



29327

Food Processor

CC34

B32

C32

- NOTICE -

This Manual is prepared for the use of trained Berkel Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Berkel Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Berkel Service Technician.

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GENERAL

INTRODUCTION

This manual covers Models CC34, B32, and C32 Food Processors.

SPECIFICATIONS

Operating voltage	100-120/50-60/1
Current	10 amps

CLEANING PROCEDURES

Never clean machine with a high pressure hose, with steam injection equipment or in a dishwasher.

Detailed cleaning procedures are included in Instruction manual for this model.

OPERATION

Start-up Test

1. With the feeder, any cutting tools, and ejector plate removed, check that the machine will not start when variable speed control is in I, II, or P position.
2. With feeder on machine base, check that the machine stops when feeder handle is raised and re-starts when feeder handle is lowered, with variable speed control in I, II, or P position.
3. Check that shaft stops rotating within four seconds when feeder handle is lifted and variable speed control is in II position.

Detailed operation procedures are included in the Instruction manual for this model.

TOOLS

- Standard set of hand tools
- Set of Torx drivers
- VOM with measuring micro amp current tester. Any VOM with minimum of CAT III 600V, CE certified. Sensitivity of at least 20,000 ohms per volt can be used. In addition, meter leads must also be a minimum of CAT III 600V.
- Loctite® No. 222

LUBRICATION

Chevron FM ALC EP - 2 used in bowl drive gear case.

REMOVAL AND REPLACEMENT OF PARTS

BASE AND TOP HOUSING



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove cutter/mixer bowl or feeder attachment.
2. Position unit on blocks as shown to protect knife shaft from damage during disassembly.
3. Remove four screws and base housing from top housing.

BASE HOUSING

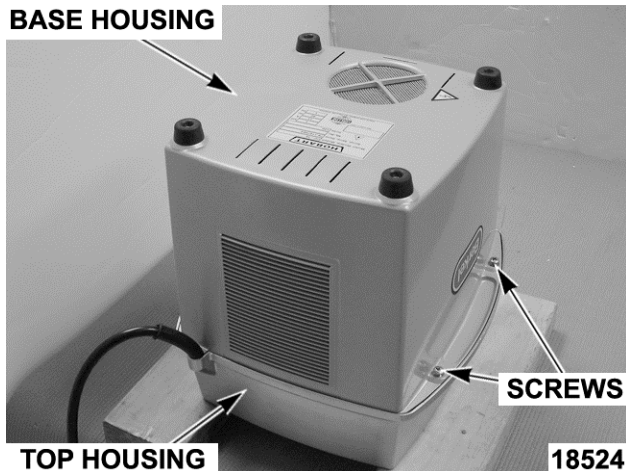


Fig. 1

4. Install in reverse order of removal.

MOTOR



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove base housing as outlined under BASE AND TOP HOUSING.
2. Tag and mark all wires.
3. Remove foam spacer from motor.
4. Remove four wire connectors from control board.

