B CPC - 2020.08

PERFORMING OPERATIONS; TRANSPORTING

NOTES omitted

TRANSPORTING

VEHICLES IN GENERAL

NOTE omitted

VEHICLES, VEHICLE FITTINGS, OR VEHICLE PARTS, NOT OTHERWISE PROVIDED FOR

NOTE

Attention is drawn to the Note following the title of class B60

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Optical viewing arrangements ([house mirrors and spies A47G 1/00; ] antiglare equipment, e.g. polarising, for windscreens or windows B60J 3/00; } devices per se G02B)

1/001 . { integrated in the windows, e.g. Fresnel lenses }

1/002 . { specially adapted for covering the peripheral part of the vehicle, e.g. for viewing tyres, bumpers or the like (integrated in the windows B60R 1/001; combined with rear-view mirrors B60R 1/08) }

1/003 . { for viewing trailer hitches }

1/005 . { specially adapted for viewing traffic-lights }

1/006 . { Side-view mirrors, e.g. V-shaped mirrors located at the front or rear part of the vehicle (combined with rear-view mirrors B60R 1/08; side-view periscopes B60R 1/10) }

1/007 . { specially adapted for covering the lateral blind spot not covered by the usual rear-view mirror }

1/008 . { allowing the driver to see passengers, e.g. for buses (combined with rear-view mirrors B60R 1/08) }

1/02 Rear-view mirror arrangements (periscope arrangements B60R 1/10)

1/025 . { comprising special mechanical means for correcting the field of view in relation to particular driving conditions, e.g. change of lane; scanning mirrors }

1/04 . mounted inside vehicle ([B60R 1/025, B60R 1/08 take precedence])

1/06 . mounted on vehicle exterior ([B60R 1/025, B60R 1/08 take precedence])

1/0602 . . . { comprising means for cleaning or deicing }

1/0605 . . . { specially adapted for mounting on trucks, e.g. by C-shaped support means }

1/0607 . . . { with remote position control adjustment }

1/061 . . . . . . { by manually actuated mechanical means, e.g. push-pull cables }

1/0612 . . . . . . { by electrically actuated means }

1/0615 . . . . . . { by hydraulically or pneumatically actuated means }

1/0617 . . . . { foldable along the vehicle, e.g. in case of external force applied thereon }

1/062 . . . . with remote control for adjusting position ([B60R 1/0607 takes precedence])

1/0625 . . . . { by hydraulically or pneumatically powered actuators }

1/064 . . . . by manually powered actuators

1/066 . . . . for adjusting the mirror relative to its housing

1/068 . . . . using cables

1/07 . . . . by electrically powered actuators

1/072 . . . . for adjusting the mirror relative to its housing

1/074 . . . . for retracting the mirror arrangements to a non-use position alongside the vehicle

1/076 . . . . yieldable to excessive external force and provided with an indexed use position ([B60R 1/0617, B60R 1/074] take precedence)

1/078 . . . . easily removable; mounted for bodily outward movement, e.g. when towing

1/08 . . . . involving special optical features, e.g. avoiding blind spots [ e.g. convex mirrors; Side-by-side associations of rear-view and other mirrors (B60R 1/025, B60R 1/10 take precedence) ]

1/081 . . . . { avoiding blind spots, e.g. by using a side-by-side association of mirrors }

1/082 . . . . { using a single wide field mirror or an association of rigidly connected mirrors }

1/083 . . . . { Anti-glare mirrors, e.g. "day-night" mirrors }

1/084 . . . . { using a removable filtering or hiding screen (associated with windows or windscreens B60J 3/00) }

1/085 . . . . { using a combination of interchangeable reflecting surfaces, e.g. reversible mirrors }

1/086 . . . . { using a mirror angularly movable between a position of use and a non-glare position reflecting a dark field to the user, e.g. situated behind a transparent glass used as low-reflecting surface; Wedge-shaped mirrors ]
Front-view mirror arrangements; {specially adapted for covering the peripheral part of the vehicle B60R 1/002}; Periscope arrangements {i.e. optical devices using combinations of mirrors, lenses, prisms or the like (specially adapted for covering the peripheral part of the vehicle B60R 1/002; for viewing traffic-lights B60R 1/005); Other mirror arrangements giving a view from above or under the vehicle}

{Optical arrangements giving a view under the vehicle, e.g. using periscopes}

{with remote or automatic control means}

{using a cell of electrically changeable optical characteristic, e.g. liquid-crystal or electrochromic mirrors}

{using a liquid filtering layer of variable thickness}

Arrangements of steps {or ladders facilitating access to or on the vehicle, e.g. running-boards} {construction of steps for railway vehicles B61D 23/00}; ladders E06C

{with lamps; with turn indicators}

{with information displays}

{with sensors or transducers}

{with thermometers}

{with vanity mirrors}

{with clocks}

{with cameras, video cameras or video screens}

{with antennae}

{with sun visors}

{with radio receivers, loud-speakers or buzzers}

{with communication systems other than radio-receivers, e.g. keyless entry systems, navigation systems; with anti-collision systems}

{holding means for personal articles}

3/00 Arrangements of steps {or ladders facilitating access to or on the vehicle, e.g. running-boards} {construction of steps for railway vehicles B61D 23/00}; ladders E06C

3/002 . . . . . [Running boards (for vehicle tops B60R 3/005; at the sides of the vehicle for carrying loads B60R 9/002)]

3/005 . . . . . [Catwalks, running boards for vehicle tops, access means for vehicle tops; Handrails therefor]

3/007 . . . . . [Removable steps or ladders, e.g. foldable (as access means for vehicle tops B60R 3/005)]

3/02 . . . . . Retractable steps {or ladders, e.g. moveable under shock (B60R 3/005 takes precedence)}

3/04 . . . . . with provisions for shoe scraping

5/00 Compartments within vehicle body primarily intended or sufficiently spacious for trunks, suit-cases, or the like (primarily intended for stowing loads in load-transporting vehicles B60P; arrangements for stowing spare wheels B62D 43/00)

5/003 . . . . . [Luggage racks, e.g. for busses (primarily intended for passengers' property smaller than suitcases B60R 7/04; B60R 7/08; luggage racks for rail vehicles B61D 37/003)]

5/006 . . . . . [stowing or holding means for elongated articles, e.g. skis inside vehicles]

5/02 . . . . . arranged at front of vehicle {B60R 5/003; B60R 3/003 takes precedence; external trunks arranged at rear of vehicle B60R 9/005)]

5/04 . . . . . [extensible externally of the vehicle body, e.g. to create an open luggage compartment of increased capacity (devices for anchoring the boot lid while carrying oversize objects E05C 17/042)]

5/042 . . . . . [to create an enclosed luggage compartment of increased capacity, e.g. with ventilation apertures for transporting dogs]

5/044 . . . . . [luggage covering means, e.g. parcel shelves]

5/045 . . . . . [collapsible or transformable]

5/047 . . . . . [collapsible by rolling-up]

5/048 . . . . . [of accordion-type, i.e. collapsible by sliding and folding]

7/00 Stowing or holding appliances inside vehicle primarily intended for personal property smaller than suit-cases, e.g. travelling articles, or maps (for radio sets, television sets, telephones or the like, mounting of cameras operative during drive, tools, or spare parts B60R 11/00; for receptacles for refuse, food, beverages, cigarettes B60N)

7/005 . . . . . [Nets or elastic pockets tensioned against walls or backrests]

7/002 . . . . . in separate luggage compartment {B60R 7/005 takes precedence}

7/004 . . . . . in driver or passenger space {e.g. using racks (B60R 7/005, B60R 7/08 takes precedence)}

7/003 . . . . . [mounted on or under a seat]

7/006 . . . . . [mounted on door]

