

CPC**COOPERATIVE PATENT CLASSIFICATION****B60R****VEHICLES, VEHICLE FITTINGS, OR VEHICLE PARTS, NOT OTHERWISE PROVIDED FOR****NOTE**

Attention is drawn to the Note following the title of class [B60](#)

B60R 1/00

Optical viewing arrangements({ house mirrors and spies [A47G 1/00](#) ; } antiglare equipment, e.g. polarising, for windscreens or windows [B60J 3/00](#) ; { visual aids for tractors [B62D 49/0614](#) ; } devices per se [G02B](#))

B60R 1/001

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

B60R 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](#))}

B60R 1/003

.. {for viewing trailer hitches}

B60R 1/005

. {specially adapted for viewing traffic-lights}

B60R 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](#))}

B60R 1/007

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

B60R 1/008

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

B60R 1/02

. Rear-view mirror arrangements([periscope arrangements B60R 1/10](#))

B60R 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}

B60R 1/04

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

B60R 1/06

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

B60R 1/0602

... {comprising means for cleaning or deicing}

B60R 1/0605

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

B60R 1/0607

.... {with remote position control adjustment}

B60R 1/061

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

B60R 1/0612

..... {by electrically actuated means}

B60R 1/0615

..... {by hydraulically or pneumatically actuated means}

B60R 1/0617

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

B60R 1/062

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

B60R 1/0625

.... {by hydraulically or pneumatically powered actuators}

B60R 1/064

.... by manually powered actuators

B60R 1/066

..... for adjusting the mirror relative to its housing

B60R 1/068

..... using cables

B60R 1/07

.... by electrically powered actuators

| | | |
|----------------|-------|--|
| B60R 1/072 | ..... | for adjusting the mirror relative to its housing |
| B60R 1/074 | ..... | for retracting the mirror arrangements to a non-use position alongside the vehicle |
| B60R 1/076 | ... | yieldable to excessive external force and provided with an indexed use position({ B60R 1/0617 , B60R 1/074 }take precedence) |
| B60R 1/078 | ... | easily removable; mounted for bodily outward movement, e.g. when towing |
| B60R 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)} |
| B60R 1/081 | ... | {avoiding blind spots, e.g. by using a side-by-side association of mirrors} |
| B60R 1/082 | .... | {using a single wide field mirror or an association of rigidly connected mirrors} |
| B60R 1/083 | ... | {Anti-glare mirrors, e.g. "day-night" mirrors} |
| B60R 1/084 | .... | {using a removable filtering or hiding screen(associated with windows or windscreens B60J 3/00)} |
| B60R 1/085 | .... | {using a combination of interchangeable reflecting surfaces, e.g. reversible mirrors} |
| B60R 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} |
| B60R 1/087 | ..... | {with remote or automatic control means} |
| B60R 1/088 | .... | {using a cell of electrically changeable optical characteristic, e.g. liquid-crystal or electrochromic mirrors} |
| B60R 1/089 | .... | {using a liquid filtering layer of variable thickness} |
| B60R 1/10 | . | 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} |
| B60R 1/105 | .. | {Optical arrangements giving a view under the vehicle, e.g. using periscopes} |
| B60R 1/12 | . | Mirror assemblies combined with other articles, e.g. clocks |
| B60R 1/1207 | .. | {with lamps; with turn indicators} |
| B60R 2001/1215 | .. | {with information displays} |
| B60R 2001/1223 | .. | {with sensors or transducers} |
| B60R 2001/123 | .. | {with thermometers} |
| B60R 2001/1238 | .. | {with vanity mirrors} |
| B60R 2001/1246 | .. | {with clocks} |
| B60R 2001/1253 | .. | {with cameras, video cameras or video screens} |
| B60R 2001/1261 | .. | {with antennae} |
| B60R 2001/1269 | .. | {with sun visors} |
| B60R 2001/1276 | .. | {with radio receivers, loud-speakers or buzzers} |
| B60R 2001/1284 | .. | {with communication systems other than radio-receivers, e.g. keyless entry systems, navigation systems; with anti-collision systems} |
| B60R 2001/1292 | .. | {with holding means for personal articles} |

| | |
|----------------------------|--|
| B60R 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) |
| B60R 3/002 | . {Running boards(for vehicle tops B60R 3/005 ; at the sides of the vehicle for carrying loads B60R 9/02)} |
| B60R 3/005 | . {Catwalks, running boards for vehicle tops, access means for vehicle tops; Handrails therefor} |
| B60R 3/007 | . {Removable steps or ladders, e.g. foldable(as access means for vehicle tops B60R 3/005)} |
| B60R 3/02 | . Retractable steps{or ladders, e.g. movable under shock(B60R 3/005 takes precedence)} |
| B60R 3/04 | . with provisions for shoe scraping |
| B60R 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) |
| B60R 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)} |
| B60R 5/006 | . {stowing or holding means for elongated articles, e.g. skis inside vehicles} |
| B60R 5/02 | . arranged at front of vehicle{(B60R 5/003 takes precedence)} |
| B60R 5/04 | . arranged at rear of vehicle{(B60R 5/003 , B60R 5/006 take precedence; external trunks arranged at rear of vehicle B60R 9/065)} |
| B60R 5/041 | .. {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)} |
| B60R 5/042 | ... {to create an enclosed luggage compartment of increased capacity, e.g. with ventilation apertures for transporting dogs} |
| B60R 5/044 | .. {luggage covering means, e.g. parcel shelves} |
| B60R 5/045 | ... {collapsible or transformable} |
| B60R 5/047 | {collapsible by rolling-up} |
| B60R 5/048 | {of accordion-type, i.e. collapsible by sliding and folding} |
| B60R 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) |
| B60R 7/005 | . {Nets or elastic pockets tensioned against walls or backrests} |
| B60R 7/02 | . in separate luggage compartment{(B60R 7/005 takes precedence)} |
| B60R 7/04 | . in driver or passenger space,{e.g. using racks(B60R 7/005 , B60R 7/08 take precedence)} |
| B60R 7/043 | .. {mounted on or under a seat} |
| B60R 7/046 | .. {mounted on door} |
| B60R 7/05 | .. mounted on sun visor |
| B60R 7/06 | .. mounted on or below dashboards |
| B60R 7/08 | . Disposition of racks, clips,{holders, containers}or the like{for supporting specific articles(B60R 7/005 takes precedence)} |

- B60R 7/081 .. {for supporting maps}
- B60R 7/082 .. {for supporting spectacles}
- B60R 7/084 .. {for supporting tissues or tissue boxes}
- B60R 7/085 .. {for supporting flowers or flower vases}
- B60R 7/087 .. {for stowing money or valuables, e.g. using safes}
- B60R 7/088 .. {for stowing tape cartridges, compact discs, or the like}
- B60R 7/10 .. for supporting hats, clothes or clothes hangers
- B60R 7/12 .. for supporting umbrellas
- B60R 7/14 .. for supporting weapons

B60R 9/00 **Supplementary fittings on vehicle exterior for carrying loads, e.g. luggage, sports gear or the like**

- B60R 9/02 . at the sides, e.g. on running-board
- B60R 9/04 . Carriers associated with vehicle roof([B60R 9/08](#) takes precedence)
- B60R 9/042 .. 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}
- B60R 9/0423 ... {for ladders}
- B60R 9/0426 ... {for small vehicles, e.g. invalid chairs, perambulators}
- B60R 9/045 .. Carriers being adjustable or transformable, e.g. expansible, collapsible{([transformable into tents B60P 3/36](#) ; [into beds B60P 3/38](#))}
- B60R 9/048 .. Carriers characterised by article-gripping,{~~covering~~}-retaining, or -locking means
 - ... {for ladders([B60R 9/0423](#) takes precedence)}
- B60R 9/0485 ... {for ladders([B60R 9/0423](#) takes precedence)}
- B60R 9/05 .. Carriers characterised by wind deflecting means([wind deflectors for open roofs B60J 7/22](#))
- B60R 9/052 .. Carriers comprising elongate members extending only transversely of vehicle([B60R 9/08](#) takes precedence)
- B60R 9/055 .. Enclosure-type carriers, e.g. containers, boxes([B60R 9/048](#) takes precedence)
- B60R 9/058 .. characterised by releasable attaching means between carrier and roof
- B60R 9/06 . at vehicle front or rear{([rear luggage compartments within vehicle extensible externally of the vehicle body B60R 5/041](#))}
- B60R 9/065 .. {Enclosure-type carriers, e.g. trunks}
- B60R 9/08 . specially adapted for sports gear([vehicles specially adapted for carrying aeroplanes, for carrying boats B60P](#))
- B60R 9/10 .. for cycles
- B60R 9/12 .. for skis

B60R 11/00 **Arrangements for holding or mounting articles, not otherwise provided for**