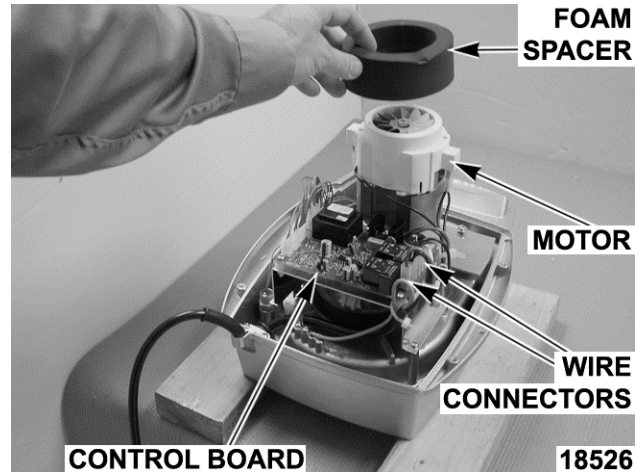


Fig. 2

5. Remove screws from motor mounting bracket and lift motor from housing.

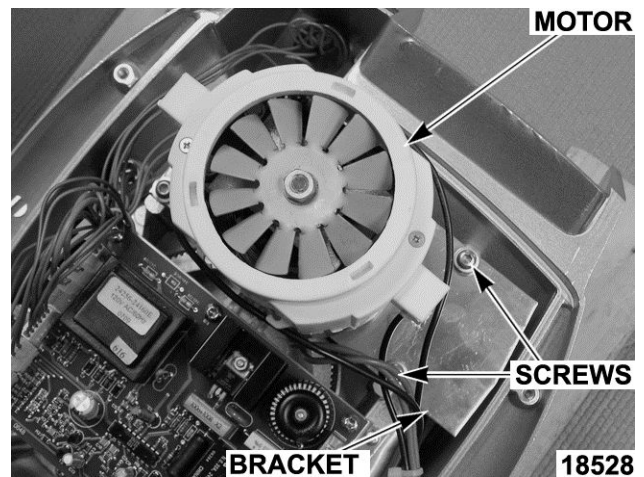


Fig. 3

6. Carefully turn motor and bracket over to remove the Torx screw and sensor.

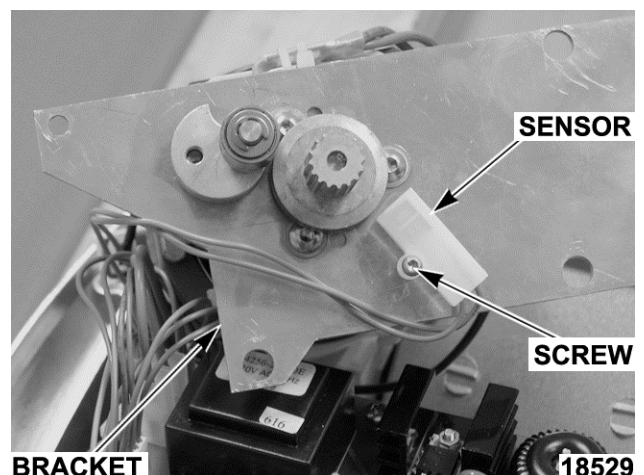
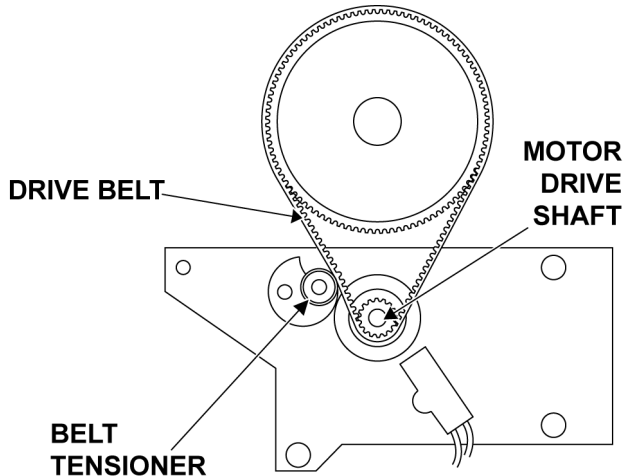


Fig. 4

- Remove motor, bracket, and wires from top housing.

NOTE: During motor installation, be sure to align drive belt correctly. The motor drive shaft should be inside the drive belt; the belt tensioner should be on the outside of the belt.



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Fig. 5

- Install motor, brackets, and wires in reverse order of removal.

CONTROL BOARD



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- Remove base housing as outlined under BASE AND TOP HOUSING.
- Tag and mark all wires and connectors.
- Remove wire ties as necessary.
- Remove 12 connectors from control board.

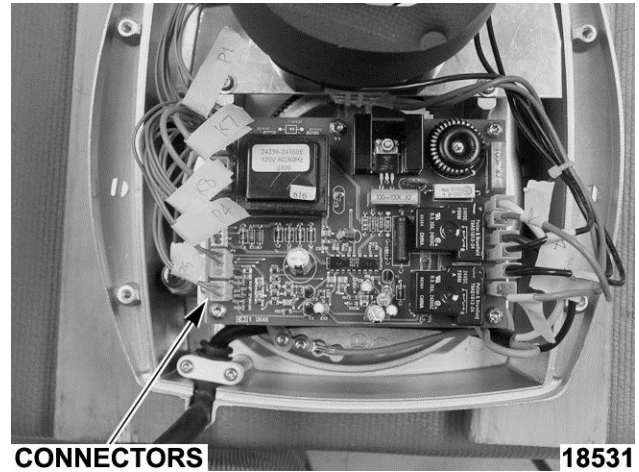


Fig. 6

- Remove five Torx screws and control board from control board plate.

