

## **B60S**

**SERVICING, CLEANING, REPAIRING, SUPPORTING, LIFTING, OR MANOEUVRING OF VEHICLES, NOT OTHERWISE PROVIDED FOR**

### **B60S 1/00**

**Cleaning of vehicles (by apparatus not integral with vehicle [B60S 3/00](#); cleaning in general [B08B](#); de-icing of aircraft [B64D](#); heating arrangements specially adapted for transparent or reflecting areas [H05B 3/84](#) )**

#### **Definition statement**

*This subclass/group covers:*

Cleaning devices used for cleaning any parts of the vehicle and being fixed to the vehicle (defogging devices, wipers for windscreen or rear windows, nozzles distributing washing liquid, scrapers fixed to the wheels, ...).

The cleaning devices being separate to the vehicle are to be found under [B60S 3/00](#).

#### **Relationship between large subject matter areas**

Heated wires embedded in the windshield are to be found in [H05B 3/84](#) and defrosting by deflecting air from the air-conditioning unit is classified in [B60H](#). [B60S 1/023](#) is therefore only concerned with the specific control of the defrosting (in particular automatic control using sensors for external conditions)

Hydrophobic films when applied to windscreens are both classified in [B60S 1/02](#) and [C09K 3/18](#).

The group [B60S 1/0818](#) and subgroups are concerned with rain sensors for automatic control of the windscreen wipers. The documents concerned with the type of detection should have both a classification in [B60S 1/0818](#) or subgroups and a classification in the corresponding type of detection (optical detection [G01N 21/45](#), by varying capacitance [G01N 27/22](#)). When the document is about a multi-functional camera, only an Indexing Code (namely [B60S 1/0844](#)) but no EC symbol is given to this document. The main groups for those documents should be either stereoscopic detection [H04N 13/00](#) or image recognition [G06K 9/00](#).

The group [B60S 1/0848](#) concerns the cleaning of cameras when the camera is used as a rain sensor for controlling the wipers on the vehicle. Automatic cleaning of cameras is classified under [H04N](#). Cleaning of radars or external cameras installed on vehicles (by wipers or heating devices) are classified in [B60S 1/56](#).

The documents concerned with the electric wiper motors are normally classified in [H02K 7/116](#) but get a classification in [B60S 1/166](#) as well. The same rule applies to gearings [F16H 1/00](#), ball-joints [F16C](#), sealings [F16F](#) or other functional fields.

The extrusion of the wiper rubber is classified in [B29C 69/00](#), only an Indexing Code ([B60S 2001/3898](#)) is given in our field. The same applies to the chemical composition of coatings for wiper blade rubbers, the relevant field being [C08J 7/00](#) and the Indexing Code [B60S 2001/3829](#).

Packaging for wiper blades are both classified in [B60S 1/38](#) (if applicable [B60S 1/3848](#)) and [B65D](#).

Washing liquid nozzles having specific features for creating a specific spray (e.g. fluidic oscillators) are both classified in [B60S 1/52](#) and [B05B](#).

Water heaters for heating washing liquid for windscreen washer reservoirs are both classified in [B60S 1/488](#) and [F24H 1/12](#). Documents showing reservoirs of washing liquid can also be classified in pumps ([F04D](#)), liquid level indicator ([G01F 23/00](#)), funnels ([B67C 11/00](#)) or front structure of car body ([B62D 25/08](#)). Some reservoirs are combined with cooling fluid expansion reservoirs for heating purposes, they should get both classifications [B60S 1/487](#) and **F02P11/02E**.

The group [B60S 1/54](#) is concerned with cleaning by using air. However, defrosters for the windscreen deflecting air from the air-conditioning device are classified in [B60H](#).

The group [B60S 1/56](#) is concerned with cleaning of other part or devices than the front window. However a specific group exist in [B60R 1/06](#) for cleaning rear-view mirrors. When cleaning is made using a wiper, a relevant classification for wipers in groups [B60S 1/04](#) to [B60S 1/44](#) is added.

