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# REPLACEMENT PARTS MANUAL

# PACKAGE HEAT PUMP

## Models:

**PH11241**

**PH1224**

**PH11301**

**PH1230**

**PH11361**

**PH1236**

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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 plates.

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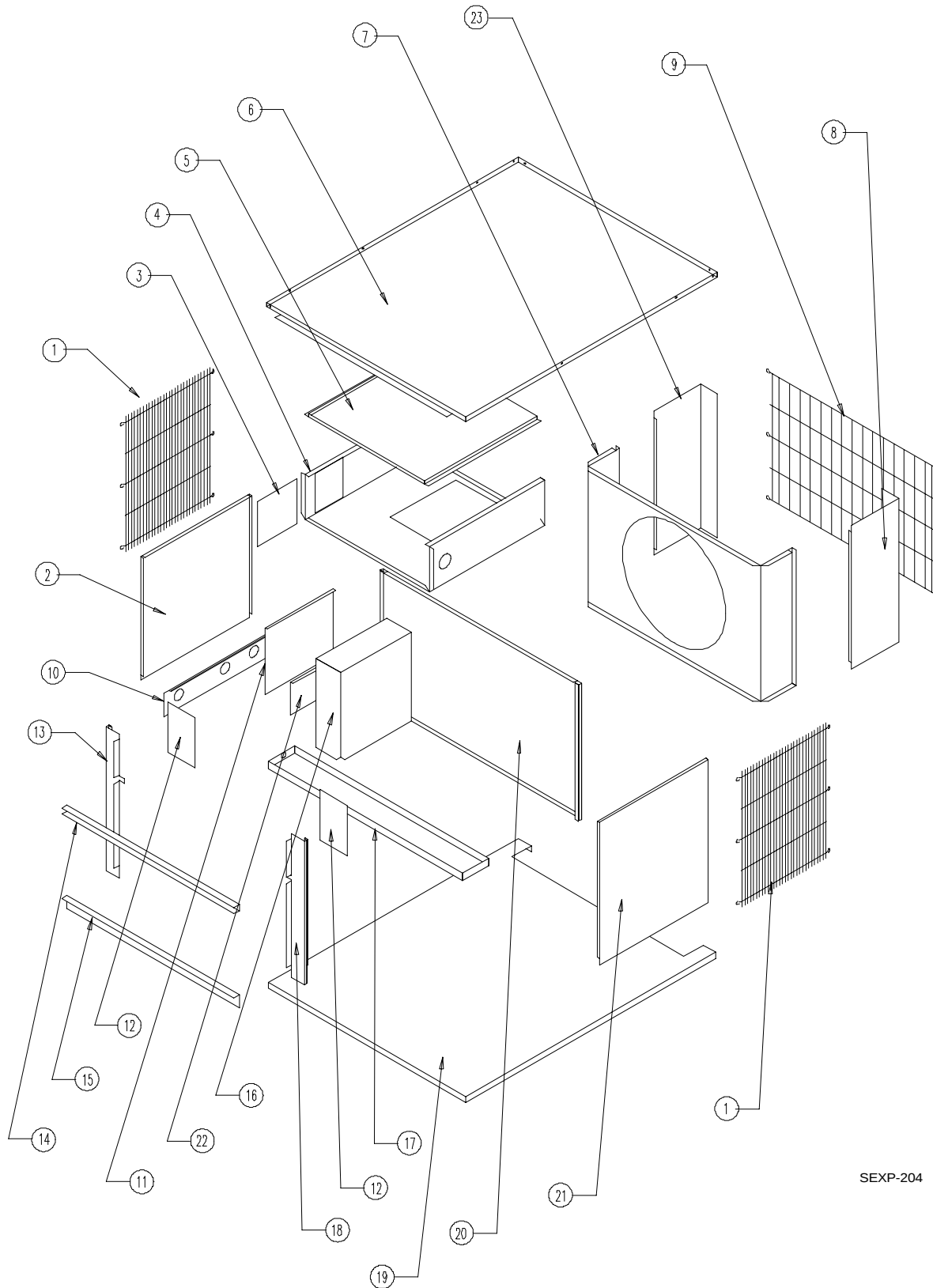


BARD MANUFACTURING COMPANY  
Bryan, Ohio 43506  
*Since 1914...Moving, ahead just as planned.*