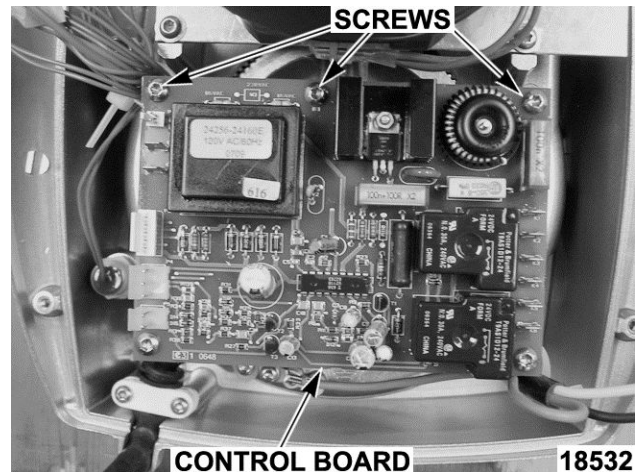


Fig. 7

- Install control board in reverse order of removal.

KNIFE SHAFT



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- Remove base housing as outlined under BASE AND TOP HOUSING.
- Remove motor as outlined under MOTOR.
- Remove control board as outlined under CONTROL BOARD.
- Remove wires and wire ties from control board plate.
- Remove Torx screws and control board plate from top housing.

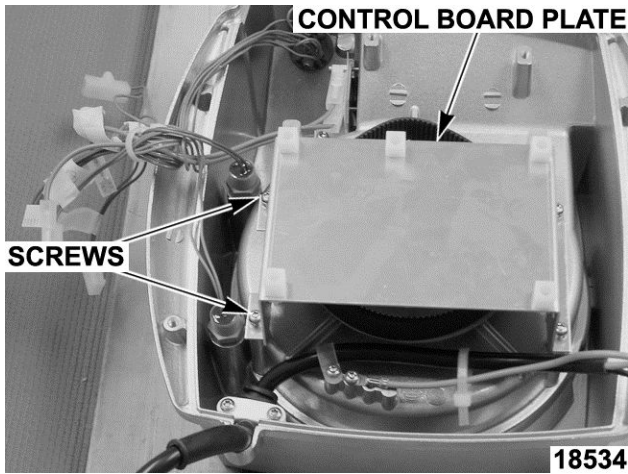


Fig. 8

6. Remove drive belt, screw, washer, and knife shaft pulley.

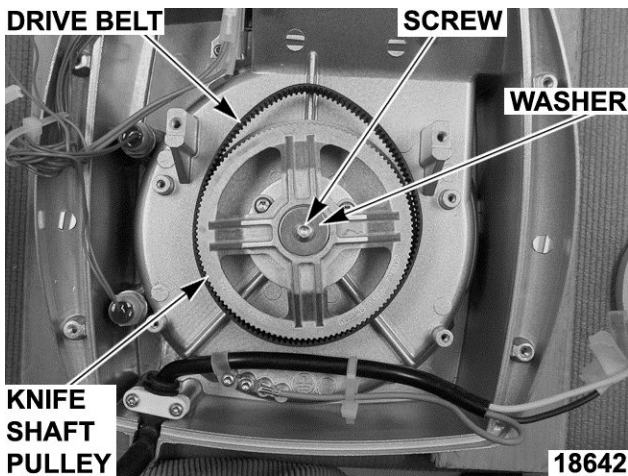


Fig. 9

7. Remove three Torx screws and bearing cover.

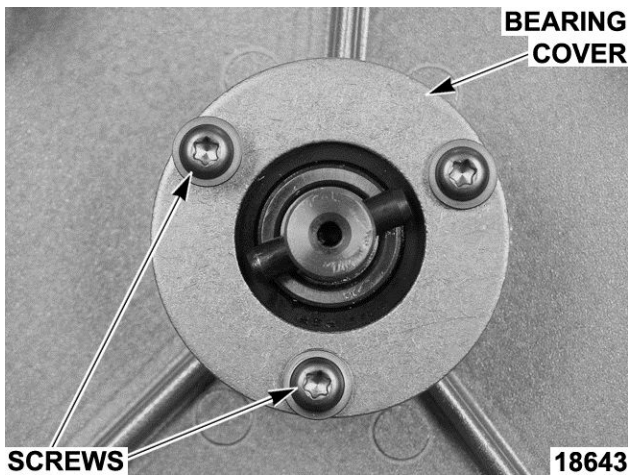


Fig. 10

NOTE: Carefully turn top housing over to gain access to the knife shaft. Do not pinch or bend wires when removing screw from knife shaft.

