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# REPLACEMENT PARTS MANUAL

## OIL FIRED FURNACE

Models: **FH085D36E**  
**FH110D48E**  
**FH110D60E**

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### General Notes

- Revised and/or additional pages may be issued from time to time.
- A complete and current manual consists of pages shown in the following contents section.

### Important

- Contact the installing and/or local Bard distributor for all parts requirements. Make sure you have the complete model and serial number available from the unit rating plate.

### Contents

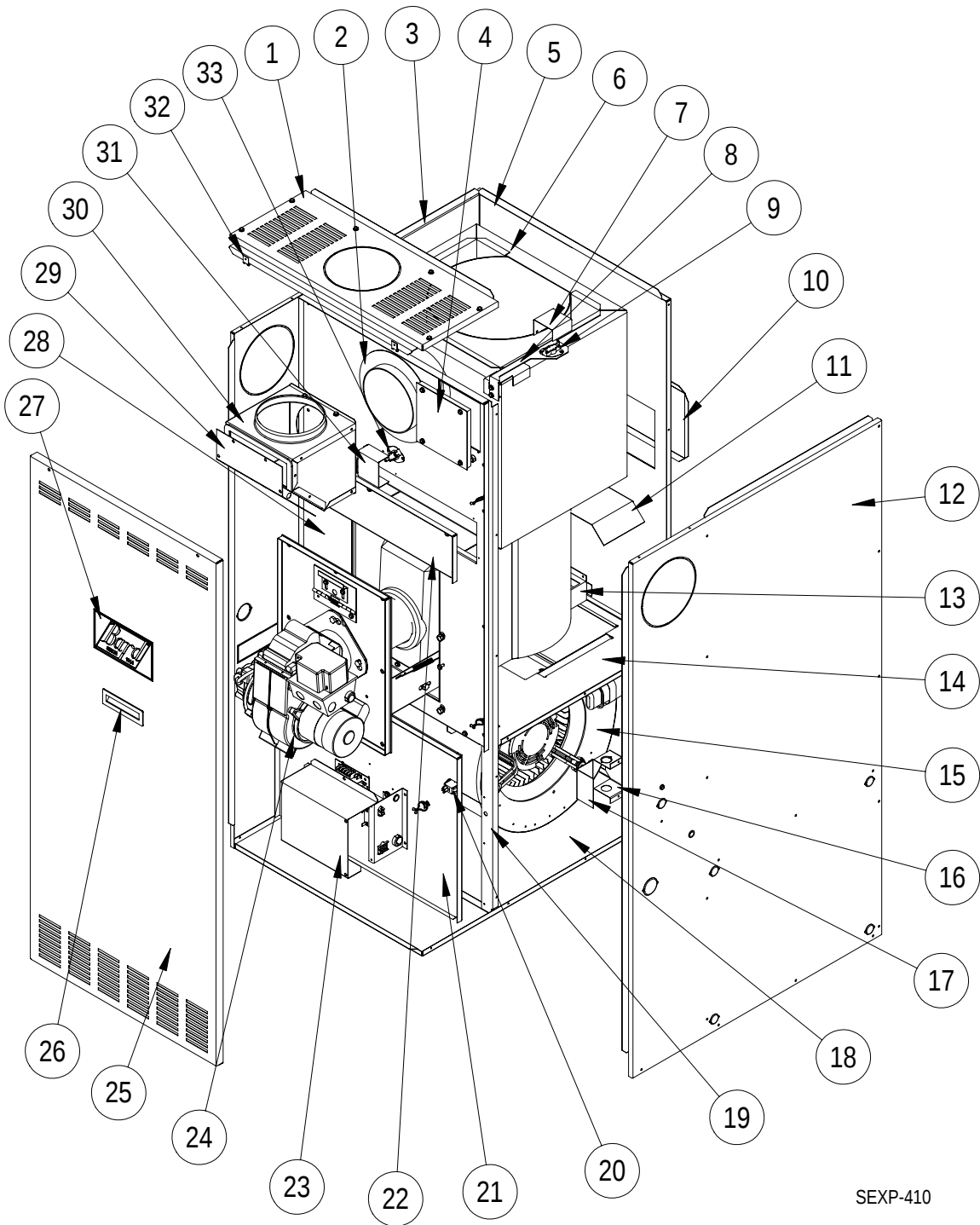
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Bard Manufacturing Company, Inc.  
Bryan, Ohio 43506  
*Since 1914...Moving ahead, just as planned.*

