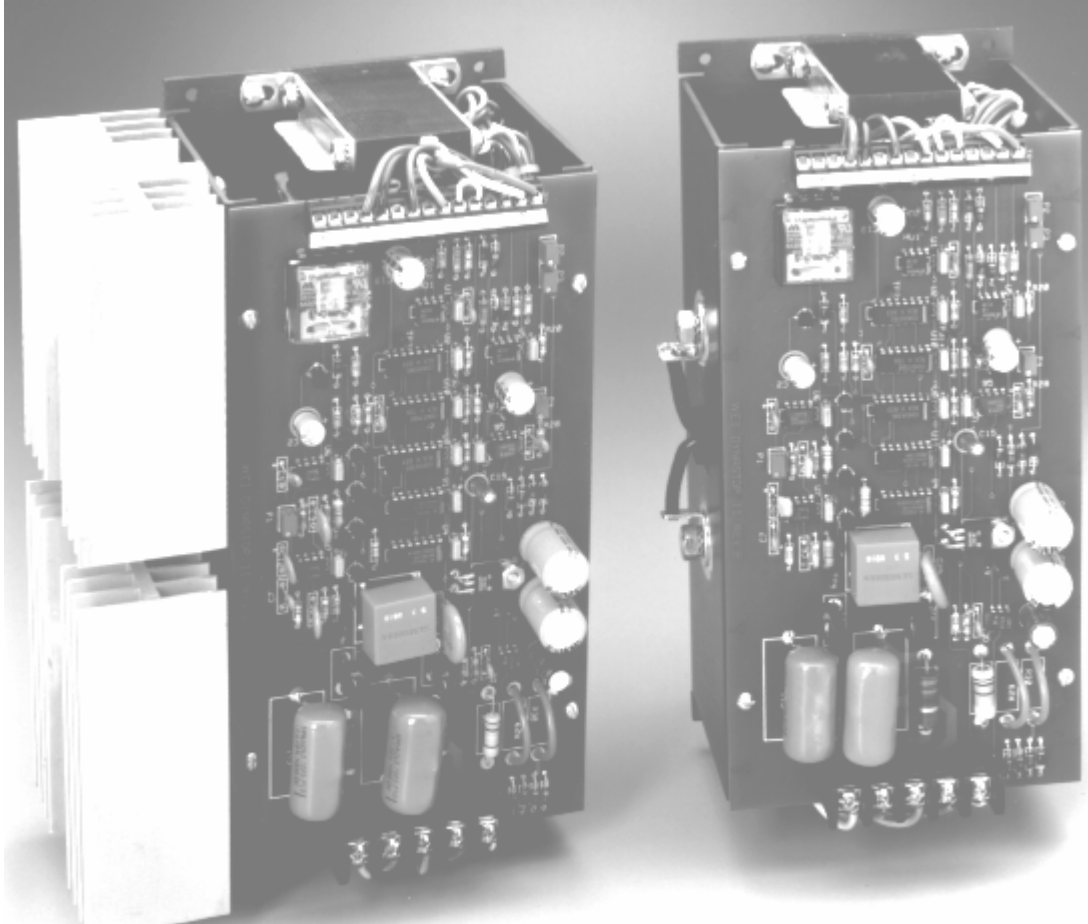


Dyna-Stop II Installation Manual



DYNA-STOP II

DYNA STOP II Electronic A.C. Motor brake has an Electronic *Zero Speed Function* that monitors Rotor rotation and applies D.C. current until the motor has stopped... regardless of load.

Its solid state circuitry assures complete reliability and there are no power consuming and heat generating transformers or capacitor banks.

DYNA STOP II can be mounted anywhere because there are no mechanical shafts to connect or equipment modifications required. Installation is fast and easy. There are only 7 wires used to make connections to the power line, motor and starting contactor coil.

DYNA STOP II is the perfect motor brake for fast cycling operations. Its smooth torque engagement practically eliminates all wear on key ways and splines and fast braking means there's no waiting for equipment to stop... and that means *increased safety and greater productivity*.

