

**KNOWLEDGE BASE**

Article Type: Instructions

Hydrostatic Vibrator Drive controls – Rexroth VT2000 for Models, 22HF, 16HF, 1600, 30/50

Description:

Instructions on “How to” properly adjust the Rexroth VT-2000K/2000, and VT-VSPA1K-1-10 amplifier card. Amplifier cards used in the speed control on the Hydrostatic Vibrator Drives.

WARNING

Never work on, clean or service this unit, control panel or any machine or open or remove any protective cover, guard, grate, door, or maintenance panel until the power or energy sources has been turned off, locked out / tagged out, and all moving parts have come to a complete stop and or blocked to prevent movement. Machinery is dangerous - avoid personal injury and or death by following manufacture, Local, and OSHA safety procedures. Contact Columbia Machine for safety decals, guards, horns and beacons.

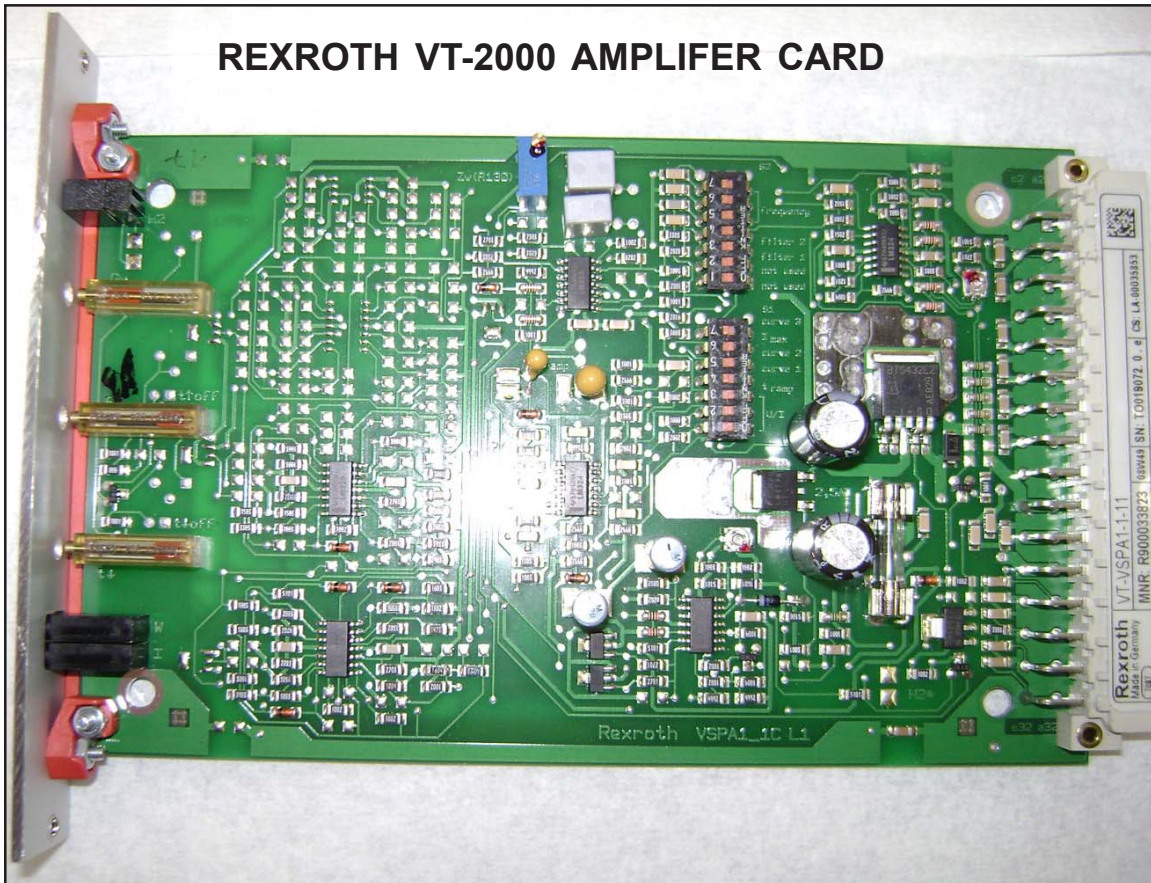
HYDROSTATIC VIBRATOR DRIVE CONTROLS

THE TOTAL SOLUTION



HYDROSTATIC VIBRATOR DRIVE CONTROLS

Columbia Machine, Inc.
Vancouver, Washington



HYDROSTATIC VIBRATOR DRIVE CONTROLS

REXROTH VT-2000K/2000 & VT-VSPA1K-1-10 AMPLIFIER CARD

The Rexroth VT-2000 Amplifier Card is a voltage to current amplifier where current rises proportionally to voltage input.