7/005 . . . . . mounted on sun visor

7/006 . . . . . mounted on or below dashboards

7/008 . . . . . Disposition of racks, clips {[holders, containers] or the like (for supporting specific articles (B60R 7/005 takes precedence)}

7/001 . . . . . [for supporting maps]

7/002 . . . . . [for supporting spectacles]

7/004 . . . . . [for supporting tissues or tissue boxes]

7/085 . . . . . [for supporting flowers or flower vases]

7/087 . . . . . [for stowing money or valuables, e.g. using safes]

7/088 . . . . . [for stowing tape cartridges, compact discs, or the like]

7/10 . . . . . [for supporting hats, clothes or clothes hangers]

7/12 . . . . . [for supporting umbrellas]

7/14 . . . . . [for supporting weapons]

9/00 Supplementary fittings on vehicle exterior for carrying loads, e.g. luggage, sports gear or the like

9/002 . . . . . at the sides, e.g. on running-board

9/004 . . . . . Carriers associated with vehicle roof (B60R 9/08 takes precedence)

9/042 . . . . . Carriers characterised by means to facilitate loading or unloading of the load, e.g. rollers, tracks, or the like

9/0423 . . . . . [for ladders]

9/0426 . . . . . [for small vehicles, e.g. invalid chairs, perambulators]

9/045 . . . . . Carriers being adjustable or transformable, e.g. expandable, collapsible {transformable into tents B60P 3/36; into beds B60P 3/38}

9/048 . . . . . Carriers characterised by article-gripping {. - covering,} -retaining, or -locking means

9/0485 . . . . . [for ladders (B60R 9/0423 takes precedence)]

9/05 . . . . . Carriers characterised by wind deflecting means (wind deflectors for open roofs B60J 7/22)
B60R

9/02 . . . Carriers comprising elongate members extending only transversely of vehicle (B60R 9/08 takes precedence)
9/05 . . . Enclosure-type carriers, e.g. containers, boxes (B60R 9/048 takes precedence)
9/08 . . . characterised by releasable attaching means between carrier and roof
9/06 . . . at vehicle front or rear ([rear luggage compartments within vehicle extensible externally of the vehicle body B60R 5/041])
9/05 . . . (Enclosure-type carriers, e.g. trunks)
9/08 . . . specially adapted for sports gear (vehicles specially adapted for carrying aeroplanes, for carrying boats B60P)
9/10 . . . for cycles
9/12 . . . for skis

11/00 Arrangements for holding or mounting articles, not otherwise provided for

2011/0001 . . . (characterised by position)
2011/0003 . . . (inside the vehicle)
2011/0005 . . . [Dashboard]
2011/0007 . . . [Mid-console]
2011/0008 . . . [Ventilation grilles]
2011/0001 . . . [Vehicle control grilles, e.g. steering-wheel or column]
2011/0012 . . . [Seats or parts thereof]
2011/0014 . . . [Arm-rests]
2011/0015 . . . [Back-rests]
2011/0017 . . . [Head-rests]
2011/0019 . . . [Side or rear panels]
2011/0021 . . . [Doors]
2011/0022 . . . [Pillars]
2011/0024 . . . [Rear shelves]
2011/0026 . . . [Windows, e.g. windscreen]
2011/0028 . . . [Ceiling, e.g. roof rails]
2011/0029 . . . [Floor, e.g. side sills, fire wall]
2011/0031 . . . [Seat belts]
2011/0033 . . . [Rear-view mirrors]
2011/0035 . . . [Sun visors]
2011/0036 . . . [Luggage compartment]
2011/0038 . . . [Engine compartment]
2011/004 . . . [outside the vehicle]
2011/0042 . . . (characterised by mounting means)
2011/0043 . . . (for integrated articles, i.e. not substantially protruding from the surrounding parts)
2011/0045 . . . [with visible part, e.g. flush mounted]
2011/0047 . . . [using hidden fastening means]
2011/0049 . . . [for non integrated articles]
2011/005 . . . [Connection with the vehicle part]
2011/0052 . . . [using screws, bolts, rivets or the like]
2011/0054 . . . [using cigarette lighter]
2011/0056 . . . [using suction cups]
2011/0057 . . . [using magnetic means]
2011/0059 . . . [using clips, clamps, straps or the like]
2011/0061 . . . [using key-type connections]
2011/0063 . . . [using adhesive means, e.g. hook and loop fasteners]
2011/0064 . . . [Connection with the article]
2011/0066 . . . [using screws, bolts, rivets or the like]
2011/0068 . . . [using suction cups]
2011/007 . . . [using magnetic means]

2011/0071 . . . [using latches, clips, clamps, straps or the like]
2011/0073 . . . [using key-type connections]
2011/0075 . . . [using a containment or docking space]
2011/0077 . . . [using adhesive means, e.g. hook and loop fasteners]
2011/0078 . . . [Quick-disconnect two-parts mounting means]
2011/008 . . . [Adjustable or movable supports]
2011/0082 . . . [collapsible, e.g. for storing after use]
2011/0084 . . . [with adjustment by linear movement in their operational position]
2011/0085 . . . [with adjustment by rotation in their operational position]
2011/0087 . . . [around two axes]
2011/0089 . . . [around three axes, i.e. universally mounted]
2011/0091 . . . [the article being mounted on a flexible shaft]
2011/0092 . . . [with motorization]
2011/0094 . . . [characterised by means for covering after user, e.g. boxes, shutters or the like]
2011/0096 . . . [Theft prevention of articles]
2011/0098 . . . [using electric or electronic means, e.g. alarms, codes]

11/02 . . . for radio sets, television sets, telephones, or the like; Arrangement of controls thereof
11/0205 . . . [for radio sets (B60R 11/0211 takes precedence)]
11/0211 . . . [for record carriers apparatus, e.g. video recorders, tape players or CD players]
11/0217 . . . [for loud-speakers]
11/0223 . . . [of flat type]
11/0229 . . . [for displays, e.g. cathodic tubes]
11/0235 . . . [of flat type, e.g. LCD]
11/0241 . . . [for telephones]
11/0247 . . . [for microphones or earphones]
11/0252 . . . [for personal computers, e.g. laptops, notebooks]
11/0258 . . . [for navigation systems]
11/0264 . . . [for control means]
2011/027 . . . [for Din-sized apparatus]
2011/0276 . . . [for rear passenger use]
2011/0282 . . . [for the use of several passengers, e.g. simultaneously]
2011/0288 . . . [Apparatus made of several modules independently mounted]
2011/0294 . . . [Apparatus with multi-functionality, e.g. radio and telephone]
11/04 . . . Mounting of cameras operative during drive; Arrangement of controls thereof relative to the vehicle
11/06 . . . for tools or spare parts (for vehicle roof parts B60P 7/20; for spare wheels B62D)

13/00 Elements for body-finishing, identifying, or decorating; Arrangements or adaptations for advertising purposes

13/005 . . . [Manufacturers' emblems, name plates, bonnet ornaments, mascots or the like; Mounting means therefor]
13/01 . . . [Liners for load platforms or load compartments]
13/011 . . . [for internal load compartments, e.g. car trunks]
13/013 . . . [comprising removable or hinged parts, e.g. for accessing storage compartments]
2013/015 . . . [made of a plurality of visible parts]
2013/016 . . . [integrating other functions or accessories]
damping of sounds using compensation by electro-

drivers' cabs for load-carrying vehicles insulated

(sound insulating linings for trains B60R 17/185

{ sound insulating linings for trains B60R 17/185; drivers' cabs for load-carrying vehicles insulated

against vibrations or noise B62D 33/004; thermal or acoustic insulation of engines F02B 77/11; damping of sounds using compensation by electro-

acoustic methods G10K 11/178)}

{Arrangements of fasteners or clips specially adapted therefore} 13/0815

{Acoustic or thermal insulation of passenger

compartments (wall or roof liners integrating the

insulating function B60R 13/02; insulating floor

mats or carpets B60N 3/04)} 13/0823

{Insulating partitions, e.g. between front and rear seats}

{for fire walls or floors} 13/0838

{for engine compartments} 13/0846

{for duct, cable or rod passages, e.g. between engine and passenger compartments}

