

**CPC****COOPERATIVE PATENT CLASSIFICATION****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](#))

**NOTE**

In this subclass, the following terms are used with the meanings indicated:

- "vehicles" include motor vehicles and trailers;
- "trailers" include forecars or sidecars.

**WARNING**

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[B62D 25/13](#) covered by [B60J 1/20](#) , [B60R 13/07B62D 25/22](#) covered by [B60R 3/00B62D 65/08](#) covered by [B60J 10/0088](#)

**Guidance heading:** **Steering of motor vehicles or trailers**

**NOTE**

Steering devices acting on ground-engaging wheels, endless tracks or the like and also applicable to aircraft are classified in [B62D 1/00](#) and relevant subsequent groups; these groups take precedence over [B64C](#) ; These elaborations also embrace steering of vehicles in general but applicable to land vehicles

**B62D 1/00**

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

**B62D 1/02**

. vehicle-mounted

B62D 1/04	..	Hand wheels
B62D 1/043	...	{with a device allowing single-hand operation of the steering wheel}
B62D 1/046	...	{Adaptations on rotatable parts of the steering wheel for accomodation of switches}
B62D 1/06	...	Rims, e.g. with heating means; Rim covers(B62D 1/11 takes precedence )
B62D 1/065	....	{Steering wheels with heating and ventilating means(heating and ventilating arrangements for spaces of vehicles B60H)}
B62D 1/08	...	Spokes, e.g. resilient(B62D 1/11 takes precedence )
B62D 1/10	...	Hubs; Connecting hubs to steering columns, e.g. adjustable(B62D 1/11 takes precedence )
B62D 1/105	....	{Non-rotatable hubs, e.g. the central part of the steering wheel not rotating( for storing airbags B60R 21/2032)}
B62D 1/11	...	incorporating energy-absorbing arrangements, e.g. by being yieldable or collapsible( padded linings associated with the steering wheel B60R 21/05 ; shock absorbers using plastic deformation of members in general F16F 7/12)
B62D 1/12	..	Hand levers
B62D 1/14	...	Tillers, i.e. hand levers operating on steering columns
B62D 1/16	..	Steering columns
B62D 1/163	...	{Part of the steering column replaced by flexible means, e.g. cable or belt}
B62D 1/166	...	{Means changing the transfer ratio between steering wheel and steering gear( by continuous supply of energy, e.g. from electric motor B62D 5/008 ; controlling steering depending on driving conditions sensed and responded to B62D 6/00)}
B62D 1/18	...	yieldable or adjustable, e.g. tiltable( padded linings associated with the steering column B60R 21/05)

**NOTE**

Group B62D 1/181 takes precedence over groups B62D 1/183 - B62D 1/187 .

B62D 1/181	....	with power actuated adjustment, e.g. with position memory
B62D 1/183	....	adjustable between in-use and out-of-use positions, e.g. to improve access
B62D 1/184	....	Mechanisms for locking columns at selected positions{( locking of telescopic systems in general F16B 7/10)}
B62D 1/185	....	adjustable by axial displacement, e.g. telescopically(B62D 1/183 , B62D 1/187 , B62D 1/19 take precedence )
B62D 1/187	....	with tilt adjustment; with tilt and axial adjustment(B62D 1/183 , B62D 1/19 takes precedence )
B62D 1/189	.....	the entire column being tiltable as a unit
B62D 1/19	....	incorporating energy-absorbing arrangements, e.g. by being yieldable or collapsible( shock absorbers using plastic deformation of members in general F16F 7/12)
B62D 1/192	.....	{Yieldable or collapsible columns}
B62D 1/195	.....	{Yieldable supports for the steering column}
B62D 1/197	.....	{incorporating devices for preventing ingress of the steering column into the passengers space in case of accident}

- B62D 1/20 . . . Connecting steering column to steering gear
- B62D 1/22 . . Alternative steering-control elements, e.g. for teaching purposes
- B62D 1/24 . not vehicle-mounted({ special adaptations of automatic tractor steering [A01B 69/04](#) ; devices for lifting, movable on wheels, automatically guided [B66F 9/063](#)})
- B62D 1/26 . . mechanical, e.g. by a non-load-bearing guide( [railways B61](#))
- B62D 1/265 . . . {especially adapted for guiding road vehicles carrying loads or passengers, e.g. in urban networks for public transportation}
- B62D 1/28 . . non-mechanical{e.g. following a line or other known markers( steering position indicators [B62D 15/02](#) ; steering aids [B62D 15/025](#) ; parking aids [B62D 15/027](#) ; steering assistants [B62D 15/029](#) ; determination or calculation of trajectory of land vehicles [G05D 1/021](#))}
- B62D 1/283 . . . {for unmanned vehicles}
- B62D 1/286 . . . {Systems for interrupting non-mechanical steering due to driver intervention}
- 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](#))
- B62D 3/02 . mechanical
- B62D 3/04 . . of worm type
- B62D 3/06 . . . with screw and nut
- B62D 3/08 . . . . using intermediate balls or the like
- B62D 3/10 . . . with worm engaging in sector or roller gear
- B62D 3/12 . . of rack-and-pinion type
- B62D 3/123 . . . {characterised by pressure yokes}
- B62D 3/126 . . . {characterised by the rack}
- B62D 3/14 . hydraulic
- 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](#))
- 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](#))}
- B62D 5/003 . . {Backup systems, e.g. for manual steering([B62D 5/30](#) takes precedence )}
- B62D 5/005 . . {means for generating torque on steering wheel, e.g. feedback}
- B62D 5/006 . . . {power actuated( control thereof [B62D 6/008](#))}
- 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}
- B62D 5/02 . mechanical, e.g. using a power-take-off mechanism for taking power from a rotating shaft of the vehicle and applying it to the steering gear

- B62D 5/04 . electrical, e.g. using an electric servo-motor connected to, or forming part of, the steering gear
- B62D 5/0403 .. {characterised by constructional features, e.g. common housing for motor and gear box}
- B62D 5/0406 ... {including housing for electronic control unit}
- B62D 5/0409 .. {Electric motor acting on the steering column}
- B62D 5/0412 ... {the axes of motor and steering column being parallel}
- B62D 5/0415 .... {the axes being coaxial}
- B62D 5/0418 .. {Electric motor acting on road wheel carriers}
- B62D 5/0421 .. {Electric motor acting on or near steering gear}
- B62D 5/0424 ... {the axes of motor and final driven element of steering gear, e.g. rack, being parallel}
- B62D 5/0427 .... {the axes being coaxial}
- B62D 5/043 .. {characterised by clutch means between driving element, e.g. motor, and driven element, e.g. steering column or steering gear}
- B62D 5/0433 ... {the clutch being of on-off type}
- B62D 5/0436 .... {the clutch being a controlled emergency clutch, e.g. for disconnecting at motor break-down}
- B62D 5/0439 ... {Controllable friction clutches([B62D 5/0436 takes precedence](#) )}
- B62D 5/0442 .. {Conversion of rotational into longitudinal movement}
- B62D 5/0445 ... {Screw drives( [Screw mechanisms in general F16H 25/20](#))}
- B62D 5/0448 .... {Ball nuts}
- B62D 5/0451 ... {Roller spindle drives}
- B62D 5/0454 ... {Worm gears}
- 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](#))}
- B62D 5/046 ... {Controlling the motor}
- B62D 5/0463 .... {for generating assisting torque}
- B62D 5/0466 .... {for returning the steering wheel to neutral position}
- B62D 5/0469 .... {End-of-stroke control}
- B62D 5/0472 .... {for damping vibrations}
- B62D 5/0475 ... {Controlling other elements}
- B62D 5/0478 .... {Clutches}
- B62D 5/0481 ... {monitoring the steering system, e.g. failures}
- B62D 5/0484 .... {for reaction to failures, e.g. limp home}
- B62D 5/0487 .... {detecting motor faults([B62D 5/0496 takes precedence](#) )}
- B62D 5/049 .... {detecting sensor failures}
- B62D 5/0493 .... {detecting processor errors, e.g. plausibility of steering direction}
- B62D 5/0496 .... {by using a temperature sensor}

