



1334-MOD-K8

15 & 20HP Series A Dynamic Brake

Description The Bulletin 1334-MOD-K8 Dynamic Braking Option Kit contains components to perform the dynamic braking function for a Bulletin 1334 15 or 20HP, 460V, Series A Drive. When installed, the 1334-MOD-K8 permits the Drive to generate a 100% braking torque in the motor during motor regenerating conditions. The Dynamic Brake duty cycle is 20%, with a maximum braking time of 20 seconds.

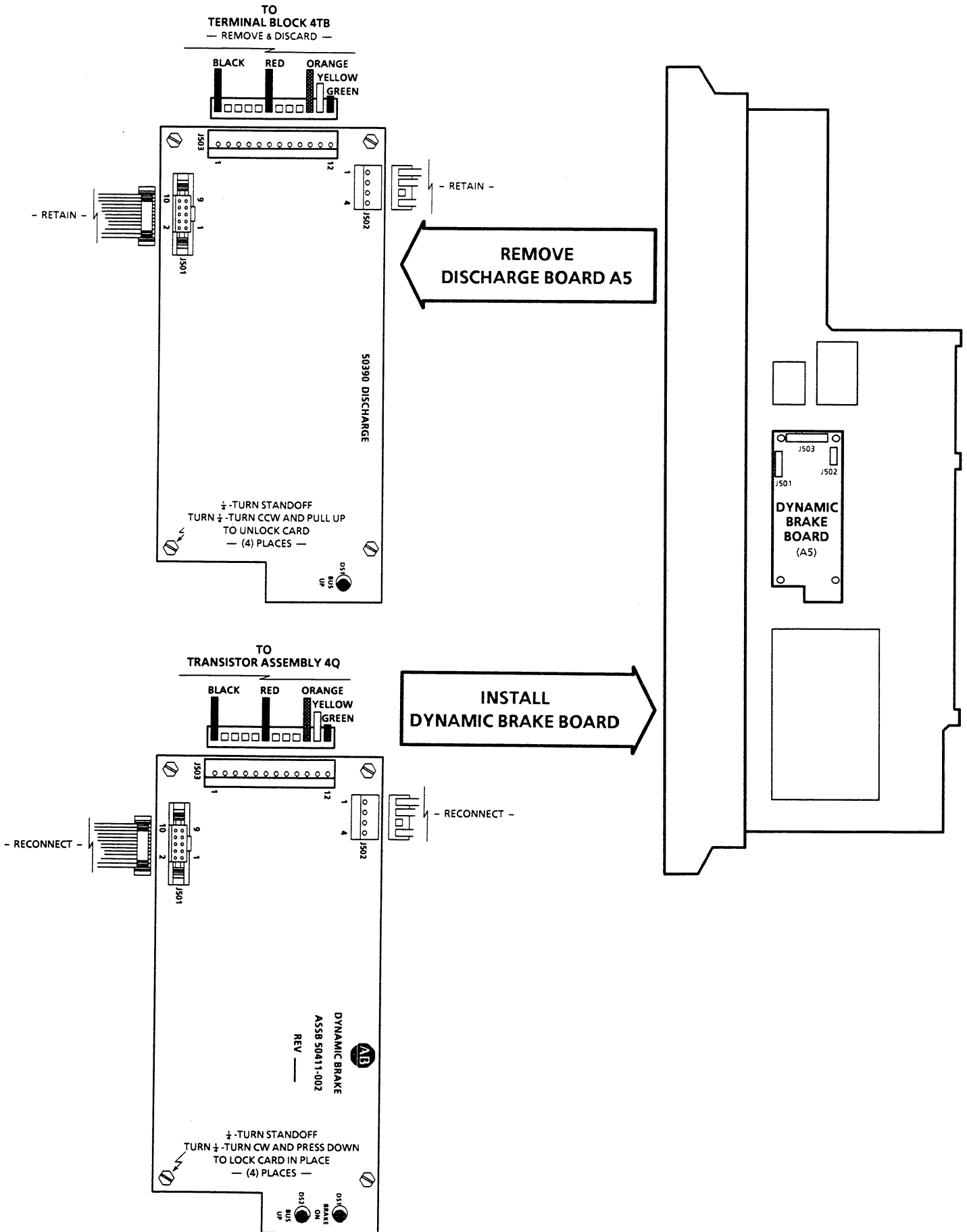
Each 1334-MOD-K8 Option Kit Includes —

- (1) Dynamic Brake Board, P/N 50411-002
- (4) $\frac{1}{2}$ " $\frac{1}{4}$ -Turn Standoffs, P/N 201105
- (1) Transistor Assembly **4Q**, P/N 201051
- (1) 2g Thermal Compound Packets, P/N 201686
- (2) 10-32 3/8" Screws, P/N 215341
- (2) #10 Split Lock Washers, P/N 209716
