GOVERNMENT OF PAKISTAN
COLLECTORATE OF CUSTOMS APPRAISEMENT
(EAST) CUSTOM HOUSE
KARACHI

No. C-35/KAPE/DC-PCT/2026

Date: 10-10-2026

PUBLIC NOTICE NO. 64 /2026

SUBJECT: **CLASSIFICATION OF CUMMINS ELECTRONIC CONTROL MODULES (ECMs) IMPORTED BY M/S ORIENT ENERGY SYSTEMS (PVT) LIMITED.**

122256-R 28-10-26

BACKGROUND:

The present ruling concerns the tariff classification of three Cummins Electronic Control Modules (ECMs), imported for use in diesel-engine control systems. The subject goods are dedicated electronic engine-control units which receive signals from various engine sensors, process such signals through stored control software and calibration, and generate commands for fuel systems, actuators and other engine functions. The issue requiring determination is whether the subject ECMs are classifiable under heading 90.32, covering automatic regulating or controlling instruments and apparatus, or under heading 85.37, which includes programmable controllers.

PRODUCT ANALYSIS:

2. The products under examination, bearing Cummins part numbers **4995445NX**, **5317106NX** and **4954573**, are Electronic Control Modules (ECMs) used in Cummins diesel-engine control systems. These models are identified from the packing list provided with GD No. **KAPW-HC-81360-04-11-2025**. The ECMs are dedicated engine-control computers that receive signals from engine sensors, process them according to programmed parameters, and issue commands to actuators to monitor, regulate and protect engine operation. The ECM's function is substantially broader than merely recording engine information. It performs active control functions, including:

- *receiving and processing signals from engine sensors;*
- *determining the appropriate engine operating parameters from the programmed control logic;*
- *controlling fuel delivery and injection-related functions;*
- *controlling or commanding engine actuators;*
- *monitoring engine operating conditions;*
- *identifying and recording diagnostic fault etc.*

LAW & ANALYSIS:

3. The classification of imported goods is required to be determined in accordance with the *General Rules for the Interpretation of the Harmonized System ("GRIs")*, read with the relevant Section and Chapter Notes and, where appropriate, the Explanatory Notes to the Harmonized System. In the present case, the competing tariff headings requiring consideration are heading 90.32 and heading 85.37.

Heading 90.32 provides:

> *"Automatic regulating or controlling instruments and apparatus; parts and accessories thereof."*

Chief (TPS) 28/10/26 Webmaster

Muhammad Abu Bakar Siddiqui
Chief (TPS)

Heading 85.37 provides:

> ***"Boards, panels, consoles, desks, cabinets and other bases, equipped with two or more apparatus of heading 85.35 or 85.36, for electric control or the distribution of electricity, including those incorporating instruments or apparatus of Chapter 90, and numerical control apparatus, other than switching apparatus of heading 85.17."***

IMPORTER'S CONTENTION:

4. The importer contended that the subject ECM falls under Heading 90.32, emphasizing that its function is to automatically regulate and control engine parameters. It was further argued that its programme is fixed/pre-programmed and not capable of dynamic modification, and therefore the ECM should not be regarded as a programmable controller under Heading 85.37.

DEPARTMENT'S POINT OF VIEW:

5. The Department also presented its point of view and narrated that the fixed nature of the programme stored in the ECM does not, by itself, determine its classification. The Department further submitted that heading 90.32 is subject to the specific conditions prescribed under Note 7 to Chapter 90. It was explained that the subject ECMs perform broader engine-management functions, including fuel management, actuator control, monitoring, diagnostics and engine protection, rather than being confined to regulating a particular variable to a predetermined value. The Department, therefore, maintained that the subject ECMs are essentially programmable electronic controllers for machinery and merit consideration under heading 85.37, rather than heading 90.

LAW & ANALYSIS:

6. The Classification Committee has examined the matter in light of the submissions made by the representative of the importer and Department, the description and functions of the subject ECMs, the General Rules for the Interpretation of the Harmonized System (GRIs), and the relevant Section and Chapter Notes.

7. In terms of GRI 1, classification is determined according to the terms of the headings and any relevant Section or Chapter Notes. Heading 85.37 covers, programmable controllers. The Explanatory Notes to heading 85.37 describe programmable controllers as:

> ***"digital apparatus using a programmable memory for the storage of instructions for implementing specific functions such as logic, sequencing, timing, counting and arithmetic, to control, through digital or analogue input/output modules, various types of machines."***

8. The Explanatory Notes further clarify that the heading does not cover automatic controlling apparatus of heading 90.32. On the other hand, Note 7 to Chapter 90 provides that:

> ***"Heading 90.32 applies only to: (a) Instruments and apparatus for automatically controlling the flow, level, pressure or other variables of liquids or gases, or for automatically controlling temperature ... which are designed to bring this factor to, and maintain it at, a desired value, stabilised against disturbances, by constantly or periodically measuring its actual value; and (b) Automatic regulators of electrical quantities, and instruments or apparatus for automatically controlling non-electrical quantities ... which are designed to bring this factor to, and***

maintain it at, a desired value, stabilised against disturbances, by constantly or periodically measuring its actual value."

