

B62D

MOTOR VEHICLES; TRAILERS (steering, or guiding on a desired track, of agricultural machines or implements [A01B 69/00](#); wheels, castors, axles, increasing wheel adhesion [B60B](#); vehicle tyres, tyre inflation or tyre changing [B60C](#); connections between vehicles of a train or the like [B60D](#); vehicles for use on rail and road, amphibious or convertible vehicles [B60F](#); suspension arrangements [B60G](#); heating, cooling, ventilating or other air treating devices [B60H](#); windows, windscreens, non-fixed roofs, doors or similar devices, protective coverings for vehicles not in use [B60J](#); propulsion plant arrangements, auxiliary drives, transmissions, controls, instrumentation or dashboards [B60K](#); electric equipment or propulsion of electrically-propelled vehicles [B60L](#); power supply for electrically-propelled vehicles [B60M](#); passenger accommodation not otherwise provided for [B60N](#); adaptations for load transportation or to carry special loads or objects [B60P](#); arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general [B60Q](#); vehicles, vehicle fittings or vehicle parts not otherwise provided for [B60R](#); servicing, cleaning, repairing, supporting, lifting, or manoeuvring, not otherwise provided for, [B60S](#); brake arrangements, brake control systems or parts thereof [B60T](#); air-cushion vehicles [B60V](#); motor-cycles, accessories therefor [B62J](#), [B62K](#); testing of vehicles [G01M](#))

Definition statement

This place covers:

- Fittings for identifying vehicles in case of collision; Fittings for marking or recording collision areas
- Spare wheel stowing, holding, or mounting arrangements
- Systematic disassembly of vehicles for recovery of salvageable components, e.g. for recycling
- Steering of motor vehicles or trailers
- Arrangements for automatically controlling steering depending on driving conditions, e.g. control circuits therefor
- Steering non-deflectable wheels
- Steering endless tracks or the like
- Steering specially adapted for trailers or for vehicles having pivotally connected frames
- Power-assisted or power-driven steering
- Steering control means, e.g. steering wheel or levers
- Steering gears, e.g. means to convert control input motion to final output motion at the wheels
- Steering linkages; Stub axles or their mountings
- Understructures; Superstructures; Vehicle bodies
- Combined superstructures and frame, i.e. monocoque constructions
- Superstructures for load-carrying vehicles
- Superstructures for passenger vehicles
- Connections between superstructure sub-units
- Understructures, i.e. chassis frames on which vehicle body may be mounted
- Connections between vehicle body and frame
- Vehicle bodies characterised by stream lining
- Stabilising vehicle bodies without suspension arrangements, e.g. by movable masses or by aerodynamic means
- Motor vehicles or trailers classified according to type; Parts or accessories thereof
- Endless track vehicles

- Motor vehicles characterised by the driver not being seated
- Tractors
- Tractor trailer combinations; Road trains
- Motor vehicles or trailers predominantly for carrying passengers, e.g. omnibuses
- Trailers with driven ground wheels
- Motor vehicles having other propulsion or ground engaging means than wheels or endless tracks alone or in addition to wheels or endless tracks

References

Limiting references

This place does not cover:

Steering, or guiding on a desired track, of agricultural machines or implements	A01B 69/00
Emergency vehicles, unless the document concerns chassis/bodywork aspects	A62C 27/00
Connections between vehicles;	B60D
Vehicles for use on rail and road, amphibious or convertible vehicles;	B60F
Passenger accommodation not otherwise provided for	B60N
Adaptations for load transportation or to carry special loads or objects	B60P
Vehicles, vehicle fittings or vehicle parts not otherwise provided for	B60R
Air-cushion vehicles	B60V
Locomotives; Motor railcars	B61C
Body details or kinds of railway vehicles	B61D
Hand-propelled vehicles, e.g. hand carts, Sledges	B62B
Motor-cycles, including quad bikes, ATVs;	B62J
Balancing machines supporting a rider; motorised skateboards and the like	B62K
Motorized wheelchairs; personal mobility vehicles	B62K 5/00
Armoured vehicles, unless the document concerns chassis/bodywork/track aspects	F41H

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:

Vehicle wheels, castors, axles, increasing wheel adhesion;	B60B
Vehicle tyres, tyre inflation or tyre changing;	B60C
Suspension arrangements	B60G
Heating, cooling, ventilating or other air treating devices	B60H
Windows, windscreens, non-fixed roofs, doors or similar devices, protective coverings for vehicles not in use	B60J
Electric equipment or propulsion of electrically-propelled vehicles;	B60L
Power supply for electrically-propelled vehicles	B60M
Lighting, signalling	B60Q

Servicing, cleaning, repairing, supporting, lifting, or manoeuvring, not otherwise provided for	B60S
Brake arrangements, brake control systems or parts thereof	B60T
Propulsion plant arrangements, auxiliary drives, transmissions, controls, instrumentation or dashboards	B62K

Informative references

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

Servicing, cleaning, repairing, supporting, lifting, or manoeuvring, not otherwise provided for	B60S
Brake arrangements, brake control systems or parts thereof	B60T
Steering devices applicable only to steerable undercarriages for aircraft	B64C 25/50
Testing of vehicles	G01M

Special rules of classification

The indexing scheme of IPC [5] associated with group [B62D 6/00](#), relating to driving conditions sensed and responded to are not used in CPC.

B62D 1/00

Steering controls, i.e. means for initiating a change of direction of the vehicle

Definition statement

This place covers:

Means for initiating a change of driving direction of vehicles

- External motors for turning the steering wheel; e.g. fixed to or placed on the seat.
- Remote controllers (man held apparatus) used for steering.
- Single steering systems added later.
- System allowing steering with the knee or the like, e.g. specially adapted levers
- Systems telling the vehicle driver about free parking places.

References

Limiting references

This place does not cover:

Systems for helping the driver to keep the lane	B62D 15/025
Automatic steering system used for parking	B62D 15/027

B62D 1/02

vehicle-mounted

Definition statement

This place covers:

- Foot steered vehicles.
- Vehicles running a previously recorded program, also learning or teaching thereof.