Manual: 2110-260D  
Supersedes: 2110-260C  
File: Tab 11  
Date: 01-03-03

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# CABINET COMPONENTS

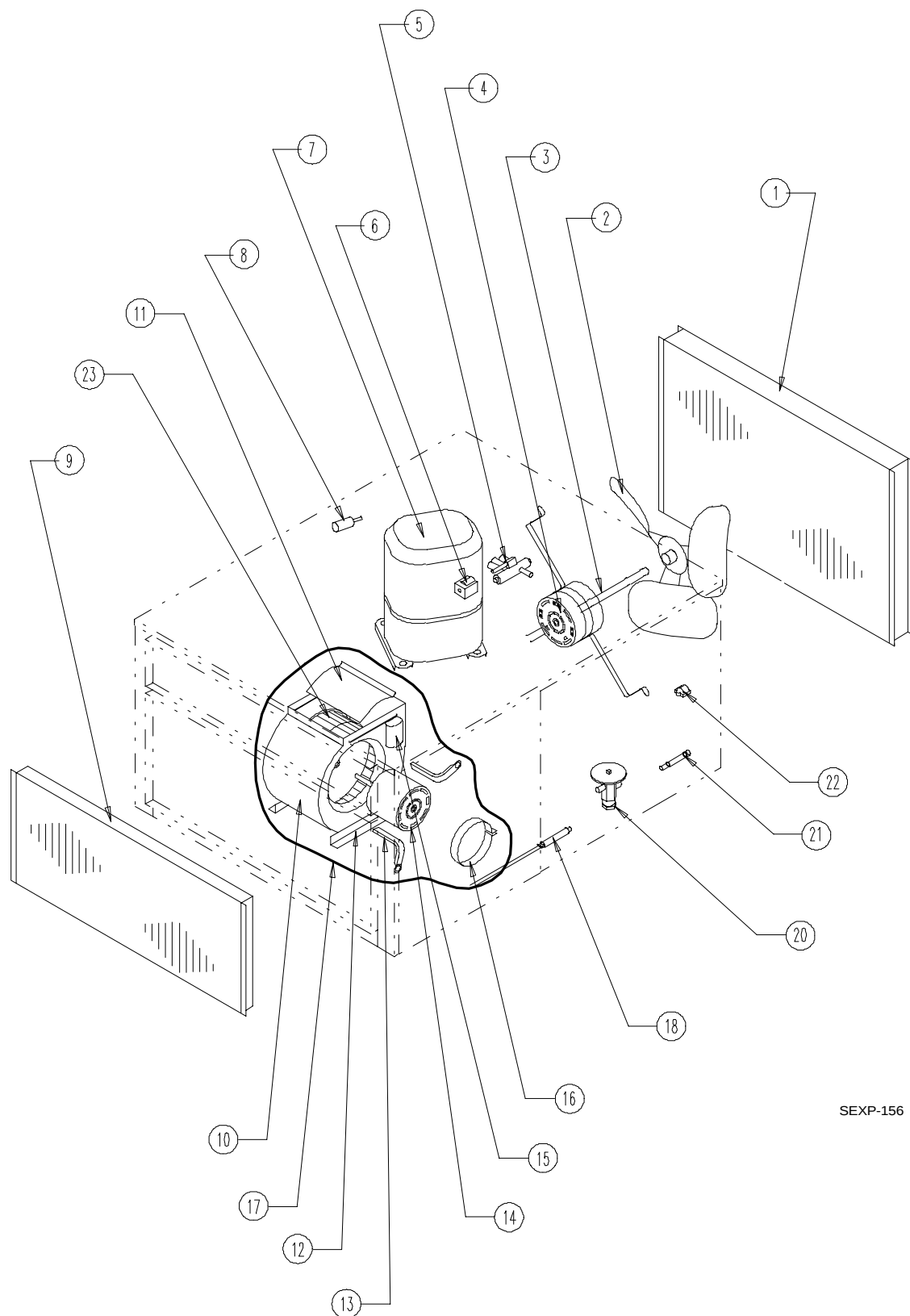


SEXP-204

## CABINET COMPONENTS

| Drawing No. | Part No.               | Description                            | PH11241 | PH11301 | PH11361 | PH1224 | PH1230 | PH1236 |
|-------------|------------------------|----------------------------------------|---------|---------|---------|--------|--------|--------|
| 1           | 7051-015               | Inlet Grille                           | 2       | 2       | 2       | 2      | 2      | 2      |
| 2           | 501-133-X              | Left Side                              | X       | X       | X       | X      | X      | X      |
| 3           | 142-017                | Cover Plate – 0KW                      | X       | X       | X       | X      | X      | X      |
| 4           | 520-284                | Blower Partition                       | X       |         |         |        |        |        |
| 4           | 520-286                | Blower Partition                       |         | X       | X       |        |        |        |
| 4           | 520-330                | Blower Partition                       |         |         |         | X      | X      | X      |
| 5           | 134-017                | Heat Strip Shield                      | X       | X       | X       | X      | X      | X      |
| 6           | 507-168-X              | Top                                    | X       | X       | X       | X      | X      | X      |
| 7           | 125-012-X              | Fan Shroud                             | X       | X       | X       | X      | X      | X      |
| 8           | 149-085-X              | Right Rear Corner                      | X       | X       | X       | X      | X      | X      |
| 9           | 7051-001               | Condenser Grille                       | X       | X       | X       | X      | X      | X      |
| 10          | 557-028-X              | Entrance Panel                         | X       | X       | X       | X      | X      | X      |
| 11          | 133-035-X              | Control Panel Cover                    | X       | X       | X       | X      | X      | X      |
| 12          | 136-312                | Blower Fill Plates                     | X       | X       | X       | X      | X      | X      |
| 13          | 549-082-X              | Left Front Cover                       | X       | X       | X       | X      | X      | X      |
| 14          | 165-552-X              | Plenum Channel                         | X       | X       | X       | X      | X      | X      |
| 15          | 105-521-X              | Plenum Angle                           | X       | X       | X       | X      | X      | X      |
| 16          | Control Panel Assembly | See Control Panel Drawing & Parts List | X       | X       | X       | X      | X      | X      |
| 17          | 123-088-X              | Drain Pan                              | X       | X       | X       | X      | X      | X      |
| 18          | 549-081-X              | Right Front Corner                     | X       | X       | X       | X      | X      | X      |
| 19          | 527-255-X              | Base                                   | X       | X       | X       | X      | X      | X      |
| 20          | 521-283-X              | Compressor Partition                   | X       | X       | X       | X      | X      | X      |
| 21          | 501-132-X              | Right Side                             | X       | X       | X       | X      | X      | X      |
| 22          | 142-044                | Entrance Cover                         | X       | X       | X       | X      | X      | X      |
| 23          | 149-086-X              | Left Rear Corner                       | X       | X       | X       | X      | X      | X      |

