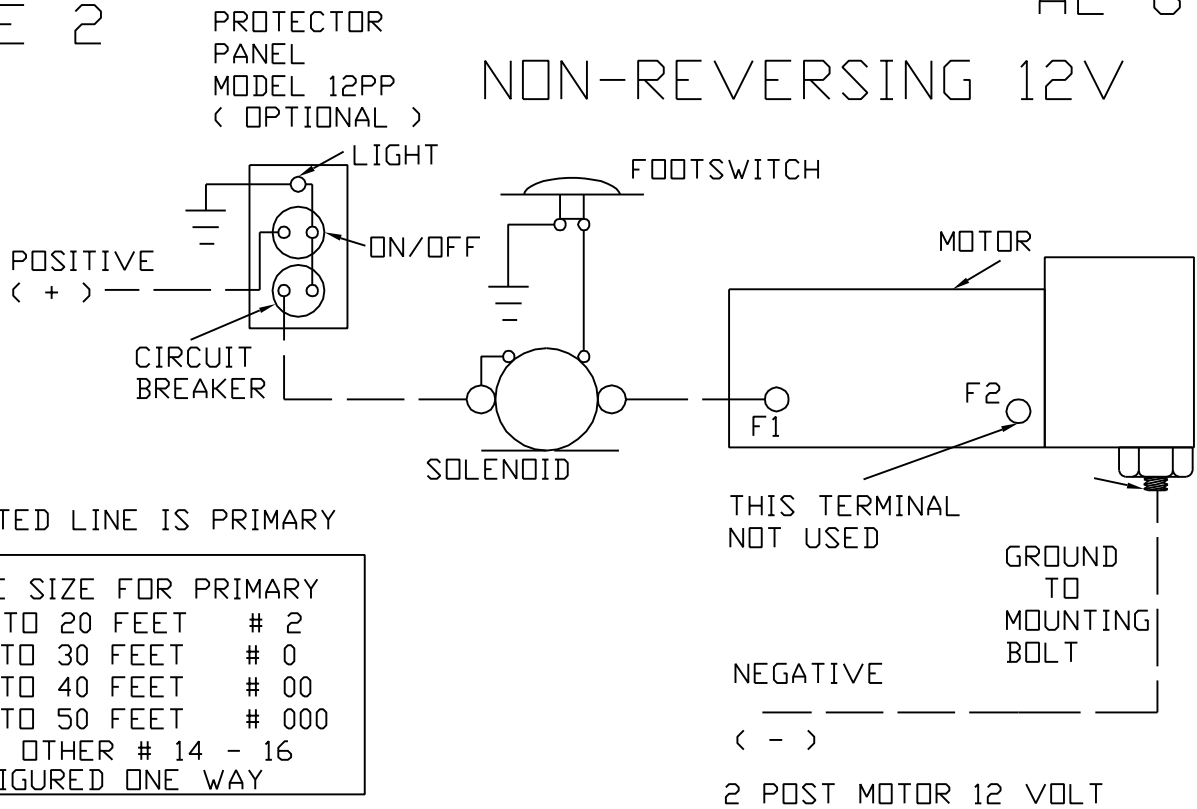


## Wiring Diagrams

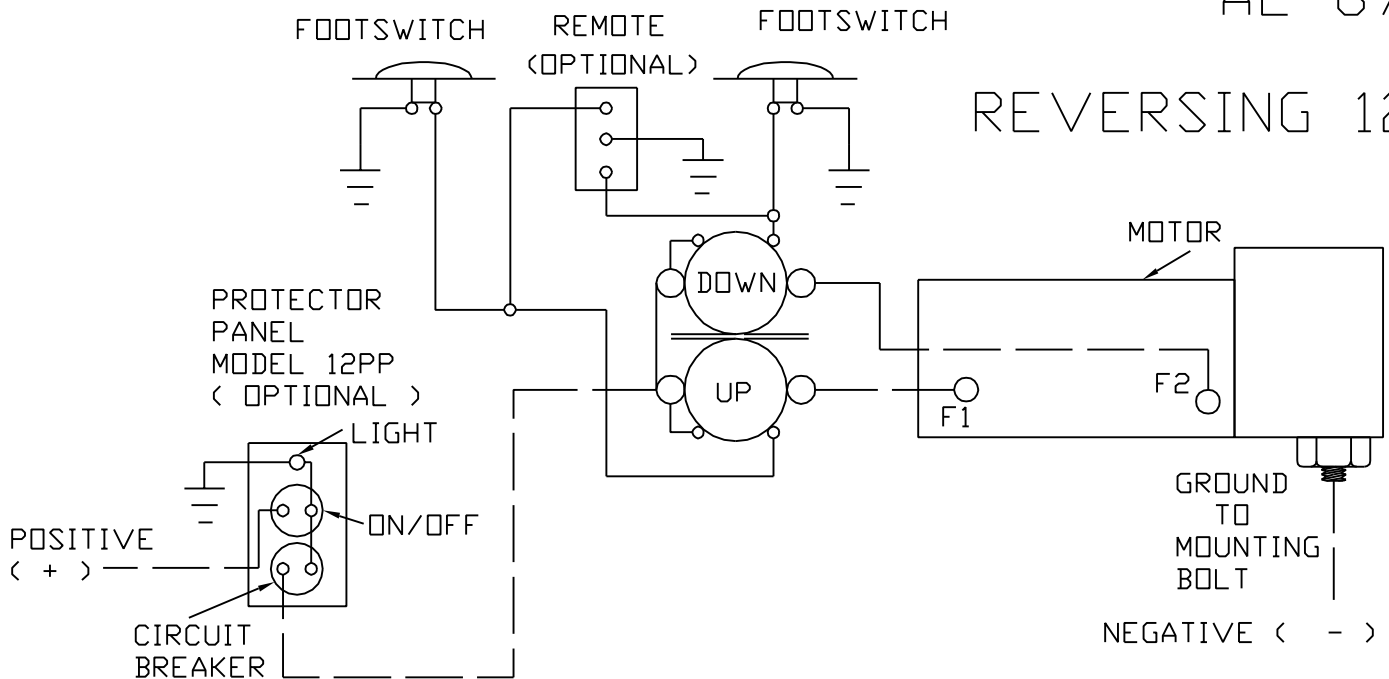
There are well over a thousand wiring diagrams in our files. The following are many of the most common. They are arranged by voltage, with a non-reversing and reversing on each page.

Page	Voltage	Years Used	Notes	Diagram #
2	12V	1950's – 1980's	Most Common	AL672 & AL678
3	12V	Mid 80's – Mid 90's	N Open Thermal	AL830 & AL831
4	12V	Mid 90's - 2002	3 Posted Motor	AL969 & AL972
5	12V	2003 - Present	N Closed Thermal	AL994 & AL996
6	12V		Replacing 3 Posted	AL967A
7	24v	1970's – Late 80's	Permanent Magnet	AL-163 & AL673A
8	24V	Late 80's – Present	3 Posted	AL806D & AL806E
9	32V	1970's – Late 80's	Permanent Magnet	AL-163A & AL673A
10	32V	1960's – Early 70's		BL544 & BL707
11	32V	1960's – Early 70's		BL707
12	32V	2006 – Present		AL-1004
13	115V	1970 – Mid 80's		AL684 & AL696
14	115V	1995 – 2000		AL824
15	115V	2000 – 2009		AL741-E

NON-REVERSING 12V



REVERSING 12V



NOTE: FOOTSWITCH PARTS SUCH AS THE SWITCH ELEMENT, RUBBER COVER MOUNTING PLATE, MOUNTING RING, SCREWS ARE AVAILABLE SEPERATELY, OR THE ENTIRE ASSEMBLY CAN BE REPLACED. ALL IDEAL FOOTSWITCHES ARE THE SAME SIZE. THE ONLY DIFFERENCE IS AC OR DC.

SOLENOIDS ARE AVAILABLE INDIVIDUALLY OR WIRED TOGETHER & MOUNTED ON A BRACKET FOR REVERSING APPLICATIONS.

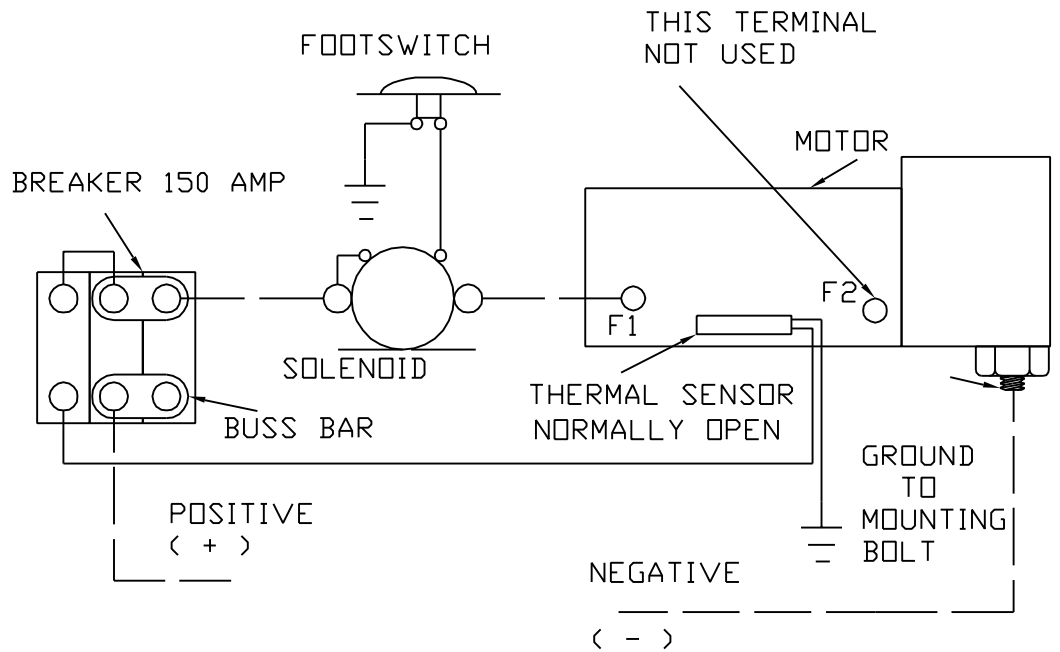
MOTORS AVAILABLE WITH GEARING & BEARING, OR WITHOUT. MOTORS INCLUDE THE BRONZE PLATE TO MOUNT TO THE WINDLASS. SOME MOTOR PARTS AVAILABLE.

PROTECTOR PANEL 12 PP IS OBSOLETE AND PARTS ARE NO LONGER AVAILABLE. A REPLACEMENT WITH THE SAME SIZE PLATE IS AVAILABLE.

