

EUROPEAN PATENT OFFICE  
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 771

DATE: JANUARY 1, 2020

PROJECT RP0612

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
<b>SCHEME:</b>		
Titles Changed:	B60L	53/35, 53/65
<b>DEFINITIONS:</b>		
Definitions New:	B60L	50/15, 50/64
	B60L	53/10, 53/122, 53/124, 53/16, 53/51, 53/52
	B60L	58/00, 58/10, 58/24, 58/30
Definitions Modified	B06L	50/00, 50/10, 50/16, 50/20, 50/50, 50/51, 50/52, 50/60, 50/61, 50/62, 50/70, 50/72
	B60L	53/00, 53/12, 53/14, 53/22, 53/30, 53/38, 53/80
	B60L	55/00
	B60L	58/12, 58/16, 58/18, 58/31, 58/32
	B60S	5/06

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following [Check the ones included]:

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

- 3.  REVISION CONCORDANCE LIST (RCL)
- 4.  CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
- 5.  CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

**B60L - PROPULSION OF ELECTRICALLY-PROPELLED VEHICLES** (arrangements or mounting of electrical propulsion units or of plural diverse prime-movers for mutual or common propulsion in vehicles B60K 1/00, B60K 6/20; arrangements or mounting of electrical gearing in vehicles B60K 17/12, B60K 17/14; preventing wheel slip by reducing power in rail vehicles B61C 15/08; dynamo-electric machines H02K; control or regulation of electric motors H02P); **SUPPLYING ELECTRIC POWER FOR AUXILIARY EQUIPMENT OF ELECTRICALLY-PROPELLED VEHICLES** (electric coupling devices combined with mechanical couplings of vehicles B60D 1/64; electric heating for vehicles B60H 1/00); **ELECTRODYNAMIC BRAKE SYSTEMS FOR VEHICLES IN GENERAL** (control or regulation of electric motors H02P); **MAGNETIC SUSPENSION OR LEVITATION FOR VEHICLES**; **MONITORING OPERATING VARIABLES OF ELECTRICALLY-PROPELLED VEHICLES**; **ELECTRIC SAFETY DEVICES FOR ELECTRICALLY PROPELLED VEHICLES**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g.</u> <u>0, 1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be</u> <u>enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	B60L 53/35	2	Means for automatic or assisted adjustment of the relative position of charging devices and vehicles	
M	B60L 53/65	2	involving identification of vehicles or their battery types	

\*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- \*\*No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- “Transferred to” column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.

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- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalisation projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column.
- For more details about the types of scheme change, see CPC Guide.

## 2. A. DEFINITIONS (new)

Insert: The following new definitions for subclass B60L.

### B60L 50/15

#### Definition statement

*This place covers:*

Additional electric power supply independent of the power supplied by the engine-driven generators.

#### References

#### Limiting references

*This place does not cover:*

Electric vehicles with capacitors charged by engine-driven generators	<a href="#">B60L 50/40</a>
Electric vehicles with batteries charged by engine-driven generators	<a href="#">B60L 50/61</a>

### B60L 50/64

#### Relationships with other classification places

This group does not cover constructional details of batteries per se which are covered by [H01M](#).

#### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Secondary cells, i.e. accumulators, in general	<a href="#">H01M 10/00</a>
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## **B60L 53/10**

### **Definition statement**

*This place covers:*

Charging of batteries, specially adapted for propulsion of electric vehicles, characterised by the type of energy transfer between the charging station and the vehicle.

The energy transferred to or from the vehicle is used to adjust the SOC of the vehicle rather than for immediate propulsion. The vehicle is normally stationary, or at least stationary in relation to the charging station.

### **Relationships with other classification places**

Electric propulsion of vehicles using power supplied by batteries in combination with an external power supply is covered by [B60L 50/53](#).

Electric propulsion of vehicles with power supply external of the vehicle is covered by [B60L 9/00](#).

## **B60L 53/122**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Circuit arrangements for wireless supply of electric power in general using inductive coupling	<a href="#">H02J 50/10</a>
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## **B60L 53/124**

### **References**

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Circuit arrangements for wireless supply of electric power in general responsive to the presence of foreign objects	<a href="#">H02J 50/60</a>
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## **B60L 53/16**

### **References**

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Connectors in general	<a href="#">H01R</a>
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## **B60L 53/51**

### **References**

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Supporting structures for photovoltaic modules	<a href="#">H02S 20/00</a>
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**B60L 53/52****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Wind motors in general	<a href="#">F03D</a>
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**B60L 58/00****Relationships with other classification places**

This main group does not cover methods or circuit arrangements for monitoring or controlling batteries or fuel cells per se, which are covered by [G01R 31/36](#), [H01M 6/50](#), [H01M 8/04298](#) and [H01M 10/48](#).

