

**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](#)

**Guidance heading:****B60R 1/00**

**Optical viewing arrangements** ( { house mirrors and spies [A47G 1/00](#) ; } ant glare 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 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 3/00B; 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
  - 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
  - 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 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 7/08 H](#); } 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 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 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 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 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 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](#) , [E05B 65/38](#) ) }**
- 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 <a href="#">B60K 37/00</a> , <a href="#">B60Q 3/04</a> ; for indicating emergencies <a href="#">B60Q 1/52</a> ; registering or indicating the working of vehicles <a href="#">G07C 5/00</a> ; measuring distance <a href="#">G01C</a> , e.g. combinations of speed and distance <a href="#">G01C 23/00</a> ; engine indicators <a href="#">G01L</a> ; measuring speed or acceleration <a href="#">G01P</a> ; brake control systems <a href="#">B60T</a> ; monitoring tyres <a href="#">B60C 23/00</a> ; indicating overspeed <a href="#">B60K 31/00</a> ) } |
| 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 <a href="#">G01W</a> ) }   |
| 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 <a href="#">B60C 23/00</a> ) }  |
| B60R 16/03        | ..    | for supply of electrical power to vehicle subsystems { or for ( circuit arrangements for charging batteries <a href="#">H02J 7/00</a> ) }  |
| 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 <a href="#">G08C 15/00</a> ; multiplexing for electrical communication in general <a href="#">H04J</a> ) }  |
| B60R 16/033       | ...   | characterised by the use of electrical cells or batteries ( for propulsion puposes <a href="#">B60K 1/04</a> ; supplying batteries to, or removing batteries from, vehicles <a href="#">B60S 5/06</a> ; testing of charge state <a href="#">G01R 31/36</a> )   |
| 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 <a href="#">G10L</a> ) }  |
| B60R 16/0376      | ...   | { Gear-shift lever position ( indicating position of controlling members in general <a href="#">G05G 1/00</a> ) }  |
| B60R 16/04        | ..    | Arrangement of batteries   |
| B60R 16/06        | ..    | for removing electrostatic charges ( carrying-off electrostatic charges in general <a href="#">H05F 3/00</a> )   |
| B60R 16/08        | .     | fluid  |
| <b>B60R 17/00</b> |       | <b>Arrangements or adaptations of lubricating systems or devices ( lubricating in general <a href="#">F16N</a> )</b>   |
| B60R 17/02        | .     | Systems, e.g. central lubrication systems  |
| <b>B60R 19/00</b> |       | <b>Wheel guards ; Radiator guards, { e.g. grilles } ; Obstruction removers ; Fittings damping bouncing force in collisions ( { reinforcement elements for side doors <a href="#">B60J 5/0412</a> ; } mudguards <a href="#">B62D</a> )</b>  |



- 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 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 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 19/26 . . . comprising yieldable mounting means ( { [19/38](#) takes precedence; } springs, shock absorbers, or means for damping vibrations per se [F16F](#) )
- 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 { ( [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 19/50 . . . with lights or registration plates
- B60R 19/52 . Radiator or grille guards { ; Radiator grilles ( cooling aspects [B60K 11/08](#) ) }
- 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 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 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 21/0132      ...      responsive to vehicle motion parameters { ,e.g. to vehicle longitudinal or transversal deceleration or speed value }
- B60R 21/0134      ...      responsive to imminent contact with an obstacle { ,e.g. using radar systems }
- B60R 21/0136      ...      responsive to actual contact with an obstacle { ,e.g. to vehicle deformation, bumper displacement or bumper velocity relative to the vehicle }
- B60R 21/015      ..      including means for detecting the presence or position of passengers, passenger seats or child seats, e.g. for disabling triggering { ; Including means for controlling the safety arrangement actuation parameters, e.g. rate, speed or timing of airbag inflation, in relation to external conditions, e.g. temperature, crash strength, occupant position, seat belt use or the like; Inhibition means for cases of useless or dangerous conditions, e.g. passengers out of position }
- 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 21/026      ..      { Rigid partitions inside vehicles, e.g. between passengers and load compartments ( [B60R 21/12](#) takes precedence ) }
- 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 21/04      ..      Padded linings for the vehicle interior; { Energy absorbing structures associated with padded or non-padded linings }

|              |       |  |
|--------------|-------|--|
| B60R 21/0428 | ...   | { associated with the side doors or panels, e.g. displaced towards the occupants in case of a side collision }   |
| 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 <a href="#">B62D 1/18</a> )  |
| B60R 21/055  | ..    | Padded { or energy-absorbing } fittings, { e.g. seat belt anchors ( sun visors <a href="#">B60J 3/00</a> ; head rests <a href="#">B60N 2/48</a> ) }  |
| B60R 21/06   | ..    | Safety nets, transparent sheets, curtains, or the like, e.g. between occupants and glass ( { <a href="#">B60R 21/026</a> } , <a href="#">B60R 21/11</a> , <a href="#">B60R 21/12</a> , <a href="#">B60R 21/16</a> take precedence )  |
| B60R 21/08   | ...   | { automatically } movable from an inoperative to an operative position, e.g. in a collision ( electrical circuits for triggering safety arrangements <a href="#">B60R 21/01</a> )  |
| 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, <a href="#">B60T 7/065</a> ) }              |
| B60R 21/11   | ..    | Overhead guards, e.g. against loads falling down { ( specially adapted for fork-lift trucks <a href="#">B66F 9/07545</a> ) }   |
| 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 <a href="#">B60R 21/01</a> )   |
| B60R 21/131  | ...   | { Protective devices for drivers in case of overturning of tractors ( means for preventing overturning or tipping of tractors <a href="#">B62D 49/08</a> ) }   |
| 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 <a href="#">A41D 13/018</a> ; } connection of valves to inflatable elastic bodies <a href="#">B60C 29/00</a> ) |
| B60R 21/164  | ...   | { combined with vehicle venting means for reducing or avoiding the passenger compartment overpressure during inflation }   |
| 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 <a href="#">B60R 21/21656</a> ; assembling of modules <a href="#">B60R 21/217</a> ) }   |
| 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 <a href="#">B60R 21/21658</a> ) }                                       |
| 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 21/21    | ....  | in vehicle side panels, e.g. doors ( <a href="#">pillar mounted arrangements B60R 21/213</a> )  |
| 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 { ( <a href="#">B60R 21/2176 takes precedence</a> ) }   |
| 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 21/2165  | ..... | characterised by a tear line for defining a deployment opening  |
| B60R 21/21656 | ..... | { <a href="#">Steering wheel covers or similar cup-shaped covers</a> }  |
| B60R 21/21658 | ..... | { <a href="#">with integrated switches, e.g. horn switches</a> }  |
| 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  | ..... | { <a href="#">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 ( <a href="#">B60R 21/2176 takes precedence</a> )</a> } |
| B60R 21/2176  | ..... | { <a href="#">the air bag components being completely enclosed in a soft or semi-rigid housing or cover</a> }   |
| B60R 21/23    | ...   | Inflatable members ( { <a href="#">B60R 21/18 takes precedence</a> ; connection to inflation fluid source retainers <a href="#">B60R 21/217</a> } )   |
| 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 21/23138 | ..... | { <a href="#">specially adapted for side protection ( <a href="#">B60R 21/23184</a> , <a href="#">B60R 21/232</a> take precedence )</a> }  |
| B60R 21/23184 | ..... | { <a href="#">Tubular air bags connected to the vehicle at their two extremities</a> }   |
| 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 ( <a href="#">B60R 21/232 takes precedence</a> )   |
| B60R 21/2334  | ..... | Expansion regulating features  |
| B60R 21/2338  | ..... | Tethers  |
| B60R 21/2342  | ..... | Tear seams   |
| B60R 21/2346  | ..... | Soft diffusers   |
| B60R 21/235   | ....  | characterised by their material  |
| B60R 21/237   | ....  | characterised by the way they are folded   |
| B60R 21/239   | ....  | characterised by their venting means   |
| B60R 21/26    | ...   | characterised by the inflation fluid source or means to control inflation fluid flow { ( <a href="#">arrangement or mounting thereof to the vehicle B60R 21/20</a> ; <a href="#">blasting cartridges for producing gas under pressure in general F42B 3/04</a> ; <a href="#">Initiators or igniters therefor F42B 3/10</a> ) } |

