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› Knowtek EFC3044196 Speed Control Unit Governor Instruction Manual

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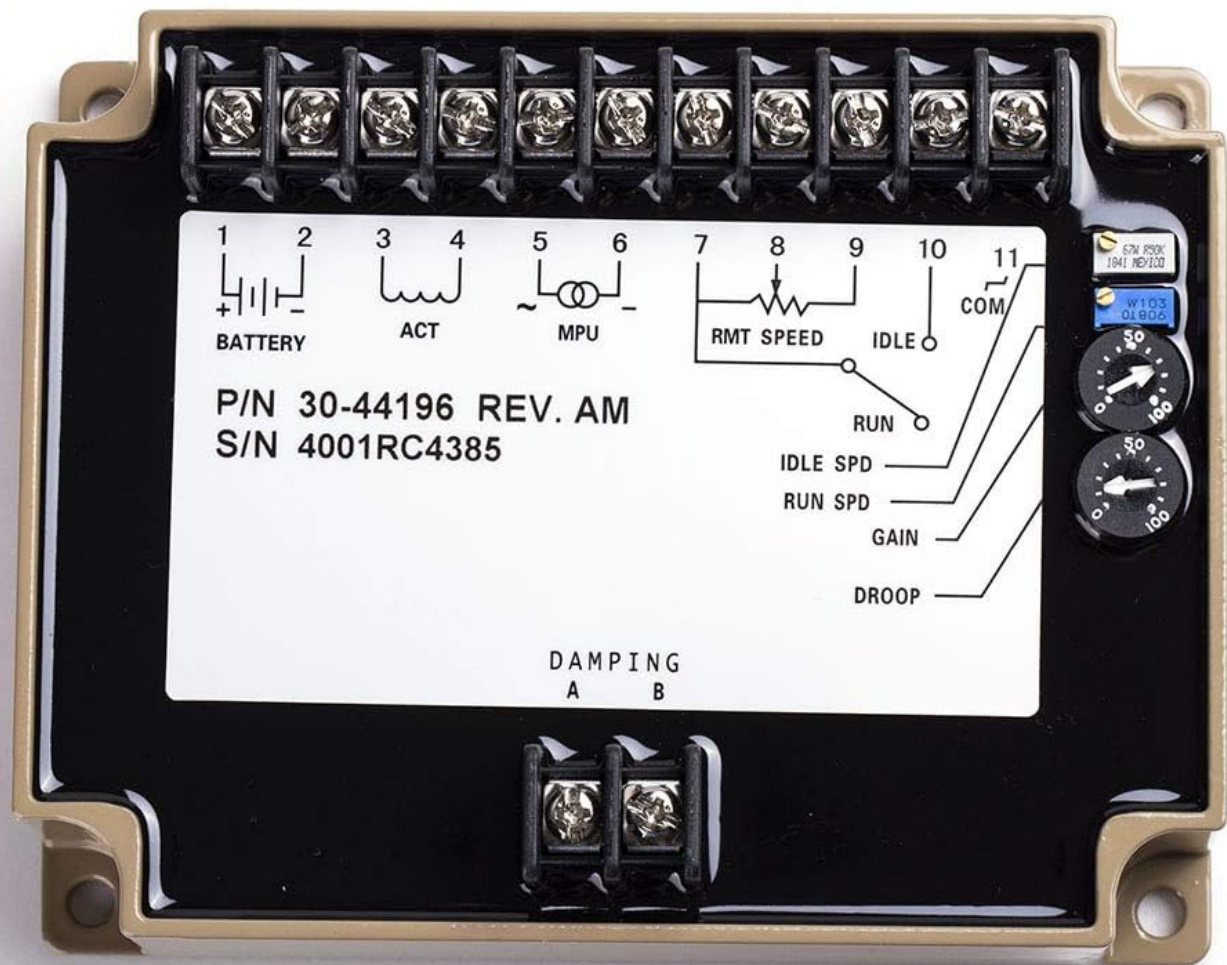
Model: EFC3044196

1. INTRODUCTION

The Knowtek EFC3044196 is an electronic speed control unit (governor) designed to precisely regulate engine speed for various generator applications, including KTA19, QSK19, and K19 models. This manual provides essential information for the safe and effective installation, operation, and maintenance of your speed control unit.

