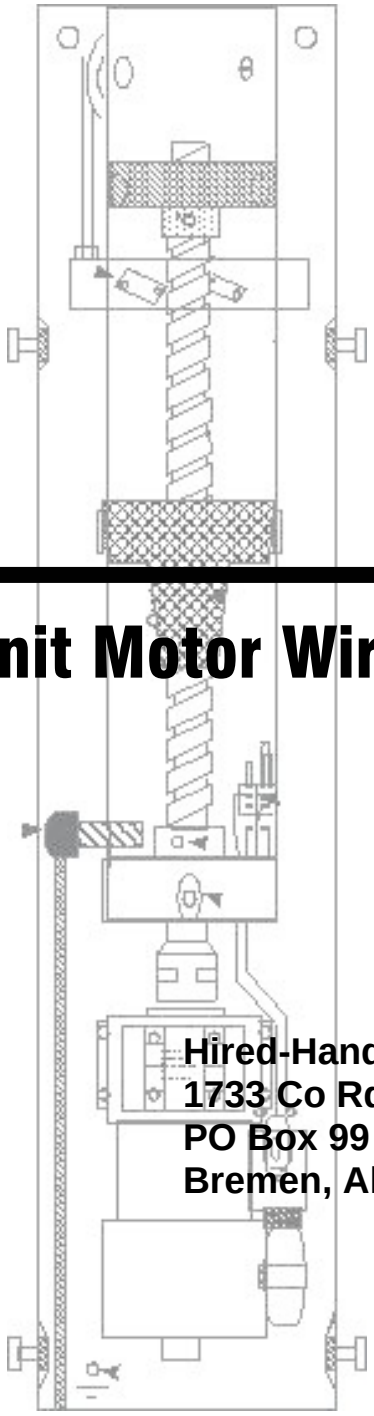
HIRED-HAND®



Power Unit Motor Wiring Diagrams

Service Information

Hired-Hand Manufacturing, Inc.
1733 Co Rd 68
PO Box 99
Bremen, Alabama 35033

Table of Contents

Section	Title	Page
1.	Warnings	1
2.	Replacement Motors	1
3.	Motors and Wiring Diagrams for Power Unit Machines	2
4.	Power Unit Junction Box Location	3
5.	120 VAC Power Units	4
5.1	AC Voltage Limit Switch Wiring Diagram	4
5.2	Test an AC Voltage Power Unit with Limit Switches	5
5.3	Von Weise V47A1 Wiring Diagram – 120 VAC	6
5.4	Maxi-Torq Wiring Diagram – 120 VAC	7
5.5	Franklin 6521007405 Wiring Diagram – 120 VAC	8
5.6	Von Weise V03021AC112 Wiring Diagram – 120 VAC	8
5.7	Franklin 652007408 Wiring Diagram – 120 VAC	9
5.8	Bison 3017-1000 Wiring Diagram – 120 VAC	9
5.9	Grainger Wiring Diagram – 120 VAC	10
5.10	Fasco 30/60 RPM Wiring Diagram – 120 VAC	11
5.11	Bison/Hired-Hand 15/30 RPM Wiring Diagram – 120 VAC	11
5.12	Bison/Hired Hand 60 RPM Wiring Diagram – 120 VAC	12
5.13	Dayton 9Z353 Wiring Diagram – 120 VAC	12
5.14	Fasco 15 RPM Wiring Diagram – 120V AC	13
5.15	Dayton 6K3XXA Wiring Diagram – 120 VAC	13
6.	240 VAC Power Units	14
6.1	Maxi-Torq 6Z818 Wiring Diagram – 240 VAC	14
6.2	Bison Model 3017-011X Wiring Diagram – 240 VAC	15
6.3	Bison 3017-0116 Wiring Diagram – 240 VAC	15
7.	DC Voltage Power Units	16
7.1	DC Voltage Limit Switch Wiring Diagram	16
7.2	Test a DC Voltage Power Unit with Limit Switches	17
7.3	Fasco V0902AA88 Wiring Diagram – 12 VDC	17
7.4	Dayton 9Z304 Wiring Diagram – 12 VDC	18

1. Warnings

Warning!

When this system is used in a life support cooling system where failure could result in loss or injury, the user should provide adequate back-up, or accept the risk of such loss or injury!

Warning!

All Wiring Should Be In Accordance with National Electrical Code Or Other Local Codes.

Warning!

Disconnect All Power Sources Before Installing This Equipment. Failure To Disconnect Power Source Can Result In Property Damage, Serious Injury Or Death!

Warning!

Dangerous Rotating Machinery!
Keep Hands, Clothing, Etc. Clear When Operating!
Do Not Operate Without All Guards And Covers In Place!

2. Replacement Motors

The following table shows motors that are currently available from Hired-Hand for replacing Power Unit motors that were used in Power Units manufactured prior to 1995. Reference to the motor wiring diagram for the replacement motor is shown in the table.

HH Part Number	RPM	Power Specifications 120 Volt	Drawing	Page
6650-0093	15	120VAC 60/50 Hz, 1.3 amps, 1/10 HP	5.11	11
6650-0094	30	120VAC 60/50 Hz, 2.1 amps, ¼ HP	5.11	11
6650-0095	60	120VAC 60/50 Hz, 3.15 amps, ¼ HP	5.12	12

HH Part Number	RPM	Power Specifications 240 Volt	Drawing	Page
6650-0096	15	240 volts 60/50 Hz, 0.75 amps	6.2	15
6650-0097	30	240 volts 60/50 Hz, 0.96 amps	6.2	15
6650-0098	60	240 volts 60/50 Hz, 1.4 amps	6.3	15



Power Unit

3. Motors and Wiring Diagrams for Power Unit Machines

The following table lists motors that have been used in Hired Hand Power Unit machines. Locate the Motor Manufacturer and Model Number in the table and see the corresponding drawing number for a wiring diagram of the motor, power and controller connections.

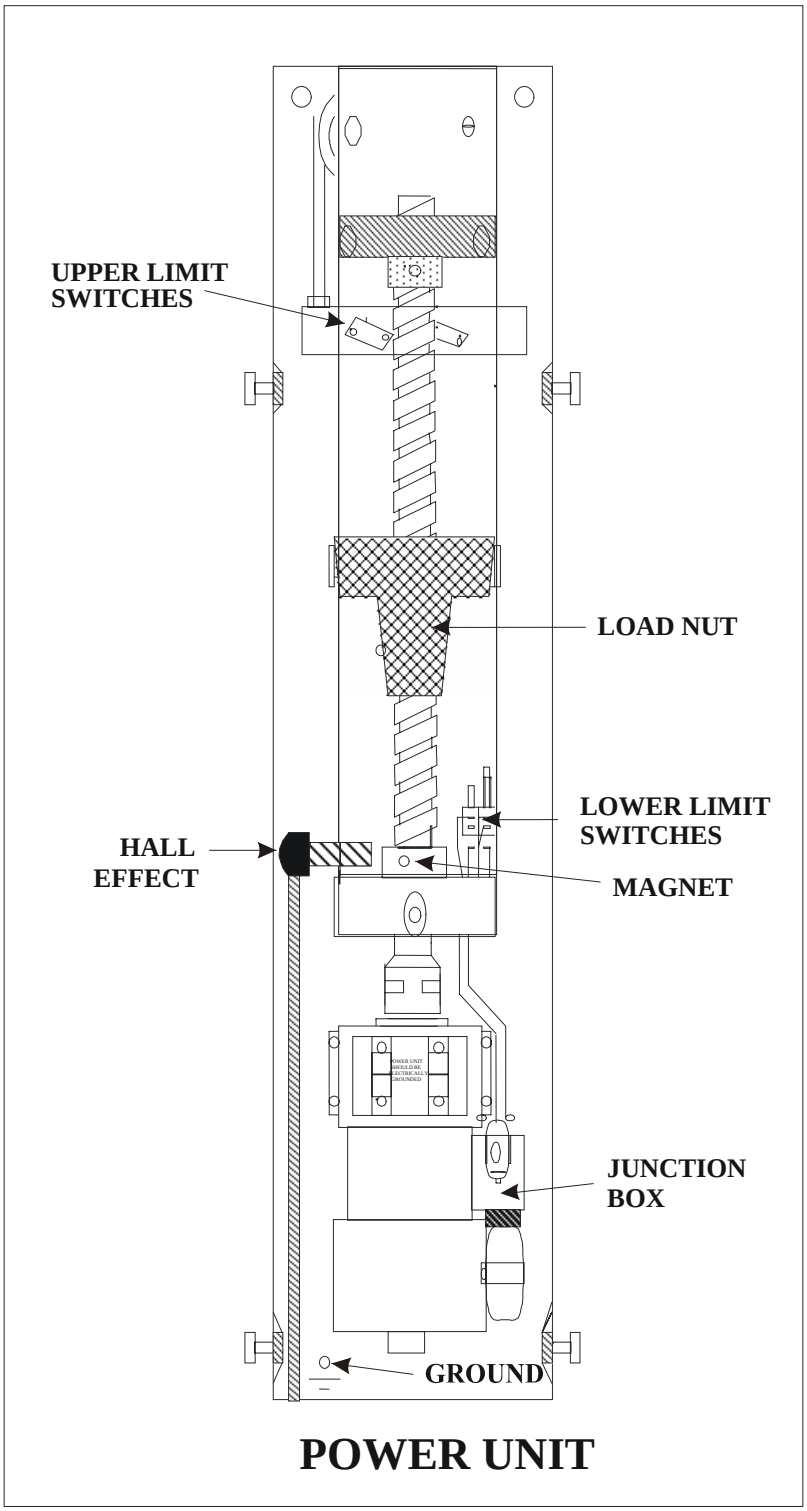
Diagrams for the AC Limit Switches are in Section 5.1. Diagrams for the DC Limit Switches are in Section 7.1. Diagrams for testing an AC Voltage Power Unit with Limit Switches are shown in Section 5.2. Diagrams for testing a DC Voltage Power Unit with Limit Switches are shown in Section 7.2.