DYNA-STOP II FEATURES

Adjustable stopping torque.

Easy to retrofit.

Timer or zero speed mode operation.

Soft starting of dc to protect SCR life.

Improved motor starter interlock.

Oversized SCR's.

Pulse train hard fired SCR gate insure SCR turn on.

BENEFITS

Completely automatic

Adjustable stopping time (Torque)

Easy To install

Mounts anywhere no mechanical modifications to machinery

Low Cost (cost less that mechanical Brakes and No maintenance)

Decreased cycle time

Frictionless

No brake linings to replace

No routine maintenance

DYNA-STOP II can be connected to Virtually any existing AC motor, power for the brake control and power circuits is supplied from 2 wires connected to the line side of the motor starter, 3 wires are then connected to the load side of the starter and a starter interlock is provided to insure motor lockout during braking of the motor.

Stopping time is changed simply by adjusting the Torque potentiometer on the Brake and the zero speed Circuit insures that braking current is removed from the motor when zero speed is reached. The elimination of the brake timer allows for rapid jogging sequences because the brake stays on only long enough to stop the motor.

Applications for the

DYNA-STOP II include:

- Power Transmission
- Conveyors
- Rolling Mills
- Crane Trolleys
- Fans (Anti-Windmill Device)
- Centrifuges And Extractors
- Drills
- Tapping Heads
- Lathes
- Grinders
- Milling Machines
- Boring Machines
- Punch Presses
- Gear Hobbers
- Saws
- Band Saws
- Planers
- Chippers
- Routers
- Shapers
- Sanders
- Gang Saws
- Jointers

Installation and Adjustment Procedures for the Dyna-Stop II Electronic Brake (c) (230 and 460 Volt Units)

INSPECTION:

At the bottom open end of the chassis is the 10 connection terminal block to which you will make all connections. At the top you will see the power supply transformer.

Verify that the voltage indicated on this transformer and on the serial number label match your motor's operating voltage.

At the bottom right side of the circuit board, above the 5 connection terminal block, there will be one large resistor and two red jumper wires if your Dyna-Stop circuit board is for a 230 Volt application. There will be two large resistors and only one red jumper wire for circuit boards designed for 460 Volts.

INSTALLATION:

If you require a brake inhibit function, then the jumper between positions 5 and 6 on the top (15 connection) circuit board terminal block should be removed and the connections wired in series with the brake inhibit actuator.

This is the only required connection on the circuit board. It is for a dry contact only.

Install the unit in a vertical position, if possible, for better air cooling of the circuitry. Connect the line voltage, the same as the motor operating voltage, to TB3 #1 and #2 (chassis terminal block positions 1 and 2).

Wire TB3 #3 and #4 in series with the coil of the motor starter.

Attach TB3 #5, #6, and #7 to the LOAD side of the motor starter, between the contacts and the overload heaters (T1, T2, and T3).

Attach the gray current transformer wire to TB#8 and the white current transformer wire to TB#9.

ADJUSTMENT AND OPERATION:

Be prepared to cut power to the Dyna-Stop unit while making these adjustments.

Start the motor and allow it to come up to full speed. De-energize the motor circuit. At this time, note the deceleration time of the motor or spindle. The Dyna-Stop should bring the motor to a stop, and then remove braking power from the motor within a second. You will be able to clearly hear the contactor in the brake chassis release.

The Special feature of the Dyna-Stop II is the zero speed sense function which will remove the braking current from the motor when the motor rotation stops, regardless of the initial speed of the motor or the load.

In your application the Dyna-Stop, As Shipped may not remove the motor braking current when the motor stops. It may also cut off the braking current before rotation is completely stopped.

To Adjust the zero speed sense feature, first verify that the timer, P4 is at maximum fully clockwise about 20 turns.

Jog the motor.

If the brake cuts out before the motor has stopped turn P3 ½ a turn clockwise before jogging the motor again.