**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 21/261 . . . . with means other than bag structure to diffuse or guide inflation fluid
- 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 21/264 . . . . using instantaneous generation of gas, e.g. pyrotechnic ( [B60R 21/268](#) takes precedence )
- 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 21/268 . . . . using instantaneous release of stored pressurized gas { ( [B60R 21/26005](#) takes precedence ) }
- B60R 21/272 . . . . . with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators
- 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 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 21/34 . . Protecting non-occupants of a vehicle, e.g. pedestrians { ( [B60R 19/02](#) takes precedence ) }
- 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 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 22/022 . . { 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 22/03 . . 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 22/185 . . 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 <a href="#">B60R 21/32</a> ) }   |
| B60R 22/1958 | ...   | { characterised by spring actuators ( <a href="#">B60R 22/1953</a> 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 <a href="#">B60R 22/06</a> ) }   |
| B60R 22/202  | ....  | { the slider comprising spring-actuated locking means ( <a href="#">B60R 22/205</a> 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 22/22   | ..    | 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 22/28   | .     | incorporating energy-absorbing devices { ( belt anchors provided with energy-absorbing means for protecting the occupants in case of physical contact therewith <a href="#">B60R 21/055</a> ; belt retractors comprising energy-absorbing means <a href="#">B60R 22/341</a> , <a href="#">B60R 22/4676</a> ) }   |
| 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 <a href="#">B60R 22/024</a> ; buckles <a href="#">A44B 11/00</a> ; releasable fastenings in general <a href="#">F16B</a> ) } |
| B60R 22/32   | .     | Devices for releasing in an emergency, e.g. after an accident; { Remote or automatic unbuckling devices ( unlocking devices for retractors <a href="#">B60R 22/3416</a> ) }  |
| B60R 22/321  | ..    | { using electric means }   |
| B60R 22/322  | ..    | { using automatic actuating means ( <a href="#">B60R 22/321</a> takes precedence ) }   |
| B60R 22/324  | ...   | { triggered by strong traction on the seat belt, e.g. with temporisation }   |
| B60R 22/325  | ..    | { using remote control means ( <a href="#">B60R 22/321</a> , <a href="#">B60R 22/322</a> take precedence ) }   |
| B60R 22/34   | .     | Belt retractors, e.g. reels ( anchoring devices { e.g. guide loops } , with means to tension the belt in an emergency <a href="#">B60R 22/195</a> )  |
| B60R 22/3405 | ..    | { of the non-rotary type }   |
| B60R 22/3408 | ..    | { without locking means ( <a href="#">B60R 22/3405</a> takes precedence ) }  |
| B60R 22/341  | ..    | { comprising energy-absorbing means }  |
| B60R 22/3413 | ...   | { operating between belt reel and retractor frame ( <a href="#">B60R 22/4676</a> takes precedence ) }  |
| B60R 22/3416 | ..    | { Unlocking devices for retractors ( <a href="#">B60R 22/3405</a> takes precedence ) }   |
| B60R 22/343  | ..    | with electrically actuated locking means { ( <a href="#">B60R 22/3405</a> takes precedence ) }   |
| B60R 22/347  | ..    | with means for permanently locking the retractor during the wearing of the belt ( { <a href="#">B60R 22/3405</a> } , <a href="#">B60R 22/343</a> , <a href="#">B60R 22/415</a> take precedence )   |
| B60R 22/35   | ...   | the locking means being automatically actuated   |
| B60R 22/353  | ....  | in response to belt movement when a wearer applies the belt  |
| 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 22/40 . . . responsive only to vehicle movement
- 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 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 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 22/4652 . . . . { [Mechanical triggering means therefor \( \[also adapted for air bag inflators B60R 21/32\]\(#\) \)](#) }
- 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 22/48 . . Control systems, alarms, or interlock systems, for the correct application of the belt or harness

**B60R 25/00**

**Fittings or systems for preventing or indicating unauthorised use or theft of vehicles** ( { for accessories, see the relevant groups, e.g. for radio sets [B60R 11/0205](#) ; anti-theft devices for wheel cover discs, rings or the like [B60B 7/16](#) ; covers, caps or guards for hitches, e.g. comprising anti-theft devices [B60D 1/60](#) ; anti-theft devices for spare wheels [B62D 43/007](#) ; king pins with anti-coupling devices [B62D 53/085](#) } ; locks for vehicles [E05B 65/12](#) )

