

WIRING INSTRUCTIONS

TITLE

MAG STAND DRILL MOTOR

BULLETIN

MILWAUKEE ELECTRIC TOOL CORP. 13135 WEST LISBON RD. BROOKFIELD, WIS.

DATE
Jan. 2002

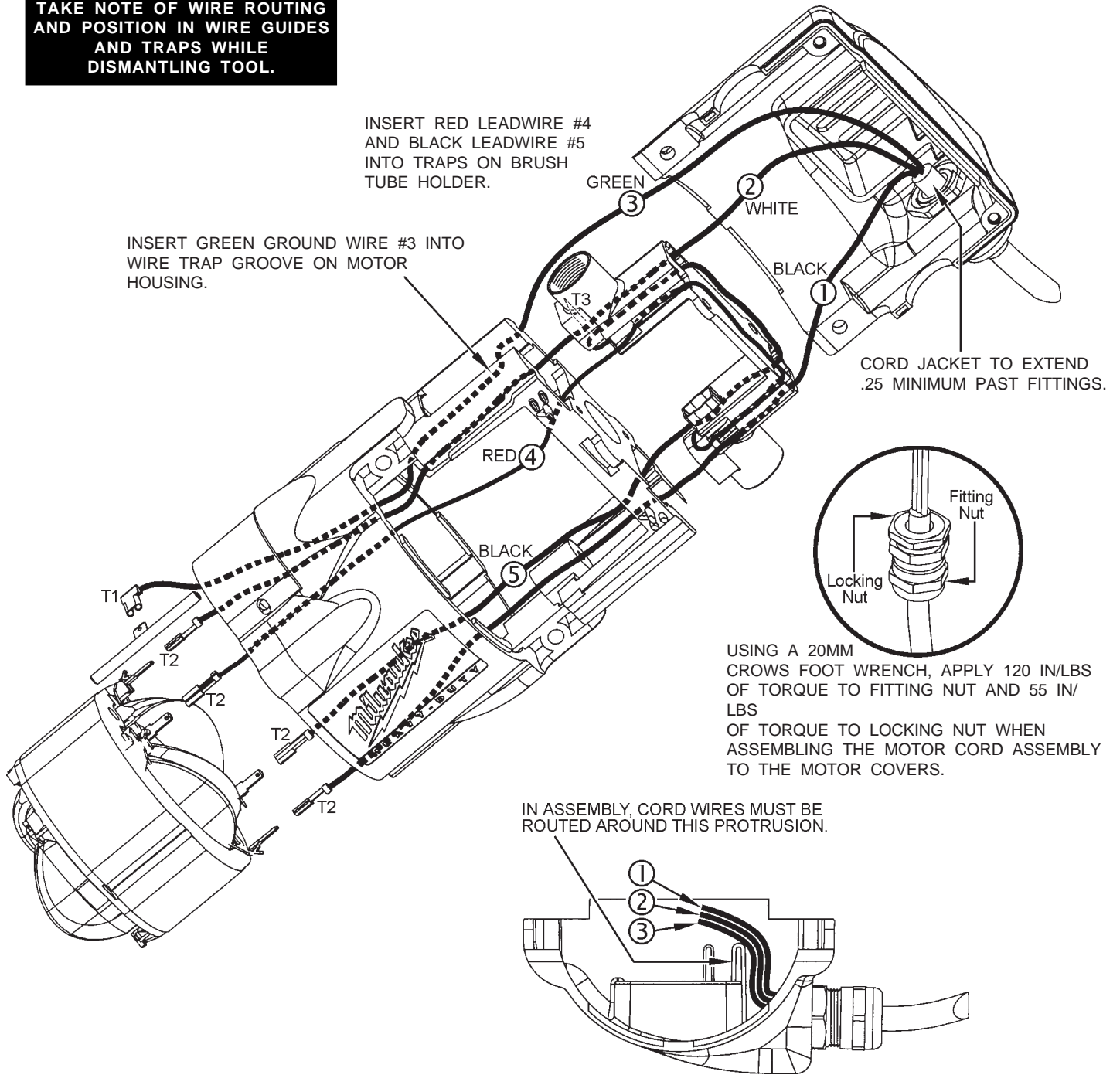
58-01-1840

**AS AN AID TO REASSEMBLY,
TAKE NOTE OF WIRE ROUTING
AND POSITION IN WIRE GUIDES
AND TRAPS WHILE
DISMANTLING TOOL.**

INSERT RED LEADWIRE #4
AND BLACK LEADWIRE #5
INTO TRAPS ON BRUSH
TUBE HOLDER.

