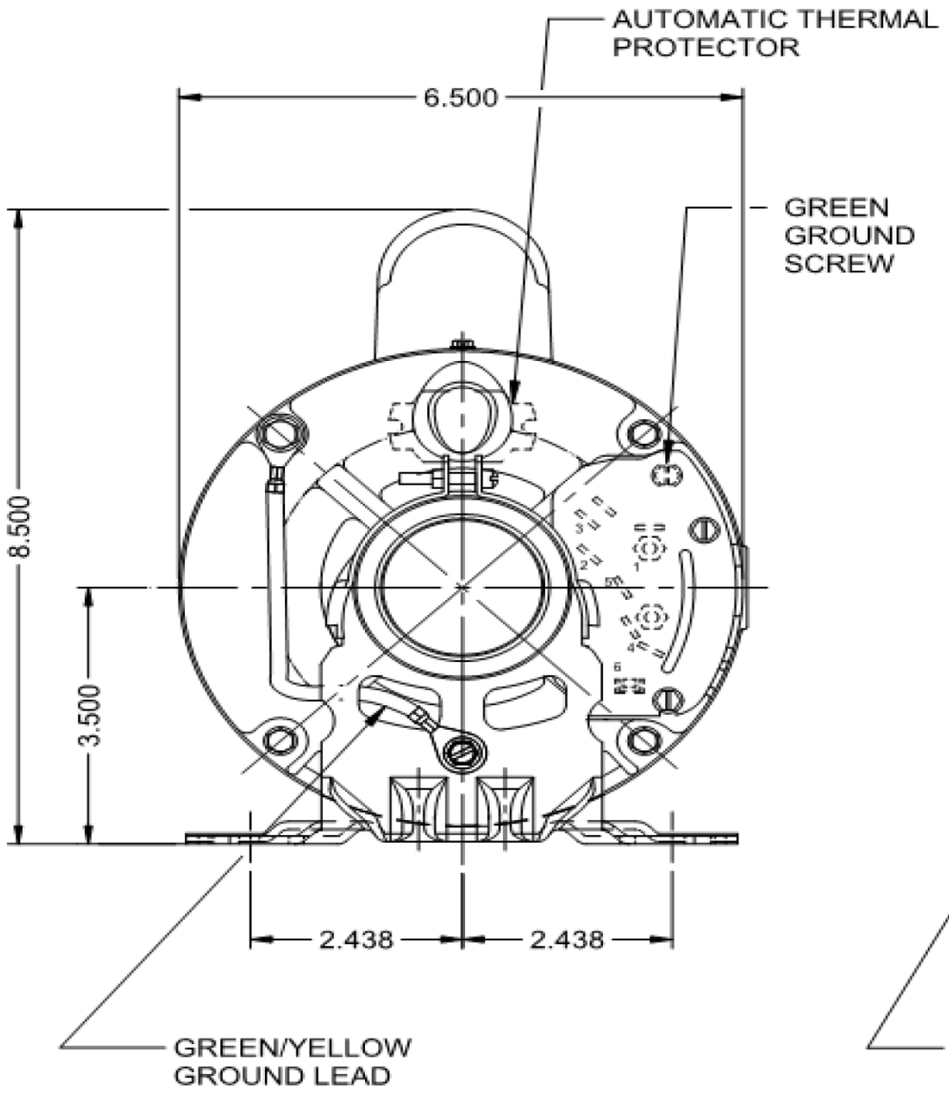
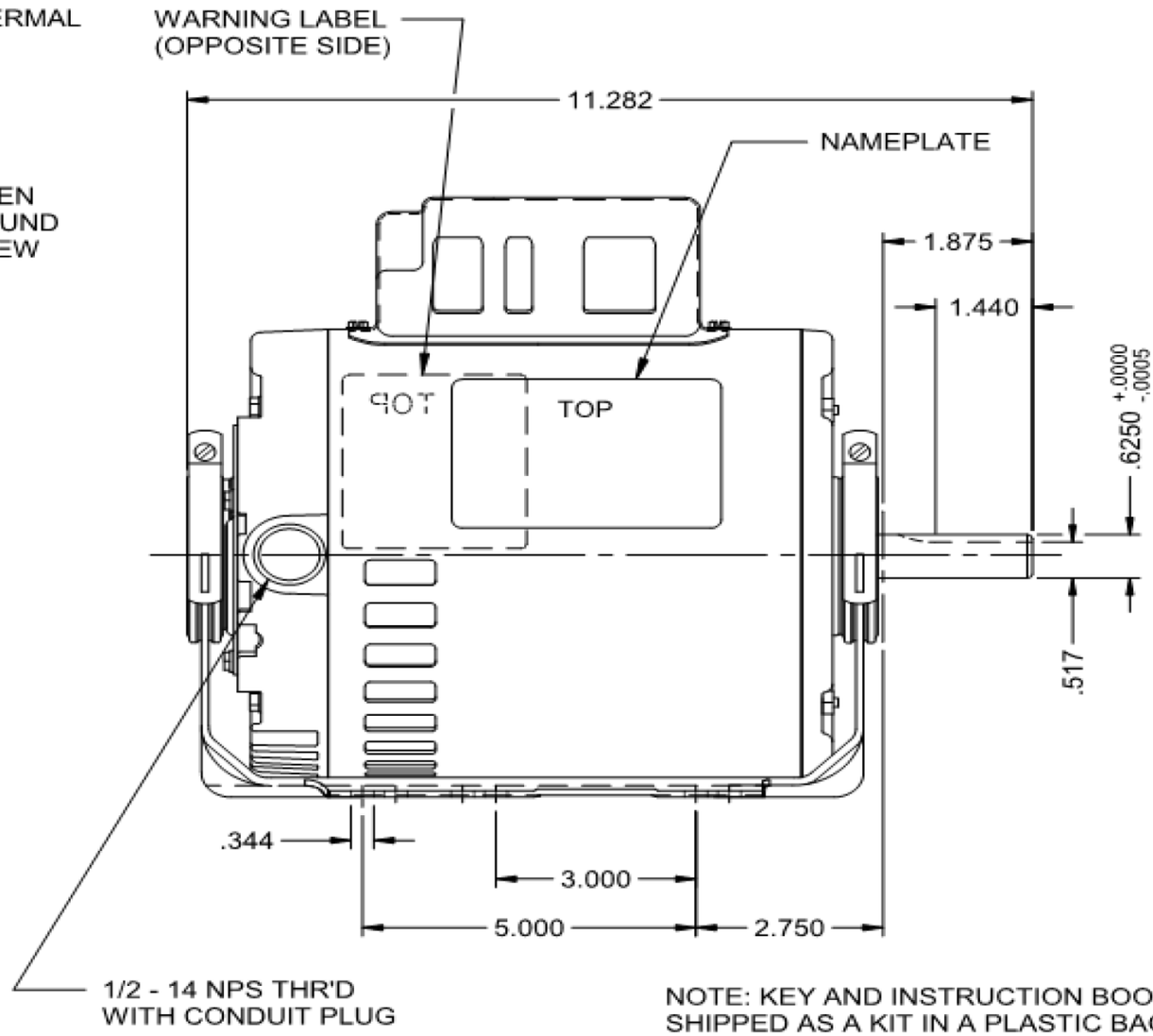
Dimensional Drawing