- Finger-tip steering on sliding switches.
- (mechanical) systems for blocking the steering wheel in a certain position, e.g. to allow straight driving.
- Steering by shifting a load or by rotating seats.
- Steering systems for vehicles with rotating cabins.
- Steering with reign like handles.
- Steering by moving the armrest of a seat.

B62D 1/046

{Adaptations on rotatable parts of the steering wheel for accommodation of switches}

Definition statement

This place covers:

Other electric devices integrated in the steering wheel, e.g. microphones, vibrating means, (pressure) sensors, lamps, information screens.

References

Limiting references

This place does not cover:

Combination of airbags with horn switch in steering wheel	B60R 21/2037
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Special rules of classification

For the characteristics of the electric devices per se, see the relevant groups for the device as such.

B62D 1/12

Hand levers

Definition statement

This place covers:

- Hand levers for steering control
- (Multiple function) joy-sticks

B62D 1/16

Steering columns

Definition statement

This place covers:

Special features of steering columns; bearing and bearing arrangements therefor

B62D 1/18

yieldable or adjustable, e.g. tiltable (padded linings associated with the steering column [B60R 21/05](#))

Definition statement

This place covers:

- Steering columns supported by elastic means
- Steering columns being adjustable by the driver, e.g. for a comfortable position
- Steering columns movable together with the dashboard, e.g. when dashboard is linked to a front door

B62D 1/197

{incorporating devices for preventing ingress of the steering column into the passengers space in case of accident}

Definition statement

This place covers:

Systems of actively moving steering columns in a better position to fire the airbag.

Special rules of classification

Clarification of the definition scope; initially this group involved the movement of the steering wheel for "in case of accident". Modern activation of airbags requires a similar design/motion of the steering column and so such systems are also classified in this group.

B62D 3/00

Steering gears (power assisted or power driven [B62D 5/00](#); steering linkages [B62D 7/00](#); for non-deflectable wheels [B62D 11/00](#); gearing in general [F16H](#))

Definition statement

This place covers:

Means to convert the steering control input motion to final output motion at the wheels, .e.g. rack and pinion gear or the like

References

Limiting references

This place does not cover:

Power assisted or power driven steering	B62D 5/00
Steering linkages	B62D 7/00

Informative references

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

Gearing in general	F16H
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B62D 5/00

Power-assisted or power-driven steering (controlling steering depending on driving conditions sensed and responded to [B62D 6/00](#); } for non-deflectable wheels [B62D 11/00](#); fluid pressure servomotors in general [F15B](#))

Definition statement

This place covers:

- Supplying power to the steering movement by electric or hydraulic means to reduce steering force at the control input
- Changing the transfer ratio between the steering wheel and the steering output movement by variable supply of energy, e.g. by using a superposition gear
- Telemotors for steering
- Mechanical means or mechanism specially adapted for power assist
- Hydraulic means, e.g. valves specially adapted for power assist
- Electric means, e.g. motors specially adapted for power assist
- Safety devices or back up systems for steering if hydraulic power assist function fails

References

Limiting references

This place does not cover:

Safety devices for steer by wire	B62D 5/003
Monitoring electric power steering systems, e.g. detecting or adapting to failures	B62D 5/0481

Informative references

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

controlling steering depending on driving conditions sensed and responded to	B62D 6/00
Steering non deflectable wheels	B62D 11/00
-Fluid pressure servomotors in general	F15B

B62D 5/001

{Mechanical aspects of steer-by-wire systems, not otherwise provided in [B62D 5/00](#) (hydraulic steer-by-wire systems [B62D 5/091](#))}

Definition statement

This place covers:

Mechanical steering angle limiters, e.g. catch or block to limit output movement

B62D 5/003

{Backup systems, e.g. for manual steering ([B62D 5/30](#) takes precedence)}

Definition statement

This place covers:

- Means to allow manual steering in case of failure of power assist means
- Repairing failure by redundant parts

B62D 5/005

{means for generating torque on steering wheel, e.g. feedback}

Definition statement

This place covers:

- Means to "disturb" the turning of the steering wheel, e.g. by using a brake.
- Tactile feedback, e.g. vibration on steering wheel

Special rules of classification

"Steering wheel" means any input element.

B62D 5/008

{Changing the transfer ratio between the steering wheel and the steering gear by variable supply of energy, e.g. by using a superposition gear}

Definition statement

This place covers:

Mechanism or control to achieve change of transfer ratio

- superposition gear
- electric motor with the stator connected with one part of the steering column and the rotor with the other part of the steering column

Relationships with other classification places

Calculating of desired steering angle to be reached by e.g. a superposition mechanism are classified in [B62D 6/002](#)

B62D 5/04

electrical, e.g. using an electric servo-motor connected to, or forming part of, the steering gear

Definition statement

This place covers:

- Gearings (or connections) between the power steering motor and the part, which is connected to any part of the steering system, e.g. column or rack
- Electric power steering to be mounted additionally to the vehicle, e.g. to change manual steering into power steering
- Cooling of electric power steering motor
- "Non-rotating" motors, e.g. linear motors
- Use of multiple electric motors in one power steering, see for example US2006278466.

- Wire harness from the battery to the electric power steering, see for example FR2721875.

References

Limiting references

This place does not cover:

Combinations of electric power steering with steering locks (steering column locks)	B60R 25/02
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B62D 5/0403

{characterised by constructional features, e.g. common housing for motor and gear box}

Definition statement

This place covers:

- Constructional features of the motors or the arrangement thereof, e.g. Double stator and one rotor
- Interchanging the connections of two windings on a three phase motor to make it turn in the other direction, e.g. for using the same apparatus for right hand drive and left hand drive vehicles.
- Remote controlled moving brushes of the motor.
- Using on/off-switches to operate the motor based on steering wheel torque

B62D 5/0418

{Electric motor acting on road wheel carriers}

Definition statement

This place covers:

Single drive for a single wheel, e.g. one right steering motor and one left steering motor.

Combined driving and steering units for industrial trucks.

Relationships with other classification places

Combined driving and steering units for industrial trucks should be also classified in [B62D 7/02](#) and relevant subgroups

References

Informative references

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

Steering by acting on the suspension system	B62D 7/146
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B62D 5/043

{characterised by clutch means between driving element, e.g. motor, and driven element, e.g. steering column or steering gear}

Definition statement

This place covers:

Mechanical overload clutches for suppressing torque peaks.