- B62D 5/06 . fluid, i.e. using a pressurised fluid for most or all the force required for steering a vehicle
- B62D 5/061 .. {provided with effort, steering lock, or end-of-stroke limiters}
- B62D 5/062 .. {Details, component parts}
- B62D 5/063 ... {Pump driven by vehicle engine([B62D 5/065](#) takes precedence )}
- B62D 5/064 ... {Pump driven independently from vehicle engine, e.g. electric driven pump([B62D 5/065](#) takes precedence )}
- B62D 5/065 .. characterised by specially adapted means for varying pressurised fluid supply based on need, e.g. on-demand, variable assist
- B62D 5/07 .. Supply of pressurised fluid for steering also supplying other consumers;{control thereof}
- B62D 5/075 ... {using priority valves( priority valves in general [F15B 13/022](#))}
- B62D 5/08 .. characterised by type of{steering}valve used( valves in general [F16K](#))
- B62D 5/081 ... {Seat valves}
- B62D 5/083 ... Rotary valves
- B62D 5/0832 .... {with elastic means other than a torsion bar, e.g. leaf springs}
- 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](#))}
- B62D 5/0837 .... {characterised by the shape of the control edges, e.g. to reduce noise}
- B62D 5/087 ... Sliding spool valves
- B62D 5/09 .. characterised by means for actuating valves
- B62D 5/091 ... {Hydraulic steer-by-wire systems, e.g. the valve being actuated by an electric motor}
- B62D 5/092 .... {the electric motor being connected to the final driven element of the steering gear, e.g. rack}
- B62D 5/093 ... Telemotor driven by steering wheel movement( hydraulic steering gear [B62D 3/14](#))
- B62D 5/097 .... Gerotor type
- B62D 5/10 .. characterised by type of power unit
- B62D 5/12 ... Piston and cylinder
- B62D 5/14 ... Rotary motor
- B62D 5/16 ... Expansible chamber with flexible wall
- B62D 5/18 .. characterised by power transmitting means
- B62D 5/20 .. specially adapted for particular type of steering gear or particular application( steering gears per se [B62D 3/00](#) ; steering linkages not characterised by being power-assisted or power-driven [B62D 7/00](#))
- B62D 5/22 ... for rack-and-pinion type{( pressure yokes [B62D 3/123](#))}
- B62D 5/24 ... for worm type
- B62D 5/26 ... for pivoted axles
- B62D 5/28 ... for pivoted bogies
- B62D 5/30 .. Safety devices, e.g. alternate emergency power supply or transmission means to ensure steering upon failure of the primary steering means

B62D 5/32 . . . for telemotor systems

## 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](#))

### NOTE

When classifying in this group, classification is also made in the appropriate one of groups [B62D 1/00](#) to [B62D 5/00](#) or [B62D 7/00](#) to [B62D 19/00](#) if other aspects of the steering system are of interest

- B62D 6/001 . {the torque NOT being among the input parameters}
- B62D 6/002 . {computing target steering angles for front or rear wheels([B62D 7/159](#) takes precedence )}
- B62D 6/003 . . {in order to control vehicle yaw movement, i.e. around a vertical axis([B62D 6/007](#) take precedence; stability systems acting on the brakes [B60T 8/1755](#))}
- B62D 6/005 . . . {treating sensor outputs to obtain the actual yaw rate}
- B62D 6/006 . . {using a measured or estimated road friction coefficient}
- B62D 6/007 . {adjustable by the driver, e.g. sport mode}
- B62D 6/008 . {Control of feed-back to the steering input member, e.g. simulating road feel in steer-by-wire applications}
- B62D 6/02 . responsive only to vehicle speed
- B62D 6/04 . responsive only to forces disturbing the intended course of the vehicle, e.g. forces acting transversely to the direction of vehicle travel
- B62D 6/06 . responsive only to vehicle vibration dampening arrangements( steering dampers for cycles [B62K 21/08](#))
- B62D 6/08 . responsive only to{driver}input torque

### WARNING

Group [B62D 6/08](#) is not complete. See also [B62D 5/04](#)

- B62D 6/10 . . characterised by means for sensing{or determining}torque

### WARNING

Group [B62D 6/10](#) is not complete. See also [G01L 5/22](#)

## B62D 7/00

**Steering linkage; Stub axles or their mountings**([B62D 13/00](#) takes precedence; power-assisted or power-driven steering [B62D 5/00](#))

- B62D 7/02 . for pivoted bogies
- B62D 7/023 .. {Steering turntables}
- B62D 7/026 .. {characterised by comprising more than one bogie, e.g. situated in more than one plane transversal to the longitudinal centre line of the vehicle}
- B62D 7/04 .. with more than one wheel
- B62D 7/06 . for individually-pivoted wheels, e.g. on king-pins
- B62D 7/08 .. the pivotal axes being situated in a single plane transverse to the longitudinal centre line of the vehicle
- B62D 7/09 ... characterised by means varying the ratio between the steering angles of the steered wheels( [varying the ratio automatically depending on driving conditions B62D 6/00](#))
- B62D 7/10 ... with single-output steering gear
- B62D 7/12 ... with twin-output steering gear
- B62D 7/14 .. the pivotal axes being situated in more than one plane transverse to the longitudinal centre line of the vehicle, e.g. all-wheel steering
- B62D 7/142 ... {specially adapted for particular vehicles, e.g. tractors, carts, earth-moving vehicles, trucks}
- B62D 7/144 .... {for vehicles with more than two axles}
- B62D 7/146 ... {characterised by comprising means for steering by acting on the suspension system, e.g. on the mountings of the suspension arms( [means on vehicle for adjusting camber, castor or toe-in B62D 17/00](#))}
- B62D 7/148 ... {provided with safety devices}
- B62D 7/15 ... characterised by means varying the ratio between the steering angles of the steered wheels([B62D 7/148 takes precedence](#) )
- B62D 7/1509 .... {with different steering modes, e.g. crab-steering, or steering specially adapted for reversing of the vehicle}
- B62D 7/1518 .... {comprising a mechanical interconnecting system between the steering control means of the different axles}
- B62D 7/1527 ..... {comprising only mechanical parts, i.e. without assistance means}
- B62D 7/1536 ..... {provided with hydraulic assistance;( [power-assisted fluid steering per se B62D 5/06](#))}
- B62D 7/1545 ..... {provided with electrical assistance;( [power-assisted electrical steering per se B62D 5/04](#))}
- B62D 7/1554 .... {comprising a fluid interconnecting system between the steering control means of the different axles;( [power-assisted fluid steering per se B62D 5/06](#))}
- B62D 7/1563 ..... {provided with fluid control means;(B62D 7/1572 takes precedence )}
- B62D 7/1572 ..... {provided with electro-hydraulic control means}
- B62D 7/1581 .... {characterised by comprising an electrical interconnecting system between the steering control means of the different axles;( [power-assisted electrical steering per se B62D 5/04](#))}
- B62D 7/159 .... {characterised by computing methods or stabilisation processes or systems, e.g. responding to yaw rate, lateral wind, load, road condition}