24C180A	REV. -





NOTE: KEY AND INSTRUCTION BOOK SHIPPED AS A KIT IN A PLASTIC BAG

MODEL	HP.	VOLTS	HZ.	R.P.M.	BEARING	ROTATION	CUST. PT. NO.
C63CXHYR-1185	1/2	115/208-230	60	1725	BALL	CW/CCW	24C180A

DRAWING NO.	PAGE 1 of 1	REV.
24C180A		-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

24C180A	REV. -

MOTOR PERFORMANCE

HP:	1/2 HP							
Poles:	4P							
No. of Speeds:	1Spd							
Volts:	115/280-230 V	**115**	**230**					
HZ:	60	**60**	**60**					
Service Factor:	1.25							
Efficiency:	@ Rated Load	65.2	65.9					
Power Factor:	@ Rated Load	65.1	64.9					
Amps:	@ No Load							
	@ Rated Load	7.7	3.8					
	@ Service Factor	4.3	4.2					
	@ Locked Rotor	46.1	23.8					
RPM:	@ Rated Load							
Ambient (ºC):	40							
Torques:	Breakdown	70	69.6					
	Locked Rotor	105.5	89.7					
	Pull-Up	100.8	89.7					
	Rated Load							
	Service Factor							
Watts:	Rated Load							
KVA Code:								
Temperature Rise:	@ Rated Load	32.4	34.8					
	@ Service Factor	39.9	40.4					
Thermal Protector:	Trip Temp (ºC)							
Winding Material:	Start (Auxiliary)	Al						
	Run (Main)	Al						
Capacitor(s):	Start (MFD / Volts)	649 MFD / 125 VAC						
	No. of Start Capacitors							
	Run (MFD / Volts)	N/A						
	No. of Run Capacitors							
PERFORMANCE DATA:								
HP:								
Poles:								
Volts:								
HZ:								
Efficiency:	@ Rated Load							
Power Factor:	@ Rated Load							
Amps:	@ No Load							
	@ Rated Load							
	@ Service Factor							
	@ Locked Rotor							
Torques:	@ Rated Load							
	Locked Rotor							
	Pull-Up							
	Rated Load							
	Service Factor							
Watts:	@ Rated Load							
Temperature Rise:	@ Rated Load							
	@ Service Factor							

Performance Data

24C180A	REV. -

Dayton Manufacturing Company

Motor Description

Model:	C063CXJBU113801
Motor ID:	Motor #1
Poles:	4
Volts:	115/230
Frequency:	60&50
HP:	1/2
Speed:	1725&1425
Phase:	1
Protector:	CEJ68CY

