

# A.O. Smith Connection Diagrams

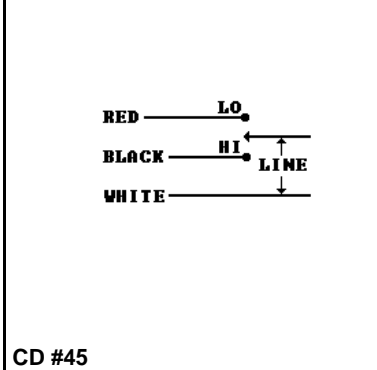
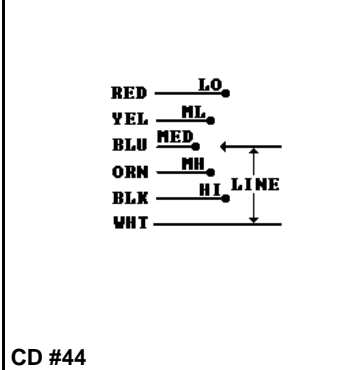
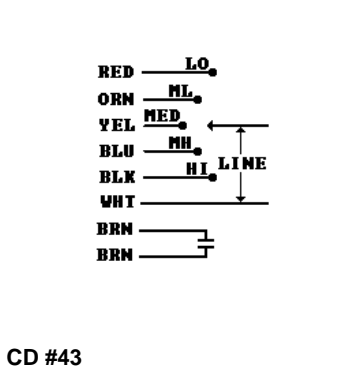
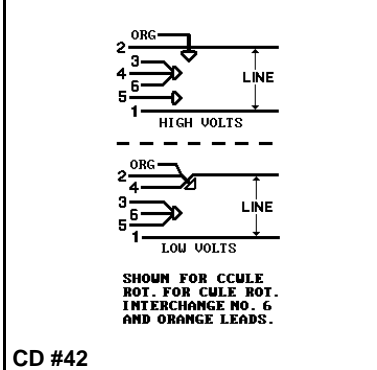
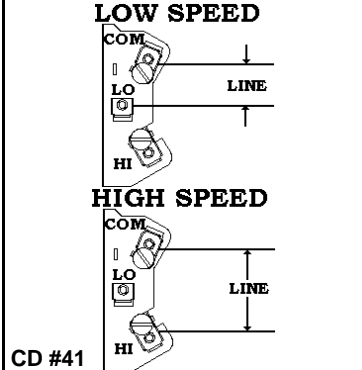
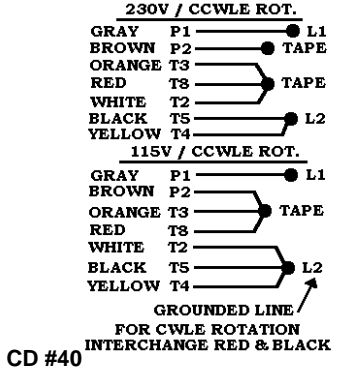
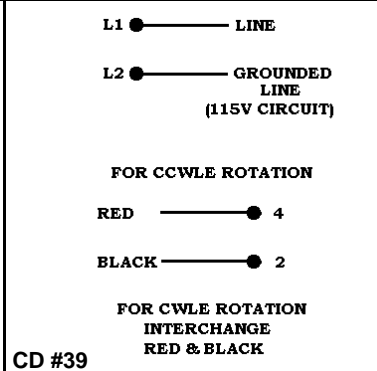
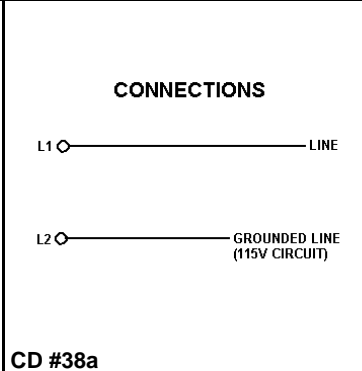
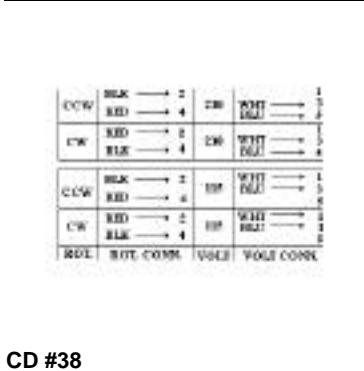
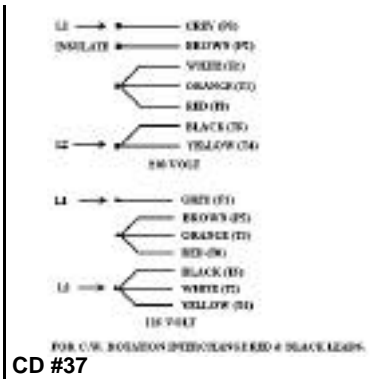
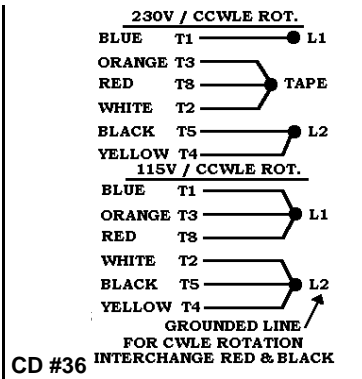
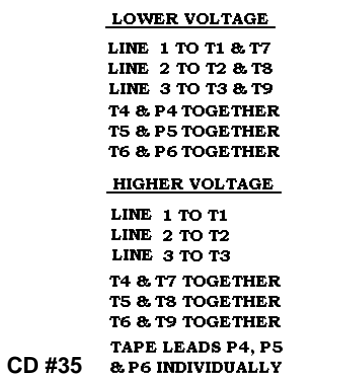
Lead color may vary from motor being replaced.