- B62D 7/16 . Arrangement of linkage connections( [pivots per se F16C](#) ; { e.g. ball joints [F16C 11/06](#)})
- B62D 7/163 .. {substantially in axial direction, e.g. between rack bar and tie-rod}
- B62D 7/166 .. {substantially perpendicular, e.g. between tie-rod and steering knuckle( [steering knuckles in general B62D 7/18](#))}
- B62D 7/18 . Steering knuckles; King pins
- B62D 7/20 . Links, e.g. track rods( [means for adjusting camber, castor, or toe-in B62D 17/00](#))
- B62D 7/22 . Arrangements for reducing or eliminating reaction, e.g. vibration, from parts, e.g. wheels, of the steering system{( [dampers in general F16F](#))}
- B62D 7/222 .. {acting on the steering wheel}
- B62D 7/224 .. {acting between the steering wheel and the steering gear, e.g. on the steering column}
- B62D 7/226 .. {acting on the steering gear}
- B62D 7/228 .. {acting between the steering gear and the road wheels, e.g. on tie-rod}

**B62D 9/00** **Steering deflectable wheels not otherwise provided for**( [steering position indicators B62D 15/02](#))

- B62D 9/002 . {combined with means for differentially distributing power on the deflectable wheels during cornering}
- B62D 9/005 . {Emergency systems using brakes for steering}
- B62D 9/007 . {Emergency systems using the steering system for braking}
- B62D 9/02 . combined with means for inwardly inclining vehicle body on bends
- B62D 9/04 . combined with means for{inwardly}inclining wheels on bends([B62D 9/02 takes precedence](#) )

**WARNING**

Group [B62D 9/04](#) is not complete. See also [B62D 9/02](#)

**B62D 11/00** **Steering non-deflectable wheels; Steering endless tracks or the like**

**NOTE**

Gearings of interest apart from this application are also classified in the relevant group of subclass [F16H](#) covering gearings per se

- B62D 11/001 . {control systems([B62D 11/183 takes precedence](#) )}

**NOTE**



When classifying in this group, classification is also made in the appropriate one of groups [B62D 11/02](#) to [B62D 11/24](#) if other aspects of the steering system are of interest

- [B62D 11/003](#)      ..      {Electric or electronic control systems}
- [B62D 11/005](#)      ..      {Hydraulic control systems}
- [B62D 11/006](#)      ..      {Mechanical control systems}
- [B62D 11/008](#)      ..      {Pneumatic control systems}
  
- [B62D 11/02](#)      .      by differentially driving ground-engaging elements on opposite vehicle sides
- [B62D 11/04](#)      ..      by means of separate power sources
- [B62D 11/06](#)      ..      by means of a single main power source
- [B62D 11/08](#)      ...      using brakes or clutches as main steering-effecting means
- [B62D 11/10](#)      ...      using gearings with differential power outputs on opposite sides, e.g. with twin-differential or epicyclic gears({ [arrangements or mounting of transmissions in vehicles B60K 17/00](#) ; gearing in general [F16H](#)})
- [B62D 11/105](#)      ....      {using variable ratio belt and pulley gearings( gearing for conveying rotary motion by endless flexible members [F16H 7/00](#) , [F16H 9/00](#))}
- [B62D 11/12](#)      ....      using separate change-speed gearings
- [B62D 11/14](#)      ....      differential power outputs being effected by additional power supply to one side, e.g. power originating from secondary power source
- [B62D 11/16](#)      .....      the additional power supply being supplied mechanically
- [B62D 11/18](#)      .....      the additional power supply being supplied hydraulically
- [B62D 11/183](#)      .....      {Control systems therefor}
- [B62D 11/186](#)      .....      {Uncoupling devices for the hydraulic motors, e.g. to allow towing}
  
- [B62D 11/20](#)      .      Endless-track steering having pivoted bogie carrying track([B62D 11/02](#) takes precedence )
- [B62D 11/22](#)      .      Endless track steering being effected by deflecting endless track rollers or the like
- [B62D 11/24](#)      .      Endless track steering specially adapted for vehicles having both steerable wheels and endless track
  
- [B62D 12/00](#)**      **Steering specially adapted for vehicles operating in tandem or having pivotally connected frames( steering endless tracks or the like [B62D 11/00](#) ; steering specially adapted for trailers [B62D 13/00](#))**
  
- [B62D 12/02](#)      .      for vehicles operating in tandem
  
- [B62D 13/00](#)**      **Steering specially adapted for trailers( combined traction and steering hitches [B60D](#))**
  
- [B62D 13/005](#)      .      {operated from tractor steering system}

- B62D 13/02 . for centrally-pivoted axles
- B62D 13/025 .. {the pivoted movement being initiated by the coupling means between tractor and trailer}
- B62D 13/04 . for individually-pivoted wheels
- B62D 13/06 . for backing a normally drawn trailer
  
- B62D 15/00           Steering not otherwise provided for**
  
- B62D 15/02 . Steering position indicators;{Steering position determination; Steering aids}
- B62D 15/0205 .. {Mechanical indicators, e.g. in or near steering wheel}
- B62D 15/021 .. {Determination of steering angle( [sensors in general G01B](#))}
- B62D 15/0215 ... {by measuring on the steering column}
- B62D 15/022 .... {on or near the connection between the steering wheel and steering column}
- B62D 15/0225 ... {by measuring on a steering gear element, e.g. on a rack bar}
- B62D 15/023 ... {by measuring on the king pin}
- B62D 15/0235 ... {by measuring or deriving directly at the electric power steering motor}
- B62D 15/024 ... {Other means for determination of steering angle without directly measuring it, e.g. deriving from wheel speeds on different sides of the car}
- B62D 15/0245 ... {Means or methods for determination of the central position of the steering system, e.g. straight ahead position}
- B62D 15/025 .. {Active steering aids, e.g. helping the driver by actively influencing the steering system after environment evaluation([B62D 1/28 takes precedence](#); [parking aids B62D 15/027](#))}
- B62D 15/0255 ... {Automatic changing of lane, e.g. for passing another vehicle}
- B62D 15/026 ... {combined with automatic distance control, i.e. electronic tow bar}
- B62D 15/0265 ... {Automatic obstacle avoidance by steering}
- B62D 15/027 .. {Parking aids, e.g. instruction means}
- B62D 15/0275 ... {by overlaying a vehicle path based on present steering angle over an image without processing that image}
- B62D 15/028 ... {Guided parking by providing commands to the driver, e.g. acoustically or optically}
- B62D 15/0285 ... {Parking performed automatically}
- B62D 15/029 .. {Steering assistants using warnings or proposing actions to the driver without influencing the steering system( [parking aids B62D 15/027](#) , [determination or calculation of trajectory of land vehicles G05D 1/021](#) , [image processing G06T](#))}
- B62D 15/0295 ... {by overlaying a vehicle path based on present steering angle over an image without processing that image}
  
- B62D 17/00           Means on vehicles for adjusting camber, castor, or toe-in**
  