- B60R 2011/0001 . {characterised by position}
- B60R 2011/0003 .. {inside the vehicle}
- B60R 2011/0005 ... {Dashboard}
- B60R 2011/0007 ... {Mid-console}
- B60R 2011/0008 ... {Ventilation grilles}
- B60R 2011/001 ... {Vehicle control means, e.g. steering-wheel or column}

| | | |
|----------------|------|---|
| B60R 2011/0012 | ... | {Seats or parts thereof} |
| B60R 2011/0014 | .... | {Arm-rests} |
| B60R 2011/0015 | .... | {Back-rests} |
| B60R 2011/0017 | .... | {Head-rests} |
| B60R 2011/0019 | ... | {Side or rear panels} |
| B60R 2011/0021 | .... | {Doors} |
| B60R 2011/0022 | .... | {Pillars} |
| B60R 2011/0024 | .... | {Rear shelves} |
| B60R 2011/0026 | ... | {Windows, e.g. windscreen} |
| B60R 2011/0028 | ... | {Ceiling, e.g. roof rails} |
| B60R 2011/0029 | ... | {Floor, e.g. side sills, fire wall} |
| B60R 2011/0031 | ... | {Seat belts} |
| B60R 2011/0033 | ... | {Rear-view mirrors} |
| B60R 2011/0035 | ... | {Sun visors} |
| B60R 2011/0036 | ... | {Luggage compartment} |
| B60R 2011/0038 | ... | {Engine compartment} |
| B60R 2011/004 | .. | {outside the vehicle} |
| B60R 2011/0042 | . | {characterised by mounting means} |
| B60R 2011/0043 | .. | {for integrated articles, i.e. not substantially protruding from the surrounding parts} |
| B60R 2011/0045 | ... | {with visible part, e.g. flush mounted} |
| B60R 2011/0047 | .... | {using hidden fastening means} |
| B60R 2011/0049 | .. | {for non integrated articles} |
| B60R 2011/005 | ... | {Connection with the vehicle part} |
| B60R 2011/0052 | .... | {using screws, bolts, rivets or the like} |
| B60R 2011/0054 | .... | {using cigarette lighter} |
| B60R 2011/0056 | .... | {using suction cups} |
| B60R 2011/0057 | .... | {using magnetic means} |
| B60R 2011/0059 | .... | {using clips, clamps, straps or the like} |
| B60R 2011/0061 | .... | {using key-type connections} |
| B60R 2011/0063 | .... | {using adhesive means, e.g. hook and loop fasteners} |
| B60R 2011/0064 | ... | {Connection with the article} |
| B60R 2011/0066 | .... | {using screws, bolts, rivets or the like} |
| B60R 2011/0068 | .... | {using suction cups} |
| B60R 2011/007 | .... | {using magnetic means} |
| B60R 2011/0071 | .... | {using latches, clips, clamps, straps or the like} |
| B60R 2011/0073 | .... | {using key-type connections} |
| B60R 2011/0075 | .... | {using a containment or docking space} |
| B60R 2011/0077 | .... | {using adhesive means, e.g. hook and loop fasteners} |
| B60R 2011/0078 | ... | {Quick-disconnect two-parts mounting means} |
| B60R 2011/008 | .. | {Adjustable or movable supports} |

| | |
|-------------------|--|
| B60R 2011/0082 | ... {collapsible, e.g. for storing after use} |
| B60R 2011/0084 | ... {with adjustment by linear movement in their operational position} |
| B60R 2011/0085 | ... {with adjustment by rotation in their operational position} |
| B60R 2011/0087 | {around two axes} |
| B60R 2011/0089 | {around three axes, i.e. universally mounted} |
| B60R 2011/0091 | {the article being mounted on a flexible shaft} |
| B60R 2011/0092 | ... {with motorization} |
| B60R 2011/0094 | . {characterised by means for covering after user, e.g. boxes, shutters or the like} |
| B60R 2011/0096 | . {Theft prevention of articles} |
| B60R 2011/0098 | .. {using electric or electronic means, e.g. alarms, codes} |
| B60R 11/02 | . for radio sets, television sets, telephones, or the like; Arrangements of control thereof({ stowing of tape cartridges, compact discs or the like B60R 7/088 ; }of aerials H01Q) |
| B60R 11/0205 | .. {for radio sets(B60R 11/0211 takes precedence)} |
| B60R 11/0211 | .. {for record carriers apparatus, e.g. video recorders, tape players or CD players} |
| B60R 11/0217 | .. {for loud-speakers} |
| B60R 11/0223 | ... {of flat type} |
| B60R 11/0229 | .. {for displays, e.g. cathodic tubes} |
| B60R 11/0235 | ... {of flat type, e.g. LCD} |
| B60R 11/0241 | .. {for telephones} |
| B60R 11/0247 | .. {for microphones or earphones} |
| B60R 11/0252 | .. {for personal computers, e.g. laptops, notebooks} |
| B60R 11/0258 | .. {for navigation systems} |
| B60R 11/0264 | .. {for control means} |
| B60R 2011/027 | .. {for Din-sized apparatus} |
| B60R 2011/0276 | .. {for rear passenger use} |
| B60R 2011/0282 | .. {for the use of several passengers, e.g. simultaneously} |
| B60R 2011/0288 | .. {Apparatus made of several modules independently mounted} |
| B60R 2011/0294 | .. {Apparatus with multi-functionalities, e.g. radio and telephone} |
| B60R 11/04 | . Mounting of cameras operative during drive; Arrangement of controls thereof relative to the vehicle(cameras per se G03B) |
| B60R 11/06 | . for tools or spare parts(for vehicle roof parts B60J 7/20 ; for spare wheels B62D) |
| B60R 13/00 | Elements for body-finishing, identifying, or decorating; Arrangements or adaptations for advertising purposes |
| B60R 13/005 | . {Manufacturers` emblems, name plates, bonnet ornaments, mascots or the like; Mounting means therefor} |
| B60R 13/01 | . Liners for load platforms or load compartments |
| B60R 13/011 | .. {for internal load compartments, e.g. car trunks} |
| B60R 13/013 | ... {comprising removable or hinged parts, e.g. for accessing storage compartments} |
| B60R 2013/015 | .. {made of a plurality of visible parts} |
| B60R 2013/016 | .. {integrating other functions or accessories} |

- B60R 2013/018 .. {Connection or positioning of adjacent panels}
- B60R 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](#) })
- B60R 13/0206 .. {Arrangements of fasteners and clips specially adapted for attaching inner vehicle liners or mouldings(devices for fastening or securing [F16B](#))}
- B60R 13/0212 .. {Roof or head liners(movable head-liners [B60J 7/0007](#))}
- B60R 13/0218 ... {supported by adhesion with the roof panel}
- B60R 13/0225 ... {self supporting head liners}
- B60R 13/0231 ... {specially adapted for roofs with openings}
- B60R 13/0237 .. {Side or rear panels}
- B60R 13/0243 ... {Doors}
- B60R 13/025 ... {Pillars; Roof rails}
- B60R 13/0256 .. {Dashboard liners}
- B60R 13/0262 .. {Mid-console liners}
- B60R 13/0268 .. {Rear parcel liners(used as luggage covering means [B60R 5/044](#))}
- B60R 13/0275 .. {comprising removable or hinged parts(for accessing storage compartments [B60R 7/04](#) ; for airbag deployment [B60R 21/215](#))}
- B60R 2013/0281 .. {made of a plurality of visible parts}
- B60R 2013/0287 .. {integrating other functions or accessories}
- B60R 2013/0293 .. {Connection or positioning of adjacent panels}
- B60R 13/04 . {External}Ornamental or guard strips; Ornamental inscriptive devices{thereon(fastening strips or bars to sheets or plates by means of clips [F16B 5/12](#))}
- B60R 13/043 .. {Door edge guards}
- B60R 2013/046 .. {Foot boards}
- B60R 13/06 . Sealing strips(sealing arrangements for vehicle windows, windscreens, non-fixed roofs, doors, or similar devices [B60J 10/00](#))
- B60R 13/07 . Water drainage or guide means not integral with roof structure([B60R 13/06](#) , { [B60J 10/0045](#) }take precedence;{ integral with roof structure [B62D 25/07](#) ; drainage openings having movable or removable closures [B62D 25/24](#) })
- B60R 13/08 . 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 33/0604](#) ; thermal or acoustic insulation of engines [F02B 77/11](#) ; damping of sounds using compensation by electro-acoustic methods [G10K 11/178](#))}
- B60R 2013/0807 .. {Arrangements of fasteners or clips specially adapted therefore}
- B60R 13/0815 .. {Acoustic of thermal insulation of passenger compartments(wall or roof liners integrating the insulating function [B60R 13/02](#) ; insulating floor mats or carpets [B60N 3/04](#))}
- B60R 13/0823 ... {Insulating partitions, e.g. between front and rear seats}
- B60R 13/083 ... {for fire walls or floors}
- B60R 13/0838 .. {for engine compartments}
- B60R 13/0846 .. {for duct, cable or rod passages, e.g. between engine and passenger compartments}

- B60R 13/0853 . . . {specially adapted for movable parts, e.g. gears levers, pedals}
- B60R 13/0861 . . {for covering undersurfaces of vehicles, e.g. wheel houses}
- B60R 13/0869 . . {for protecting heat sensitive parts, e.g. electronic components}
- B60R 13/0876 . . {for mounting around heat sources, e.g. exhaust pipes}
- B60R 13/0884 . . {for mounting around noise sources, e.g. air blowers}
- B60R 13/0892 . . {for humidity insulation(sealing strips [B60R 13/06](#))}
- B60R 13/10 . Registration, licencing, or like devices
- B60R 13/105 . . {Licence- or registration plates, provided with mounting means, e.g. frames, holders, retainers, brackets}

B60R 15/00**Arrangements or adaptations of sanitation devices**

- B60R 15/02 . Washing facilities{(in railway vehicles [B61D 35/002](#))}
- B60R 15/04 . Toilet facilities{(in railway vehicles [B61D 35/005](#))}

B60R 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](#) , [E05B65/38](#))}

- B60R 16/005 . {Electro-mechanical devices, e.g. switched(electric switches in general [H01H](#))}
- B60R 16/02 . electric{constitutive elements}
- B60R 16/0207 . . {Wire harnesses}
- B60R 16/0215 . . . {Protecting, fastening and routing means therefor}
- B60R 16/0222 {Grommets}
- B60R 16/023 . . for transmission of signals between vehicle parts or subsystems
- B60R 16/0231 . . . {Circuits relating to the driving or the functioning of the vehicle(for dash boards [B60K 37/00](#) , [B60Q 3/04](#) ; for indicating emergencies [B60Q 1/52](#) ; 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](#); brake control systems [B60T](#); monitoring tyres [B60C 23/00](#) ; indicating overspeed [B60K 31/00](#))}
- B60R 16/0232 {for measuring vehicle parameters and indicating critical, abnormal or dangerous conditions}
- B60R 16/0233 {Vehicle tilting, overturning or roll over}
- B60R 16/0234 {related to maintenance or repairing of vehicles}
- B60R 16/0235 {for lighting devices combined with starting or ignition devices for road vehicles}
- B60R 16/0236 {for economical driving}
- B60R 16/0237 . . . {circuits concerning the atmospheric environment(meteorology [G01W](#))}
- B60R 16/0238 . . . {Electrical distribution centers}
- B60R 16/0239 . . . {Electronic boxes}
- B60R 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](#))}

