



# BETTCHER Industries, Inc.

*OPERATING INSTRUCTIONS AND SPARE PARTS LISTS*



## UN-84 UNIVERSAL DRIVE MOTOR

**For Use With All  
Current Electric  
Whizard Trimmers**

**MANUAL #163835**  
Issued : November 15, 1995  
TMC#837

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Operating Instructions in other languages are available on request. Additional copies of Operating Instructions are available by calling or writing the local Representative or by contacting :

**BETTCHER INDUSTRIES, INC.**  
6801 State Route 60  
Birmingham, Ohio 44889  
U.S.A.

Telephone : 1-440-965-4422  
(In The U.S.A.) : 1-800-321-8763  
Fax : 1-440-965-4900

The Information Provided In These Operating Instructions  
Are Important To Your Health, Comfort And Safety.  
For Safe And Proper Operation, Read This Entire  
Manual Before Using This Equipment.



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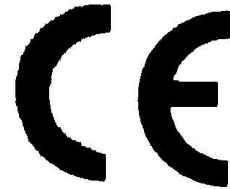


SECTION 1.0      MACHINE SPECIFICATIONS

The Bettcher-Bilt Universal Drive Motor is highly effective for use in the meat industry, designed with the highest possible standards for safety, ergonometry and production and yield efficiency.

The Whizard UN-84 Motor Assembly Unit described in this Operation Instruction has been tested by an independent and certified body, Inchcape Testing Services (UK) Ltd, ETL Albury, Cranleigh, Surrey, England and complies with the Low Voltage Directive 73/23/EEC and EMC 89/336/EEC which includes conformity with the following standards :

- EN 50081-1
- EN 50082-1
- EN 60335-1
- IEC 801
- IEC 335-1



In addition, this product also conforms with the following Swiss standards IEC 745 and HD 400.1 and also conforms with American standards USDA, ANSI 3.34 and UL763. This product is also in conformity with Machine Directive 89/392/EEC prEN/TC153/WG2/N16.5E when used with Whizard UN-84 Trimmers or Whizard Modular Trimmers.

General UN-84 Motor Drive Information :

Weight:                      24 lbs. (10.9 kg)  
Overall Size:                22" High x 11" Wide x 7-1/2" Deep  
   (530mm) x (280mm) x (190mm)

Power Requirements :

|               |                           |        |
|---------------|---------------------------|--------|
| Model 163023: | 115 VAC / 1 Phase / 60 Hz | 6 Amps |
| Model 163554: | 230 VAC / 1 Phase / 50 Hz | 3 Amps |

SECTION 2.0      DESIGNATED USE

2.1    Warning



**WARNING**



**WHIZARD TRIMMERS ARE USED FOR REMOVAL OF FAT AND TISSUE, THE RECOVERY OF LEAN MEAT FROM FAT AND AS A UNIVERSAL CUTTING TOOL IN THE MEAT INDUSTRY. ANY USE IN APPLICATIONS OTHER THAN THOSE FOR WHICH THE WHIZARD TRIMMERS HAVE BEEN DESIGNED AND BUILT MAY RESULT IN SERIOUS INJURIES.**



**WARNING**



**THE MANUFACTURER ASSUMES NO LIABILITY FOR ANY UNAUTHORIZED DESIGN CHANGES, MODIFICATIONS, OR USE OF PARTS NOT SUPPLIED BY THE MANUFACTURER  
OR  
THE USE OF PARTS NOT DESIGNED FOR USE ON THE SPECIFIC MODEL  
AND  
INCLUDES CHANGES IN OPERATING PROCEDURES MADE BY THE OWNER OR ANY OF HIS PERSONNEL.**

**THE USE OF PARTS OTHER THAN THOSE LISTED IN THE PARTS LIST OF THIS MANUAL MAY CAUSE BLADE LOCK-UP RESULTING IN AN UNSAFE OPERATING CONDITION.**

**FOR SAFE AND PROPER OPERATION, READ ENTIRE MANUAL BEFORE USING THIS EQUIPMENT.**

## 2.2 Recommended Operation

The Whizard UN-84 Motor Drive Assembly has been designed for use with the following Whizard Trimmers :

| Model |                           | Modular Model |                                   |
|-------|---------------------------|---------------|-----------------------------------|
| 350   | Trimmer                   | 350M          | Modular Trimmer                   |
| 360   | Trimmer                   | 360M          | Modular Trimmer                   |
| 500   | Bone Trimmer              | 500M          | Modular Bone Trimmer              |
|       |                           | 500MA         | Modular Angle Bone Trimmer        |
| 505   | Bone Trimmer              | 505M          | Modular Defatting Machine         |
|       |                           | 505MA         | Modular Angle Defatting Machine   |
| 520   | Bone Trimmer              |               |                                   |
|       |                           | 564           | Modular Bone Trimmer              |
| 620   | Bone Trimmer              | 620M          | Modular Bone Trimmer              |
|       |                           | 620MA         | Modular Angle Bone Trimmer        |
| 625   | Fat Trimmer               | 625M          | Modular Fat Trimmer               |
| 750   | Trimmer                   | 750M          | Modular Trimmer                   |
|       |                           | 754M          | Modular Trimmer                   |
| 850   | Defatting Machine         | 850M          | Modular Defatting Machine         |
|       |                           | 850MA         | Modular Angle Defatting Machine   |
| 880-B | Primal Fat Shaper (Beef)  | 880B-M        | Modular Primal Fat Shaper (Beef)  |
| 880-S | Primal Fat Shaper (Swine) | 880S-M        | Modular Primal Fat Shaper (Swine) |
| 1850  | Defatting Machine         | 1850M         | Modular Defatting Machine         |
| 1880  | Primal Fat Shaper         | 1880M         | Modular Primal Fat Shaper         |
| 1000  | Fat And Lean Trimmer      | 1000M         | Modular Fat And Lean Trimmer      |
| 1300  | Primal Fat Shaper         | 1300M         | Modular Primal Fat Shaper         |
| 1400  | Ham Finisher              | 1400M         | Modular Ham Finisher              |
| 1500  | Skinning Machine          | 1500M         | Modular Skinning Machine          |

## SECTION 3.0      FUNCTION

### 3.1    Machine Functions

This universal motor drive unit features a 1/3 HP motor which will drive all current electric Whizard Trimmers with all the advantages, the power, and with all the performance to improve your yields and profits.

