

LS Series Crate Engine Control System

This control system is a stand alone, fully-integrated kit designed to run GM Performance Parts LS series crate engines with 58x crankshaft reluctor wheels, 4x camshaft indexing, and electronic throttle control (ETC) - typically 2006 and newer. Included in the kit are the engine control module (flashed with the appropriate calibration for the LS series engine used), engine harness, accelerator pedal, mass air flow (MAF) sensor, MAF sensor mounting boss, oxygen sensors (2), and oxygen sensor mounting bosses.

This control system requires a fuel system which maintains 400 kPa (60 psi) constant pressure and can deliver 40 gph for LS2/LS3/LS376's or 50 gph for LS7's. Vehicle performance/driveability and engine durability may be affected if correct pressure or flow are not maintained.

Installation Instructions:

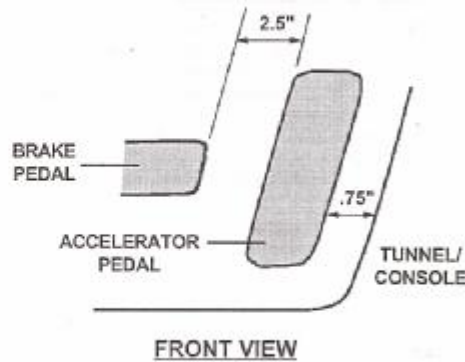
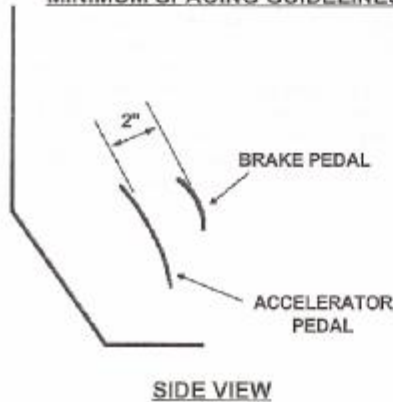
ECM

The Engine Control Module (ECM) is environmentally sealed and can be mounted underhood, however, avoid extremely hot locations (exhaust, etc.) or high splash areas. It is not recommended that the ECM be mounted directly to the engine.

Accelerator Pedal

Mount the accelerator pedal per the following dimensional guidelines, mounting details are application-specific and are left to the user. Ensure that the pedal is securely mounted to the vehicle. A grommet is required in any sheet metal hole that the harness routes through to avoid wire damage.

**ACCELERATOR PEDAL ASSEMBLY
MINIMUM SPACING GUIDELINES**



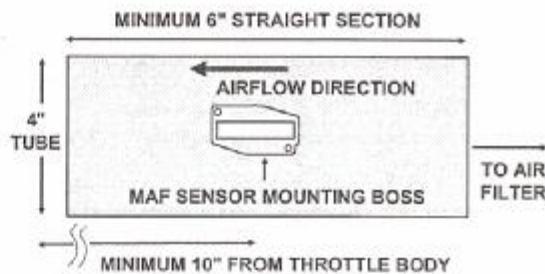
Mass Air Flow (MAF) Sensor

NOTE: It is critical that the MAF sensor is mounted per the instructions below. Vehicle performance and/or driveability may be affected if it is not mounted as recommended.

The mass air flow sensor must be installed in the induction system using the supplied MAF sensor mounting boss. The induction system should be 4 inches in diameter and have a minimum straight section 6 inches in length. Mount the MAF sensor in the middle of the straight induction section, ensuring that the middle of the mounting boss is at least 10 inches from the throttle body.

The MAF sensor must be oriented correctly in the induction system - note the arrow on the sensor indicating flow direction. Be sure to weld the mounting boss correctly - the sensor will only mount one way in the boss (see diagram). Weld the boss in place before installing the sensor. When installed in the vehicle, the MAF sensor should be mounted with the connector end pointing between horizontal and fully upright - do not mount with the connector oriented downward.

MAF SENSOR MOUNTING GUIDELINES



LS Series Crate Engine Control System REV 01OC07 PART NO. 19171935 SHEET 1 OF 12

ALL INFORMATION WITHIN ABOVE BORDER TO BE PRINTED EXACTLY AS SHOWN ON 8.5x11 WHITE 16 POUND NON-BOND RECYCLABLE PAPER. PRINTING BOTH SIDES EXCLUDED. TEMPLATES TO BE LIMITED IN ACCORDANCE WITH GM/PO SPECIFICATIONS.

DATE	REVISION	AUTH	DR
19MR07	Initial Release - Anthony Cubr		
01OC07	Revised - Anthony Cubr		

TITLE **INSTALLATION INSTRUCTIONS**
LS Series Crate Engine Control System

PART NO. **19171935** SHEET **1** OF **12**