- B62D 19/00           Radius rods, i.e. distance members**

**Guidance heading: Understructures; Superstructures; Vehicle bodies**

**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](#)})**

- [B62D 21/02](#) . comprising longitudinally or transversely arranged frame members
- [B62D 21/03](#) . . transverse members providing body support
- [B62D 21/04](#) . . single longitudinal type
- [B62D 21/05](#) . . pinched frame type, i.e. formed of at least two longitudinal frame sections connected by other longitudinal frame sections of lesser transverse dimension
- [B62D 21/06](#) . of X-shaped or fork-shaped construction, i.e. having members which form an X or fork as the frame is seen in plan view
- [B62D 21/07](#) . wide-hipped frame type, i.e. a wide box-shaped mid portion with narrower sections extending from said mid portion in both fore and aft directions
- [B62D 21/08](#) . built up with interlaced cross members
- [B62D 21/09](#) . Means for mounting load bearing surfaces
- [B62D 21/10](#) . in which the main member is plate-like
- [B62D 21/11](#) . with resilient means for suspension{, e.g. of wheels or engine; sub-frames for mounting engine or suspensions}

**NOTE**

This group does not cover subject matter primarily relating to the suspension, with only a nominal recitation of frame structure, which are covered by subclass [B60G](#)

- [B62D 21/12](#) . assembled from readily detachable parts
- [B62D 21/14](#) . of adjustable length or width
- [B62D 21/15](#) . having impact absorbing means, e.g. a frame designed to permanently or temporarily change shape or dimension upon impact with another body( bumpers [B60R 19/02](#) ; shock absorbers in general [F16F](#))
- [B62D 21/152](#) . . {Front or rear frames}
- [B62D 21/155](#) . . . {Sub-frames or underguards}
- [B62D 21/157](#) . . {for side impacts}
- [B62D 21/16](#) . having fluid storage compartment

- B62D 21/17 . forming fluid or electrical conduit means or having other means to accommodate the transmission of a force or signal
- B62D 21/18 . characterised by the vehicle type and not provided for in groups [B62D 21/02](#) to [B62D 21/17](#)
- B62D 21/183 . . {specially adapted for sports vehicles, e.g. race, dune buggies, go-karts( tubular skeleton [B62D 23/005](#))}
- B62D 21/186 . . {for building site vehicles or multi-purpose tractors( tracked vehicles [B62D 55/10](#) ; tractors in general [B62D 49/00](#) ; building site vehicles in general [E02F](#) ; lift-trucks [B66F](#))}
- B62D 21/20 . . trailer type, i.e. a frame specifically constructed for use in a non-powered vehicle
- 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](#)}
- B62D 23/005 . {with integrated chassis in the whole shell e.g. meshwork, tubes, or the like([B62D 33/044](#) takes precedence )}
- B62D 24/00** **Connections between vehicle body and vehicle frame**([B62D 23/00](#) , [B62D 33/077](#) take precedence )
- WARNING**
- Group [B62D 24/00](#) and subgroups are not complete. See also other groups of [B62D](#)
- B62D 24/02 . Vehicle body, not intended to move relatively to the vehicle frame, and mounted on vibration absorbing mountings, e.g. rubber pads
- B62D 24/04 . Vehicle body mounted on resilient suspension for movement relative to the vehicle frame
- 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](#))}
- B62D 25/02 . Side panels{([B62D 33/046](#) takes precedence; sideboards for open load compartments [B62D 33/023](#))}
- B62D 25/025 . . {Side sills thereof}
- B62D 25/04 . Door pillars;{windshield pillars}
- B62D 25/06 . Fixed roofs( non-fixed roofs or like shelters [B60J 7/00](#) ; roof liners [B60R 13/02](#) ; insulating elements [B60R 13/08](#))
- B62D 25/07 . . having water drainage or guide means integral with roof structure
- B62D 25/08 . Front or rear portions{ ( sub-frames for mounting engine or suspensions [B62D 21/11](#))}

- B62D 25/081 .. {Cowls( ventilating openings situated directly in front of the vehicle front window [B60H 1/28](#))}
- B62D 25/082 .. {Engine compartments}
- B62D 25/084 ... {Radiator supports}
- B62D 25/085 ... {Front-end modules}
- B62D 25/087 .. {Luggage compartments}
- B62D 25/088 .. {Details of structures as upper supports for springs or dampers}
- B62D 25/10 .. Bonnets or lids,{e.g. for trucks, tractors, busses, work vehicles( for truck beds [B60J 7/1607](#) ; for boats [B63B 19/12](#) ; doors arranged at the vehicle rear [B60J 5/10](#) ; inlet covers for vehicle fuel tanks [B60K 15/05](#) ; for protecting non-occupants of a vehicle [B60R 21/38](#))}
- B62D 25/105 ... {for motor cars}
- B62D 25/12 ... Parts or details thereof(locks [E05B](#),{[E05B 65/19](#) ; devices for holding open [E05C 17/00](#) , e.g. while carrying oversize objects [E05C 17/042](#)}; hinges [E05D](#); counterbalancing means [E05F](#):{ checks, stops, buffers [E05F 5/00](#) ; }springs,{e.g. pneumatic springs}[F16F](#))
- B62D 25/14 .. Dashboards as superstructure sub-units( other dashboard aspects [B60K](#))
- B62D 25/142 ... {having ventilation channels incorporated therein}
- B62D 25/145 ... {having a crossbeam incorporated therein}
- B62D 25/147 .... {with adjustable connection to the A-pillars}
- B62D 25/16 .. Mud-guards or wings; Wheel cover panels( equipped with means for freeing wheels or tyres from foreign matter [B60S](#))
- B62D 25/161 ... {Mud-guards made of non-conventional material, e.g. rubber, plastics}
- B62D 25/163 ... {Mounting devices}
- B62D 25/165 .... {including sealing devices}
- B62D 25/166 .... {by rods or other distance-keeping devices}
- B62D 25/168 ... {Mud guards for utility vehicles}
- B62D 25/18 ... Parts or details thereof, e.g. mudguard flaps
- B62D 25/182 .... {Movable mudguards, or mudguards comprising movable or detachable parts([B62D 25/188](#) takes precedence )}
- B62D 25/184 ..... {to facilitate access to wheels}
- B62D 25/186 ..... {being attached or suspended laterally from the wheel([B62D 25/184](#) takes precedence )}
- B62D 25/188 .... {Mud-guard flaps for utility vehicles}
- B62D 25/20 . Floors or bottom sub-units{( sub-frames for mounting engine or suspensions [B62D 21/11](#) ; drip trays [F16N 31/006](#))}
- B62D 25/2009 .. {in connection with other superstructure subunits}
- B62D 25/2018 ... {the subunits being front structures}
- B62D 25/2027 ... {the subunits being rear structures}
- B62D 25/2036 ... {the subunits being side panels, sills or pillars([B62D 21/157](#) takes precedence )}
- B62D 25/2045 ... {the subunits being fire walls}
- B62D 25/2054 .. {Load carrying floors for commercial vehicles}

- B62D 25/2063 . . {Floor elements for repairs}
- B62D 25/2072 . . {Floor protection, e.g. from corrosion or scratching( floor mats [B60N 3/04](#) , armour [F41H 7/042](#) , insulation [B60R 13/08](#) , streamlining [B62D 35/02](#))[[M1104](#)]}
- B62D 25/2081 . . {Jack receiving devices}
- B62D 25/209 . . {Arrangements for the mounting of vehicle hitches( vehicle connections in general [B60D](#))}
  
- B62D 25/24 . Superstructure sub-units with access{or drainage}openings having movable or removable closures;{Sealing means therefor}{ inlet covers for vehicle fuel tanks [B60K 15/05](#)}

**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](#))}**

- B62D 27/02 . rigid
- B62D 27/023 . . {Assembly of structural joints}
- B62D 27/026 . . {Connections by glue bonding( in general [F16B 11/00](#) ; processes [C09J 5/00](#))}
  