"Freewheeling clutches", e.g. operated by the power steering motor or the driver's torque.

References

Limiting references

This place does not cover:

Clutches used in steer-by-wire systems to connect the steering wheel to the steered wheel in case of failure, e.g. backup,	B62D 5/003
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B62D 5/0439

{Controllable friction clutches ([B62D 5/0436](#) takes precedence)}

Definition statement

This place covers:

- Rheological fluid clutches in "normal" electric power steering
- Viscous clutches
- Clutches controlled by mechanical movement, e.g. pinion "rolling" on rack and by this "leaning" on friction rollers

B62D 5/0457

{characterised by control features of the drive means as such (controlling steering depending on driving conditions sensed and responded to [B62D 6/00](#); determination of steering angle [B62D 15/021](#); measuring torque applied to steering wheels [G01L 5/221](#); control of electric motor as such [H02P](#))}

Definition statement

This place covers:

Calibrating of electric steering systems as such.

Switching off of electric power steering if not needed, e.g. standstill, see for example GB2269568.

B62D 5/046

{Controlling the motor}

Definition statement

This place covers:

- Controlling the motor as such, e.g. a brushless DC-Motor;
- booster circuits to rise the voltage over the battery voltage;
- voltage reduction circuits feeding the controller if higher battery voltage feeds the motor.

B62D 5/0463**{for generating assisting torque}****References****Limiting references***This place does not cover:*

Controlling the motor as such, e.g. brushless DC-Motor	B62D 5/046
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B62D 5/0466**{for returning the steering wheel to neutral position}****Definition statement***This place covers:*

Control of electric power steering motor during the time of returning the steering wheel, e.g. inertia compensation.

B62D 5/0469**{End-of-stroke control}****Definition statement***This place covers:*

Blocking of the steered wheel due to catches, stops or curb stone

B62D 5/0472**{for damping vibrations}****Definition statement***This place covers:*

Reducing vehicle induced disturbances, e.g. braking, unbalanced wheels, "torque steer", etc

Counterbalancing by an additional motor (which can be the "normal" power steering motor) the reaction forces of a steering angle ratio change mechanism

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

Changing the transfer ratio between the steering wheel and the steering gear by variable supply of energy, e.g. by using a superposition gear	B62D 5/008
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B62D 5/0484**{for reaction to failures, e.g. limp home}****Definition statement***This place covers:*

Recovery from (detected) failures, e.g. fixing or bridging a loose contact.

B62D 5/0487**{detecting motor faults ([B62D 5/0496](#) takes precedence)}****Definition statement***This place covers:*

Detecting failure of the motor drive means, e.g. in the H-bridge.

B62D 5/049**{detecting sensor failures}****Definition statement***This place covers:*

- - Detecting malfunction of sensors
- - Includes also failures in the direct treatment of sensor signals, e.g. in a circuit for phase compensation.

Glossary of terms*In this place, the following terms or expressions are used with the meaning indicated:*

Sensor	any sensing element or transducer used in or for electric power steering.
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B62D 5/065**characterised by specially adapted means for varying pressurised fluid supply based on need, e.g. on-demand, variable assist****Definition statement***This place covers:*

Parametrising of hydraulic power steering systems,.

Also pump directly connected with the steering motors, e.g. reversible pump to cylinder.

Special rules of classificationControl of electric motor driving a pump directly connected with the steering motors (hydraulic gear), see also [B62D 5/046](#) and subgroups.

This group includes controls of the hydraulic fluid supply which adjusts the pressure to facilitate the required pressure demands by the external environment, e.g. when driving on a mountainous road.

B62D 5/07

Supply of pressurised fluid for steering also supplying other consumers{; control thereof}

Definition statement

This place covers:

Supply of pressurized fluid for other consumers and also supplying the steering means

B62D 5/0835

{characterised by means for actively limiting the deflection angle, e.g. depending on driving parameters (controlling steering depending on driving conditions sensed and responded to [B62D 6/00](#))}

Definition statement

This place covers:

Not only "limiting", but also influencing the deflection angle, e.g. for automatic steering.

Special rules of classification

See also [B62D 6/02](#), especially for documents published before 2003.

B62D 6/00

Arrangements for automatically controlling steering depending on driving conditions sensed and responded to, e.g. control circuits (means for initiating a change in direction [B62D 1/00](#); steering valves [B62D 5/06](#); combined with means for inclining the vehicle body or wheels on bends [B62D 9/00](#))

Definition statement

This place covers:

- Circuits or processes for controlling power steering systems, e.g. to control steering angles
- Control of steering angle
- Control of vehicle motion in general, e.g. yaw rate
- Control of steering assist power depending on ambient condition
- Control of feedback to the driver
- Measuring or determining driver input torque

B62D 6/006

{using a measured or estimated road friction coefficient}

Definition statement

This place covers:

Measuring or estimating the road friction coefficient using the steering system or values derived from within the steering system.

B62D 6/007**{adjustable by the driver, e.g. sport mode}****Definition statement***This place covers:*

- Classification of the driver automatically in different groups.
- Taking care of tired, e.g. almost sleeping, driver.
- Classifying automatically the road driven by the driver, e.g. town, highway, or mountain road.
- Taking into account (dynamically) changing vehicles responses due to load, tyre condition, etc.

B62D 7/00**Steering linkage; Stub axles or their mountings ([B62D 13/00](#) takes precedence; power-assisted or power-driven steering [B62D 5/00](#))****Definition statement***This place covers:*

Means on vehicle to deflect wheels, e.g. changing the steered wheel angle in relation to chassis or vehicle body

References**Limiting references***This place does not cover:*

Steering specially adapted for trailers	B62D 13/00
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Special rules of classification

Steering linkage, stub axles and their mountings are the means which allow to deflect the wheels.

B62D 9/00**Steering deflectable wheels not otherwise provided for (steering position indicators [B62D 15/02](#))****Definition statement***This place covers:*

Residual group for subject matter not covered by previous main groups

B62D 9/005**{Emergency systems using brakes for steering}****Definition statement***This place covers:*

Using differential driving or braking to deflect steered wheels

Not only using brakes, but also using torque differences on wheels driven by electric motors.