Manual: 2110-925C  
Supersedes: 2110-925B  
File: Tab 3  
Date: 02-08-08

# CABINET AND FUNCTIONAL COMPONENTS



SEXP-410

## CABINET AND FUNCTIONAL COMPONENTS

| Drawing No. | Part No.   | Description                  | FH085D36E | FH110D48E | FH110D60E |
|-------------|------------|------------------------------|-----------|-----------|-----------|
| 1           | S107-231-4 | Top Fill                     | X         | X         | X         |
| 2           | 1921-037   | Smoke Pipe Gasket            | X         | X         | X         |
| 3           | S101-408-4 | Left Side                    | X         |           |           |
| 3           | S101-410-4 | Left Side                    |           | X         | X         |
| 4           | S142-089   | Limit Access Door            | X         | X         | X         |
| 5           | S109-169-4 | Back                         | X         |           |           |
| 5           | S109-170-4 | Back                         |           | X         | X         |
| 6           | S171-267   | Heat Exchanger               | X         |           |           |
| 6           | S171-268   | Heat Exchanger               |           | X         | X         |
| 7           | 143-091    | Limit Cover                  | X         | X         | X         |
| 8           | 112-312    | Limit Bracket                | X         | X         | X         |
| 9           | 8402-142   | Primary Limit L145           | X         |           |           |
| 9           | 8402-143   | Primary Limit L155           |           | X         | X         |
| 10          | S143-088-4 | Rear Clean Out Cover         | X         | X         | X         |
| 11          | 143-206    | Air Deflector                | X         | X         | X         |
| 12          | S101-407-4 | Right Side                   | X         |           |           |
| 12          | S101-409-4 | Right Side                   |           | X         | X         |
| 13          | 140-315    | Rear Heat Exchanger Leg      | X         |           |           |
| 13          | 140-316    | Rear Heat Exchanger Leg      |           | X         | X         |
| 14          | 126-327    | Blower Base                  | X         |           |           |
| 14          | 127-329    | Blower Base                  |           | X         | X         |
| 15          | S900-259   | Blower Assembly              | X         |           |           |
| 15          | S900-260   | Blower Assembly              |           | X         |           |
| 15          | S900-261   | Blower Assembly              |           |           | X         |
| 16          | 117-251    | Junction Box                 | X         | X         | X         |
| 17          | 133-178    | Junction Box Cover           | X         | X         | X         |
| 18          | S127-328   | Lower Base                   | X         | X         | X         |
| 19          | 105-1133   | Side Angle                   | 2         | 2         | 2         |
| 20          | 8406-076   | Door Switch SPST 16 Amp N.O. | X         | X         | X         |

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## CABINET AND FUNCTIONAL COMPONENTS

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Table Continued from Page 3

| Drawing No. | Part No.     | Description                                       | FH085D36E | FH110D48E | FH110D60E |
|-------------|--------------|---------------------------------------------------|-----------|-----------|-----------|
| 21          | S153-351     | Blower Door                                       | X         |           |           |
| 21          | S153-353     | Blower Door                                       |           | X         | X         |
| 22          | S143-090     | Clean Out Cover                                   | X         | X         | X         |
| 23          | 132-177      | Control Cover                                     | X         | X         | X         |
| 24          | Burner Assy. | See Burner Assembly Parts List<br>(Pages 10 & 11) | X         | X         | X         |
| 25          | S153-350-4   | Vestibule Door                                    | X         |           |           |
| 25          | S153-352-4   | Vestibule Door                                    |           | X         | X         |
| 26          | 1171-025     | Plastic Door Pull                                 | X         | X         | X         |
| 27          | 5252-010     | Bard Nameplate                                    | X         | X         | X         |
| 28          | S120-361     | Heat Exchanger Partition                          | X         |           |           |
| 28          | S120-362     | Heat Exchanger Partition                          |           | X         | X         |
| 29          | 169-152      | Flue Box Door                                     | X         | X         | X         |
| 30          | S169-150     | Flue Box Assembly                                 | X         | X         | X         |
| 31          | 143-094      | Partition Limit Cover                             | X         | X         | X         |
| 32          | 1012-314     | #10 - 18 U-Clips                                  | 2         | 2         | 2         |
| 33          | 8402-147     | Backup Limit L190                                 | X         | X         | X         |