A vertical motor drives a flexible shaft. The flexible shaft drives a rotating blade in the handpiece via a gear and pinion. The force to cut through meat and fats is now provided by the drive motor and no longer by the worker. Forces applied by the worker are greatly reduced and limited to guiding the rotating knife blade.

The design locks the handpiece in the hanger and shuts the motor off when the handpiece is placed in the hanger.

The motor will not start if the handpiece is in the hanger. An emergency slap-stick stops the unit.

The handpiece has no metal to metal contact with the motor.

### 3.2    Safety Recommendations And Warnings



## **WARNING**




**ALWAYS TURN OFF THE MOTOR AND PLACE THE HANDPIECE IN THE HANGER BRACKET. NEVER LAY THE HANDPIECE DOWN ON THE WORKSTATION OR LET IT HANG FREE BY THE FLEX SHAFT CASING. NEVER PLACE THE HANDPIECE IN THE HANGER WHILE THE BLADE IS STILL REVOLVING.**



3.2 Safety Recommendations And Warnings (Continued)

 **WARNING** 

**ALWAYS DISCONNECT THE POWER  
AND REMOVE THE TOOL FROM THE  
FLEX SHAFT PRIOR TO SERVICING.**

 **WARNING** 

**IF AT ANY TIME THIS MACHINE DOES NOT APPEAR TO OPERATE  
NORMALLY OR EXHIBITS A MARKED CHANGE IN  
PERFORMANCE, IT SHOULD BE IMMEDIATELY SHUT DOWN AND  
TAGGED AS "UNSAFE" UNTIL SUCH TIME AS PROPER REPAIRS  
ARE MADE THE MACHINE AGAIN OPERATES NORMALLY.**

 **WARNING**  

**AVOID USE OF THIS MACHINE IN STANDING WATER.**

## SECTION 4.0      SAFETY FEATURES

The sealed enclosure is extremely water resistant with only one small vent hole.

Switch mechanism is located on top of the motor and is completely enclosed under the motor cover for protection from moisture.

Bottom mounted extra long on/off switch rod.

Strain relief design allows motor to be free-swinging.

The machine has an interlock on the handpiece hanger that prevents hanging the handpiece while the motor is running or turning the motor on while the handpiece is in the hanger. The motor will shut off automatically if the handpiece is placed into the hanger.

## SECTION 5.0      INSTALLATION

Correct installation is extremely important to achieve maximum efficiency for both the Whizard Trimmer unit being used and the operator. Incorrect installation may possibly hamper the operator's movements and cause undue wear or damage to the flex shaft and flex shaft casing parts of the unit.

### 5.1      Space Requirements

#### C A U T I O N

IT IS STRONGLY RECOMMENDED THAT A SAFETY CABLE OR CHAIN BE INSTALLED THROUGH THE SUPPORT YOKE AND AROUND A FIXED OVERHEAD STRUCTURE.

A 3/4" diameter pipe should be fastened to an overhead beam with the pipe centerline 12 inches (300mm) to the right of the operator's shoulder for a right-handed operator (or 12 inches (300mm) to the left of the operator's shoulder if the operator is left-handed). Pipe centerline for Small Tool Models should be 12 inches (300mm) back from the front edge of the table and 15 inches (380mm) back from the front edge of the table for the Large Tool Models (see Figure 1). The pipe should be long enough to provide vertical clearance between the motor to the casing adapter and the top of the table surface. Actual clearance dimensions vary between Whizard tools -see listing of tools as illustrated in Figure 1. (Table top height may be set differently based on operator height and the height of the meat product on the table).

The yoke should be rigidly mounted and parallel to the work station.

5.1 Space Requirements (Continued)

**CAUTION**

IMPROPERLY HUNG MOTORS MAY RESULT IN EXCESSIVE OPERATOR EFFORT & DECREASE IN MOBILITY. INCREASED FATIGUE & LOSS OF EFFICIENCY MAY OCCUR.

For further details on the ergonomic design considerations to the work station, please refer to the Whizard Trimmer Ergonomic Manual. Copies may be obtained by making the request to Bettcher Industries at the contact locations listed in the back of this manual.