- B60R 16/03 . . for supply of electrical power to vehicle subsystems{or for(circuit arrangements for charging batteries [H02J 7/00](#))}
- B60R 16/0307 . . . {using generators driven by a machine different from the vehicle motor}
- B60R 16/0315 . . . {using multiplexing techniques(multiplexing for transmission of signals [G08C 15/00](#) ; multiplexing for electrical communication in general [H04J](#))}
- B60R 2016/0322 {Temporary code for documents to be reclassified to [G08C](#), [H04L](#) or [H04Q](#)}
- B60R 16/033 . . . characterised by the use of electrical cells or batteries(for propulsion puposes [B60K 1/04](#) ; supplying batteries to, or removing batteries from, vehicles [B60S 5/06](#) ; testing of charge state [G01R 31/36](#))
- B60R 16/037 . . for occupant comfort,{e.g. for automatic adjustment of appliances according to personal settings, e.g. seats, mirrors, steering wheel}
- B60R 16/0373 . . . {Voice control(in general [G10L](#))}
- B60R 16/0376 . . . {Gear-shift lever position(indicating position of controlling members in general [G05G 1/00](#))}
- B60R 16/04 . . Arrangement of batteries
- B60R 16/06 . . for removing electrostatic charges(carrying-off electrostatic charges in general [H05F 3/00](#))
- B60R 16/08 . fluid
- B60R 17/00 Arrangements or adaptations of lubricating systems or devices(lubricating in general [F16N](#))**
- B60R 17/02 . Systems, e.g. central lubrication systems
- B60R 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](#))**
- B60R 2019/002 . {Wheel guards}
- B60R 2019/005 . {Crash attenuators, i.e. means added to highway service vehicles for softening high speed impacts}
- B60R 2019/007 . {Means for adjusting or regulating the crash absorption capacity of the vehicle, e.g. when detecting an impending collision}
- B60R 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](#))
- B60R 19/023 . . {Details}
- B60R 2019/026 . . {Buffers, i.e. bumpers of limited extent}
- B60R 19/03 . . characterised by material, e.g. composite([B60R 19/18](#) takes precedence)
- B60R 19/04 . . formed from more than one section{in a side-by-side arrangement}
- B60R 19/12 . . . vertically spaced
- B60R 19/14 . . . having folding parts
- B60R 19/16 . . . having deflecting members, e.g. rollers, balls
- B60R 19/18 . . {characterised by the cross-section;}Means within the bumper to absorb impact
- B60R 2019/1806 . . . {Structural beams therefor, e.g. shock-absorbing(bumper beams made of cellular materials [B60R 19/22](#))}

| | | |
|----------------|-------|--|
| B60R 2019/1813 | .... | {made of metal} |
| B60R 2019/182 | ..... | {of light metal, e.g. extruded} |
| B60R 2019/1826 | ..... | {of high-tension steel} |
| B60R 2019/1833 | .... | {made of plastic material} |
| B60R 2019/184 | ..... | {Blow moulded} |
| B60R 2019/1846 | ..... | {comprising a cellular structure} |
| B60R 2019/1853 | ..... | {of reinforced plastic material} |
| B60R 2019/186 | ... | {Additional energy absorbing means supported on bumper beams, e.g. cellular structures or material} |
| B60R 2019/1866 | .... | {Cellular structures} |
| B60R 2019/1873 | .... | {Cellular materials} |
| B60R 2019/188 | .... | {Blow molded structures} |
| B60R 2019/1886 | ... | {Bumper fascias and fastening means therefor(on fenders B60R 2019/247)} |
| B60R 2019/1893 | ... | {comprising a multiplicity of identical adjacent shock-absorbing means} |
| B60R 19/20 | ... | containing{mainly}gas or liquid, e.g. inflatable(connection of valves to inflatable elastic bodies B60C 29/00) |
| B60R 19/205 | .... | {inflatable in the direction of an obstacle upon impending impact, e.g. using air bags} |
| B60R 19/22 | ... | containing{mainly}cellular material, e.g. solid foam |
| B60R 19/24 | .. | Arrangements for mounting bumpers on vehicles |
| B60R 2019/242 | ... | {on two vertical sleeves, e.g. on energy absorber ends} |
| B60R 2019/245 | ... | {with adjusting means to compensate manufacturing tolerances, e.g. between bumper and energy absorbers} |
| B60R 2019/247 | ... | {Fastening of bumpers` side ends} |
| B60R 19/26 | ... | comprising yieldable mounting means{(B60R 19/38 takes precedence;} springs, shock absorbers, or means for damping vibrations per se F16F)} |
| B60R 2019/262 | .... | {with means to adjust or regulate the amount of energy to be absorbed} |
| B60R 2019/264 | .... | {using cellular structures} |
| B60R 2019/266 | .... | {using friction surfaces} |
| B60R 2019/268 | .... | {with rebound preventing means, e.g. ratchets} |
| B60R 19/28 | .... | Metallic springs |
| B60R 19/285 | ..... | {comprising only leaf springs, e.g. the mounting means forming part of the guard itself} |
| B60R 19/30 | .... | Elastomeric material{(B60R 19/34 takes precedence)} |
| B60R 19/32 | .... | Fluid shock absorbers{, e.g. with coaxial coil springs} |
| B60R 19/34 | .... | destroyed upon impact, e.g. one-shot type |
| B60R 19/36 | .... | Combinations of yieldable mounting means of different types{(fluid shock absorbers with coaxial coil springs B60R 19/32)} |
| B60R 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)} |

- B60R 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](#))}
- B60R 19/42 . . extending primarily along the sides of, or completely encircling, a vehicle(ornamental or guard strips [B60R 13/04](#))
- B60R 19/44 . . Bumper guards
- B60R 19/445 . . . {Guard strips}
- B60R 19/46 . . . spring- or pivotally-mounted
- B60R 19/48 . . combined with, or convertible into, other devices or objects, e.g. bumpers combined with road brushes, bumpers convertible into beds
- B60R 19/483 . . . {with obstacle sensors of electric or electronic type}
- B60R 2019/486 . . . {with air passages, e.g. for cooling}
- B60R 19/50 . . . with lights or registration plates
- B60R 2019/505 {with lights}
- B60R 19/52 . . Radiator or grille guards(Radiator grilles(cooling aspects [B60K 11/08](#))}
- B60R 2019/522 . . {Bull bars}
- B60R 2019/525 . . {Radiator grilles}
- B60R 2019/527 . . . {integral with bumpers}
- B60R 19/54 . . Obstruction removers or deflectors([B60R 19/16](#) , [B60R 21/34](#) take precedence)
- B60R 19/545 . . {Devices for cutting wire-type obstructions}
- B60R 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
- B60R 19/565 . . {on vehicle sides}
- B60R 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](#))**
 - B60R 2021/0002 . {Type of accident}
 - B60R 2021/0004 . . {Frontal collision}
 - B60R 2021/0006 . . {Lateral collision}
 - B60R 2021/0009 . . {Oblique collision}
 - B60R 2021/0011 . . {Rear collision or recoiling bounce after frontal collision}
 - B60R 2021/0013 . . {Free fall}
 - B60R 2021/0016 . . {Fall in water}
 - B60R 2021/0018 . . {Roll-over}
 - B60R 2021/002 . . {Underrun collision}
 - B60R 2021/0023 . . {Offset collision}

| | | |
|-----------------|-----|--|
| B60R 2021/0025 | .. | {Pole collision} |
| B60R 2021/0027 | . | {Post collision measures, e.g. notifying emergency services} |
| B60R 2021/003 | . | {characterised by occupant or pedestrian} |
| B60R 2021/0032 | .. | {Position of passenger} |
| B60R 2021/0034 | ... | {lying down} |
| B60R 2021/0037 | ... | {standing} |
| B60R 2021/0039 | .. | {Body parts of the occupant or pedestrian affected by the accident} |
| B60R 2021/0041 | ... | {Arms} |
| B60R 2021/0044 | ... | {Chest} |
| B60R 2021/0046 | ... | {Feet} |
| B60R 2021/0048 | ... | {Head} |
| B60R 2021/0051 | ... | {Knees} |
| B60R 2021/0053 | ... | {Legs} |
| B60R 2021/0055 | ... | {Pelvis} |
| B60R 2021/0058 | ... | {Shoulders} |
| B60R 2021/006 | .. | {Type of passenger} |
| B60R 2021/0062 | ... | {woman, e.g. pregnant} |
| B60R 2021/0065 | . | {Type of vehicles} |
| B60R 2021/0067 | .. | {Buses} |
| B60R 2021/0069 | .. | {Trailers, e.g. caravans} |
| B60R 2021/0072 | .. | {Convertible cars} |
| B60R 2021/0074 | .. | {Utility vehicles} |
| B60R 2021/0076 | ... | {Agricultural vehicles, e.g. tractors} |
| B60R 2021/0079 | ... | {Fork-lift trucks} |
| B60R 2021/0081 | ... | {Working vehicles} |
| B60R 2021/0083 | ... | {Pick-up trucks; Light trucks; Sport utility vehicles} |
| B60R 2021/0086 | .. | {Racing cars} |
| B60R 2021/0088 | .. | {Cycles, e.g. motorcycles} |
| B60R 2021/009 | .. | {Railway vehicles} |
| B60R 2021/0093 | .. | {Aircraft} |
| B60R 2021/0095 | .. | {Boats} |
| B60R 2021/0097 | .. | {Amusement vehicles} |
| B60R 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)} |
| B60R 2021/01006 | .. | {Mounting of electrical components in vehicles} |
| B60R 2021/01013 | .. | {Means for detecting collision, impending collision or roll-over} |
| B60R 2021/0102 | ... | {the monitored value being used for calculating occupant displacement} |
| B60R 2021/01027 | ... | {Safing sensors} |
| B60R 2021/01034 | .. | {Controlling a plurality of restraint devices} |