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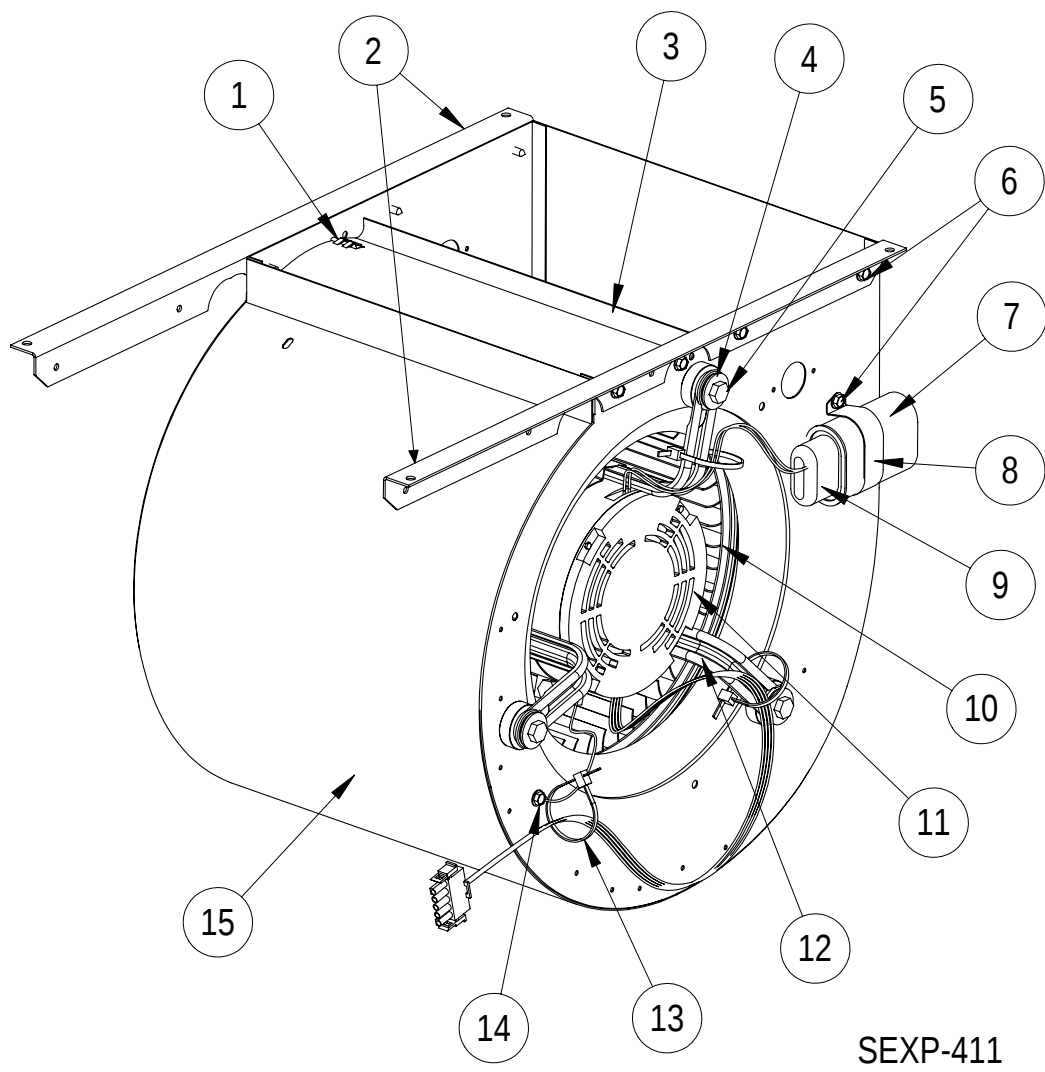
## CONTROL PANEL

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| Drawing No. | Part No.  | Description                           | FH085D36E | FH110D48E | FH110D60E |
|-------------|-----------|---------------------------------------|-----------|-----------|-----------|
|             |           |                                       |           |           |           |
| 1           | 3000-1177 | Wire Assembly                         | X         | X         | X         |
| 2           | 5651-166  | Oil Furnace Blower Control            | X         | X         | X         |
| 3           | 8614-045  | 3 Amp Fuse                            | X         | X         | X         |
| 4           | 8407-045  | Transformer 120/24V 40 VA             | X         | X         | X         |
| 5           | 1012-153  | Screw Type AB #10 – 16x1/2            | X         | X         | X         |
| 6           | 3000-1176 | Wire Assembly (Inside Control Panel)  | X         | X         | X         |
| 7           | 113-296   | Plug Bracket                          | X         | X         | X         |
| 8           | 1012-086  | Screw Type AB #10 – 16x1/2 w/nibs     | X         | X         | X         |
| 9           | 7950-027  | Purse Lock Wire Tie                   | X         | X         | X         |
| 10          | 3000-1175 | Wire Assembly (Outside Control Panel) | X         | X         | X         |