8. Remove screw pin from knife shaft.

NOTE: Some heat may be required to remove the screw pin.

9. Remove seal ring from knife shaft.

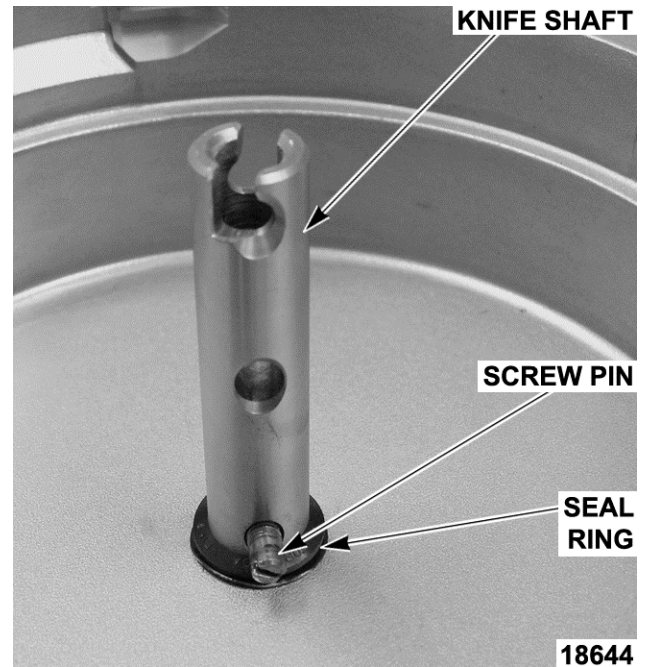


Fig. 11

10. Tap knife shaft assembly from top housing.

11. Remove roll pin from knife shaft assembly.

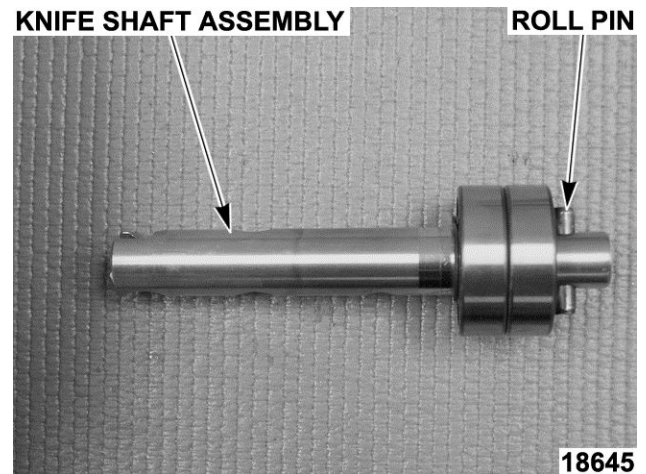


Fig. 12

12. Remove two bearings from knife shaft.

13. Remove lock ring from knife shaft.

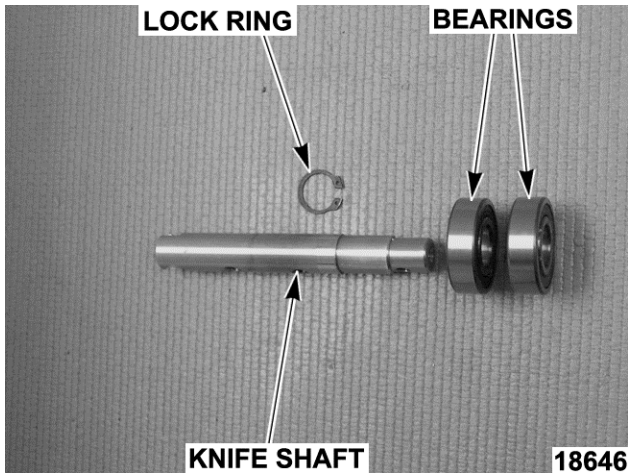


Fig. 13

14. Remove ring seal from top housing.

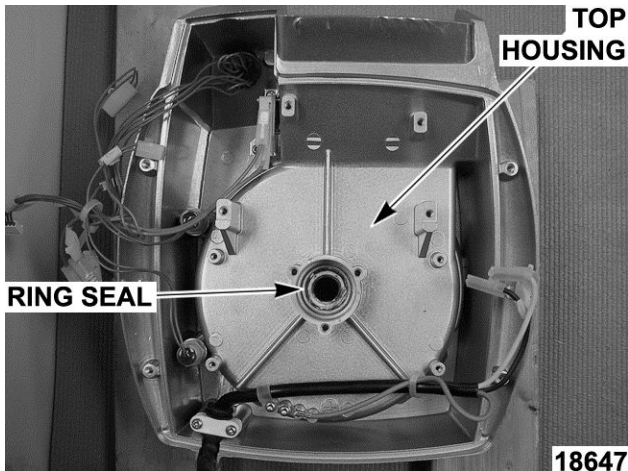


Fig. 14

15. Install knife shaft in reverse order of removal.

NOTE: Add loctite to screw pin during install

MAGNETIC SAFETY SWITCH



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove base housing as outlined under BASE AND TOP HOUSING.
2. Remove wire ties as necessary.
3. Tag and mark all wires and connectors.
4. Remove connector from control board.
5. Remove magnetic safety switch from top housing.