**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 <a href="#">B60R 25/0221</a> ) }   |
| 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 (  |

|                              |      |  |
|------------------------------|------|--|
|                              |      | <a href="#">B60R 25/021</a> takes precedence )   |
| <a href="#">B60R 25/0221</a> | .... | { restraining means joining the steering wheel with another part of the car, e.g. pedals }   |
| <a href="#">B60R 25/0222</a> | .... | { by disjoining steering wheel and column }  |
| <a href="#">B60R 25/0224</a> | .... | { restraining of steering wheel by collapsing against column }   |
| <a href="#">B60R 25/0225</a> | .... | { using a rod locked on the steering wheel rim ( <a href="#">B60R 25/0221</a> takes precedence ) }   |
| <a href="#">B60R 25/0227</a> | .... | { using means preventing access, e.g. boxes enclosing the steering wheel ( <a href="#">B60R 25/014</a> takes precedence ) }  |
| <a href="#">B60R 25/0228</a> | .... | { comprising a locking bolt or fork slidable between or around the steering wheel spokes }   |
| <a href="#">B60R 25/023</a>  | ...  | countermeasures against the physical destruction of the steering lock  |
| <a href="#">B60R 25/04</a>   | ..   | operating on the propulsion system, e.g. engine or drive motor   |
| <a href="#">B60R 25/042</a>  | ...  | operating on the fuel supply   |
| <a href="#">B60R 25/043</a>  | ...  | by blocking the exhaust  |
| <a href="#">B60R 25/044</a>  | ...  | by limiting or blocking the air supply   |
| <a href="#">B60R 25/045</a>  | ...  | by limiting or cutting the electrical supply to the propulsion unit  |
| <a href="#">B60R 25/06</a>   | ...  | operating on the vehicle transmission  |
| <a href="#">B60R 25/063</a>  | .... | { Locking of foot actuated control actuating means }   |
| <a href="#">B60R 25/066</a>  | .... | { Locking of hand actuated control actuating means }   |
| <a href="#">B60R 25/08</a>   | ..   | operating on brakes or brake system  |
| <a href="#">B60R 25/083</a>  | ...  | { Locking of foot-actuated control actuating means }   |
| <a href="#">B60R 25/086</a>  | ...  | { Locking of hand-actuated control actuating means }   |
| <a href="#">B60R 25/09</a>   | ..   | by restraining wheel rotation, e.g. wheel clamps   |
| <a href="#">B60R 25/093</a>  | ...  | { comprising ground-engaging means }   |
| <a href="#">B60R 25/096</a>  | ...  | { comprising means for deflating tyres }   |
| <a href="#">B60R 25/10</a>   | .    | actuating a signalling device  |
| <a href="#">B60R 25/1001</a> | ..   | { Alarm systems associated with another car fitting or mechanism, e.g. door lock or knob, pedals ( features related to the general power supply <a href="#">B60R 25/10 F</a> ) } |
| <a href="#">B60R 25/1003</a> | ..   | { Alarm systems characterised by arm or disarm features }  |
| <a href="#">B60R 25/1004</a> | ..   | { Alarm systems characterised by the type of sensor, e.g. current sensing means ( using door lock sensors <a href="#">B60R 25/1001</a> ) }                                       |
| <a href="#">B60R 25/1006</a> | ...  | { Mechanical sensors, e.g. pendulums ( <a href="#">B60R 25/101</a> takes precedence ) }  |
| <a href="#">B60R 25/1007</a> | .... | { comprising associated circuitry }  |
| <a href="#">B60R 25/1009</a> | ...  | { Sonic sensors; Signal treatment therefor }   |
| <a href="#">B60R 25/101</a>  | ...  | { Fuel level sensors }   |
| <a href="#">B60R 25/1012</a> | ...  | { Zone surveillance means, e.g. parking lots, truck depots }   |
| <a href="#">B60R 25/1018</a> | ..   | { Alarm systems characterised by features related to the general power supply }  |
| <a href="#">B60R 25/102</a>  | ..   | 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   |
| <a href="#">B60R 25/1025</a> | ...  | { preventing jamming or interference of said signal }  |
| <a href="#">B60R 25/104</a>  | ..   | characterised by the type of theft warning signal, e.g. visual or audible signals with special characteristics   |
| <a href="#">B60R 25/1045</a> | ...  | { 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**

**Guidance heading:****B60R 2001/00**

**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 2001/12**

. Mirror assemblies combined with other articles, e.g. clocks

**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 2011/00**

**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 2011/02   | .     | for radio sets, television sets, telephones, or the like ; Arrangements of control thereof<br>( { stowing of tape cartridges, compact discs or the like <a href="#">B60R 7/08 H</a> ; } of aerials <a href="#">H01Q</a> ) |
| B60R 2011/027  | ..    | for Din-sized apparatus   |