<p>Common (White or Purple) High (Black) Medium (Blue) Low (Red)</p> <p>Line</p> <p><b>3 Speed, Shaded Pole</b></p> <p><b>CD #1</b></p>	<p>Common (White or Purple) High (Black) Medium - High (Yellow) Medium - Low (Blue) Low (Red)</p> <p>Line</p> <p><b>4 Speed, Shaded Pole</b></p> <p><b>CD #2</b></p>	<p>Common (White or Purple) High (Black) Medium (Blue) Low (Red) Brown (Capacitor)</p> <p>Line</p> <p><b>3 Speed, PSC, CCW Rotation</b></p> <p><b>CD #6</b></p>
<p>Common (White or Purple) High (Black) Medium (Blue) Low (Red) Brown (Capacitor)</p> <p>Line</p> <p><b>3 Speed, PSC, CCW Rotation</b></p> <p><b>CD #7</b></p>	<p>High (Black) Medium (Blue) Low (Red) Common (White or Purple) Brown (Capacitor)</p> <p>Line</p> <p><b>3 Speed, PSC, CCW Rotation</b></p> <p><b>CD #8</b></p>	<p>High (Black) Medium (Blue) Low (Red) Common (White or Purple) Brown (CW) Orange (CCW) Yellow</p> <p>Local Reversing Connections: CCW (Orange - Capacitor) CW (Brown - Yellow) CCW (Brown - Capacitor) CW (Orange - Yellow)</p> <p>Line</p> <p><b>3 Speed, PSC, Reversible (Lead Reversing)</b></p> <p><b>CD #9</b></p>
<p>COMMON (WHITE OR PURPLE OR YELLOW) HIGH (BLACK) MEDIUM (BLUE) LOW (RED) BROWN (CAPACITOR) BLACK WHITE</p> <p>REVERSING PLUG OPERATION: CCW: BLACK-BLACK, WHITE-WHITE CW: BLACK-WHITE, WHITE-BLACK</p> <p>Line</p> <p><b>CD #10</b></p>	<p>Common (White or Purple) High (Black) Medium - High (Yellow) Medium - Low (Blue) Low (Red) Brown (Capacitor)</p> <p>Line</p> <p><b>4 Speed, PSC, CCW Rotation</b></p> <p><b>CD #11</b></p>	<p>SINGLE PHASE</p> <p>HIGH VOLTS: 6, 2, 3, 4, 7, 5, 1. SEP. CAP. LINE.</p> <p>LOW VOLTS: 6, 4, 2, 3, 7, 5, 1. SEP. CAP. LINE.</p> <p>SHOWN FOR CCWLE ROT. FOR CWLE ROT. INTERCHANGE #6 AND #7 LEADS.</p> <p><b>CD #12</b></p>
<p>BROWN YELLOW BLACK RED BLUE PURPLE</p> <p>SEP. CAP. HI, LO. LINE.</p> <p>SHOWN FOR CCWLE ROT. FOR CWLE ROT. INTERCHANGE BLUE AND BROWN LEADS.</p> <p><b>CD #13</b></p>	<p>BROWN YELLOW BLACK ORANGE RED BLUE PURPLE</p> <p>SEP. CAP. HI, LO. LINE.</p> <p>SHOWN FOR CWLE ROTATION. INTERCHANGE BLUE AND BROWN LEADS.</p> <p>NOTE: FOR HIGH SPEED OPERATION ONLY. DISCONNECT ORANGE LEAD AND INSULATE.</p> <p><b>CD #14</b></p>	<p>BROWN BROWN/WHITE YELLOW BLACK RED</p> <p>SEP. CAP. HI, LO. LINE.</p> <p>NO RED LEAD USED ON SINGLE SPEED.</p> <p>ROTATION: CCWLE: BLACK, WHITE CWLE: BLACK, WHITE</p> <p><b>CD #15</b></p>