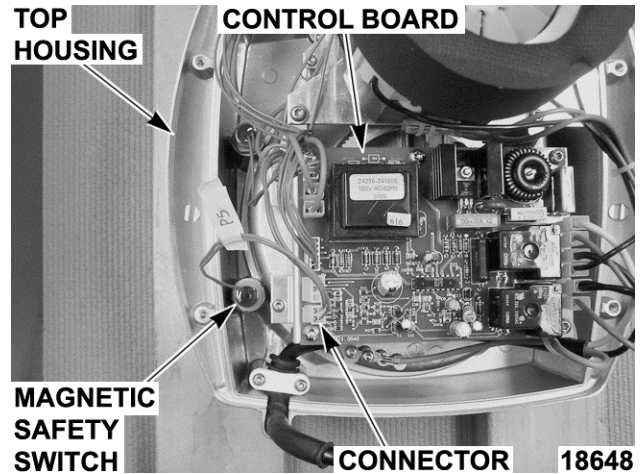


Fig. 15

6. Install magnetic safety switch in reverse order of removal.

SPEED CONTROL SWITCH



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove base housing as outlined under BASE AND TOP HOUSING.
2. Remove wire ties as necessary.
3. Tag and mark all wires and connectors.
4. Remove connector from control board.
5. Remove speed control switch from top housing.

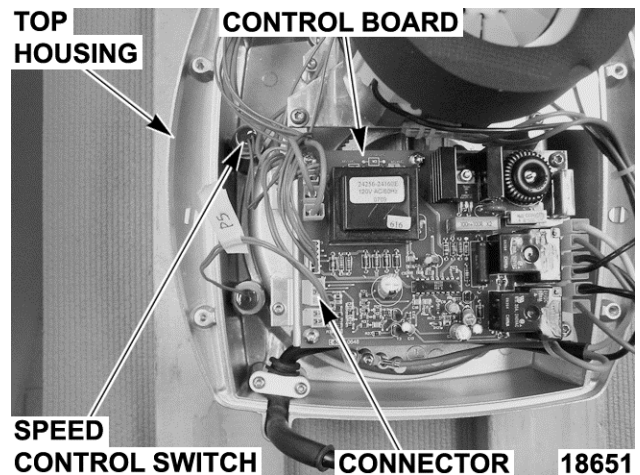


Fig. 16

6. Install speed control switch in reverse order of removal.

ROTARY SWITCH



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove base housing as outlined under BASE AND TOP HOUSING.
2. Remove wire ties as necessary.
3. Tag and mark all wires and connectors.
4. Remove connector from control board.

ROTARY SWITCH

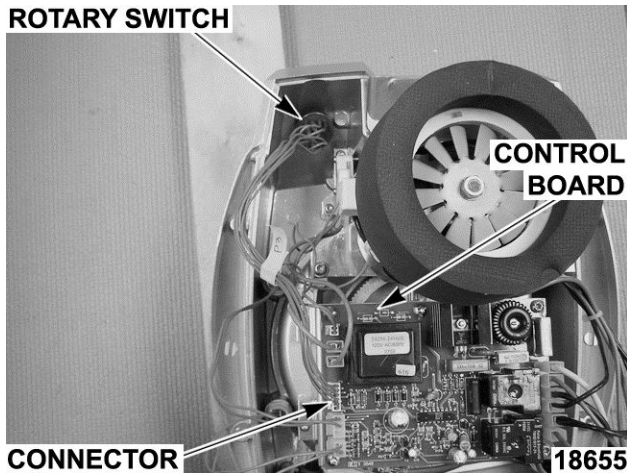


Fig. 17

5. Turn top housing upright and support.
6. Remove knob from rotary switch.
7. Remove nut and rotary switch from top housing.