| | | |
|-----------------|-------|---|
| B60R 2021/0104 | .. | {Communication circuits for data transmission} |
| B60R 2021/01047 | ... | {Architecture} |
| B60R 2021/01054 | .... | {Bus} |
| B60R 2021/01061 | ..... | {between the airbag system and other vehicle electronic systems} |
| B60R 2021/01068 | ..... | {between different sensors and airbag control unit} |
| B60R 2021/01075 | ..... | {between the airbag control unit and pyrotechnic fuses or equivalent actuators} |
| B60R 2021/01081 | ... | {Transmission medium} |
| B60R 2021/01088 | .... | {wireless} |
| B60R 2021/01095 | .... | {optical} |
| B60R 2021/01102 | ... | {Transmission method} |
| B60R 2021/01109 | .... | {power and data signal using transmission medium} |
| B60R 2021/01115 | .... | {specific data frames} |
| B60R 2021/01122 | .. | {Prevention of malfunction} |
| B60R 2021/01129 | ... | {Problems or faults} |
| B60R 2021/01136 | .... | {Cut lines} |
| B60R 2021/01143 | .... | {Short circuits} |
| B60R 2021/0115 | .... | {Current leakage} |
| B60R 2021/01156 | .... | {Current or voltage overload} |
| B60R 2021/01163 | .... | {Insufficient current or voltage} |
| B60R 2021/0117 | .... | {Noise} |
| B60R 2021/01177 | .... | {Misdeployment, e.g. during assembly, disassembly, accident salvage or recycling} |
| B60R 2021/01184 | ... | {Fault detection or diagnostic circuits(in power circuits B60R 2021/01129)} |
| B60R 2021/0119 | .... | {Plausibility check} |
| B60R 2021/01197 | .... | {Warning devices} |
| B60R 2021/01204 | .. | {Actuation parameters of safety arrangements} |
| B60R 2021/01211 | ... | {Expansion of air bags} |
| B60R 2021/01218 | .... | {control of expansion speed} |
| B60R 2021/01225 | .... | {control of expansion volume} |
| B60R 2021/01231 | .... | {control of expansion timing or sequence} |
| B60R 2021/01238 | .... | {control of expansion shape} |
| B60R 2021/01245 | .... | {selection of seat for bag expansion} |
| B60R 2021/01252 | ... | {Devices other than bags} |
| B60R 2021/01259 | .... | {Brakes} |
| B60R 2021/01265 | .... | {Seat belts} |
| B60R 2021/01272 | ..... | {Belt tensioners} |
| B60R 2021/01279 | ..... | {Load limiters} |
| B60R 2021/01286 | .. | {Electronic control units} |
| B60R 2021/01293 | ... | {programmable for use in different vehicles or with different airbags configurations} |

| | | |
|-----------------|------|--|
| B60R 21/013 | .. | including means for detecting collisions, impending collision or roll-over({ inclination sensors per se G01C 9/00 ; acceleration sensors per se G01P 15/00 ; radar systems per se G01S 13/00 ; inertia switches per se H01H 35/14 }) |
| B60R 2021/01302 | ... | {monitoring vehicle body vibrations or noise} |
| B60R 2021/01304 | ... | {monitoring rough road condition} |
| B60R 2021/01306 | ... | {monitoring vehicle inclination} |
| B60R 2021/01308 | ... | {monitoring distance between vehicle body and road} |
| B60R 2021/01311 | ... | {monitoring the braking system, e.g. ABS} |
| B60R 2021/01313 | ... | {monitoring the vehicle steering system or the dynamic control system} |
| B60R 2021/01315 | ... | {monitoring occupant displacement} |
| B60R 2021/01317 | ... | {monitoring seat belt tension} |
| B60R 21/0132 | ... | responsive to vehicle motion parameters{,e.g. to vehicle longitudinal or transversal deceleration or speed value} |
| B60R 2021/01322 | .... | {comprising variable thresholds, e.g. depending from other collision parameters} |
| B60R 2021/01325 | .... | {Vertical acceleration} |
| B60R 2021/01327 | .... | {Angular velocity or angular acceleration} |
| B60R 21/0134 | ... | responsive to imminent contact with an obstacle{,e.g. using radar systems} |
| B60R 2021/01345 | .... | {using mechanical sensing means} |
| B60R 21/0136 | ... | responsive to actual contact with an obstacle{, e.g. to vehicle deformation, bumper displacement or bumper velocity relative to the vehicle (monitoring crash strength in combination with passenger seat detection B60R 21/01558)} |
| B60R 21/015 | .. | 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} |

WARNING

Group(s) [B60R 21/01504](#) - [B60R 21/01566](#) is/are incomplete pending reclassification of documents from group(s) [B60R 21/015](#).

Until reclassification is complete, group [B60R 21/015](#) should be considered in order to perform a complete search.

| | | |
|---------------|-------|---|
| B60R 21/01504 | ... | {detecting bag displacement} |
| B60R 21/01508 | ... | {detecting forces or pressure in bags or modules} |
| B60R 21/01512 | ... | {Passenger detection systems} |
| B60R 21/01516 | .... | {using force or pressure sensing means} |
| B60R 21/0152 | ..... | {using strain gauges} |
| B60R 21/01522 | ..... | {using fluid means} |
| B60R 21/01524 | ..... | {using electric switches} |
| B60R 21/01526 | ..... | {using piezoelectric elements} |
| B60R 21/01528 | .... | {mounted on the bag} |
| B60R 21/0153 | .... | {using field detection presence sensors} |
| B60R 21/01532 | ..... | {using electric or capacitive field sensors} |

| | | |
|----------------|-------|--|
| B60R 21/01534 | ..... | {using electromagnetic waves, e.g. infrared} |
| B60R 21/01536 | ..... | {using ultrasonic waves} |
| B60R 21/01538 | ..... | {for image processing, e.g. cameras or sensor arrays} |
| B60R 21/0154 | ..... | {in combination with seat heating} |
| B60R 21/01542 | .... | {detecting passenger motion} |
| B60R 21/01544 | .... | {detecting seat belt parameters, e.g. length, tension or height-adjustment} |
| B60R 21/01546 | ..... | {using belt buckle sensors} |
| B60R 21/01548 | ..... | {sensing the amount of belt wound on retractor} |
| B60R 21/0155 | ..... | {sensing belt tension} |
| B60R 21/01552 | .... | {detecting position of specific human body parts, e.g. face, eyes or hands} |
| B60R 21/01554 | ... | {Seat position sensors} |
| B60R 21/01556 | ... | {Child-seat detection systems} |
| B60R 21/01558 | ... | {monitoring crash strength} |
| B60R 21/0156 | .... | {by deceleration} |
| B60R 21/01562 | .... | {by speed} |
| B60R 21/01564 | ... | {Manually or key-actuated inhibition switches} |
| B60R 21/01566 | ... | {Devices for warning or indicating mode of inhibition} |
| B60R 21/017 | .. | including arrangements for providing electric power to safety arrangements{or their actuating means, e.g. to pyrotechnic fuses or electro-mechanic valves} |
| B60R 21/0173 | ... | {Diagnostic or recording means therefor} |
| B60R 21/0176 | .... | {for firing circuits using only mechanical switches as collision detecting means, in series with pyrotechnic fuses} |
| B60R 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)} |
| B60R 2021/0206 | .. | {Self-supporting restraint systems, e.g. restraining arms, plates or the like} |
| B60R 2021/0213 | ... | {mounted on floor} |
| B60R 2021/022 | ... | {mounted on seats} |
| B60R 2021/0226 | ... | {mounted on fire wall} |
| B60R 2021/0233 | ... | {mounted on steering-wheel} |
| B60R 2021/024 | ... | {mounted on dash-board} |
| B60R 2021/0246 | ... | {mounted on side walls} |
| B60R 2021/0253 | ... | {mounted on roof} |
| B60R 21/026 | .. | {Rigid partitions inside vehicles, e.g. between passengers and load compartments(B60R 21/12 takes precedence)} |
| B60R 2021/0266 | ... | {comprising energy absorbing means} |
| B60R 2021/0273 | .. | {automatically movable to an operative position, e.g. in case of collision or impending collision} |
| B60R 2021/028 | .. | {Means preventing passenger from falling out of vehicles} |
| B60R 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)} |

| | | |
|----------------|-------|--|
| B60R 2021/0293 | .. | {Additional pads or cushions in vehicle compartments, e.g. movably mounted} |
| B60R 21/04 | .. | Padded linings for the vehicle interior;{Energy absorbing structures associated with padded or non-padded linings} |
| B60R 2021/0407 | ... | {using gas or liquid as energy absorbing means} |
| B60R 2021/0414 | ... | {using energy absorbing ribs} |
| B60R 2021/0421 | ... | {using honeycomb structures} |
| B60R 21/0428 | ... | {associated with the side doors or panels, e.g. displaced towards the occupants in case of a side collision} |
| B60R 2021/0435 | ... | {associated with the side or roof pillars} |
| B60R 2021/0442 | ... | {associated with the roof panel} |
| B60R 21/045 | ... | associated with the instrument panel or dashboard |
| B60R 21/05 | ... | associated with the steering wheel,{steering}hand lever or{steering}column(yieldable steering columns B62D 1/18) |
| B60R 21/055 | .. | Padded{or energy-absorbing}fittings,{e.g. seat belt anchors(sun visors B60J 3/00 ; head rests B60N 2/48)} |
| B60R 21/06 | .. | Safety nets, transparent sheets, curtains, or the like, e.g. between occupants and glass({ B60R 21/026 } , B60R 21/11 , B60R 21/12 , B60R 21/16 take precedence) |
| B60R 2021/065 | ... | {comprising energy absorbing mounting means} |
| B60R 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) |
| B60R 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)} |
| B60R 21/11 | .. | Overhead guards, e.g. against loads falling down({ specially adapted for fork-lift trucks B66F 9/07545)} |
| B60R 21/12 | .. | which protect the occupants against personal attack from the inside or the outside of the vehicle |
| B60R 21/13 | .. | Roll-over protection(electrical circuits for triggering safety arrangements B60R 21/01) |
| B60R 21/131 | ... | {Protective devices for drivers in case of overturning of tractors(means for preventing overturning or tipping of tractors B62D 49/08)} |
| B60R 2021/132 | ... | {Roll bars for convertible vehicles} |
| B60R 2021/134 | .... | {movable from a retracted to a protection position} |
| B60R 2021/135 | ..... | {automatically during an accident} |
| B60R 2021/137 | ... | {Reinforcement cages for closed vehicle bodies} |
| B60R 2021/138 | ... | {using external airbags} |
| B60R 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) |
| B60R 2021/161 | ... | {characterised by additional means for controlling deployment trajectory} |
| B60R 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} |

