

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B60 VEHICLES IN GENERAL

(NOTE omitted)

B60R VEHICLES, VEHICLE FITTINGS, OR VEHICLE PARTS, NOT OTHERWISE PROVIDED FOR

NOTE

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

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)	1/0625	. . . . {by hydraulically or pneumatically powered actuators}
		1/064	. . . . by manually powered actuators
		1/066	. . . . for adjusting the mirror relative to its housing
1/001	. {integrated in the windows, e.g. Fresnel lenses}	1/068	. . . . . using cables
1/002	. {specially adapted for covering the peripheral part of the vehicle, e.g. for viewing tyres, bumpers or the like (integrated in the windows B60R 1/001 ; combined with rear-view mirrors B60R 1/08)}	1/07	. . . . by electrically powered actuators
		1/072	. . . . for adjusting the mirror relative to its housing
1/003	. . {for viewing trailer hitches}	1/074	. . . . for retracting the mirror arrangements to a non-use position alongside the vehicle
1/005	. {specially adapted for viewing traffic-lights}	1/076	. . . yieldable to excessive external force and provided with an indexed use position (B60R 1/0617 , B60R 1/074 take precedence)
1/006	. {Side-view mirrors, e.g. V-shaped mirrors located at the front or rear part of the vehicle (combined with rear-view mirrors B60R 1/08 ; side-view periscopes B60R 1/10)}	1/078	. . . easily removable; mounted for bodily outward movement, e.g. when towing
1/007	. . {specially adapted for covering the lateral blind spot not covered by the usual rear-view mirror}	1/08	. . involving special optical features, e.g. avoiding blind spots {, e.g. convex mirrors; Side-by-side associations of rear-view and other mirrors (B60R 1/025 , B60R 1/10 take precedence)}
1/008	. {allowing the driver to see passengers, e.g. for busses (combined with rear-view mirrors B60R 1/08)}	1/081	. . . {avoiding blind spots, e.g. by using a side-by-side association of mirrors}
1/02	. Rear-view mirror arrangements (periscope arrangements B60R 1/10)	1/082	. . . . {using a single wide field mirror or an association of rigidly connected mirrors}
1/025	. . {comprising special mechanical means for correcting the field of view in relation to particular driving conditions, e.g. change of lane; scanning mirrors}	1/083	. . . {Anti-glare mirrors, e.g. "day-night" mirrors}
1/04	. . mounted inside vehicle (B60R 1/025 , B60R 1/08 take precedence)}	1/084	. . . . {using a removable filtering or hiding screen (associated with windows or windscreens B60J 3/00)}
1/06	. . mounted on vehicle exterior (B60R 1/025 , B60R 1/08 take precedence)}	1/085	. . . . {using a combination of interchangeable reflecting surfaces, e.g. reversible mirrors}
1/0602	. . . {comprising means for cleaning or deicing}	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}
1/0605	. . . {specially adapted for mounting on trucks, e.g. by C-shaped support means}		
1/0607	. . . . {with remote position control adjustment}		
1/061	. . . . . {by manually actuated mechanical means, e.g. push-pull cables}	1/087	. . . . . {with remote or automatic control means}
1/0612	. . . . . {by electrically actuated means}	1/088	. . . . {using a cell of electrically changeable optical characteristic, e.g. liquid-crystal or electrochromic mirrors}
1/0615	. . . . . {by hydraulically or pneumatically actuated means}		
1/0617	. . . . {foldable along the vehicle, e.g. in case of external force applied thereon}	1/089	. . . . {using a liquid filtering layer of variable thickness}
1/062	. . . with remote control for adjusting position (B60R 1/0607 takes precedence)}		