Motor Manufacturer	Model Number	RPM	Power Specifications	Drawing	Page
Von Weise	V47A1	NA	NA	5.3	6
	V03021AC102	60	115 volts 60 Hz, 3.5 amps	5.10	11
	V03021AC112	65	115 volts 60 Hz, 3.5 amps	5.6	8
	V03021AB102	30	115 volts, 1/6 HP	5.10	11
Fasco	V03021AA102	15	115/230 volts 60 Hz, 1/12 HP	5.14	13
	V03021AB88	15	60 Hz, 1/12 HP	5.14	13
	V03021AA88	31	12 VDC 13.3 amps, 1/6 HP	7.3	17
	V03021AD88	30	115 volts 60 Hz, 2.01 amps, 1/6 HP	5.10	11
	V03021AE88	60	115 volts 60 Hz, 3.98 amps, 1/3 HP	5.10	11
Franklin	6526420400	16/13	115/230 volts 60/50 Hz 1/15 HP	5.4	7
	6526460400	52	115/230 volts 60 Hz, 2.2/1.1 amps	5.4	7
	6521007402	60	115/230 volts, 3.4/1.7 amps	5.4	7
	6521007403	16/13	115/230 volts 60/50 Hz, 1.6/.8 amps	5.4	7
	6521007405	30	115/230 volts 60 Hz, 2/1 amps	5.5	8
	6521007407	15	115 volts 60 Hz, 1.3 amps, 1/15 HP	5.10	11
	6521007408 (Note 1)	30	120 volt, 1/6 HP	5.7	9
	6521007408 (Note 1)	30	115 volts 60 Hz, 2.0 amps, 1/6 HP	5.10	11
Bison	016-200-9089	15	115/230 volts 60 Hz, 1.3/0.65 amps	5.4	7
	016-200-8108	15	115/230 volts 60 Hz, 1.3/0.65 amps	5.4	7
	016-242-2012	40/33	115/230 volts 60/50 Hz, 1/6 HP	5.9	10
	3017-1000 (Note 2)	60	115 volts, ¼ HP	5.8	9
	3017-1000 (Note 2)	60/50	115/230 volts, 60/50 Hz, ¼ HP	5.9	10
	3017-0111	15	115 volts 50/60 Hz, 1.3 amps, 1/10 HP	5.11	11
	3017-0112	30	115 volts 50/60 Hz, 2.1 amps, 1/4 HP	5.11	11
	3017-0113	60	115 volts 60 Hz, 3.15 amps, 1/4 HP	5.12	12
	3017-0114	15	240 volts 60/50 Hz, 0.75 amps	6.2	15
	3017-0115	30	240 volts 60/50 Hz, 0.96 amps	6.2	15
	3017-0116	60	240 volts 60/50 Hz, 1.4 amps	6.3	15
Dayton	4Z518	15/12.5	115/230 volts 60 Hz, 110/220 volts 50 Hz, 1/15 HP	5.4	7
	9Z353	NA	NA	5.13	12
	6K329A	40	115 volts 60 Hz, 4.9 amps	5.15	13
	6K325A	13.5	115 volts 60 Hz	5.15	13
	6K303A	30	115 volts 60 Hz	5.15	13
	9Z304	33	12 Volts DC, 1/8 HP, 8.5 amps	7.4	18
Maxi-Torq	4Z515	15/12.5	115/230 volts 60 Hz, 110/220 volts 50 Hz	5.4	7
	4Z518	15/12.5	115/230 volts 60 Hz, 110/220 volts 50 Hz, 1/15 HP	5.4	7
	6Z818	30/25	115/230 volts 60 Hz, 110/220 volts 50 Hz	6.1	14
	6Z819	40/33	115/230 volts 60 Hz, 110/220 volts 50 Hz	5.9	10
Grainger	6Z816	30	115/230 volts 60 Hz, 110/220 volts 50 Hz	5.9	10

Note 1- Select Drawing 5.7 or 5.10 based upon the motor wire colors.
Note 2- Select Drawing 5.8 or 5.9 based upon the motor wire colors.

4. Power Unit Junction Box Location

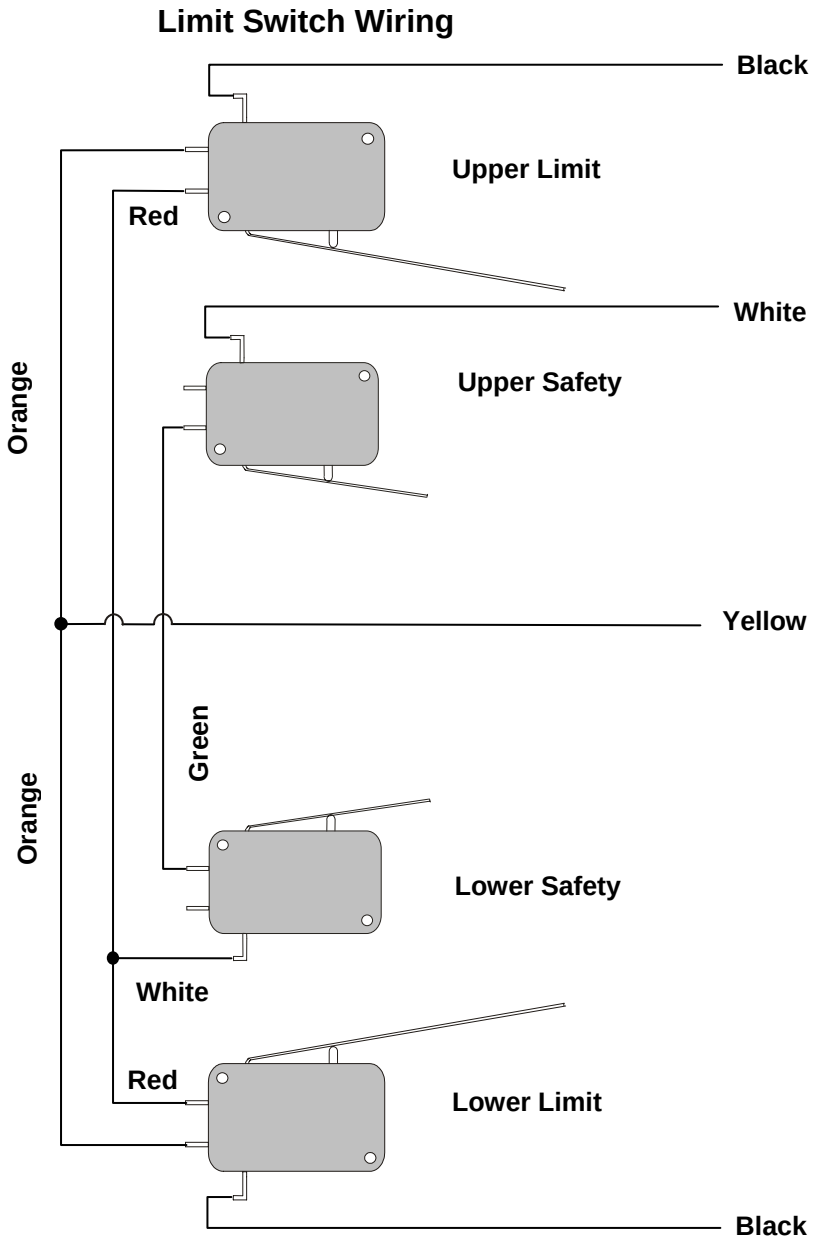
All wiring is made in the junction box as shown in the following diagram. Note also the location of the upper and lower limit switches that may be referenced in some motor installations.