{specially adapted for movable parts, e.g. gears, levers, pedals} 13/0853

[Connection or positioning of adjacent panels] 13/02

{Internal} Trim mouldings; {Internal} Ledges;

Wall liners (for passenger compartments); Roof

liners (B60R 13/01 takes precedence; padded linings for the vehicle interior B60R 21/04; arrangements or adaptations of floor mats or carpets in vehicles B60N 3/04; internal lining for trains B61D 17/18)}

{Arrangements of fasteners and clips specially adapted for attaching inner vehicle liners or mouldings (devices for fastening or securing E16B)}

{Roof or head liners (movable head-liners B60J 7/00/07)}

{supported by adhesion with the roof panel} 13/0218

{self supporting head liners} 13/0225

{specially adapted for roofs with openings} 13/0231

{Side or rear panels} 13/0237

{Doors} 13/0243

{Pillars; Roof rails} 13/025

{Dashboard liners} 13/0256

{Mid-console liners} 13/0262

{Rear parcel liners (used as luggage covering means B60R 5/044)} 13/0275

{comprising removable or hinged parts (for accessing storage compartments B60R 7/04; for airbag deployment B60R 21/215)}

{made of a plurality of visible parts} 13/0281

{integrating other functions or accessories} 13/0287

{Connection or positioning of adjacent panels} 13/0293

{External} Ornamental or guard strips; Ornamental inscriptive devices (thereon (fastening strips or bars to sheets or plates by means of clips F16B 5/12))

{Door edge guards} 13/043

{Foot boards} 13/046

{Sealing strips (sealing arrangements for vehicle windows, windscreens, non-fixed roofs, doors, or similar devices B60J 10/00)} 13/06

{Water drainage or guide means not integral with roof structure (B60R 13/06; B60J 10/25) take precedence; (integral with roof structure B62D 25/07; drainage openings having movable or removable closures B62D 25/24)} 13/07

{Insulating elements, e.g. for sound insulation (sound insulating linings for trains B61D 17/185; drivers' cabs for load-carrying vehicles insulated against vibrations or noise B62D 33/004; thermal or acoustic insulation of engines F02B 77/11; damping of sounds using compensation by electro-

acoustic methods G10K 11/178)}

{Arrangements of fasteners or clips specially adapted therefore} 13/0807

{Acoustic or thermal insulation of passenger

compartments (wall or roof liners integrating the

insulating function B60R 13/02; insulating floor

mats or carpets B60N 3/04)}

{for covering undersurfaces of vehicles, e.g. wheel houses} 13/0861

{for protecting heat sensitive parts, e.g. electronic components} 13/0869

{for mounting around heat sources, e.g. exhaust pipes} 13/0876

{for mounting around noise sources, e.g. air blowers} 13/0884

{for humidity insulation (sealing strips B60R 13/06)}

{Registration, licensing, or like devices} 13/10

{Licence- or registration plates, provided with mounting means, e.g. frames, holders, retainers, brackets} 13/105

{Arrangements or adaptations of sanitation devices} 15/00

{Washing facilities ((in railway vehicles B61D 35/002))}

{Toilet facilities (in railway vehicles B61D 35/005)}

{Electric or fluid circuits specially adapted for vehicles and not otherwise provided for; Arrangement of elements of electric or fluid circuits specially adapted for vehicles and not otherwise provided for ([devices for protecting vehicle occupants in case of accidents B60R 21/00; safety belts B60R 22/00; central door locking E05B 49/00, E05B 77/00])}

{two thirds of a plurality of visible parts}
16/027 . . . between relatively movable parts of the vehicle, e.g. between steering wheel and column \{(devices for measuring, signalling or controlling tyre pressure or temperature specially adapted for mounting on vehicles B60C 23/00)\}

16/03 . . . for supply of electrical power to vehicle subsystems \{or for circuit arrangements for charging batteries H02J 7/80\}

16/0307 . . . \{using generators driven by a machine different from the vehicle motor\}

16/0315 . . . \{using multiplexing techniques \{multiplexing for transmission of signals G08C 15/00; multiplexing for electrical communication in general H04D\}\}

2016/0322 . . . \{Temporary code for documents to be reclassified to G08C, H04L or H04Q\}

16/03 . . . characterised by the use of electrical cells or batteries \{for propulsion purposes B60K 1/04; supplying batteries to, or removing batteries from, vehicles B60S 5/06; testing of charge state G01R 31/36\}

16/037 . . . for occupant comfort \{e.g. for automatic adjustment of appliances according to personal settings, e.g. seats, mirrors, steering wheel\}

16/0373 . . . \{Voice control \{in general G10L\}\}

16/04 . . . Arrangement of batteries

16/06 . . . for removing electrostatic charges \{carrying-off electrostatic charges in general H05F 3/00\}

16/08 . . . fluid

17/00 Arrangements or adaptations of lubricating systems or devices \{lubricating in general F16N\}

17/02 . . . Systems, e.g. central lubrication systems

19/00 Wheel guards; Radiator guards, \{e.g. grilles\}; Obstruction removers; Fittings damping bouncing force in collisions \{\{reinforcement elements for side doors B60J 5/0412; \} mudguards B62D\}

19/00/002 . . . \{Wheel guards\}

19/00/005 . . . \{Crash attenuators, i.e. means added to highway service vehicles for softening high speed impacts\}

19/00/007 . . . \{Means for adjusting or regulating the crush absorption capacity of the vehicle, e.g. when detecting an impending collision\}

19/02 . . . Bumpers, i.e. impact receiving or absorbing members for protecting vehicles or fending off blows from other vehicles or objects \{(B60R 19/56 takes precedence; initiating brake action by contact of bumper with an external object B60T 7/22; for rail vehicles B61F 19/04; safety equipment for cycles B62J 27/00;\} integral with waterborne vessels or specially adapted therefor B63B 59/02\}

19/023 . . . \{Details\}

19/02/026 . . . \{Buffers, i.e. bumpers of limited extent\}

19/03 . . . characterised by material, e.g. composite \{(B60R 19/18 takes precedence\}

19/04 . . . formed from more than one section \{in a side-by-side arrangement\}

19/1/2 . . . vertically spaced

19/14 . . . having folding parts

19/16 . . . having deflecting members, e.g. rollers, balls

19/18 . . . \{characterised by the cross-section;\} Means within the bumper to absorb impact

19/201806 . . . \{Structural beams therefor, e.g. shock-absorbing \{bumper beams made of cellular materials B60R 19/22\}\}

19/201813 . . . \{made of metal\}

19/20182 . . . \{of light metal, e.g. extruded\}

19/201826 . . . \{of high-tension steel\}

19/201833 . . . \{made of plastic material\}

19/20184 . . . \{Blow moulded\}

19/201846 . . . \{comprising a cellular structure\}

19/201853 . . . \{of reinforced plastic material\}

19/20186 . . . \{Additional energy absorbing means supported on bumper beams, e.g. cellular structures or material\}

19/201866 . . . \{Cellular structures\}

19/201873 . . . \{Cellular materials\}

19/20188 . . . \{Blow molded structures\}

19/201886 . . . \{Bumper fascias and fastening means therefor \{on fenders B60R 2019/247\}\}

19/201893 . . . \{comprising a multiplicity of identical adjacent shock-absorbing means\}

