



**INSTRUCTIONS**  
**TRUCK MANAGEMENT MODULE**  
**OEM DEFINED STATUS CODES**

**GENERAL**

The Truck Management Module (TMM7) (IC3645TMM7A) is a multi-function accessory card or an auxiliary function of the EV-T100 Pump control used with the EV-T100ZX series Traction controls. The TMM7 card provides the OEM the ability to provide status codes or operator warning codes that will be displayed on the dash display whenever a normally open switch or sensor wire provides a signal to the TMM7A accessory card.

Typically the TMM7A can be used to display overtemperature of motors, hydraulic systems or any other device or system that can activate a thermostat type switch that closes at the desired temperature. Status codes 90 and 93 not only display the status code to the dash display but when activated can be programmed with the Handset to reduce the speed of the truck from 100% to 0% percent on time. The TMM7A can also be used to monitor and display motor brush wear warnings when the motor brushes require replacement.

**OPERATION**

The TMM7A card utilizes up to 9 input points and 3 output points. The 3 output points connect to the "Y" plug on the EV-T100 logic card. Due to the low level signal value of this output, shielded wire should always be used to insure proper operation. The input to the TMM7A card is either switch or sensor wire closure to battery negative or positive. The table below outlines the status code displayed for each input point when that point is closed to battery negative or positive as indicated.

TMM7A Card Terminal	Pump Control Terminal	Status Code	Connect To
TB1	PA3	90 *	Neg
TB3	PA6	91	Neg
TB4	PB6	92	Neg
TB5	PA1	93 *	Pos
TB6	PA2	93 *	Pos
TB8	PA4	94	Pos
TB10	PA5	94	Pos
TB11	PZ11	95	Pos
TB12	PZ10	95	Pos

\* Input points TB1, TB5 and TB6 also have the ability to activate a speed limit which is adjustable by using the Handset.

The instructions for adjustment of the speed limit function of status codes 90 and 93 are described in detail in the instructions for the Handset. The speed limit function will be enabled when the input switch supplies a negative signal to either TB1, TB5 or TB6.

**IMPORTANT NOTE: The microprocessor only checks for a TMM7A status codes 93,94 and 95 when a neutral signal is present (i.e. open start switch or open F/R switch), the status code is displayed and the speed limit enabled when the control is returned to the run mode. Do not use status code 93 speed limit for applications requiring immediate speed limit on switch closure.**

Figure 1 outlines the typical wiring for the TMM7A with all switch closure inputs.

The TMM7A can also be used as a **Brush Wear Indicator (BWI)**. The Brush Wear Indicator is designed to detect a worn-out brush and display a fault code on the dash display to warn maintenance personnel that the motor brushes need to be replaced before they wear to the point of causing destructive damage to the motor commutator surface. The BWI is compatible with any sensor that short circuits to the motor armature to signal limits of brush wear. Figure 2 outlines the typical connection to the brush wear sensors.

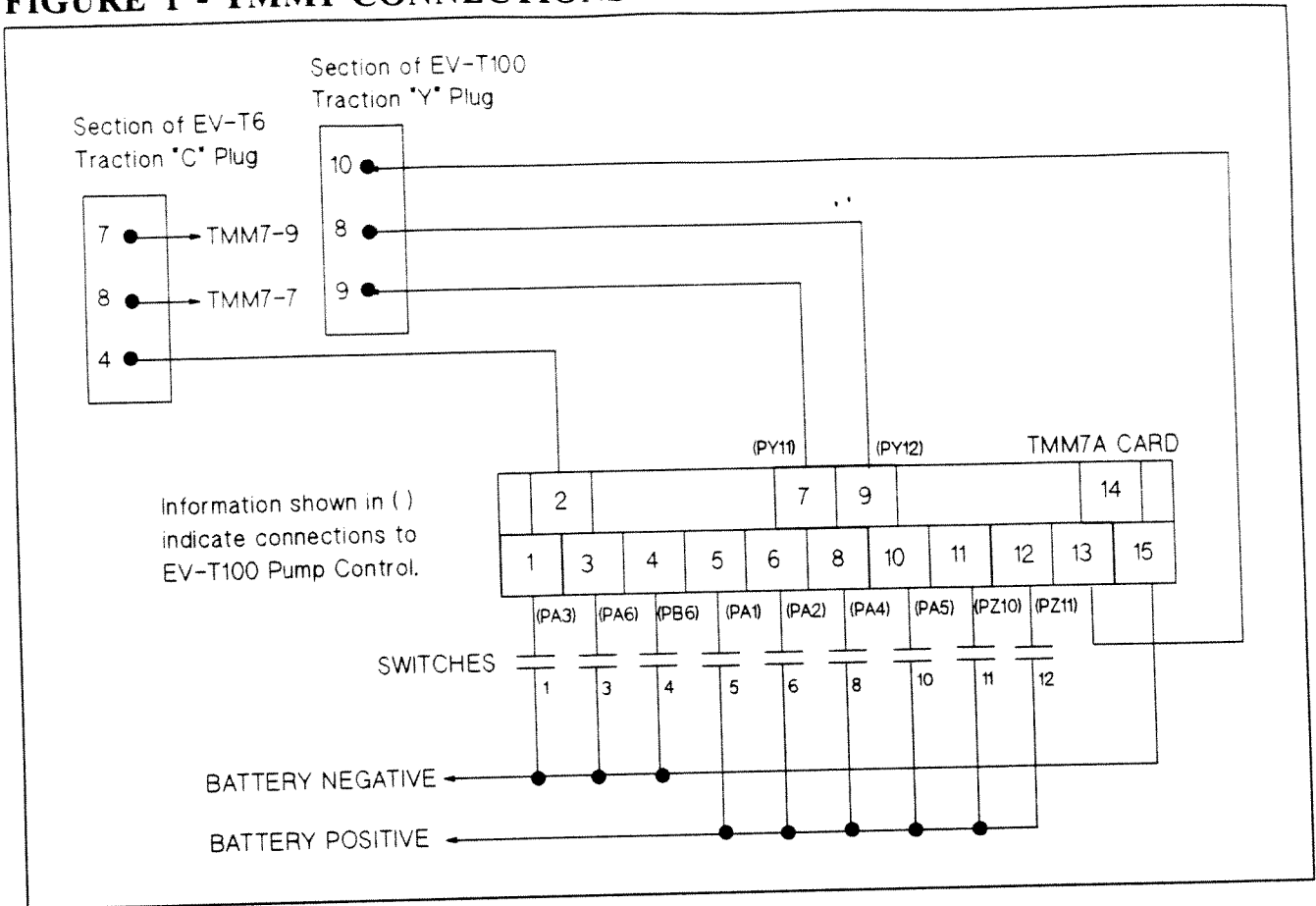
**Note: Motor armature must be in the positive side of the battery circuit.**