| | | |
|-----------------|-------|---|
| B60R 21/164 | ... | {combined with vehicle venting means for reducing or avoiding the passenger compartment overpressure during inflation} |
| B60R 2021/165 | ... | {reusable, e.g. in case of multiple collisions} |
| B60R 2021/167 | ... | {comprising anti-theft devices} |
| B60R 2021/168 | ... | {for restraining luggages} |
| B60R 21/18 | ... | the inflatable member formed as a belt or harness or combined with a belt or harness arrangement |
| B60R 21/20 | ... | Arrangements for storing inflatable members in their non-use or deflated condition; Arrangement or mounting of air bag modules or components |
| B60R 21/201 | .... | Packaging straps or envelopes for inflatable members |
| B60R 21/203 | .... | in steering wheels or steering columns |
| B60R 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} |
| B60R 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)} |
| B60R 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)} |
| B60R 21/205 | .... | in dashboards |
| B60R 21/206 | ..... | in the lower part of dashboards, e.g. for protecting the knees |
| B60R 21/207 | .... | in vehicle seats |
| B60R 21/2072 | ..... | {in children's seats} |
| B60R 2021/2074 | ..... | {in head rests} |
| B60R 2021/2076 | ..... | {Removable covers with tear seams} |
| B60R 2021/2078 | ..... | {in rear seats} |
| B60R 21/21 | .... | in vehicle side panels, e.g. doors(pillar mounted arrangements B60R 21/213) |
| B60R 21/213 | .... | in vehicle roof frames or pillars |
| B60R 21/214 | .... | in roof panels |
| B60R 21/215 | .... | characterised by the covers for the inflatable member{(B60R 21/2176 takes precedence)} |
| B60R 2021/21506 | ..... | {comprising tearing tabs, legs or the like for holding the lid before deployment} |
| B60R 2021/21512 | ..... | {the lid being displaced towards the occupant during deployment(B60R 2021/2161 , B60R 2021/21525 take precedence)} |
| B60R 2021/21518 | ..... | {comprising a lock unlocked during deployment} |
| B60R 2021/21525 | ..... | {the lid being fixed on the bag, or forming part of the bag wall, or the bag itself being used as wall liner} |
| B60R 2021/21531 | ..... | {using a stretchable wall liner} |
| B60R 2021/21537 | ..... | {characterised by hinges} |
| B60R 2021/21543 | ..... | {with emblems} |

| | | |
|-----------------|-------|--|
| B60R 21/2155 | ..... | with complex motion of the cover; Retraction under the lining during opening |
| B60R 21/216 | ..... | comprising tether means for limitation of cover motion during deployment |
| B60R 2021/2161 | ..... | {the cover being displaced towards the occupant during deployment} |
| B60R 2021/2163 | ..... | {with energy absorbing or elastic means} |
| B60R 21/2165 | ..... | characterised by a tear line for defining a deployment opening |
| B60R 2021/21652 | ..... | {the tearing being done or assisted by cutters} |
| B60R 2021/21654 | ..... | {the tearing being done or assisted by heating or pyrotechnic means} |
| B60R 21/21656 | ..... | {Steering wheel covers or similar cup-shaped covers} |
| B60R 21/21658 | ..... | {with integrated switches, e.g. horn switches} |
| B60R 21/217 | .... | Inflation fluid source retainers, e.g. reaction canisters; Connection of bags, covers, diffusers or inflation fluid sources therewith or together |
| B60R 21/2171 | ..... | {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 21/2176 takes precedence)} |
| B60R 2021/2172 | ..... | {the cover being connected to the surrounding part and to the module, e.g. floating mounts} |
| B60R 2021/2173 | ..... | {the module or part thereof being movably mounted on the vehicle} |
| B60R 2021/2175 | ..... | {using energy absorbing means} |
| B60R 21/2176 | ..... | {the air bag components being completely enclosed in a soft or semi-rigid housing or cover} |
| B60R 2021/2177 | ..... | {Reaction canisters characterised by material} |
| B60R 2021/2178 | ..... | {Plastic} |
| B60R 21/23 | ... | Inflatable members({ B60R 21/18 takes precedence ; connection to inflation fluid source retainers B60R 21/217 }) |
| B60R 21/231 | .... | characterised by their shape, construction or spatial configuration |

WARNING

Groups [B60R 21/2334](#) - [B60R 21/2346](#) are not complete, pending a reorganisation; see provisionally also group [B60R 21/233](#)

| | | |
|-----------------|-------|--|
| B60R 2021/23107 | ..... | {the bag being integrated in a multi-bag system} |
| B60R 2021/23115 | ..... | {with inflatable support compartments creating an internal suction volume} |
| B60R 2021/23123 | ..... | {Heat protection panels} |
| B60R 2021/2313 | ..... | {comprising sensitive compartments} |
| B60R 21/23138 | ..... | {specially adapted for side protection(B60R 21/23184 , B60R 21/232 take precedence)} |
| B60R 2021/23146 | ..... | {seat mounted} |
| B60R 2021/23153 | ..... | {specially adapted for rear seat passengers} |
| B60R 2021/23161 | ..... | {specially adapted for protecting at least two passengers, e.g. preventing them from hitting each other} |
| B60R 2021/23169 | ..... | {specially adapted for knee protection} |
| B60R 2021/23176 | ..... | {specially adapted for foot protection} |

| | | |
|-----------------|-------|--|
| B60R 21/23184 | ..... | {Tubular air bags connected to the vehicle at their two extremities} |
| B60R 2021/23192 | ..... | {Roof bags, i.e. protecting the occupant in a roll-over situation} |
| B60R 21/232 | ..... | Curtain-type airbags deploying mainly in a vertical direction from their top edge |
| B60R 21/233 | ..... | comprising a plurality of individual compartments; comprising two or more bag-like members, one within the other(B60R 21/232 takes precedence) |
| B60R 2021/23308 | ..... | {the individual compartments defining the external shape of the bag} |
| B60R 2021/23316 | ..... | {Inner seams, e.g. creating separate compartments or used as tethering means} |
| B60R 2021/23324 | ..... | {Inner walls crating separate compartments, e.g. communicating with vents} |
| B60R 2021/23332 | ..... | {using independent bags, one within the other} |
| B60R 21/2334 | ..... | Expansion regulating features |
| B60R 21/2338 | ..... | Tethers |
| B60R 2021/23382 | ..... | {Internal tether means} |
| B60R 2021/23384 | ..... | {having ends which are movable or detachable during deployment} |
| B60R 2021/23386 | ..... | {External tether means} |
| B60R 2021/23388 | ..... | {having ends which are movable or detachable during deployment} |
| B60R 21/2342 | ..... | Tear seams |
| B60R 21/2346 | ..... | Soft diffusers |
| B60R 21/235 | .... | characterised by their material |
| B60R 2021/23504 | ..... | {characterised by material} |
| B60R 2021/23509 | ..... | {Fabric} |
| B60R 2021/23514 | ..... | {coated fabric} |
| B60R 2021/23519 | ..... | {Resin(for coating fabric B60R 2021/23514)} |
| B60R 2021/23523 | ..... | {Composite(coated fabric B60R 2021/23514)} |
| B60R 2021/23528 | ..... | {Metal} |
| B60R 2021/23533 | ..... | {characterised by the manufacturing process} |
| B60R 2021/23538 | ..... | {Sewing} |
| B60R 2021/23542 | ..... | {Weaving} |
| B60R 2021/23547 | ..... | {one piece weaving} |
| B60R 2021/23552 | ..... | {Knitting} |
| B60R 2021/23557 | ..... | {Molding} |
| B60R 2021/23561 | ..... | {Sealing} |
| B60R 2021/23566 | ..... | {Nesting of panels, i.e. for material utilisation} |
| B60R 2021/23571 | ..... | {characterised by connections between panels} |
| B60R 2021/23576 | ..... | {Sewing} |
| B60R 2021/2358 | ..... | {Bonding} |
| B60R 2021/23585 | ..... | {Vulcanisation} |
| B60R 2021/2359 | ..... | {Welding} |

| | | |
|-----------------|-------|---|
| B60R 2021/23595 | ..... | {Sealing} |
| B60R 21/237 | .... | characterised by the way they are folded |
| B60R 2021/2375 | ..... | {Folding devices} |
| B60R 21/239 | .... | characterised by their venting means |
| B60R 2021/2395 | ..... | {comprising means to control the venting} |
| B60R 21/26 | ... | characterised by the inflation fluid source or means to control inflation fluid flow{(arrangement or mounting thereof to the vehicle B60R 21/20 ; blasting cartridges for producing gas under pressure in general F42B 3/04 ; Initiators or igniters therefor F42B 3/10)} |