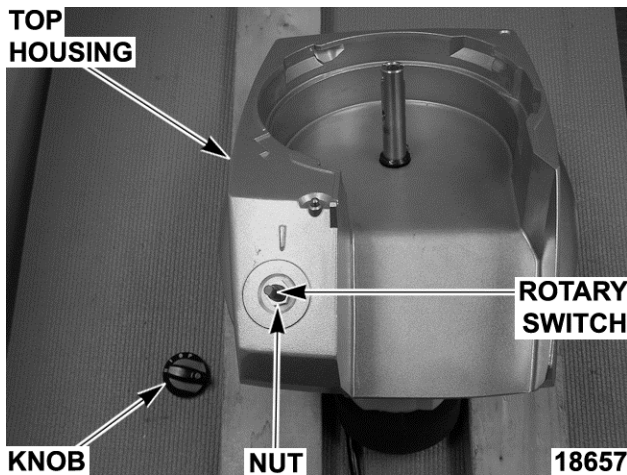


Fig. 18

8. Install rotary switch in reverse order of removal.

MICROSWITCH



WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove base housing as outlined under BASE AND TOP HOUSING.
2. Remove wire ties as necessary.
3. Tag and mark all wires and connectors.
4. Remove two connectors from control board.
5. Remove two Torx screws and microswitch bracket from top housing.

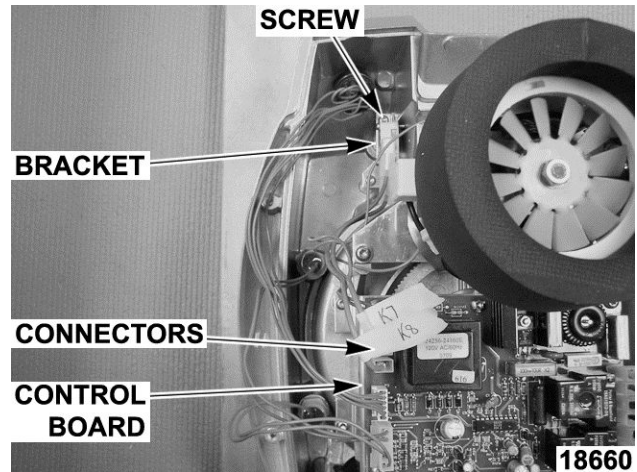


Fig. 19

6. Remove two wires and connectors from microswitch.

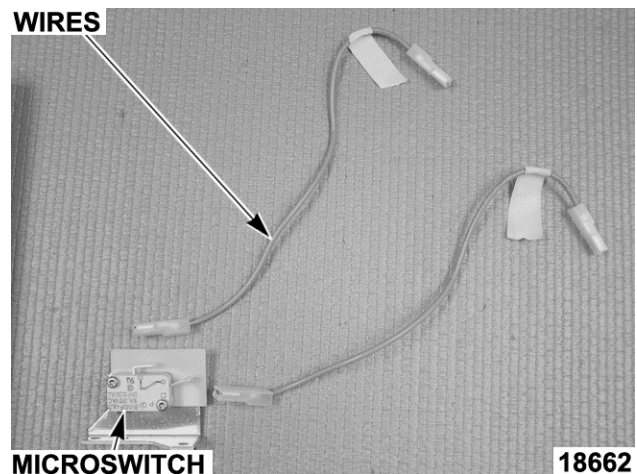


Fig. 20

7. Remove two Torx screws, switch, and insulator from microswitch bracket.

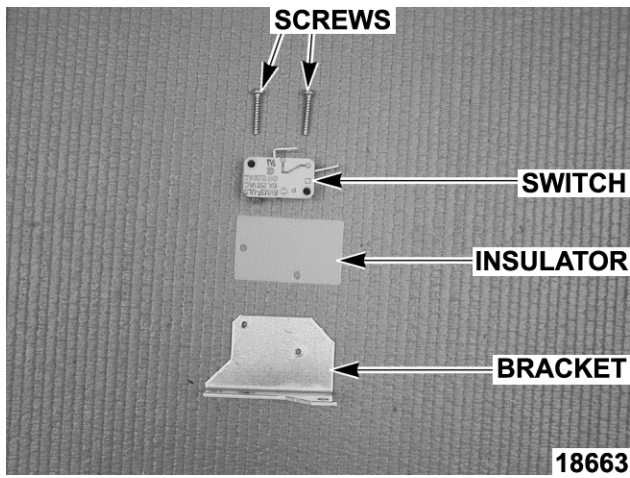


Fig. 21

8. Install microswitch in reverse order of removal.

SERVICE PROCEDURES AND ADJUSTMENTS

ELECTRICAL CONTROLS TEST PROCEDURES

⚠ WARNING Do not install any cutting tools for the following tests.