If the brake does not cut out within about 1 second after the motor stops turn P3 slowly CCW until the contactor releases removing the braking current.

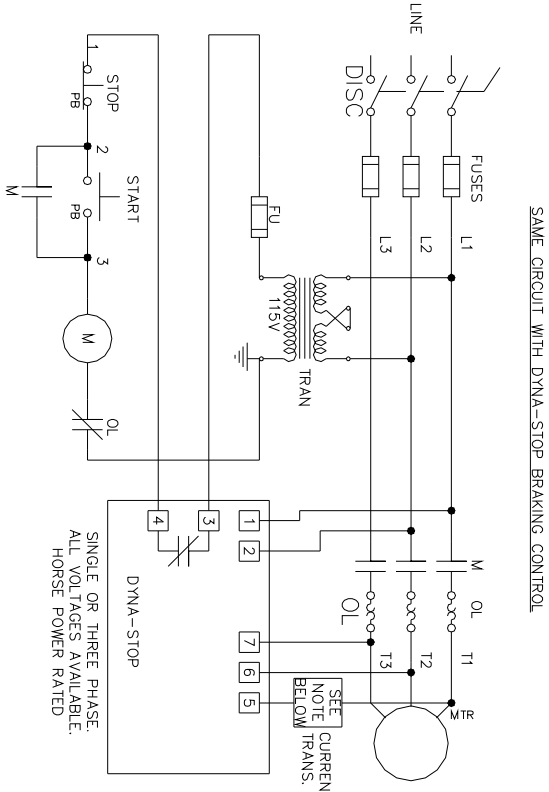
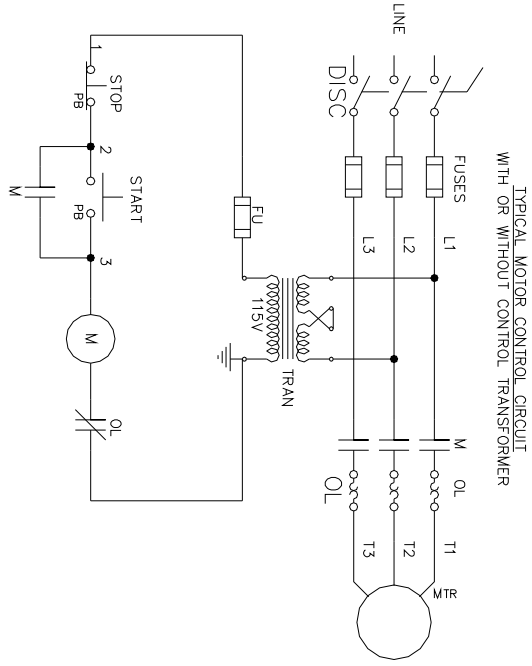
Continue these fine adjustments until the brake shuts down about 1 second after the motor stops.

If a longer or shorter braking time is desired adjust P1 (torque adjustment) CW to decrease braking torque (longer stopping time)

After adjusting P1 Zero speed setting will have to be readjusted (P3)

P2 is factory set and should not be changed.

The Dyna-Stop circuitry includes a timer that will automatically cut the current to the motor after about 40 seconds. This setting is the maximum allowed by the unit as shipped, and can be adjusted to a shorter time by turning P4 (below P2 and P3 on the right side of the board) clockwise. If a longer braking time is required, then the value of C18 (the electrolytic can capacitor near P4) can be increased slightly. Contact the factory for further information on this option.