|                                |      |   |
|--------------------------------|------|---|
| <a href="#">B60R 2011/0276</a> | ..   | for rear passenger use  |
| <a href="#">B60R 2011/0282</a> | ..   | for the use of several passengers, e.g. simultaneously  |
| <a href="#">B60R 2011/0288</a> | ..   | Apparatus made of several modules independently mounted   |
| <a href="#">B60R 2011/0294</a> | ..   | Apparatus with multi-functionalities, e.g. radio and telephone  |
| <b>B60R 2013/00</b>            |      | <b>Elements for body-finishing, identifying, or decorating ; Arrangements or adaptations for advertising purposes</b>   |
| <a href="#">B60R 2013/01</a>   | .    | Liners for load platforms or load compartments  |
| <a href="#">B60R 2013/015</a>  | ..   | made of a plurality of visible parts  |
| <a href="#">B60R 2013/016</a>  | ..   | integrating other functions or accessories  |
| <a href="#">B60R 2013/018</a>  | ..   | Connection or positioning of adjacent panels  |
| <a href="#">B60R 2013/02</a>   | .    | { <a href="#">Internal</a> } Trim mouldings; { <a href="#">Internal</a> } Ledges ; Wall liners { for passenger compartments } ; Roof liners ( <a href="#">B60R 13/01</a> takes precedence; { padded linings for the vehicle interior <a href="#">B60R 21/04</a> ; arrangements or adaptations of floor mats or carpets in vehicles <a href="#">B60N 3/04</a> ; internal lining for trains <a href="#">B61D 17/18</a> } )                        |
| <a href="#">B60R 2013/0281</a> | ..   | made of a plurality of visible parts  |
| <a href="#">B60R 2013/0287</a> | ..   | integrating other functions or accessories  |
| <a href="#">B60R 2013/0293</a> | ..   | Connection or positioning of adjacent panels  |
| <a href="#">B60R 2013/04</a>   | .    | { <a href="#">External</a> } Ornamental or guard strips ; Ornamental inscriptive devices { thereon ( fastening strips or bars to sheets or plates by means of clips <a href="#">F16B 5/12</a> ) }   |
| <a href="#">B60R 2013/046</a>  | ..   | Foot boards   |
| <a href="#">B60R 2013/08</a>   | .    | Insulating elements, e.g. for sound insulation { ( sound insulating linings for trains <a href="#">B61D 17/185</a> ; drivers` cabs for load-carrying vehicles insulated against vibrations or noise <a href="#">B62D 33/0604</a> ; thermal or acoustic insulation of engines <a href="#">F02B 77/11</a> ; damping of sounds using compensation by electro-acoustic methods <a href="#">G10K 11/178</a> ) }                                      |
| <a href="#">B60R 2013/0807</a> | ..   | Arrangements of fasteners or clips specially adapted therefore  |
| <b>B60R 2016/00</b>            |      | <b>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 <a href="#">B60R 21/00</a> ; safety belts <a href="#">B60R 22/00</a> ; central door locking <a href="#">E05B 49/00</a> , <a href="#">E05B 65/38</a> ) }</b> |
| <a href="#">B60R 2016/02</a>   | .    | electric { <a href="#">constitutive elements</a> }  |
| <a href="#">B60R 2016/03</a>   | ..   | for supply of electrical power to vehicle subsystems { or for ( circuit arrangements for charging batteries <a href="#">H02J 7/00</a> ) }   |
| <a href="#">B60R 2016/0315</a> | ...  | { using multiplexing techniques ( multiplexing for transmission of signals <a href="#">G08C 15/00</a> ; multiplexing for electrical communication in general <a href="#">H04J</a> ) }   |
| <a href="#">B60R 2016/0322</a> | .... | Temporary code for documents to be reclassified to <a href="#">G08C</a> , <a href="#">H04L</a> or <a href="#">H04Q</a>  |
| <b>B60R 2019/00</b>            |      | <b>Wheel guards ; Radiator guards, { e.g. grilles } ; Obstruction removers ; Fittings damping bouncing force in collisions ( { reinforcement elements for side doors <a href="#">B60J 5/0412</a> ; } mudguards <a href="#">B62D</a> )</b>   |
| <a href="#">B60R 2019/002</a>  | .    | 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 2019/02 . 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 2019/026 .. Buffers, i.e. bumpers of limited extent
- B60R 2019/18 .. { 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 2019/24 .. 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 2019/26 ... comprising yieldable mounting means ( { [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 2019/48 .. combined with, or convertible into, other devices or objects, e.g. bumpers combined with road brushes, bumpers convertible into beds
- B60R 2019/486 ... with air passages, e.g. for cooling
- B60R 2019/50 ... with lights or registration plates
- B60R 2019/505 .... with lights
- B60R 2019/52 . 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 2021/00**

**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 2021/01    | .     | Electrical circuits for triggering { <i>passive</i> } safety arrangements, { <i>e.g. airbags, safety belt tighteners,</i> } in case of vehicle accidents or impending vehicle accidents { ( <i>electrical circuits for transmission of signals between steering wheel and the vehicle itself <a href="#">B60R 16/027</a> ; for electrically actuating belt retractor locking means <a href="#">B60R 22/343</a> )</i> } |
| 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  |

|                                 |       |   |
|---------------------------------|-------|---|
| <a href="#">B60R 2021/0117</a>  | ....  | Noise   |
| <a href="#">B60R 2021/01177</a> | ....  | Misdeployment, e.g. during assembly, disassembly, accident salvage or recycling   |
| <a href="#">B60R 2021/01184</a> | ...   | Fault detection or diagnostic circuits ( in power circuits <a href="#">B60R 2021/01129</a> )  |
| <a href="#">B60R 2021/0119</a>  | ....  | Plausibility check  |
| <a href="#">B60R 2021/01197</a> | ....  | Warning devices   |
| <a href="#">B60R 2021/01204</a> | ..    | Actuation parameters of safety arrangements   |
| <a href="#">B60R 2021/01211</a> | ...   | Expansion of air bags   |
| <a href="#">B60R 2021/01218</a> | ....  | control of expansion speed  |
| <a href="#">B60R 2021/01225</a> | ....  | control of expansion volume   |
| <a href="#">B60R 2021/01231</a> | ....  | control of expansion timing or sequence   |
| <a href="#">B60R 2021/01238</a> | ....  | control of expansion shape  |
| <a href="#">B60R 2021/01245</a> | ....  | selection of seat for bag expansion   |
| <a href="#">B60R 2021/01252</a> | ...   | Devices other than bags   |
| <a href="#">B60R 2021/01259</a> | ....  | Brakes  |
| <a href="#">B60R 2021/01265</a> | ....  | Seat belts  |
| <a href="#">B60R 2021/01272</a> | ..... | Belt tensioners   |
| <a href="#">B60R 2021/01279</a> | ..... | Load limiters   |
| <a href="#">B60R 2021/01286</a> | ..    | Electronic control units  |
| <a href="#">B60R 2021/01293</a> | ...   | programmable for use in different vehicles or with different airbags configurations   |
| <a href="#">B60R 2021/013</a>   | ..    | including means for detecting collisions, impending collision or roll-over { ( <a href="#">inclination sensors per se G01C 9/00</a> ; <a href="#">acceleration sensors per se G01P 15/00</a> ; <a href="#">radar systems per se G01S 13/00</a> ; <a href="#">inertia switches per se H01H 35/14</a> ) }   |
| <a href="#">B60R 2021/01302</a> | ...   | monitoring vehicle body vibrations or noise   |
| <a href="#">B60R 2021/01304</a> | ...   | monitoring rough road condition   |
| <a href="#">B60R 2021/01306</a> | ...   | monitoring vehicle inclination  |
| <a href="#">B60R 2021/01308</a> | ...   | monitoring distance between vehicle body and road   |
| <a href="#">B60R 2021/01311</a> | ...   | monitoring the braking system, e.g. ABS   |
| <a href="#">B60R 2021/01313</a> | ...   | monitoring the vehicle steering system or the dynamic control system  |
| <a href="#">B60R 2021/01315</a> | ...   | monitoring occupant displacement  |
| <a href="#">B60R 2021/01317</a> | ...   | monitoring seat belt tension  |
| <a href="#">B60R 2021/0132</a>  | ...   | responsive to vehicle motion parameters { ,e.g. to vehicle longitudinal or transversal deceleration or speed value }  |
| <a href="#">B60R 2021/01322</a> | ....  | comprising variable thresholds, e.g. depending from other collision parameters  |
| <a href="#">B60R 2021/01325</a> | ....  | Vertical acceleration   |
| <a href="#">B60R 2021/01327</a> | ....  | Angular velocity or angular acceleration  |
| <a href="#">B60R 2021/0134</a>  | ...   | responsive to imminent contact with an obstacle { ,e.g. using radar systems }   |
| <a href="#">B60R 2021/01345</a> | ....  | using mechanical sensing means  |
| <a href="#">B60R 2021/015</a>   | ..    | including means for detecting the presence or position of passengers, passenger seats or child seats, e.g. for disabling triggering { ; Including means for controlling the safety arrangement actuation parameters, e.g. rate, speed or timing of airbag inflation, in relation to external conditions, e.g. temperature, crash strength, occupant position, seat belt use or the like; Inhibition means for cases of useless or |