19/20 . . . containing \{mainly\} gas or liquid, e.g. inflatable \{connection of valves to inflatable elastic bodies B60C 29/00\}

19/205 . . . \{inflatable in the direction of an obstacle upon impacting impact, e.g. using air bags\}

19/22 . . . containing \{mainly\} cellular material, e.g. solid foam

19/24 . . . Arrangements for mounting bumpers on vehicles

19/201242 . . . \{on two vertical sleeves, e.g. on energy absorber ends\}

19/201245 . . . \{with adjusting means to compensate manufacturing tolerances, e.g. between bumper and energy absorbers\}

19/201247 . . . \{Fastening of bumpers’ side ends\}

19/20126 . . . comprising yieldable mounting means \{\{(B60R 19/38 takes precedence;\) springs, shock absorbers, or means for damping vibrations per se F16F\}\}

19/201262 . . . \{with means to adjust or regulate the amount of energy to be absorbed\}

19/201264 . . . \{using cellular structures\}

19/201266 . . . \{using friction surfaces\}

19/201268 . . . \{with rebound preventing means, e.g. ratchets\}

19/20128 . . . \{Metallic springs\}

19/201285 . . . \{comprising only leaf springs, e.g. the mounting means forming part of the guard itself\}

19/20130 . . . \{Elastomeric material \{(B60R 19/34 takes precedence\)\}

19/20132 . . . \{Fluid shock absorbers \{e.g. with coaxial coil springs\\}

19/20134 . . . destroyed upon impact, e.g. one-shot type

19/20136 . . . Combinations of yieldable mounting means of different types \{(fluid shock absorbers with coaxial coil springs B60R 19/32)\}

19/20138 . . . adjustably or movably mounted, e.g. horizontally displaceable for securing a space between parked vehicles \{(adjustably mounted for compensating manufacturing tolerances B60R 19/24, B60R 19/26)\}
19/40 . . . in the direction of an obstacle before a
collision [, or extending during driving of the
vehicle, i.e. to increase the energy absorption
capacity of the bumper (inflatable bumpers
B60R 19/20)]

19/42 . . . extending primarily along the sides of, or
completely encircling, a vehicle (ornamental or
guard strips B60R 13/04)

19/44 . . . Bumper guards
19/445 . . . [Guard strips]
19/46 . . . spring- or pivotally-mounted
19/48 . . . combined with, or convertible into, other devices
or objects, e.g. bumpers combined with road
brushes, bumpers convertible into beds
19/483 . . . [with obstacle sensors of electronic or electric type]

2019/486 . . . [with air passages, e.g. for cooling]
19/50 . . . with lights or registration plates
2019/505 . . . [with lights]
19/52 . Radiator or grille guards (; Radiator grilles (cooling
aspects B60K 11/08))
19/522 . . . [Bulb bars]
19/525 . . . [Radiator grilles]
19/527 . . . [integral with bumpers]
19/54 . Obstruction removers or deflectors (B60R 19/16,
B60R 21/34 take precedence)
19/545 . . . [Devices for cutting wire-type obstructions]
19/56 . . . [Fittings damping bouncing force in truck
collisions, e.g. bumpers:] Arrangements on high-
riding vehicles, e.g. lorries, for preventing vehicles
or objects from running thereunder
19/565 . . . [on vehicle sides]

21/00 Arrangements or fittings on vehicles for protecting
or preventing injuries to occupants or pedestrians
in case of accidents or other traffic risks (safety
belts or body harnesses in vehicles B60R 22/00;
devices, apparatus or methods for life-saving in
general A62B; safety devices for propulsion unit
control specially adapted for, or arranged in, vehicles
B60K 28/00; seats constructed to protect the occupant
from the effect of abnormal g-forces, e.g. crash
or safety seats, B60N 2/42; energy-absorbing
arrangements for hand wheels for steering vehicles
B62D 1/11; energy-absorbing arrangements for
vehicle steering columns B62D 1/19; harnessing in
aircraft B64D 25/00)

21/2002 . . . [Type of accident]
21/2004 . . . [Frontal collision]
21/2006 . . . [Lateral collision]
21/2009 . . . [Oblique collision]
21/20111 . . . [Rear collision or recoiling bounce after frontal
collision]
21/2013 . . . [Free fall]
21/2016 . . . [Fall in water]
21/2018 . . . [Roll-over]
21/202 . . . [Underrun collision]
21/2023 . . . [Offset collision]
21/2025 . . . [Pole collision]
21/2027 . . . [Post collision measures, e.g. notifying emergency
services]
21/203 . . . [characterised by occupant or pedestrian]
21/2032 . . . [Position of passenger]
21/2034 . . . [lying down]
21/2037 . . . [standing]
21/2039 . . . [Body parts of the occupant or pedestrian
affected by the accident]
21/2041 . . . [Arms]
21/2044 . . . [Chest]
21/2046 . . . [Feet]
21/2048 . . . [Head]
21/2051 . . . [Knees]
21/2053 . . . [Legs]
21/2055 . . . [Pelvis]
21/2058 . . . [Shoulders]
21/206 . . . [Type of passenger]
21/2062 . . . [woman, e.g. pregnant]
21/2065 . . . [Type of vehicles]
21/2067 . . . [Buses]
21/2069 . . . [Trailers, e.g. caravans]
21/2072 . . . [Convertible cars]
21/2074 . . . [Utility vehicles]
21/2076 . . . [Agricultural vehicles, e.g. tractors]
21/2079 . . . [Fork-lift trucks]
21/2081 . . . [Working vehicles]
21/2083 . . . [Pick-up trucks; Light trucks; Sport utility
vehicles]
21/2086 . . . [Racing cars]
21/2088 . . . [Cycles, e.g. motorcycles]
21/209 . . . [Railway vehicles]
21/2093 . . . [Aircraft]
21/2095 . . . [Boats]
21/2097 . . . [Amusement vehicles]
21/2099 . . . [Electric circuits for triggering { passive } safety
arrangements, { e.g. airbags, safety belt tighteners, }
in case of vehicle accidents or impending vehicle
accidents (electrical circuits for transmission of
signals between steering wheel and the vehicle itself
B60R 16/027; for electrically actuating belt retractor
locking means B60R 22/343)]

21/20006 . . . [Mounting of electrical components in vehicles]
21/201013 . . . [Means for detecting collision, impending
collision or roll-over]
21/20102 . . . [the monitored value being used for calculating
occupant displacement]
21/201027 . . . [Safing sensors]
21/201034 . . . [Controlling a plurality of restraint devices]
21/20104 . . . [Communication circuits for data transmission]
21/201047 . . . [Architecture]
21/201054 . . . [Bus]
21/201061 . . . [between the airbag system and other
vehicle electronic systems]
21/201068 . . . [between different sensors and airbag
control unit]
21/201075 . . . [between the airbag control unit and
pyrotechnic fuses or equivalent actuators]
21/201081 . . . [Transmission medium]
21/201088 . . . [wireless]
21/201095 . . . [optical]
21/201102 . . . [Transmission method]
21/201109 . . . [power and data signal using transmission
medium]
21/201115 . . . [specific data frames]
21/201122 . . . [Prevention of malfunction]
21/201129 . . . [Problems or faults]
21/201136 . . . [Cut lines]
including means for detecting the presence or position of passengers, passenger seats or child seats, and the related safety parameters therefor, e.g. speed or timing of airbag inflation in relation to occupant position or seat belt use

21/01504  [detecting bag displacement]
21/01508  [detecting forces or pressure in bags or modules]