2. PRODUCT OVERVIEW

The EFC3044196 speed controller offers fast and precise response to transient load changes, ensuring stable engine performance. It features a wide speed control range and incorporates separate circuits for adjusting proportional, integral, and derivative (PID) values, allowing for fine-tuning of engine response. This unit is compatible with actuators such as EFC3408324, DYNA2000, and DYNA2500.



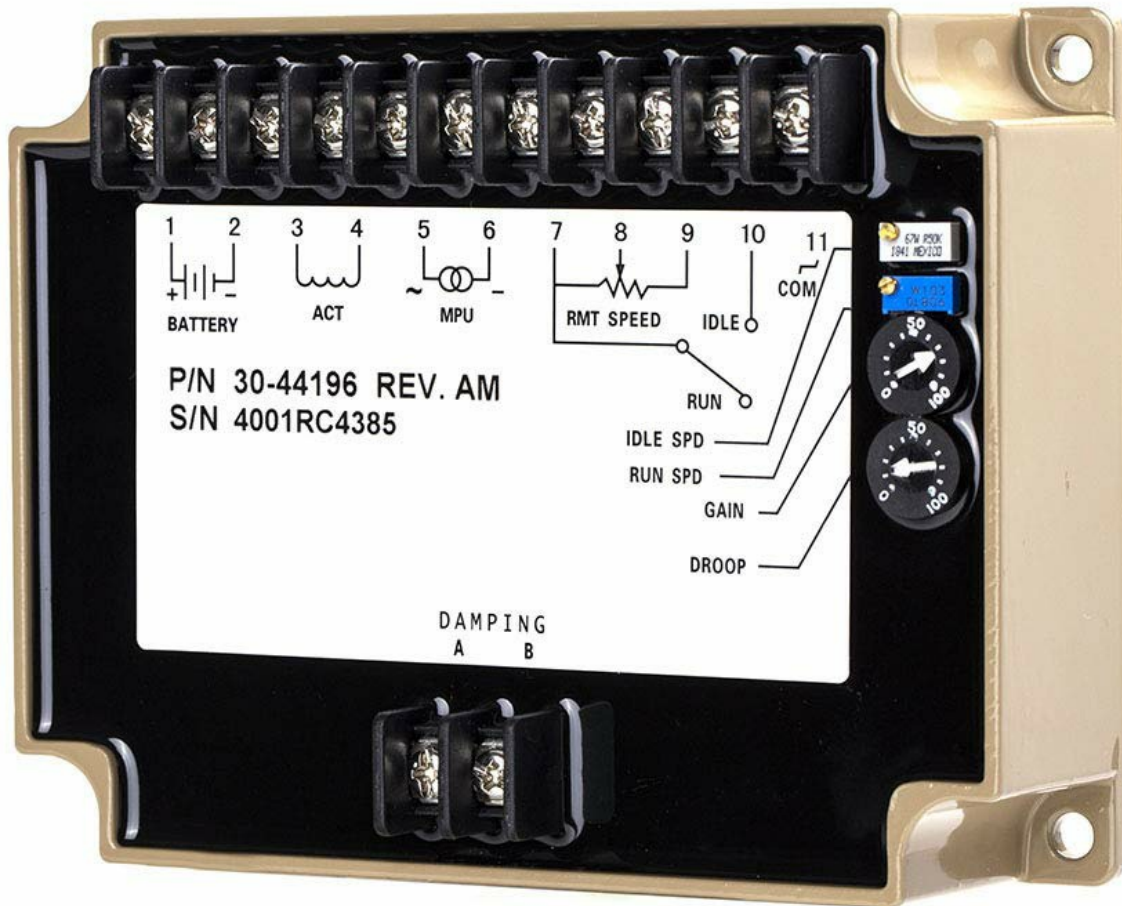
This image shows the Knowtek EFC3044196 Speed Control Unit Governor from a slightly angled top-down perspective, displaying its compact design and the terminal block.

3. SAFETY INFORMATION

- Always disconnect power from the generator and the speed control unit before performing any installation, maintenance, or inspection.
- Ensure proper grounding to prevent electrical shock.
- Only qualified personnel familiar with engine control systems should install and service this unit.
- Refer to your generator's specific manual for additional safety guidelines and procedures.
- Avoid contact with moving parts of the engine during operation.