## FUNCTIONAL COMPONENTS



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This drawing to be used as reference for Pages 4 and 5.

## FUNCTIONAL COMPONENTS

| Drawing No. | Part No. | Description                   | PH11241 | PH11301 | PH11361 | PH11361-B | PH11361-C |
|-------------|----------|-------------------------------|---------|---------|---------|-----------|-----------|
| 1           | 5051-106 | Condenser Coil                | X       | X       | X       | X         | X         |
| 2           | 5151-034 | Fan Blade                     | X       |         |         |           |           |
| 2           | 5151-004 | Fan Blade                     |         | X       | X       | X         | X         |
| 3           | 8200-001 | Motor Mount                   | X       | X       | X       | X         | X         |
| 4           | 8103-014 | Motor                         |         |         |         |           | X         |
| 4           | 8103-016 | Motor                         | X       |         |         |           |           |
| 4           | 8103-019 | Motor                         |         | X       | X       | X         |           |
| 5           | 5650-020 | Reversing Valve               | X       | X       | X       | X         | X         |
| 6           | 5650-022 | Reversing Valve Solenoid      | X       | X       | X       | X         | X         |
| 7           | 8000-170 | Compressor ZR22K3-PFV-230     | X       |         |         |           |           |
| 7           | 8000-172 | Compressor ZR28K3-PFV-230     |         | X       |         |           |           |
| 7           | 8000-175 | Compressor ZR34K3-PFV-230     |         |         | X       |           |           |
| 7           | 8000-163 | Compressor ZR34K3-TF5-230     |         |         |         | X         |           |
| 7           | 8000-164 | Compressor ZR34K3-TFD-230     |         |         |         |           | X         |
| 8           | 8406-040 | High Pressure Switch          | X       | X       | X       | X         | X         |
| 9           | 5060-052 | Evaporator Coil               | X       |         |         |           |           |
| 9           | 5060-088 | Evaporator Coil               |         | X       | X       | X         | X         |
| 10          | 151-088  | Blower Housing                | X       |         |         |           |           |
| 10          | 151-101  | Blower Housing                |         | X       | X       | X         | X         |
| 11          | 144-156  | Blower Diffuser               | X       |         |         |           |           |
| 11          | 144-166  | Blower Diffuser               |         | X       | X       | X         | X         |
| 12          | 104-787  | Blower Angle                  | X       | X       | X       | X         | X         |
| 13          | 8620-034 | Motor Mount Arm               | X       | X       | X       | X         | X         |
| 14          | 8105-016 | Motor                         |         |         |         |           | X         |
| 14          | 8105-032 | Motor                         | X       |         |         |           |           |
| 14          | 8105-024 | Motor                         |         | X       | X       | X         |           |
| 15          | 8552-002 | Capacitor 5/370               | X       | X       | X       | X         | X         |
| 16          | 8620-034 | Motor Mount Band              | X       | X       | X       | X         | X         |
| 17          | 900-146  | Complete Blower Assembly      | X       |         |         |           |           |
| 17          | 900-145  | Complete Blower Assembly      |         | X       | X       | X         |           |
| 17          | 900-207  | Complete Blower Assembly      |         |         |         |           | X         |
| 18          | 5625-025 | Cooling Flow Control Assembly | X       |         |         |           |           |
| 18          | 5625-026 | Cooling Flow Control Assembly |         | X       | X       | X         |           |
| 18          | 5625-027 | Cooling Flow Control Assembly |         |         |         |           | X         |
| 20          | 5651-138 | Expansion Valve – Heating     | X       | X       |         |           |           |
| 20          | 5651-102 | Expansion Valve – Heating     |         |         | X       | X         | X         |
| 22          | 8620-095 | Defrost Sensor                | X       | X       | X       | X         | X         |
| 23          | 5152-065 | Blower Wheel                  | X       |         |         |           |           |
| 23          | 5152-005 | Blower Wheel                  |         | X       | X       | X         | X         |
| NS          | 5625-013 | Heating Distributor           | X       | X       | X       | X         | X         |