# NON-REVERSING 12V

AL-831

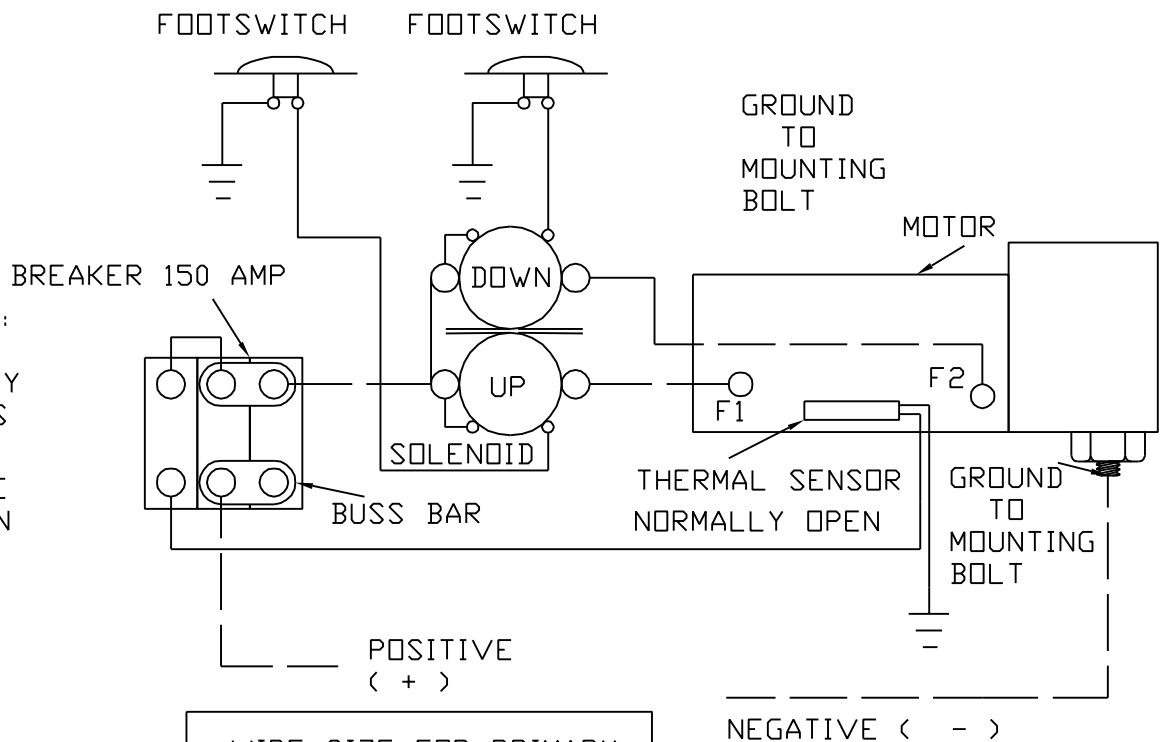
NOTES ON WIRING:  
 2 BREAKERS ARE TIED TOGETHER BY THE COPPER BUSS BAR. BRING THE POWER IN ON ONE SIDE, AND OUT ON THE OTHER SIDE AS SHOWN.  
 THERMAL SENSOR: IF WHEN FIRST TESTING THE BREAKER TRIPS IMMEDIATELY REMOVE THE PLUS OR MINUS FROM THE SENSOR. IF THIS STOPS THE BREAKER FROM TRIPPING, RELOCATE THE SENSOR.



# REVERSING 12V

AL-830

NOTES ON WIRING:  
 2 BREAKERS ARE TIED TOGETHER BY THE COPPER BUSS BAR. BRING THE POWER IN ON ONE SIDE, AND OUT ON THE OTHER SIDE AS SHOWN.  
 THERMAL SENSOR: IF WHEN FIRST TESTING THE BREAKER TRIPS IMMEDIATELY REMOVE THE PLUS OR MINUS FROM THE SENSOR. IF THIS STOPS THE BREAKER FROM TRIPPING, RELOCATE THE SENSOR.