WARNING

Groups [B60R 21/261](#) - [B60R 21/264](#) are not complete, pending a reorganisation; see provisionally also this group

| | | |
|-----------------|-------|--|
| B60R 21/26005 | .... | {the inflation fluid being transferred to the inflatable member by the mechanical deformation of the fluid container during an impact} |
| B60R 2021/26011 | .... | {using a filter through which the inflation gas passes} |
| B60R 2021/26017 | .... | {a cooling agent being added to the inflation fluid} |
| B60R 2021/26023 | .... | {for filling the bag with foam} |
| B60R 2021/26029 | .... | {Igniters} |
| B60R 2021/26035 | ..... | {triggered by mechanical means} |
| B60R 2021/26041 | ..... | {of elongated shape} |
| B60R 2021/26047 | ..... | {of film shape} |
| B60R 2021/26052 | ..... | {using fluid materials} |
| B60R 2021/26058 | .... | {using a combination of inflators} |
| B60R 2021/26064 | .... | {characterised by auto-ignition means} |
| B60R 2021/2607 | .... | {characterised by heating or heat insulating means, e.g. for use under extreme temperatures} |
| B60R 2021/26076 | .... | {characterised by casing} |
| B60R 2021/26082 | ..... | {Material} |
| B60R 2021/26088 | ..... | {Plastic} |
| B60R 2021/26094 | .... | {characterised by fluid flow controlling valves} |
| B60R 21/261 | .... | with means other than bag structure to diffuse or guide inflation fluid |
| B60R 2021/2612 | ..... | {Gas guiding means, e.g. ducts} |
| B60R 2021/2615 | ..... | {for diverting the gas into a plurality of bags} |
| B60R 2021/2617 | ..... | {Curtain bag nozzles} |
| B60R 21/262 | ..... | Elongated tubular diffusers, e.g. curtain-type |
| B60R 21/263 | .... | using a variable source, e.g. plural stage or controlled output(hybrid inflators B60R 21/272) |
| B60R 2021/2633 | ..... | {with a plurality of inflation levels} |
| B60R 2021/2636 | ..... | {The volume of gas being continuously adjustable} |
| B60R 21/264 | .... | using instantaneous generation of gas, e.g. pyrotechnic(B60R 21/268 takes precedence) |

| | | |
|----------------|-------|--|
| B60R 2021/2642 | ..... | {comprising a plurality of combustion chambers or sub-chambers} |
| B60R 21/2644 | ..... | {using only solid reacting substances, e.g. pellets, powder} |
| B60R 21/2646 | ..... | {the reacting substances being supported by the inflatable member walls, or by a flexible support within it} |
| B60R 2021/2648 | ..... | {comprising a plurality of combustion chambers or sub-chambers} |
| B60R 21/268 | .... | using instantaneous release of stored pressurized gas(B60R 21/26005 takes precedence)} |
| B60R 2021/2685 | ..... | {comprising a plurality of pressure chambers} |
| B60R 21/272 | ..... | with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators |
| B60R 2021/2725 | ..... | {using a fluid fuel gas generator} |
| B60R 21/274 | ..... | characterised by means to rupture or open the fluid source |

WARNING

This group is not complete, pending a reorganisation; see provisionally also group [B60R 21/268](#)

| | | |
|----------------|-------|--|
| B60R 21/276 | .... | 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)} |
| B60R 2021/2765 | ..... | {comprising means to control the venting} |
| B60R 21/30 | .... | with means to draw ambient air into the flow line and mix such air with the inflation fluid |
| B60R 21/33 | ... | Arrangements for non-electric triggering of inflation(electrical circuits for triggering safety arrangements B60R 21/01) |
| B60R 2021/335 | .... | {Connections between collision detecting means and inflators using pyrothechnic transmission lines} |
| B60R 21/34 | . | Protecting non-occupants of a vehicle, e.g. pedestrians(B60R 19/02 takes precedence)} |
| B60R 2021/343 | .. | {using deformable body panel, bodywork or components} |
| B60R 2021/346 | .. | {means outside vehicle body} |
| B60R 21/36 | .. | using airbags |
| B60R 21/38 | .. | using means for lifting bonnets |

B60R 22/00 **Safety belts or body harnesses in vehicles**([safety belts or body harnesses in general A62B 35/00](#))

| | | |
|---------------|---|---|
| B60R 22/001 | . | {Knee, leg or head belts} |
| B60R 2022/003 | . | {for restraining detainees} |
| B60R 2022/005 | . | {for restraining luggages} |
| B60R 2022/006 | . | {Sleeve or tubular members enveloping the seat belt for enhancing comfort or protection} |
| B60R 2022/008 | . | {Belts; Fixing thereof specially adapted for pregnant users} |
| B60R 22/02 | . | Semi-passive restraint systems, e.g. systems applied or removed automatically but not both;{ Manual restraint systems (knee, leg or head belts B60R 22/001 ; devices for releasing in an emergency, remote or automatic unbuckling devices B60R 22/32)} |

- B60R 22/021 .. {Means for holding the tongue or buckle in a non-use position, e.g. for easy access by the user}
- B60R 22/022 .. {with means for facilitating access to rear seats in two-door cars}
- B60R 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)}
- B60R 22/024 ... {Adaptations for use by small passengers, e.g. children([B60R 22/20](#) takes precedence; using belt anti-slip devices [B60R 22/30](#))}
- B60R 22/025 ... {Adaptations for use with children seats or luggages}
- B60R 22/026 ... {at least two ends of the belt being retractable after use}
- B60R 22/027 .. {Four-point seat belt systems, e.g. with the two upper points connected together}
- B60R 22/028 .. {specially adapted for use in sleeping position, e.g. for reclining seats}
- B60R 22/029 .. {Belt storage; Devices or systems for controlling winding up of unused seat belt}
- B60R 22/03 .. Means for presenting the belt or part thereof to the wearer,{e.g. foot-operated}
- B60R 22/04 . Passive restraint systems, i.e. systems both applied and removed automatically, e.g. by movement of the vehicle door
- B60R 22/06 .. having the belt or harness connected to a member slidable in a vehicle-mounted track
- B60R 22/08 .. having the belt retractor mounted on or in a vehicle closure, e.g. the door
- B60R 22/10 . specially adapted for children or animals([children`s seats B60N 2/24](#))

NOTE

Groups [B60R 22/02](#) {[B60R 22/022](#)} to [B60R 22/08](#) , [B60R 22/18](#) to [B60R 22/48](#) take precedence over group [B60R 22/10](#)

- B60R 22/105 .. {for children(adaptation of children`s seats for seat belts [B60N 2/265](#) , [B60N 2/2803](#))}
- B60R 22/12 . Construction of belts or harnesses([B60R 21/18](#) takes precedence; { woven fabrics for safety belts [D03D 1/0005](#) })
- B60R 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](#))}
- B60R 22/16 .. using belts which become permanently deformed, i.e. one time use
- B60R 22/18 . Anchoring devices
- B60R 22/1806 .. {for buckles}
- B60R 22/1812 .. {Connections between seat belt and buckle tongue}
- B60R 22/1818 .. {Belt guides}
- B60R 22/1825 ... {using rollers}
- B60R 22/1831 ... {comprising a slotted plate sliding in its plane, e.g. inside circular guides}
- B60R 22/1837 ... {comprising a universal mounting. e.g. spherical or cardan-type}
- B60R 22/1843 ... {comprising an elongated sleeve}
- B60R 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](#))}
- B60R 22/1855 ... {the means being sensitive to belt tension}

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

- B60R 22/1951 ... {characterised by arrangements in vehicle or relative to seat belt}
- B60R 22/1952 ... {Transmission of tensioning power by cable; Return motion locking means therefor}
- B60R 22/1953 {the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash}
- B60R 22/1954 ... {characterised by fluid actuators, e.g. pyrotechnic gas generators([actuating a cable B60R 22/1952](#))}
- B60R 22/1955 {Linear actuators}
- B60R 22/1956 {Mechanical triggering means therefor([also adapted for air bag inflators B60R 21/33](#))}
- B60R 22/1957 ... {characterised by electric actuators}
- B60R 22/1958 ... {characterised by spring actuators([B60R 22/1953 takes precedence](#))}
- B60R 22/20 .. adjustable in position, e.g. in height
- B60R 22/201 ... {with the belt anchor connected to a slider movable in a vehicle-mounted track([for passive restraint systems B60R 22/06](#))}
- B60R 22/202 {the slider comprising spring-actuated locking means([B60R 22/205 takes precedence](#))}
- B60R 22/203 {the locking means being movably mounted on the slider}
- B60R 22/205 {the slider comprising emergency actuated locking means}
- B60R 22/206 ... {Adjustable stop members for restraint systems comprising belt anchor vehicle mounted tracks,e.g. for passive seat belts}
- B60R 22/207 ... {Horizontally or transversally adjustable}
- B60R 22/208 ... {by automatic or remote control means}
- B60R 22/22 .. secured to the vehicle floor
- B60R 22/24 .. secured to the side, door, or roof of the vehicle
- B60R 22/26 .. secured to the seat
- B60R 22/263 ... {Front seats}
- B60R 22/266 ... {Rear seats, e.g. benches}
- B60R 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](#))}
- B60R 22/281 .. {for buckles}
- B60R 22/282 .. {using fluids or vico-elastic materials}