NS = Not Shown

Refer to drawing on Page 3

## FUNCTIONAL COMPONENTS

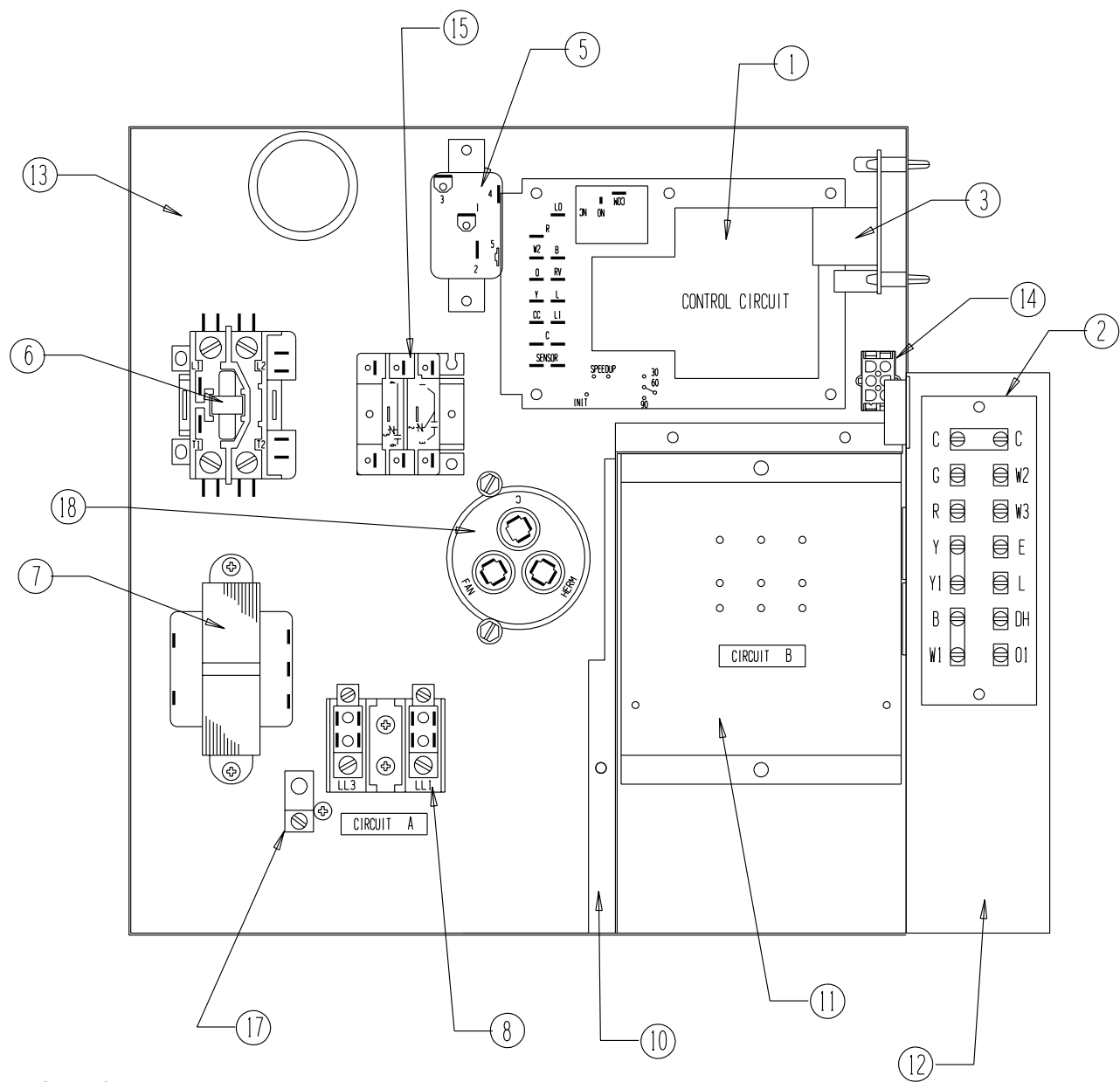
| Drawing No. | Part No.      | Description                   | PH1224 | PH1230 | PH1236 | PH1236-B |
|-------------|---------------|-------------------------------|--------|--------|--------|----------|
| 1           | 5051-106      | Condenser Coil                | X      | X      |        |          |
| 1           | 5051-108      | Condenser Coil                |        |        | X      | X        |
| 2           | 5151-034      | Fan Blade                     | X      |        |        |          |
| 2           | 5151-004      | Fan Blade                     |        | X      | X      | X        |
| 3           | 8200-001      | Motor Mount                   | X      | X      | X      | X        |
| 4           | 8103-016      | Motor                         | X      |        |        |          |
| 4           | 8103-019      | Motor                         |        | X      | X      | X        |
| 5           | 5650-020      | Reversing Valve               | X      | X      | X      | X        |
| 6           | 5650-022      | Reversing Valve Solenoid      | X      | X      | X      | X        |
| 7           | 8000-170      | Compressor ZR22K3-PFV-230     | X      |        |        |          |
| 7           | 8000-172      | Compressor ZR28K3-PFV-230     |        | X      |        |          |
| 7           | 8000-175      | Compressor ZR34K3-PFV-230     |        |        | X      |          |
| 7           | 8000-163      | Compressor ZR34K3-TF5-230     |        |        |        | X        |
| 8           | 8406-040      | High Pressure Switch          | X      | X      | X      | X        |
| 9           | 5060-052      | Evaporator Coil               | X      |        |        |          |
| 9           | 5060-100      | Evaporator Coil               |        | X      | X      | X        |
| 10          | 151-097       | Blower Housing                | X      | X      | X      | X        |
| 11          | 144-130       | Blower Diffuser               | X      | X      | X      | X        |
| 12          | 104-787       | Blower Angle                  | X      | X      | X      | X        |
| 13          | 8620-034      | Motor Mount Kit               | 3      | 3      | 3      | 3        |
| 14          | 8106-035-0020 | Motor                         |        | X      |        |          |
| 14          | 8105-045-0016 | Motor                         | X      |        |        |          |
| 14          | 8106-035-0021 | Motor                         |        |        | X      | X        |
| 15          | 8552-002      | Capacitor 5/370               | X      | X      | X      | X        |
| 16          | 8620-034      | Motor Mount Kit               | X      | X      | X      | X        |
| 17          | 900-239-001   | Complete Blower Assembly      | X      |        |        |          |
| 17          | 900-240-003   | Complete Blower Assembly      |        | X      |        |          |
| 17          | 900-240-002   | Complete Blower Assembly      |        |        | X      | X        |
| 18          | 5625-025      | Cooling Flow Control Assembly | X      |        |        |          |
| 18          | 5625-026      | Cooling Flow Control Assembly |        | X      |        |          |
| 18          | 5625-027      | Cooling Flow Control Assembly |        |        | X      | X        |
| 20          | 5651-138      | Expansion Valve – Heating     | X      | X      |        |          |
| 20          | 5651-102      | Expansion Valve – Heating     |        |        | X      | X        |
| 22          | 8620-095      | Defrost Sensor                | X      | X      | X      | X        |
| 23          | 5152-049      | Blower Wheel                  | X      | X      | X      | X        |
| NS          | 5625-013      | Heating Distributor           | X      | X      | X      | X        |