NOTE: SEE INSTALLATION/ADJUSTMENT DIAGRAM
FOR PROPER CONNECTIONS TO CURRENT TRANSFORMER

THE ONLY CHANGE REQUIRED IS TO CONNECT THE INTERLOCK 3&4 IN SERIES WITH THE
STARTER TO KEEP IT OFF DURING BRAKING TIME. (OTHER CIRCUIT CONNECTIONS SUPPLIED
UPON REQUEST)

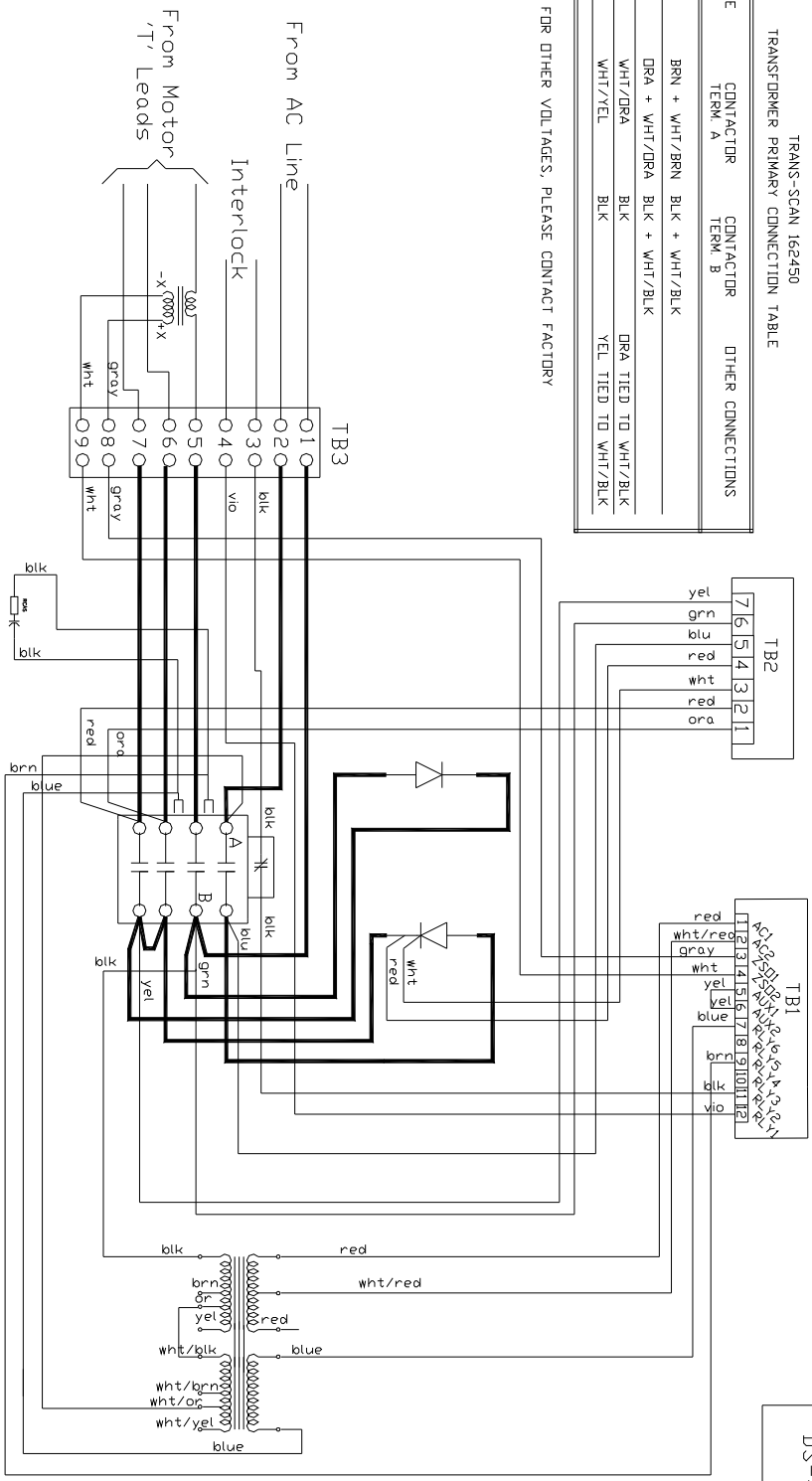
ITEM	P/N	DESCRIPTION	QTY.
	dyn sxs	title DYNA-STOP BRAKING	
	ckd by	CONTROL, Typical Application	
	date 12.3.87	drawing no.	
	scale	d:\dynastop\cust-APL	
Waddington Electronics Inc.			