The external potentiometers (high speed and low speed) act as a voltage divider to vary the command voltage to the VT-2000 (terminal 12). Terminal 12 puts virtually no load on the divider network thus preserving the linearity of the divider.

The command input may vary between measured zero (terminal 14) and + 9 volts (terminal 10).



Measured zero is held positive by the VT-2000 and should not be connected with 24V common or ground. When measuring the voltage on terminal 10 or 12, use measured zero (terminal 14) as the **reference**.

The command input is isolated until either the high speed relay or the low speed relay is energized. This may be done manually, by the high speed / auto / low speed switch on the panel cover or electrically, by applying 120 volts AC to terminal 55 or 56 on the AC strip. Only one relay should be energized at one time.

The RPM limiter potentiometer acts as a dropping resistor to limit the maximum voltage at the divider networks. This limits the current output of the VT-2000 and thus the top speed of the vibrator.

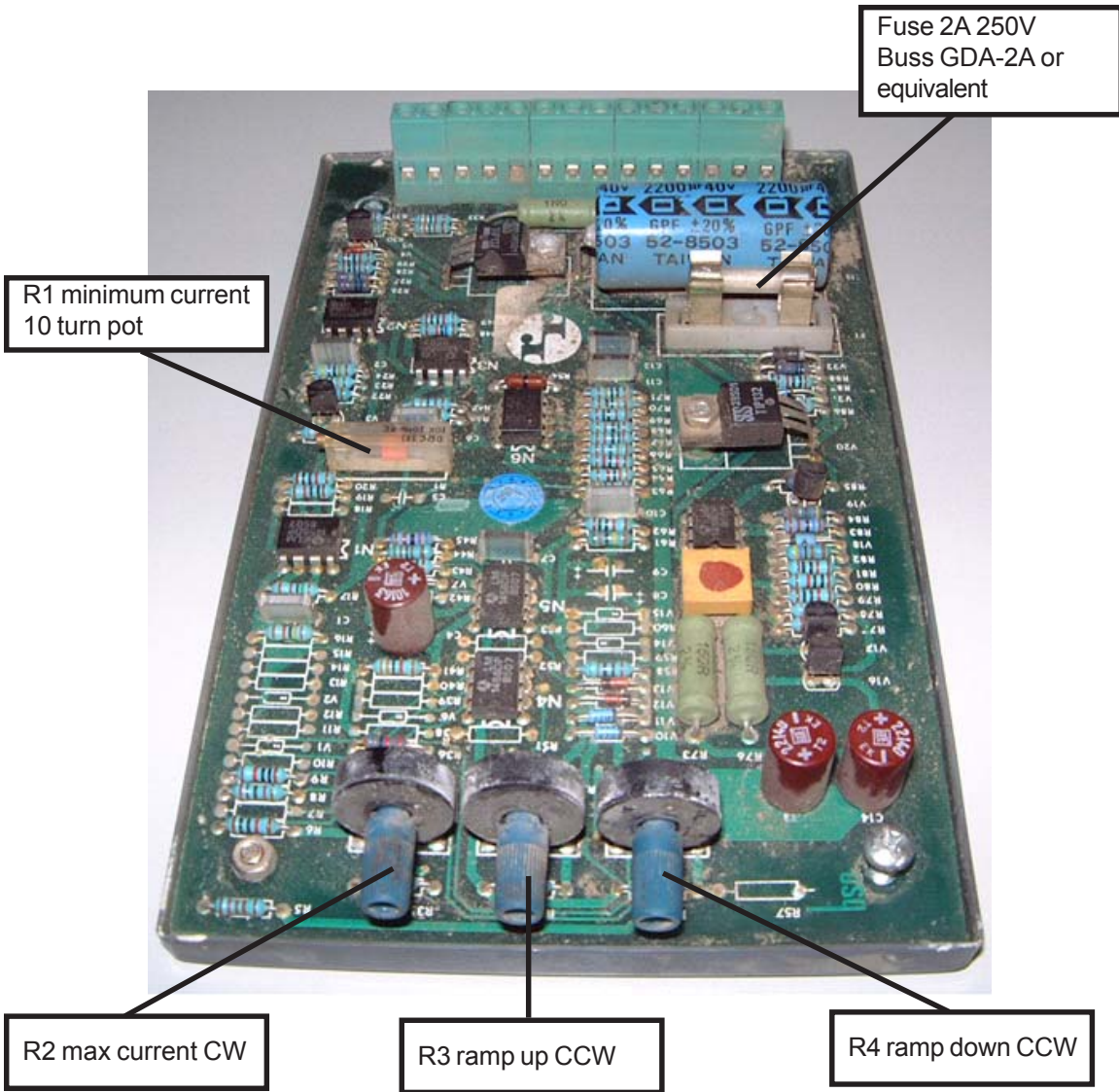
R3 on the VT-2000 controls the time it takes for the current output to reach its full value. This value is proportional to the input voltage. This option is not used in this application and should be set to minimum value of fully counter-clockwise.