21/01512  [Passenger detection systems]
21/01516  [using force or pressure sensing means]
21/01522  [using strain gauges]
21/01524  [using fluid means]
21/01526  [using electric switches]
21/01528  [mounted on the bag]
21/0153  [using field detection presence sensors]
21/01532  [using electric or capacitive field sensors]
21/01534  [using electromagnetic waves, e.g. infrared]
21/01536  [using ultrasonic waves]
21/01538  [for image processing, e.g. cameras or sensor arrays]
21/0154  [in combination with seat heating]
21/01542  [detecting passenger motion]
21/01544  [detecting seat belt parameters, e.g. length, tension or height-adjustment]
21/01546  [using belt buckle sensors]
21/01548  [sensing the amount of belt wound on retractor]
21/0155  [sensing belt tension]
21/01552  [detecting position of specific human body parts, e.g. face, eyes or hands]
21/01554  [Seat position sensors]
21/01556  [Child-seat detection systems]
21/01558  [monitoring crash strength]
21/0156  [by deceleration]
21/01562  [by speed]
21/01564  [Manually or key-actuated inhibition switches]
21/01566  [Devices for warning or indicating mode of inhibition]
21/017  [including arrangements for providing electric power to safety arrangements (or their actuating means, e.g. to pyrotechnic fuses or electromagnetic valves)]

21/0173  [Diagnostic or recording means therefor]
21/0176  [for firing circuits using only mechanical switches as collision detecting means, in series with pyrotechnic fuses]

21/02  [Occupant safety arrangements or fittings, e.g. crash pads (seat belts with crash pads B60R 22/14; removable children’s seats having a front guard or barrier B60N 2/2839)]

21/0206  [Self-supporting restraint systems, e.g. restraining arms, plates or the like]

21/0213  [mounted on floor]
21/022  [mounted on seats]
21/0226  [mounted on fire wall]
21/0233  [mounted on steering-wheel]
21/024  [mounted on dash-board]
21/0246  [mounted on side walls]
21/0253  [mounted on roof]
21/026 . . . [Rigid partitions inside vehicles, e.g. between passengers and load compartments (B60R 21/12 takes precedence)]

2021/0266 . . . [comprising energy absorbing means]

2021/0273 . . . [automatically movable to an operative position, e.g. in case of collision or impending collision]

2021/028 . . . [Means preventing passenger from falling out of vehicles]

21/0286 . . . [Padded or energy absorbing driving control initiating means, e.g. gear lever, pedals (B60R 21/09 takes precedence; padded linings for steering control means B60R 21/05)]

2021/0293 . . . [Additional pads or cushions in vehicle compartments, e.g. movably mounted]

21/04 . . . Padded linings for the vehicle interior [: Energy absorbing structures associated with padded or non-padded linings]

2021/0407 . . . [using gas or liquid as energy absorbing means]

2021/0414 . . . [using energy absorbing ribs]

2021/0421 . . . [using honeycomb structures]

21/0428 . . . [associated with the side doors or panels, e.g. displaced towards the occupants in case of a side collision]

2021/0435 . . . [associated with the side or roof pillars]

2021/0442 . . . [associated with the roof panel]

21/045 . . . associated with the instrument panel or dashboard

21/05 . . . associated with the steering wheel, {steering} hand lever or {steering} column (yieldable steering columns B62D 1/18)

21/055 . . . Padded [or energy-absorbing] fittings [, e.g. seat belt anchors (sun visors B60J 3/00; head rests B60N 2/80)]

21/06 . . . Safety nets, transparent sheets, curtains, or the like, e.g. between occupants and glass ((B60R 21/06, B60R 21/11, B60R 21/12, B60R 21/16 take precedence)

2021/065 . . . [comprising energy absorbing mounting means]

21/08 . . . [automatically] movable from an inoperative to an operative position, e.g. in a collision (electrical circuits for triggering safety arrangements B60R 21/01)

21/09 . . . Control elements or operating handles movable from an operative to an out-of-the-way position, e.g. [pedals,] switch knobs, window cranks [(specially adapted for brake pedals, e.g. by venting of master cylinder or destruction of force transmitting rod, B60T 7/065)]

21/11 . . . Overhead guards, e.g. against loads falling down [(specially adapted for fork-lift trucks B66F 9/07545)]

21/12 . . . which protect the occupants against personal attack from the inside or the outside of the vehicle

21/13 . . . Roll-over protection (electrical circuits for triggering safety arrangements B60R 21/01)

21/131 . . . [Protective devices for drivers in case of overturning of tractors (means for preventing overturning or tipping of tractors B62D 49/08)]

2021/132 . . . [Roll bars for convertible vehicles]

2021/134 . . . [movable from a retracted to a protection position]

2021/135 . . . (automatically during an accident)

2021/137 . . . [Reinforcement cages for closed vehicle bodies]

2021/138 . . . [using external airbags]

21/16 . . . Inflatable occupant restraints or confinements designed to inflate upon impact or impending impact, e.g. air bags ([protective garments with automatically inflatable shock-absorbing means A41D 13/018;] connection of valves to inflatable elastic bodies B60C 29/00)

2021/161 . . . [characterised by additional means for controlling deployment trajectory]

2021/162 . . . [Means for diverting, destroying or blocking the bag in case of dangerous deployment, e.g. during rescue operations or use of rear-facing children seats]

21/164 . . . [combined with vehicle venting means for reducing or avoiding the passenger compartment overpressure during inflation]

2021/165 . . . [reusable, e.g. in case of multiple collisions]

2021/167 . . . [comprising anti-theft devices]

2021/168 . . . [for restraining luggages]

21/18 . . . the inflatable member formed as a belt or harness or combined with a belt or harness arrangement

21/20 . . . Arrangements for storing inflatable members in their non-use or deflated condition; Arrangement or mounting of air bag modules or components

21/201 . . . Packageing straps or envelopes for inflatable members

21/203 . . . in steering wheels or steering columns

21/2032 . . . {the inflator or inflatable member not being rotatable with the steering wheel; Arrangements using the steering column or steering wheel rim for storing, supplying or evacuating the inflation gas or for storing the inflatable member}

21/2035 . . . [using modules containing inflator, bag and cover attachable to the steering wheel as a complete sub-unit (steering wheel covers with tear lines B60R 21/21656; assembling of modules B60R 21/217)]

21/2037 . . . {the module or a major component thereof being yieldably mounted, e.g. for actuating the horn switch or for protecting the driver in a non-deployment situation (horn switches integrated in steering wheel covers with tear lines B60R 21/21658)}

21/205 . . . in dashboards

21/206 . . . in the lower part of dashboards, e.g. for protecting the knees

21/207 . . . in vehicle seats

21/2072 . . . in children's seats

21/2074 . . . [in head rests]

2021/2076 . . . [Removable covers with tear seams]

2021/2078 . . . [in rear seats]

21/21 . . . in vehicle side panels, e.g. doors (pillar mounted arrangements B60R 21/213)

21/213 . . . in vehicle roof frames or pillars

21/214 . . . in roof panels

21/215 . . . characterised by the covers for the inflatable member {(B60R 21/2176 takes precedence)}
Inflatable members (B60R 21/18) characterised by their shape, construction or spatial configuration (B60R 21/18 takes precedence; connection to inflation fluid source retainer B60R 21/217)

(characterised by their shape, construction or spatial configuration (B60R 21/18 takes precedence; connection to inflation fluid source retainer B60R 21/217)

[with inflatable support compartments creating an internal suction volume]

(Heat protection panels)

[comprising sensitive compartments]

[comprising tether means for limitation of cover motion during deployment]

[with integrated switches, e.g. horn switches]

[with energy absorbing or elastic means]

[characterised by a tear line for defining a deployment opening]

[the tearing being done or assisted by cutters]

[the tearing being done or assisted by heating or pyrotechnic means]

[Steering wheel covers or similar cup-shaped covers]

[with tether means for limitation of cover motion during deployment]