NS = Not Shown

Refer to drawing on Page 3

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# CONTROL PANEL



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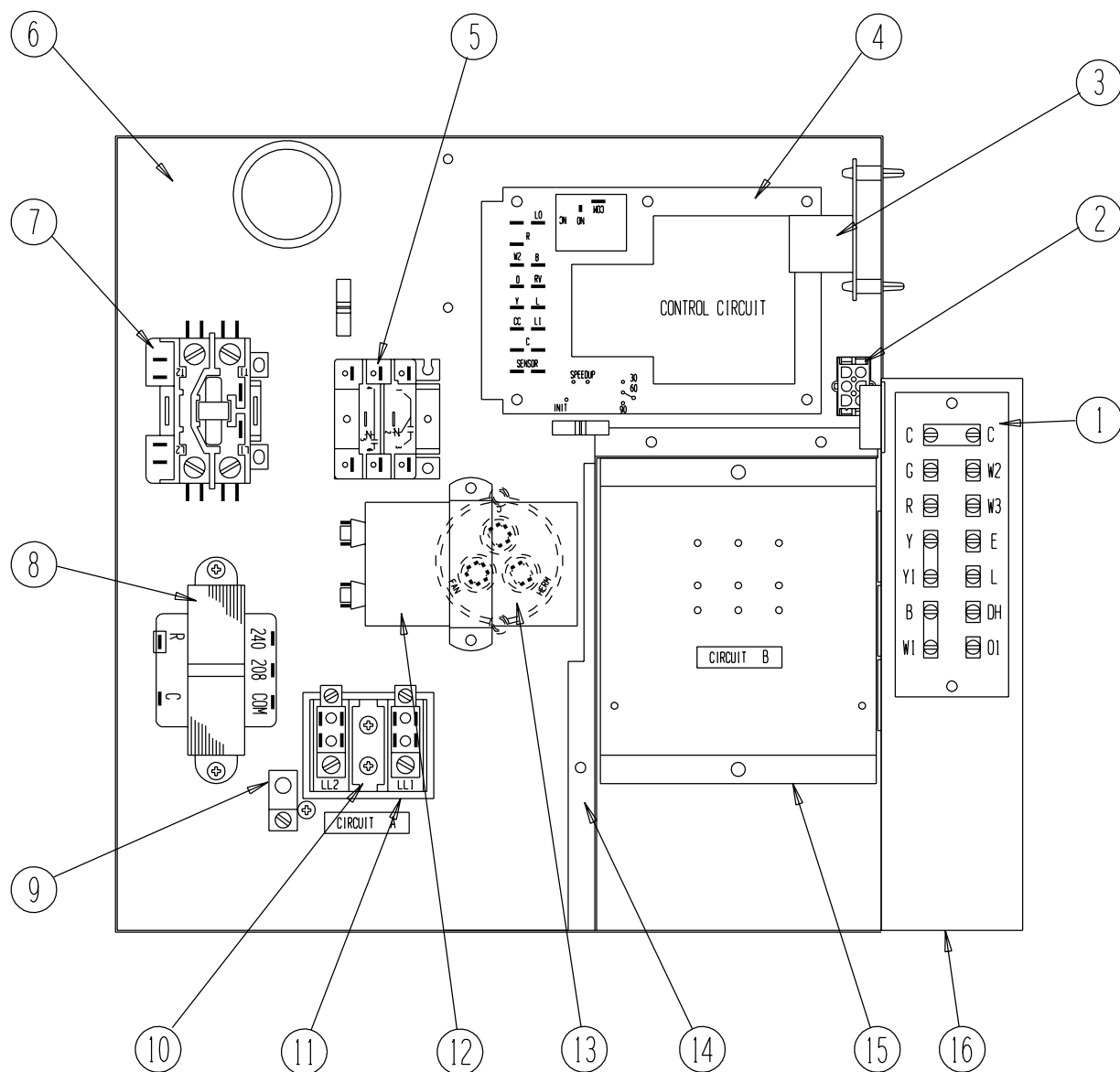
## CONTROL PANEL