4. INSTALLATION AND SETUP

Careful installation is crucial for the proper functioning of the EFC3044196 speed control unit. Follow the wiring diagram provided on the unit for correct connections.



This image displays the top view of the EFC3044196 speed control unit, highlighting the terminal block with its eleven connection points and the integrated wiring diagram. The diagram illustrates connections for battery power, actuator, magnetic pickup (MPU), remote speed adjustment, idle/run speed selection, and gain/droop adjustments. Two adjustment potentiometers are visible on the right side.

Wiring Connections:

1. **Terminals 1 & 2 (BATTERY):** Connect the battery supply. Terminal 1 is positive (+), Terminal 2 is negative (-).
2. **Terminals 3 & 4 (ACT):** Connect the actuator wires to these terminals.
3. **Terminals 5 & 6 (MPU):** Connect the magnetic pickup unit (MPU) to these terminals for speed sensing.
4. **Terminals 7, 8, & 9 (RMT SPEED):** These terminals are used for remote speed adjustment. Connect a remote potentiometer as per the diagram.
5. **Terminals 9 & 10 (IDLE/RUN):** Used for selecting between idle and run speeds.
6. **Terminal 11 (COM):** Common connection point.
7. **Terminals A & B (DAMPING):** These terminals are for damping adjustments.

Ensure all connections are secure and correctly polarized where applicable. Incorrect wiring can damage the unit or the engine.

5. OPERATING INSTRUCTIONS

The EFC3044196 features several potentiometers for fine-tuning engine speed and response characteristics. These are typically located on the unit's side or top panel, as indicated in the wiring diagram.

Adjustments:

- **GAIN:** Adjusts the sensitivity of the speed control unit. A higher gain setting provides a faster response to load changes but can lead to instability if set too high. Adjust incrementally until stable operation is achieved.
- **DROOP:** Controls the speed drop from no-load to full-load. This adjustment is critical for applications requiring parallel operation or load sharing between multiple generators.
- **IDLE SPD:** Sets the engine's idle speed. Adjust this potentiometer to achieve the desired low-speed operation.
- **RUN SPD:** Sets the engine's primary operating speed. Adjust this potentiometer to achieve the desired full-load operating speed.

Always make small adjustments and observe the engine's response before making further changes. Consult a qualified technician if you are unsure about any adjustments.

6. MAINTENANCE

- **Inspection:** Periodically inspect all wiring connections for tightness, corrosion, or damage. Ensure the unit is securely mounted.
- **Cleaning:** Keep the speed control unit clean and free from dust, dirt, and moisture. Use a soft, dry cloth for cleaning. Do not use solvents or abrasive cleaners.
- **Environmental Protection:** Ensure the unit is protected from excessive vibration, extreme temperatures, and direct exposure to water or corrosive substances.
- **Service:** The EFC3044196 contains no user-serviceable parts. Any internal repairs should only be performed by authorized service personnel.

7. TROUBLESHOOTING

If you encounter issues with your EFC3044196 speed control unit, consider the following common troubleshooting steps:

- **Engine Speed Instability:** Check the GAIN and DROOP settings. Adjust them incrementally to find a stable operating point. Ensure the magnetic pickup (MPU) signal is clean and strong.
- **Engine Fails to Start or Maintain Speed:** Verify all power connections (Terminals 1 & 2) and actuator connections (Terminals 3 & 4). Ensure the MPU is correctly connected and functioning.
- **No Response to Speed Adjustments:** Check the remote speed potentiometer and its wiring to terminals 7, 8, and 9. Verify the IDLE/RUN switch functionality.
- **Over-speed or Under-speed:** Re-check the RUN SPD and IDLE SPD potentiometer settings.

If problems persist after performing these checks, contact a qualified technician for further assistance.

8. SPECIFICATIONS

Feature	Specification
Model Number	EFC3044196
Manufacturer	KNOWTEK
Package Dimensions	6.54 x 6.22 x 2.4 inches

Feature	Specification
Item Weight	1.94 pounds
Actuator Compatibility	EFC3408324, DYNA2000, DYNA2500 (and similar)
Engine Compatibility	KTA19, QSK19, K19 Generators (and similar)

9. WARRANTY AND SUPPORT

For detailed warranty information, technical support, or service inquiries regarding your Knowtek EFC3044196 Speed Control Unit Governor, please refer to the product packaging or contact Knowtek customer service directly. Keep your purchase receipt for warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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