- 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}
- 1/105 . . {Optical arrangements giving a view under the vehicle, e.g. using periscopes}
- 1/12 . . Mirror assemblies combined with other articles, e.g. clocks
- 1/1207 . . {with lamps; with turn indicators}
- 2001/1215 . . {with information displays}
- 2001/1223 . . {with sensors or transducers}
- 2001/123 . . {with thermometers}
- 2001/1238 . . {with vanity mirrors}
- 2001/1246 . . {with clocks}
- 2001/1253 . . {with cameras, video cameras or video screens}
- 2001/1261 . . {with antennae}
- 2001/1269 . . {with sun visors}
- 2001/1276 . . {with radio receivers, loud-speakers or buzzers}
- 2001/1284 . . {with communication systems other than radio-receivers, e.g. keyless entry systems, navigation systems; with anti-collision systems}
- 2001/1292 . . {with holding means for personal articles}
- 3/00 Arrangements of steps {or ladders facilitating access to or on the vehicle}, e.g. running-boards** ({construction of steps for railway vehicles [B61D 23/00](#) ; ladders [E06C](#))
- 3/002 . . {Running boards (for vehicle tops [B60R 3/005](#); at the sides of the vehicle for carrying loads [B60R 9/02](#))}
- 3/005 . . {Catwalks, running boards for vehicle tops, access means for vehicle tops; Handrails therefor}
- 3/007 . . {Removable steps or ladders, e.g. foldable (as access means for vehicle tops [B60R 3/005](#))}
- 3/02 . . Retractable steps {or ladders, e.g. movable under shock ([B60R 3/005](#) takes precedence)}
- 3/04 . . with provisions for shoe scraping
- 5/00 Compartments within vehicle body primarily intended or sufficiently spacious for trunks, suit-cases, or the like** (primarily intended for stowing loads in load-transporting vehicles [B60P](#); arrangements for stowing spare wheels [B62D 43/00](#))
- 5/003 . . {Luggage racks, e.g. for busses (primarily intended for passengers' property smaller than suitcases [B60R 7/04](#); [B60R 7/08](#); luggage racks for rail vehicles [B61D 37/003](#))}
- 5/006 . . {stowing or holding means for elongated articles, e.g. skis inside vehicles}
- 5/02 . . arranged at front of vehicle {([B60R 5/003](#) takes precedence)}
- 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](#))}
- 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](#))}
- 5/042 {to create an enclosed luggage compartment of increased capacity, e.g. with ventilation apertures for transporting dogs}
- 5/044 {luggage covering means, e.g. parcel shelves}
- 5/045 {collapsible or transformable}
- 5/047 {collapsible by rolling-up}
- 5/048 {of accordion-type, i.e. collapsible by sliding and folding}
- 7/00 Stowing or holding appliances inside vehicle primarily intended for personal property smaller than suit-cases, e.g. travelling articles, or maps** (for radio sets, television sets, telephones or the like, mounting of cameras operative during drive, tools, or spare parts [B60R 11/00](#); for receptacles for refuse, food, beverages, cigarettes [B60N](#))
- 7/005 . . {Nets or elastic pockets tensioned against walls or backrests}
- 7/02 . . in separate luggage compartment {([B60R 7/005](#) takes precedence)}
- 7/04 . . in driver or passenger space {, e.g. using racks ([B60R 7/005](#), [B60R 7/08](#) take precedence)}
- 7/043 . . {mounted on or under a seat}
- 7/046 . . {mounted on door}
- 7/05 . . mounted on sun visor
- 7/06 . . mounted on or below dashboards
- 7/08 . . Disposition of racks, clips {, holders, containers} or the like {for supporting specific articles ([B60R 7/005](#) takes precedence)}
- 7/081 . . {for supporting maps}
- 7/082 . . {for supporting spectacles}
- 7/084 . . {for supporting tissues or tissue boxes}
- 7/085 . . {for supporting flowers or flower vases}
- 7/087 . . {for stowing money or valuables, e.g. using safes}
- 7/088 . . {for stowing tape cartridges, compact discs, or the like}
- 7/10 . . for supporting hats, clothes or clothes hangers
- 7/12 . . for supporting umbrellas
- 7/14 . . for supporting weapons
- 9/00 Supplementary fittings on vehicle exterior for carrying loads, e.g. luggage, sports gear or the like**
- 9/02 . . at the sides, e.g. on running-board
- 9/04 . . Carriers associated with vehicle roof ([B60R 9/08](#) takes precedence)
- 9/042 . . Carriers characterised by means to facilitate loading or unloading of the load, e.g. rollers, tracks, or the like
- 9/0423 {for ladders}
- 9/0426 {for small vehicles, e.g. invalid chairs, perambulators}
- 9/045 . . Carriers being adjustable or transformable, e.g. expansible, collapsible {(transformable into tents [B60P 3/36](#); into beds [B60P 3/38](#))}
- 9/048 . . Carriers characterised by article-gripping {, -covering,}-retaining, or -locking means
- 9/0485 {for ladders ([B60R 9/0423](#) takes precedence)}
- 9/05 . . Carriers characterised by wind deflecting means (wind deflectors for open roofs [B60J 7/22](#))
- 9/052 . . Carriers comprising elongate members extending only transversely of vehicle ([B60R 9/08](#) takes precedence)
- 9/055 . . Enclosure-type carriers, e.g. containers, boxes ([B60R 9/048](#) takes precedence)