- B62D 27/04 . resilient
  
- B62D 27/06 . readily releasable
- B62D 27/065 . . {using screwthread( Connection of crossbeam to A- pillars [B62D 25/147](#) ; mounting load bearing surfaces [B62D 21/09](#) ; securing mudguards [B62D 25/163](#) ; connections for synthetic parts [B62D 29/048](#))}

**B62D 29/00** **Superstructures,{understructures, or sub-units thereof,}characterised by the material thereof{(B62D 33/044 , [B62D 33/048](#) take precedence )}**

- B62D 29/001 . {characterised by combining metal and synthetic material}
- B62D 29/002 . . {a foamable synthetic material or metal being added in situ( shaping of substances in a plastic state by foaming, in general [B29C 44/00](#))}
- B62D 29/004 . . {the metal being over-moulded by the synthetic material, e.g. in a mould}
- B62D 29/005 . . {preformed metal and synthetic material elements being joined together, e.g. by adhesives}
  
- B62D 29/007 . {predominantly of special steel or specially treated steel, e.g. stainless steel or locally surface hardened steel}
  
- B62D 29/008 . {predominantly of light alloys, e.g. extruded}
  
- B62D 29/02 . predominantly of wood
  
- B62D 29/04 . predominantly of synthetic material(working of plastics or substances in a plastic state [B29](#))
- B62D 29/041 . . {Understructures}
- B62D 29/043 . . {Superstructures([B62D 25/161](#) takes precedence )}

- B62D 29/045 . . . {Van bodies composed of substantially rectangular panels}
- B62D 29/046 . . {Combined superstructure and frame, i.e. monocoque constructions}
- B62D 29/048 . . {Connections therefor, e.g. joints([B62D 29/045](#) takes precedence )}
  
- B62D 31/00** **Superstructure for passenger vehicles**( passenger vehicles specially adapted to co-operate with aircraft or terminal buildings [B64F 1/31](#))
  
- B62D 31/003 . {compact cars e.g. city cars}
- B62D 31/006 . . {foldable( droppable [B60F 5/006](#))}
  
- B62D 31/02 . for carrying large numbers of passengers, e.g. omnibus
- B62D 31/025 . . {having modular sections}
  
- B62D 31/04 . with more than one deck
  
- 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](#)})
  
- B62D 33/02 . Platforms; Open load compartments({ Flat wagons including posts or standards [B61D 3/08](#)})
- B62D 33/0207 . . {Connections of movable or detachable racks or stanchions to platforms}
- B62D 33/0215 . . . {for log hauling vehicles( vehicles for log transport in general [B60P 3/41](#))}
- B62D 33/0222 . . {Connecting elements between stanchions, e.g. roof supporting elements, stiffeners( non-fixed roofs [B60J 7/00](#) ; securing and covering of load [B60P 7/00](#))}
- B62D 33/023 . . Sideboard or tailgate structures({ vehicle side panels in general [B62D 25/02](#)})
- B62D 33/027 . . . movable
- B62D 33/0273 . . . . {Movable tailboards for vehicles comprising non-movable sideboards, e.g. pick-up trucks([B62D 33/037](#) takes precedence )}
- B62D 33/0276 . . . . {by vertical translation([B62D 33/0273](#) takes precedence )}
- B62D 33/03 . . . . by swinging down({[B62D 33/0273](#) takes precedence )}
- B62D 33/033 . . . . removable({[B62D 33/0273](#) takes precedence )}
- B62D 33/037 . . . . Latching means therefor
  
- B62D 33/04 . Enclosed load compartments(Frameworks for movable panels, tarpaulins or side curtains( tarpaulins per se [B60J 7/00](#) , [B60P 7/04](#) ; side curtains per se [B60J 5/065](#))}
- B62D 33/042 . . {divided into compartments( movable bulk heads [B60P 7/14](#) ; cattle transport [B60P 3/04](#) ; bottled liquids [B60P 3/22](#))}
- B62D 33/044 . . {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 . . {built up with flat self-supporting panels; Fixed connections between panels([B62D 29/045](#) , [B62D 33/048](#) take precedence )}
- B62D 33/048 . . {for refrigerated goods vehicles}



- B62D 33/06 . Drivers` cabs{( overhead guards, e.g. against loads falling down [B60R 21/11](#) ; roll-over protection [B60R 21/13](#))}
- B62D 33/0604 .. {Cabs insulated against vibrations or noise, e.g. with elastic suspension( resilient connections between superstructure sub-units [B62D 27/04](#) ; damping noise in general [G10K 11/00](#) ; for vehicles in general [B60R 13/08](#))}
- B62D 33/0608 ... {pneumatic or hydraulic suspension}
- B62D 33/0612 .. {Cabins with living accommodation, especially for long distance road vehicles, i.e. sleeping, cooking, or other facilities( beds in general adapted to be used in vehicles [A47C 17/80](#) ; sanitation devices in vehicles in general [B60R 15/00](#) ; living accommodation in vehicles in general [B60P 3/32](#) ; passenger fittings in general [B60N 3/00](#))}
- B62D 33/0617 .. {for tractors or off-the-road vehicles( protective devices for drivers in case of overturning of tractors [B60R 21/131](#))}
- B62D 33/0621 ... {able to be dismantled, folding}
- B62D 33/0625 ... {open}
- B62D 33/063 .. movable from one position into at least one other position, e.g. tiltable, pivotable about a vertical axis, displaceable from one side of the vehicle to the other
- B62D 33/0633 ... {pivotable about a vertical axis}
- B62D 33/0636 ... {displaceable along a linear path}
- B62D 33/067 ... tiltable
- B62D 33/07 .... characterised by the device for locking the cab in the tilted or in the driving position
- B62D 33/071 ..... {Locking devices for cabins in driving position; Shock and vibration absorbing devices therefor}
- B62D 33/073 ... characterised by special adaptations of vehicle control devices
- B62D 33/077 . characterised by the connection of the superstructure to the vehicle frame{( [B62D 33/06](#) takes precedence )}
- B62D 33/08 . comprising adjustable means([B62D 33/10](#) takes precedence )
- B62D 33/10 .. comprising means for the suspension of the superstructure on the frame

## **B62D 35/00 Vehicle bodies characterised by streamlining**

- B62D 35/001 . {For commercial vehicles or tractor-trailer combinations e.g. caravans}
- B62D 35/002 .. {for caravans([B62D 35/004](#) takes precedence )}
- B62D 35/004 .. {Inflatable nose or rear cones}
- B62D 35/005 . {Front spoilers([B62D 35/001](#) takes precedence )}
- B62D 35/007 . {Rear spoilers([B62D 35/001](#) takes precedence )}
- B62D 35/008 . {Side spoilers([B62D 35/001](#) takes precedence )}
- B62D 35/02 . Streamlining the undersurfaces{( [B62D 35/005](#) , [B62D 35/007](#) , [B62D 35/008](#) take precedence )}



**B62D 37/00**      **Stabilising vehicle bodies without controlling suspension arrangements**

- B62D 37/02      .    by aerodynamic means
- B62D 37/04      .    by means of movable masses
- B62D 37/06      . .    using gyroscopes

**B62D 39/00**      **Vehicle bodies not otherwise provided for{e.g. safety vehicles( safety equipment [B60R 21/00](#))}****B62D 41/00**      **Fittings for identifying vehicles in case of collision; Fittings for marking or recording collision areas****B62D 43/00**      **Spare wheel stowing, holding, or mounting arrangements**