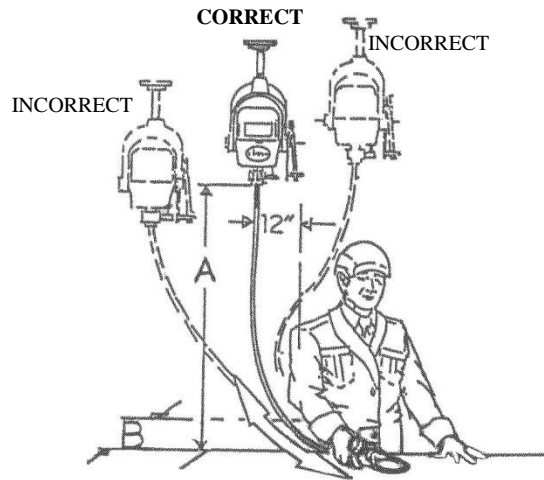


Figure 1

| Model          | A   | B   |
|----------------|-----|-----|
| 350/350M       | 28" | 12" |
| 360/360M       | 28" | 12" |
| 500/500M/500MA | 28" | 12" |
| 505/505M/505MA | 40" | 12" |
| 520            | 28" | 12" |
| 564M           | 28" | 12" |
| 620/620M/620MA | 28" | 12" |
| 625/625M       | 28" | 12" |
| 750/750M       | 42" | 15" |
| 754M           | 42" | 15" |
| 850/850M/850MA | 42" | 15" |
| 880/880M-B&S   | 42" | 15" |
| 1000/1000M     | 42" | 15" |
| 1300/1300M     | 42" | 15" |
| 1400/1400M     | 42" | 15" |
| 1500/1500M     | 42" | 15" |
| 1850/1850M     | 42" | 15" |
| 1880/1880M     | 42" | 15" |

**A = Distance from Motor to Casing Adapter to Center Line of Product**

**B = Distance Out from Table Top**

## 5.2 Installation

Install the motor in the proper position as shown and described in Section 5.1.

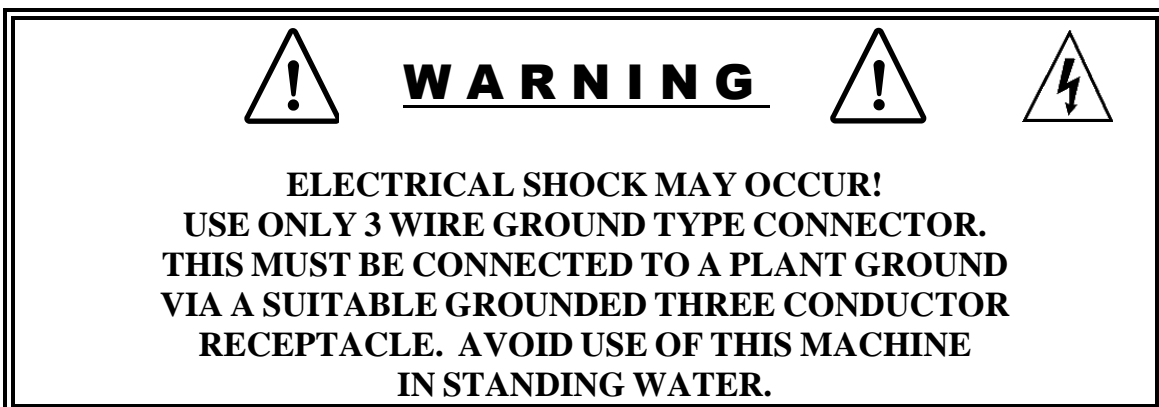
Install the flex shaft assembly to the motor disconnect by lifting the disconnect collar and inserting the adapter end of the casing into the disconnect body.

It may be necessary to rotate the casing assembly to align the square drive of the flex shaft with the square hole in the motor shaft adapter.

Release the disconnect collar to secure the casing to the motor assembly. The flex shaft casing assembly should swivel freely.

## 5.3 Connecting The Power

Connect the motor power cord to the prescribed voltage on the motor nameplate. The motor must be connected to a ground. Use only approved type connector.



Refer to the Wiring Diagrams in Section 8.0

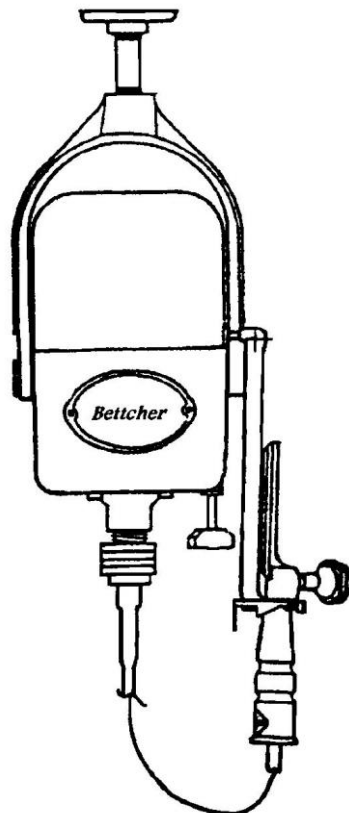
SECTION 6.0      INSTRUCTIONS FOR OPERATION

The hanger is designed to hold the handpiece with the blade facing toward the flipper and the motor turned off. This feature is to discourage the unsafe practice of hanging the handpiece with the blade rotating and requires removing the handpiece from the hanger in order to start the motor.

On/Off Procedure : Remove the handpiece from the hanger, lifting the metal catch with one finger as you pull the handpiece out. With your other hand, turn the switch knob clockwise to start the motor.

On/Off Procedure With Disconnect Casing Assembly (Modular Trimmers Only) : Remove the handpiece from the hanger, lifting the metal catch with one finger as you pull the handpiece out. The Quick Disconnect can be used with the motor either running at the time of engagement or with the motor off.

The motor can be turned off by turning the switch knob counterclockwise or by tripping the hanger flipper. Turn the motor off before placing the handpiece in the hanger to prevent dulling the blade on the flipper. Push the handpiece into the holder until catch drops in place.