Lead color may vary from motor being replaced.

<p><b>CD #16</b></p>	<p><b>CD #17</b> * OR BROWN/WHITE</p>	<p><b>CD #19</b></p>																																																						
<p><b>CD #20</b></p>	<p><b>CD #22</b></p>	<p><b>CD #23</b></p>																																																						
<p><b>CD #24</b></p>	<p><b>THREE PHASE DUAL VOLTS TYPE G1</b></p> <p>HI VOLTAGE</p> <table border="1"> <tr><td>⑩</td><td>④</td><td>⑦</td><td>①</td><td>L1</td></tr> <tr><td>⑪</td><td>⑤</td><td>⑧</td><td>②</td><td>L2</td></tr> <tr><td>⑫</td><td>⑥</td><td>⑨</td><td>③</td><td>L3</td></tr> </table> <p>LOW VOLTAGE</p> <table border="1"> <tr><td>⑩</td><td>④</td><td>⑦</td><td>①</td><td>L1</td></tr> <tr><td>⑪</td><td>⑤</td><td>⑧</td><td>②</td><td>L2</td></tr> <tr><td>⑫</td><td>⑥</td><td>⑨</td><td>③</td><td>L3</td></tr> </table> <p><b>CD #28</b></p>	⑩	④	⑦	①	L1	⑪	⑤	⑧	②	L2	⑫	⑥	⑨	③	L3	⑩	④	⑦	①	L1	⑪	⑤	⑧	②	L2	⑫	⑥	⑨	③	L3	<p><b>THREE PHASE DUAL VOLTS TYPE G2</b></p> <p>HI VOLTAGE</p> <table border="1"> <tr><td>④</td><td>⑦</td><td>①</td><td>L1</td></tr> <tr><td>⑤</td><td>⑧</td><td>②</td><td>L2</td></tr> <tr><td>⑥</td><td>⑨</td><td>③</td><td>L3</td></tr> </table> <p>LOW VOLTAGE</p> <table border="1"> <tr><td>④</td><td>⑦</td><td>①</td><td>L1</td></tr> <tr><td>⑤</td><td>⑧</td><td>②</td><td>L2</td></tr> <tr><td>⑥</td><td>⑨</td><td>③</td><td>L3</td></tr> </table> <p><b>CD #29</b></p>	④	⑦	①	L1	⑤	⑧	②	L2	⑥	⑨	③	L3	④	⑦	①	L1	⑤	⑧	②	L2	⑥	⑨	③	L3