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| Drawing No. | Part No. | Description             | PH11241 | PH11301 | PH11361 |
|-------------|----------|-------------------------|---------|---------|---------|
| 1           | 8201-069 | Heat Pump Control       | X       | X       | X       |
| 2           | 8607-025 | Terminal Strip          | X       | X       | X       |
| 3           | 8201-056 | Blower Control          | X       | X       | X       |
| 5           | 8201-008 | Defrost Heat Relay      | X       | X       | X       |
| 6           | 8401-007 | Contactor               | X       | X       | X       |
| 7           | 8407-035 | Transformer             | X       | X       | X       |
| 8           | 8607-013 | Terminal Block          | X       | X       | X       |
| 10          | 116-149  | Control Panel Partition | X       | X       | X       |
| 11          | 116-150  | Terminal Block Shield   | X       | X       | X       |
| 12          | 116-148  | Low Voltage Box         | X       | X       | X       |
| 13          | 516Y141  | Control Panel           | X       | X       | X       |
| 14          | 3000-976 | Wire Assembly           | X       | X       |         |
| 14          | 3000-974 | Wire Assembly           |         |         | X       |
| 15          | 8201-013 | Emergency Heat Relay    |         |         | X       |
| 17          | 8611-006 | Ground Terminal         | X       | X       | X       |
| 18          | 8552-050 | Capacitor 40/5-370      | X       |         |         |
| 18          | 8552-052 | Capacitor 45/5-370      |         | X       | X       |
| 18          | 8552-056 | Capacitor 50/10-440     |         |         |         |
| NS          | 4098-113 | Wiring Diagram          | X       |         |         |
| NS          | 4098-121 | Wiring Diagram          |         | X       | X       |

