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# Bulletin 1370AR/NR

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## Supplemental Control or I/O Board Adjustment Instructions

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**Purpose** When replacing either an I/O Board or a Control Board of a DC Drive Module, the supplementary Offset Adjustment Procedure listed below must be performed to guard against unintended motor rotation. This procedure applies to Control Board P/N 112993 and I/O Board P/N's 112997 or 112998.



**CAUTION:** Failure to perform this procedure may cause machine damage due to motor creep in either the forward or reverse direction when the speed reference is at zero volts.

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**IMPORTANT:** The Speed Regulator Offset adjustment is only intended to compensate for offsets generated by Drive controller components and circuitry. Offsets generated by external reference or feedback devices **must** be corrected at the source and **not** with the Speed Regulator Offset potentiometer.

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**WARNING: REMOVE MAIN POWER AND CONTROL LOGIC POWER** before starting this procedure. Personal injury and/or equipment damage may occur if power is not removed.

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### Offset Adjustment Procedure

- 1. Remove all wires from terminals TB4-61, TB4-63 and TB1-2 through TB1-7 and insulate the ends.
- 2. Place insulated jumpers between TB4-61, TB4-63 and TB4-65. This will ensure a zero volt reference.
- 3. Connect an insulated jumper wire from TB2-27 to TB1-7.

Offset Adjustment Procedure  
(Continued)



**WARNING:** The following steps may cause the motor to rotate slowly in an undetermined direction. The danger of machine movement exists if the motor can not be uncoupled. Read through the following procedure first to understand fully the steps to be performed.

In case of improper machine motion, an operator **must** be prepared to initiate an Emergency Stop. Personal injury may also result if accidental contact is made with moving machine components. Alert all personnel before beginning step 4.

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- 4. Apply main power and control logic power.
- 5. Initiate a **Start**.
- 6. Connect a digital voltmeter with a 1M $\Omega$  minimum input impedance to TB4-77 (-) and TB4-79 (+).
- 7. Adjust the Speed Regulator Offset potentiometer (R78 on the Control Board) until the voltmeter reads 0.00V DC.
- 8. If 0.00V DC cannot be achieved by adjusting R78 on the Control Board, consult Allen-Bradley and Do Not Proceed. Remove main power.
- 9. Initiate a **Stop**.
- 10. **REMOVE MAIN POWER AND CONTROL LOGIC POWER.**
- 11. Remove jumper wires and voltmeter.
- 12. Reconnect wires previously removed in step 1.

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INSTRUCTION MANUAL FOR FUTURE REFERENCE**



# Bulletin 1387

## Supplemental Control or I/O Board Adjustment Instructions

**Purpose** When replacing either an I/O Board or a Control Board of a Bulletin 1387 High Performance DC Drive, the Speed Regulator Offset may have to be readjusted. The procedure listed below must be performed to guard against unintended motor rotation. This procedure applies to I/O Board P/N's 112997 or 112998 and Control Board P/N 112992.



**CAUTION:** Failure to perform this procedure may cause machine damage due to motor creep in either the forward or reverse direction when the speed reference is at zero volts.

**IMPORTANT:** The Speed Regulator Offset adjustment is only intended to compensate for offsets generated by Drive controller components and circuitry. Offsets generated by external reference or feedback devices **must** be corrected at the source and **not** with the Speed Regulator Offset potentiometer.



**WARNING: REMOVE MAIN POWER AND CONTROL LOGIC POWER** before starting this procedure. Personal injury and/or equipment damage may occur if power is not removed.

### Offset Adjustment Procedure

1. Remove all wires from terminals TB1-1 and TB1-3 (Speed Reference). To guard against noise injection, place insulated jumpers between TB1-1, TB1-3 and TB1-5. This will ensure a zero volt reference.
2. Connect a digital voltmeter with a 1M $\Omega$  minimum input impedance to TB1-17 (-) and TB1-19 (+) (tachometer).



**WARNING:** The following steps may cause the motor to rotate slowly in an undetermined direction. The danger of machine movement exists if the motor can not be uncoupled. Read through the following procedure first to understand fully the steps to be performed.

In case of improper machine motion, an operator **must** be prepared to initiate an Emergency Stop. Personal injury may also result if accidental contact is made with moving machine components. Alert all personnel before beginning step 3.

**Offset Adjustment Procedure**

*(Continued)*

- 3. Apply main power and control logic power.
- 4. Apply a **Run** command.
- 5. Adjust the Speed Regulator Offset potentiometer (R78 on the Control Board) until the voltmeter reads 0.00V DC.
- 6. If 0.00V DC cannot be achieved by adjusting R78 on the Control Board, consult Allen-Bradley and Do Not Proceed. Remove main power.
- 7. Apply a **Stop** command.
- 8. Remove main power. Remove the control logic power.
- 9. Remove jumper wires and voltmeter.
- 10. Reconnect wires previously removed in step 1.

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