**INSTALLATION**

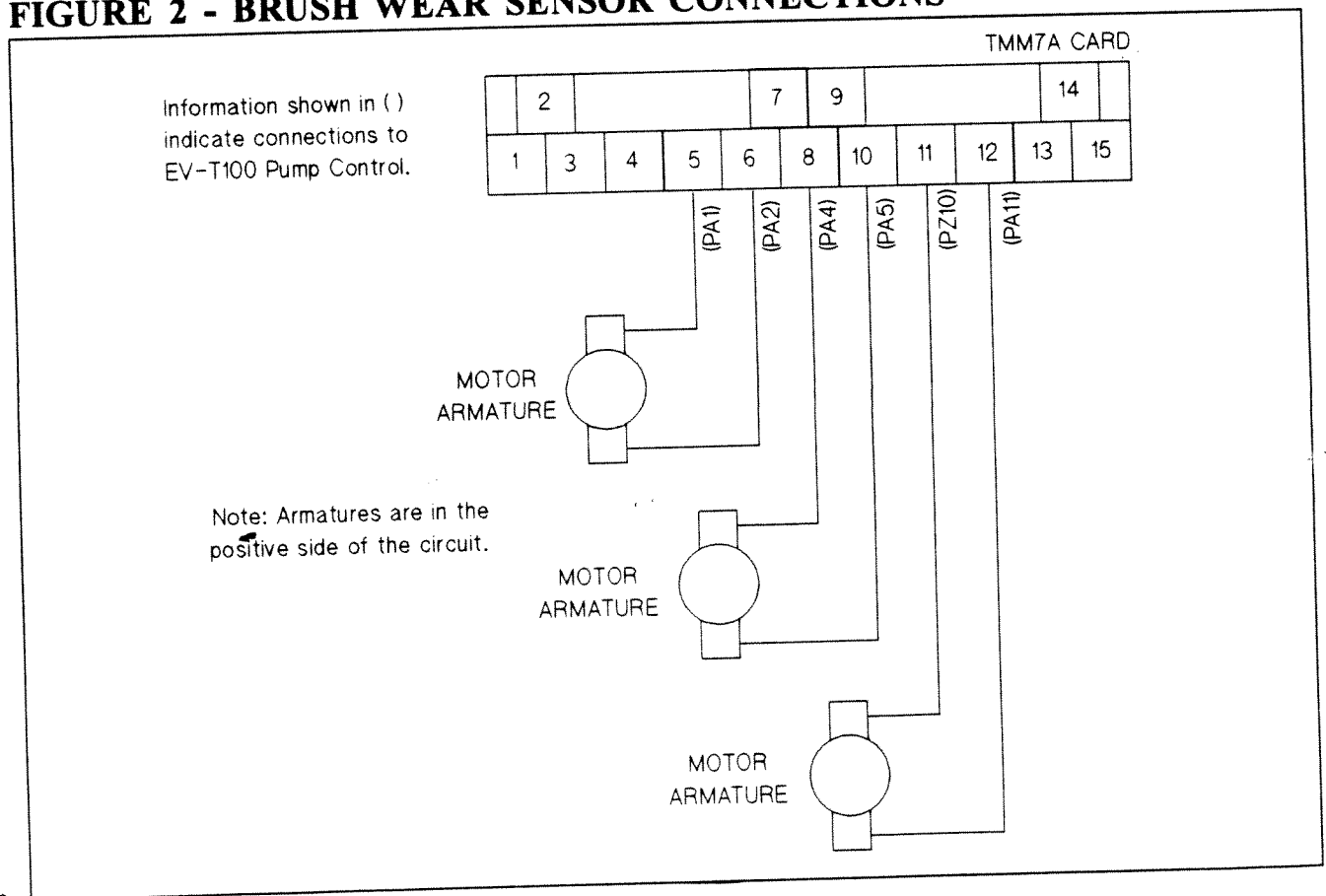
**WARNING: Before any adjustments, servicing or act requiring physical contact with working components, jack wheels off the floor, disconnect the battery and discharge the capacitor in the traction and ( pump ) controls.**

The TMM7A card should be mounted to a flat surface ( in any plane ) in an area protected from water, oil and battery acid . Mounting dimensions are shown in Figure 3. Two .187 (4.75mm) holes are provided for mounting.

**FIGURE 1 - TMM1 CONNECTIONS**



**FIGURE 2 - BRUSH WEAR SENSOR CONNECTIONS**



**FIGURE 3 - CARD BOX OUTLINE**