INSERT GREEN GROUND WIRE #3 INTO
WIRE TRAP GROOVE ON MOTOR
HOUSING.

CORD JACKET TO EXTEND
.25 MINIMUM PAST FITTINGS.



USING A 20MM
CROWS FOOT WRENCH, APPLY 120 IN/LBS
OF TORQUE TO FITTING NUT AND 55 IN/
LBS
OF TORQUE TO LOCKING NUT WHEN
ASSEMBLING THE MOTOR CORD ASSEMBLY
TO THE MOTOR COVERS.

IN ASSEMBLY, CORD WIRES MUST BE
ROUTED AROUND THIS PROTRUSION.

WIRING SPECIFICATIONS

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3290	18	4"	Component of motor cord assy. Strip .18 for T3.
2	White	22-64-3290	18	5"	Component of motor cord assy. Strip .18 for T3.
3	Green	22-64-3290	18	10"	Component of motor cord assy. Strip .18 for T1.
4	Red	23-94-6120	18	5.5"	Strip .18 for T1 and strip .25 for T2.
5	Black	23-94-6370	18	5.6"	Strip .18 for T1 and strip .25 for T2.

NOTE:

All lead lengths are before stripping.
All leads must be held to $\pm .125$ "
unless specified elsewhere.
Strip wire per ES 13-11.
Crimp terminals per ES 13-15.

TERMINAL DESCRIPTION

Code	Part No.	Qty.
T1	23-74-0605	1
T2	23-74-0410	2
T3	23-74-1060	4



SERVICE PARTS LIST

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
MAG STAND CONTROL PANEL			
CATALOG NO. 23-35-0360	SERIAL NUMBER	WIRING INSTRUCTION SEE BELOW	

EXAMPLE:

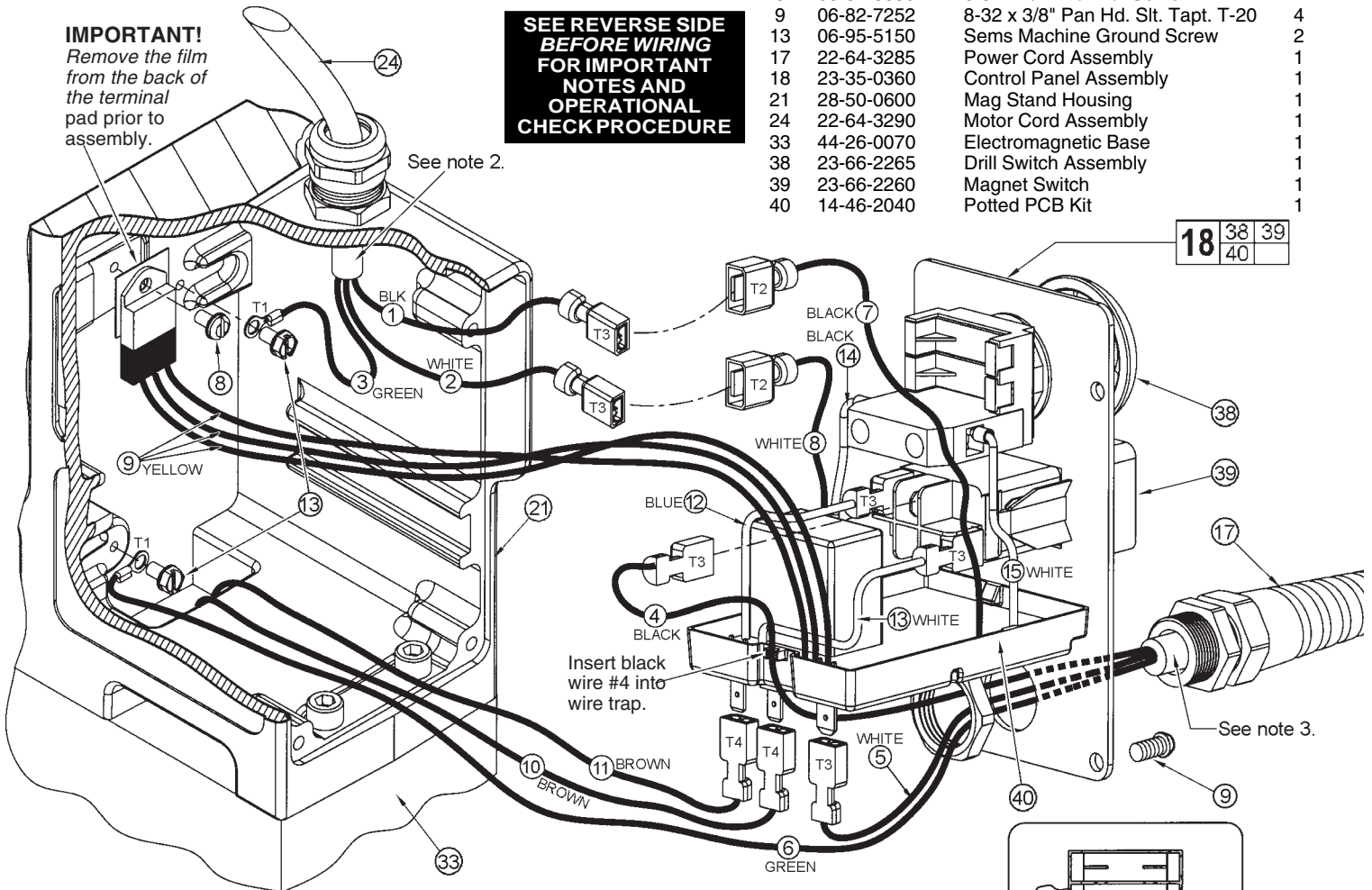
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 Component Parts (Small #) Are Included When Ordering The Assembly (Large #).

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
8	06-81-8650	6-32 x 1/4" Rd. Hd. Sems	1
9	06-82-7252	8-32 x 3/8" Pan Hd. Slit. Tapt. T-20	4
13	06-95-5150	Sems Machine Ground Screw	2
17	22-64-3285	Power Cord Assembly	1
18	23-35-0360	Control Panel Assembly	1
21	28-50-0600	Mag Stand Housing	1
24	22-64-3290	Motor Cord Assembly	1
33	44-26-0070	Electromagnetic Base	1
38	23-66-2265	Drill Switch Assembly	1
39	23-66-2260	Magnet Switch	1
40	14-46-2040	Potted PCB Kit	1

SEE REVERSE SIDE BEFORE WIRING FOR IMPORTANT NOTES AND OPERATIONAL CHECK PROCEDURE

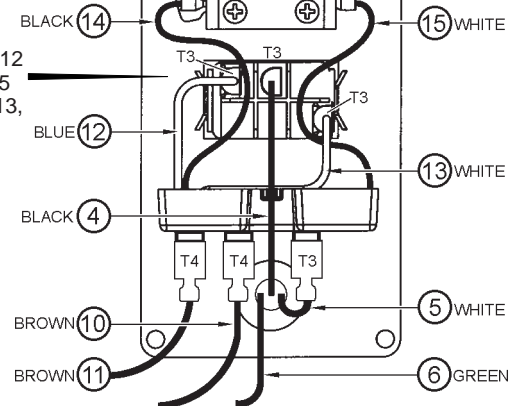
IMPORTANT!
 Remove the film from the back of the terminal pad prior to assembly.