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<p><b>LEAD CONNECTIONS</b></p> <table border="1"> <thead> <tr> <th>CCW ROTATION</th> <th>CW ROTATION</th> </tr> </thead> <tbody> <tr> <td>L1 → GRAY (P1)</td> <td>L1 → GRAY (P1)</td> </tr> <tr> <td>← BLUE (T1)</td> <td>← BLUE (T1)</td> </tr> <tr> <td>← RED (T8)</td> <td>← BLACK (T5)</td> </tr> <tr> <td>← YELLOW (T4)</td> <td>← YELLOW (T4)</td> </tr> <tr> <td>← BLACK (T5)</td> <td>← RED (T8)</td> </tr> </tbody> </table> <p>CONNECT L2 TO GROUNDED SIDE OF POWER SUPPLY, WHEN AVAILABLE.</p> <p><b>CD #30</b></p>	CCW ROTATION	CW ROTATION	L1 → GRAY (P1)	L1 → GRAY (P1)	← BLUE (T1)	← BLUE (T1)	← RED (T8)	← BLACK (T5)	← YELLOW (T4)	← YELLOW (T4)	← BLACK (T5)	← RED (T8)	<p><b>THREE PHASE DUAL VOLTS</b></p> <table border="1"> <thead> <tr> <th>LOW VOLTAGE</th> <th>HIGH VOLTAGE</th> </tr> <tr> <th>L1 L2 L3</th> <th>L1 L2 L3</th> </tr> </thead> <tbody> <tr> <td>① ② ③</td> <td>① ② ③</td> </tr> <tr> <td>⑦ ⑧ ⑨</td> <td>⑦ ⑧ ⑨</td> </tr> <tr> <td>④-⑤-⑥</td> <td>④ ⑤ ⑥</td> </tr> </tbody> </table> <p><b>CD #31</b></p>	LOW VOLTAGE	HIGH VOLTAGE	L1 L2 L3	L1 L2 L3	① ② ③	① ② ③	⑦ ⑧ ⑨	⑦ ⑧ ⑨	④-⑤-⑥	④ ⑤ ⑥	<p><b>LOWER VOLTAGE</b></p> <p>LEAD 1 TO T1 &amp; T7 LEAD 2 TO T2 &amp; T8 LEAD 3 TO T3 &amp; T9</p> <p>CONNECT T4, T5 &amp; T6 TOGETHER</p> <p><b>HIGHER VOLTAGE</b></p> <p>LEAD 1 TO T1 LEAD 2 TO T2 LEAD 3 TO T3</p> <p>T4 &amp; T7 TOGETHER T5 &amp; T8 TOGETHER T6 &amp; T9 TOGETHER</p> <p><b>CD #34</b></p>																																
CCW ROTATION	CW ROTATION																																																							
L1 → GRAY (P1)	L1 → GRAY (P1)																																																							
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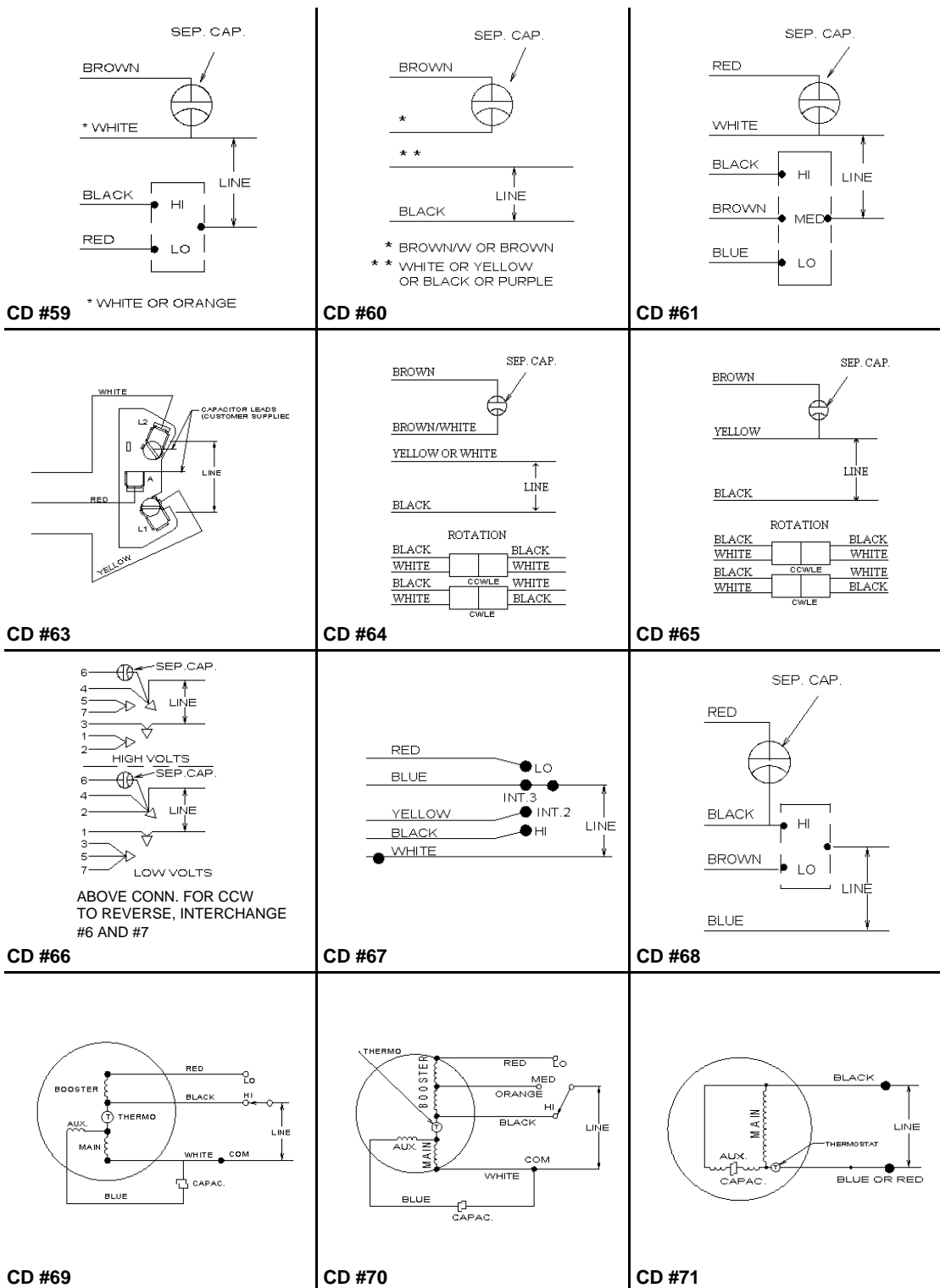