B62D 11/00

Steering non-deflectable wheels; Steering endless tracks or the like

Definition statement

This place covers:

Steering of e.g. tanks or slip-steered wheeled vehicles or control thereof

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

	Where steering right or left is governed by an alteration in the rotation speed of one side of a set of tracks or wheels moving in a continuous motion. There is no associated steering angle.
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B62D 11/24

Endless track steering specially adapted for vehicles having both steerable wheels and endless track

Definition statement

This place covers:

- Endless track steering depending on steering input for steerable wheels
- Supporting steering by differential driving of non-deflectable wheels

References

Limiting references

This place does not cover:

Differentially distributing power on deflectable wheels:	B62D 9/002
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B62D 13/00

Steering specially adapted for trailers (combined traction and steering hitches [B60D](#))

Definition statement

This place covers:

Stability systems for tractor-trailer combinations, e.g. counter steering or braking.

B62D 15/00

Steering not otherwise provided for

Definition statement

This place covers:

Passive indicator, "aiming" means, e.g. fingers in the car to drive along compared with a line in the outside world.

B62D 15/021**{Determination of steering angle (sensors in general [G01B](#))}****Definition statement***This place covers:*

- Storing the last recorded steering angle;
- Determination of rotation speed of steering wheel;
- Measuring on the steering wheel, if there is no steering column;
- Retrieving of steering angle information in special situations, e.g. during power off
- Checking or testing of steering angle sensors (see also [B62D 5/049](#))
- Calibration of steering angle systems e.g. by measuring steering angle and following curvature;
- Transmission of steering angle data to other vehicle systems including steering systems.

B62D 15/022**{on or near the connection between the steering wheel and steering column}****Definition statement***This place covers:*

Combinations of steering angle sensors and rotary connectors in close proximity to steering wheel and column

Special rules of classification

This group only covers rotary connectors when the rotary connector is combined with the steering angle with close proximity to the steering wheel and column.

B62D 15/023**{by measuring on the king pin}****Definition statement***This place covers:*

Measuring steering angle on the king pin at the deflectable wheel or on the turn-table between tractor and trailer

B62D 15/0245**{Means or methods for determination of the central position of the steering system, e.g. straight ahead position}****Definition statement***This place covers:*

Determination of absolute angles, e.g. absolute steering wheel angle with a relative sensor, measuring e.g. between -90° and +90°

B62D 15/0265**{Automatic obstacle avoidance by steering}****Definition statement***This place covers:*

Not allowing steering in the direction of obstacles.

Minimizing damages by steering in not avoidable accident

B62D 15/027**{Parking aids, e.g. instruction means}****Definition statement***This place covers:*

- Parking the car, e.g. parallel or perpendicular parking.
- Leaving (pulling out) into the traffic.
- Testing and/or finding of parking pockets.
- Testing of (automatic) parking systems.

Special rules of classification

Automatic or guided parking as such see the relevant subgroups

B62D 15/028**{Guided parking by providing commands to the driver, e.g. acoustically or optically}****Definition statement***This place covers:*

Haptically or any other means

B62D 15/0285**{Parking performed automatically}****Special rules of classification**

"Automatic parking" is also, if only the steering is done automatically.

B62D 15/0295**{by overlaying a vehicle path based on present steering angle over an image without processing that image}****Definition statement***This place covers:*

Projections in the windscreen or on the street ahead

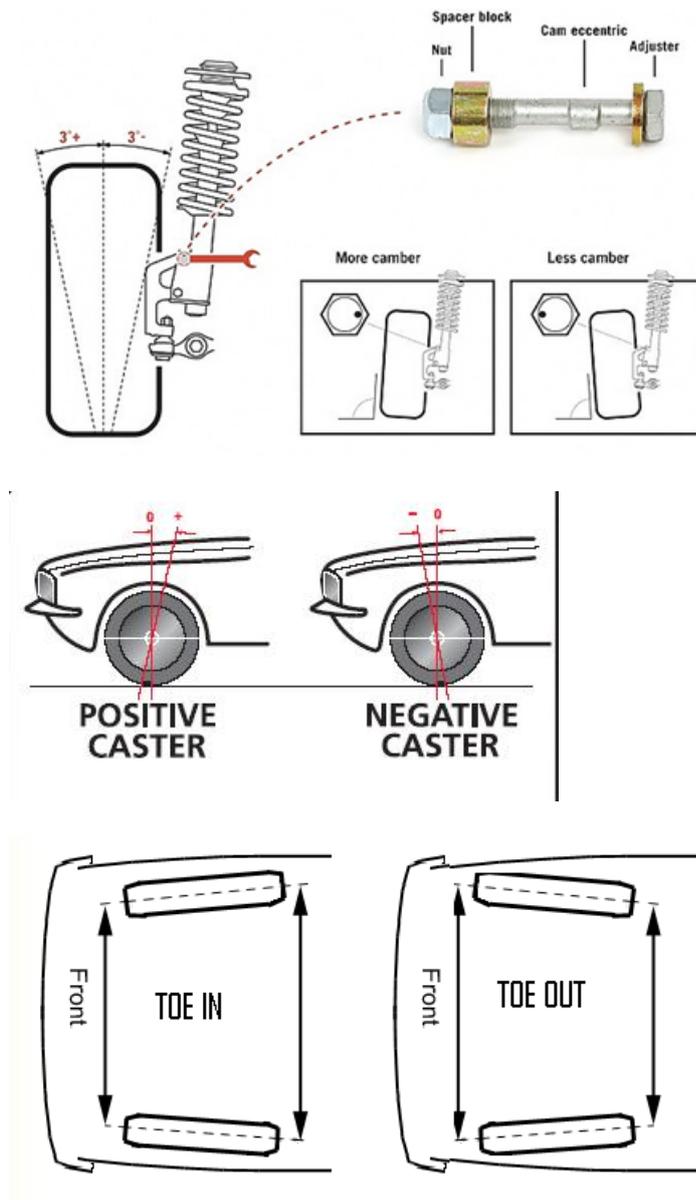
B62D 17/00

Means on vehicles for adjusting camber, castor, or toe-in

Definition statement

This place covers:

Means or tools located on the vehicle to adjust the different angles of a wheel support, e.g. camber, castor or toe-in and toe-out, see examples



B62D 19/00

Radius rods, i.e. distance members

Definition statement

This place covers:

Levers or linkages for supporting a wheel.