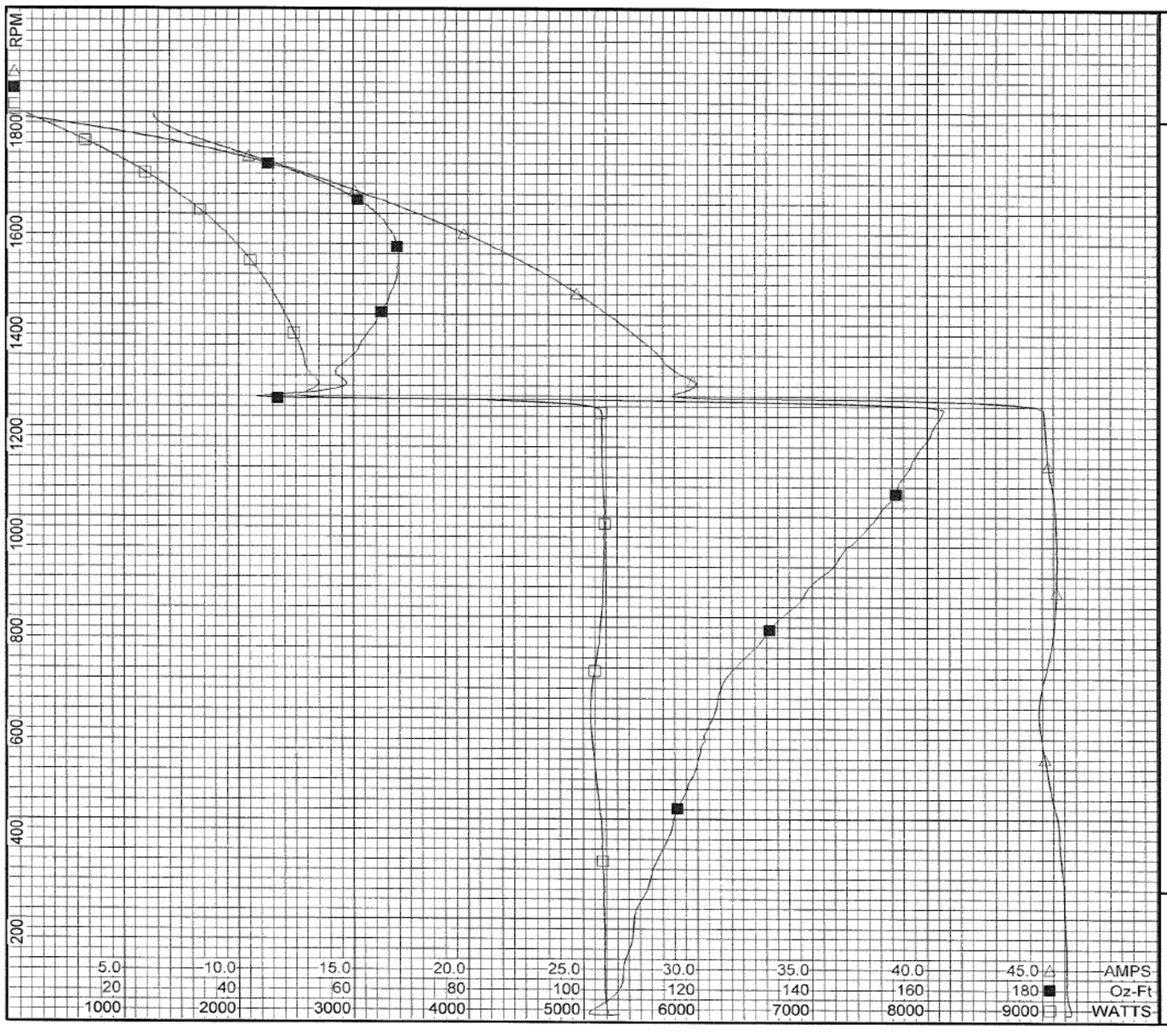
Test Conditions

Test Type:	Start	Run Cap:	0
Test Number:	1	Start Cap:	0µfd
Poles:	4		
Volts:	115	Tested:	3/2/2012 2:09:18 PM
Hz:	60		
Rotation:		Gear Ratio:	1:1
Special Cond:	2 Line	Bearing Friction:	-0.59 Oz-Ft
Speed Conn:		Windage Torque:	-1.73 Oz-Ft
TestBoard:	Amtps Performance	Fixture #3	

Special Points	Vline	Iline	Watts	Speed	Tq(Oz-ft)	HP	Eff(%)	PF(%)
	115.0	46.05	5181	11	105.46	0.013	0.2	97.8
PUT OZ-FT	**115.0**	**46.27**	**5206**	**11**	**100.84**	**0.014**	**0.2**	**97.8**
	115.0	46.12	5190	39	104.26	0.048	0.7	97.9
	115.0	46.00	5183	188	108.72	0.243	3.5	98.0
	115.0	45.77	5160	344	114.11	0.467	6.8	98.0
	115.0	45.27	5109	483	119.06	0.685	10.0	98.1
	115.0	44.87	5061	611	122.99	0.894	13.2	98.1
	115.0	45.35	5119	726	128.82	1.114	16.2	98.1
	115.0	45.62	5167	832	137.91	1.366	19.7	98.5
	115.0	45.64	5181	929	145.33	1.607	23.1	98.7
	115.0	45.57	5185	1016	152.28	1.842	26.5	98.9
	115.0	45.28	5167	1096	156.96	2.048	29.6	99.2
	115.0	45.14	5162	1170	160.80	2.239	32.4	99.4
	115.0	39.04	4073	1232	101.28	1.486	27.2	90.7
	115.0	29.80	2687	1270	58.43	0.883	24.5	78.4
	115.0	27.94	2540	1336	60.93	0.969	28.5	79.0
	115.0	26.25	2419	1395	64.30	1.068	32.9	80.1
	115.0	24.58	2290	1446	66.59	1.147	37.4	81.0
	115.0	22.87	2156	1492	67.47	1.198	41.5	82.0
	115.0	21.17	2012	1531	67.75	1.235	45.8	82.6
	115.0	19.51	1864	1567	66.40	1.239	49.6	83.1
	115.0	17.88	1713	1599	64.13	1.221	53.1	83.3
	115.0	16.22	1551	1628	60.75	1.177	56.6	83.2
	115.0	14.61	1388	1654	56.43	1.111	59.7	82.6
	115.0	12.99	1217	1678	51.11	1.021	62.6	81.4
	115.0	11.45	1044	1701	44.59	0.903	64.5	79.3
	115.0	9.94	864	1723	37.17	0.762	65.8	75.6
	115.0	8.55	683	1743	28.77	0.597	65.2	69.4
	115.0	7.38	500	1762	19.48	0.409	61.0	58.9
	115.0	6.53	310	1781	8.89	0.189	45.4	41.2
	115.0	6.29	147	1798	0.00	0.000	0.0	20.3

Performance Data

24C180A	REV. -



Dayton

Curve Descriptions:

Motor(1) Test 1 Start 115V 60 Hz 4P
2 Line Attempt #1

- ☐ SPEED vs WATTS
- ■ SPEED vs TORQUE
- △ SPEED vs ILine

Motor Ratings:

(1) C063CXJBU113801 ID: Motor #1

DRAWING NO.	PAGE 2 of 8	REV.
24C180A		-

Performance Data

24C180A	REV. -

Dayton Manufacturing Company

Motor Description

Model:	C063CXJBU113801
Motor ID:	Motor #1
Poles:	4
Volts:	115/230
Frequency:	60&50
HP:	1/2
Speed:	1725&1425
Phase:	1
Protector:	CEJ68CY