5. 120 VAC Power Units

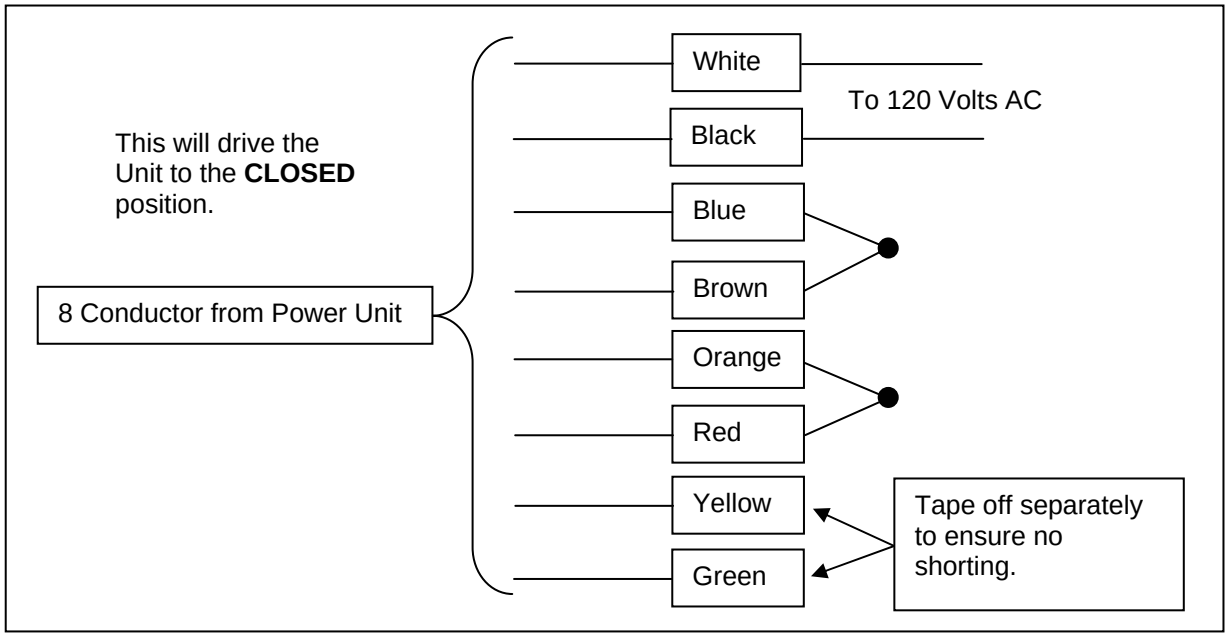
This section contains wiring diagrams for motors wired for either 120 volts or 240 volts AC. For the Limit Switch wiring for 120 volt or 240 volt motors see Section 5.1 and for Power Unit Test Diagrams with Limit Switches see Section 5.2.

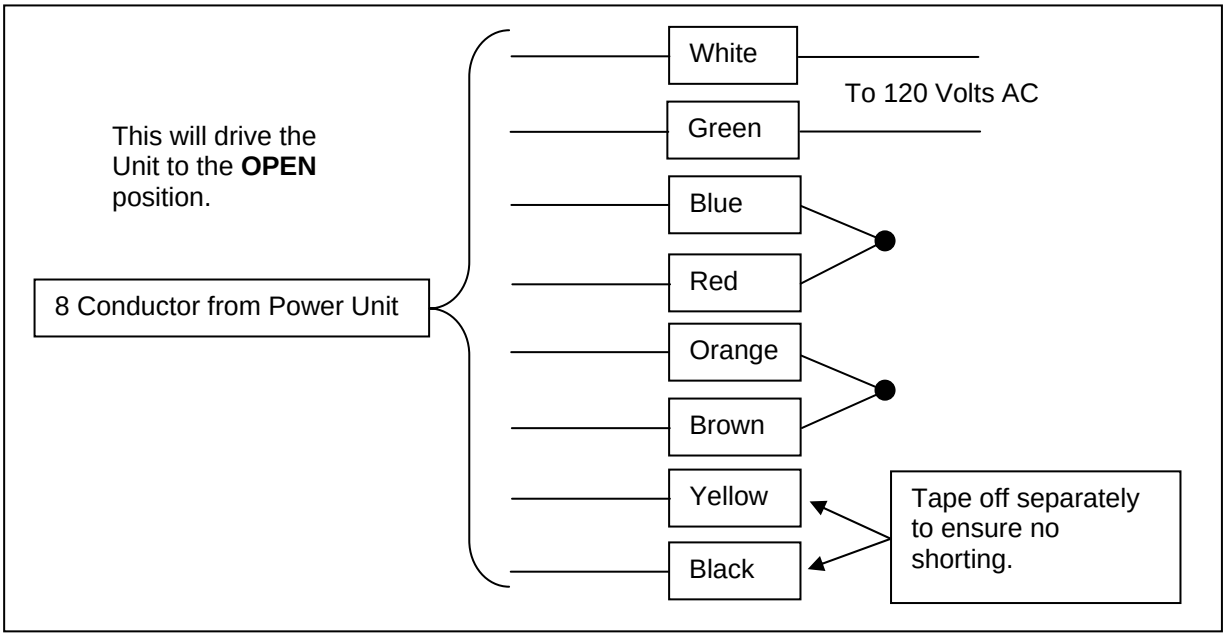
5.1 AC Voltage Limit Switch Wiring Diagram



5.2 Test an AC Voltage Power Unit with Limit Switches

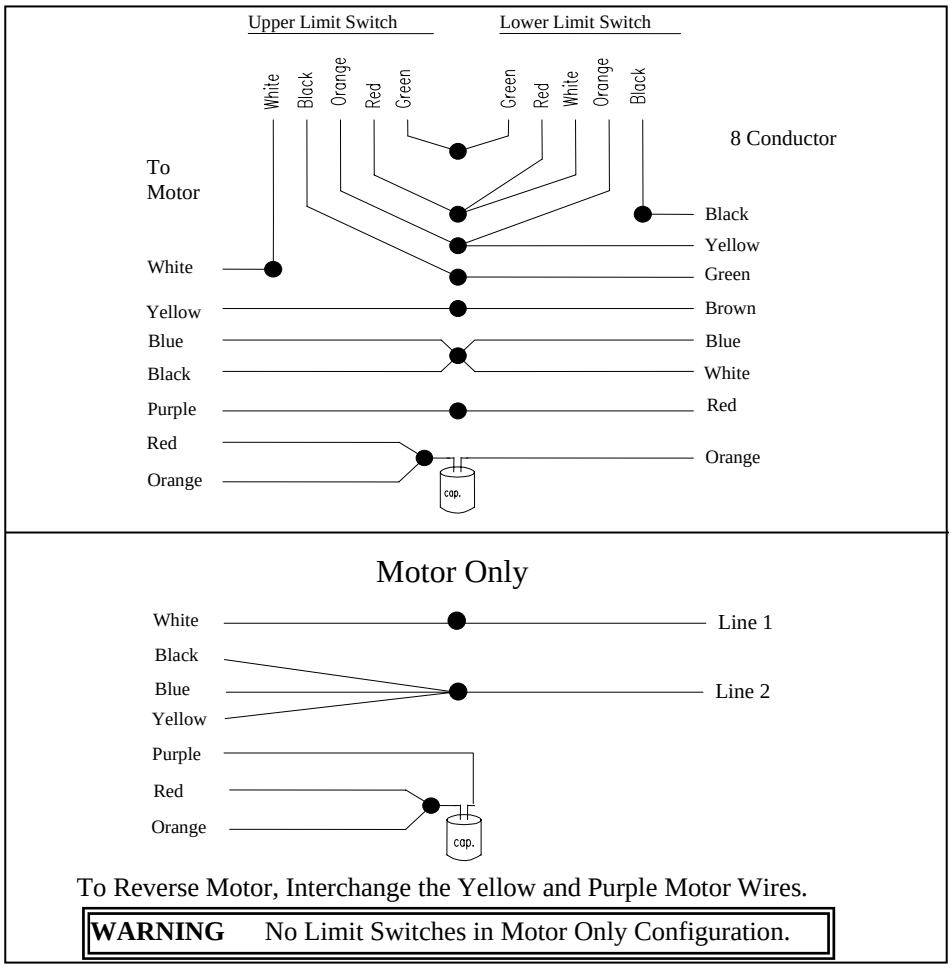
To test an AC voltage Power Unit Machine without the Control Box or Relay Box, disconnect the 8 wire conductor from the terminal strip in the Control/Relay Box and arrange wires as shown in the figures below. The limit switches should operate.

