HIRINTOL L60E L70E L90E L110E L120E

Instruction Manual

HIRINTOL ECU Engine Control Module for Volvo L60E-L120E Wheel Loaders and EC140B-EC460B Excavators

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of the HIRINTOL ECU Engine Control Module. Please read this manual thoroughly before attempting any procedures to ensure correct usage and to prevent damage to the unit or associated machinery.

2. Product Overview

The HIRINTOL ECU Engine Control Module (ECM) is an aftermarket electronic control unit designed for direct replacement in compatible Volvo heavy machinery. It manages various engine functions to ensure optimal performance.

Product Details:

- **Part Names:** ECU Controller, ECM Controller, Electronic Control Module, Engine Control Unit Module
- **Fuel Type:** Diesel
- **Material:** Metal
- **Reference Numbers:** 20577135, 60100002

Compatible Models:

- **Volvo Wheel Loaders:** L60E, L70E, L90E, L110E, L120E
- **Volvo Excavators:** EC140, EC140B, EC160, EC160B, EC210, EC210B, EC240, EC240B, EC290, EC290B, EC330, EC330B, EC360, EC360B, EC360LC, EC460, EC460B, EC460BLC, EW160B, EW180B, EW200B



Figure 2.1: Top-down view of the HIRINTOL ECU Engine Control Module, showing its metallic casing and overall form factor.



Figure 2.2: Side view of the ECU, highlighting the two main electrical connector ports where wiring harnesses attach.



Figure 2.3: Detailed view of one of the multi-pin electrical connectors on the ECU, showing the internal pin configuration.

3. Setup and Installation

Proper installation and programming are critical for the correct function of the ECU. It is strongly recommended that installation and removal procedures be performed by an experienced technician.

Pre-Installation Requirements:

- Before installation, ensure the vehicle's battery is disconnected to prevent electrical damage.
- For programming, the following information is required:
  - Original Module Part Number and a picture of the original module.
  - Vehicle Model and Serial Number.
  - Engine Model and Serial Number.

Installation Steps:

1. Carefully remove the existing ECU from the vehicle, noting all connections.
2. Install the new HIRINTOL ECU in the same location, ensuring all mounting points are secure.
3. Connect all electrical harnesses to the appropriate ports on the new ECU. Ensure connections are firm and correctly seated.
4. Reconnect the vehicle's battery.
5. **Programming:** The module requires programming to function correctly with your specific engine. This unit is pre-programmed to your engine's exact specifications prior to shipment, making it ready for immediate installation.

4. Operating Instructions

Once the HIRINTOL ECU Engine Control Module is correctly installed and programmed, it operates

automatically as an integral part of the vehicle's engine management system. No direct user interaction is required for its operation.

- The ECU continuously monitors engine sensors and adjusts parameters such as fuel injection, ignition timing, and emissions control to optimize engine performance and efficiency.
- Ensure all vehicle systems are functioning normally after installation. Any warning lights or unusual engine behavior should be addressed immediately by a qualified technician.

5. Maintenance

The HIRINTOL ECU Engine Control Module is a sealed electronic component and does not require routine user maintenance. It is designed for long-lasting performance through improved circuitry and manufacturing processes.

- Keep the area around the ECU clean and free from excessive dirt, moisture, or corrosive substances.
- Avoid physical impact or tampering with the unit.
- Regular vehicle maintenance, including checking electrical connections, helps ensure the longevity and proper function of all electronic components, including the ECU.

6. Troubleshooting

If the vehicle exhibits issues after ECU installation, consider the following general troubleshooting advice. Due to the complex nature of engine control systems, professional diagnostic services are recommended.

- **Engine Warning Lights:** If an engine warning light illuminates, it indicates a detected fault. Use a diagnostic scanner to retrieve trouble codes.
- **Engine Performance Issues:** Poor engine performance (e.g., misfires, reduced power, rough idling) can stem from various sources. Verify all electrical connections to the ECU are secure.
- **No Start Condition:** Check battery voltage and ensure all fuses related to the engine and ECU are intact. Confirm proper programming of the ECU.

For persistent issues, consult a certified technician specializing in Volvo heavy equipment. Do not attempt to repair the ECU yourself.

7. Specifications

Feature	Detail
Product Dimensions	1.97 x 1.18 x 1.57 inches
Item Weight	4 pounds
Material	Metal
Operating Temperature	Up to 85 Degrees Celsius
Included Components	1pc 20577135 60100002 ECU ECM Controller Electronic Control Module

8. Warranty Information

The HIRINTOL ECU Engine Control Module comes with a **12-month warranty period**. During this period, if any problems arise due to manufacturing defects or component failure under normal operating conditions, repair or replacement services will be provided.

This warranty does not cover damage resulting from improper installation, misuse, accidents, unauthorized modifications, or normal wear and tear.

9. Support Information

For technical assistance, warranty claims, or any questions regarding your HIRINTOL ECU Engine Control Module, please contact the seller directly. When contacting support, please have your purchase details, the original module's part number, vehicle model, and serial numbers readily available.
Manufacturer: HIRINTOL
Seller: HIRINTOL-shop
We are committed to providing a satisfactory experience and reliable after-sales service.