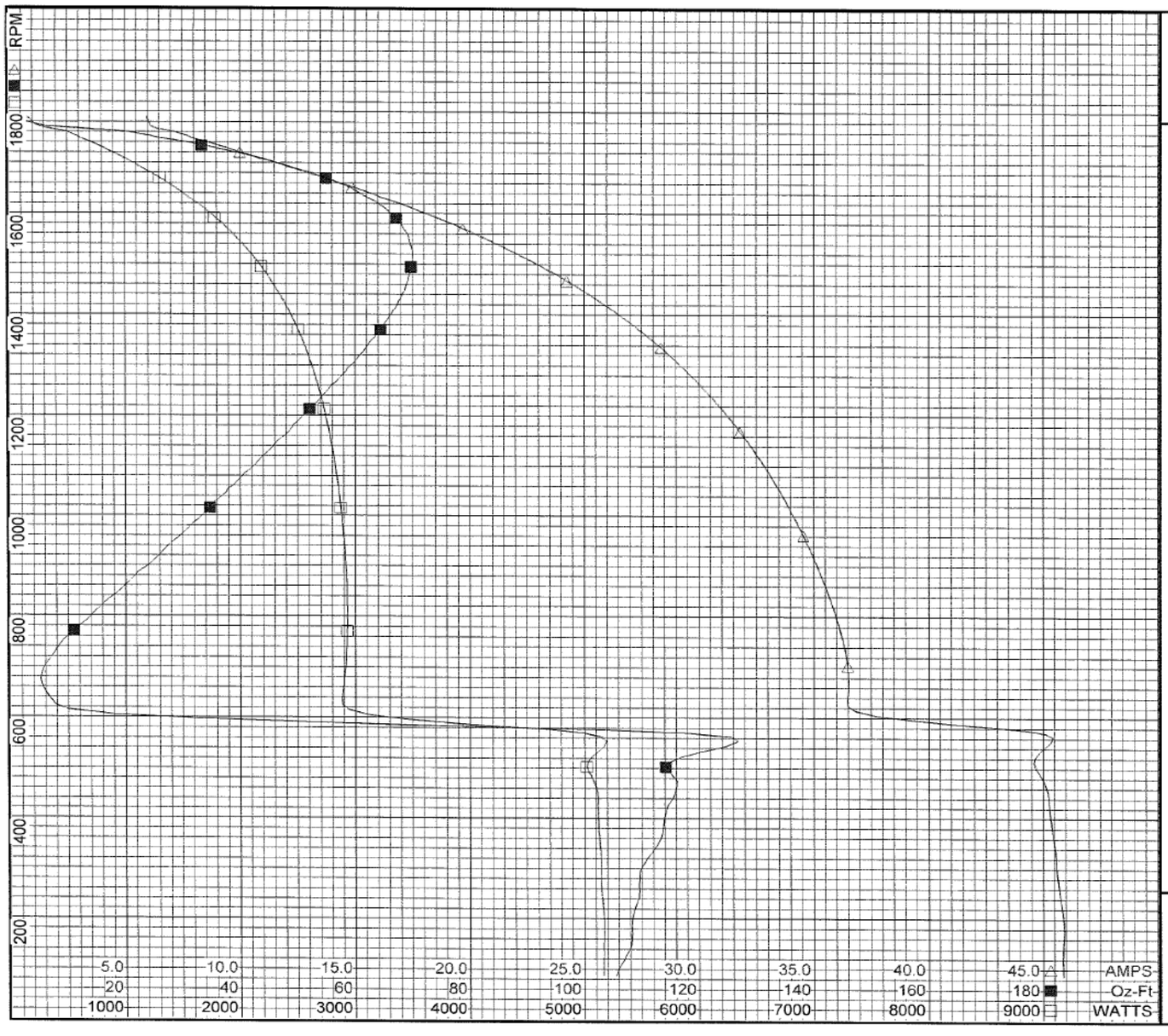
Test Conditions

Test Type:	Run	Run Cap:	0
Test Number:	3	Start Cap:	0µfd
Poles:	4		
Volts:	115	Tested:	3/2/2012 1:45:46 PM
Hz:	60		
Rotation:		Gear Ratio:	1:1
Special Cond:	2 Line	Bearing Friction:	-0.63 Oz-Ft
Speed Conn:		Windage Torque:	-1.83 Oz-Ft
TestBoard:	Amtps Performance	Fixture #3	

Special Points	Vline	Iline	Watts	Speed	Tq(Oz-ft)	HP	Eff(%)	PF(%)
	115.0	5.95	149	1790	0.00	0.000	0.0	21.8
	115.0	6.18	282	1769	8.01	0.169	44.6	39.7
16.4 OZ-FT	**115.0**	**6.70**	**425**	**1764**	**16.40**	**0.344**	**60.4**	**55.1**
0.5 HP	**115.0**	**7.65**	**572**	**1753**	**23.97**	**0.500**	**65.2**	**65.1**
24.3 OZ-FT	**115.0**	**7.69**	**578**	**1752**	**24.30**	**0.507**	**65.4**	**65.4**
	115.0	7.71	580	1752	24.42	0.509	65.4	65.5
0.625 HP	**115.0**	**8.50**	**695**	**1740**	**30.17**	**0.625**	**67.1**	**71.1**
	115.0	9.16	781	1732	34.47	0.711	67.8	74.2
1725 RPM	**115.0**	**9.60**	**838**	**1725**	**36.76**	**0.755**	**67.2**	**75.9**
	115.0	10.68	971	1711	42.59	0.867	66.6	79.0
	115.0	12.36	1157	1688	49.86	1.002	64.6	81.4
	115.0	14.05	1337	1665	55.84	1.107	61.7	82.8
	115.0	15.69	1506	1640	60.87	1.188	58.9	83.5
	115.0	17.33	1666	1613	64.84	1.245	55.7	83.6
	115.0	19.03	1827	1583	67.74	1.276	52.1	83.5
	115.0	20.64	1971	1551	69.38	1.281	48.5	83.0
BDT OZ-FT	**115.0**	**22.07**	**2095**	**1520**	**70.03**	**1.267**	**45.1**	**82.5**
	115.0	22.23	2108	1516	70.00	1.264	44.7	82.5
	115.0	23.81	2234	1479	69.43	1.223	40.8	81.6
	115.0	25.30	2349	1438	68.18	1.167	37.1	80.7
	115.0	26.72	2451	1394	65.87	1.093	33.3	79.8
	115.0	28.08	2549	1346	62.55	1.002	29.3	78.9
	115.0	29.36	2630	1294	58.73	0.905	25.7	77.9
	115.0	30.57	2704	1237	54.14	0.797	22.0	76.9
	115.0	31.69	2766	1175	48.95	0.685	18.5	75.9
	115.0	32.73	2818	1110	43.17	0.571	15.1	74.9
	115.0	33.67	2863	1038	36.73	0.454	11.8	73.9
	115.0	34.55	2894	961	29.73	0.340	8.8	72.8
	115.0	35.34	2921	879	21.57	0.226	5.8	71.9
	115.0	36.04	2930	789	13.00	0.122	3.1	70.7
	115.0	36.48	2910	694	5.50	0.045	1.2	69.4
	115.0	39.27	3440	596	34.49	0.245	5.3	76.2
	115.0	44.60	5031	512	114.88	0.701	10.4	98.1
	115.0	45.32	5120	399	113.82	0.541	7.9	98.2
	115.0	45.67	5145	268	109.51	0.350	5.1	98.0
	115.0	45.86	5166	131	107.42	0.167	2.4	97.9

