



HQ H342833

December 19, 2025

OT:RR:CTF:VS H342833 RRB

CATEGORY: Origin

Nate Bolin
K&L Gates LLP
1601 K Street NQ
Washington, DC 20006

RE: Country of Origin of an Electronically Commutated Motor; Section 301 Trade Remedy

Dear Mr. Bolin:

This is in response to your request, dated October 14, 2024, filed on behalf of your client, GMCC & Welling Appliance Component (Thailand) Co., Ltd. (“GAT”), regarding the country of origin of an Electronically Commutated Motor (hereinafter, “the ECM motor”).

FACTS:

GAT manufactures the ECM motor in Thailand using materials and components from China, Japan and Thailand. The ECM motor is described as a 138 series constant torque motor with a basic power of 1/3 horsepower (“HP”), 1/2 HP, 3/4 HP, and 1 HP for use in a household central air conditioner. The ECM motor is equipped with functions such as constant torque or constant speed.

GAT states that the ECM motor consists of three basic subassemblies: (1) rotor subassembly, (2) stator subassembly, and (3) structural aluminum bracket. The rotor subassembly is connected with the stator subassembly and the structural bracket through the bearing. The stator is energized to form a magnetic field, driving the rotor subassembly to rotate and converting the electric energy input into the kinetic energy of the complete ECM motor. The structural bracket, together with the stator subassembly, is used to support the rotor subassembly as it rotates in the stator subassembly. Along with the rotor subassembly, stator subassembly, and structural aluminum bracket, other key components include the shaft, magnet and bearing.

GAT explains that it will manufacture the ECM motor in Thailand using materials and components originating in Thailand, Japan, and China. GAT manufactures the rotor subassembly in Thailand using punching and pressing techniques. The rotor subassembly consists of various components, including the inner rotor core, outer rotor core, thermoplastic elastomer (“TPE”) rubber, shaft, magnetic tiles, bearings, and other components. GAT provided our office with a breakdown of the various production steps for the rotor subassembly, beginning with punching silicon steel sheets to produce the rotor core.

With respect to the stator subassembly, GAT states that it purchases the stator subassembly from a third party and is not involved in its manufacturing process, which takes place in China. GAT further states that it sources the structural aluminum bracket from a third-party supplier that manufactures the component in Thailand¹ and delivers it to GAT for incorporation into the final ECM motor.

GAT assembles the final ECM motor in Thailand, where it will place the Thai-origin rotor subassembly and Thai-origin structural bracket with the Chinese-origin stator subassembly and remaining components originating from China, Japan, and Thailand on the main assembly line to produce the finished ECM motor. This includes the magnetization of the rotor subassembly into the stator subassembly, installation of the structural bracket into the rotor and stator subassemblies, and testing and packaging of the finished ECM motor. GAT provided our office with a detailed description of its final assembly steps. GAT also provided a bill of materials indicating that the Thai processing and material costs outweigh the Chinese material costs.²

ISSUE:

What is the country of origin of the ECM motor for duty purposes?

LAW AND ANALYSIS:

When determining the country of origin for purposes of applying trade remedies under Section 301, the substantial transformation analysis is applicable. The test for determining whether a substantial transformation will occur is whether an article emerges from a process with a new name, character or use, different from that possessed by the article prior to processing. *See Texas Instruments, Inc. v. United States*, 681 F.2d 778 (CCPA 1982). In deciding whether the combining of parts or materials constitutes a substantial transformation, the determinative issue is the extent of operations performed and whether the parts lose their identity and become an

¹ In a supplemental submission, dated November 11, 2025, GAT submitted a Revised Bill of Materials, which corrected the initial submission, dated October 14, 2024. The supplemental submission confirmed that the structural aluminum bracket is sourced from Thailand, not China.

² In the supplemental submission, dated November 11, 2025, GAT’s Revised Bill of Materials corrected the costs of the Thai processing and materials costs and the Chinese materials costs based on its revision of the structural bracket sourcing.

integral part of the new article. See *Belcrest Linens v. United States*, 6 CIT 204, 573 F. Supp. 1149 (1983), *aff'd*, 741 F.2d 1368 (Fed. Cir. 1984). Assembly operations that are minimal or simple, as opposed to complex or meaningful, will generally not result in a substantial transformation. Factors which may be relevant in this evaluation include the nature of the operation (including the number of components assembled); the number of different operations involved; and whether a significant period of time, skill, detail, and quality control are necessary for the assembly operation. See C.S.D. 80-111, C.S.D. 85-25, C.S.D. 89-110, C.S.D. 89-118, C.S.D. 90-51, and C.S.D. 90-97. If the manufacturing or combining process is a minor one which leaves the identity of the article intact, a substantial transformation has not occurred. See *Uniroyal, Inc. v. United States*, 3 CIT 220, 542 F. Supp. 1026 (1982), *aff'd*, 702 F.2d 1022 (Fed. Cir. 1983).

