UNITED STATES COURT OF INTERNATIONAL TRADE

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FANUC ROBOTICS AMERICA, INC.,

Plaintiff,

v.

UNITED STATES,

Defendant.

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Before: Timothy C. Stanceu, Chief Judge

Court No. 04-00197

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<u>OPINION</u>

[Determining the tariff classification of certain imported printed circuit assemblies]

Dated: July 26, 2019

Michael S. O'Rourke, Sandler, Travis & Rosenberg, P.A., of New York, NY for plaintiff FANUC America Corporation f/k/a FANUC Robotics America, Inc.

Amy M. Rubin, Assistant Director, International Trade Field Office, Civil Division, U.S. Department of Justice, of New York, NY, for defendant United States. With her on the brief were *Chad A. Readler*, Acting Assistant Attorney General, and *Marcella Powell*, Trial Attorney. Of counsel on the brief was *Yelena Slepak*, Senior Attorney, Office of the Assistant Chief Counsel, International Trade Litigation, U.S. Customs and Border Protection. With them on the response was *Joseph H. Hunt*, Assistant Attorney General.

Stanceu, Chief Judge: Plaintiff FANUC America Corporation f/k/a FANUC Robotics America, Inc. ("FANUC") commenced this action to contest the denial by U.S. Customs and Border Protection ("Customs") of its administrative protests. FANUC claims that Customs incorrectly determined the tariff classification of its imported printed circuit assemblies ("PCAs"), which were manufactured for use as components in FANUC's programmable "controllers" that are used in conjunction with FANUC's industrial robots.

Before the court are cross-motions for summary judgment. Concluding that there are no genuine issues of material fact, the court awards summary judgment in favor of defendant United States.

I. BACKGROUND

FANUC imported the subject PCAs on 24 entries made at the port of Detroit, Michigan during a period beginning January 22, 2002 and ending August 23, 2002. Summons (May 14, 2004), ECF No. 1. Customs liquidated the entries at various dates from December 6, 2002 to July 7, 2003 inclusive, and FANUC contested the liquidations in three protests filed at the Port of Detroit on February 19, July 21, and August 19, 2003.[1] *Id.* The Port Director in Detroit denied the three protests on November 28, 2003. *Id.*

FANUC initiated this action on May 14, 2004, *id.*, and filed its complaint on November 30, 2005, Compl. (Nov. 30, 2015), ECF No. 4. The parties originally cross-moved for summary judgment in 2010. Pursuant to numerous requests by the parties, the court issued orders staying this action to allow the parties to conduct additional discovery and to pursue possible settlement. Following an oral argument and additional stays, the parties withdrew their original summary judgment motions. The final stay granted by the court expired on February 9, 2017. *See* Order (Nov. 14, 2016), ECF No. 134.

The summary judgment motions now before the court, which pertain to a narrower set of issues, were filed in 2017 and 2018. Def.'s Mot. for Summ. J. & Mem. in Supp. of Def.'s Mot. for Summ. J. ("Def.'s Br.") (Oct. 12, 2017), ECF No. 150; Pl.'s Reply to Def.'s Mot. for Summ. J. & Mem. in Supp. of Pl's Cross-Mot. for Summ. J. ("Pl.'s Br.") (Apr. 9, 2018), ECF Nos. 160 (motion), 161 (brief). On October 10, 2018, defendant filed a response in opposition to

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[1] Protest numbers 3801-03-100078, 3801-03-100304, and 3801-03-100355, respectively.

plaintiff's cross-motion for summary judgment and a reply in further support of its own motion.
Def.'s Br. in Opp'n to Pl.'s Mot. for Summ. J. & in Further Supp. of Def.'s Mot. for Summ. J.
(Oct. 10, 2018), ECF No. 176. On December 21, 2018, plaintiff filed a reply to defendant's
response and in further support of its own cross-motion for summary judgment. Pl.'s Reply to
Def.'s Br. in Opp'n to Pl.'s Mot. for Summ. J. & in Further Supp. of Pl.'s Cross-Mot. for Summ.
J. (Dec. 21, 2018), ECF No. 181.

II. DISCUSSION

A. Subject Matter Jurisdiction

The court exercises jurisdiction according to 28 U.S.C. § 1581(a) (2000), which provides
the Court of International Trade exclusive jurisdiction over any civil action commenced to
contest the denial of a protest under section 515 of the Tariff Act of 1930, *as amended* ("Tariff
Act"), 19 U.S.C. § 1515 (2000).[2]

B. Scope and Standard of Review

Actions to contest the denial of a protest are adjudicated *de novo*. *See* 28 U.S.C.
§ 2640(a)(1) (directing the Court of International Trade to "make its determinations upon the
basis of the record made before the court").

C. Awards of Summary Judgment

The court will award summary judgment "if the movant shows that there is no genuine
dispute as to any material fact and the movant is entitled to judgment as a matter of law."
USCIT R. 56(a). In a tariff classification dispute, "summary judgment is appropriate when there
is no genuine dispute as to the underlying factual issue of exactly what the merchandise is."
Bausch & Lomb, Inc. v. United States, 148 F.3d 1363, 1365 (Fed. Cir. 1998) (citing *Nissho Iwai*

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[2] All citations to the United States Code herein are to the 2000 edition.