[the module or part thereof being movably mounted on the vehicle]

[using energy absorbing means]

[the air bag components being completely enclosed in a soft or semi-rigid housing or cover]

[Reaction canisters characterised by material]

[Plastic]

[Inflatable members (B60R 21/18 takes precedence; connection to inflation fluid source retainer B60R 21/217)]

[comprising tether means for limitation of cover motion during deployment]

[the cover being connected to the surrounding part and to the module, e.g. floating mounts]

[the module or part thereof being movably mounted on the vehicle]

[using energy absorbing means]

[the air bag components being completely enclosed in a soft or semi-rigid housing or cover]

[Reaction canisters characterised by material]

[Plastic]

[Inflatable members (B60R 21/18 takes precedence; connection to inflation fluid source retainer B60R 21/217)]

[characterised by energy absorbing means]

[the lid being displaced towards the occupant during deployment]

[the lid being fixed on the bag, or forming part of the bag wall, or the bag itself being used as wall liner]

[using a stretchable wall liner]

[characterised by hinges]

[with emblems]

[with complex motion of the cover; Retraction under the lining during opening comprising tether means for limitation of cover motion during deployment]

[the cover being displaced towards the occupant during deployment]

[with energy absorbing or elastic means]

[characterised by a tear line for defining a deployment opening]

[the tearing being done or assisted by cutters]

[the tearing being done or assisted by heating or pyrotechnic means]

[characterised by the manufacturing process]

[Composite (coated fabric B60R 21/232 takes precedence)]

[using independent bags, one within the other]

[Expansion control features]

[Tethers]

[Internal tether means]

[having ends which are movable or detachable during deployment]

[External tether means]

[having ends which are movable or detachable during deployment]

[Tear seams]

[Soft diffusers]

[characterised by their material]

[characterised by material]

[Fabric]

[coated fabric]

[Resin (for coating fabric B60R 21/232 takes precedence)]

[Composite (coated fabric B60R 21/232 takes precedence)]

[Metal]

[characterised by the manufacturing process]

[Sewing]

[Weaving]

[one piece weaving]

[Knitting]

[Molding]

[Sealing]

[Nesting of panels, i.e. for material utilisation]

[characterised by connections between panels]

[Roof bags, i.e. protecting the occupant in a roll-over situation]

[Curtain-type airbags deploying mainly in a vertical direction from their top edge]

[comprising a plurality of individual compartments; comprising two or more bag-like members, one within the other (B60R 21/232 takes precedence)]

[the individual compartments defining the external shape of the bag]

[Inner seams, e.g. creating separate compartments or used as tethering means]

[Inner walls crating separate compartments, e.g. communicating with vents]

[using independent bags, one within the other]

[Expansion control features]

[Tethers]

[Internal tether means]

[having ends which are movable or detachable during deployment]

[External tether means]

[having ends which are movable or detachable during deployment]

[Tear seams]

[Soft diffusers]

[characterised by their material]

[characterised by material]

[Fabric]

[coated fabric]

[Resin (for coating fabric B60R 21/232 takes precedence)]

[Composite (coated fabric B60R 21/232 takes precedence)]

[Metal]

[characterised by the manufacturing process]

[Sewing]

[Weaving]

[one piece weaving]

[Knitting]

[Molding]

[Sealing]

[Nesting of panels, i.e. for material utilisation]

[characterised by connections between panels]
producing gas under pressure in general vehicle B60R 21/20
{ ( arrangement or mounting thereof to the or means to control inflation fluid flow; blasting cartridges for initiators or igniters therefor characterised by the inflation fluid source pyrotechnic (B60R 21/268 takes precedence) }
B60R 21/272 or controlled output (hybrid inflators using a variable source, e.g. plural stage with means other than bag structure to valves }
{ characterised by casing }
{ characterised by heating or heat insulating means, e.g. for use under extreme temperatures }
{ characterised by fluid flow controlling valves }
{ for diverting the gas into a plurality of bags }
{ Curtain bag nozzles }
Elongated tubular diffusers, e.g. curtain-type
{ using a variable source, e.g. plural stage or controlled output (hybrid inflators B60R 21/272) }
{ with a plurality of inflation levels }
{ The volume of gas being continuously adjustable }
{ using instantaneous generation of gas, e.g. pyrotechnic (B60R 21/268 takes precedence) }
{ comprising a plurality of combustion chambers or sub-chambers }
{ using only solid reacting substances, e.g. pellets, powder }
{ the reacting substances being supported by the inflatable member walls, or by a flexible support within it }
{ comprising means to control the venting }
{ comprising means to control the venting }
{ Connections between collision detecting means and inflators using pyrotechnic transmission lines }
Protecting non-occupants of a vehicle, e.g. pedestrians (B60R 19/02 takes precedence) }
{ (B60R 19/02 takes precedence) }
{ Belts; Fixing thereof specially adapted for pregnant users }
{ Manual restraint systems (knee, leg or head applied or removed automatically but not both }{ using instantaneous release of stored pressurised gas ((B60R 21/26005 takes precedence)) }
{ comprising a plurality of pressure chambers }
{ with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators }
{ using a fluid fuel gas generator }
{ characterised by means to rupture or open the fluid source }
{ with means to vent the inflation fluid source, e.g. in case of overpressure ((B60R 21/30 takes precedence); venting means on inflatable member walls B60R 21/239) }
{ comprising means to control the venting }
{ with means to draw ambient air into the flow line and mix such air with the inflation fluid }
{ Arrangements for non-electric triggering of inflation (electrical circuits for triggering safety arrangements B60R 21/01) }
{ Knee, leg or head belts }
{ for restraining detainees }
{ for restraining luggages }
{ Adapts for use with children seats or children (B60R 22/20 takes precedence; using }
{ Adaptations for use with children seats or luggages }
{ at least two ends of the belt being retractable after use }
{ Four-point seat belt systems, e.g. with the two upper points connected together }
NOTE

Groups
B60R 22/02 (B60R 22/02) - B60R 22/08.
B60R 22/18 - B60R 22/48 take precedence over group B60R 22/10

22/105 . . . (for children (adaptation of children's seats for seat belts B60N 2/265, B60N 2/2803))

22/12 . Construction of belts or harnesses (B60R 21/18 takes precedence (; woven fabrics for safety belts D03D 1/0005))

22/14 . incorporating enlarged restraint areas, e.g. vests, nets [1}, crash pads, optionally for children (crash pads for occupants' safety on vehicles in general B60R 21/02)

22/16 . using belts which become permanently deformed, i.e. one time use

22/18 . Anchoring devices

2022/1806 . . . (for buckles)

2022/1812 . . . (Connections between seat belt and buckle tongue)

2022/1818 . . . (Belt guides)

2022/1825 . . . [using rollers]

2022/1831 . . . [comprising a slotted plate sliding in its plane, e.g. inside circular guides]

2022/1837 . . . [comprising a universal mounting, e.g. spherical or cardan-type]

2022/1843 . . . [comprising an elongated sleeve]

2022/185 . . . with stopping means for acting directly upon the belt in an emergency, e.g. by clamping or friction (B60R 22/195 takes precedence; combined with the retractor B60R 22/42))

2022/1855 . . . [the means being sensitive to belt tension]

2022/195 . . . with means for reducing belt tension during use under normal conditions ([included in the retractor B60R 22/44])

2022/1951 . . . [characterised by arrangements in vehicle or relative to seat belt]

NOTE

If the type of belt tensioner is not specified and can be used indifferently for pulling belt anchors or rotating belt reels, the documents are classified in B60R 22/46

2022/1952 . . . [Transmission of tensioning power by cable; Return motion locking means therefor]

2022/1953 . . . [the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash]