# BLOWER ASSEMBLY

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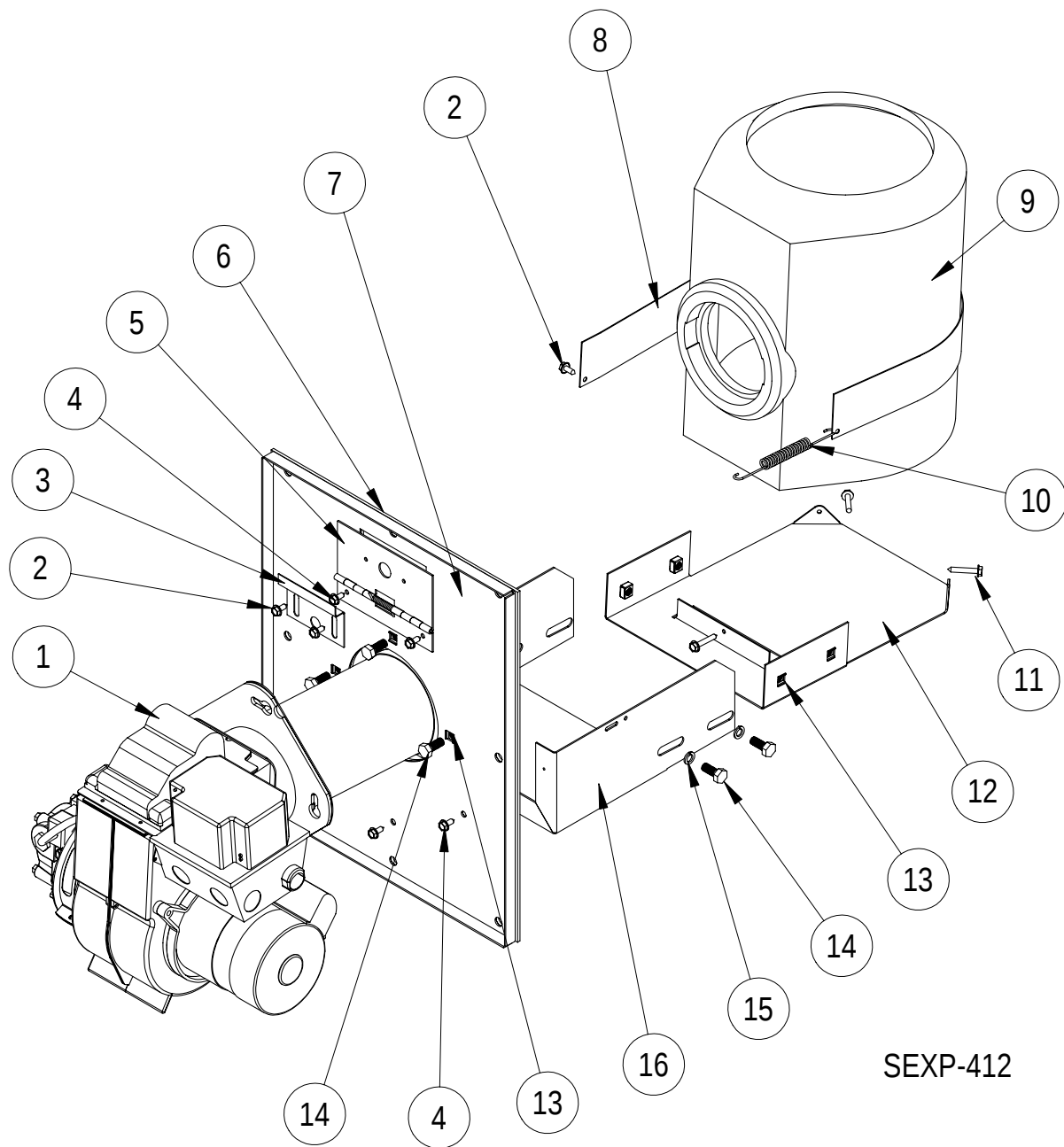
# BLOWER ASSEMBLY