Performance Data

24C180A	REV. -



Dayton

Curve Descriptions:

Motor(1) Test 3 Run 115V 60 Hz 4P
2 Line Attempt #1

- □ SPEED vs WATTS
- ■ SPEED vs TORQUE
- △ SPEED vs ILine

Motor Ratings:

(1) C063CXJBU113801 ID: Motor #1

DRAWING NO.	PAGE 4 of 8	REV.
24C180A		-

Performance Data

24C180A	REV. -

Dayton Manufacturing Company

Motor Description

Model:	C063CXJBU113801
Motor ID:	Motor #1
Poles:	4
Volts:	115/230
Frequency:	60&50
HP:	1/2
Speed:	1725&1425
Phase:	1
Protector:	CEJ68CY

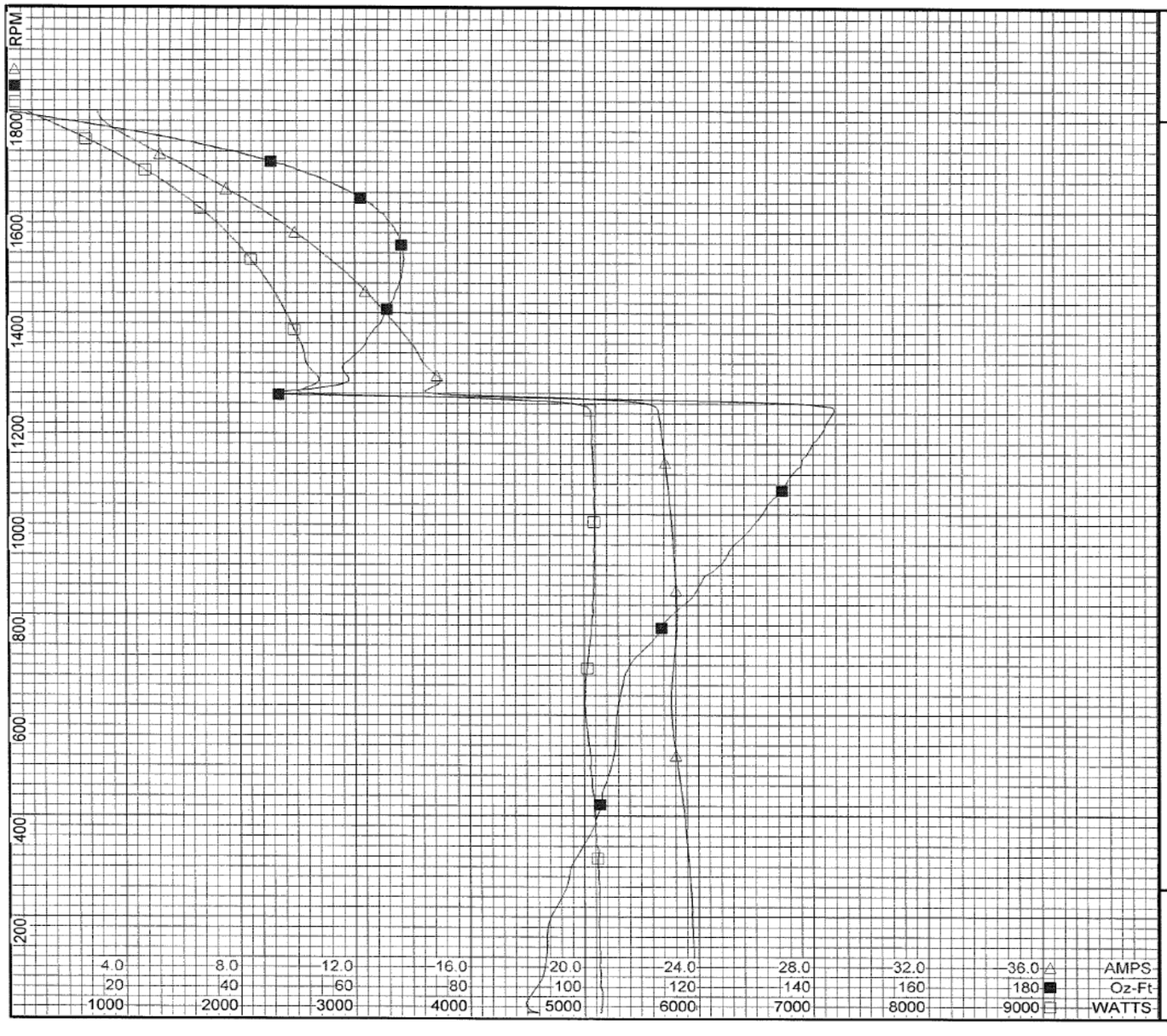
Test Conditions

Test Type:	Start	Run Cap:	0
Test Number:	11	Start Cap:	0µfd
Poles:	4		
Volts:	230	Tested:	3/2/2012 12:36:06 PM
Hz:	60		
Rotation:		Gear Ratio:	1:1
Special Cond:	2 line	Bearing Friction:	-0.56 Oz-Ft
Speed Conn:		Windage Torque:	-1.70 Oz-Ft
TestBoard:	Amtps Performance	Fixture #3	