**B60L 58/10****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Measuring, testing or indicating condition of accumulators in general	<a href="#">H01M 10/48</a>
Testing electrical variables of batteries	<a href="#">G01R 31/36</a> , <a href="#">H01M 6/50</a>

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## **B60L 58/24**

### **References**

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Controlling the temperature of accumulators in general	<a href="#">H01M 10/60</a>
Controlling the temperature of accumulators of vehicles in general	<a href="#">H01M 10/625</a>

## **B60L 58/30**

### **References**

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Controlling of fuel cells in general	<a href="#">H01M 8/04298</a>
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## 2. A. DEFINITIONS (modified)

Insert: The following new modifications for subclass B60L.

### B60L 50/00

#### Definition statement

*This place covers:*

Replace: The existing definition statement with the following new statement.

Electric vehicles using electric energy stored or provided in various forms within the vehicle. The electric energy can be provided by engine-driven generators or fuel cells, stored in electrical cells like batteries or in capacitors, or converted from mechanically stored energy.

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Delete: The following row from the Informative references table.

Electrically driven model locomotives	<a href="#">A63H 19/10</a>
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Replace: The text for the reference B60K 6/20 with the following new text.

Arrangements or mounting of plural diverse prime-movers for mutual or common propulsion consisting of electric motors and internal combustion engines, e.g. HEVs.	<a href="#">B60K 6/20</a>
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Insert: The following new Application-oriented references section and row.

##### **Application-oriented references**

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Electrically-driven model locomotives	<a href="#">A63H 19/10</a>
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## B60L50/10

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Replace: The text for the following two references with the following new text.

Electric vehicles with batteries charged by engine-driven generators	<a href="#">B60L 50/61</a>
Control of combustion engines	<a href="#">F02D</a>

## B60L 50/16

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Insert: The following row into the Informative references table.

Architecture of hybrid vehicles	<a href="#">B60K 6/42</a>
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## B60L 50/20

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Replace: The text for the following reference with the following new text.

Rider propelled cycles with auxiliary electric motor	<a href="#">B62M 6/40</a>
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## B60L 50/50

Insert: The following new Definition statement section

### **Definition statement**

*This place covers:*

General features that are not specific for either batteries or fuel cells.

## B60L 50/51

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Replace: The text for the reference B60L 50/53 with the following new text.

Electric vehicles with power supplied by batteries in combination with an external power supply	<a href="#">B60L 50/53</a>
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## B60L 50/52

### **References**

#### ***Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Replace: The text for the reference B60L 50/53 with the following new text.

Electric vehicles with power supplied by batteries in combination with an external power supply	<a href="#">B60L 50/53</a>
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## B60L 50/60

### References

#### Limiting references

*This place does not cover:*

Replace: The text for the reference B60L 50/75 with the following new text.

Electric vehicles powered by batteries in combination with fuel cells	<a href="#">B60L 50/75</a>
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## B60L 50/61

### Definition statement

*This place covers:*

Delete: The definition statement “Electric vehicles using ....., e.g. series hybrid vehicles.”

Insert: The three new definition bullets below.

- Electric vehicles using a range extender to increase the operating range of the battery, e.g. series hybrid vehicles.
- Aspects related to the electrical equipment and propulsion of series hybrid vehicles, i.e. the electric drivetrain of series hybrid vehicles.
- Control of series hybrid vehicles when the control is restricted to the electrical drivetrain only.

Insert: The following new Relationships with other classification places section.

#### Relationships with other classification places

Arrangements of the plural prime-movers in series hybrid vehicles or aspects related to the architecture of series hybrid vehicles are covered by [B60K 6/20](#), especially [B60K 6/46](#).

Control of series hybrid vehicles involving plural prime-movers, i.e. when the control is not restricted to the electrical drivetrain, is covered by [B60W 20/00](#).

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## References

### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Insert: The following new rows into the Informative references table.

Architecture of series-type hybrid vehicles	<a href="#">B60K 6/46</a>
Control systems specially adapted for hybrid vehicles	<a href="#">B60W 20/00</a>

## **B60L 50/62**

### **Definition statement**

This place covers:

Replace: The existing definition statement with the following new text.

Vehicles with propulsion power supplied by batteries charged by engine-driven generators that are not providing enough power to supply the maximum output power of the vehicles, e.g. range extenders. This kind of vehicle has a reduced power output if it is only powered by low-power generators.

## **B60L 50/70**

### **References**

#### *Limiting references*

*This place does not cover:*

Replace: The text for the reference B60L 50/75 with the following new text.

Electric vehicles powered by fuel cells in combination with batteries	<a href="#">B60L 50/75</a>
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## B60L 50/72

Insert: The following new Relationships with other classification places section.

### **Relationships with other classification places**

This group does not cover constructional details of fuel cells per se, which are covered by [H01M 8/00](#).

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Replace: The text for the reference H01M 8/00 with the following new text.

Fuel cells	<a href="#">H01M 8/00</a>
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## B60L 53/00

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Insert: The following new rows into the Informative references table.