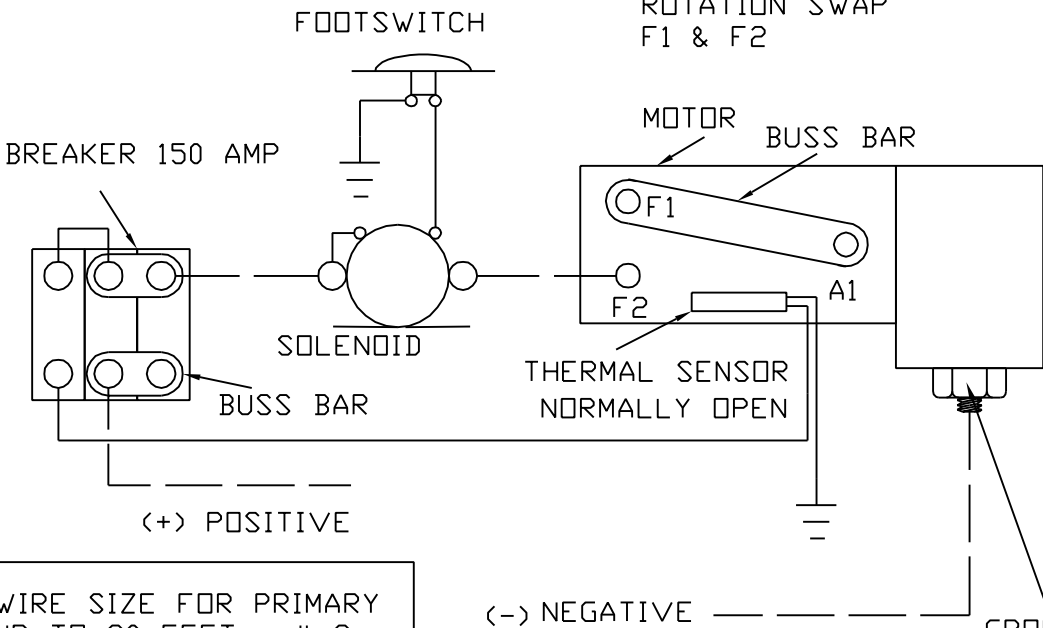


WIRE SIZE FOR PRIMARY	
UP TO 20 FEET	# 2
20 TO 30 FEET	# 0
30 TO 40 FEET	# 00
40 TO 50 FEET	# 000
ALL OTHER	# 14 - 16

DOTTED LINE IS PRIMARY

12 VOLT REVERSING  
 2 POST MOTOR  
 FOR SIZE 1 - 5

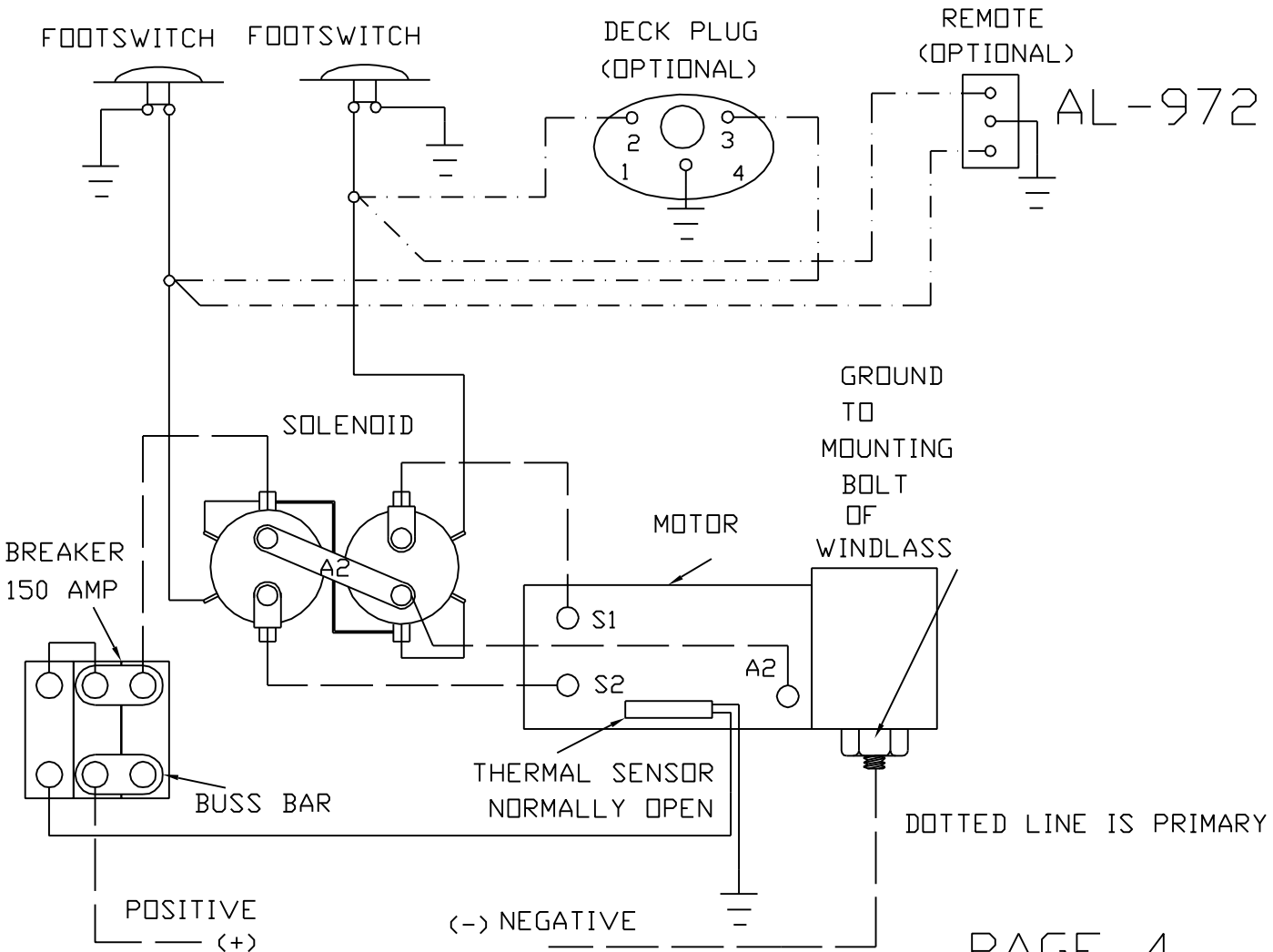
# AL-969

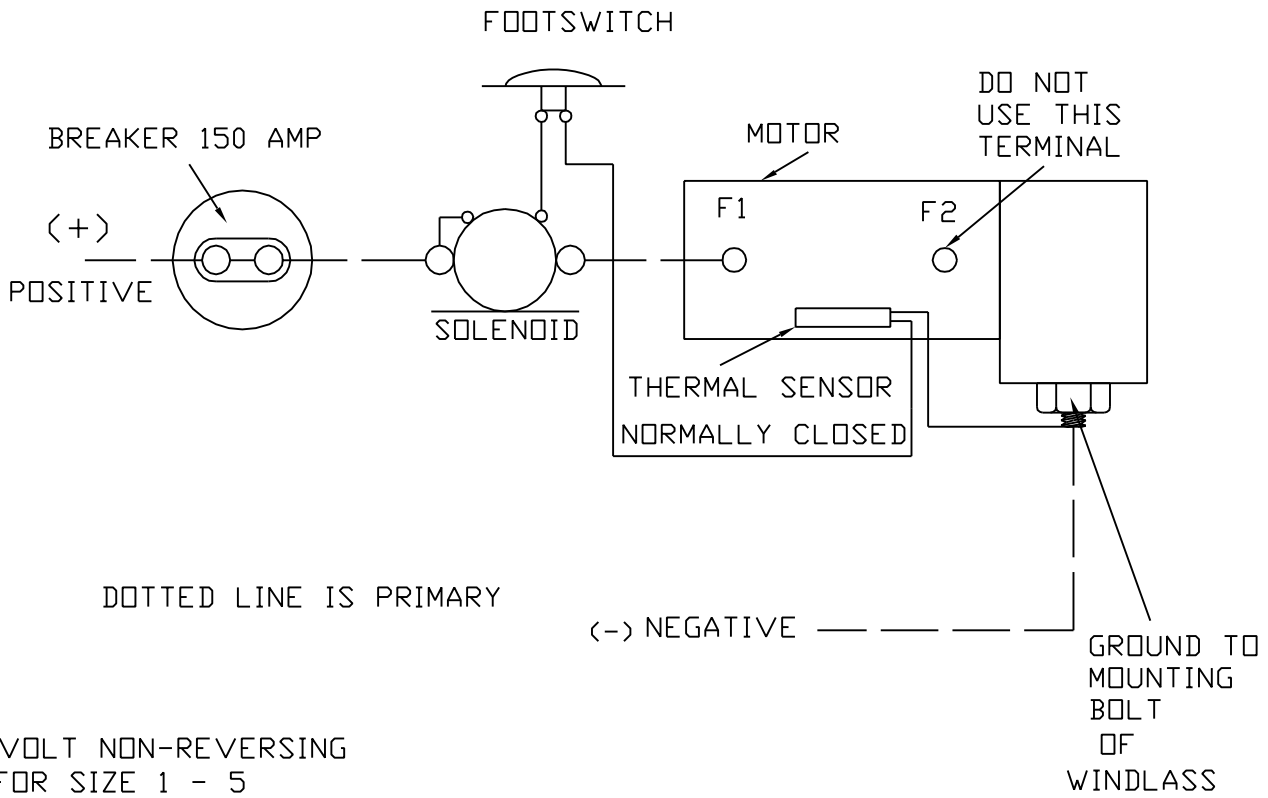


NOTES ON WIRING:  
2 BREAKERS ARE TIED TOGETHER BY THE COPPER BUSS BAR. BRING THE POWER IN ON ONE SIDE, AND OUT ON THE OTHER SIDE

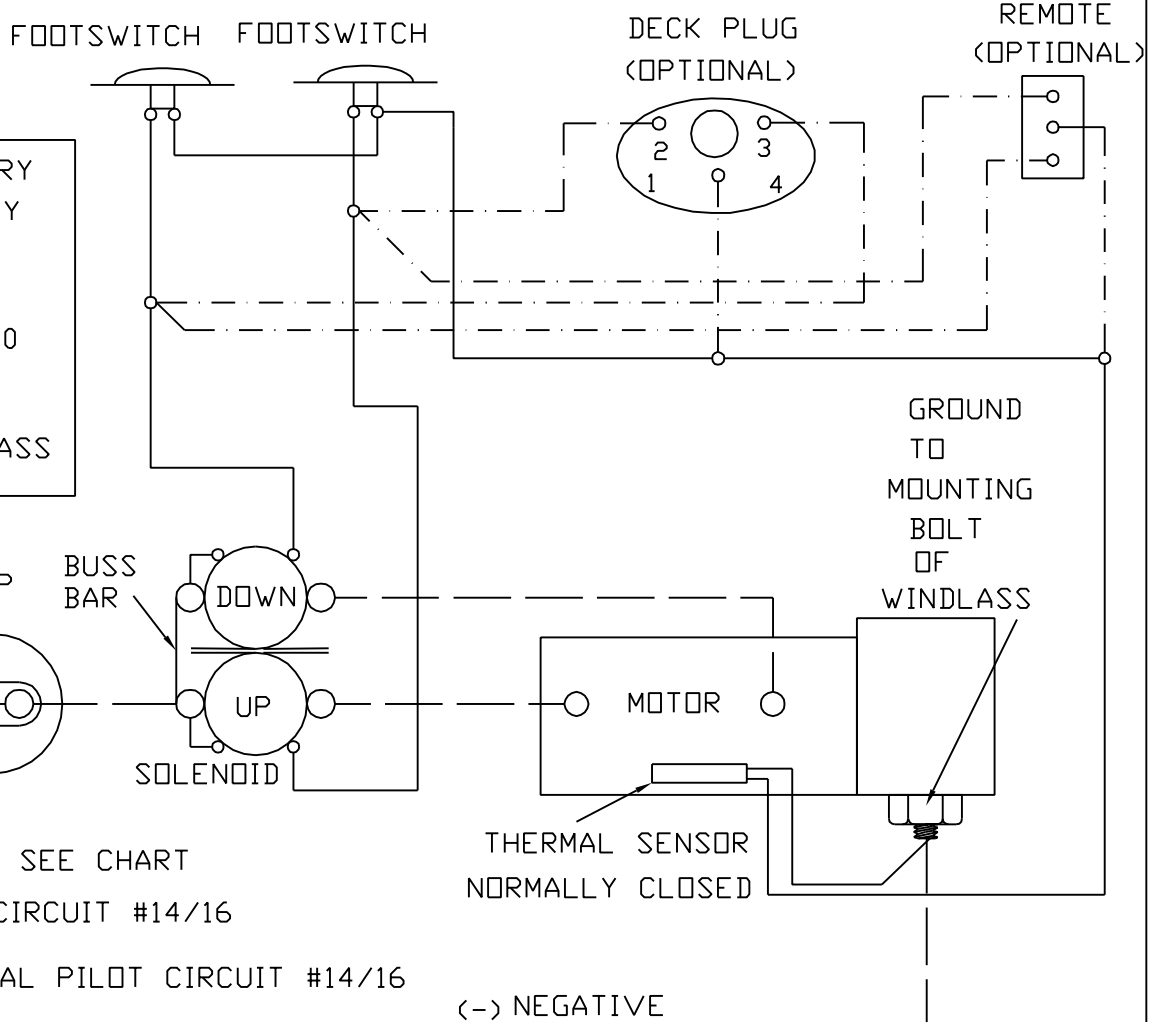
THERMAL SENSOR: IF WHEN FIRST TESTING THE BREAKER TRIPS IMMEDIATELY REMOVE THE PLUS OR MINUS FROM THE SENSOR. IF THIS STOPS THE BREAKER FROM TRIPPING, RELOCATE THE SENSOR.

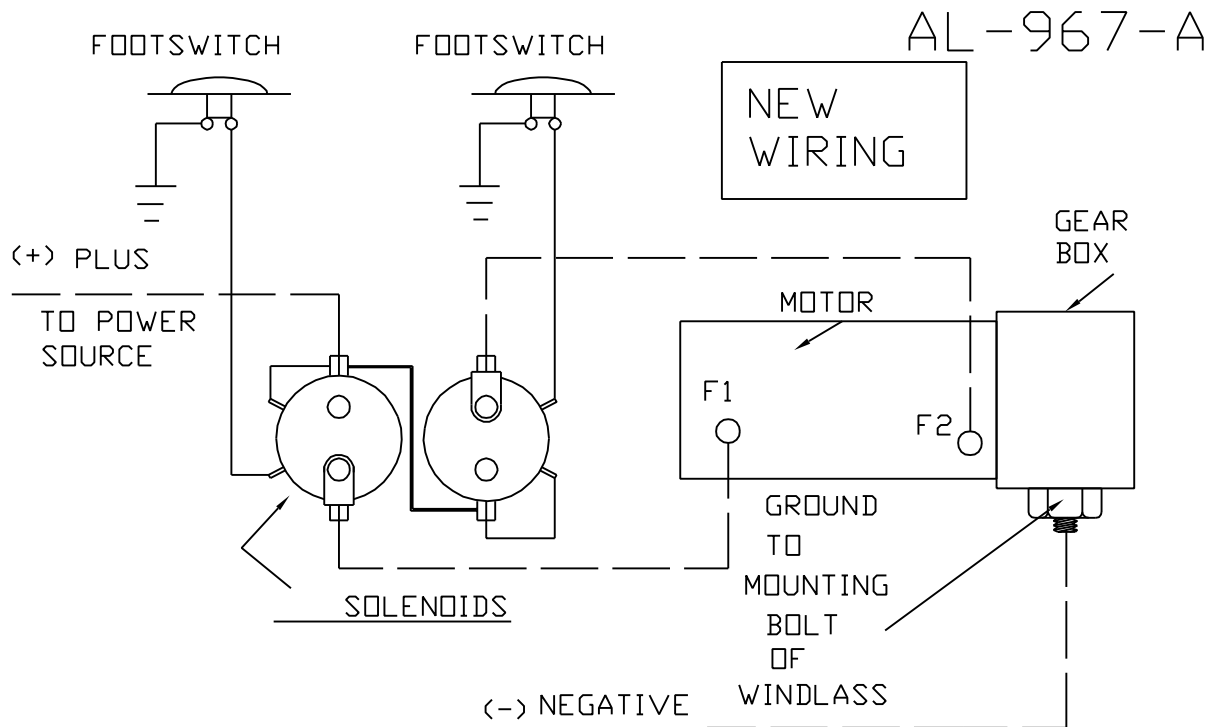
WIRE SIZE FOR PRIMARY	
UP TO 20 FEET	# 2
20 TO 30 FEET	# 0
30 TO 40 FEET	# 00
40 TO 50 FEET	# 000
ALL OTHER	# 14 - 16