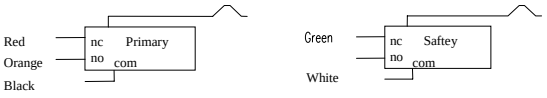


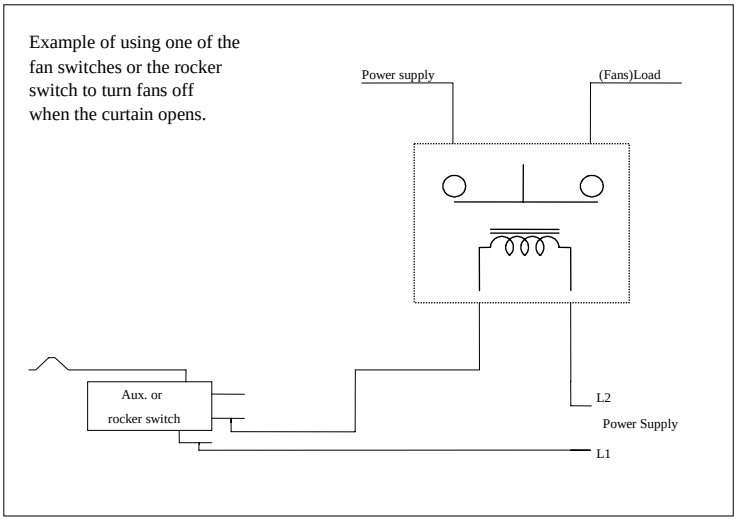


5.3 Von Weise V47A1 Wiring Diagram – 120 VAC

The following diagram is used with: Von Weise Power Act Motor V47A1



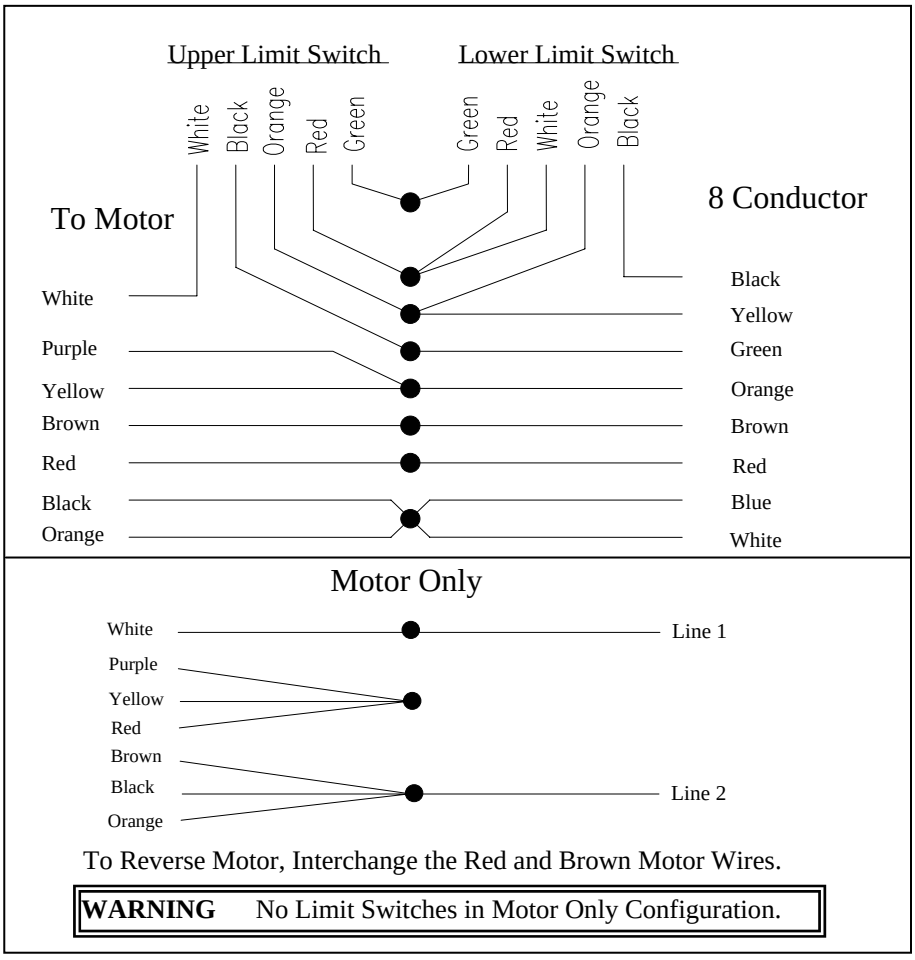




5.4 Maxi-Torq Wiring Diagram – 120 VAC

The following diagram is used with:

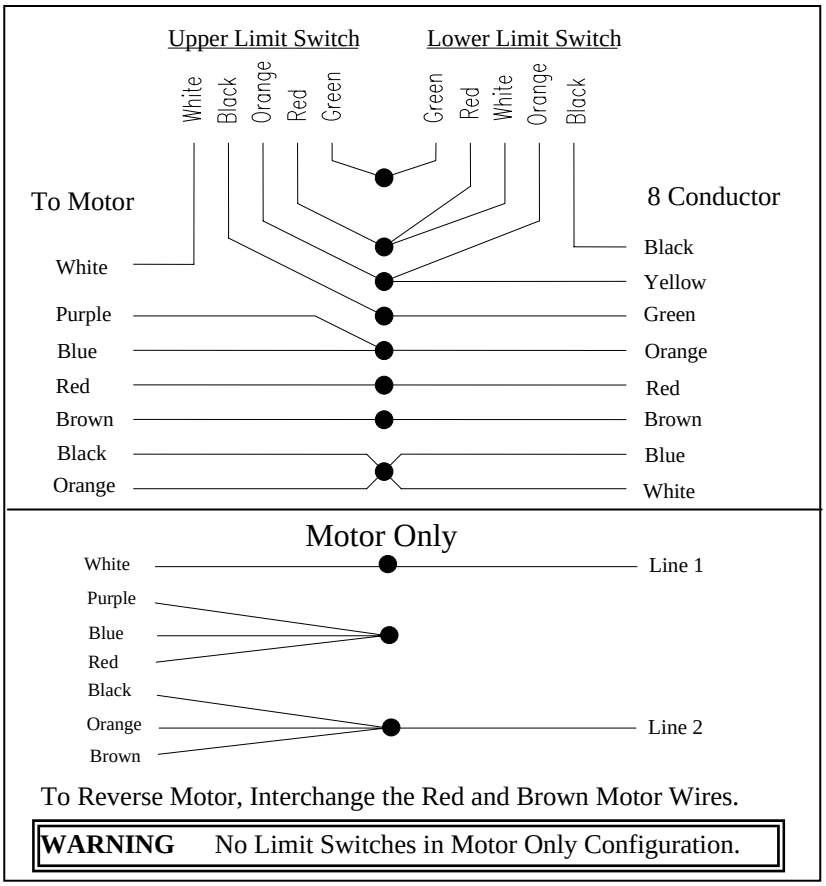
Franklin 16/13 RPM, Model 6526420400, 115/230 volts 60/50 Hz, 1/15 HP
Franklin 16/13 RPM, Model 6521007403, 115/230 volts 60/50 Hz, 1.6/.8 amps
Franklin 52 RPM, Model 6526460400, 115/230 volts 60 Hz, 2.2/1.1 amps
Franklin 60 RPM, Model 6521007402, 115/230 volts 3.4/1.7 amps
Bison 15 RPM, Model 016-200-9089, 115/230 volts 60 Hz, 1.3/.65 amps
Bison 15 RPM, Model 016-200-8108, 115/230 volts 60 Hz, 1.3/.65 amps
Dayton 15/12.5 RPM, Model 4Z518, , 115/230 volts 60 Hz, 110/220 volts 50 Hz, 1/15 HP
Maxi-Torq 15/12.5 RPM, Model 4Z518, 115/230 volts 60/50 Hz, 1/15 HP
Maxi-Torq 15/12.5 RPM, Model 4Z515, 115/230 volts 60 Hz, 110/220 volts 50 Hz



5.5 Franklin 6521007405 Wiring Diagram – 120 VAC

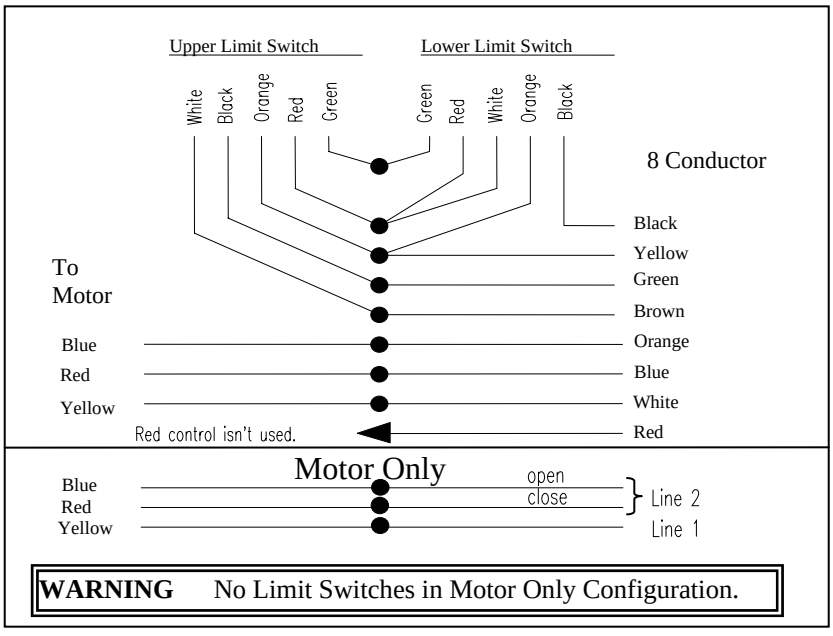
The following diagram is used with:

Franklin 30 RPM, Model 6521007405, 115/230 volts 60 Hz, 2/1 amps



5.6 Von Weise V03021AC112 Wiring Diagram – 120 VAC

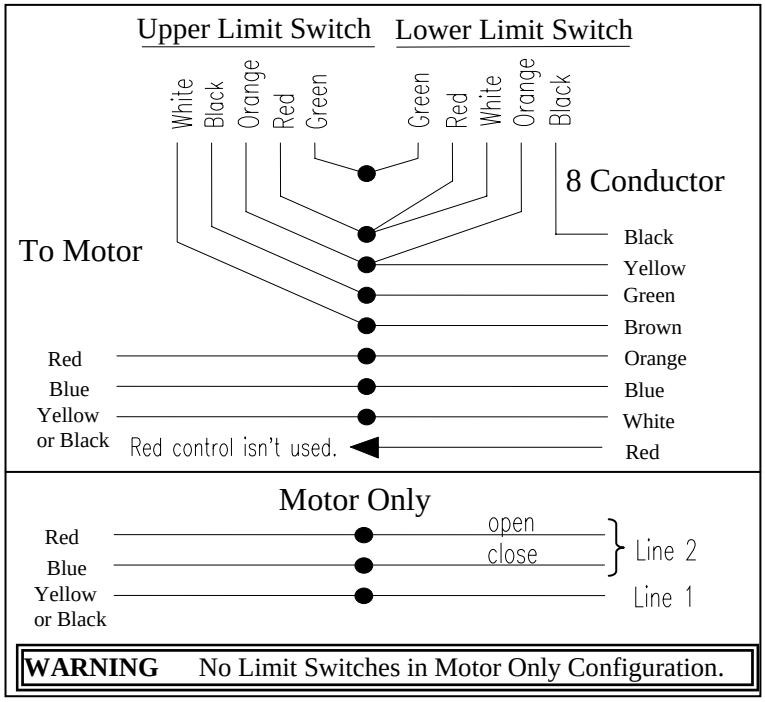
The following diagram is used with: Von Weise 65 RPM, Model V03021AC112, 115 volts 60 Hz



5.7 Franklin 652007408 Wiring Diagram – 120 VAC

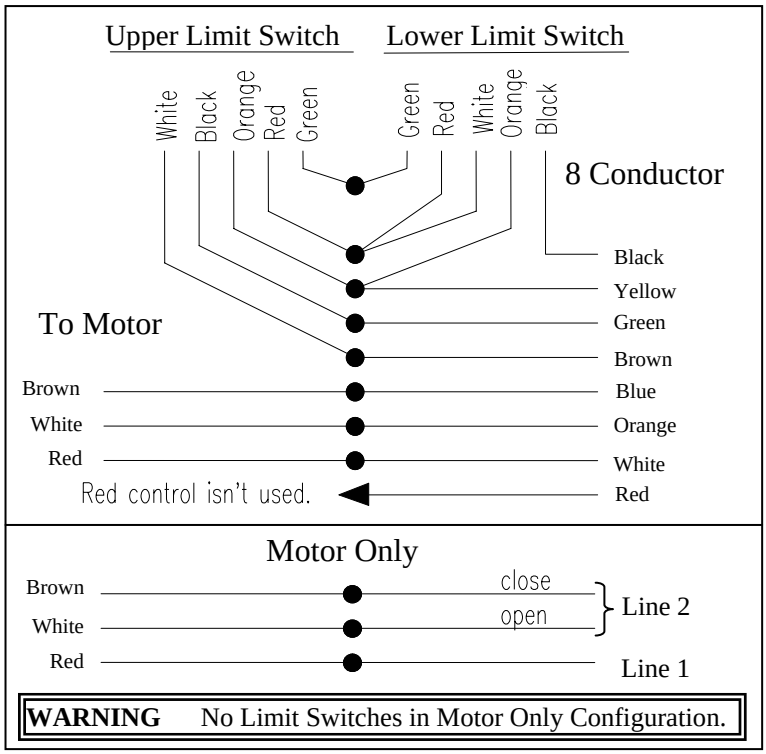
The following diagram is used with:

Franklin 30 RPM, Model 6521007408, 120 volt, 1/6 HP



5.8 Bison 3017-1000 Wiring Diagram – 120 VAC

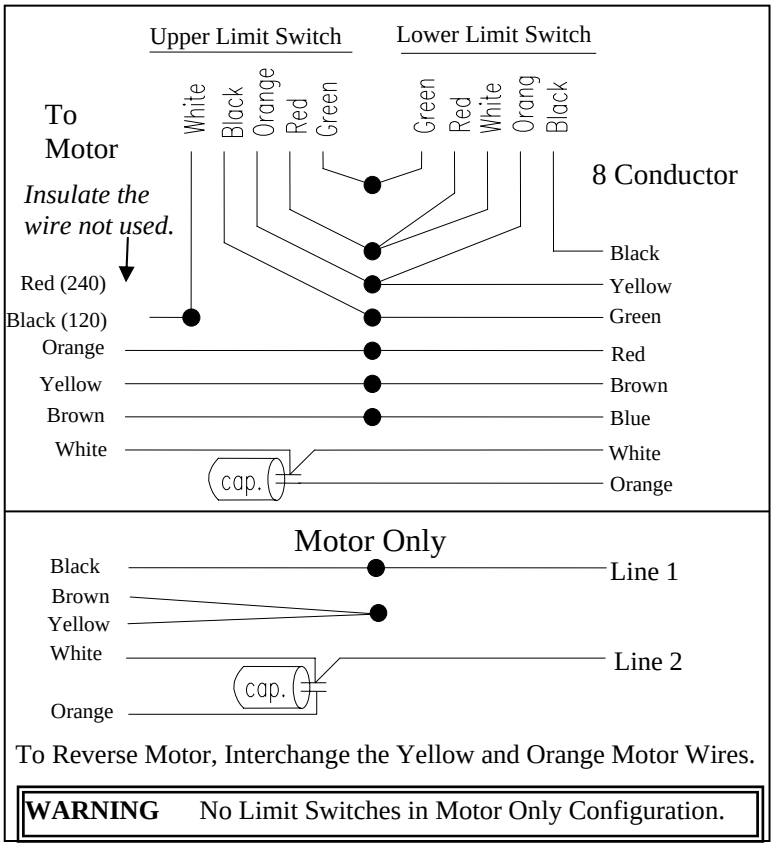
The following diagram is used with: Bison 60 RPM, Model 3017-1000, 115 volts, ¼ HP



5.9 Grainger Wiring Diagram – 120 VAC

The following diagram is used with:

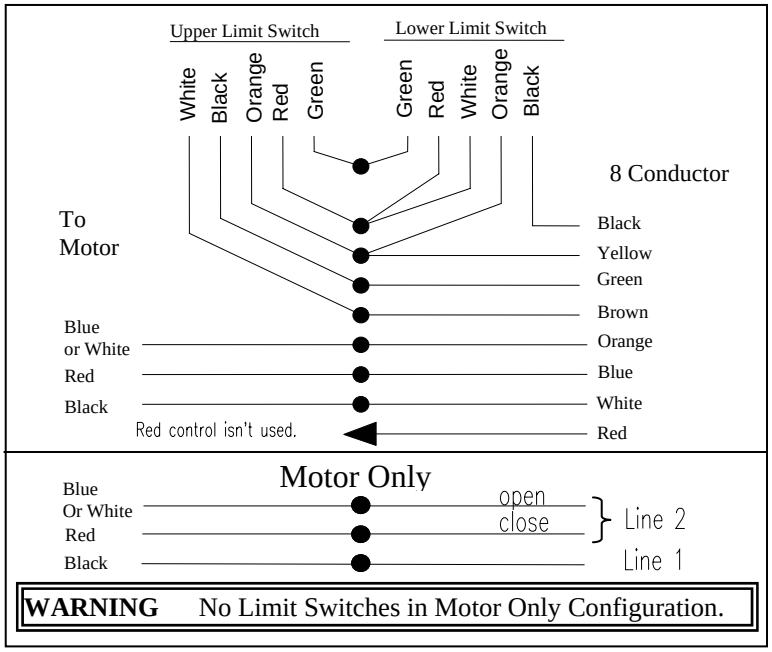
Bison 40/33 RPM, Model 016-242-2012, 115/230 volts 60/50 Hz, 1/6 HP
Bison 58/50 RPM, Model 3017-1000, 115/230 volts 60/50 Hz, ¼ HP
Maxi-Torq 40/33 RPM, Model 6Z819, 115/230 volts 60 Hz, 110/220 volts 50 Hz
Grainger 30 RPM, Model 6Z816, 115/230 volts 60 Hz, 110/220 volts 50 Hz



5.10 Fasco 30/60 RPM Wiring Diagram – 120 VAC

The following diagram is used with:

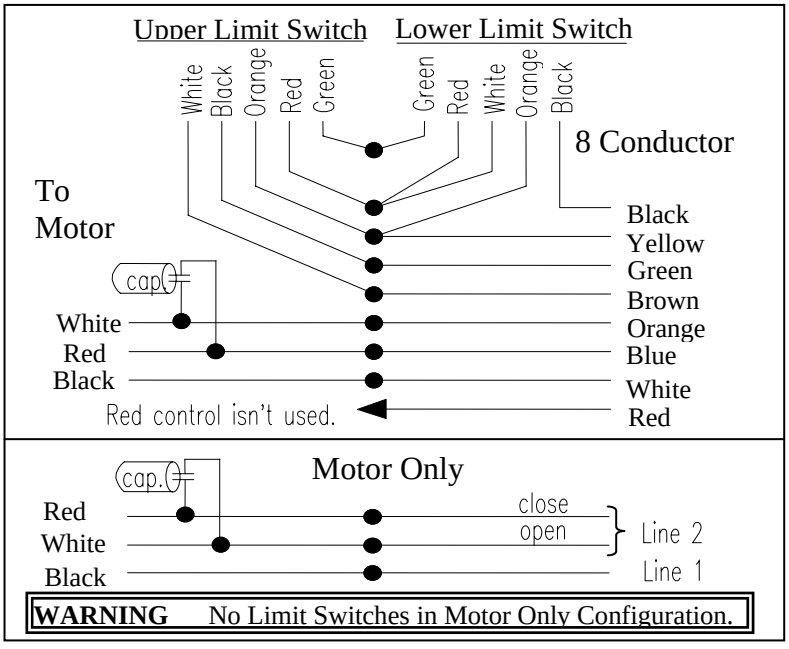
Von Weise 60 RPM, Model V03021AC102, 115 volts 60 Hz 3.5 amps
Von Weise 30 RPM, Model V03021AB102, 115 volts, 1/6 HP
Fasco 30 RPM, Model V03021AD88, 2.01 amps, 115 volts 60 Hz, 1/6 HP
Fasco 60 RPM, Model V03021AE88, 3.98 amps, 115 volts 60 Hz, 1/3 HP
Franklin 15 RPM, Model 6521007407, 1.3 amps, 115 volts 60 Hz, 1/15 HP
Franklin 30 RPM, Model 6521007408, 2.0 amps, 115 volts 60 Hz, 1/6 HP



5.11 Bison/Hired-Hand 15/30 RPM Wiring Diagram – 120 VAC

The following diagram is used with:

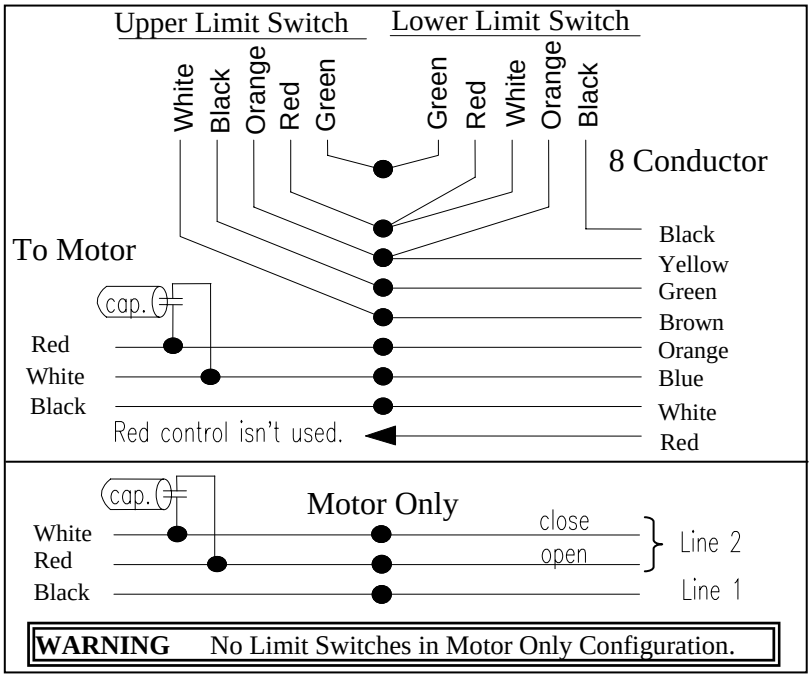
Bison 15 RPM, Model 3017-0111, 120 volts 60/50 Hz, 1.3 amps, 1/10 HP
Bison 30 RPM, Model 3017-0112, 120 volts 60/50 Hz, 2.1 amps, ¼ HP
Hired-Hand 15 RPM, Part 6650-0093, 120VAC 60/50 Hz, 1.3 amps, 1/10 HP
Hired-Hand 30 RPM, Part 6650-0094, 120VAC 60/50 Hz, 2.1 amps, ¼ HP



5.12 Bison/Hired Hand 60 RPM Wiring Diagram – 120 VAC

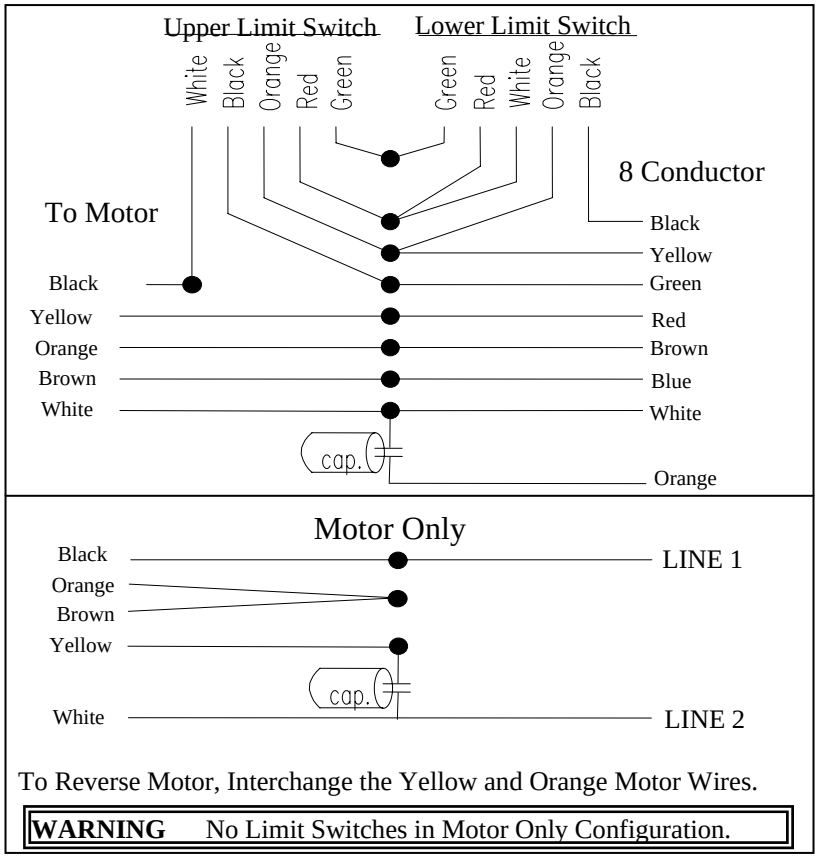
The following diagram is used with:

Bison 60 RPM, Model 3017-0113, 120 volts 60/50 Hz, 3.15 amps, ¼ HP
Hired-Hand 60 RPM, Part 6650-0095, 120VAC 60/50 Hz, 3.15 amps, ¼ HP



5.13 Dayton 9Z353 Wiring Diagram – 120 VAC

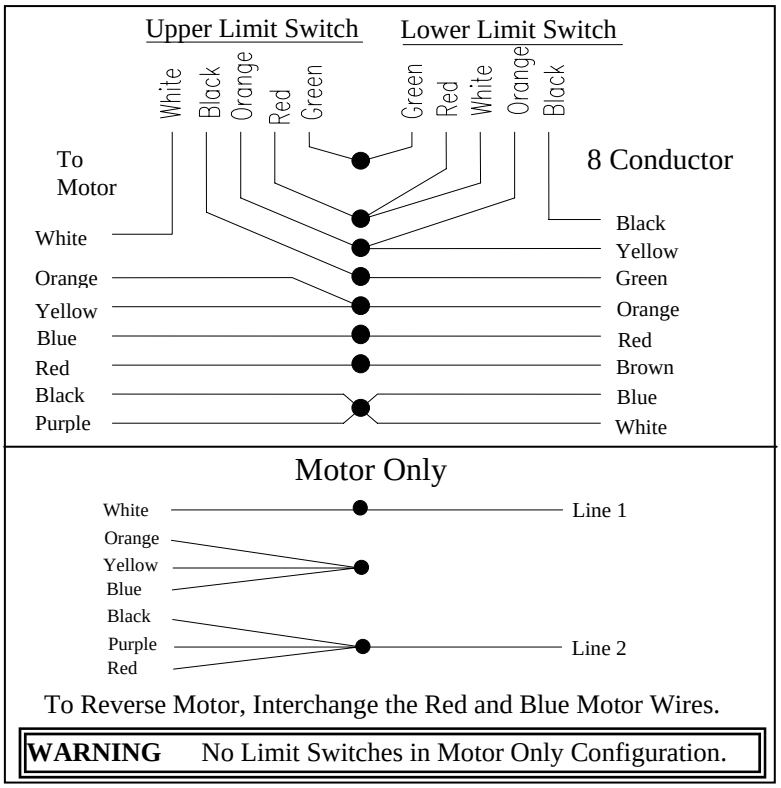
The following diagram is used with: Dayton Model 9Z353