**Figure 2**  
**Handpiece in Hanger**

6.1 Fault Detection And Correction

| <b>Problem</b>      | <b>Probable Cause</b>  | <b>Remedy</b>  |
|---------------------|--|--|
| Motor Will Not Run  | No power to motor  | Check line voltage. Make sure line voltage matches motor spec. plate                               |
|                     | Bad power cord or plug   | Check voltage at cord to switch point. Refer to Sections 8.3, 8.4, and/or 8.5 for proper schematic |
|                     | Loose wire connections   | Tighten loose connections  |
|                     | Bad circuit breaker (230V Only)                                  | Try resetting breaker or replace breaker if defective (refer to Section 8.4)                       |
|                     | Bad switch   | Check switch and replace if defective  |
| Motor Noisy         | Bad bearing in motor   | Remove and replace   |
| Handpiece Vibration | Machine not installed correctly in relation to operator position | Check installation procedures in Section 5.1   |
|                     | Flex shaft/motor adapter worn                                    | Replace adapter (Part Number 143077)   |

6.2 Instructions On Safety For Personnel



**WARNING**



**NEVER PLACE THE HANDPIECE IN THE HANGER WHILE THE  
BLADE IS STILL REVOLVING.**



**WARNING**



**ALWAYS TURN OFF THE MOTOR AND PLACE THE HANDPIECE IN  
THE HANGER BRACKET.**



**WARNING**



**ALWAYS DISCONNECT POWER AND REMOVE THE TOOL FROM  
THE FLEX SHAFT CASING PRIOR TO SERVICING.**



**WARNING**



**IF AT ANY TIME THIS MACHINE DOES NOT APPEAR TO OPERATE  
NORMALLY, OR EXHIBITS A MARKED CHANGE IN  
PERFORMANCE, IT SHOULD BE IMMEDIATELY SHUT DOWN AND  
TAGGED AS "UNSAFE" UNTIL SUCH TIME AS PROPER REPAIRS  
ARE MADE AND THE MACHINE AGAIN OPERATES NORMALLY.**

*SECTION 7.0*      *MAINTENANCE*

Make sure the motor unit pivots freely in the yoke. Check that the pivot bolts and pivot sleeve bearings are in good condition. If required, clean pivots and change the sleeve bearings.

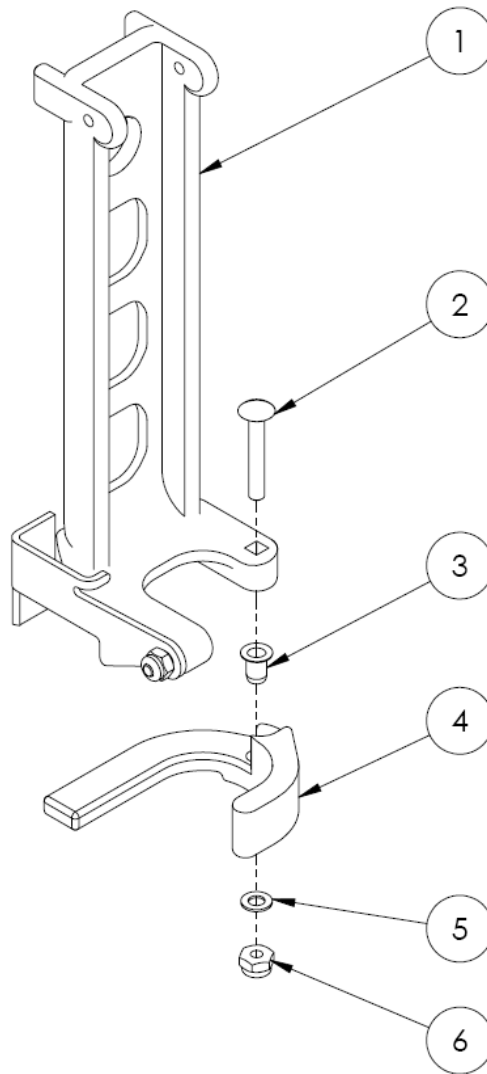
Check to make sure the power cord connector is tight in the bell cap. Tighten as required.

Periodically check the condition of the flex shaft casing to motor disconnect. Make sure the balls move freely and the casing rotates freely in the disconnect.