R4 on the VT-2000 controls ramp down time. This also should be set to minimum or fully counter-clockwise for this application.

R2 controls the maximum current output and should be set to maximum or full clockwise.

R1 controls the maximum current output. This output will be present even without a command input on terminal 12. Minimum current is used to overcome hysteresis in the pump. If this is set to low, the pump will not get enough drive to actually pump oil. This is true for the first few turns of the high or low speed pots, from 0 to 3.0 on the dials. The maximum value for minimum drive should be 140 MA or less.

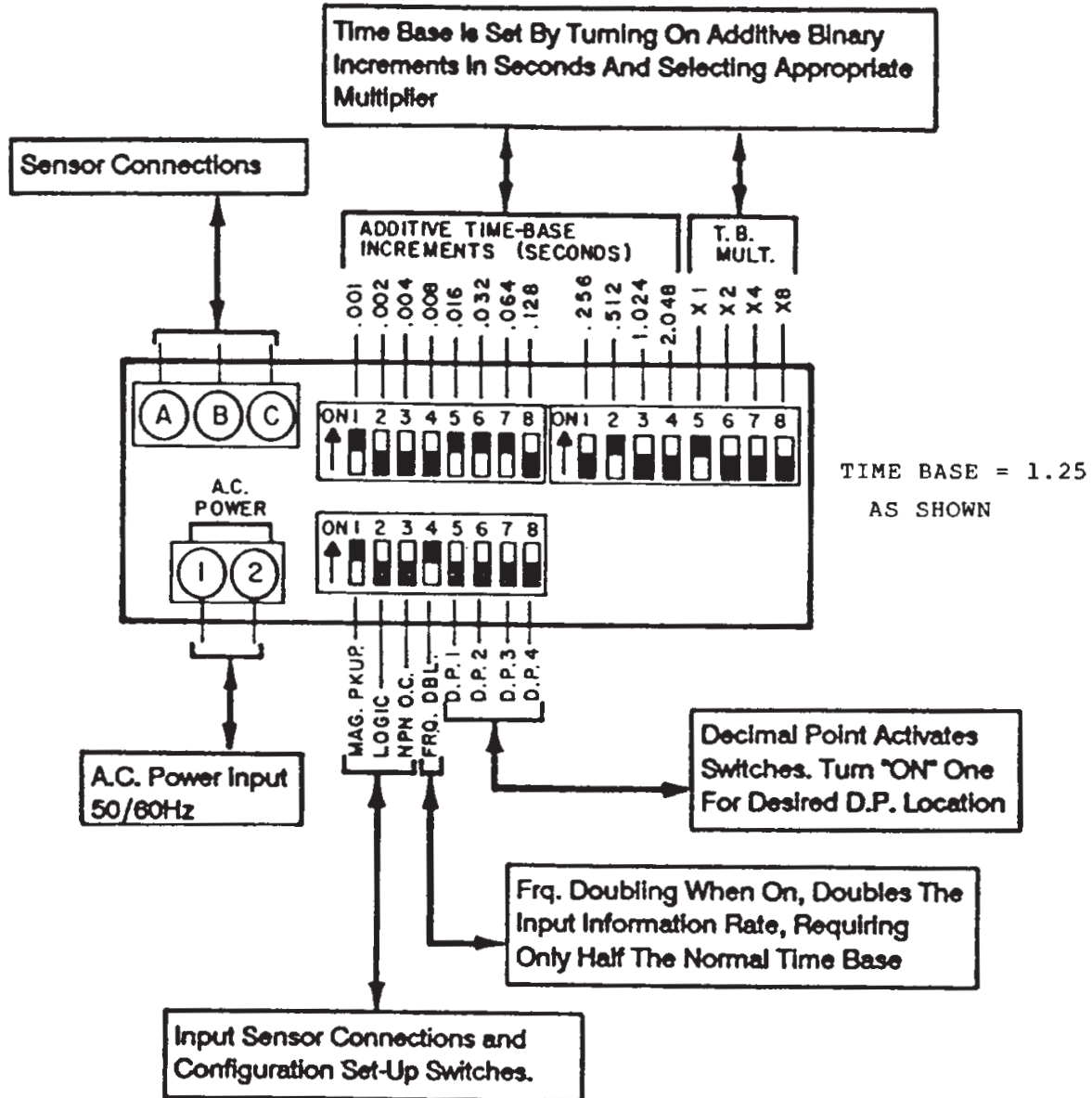
HYDROSTATIC VIBRATOR DRIVE CONTROLS



1st Generation VT Card: Part # 230525 VT-2000K
Replace with kit # 382.657.127

HYDROSTATIC VIBRATOR DRIVE CONTROLS

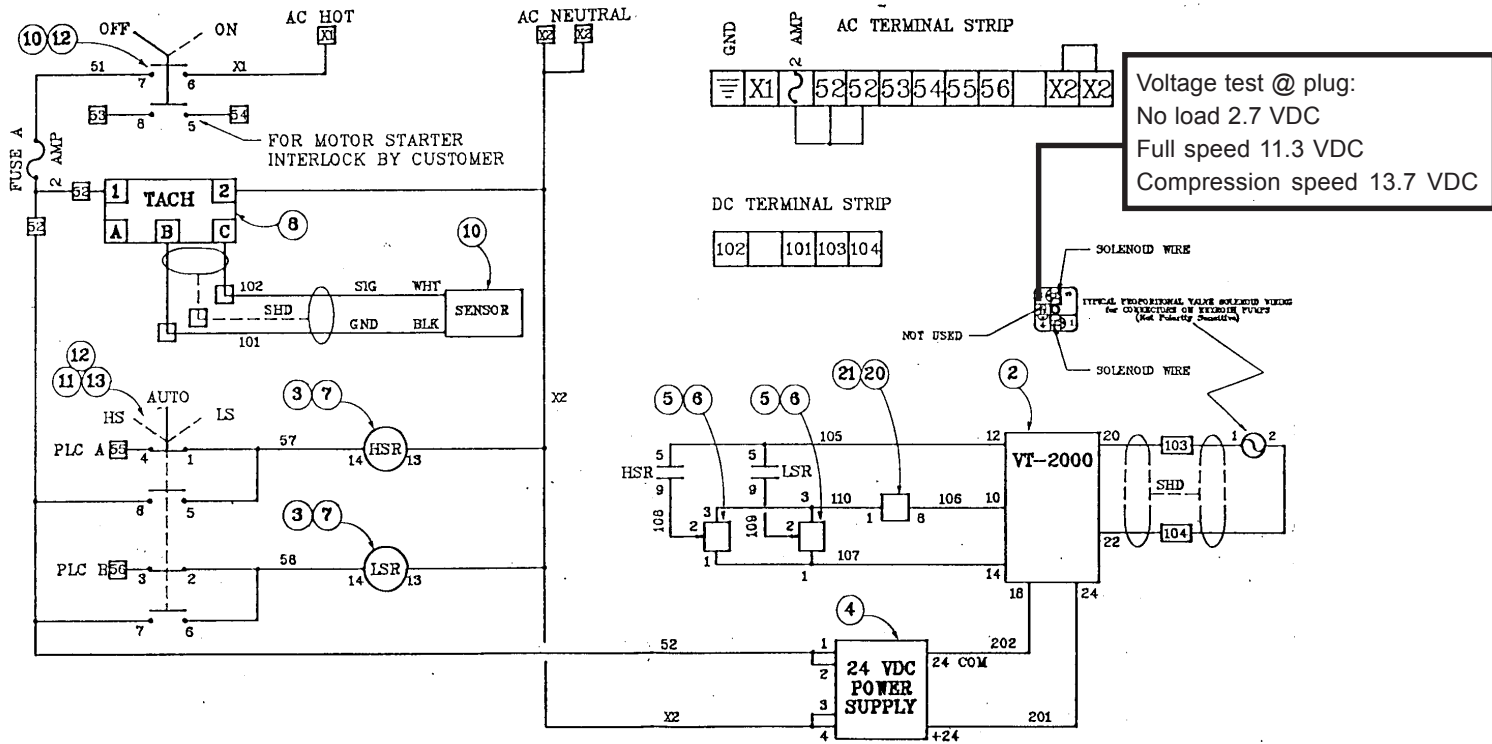
DITAK 3D CONNECTIONS & PROGRAMMING SWITCHES



Tachometer Dip Switch Settings: (Reference only part # 230540 OP Interface Meter Digital) For parts ordering please refer to your hydrostatic part manual.