## References relevant to classification in this group

*This subclass/group does not cover:*

De-icing of aircraft	<a href="#">B64D</a>
Heating arrangements for transparent or reflecting areas	<a href="#">H05B 3/84</a>
Air-conditioning for vehicles	<a href="#">B60H</a>
Cleaning of rear-view mirrors	<a href="#">B60R 1/06</a>

## Informative references

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

Coating of wiper blades	<a href="#">C08J 7/00</a>
Extrusion of wiper blades	<a href="#">B29C 69/00</a>
Packaging (for wiper blades)	<a href="#">B65D</a>
Spraying devices	<a href="#">B05B</a>
Electric wiper motors	<a href="#">H02K 7/116</a>
Casings of wiper motors	<a href="#">H02K</a>
Suction cleaners	<a href="#">A47L 9/00</a>
Cleaning in general	<a href="#">B08B</a>
Hydrophobic films	<a href="#">C09K 3/18</a>

### Special rules of classification within this group

The groups [B60S 1/04](#) to [B60S 1/44](#) are concerned with windscreen wipers and their different consisting parts (mounting on the vehicle [B60S 1/04](#), electric control [B60S 1/08](#), motor-reduction units [B60S 1/166](#), transmissions [B60S 1/18](#) to [B60S 1/24](#), wiper arms [B60S 1/34](#), wiper blades\* [B60S 1/38](#), Connection between wiper arm and wiper blade [B60S 1/40](#)).

\* The term "wiper blade" relates to the wiper squeegee (wiping lip) together with its support structure. The structure is either made of articulated elements ([B60S 1/3801](#)) or from a single flat element (flat-type wiper blade [B60S 1/3848](#)). A flat-type wiper blade should always either get an EC or an Indexing Code under [B60S 1/3848](#) even if only visible on the figures (this remark is particularly relevant for documents concerned with connectors for wiper blade and wiper arm).

Warning : A series of Indexing Codes [B60S 2001/3812](#) - [B60S 2001/3846](#) does not have a corresponding EC classification. They are however to be used when their titles correspond specifically to the wiper blades described in the documents.

The flat-type wiper blades [B60S 1/3848](#) have a corresponding EC/Indexing Code scheme except for [B60S 2001/3898](#) (only Indexing Code). Here the general rule applies: Invention information under EC - Additional information under Indexing Code

The blade-arm connection does not have a corresponding EC or Indexing Code scheme. Some specific details of connections are only present in the Indexing Code scheme. The document got usually the best relevant EC

classification. If the best classification is an Indexing Code symbol, this Indexing Code is given together with one EC and other Indexing Codes related to additional information.

## **B60S 3/00**

**Vehicle cleaning apparatus not integral with vehicles (cleaning in general [B08B](#); cleaning peculiar to waterborne vessels [B63B 57/00](#), [B63B 59/00](#); ground equipment for cleaning aircraft [B64F 5/00](#); [N: multistage treatment applied to waste water from vehicle wash installations [C02F 9/00](#) ])**

### **Definition statement**

*This subclass/group covers:*

Washing bays and separate hand-held devices specific for cleaning vehicles. The term vehicles has to be understood in its broad sense as cleaning devices for golf carts, shopping trolleys or wheelchairs are also classified here.

Cleaning of car structure (for example before painting) is not covered by this groups as it concerns only complete vehicle being in use. Cleaning of dismounted wheels can however be found under [B60S 3/042](#).

### **Relationship between large subject matter areas**

Documents relating to cleaning in general are classified in [B08B](#).

Bicycle chain cleaners are classified in [B60S 3/041](#) and [B62J](#).

Documents showing ice-scrapers, mops or window-cleaning are only classified in [A47L](#) except if only used in combination with a vehicle (in this case the classification [B60S 3/045](#) is added).

When a document discloses the characteristics of a brush for car wash systems, it should be both classified in [B60S 3/06](#) and in [A46B](#).

Washing with textiles curtains strips should be classified in [B60S 3/04](#) and not in [B60S 3/06](#) (rotating brushes).