1. Route two magnetic base leads (brown wires #10 and #11) through the opening in the bottom of the mag stand housing #21.
2. Secure the cord #24 from drill in the top opening of the mag stand housing. The cord jacket is to extend .25 minimum beyond the fittings.
3. Secure the power cord assembly #17 to the control panel kit #18. The cord jacket is to extend .25 minimum beyond the fittings.
4. Attach ground terminals from green wires #3 and #6 to mag stand housing with ground screws #13. Orient the terminals as shown.
5. Orient terminal pad (component of the potted pcb kit), as shown. **Remove film from the back of the terminal pad** and secure to mag stand housing with screw #8.
6. Attach the leads from the magnetic base, as shown. **Note:** the leads from the magnetic base are interchangeable and can be attached to the panel in either location.
7. Route black wire #4 from the power cord assembly into the wire trap on the potted pcb kit, as shown.
8. Connect all wires, as shown. In assembly, wires #5, #6, #10 and #11 must be contained beneath the electronics boat.
9. Align the potted boat with the groove in the mag stand housing cavity. Gently push the bundle of wires and the control panel assembly into the housing. Avoid pinching wires as the control panel is being installed.

BACK VIEW OF PANEL

Route wire #14 in between wire #12 and route wire #15 in between wire #13, as shown.



ATTENTION

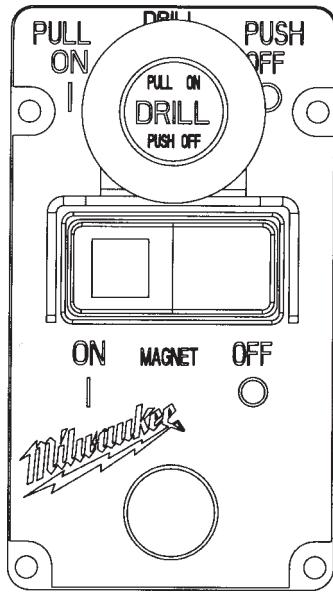
Observe precautions for handling electrostatic sensitive devices



OPERATIONAL CHECK LIST

1. DIELECTRIC POTENTIAL TESTING

Dielectric potential testing should be conducted on a fully assembled tool that has successfully completed a ground continuity test. The dielectric potential voltage should be between 1200 and 1320 VAC.



2. SET UP

- A. Place the magnetic drill stand on a steel plate.
- B. Verify that the magnet switch is "OFF".
- C. Verify that the drill switch is "OFF".
- D. Plug magnetic drill stand into a 120 V AC receptacle.
*Response: Motor does not operate.
 Red lamp on the magnet switch is off.*

3. MAGNET SWITCH TEST

- A. Push the magnet switch "ON".
*Response: Red lamp on magnet switch is lit.
 The motor does not operate.*
- B. Verify that the magnetic drill stand cannot be easily moved on the steel surface.

4. NORMAL DRILLING

- A. Pull the drill switch "ON".
*Response: Magnet is on, "MAGNET" button is lit,
 drill motor is on (operating).*

5. LINE LOCKOUT

- A. Push the drill switch "OFF".
Response: The motor stops operating.
- B. Push the magnet switch "OFF".
Response: The magnet and red lamp are off.
- C. Pull drill switch "ON".
Response: The motor will not operate.
- D. Turn magnet switch "ON".
*Response: The motor will not operate.
 Magnet is on, "MAGNET" button is lit.*

6. END OF TEST

- A. Turn both switches "OFF".
- B. Unplug magnetic drill stand from 120 V AC receptacle.

23-35-0360 TROUBLE SHOOTING			
ACTION	RESPONSE	POSSIBLE CAUSE	SOLUTION
Magnet is "on". Drill switch is "on".	Tool does not operate. Magnet switch lamp is "on".	1. Drill switch was "on" when magnet was turned "on".	1. Turn drill switch "off", then back "on".
		2. Control module is damaged.	2. Replace control module.
Magnet switch is turned "on".	Magnet switch lamp turns "on", then "off".	1. Magnet is damaged.	1. Check magnet resistance, 335 to 355 ohms.
		2. Wiring from magnet to control module is damaged.	2. Repair or replace wiring.
		3. Control module is damaged.	3. Replace control module.
		4. Voltage is too low/ extension cord is too long or wrong gauge.	4. Check for 120 VAC at cord end. Check extension cord length and gauge.
Magnet switch is turned "on". Drill switch is turned "on".	Magnet switch lamp is on, turns off when drill switch is turned "on".	1. Motor brushes are worn.	1. Replace brushes.
		2. Control module is damaged.	2. Replace control module.