2022/1954 . . . [characterised by fluid actuators, e.g. pyrotechnic gas generators (actuating a cable B60R 22/1952)]

2022/1955 . . . [Linear actuators]

2022/1956 . . . [Mechanical triggering means therefor (also adapted for air bag inflators B60R 21/33)]

2022/1957 . . . [characterised by electric actuators]

2022/1958 . . . [characterised by spring actuators (B60R 22/1953 takes precedence)]

2022/1959 . . . [spring actuators (B60R 22/1953 takes precedence)]

22/20 . . . adjustable in position, e.g. in height

22/201 . . . [with the belt anchor connected to a slider movable in a vehicle-mounted track for passive restraint systems B60R 22/06]

22/202 . . . [the slider comprising spring-actuated locking means (B60R 22/205 takes precedence)]

22/203 . . . [the locking means being movably mounted on the slider]

22/205 . . . [the slider comprising emergency actuated locking means]

22/206 . . . [Adjustable stop members for restraint systems comprising belt anchor vehicle mounted tracks, e.g. for passive seat belts]

2022/207 . . . [Horizontally or transversally adjustable]

2022/208 . . . [by automatic or remote control means]

22/22 . . . secured to the vehicle floor

22/24 . . . secured to the side, door, or roof of the vehicle

22/26 . . . secured to the seat

22/263 . . . [Front seats]

22/266 . . . [Rear seats, e.g. benches]

22/28 . incorporating energy-absorbing devices ([belt anchors provided with energy-absorbing means for protecting the occupants in case of physical contact therewith B60R 21/053; belt retractors comprising energy-absorbing means B60R 22/341, B60R 22/4676)]

2022/281 . . . [for buckles]

2022/282 . . . [using fluids or vico-elastic materials]

2022/283 . . . [using tearing or scoring of material]

2022/284 . . . [using electric or magnetic braking means]

2022/285 . . . [using friction surfaces]

2022/286 . . . [using deformation of material]

2022/287 . . . [of torsion rods or tubes]

2022/288 . . . [with means to adjust or regulate the amount of energy to be absorbed]

2022/289 . . . [Energy-absorption curves]

22/30 . Coupling devices other than buckles, including length-adjusting fittings (or anti-slip devices (adaptations of manual three-point seat belt systems for use by small passengers using other means than belt anti-slip devices B60R 22/024; buckles A44B 11/00; releasable fastenings in general F16B))

22/32 . Devices for releasing in an emergency, e.g. after an accident (; Remote or automatic unbuckling devices (unlocking devices for retractors B60R 22/3416) )

22/321 . . . [using electric means]

22/322 . . . [using automatic actuating means (B60R 22/321 takes precedence)]
B60R

22/324 . . . [triggered by strong traction on the seat belt, e.g. with temperisation]
22/325 . . . [using remote control means (B60R 22/321, B60R 22/322 take precedence)]
2022/327 . . . [using pyrotechnic means]
2022/328 . . . [comprising means for cutting the belt]
22/34 . . . Belt retractors, e.g. reels (anchoring devices, e.g. guide loops), with means to tension the belt in an emergency (B60R 22/195)
2022/3402 . . . [Retractor casings; Mounting thereof]
22/3405 . . . [of the non-rotary type]
22/3408 . . . [without locking means (B60R 22/3405 takes precedence)]
22/341 . . . [comprising energy-absorbing means]
22/3413 . . . [operating between belt reel and retractor frame (B60R 22/4676 takes precedence)]
22/3416 . . . [Unlocking devices for retractors (B60R 22/3405 takes precedence)]
2022/3419 . . . [with end lock preventing means]
2022/3421 . . . [with means for locking the belt reel in a non-use position, e.g. for seat mounted retractor when the seat is in a non-locked condition]
2022/3424 . . . [Multi-spool or multi-belt retractors]
2022/3427 . . . [Seat belt connection on reels]
22/343 . . . with electrically actuated locking means (B60R 22/3405 takes precedence)
22/347 . . . with means for permanently locking the retractor during the wearing of the belt (B60R 22/3405, B60R 22/343, B60R 22/415 take precedence)
2022/3475 . . . [having means for acting directly upon the belt, e.g. by clamping or friction]
22/35 . . . the locking means being automatically actuated
22/353 . . . in response to belt movement when a wearer applies the belt
2022/3535 . . . [comprising anti-cinch devices]
22/357 . . . in response to fastening of the belt buckle
22/36 . . . self-locking in an emergency (B60R 22/3405, B60R 22/343 take precedence)
22/38 . . . responsive only to belt movement
2022/385 . . . [with adjustable sensitivity]
22/40 . . . responsive only to vehicle movement
2022/401 . . . [with adjustable sensor]
2022/402 . . . [automatically adjustable to keep a vertical position, e.g. irrespective of seat or vehicle tilting]
2022/403 . . . [using externally controlled means, e.g. linked with seat back hinge]
2022/404 . . . [with remote sensor, e.g. for mounting on seat]
22/405 . . . responsive to belt movement and vehicle movement
22/41 . . . with additional means for preventing locking [during unwinding] under predetermined conditions
22/415 . . . with additional means allowing a permanent locking of the retractor during the wearing of the belt
22/42 . . . having means for acting directly upon the belt, e.g. by clamping or friction [(not combined with the retractor B60R 22/185)]
22/44 . . . with means for reducing belt tension during use under normal conditions [(not included in the retractor B60R 22/19; B60R 22/3405 takes precedence)]
2022/4406 . . . [Spring shapes; Spring characteristic; Springs with adjustable anchoring means]
2022/4413 . . . [by connecting the retracting spring to the belt reel by means of a transmission which decreases the spring force when the belt is pulled out, e.g. using conical pulleys]
2022/442 . . . [using one spring and one additional retraction device in parallel]
2022/4426 . . . [the additional retraction device being a second spring]
2022/4433 . . . [externally controlled]
2022/444 . . . [the additional retraction device being an electric actuator]
2022/4446 . . . [using one spring and one additional retraction device in series]
2022/4453 . . . [the additional retraction device being a second spring]
2022/446 . . . [with external control means]
2022/4466 . . . [the additional retraction device being an electric actuator]
2022/4473 . . . [using an electric retraction device (combined with a spring B60R 2022/444, B60R 2022/4466)]
2022/448 . . . [using a fluid actuated retraction device]
2022/4486 . . . [for cancelling the belt tension]
2022/4493 . . . [for braking the belt reel using friction surfaces or the like]
22/46 . . . [Reels] with means to tension the belt in an emergency [by forced winding up] (electrical circuits for triggering safety arrangements B60R 21/01) (tensioners using reels only guiding the belt during normal use, e.g. splitted reels B60R 22/195)
22/4604 . . . [characterised by arrangements in vehicle or relative to seat belt]
2022/4609 . . . [using a plurality of tensioners]
2022/4614 . . . [one pretensioner acting on a plurality of belts]
22/4619 . . . [Transmission of tensioning power by cable, e.g. using a clutch on reel side]
22/4623 . . . [the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash]
22/4628 . . . [characterised by fluid actuators, e.g. pyrotechnic gas generators (actuating a cable B60R 22/4619)]
22/4633 . . . [Linear actuators, e.g. comprising a piston moving along reel axis and rotating along its own axis]
2022/4638 . . . [comprising a piston moving along or in parallel to the reel axis]
2022/4642 . . . [the gas directly propelling a flexible driving means, e.g. a plurality of successive masses, in a tubular chamber]
2022/4647 . . . [the driving means being a belt, a chain or the like]
22/4652 . . . [Mechanical triggering means therefor (also adapted for air bag inflators B60R 21/33)]
2022/4657 . . . [comprising a plurality of charges]
2022/4661 . . . [comprising venting means, e.g. for allowing overpressure in case of fire or for allowing return motion with energy absorption]
2022/4666 . . . [characterised by electric actuators]
B60R

