B60R 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)

1/01 (integrated in the windows, e.g. Fresnel lenses)

1/02 (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))

1/03 (for viewing trailer hitches)

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

1/05 mounted on vehicle exterior (B60R 1/025, B60R 1/08 take precedence)

1/06 (comprising means for cleaning or deicing)

1/07 (specially adapted for cleaning or deicing)

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

1/09 (specially adapted for covering the lateral blind spot not covered by the usual rear-view mirror)

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

1/101 (comprising special mechanical means for correcting the field of view in relation to particular driving conditions, e.g. change of lane; scanning mirrors)

1/104 mounted inside vehicle (B60R 1/025, B60R 1/08 take precedence)

1/106 mounted on vehicle exterior (B60R 1/025, B60R 1/08 take precedence)

1/108 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)

1/11 (avoiding blind spots, e.g. by using a single wide field mirror or an association of rigidly connected mirrors)

1/12 (using a combination of interchangeable reflecting surfaces, e.g. reversible mirrors)

1/13 (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)
[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]}

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 7/005); Other mirror arrangements giving a view from above or under the vehicle}

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

Mirrors assembles combined with other articles, e.g. clocks

{[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]}

{[with holding means for personal articles]}

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)}

{[Running boards (for vehicle tops B60R 3/005; at the sides of the vehicle for carrying loads B60R 9/02)]}

{[Catwalks, running boards for vehicle tops, access means for vehicle tops; Handrails therefor]}

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

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

{[with provisions for shoe scraping]}

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)

{[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 37/00)]}

{[stowing or holding means for elongated articles, e.g. skis inside vehicles]}

{[arranged at front of vehicle {[B60R 5/003 takes precedence)]}

{[arranged at rear of vehicle {[B60R 5/003; B60R 5/006 take precedence; external trunks arranged at rear of vehicle B60R 9/065)]}

 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[)]

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

{[luggage covering means, e.g. parcel shelves]}

{[collapsible or transformable]}

{[collapsible by rolling-up]}

{[of accordion-type, i.e. collapsible by sliding and folding]}

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)

{[Nets or elastic pockets tensioned against walls or backrests]}

{[in separate luggage compartment {[B60R 7/005 takes precedence]}

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

{[mounted on or under a seat]}

{[mounted on door]}

{[mounted on sun visor]}

{[mounted on or below dashboards]}

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

{[for supporting maps]}

{[for supporting spectacles]}

{[for supporting tissues or tissue boxes]}

{[for supporting flowers or flower vases]}

{[for stowing money or valuables, e.g. using safes]}

{[for stowing tape cartridges, compact discs, or the like]}

{[for supporting hats, clothes or clothes hangers]}

{[for supporting umbrellas]}

{[for supporting weapons]}

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

{[at the sides, e.g. on running-board]}

{[Carriers associated with vehicle roof (B60R 9/08 takes precedence)]}

{[Carriers characterised by means to facilitate loading or unloading of the load, e.g. rollers, tracks, or the like]}

{[for ladders]}

{[for small vehicles, e.g. invalid chairs, perambulators]}

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

{[Carriers characterised by article-gripping {, - covering,} -retaining, or -locking means]}

{[for ladders (B60R 9/0423 takes precedence)]}

{[Carriers characterised by wind deflecting means (wind deflectors for open roofs B60J 7/22]}

[with remote or automatic control means]
B60R

9/052 . . . Carriers comprising elongate members extending only transversely of vehicle (B60R 9/08 takes precedence)
9/055 . . . Enclosure-type carriers, e.g., containers, boxes (B60R 9/048 takes precedence)
9/058 . . . 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)]
9/065 . . . [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
2011/0205 . . . [for radio sets (B60R 11/0211 takes precedence)]
2011/0211 . . . [for record carriers apparatus, e.g. video recorders, tape players or CD players]
2011/0217 . . . [for loud-speakers]
2011/0223 . . . [of flat type]
2011/0229 . . . [for displays, e.g. cathodic tubes]
2011/0235 . . . [of flat type, e.g. LCD]
2011/0241 . . . [for telephones]
2011/0247 . . . [for microphones or earphones]
2011/0252 . . . [for personal computers, e.g. laptops, notebooks]
2011/0258 . . . [for navigation systems]
2011/0264 . . . [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-functionalities, 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 B60J 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]
Arrangements or adaptations of sanitation devices