| Drawing No. | Part No. | Description                        | S900-259 | S900-260 | S900-261 |
|-------------|----------|------------------------------------|----------|----------|----------|
| 1           | 1012-088 | Screw Type AB #10 – 16x3/4         | 2        | 2        | ①        |
| 2           | 104-1134 | Blower Angle                       | 2        |          | 2        |
| 2           | 104-1137 | Blower Angle                       |          | 2        |          |
| 3           | 144-128  | Diffuser                           | X        |          | ①        |
| 3           | 144-129  | Diffuser                           |          | X        |          |
| 4           | 1012-109 | Washer                             | 3        | 3        | 3        |
| 5           | 1012-076 | 1/4 – 20x1-1/4 Type I Bolt         | 3        | 3        | 3        |
| 6           | 1012-086 | Screw Type AB #10 – 16x1/2 w/nibs  | 10       | 10       | 10       |
| 7           | 8552-002 | Capacitor 5.0 MFD 370V             | X        |          |          |
| 7           | 8552-004 | Capacitor 7.5 MFD 370V             |          | X        |          |
| 7           | 8552-026 | Capacitor 15.0 MFD 370V            |          |          | X        |
| 8           | 8550-003 | Capacitor Bracket                  | X        | X        |          |
| 8           | 8550-006 | Capacitor Bracket                  |          |          | X        |
| 9           | 8611-002 | Capacitor Boot                     | X        | X        | X        |
| 10          | 5152-014 | Blower Wheel CW 1/2" 10-9DD        | X        |          |          |
| 10          | 5152-059 | Blower Wheel CCW 1/2" 10-10DD      |          | X        |          |
| 10          | 5152-053 | Blower Wheel CW 1/2" 11-10DD       |          |          | X        |
| 11          | 8105-040 | Motor 1/3 HP 115V CCW 1075 3 Speed | X        |          |          |
| 11          | 8106-033 | Motor 1/2 HP 115V CW 1075 4 Speed  |          | X        |          |
| 11          | 8107-007 | Motor 3/4 HP 115V CCW 1075 4 Speed |          |          | X        |
| 12          | 8620-034 | Motor Mount Kit                    | X        | X        | X        |
| 13          | 7950-009 | Wire Tie                           | X        | X        | X        |
| 14          | 1012-153 | Screw Type AB #10 – 16x1/2         | X        | X        | X        |
| 15          | 151-073  | Blower Housing                     | X        |          |          |
| 15          | 151-082  | Blower Housing                     |          | X        |          |
| 15          | ①        | Blower Housing                     |          |          | ①        |

① Part #5152-050 includes housing, diffuser and blower wheel part #5152-053.

# BURNER ASSEMBLY

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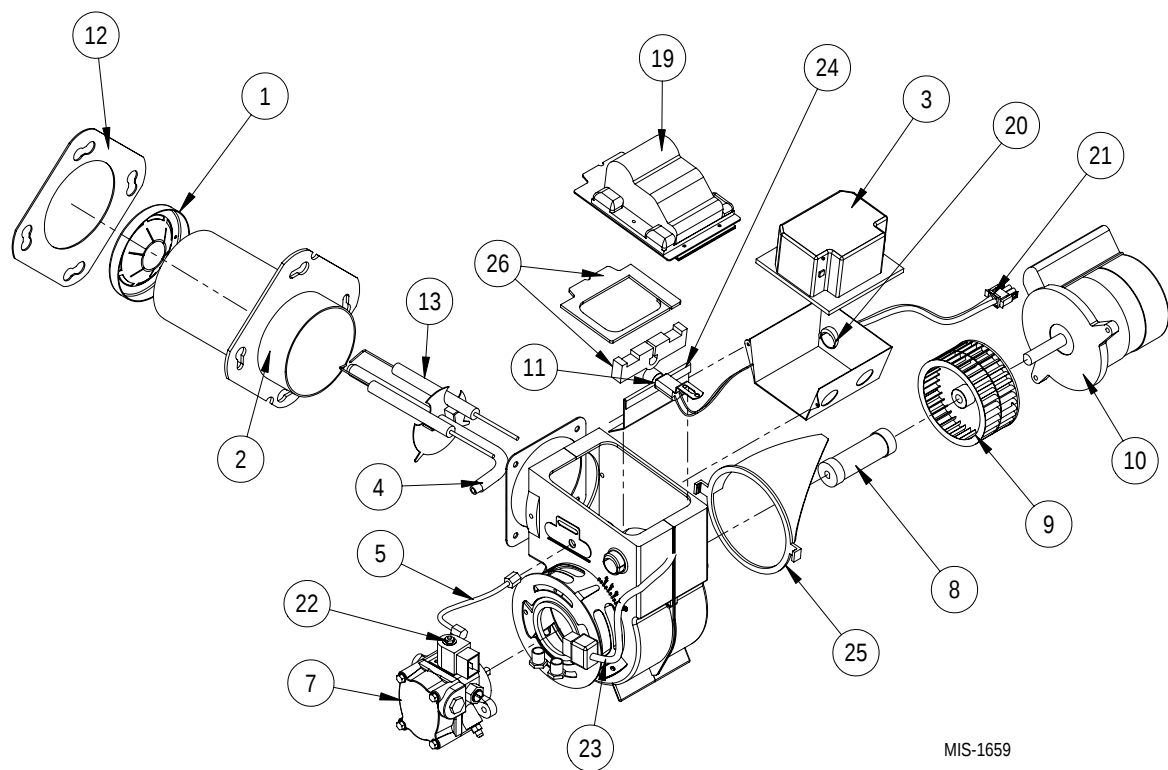