|                 |       |  |
|-----------------|-------|--|
|                 |       | dangerous conditions, e.g. passengers out of position }  |
| B60R 2021/01504 | ...   | monitoring bag displacement  |
| B60R 2021/01508 | ...   | monitoring forces or pressure in bag or module   |
| B60R 2021/01512 | ...   | Passenger detection systems  |
| B60R 2021/01516 | ....  | using force or pressure sensing means  |
| B60R 2021/0152  | ....  | mounted on the bad   |
| B60R 2021/01525 | ....  | using field detection presence sensor  |
| B60R 2021/01529 | ..... | using electric or capacitive field sensors   |
| B60R 2021/01533 | ..... | using electromagnetic waves, e.g. infrared   |
| B60R 2021/01537 | ..... | using ultrasonic waves   |
| B60R 2021/01541 | ..... | for image processing, e.g. cameras, sensor arrays  |
| B60R 2021/01545 | ....  | monitoring passenger motion  |
| B60R 2021/0155  | ....  | monitoring seat belt, e.g. length, height-adjustment, tension  |
| B60R 2021/01554 | ..... | using belt buckle sensors  |
| B60R 2021/01558 | ..... | sensing amount of belt winded on retractor   |
| B60R 2021/01562 | ..... | sensing belt tension   |
| B60R 2021/01566 | ....  | monitoring specific human body parts, e.g. face, eyes, hands   |
| B60R 2021/0157  | ...   | Seat position sensors  |
| B60R 2021/01575 | ...   | Children seat detection system   |
| B60R 2021/01579 | ...   | monitoring crash strength  |
| B60R 2021/01583 | ....  | deceleration dependent   |
| B60R 2021/01587 | ....  | speed dependent  |
| B60R 2021/01591 | ...   | Manually or key actuated inhibition switches   |
| B60R 2021/01595 | ...   | Devices for warning in case of inhibition  |
| B60R 2021/02    | .     | Occupant safety arrangements or fittings, { e.g. crash pads ( seat belts with crash pads <a href="#">B60R 22/14</a> ; removable children's seats having a front guard or barrier <a href="#">B60N 2/2839</a> ) } |
| 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 2021/026   | ..    | { Rigid partitions inside vehicles, e.g. between passengers and load compartments ( <a href="#">B60R 21/12</a> 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 2021/0293  | ..    | Additional pads or cushions in vehicle compartments, e.g. movably mounted  |
| B60R 2021/04    | ..    | 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 2021/0435  | ...   | associated with the side or roof pillars   |
| B60R 2021/0442  | ...   | associated with the roof panel   |
| B60R 2021/06    | ..    | Safety nets, transparent sheets, curtains, or the like, e.g. between occupants and glass ( { <a href="#">B60R 21/026</a> } , <a href="#">B60R 21/11</a> , <a href="#">B60R 21/12</a> , <a href="#">B60R 21/16</a> take precedence )  |
| B60R 2021/065   | ...   | comprising energy absorbing mounting means   |
| B60R 2021/13    | ..    | Roll-over protection ( <a href="#">electrical circuits for triggering safety arrangements B60R 21/01</a> )   |
| 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 2021/16    | ..    | Inflatable occupant restraints or confinements designed to inflate upon impact or impending impact, e.g. air bags ( { <a href="#">protective garments with automatically inflatable shock-absorbing means A41D 13/018</a> ; } <a href="#">connection of valves to inflatable elastic bodies B60C 29/00</a> ) |
| 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 2021/165   | ...   | reusable, e.g. in case of multiple collisions  |
| B60R 2021/167   | ...   | comprising anti-theft devices  |
| B60R 2021/168   | ...   | for restraining luggages   |
| B60R 2021/20    | ...   | Arrangements for storing inflatable members in their non-use or deflated condition ; Arrangement or mounting of air bag modules or components  |
| B60R 2021/207   | ....  | in vehicle seats   |
| B60R 2021/2074  | ..... | in head rests  |
| B60R 2021/2076  | ..... | Removable covers with tear seams   |
| B60R 2021/2078  | ..... | in rear seats  |
| B60R 2021/215   | ....  | characterised by the covers for the inflatable member { ( <a href="#">B60R 21/2176</a> 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 ( <a href="#">B60R 2021/2161</a> , <a href="#">B60R 2021/21525</a> 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 2021/216   | ..... | comprising tether means for limitation of cover motion during deployment   |

|                                 |       |  |
|---------------------------------|-------|--|
| <a href="#">B60R 2021/2161</a>  | ..... | the cover being displaced towards the occupant during deployment   |
| <a href="#">B60R 2021/2163</a>  | ..... | with energy absorbing or elastic means   |
| <a href="#">B60R 2021/2165</a>  | ..... | characterised by a tear line for defining a deployment opening   |
| <a href="#">B60R 2021/21652</a> | ..... | the tearing being done or assisted by cutters  |
| <a href="#">B60R 2021/21654</a> | ..... | the tearing being done or assisted by heating or pyrotechnic means   |
| <a href="#">B60R 2021/217</a>   | ....  | Inflation fluid source retainers, e.g. reaction canisters ; Connection of bags, covers, diffusers or inflation fluid sources therewith or together |
| <a href="#">B60R 2021/2172</a>  | ..... | the cover being connected to the surrounding part and to the module, e.g. floating mounts  |
| <a href="#">B60R 2021/2173</a>  | ..... | the module or part thereof being movably mounted on the vehicle  |
| <a href="#">B60R 2021/2175</a>  | ..... | using energy absorbing means   |
| <a href="#">B60R 2021/2177</a>  | ..... | Reaction canisters characterised by material   |
| <a href="#">B60R 2021/2178</a>  | ..... | Plastic  |
| <a href="#">B60R 2021/23</a>    | ...   | Inflatable members ( { <a href="#">B60R 21/18</a> takes precedence; connection to inflation fluid source retainers <a href="#">B60R 21/217</a> } ) |
| <a href="#">B60R 2021/231</a>   | ....  | 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](#)