NS = Not Shown

# CONTROL PANEL



SEXP-202

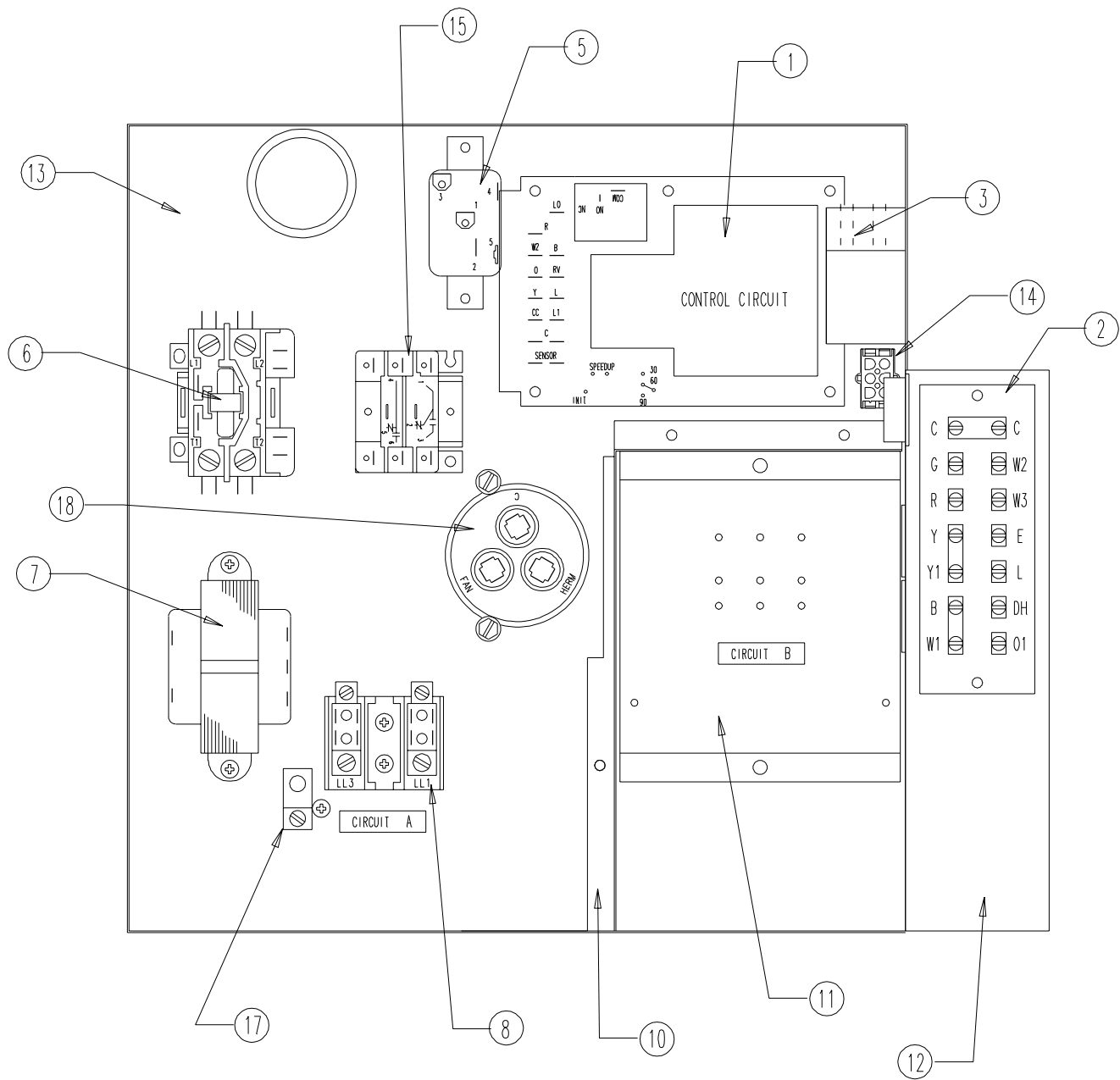
## CONTROL PANEL

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| Drawing<br>No. | Part No. | Description                | PH11361-B | PH11361-C |
|----------------|----------|----------------------------|-----------|-----------|
|                |          |                            |           |           |
| 1              | 8607-025 | Terminal Strip             | X         | X         |
| 2              | 3000-100 | wire Assembly              | X         | X         |
| 3              | 8201-056 | Solid State Blower Control | X         |           |
| 3              | 8201-032 | Blower Relay               |           | X         |
| 4              | 8201-069 | Heat Control Pump          | X         | X         |
| 5              | 8201-013 | Relay                      | X         | X         |
| 6              | 516-147  | Control Panel              | X         | X         |
| 7              | 8401-002 | Contactor                  | X         | X         |
| 8              | 8407-035 | Transformer                | X         |           |
| 8              | 8407-042 | Transformer                |           | X         |
| 9              | 8611-006 | Ground Terminal            | X         | X         |
| 10             | 8607-014 | Terminal Block             | X         | X         |
| 11             | 8607-015 | Phenolic Insulator         |           | X         |
| 12             | 8552-002 | Capacitor 5-370            | X         | X         |
| 14             | 116-149  | Control Panel Partition    | X         | X         |
| 15             | 116-150  | Terminal Block Support     | X         | X         |
| 16             | 116-148  | Low Voltage Box            | X         | X         |
| NS             | 4065-211 | Wiring Diagram             | X         |           |
| NS             | 4065-311 | Wiring Diagram             |           | X         |