SEXP-412

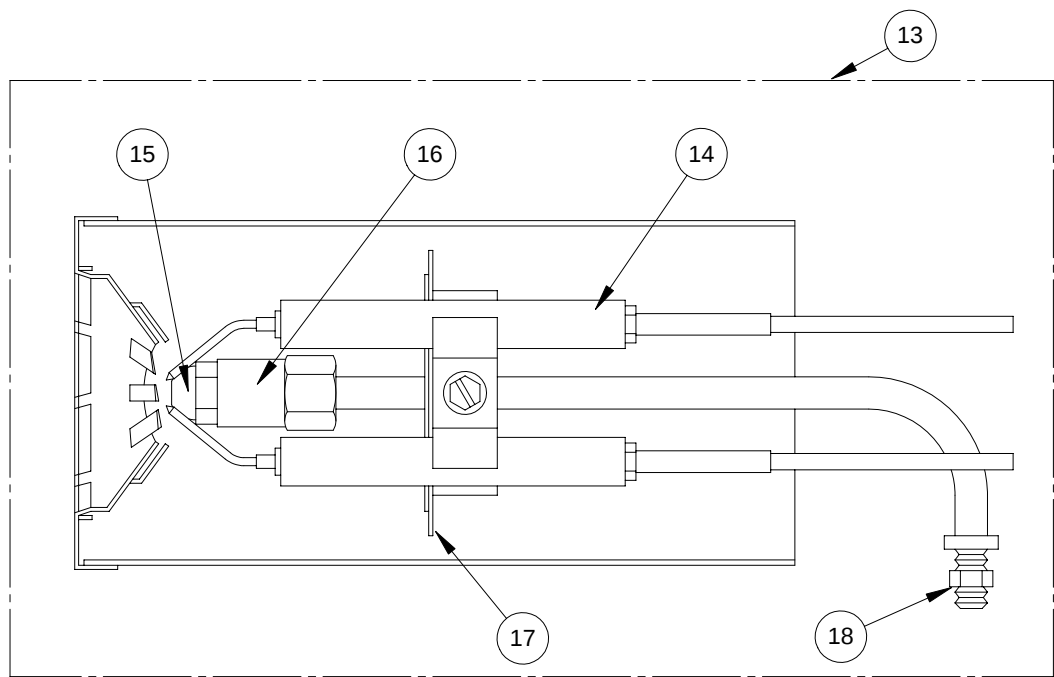
## BURNER ASSEMBLY

| Drawing No. | Part No. | Description                        | FH085D36E | FH110D48E | FH110D60E |
|-------------|----------|------------------------------------|-----------|-----------|-----------|
| 1           | 9020-026 | AFG Burner Assembly .75 GHP 70° H  | X         |           |           |
| 1           | 9020-027 | AFG Burner Assembly 1.00 GHP 70° H |           | X         | X         |
| 2           | 1012-153 | Screw Type AB #10 – 16x1/2"        | 3         | 3         | 3         |
| 3           | 143-026  | Inspection Door Cover Plate        | X         | X         | X         |
| 4           | 1012-086 | Screw Type AB #10 – 16x1/2" w/nibs | 5         | 5         | 5         |
| 5           | 142-027  | Inspection Door Hinge              | X         | X         | X         |
| 6           | 1921-057 | Front Plate Gasket                 | X         | X         | X         |
| 7           | S160-036 | Front Plate Assembly               | X         | X         | X         |
| 8           | 140-198  | Combustion Chamber Support         | X         | X         | X         |
| 9           | 7090-014 | Pyrolite Combustion Chamber        | X         | X         | X         |
| 10          | 5401-004 | Stainless Steel Spring             | X         | X         | X         |
| 11          | 1012-145 | Screw Type AB #10 – 16x1"          | 3         | 3         | 3         |
| 12          | S140-292 | Bracket Extension                  | X         | X         | X         |
| 13          | 1012-218 | 1/4 – 20 Cage Nut                  | 7         | 7         | 7         |
| 14          | 1012-051 | 1/4 – 20x 3/4 Hex Head Bolt        | 7         | 7         | 7         |
| 15          | 1012-126 | 1/4" Type "A" Washer               | 4         | 4         | 4         |
| 16          | 112-297  | Combustion Chamber Bracket         | X         | X         | X         |

# BURNER COMPONENTS



MIS-1659



MIS-1663

## BURNER COMPONENTS

| Drawing No. | Bard Part No. | Supplier Part No. | Description                    | FH085D36E | FH110D48E | FH110D60E |
|-------------|---------------|-------------------|--------------------------------|-----------|-----------|-----------|
| 1           | 9022-034      | 360004            | Head (F4)                      | X         |           |           |
| 1           | 9022-042      | 360006            | Head (F6)                      |           | X         | X         |
| 2           | 9022-004      | 51236007BK        | Air Tube & Flange Assembly     | X         | X         | X         |
| 3           | 9022-080      | 7456U             | Primary Control                | X         | X         | X         |