Dyna-Stop Low HP Chassis Wiring Diagram

TRANSFORMER PRIMARY CONNECTION TABLE

AC VOLTAGE	CONTACTOR TERM. A	CONTACTOR TERM. B	OTHER CONNECTIONS
208 VAC	BRN + WHT/BRN	BLK + WHT/BLK	
220 VAC	DRA + WHT/DRA	BLK + WHT/BLK	DRA TIED TO WHT/BLK
440 VAC	WHT/DRA	BLK	YEL TIED TO WHT/BLK
575 VAC	WHT/YEL	BLK	YEL TIED TO WHT/BLK

FOR OTHER VOLTAGES, PLEASE CONTACT FACTORY



Note: 440 V Primary Connections Shown

Use For:
DS-220/440-5
DS-440-10

ITEM	DATE	WIRE COLOR	FIXED	D.W.
	8/10/90	P/N	DESCRIPTION	QTY.
		den D.W.	Dyna-Stop II Rev D	
		ck'd by	Wiring Assembly	diag.
		scale	dyna-stop manuals REV D-ASV	

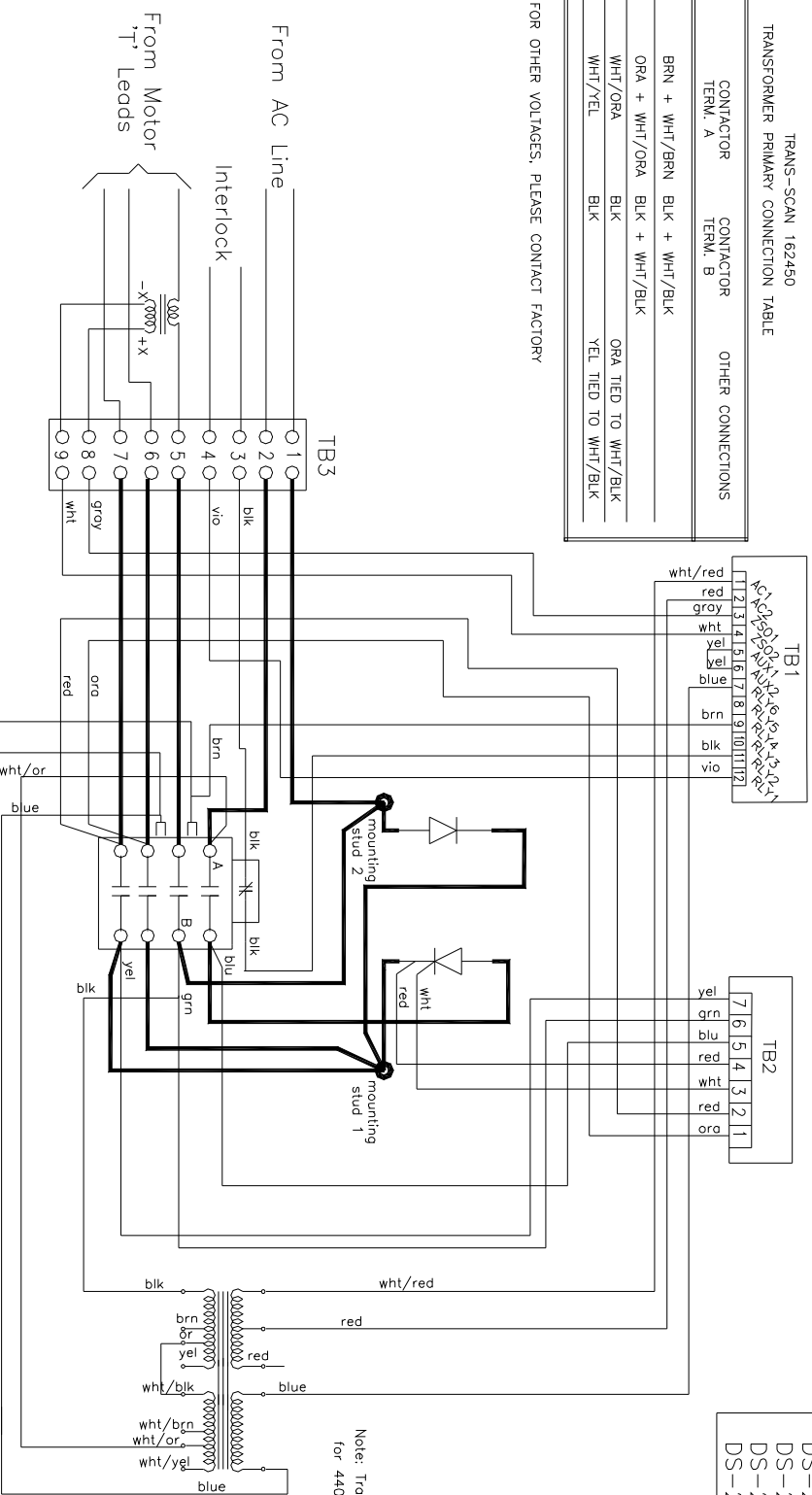
Waddington Electronics Inc.