- (1) Transistor Wire Harness, P/N 197182
- (1) Brake Resistor Assembly, P/N 41483

The 1334-MOD-K8 Kit includes components that are installed both in and outside the Drive. The Brake Board, Transistor Assembly, & Transistor Wire Harness are installed inside the Drive, while the Brake Resistor Assembly is externally installed.

Additional materials, including hardware for mounting the external Brake Resistor Assembly and wire to connect the assembly to the Drive, must be supplied by the user.

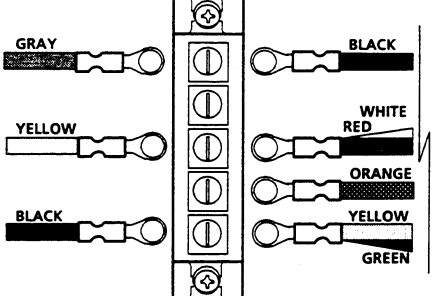
DYNAMIC BRAKE BOARD INSTALLATION



**TRANSISTOR ASSEMBLY INSTALLATION
TRANSISTOR WIRE HARNESS INSTALLATION**

REMOVE TERMINAL BLOCK 4TB

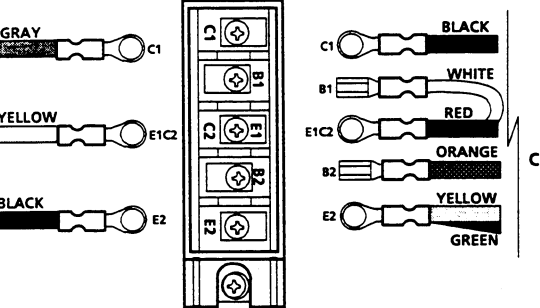
— RETAIN — LEFT WIRE HARNESS
— REMOVE & DISCARD — DISCHARGE BOARD A5 WIRE HARNESS