Am. Corp. v. United States, 143 F.3d 1470, 1472-73 (Fed. Cir. 1998)). A factual dispute is

material if it potentially affects the outcome under the governing law. *Anderson v. Liberty*

Lobby, Inc., 477 U.S. 242, 248 (1986). In ruling on a motion for summary judgment, the court

credits the non-moving party's evidence and draws all inferences in that party's favor. *Hunt v.*

Cromartie, 526 U.S. 541, 552 (1999) (quoting *Anderson*, 477 U.S. at 255).

D. Description of the Merchandise at Issue

The facts set forth below, obtained from the parties' statements of facts and documentary

exhibits to their cross-motions, are undisputed except where otherwise noted. *See* Def.'s

Statement of Material Facts as to Which No Genuine Issue Exists ("Def.'s Facts") (Oct. 12,

2017), ECF No. 150; Pl.'s Resp. to Def.'s Statement of Material Facts as to Which No Genuine

Issue Exists ("Pl.'s Facts") and Pl.'s Additional Material Facts ("Pl.'s Additional Material

Facts") (Apr. 9, 2018), ECF No. 162; Def.'s Resp. to Pl.'s Additional Material Facts Not in

Dispute ("Def.'s Resp. to Additional Facts") (Oct. 10, 2018), ECF No. 176; Pl.'s Resp. to Def.'s

Additional Material Facts Not in Dispute ("Pl.'s Resp. to Additional Facts") (Dec. 21, 2018),

ECF No. 182.

The term "printed circuit assembly," or "PCA," is used in this Opinion to refer to a

printed circuit board populated with active elements. Ten general types of PCAs are at issue in

this case, each of which is manufactured for use as a component within a programmable

"controller" that is linked by cable to an industrial robotic "arm" (also referred to as the

"manipulator arm").

The components of a FANUC industrial robotic system typically consist of the

programmable controller containing various PCAs, a manipulator (i.e., robotic) arm, an end

"effector" or end-of-arm tooling, a power supply, and means for programming the controller.

The user programs the controller by one of two means: by means of a separate keyboard that is linked by cable to the controller, or by means of a separate "teach pendant" that is also linked by cable to the controller. Depending on the configuration and programming, the robotic arm may perform any of several types of industrial functions, e.g., spot welding, arc welding, laser welding, material handling, and painting. The manipulator arm is connected by cable to the programmable controller, and the end-of-arm tooling (the "effector") is attached to the end of the manipulator arm as the robot's "hand."

The ten general PCA types at issue in this case, as identified by plaintiff, are as follows: (1) "Main Board (includes CPU Board)"; (2) "Memory Board"; (3) "Axis Control Board"; (4) "Option Boards"; (5) "I/O [input/output] Boards"; (6) "Power Supply Unit Board"; (7) "Backplane"; (8) "Operator Panel Board"; (9) "E-Stop Unit Board"; and (10) "Control Circuit Board." The PCAs at issue in this case are made for use in one of four models of FANUC's controllers ("R-J 3iB," "R-J 2," "R-J 3," and "R-H"). While each controller typically will contain one of each of the ten PCAs, some controllers may be configured with more than one Option Board and more than one I/O Board. The particular PCAs at issue in this case were imported for use as spare parts for incorporation into FANUC controllers. The function or functions of each PCA, as discerned from plaintiff's own submissions and according to the uncontested facts, is described later in this Opinion.

<div align="center">E. Tariff Classification under the HTSUS</div>

Tariff classification under the Harmonized Tariff Schedule of the United States ("HTSUS") is governed by the General Rules of Interpretation ("GRIs") and the Additional U.S.

Rules of Interpretation, both of which are part of the legal text of the HTSUS.[3] The GRIs are

applied in numerical order, beginning with GRI 1, which provides that "classification shall be

determined according to the terms of the headings and any relative section or chapter notes."

GRI 1, HTSUS. GRIs 2 through 5 apply "provided such headings or notes do not otherwise

require." *Id.* Once merchandise is determined to be correctly classified under a particular

heading of the HTSUS, a court then looks to the HTSUS subheadings to determine the correct

classification of the merchandise in question. *See* GRI 6, HTSUS; *Orlando Food Corp. v.

United States*, 140 F.3d 1437, 1440 (Fed. Cir. 1998).

        In cases involving a disputed tariff classification, the court first considers whether "the

government's classification is correct, both independently and in comparison with the importer's

alternative." *Jarvis Clark Co. v. United States*, 733 F.2d 873, 878 (Fed. Cir. 1984). Plaintiff has

the burden of showing the government's classification to be incorrect. *Id.* at 876. If plaintiff

meets that burden, the court has an independent duty to arrive at "the *correct* result, by whatever

procedure is best suited to the case at hand." *Id.* at 878 (footnote omitted).

        "Absent contrary legislative intent, HTSUS terms are to be construed according to their

common and commercial meanings." *La Crosse Tech., Ltd. v. United States*, 723 F.3d 1353,

1358 (Fed. Cir. 2013) (quoting *Carl Zeiss, Inc. v. United States*, 195 F.3d 1375, 1379 (Fed. Cir.

1999)). In interpreting the HTSUS, the court "may consult lexicographic and scientific

authorities, dictionaries, and other reliable information sources." *Carl Zeiss*, 195 F.3d at 1379

(citing *Baxter Healthcare Corp. of P.R. v. United States*, 182 F.3d 1333, 1338 (Fed. Cir. 1999)).