15/00

15/02 . Washing facilities ((in railway vehicles B61D 35/002))
15/04 . Toilet facilities ((in railway vehicles B61D 35/005))

16/00 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 77/50)

16/005 . [Electro-mechanical devices, e.g. switched (electric switches in general B01H)]
16/02 . electric (constitutive elements)
16/0207 . [Wire harnesses]
16/0215 . [Protecting, fastening and routing means therefor]
16/0222 . . . . [Grommets]
16/023 . . . . for transmission of signals between vehicle parts or subsystems
16/0231 . . . . [Circuits relating to the driving or the functioning of the vehicle (monitoring tyres B60C 23/00; indicating overspeed B60K 31/00; for dash boards B60K 37/00, B60Q 31/0; for indicating emergencies B60Q 15/2; brake control systems B60T; registering or indicating the working of vehicles G07C 5/00; measuring distance G01C, e.g. combinations of speed and distance G01C 23/00; engine indicators G01L; measuring speed or acceleration G01P)]
16/0232 . . . . [for measuring vehicle parameters and indicating critical, abnormal or dangerous conditions]
16/0233 . . . . . [Vehicle tilting, overturning or roll over]
16/0234 . . . . . . [related to maintenance or repairing of vehicles]
16/0235 . . . . . . . [for lighting devices combined with starting or ignition devices for road vehicles]
16/0236 . . . . . [for economical driving]
16/0237 . . . . . . . [circuits concerning the atmospheric environment (meteorology G01W)]
16/0238 . . . . . . . [Electrical distribution centers]
16/0239 . . . . . . . [Electronic boxes]
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 7/00)]

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]

16/033 . . . 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)

2019/002 . . . [Wheel guards]

2019/005 . . . [Crash attenuators, i.e. means added to highway service vehicles for softening high speed impacts]

2019/007 . . . [Means for adjusting or regulating the crash 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]

2019/026 . . . [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]

19/12 . . . 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

2019/1806 . . . [Structural beams therefor, e.g. shock-absorbing (bumper beams made of cellular materials B60R 19/221)]

2019/1813 . . . [made of metal]

2019/182 . . . [of light metal, e.g. extruded]

2019/1826 . . . [of high-tension steel]

2019/1833 . . . [made of plastic material]

2019/184 . . . [Blow moulded]

2019/1846 . . . [comprising a cellular structure]

2019/1853 . . . [of reinforced plastic material]

2019/186 . . . [Additional energy absorbing means supported on bumper beams, e.g. cellular structures or material]

2019/1866 . . . [Cellular structures]

2019/1873 . . . [Cellular materials]

2019/188 . . . [Blow molded structures]

2019/1886 . . . [Bumper fascias and fastening means therefor (on fenders B60R 2019/247)]

2019/1893 . . . [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 impending impact, e.g. using air bags]

19/22 . . . containing [mainly] cellular material, e.g. solid foam

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

2019/242 . . . [on two vertical sleeves, e.g. on energy absorber ends]

2019/245 . . . [with adjusting means to compensate manufacturing tolerances, e.g. between bumper and energy absorbers]

2019/247 . . . [Fastening of bumpers’ side ends]

19/26 . . . comprising yieldable mounting means ((B60R 19/38 takes precedence;) springs, shock absorbers, or means for damping vibrations per se F16F)

2019/262 . . . [with means to adjust or regulate the amount of energy to be absorbed]

2019/264 . . . [using cellular structures]

2019/266 . . . [using friction surfaces]

2019/268 . . . [with rebound preventing means, e.g. ratchets]

19/28 . . . Metallic springs

19/285 . . . [comprising only leaf springs, e.g. the mounting means forming part of the guard itself]

19/30 . . . Elastomeric material ((B60R 19/34 takes precedence))

19/32 . . . Fluid shock absorbers [, e.g. with coaxial coil springs]

19/34 . . . destroyed upon impact, e.g. one-shot type

19/36 . . . Combinations of yieldable mounting means of different types (fluid shock absorbers with coaxial coil springs B60R 19/32)

19/38 . . . 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 electric or electronic 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 . . . Bull 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)