- B60R 2022/283 .. {using tearing or scoring of material}
- B60R 2022/284 .. {using electric or magnetic braking means}
- B60R 2022/285 .. {using friction surfaces}
- B60R 2022/286 .. {using deformation of material}
- B60R 2022/287 ... {of torsion rods or tubes}
- B60R 2022/288 .. {with means to adjust or regulate the amount of energy to be absorbed}
- B60R 2022/289 .. {Energy-absorption curves}
- B60R 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](#))}
- B60R 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](#))}
- B60R 22/321 .. {using electric means}
- B60R 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 temporisation}
- B60R 22/325 .. {using remote control means([B60R 22/321](#) , [B60R 22/322](#) take precedence)}
- B60R 2022/327 .. {using pyrotechnic means}
- B60R 2022/328 .. {comprising means for cutting the belt}
- B60R 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](#))}
- B60R 2022/3402 .. {Retractor casings; Mounting thereof}
- B60R 22/3405 .. {of the non-rotary type}
- B60R 22/3408 .. {without locking means([B60R 22/3405](#) takes precedence)}
- B60R 22/341 .. {comprising energy-absorbing means}
- B60R 22/3413 ... {operating between belt reel and retractor frame([B60R 22/4676](#) takes precedence)}
- B60R 22/3416 .. {Unlocking devices for retractors([B60R 22/3405](#) takes precedence)}
- B60R 2022/3419 .. {with end lock preventing means}
- B60R 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}
- B60R 2022/3424 .. {Multi-spool or multi-belt retractors}
- B60R 2022/3427 .. {Seat belt connection on reels}
- B60R 22/343 .. with electrically actuated locking means{([B60R 22/3405](#) takes precedence)}
- B60R 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)}
- B60R 2022/3475 ... {having means for acting directly upon the belt, e.g. by clamping or friction}
- B60R 22/35 ... the locking means being automatically actuated
- B60R 22/353 in response to belt movement when a wearer applies the belt
- B60R 2022/3535 {comprising anti-cinch devices}
- B60R 22/357 in response to fastening of the belt buckle
- B60R 22/36 .. self-locking in an emergency{([B60R 22/3405](#)) , [B60R 22/343](#) take precedence)}

| | | |
|----------------|-------|--|
| B60R 22/38 | ... | responsive only to belt movement |
| B60R 2022/385 | .... | {with adjustable sensitivity} |
| B60R 22/40 | ... | responsive only to vehicle movement |
| B60R 2022/401 | .... | {with adjustable sensor} |
| B60R 2022/402 | ..... | {automatically adjustable to keep a vertical position, e.g. irrespective of seat or vehicle tilting} |
| B60R 2022/403 | ..... | {using externally controlled means, e.g. linked with seat back hinge} |
| B60R 2022/404 | .... | {with remote sensor, e.g. for mounting on seat} |
| B60R 22/405 | ... | responsive to belt movement and vehicle movement |
| B60R 22/41 | ... | with additional means for preventing locking{during unwinding}under predetermined conditions |
| B60R 22/415 | ... | with additional means allowing a permanent locking of the retractor during the wearing of the belt |
| B60R 22/42 | ... | having means for acting directly upon the belt, e.g. by clamping or friction{(not combined with the retractor B60R 22/185)} |
| B60R 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)} |
| B60R 2022/4406 | ... | {Spring shapes; Spring characteristic; Springs with adjustable anchoring means} |
| B60R 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} |
| B60R 2022/442 | ... | {using one spring and one additional retraction device in parallel} |
| B60R 2022/4426 | .... | {the additional retraction device being a second spring} |
| B60R 2022/4433 | ..... | {externally controlled} |
| B60R 2022/444 | .... | {the additional retraction device being an electric actuator} |
| B60R 2022/4446 | ... | {using one spring and one additional retraction device in series} |
| B60R 2022/4453 | .... | {the additional retraction device being a second spring} |
| B60R 2022/446 | ..... | {with external control means} |
| B60R 2022/4466 | .... | {the additional retraction device being an electric actuator} |
| B60R 2022/4473 | ... | {using an electric retraction device(combined with a spring B60R 2022/444 , B60R 2022/4466)} |
| B60R 2022/448 | ... | {using a fluid actuated retraction device} |
| B60R 2022/4486 | ... | {for cancelling the belt tension} |
| B60R 2022/4493 | ... | {for braking the belt reel using friction surfaces or the like} |
| B60R 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 } |
| B60R 22/4604 | ... | {characterised by arrangements in vehicle or relative to seat belt} |
| B60R 2022/4609 | .... | {using a plurality of tensioners} |
| B60R 2022/4614 | .... | {one pretensioner acting on a plurality of belts} |
| B60R 22/4619 | ... | {Transmission of tensioning power by cable, e.g. using a clutch on reel side} |

| | | |
|--------------|-------|---|
| B60R 22/4623 | .... | {the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash} |
| B60R 22/4628 | ... | {characterised by fluid actuators, e.g. pyrotechnic gas generators(actuating a cable B60R 22/4619)} |
| B60R 22/4633 | .... | {Linear actuators, e.g. comprising a piston moving along reel axis and rotating along its own axis} |
| B60R 22/4638 | ..... | {comprising a piston moving along or in parallel to the reel axis} |
| B60R 22/4642 | .... | {the gas directly propelling a flexible driving means, e.g. a plurality of successive masses, in a tubular chamber} |
| B60R 22/4647 | ..... | {the driving means being a belt, a chain or the like} |
| B60R 22/4652 | .... | {Mechanical triggering means therefor(also adapted for air bag inflators B60R 21/33)} |
| B60R 22/4657 | .... | {comprising a plurality of charges} |
| B60R 22/4661 | .... | {comprising venting means, e.g. for avoiding overpressure in case of fire or for allowing return motion with energy absorption} |
| B60R 22/4666 | ... | {characterised by electric actuators} |
| B60R 22/4671 | ... | {characterised by spring actuators(B60R 22/4623 takes precedence)} |
| B60R 22/4676 | ... | {comprising energy-absorbing means operating between belt reel and retractor frame} |
| B60R 22/468 | ... | {characterised by clutching means between actuator and belt reel} |
| B60R 22/4685 | ... | {with means to adjust or regulate the tensioning force in relation to external parameters} |
| B60R 22/469 | ... | {reusable} |
| B60R 22/4695 | ... | {without winding function during normal use} |
| B60R 22/48 | . | Control systems, alarms, or interlock systems, for the correct application of the belt or harness |
| B60R 22/4808 | .. | {Sensing means arrangements therefor} |
| B60R 22/4816 | ... | {for sensing locking of buckle} |
| B60R 22/4825 | ... | {for sensing amount of belt wound on retractor} |
| B60R 22/4833 | ... | {for sensing locking of retractor} |
| B60R 22/4841 | ... | {for sensing belt tension} |
| B60R 22/485 | ... | {for sensing belt anchor position, belt orientation, or the like} |
| B60R 22/4858 | ... | {for sensing pressure on seat} |
| B60R 22/4866 | .. | {Displaying or indicating arrangements thereof} |
| B60R 22/4875 | ... | {on vehicle exterior} |
| B60R 22/4883 | .. | {Interlock systems} |
| B60R 22/4891 | ... | {preventing use of the vehicle when the seatbelt is not fastened} |

B60R 25/00 **Fittings or systems for preventing or indicating unauthorised use or theft of vehicles**([locks for vehicles E05B 77/00-E05B 85/00](#))

WARNING

Subgroups of [B60R 25/00](#) corresponding to IPC2013.01 are not complete pending the completion of a reclassification; see also [B60R 25/00](#) and its other subgroups

- B60R 25/001 . {Anti-theft devices acting on jacking means or props, e.g. for trailers}
- B60R 25/002 . {Locking of control actuating or transmitting means(of steering mechanism [B60R 25/02](#))}
- B60R 25/003 . . {locking of control actuating means}
- B60R 25/005 . . . {of foot actuated control means(rods connecting pedals and steering wheels [B60R 25/0221](#))}
- B60R 25/006 {using means preventing access, e.g. boxes, shutters}
- B60R 25/007 . . . {of hand actuated control means}
- B60R 25/008 {comprising means for locking two or more control means together, e.g. hand-brake handle and gear shift lever}
- B60R 25/01 . operating on vehicle systems or fittings, e.g. on doors, seats or windscreens
- B60R 25/012 . . {Airbags triggered}
- B60R 25/014 . . {comprising means for locking the seat or parts thereof in a driving prevention position}
- B60R 25/016 . . {comprising means for shuttering the windscreen or part thereof}
- B60R 25/018 . . {Thief traps}
- B60R 25/02 . . operating on the steering mechanism
- B60R 25/021 . . . restraining movement of the steering column or steering wheel hub, e.g. restraining means controlled by ignition switch
- B60R 25/02102 {with supplementary safety device preventing operation of the starter of an engine already running}
- B60R 25/02105 {Arrangement of the steering column thereof}
- B60R 25/02107 {comprising overload clutching means}
- B60R 25/0211 {comprising a locking member radially and linearly moved towards the steering column}
- B60R 25/02113 {manually actuated, e.g. using removable locking means}
- B60R 25/02115 {key actuated}
- B60R 25/02118 {with linear bolt motion parallel to the lock axis}
- B60R 25/02121 {comprising safety devices avoiding locking until removal of the key}
- B60R 25/02123 {using an axially slidable lock cylinder}
- B60R 25/02126 {with linear bolt motion perpendicular to the lock axis}
- B60R 25/02128 {comprising safety devices avoiding locking until removal of the key}
- B60R 25/02131 {by using an axially slidable lock cylinder}
- B60R 25/02134 {comprising a locking member axially moved along the steering column}
- B60R 25/02136 {manually actuated, e.g. using removable locking members}
- B60R 25/02139 {key actuated}
- B60R 25/02142 {comprising externally controlled safety devices for preventing locking during vehicle running condition}

| | | |
|----------------|-------|--|
| B60R 25/02144 | ..... | {interlocked with gear box or gear lever} |
| B60R 25/02147 | .... | {comprising a locking member having other than linear, axial or radial motion, e.g. rotatable; Steering column locking using balls, rollers or the like} |
| B60R 25/0215 | .... | using electric means, e.g. electric motors or solenoids |
| B60R 25/02153 | ..... | {comprising a locking member radially and linearly moved towards the steering column} |
| B60R 25/02156 | ..... | {comprising a locking member axially moved along the steering column} |
| B60R 25/022 | ... | operating on the steering wheel, e.g. bars locked to the steering wheel rim(B60R 25/021 takes precedence) |
| B60R 25/0221 | .... | {restraining means joining the steering wheel with another part of the car, e.g. pedals} |
| B60R 25/0222 | .... | {by disjoining steering wheel and column} |
| B60R 25/0224 | .... | {restraining of steering wheel by collapsing against column} |
| B60R 25/0225 | .... | {using a rod locked on the steering wheel rim(B60R 25/0221 takes precedence)} |
| B60R 25/0227 | .... | {using means preventing access, e.g. boxes enclosing the steering wheel(B60R 25/014 takes precedence)} |
| B60R 25/0228 | .... | {comprising a locking bolt or fork slidable between or around the steering wheel spokes} |
| B60R 25/023 | ... | countermeasures against the physical destruction of the steering lock |
| B60R 25/04 | .. | operating on the propulsion system, e.g. engine or drive motor |
| B60R 2025/0405 | ... | {from the external} |
| B60R 2025/041 | ... | {Preventing use of engine operating on the fluid supply} |
| B60R 2025/0415 | ... | {with safe immobilisation} |