22/4671 . . . [characterised by spring actuators (B60R 22/4623 takes precedence)]
22/4676 . . . [comprising energy-absorbing means operating between belt reel and retractor frame]
2022/468 . . . [characterised by clutching means between actuator and belt reel]
2022/4685 . . . [with means to adjust or regulate the tensioning force in relation to external parameters]
2022/469 . . . [Reusable]
2022/4695 . . . [without winding function during normal use]
22/48 . Control systems, alarms, or interlock systems, for the correct application of the belt or harness
2022/4808 . . . [Sensing means arrangements thereof]
2022/4816 . . . [for sensing locking of buckle]
2022/4825 . . . [for sensing amount of belt winched on retractor]
2022/4833 . . . [for sensing locking of retractor]
2022/4841 . . . [for sensing belt tension]
2022/485 . . . [for sensing belt anchor position, belt orientation, or the like]
2022/4858 . . . [for sensing pressure on seat]
2022/4866 . . . [Displaying or indicating arrangements thereof]
2022/4875 . . . [on vehicle exterior]
2022/4883 . . . [Interlock systems]
2022/4891 . . . [preventing use of the vehicle when the seatbelt is not fastened]

25/00 Fittings or systems for preventing or indicating unauthorised use or theft of vehicles (locks for vehicles E05B 77/00-E05B 85/00)
25/001 . . . [Anti-theft devices acting on jacking means or props, e.g. for trailers]
25/002 . . . [Locking of control actuating or transmitting means (of steering mechanism B60R 25/02)]
25/003 . . . [locking of control actuating means]
25/005 . . . [of foot actuated control means (rods connecting pedals and steering wheels B60R 25/0221)]
25/006 . . . [using means preventing access, e.g. boxes, shutters]
25/007 . . . [of hand actuated control means]
25/008 . . . [comprising means for locking two or more control means together, e.g. hand-brake handle and gear shift lever]
25/01 . . . operating on vehicle systems or fittings, e.g. on doors, seats or windscreens
25/012 . . . [Airbags triggered]
25/014 . . . [comprising means for locking the seat or parts thereof in a driving prevention position]
25/016 . . . [comprising means for shuttering the windshield or part thereof]
25/018 . . . [Thief traps]
25/02 . . . operating on the steering mechanism
25/021 . . . [restraining movement of the steering column or steering wheel hub, e.g. restraining means controlled by ignition switch]
25/02102 . . . [with supplementary safety device preventing operation of the starter of an engine already running]
25/02105 . . . [Arrangement of the steering column thereof]
25/02107 . . . [comprising overload clutching means]
25/0211 . . . [comprising a locking member radially and linearly moved towards the steering column]
Means to switch the anti-theft system on or off

using mechanical identifiers

actuating a signalling device

{ Remote starting of engine }

devices, e.g. mirrors, seats, steering wheels }

{ combined with personal settings of other vehicle }

interference of a remote switch control signal }

{ by foot gestures }

{ Locking of foot actuated control actuating means }

{ Locking of hand actuated control actuating means }

operating on the vehicle transmission

operating on brakes or brake systems

{ Locking of foot-actuated control actuating means }

{ Locking of hand-actuated control actuating means }

by restraining wheel rotation, e.g. wheel clamps

{ comprising ground-engaging means }

{ comprising means for deflating tyres }

actuating a signalling device

{ Antitheft state indicator }

characterised by the type of theft warning

a security company or the owner

a signal being sent to a remote location, e.g. a

Alarm systems characterised by features related to the general power supply B60R 25/1001

Sensor information, e.g. using RADAR/LIDAR/

combining image information with other obstacle

sensor, camera sensor split in multiple image

using night vision cameras

using multiple cameras

using night vision cameras

using stereoscopic cameras

using 'non-standard' camera systems, e.g. camera

combining image information with other obstacle

sensor information used for additional purposes i.a. rain

sensor, camera sensor split in multiple image

using 360 degree surveillance camera system

using camera systems provided with artificial

illumination device, e.g. IR light source

using manual input of alphanumerical codes

using electronic identifiers containing a code not

memorised by the user

{ [key in lock presence switch] }

{ [with more than one way to gain access] }

{ [whereby access privileges are related to the }

identifiers }

{ [characterised by the challenge triggering] }

{ [Electronic key extraction prevention] }

using biometry

{ [Fingerprint recognition] }

{ [Eye recognition] }

{ [Voice recognition] }

Detection related to theft or to other events relevant

to anti-theft systems

{ using recording means, e.g. black box }

{ using a camera }

{ using data concerning maintenance or configuration }

of human presence inside or outside the vehicle

of vehicle dynamic parameters, e.g. speed or

acceleration

of global position, e.g. by providing GPS

coordinates

of conditions of vehicle components, e.g. of

windows, door locks or gear selectors

Features of the power supply for the anti-theft

system, e.g. anti-theft batteries, back-up power

supply or means to save battery power

{ Power supply in the vehicle }

{ Power supply in the remote key }

Subject matter not provided for in other groups of

this subclass

{ Protections against martens or rodents }

Means indicating the functioning state of the alarm

system, e.g. indicating arming, using leds

Details of viewing arrangements using cameras

and displays, specially adapted for use in a vehicle

characterised by the type of camera system used

using cameras with adjustable capturing direction

using 360 degree surveillance camera system

using camera systems provided with artificial

illumination device, e.g. IR light source

using multiple cameras

using night vision cameras

using stereoscopic cameras

using ‘non-standard’ camera systems, e.g. camera

sensor used for additional purposes i.a. rain

sensor, camera sensor split in multiple image

areas

characterised by the type of display used

displaying a blind spot scene on the vehicle part

responsible for the blind spot

using a head-up display

using multi-purpose displays, e.g. camera image

and navigation or video on same display

characterised by the type of image processing

combining image information with other obstacle

sensor information, e.g. using RADAR/LIDAR/

SONAR sensors for estimating risk of collision
combining image information with GPS information or vehicle data, e.g. vehicle speed, gyro, steering angle data

using joined images, e.g. multiple camera images

using merged images, e.g. merging camera image with stored images

merging camera image with lines or icons

using a re-scaling of images

virtually distinguishing relevant parts of a scene from the background of the scene

by overlaying the real scene, e.g. through a head-up display on the windshield

characterised by the details of the power supply or the coupling to vehicle components

Image calibration

triggering from stand-by mode to operation mode

using wireless transmission

using a data bus

characterised by the display information being shared, e.g. external display, data transfer to other traffic participants or centralised traffic controller

characterised by monitoring and displaying vehicle exterior scenes from a transformed perspective

with an adjustable viewpoint

the adjustment being automatic

from a bird's eye viewpoint

characterised by an event-triggered choice to display a specific image among a selection of captured images

characterised by the intended use of the viewing arrangement

for monitoring and displaying scenes of vehicle interior, e.g. for monitoring passengers or cargo

for child monitoring

for monitoring and displaying vehicle exterior blind spot views

in addition to a rear-view mirror system

for pedestrian protection

for lane monitoring

for replacing a rear-view mirror system

for bad weather conditions or night vision

for aiding parking

for monitoring rearward traffic

for vehicle security, e.g. parked vehicle surveillance, burglar detection

for facilitating docking to a trailer

for vehicle path indication

for obstacle warning

Indexing scheme relating to vehicle anti-theft devices

Communication protocols, communication systems of vehicle anti-theft devices

Bluetooth

Near field communication [NFC]

Radio frequency identification data [RFID]

Internet

Encryption

Communication devices for vehicle anti-theft devices

Personal digital assistant [PDA]

Mobile phones

Satellites