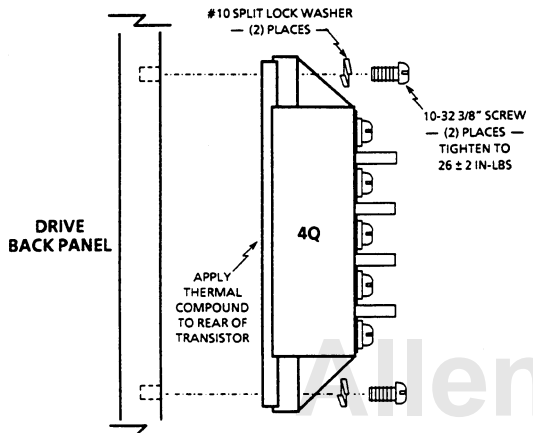
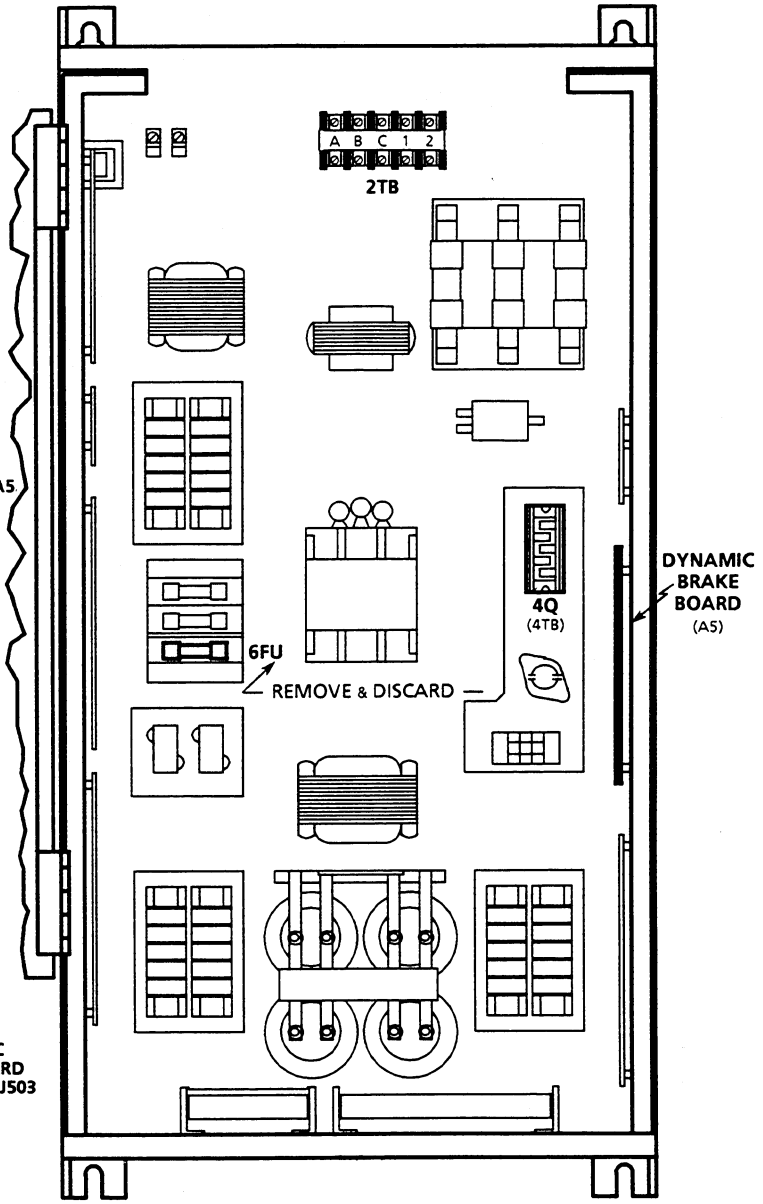
TO DISCHARGE BOARD A5
CONNECTOR J503

INSTALL TRANSISTOR ASSEMBLY 4Q

— RECONNECT — LEFT WIRE HARNESS
— CONNECT — TRANSISTOR WIRE HARNESS



TO DYNAMIC
BRAKE BOARD
CONNECTOR J503



Installation



WARNING

Only personnel familiar with the Drive and its associated machinery should plan or implement the installation, startup, and adjustment of MOD kits. Failure to comply may result in personal injury and/or equipment damage.

To guard against personal injury, always remove & lock out power to the Drive at the main supply disconnect and all other power source disconnects. Ensure that DS1 is not lit when boards or wires are being installed or connected. Refer to the instruction manual for your Drive for LED location.

DYNAMIC BRAKE BOARD INSTALLATION

Installation involves —

- Replacing Bus Discharge Board A5 with the Dynamic Brake Board.
- Reconnecting the existing ribbon cable at **J501** and cable harness at **J502**.
- Replacing the existing wire harness at **J503**.
- Removing fuse **6FU** on the Drive back panel — For 15 & 20HP Drives, fuse **F1** on the Dynamic Brake Board functionally replaces fuse **6FU**.

As shown on **page 2**, the Dynamic Brake Board is installed in the same position as A5. If required, four extra $\frac{1}{2}$ " $\frac{1}{4}$ -turn standoffs have been included with the kit.

TRANSISTOR ASSEMBLY INSTALLATION

TRANSISTOR WIRE HARNESS INSTALLATION

Installation involves —

- Replacing terminal block **4TB** with the Transistor Assembly.
- Reconnecting the existing left wire harness to the Transistor Assembly.
- Connecting the new Transistor Wire Harness to the Transistor Assembly.