Columbia Concrete Products

HYDROSTATIC VIBRATOR DRIVE CONTROLS



NOTE: Use shielded cable (Max length 100ft.) Shielded cable to be in separate cable.

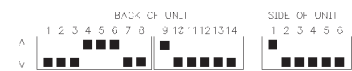
One (1) for valve cable.

One (1) for RPM cable.

Parts information: check your hydrostatic drive parts manual

NOTE:

(B) RA L ML LR DIP SWITCH SENSING (RLI ONLY)



(C) W/V1 - VS5A1-1-1X CARD

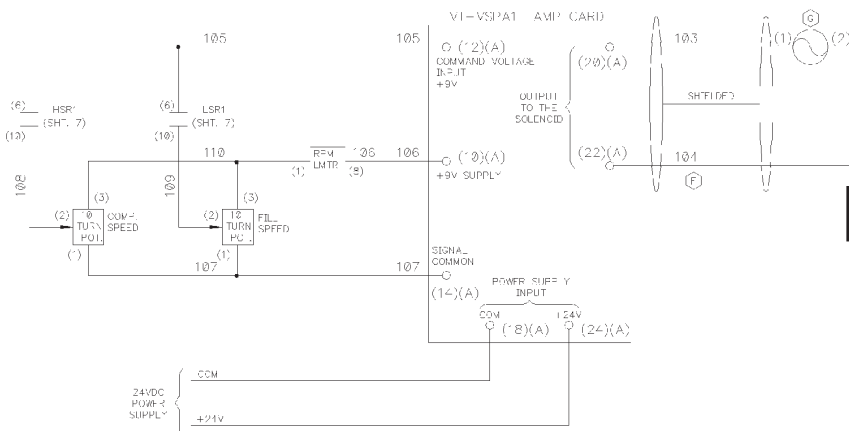


(F) USE SHIELD CABLE (MAX LENGTH 100 FT.) SHIELD CABLE TO BE IN SEPARATE CONDUITS.