The court may also refer to the Explanatory Notes ("ENs") for the Harmonized Commodity

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        [3] Because all entries of the merchandise at issue occurred in 2002, all citations herein to
the Harmonized Tariff Schedule of the United States ("HTSUS") are to the 2002 version.

Description and Coding System ("Harmonized System") maintained by the World Customs

Organization. Although not legally binding, the ENs "may be consulted for guidance and are

generally indicative of the proper interpretation of a tariff provision."[4] *Degussa Corp. v. United*

States, 508 F.3d 1044, 1047 (Fed. Cir. 2007) (citing *Motorola, Inc. v. United States*, 436 F.3d

1357, 1361 (Fed. Cir. 2006)).

F. Claims of the Parties

Upon liquidation, Customs classified all the PCAs at issue in subheading 8538.90.30,

HTSUS ("Parts suitable for use solely or principally with the apparatus of heading 8535, 8536 or

8537: Other: Printed circuit assemblies: Other"), subject to duty at 3.5% *ad val*. Summons.

Defendant argues that the PCAs were liquidated under the correct tariff provision.

Plaintiff's primary claim is that the PCAs should be classified in subheadings under

heading 8471, HTSUS ("Automatic data processing machines and units thereof; magnetic or

optical readers, machines for transcribing data onto data media in coded form and machines for

processing such data, not elsewhere specified or included"), free of duty. In brief summary,

plaintiff's argument in favor of classification under heading 8471 is that the PCAs at issue in this

case are an automatic data processing machine (or machines) or are "units" of an automatic data

processing machine. Acknowledging that the PCAs are designed and used as parts of a FANUC

controller, plaintiff maintains that each of the controllers contains an "automatic data processing

machine" composed of the PCAs at issue in this case.

Plaintiff claims in the alternative that the PCAs should be classified under heading 8473,

HTSUS as "parts" of automatic data processing machines. Plaintiff points specifically to

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[4] All citations to the World Customs Organization's Harmonized Commodity Description
and Coding System Explanatory Notes ("ENs") in this Opinion are to the 2002 edition.

subheading 8473.30.10, HTSUS ("Parts and accessories (other than covers, carrying cases and the like) suitable for use solely or principally with machines of headings 8469 to 8472: Parts and accessories of the machines of heading 8471: Not incorporating a cathode ray tube: Printed circuit assemblies"), free of duty.

Defendant's argument on summary judgment is that the controller, if imported, would be classified under heading 8537, HTSUS, which, in pertinent part, includes the tariff term "[b]oards, panels, consoles, desks, cabinets and other bases, equipped with two or more apparatus of heading 8535 or 8536, for electric control or the distribution of electricity." Defendant argues that, according to the uncontested facts (which plaintiff does not dispute), the controller is equipped with at least two apparatus of heading 8536, HTSUS ("Electrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (for example, switches, relays, fuses, surge suppressors, plugs, sockets, lamp-holders, junction boxes), for a voltage not exceeding 1,000 V"). The controller contains, *inter alia*, switches and a circuit breaker. Defendant argues that each of the PCAs at issue, being parts suitable for use solely with an article classified under heading 8537, must be classified under the parts heading associated with that heading, i.e., heading 8538, HTSUS. In response to plaintiff's claimed classifications, defendant argues that the PCAs are excluded from headings 8471 and 8473 because they do not satisfy the conditions for classification under either of these headings.

<u>G. The Headings for Consideration According to GRI 1, HTSUS</u>

Because GRI 1, HTSUS directs that classification be determined, in the first instance, "according to the terms of the headings and any relative section or chapter notes," the court first considers the headings that might merit consideration. The parties identify the following candidate headings, which are presented below with their respective article descriptions:

8471   Automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included.

8473   Parts and accessories (other than covers, carrying cases and the like) suitable for use solely or principally with machines of headings 8469 to 8472.

8538   Parts suitable for use solely or principally with the apparatus of heading 8535, 8536 or 8537.

The court has not identified additional candidate headings.

H. FANUC's Controllers Would Be Classified under Heading 8537, HTSUS

Heading 8537, HTSUS pertains to "[b]oards, panels, consoles, desks, cabinets and other bases, equipped with two or more apparatus of heading 8535 or 8536, 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 8517."[5]

The controllers contain electrical components that transform and modulate electrical signals for use within an industrial robotic system. They distribute electrical signals to the manipulator arm, the end-of-arm tooling, and other peripheral machines, such as a conveyor, that may be linked to the controller. They also receive electronic signals from these machines, further to the function of controlling the equipment in a factory environment (or "work cell").

As required under heading 8537, HTSUS, the controller is equipped with at least two apparatus of heading 8536, HTSUS, which covers "[e]lectrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (for example, switches, relays, fuses, surge suppressors, plugs, sockets, lamp-holders, junction boxes), for a voltage not exceeding 1,000 V." The controller contains, for example, a circuit breaker,

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[5] The exclusion for switching apparatus of heading 8517, HTSUS, inapplicable here, is for "[e]lectrical apparatus for line telephony or line telegraphy." Heading 8517, HTSUS.

switches, and the backplane, which is an electrical connector. Therefore, the controllers conform

to the terms of heading 8537. EN 85.37 confirms the broad scope intended for the heading:

> The goods of this heading vary from small switchboards with only a few switches, fuses, etc. (*e.g.*, for lighting installations) to complex control panels for machine-tools, rolling mills, power stations, radio stations, etc., including assemblies of several of the articles cited in the text of this heading.
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> The heading also covers . . . "Programmable controllers" which are 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 analog input/output modules, various types of machines.