|                                 |       |  |
|---------------------------------|-------|--|
| <a href="#">B60R 2021/23107</a> | ..... | the bag being integrated in a multi-bag system   |
| <a href="#">B60R 2021/23115</a> | ..... | with inflatable support compartments creating an internal suction volume   |
| <a href="#">B60R 2021/23123</a> | ..... | Heat protection panels   |
| <a href="#">B60R 2021/2313</a>  | ..... | comprising sensitive compartments  |
| <a href="#">B60R 2021/23138</a> | ..... | { specially adapted for side protection ( <a href="#">B60R 21/23184</a> , <a href="#">B60R 21/232</a> take precedence ) }  |
| <a href="#">B60R 2021/23146</a> | ..... | seat mounted   |
| <a href="#">B60R 2021/23153</a> | ..... | specially adapted for rear seat passengers   |
| <a href="#">B60R 2021/23161</a> | ..... | specially adapted for protecting at least two passengers, e.g. preventing them from hitting each other   |
| <a href="#">B60R 2021/23169</a> | ..... | specially adapted for knee protection  |
| <a href="#">B60R 2021/23176</a> | ..... | specially adapted for foot protection  |
| <a href="#">B60R 2021/23192</a> | ..... | Roof bags, i.e. protecting the occupant in a roll-over situation   |
| <a href="#">B60R 2021/233</a>   | ..... | comprising a plurality of individual compartments ; comprising two or more bag-like members, one within the other ( <a href="#">B60R 21/232</a> takes precedence ) |
| <a href="#">B60R 2021/23308</a> | ..... | the individual compartments defining the external shape of the bag   |
| <a href="#">B60R 2021/23316</a> | ..... | Inner seams, e.g. creating separate compartments or used as tethering means  |
| <a href="#">B60R 2021/23324</a> | ..... | Inner walls crating separate compartments, e.g. communicating with vents   |
| <a href="#">B60R 2021/23332</a> | ..... | using independent bags, one within the other   |
| <a href="#">B60R 2021/2334</a>  | ..... | Expansion regulating features  |
| <a href="#">B60R 2021/2338</a>  | ..... | Tethers  |
| <a href="#">B60R 2021/23382</a> | ..... | Internal tether means  |

|                                 |       |  |
|---------------------------------|-------|--|
| <a href="#">B60R 2021/23384</a> | ..... | having ends which are movable or detachable during deployment  |
| <a href="#">B60R 2021/23386</a> | ..... | External tether means  |
| <a href="#">B60R 2021/23388</a> | ..... | having ends which are movable or detachable during deployment  |
| <a href="#">B60R 2021/235</a>   | ....  | characterised by their material  |
| <a href="#">B60R 2021/23504</a> | ..... | characterised by material  |
| <a href="#">B60R 2021/23509</a> | ..... | Fabric   |
| <a href="#">B60R 2021/23514</a> | ..... | coated fabric  |
| <a href="#">B60R 2021/23519</a> | ..... | Resin ( for coating fabric <a href="#">B60R 2021/23514</a> )   |
| <a href="#">B60R 2021/23523</a> | ..... | Composite ( coated fabric <a href="#">B60R 2021/23514</a> )  |
| <a href="#">B60R 2021/23528</a> | ..... | Metal  |
| <a href="#">B60R 2021/23533</a> | ..... | characterised by the manufacturing process   |
| <a href="#">B60R 2021/23538</a> | ..... | Sewing   |
| <a href="#">B60R 2021/23542</a> | ..... | Weaving  |
| <a href="#">B60R 2021/23547</a> | ..... | one piece weaving  |
| <a href="#">B60R 2021/23552</a> | ..... | Knitting   |
| <a href="#">B60R 2021/23557</a> | ..... | Molding  |
| <a href="#">B60R 2021/23561</a> | ..... | Sealing  |
| <a href="#">B60R 2021/23566</a> | ..... | Nesting of panels, i.e. for material utilisation   |
| <a href="#">B60R 2021/23571</a> | ..... | characterised by connections between panels  |
| <a href="#">B60R 2021/23576</a> | ..... | Sewing   |
| <a href="#">B60R 2021/2358</a>  | ..... | Bonding  |
| <a href="#">B60R 2021/23585</a> | ..... | Vulcanisation  |
| <a href="#">B60R 2021/2359</a>  | ..... | Welding  |
| <a href="#">B60R 2021/23595</a> | ..... | Sealing  |
| <a href="#">B60R 2021/237</a>   | ....  | characterised by the way they are folded   |
| <a href="#">B60R 2021/2375</a>  | ..... | Folding devices  |
| <a href="#">B60R 2021/239</a>   | ....  | characterised by their venting means   |
| <a href="#">B60R 2021/2395</a>  | ..... | comprising means to control the venting  |
| <a href="#">B60R 2021/26</a>    | ...   | characterised by the inflation fluid source or means to control inflation fluid flow { ( arrangement or mounting thereof to the vehicle <a href="#">B60R 21/20</a> ; blasting cartridges for producing gas under pressure in general <a href="#">F42B 3/04</a> ; Initiators or igniters therefor <a href="#">F42B 3/10</a> ) } |

**WARNING**

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

|                                 |       |   |
|---------------------------------|-------|---|
| <a href="#">B60R 2021/26011</a> | ....  | using a filter through which the inflation gas passes |
| <a href="#">B60R 2021/26017</a> | ....  | a cooling agent being added to the inflation fluid    |
| <a href="#">B60R 2021/26023</a> | ....  | for filling the bag with foam                         |
| <a href="#">B60R 2021/26029</a> | ....  | Igniters  |
| <a href="#">B60R 2021/26035</a> | ..... | triggered by mechanical means                         |