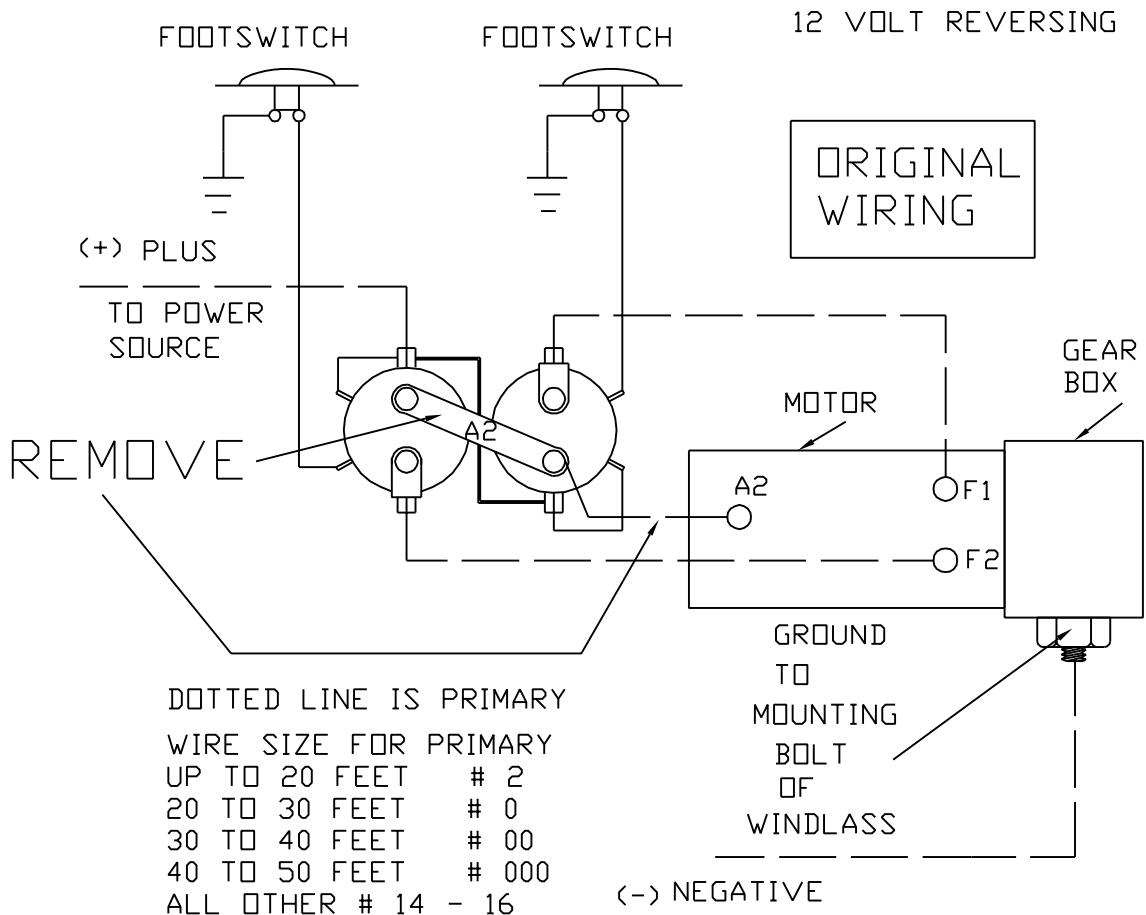


12 VOLT REVERSING 2 POST MOTOR FOR SIZE 1 - 5

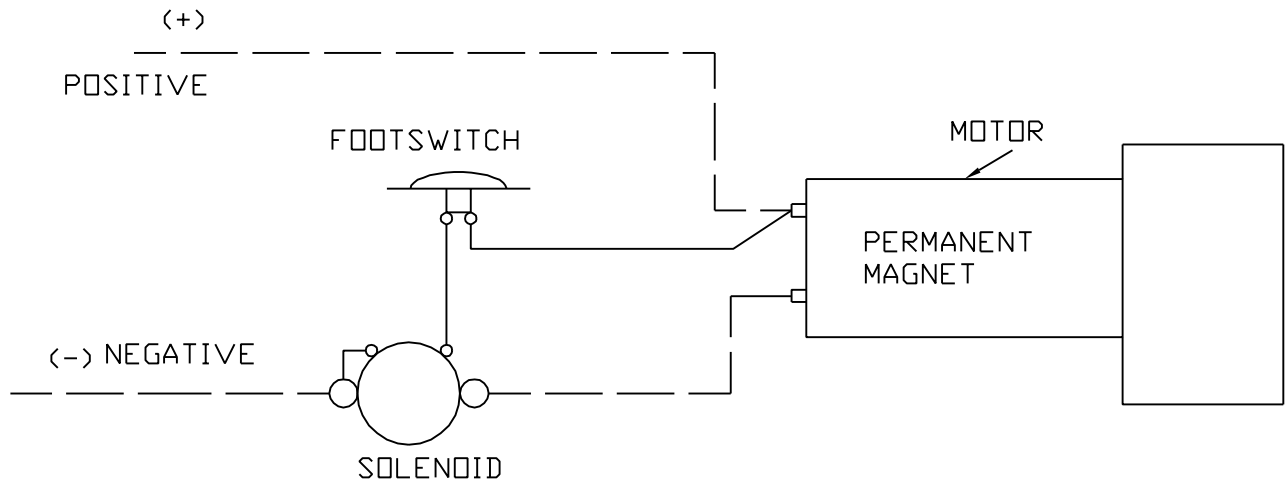




REPLACING A 3 POSTED MOTOR WITH A 2 POSTED

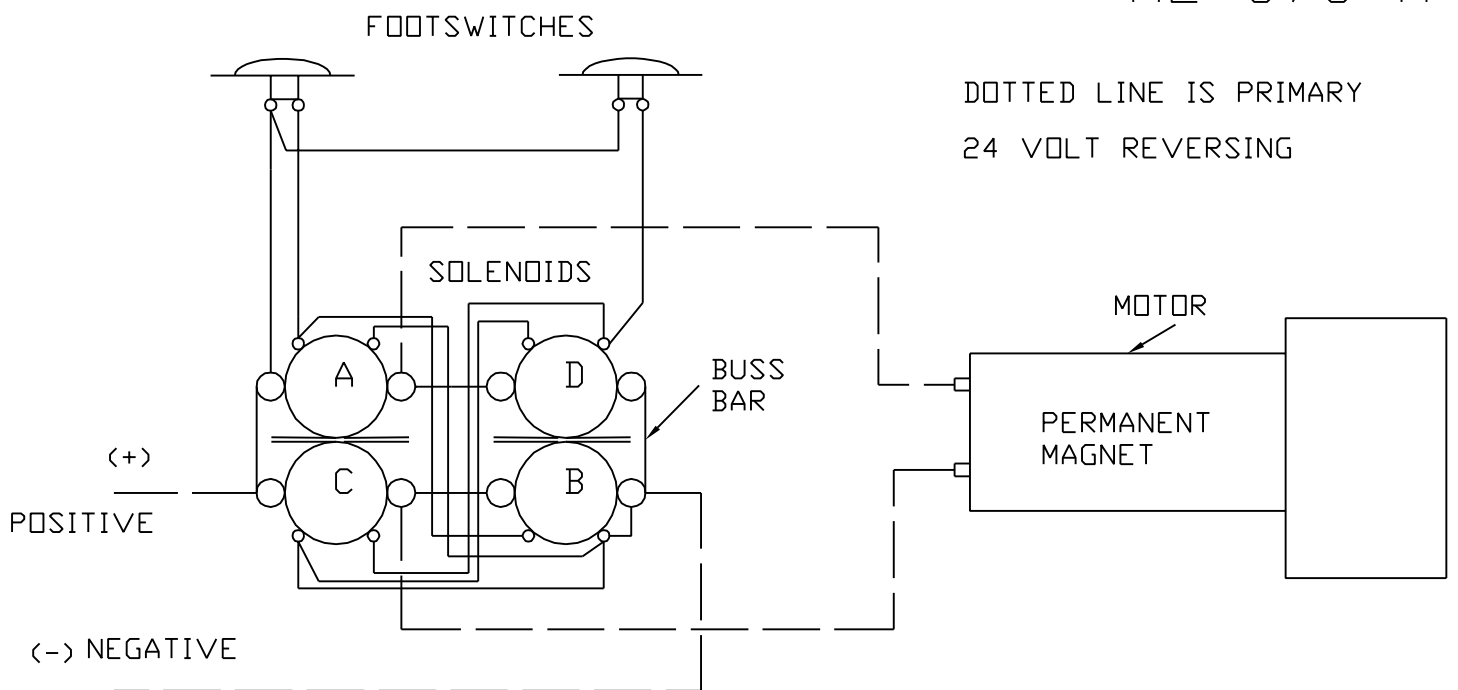


AL-163-A

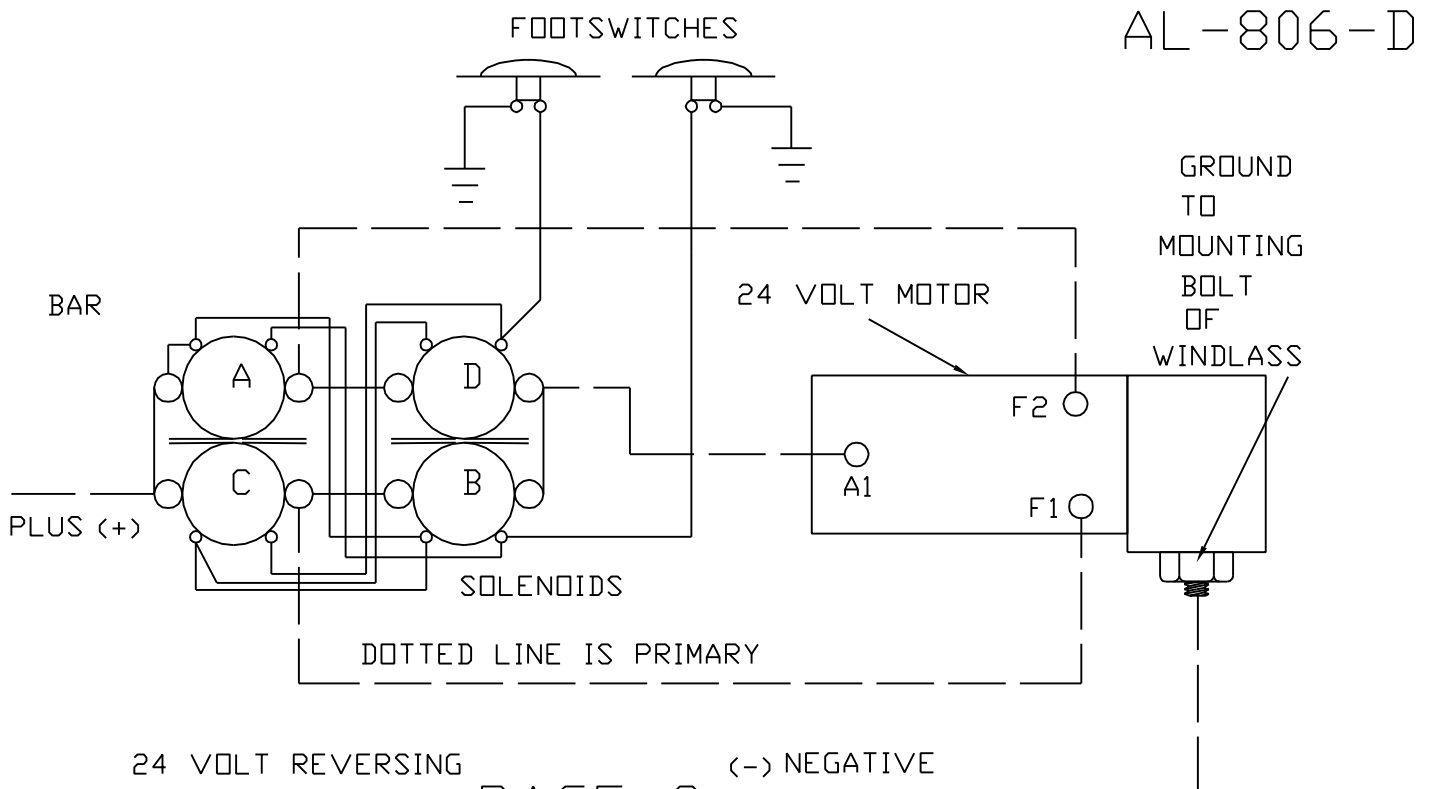
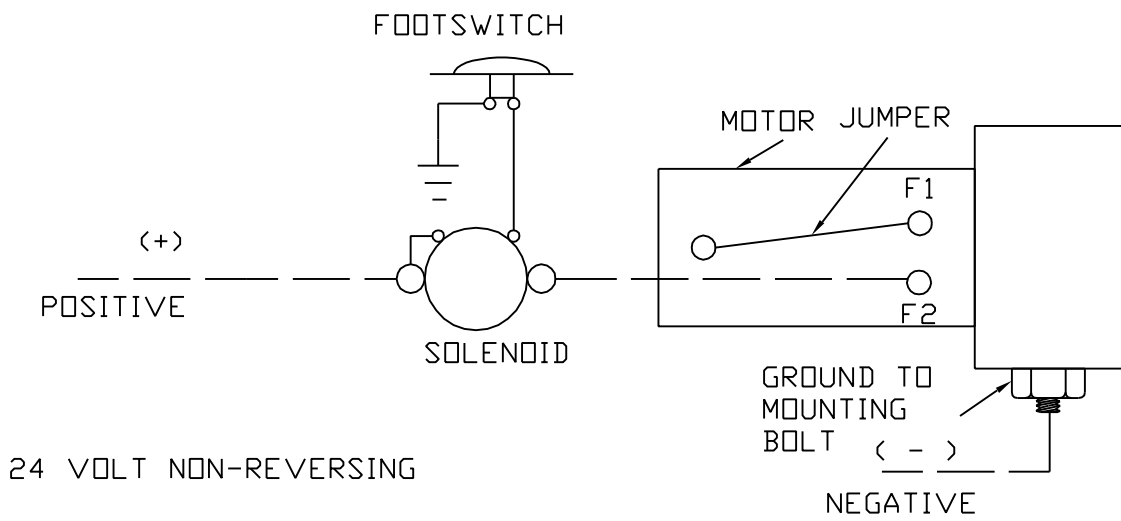
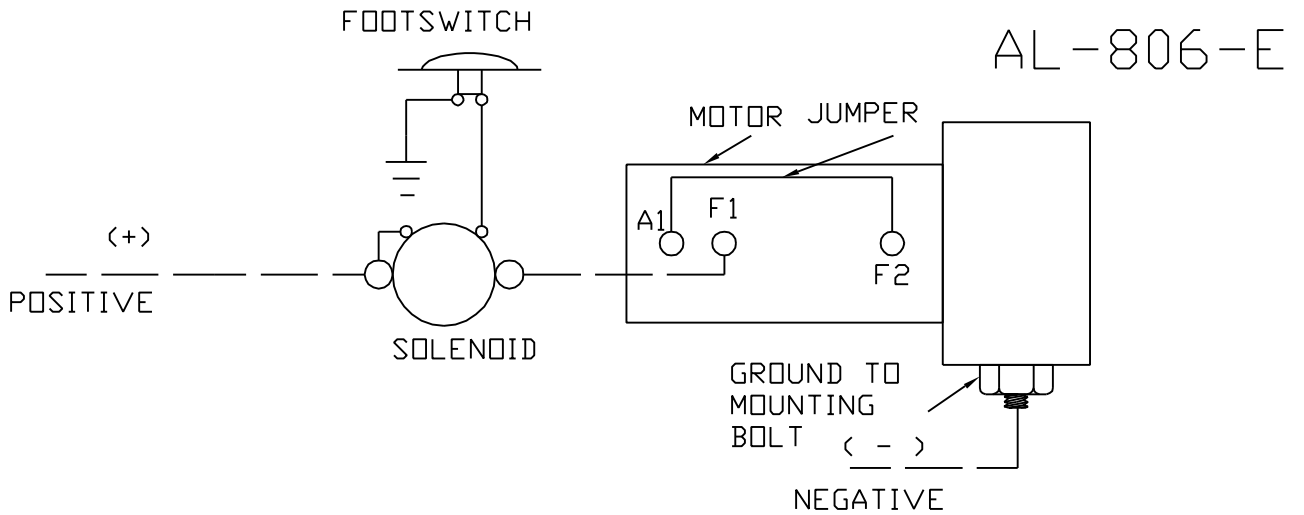