FANUC's controllers conform to the definition in the EN of "programmable controllers."

FANUC's controllers are excluded from the scope of heading 8471, HTSUS because they

are not "automatic data processing machines" within the meaning of that heading term, as

defined in note 5 to chapter 84, HTSUS under which it is not sufficient for classification

thereunder that a machine depend on automatic data processing for its functioning. Even if it

were presumed, as plaintiff argues, that a FANUC controller "incorporates" an "automatic data

processing machine," the controller would be excluded from heading 8471 by note 5(E) to

chapter 84, HTSUS. That chapter note provides as follows: "Machines performing a specific

function other than data processing and incorporating or working in conjunction with an

automatic data processing machine are to be classified in the headings appropriate to their

respective functions or, failing that, in residual headings."[6] Note 5(E) to ch. 84, HTSUS. The

drafters of the Harmonized System intended that the words "classified in the headings

appropriate to their respective functions," as used in Note 5(E) to chapter 84 of the Harmonized

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[6] The "working in conjunction with" reference is inapplicable here. The machine plaintiff describes as an automatic data processing machine is not a machine that is physically separate from the controller.

System, would not refer to the automatic data processing function itself. That much is clear from the Explanatory Notes. *See* EN(E)(1) to § XVI; *see also* EN 84.71(I) ("[T]he heading **excludes** machines, instruments or apparatus incorporating or working in conjunction with an automatic data processing machine and performing a specific function.").

I. The PCAs Are Described by the Terms of Heading 8538, HTSUS

The article description for heading 8538, HTSUS, is "[p]arts suitable for use solely or principally with the apparatus of heading 8535, 8536 or 8537." Heading 8538, HTSUS. It is uncontested that the PCAs at issue in this litigation are imported for use as spare parts to be incorporated into FANUC controllers, models R-J 3iB, R-J 2, R-J 3, and R-H. Def.'s Facts ¶ 16; Pl.'s Facts ¶ 16. Due to the interfaces on the PCAs, they are not suitable for installation in any type of machine other than a FANUC controller. Def.'s Facts ¶ 18; Pl.'s Facts ¶ 18. Therefore, whatever else they may be, these PCAs are parts suitable for use solely with an apparatus of heading 8537, HTSUS and accordingly must be considered to be articles described by the terms of heading 8538.

The question this case poses with respect to GRI 1, HTSUS is whether, according to the terms of the headings, and any relative section or chapter notes, of the HTSUS, there is another heading that merits consideration for the classification of the PCAs. As discussed above, headings 8471 and 8473, HTSUS are possible candidate headings, and plaintiff asserts claims under each of these headings. If GRI 1 does not preclude classification of the PCAs under either of these headings, then the choice of the correct heading must be ascertained according to GRIs following GRI 1. If GRI 1 precludes consideration of these other headings, then heading 8538 is the correct heading of the HTSUS for the PCAs.

Acknowledging that a FANUC controller must be classified outside of heading 8471,

HTSUS, *see* Pl.'s Br. 17, plaintiff bases its claim for classification of the PCAs under heading

8471 or 8473 on an argument that there is a machine *within* a FANUC controller that meets the

definition of "automatic data processing machines" provided in note 5 to chapter 84, HTSUS.

Although not disputing that the controllers would be classified under heading 8537, HTSUS,

plaintiff argues that the PCAs at issue form a machine within each of the four models of

programmable controllers that handles the digital and informational aspects of the industrial

robot system separately from the other PCAs and components of a controller, thereby meeting

the requirements of note 5 to chapter 84. *See* Pl.'s Br. 4, 8-18, 21. Further to this argument,

plaintiff refers to the ten PCAs at issue as the "ADP Parts" of a FANUC controller. *See id*. at 4.

FANUC views them as separate from the "Power/Control Parts" of the controller, which, it

posits, include a "Power Circuit Board" and other components within the controller. *See id*.

Plaintiff argues, variously, that the "ADP Parts" constitute an "automatic data processing

machine" within the scope of heading 8471, are "units" of such a machine that also are within

the scope of heading 8471, or are "parts" of such a machine that fall within the scope of heading

8473, HTSUS.

J. The "ADP Parts" Do Not Constitute an "Automatic Data Processing Machine" for Purposes of
Tariff Classification under the HTSUS because they Perform a Function Beyond Data Processing

In substance, FANUC argues that for tariff classification purposes each of its controllers

consists of two "machines," i.e., an "automatic data processing machine" that performs

automatic data processing and a "power/control" machine that powers and controls the robotic

arm and associated industrial equipment.

An uncontested fact is that the two "machines" plaintiff posits are not physically

separate: if these two machines exist, both reside within the housing of the controller. *See* Def.'s

Ex. G, Diagram of the PCAs at Issue When Assembled in a Controller Cabinet. This fact, by

itself, does not defeat plaintiff's classification argument. As provided in note 5 to section XVI,

HTSUS, "[f]or the purposes of these notes [i.e., the notes to section XVI], the expression

'machine' means any machine, machinery, plant, equipment, apparatus or appliance cited in the

headings of chapter 84 or 85." Note 5 to § XVI, HTSUS (emphasis omitted). Arguably, what

plaintiff terms the "ADP Parts" are "machinery" or "equipment." Moreover, an automatic data

processing "machine" may consist of a "system" of interconnected separate components. Note

5(B) to ch. 84, HTSUS. The court, therefore, must look to other provisions of the HTSUS.