Said support of wheels is considered as subject matter related to the suspension of a vehicle. Hence this group is no longer used for classifying. Classification should be given in subclass [B60G](#) instead.

B62D 21/00

Understructures, i.e. chassis frame on which a vehicle body may be mounted (combined frame and vehicle body [B62D 23/00](#){; characterised by the material thereof [B62D 29/00](#)})

Definition statement

This place covers:

Chassis built from frame members where the vehicle body will be mounted on, e.g.:

- Structures comprising longitudinally or transversely arranged frame members
- Structures of X-shaped or fork shaped construction
- Subframes
- Frames being adjustable
- Structures having impact absorbing means
- Structures assembled from readily detachable parts

Relationships with other classification places

This group does not cover subject matter primarily relating to the suspension with only a nominal recitation of frame structure, i.e. the inventive subject matter is related to suspension features and are covered by subclass [B60G](#).

Sub-frames for mounting engines or suspension means are classified in [B62D 21/11](#).

In order to get a classification in [B62D 21/15](#), the understructure should have features, e.g. crush zones, crash boxes etc. which enable it to deform in a controlled fashion. If the structure is merely reinforced, then it should be given the relevant classifications elsewhere.

Beam elements which form part of a self supporting vehicle body are referred out of this group to [B62D 25/00](#), e.g. [B62D 25/082](#) for longitudinal beams in the engine bay to which sub-frames are attached.

References

Limiting references

This place does not cover:

Combined frame and vehicle body:	B62D 23/00
Beam elements forming part of a self-supporting vehicle body	B62D 25/08
Longitudinal beams in the engine bay to which sub-frames are attached	B62D 25/082
Suspension arrangements	B60G

Informative references

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

Understructures characterised by the material used:	B62D 29/00
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B62D 23/00

Combined superstructure and frame, i.e. monocoque constructions ({having impact absorbing means [B62D 21/15](#); } superstructure {or monocoque structure} sub-units {or parts or details thereof} [B62D 25/00](#){; characterised by the material thereof [B62D 29/00](#)})

Definition statement

This place covers:

- Self-supporting structures which do need an additional frame, the frame and the structure forms one unit
- Spaceframes with integrated chassis in the whole shell, e.g. by using meshwork, tubes or the like

References

Limiting references

This place does not cover:

Structures having impact absorbing means	B62D 21/15
Superstructures or monocoque sub-units or details thereof	B62D 25/00

Informative references

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

Superstructures or frames characterised by the material used	B62D 29/00
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B62D 24/00

Connections between vehicle body and vehicle frame ([B62D 23/00](#), [B62D 33/077](#) take precedence)

Definition statement

This place covers:

Fixing means for connecting vehicle body to the vehicle frame, e.g. by vibration absorbing mountings like rubber pads

References

Limiting references

This place does not cover:

Joining plates to bars	F16B 5/00
Springs or resilient mounts per se	F16F 1/00

Informative references

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

Joining plates to bars	F16B 5/00
Springs or resilient mounts per se	F16F 1/00

Special rules of classification

WARNING: Group [B62D 24/00](#) and subgroups are not complete; see also other groups of [B62D](#)

B62D 25/00

Superstructure {or monocoque structure} sub-units; Parts or details thereof not otherwise provided for {(having impact absorbing means [B62D 21/15](#); running-boards, steps, or the like as superstructure sub-unit [B60R 3/00](#))}

Definition statement

This place covers:

Subunits for superstructures, e.g.

- Side panels
- Door pillars
- Fixed roofs
- Front or rear portions, e.g. bonnets, lids, dashboards or mud-guards
- Floor or bottom sub-units

Relationships with other classification places

The references to other areas are particularly helpful here, particularly take note of those in [B62D 25/10](#) and [B62D 25/12](#) for how to treat bonnet hinges, bonnet stays, openers, etc. Cabins or superstructure of the (open or closed) load compartments of utility vehicles are classified in [B62D 33/00](#). Mudguards do not include mudguards for cycles but do include mudguards of utility vehicles.

Structures (e.g. bonnet, wing mounts) intended to deform or collapse to absorb impact forces from a non-occupant of the vehicle (e.g. pedestrian) should also be considered for classification in [B60R 21/00](#) or indented groups.

Deformable bonnets are usually for motor cars - such documents should be classified in [B62D 25/105](#) even if the application it is not specifically mentioned. Active protection devices which do not serve to alter the structural properties (e.g. airbags, bonnet lifters) are not classified in this group, they should be classified in [B60R 21/34](#) and subgroups. For vehicle doors, including rear hatchback tailgates, see [B60J 5/00](#).

The group [B62D 25/085](#) is intended to mean front-end modules of engine compartments.

References

Limiting references

This place does not cover:

Structures having impact absorbing means	B62D 21/15
Superstructures of utility vehicles, e.g. load compartments or cabins	B62D 33/00
Running-boards, steps, or the like, as superstructure sub-unit	B60R 3/00
Mudguards for cycles	B62J 15/00

Special rules of classification

The IPC group **B62D25/22** "Running-boards, steps, or the like, as superstructure sub-unit" is not used in CPC; these sub-units are referred out to group [B60R 3/00](#) (see limiting reference in main group title).

B62D 27/00

Connections between superstructure {or understructure} sub-units **{{(B62D 33/0207, B62D 33/044 take precedence; between sub-units predominantly made of synthetic material B62D 29/048)}**

Definition statement

This place covers:

Rigid, resilient or readily releasable (e.g. using screwthreads) connections between super- or understructure sub-units

Relationships with other classification places

Please be aware that groups here should not be used for documents concerning connectors and connections in general, see subclass [F16B](#). Documents concerning the building up of individual components (e.g. the welding of sheets to form a panel) are not classified here; neither are documents concerning the attachment components which are not part of the vehicle structure, e.g. fuel tanks.

Joining trim elements (e.g. headliners) to the vehicle are in the relevant subgroups of [B60R 13/00](#); attachments of bumpers are in the group [B60R 19/00](#).