24 VOLT NON-REVERSING

AL-673-A

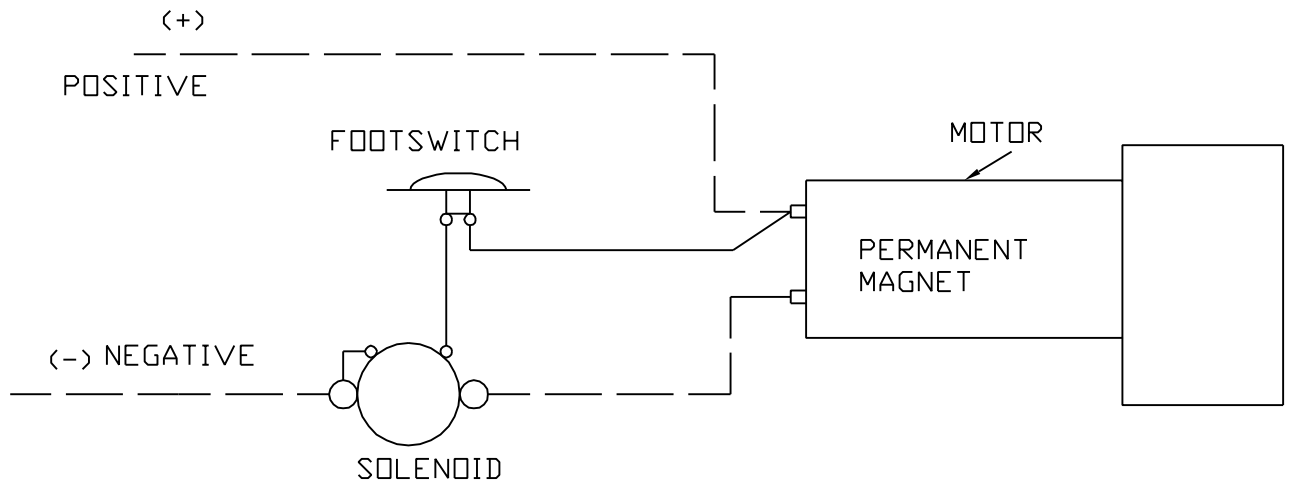


DOTTED LINE IS PRIMARY  
24 VOLT REVERSING

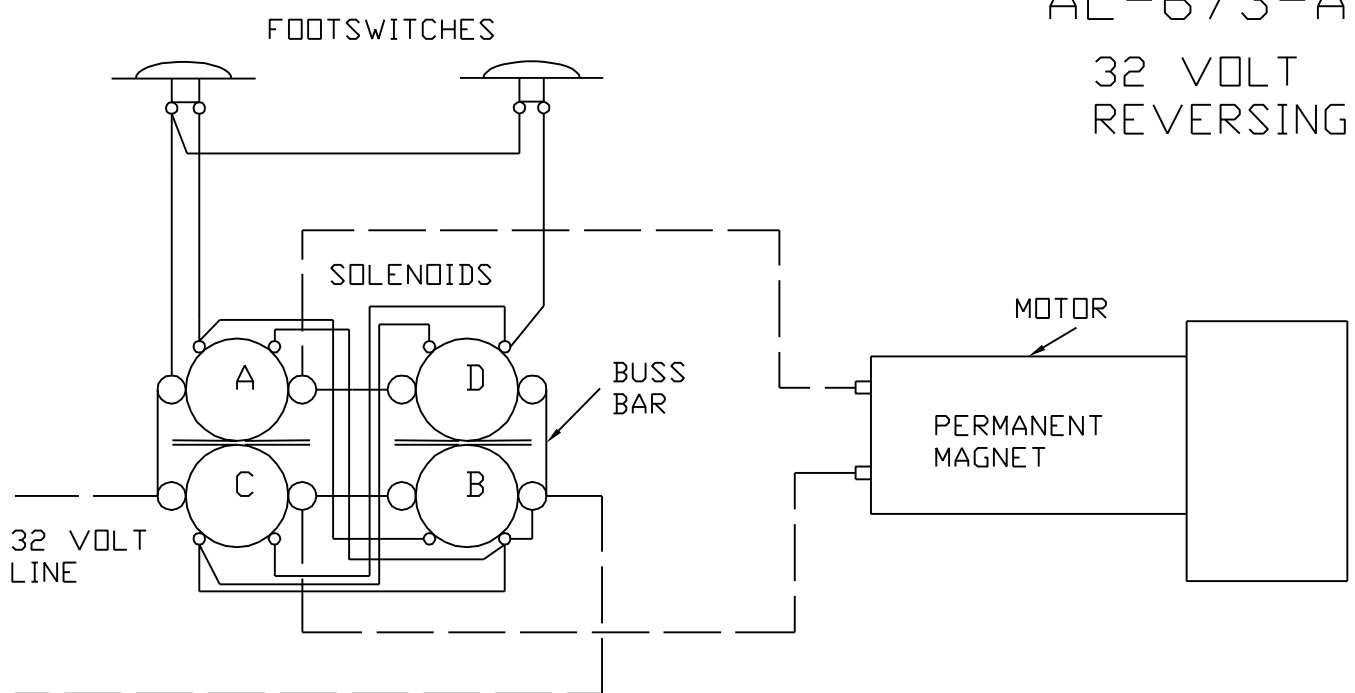




AL-163  
32 VOLT  
NON-REVERSING



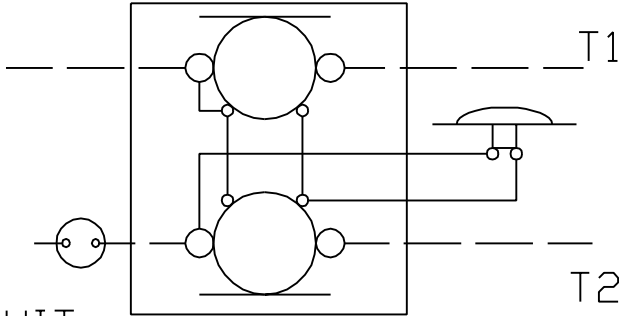
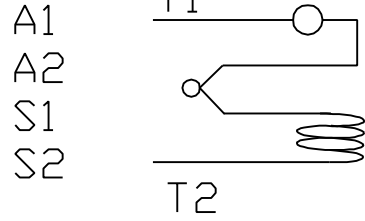
AL-673-A  
32 VOLT  
REVERSING