2021/0002 . . . [Type of accident]
2021/0004 . . . [Frontal collision]
2021/0006 . . . [Lateral collision]
2021/0009 . . . [Oblique collision]
2021/0011 . . . [Rear collision or recoiling bounce after frontal collision]
2021/0013 . . . [Free fall]
2021/0016 . . . [Fall in water]
2021/0018 . . . [Roll-over]
2021/002 . . . [Underrun collision]
2021/0023 . . . [Offset collision]
2021/0025 . . . [Pole collision]
2021/0027 . . . [Post collision measures, e.g. notifying emergency services]
2021/003 . . . [characterised by occupant or pedestrian]
2021/0032 . . . [Position of passenger]
2021/0034 . . . [lying down]

2021/0037 . . . [standing]
2021/0039 . . . [Body parts of the occupant or pedestrian affected by the accident]
2021/0041 . . . [Arms]
2021/0044 . . . [Chest]
2021/0046 . . . [Feet]
2021/0048 . . . [Head]
2021/0051 . . . [Knees]
2021/0053 . . . [Legs]
2021/0055 . . . [Pelvis]
2021/0058 . . . [Shoulders]
2021/006 . . . [Type of passenger]
2021/0062 . . . [woman, e.g. pregnant]
2021/0065 . . . [Type of vehicles]
2021/0067 . . . [Buses]
2021/0069 . . . [Trailers, e.g. caravans]
2021/0072 . . . [Convertible cars]
2021/0074 . . . [Utility vehicles]
2021/0076 . . . [Agricultural vehicles, e.g. tractors]
2021/0079 . . . [Fork-lift trucks]
2021/0081 . . . [Working vehicles]
2021/0083 . . . [Pick-up trucks; Light trucks; Sport utility vehicles]
2021/0086 . . . [Racing cars]
2021/0088 . . . [Cycles, e.g. motorcycles]
2021/009 . . . [Railway vehicles]
2021/0093 . . . [Aircraft]
2021/0095 . . . [Boats]
2021/0097 . . . [Amusement vehicles]
21/01 . . . Electrical 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)

2021/01006 . . . [Mounting of electrical components in vehicles]
2021/01013 . . . [Means for detecting collision, impending collision or roll-over]
2021/0102 . . . [the monitored value being used for calculating occupant displacement]
2021/01027 . . . [Safing sensors]
2021/01034 . . . [Controlling a plurality of restraint devices]
2021/0104 . . . [Communication circuits for data transmission]
2021/01047 . . . [Architecture]
2021/01054 . . . [Bus]
2021/01061 . . . [between the airbag system and other vehicle electronic systems]
2021/01068 . . . [between different sensors and airbag control unit]
2021/01075 . . . [between the airbag control unit and pyrotechnic fuses or equivalent actuators]
2021/01081 . . . [Transmission medium]
2021/01088 . . . [wireless]
2021/01095 . . . [optical]
2021/01102 . . . [Transmission method]
2021/01109 . . . [power and data signal using transmission medium]
2021/01115 . . . [specific data frames]
2021/01122 . . . [Prevention of malfunction]
2021/01129 . . . [Problems or faults]
2021/01136 . . . [Cut lines]
including means for detecting the presence or position of passengers, passenger seats or child seats (e.g., speed or timing of airbag inflation in relation to occupant position or seat belt use)

including means for detecting bag displacement

{detecting forces or pressure in bags or modules}

Passenger detection systems

{using force or pressure sensing means}

{using strain gauges}

{using fluid means}

{using electric switches}

{using piezoelectric elements}

mounted on the bag

{using field detection presence sensors}

{using electric or capacitive field sensors}

{using electromagnetic waves, e.g., infrared}

{using ultrasonic waves}

{for image processing, e.g., cameras or sensor arrays}

in combination with seat heating

{detecting passenger motion}

{detecting seat belt parameters, e.g., length, tension or height-adjustment}

{using belt buckle sensors}

{sensing the amount of belt wound on retractor}

{sensing belt tension}

{detecting position of specific human body parts, e.g., face, eyes or hands}

Seat position sensors

{Child-seat detection systems}

{monitoring crash strength}

{by deceleration}

{by speed}

{Manually or key-actuated inhibition switches}

{Devices for warning or indicating mode of inhibition}

including arrangements for providing electric power to safety arrangements (or their actuating means, e.g., to pyrotechnic fuses or electromagnetic valves)

Diagnostic or recording means therefor

for firing circuits using only mechanical switches as collision detecting means, in series with pyrotechnic fuses

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))