|                                 |       |  |
|---------------------------------|-------|--|
| <a href="#">B60R 2021/26041</a> | ..... | of elongated shape   |
| <a href="#">B60R 2021/26047</a> | ..... | of film shape  |
| <a href="#">B60R 2021/26052</a> | ..... | using fluid materials  |
| <a href="#">B60R 2021/26058</a> | ....  | using a combination of inflators   |
| <a href="#">B60R 2021/26064</a> | ....  | characterised by auto-ignition means   |
| <a href="#">B60R 2021/2607</a>  | ....  | characterised by heating or heat insulating means, e.g. for use under extreme temperatures   |
| <a href="#">B60R 2021/26076</a> | ....  | characterised by casing  |
| <a href="#">B60R 2021/26082</a> | ..... | Material   |
| <a href="#">B60R 2021/26088</a> | ..... | Plastic  |
| <a href="#">B60R 2021/26094</a> | ....  | characterised by fluid flow controlling valves   |
| <a href="#">B60R 2021/261</a>   | ....  | with means other than bag structure to diffuse or guide inflation fluid  |
| <a href="#">B60R 2021/2612</a>  | ..... | Gas guiding means, e.g. ducts  |
| <a href="#">B60R 2021/2615</a>  | ..... | for diverting the gas into a plurality of bags   |
| <a href="#">B60R 2021/2617</a>  | ..... | Curtain bag nozzles  |
| <a href="#">B60R 2021/263</a>   | ....  | using a variable source, e.g. plural stage or controlled output ( <a href="#">hybrid inflators B60R 21/272</a> )   |
| <a href="#">B60R 2021/2633</a>  | ..... | with a plurality of inflation levels   |
| <a href="#">B60R 2021/2636</a>  | ..... | The volume of gas being continuously adjustable  |
| <a href="#">B60R 2021/264</a>   | ....  | using instantaneous generation of gas, e.g. pyrotechnic ( <a href="#">B60R 21/268 takes precedence</a> )   |
| <a href="#">B60R 2021/2642</a>  | ..... | comprising a plurality of combustion chambers or sub-chambers  |
| <a href="#">B60R 2021/2644</a>  | ..... | { <a href="#">using only solid reacting substances, e.g. pellets, powder</a> }   |
| <a href="#">B60R 2021/2648</a>  | ..... | comprising a plurality of combustion chambers or sub-chambers  |
| <a href="#">B60R 2021/268</a>   | ....  | using instantaneous release of stored pressurized gas { ( <a href="#">B60R 21/26005 takes precedence</a> ) }   |
| <a href="#">B60R 2021/2685</a>  | ..... | comprising a plurality of pressure chambers  |
| <a href="#">B60R 2021/272</a>   | ..... | with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators  |
| <a href="#">B60R 2021/2725</a>  | ..... | using a fluid fuel gas generator   |
| <a href="#">B60R 2021/276</a>   | ....  | with means to vent the inflation fluid source, e.g. in case of overpressure { ( <a href="#">B60R 21/30 takes precedence</a> ; <a href="#">venting means on inflatable member walls B60R 21/239</a> ) } |
| <a href="#">B60R 2021/2765</a>  | ..... | comprising means to control the venting  |
| <a href="#">B60R 2021/33</a>    | ...   | Arrangements for non-electric triggering of inflation ( <a href="#">electrical circuits for triggering safety arrangements B60R 21/01</a> )  |
| <a href="#">B60R 2021/335</a>   | ....  | Connections between collision detecting means and inflators using pyrotechnic transmission lines   |
| <a href="#">B60R 2021/34</a>    | .     | Protecting non-occupants of a vehicle, e.g. pedestrians { ( <a href="#">B60R 19/02 takes precedence</a> ) }  |
| <a href="#">B60R 2021/343</a>   | ..    | using deformable body panel, bodywork or components  |
| <a href="#">B60R 2021/346</a>   | ..    | means outside vehicle body   |
| <b>B60R 2022/00</b>             |       | <b>Safety belts or body harnesses in vehicles ( <a href="#">safety belts or body harnesses in general A62B 35/00</a> )</b>   |

- 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 2022/02 . 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 2022/021 . . Means for holding the tongue or buckle in a non-use position, e.g. for easy access by the user
- B60R 2022/023 . . { [Three-point seat belt systems comprising two side lower and one side upper anchoring devices](#) ( [B60R 22/022](#) , [B60R 22/03](#) take precedence ) }
- B60R 2022/025 . . . Adaptations for use with children seats or luggages
- B60R 2022/026 . . . at least two ends of the belt being retractable after use
- B60R 2022/027 . . Four-point seat belt systems, e.g. with the two upper points connected together
- B60R 2022/028 . . specially adapted for use in sleeping position, e.g. for reclining seats
- B60R 2022/029 . . Belt storage ; Devices or systems for controlling winding up of unused seat belt
- B60R 2022/18 . Anchoring devices
- B60R 2022/1806 . . for buckles
- B60R 2022/1812 . . Connections between seat belt and buckle tongue
- B60R 2022/1818 . . Belt guides
- B60R 2022/1825 . . . using rollers
- B60R 2022/1831 . . . comprising a slotted plate sliding in its plane, e.g. inside circular guides
- B60R 2022/1837 . . . comprising a universal mounting. e.g. spherical or cardan-type
- B60R 2022/1843 . . . comprising an elongated sleeve
- B60R 2022/195 . . 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 2022/1957 . . . characterised by electric actuators
- B60R 2022/20 . . adjustable in position, e.g. in height
- B60R 2022/207 . . . Horizontally or transversally adjustable
- B60R 2022/208 . . . by automatic or remote control means
- B60R 2022/26 . . secured to the seat
- B60R 2022/263 . . . Front seats
- B60R 2022/266 . . . Rear seats, e.g. benches
- B60R 2022/28 . 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 2022/281](#) . . for buckles
- [B60R 2022/282](#) . . 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 2022/32](#) . Devices for releasing in an emergency, e.g. after an accident; { [Remote or automatic unbuckling devices](#) ( [unlocking devices for retractors](#) [B60R 22/3416](#) ) }
- [B60R 2022/327](#) . . using pyrotechnic means
- [B60R 2022/328](#) . . comprising means for cutting the belt
  
