
- 4. Remove the Phillips head screws and pull the washer out to expose the end of the pivot bar.
- 5. Using a Phillips head screw driver, remove the two screws holding the cover located under the back of the cutting head directly below the pivot lock.
- 6. Using a 4mm Allen wrench, loosen the two set screws on the cutting head main angle bracket. Only loosen the two 4mm screws located above and below the torsion spring dowel pin.
- 7. Push the cutting head to the highest possible raised position and then tighten the heck out of the two 4mm set screws on the cutting head main angle bracket. Tighten the bottom set screw first then tighten the set screw facing the front of the saw. These set screws must be tightened until they "scream" or the cutting head will slip when the operator presses down on the handle.









Adjusting the Cutting Head Depth

8. Insert the washer with the two alignment holes into the slot of the upright on the motor side. Insert the two Phillips head screws and tighten. *Lifting up on the handle will ease tension on the Phillips head screws while tightening.*



ROTATE UP

MAX!

SQUEEZE

- 9. Push the cutting head to the highest possible raised position. Squeeze and hold the two uprights "snug" against the aluminum pivot bar cover tubes and then tighten the 5mm set screw on the top of the upright on the motor side. Make sure the cutting head pivots as far up as possible and make sure to tighten the 5mm set screw until it screams.
- 10. Place the blade on the spindle and pivot the head down as far as possible. If the blade makes contact with the table, repeat the procedure and make sure the head remains in the maximum possible raised position before tightening any of the set screws.
- 11. Insert the 17mm hex head cap screw, lockwasher, and washer assembly into the hole in the upright on the motor side and then tighten the cap screw.





12. Position the torsion spring cover and use a Phillips head screw driver to tighten the screws that hold the cover in place.



COMPLETE



Motor Assembly				
Item	Description	Part Number		
1	Bearing Motor Inner	235122		
2	Armature BBM/YBM307	235123		
3	Motor Retaining Plate	235124		
4	Bearing Motor Outer	235112		
5	Field Windings BBM/YBM307	235126		
6	Motor Housing	235127		
7	Washer Flat (qty required= 4)	235104		
8	Washer Lock (qty required= 4)	235105		
9	Screw Motor Housing (qty required= 4)	235130		
10	Carbon Brushes (2 pcs./set)	235054		
11	Brush Cap (1)	235053		
12	Motor Air In- Take Cover	235056		
13	Scr M4 x 16 0.7 DIN933 (qty required= 4)	235057		