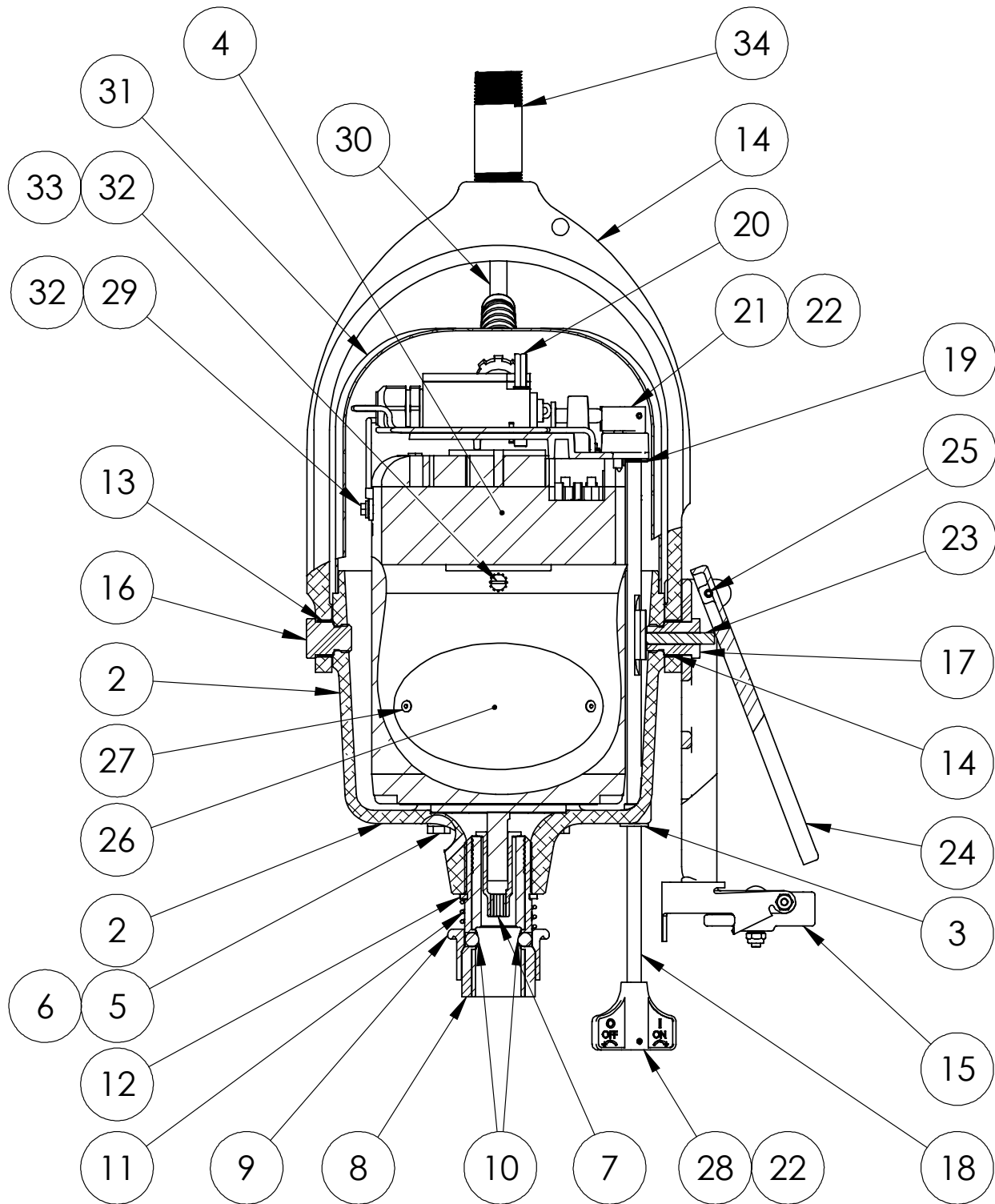
SECTION 8.0      SPARE PARTS LIST

8.1    Handpiece Hanger



| ITEM | DESCRIPTION           | PART NUMBER | QTY. USED |
|------|-----------------------|-------------|-----------|
| 1    | HANGER/CATCH ASSEMBLY | 143679      | 1         |
| 2    | BOLT                  | 143199      | 1         |
| 3    | FLANGED SPACER        | 122275      | 1         |
| 4    | LATCH                 | 143671      | 1         |
| 5    | WASHER                | 120280      | 1         |
| 6    | NUT                   | 123609      | 1         |