Electric propulsion of vehicles with power supply external to the vehicle	<a href="#">B60L 9/00</a>
Methods, circuits, or devices for controlling the traction-motor speed of electrically propelled vehicles	<a href="#">B60L 15/20</a>
Electric propulsion of vehicles using power supplied by vehicle batteries in combination with an external power supply	<a href="#">B60L 50/53</a>
Methods for charging or discharging batteries in general	<a href="#">H01M 10/44</a>

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Replace: The text for the reference H02J 7/00 with the following new text.

Circuit arrangements for charging batteries or for supplying loads from batteries in general	H02J 7/00
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## B60L 53/12

### Definition statement

*This place covers:*

Insert: The following new paragraph as the first paragraph and before the existing paragraph.

Arrangements where the charging energy is transmitted inductively from the charging station to the vehicle.

Insert: The following new Relationships with other classification places section.

### Relationships with other classification places

This group covers inductive energy transfer specially adapted for electric vehicles, e.g. for the power supply control in cooperation with control and operation of the vehicle or arrangements therefor.

Wireless charging in general is covered by the general technology group [H02J 50/00](#).

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Insert: The following new row into the Informative references table.

Circuit arrangements or systems for wireless supply or distribution of electric power in general	H02J 50/00
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## B60L 53/14

### Definition statement

*This place covers:*

Insert: The following new paragraph as the first paragraph and before the existing paragraph.

Arrangements where the charging energy is transmitted conductively from the charging station to the vehicle.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Replace: The text for the reference H02G 3/00 with the following new text.

Installation of electric cables or line or protective tubings therefor in or on buildings, equivalent structures or vehicles	H02G 3/00
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Insert: The following new row into the Informative references table.

Electric circuits specially adapted for vehicles not otherwise provided for	B60R 16/00
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## B60L53/22

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Replace: The text for the reference H02M with the following new text.

Converters and inverters, in general	H02M
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**B60L 53/30****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*Delete: The following row from the Informative references table.

Optimisation of energy and GPS or similar system	<a href="#">B60L 15/20</a>
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Insert: The following new rows into the Informative references table.

Methods, circuits, or devices for controlling the traction-motor speed of electrically propelled vehicles	<a href="#">B60L 15/20</a>
Optimisation of energy with GPS or similar systems	<a href="#">B60L 15/2045</a>
Supplying batteries to, or removing batteries from, vehicles in general	<a href="#">B60S 5/06</a>

Replace: The text for the reference B60L 53/80 with the following new text.

Exchange of energy storage elements for electric propulsion of vehicles	<a href="#">B60L 53/80</a>
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**B60L 53/38****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*Replace: The text for the reference B60L 53/12 with the following new text.

Inductive charging of electric vehicles in general	<a href="#">B60L 53/12</a>
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## B60L 53/80

### Definition statement

*This place covers:*

Insert: The following new paragraph as the first paragraph and before the existing paragraph.

Exchange of electric storage elements for electric propulsion of vehicles.

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Insert: The following new row into the Informative references table.

Regenerative fuel cells	H01M 8/18
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## B60L 55/00

### References

#### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Insert: The following new row into the Informative references table.

Arrangements for balancing of the load in an AC network by storage of energy	H02J 3/28
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**B60L58/12****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*Replace: The text for the reference G01R 31/382 with the following new text.

Arrangements for monitoring battery variables, e.g. state-of-charge [SOC], in general	<a href="#">G01R 31/382</a>
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**B60L 58/16**Insert: The following new Informative references section and table.**References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Apparatus for determining battery ageing, e.g. state-of-health, in general	<a href="#">G01R 31/392</a>
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**B60L 58/18**Insert: The following new Informative references section and table.**References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Apparatus for monitoring individual cells or groups of cells within a battery	<a href="#">G01R 31/396</a>
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**B60L 58/31**Insert: The following new Informative references section and table.**References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Starting of fuel cells in general	<a href="#">H01M 8/04302</a>
Arrangements for starting of fuel cells in general	<a href="#">H01M 8/04225</a>

**B60L 58/32**Insert: The following new Informative references section and table.**References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Controlling the temperature of fuel cells in general	<a href="#">H01M 8/04701</a>
Detection of temperature for controlling fuel cells in general	<a href="#">H01M 8/0432</a>

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Insert: The following new modifications for subclass B60S.

## **B60S 5/06**

### **Definition statement**

*This place covers:*

Replace: The existing bullet statement with the following two new bullet statements.

- Battery exchange service stations
- Exchanging batteries in general for vehicles

### **Relationships with other classification places**

Replace: The symbol in the statement

“Service stations with an automatic system for recharging batteries, without battery exchange, are classified in [B60L 50/50](#).”

with [B60L 53/50](#).

Insert: The following new paragraph immediately following the first existing paragraph.

Exchanging batteries for electric propulsion of vehicles is covered by [B60L 53/80](#).

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Delete: The following row from the Informative references table.

Charging of batteries	<a href="#">B60L 50/50</a>
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Insert: The following new row into the Informative references table.

Charging batteries specially adapted for electric vehicles	<a href="#">B60L 53/00</a>
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