Dyna-Stop High HP Chassis Wiring Diagram

TRANS-SCAN 162450
TRANSFORMER PRIMARY CONNECTION TABLE

AC VOLTAGE	CONTACTOR TERM. A	CONTACTOR TERM. B	OTHER CONNECTIONS
208 VAC	BRN + WHT/BRN	BLK + WHT/BLK	
220 VAC	ORA + WHT/ORA	BLK + WHT/BLK	
440 VAC	WHT/ORA	BLK	ORA TIED TO WHT/BLK
575 VAC	WHT/YEL	BLK	YEL TIED TO WHT/BLK

FOR OTHER VOLTAGES, PLEASE CONTACT FACTORY

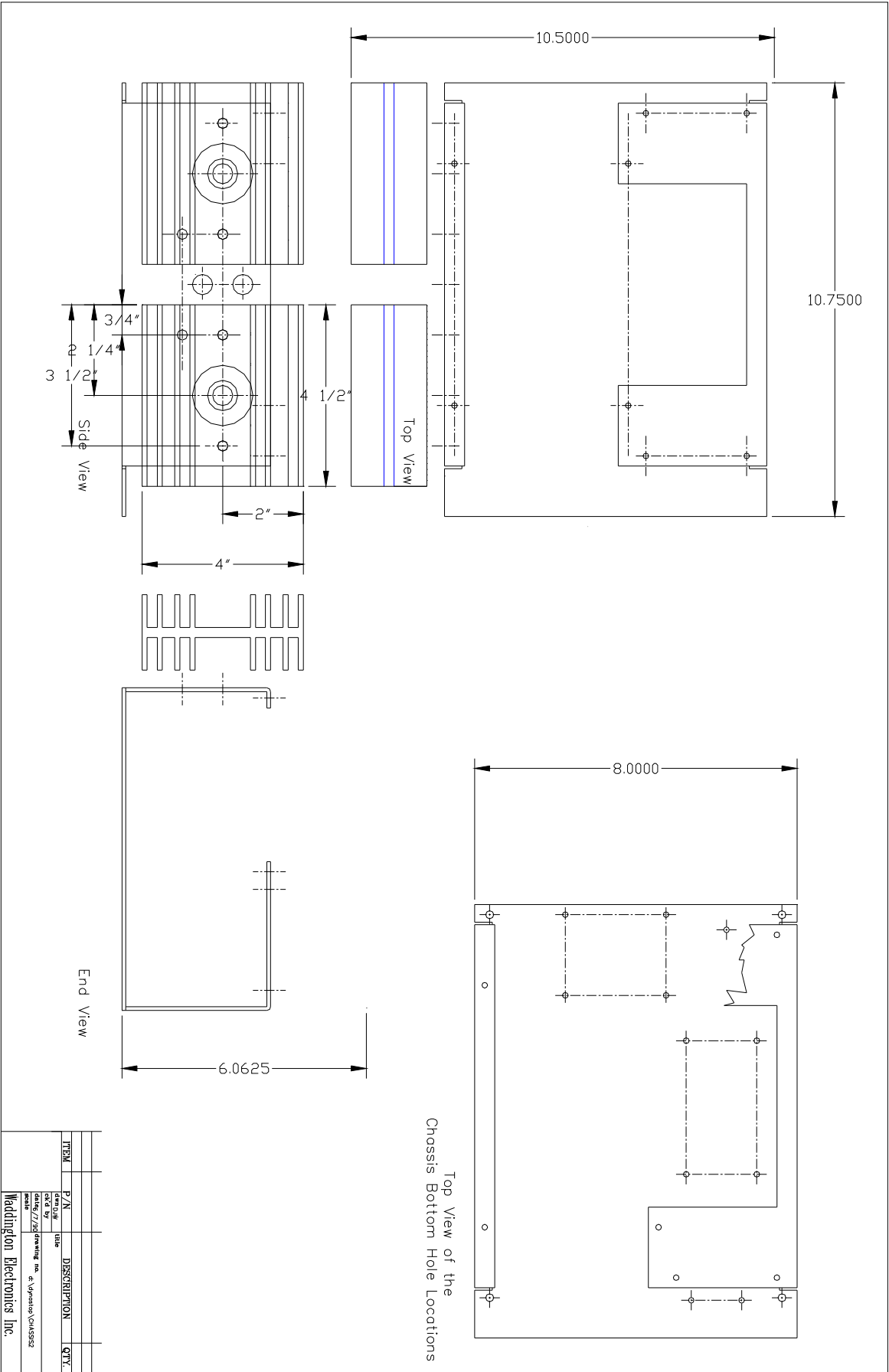


Use For:
 DS-220-10
 DS-220/440-15
 DS-220/440-20
 DS-220/440-25
 DS-220-440-30

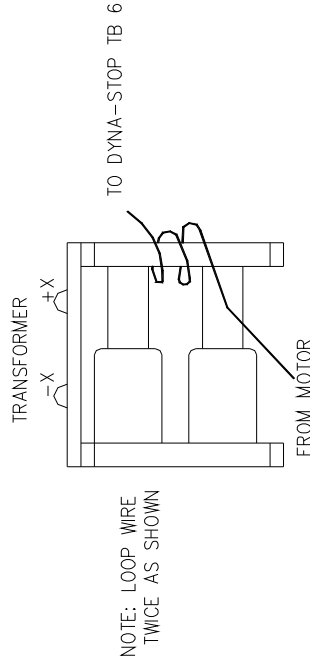