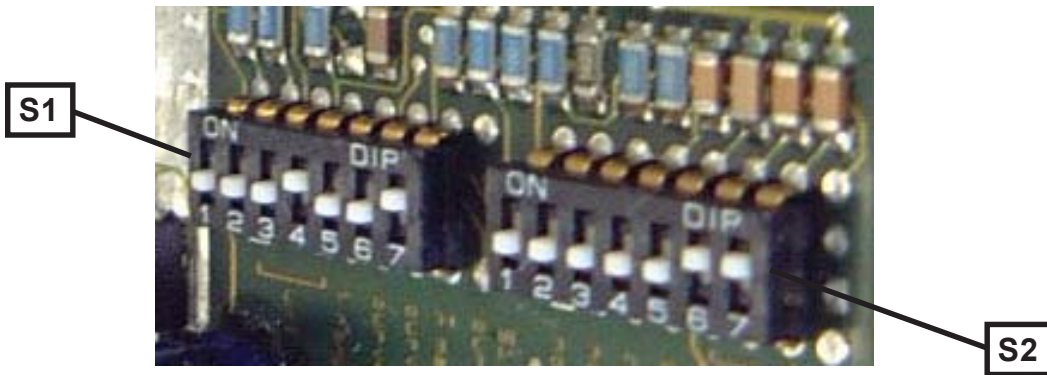
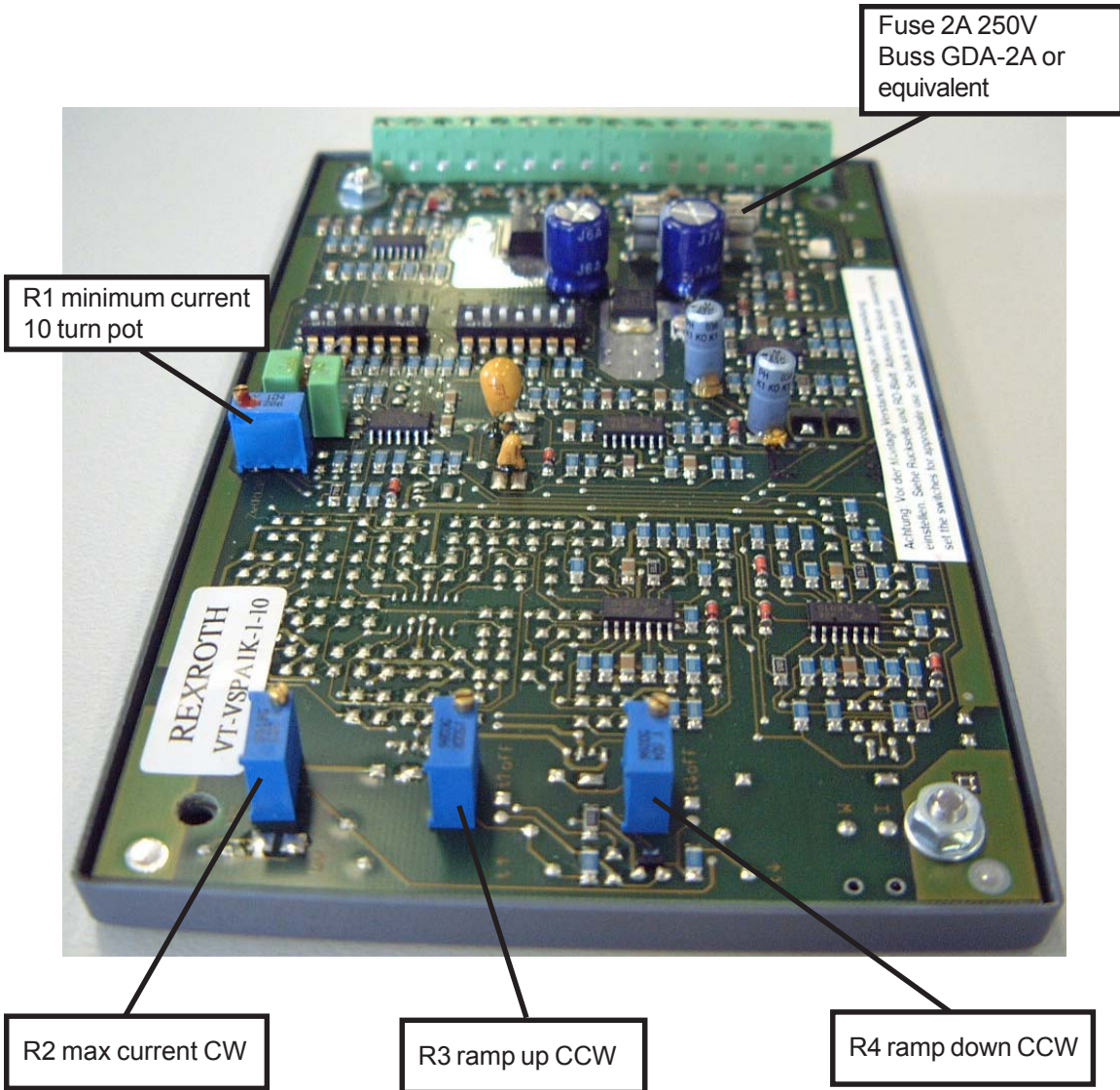
(G) TYPICAL PROPORTIONAL VALVE SOLENOID WIRING FOR CONNECTIONS ON REXROTH PUMPS (NOT POLARITY SENSITIVE)