Subgroup [B62D 27/023](#) is especially directed towards structural nodes - e.g. several elements joined together by connecting means.

References

Limiting references

This place does not cover:

Connections between sub-units predominantly made of synthetic material	B62D 29/048
Connections of movable or detachable racks or stanchions to platforms	B62D 33/0207
Enclosed load compartments built up with profiles of constant elongated shape, e.g. extruded, mechanically interconnected by coupling members, e.g. by clamping, riveting or bolting	B62D 33/046

Informative references

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

Joining trim elements (e.g. headliners) to the vehicle	B60R 13/00
Attachment of bumpers	B60R 19/00

B62D 29/00

Superstructures, {understructures, or sub-units thereof,} characterised by the material thereof **{{(B62D 33/044, B62D 33/048 take precedence)}**

Definition statement

This place covers:

- Superstructures, understructures or sub-units characterised by the used material
- characterised by combining metal and synthetic material
- characterised by using predominatly special steel, light alloys, wood or synthetic material
- Structures predominantly made of sythetic material and joints therefor

References

Limiting references

This place does not cover:

Enclosed load compartments built up with flat self-supporting panels if not predominately made of synthetic material	B62D 33/044
Enclosed load compartments for refrigerated good vehicles	B62D 33/048

Special rules of classification

Documents concerning the production of the material itself, or the moulding process, or metal-working process would not be given a classification here unless component details are specified.

B62D 31/00

Superstructures for passenger vehicles (passenger vehicles specially adapted to co-operate with aircraft or terminal buildings [B64F 1/31](#))

Definition statement

This place covers:

- Superstructures for passenger vehicles, e.g. for carrying large number of passengers (omnibus)
- Compact cars, e.g. city cars

Relationships with other classification places

This main group does not include railway carriages or motorized wheelchairs or the like. Please note the definition of cycle as being a vehicle on which the operator sits (e.g. on a saddle) and has direct steering, e.g. using a steering handle.

References

Limiting references

This place does not cover:

Passenger vehicles specially adapted to co-operate with aircraft or terminal buildings	B64F 1/31
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B62D 33/00

Superstructures for load-carrying vehicles (having impact absorbing means [B62D 21/15](#); } in which a load-carrying element is movable [B60P](#); liners [B60R 13/00](#){; joining sheets or plates to one another or to strips or bars parallel to them [F16B 5/00](#)})

Definition statement

This place covers:

- Platforms or open load compartments
- Enclosed load compartments
- Drivers's cabs or cabins and their attachment, e.g. for tiltable cabins
- Superstructures characterised by the connection of the structure to the vehicle frame
- Superstructures comprising adjustable means

Relationships with other classification places

Vehicle cabs, load compartments etc. are classified in this main group, but load carrying floors for commercial vehicles are classified in group [B62D 25/2054](#). Bonnets or lids are classified in [B62D 25/10](#) or [B62D 25/12](#); mudguards in [B62D 25/168](#) or [B62D 25/188](#).

See also [B60P 1/00](#) - [B60P 7/00](#) concerning adaptations for load transportation or to carry special loads or objects.

Cabins for dredging or soil shifting machines (often called work machines) should be classified in [E02F 9/16](#); other parts of the structure of soil shifting machines in group [E02F 9/08](#).

References

Limiting references

This place does not cover:

Understructures having impact absorbing means	B62D 21/15
Structures in which a load-carrying element is movable, e.g. to facilitate loading or unloading	B60P 1/00
Liners for load platforms or load compartments	B60R 13/02

Informative references

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

Superstructures of soil shifting machines	E02F 9/08
Cabins of soil shifting machines	E02F 9/16
Joining sheets or plates to one another or to strips or bars parallel to them	F16B 5/00

B62D 35/00

Vehicle bodies characterised by streamlining

Definition statement

This place covers:

- Shaping of vehicle bodies for reducing resistance to air flow
- Devices to control or modify the boundary layer
- Spoilers

References

Informative references

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

Spoilers for stabilising vehicle bodies	B62D 37/02
Fluid dynamics; Influencing flow of fluid	F15D 1/00

Special rules of classification

Spoilers which have a stabilizing function should also be classified in [B62D 37/02](#).

Devices to control or modify the boundary layer should be classified in [B62D 35/00](#), and should be considered for further classification in the group for influencing flow of fluid [F15D 1/00](#).

B62D 37/00

Stabilising vehicle bodies without controlling suspension arrangements

Definition statement

This place covers:

Stabilising a vehicle body by forces generated with aerodynamic means (e.g. spoilers) or by movable masses, e.g. by using gyroscopes

Relationships with other classification places

Devices to prevent vehicles toppling over are classified according to vehicle type:

for tractors [B62D 49/08](#); for work machines [E02F 9/18](#); for cranes [B66C 23/72](#).

Electronic stability control operating on brakes [B60T 8/1755](#). Stabilising means using the control of wheel suspension are not covered by this group.

References

Informative references

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

Spoilers for streamlining	B62D 35/02
Ground engaging vehicle fittings for supporting, lifting or manoeuvring the vehicle	B60S 9/00

Special rules of classification

If a document concerns a spoiler which has, explicitly, a stabilizing function, then it should be given classification in [B62D 37/02](#) as well as in [B62D 35/00](#)

B62D 39/00

Vehicle bodies not otherwise provided for {, e.g. safety vehicles (safety equipment [B60R 21/00](#))}

Definition statement

This place covers:

Bodies for emergency vehicles or special vehicle bodies not provided for in other groups of this subclass

References

Informative references

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

Safety equipment	B60R 21/00
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B62D 41/00

Fittings for identifying vehicles in case of collision; Fittings for marking or recording collision areas

Definition statement

This place covers:

Devices or methods to indicate that a vehicle has been involved in a crash, the kind of crash and where the damage occurred on the vehicle. Crash recorders are not classified in this group.

B62D 43/00

Spare wheel stowing, holding, or mounting arrangements

Definition statement

This place covers:

- Stowing, holding, or mounting arrangements for spare wheels in or on the vehicle
- Handling devices for spare wheels, e.g. for handling heavy wheels
- Anti-theft devices for spare wheels
- Protective coverings for spare wheels

Special rules of classification

If the document concerns adaptation to the vehicle structure, a further classification may also be required in [B62D 25/087](#) and/or [B62D 25/2027](#).