Note 5(A) to chapter 84, HTSUS defines the heading term "automatic data processing

machines" as follows:

(A)   For purposes of heading 8471, the expression "<u>automatic data processing machines</u>" means:

(a)   Digital machines, capable of (1) storing the processing program or programs and at least the data immediately necessary for execution of the program; (2) being freely programmed in accordance with the requirements of the user; (3) performing arithmetical computations specified by the user; and, (4) executing, without human intervention, a processing program which requires them to modify their execution, by logical decision during the processing run;

(b)   Analog machines capable of simulating mathematical models and comprising at least: analog elements, control elements and programming elements;

(c)   Hybrid machines consisting of either a digital machine with analog elements or an analog machine with digital elements.

Note 5(A) to ch. 84, HTSUS. There can be no genuine dispute that the function of the

controllers is to control robotic arms and associated industrial equipment (such as conveyors) by

means of the storage and processing of digital data, that the controllers store and execute

programs, and that, further to enabling the automated robotic control function, they are

programmable by the user. Beyond these facts, the parties disagree as to whether the controllers, and specifically the PCAs within the controllers, are capable of "being freely programmed in accordance with the requirements of the user," and "performing arithmetical computations specified by the user," as required by note 5(A)(a) to chapter 84, HTSUS. Plaintiff argues that they are.

As to the "freely programmable" requirement, the submissions show that the user can program the controller to perform robotic functions unique to that user's requirements. Defendant disagrees that the controllers or PCAs meet the "*freely* programmable" requirement of note 5(A)(a) but nevertheless "[a]dmits that FANUC robot controllers can be programmed to instruct the robot to perform material handling, spot welding, arc welding, painting, and dispensing" and "can accept new applications that instruct the robot to perform tasks programmed by the robot user." Def.'s Resp. to Additional Facts ¶ 69. It would not appear unreasonable to interpret the words "requirements of the user," as used in note 5(A)(a), to refer to the manufacturing requirements of the user of the robotic system. The parties also disagree as to whether the controllers, or the PCAs within, meet the "arithmetic function" capability specified by note 5(A)(a) to chapter 84, HTSUS. Nevertheless, the court does not consider it necessary to decide whether a FANUC controller, or any group of components within one, possesses the "freely programmable" and "arithmetic function" capabilities. For even were the court to presume that these capabilities are present, it could not conclude that the PCAs at issue in this case are described by the terms of either heading 8471 or 8473, HTSUS, as interpreted according to relative section and chapter notes.

The aforementioned note 5(E) to chapter 84, HTSUS addresses machines that incorporate an "automatic data processing machine" as defined in note 5. Plaintiff argues that the effect of

note 5(E) is to exclude the controller from the scope of heading 8471 but not the ADP parts

within: "In this case, this Note applies to the Controller because the Controller is the '[machine]

incorporating or working in conjunction with automatic data processing machine' (the ADP

Parts), and the Controller is the machine 'performing a specific function other than data

processing' (the transmission and distribution of electric power and the control of robot

motors)." Pl.'s Br. 17. Plaintiff adds that "[t]his note does not apply to the ADP Parts because

they *are* the automatic data processing machines." *Id.*

       The court disagrees with plaintiff's analysis. The court not only must consider the effect

of note 5(E) to chapter 84, HTSUS as applied to the controller but also must consider the effect

of that note as applied to the "machine" (or equivalently, the "system") plaintiff describes as

comprising the "ADP Parts." If the court were to accept, *arguendo*, the premise that the "ADP

Parts" constitute a "machine" or "system," they could constitute an "automatic data processing

machine" as defined by note 5 only if they satisfy the requirements of note 5, including

paragraph (E) thereof. The question presented, then, is whether, for purposes of note 5(E), any

"machine" that could be composed of the "ADP Parts" is an "automatic data processing

machine," a "machine incorporating an automatic data processing machine," or neither. Note

5(E) imposes a "sole function" requirement on the machine in question. If it "performs a

specific function other than data processing," the most that could be said, at this point in the

analysis, is that this machine might "incorporate" an automatic data processing machine but itself

is not one.[7] According to the uncontested facts, some of the ADP Parts in fact perform automatic

data processing. But with one possible exception (the Memory Board, discussed later in this

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      [7] Later in this Opinion, the court considers the question of whether the "ADP Parts" can
be described as "incorporating" an automatic data processing machine.

Opinion), those same parts, as plaintiff describes them, also perform the function of controlling

robotic and associated factory equipment.

The "Main Board" includes the "CPU ["Central Processing Unit"] Board" and the "Axis

Control Board." Def.'s Ex. F, Pl.'s Resp. to Def.'s First Interrogs. and Req. for Produc. ¶ 12

(May 15, 2009) ("Pl.'s Resp. to Def.'s First Interrogs."). The Main Board "contains a processor

for many of the functions of the controller (e.g. Ethernet communications)," and the CPU Board

"contains a processor for the remaining functions." *Id*. The CPU Board can connect to the Main

Board by means of a "bus" (i.e., data path) connector and may be mounted on the Main Board at

the time of importation. Pl.'s Facts ¶¶ 24-26. Plaintiff refers to the CPU on the CPU Board as

the "main CPU" because the controller contains other CPUs. *See id.* ¶¶ 25-26. Significantly, the

purpose of the main CPU is stated by plaintiff as follows: "The main CPU performs calculations

as to how the robot arm axes are programmed to move." *Id.* ¶ 33.