Special Points PUT OZ-FT	Vline	Iline	Watts	Speed	Tq(Oz-ft)	HP	Eff(%)	PF(%)
	230.0	23.82	5137	8	89.71	0.009	0.1	93.8
	230.0	23.82	5137	8	89.71	0.009	0.1	93.8
	230.0	23.86	5152	38	90.24	0.040	0.6	93.9
	230.0	23.75	5123	189	93.70	0.211	3.1	93.8
	230.0	23.59	5102	344	99.91	0.409	6.0	94.0
	230.0	23.31	5058	483	104.31	0.600	8.9	94.3
	230.0	23.04	5009	609	105.82	0.768	11.4	94.5
	230.0	23.18	5040	725	109.82	0.948	14.0	94.6
	230.0	23.23	5081	832	118.61	1.174	17.2	95.1
	230.0	23.13	5085	929	125.40	1.387	20.3	95.6
	230.0	23.01	5088	1017	131.92	1.597	23.4	96.2
	230.0	22.86	5084	1096	137.95	1.801	26.4	96.7
	230.0	22.69	5071	1169	141.92	1.975	29.1	97.1
	230.0	18.92	3797	1232	83.97	1.231	24.2	87.3
	230.0	14.87	2667	1276	58.58	0.890	24.9	78.0
	230.0	13.97	2535	1339	61.87	0.986	29.0	78.9
	230.0	13.13	2411	1397	65.14	1.084	33.5	79.8
	230.0	12.30	2285	1448	67.39	1.161	37.9	80.8
	230.0	11.43	2143	1493	68.46	1.217	42.4	81.5
	230.0	10.60	1999	1532	68.19	1.244	46.4	82.0
	230.0	9.77	1857	1567	67.01	1.250	50.2	82.6
	230.0	8.93	1703	1599	64.40	1.226	53.7	82.9
	230.0	8.11	1542	1629	61.06	1.184	57.3	82.6
	230.0	7.30	1379	1654	56.60	1.115	60.3	82.2
	230.0	6.49	1208	1679	51.27	1.025	63.3	80.9
	230.0	5.72	1035	1703	44.74	0.907	65.4	78.6
	230.0	4.98	865	1722	37.68	0.772	66.6	75.5
	230.0	4.30	686	1742	29.41	0.610	66.4	69.4
	230.0	3.64	487	1764	19.21	0.403	61.8	58.2
	230.0	3.20	289	1783	8.13	0.173	44.5	39.3
	230.0	3.07	153	1798	0.00	0.000	0.0	21.6

Performance Data

24C180A	REV. -



Dayton

Curve Descriptions:

Motor(1) Test 11 Start 230V 60 Hz 4P
2 line Attempt #1

- □ SPEED vs WATTS
- ■ SPEED vs TORQUE
- △ SPEED vs ILine

Motor Ratings:

(1) C063CXJBU113801 ID: Motor #1

DRAWING NO.	PAGE 6 of 8	REV.
24C180A		-

Performance Data

24C180A	REV. -

Dayton Manufacturing Company

Motor Description

Model:	C063CXJBU113801
Motor ID:	Motor #1
Poles:	4
Volts:	115/230
Frequency:	60&50
HP:	1/2
Speed:	1725&1425
Phase:	1
Protector:	CEJ68CY

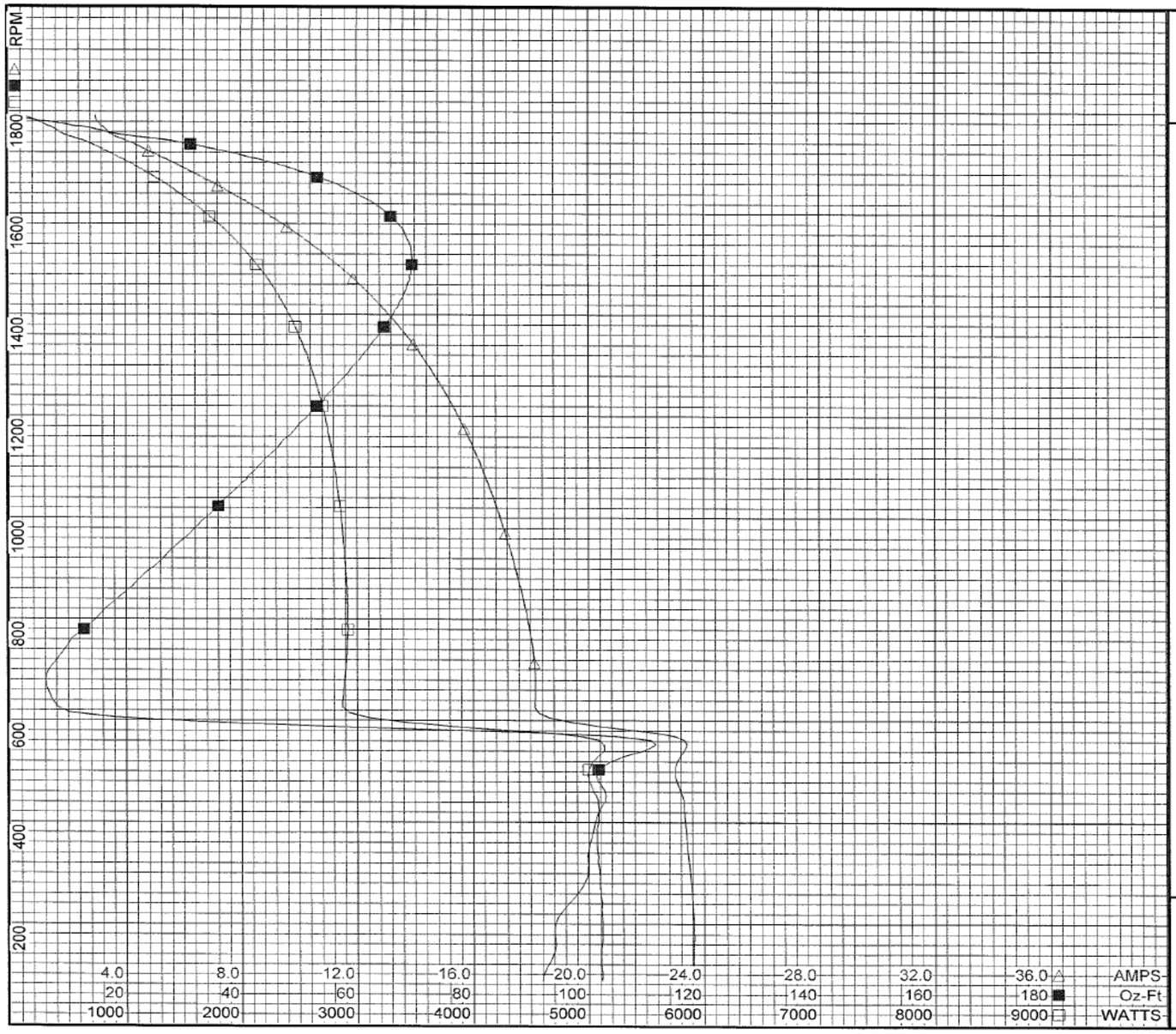
Test Conditions

Test Type:	Run	Run Cap:	0
Test Number:	13	Start Cap:	0µfd
Poles:	4		
Volts:	230	Tested:	3/2/2012 10:46:44 AM
Hz:	60		
Rotation:		Gear Ratio:	1:1
Special Cond:	2 Line	Bearing Friction:	-0.55 Oz-Ft
Speed Conn:		Windage Torque:	-1.64 Oz-Ft
TestBoard:	Amtps Performance	Fixture #3	