5.14 Fasco 15 RPM Wiring Diagram – 120V AC

The following diagram is used with:

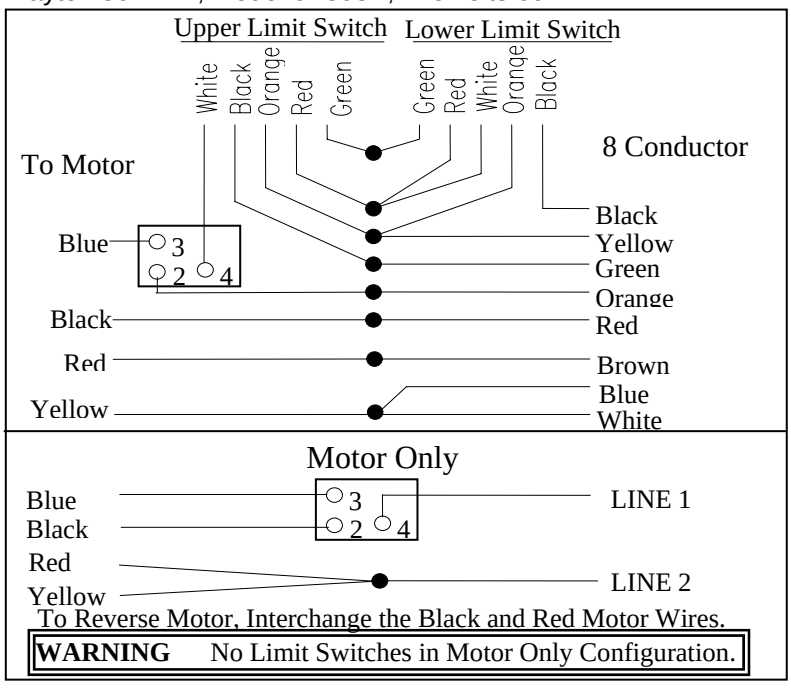
Fasco 15 RPM, Model V03021AA102, 115/230 volts 60 Hz, 1/12 HP
Fasco 15 RPM, Model V03021AB88, 60 Hz, 1/12 HP



5.15 Dayton 6K3XXA Wiring Diagram – 120 VAC

The following diagram is used with:

Dayton 40 RPM, Model 6K329A, 115 volts, 60 Hz, 4.9 amps
Dayton 13.5 RPM, Model 6K325A, 115 volts 60 Hz
Dayton 30 RPM, Model 6K303A, 115 volts 60 Hz



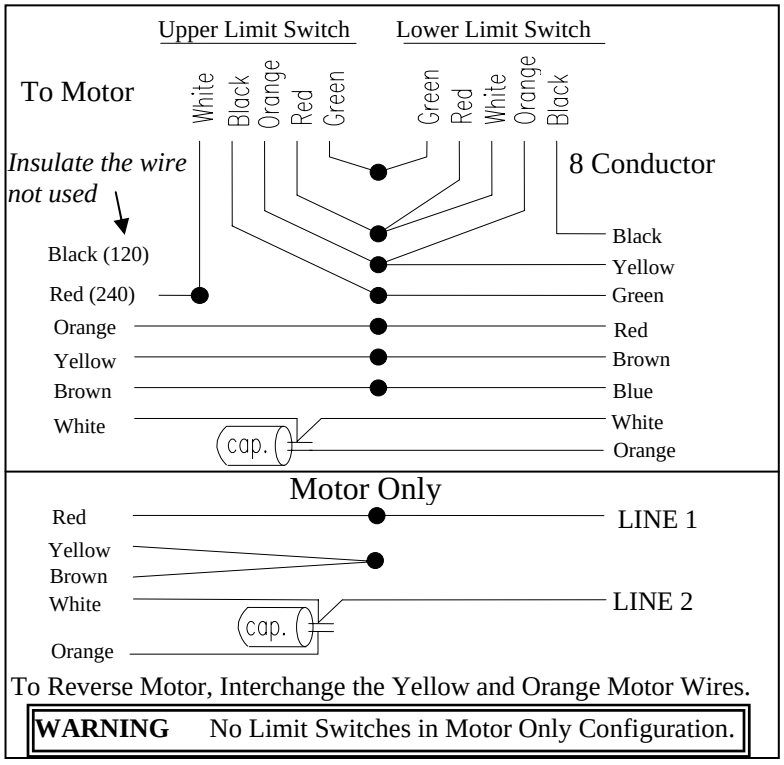
6. 240 VAC Power Units

This section contains wiring diagrams for motors wired for 240 volts AC. The Limit switch wiring diagrams can be found in Section 5.1. To test a Unit with limit switches see Section 5.2.

6.1 Maxi-Torq 6Z818 Wiring Diagram – 240 VAC

The following diagram is used with:

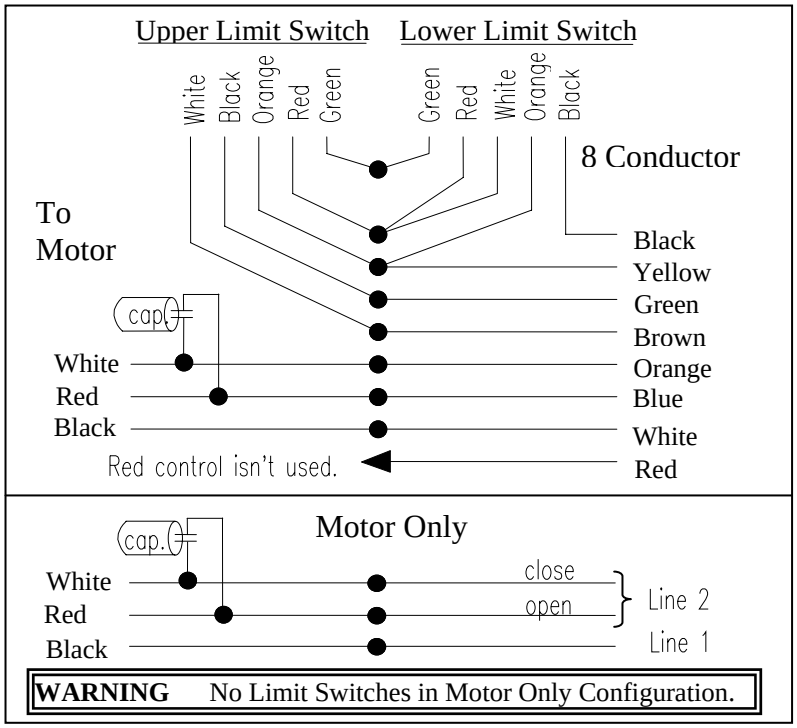
Maxi-Torq 30/25 RPM, Model 6Z818, 115/230 volts 60 Hz, 110/220 volts 50 Hz



6.2 Bison Model 3017-011X Wiring Diagram – 240 VAC

The following diagram is used with:

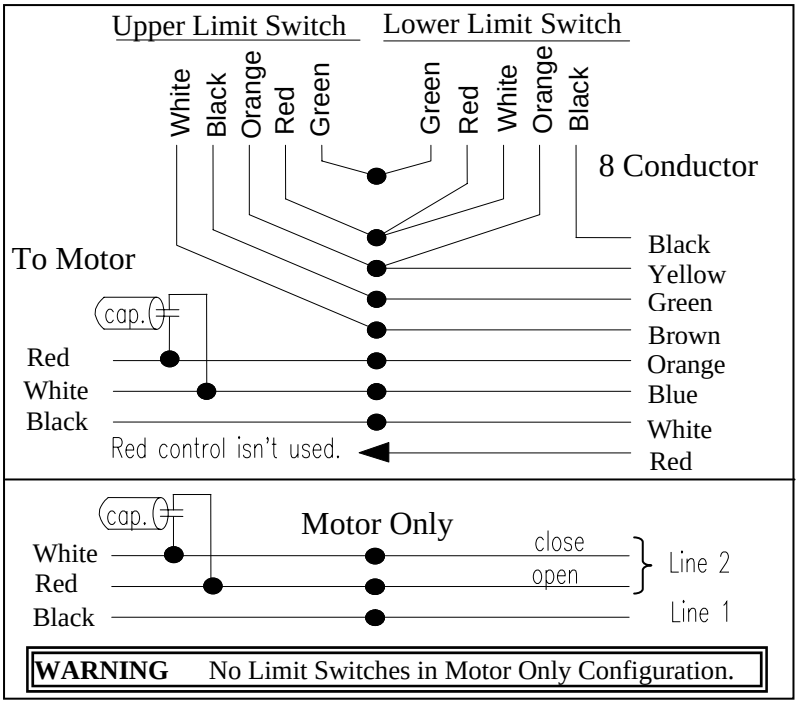
Bison 15 RPM, Model 3017-0114, 240 volts 60/50 Hz, 0.75 amps
Bison 30 RPM, Model 3017-0115, 240 volts 60/50 Hz, 0.96 amps
Hired-Hand 15 RPM , Model 6650-0096, 240 volts 60/50 Hz, 0.75 amps
Hired-Hand 30 RPM , Model 6650-0097, 240 volts 60/50 Hz, 0.96 amps