The "Axis Control Board" "can be located on the main board or it can be connected to

the main board." *Id.* ¶ 32 (emphasis omitted). "The axis control board receives the motion

command from the main CPU." *Id.* ¶ 33.

The "Memory Board" "is on the Main Board and contains the software programs." Pl.'s

Additional Material Facts ¶ 74. It can store program instructions. Pl.'s Facts ¶ 28. While it may

or may not be referring specifically to this board, a user manual for the R-J 3iB controller states

that "[c]ontroller memory stores the software in addition to any user-defined programs and data."

Def.'s Ex. H, FANUC user manual for RJ3iB Controller, Sec. 1.3.1 Controller Overview.

The "I/O [Input/Output] Board" "allows for signals to and from equipment outside of the

controller by converting the signals received from the outside equipment (inputs) and converting

the signals to the outside equipment (outputs)." Pl.'s Facts ¶ 35. "The I/O Board does not

amplify any power, but only converts input and output signals, e.g. to and from serial and parallel, and to and from digital and analog." *Id.* ¶ 37. "The I/O Boards . . . are connected to the Main Board . . . through the Backplane . . . for the purpose of processing data to and from other input and output devices, similar to a USB hub." Pl.'s Additional Material Facts ¶ 74.

The "Option Boards" contained within the controller can vary "depending on the option that is ordered" and may include auxiliary axis control boards and a "Line Tracking Interface Board," which plaintiff describes as containing an "input device for feedback from a conveyor encoder, and a processor for processing this data." Pl.'s Resp. to Def.'s First Interrogs. ¶ 12. Other boards "for specific communication options that process the data for that option and format it for communication" also may be present. *Id.*

The "Power Supply Board" (or "Power Supply Unit Board") transmits power to the CPU, the I/O Board, and other boards in the controller. Pl.'s Facts ¶ 38. It "converts 200V AC (in) into DC (e.g. 24V) out." Pl.'s Resp. to Def.'s First Interrogs. ¶ 12. It serves as an "adaptor" for the power supplied to these boards, which perform automatic data processing. Pl.'s Additional Material Facts ¶ 74. It does not supply or adapt the electric power to the robot, which is a function performed by other components in the controller. Pl.'s Facts ¶ 38.

The "Backplane" is a connector for several of the PCAs within the controller. *Id.* ¶ 39. "The Backplane board is present so that other boards can plug into it." Pl.'s Resp. to Def.'s First Interrogs. ¶ 12.

The "Operator Panel Board" transmits signals to the Main Board from the "operator panel" that is located on the outside of the controller, which contains "buttons and switches used in the operation of the robot." Pl.'s Facts ¶ 40.

The "E-stop Unit Board" enables the "E-stop" (emergency stop) function of the controller, which ceases robotic activity in the event of an emergency. *Id.* ¶ 42. "[T]he E-stop board receives digital signals from the Main Board CPU and converts them into a form that can be used for the E-stop function." *Id.*

The "Control Circuit Board" "is connected to the Servo Amplifier [not at issue in this case] and to the Axis Control Board for the purpose of converting signals between the Axis Control Board . . . and the Power Circuit Board." Pl.'s Additional Material Facts ¶ 74. "The Power Circuit Board . . . is not at issue as Plaintiff agrees that this board's essential function is Power Amplification and, therefore, is properly classifiable under subheading 8538.90.30." Pl.'s Facts ¶ 17.

The uncontested facts, as summarized above, are inconsistent with a conclusion that the ten PCAs together constitute a machine or system with no function beyond automatic data processing. The Main Board and CPU Board (which are mounted or connected together and which plaintiff describes together with respect to function) perform calculations by processing digital data, but in plaintiff's own words these are "calculations *as to how the robot arm axes are programmed to move.*" *Id.* ¶ 33 (emphasis added). The desired "output" of these PCAs, therefore, is not data or information but electrical signals that are intended, after further operations performed within the controller, including amplification, to control the motion of a robotic arm and related equipment. The Main Board and CPU Board (which contains the "main CPU") perform this robotic control function in conjunction with the Axis Control Board, which "receives the motion command from the main CPU." *Id.*

In contrast, it can be argued that the Memory Board, which stores programs that are instructions for the operation of the robot and associated equipment, is limited in function to the

storage of data and in that respect can be described as performing only an automatic data

processing function. But because of its limited function, the Memory Board is not, in and of

itself, an automatic data processing machine as defined in note 5(A)(a) to chapter 84: it performs

only one of the functions listed therein. But like the other boards, it cannot be used in any

machine other than a FANUC controller. Def.'s Facts ¶ 18; Pl.'s Facts ¶ 18. Therefore, the

"machine" of which plaintiff claims the Memory Board is a part or unit does not have automatic

data processing as its sole function.

The I/O Board or Boards send output signals and receive input signals and convert those

signals, e.g., from serial to parallel and from digital to analog. Pl.'s Facts ¶ 37. They are

connected to the Main Board (and, therefore, to the main CPU) by means of the Backplane. Pl.'s

Additional Material Facts ¶ 74. Because the input and output signals are for robotic control, the

function of an I/O Board cannot accurately be described as separate from the robotic control

function. *See* Def.'s Facts ¶ 12; Pl.'s Facts ¶¶ 12 (controller receives input from sensors on the

manipulator and end-of-arm tooling), 15 (controller has closed-loop system, which involves

feedback from sensors and encoders that are transmitted back to the controller). Similarly, the

Option Boards allow individualized control of robotic and related equipment in the factory

environment. *See* Pl.'s Resp. to Def.'s First Interrogs. ¶ 12. The I/O boards, which are

connected to the Main Board and main CPU, form part of the closed loop in which signals are

transmitted from the robotic equipment back to the controller, further to accomplishing the

robotic control function. This is yet another fact dispelling the premise that the common

function or purpose of the PCAs plaintiff identifies as the "ADP Parts" is limited to automatic

data processing.