Special Points	Vline	Iline	Watts	Speed	Tq(Oz-ft)	HP	Eff(%)	PF(%)
	230.0	2.97	129	1792	0.00	0.000	0.0	18.9
	230.0	3.18	333	1771	10.95	0.231	51.8	45.5
16.4 OZ-FT	230.0	3.41	427	1761	16.40	0.344	60.1	54.4
	230.0	3.59	498	1753	20.42	0.426	63.8	60.3
0.5 HP	230.0	3.79	566	1748	24.03	0.500	65.9	64.9
24.3 OZ-FT	230.0	3.80	571	1748	24.30	0.506	66.0	65.2
0.625 HP	230.0	4.24	690	1738	30.21	0.625	67.6	70.8
	230.0	4.40	730	1734	32.03	0.661	67.6	72.2
1725 RPM	230.0	4.70	811	1725	35.67	0.732	67.4	75.0
	230.0	5.14	915	1713	40.39	0.824	67.1	77.5
	230.0	5.97	1110	1691	48.24	0.971	65.3	80.8
	230.0	6.79	1287	1667	54.48	1.081	62.6	82.4
	230.0	7.60	1453	1642	59.47	1.163	59.7	83.1
	230.0	8.42	1615	1616	63.64	1.224	56.5	83.4
	230.0	9.27	1774	1586	66.43	1.254	52.7	83.2
	230.0	10.06	1919	1556	68.54	1.269	49.3	82.9
	230.0	10.87	2059	1520	69.50	1.258	45.6	82.4
BDT OZ-FT	230.0	11.26	2125	1502	69.63	1.245	43.7	82.0
	230.0	11.66	2192	1484	69.39	1.226	41.7	81.8
	230.0	12.42	2312	1442	68.23	1.172	37.8	80.9
	230.0	13.13	2420	1399	66.22	1.102	34.0	80.2
	230.0	13.82	2514	1351	63.22	1.017	30.2	79.1
	230.0	14.47	2599	1299	59.42	0.919	26.4	78.1
	230.0	15.09	2676	1243	54.98	0.813	22.7	77.1
	230.0	15.66	2741	1182	49.86	0.702	19.1	76.1
	230.0	16.19	2793	1117	44.11	0.586	15.7	75.0
	230.0	16.67	2839	1046	37.94	0.472	12.4	74.0
	230.0	17.12	2876	969	31.03	0.358	9.3	73.0
	230.0	17.53	2903	888	22.99	0.243	6.2	72.0
	230.0	17.89	2914	799	14.59	0.139	3.6	70.8
	230.0	18.13	2900	704	6.79	0.057	1.5	69.5
	230.0	18.65	3091	605	18.26	0.132	3.2	72.1
	230.0	23.04	5028	517	103.38	0.637	9.4	94.9
	230.0	23.32	5084	413	101.44	0.498	7.3	94.8
	230.0	23.54	5093	282	99.28	0.334	4.9	94.1
	230.0	23.62	5103	144	93.97	0.161	2.4	93.9

Performance Data

24C180A	REV. -



Dayton

Curve Descriptions:

Motor(1) Test 13 Run 230V 60 Hz 4P
2 Line Attempt #1

- □ SPEED vs WATTS
- ■ SPEED vs TORQUE
- △ SPEED vs ILine

Motor Ratings:

(1) C063CXJBU113801 ID: Motor #1

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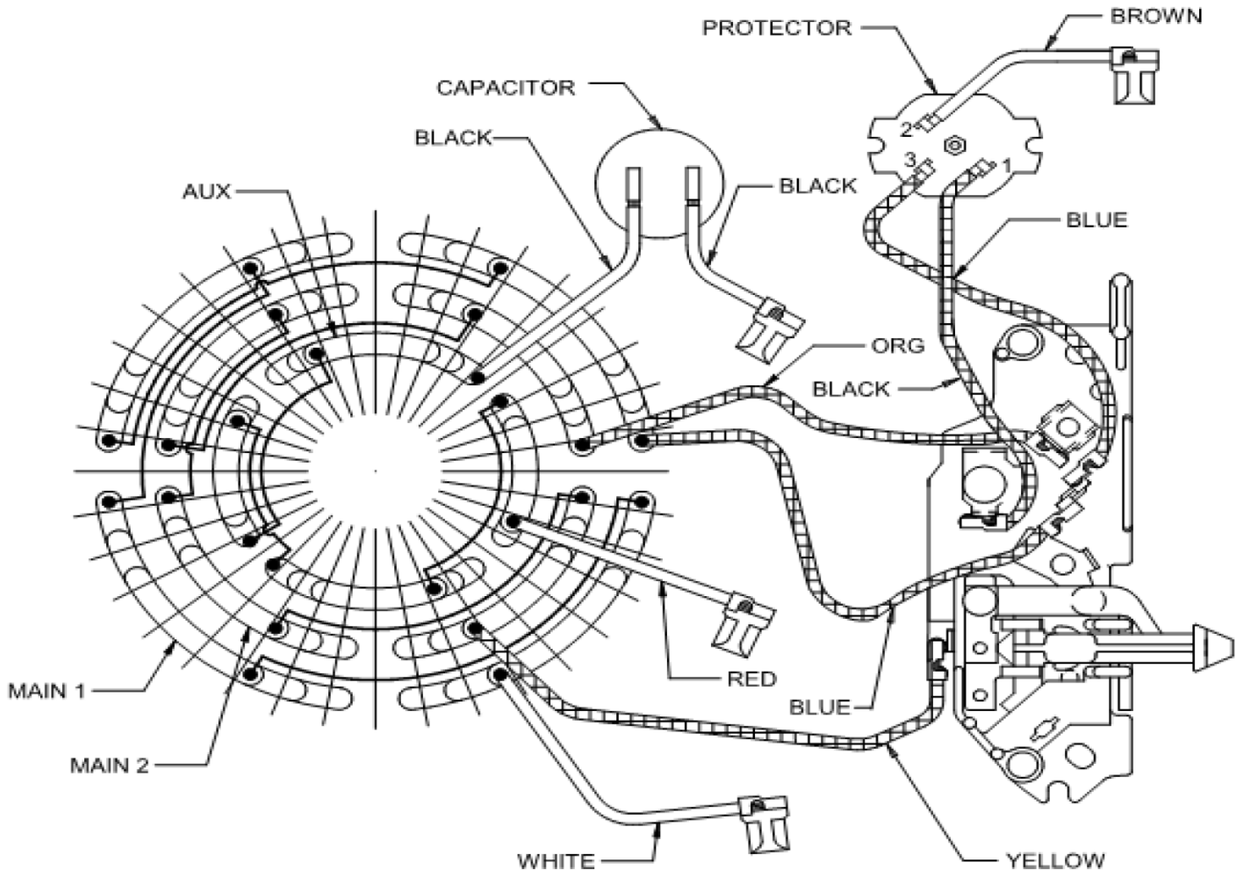
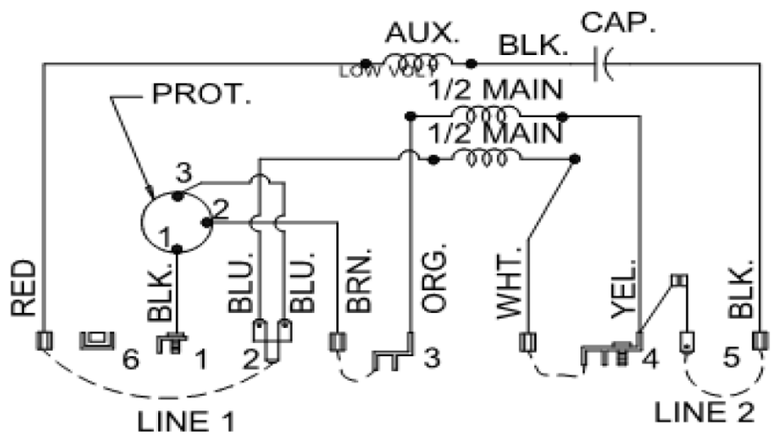
Wiring Diagram

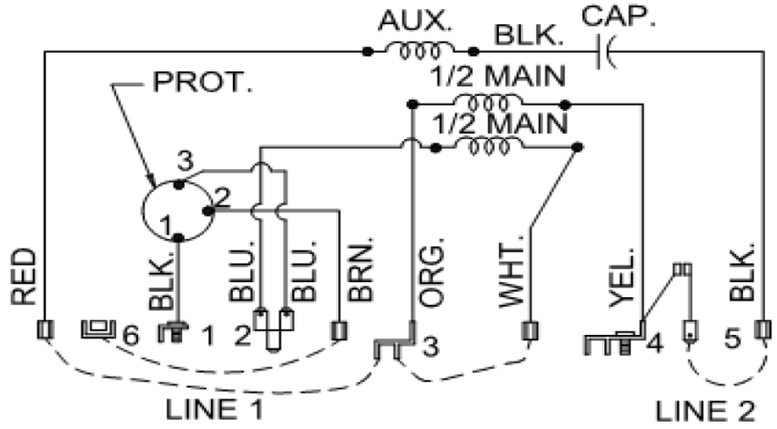
24C180A	REV. -



CONNECTED FOR LOW VOLTAGE



CONNECTED FOR HIGH VOLTAGE



ROTATION: CCW SWITCH END REVERSIBLE
TO REVERSE ROTATION INTERCHANGE
BLACK AND RED LEADS

C 4P DUAL VOLTAGE REV W/CAP & PROT

DRAWING NO.	PAGE 1 of 1	REV.
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Dayton®

BELT DRIVE FAN & BLOWER MOTOR

Part No 24C180A

HP: 1/2
VOLTS: 115/208-230
AMPS: 7.7/3.7-3.8
RPM: 1725
DUTY: CONT
SF: 1.25
KVA CODE: M
ENCL: ODP

PH: 1
HZ: 60
FR: 56H
INS CL: B
AMB: 40 °C
SFA: 8.5/4.3-4.2

THERMALLY PROTECTED: AUTO

MFG. NO. [ ] [ ] PROT. CODE : [00470] AVG. F.L. EFF.

MTR REF: C63CXHYR-1185

TO SAVE ENERGY REPLACE WITH: 30PT66

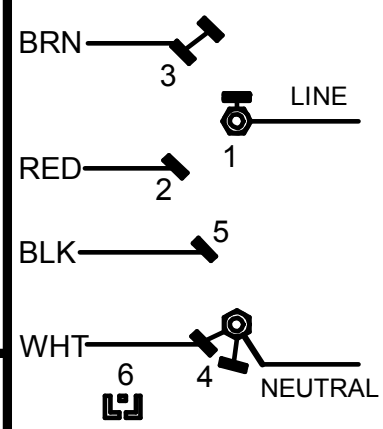
E37403

258501

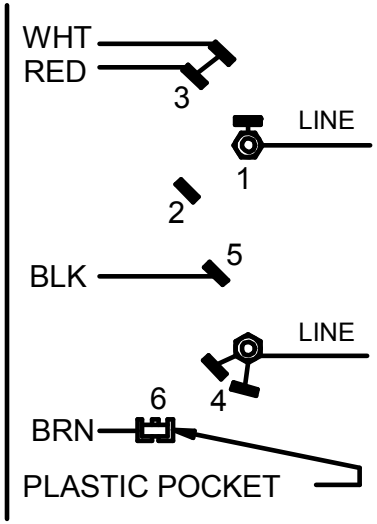
Disconnect Power Before Making Any Electrical Conections or Changes

CONNECTIONS

LOW VOLTAGE



HIGH VOLTAGE



TO REVERSE ROTATION
INTERCHANGE RED AND BLACK LEADS

Mfd for Dayton Electric Mfg. Co., Lake Forest, IL 60045 USA

Made in Mexico