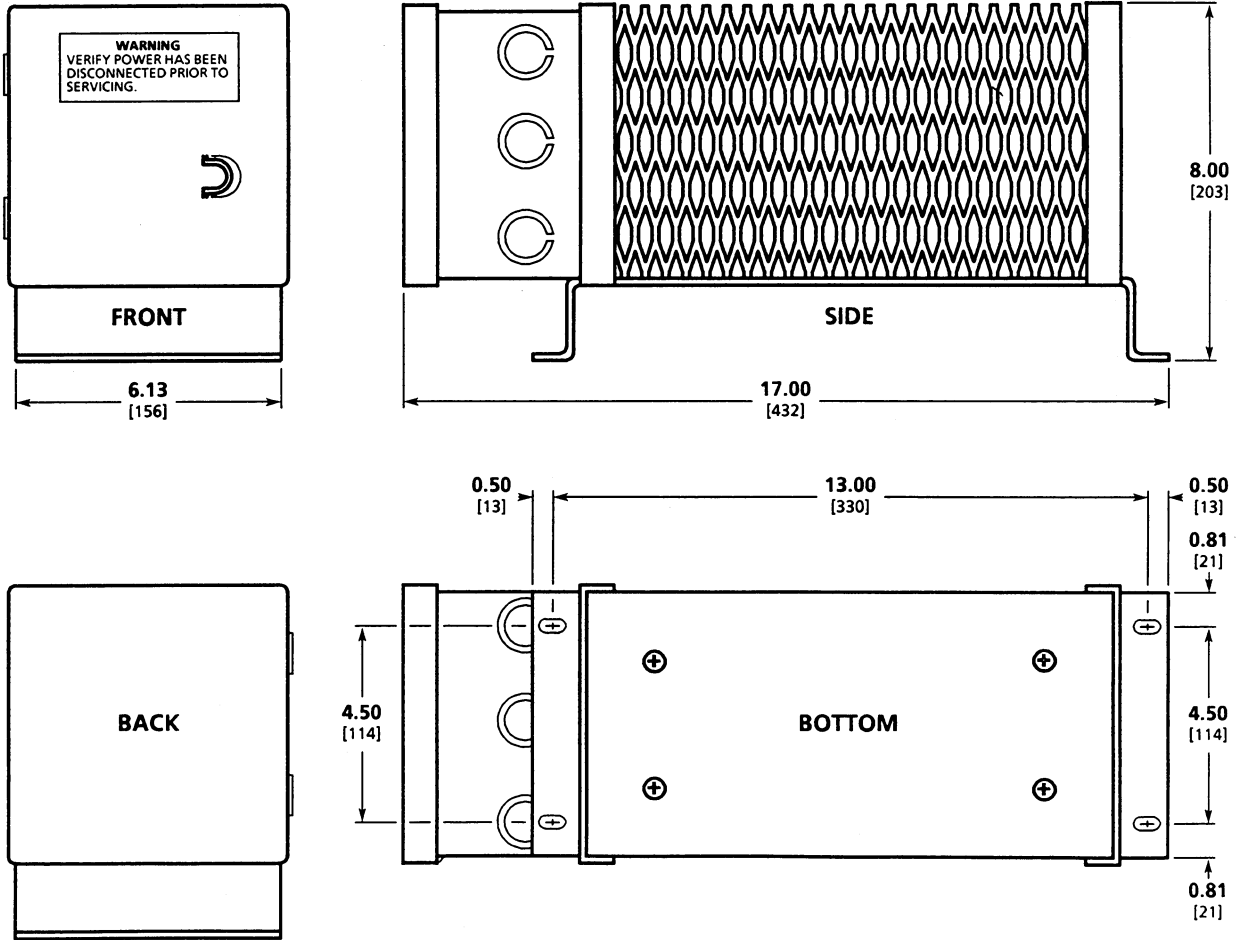
As shown on **page 3**, the Transistor Assembly is installed in the same position as **4TB**. Before mounting the assembly, spread the contents of the thermal compound packet evenly over the rear of the transistor. Install the transistor over the two predrilled and tapped holes in place of **4TB**. Use the two 10-32 $\frac{3}{8}$ " screws and the two #10 split lock washers to secure the transistor in place. Tighten the screws to 26 ± 2 in-lbs.