The Power Supply Board and Backplane are not described by plaintiff as performing automatic data processing functions. The former powers the CPU Board, I/O Board and other boards that plaintiff views as composing an automatic data processing machine. But the principal purpose and function served by those boards, as discussed previously, is robotic control. The Backplane is described as providing connections with other boards.

Plaintiff describes the Operator Panel Board as transmitting signals to the Main Board from the "operator panel" on the outside of the controller, which features "buttons and switches used in the operation of the robot." Pl.'s Facts ¶ 40. The Operator Panel Board, therefore, is instrumental in controlling the robot. Similarly, the E-Stop Unit Board has a robotic control function that enables the interruption of robotic activity in the event of an emergency. Def.'s Facts ¶ 42; Pl.'s Facts ¶ 42.

Finally, the Control Circuit Board works in conjunction with the Servo Amplifier, the Axis Control Board, and the Power Circuit Board and performs signal conversion. Pl.'s Additional Material Facts ¶ 74. All three of these components are involved in robotic operation and control, which, as plaintiff acknowledges, is the principal function of the controller. Pl.'s Facts ¶ 9.

K. The Ten PCAs Are Not Correctly Classified under Heading 8471 as Automatic Data Processing Machines or Units Thereof

Having considered the functions of each of the subject PCAs, the court now can answer the question of whether the "ADP Parts" can be said to "incorporate" an automatic data processing machine. According to the uncontested facts, they cannot. The common purpose of those of the subject PCAs that rely upon data processing (other than the Memory Board) is to provide the electronic signals required for the control of a robot and, where fitted, auxiliary factory equipment. These signals, and not data or other information *per se*, are the desired

output. EN 84.71(I) explains that "[d]ata processing consists in handling information of all kinds" and that "[a]utomatic data processing machines are machines which, by logically interrelated operations performed in accordance with pre-established instructions (program), *furnish data which can be used as such* or, in some cases, serve in turn as *data for other data processing operations*." EN 84.71(I) (emphasis added).

The Memory Board is the only PCA that arguably could be described as performing solely an automatic data processing function. But as the court discussed above, it performs only one of the four functions described by note 5(A)(a) to chapter 84, HTSUS, i.e., "storing the processing program or programs and at least the data immediately necessary for execution of the program." In short, there is no single component within the collection plaintiff groups together as "ADP Parts" that qualifies as an automatic data processing machine according to note 5 to chapter 84, HTSUS, which applies a "four part" test in paragraph (A)(a) and a "sole function" test in paragraph (E). Accordingly, the court must reject plaintiff's argument that for tariff classification purposes each of its controllers consists of two "machines," i.e., an "automatic data processing machine" that performs automatic data processing and a "power/control" machine that powers and controls the robotic arm and associated industrial equipment. According to plaintiff's descriptions of the functions of the PCAs at issue, when considered according to the requirements of note 5 to chapter 84, these two functions are intertwined and not performed by separate machines within a FANUC controller.

Nor is any of the ten PCAs correctly described as a "unit" of an automatic data processing machine.[8] Although "[s]eparately presented units of an automatic data processing

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[8] Note 5(B) to chapter 84, HTSUS, provides as follows:
(continued . . .)

machine are to be classified in heading 8471," note 5(C) to ch. 84, HTSUS, there is no automatic

data processing machine within a FANUC controller of which the PCAs at issue, or any

combination of them, could be described by the heading term "unit thereof." Moreover, as

explained by EN 84.71(D), "[i]f the unit performs a specific function other than data processing,

it is to be classified in the heading appropriate to that function or, failing that, in a residual

heading (see Note 5(E) to this Chapter [84])." EN 84.71(D). The court, therefore, eliminates

from consideration heading 8471, HTSUS.

L. The Ten PCAs Are Not Correctly Classified under Heading 8473 as Parts of Automatic Data
Processing Machines

Because the ten PCAs at issue in this litigation, whether viewed individually or in any

combination, do not constitute an "automatic data processing machine" as defined by note 5 to

chapter 84, HTSUS, the court also eliminates heading 8473, HTSUS from consideration. Note 2

to section XVI, HTSUS, establishes rules for the classification of parts within the section.

Note 2(b), read as it pertains here, provides that "parts, if suitable for use solely . . . with a

particular kind of machine . . . are to be classified . . . in heading . . . 8473 . . . or 8538 as

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(. . . continued)
Automatic data processing machines may be in the form of systems consisting of
a variable number of separate units. Subject to paragraph (E) below, a unit is to
be regarded as being a part of a complete system if it meets all of the following
conditions:
  (a)   It is of a kind solely or principally used in an automatic data
          processing system;
  (b)   It is connectable to the central processing unit either directly or
          through one or more other units; and
  (c)   It is able to accept or deliver data in a form (codes or signals)
          which can be used by the system.

appropriate." Note 2(b) to § XVI, HTSUS.[9] Classification under heading 8473 is not

"appropriate" for any of the PCAs at issue in this case because that heading, by its express terms,

is limited to "[p]arts . . . suitable for use solely or principally with the machines of headings 8469

to 8472." Heading 8473, HTSUS. None of the ten PCAs is suitable for use solely or principally

with an automatic data processing machine of heading 8471, HTSUS because the controller

contains no such machine. The Memory Board is not an exception because, like the other nine

PCAs, it is not part of a machine that qualifies as an automatic data processing machine under

note 5 to chapter 84 and is not suitable for use in any machine other than a FANUC controller.