Lead color may vary from motor being replaced.

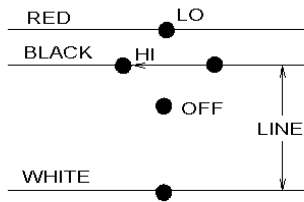
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<p><b>CD #49</b></p>	<p><b>CD #51</b></p>	<p><b>CD #52</b></p>
<p><b>CD #53</b></p>	<p><b>CD #54</b></p>	<p><b>CD #55</b></p>
<p><b>CD #56</b></p>	<p><b>CD #57</b></p>	<p><b>CD #58</b></p>

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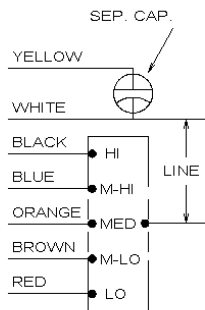
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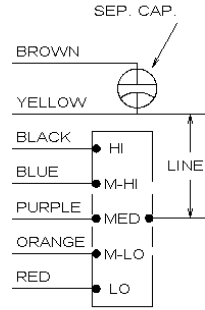
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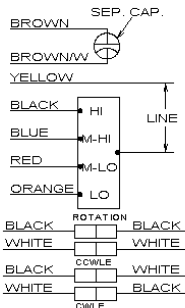
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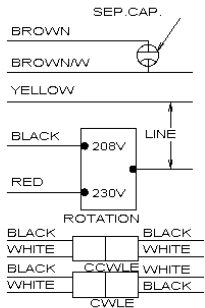
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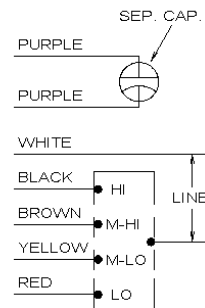
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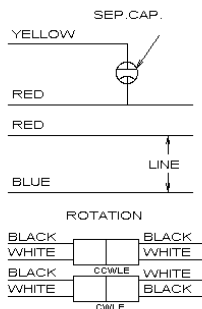
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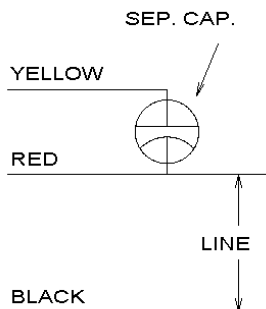
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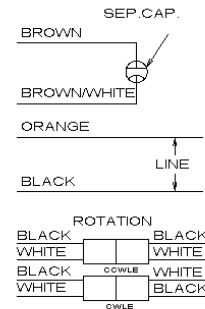
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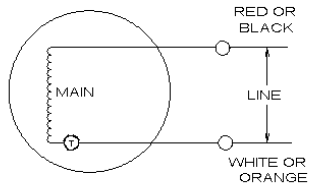
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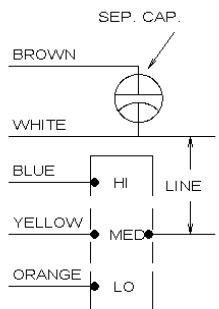
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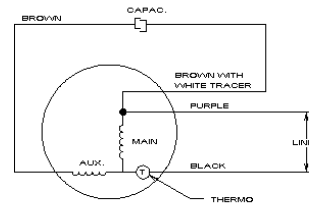
CD #83