The Transistor Wire Harness replaces the existing wire harness that is connected between terminal block **4TB** and **J503** on the Bus Discharge Board. One end is plugged into **J503** on the Dynamic Brake Board shown on **page 2**, while the other end is connected to the Transistor Assembly shown on **page 3**.

Installation
(continued)

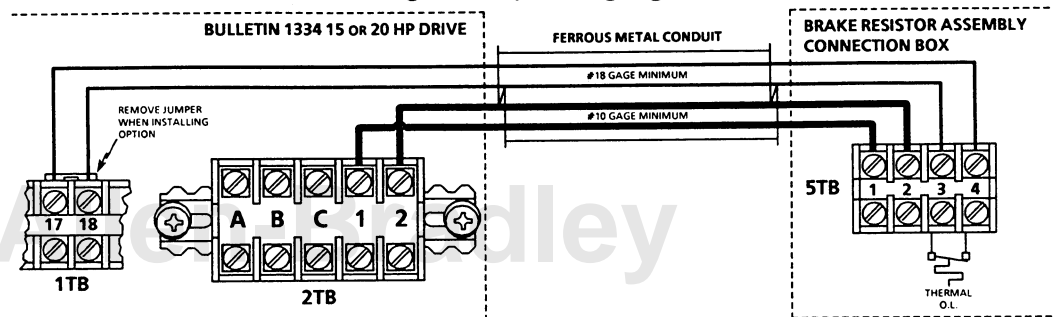
BRAKE RESISTOR ASSEMBLY INSTALLATION

Determine a suitable mounting location for the Brake Resistor Assembly and mount it firmly in place. The assembly should be located within 10 feet of the Drive and should have a minimum of 12 inches of air space around the cage for heat dissipation. Mounting an assembly with the feet facing upward will not permit proper heat dissipation and is not recommended. Interconnection wiring between the Drive and the Brake Resistor Assembly must be run in conduit. Use the knockouts on the assembly connection box for conduit connections.



BRAKE RESISTOR ASSEMBLY INTERCONNECTION WIRING

Interconnection wiring between the Brake Resistor Assembly and the Drive is not provided with the kit. Four wires must be connected from the Brake Resistor Assembly to the Drive. Two of the wires must be 10 gauge minimum, while the remaining two may be 18 gauge minimum.



Operation

The DC bus voltage will rise during a braking or regenerative operation when energy from the motor is transferred to the Drive's DC bus. The Drive monitors the DC bus voltage and at a predetermined value tells the dynamic brake board to turn on the brake transistor. The brake transistor connects the dynamic brake resistor across the DC bus to absorb the excess energy. The brake transistor is turned off when the bus voltage returns to normal.

The Brake Resistor Assembly is thermally protected by a relay within the assembly. A normally closed contact is connected between terminals **17 & 18** at **1TB** — the Drive's main terminal block. Should the resistor assembly overheat and trip, the overload relay circuit between terminals **17 & 18** will open, shut down the Drive, and illuminate the Brake Over Temperature LED on the Diagnostic Display Panel.

TO RESET THE DRIVE —

- Wait a Few Minutes to Allow the Overload & Brake Resistor Assembly to Cool Down
- Remove Power From the Drive at the Disconnect Device
- Open the Connection Box On the Brake Resistor Assembly
Reset the Overload Relay by Depressing the Reset Plunger Until a Click Is Either Heard or Felt
- Reapply Power & Cycle the Drive Stop/Start Pushbuttons or Contact

IMPORTANT

Frequent tripping on **BRAKE OVER TEMP** may mean that the braking requirements imposed on the dynamic brake exceeds its design limits. Should frequent tripping occur, consult your nearest Allen-Bradley Area Sales/Support Center or representative for assistance.



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