6.3 Bison 3017-0116 Wiring Diagram – 240 VAC

The following diagram is used with:

Bison 60 RPM, Model 3017-0116, 240 volts 60/50 Hz, 1.4 amps
Hired-Hand 60 RPM , Model 6650-0098, 240 volts 60/50 Hz, 1.4 amps



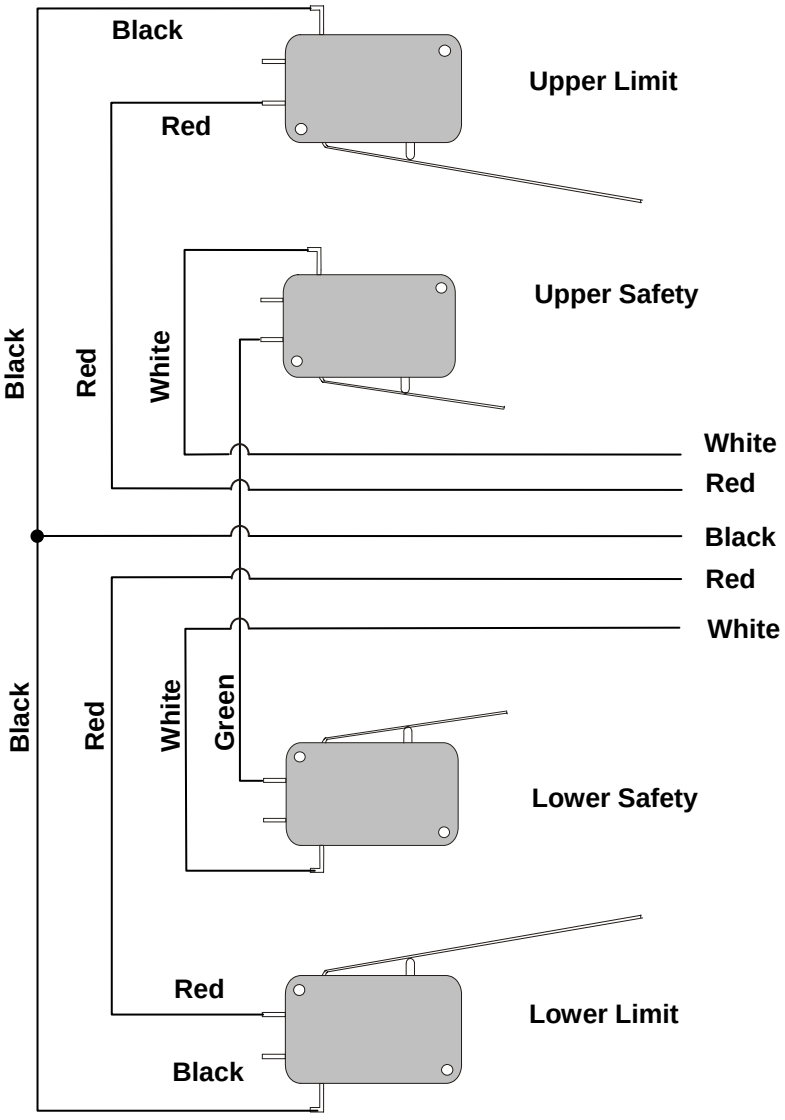
7. DC Voltage Power Units

This section contains the Limit Switch wiring for an DC motor. For the Limit Switch wiring for DC motors see Section 7.2 and for Power Unit Test Diagrams with Limit Switches see Section 7.2.

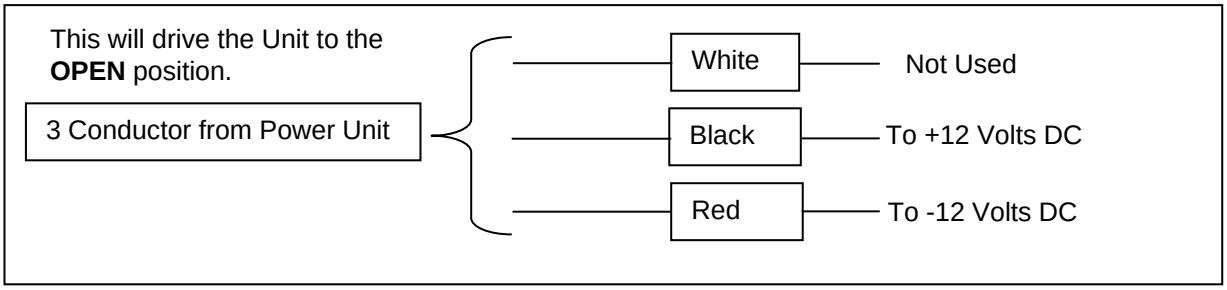
7.1 DC Voltage Limit Switch Wiring Diagram

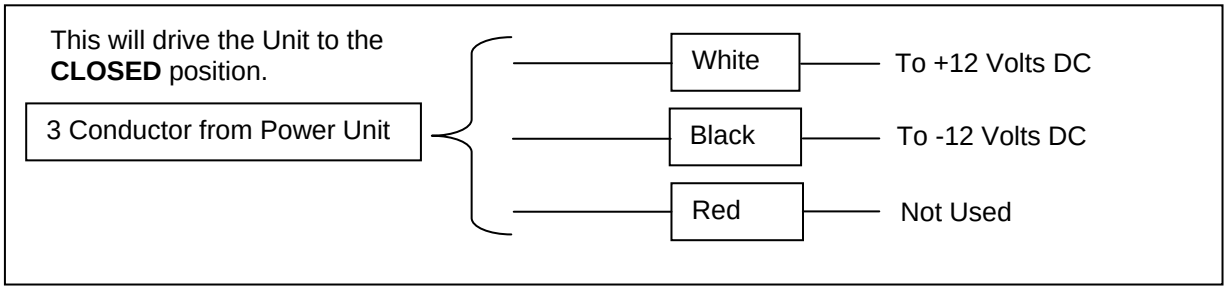
DC Voltage Power Unit

Limit Switch Wiring



7.2 Test a DC Voltage Power Unit with Limit Switches

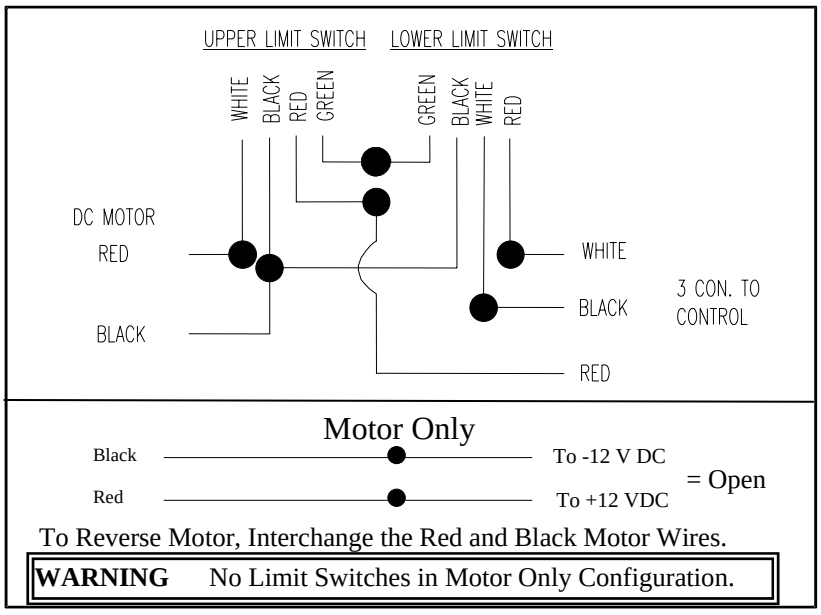




7.3 Fasco V0902AA88 Wiring Diagram – 12 VDC

The following diagram is used with:

Fasco 31 RPM, Model V03021AA88, 12 Volts DC, 13.3 amps, 1/6 HP



7.4 Dayton 9Z304 Wiring Diagram – 12 VDC

The following diagram is used with:

Dayton 33 RPM, Model 9Z304, 12 Volts DC, 8.5 amps, 1/8 HP