1. - ALL DC VOLTAGE CONTROL WIRING SHALL BE #14AWG BLUE UNLESS OTHERWISE SPECIFIED.

2. - CONNECT WIRLS TO TERMINAL STRIP "A" ON CARD HOLDER.

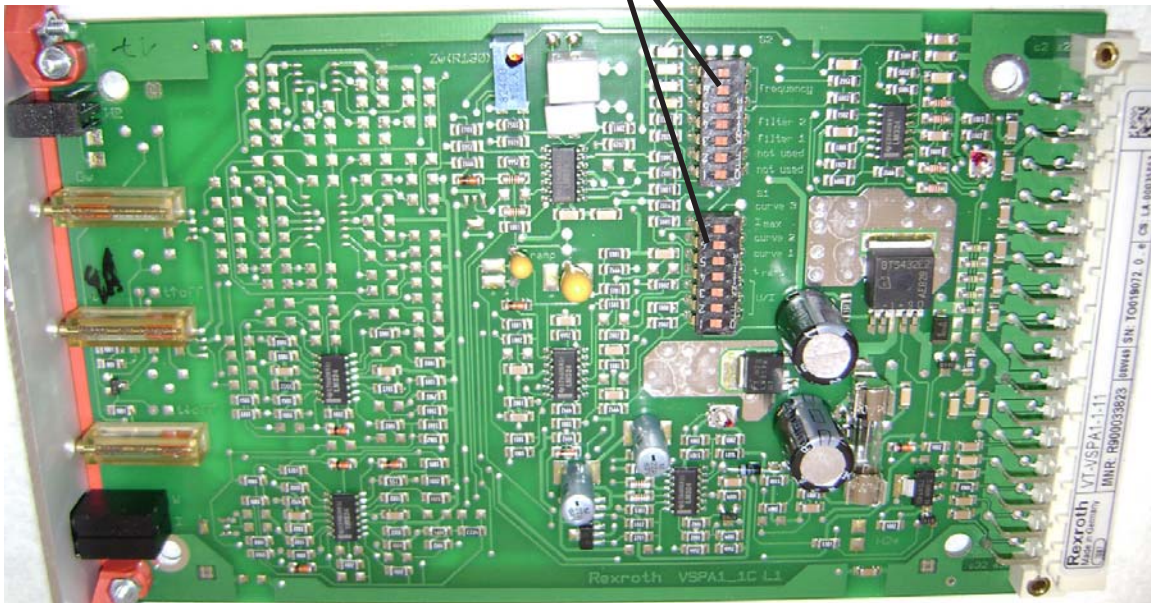
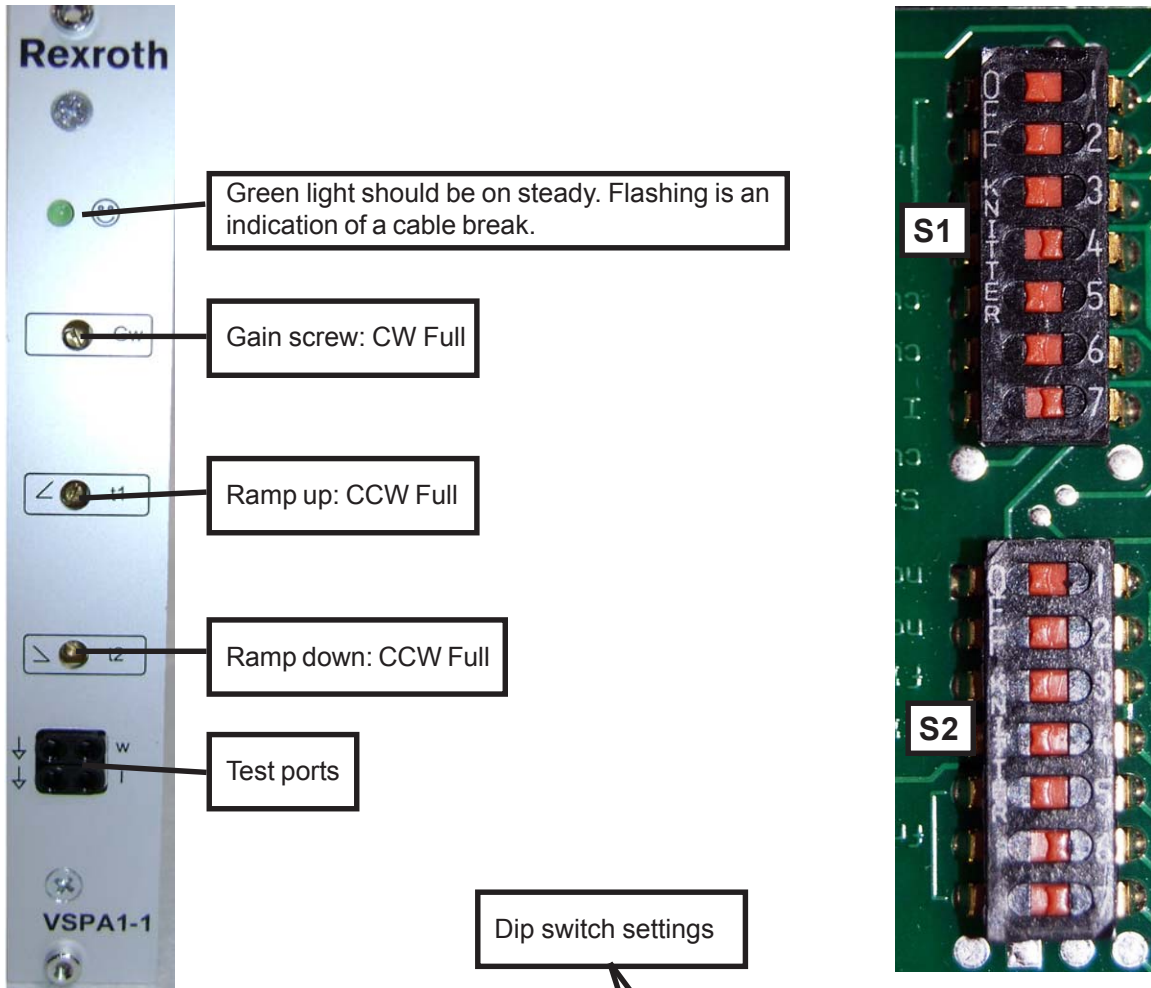


HYDROSTATIC VIBRATOR DRIVE CONTROLS



2nd Generation VT Card Part # 230565 VT-VSPA1K-1-10
Replace with Kit # 382.657.127

HYDROSTATIC VIBRATOR DRIVE CONTROLS



Current VT Card Part # 238789 VT-VSPA-1-1X