8.2 Motor Assembly

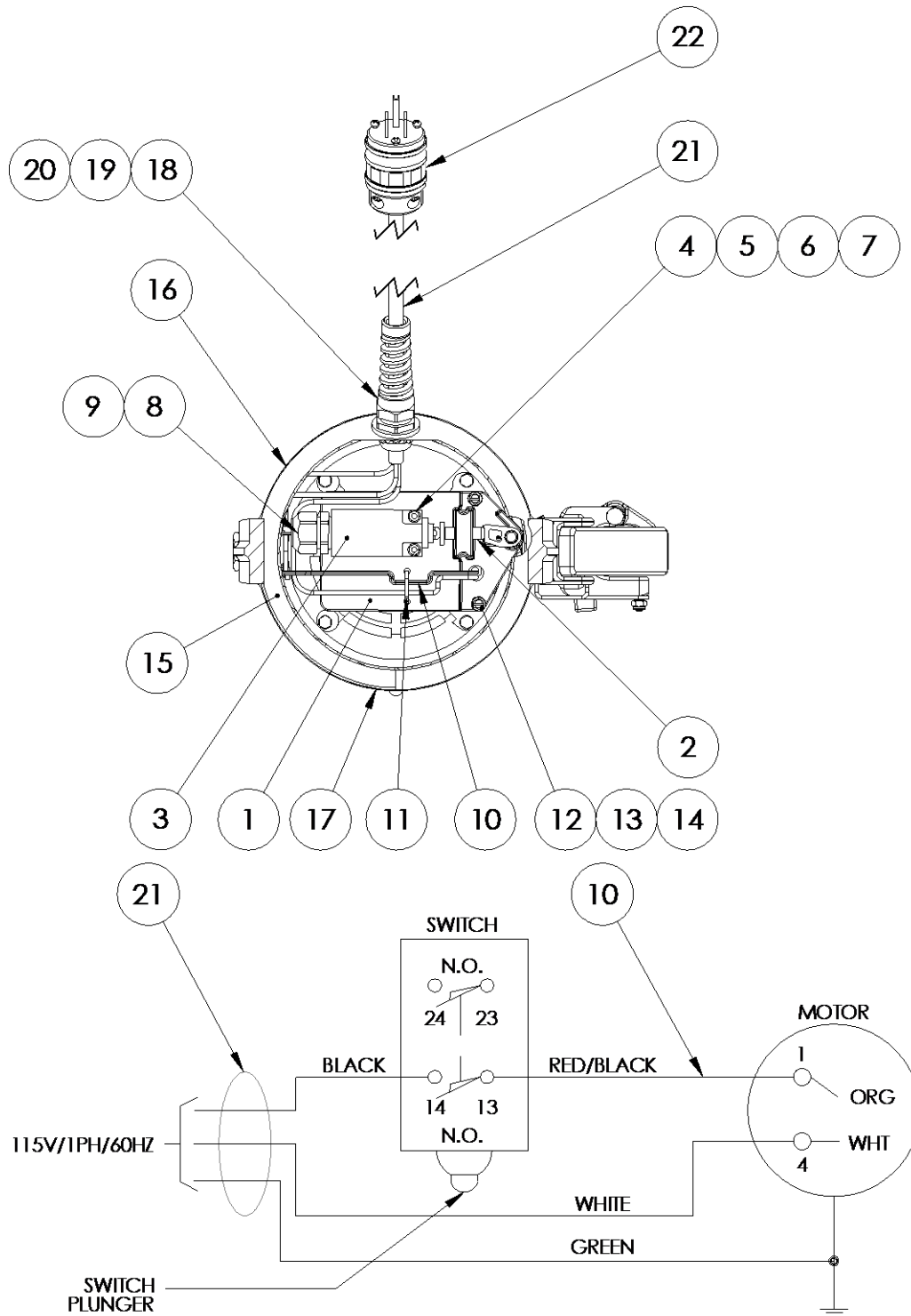


1 **COMPLETE MOTOR ASSEMBLY**

8.2 Motor Assembly (Continued)

| ITEM | DESCRIPTION  | 115 VOLTS<br>1 PHASE<br>60 HZ |      | 230 VOLTS<br>1 PHASE<br>50 HZ |      |
|------|--|-------------------------------|------|-------------------------------|------|
|      |  | P/N                           | QTY  | P/N                           | QTY  |
| 1    | COMPLETE MOTOR ASSEMBLY                                  | 163023                        | 1    | 163554                        | 1    |
| 2    | END BELL ASSEMBLY<br>(INCLUDES SWITCH ROD BUSHING)       | 143074                        | 1    | 163900                        | 1    |
| 3    | SWITCH ROD BUSHING                                       | 143125                        | REF. | 143125                        | REF. |
| 4    | MOTOR  | 163057                        | 1    | 163058                        | 1    |
| 5    | LOCK WASHER  | 120220                        | 4    | 120220                        | 4    |
| 6    | BOLT   | 120576                        | 4    | 120576                        | 4    |
| 7    | FLEX SHAFT/ MOTOR ADAPTER                                | 143077                        | 1    | 143077                        | 1    |
|      | DISCONNECT ASSEMBLY<br>INCLUDES ITEMS; 8 THRU 12         | 163190                        | 1    | 163190                        | 1    |
| 8    | DISCONNECT BODY  | 143112                        | 1    | 143112                        | 1    |
| 9    | DISCONNECT COLLAR  | 143113                        | 1    | 143113                        | 1    |
| 10   | BALL   | 143114                        | 2    | 143114                        | 2    |
| 11   | SPRING   | 121610                        | 1    | 121610                        | 1    |
| 12   | RETAINING RING   | 122025                        | 1    | 122025                        | 1    |
| 13   | SLEEVE BEARING   | 121751                        | 2    | 121751                        | 2    |
| 14   | MOTOR SUPPORT YOKE                                       | 143161                        | 1    | 143161                        | 1    |
| 15   | HANGER ASSEMBLY<br>(SEE HANDPIECE SECTION FOR<br>DETAIL) | 143691                        | 1    | 143691                        | 1    |
| 16   | PIVOT BOLT   | 143117                        | 1    | 143117                        | 1    |
| 17   | PIVOT INTERLOCK BOLT                                     | 143674                        | 1    | 143674                        | 1    |
| 18   | SWITCH ROD   | 143132                        | 1    | 143132                        | 1    |
| 19   | E-RING   | 122024                        | 1    | 122024                        | 1    |
| 20   | LIMIT SWITCH ASSEMBLY                                    | 173660                        | 1    | 173661                        | 1    |
| 21   | SWITCH CAM   | 185767                        | 1    | 185767                        | 1    |
| 22   | SPRING PIN   | 120166                        | 2    | 120166                        | 2    |
| 23   | SHUT-OFF PIN   | 143675                        | 1    | 143675                        | 1    |
| 24   | FLIPPER  | 143672                        | 1    | 143672                        | 1    |
| 25   | SLOTTED SPRING PIN                                       | 122432                        | 1    | 122432                        | 1    |
| 26   | NAME PLATE   | 143129                        | 1    | 163446                        | 1    |
| 27   | POP RIVET 1/8"   | 122744                        | 2    | 122744                        | 2    |
| 28   | SWITCH ROD KNOB  | 163014                        | 1    | 163014                        | 1    |
| 29   | SCREW (PART OF MOTOR)                                    | 122730                        | 1    | 122730                        | 2    |
| 30   | POWER CORD   | 163018                        | 1    | 163580                        | 1    |
| 31   | BELLCAP ASSEMBLY   | 163044                        | 1    | 163895                        | 1    |
| 32   | LOCK WASHER  | 120232                        | 3    | 120232                        | 4    |
| 33   | SCREW  | 120775                        | 2    | 120775                        | 2    |
| 34   | PIPE NIPPLE  | 143212                        | 1    | 143212                        | 1    |