1. Remove the feeder, any cutting tools and ejector plate.
2. Remove the lid, knife, and bowl.
3. Turn the variable speed control to the I position and check that the machine will not start.
4. Install the feeder, set the variable speed control to the I position and check that the machine stops when the feeder handle is raised and re-starts when the handle is lowered.
5. Set the variable speed control to the I position, raise the feeder handle and check that the shaft stops rotating within four seconds.
6. Install the bowl and lid and set the variable speed control to the I position and check that the shaft stops rotating within four seconds after the lid has been lifted and turned counterclockwise as far as it will go.
7. Remove the power supply plug from the wall socket. Check that the electrical cable is in good condition and has no cracks.

NOTE: If the electrical cable is worn or damaged or shows signs of cracking, or if any of the above safety functions are not in good working order, a service mechanic should be called in to make repairs before the machine is put back in operation.

MOTOR TEST



⚠ WARNING Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect power and follow Lockout/Tagout procedures, attach test equipment and reapply power to test.



⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove base housing as outlined under BASE AND TOP HOUSING.
2. Remove wire ties as necessary.
3. Tag and mark all wires and connectors.
4. Unplug motor wire connectors from control board.
5. Test resistance between the following motor wire connectors.

K2 to K6	0.2 to 0.4 Ohms
K2 to K5	Open
K2 to K4	Open
K5 to K4	2.8 to 2.9 Ohms
K5 to K6	Open
K6 to K4	Open

ELECTRICAL OPERATION

COMPONENT FUNCTION

Motor - M1	Drive Motor
Speed Sensor Fixed Value Inductor	Monitors speed of blade rotation.
Safety Interlock 1LS	Keeps motor from turning if feeder is not installed properly.
Speed Selector	Allows operator to select preferred speed.
Magnetic Switch Speed Control	Senses which attachment is installed and automatically sets speed ranges.
Magnetic Switch Safety Control	Keeps motor from turning if accessory is not installed properly.