Self-supporting restraint systems, e.g., restraining arms, plates or the like

mounted on floor

mounted on seats

mounted on fire wall

mounted on steering-wheel

mounted on dash-board

mounted on side walls

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 21/26), 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 forklift trucks B60F 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 tripping 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]
Inflation fluid source retainers, e.g. reaction canisters; Connection of bags, covers, diffusers or inflation fluid sources therewith or together

Specially adapted for elongated cylindrical or bottle-like inflators with a symmetry axis perpendicular to the main direction of bag deployment, e.g. extruded reaction canisters (B60R 21/2172 takes precedence)

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 retainers B60R 21/217)

Characterised by their shape, construction or spatial configuration

The bag being integrated in a multi-bag system

With inflatable support compartments creating an internal suction volume

Heat protection panels

Comprising sensitive compartments

Specially adapted for side protection (B60R 21/23184, B60R 21/232 take precedence)

Seat mounted

Specially adapted for rear seat passengers

Specially adapted for protecting at least two passengers, e.g. preventing them from hitting each other

Specially adapted for knee protection

Specially adapted for foot protection

‘Tubular air bags connected to the vehicle at their two extremities’

‘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, e.g. forming

‘Composition of panels, i.e. for material

Nesting of panels, i.e. for material utilisation

Characterised by connections between panels

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

‘Composite (coated fabric B60R 2021/23514)’

‘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
B60R

2021/248 . . . . . . {comprising a plurality of combustion chambers or sub-chambers}
2021/268 . . . . using instantaneous release of stored pressurised gas ((B60R 21/26005 takes precedence))
2021/2685 . . . . {comprising a plurality of pressure chambers}
2021/272 . . . . with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators
2021/2725 . . . . {using a fluid fuel gas generator}
2021/274 . . . . characterised by means to rupture or open the fluid source
2021/276 . . . . 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))
2021/2765 . . . . {comprising means to control the venting}
2021/30 . . . . with means to draw ambient air into the flow line and mix such air with the inflation fluid
2021/33 . . . . Arrangements for non-electric triggering of inflation (electrical circuits for triggering safety arrangements B60R 21/01)
2021/335 . . . . {Connections between collision detecting means and inflators using pyrotechnic transmission lines}
21/34 . . . . Protecting non-occupants of a vehicle, e.g. pedestrians ((B60R 19/02 takes precedence))
2021/343 . . . . {using deformable body panel, bodywork or components}
2021/346 . . . . {means outside vehicle body}
21/36 . . . . using airbags
21/38 . . . . using means for lifting bonnets
2022/00 Safety belts or body harnesses in vehicles (safety belts or body harnesses in general A62B 35/00)
22/001 . . . . {Knee, leg or head belts}
2022/003 . . . . {for restraining detainees}
2022/005 . . . . {for restraining luggages}
2022/006 . . . . {Belts; Fixing thereof specially adapted for pregnant users}
2022/008 . . . . {Means for holding the tongue or buckle in a non-use position, e.g. for easy access by the user}
22/02 . . . . Semi-passive restraint systems, e.g. systems applied or removed automatically but not both
22/021 . . . . {Manual restraint systems (knee, leg or head belts B60R 22/001; devices for releasing in an emergency, remote or automatic unbolking devices B60R 22/32)}
22/022 . . . . {with means for facilitating access to rear seats in two-door cars}
22/023 . . . . {Three-point seat belt systems comprising two side lower and one side upper anchoring devices (B60R 22/022, B60R 22/03 take precedence)}
22/024 . . . . {Adaptations for use by small passengers, e.g. children (B60R 22/20 takes precedence; using belt anti-slip devices B60R 22/30)}
2022/025 . . . . {Adaptations for use with children seats or luggages}
2022/026 . . . . {at least two ends of the belt being retractor after use}
2022/027 . . . . {Four-point seat belt systems, e.g. with the two upper points connected together}
Anchoring devices takes precedence {; woven fabrics for safety belts}

Construction of belts or harnesses (B60R 21/18 takes precedence {; B60R 22/022 - B60R 22/48}) - B60R 22/08

NOTE

seats B60N 2/24

specially adapted for children or animals (children's seats B60N 2/24)

NOTE

Groups B60R 22/02 (B60R 22/022 - 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 2/280))

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 {, 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

22/1806 . . . (for buckles)

22/1812 . . . (Connections between seat belt and buckle tongue)