B62D 47/00

Motor vehicles or trailers predominantly for carrying passengers (superstructures [B62D 31/00](#))

Definition statement

This place covers:

- Vehicles for large number of passengers, e.g. omnibus
- Vehicles which can be divided in sub-vehicles, e.g. nestable vehicles
- Vehicles which are convertible in order to modify the number of seats

References

Limiting references

This place does not cover:

Superstructures for passenger vehicles	B62D 31/00
Body details or kinds of railway vehicles	B61D
Motor-cycles, including quad bikes, ATVs;	B62J
Balancing machines supporting a rider; motorised skateboards and the like	B62K
Motorized wheelchairs; personal mobility vehicles	B62K 5/00

Special rules of classification

[B62D 47/003](#) means that the structure should be convertible to modify the number of seats; not that the seats should simply be removable (for removable vehicle seats see [B60N 2/00](#)). Documents which are more general and do not concern the understructure or superstructure per se or particular part thereof should be classified in this group.

B62D 47/003

{convertible in order to modify the number of seats (foldable compact cars [B62D 31/006](#); convertible from one use to a different one [B60P 3/42](#))}

Definition statement

This place covers:

Vehicles structures, which could be changed to allow different numbers of seats. Subject matter where the seats are simply removable are not covered by this group.

References

Limiting references

This place does not cover:

Compact cars, e.g. being foldable	B62D 31/006
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Informative references

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

Vehicles convertible from one use to a different one	B60P 3/42
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B62D 49/00

Tractors (of walk type [B62D 51/04](#); endless-track features [B62D 55/00](#) {; tractors for handling aircraft [B64F 1/22](#); transport specially adapted for underground galleries [E21F 13/02](#)})

Definition statement

This place covers:

Tractors for pushing or pulling

Tractors for semi-trailers

Tractors adapted for multi-purpose use

Tractors for all kind of tasks, e.g. modified to take lifting devices

Tractors having means for preventing overturning or tipping

References

Limiting references

This place does not cover:

Walk type tractors	B62D 51/04
Endless track vehicles	B62D 55/00

Tractors specially adapted for handling aircraft	B64F 1/22
Transport means specially adapted for underground galleries	E21F 13/02

Special rules of classification

Generally, connections between tractors and agricultural equipment or implements are classified in [A01B 59/04](#) and subgroups. The term "Tractors" in this group is not limited to agricultural vehicles.

Specialist tractors, e.g. street cleaning tractors, snow clearance vehicles, will be classified elsewhere according to their function.

B62D 51/00

Motor vehicles characterised by the driver not being seated {(wheeled carriers for golf bags [A63B 55/60](#))}

Definition statement

This place covers:

- Load handling vehicles, e.g. pedestrian trucks
- Walk-type tractors, i.e. the driver is walking behind
- Vehicles where the driver is not being seated with endless tracks
- Control devices for vehicles where the driver is not being seated
- Transmission devices for vehicles where the driver is not being seated

References

Limiting references

This place does not cover:

Wheeled carriers for golf bags	A63B 55/60
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Informative references

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

Motorised hand carts	B62B 1/00 - B62B 5/0026
Electric wheel-barrows	B62B 1/18 - B62B 5/0026
Balancing machines supporting a rider; motorised skateboards and the like	B62K

Special rules of classification

Agricultural machines or the like where the driver walks behind the tool, e.g. lawn mower, rotary cultivator, would not typically be given a classification here, classification would be given in the related application groups for the machines. For motorised hand carts see [B62B 1/00](#) and [B62B 5/0026](#). For electric wheel-barrows see [B62B 1/18](#) and [B62B 5/0026](#).

B62D 53/00

Tractor-trailer combinations; Road trains (traction couplings other than fifth wheel coupling [B60D](#) {; tracked vehicles comprising at least two articulated parts [B62D 55/0655](#)})

Definition statement

This place covers:

Tractor-trailer combinations comprising an uniaxle tractor unit and an uniaxle trailer unit

Tractor-trailer combinations where one unit supports an essential part of the other unit's load, e.g. semi-trailers

Fifth wheel traction couplings

References

Limiting references

This place does not cover:

Articulated tracked vehicles comprising tracks for tractor and trailer	B62D 55/0655
Traction couplings other than fifth wheel coupling	B60D

Informative references

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

Steering specially adapted for trailers	B62D 13/00 - B62D 47/025
Couplings of service lines	B60D 1/62 - B60D 1/64
Stability control acting on the braking system of tractor-trailer combinations	B60T 8/1708

Special rules of classification

Documents concerning road trains, i.e. tractor plus two or more trailers, are classified in [B62D 53/005](#). [B62D 53/125](#) should concern automatic coupling of the service lines happening during automatic coupling of the fifth-wheel coupling. For all other couplings of service lines see [B60D 1/62](#) and [B62D1/64](#).

Regarding subgroup [B62D 53/068](#): if the load distribution is modified by operating on the vehicle suspension (without lifting a wheel set), then the document should be classified in the relevant groups of [B60G](#).

B62D 55/00

Endless track vehicles (steering aspects [B62D 11/00](#); {characterised by the driver not being seated [B62D 51/007](#)})

Definition statement

This place covers:

- Tracked vehicles with tracks and additional ground wheels
- Tracked vehicles using alternatively tracks or ground wheels

- Vehicles with tracks only
- Endless track units, e.g. bogies, frames or tracks

References

Limiting references

This place does not cover:

Steering aspects of endless tracked vehicles	B62D 11/00
Endless tracked vehicles characterised by the driver not being seated, e.g, walk-type tractors	B62D 51/007

Special rules of classification

These endless track vehicles are also called caterpillar or crawler vehicles

If a vehicle merely has tracks, this is not a sufficient reason for classifying in [B62D 55/00](#). For example, a mono-tracked snow mobile would only be given the classification [B62D 55/07](#) if there were details shown of the track or track unit. Traction increasing devices which fit over individual tyres such as snow-chains are not classified here, see [B60C 27/00](#).