> M. Application of GRI 6, HTSUS to Determine the Correct Subheading of the HTSUS

The court next examines heading 8538, HTSUS for the proper subheading. *See* GRI 6,

HTSUS. The first subheading, 8538.10.00 ("Boards, panels, consoles, desks, cabinets and other

bases for the goods of heading 8537, not equipped with their apparatus"), does not describe the

merchandise in this case. Nor does the second subheading, 8538.90.10 ("Other: Printed circuit

assemblies: Of an article of heading 8537 for one of the articles described in additional U.S.

note 12 to chapter 85"), describe the PCAs under consideration. Additional U.S. note 12 to

chapter 85, HTSUS contains numerous article descriptions that do not apply to the subject

PCAs.[10] The court concludes that the subsequent subheading is correct: 8538.90.30 ("Other:

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[9] Note 2(a) to section XVI, HTSUS is not applicable to the question presented because it expressly excludes from its scope the issue of the classification of parts that might be described as included in headings 8473 or 8538, HTSUS.

[10] Additional U.S. note 12 to chapter 85, HTSUS provides:

> For the purposes of subheading 8538.90.10, the expression "articles described in additional U.S. note 12 to chapter 85" means any of the following goods: spin dryers of subheading 8421.19.30; deflash machines of subheading 8424.30 for cleaning or removing contaminants from the metal leads of semiconductor

(continued . . .)

Printed circuit assemblies: Other"), subject to duty at 3.5% *ad val*. Because this is the tariff

provision under which the goods at issue were liquidated, plaintiff has failed to demonstrate that

the government's classification is incorrect.

(. . . continued)

packages prior to electroplating (deflash by projectile beads); spraying appliances
of subheading 8424.89.30; machines or appliances of subheading 8424.89.50;
automated machinery of subheading 8428.20, 8428.33,8428.39 or 8428.90 for
transport, handling and storage of semiconductor wafers, wafer cassettes, wafer
boxes and other materials for semiconductor devices; machines of subheading
8456.10.60; machines of subheading 8456.91; machines of subheading
8456.99.10; machines of subheading 8456.99.70; machines of subheading
8462.21.40 or 8462.29.40; machines of subheading 8464.10 for sawing
monocrystal semiconductor boules into slices, or wafers into chips; machines of
subheading 8464.20.10; machines of subheading 8464.90.10 or 8464.90.60;
deflash machines of subheading 8465.99.40; articles of subheading 8469.11,
heading 8470 or heading 8471; automatic teller machines of subheading
8472.90.10; machines of subheading 8477.10.70, 8477.40.40 or 8477.59.40;
machines of subheading 8479.89.85 for processing of semiconductor materials or
for production and assembly of diodes, transistors and similar semiconductor
devices and electronic integrated circuits; machines of subheading 8479.89.87;
furnaces and ovens of subheading 8514.10 or 8514.20 for the manufacture of
semiconductor devices on semiconductor wafers; furnaces and ovens of
subheading 8514.30.60; die attach apparatus, tape automated bonders and wire
bonders of subheading 8515.80 for assembly of semiconductors; articles of
heading 8517; articles of subheading 8520.20; transmission apparatus of
subheading 8525.10.10 or 8525.10.90; articles of subheading 8525.20; digital still
image video cameras of subheading 8525.40.40; article of subheading
8527.90.40; paging receivers of subheading 8527.90.85; ion implanters of
subheading 8543.11 designed for doping semiconductor materials; articles of
subheading 8543.89.10; articles of subheading 8543.89.92; photocopying
apparatus of subheading 9009.11 or 9009.21; apparatus of subheading 9010.41,
9010.42 or 9010.49; apparatus of subheading 9010.50.60 for the projection or
drawing of circuit patterns on flat panel displays; plotters of subheading
9017.10.40 or 9017.20.70; pattern generating apparatus of subheading
9017.20.50; instruments and apparatus of heading 9026; instruments and
apparatus of heading 9027 except of subheading 9027.10, 9027.40 or 9027.90.20;
instruments and apparatus of subheading 9030.40; instruments and apparatus of
subheading 9030.82; optical instruments and appliances of subheading 9031.41;
optical instruments and appliances of subheading 9031.49.70; articles of
subheading 9031.80.40.

III. CONCLUSION

For the reasons discussed in the foregoing, the court will grant defendant's summary judgment motion, concluding that the merchandise at issue is classified properly in subheading 8538.90.30, HTSUS ("Parts suitable for use solely or principally with the apparatus of heading 8535, 8536 or 8537: Other: Printed circuit assemblies: Other"), subject to duty at 3.5% *ad val*. The court will deny plaintiff's cross-motion. Judgment will enter accordingly.

/s/Timothy C. Stanceu
Timothy C. Stanceu, Chief Judge

Dated: July 26, 2019
New York, New York