BL-544

GRAY  
METAL  
BOX

4 LEAD MOTOR

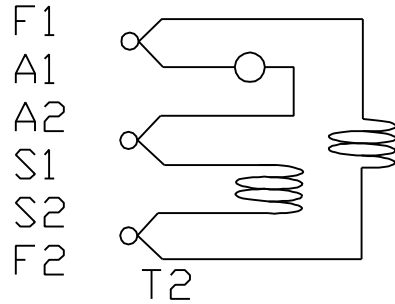


CIRCUIT  
BREAKER

TO CHANGE DIRECTION  
SWAP A1 & A2 ONLY

32 VOLT  
NON-REVERSING

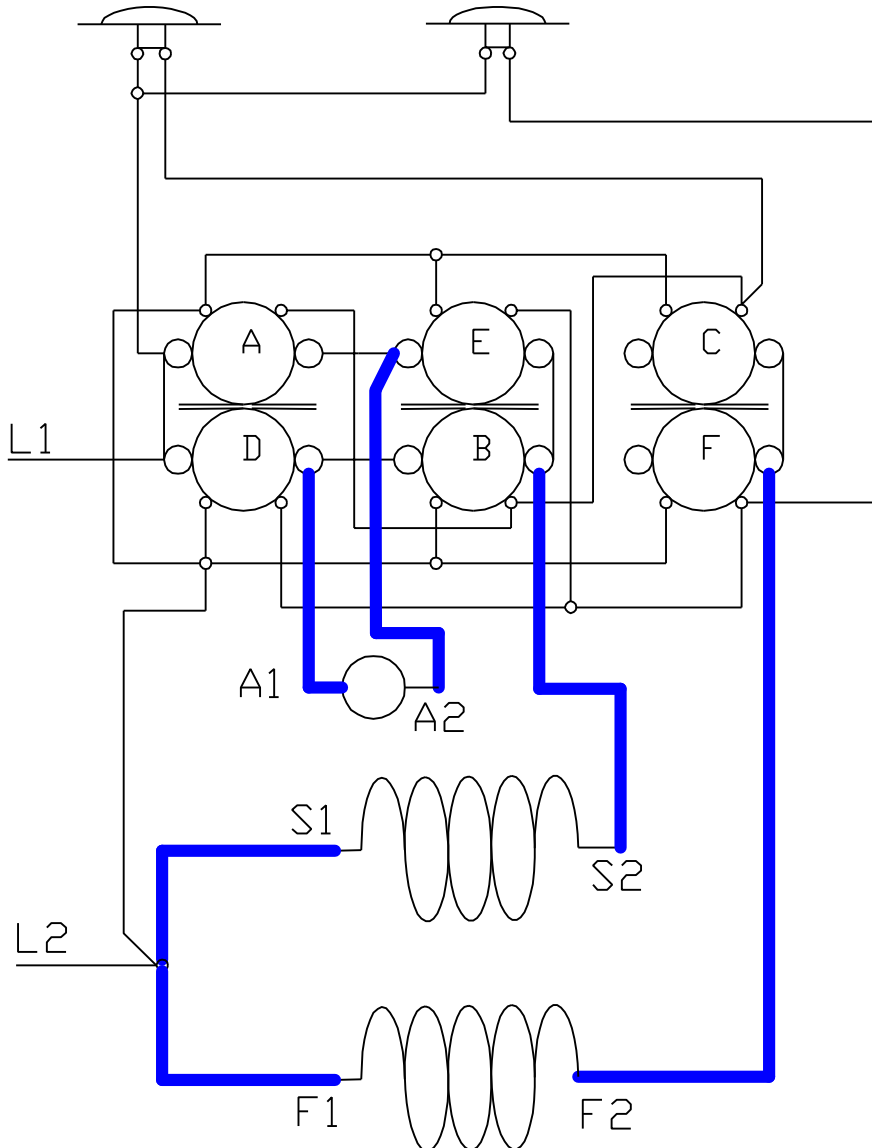
6 LEAD MOTOR



FOOTSWITCHES

BL-707

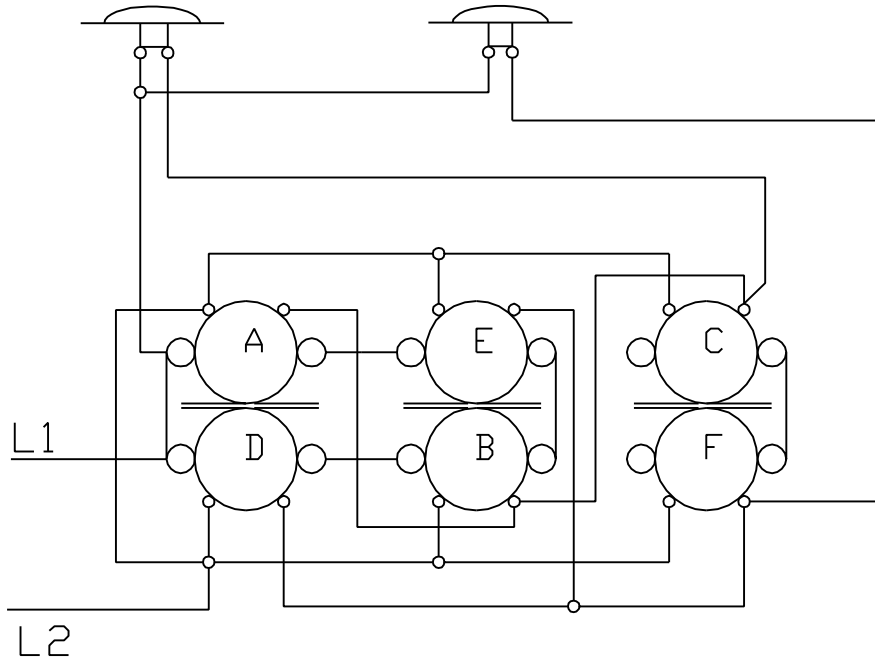
32 VOLT  
REVERSING



BL-707

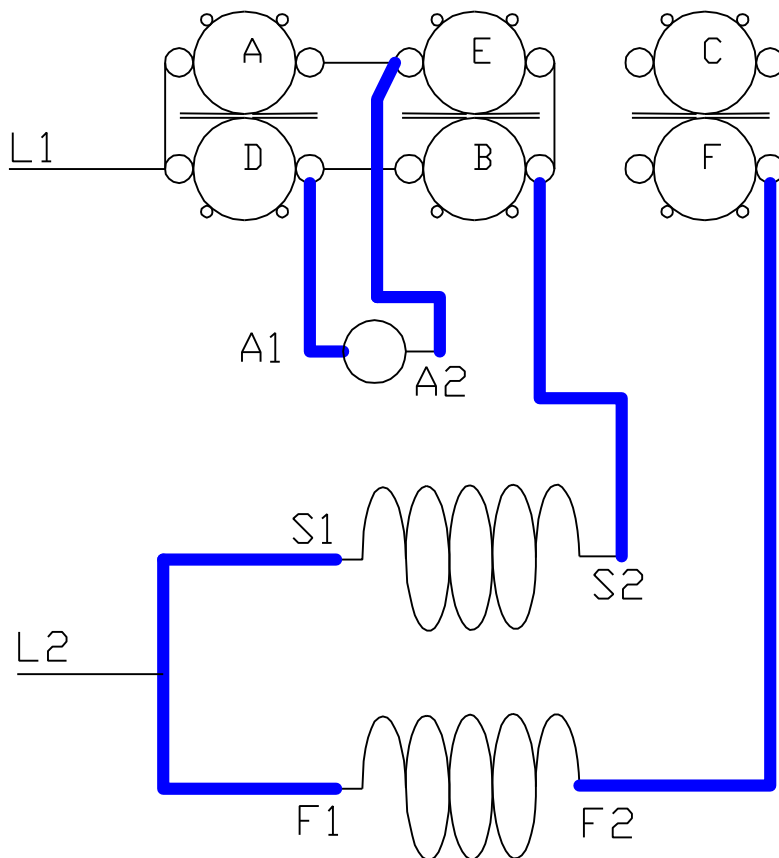
FOOTSWITCHES

32 VOLT  
REVERSING



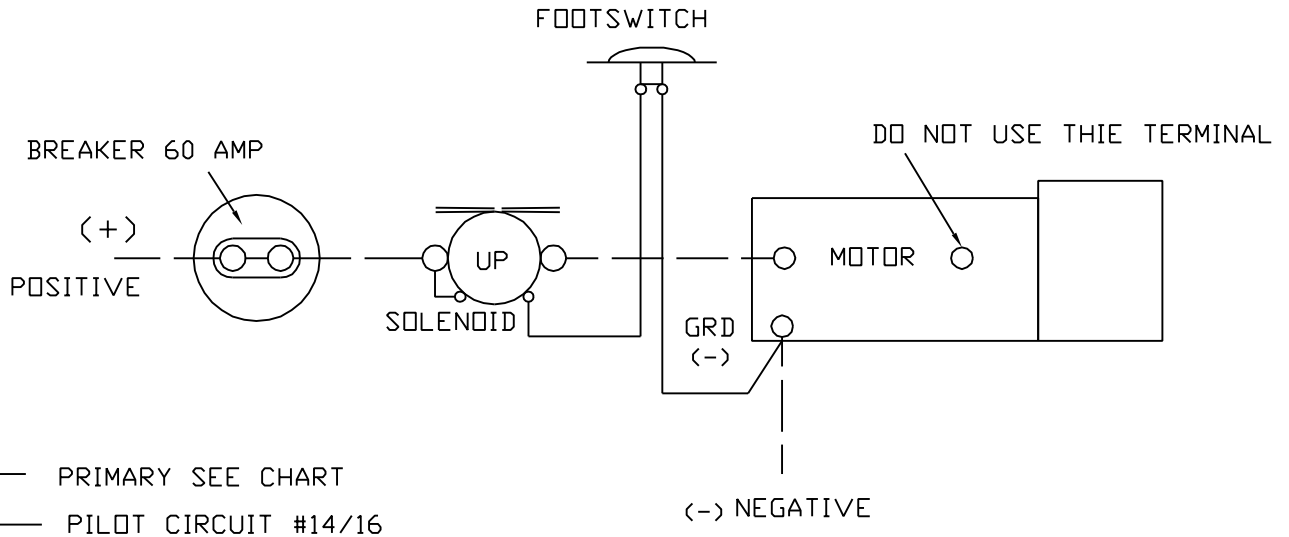
ABOVE SHOWS SOLENOID ASSEMBLY  