The Court of International Trade more recently interpreted the meaning of “substantial transformation” in *Energizer Battery, Inc. v. United States*, 190 F. Supp. 3d 1308 (CIT 2016). *Energizer Battery* involved the determination of the country of origin of a flashlight, referred to as the Generation II flashlight. All of the components of the flashlight were of Chinese origin, except for a white LED and a hydrogen getter. The components were imported into the United States and assembled into the finished Generation II flashlight. The *Energizer Battery* court reviewed the “name, character and use” test utilized in determining whether a substantial transformation had occurred and noted, citing *Uniroyal, Inc.*, 3 C.I.T. 220, 226, 542 F. Supp. 1026 (1982), *aff'd per curiam*, 702 F.2d 1022 (Fed. Cir. 1983), that when “the post-importation processing consists of assembly, courts have been reluctant to find a change in character, particularly when the imported articles do not undergo a physical change.” *Energizer Battery* at 1318. In addition, the court noted that “when the end-use was pre-determined at the time of importation, courts have generally not found a change in use.” *Energizer Battery* at 1319, citing as an example, *National Hand Tool Corp. v. United States*, 16 C.I.T. 308, 312 (1992), *aff'd*, 989 F.2d 1201 (Fed. Cir. 1993). Furthermore, courts have considered the nature of the assembly, i.e., whether it is a simple assembly or more complex, such that individual parts lose their separate identities and become integral parts of a new article.

CBP’s general position is that the country of origin of an electric motor will be determined by where the two most essential components of an electric motor, the rotor and the stator, are made. In turn, the country of origin of the stator and rotor will often be based upon the country where the cores of these components are made. In New York Ruling Letter (“NY”) N325810, dated May 25, 2022, CBP considered the origin of an electric motor under two manufacturing scenarios. In the second scenario, the stator, the structural bracket, the bearing, the shaft, the magnets, and various hardware components were sourced from China. The rotor was manufactured in Thailand by stamping sheet steel into individual laminations, pressing the laminations, inserting the shaft, gluing the magnetic tiles and magnetizing. The manufacture of the printed circuit board assembly (PCBA), along with final assembly of the electric motor in this scenario, also occurred in Thailand. CBP found that the rotor is the more complex component of the finished motor when compared to the stator. CBP held that since the fact that the final assembly occurred in Thailand, and the origin of the PCBA, which represented the

largest single component cost, was also manufactured in Thailand, the manufacturing and assembly operations in Thailand, taken collectively for scenario two, substantially transformed the Chinese stator. Accordingly, the finished electric motor manufactured under the second scenario in NY N325810 was a product of Thailand for origin and marking purposes.

In addition, CBP has held that whether an assembly process is sufficiently complex to rise to the level of substantial transformation is determined upon consideration of all of the operations that occur within that country, including any subassembly processes that take place in that country. For example, in Headquarters Ruling Letter (“HQ”) H303529, dated June 6, 2019, the subject merchandise was an incomplete postage meter, which functioned as a specialized printer in a mail handling system. While one of the major subassemblies was made in Malaysia, the remaining subassemblies were made in China, and the final assembly process of connecting the subassemblies also occurred in China. CBP found that the assembly process that occurred in China was sufficiently extensive and complex as to substantially transform the components into a product of China. In doing so, CBP noted that the question of the complexity of the assembly process which occurred in China was not limited to an examination of the assembly of the various subassemblies to one another, but included an examination of all the assembly processes involved in China in the production of the incomplete postage meter. *See Energizer* at 1318 (2016) (“case law...indicates that a determination of substantial transformation must be based on a totality of factors”) (citing *National Hand Tool Corp.* at 312, and *Ran-Paige Co., Inc. v. United States*, 35 Fed. Cl. 117, 121 (1996)).

With regard to motors, the extent of processing that occurs after the stator and rotor core are created must also be taken into account. For example, in NY N309707, dated March 11, 2020, CBP considered the origin of a fan blower. The fan blower was produced in Mexico from parts of largely Chinese origin. The parts that came from China were a stator core, magnetic wire, insulator sheets, bottom housing, a lead wire harness, a rotor shaft, bearing housing, ball bearings, and rotor yoke. In Mexico, workers created the stator subassembly by winding the magnetic wire onto a stator core. The PCBA and the Chinese insulator sheets were then connected and soldered onto the stator assembly. The stator assembly was then installed and bonded to the Chinese bottom housing. A lead wire harness from China was then soldered to the contacts of the PCBA assembly and a Japanese seal was installed in the bottom housing. Workers then created the rotor assembly by installing a retaining ring on a Chinese shaft to form a shaft assembly. Washers from Mexico or the United States were then installed onto the shaft and ball bearings were bonded to bearing housings and the shaft. The magnet was then assembled and bonded to the rotor yoke with adhesive. The magnetic yoke assembly was then cured, magnetized, and bonded to the rotor assembly. The Chinese impeller was then bonded onto the rotor assembly, which in turn was fastened to the stator assembly. The Chinese top housing was fitted and screwed onto the impeller attached to the completed rotor and stator assemblies. CBP found that the various manufacturing and assembly processes in Mexico created a new and different article of commerce, as the air circulating and motor components of

each unit, to include the less significant Chinese and Japanese components, were subjected to operations resulting in the individual parts losing their separate identities to become a new article, i.e., a fan blower assembly that consisted of an impeller and a motor.

