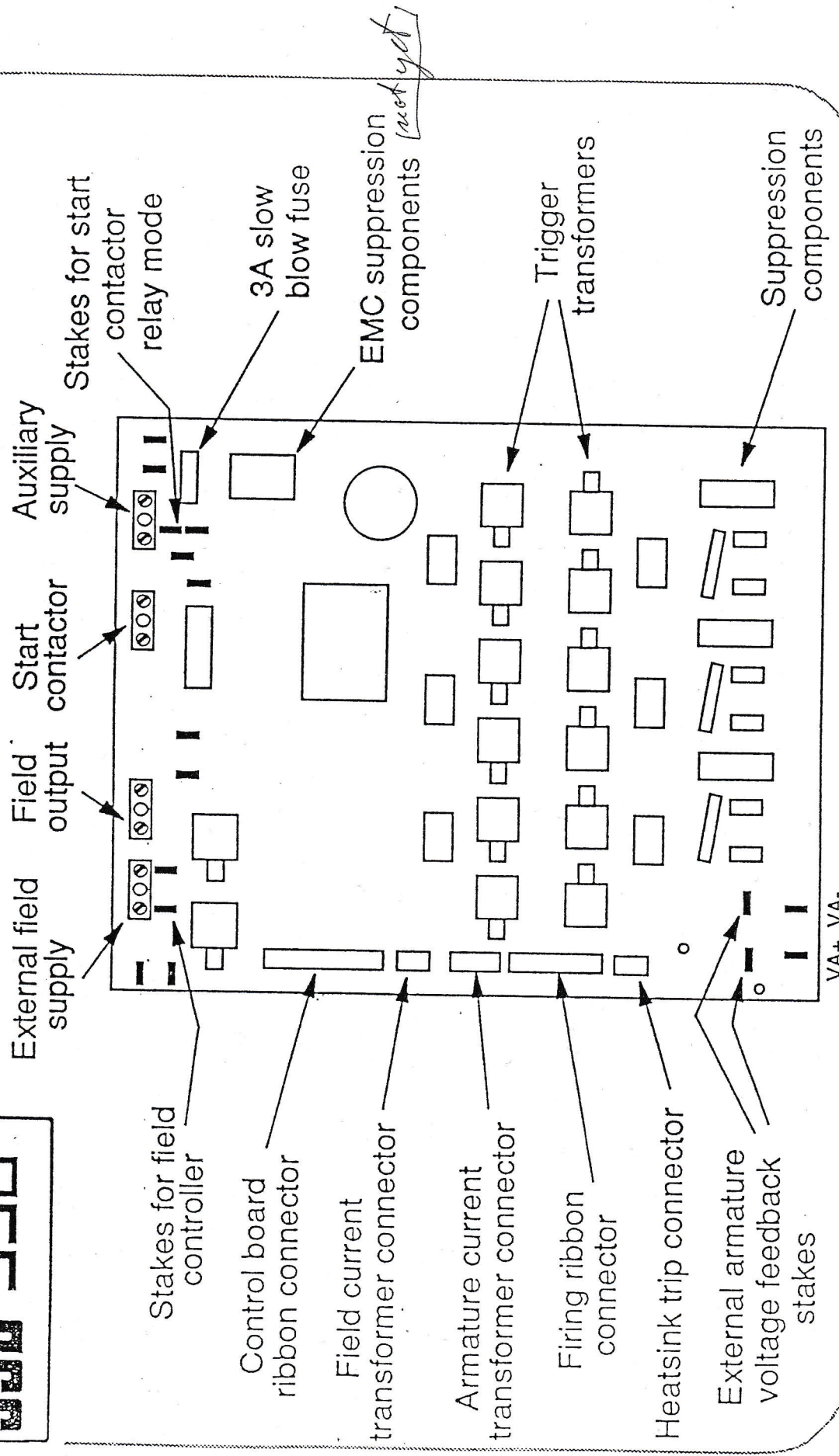


590

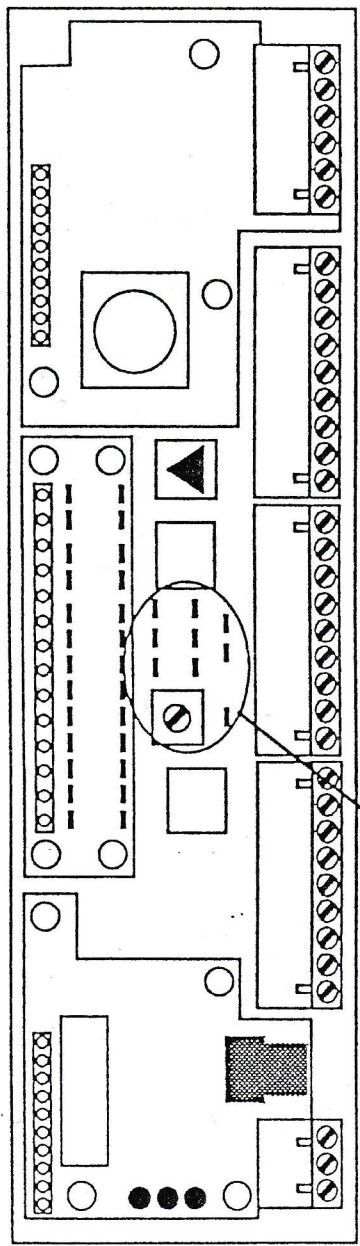
590 New power board layout



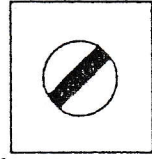


Control board test pins

For monitoring purposes
Control loop tuning



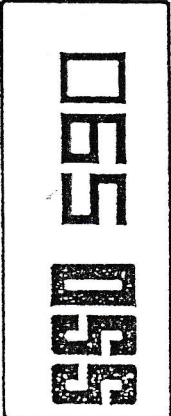
Display contrast
control pot



OV

- T1
- T2
- T3
- T4
- T5
- T6
- T7
- T8

- T1 - Armature current. (1.1V full scale)
- T2 - Analog Tach feedback. (10V full scale)
- T3 - Armature volts. (10V full scale)
- T4 - Field current. (4V = full scale)
- T5 - Not used
- T6 - Armature overcurrent
- T7 - Peek software diagnostic
- T8 - Not used

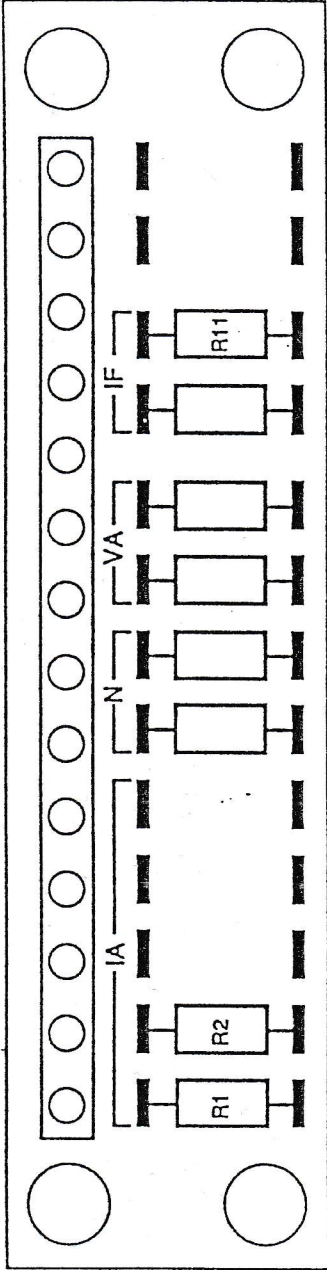


590 Calibration board

To allow calibration of:-

- Armature current → No software scaling
- Analog tachometer feedback → +2% to -10% software scaling
- Armature voltage → +2% to -10% software scaling
- Field current → +2% to -10% software scaling

Plug in calibration board



Armature current Scaling Analog tach scaling Armature volts scaling Field current scaling



Calibration equations

Armature current

$$R_a = \frac{2200}{(I_A - 1)} \quad \frac{1}{R_a} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \frac{1}{R_4} + \frac{1}{R_5}$$

I_A = FS armature current

Analog Tach

$$R_6 + R_7 = (\text{FS Tach volts} - 10) \text{ k ohms}$$

Armature volts

$$R_8 + R_9 = 0.1(\text{FS armature volts} - 100) \text{ k ohms}$$

Field current

$$R_f = \frac{3000}{\text{FS field current}} \quad \frac{1}{R_f} = \frac{1}{R_{10}} + \frac{1}{R_{11}}$$

Valid for all packaged 590 drives

Switchable calibration board under investigation