### **References relevant to classification in this group**

*This subclass/group does not cover:*

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

Cleaning peculiar to waterborne vessels	<a href="#">B63B 57/00</a>
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Ground equipment for cleaning aircraft	<a href="#">B64F 5/00</a>
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## Informative references

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

Mops, ice scrapers	<a href="#">A47L</a>
Conveyers	<a href="#">B65G 19/02</a>
Bicycle chain cleaners	<a href="#">B62J</a>
Snow-mobiles, motorcycles	<b><a href="#">B62M67/00</a></b>
Multistage treatment applied to waste water	<a href="#">C02F 9/00</a>
Chemical mixing devices	<a href="#">C09K</a>
Cleaning or de-greasing metallic material	<a href="#">C23G 5/00</a>
Drying devices	<a href="#">F26B 21/00</a>

## **[B60S 5/00](#)**

**Servicing, maintaining, repairing or refitting of vehicles ([N: collecting or removing exhaust gases in workshops [B08B 15/002](#); straightening vehicle body parts [B21D 1/12](#), [B21D 1/14](#)]; vehicles adapted to carry a workshop for servicing or maintenance [B60P 3/14](#); servicing rail locomotives [B61K](#)); [N: registering or indicating the working of vehicles [G07C 5/00](#): testing of vehicles [G01M 17/00](#); arrangements for electrical testing [G01R 31/00](#); devices for monitoring or checking brake systems [B60T 17/22](#); filling or draining lubricant [F01M 11/04](#); means for collecting, retaining, or draining-off lubricant [F16N 31/00](#); draining of lubricant from gearing [F16H 57/0406](#); assembly or repair of springs or dampers [F16F 9/3271](#); tool, instrument or work supports or storage means used in association with vehicles [B25H 5/00](#) ]**

## Definition statement

*This subclass/group covers:*

Methods for repairing and the combination of services.

Very few documents are present in this group as there seem always to be a better place to classify these documents. JPO seem to use it more frequently.

## Relationship between large subject matter areas

Tools or bench devices : [B25B 1/00](#)

Registering or indicating the working of vehicles [G07C 5/00](#)

## References relevant to classification in this group

*This subclass/group does not cover:*

Straightening vehicle body parts	<a href="#">B21D 1/12</a>
Testing of vehicles	<a href="#">G01M 17/00</a>
Arrangements for electrical testing	<a href="#">G01R 31/00</a>
Devices for monitoring or checking brake systems	<a href="#">B60T 17/22</a>
Filling or draining lubricant	<a href="#">F01M 11/04</a>
Means for collecting, retaining, or draining-off lubricant	<a href="#">F16N 31/00</a>
Draining of lubricant from gearing	<a href="#">F16H 57/04</a>
Assembly or repair of springs or dampers	<a href="#">F16F 9/32</a>
Assembling motor vehicles	<a href="#">B62D 65/00</a>
Registering or indicating the working of vehicles	<a href="#">G07C 5/00</a>
Administration of vehicle repair process	<a href="#">G06Q 10/00</a>

## Informative references

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

Collecting or removing exhaust gases in workshops	<a href="#">B08B 15/002</a>
Vehicles adapted to carry a workshop for servicing or maintenance	<a href="#">B60P 3/14</a>
Servicing rail locomotives	<a href="#">B61K</a>
Tools or bench devices	<a href="#">B25B 1/00</a>
Registering or indicating the working of vehicles	<a href="#">G07C 5/00</a>

## B60S 5/02

**Supplying fuel to vehicles; General disposition of plant in filling stations (apparatus for transferring measured quantities of petrol, oil, or the like from storage space to vehicles [B67D](#))**

### Definition statement

*This subclass/group covers:*

This group is only concerned with the exterior arrangement of service station plants but not with the dispensing of the fuel itself which is classified in subclass [B67D](#). Documents in this group are concerned with mobile fuel stations, arrangement of service or technical rooms, arrangement of other services like cleaning, tyre air refill or similar subject matter.

### References relevant to classification in this group

*This subclass/group does not cover:*

Transferring measured quantities of petrol, oil, or the like from storage space to vehicles	<a href="#">B67D</a>
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## Informative references

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

Buildings or like structures	<a href="#">E04H 1/12</a>
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Coin-freed apparatus	<a href="#">G07F</a>
Displaying, advertising	<a href="#">G09F 27/00</a>

## B60S 5/04

Supplying air for tyre inflation (arrangement of tyre inflating devices on vehicles [B60C 23/00](#); tyre pressure gauges [G01L 17/00](#); [N: pumps actuated by muscle power [F04B 33/00](#) ])

### Definition statement

*This subclass/group covers:*

Air supply for vehicle tyre inflation.