In NY N320693, dated July 28, 2021, CBP considered the country of origin of a DC electric motor. There, the DC electric motor was comprised of three main subcomponents: a wound rotor, an unwound magnetized stator, and the brush holder, where each subcomponent was composed of various parts including gears, bearings, magnets, a stator housing, a shaft, a lamination stack, a commutator, etc. The three main subcomponents were manufactured and assembled into the DC electric motor under two different production scenarios. Under the first scenario, the stamping of steel sheet, stacking of the laminations, and inserting of the shaft/coupling via machine press to produce a rotor core occurred in Vietnam. The rotor core was then shipped to Mexico where the commutator was pressed onto the shaft, the core was wire wound, further processed, tested, a fan blade was added, and the finished rotor subassembly was balanced. For the stator, stamping and pressing work performed in China produced a stator core of Chinese origin. In Mexico, magnets and the bearing were mounted to the Chinese stator housing to produce a stator subassembly. In Mexico, both the rotor and stator subassemblies were combined with the brush holder subassembly that was manufactured in Mexico and the DC electric motor was tested and packaged. Regarding the origin of the DC electric motor, it was noted that while gluing magnets and attaching a bearing to the Chinese stator housing was not that extensive in Mexico, the assembly of the rotor and brush holder subassemblies, which were not products of China, coupled with the final manufacturing operations in Mexico, when considered in totality, overshadowed the simplicity of the stamped stator housing. Accordingly, CBP found that the manufacturing and assembly processes performed in Mexico resulted in a substantial transformation of the Chinese components.

Similarly, in NY N318006, dated March 19, 2021, in the third scenario CBP considered the country of origin of a different DC electric motor manufactured in Mexico. The DC electric motor in NY N318006 was comprised of a Chinese-origin stator, a Mexican-origin rotor and Mexican-origin brush holder subassemblies. In addition to production of the rotor and brush holder subassemblies in Mexico, the final assembly operations in Mexico consisted of coupling the rotor subassembly and the stator subassembly via a servo-press, inserting the brush holder subassembly into the housing, and riveting an end cap. Voltage was then applied to the DC electric motor, followed by testing, machine pressing a gear onto the output shaft, and marking and packaging the product. As in NY N320693, CBP found that gluing magnets and attaching a bearing to the Chinese stator housing in Mexico was not that extensive, the assembly of the rotor and brush holder subassemblies in Mexico, coupled with the final manufacturing operations in Mexico, were considerable and transformed the Chinese content into a new and different article of commerce with a new name, character, and use. Accordingly, CBP found that the manufacturing and assembly processes performed in Mexico resulted in a substantial transformation.

In the instant matter, we find that the processing of the ECM motor in Thailand is similar to the processing that occurs in NY N320693 and NY N318006. As with the processing in NY N320693 and NY N318006, the Chinese-origin stator subassembly and other non-Thai components are installed with the Thai-origin rotor subassembly and the Thai-origin structural bracket in Thailand. Additionally, the rotor and stator subassemblies of the DC electric motors in NY N320693 and NY N318006, and the rotor and stator subassemblies of the subject ECM motor originate in different countries. As in NY N320693 and NY N318006, the complex final assembly of the ECM motor occurs in the same country as where the rotor subassembly and another subassembly³ are manufactured, *i.e.*, Thailand. Moreover, according to the bill of materials, the Thai processing and material costs outweigh the Chinese material costs. Thus, based on a totality of the evidence submitted, the assembly of the rotor subassembly and structural bracket in Thailand, coupled with the final assembly operations in Thailand, are significant when compared to the Chinese operations. Because of the extensive operations that take place in Thailand, we find that the non-Thai components, including the stator subassembly, are substantially transformed into a new and different article of commerce with a new name, character and use. Therefore, the country of origin of the ECM motor will be Thailand.

HOLDING:

The country of origin of the ECM motor for duty purposes will be Thailand.

Please note that 19 C.F.R. § 177.9(b)(1) provides that “[e]ach ruling letter is issued on the assumption that all of the information furnished in connection with the ruling request and incorporated in the ruling letter, either directly, by reference, or by implication, is accurate and complete in every material respect. The application of a ruling letter by [CBP] field office to the transaction to which it is purported to relate is subject to the verification of the facts incorporated in the ruling letter, a comparison of the transaction described therein to the actual transaction, and the satisfaction of any conditions on which the ruling was based.”

A copy of this ruling letter should be attached to the entry documents filed at the time this merchandise is entered. If the documents have been filed without a copy, this ruling should be brought to the attention of the CBP officer handling the transaction.

Sincerely,

Monika R. Brenner, Chief
Valuation and Special Programs Branch

³ In NY N320693 and NY N318006, the brush holder subassemblies and rotor subassemblies are manufactured in the same country as the final assembly, while in the instant matter, the structural bracket and the rotor subassembly are manufactured in the same country as the final assembly, *i.e.*, Thailand.