NS = Not Shown

# CONTROL PANEL



SEXP-303

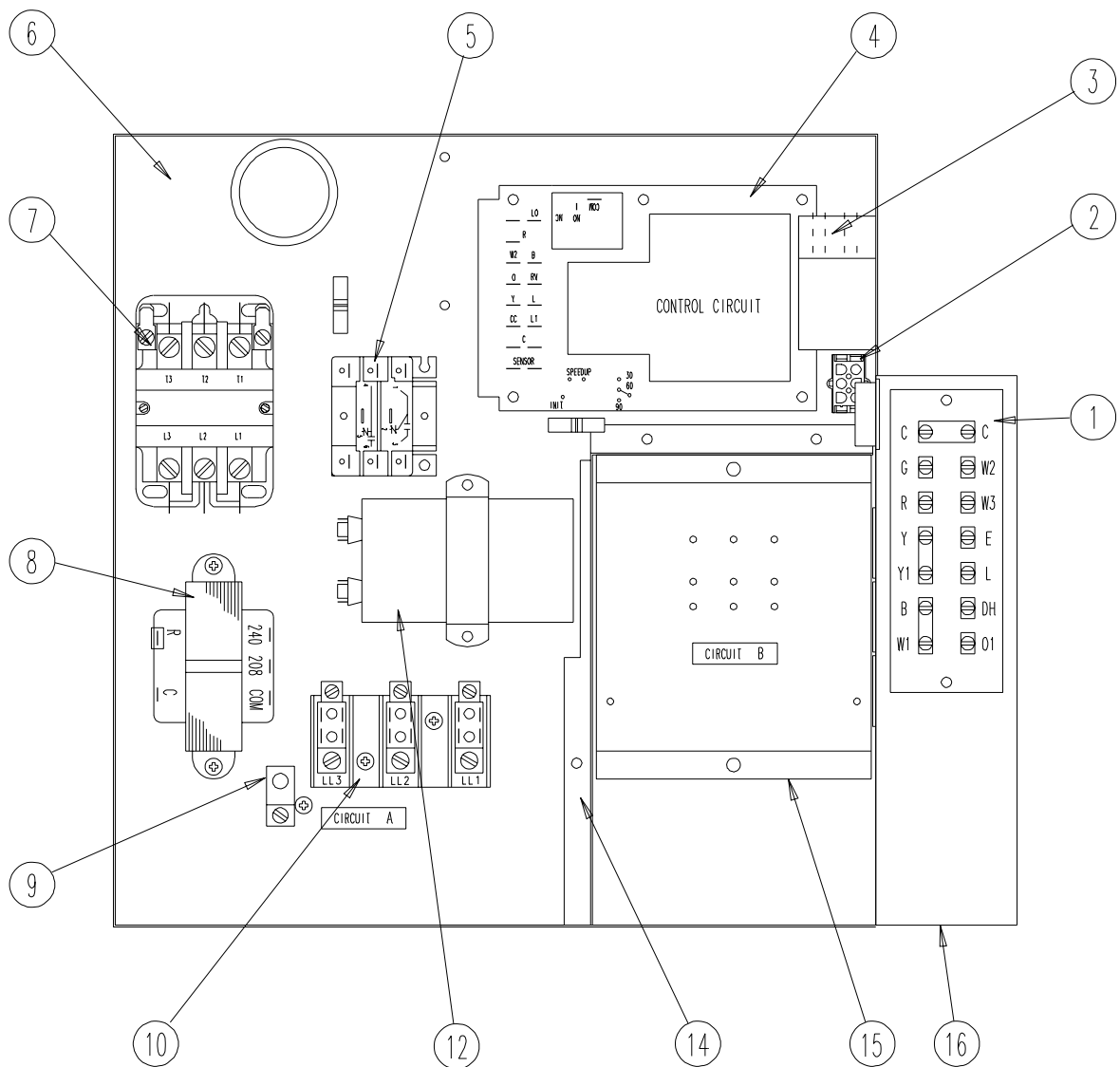
## CONTROL PANEL

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| Drawing No. | Part No. | Description             | PH1224 | PH1230 | PH1236 |
|-------------|----------|-------------------------|--------|--------|--------|
| 1           | 8201-069 | Heat Pump Control       | X      | X      | X      |
| 2           | 8607-025 | Terminal Strip          | X      | X      | X      |
| 3           | 8201-074 | Blower Interlock Relay  | X      | X      | X      |
| 5           | 8201-008 | Defrost Heat Relay      | X      | X      | X      |
| 6           | 8401-007 | Contactor               | X      | X      | X      |
| 7           | 8407-035 | Transformer             | X      | X      | X      |
| 8           | 8607-013 | Terminal Block          | X      | X      | X      |
| 10          | 116-149  | Control Panel Partition | X      | X      | X      |
| 11          | 116-150  | Terminal Block Shield   | X      | X      | X      |
| 12          | 116-148  | Low Voltage Box         | X      | X      | X      |
| 13          | 516Y141  | Control Panel           | X      | X      | X      |
| 14          | 3000-976 | Wire Assembly           | X      | X      |        |
| 14          | 3000-974 | Wire Assembly           |        |        | X      |
| 15          | 8201-013 | Emergency Heat Relay    |        |        | X      |
| 17          | 8611-006 | Ground Terminal         | X      | X      | X      |
| 18          | 8552-052 | Capacitor 45/5 - 370    | X      | X      |        |
| 18          | 8552-063 | Capacitor 50/5 - 370    |        |        | X      |
| NS          | 4098-123 | Wiring Diagram          | X      |        |        |
| NS          | 4098-124 | Wiring Diagram          |        | X      | X      |

NS = Not Shown

# CONTROL PANEL



SEXP-304

## CONTROL PANEL

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| Drawing<br>No. | Part No.  | Description             | PH1236-B |
|----------------|-----------|-------------------------|----------|
|                |           |                         |          |
| 1              | 8607-025  | Terminal Strip          | X        |
| 2              | 3000-1100 | Wire Assembly           | X        |
| 3              | 8201-074  | Blower Interlock Relay  | X        |
| 4              | 8201-069  | Heat Control Pump       | X        |
| 5              | 8201-013  | Changeover Relay        | X        |
| 6              | 516-147   | Control Panel           | X        |
| 7              | 8401-002  | Contacto                | X        |
| 8              | 8407-035  | Transformer             | X        |
| 9              | 8611-006  | Ground Terminal         | X        |
| 10             | 8607-014  | Terminal Block          | X        |
| 12             | 8552-002  | Capacitor 5-370         | X        |
| 14             | 116-149   | Control Panel Partition | X        |
| 15             | 116-150   | Terminal Block Support  | X        |
| 16             | 116-148   | Low Voltage Box         | X        |
| NS             | 4098-211  | Wiring Diagram          | X        |

NS = Not Shown