COMPONENT LOCATION

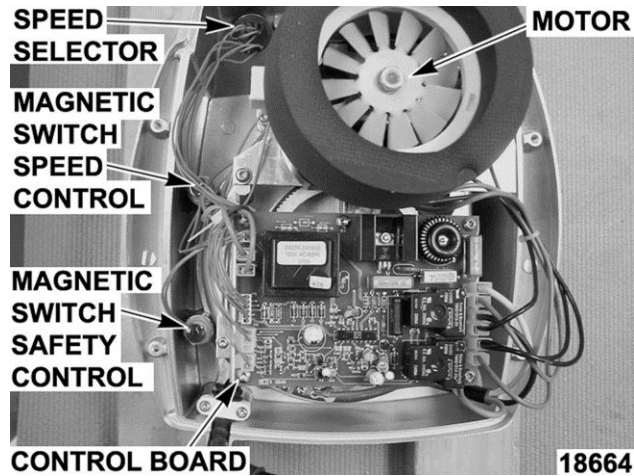


Fig. 22

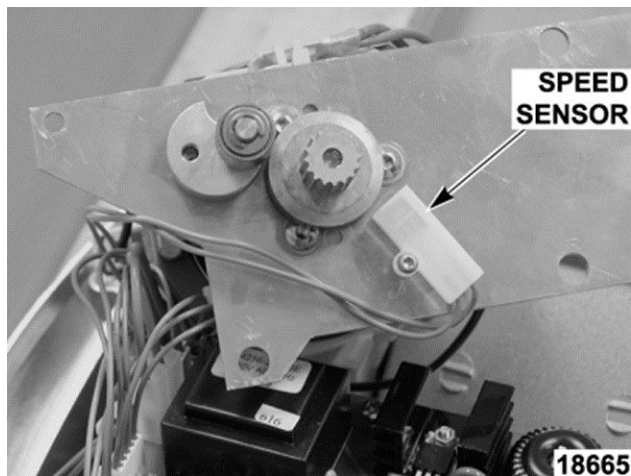


Fig. 23

WIRING DIAGRAM

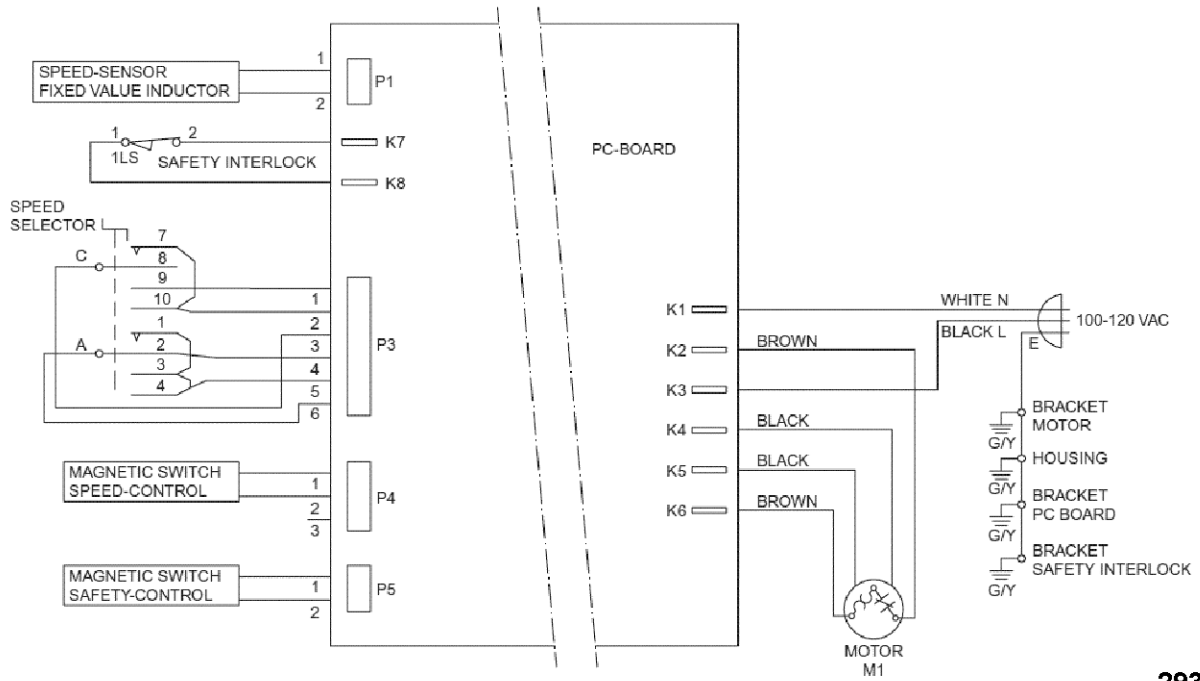


Fig. 24

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TRUBLESHOOTING

TRUBLESHOOTING

NOTICE To eliminate the risk of damage to the motor, the CC34, B32, and C32 are fitted with thermal motor protection that automatically switches off the machine if the temperature of the motor should become too high. The thermal motor protection has automatic reset, which means that the machine can be started again when the motor has cooled down, which usually takes between 10 and 30 minutes.

SYMPTOMS	POSSIBLE CAUSES
Processor will not start.	<ol style="list-style-type: none"> 1. No voltage, check source. 2. Feeder or Bowl/Lid is not installed properly. 3. Safety interlock open. 4. Magnetic switch speed control open. 5. Magnetic switch safety control open.
Processor starts, but stops during use. Will restart after waiting several minutes.	<ol style="list-style-type: none"> 1. Check for overloaded conditions. 2. Malfunctioning motor.
Low output or bad cutting results.	<ol style="list-style-type: none"> 1. Wrong cutting tools used. 2. Wrong combination of cutting tool. 3. Cutting tools dull. 4. Speed control switch not in correct position. 5. Malfunctioning motor.
Stops when operating.	<ol style="list-style-type: none"> 1. Safety interlock open or malfunctioning. 2. Magnetic switch speed control open or malfunctioning. 3. Magnetic switch safety control open or malfunctioning. 4. Speed control switch malfunctioning.
Motor runs. but knife shaft does not turn.	<ol style="list-style-type: none"> 1. Check drive belt.