### References relevant to classification in this group

*This subclass/group does not cover:*

Arrangement of tyre inflating devices on vehicles	<a href="#">B60C 23/00</a>
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### Informative references

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

Pumps actuated by muscle power	<a href="#">F04B 33/00</a>
Tyre pressure gauges	<a href="#">G01L 17/00</a>
Mounting or dismounting of wheels	<a href="#">B60B 29/00</a>
Filling of containers with liquefied gases under pressure	<a href="#">F17C 5/06</a>

## B60S 5/06

Supplying batteries to, or removing batteries from, vehicles (circuit arrangements for charging batteries [H02J 7/00](#) )

### Definition statement

*This subclass/group covers:*

Documents in this group are only concerned with battery exchange service stations.

Relationship between large subject matter areas

Documents related to service stations with an automatic system for recharging batteries (no exchange) are classified in [B60L 11/18](#).

### **Informative references**

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

Arrangement of batteries in the vehicle	<a href="#">B60K</a>
Charging of batteries	<a href="#">B60L 11/18</a>
Arrangement of batteries in fork lift trucks	<a href="#">B66F 9/00</a>
Automatic payment	<a href="#">G07F</a>
Batteries in general	<a href="#">H01M</a>
Circuit arrangements for charging batteries	<a href="#">H02J 7/00</a>

### **B60S 9/00**

**Ground-engaging vehicle fittings for supporting, lifting, or manoeuvring the vehicle, wholly or in part, e.g. built-in jacks [N: props for vehicle draw bars [B60D 1/66](#); anti-theft devices acting on vehicle jacking means [B60R 25/001](#) ]; (lifting devices in general [B66F](#), supports in general [F16M](#))**

### **Definition statement**

*This subclass/group covers:*

Only supporting devices being fixed to the vehicle.

### **References relevant to classification in this group**

*This subclass/group does not cover:*

*Examples of places where the subject matter of this group is covered when*

*pecially adapted, used for a particular purpose, or incorporated in a larger system:*

Outriggers for cranes	<a href="#">B66C 23/80</a>
Outriggers for ground engaging machines	<a href="#">E02F 9/00</a>
Outriggers for concrete pumps	<a href="#">E04G 21/00</a>
Vehicles for placing portable bridges	<a href="#">E01D 15/127</a>
Root extracting machines	<a href="#">A01G 23/04</a>

### **Informative references**

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

Supports in general	<a href="#">F16M</a>
Anti-theft devices acting on vehicle jacking means	<a href="#">B60R 25/001</a>
Props for vehicle draw bars	<a href="#">B60D 1/66</a>
Vehicles with ground-engaging propulsion means, e.g. walking members	<a href="#">B62D 57/02</a>
Track vehicles with additional or alternative ground wheels	<a href="#">B62D 55/02</a>
Auxiliary drives from a ground wheel	<a href="#">B60K 25/08</a>
Load transporting devices (loading platforms)	<a href="#">B60P</a>
Lifting devices in general	<a href="#">B66F</a>

### **B60S 11/00**

**Vehicle modifications for receiving separate lifting, supporting, or manoeuvring devices**

## Definition statement

*This subclass/group covers:*

Documents in that group are concerned with vehicles presenting supporting elements for receiving separate lifting devices i.e. devices which are not an integral part of the vehicle (like the classical scissors jack for example).

## B60S 13/00

**Vehicle-manoeuving devices separate from the vehicle (vehicle lifting [N: e.g. liftable turntables] or pushing devices [B66F](#); [N: workshop equipment [B25H](#)])**

## Definition statement

*This subclass/group covers:*

Only turntables or traverses specifically designed to move vehicles

## References relevant to classification in this group

*This subclass/group does not cover:*

Equipment fixed to parking garages	<a href="#">E04H 6/40</a>
Conveyers for vehicles	<a href="#">B62D 65/18</a>
Vehicle lifting or pushing device	<a href="#">B66F 3/00</a>

## Informative references

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

Workshop equipment	<a href="#">B25H</a>
Conveyers in general	<a href="#">B65G</a>
Castors for vehicles	<a href="#">B62B 5/00</a>