CD #84



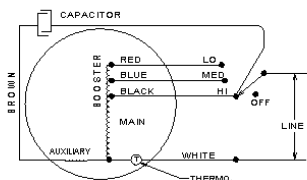
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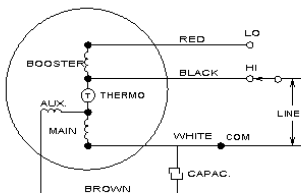
CD #86

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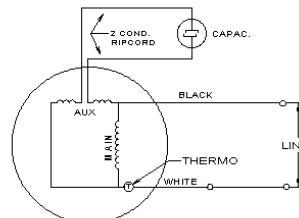
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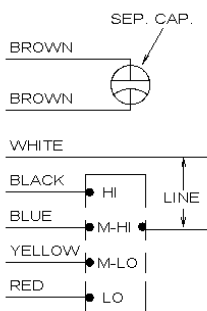
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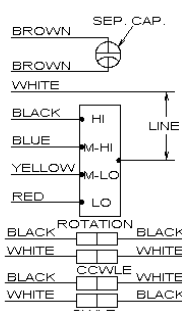
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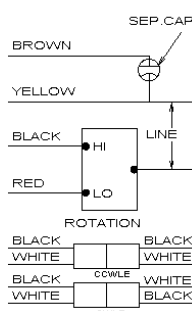
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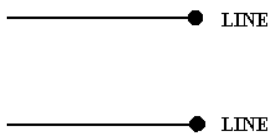
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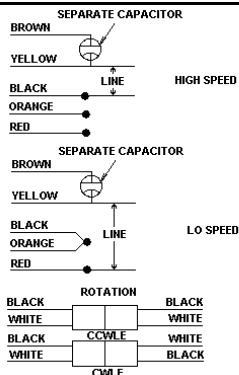
CD #91



