

IMPORTANT: Jumpers are read only on powerup, so power must be cycled for a change to a jumper setting to be recognized by the Drive.

To set the jumpers:

1. Remove power from the Drive. Remove the cover. Refer to Chapter 3 for cover removal. You do need to remove the HIM bracket.
2. The jumpers are located on the regulator board as shown in Figure 4.9.
3. Change the jumper settings as described in the following description and record them in the Final Setting column of Table 4.G.

Table 4.G
Jumper and Adjustment Settings

Jumper/Adjustment	Default Setting	Calculated Setting	Final Setting
J15 (Regulator Type)	Speed		
J16 (Program Protection)	<i>Not Currently Used</i>		
J20 (Field Loss Detect)	Enable		
J21 (Field Supply Jumper)	N/A ¹		
J19 (Analog Ref 2)	Pot		
J14 (Tach V Range)	62		
J11 (Tach V Scale)	16		
J10 (Analog Ref 1)	Volts		
J12 (Analog Ref 1)	Volts		
J18 (ARM I FB RB)	Position 4		

¹ Only applicable when the optional Enhanced Field Supply kit is installed.

Setting the Regulator Type (Jumper J15)

J15 determines whether the Drive uses speed/voltage or torque/current regulation mode. This jumper is read only when the regulator is powered up.

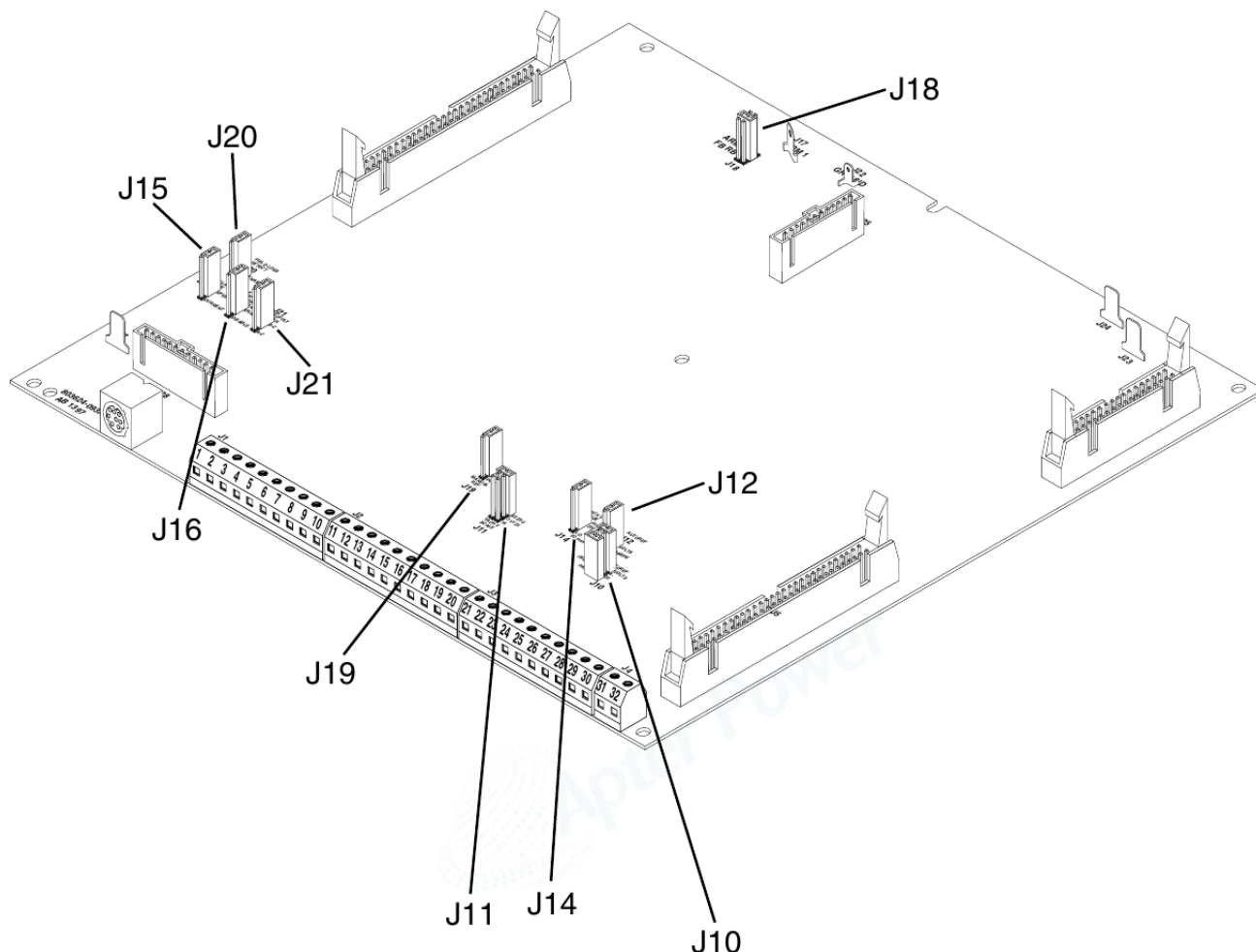
When Current is selected, all speed references become torque references. For example: Analog Ref 1 and Ref 2 are now *Torque References*.