WITHOUT MOTOR CONNECTIONS

BELOW SHOWS MOTOR & COPPER BUSS BAR ONLY



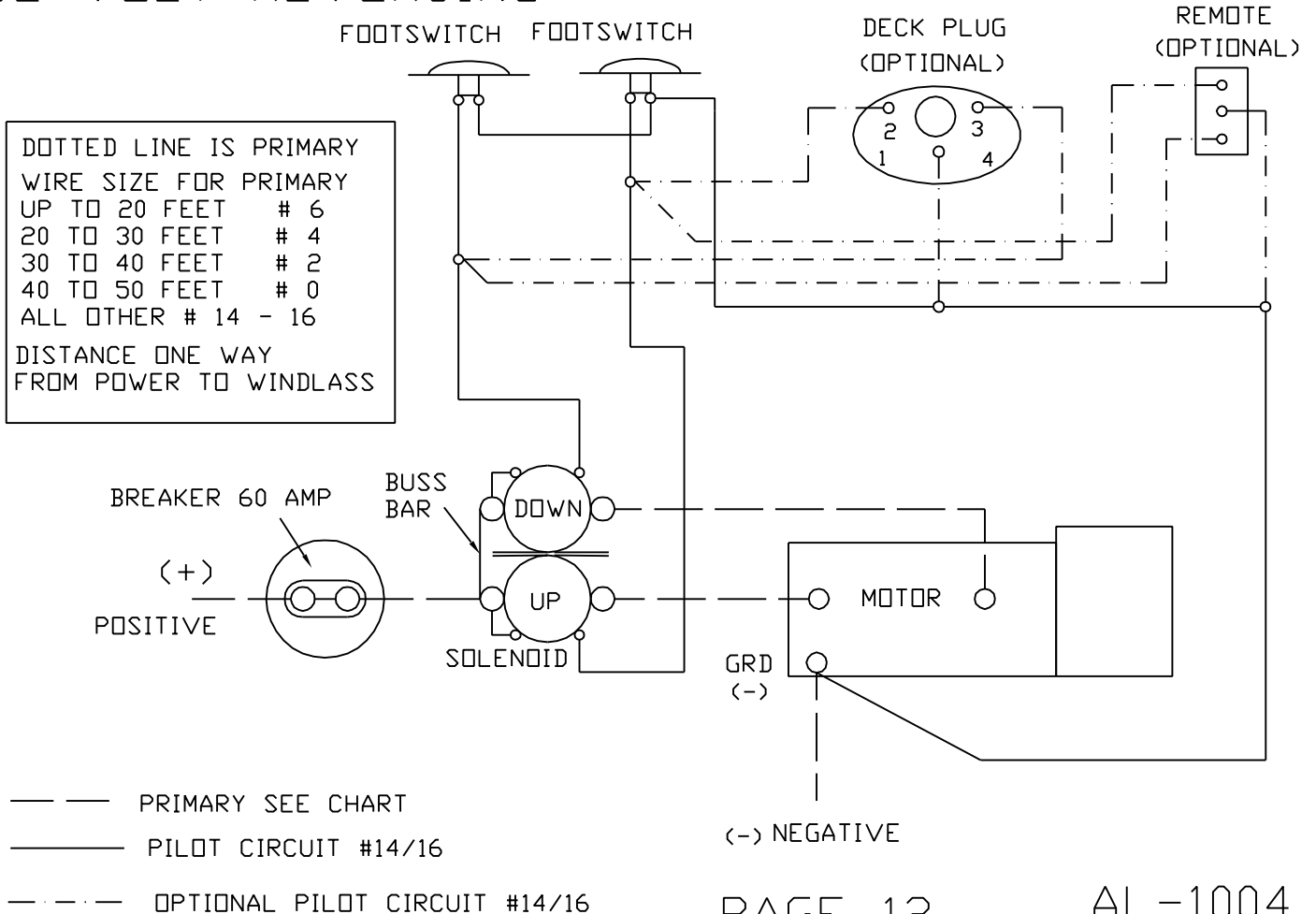
# 32 VOLT NON-REV

AL-1004



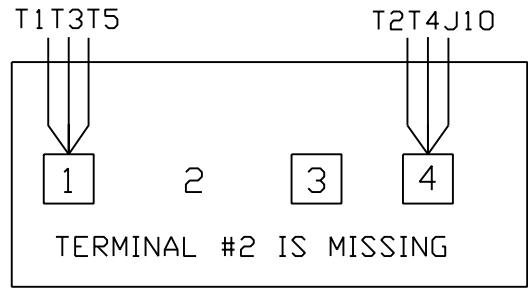
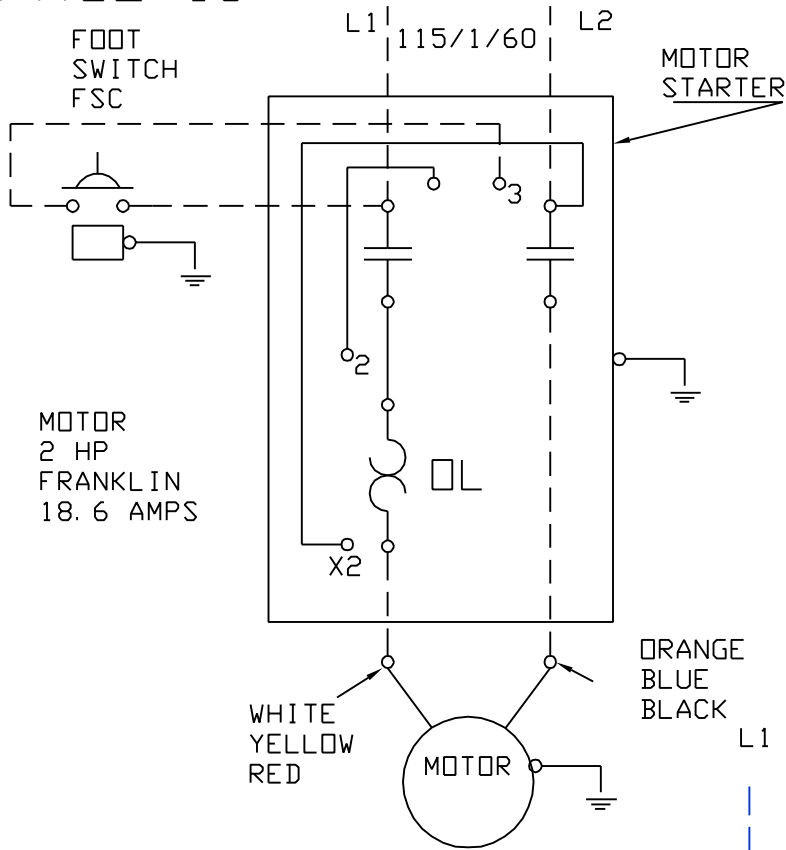
# 32 VOLT REVERSING

DOTTED LINE IS PRIMARY  
 WIRE SIZE FOR PRIMARY  
 UP TO 20 FEET # 6  
 20 TO 30 FEET # 4  
 30 TO 40 FEET # 2  
 40 TO 50 FEET # 0  
 ALL OTHER # 14 - 16  
 DISTANCE ONE WAY  
 FROM POWER TO WINDLASS