CD #92

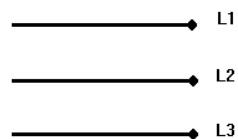


CD #93



CD #94

THREE PHASE - SINGLE VOLTS

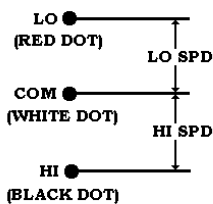


CD #95

2	CCW	RED	→	2
		BLACK	→	4
1	CW	BLACK	→	2
		RED	→	4
	ROT.			CONN.

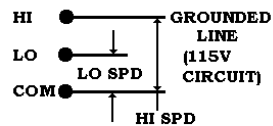
CD #96

## CONNECTION DIAGRAM



CD #97

## CONNECTION DIAGRAM



**CAUTION**  
DO NOT APPLY  
VOLTAGE HI TO LO

CD #98

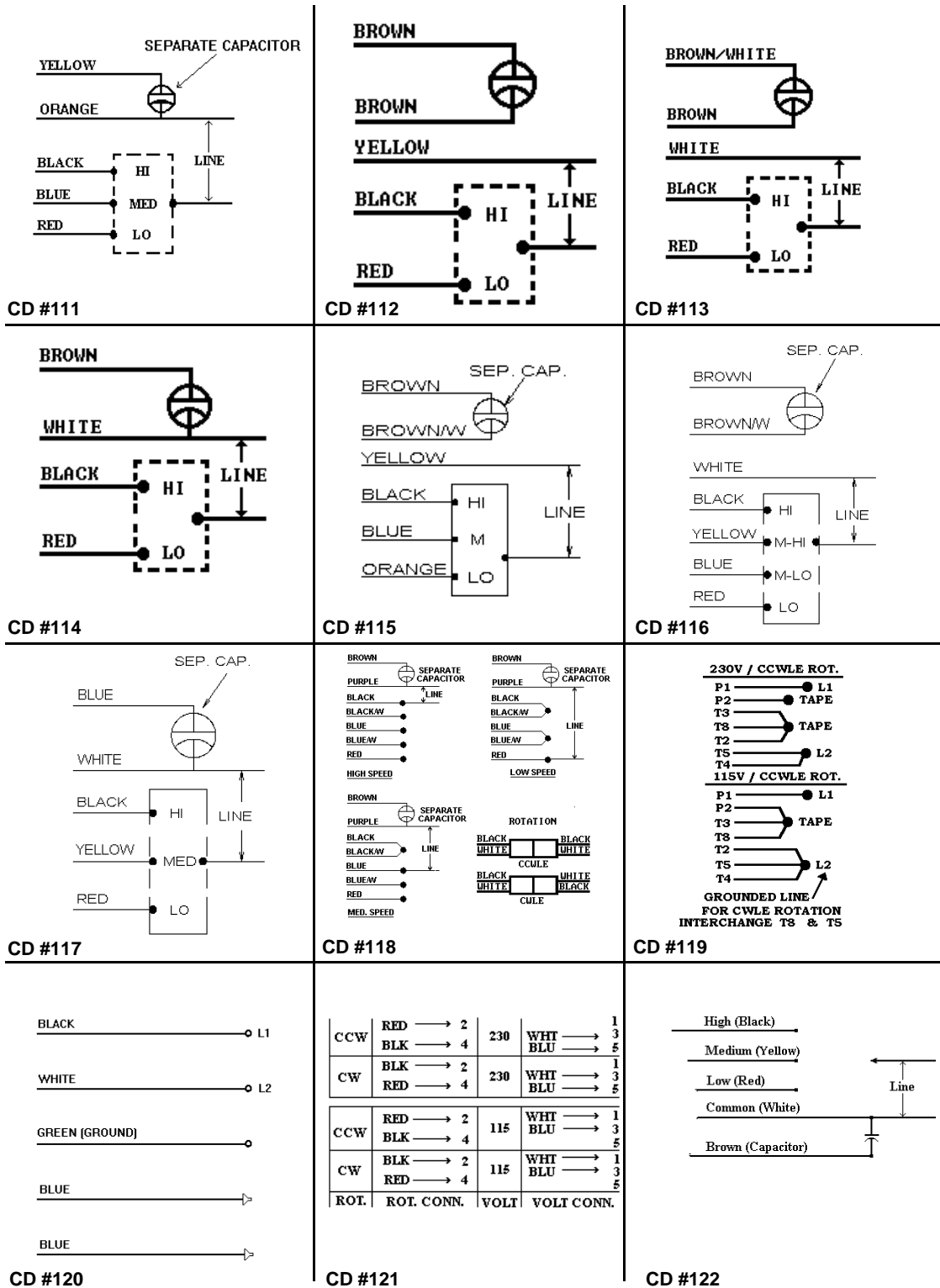
Lead color may vary from motor being replaced.

<p>115 VOLT</p> <p>WHITE → LINE BLACK → LINE BLUE → LINE RED → INS. YELLOW → INS.</p> <p>230 VOLT</p> <p>WHITE → LINE BLACK → LINE BLUE → LINE RED → INS. YELLOW → INS.</p> <p><b>CD #99</b></p>	<table border="1"> <thead> <tr> <th>VOLTS</th> <th>CONNECTION</th> </tr> </thead> <tbody> <tr> <td>230</td> <td>WHITE → 3 BLUE → 5</td> </tr> <tr> <td>115</td> <td>WHITE → 1 BLUE → 3</td> </tr> </tbody> </table> <p><b>CD #100</b></p>	VOLTS	CONNECTION	230	WHITE → 3 BLUE → 5	115	WHITE → 1 BLUE → 3	<p><b>CD #101</b></p>
VOLTS	CONNECTION							
230	WHITE → 3 BLUE → 5							
115	WHITE → 1 BLUE → 3							
<p><b>CD #102</b></p>	<p><b>CD #103</b></p>	<p><b>CONNECTIONS</b></p> <p>BLUE → 4 L1 → LINE (CCW ROT.)</p> <p>YELLOW → 2 L2 → GROUNDED LINE (115V CIRCUIT)</p> <p>FOR CW ROT. INTERCHANGE BLUE &amp; YELLOW</p> <p><b>CD #104</b></p>						
<p><b>CONNECTIONS</b></p> <p>HI — GROUND LINE (115V CIRCUIT) LO — LO SPD COM — HI SPD</p> <p><b>FOR CCW ROTATION</b></p> <p>RED → 4 BLACK → 2</p> <p>CAUTION: DO NOT APPLY VOLT HI TO LO FOR C.W. ROT. INTERCHANGE RED &amp; BLACK</p> <p><b>CD #105</b></p>	<p>WHITE (COMMON)</p> <p>BLACK (HI)</p> <p>RED (LOW)</p> <p>GREEN (GROUND)</p> <p><b>CD #106</b></p>	<p><b>CONNECTIONS</b></p> <p>L1 → LINE</p> <p>L2 → GROUNDED LINE (115V CIRCUIT)</p> <p><b>CD #107</b></p>						
<p><b>CD #108</b></p>	<p>L1 → WHITE (P1) INSULATE → WHITE (P2) WHITE (T2) ORANGE (T3) RED (T8) BLACK (T5) YELLOW (T4)</p> <p>230 VOLT</p> <p>L1 → WHITE (P1) WHITE (P2) ORANGE (T3) RED (T8) BLACK (T5) WHITE (T2) YELLOW (T4)</p> <p>115 VOLT</p> <p>FOR C.W. ROTATION INTERCHANGE RED &amp; BLACK LEADS.</p> <p><b>CD #109</b></p>	<p>L1 → (T8) (T1) (T3) (T4)</p> <p>L2 → (T2) (T5)</p> <p>115 VOLT CCW ROTATION</p> <p>L1 → (T1) (T8) (T3) (T2) (T4)</p> <p>L2 → (T5)</p> <p>230 VOLT CCW ROTATION</p> <p>FOR C.W. ROTATION INTERCHANGE (T8) &amp; (T5) LEADS. CD#110</p> <p><b>CD #110</b></p>						