| 4           | 9022-007      | 571801            | Bulkhead Fitting               | X         | X         | X         |
| 5           | 9022-008      | 5636              | Connector Tube                 | X         | X         | X         |
| 7           | 9022-082      | 21844U            | "CleanCut" Oil Pump            | X         | X         | X         |
| 8           | 9022-011      | 2454              | Coupling                       | X         | X         | X         |
| 9           | 9022-045      | 2999              | Blower Wheel                   | X         | X         | X         |
| 10          | 9022-084      | 21805R/218        | PSC Motor 1/7 H.P.             | X         | X         | X         |
| 11          | 9022-085      | 7006Q             | CAD Cell                       | X         | X         | X         |
| 12          | 9022-021      | 3811              | Mounting Flange Gasket         | X         | X         | X         |
| 13          | 9022-014      | NL90YH            | Nozzle Line Electrode Assembly | X         | X         | X         |
| 14          | 9022-017      | 5780              | Electrode Insulator Assembly   | X         | X         | X         |
| 15          | 9011-016      | 2663              | Nozzle .75 GPH 70 Degree A     | X         |           |           |
| 15          | 9011-018      | 2711              | Nozzle 1.00 GPH 70 Degree A    |           | X         | X         |
| 16          | 9022-016      | 213U              | Nozzle Adapter                 | X         | X         | X         |
| 17          | 9022-023      | 3384              | Static Plate (3-3/8")          | X         | X         | X         |
| 18          | 9022-018      | 3666              | Bulkhead Fitting Locknut       | X         | X         | X         |
| 19          | 9022-079      | 7440              | Solid State Igniter            | X         | X         | X         |
| 20          | 9022-086      | 3741              | Junction Box                   | X         | X         | X         |
| 21          | 9022-055      | 31838             | Power Cord                     | X         | X         | X         |
| 22          | 9022-087      | 21755             | Solenoid Valve Coil            | X         | X         | X         |
| 23          | 9022-088      | 21807             | Solenoid Valve Cord            | X         | X         | X         |
| 24          | 9022-089      | 3708              | Restrictor Baffle              | X         | X         | X         |
| 25          | 9022-090      | 31231             | Air Guide                      | X         | X         | X         |
| 26          | 9022-093      | 51304             | Igniter Gasket Kit             | X         | X         | X         |