AL-684

115V NON-REVERSING



BLUE T1  
 ORANGET3  
 BLACK T5  
 WHITE T2  
 YELLOWT4  
 RED J10

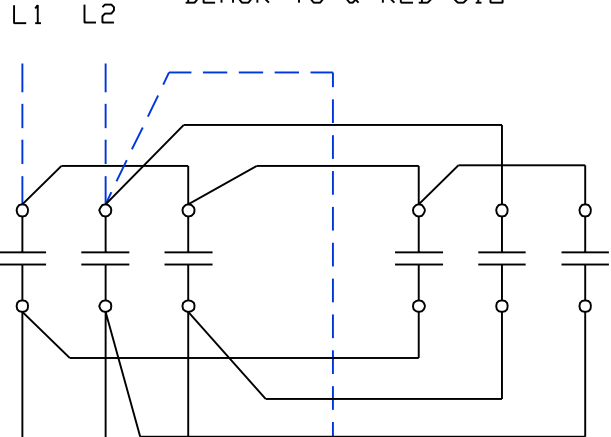
L1  
 L2

TO REVERSE SWAP  
 BLACK T5 & RED J10

MOTOR 2 HP  
 FRANKLIN  
 18.6 AMPS

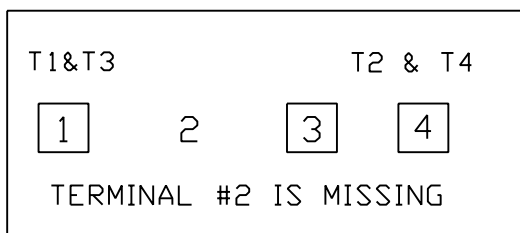
WHITE  
 YELLOW  
 RED

ORANGE  
 BLUE  
 BLACK



115V REVERSING

MOTOR  
 TERMINAL  
 BOARD  
 CONNECTIONS



T1&T3  
 T5  
 J10

MOTOR  
 T2 & T4

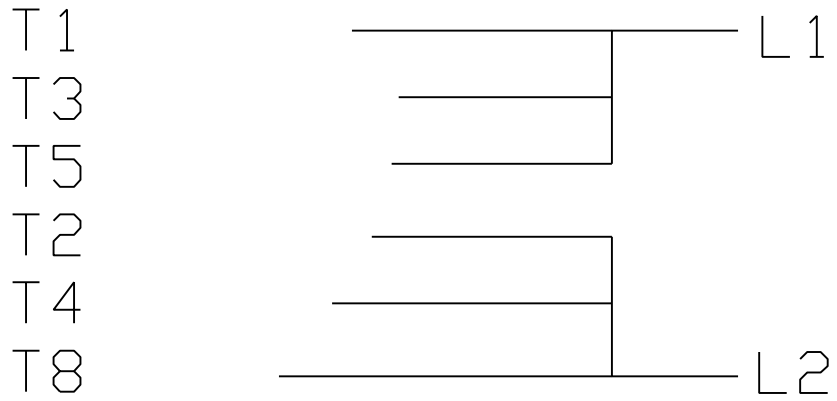
MOTOR 1.5 HP  
 115/1/60  
 FLA 16.8 AMPS

GE MOTOR

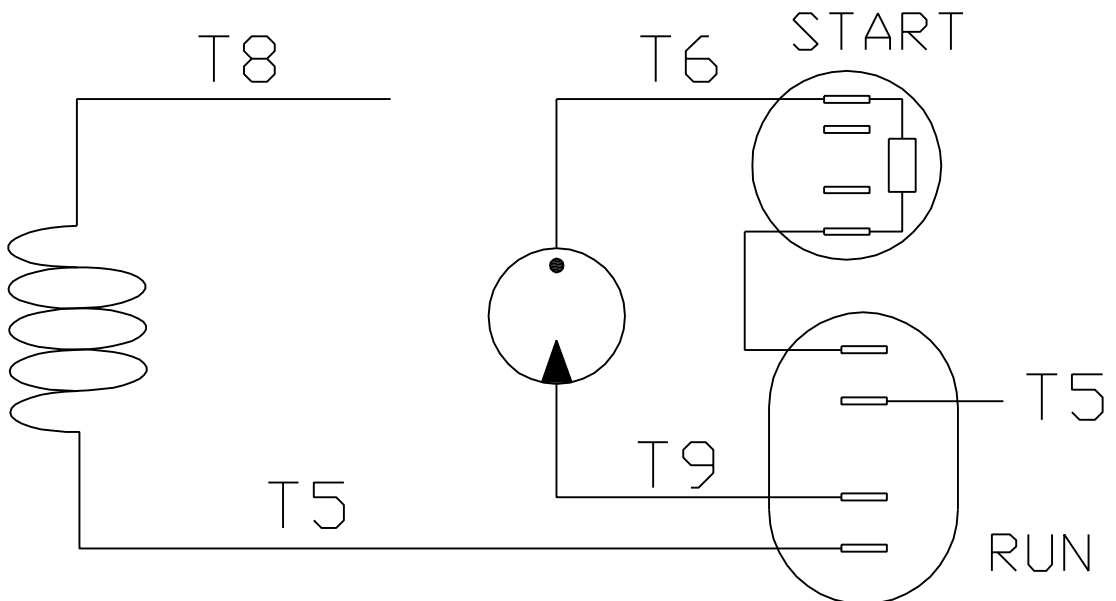
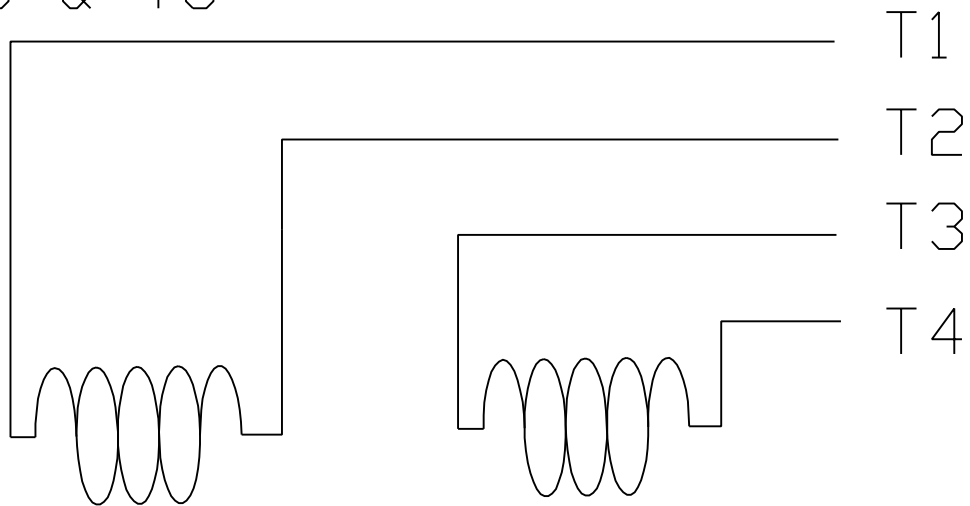
AL-696

MOTOR WIRES J10 & T5 ARE  
 NOT ON MOTOR TERMINAL BOARD  
 THEY COME FROM BEHIND THE TERMINAL  
 BOARD AND GO DIRECTLY TO THE CONTROL BOX

IF ON TERMINAL BOARD TAKE OFF & EXTEND EACH TO THE CONTROL BOX

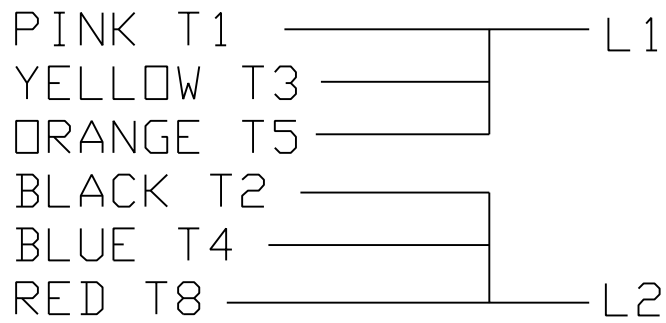


TO REVERSE SWAP  
T5 & T8

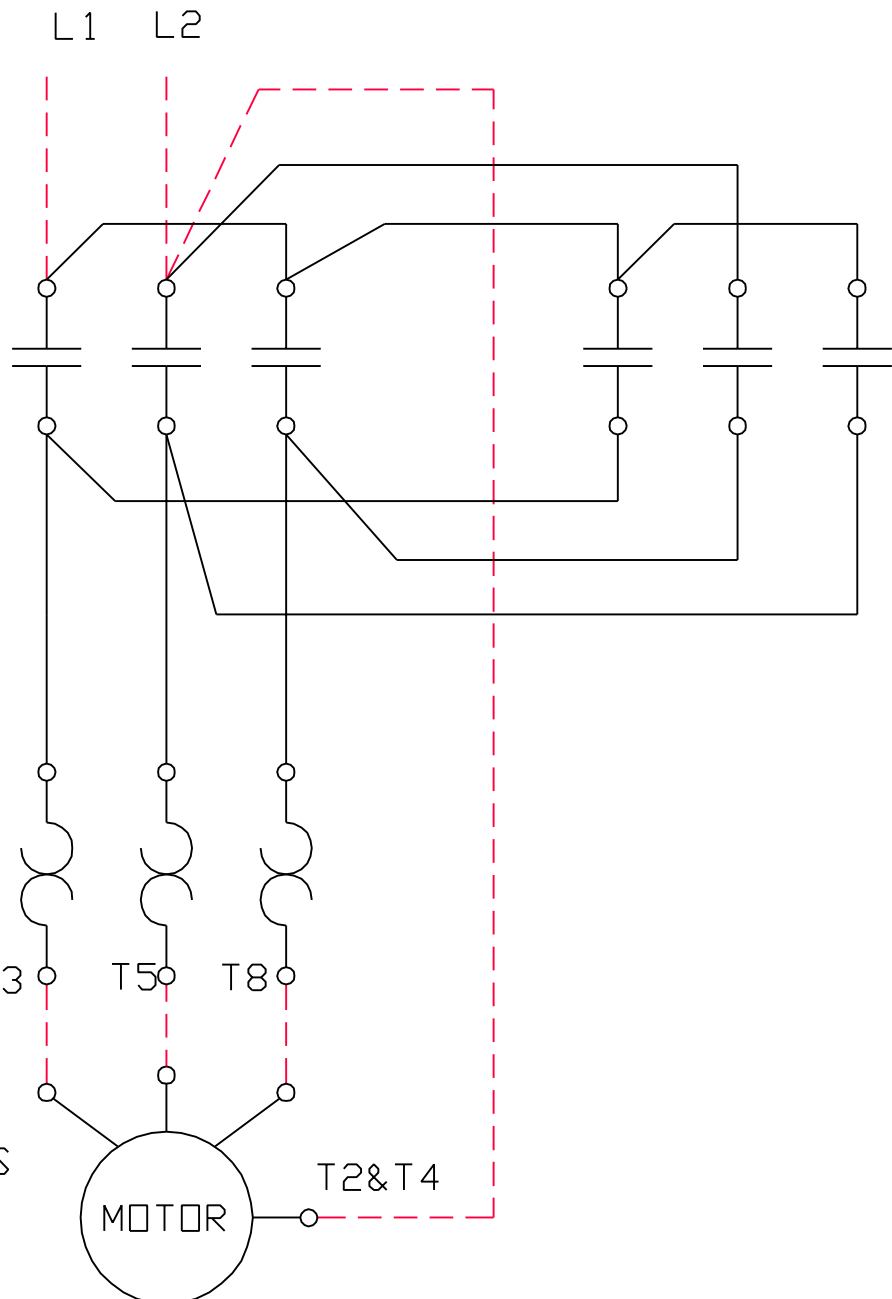


LEESON MOTOR

CAPACITORS MOUNTED  
SEPERATELY



TO REVERSE SWAP  
ORANGE T5 & RED T8



MOTOR 2 HP  
115/1/60  
FLA 18.6 AMPS

FRANKLIN MOTOR