8.3 Top View Of 115V Motor With Schematic



**SCHEMATIC DIAGRAM**

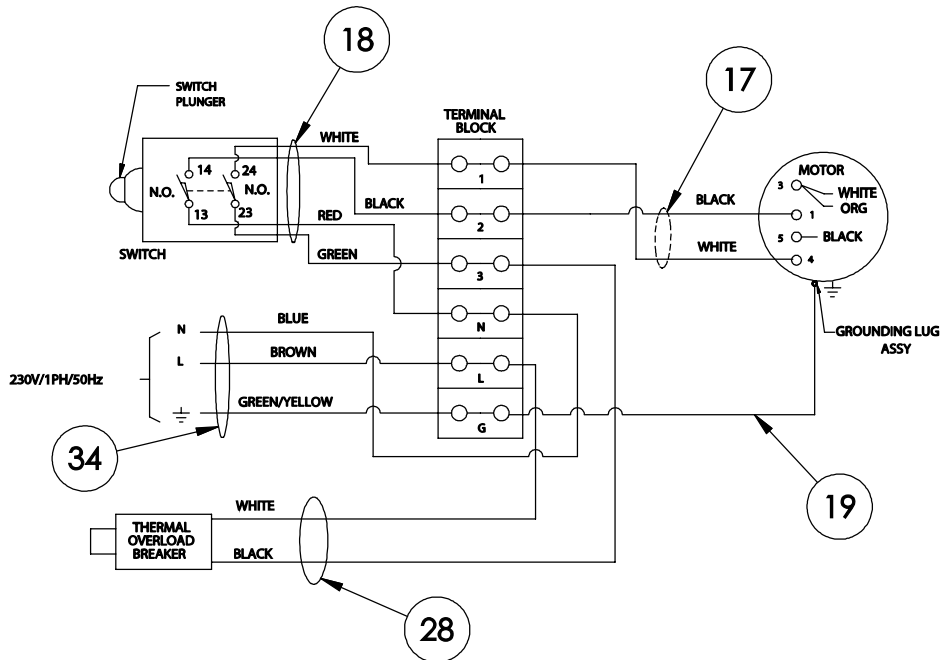
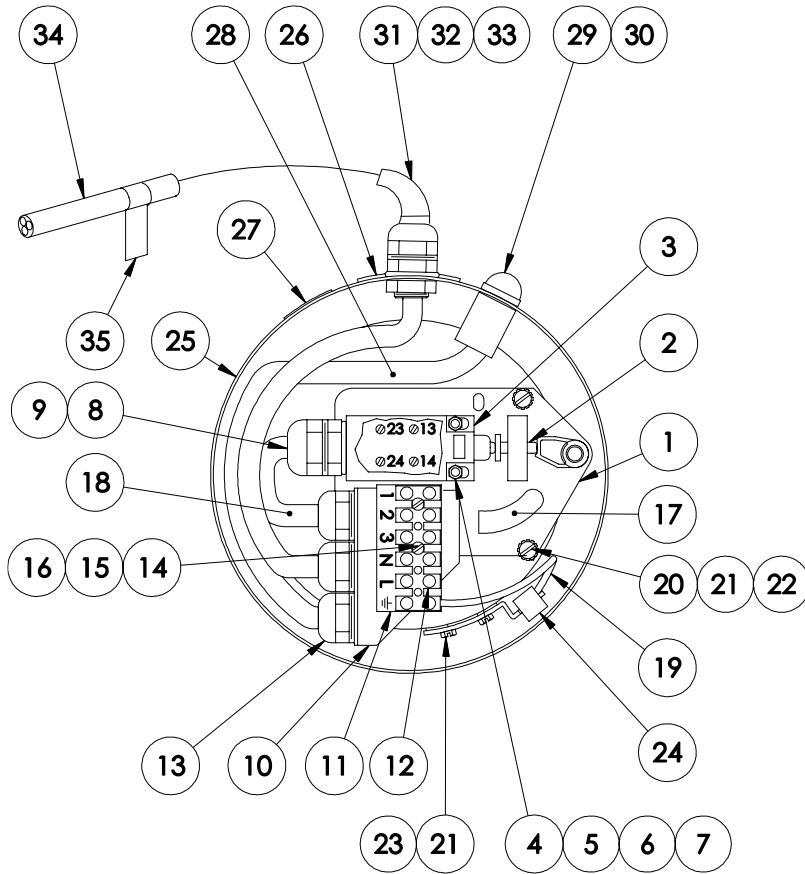
**8.3 Top View Of 115V Motor With Schematic (Continued)**

| ITEM | DESCRIPTION                                       | 115 VOLTS<br>1 PHASE<br>60 HERTZ |     |
|------|---|----------------------------------|-----|
|      |   | P/N                              | QTY |
|      | LIMIT SWITCH ASSEMBLY<br>INCLUDES ITEMS; 1 THRU 9 | 173660                           | 1   |
| 1    | SWITCH MOUNTING PLATE                             | 173663                           | 1   |
| 2    | SWITCH PLUNGER                                    | 173662                           | 1   |
| 3    | LIMIT SWITCH                                      | 124969                           | 1   |
| 4    | SOCKET HEAD CAP SCREW                             | 122514                           | 2   |
| 5    | WASHER  | 120298                           | 2   |
| 6    | LOCKING WASHER                                    | 120201                           | 2   |
| 7    | STANDOFF  | 122258                           | 2   |
| 8    | O-RING  | 122327                           | 1   |
| 9    | CONNECTOR   | 123612                           | 1   |
| 10   | SWITCH/ MOTOR WIRE<br>(RED/ BLACK)                | 163017                           | 1   |
| 11   | PLASTIC TIE CLAMP                                 | 120982                           | 1   |
| 12   | WASHER  | 120260                           | 2   |
| 13   | LOCK WASHER                                       | 120235                           | 2   |
| 14   | SCREW   | 122765                           | 2   |
|      | BELL CAP ASSEMBLY<br>INCLUDES ITEMS; 15 THRU 19   | 163044                           | 1   |
| 15   | BELL CAP  | 163015                           | 1   |
| 16   | WARNING LABEL                                     | 103709                           | 1   |
| 17   | CAUTION LABEL                                     | 163031                           | 2   |
| 18   | SEAL  | 105245                           | 1   |
| 19   | CONNECTOR   | 124961                           | 1   |
| 20   | LOCK NUT  | 122653                           | 1   |
| 21   | POWER CORD  | 163018                           | 1   |
| 22   | MALE PLUG   | 103413                           | 1   |

**ALSO AVAILABLE:**

| DESCRIPTION         | P/N    | QTY |
|---------------------|--------|-----|
| BEARING SHAFT       | 125865 | 2   |
| SWITCH - STATIONARY | 125863 | 1   |