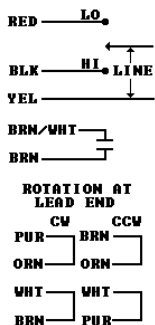


# A.O. Smith Connection Diagrams

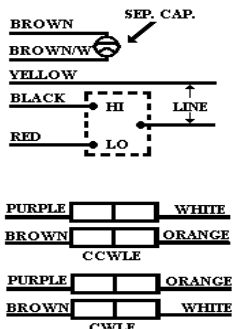
Lead color may vary from motor being replaced.



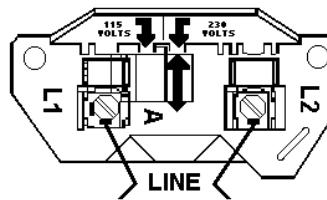
Lead color may vary from motor being replaced.



CD #123

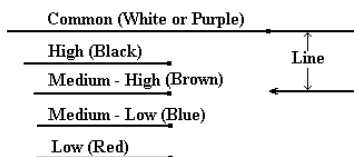


CD #124

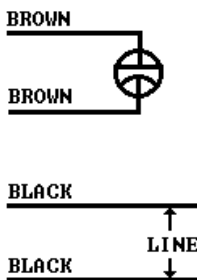


230V. CONNECTION IS SHOWN. TO CHANGE TO 115V., MOVE THE BLACK PLUG TO ALIGN THE ARROWS AT THE 115V. LOCATION.

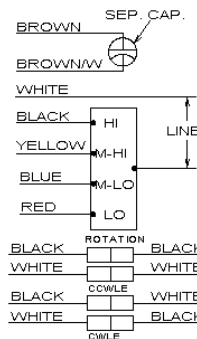
CD #125



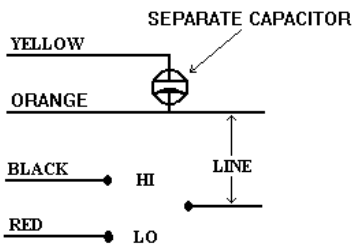
CD #126



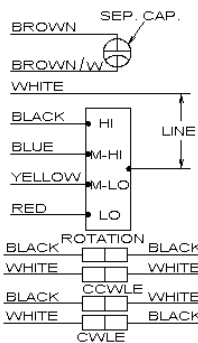
CD #127



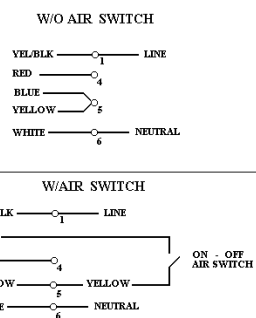
CD #128



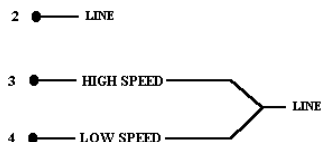
CD #129



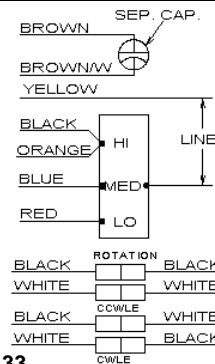
CD #130



CD #131



CD #132



CD #133