Also note that speed/voltage parameters must be set to provide overspeed protection for the Drive.



ATTENTION: Failure to correctly set speed/voltage parameters could result in dangerously high motor speeds. Failure to provide overspeed protection could result in bodily injury or equipment damage.

Figure 4.9
Regulator Board Jumpers



Setting Field Loss Detection (Jumper J20)

The Field Loss Detect jumper (J20) determines whether or not a fault is generated when a field loss occurs.

IMPORTANT: Jumper J20 is ignored if the Field Current Regulator kit is installed. Therefore, placing J20 in the Disable position will not disable field loss detection. See the instructions supplied with the kit for more information on the Field Current Regulator.

NOTE: Jumper J20 has no effect if the drive is equipped with an enhanced or regulated field supply.



ATTENTION: The user must provide external field current loss detection and inhibit Drive operation via one of the Drive interlocks when Jumper J20 is positioned to disable. Misapplication of this jumper can cause the motor to run at dangerously high speeds. Failure to observe this precaution could result in bodily injury and/or equipment damage.

To detect complete loss of field current, place the jumper on pins 1 and 2 (Enable). When a complete loss is sensed, a fault is generated and the Drive is coast stopped.

To ignore field loss, place the jumper on pins 2 and 3 (Disable). Any loss of field current is ignored. Use the Disable option only when no field exists, such as with a permanent magnet motor or when a separate field supply is used.

IMPORTANT: Jumper J20 has no effect if a Regulated Field Supply is installed. No fault is generated with a Regulated Field Supply.

Setting the Drive for the Enhanced Field Supply (Jumper J21)

IMPORTANT: This jumper has no effect on the standard field supply or the optional Field Current Regulator kit.

The Field Supply Jumper (J21) determines the voltage range that the Drive expects to see from the optional Enhanced Field Supply kit. Refer to the instructions supplied with the kit for more information on the Enhanced Field Supply.

The DC voltage range can be either from 45 to 90% or from 90 to 112.5%.

To set the Drive for a voltage range of 45 to 90%, place the jumper on pins 1 and 2.

To set the Drive for a voltage range of 90 to 112.5%, place the jumper on pins 2 and 3.

Setting the Source for the Anlg Reference 2 (Jumper J19, Manual Ref on board)



ATTENTION: The Drive will not operate at the correct speed if Jumper J19 is not set to the correct position. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

The Manual Ref jumper (J19) determines whether the internal +10 V isolated power supply or an external +10 V source is used for Analog Reference 2.

To use the +10V power supply for the Analog Reference 2 potentiometer, place the jumper on pins 2 and 3 (Pot). The supply at terminal 16 of the regulator board terminal strip is used.

To use an external +10 V source, place the jumper on pins 1 and 2 (Ext). The external reference is connected at terminals 17 and 18 of the regulator board terminal strip.

NOTE: This input can be used as a trim on the auto mode speed reference by setting the jumper on pins 1 and 2 (EXT). In this case a ± 10 V range can be used.

Setting the Voltage Range and Scale of an Analog Tachometer (Jumpers J14 and J11)

The Tach V Range (J14) and Tach V Scale (J11) jumpers set the voltage range and scale of the analog tachometer.

NOTE: These jumpers are ignored if an analog tach is not used and if **[Feedback Type] (P. 039)** is not set to DC Tach or AC Tach.

Note: Jumper J14 determines which terminal is used for tach connection. Refer to Figure 4.15 for a tach installation illustration. Table 4.H details tach terminations for Lo or Hi speed operation.



ATTENTION: The Drive can overspeed if jumper J14 is set incorrectly, or the tach is wired incorrectly. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

Table 4.H
Regulator Board Terminal Strip Tach Terminations

	Terminal	Terminal
Hi – Range	21	23 (Common)
Lo – Range	22	23 (Common)

During quick start, the Drive calculates the value of the tachometer voltage range based on the values of **[Max Process Speed] (P. 042)** and **[Anlg Tach v/1000] (P. 047)** and the setting of Feedback Select. The correct values are displayed under the Diagnostics menu on the HIM. Verify these jumper settings before performing the auto-tuning procedure.