8.4 Top View Of 230V Motor With Schematic



8.4 Top View Of 230V Motor With Schematic (Continued)

| ITEM | DESCRIPTION  | 230 VOLTS<br>1 PHASE<br>50 HERTZ |     |
|------|--|----------------------------------|-----|
|      |  | P/N                              | QTY |
|      | LIMIT SWITCH ASSEMBLY<br>INCLUDES ITEMS; 1 THRU 16 | 173661                           | 1   |
| 1    | SWITCH MOUNTING PLATE                              | 173663                           | 1   |
| 2    | SWITCH PLUNGER                                     | 173662                           | 1   |
| 3    | LIMIT SWITCH                                       | 124969                           | 1   |
| 4    | SOCKET HEAD CAP SCREW                              | 122514                           | 2   |
| 5    | WASHER   | 120298                           | 2   |
| 6    | LOCKING WASHER                                     | 120201                           | 2   |
| 7    | STANDOFF   | 122258                           | 2   |
| 8    | O-RING   | 122327                           | 1   |
| 9    | CONNECTOR  | 123612                           | 1   |
| 10   | STRAIN RELIEF BRACKET                              | 163582                           | 1   |
| 11   | TERMINAL BLOCK ID PLATE                            | 163621                           | 1   |
| 12   | TERMINAL BLOCK                                     | 124833                           | 1   |
| 13   | STRAIN RELIEF BUSHING                              | 124829                           | 3   |
| 14   | WASHER   | 120282                           | 2   |
| 15   | ROUND HEAD SLOTTED SCREW                           | 122609                           | 2   |
| 16   | LOCKING NUT  | 123608                           | 2   |
| 17   | MOTOR/ TERMINAL BLOCK CABLE                        | 163576                           | 1   |
| 18   | TERMINAL BLOCK/ SWITCH CABLE                       | 163579                           | 1   |
| 19   | GROUND WIRE (GREEN/ YELLOW)                        | 163670                           | 1   |
| 20   | WASHER   | 120260                           | 2   |
| 21   | LOCK WASHER  | 120235                           | 4   |
| 22   | SCREW  | 122765                           | 2   |
| 23   | SCREW (PART OF MOTOR)                              | 122730                           | 2   |
| 24   | LUG ASSEMBLY, SOLDERLESS,<br>2 HOLE, 6-14 AWG      | 124849                           | 1   |
|      | BELL CAP ASSEMBLY<br>INCLUDES ITEMS; 25 THRU 29    | 163895                           | 1   |
| 25   | BELL CAP   | 163577                           | 1   |
| 26   | WARNING LABEL                                      | 103709                           | 1   |
| 27   | LABEL, SPLASHPROOF                                 | 163638                           | 1   |
| 28   | CIRCUIT BREAKER/<br>TERMINAL BLOCK CABLE           | 163581                           | 1   |
| 29   | CIRCUIT BREAKER                                    | 124836                           | 1   |
| 30   | PUSH BUTTON BOOT                                   | 124837                           | 1   |
| 31   | SEAL   | 105245                           | 1   |
| 32   | CONNECTOR  | 124961                           | 1   |
| 33   | LOCK NUT   | 122653                           | 1   |
| 34   | POWER CORD   | 163580                           | 1   |
| 35   | WIRING GUIDE TAG                                   | 163591                           | 1   |

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## **SECTION 9.0**      **ABOUT THESE OPERATING INSTRUCTIONS**

### **9.1**    **Other Languages**

Translations into any of the languages used in the European Union are available at cost price upon request. Call or write the local Distributor or contact Bettcher Industries.

### **9.2**    **Document Identification**

Copies of this Operating Instruction may be ordered by quoting the Document ID as listed below :

|                        |  |
|------------------------|--|
| Document ID :          | Manual # 163835  |
| Document Description : | Operating Instructions And Spare Parts<br>List For Bettcher-Bilt™ UN-84<br>Universal Drive Motor |
| Issued :               | August 28, 1995  |

Operating Instructions for other Whizard Drive Units and/or Whizard Trimmers may be requested by quoting the model designation of the unit as shown on the identification plate on the unit.

### **9.3**    **Software And Duplication**

This document has been created with Microsoft Word for Macintosh and set in Palatino 12 points for A-size paper (8.5 x 11 inches).

It can be provided to users of the Bettcher-Bilt™ UN-84 Universal Drive Motor, in this and other popular word processor formats. If you are a user of the Bettcher-Bilt™ UN-84 Universal Drive Motor and wish to include these Instructions in your own Operating, Safety or Good Manufacturing Practice Manuals, request a copy on diskette, specifying your preferred file and media format. For more information, contact your local Representative or :

BETTCHER INDUSTRIES, INC.  
Administrative Assistant/Engineering Department  
6801 State Route 60  
Vermilion, Ohio 44889  
U.S.A.

**SECTION 10.0      CONTACT ADDRESSES AND PHONE**

For additional information, technical support and spare parts, contact your local Representative, Distributor, or Bettcher Representative :

Bettcher Industries, Inc.  
6801 State Route 60  
Birmingham, OH 44889  
USA  
Tel: +1 440/965-4422  
Fax: +1 440/965-4900

BETTCHER GmbH  
Pilatusstrasse 4  
CH-6036 Dierikon  
SWITZERLAND  
Tel: +011-41-41-348-0220  
Fax: +011-41-41-348-0229

Bettcher do Brasil Comércio de Máquinas Ltda.  
Av. Fagundes Filho, 145 Cj 101/102 - São Judas  
São Paulo - SP  
CEP 04304-010 - BRASIL  
Tel: +55 11 4083 2516  
Fax: +55 11 4083 2515