- B62D 43/002      .    {Handling devices, mainly for heavy wheels( via cables and chains [B62D 43/045](#))}
- B62D 43/005      .    {Protective coverings for spare wheels}
- B62D 43/007      .    {Anti-theft devices for spare wheels}
- B62D 43/02      .    external to the vehicle body
- B62D 43/04      . .    attached beneath the vehicle body
- B62D 43/045      . . .    {the wheel or its cradle being attached to one or more chains or cables for handling}
- B62D 43/06      .    within the vehicle body
- B62D 43/08      . .    and arranged substantially vertically
- B62D 43/10      . .    and arranged substantially horizontally

**Guidance heading:** **Motor vehicles or trailers classified according to type; Parts or accessories thereof**( frames for vehicles of special type [B62D 21/18](#))

**B62D 47/00**      **Motor vehicles or trailers predominantly for carrying passengers( superstructures [B62D 31/00](#))**

- 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](#))}
- B62D 47/006      .    {Vehicles which can be divided in sub-vehicles; nestable vehicles}
- B62D 47/02      .    for large numbers of passengers, e.g. omnibus
- B62D 47/025      . .    {articulated buses with interconnecting passageway, e.g. bellows( coupling aspects [B60D 5/00](#))}

<b>B62D 49/00</b>	<b>Tractors</b> ( of walk type <a href="#">B62D 51/04</a> ; endless- track features <a href="#">B62D 55/00</a> ){ tractors for handling aircraft <a href="#">B64F 1/22</a> ; transport specially adapted for underground galleries <a href="#">E21F 13/02</a> }
<a href="#">B62D 49/002</a>	. {characterised by being of the low ground pressure type}
<a href="#">B62D 49/005</a>	. {Tractors for semi-trailers( combinations of tractor plus semi- trailer <a href="#">B62D 53/06</a> )}
<a href="#">B62D 49/007</a>	.. {Tractors for handling trailers, e.g. roll-trailers in terminals}
<a href="#">B62D 49/02</a>	. modified to take lifting devices
<a href="#">B62D 49/04</a>	. modified to take pushing devices
<a href="#">B62D 49/06</a>	. adapted for multi-purpose use
<a href="#">B62D 49/0607</a>	.. {Straddle tractors, used for instance above vine stocks, rows of bushes, or the like}
<a href="#">B62D 49/0614</a>	.. {equipped with visual aids for positioning implements or to control working condition( optical signalling for vehicles in general <a href="#">B60Q 1/26</a> )}
<a href="#">B62D 49/0621</a>	.. {comprising traction increasing arrangements e.g. all-wheel traction devices, multiple-axle traction arrangements, auxiliary traction increasing devices( anti-skid or anti-slip devices fitted onto the wheels <a href="#">B60B 15/02</a> , <a href="#">B60B 39/12</a> ; arrangements of transmission for driving both front and rear wheels or tandem wheels of vehicles <a href="#">B60K 17/34</a> , <a href="#">B60K 17/36</a> )}
<a href="#">B62D 49/0628</a>	... {using detachable weights( counterweights against overturning <a href="#">B62D 49/085</a> ; movable stabilisation masses <a href="#">B62D 37/04</a> )}
<a href="#">B62D 49/0635</a>	... {using additional ground engaging means, e.g. endless tracks( vehicles with endless tracks and either additional or alternative ground wheels <a href="#">B62D 55/02</a> , <a href="#">B62D 55/04</a> )}
<a href="#">B62D 49/0642</a>	... {by coupling of tractors}
<a href="#">B62D 49/065</a>	.. {Coupling of multi-purpose tractors with equipment( towing bars <a href="#">B60D</a> ; with load transfer <a href="#">B62D 53/08</a> ; power take-off <a href="#">B60K</a> ; with lifting devices <a href="#">B62D 49/02</a> ; pushing gear <a href="#">B62D 49/04</a> )}
<a href="#">B62D 49/0657</a>	.. {Asymmetrical tractors}
<a href="#">B62D 49/0664</a>	.. {Light, simple, and economical tractors( <a href="#">B62D 49/002</a> takes precedence )}
<a href="#">B62D 49/0671</a>	... {the driver riding on the tractor}
<a href="#">B62D 49/0678</a>	.. {Tractors of variable track width or wheel base}( for vehicles in general <a href="#">B60B 23/12</a> and <a href="#">B60B 35/10</a> )}
<a href="#">B62D 49/0685</a>	.. {Reversible tractors adapted for shuttle work}
<a href="#">B62D 49/0692</a>	.. {characterised by the particular arrangement of control devices, e.g. having more than one control stand, operable from vehicle extension(control devices or systems characterised by mechanical features only)}
<a href="#">B62D 49/08</a>	. having means for preventing overturning or tipping( safety devices for propulsion-unit control, specially adapted for, or arranged in, vehicles <a href="#">B60K 28/00</a> )}
<a href="#">B62D 49/085</a>	.. {Counterweight}

- B62D 51/00**      **Motor vehicles characterised by the driver not being seated**{( wheeled carriers for golf bags [A63B 55/08](#))}
- B62D 51/001      . {characterised by the vehicle control device( mechanical features of control devices in general [G05G](#) ; arrangements of vehicle control devices in general [B60K 20/00](#) , [B60K 23/00](#) , [B60K 26/00](#))}
- B62D 51/002      . . {comprising safety arrangements( safety devices for vehicle propulsion unit control [B60K 28/00](#))}
- B62D 51/004      . {characterised by the transmission( arrangements or mounting of transmissions in vehicles [B60K 17/00](#) ; gearing in general [F16H](#))}
- B62D 51/005      . {Vehicular characteristics of load handling vehicles, e.g. pedestrian trucks( fork-lift trucks [B66F 9/06](#))}
- B62D 51/007      . {the vehicle being of the endless track type( endless track vehicles in general [B62D 55/00](#))}
- B62D 51/008      . {characterised by the vehicle being formed by articulated or separable units( road trains [B62D 53/00](#))}
- B62D 51/02      . the driver standing in the vehicle
- B62D 51/04      . the driver walking
- B62D 51/06      . . Uniaxle walk-type tractors
- B62D 51/065      . . . {the vehicle having only one wheel}
- 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](#)}
- B62D 53/005      . {Combinations with at least three axles and comprising two or more articulated parts( articulated buses [B62D 47/025](#))}
- B62D 53/02      . comprising a uniaxle tractor unit and a uniaxle trailer unit{ see [B60B 11/00](#) - [B60B 11/08](#)}
- B62D 53/021      . . {comprising a universal coupling joint}
- B62D 53/023      . . {with two or more coupling joints allowing staggering of the units from a central plane}
- B62D 53/025      . . {Comprising a transmission shaft passing through the coupling joints([B62D 53/021](#) takes precedence; trailers with powered axles [B62D 59/00](#))}
- B62D 53/026      . . . {With all wheels powered}
- B62D 53/028      . . {Having only coupling joints other than directional( articulated frames [B62D 21/186](#) and [B62D 55/10](#))}
- B62D 53/04      . comprising a vehicle carrying an essential part of the other vehicle's load by having supporting means for the front or rear part of the other vehicle