- [B60R 2022/34](#) . 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 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 2022/347](#) . . 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 2022/35](#) . . . the locking means being automatically actuated
- [B60R 2022/353](#) . . . . in response to belt movement when a wearer applies the belt
- [B60R 2022/3535](#) . . . . . comprising anti-cinch devices
- [B60R 2022/36](#) . . self-locking in an emergency ( { [B60R 22/3405](#) } , [B60R 22/343](#) take precedence )
- [B60R 2022/38](#) . . responsive only to belt movement
- [B60R 2022/385](#) . . . with adjustable sensitivity
- [B60R 2022/40](#) . . 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 2022/44](#) . . 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  |
| <a href="#">B60R 2022/442</a>  | ...   | using one spring and one additional retraction device in parallel   |
| <a href="#">B60R 2022/4426</a> | ....  | the additional retraction device being a second spring  |
| <a href="#">B60R 2022/4433</a> | ..... | externally controlled   |
| <a href="#">B60R 2022/444</a>  | ....  | the additional retraction device being an electric actuator   |
| <a href="#">B60R 2022/4446</a> | ...   | using one spring and one additional retraction device in series   |
| <a href="#">B60R 2022/4453</a> | ....  | the additional retraction device being a second spring  |
| <a href="#">B60R 2022/446</a>  | ..... | with external control means   |
| <a href="#">B60R 2022/4466</a> | ....  | the additional retraction device being an electric actuator   |
| <a href="#">B60R 2022/4473</a> | ...   | using an electric retraction device ( <a href="#">combined with a spring B60R 2022/444</a> , <a href="#">B60R 2022/4466</a> )   |
| <a href="#">B60R 2022/448</a>  | ...   | using a fluid actuated retraction device  |
| <a href="#">B60R 2022/4486</a> | ...   | for cancelling the belt tension   |
| <a href="#">B60R 2022/4493</a> | ...   | for braking the belt reel using friction surfaces or the like   |
| <a href="#">B60R 2022/46</a>   | ..    | { <a href="#">Reels</a> } with means to tension the belt in an emergency { <a href="#">by forced winding up</a> } ( <a href="#">electrical circuits for triggering safety arrangements B60R 21/01</a> ) { <a href="#">tensioners using reels only guiding the belt during normal use, e.g. splitted reels B60R 22/195</a> } |
| <a href="#">B60R 2022/4604</a> | ...   | { <a href="#">characterised by arrangements in vehicle or relative to seat belt</a> }   |
| <a href="#">B60R 2022/4609</a> | ....  | using a plurality of tensioners   |
| <a href="#">B60R 2022/4614</a> | ....  | one pretensioner acting on a plurality of belts   |
| <a href="#">B60R 2022/4628</a> | ...   | { <a href="#">characterised by fluid actuators, e.g. pyrotechnic gas generators ( actuating a cable B60R 22/4619 )</a> }  |
| <a href="#">B60R 2022/4633</a> | ....  | { <a href="#">Linear actuators, e.g. comprising a piston moving along reel axis and rotating along its own axis</a> }   |
| <a href="#">B60R 2022/4638</a> | ..... | comprising a piston moving along or in parallel to the reel axis  |
| <a href="#">B60R 2022/4642</a> | ....  | the gas directly propelling a flexible driving means, e.g. a plurality of successive masses, in a tubular chamber   |
| <a href="#">B60R 2022/4647</a> | ..... | the driving means being a belt, a chain or the like   |
| <a href="#">B60R 2022/4657</a> | ....  | comprising a plurality of charges   |
| <a href="#">B60R 2022/4661</a> | ....  | comprising venting means, e.g. for avoiding overpressure in case of fire or for allowing return motion with energy absorption   |
| <a href="#">B60R 2022/4666</a> | ...   | characterised by electric actuators   |
| <a href="#">B60R 2022/468</a>  | ...   | characterised by clutching means between actuator and belt reel   |
| <a href="#">B60R 2022/4685</a> | ...   | with means to adjust or regulate the tensioning force in relation to external parameters  |
| <a href="#">B60R 2022/469</a>  | ...   | reusable  |
| <a href="#">B60R 2022/4695</a> | ...   | without winding function during normal use  |
| <a href="#">B60R 2022/48</a>   | .     | Control systems, alarms, or interlock systems, for the correct application of the belt or harness   |
| <a href="#">B60R 2022/4808</a> | ..    | Sensing means arrangements therefor   |
| <a href="#">B60R 2022/4816</a> | ...   | for sensing locking of buckle   |
| <a href="#">B60R 2022/4825</a> | ...   | for sensing amount of belt wound on retractor   |
| <a href="#">B60R 2022/4833</a> | ...   | for sensing locking of retractor  |

- B60R 2022/4841 . . . for sensing belt tension
- B60R 2022/485 . . . for sensing belt anchor position, belt orientation, or the like
- B60R 2022/4858 . . . for sensing pressure on seat
- B60R 2022/4866 . . . Displaying or indicating arrangements thereof
- B60R 2022/4875 . . . on vehicle exterior
- B60R 2022/4883 . . . Interlock systems
- B60R 2022/4891 . . . preventing use of the vehicle when the seatbelt is not fastened

**B60R 2025/00**

**Fittings or systems for preventing or indicating unauthorised use or theft of vehicles** ( { for accessories, see the relevant groups, e.g. for radio sets [B60R 11/0205](#) ; anti-theft devices for wheel cover discs, rings or the like [B60B 7/16](#) ; covers, caps or guards for hitches, e.g. comprising anti-theft devices [B60D 1/60](#) ; anti-theft devices for spare wheels [B62D 43/007](#) ; king pins with anti-coupling devices [B62D 53/085](#) } ; locks for vehicles [E05B 65/12](#) )

**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 2025/01 . . . operating on vehicle systems or fittings, e.g. on doors, seats or windscreens
- B60R 2025/04 . . . 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 2025/10 . . . actuating a signalling device
- B60R 2025/1013 . . . Alarm systems characterised by the type of warning signal, e.g. visual, audible
- B60R 2025/1015 . . . Signal coming from the exhaust
- B60R 2025/1016 . . . Remote signals alerting owner or authorities, e.g. radio signals

**B60R 2099/00**

**Subject matter not provided for in other groups of this subclass**

- B60R 2099/005 . . . Protections against martens or rodents

**Guidance heading:****B60R 2225/00**

**Means indicating the functioning state of the alarm system, e.g. indicating arming, using leds**

**Guidance heading:**

|                     |   |
|---------------------|---|
| <b>B60R 2300/00</b> | <b>Details of viewing arrangements using cameras and displays, specially adapted for use in a vehicle</b>   |
| 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 Indexing scheme relating to vehicle anti-theft devices**

- B60R 2325/10 . Communication protocols, communication systems of vehicle anti-theft devices
- B60R 2325/101 . . Bluetooth
- B60R 2325/103 . . Near field communication [NFC]
- B60R 2325/105 . . Radio frequency identification data [RFID]
- B60R 2325/106 . . Internet
- B60R 2325/108 . . Encryption
  
- B60R 2325/20 . Communication devices for vehicle anti-theft devices
- B60R 2325/202 . . Personal digital assistant [PDA]
- B60R 2325/205 . . Mobile phones
- B60R 2325/207 . . Satellites
  
- B60R 2325/30 . Vehicles applying the vehicle anti-theft devices
- B60R 2325/302 . . Airplanes
- B60R 2325/304 . . Boats
- B60R 2325/306 . . Motorcycles
- B60R 2325/308 . . Industrial vehicles
  
- B60R 2325/40 . Programmable elements