Group [B62D 55/253](#) covers flexible tracks with discrete track elements interconnected by cables or the like. Continuous tracks with embedded cables are classified in group [B62D 55/242](#).

B62D 57/00

Vehicles characterised by having other propulsion or other ground- engaging means than wheels or endless track, alone or in addition to wheels or endless track (sledges [B62B](#); motor sledges [B62M](#))

Definition statement

This place covers:

- Vehicles with ground engaging propulsion means other than wheels or endless tracks, e.g. walking members
- Vehicles having propulsion means which do not engage the ground

Relationships with other classification places

Humanoid robots are not systematically classified in this group. Possible areas for this subject matter are program controlled manipulators [B25J 9/00](#); gripping heads in [B25J 15/00](#); manipulators in general [B25J](#).

References

Limiting references

This place does not cover:

Motorised sledges	B62M
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Informative references

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

Endless-track vehicles for ascending or descending stairs	B62D 55/075
Hand carts; Sledges	B62B

Special rules of classification

If necessary it is permissible to classify a document in both [B62D 55/00](#) and [B62D 57/00](#).

Please note that there are some documents concerning tracked vehicles with walking members to assist ascending stairs. These would not be classified in [B62D 57/00](#), but in [B62D 55/075](#) because the primary propulsion is by tracks, and due to the reference in [B62D 57/024](#) pointing to group [B62D 55/075](#).

The ground engaging propulsion means (e.g. walking members) are classified in the subgroup [B62D 57/02](#).

B62D 59/00

Trailers with driven ground wheels or the like

Definition statement

This place covers:

Trailers with driven ground wheels or tracks, the propulsion unit being arranged either on the trailer or remote from the trailer

References

Limiting references

This place does not cover:

Ground engaging, power driven vehicle manoeuvring fittings fixed on the vehicle, e.g. fittings using additional wheel driven by an auxiliary motor	B60S 9/205
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Informative references

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

Tractor-trailer combinations comprising uniaxial tractor and uniaxial trailer unit with a transmission shaft passing through the coupling joints	B62D 53/025
Vehicle manoeuvring devices separate from the vehicle	B60S 13/00

Special rules of classification

[B62D 59/00](#) concern trailers with driven wheels for moving the trailer when uncoupled from the tractor, e.g. for parking, manoeuvring. However, in some documents the driven trailer means are used as an auxiliary drive or alternative drive and should be (also) classified in

B62D 61/00

Motor vehicles or trailers, characterised by the arrangement or number of wheels, not otherwise provided for, e.g. four wheels in diamond pattern

Definition statement

This place covers:

Motor vehicles or trailers characterised by the arrangement or number of wheels not covered by previous groups, e.g. with variable number of ground engaging wheels or with more than four wheels

Relationships with other classification places

This group does not include cycles or motorised wheelchairs or the like. Please note the definition of cycle as being a vehicle on which the operator sits (e.g. on a saddle) and has direct steering, e.g. bicycle, tricycle or quad.

References

Limiting references

This place does not cover:

Wheelchairs, Transport devices for disabled people	A61G 5/00
Cycles, motor cycles, ATVs, quad bikes	B62J , B62K
Personal mobility vehicles	B62K 5/00

B62D 63/00

Motor vehicles or trailers not otherwise provided for

Definition statement

This place covers:

- Modular vehicles
- Foldable, yieldable or extensible trailers
- Trailers with one axle or two wheels

References

Limiting references

This place does not cover:

Trailer chassis	B62D 21/20
Semi-trailers	B62D 53/06
Adaptations of trailers for specific purposes	B60P
Trailer or vehicle features which are covered adequately elsewhere (this is a residual group!)	

Special rules of classification

Motor vehicles: modular vehicles does not mean vehicle with exchangeable modules for repair or change in function of the vehicle.

B62D 65/00

Designing, manufacturing, e.g. assembling, facilitating disassembly, or structurally modifying motor vehicles or trailers, not otherwise provided for

Definition statement

This place covers:

- Assembling, facilitating disassembly, or structurally modifying motor vehicles or trailers, not covered by other groups of this subclass
- Transportation, conveyor or haulage systems specially adapted for vehicle assembly lines
- Inspecting and control devices for assembly

- Joining sub-units or components to body shell or other sub-units
- Positioning of sub-units or components to body shell or to other sub-units, the subunits or components being doors, windows, openable roofs, lids, bonnets or weather strips
- Joining pre-assembled modular units

Relationships with other classification places

Very important is the residual character of this group "not otherwise provided for". Documents concerning the assembly or production or formation of individual components, e.g. doors, roofs, side panels, bonnets, engines, gearboxes, etc. should not be classified here, but their attachment to the body shell. This group concerns further the positioning and assembling of the body shell to the chassis.

For management of production lines, e.g. for resource allocation, planning or scheduling [G06Q 10/083](#) ; for inventory, storage or labelling of parts, ordering of new parts, Just-In-Time delivery [G06Q 10/087](#) .

For control of productions lines [i.e. direct connections to machines] see [G05B 19/418](#) or see the relevant technology, for instance [B23](#) or [B05](#), and as well for the details of the processes.

Concerning [B62D 65/024](#) "Positioning of sub-units or components with respect to body shell or other sub-units or components": when the centring is achieved by features of the component itself, then the document should be classified according to the component; the classification [B62D 65/024](#) and lower is given in addition to the groups [B62D 65/04](#) - [B62D 65/16](#) where the component is specified.

Special rules of classification

The IPC group **B62D65/08** (IPC 7) 'Weather strips or seals' is not used in ECLA. The documents are classified in application group [B60J 10/45](#).

B62D 67/00

Systematic disassembly of vehicles for recovery of salvageable components, e.g. for recycling (for disposal of vehicles by destroying or transformation [B09B 3/00](#), [B09B 5/00](#) {; general arrangement of separating plants [B03B 9/00](#); recovery of plastics [B29B 17/00](#)})

Definition statement

This place covers:

Disassembly lines or processes in reverse, not for recycling of individual components or recycling of construction materials.

References

Limiting references

This place does not cover:

Disposal of vehicles by destroying or transformation	B09B 3/00 , B09B 5/00
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Informative references

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

General arrangement of separating plants	B03B 9/00
Recovery of plastics	B29B 17/00