22/1818 . . . (Belt guides)

22/1825 . . . [using rollers]

22/1831 . . . [comprising a slotted plate sliding in its plane, e.g. inside circular guides]

22/1837 . . . [comprising a universal mounting, e.g. spherical or cardan-type]

22/1843 . . . [comprising an elongated sleeve]

22/185 . . . 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")}

22/1855 . . . [the means being sensitive to belt tension]

22/19 . . . with means for reducing belt tension during use under normal conditions [({included in the retractor B60R 22/44})]

22/195 . . . with means to tension the belt in an emergency, e.g. means of the through-anchor or splitted reel type (electrical circuits for triggering safety arrangements (B60R 21/01))

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

22/1951 . . . [characterised by arrangements in vehicle or relative to seat belt]

22/1952 . . . [Transmission of tensioning power by cable; Return motion locking means therefor]

22/1953 . . . [the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash]

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

22/1955 . . . [Linear actuators]

22/1956 . . . [Mechanical triggering means therefor (also adapted for air bag inflators B60R 21/33)]

22/1957 . . . [characterised by electric actuators]

22/1958 . . . [characterised by 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]

22/207 . . . [Horizontally or transversally adjustable]

22/208 . . . [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 21/055; belt retractors comprising energy-absorbing means B60R 22/341, B60R 22/4676})

22/281 . . . [for buckles]

22/282 . . . [using fluids or vico-elastic materials]

22/283 . . . [using taring or scoring of material]

22/284 . . . [using electric or magnetic braking means]

22/285 . . . [using friction surfaces]

22/286 . . . [using deformation of material]

22/287 . . . [of torsion rods or tubes]

22/288 . . . [with means to adjust or regulate the amount of energy to be absorbed]

22/289 . . . [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)]
emergency B60R 22/195
take precedence )
retractor B60R 22/185
the belt
with additional means for preventing locking
response only to belt movement
with adjustable sensor
using one spring and one additional retraction
device in parallel)
[Spring shapes; Spring characteristic; Springs with adjustable anchoring means]
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]
[using one spring and one additional retraction
device in parallel]
the additional retraction device being a second spring]
[externally controlled]
[the additional retraction device being an electric actuator]
[using one spring and one additional retraction
device in series]
the additional retraction device being a second spring]
[with external control means]
[the additional retraction device being an electric actuator]
[using an electric retraction device (combined with a spring B60R 2022/444, B60R 2022/446)]
[using a fluid actuated retraction device]
[for cancelling the belt tension]
[for braking the belt reel using friction surfaces or the like]
[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))
[characterised by arrangements in vehicle or relative to seat belt]
[using a plurality of tensioners]
[one pretensioner acting on a plurality of belts]
[Transmission of tensioning power by cable, e.g. using a clutch on reel side]
[using the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash]
[characterised by fluid actuators, e.g. pyrotechnic gas generators (actuating a cable B60R 22/4619)]
[Linear actuators, e.g. comprising a piston moving along reel axis and rotating along its own axis]
[comprising a piston moving along or in parallel to the reel axis]
[the gas directly propelling a flexible driving means, e.g. a plurality of successive masses, in a tubular chamber]
[the driving means being a belt, a chain or the like]
[Mechanical triggering means therefor (also adapted for air bag inflators B60R 21/33)]
[comprising a plurality of charges]
[comprising venting means, e.g. for avoiding overpressure in case of fire or for allowing return motion with energy absorption]
[characterised by electric actuators]
Fittings or systems for preventing or indicating unauthorised use or theft of vehicles (locks for vehicles E05B 77/00-E05B.85/00)

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 therefor]
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]
25/02111 [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

- Remote starting of engine devices, e.g. mirrors, seats, steering wheels
- Ignition switch geometry
- by foot gestures
- by hand gestures
- by using the door logic and door and engine with data signals passing through the human Central base unlocks or authorises unlocking
- by using multi-purpose displays, e.g. camera image using a head-up display
- using camera systems provided with artificial illumination device, e.g. IR light source
- using ‘non-standard’ camera systems, e.g. camera sensor used for additional purposes i.a. rain sensor, camera sensor split in multiple image areas
- using electronic identifiers containing a code not memorised by the user
- whereby access privileges are related to the identifiers
- with more than one way to gain access
- [where the antenna reception area plays a role]
- [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]
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