B62D 53/045	..	{with rigid linkage in the horizontal plane( <a href="#">luggage trailers B62D 63/064 to B62D 63/067</a> )}
B62D 53/06	..	Semi-trailers
B62D 53/061	...	{of flat bed or low loader type or fitted with swan necks( <a href="#">detachable swan necks B62D 53/065</a> ; <a href="#">swan neck-fifth wheel couplings B62D 53/08</a> )}
B62D 53/062	....	{having inclinable, lowerable platforms; Lift bed trailers; Straddle trailers( <a href="#">lifting coupling saddles B62D 53/0821</a> ; <a href="#">crane vehicles B60P 3/28</a> )}
B62D 53/064	.....	{inclining platforms by detachable bogies}
B62D 53/065	.....	{inclining platforms by detachable or folding swan necks}
B62D 53/067	...	{Multi-purpose, convertible or extendable load surface semi-trailers( for container transport <a href="#">B60P 1/6418</a> ; convertible road transport vehicles in general <a href="#">B60P 3/42</a> )}
B62D 53/068	...	{having devices to equalise or modify the load between the fifth wheel and the rear wheels( <a href="#">adjustable coupling saddles per se B62D 53/0807</a> ; <a href="#">load transfer devices to permit coupling or uncoupling B62D 53/0857</a> ; <a href="#">anti jack-knifing devices B62D 53/0871</a> )}
B62D 53/08	..	Fifth wheel traction couplings{Tractors for handling trailers in terminals <a href="#">B62D 49/007</a> }
B62D 53/0807	...	{adjustable coupling saddles mounted on sub-frames; Mounting plates therefor}
B62D 53/0814	....	{with adjustment of the clearance between the tractor or the trailer( <a href="#">devices modifying the load in tractor-trailer combinations B62D 53/068</a> )}
B62D 53/0821	....	{Lifting saddles, i.e. to lift the trailer front( <a href="#">tilting body constructions B60P</a> )}
B62D 53/0828	....	{Removable or fold-away traction couplings for non-specialised tractor vehicles}
B62D 53/0835	....	{Coupling saddles able to rock in all directions, e.g. for use in rough terrain}
B62D 53/0842	...	{King pins}
B62D 53/085	....	{fitted with anti-coupling devices, pivotal or retractable king pins, e.g. to prevent theft( <a href="#">vehicle fittings for preventing theft in general B60R 25/00</a> )}
B62D 53/0857	...	{Auxiliary semi-trailer handling or loading equipment, e.g. ramps, rigs, coupling supports}
B62D 53/0864	....	{Dollies for fifth wheel coupling}
B62D 53/0871	...	{with stabilising means, e.g. to prevent jack-knifing, pitching, rolling, buck jumping( <a href="#">stabilising in general B62D 37/00</a> ; <a href="#">tractors B62D 49/08</a> )}
B62D 53/0878	....	{the fifth wheel coupling incorporating braking or restraining means}
B62D 53/0885	...	{Comprising devices to limit or to compensate for wear or excessive play; Lubricating, shock absorbing, bearing devices, or the like}
B62D 53/0892	...	{comprising power transmission shafts( <a href="#">trailers with driven ground wheels B62D 59/00</a> )}
B62D 53/10	...	with means for preventing accidental uncoupling
B62D 53/12	...	engaging automatically
B62D 53/125	....	{with simultaneous coupling of the service lines}
<b>B62D 55/00</b>		<b>Endless track vehicles</b> ( <a href="#">steering aspects B62D 11/00</a> ; { characterised by the driver not being seated <a href="#">B62D 51/007</a> })

- B62D 55/02 . with tracks and additional ground wheels{ for multi-purpose tractors [B62D 49/0635](#)}
- B62D 55/04 . with tracks and alternative ground wheels, e.g. changeable from endless track vehicle into wheeled vehicle and vice versa{ for multi-purpose tractors [B62D 49/0635](#)}
- B62D 55/06 . with tracks without ground wheels
- B62D 55/062 .. {Tracked vehicles of great dimensions adapted for moving bulky loads or gear}
- B62D 55/065 .. Multi-track vehicles, i.e. more than two tracks{( [soil-shifting machines E02F](#) ; [mining machines E21C](#))}
- B62D 55/0655 ... {Articulated endless track vehicles( steering specially adapted for trailers [B62D 13/00](#) ; articulated buses [B62D 47/025](#) ; tractor-trailer combinations or road trains comprising a uni-axle unit and a uni-axle trailer [B62D 53/02](#))}
- B62D 55/07 .. Mono-track vehicles
- B62D 55/075 .. Tracked vehicles for ascending or descending stairs,{[steep slopes or vertical surfaces](#)}( [magnetic or pneumatic ground-engaging parts B62D 55/265](#) ; chairs or multi-track cycles specially adapted for invalids [A61G 5/00](#))
- B62D 55/08 . Endless track units; Parts thereof
- B62D 55/084 .. Endless-track units or carriages mounted separably, adjustably or extensibly on vehicles, e.g. portable track units([B62D 55/07 takes precedence](#) )
- B62D 55/0842 ... {Tracked vehicle with track carriages suspended on three points, e.g. by an equaliser bar}
- B62D 55/0845 ... {Protection devices}
- B62D 55/0847 ... {Track blocking devices mounted on the frame; Track guides}
- B62D 55/088 .. with means to exclude or remove foreign matter, e.g. sealing means, self-cleaning track links or sprockets, deflector plates or scrapers
- B62D 55/0882 ... {Track or sprocket cleaning devices mounted on the frame( [wheel cleaning devices in general B60S](#))}
- B62D 55/0885 ... {Self-cleaning sprockets}
- B62D 55/0887 ... {Track-articulation sealings against dust, water, mud or the like( [sealing of bearings in general F16C 33/72](#) ; [chain bushings in general F16G 15/00](#))}
- B62D 55/092 .. with lubrication means( [lubricating in general F16N](#))
- B62D 55/096 .. with noise reducing means
- B62D 55/0963 ... {Anti-noise driving sprockets}
- B62D 55/0966 ... {Low noise rollers, e.g. with antivibration means( [elastic wheel rims in general B60B 9/00](#))}
- B62D 55/10 .. Bogies; Frames( [track-tensioning means B62D 55/30](#))
- B62D 55/104 .. Suspension devices for wheels, rollers, bogies or frames( [vehicle suspension in general B60G](#))
- B62D 55/108 ... with mechanical springs, e.g. torsion bars
- B62D 55/1083 .... {Torsion-bar springs}
- B62D 55/1086 .... {Rubber springs}
- B62D 55/112 ... with fluid springs, e.g. hydraulic pneumatic
- B62D 55/1125 .... {Hydro-pneumatic or pneumatic, e.g. air-cushioned}