NOTE

Not complete pending reclassification; see also other subgroups of
[B60R 25/00](#)

WARNING

| | | |
|-------------|-------|---|
| B60R 25/042 | ... | operating on the fuel supply |
| B60R 25/043 | ... | by blocking the exhaust |
| B60R 25/044 | ... | by limiting or blocking the air supply |
| B60R 25/045 | ... | by limiting or cutting the electrical supply to the propulsion unit |
| B60R 25/06 | ... | operating on the vehicle transmission |
| B60R 25/063 | ..... | {Locking of foot actuated control actuating means} |
| B60R 25/066 | ..... | {Locking of hand actuated control actuating means} |
| B60R 25/08 | .. | operating on brakes or brake system |
| B60R 25/083 | ... | {Locking of foot-actuated control actuating means} |
| B60R 25/086 | ... | {Locking of hand-actuated control actuating means} |
| B60R 25/09 | .. | by restraining wheel rotation, e.g. wheel clamps |
| B60R 25/093 | ... | {comprising ground-engaging means} |

| | | |
|--------------|------|---|
| B60R 25/096 | ... | {comprising means for deflating tyres} |
| B60R 25/10 | . | actuating a signalling device |
| B60R 25/1001 | .. | {Alarm systems associated with another car fitting or mechanism, e.g. door lock or knob, pedals(features related to the general power supply B60R 25/1018)} |
| B60R 25/1003 | .. | {Alarm systems characterised by arm or disarm features} |
| B60R 25/1004 | .. | {Alarm systems characterised by the type of sensor, e.g. current sensing means(using door lock sensors B60R 25/1001)} |
| B60R 25/1006 | ... | {Mechanical sensors, e.g. pendulums(B60R 25/101 takes precedence)} |
| B60R 25/1007 | .... | {comprising associated circuitry} |
| B60R 25/1009 | ... | {Sonic sensors; Signal treatment therefor} |
| B60R 25/101 | ... | {Fuel level sensors} |
| B60R 25/1012 | ... | {Zone surveillance means, e.g. parking lots, truck depots} |
| B60R 25/1013 | .. | {Alarm systems characterised by the type of warning signal, e.g. visual, audible} |
| B60R 25/1015 | ... | {Signal coming from the exhaust} |
| B60R 25/1016 | ... | {Remote signals alerting owner or authorities, e.g. radio signals} |
| B60R 25/1018 | .. | {Alarm systems characterised by features related to the general power supply} |
| B60R 25/102 | .. | a signal being sent to a remote location, e.g. a radio signal being transmitted to a police station, a security company or the owner |
| B60R 25/1025 | ... | {preventing jamming or interference of said signal} |
| B60R 25/104 | .. | characterised by the type of theft warning signal, e.g. visual or audible signals with special characteristics |
| B60R 25/1045 | ... | {Signal coming from the exhaust} |
| B60R 25/20 | . | Means to switch the anti-theft system on or off |
| B60R 25/2009 | .. | {Antitheft state indicator} |
| B60R 25/2018 | .. | {Central base unlocks or authorises unlocking} |
| B60R 25/2027 | .. | {with data signals passing through the human body} |
| B60R 25/2036 | .. | {by using the door logic and door and engine unlock means} |
| B60R 25/2045 | .. | {by hand gestures} |
| B60R 25/2054 | .. | {by foot gestures} |
| B60R 25/2063 | .. | {Ignition switch geometry} |
| B60R 25/2072 | .. | {with means for preventing jamming or interference of a remote switch control signal} |
| B60R 25/2081 | .. | {combined with personal settings of other vehicle devices, e.g. mirrors, seats, steering wheels} |
| B60R 25/209 | .. | {Remote starting of engine} |
| B60R 25/21 | .. | using hidden switches |
| B60R 25/22 | .. | using mechanical identifiers |
| B60R 25/225 | ... | {key in lock presence switch} |
| B60R 25/23 | .. | using manual input or alphanumerical codes |
| B60R 25/24 | .. | using electronic identifiers containing a code not memorised by the user |
| B60R 25/241 | ... | {whereby access privileges are related to the identifiers} |
| B60R 25/243 | ... | {with more than one way to gain access} |

| | |
|---------------------|---|
| B60R 25/245 | ... {where the antenna reception area plays a role} |
| B60R 25/246 | ... {characterised by the challenge triggering} |
| B60R 25/248 | ... {Electronic key extraction prevention} |
| B60R 25/25 | .. using biometry |
| B60R 25/252 | ... {Fingerprint recognition} |
| B60R 25/255 | ... {Eye recognition} |
| B60R 25/257 | ... {Voice recognition} |
| B60R 25/30 | . Detection related to theft or to other events relevant to anti-theft systems |
| B60R 25/302 | .. {using recording means, e.g. black box} |
| B60R 25/305 | .. {using a camera} |
| B60R 25/307 | .. {using data concerning maintenance or configuration} |
| B60R 25/31 | .. of human presence inside or outside the vehicle |
| B60R 25/32 | .. of vehicle dynamic parameters, e.g. speed or acceleration |
| B60R 25/33 | .. of global position, e.g. by providing GPS coordinates |
| B60R 25/34 | .. of conditions of vehicle components, e.g. of windows, door locks or gear selectors |
| B60R 25/40 | . {2013.01}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 |
| B60R 25/403 | .. {Power supply in the vehicle} |
| B60R 25/406 | .. {Power supply in the remote key} |
| B60R 99/00 | Subject matter not provided for in other groups of this subclass |
| B60R 2099/005 | . {Protections against martens or rodents} |
| B60R 2225/00 | Means indicating the functioning state of the alarm system, e.g. indicating arming, using leds |
| B60R 2300/00 | Details of viewing arrangements using cameras and displays, specially adapted for use in a vehicle |
| B60R 2300/10 | . characterised by the type of camera system used |
| B60R 2300/101 | .. using cameras with adjustable capturing direction |
| B60R 2300/102 | .. using 360 degree surveillance camera system |
| B60R 2300/103 | .. using camera systems provided with artificial illumination device, e.g. IR light source |
| B60R 2300/105 | .. using multiple cameras |
| B60R 2300/106 | .. using night vision cameras |
| B60R 2300/107 | .. using stereoscopic cameras |
| B60R 2300/108 | .. using 'non-standard' camera systems, e.g. camera sensor used for additional purposes i.a. rain sensor, camera sensor split in multiple image areas |
| B60R 2300/20 | . characterised by the type of display used |
| B60R 2300/202 | .. displaying a blind spot scene on the vehicle part responsible for the blind spot |
| B60R 2300/205 | .. using a head-up display |
| B60R 2300/207 | .. using multi-purpose displays, e.g. camera image and navigation or video on same display |

- B60R 2300/30 . characterised by the type of image processing
- B60R 2300/301 . . combining image information with other obstacle sensor information, e.g. using RADAR/LIDAR/SONAR sensors for estimating risk of collision
- B60R 2300/302 . . combining image information with GPS information or vehicle data, e.g. vehicle speed, gyro, steering angle data
- B60R 2300/303 . . using joined images, e.g. multiple camera images
- B60R 2300/304 . . using merged images, e.g. merging camera image with stored images
- B60R 2300/305 . . . merging camera image with lines or icons
- B60R 2300/306 . . using a re-scaling of images
- B60R 2300/307 . . virtually distinguishing relevant parts of a scene from the background of the scene
- B60R 2300/308 . . . by overlaying the real scene, e.g. through a head-up display on the windscreen
- B60R 2300/40 . characterised by the details of the power supply or the coupling to vehicle components
- B60R 2300/402 . . Image calibration
- B60R 2300/404 . . triggering from stand-by mode to operation mode
- B60R 2300/406 . . using wireless transmission
- B60R 2300/408 . . using a data bus
- B60R 2300/50 . characterised by the display information being shared, e.g. external display, data transfer to other traffic participants or centralised traffic controller
- B60R 2300/60 . characterised by monitoring and displaying vehicle exterior scenes from a transformed perspective
- B60R 2300/602 . . with an adjustable viewpoint
- B60R 2300/605 . . . the adjustment being automatic
- B60R 2300/607 . . from a bird's eye viewpoint
- B60R 2300/70 . characterised by an event-triggered choice to display a specific image among a selection of captured images
- B60R 2300/80 . characterised by the intended use of the viewing arrangement
- B60R 2300/8006 . . for monitoring and displaying scenes of vehicle interior, e.g. for monitoring passengers or cargo
- B60R 2300/8013 . . . for child monitoring
- B60R 2300/802 . . for monitoring and displaying vehicle exterior blind spot views
- B60R 2300/8026 . . . in addition to a rear-view mirror system
- B60R 2300/8033 . . for pedestrian protection
- B60R 2300/804 . . for lane monitoring
- B60R 2300/8046 . . for replacing a rear-view mirror system
- B60R 2300/8053 . . for bad weather conditions or night vision
- B60R 2300/806 . . for aiding parking
- B60R 2300/8066 . . for monitoring rearward traffic
- B60R 2300/8073 . . for vehicle security, e.g. parked vehicle surveillance, burglar detection
- B60R 2300/808 . . for facilitating docking to a trailer
- B60R 2300/8086 . . for vehicle path indication
- B60R 2300/8093 . . for obstacle warning

B60R 2325/00

B60R 2325/10

B60R 2325/101

B60R 2325/103

B60R 2325/105

B60R 2325/106

B60R 2325/108

B60R 2325/20

B60R 2325/202

B60R 2325/205

B60R 2325/207

B60R 2325/30

B60R 2325/302

B60R 2325/304

B60R 2325/306

B60R 2325/308

B60R 2325/40

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
- . Vehicles applying the vehicle anti-theft devices
 - .. Airplanes
 - .. Boats
 - .. Motorcycles
 - .. Industrial vehicles
- . Programmable elements