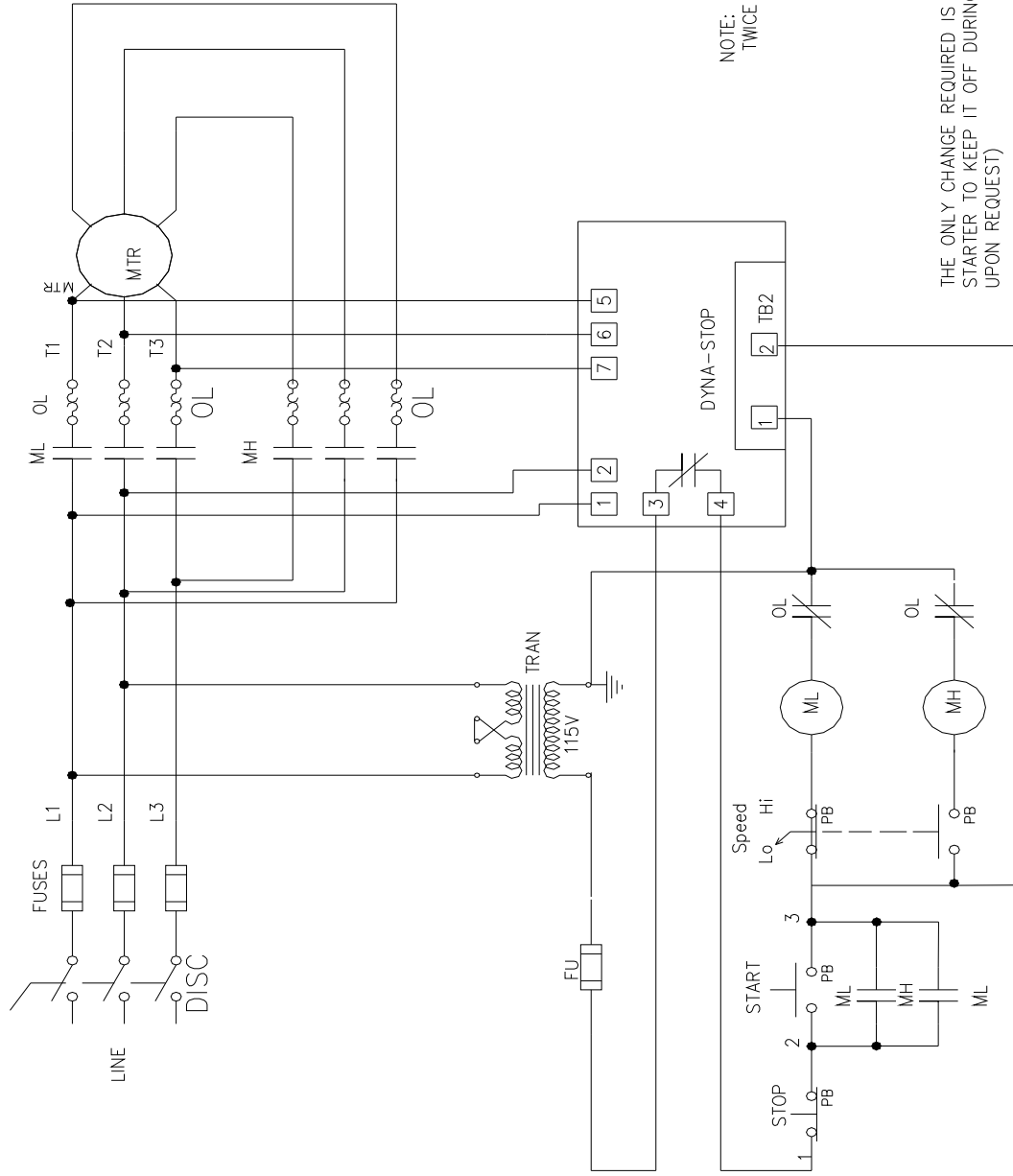
Note: Transformer Hookup for 440V Primary Shown.

DATE	BY	DESCRIPTION	QTY
8/20/90		Wire color specifications fixed DW	
8/10/90		TB2 Modifications for Rev.D	
P/N			
dw	DJW	title Dyna-Stop II Rev.D	
ck'd by		High HP assembly diag.	
date	3/15/90	drawing no.	
state		d:\dynastop\manu\RD-ASV2	

Waddington Electronics Inc.



2_speed_2_winding_motor_WITH_DYNA-STOP BRAKING CONTROL



NOTE: LOOP WIRE TWICE AS SHOWN

THE ONLY CHANGE REQUIRED IS TO CONNECT THE INTERLOCK 3&4 IN SERIES WITH THE STARTER TO KEEP IT OFF DURING BRAKING TIME. (OTHER CIRCUIT CONNECTIONS SUPPLIED UPON REQUEST)

Example Connections for 2 speed motor
 note some machines may need an aux contact
 from each starter depending on original connections
 Consult factory if you are unsure of connections to your system
 Improper wiring will result in damage to the Dynastop

ITEM	P/N	DESCRIPTION	QTY.
		title	
		DYNA-STOP BRAKING CONTROL	
		date	
		02-12-12	
		by	
		Wing no.	
		scale	
		multi speed motor connections	
Waddington Electronics Inc.			