B62D 55/116	...	Attitude or position control of chassis by action on suspension, e.g. to compensate for a slope
B62D 55/12	..	Arrangement, location, or adaptation of driving sprockets
B62D 55/125	...	Final drives
B62D 55/13	....	readily interchangeable modular type
B62D 55/135	...	with dismountable driving crown
B62D 55/14	..	Arrangement, location, or adaptation of rollers
B62D 55/145	...	{Rollers with replaceable wear rings or rims( driving sprockets with replaceable rims <a href="#">B62D 55/12</a> )}
B62D 55/15	...	Mounting devices, e.g. bushings, axles, bearings, sealings{( with lubrication means <a href="#">B62D 55/092</a> )}
B62D 55/18	..	Tracks( self-cleaning track links <a href="#">B62D 55/088</a> )
B62D 55/20	...	of articulated type, e.g. chains{( with lubrication means <a href="#">B62D 55/092</a> )}
B62D 55/202	....	{Wheel engaging parts; Wheel guides on links}
B62D 55/205	....	Connections between track links
B62D 55/21	.....	Links connected by transverse pivot pins
B62D 55/211	.....	{Bitubular chain links assembled by pins and double connectors}
B62D 55/213	.....	{Master track links}
B62D 55/215	.....	{Resilient connections between links}
B62D 55/22	....	Arrangements for preventing or modifying back-flexing
B62D 55/24	...	of continuously flexible type, e.g. rubber belts
B62D 55/242	....	{The flexible band being semi-rigid for resisting back-flexing and contributing to spring the vehicle}
B62D 55/244	....	{Moulded in one piece, with either smooth surfaces or surfaces having projections, e.g. incorporating reinforcing elements}
B62D 55/247	....	Gas filled or inflatable flexible tracks( connection of valves to inflatable elastic bodies <a href="#">B60C 29/00</a> )
B62D 55/253	....	having elements interconnected by one or more cables or like elements
B62D 55/26	...	Ground engaging parts or elements{ tracks specially adapted for amphibious vehicles <a href="#">B60F 3/0015</a> }
B62D 55/265	....	having magnetic or pneumatic adhesion
B62D 55/27	....	having different types of crampons for progression over varying ground
B62D 55/275	....	with street plate, i.e. means to prevent tread from cutting into road surface
B62D 55/28	....	detachable
B62D 55/283	.....	{and movable, e.g. around an axis or perpendicularly to the track}
B62D 55/286	.....	{For soft grounds, e.g. consisting of snow or swamp}
B62D 55/30	..	Track-tensioning means
B62D 55/305	...	{acting on pivotably mounted idlers}
B62D 55/32	.	Assembly, disassembly, repair or servicing of endless-track systems

<b>B62D 57/00</b>	<b>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 <a href="#">B62B</a> ; motor sledges <a href="#">B62M</a>)</b>
<a href="#">B62D 57/02</a>	. with ground-engaging propulsion means, e.g. walking members
<a href="#">B62D 57/021</a>	. . {the ground engaging means being sequentially inflatable bags for peristaltic movement( <a href="#">B62D 57/024</a> takes precedence )}
<a href="#">B62D 57/022</a>	. . {consisting of members having both rotational and walking movements}
<a href="#">B62D 57/024</a>	. . specially adapted for moving on inclined or vertical surfaces( <a href="#">endless-track vehicles for ascending or descending stairs <a href="#">B62D 55/075</a> ; hand-carts with provision for travelling up or down stairs <a href="#">B62B 5/02</a></a> )
<a href="#">B62D 57/028</a>	. . having wheels and mechanical legs( <a href="#">B62D 57/024</a> takes precedence; ground-engaging vehicle fittings for supporting, lifting or manoeuvring the vehicle, wholly or in part <a href="#">B60S 9/00</a> )
<a href="#">B62D 57/032</a>	. . with alternately or sequentially lifted supporting base and legs; with alternately or sequentially lifted feet or skid( <a href="#">B62D 57/024</a> takes precedence )
<a href="#">B62D 57/036</a>	. . screw type, e.g. Archimedian screw{( <a href="#">amphibious vehicles comprising screw-type ground-engaging means <a href="#">B60F 3/0023</a></a> )}
<a href="#">B62D 57/04</a>	. having other than ground-engaging propulsion means, e.g. having propellers( <a href="#">arrangement of jet-propulsion units <a href="#">B60K</a></a> )
<b>B62D 59/00</b>	<b>Trailers with driven ground wheels or the like</b>
<a href="#">B62D 59/02</a>	. driven from external propulsion unit
<a href="#">B62D 59/04</a>	. driven from propulsion unit on trailer
<b>B62D 61/00</b>	<b>Motor vehicles or trailers, characterised by the arrangement or number of wheels, not otherwise provided for, e.g. four wheels in diamond pattern</b>
<a href="#">B62D 61/02</a>	. with two road wheels in tandem on the longitudinal centre line of the vehicle
<a href="#">B62D 61/04</a>	. . with two other wheels which are coaxial
<a href="#">B62D 61/06</a>	. with only three wheels
<a href="#">B62D 61/065</a>	. . {with single rear wheel}
<a href="#">B62D 61/08</a>	. . with single front wheel
<a href="#">B62D 61/10</a>	. with more than four wheels{( <a href="#">tractors of the low ground pressure type <a href="#">B62D 49/002</a></a> )}
<a href="#">B62D 61/12</a>	. with variable number of ground engaging wheels, e.g. with some wheels arranged higher than others, or with retractable wheels( <a href="#">for manoeuvring purposes only <a href="#">B60S</a></a> )
<a href="#">B62D 61/125</a>	. . {the retractable wheel being a part of a set of tandem wheels( <a href="#">resilient suspension for a single set of tandem wheels <a href="#">B60G 5/00</a></a> )}



**B62D 63/00****Motor vehicles or trailers not otherwise provided for**

- B62D 63/02 . Motor vehicles
- B62D 63/025 .. {Modular vehicles( superstructures for busses having modular sections [B62D 31/025](#))}
- B62D 63/04 .. Component parts or accessories
- B62D 63/06 . Trailers( vehicles comprising living accommodation for people, e.g. caravans, camping or like vehicles [B60P 3/32](#))
- B62D 63/061 .. {Foldable, extensible or yielding trailers( foldable caravans [B60P 3/34](#) ; adjustable chassis frames [B62D 21/14](#))}
- B62D 63/062 .. {Trailers with one axle or two wheels( semi-trailers [B62D 53/06](#))}
- B62D 63/064 ... {light luggage or equipment trailers, e.g. for batteries, gas generators, gas bottles, stretchers( luggage carriers per se [B60R](#))}
- B62D 63/065 ... {forming an extension of the towing vehicle, i.e. with two point fixation}
- B62D 63/067 .... {single wheeled(rigid or semi-rigid coupling)}
- B62D 63/068 .. {with more than two axles or more than four wheels( vehicles with more than four wheels in general [B62D 61/10](#))}
- B62D 63/08 .. Component parts or accessories

**B62D 65/00****Designing, manufacturing, e.g. assembling, facilitating disassembly, or structurally modifying motor vehicles or trailers, not otherwise provided for**

- B62D 65/005 . {Inspection and final control devices}
- B62D 65/02 . Joining sub-units or components to, or positioning sub-units or components with respect to, body shell or other sub-units or components
- B62D 65/022 .. {Transferring or handling sub-units or components, e.g. in work stations or between workstations and transportation systems}
- B62D 65/024 .. {Positioning of sub-units or components with respect to body shell or other sub-units or components}
- B62D 65/026 ... {by using a jig or the like; Positioning of the jig}
- B62D 65/028 ... {by determining relative positions by measurement}
- B62D 65/04 .. Joining preassembled modular units composed of sub-units performing diverse functions, e.g. engine and bonnet([B62D 65/06](#) to [B62D 65/16](#) take precedence )
- B62D 65/06 .. the sub-units or components being doors, windows, openable roofs, lids, bonnets, or weather strips or seals therefor({ assembling sealing arrangements with vehicle parts, e.g. doors, windows [B60J 10/0088](#))}
- B62D 65/10 .. the sub-units or components being engines, clutches or transmissions
- B62D 65/12 .. the sub-units or components being suspensions, brakes or wheel units
- B62D 65/14 .. the sub-units or components being passenger compartment fittings, e.g. seats, linings, trim, instrument panels
- B62D 65/16 .. the sub-units or components being exterior fittings, e.g. bumpers, lights, wipers,{, exhausts}



B62D 65/18

. .      Transportation, conveyor or haulage systems specially adapted for motor vehicle or trailer assembly lines{( [conveyers and haulage in general B65G](#))}

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](#))}