9. The Committee observes that by virtue of Note 7 to Chapter 90, the heading 90.32 applies to apparatus which measures the actual value of a controlled variable, compares it with a desired value and automatically brings and maintains that variable at the desired value, stabilized against disturbances. For example, a temperature controller may continuously measure the temperature of a furnace through a sensor; where the measured temperature falls below the preset value, it activates the heating system and, upon reaching the preset temperature, reduces or stops heating so as to maintain the desired temperature. Similarly, a pressure regulator may measure pressure and operate a valve to maintain the pressure at a predetermined level. The essential function in such cases is the automatic regulation and maintenance of a controlled variable at a desired value.

10. A programmable controller under Heading 85.37 operates differently. It uses stored programme instructions to receive signals from different inputs, process those signals according to programmed logic and generate corresponding outputs to control machinery. For example, a programmed industrial controller may receive signals relating to temperature, pressure, speed and position and, depending upon the combination of those inputs and the programmed sequence, operate motors, valves, pumps or other actuators in a predetermined sequence. Its function is therefore not limited to maintaining one variable at a set value, but involves executing programmed control logic to coordinate different operations of machinery.

11. The subject ECMs operate in this latter manner. The ECM receives multiple signals from various engine sensors, such as engine speed, temperature, pressure, fuel-related parameters and other operating conditions. These inputs are processed through stored software, control logic and engine-specific calibration. Based upon the combination of the inputs and the programmed instructions, the ECM determines the appropriate control response and sends commands to the fuel system, injectors, actuators and other engine components. For example, a change in engine speed, load and temperature may simultaneously cause the ECM to alter fuel injection, control an actuator and modify other engine operating functions. **The ECM therefore makes programmed control decisions based on multiple changing inputs and coordinates several engine functions, rather than merely measuring one variable and maintaining it at a predetermined value.**

HOLDING:

12. In view of the foregoing analysis, the Committee holds that the subject Cummins Electronic Control Modules (ECMs), are classifiable under heading **8537.1090** as programmable controllers. The distinction between the two headings lies in the manner and scope of control performed by the apparatus. Heading 90.32 covers automatic regulating or controlling apparatus which is designed to measure a particular variable, compare its actual value with a desired value, and automatically bring and maintain that variable at the desired value, as specified in Note 7 to Chapter 90. In contrast, a programmable controller under Heading 85.37 operates through stored programme instructions, receives multiple inputs from sensors, processes such inputs through programmed logic, and generates corresponding outputs to control various functions of machinery. The subject ECM falls within the latter category as it does not merely regulate and maintain a single specified variable, but performs integrated and coordinated control of multiple engine functions, including fuel delivery, actuators, monitoring and engine protection.

13. The above classification determination is specific to the products whose details/ specifications have been given above. Further, the ruling is based on the documents and information provided by the referring Collectorate and shall be treated as annulled if it is found at any subsequent stage that the same was obtained by providing incorrect, false, misleading or incomplete information.

14. This Public Notice is issued in terms of Chapter-II (Classification) of CGO 12/2002 dated 15.06.2002 and any appeal against this determination/decision shall lie with the Board in terms of Rule of the Pakistan Rules provided in the preamble of the First Schedule to the Customs Act 1969.

Sd/-
(Muhammad Nauman Tashfeen)
Additional Collector
Secretary to the Classification Committee

Copy for information to:

1. The Member (Customs-Policy), FBR, Islamabad.
2. The Member (Customs-Operations), FBR, Islamabad.
3. The Member (Customs-Legal & Accounting), FBR, Islamabad.
4. The Member (FATE), FBR, Islamabad with the request to publish this ruling on FBR website.
5. The Chief (Tariff & Trae), Federal Board of Revenue, Islamabad.
6. The Chief Collector of Customs (Appraisement) South, Karachi.
7. The Chief Collector of Customs (Enforcement) Islamabad.
8. The Chief Collector of Customs (Exports / IOCO), Custom House, Karachi.
9. The Chief Collector of Customs (Appraisement) Central, Custom House, Lahore.
10. The Chief Collector of Customs (Enforcement) Central, Custom House, Lahore.
11. The Chief Collector of Customs North, Custom House, Islamabad.
12. The Chief Collector of Customs (Khyber Pakhtunkhwa), Custom House, Peshawar.
13. The Chief Collector of Customs (Baluchistan), Custom House, Quetta.
14. The Collector, Collectorate of Customs Appraisement-West/PMBQ/East/SAPT, Custom House, Karachi Members of the Classification Committee.
15. The Director, Directorate of Customs (Valuation), 7th Floor, Custom House, Karachi.
16. The Director, Directorate of Reforms & Automation (R&A), Custom House, Karachi with the request to incorporate this ruling in WeBOC.
17. All Collectors / Directors of Customs.
18. The Collector, Collectorate of Customs Appraisement (West), 2nd Floor Custom House, Karachi.
19. The Karachi Chamber of Commerce & Industry, Karachi.
20. The Federation of Pakistan Chambers of Commerce and Industry, Karachi.
21. The Karachi Customs Agents Association, Karachi.
22. M/s. Orient Energy Systems (Pvt.) Ltd., Plot No. 9, Sector-24, Korangi Industrial Area, Karachi.
23. Notice Board.

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