- 9/058 . . characterised by releasable attaching means between carrier and roof
- 9/06 . . at vehicle front or rear {[rear luggage compartments within vehicle extensible externally of the vehicle body B60R 5/041](#)}
- 9/065 . . {Enclosure-type carriers, e.g. trunks}
- 9/08 . . specially adapted for sports gear ([vehicles specially adapted for carrying aeroplanes, for carrying boats B60P](#))
- 9/10 . . for cycles
- 9/12 . . for skis
- 11/00 Arrangements for holding or mounting articles, not otherwise provided for**
- 2011/0001 . {characterised by position}
- 2011/0003 . . {inside the vehicle}
- 2011/0005 . . . {Dashboard}
- 2011/0007 . . . {Mid-console}
- 2011/0008 . . . {Ventilation grilles}
- 2011/001 . . . {Vehicle control means, e.g. steering-wheel or column}
- 2011/0012 . . . {Seats or parts thereof}
- 2011/0014 {Arm-rests}
- 2011/0015 {Back-rests}
- 2011/0017 {Head-rests}
- 2011/0019 . . . {Side or rear panels}
- 2011/0021 {Doors}
- 2011/0022 {Pillars}
- 2011/0024 {Rear shelves}
- 2011/0026 . . . {Windows, e.g. windscreen}
- 2011/0028 . . . {Ceiling, e.g. roof rails}
- 2011/0029 . . . {Floor, e.g. side sills, fire wall}
- 2011/0031 . . . {Seat belts}
- 2011/0033 . . . {Rear-view mirrors}
- 2011/0035 . . . {Sun visors}
- 2011/0036 . . . {Luggage compartment}
- 2011/0038 . . . {Engine compartment}
- 2011/004 . . {outside the vehicle}
- 2011/0042 . {characterised by mounting means}
- 2011/0043 . . {for integrated articles, i.e. not substantially protruding from the surrounding parts}
- 2011/0045 . . . {with visible part, e.g. flush mounted}
- 2011/0047 {using hidden fastening means}
- 2011/0049 . . {for non integrated articles}
- 2011/005 . . . {Connection with the vehicle part}
- 2011/0052 {using screws, bolts, rivets or the like}
- 2011/0054 {using cigarette lighter}
- 2011/0056 {using suction cups}
- 2011/0057 {using magnetic means}
- 2011/0059 {using clips, clamps, straps or the like}
- 2011/0061 {using key-type connections}
- 2011/0063 {using adhesive means, e.g. hook and loop fasteners}
- 2011/0064 . . . {Connection with the article}
- 2011/0066 {using screws, bolts, rivets or the like}
- 2011/0068 {using suction cups}
- 2011/007 {using magnetic means}
- 2011/0071 {using latches, clips, clamps, straps or the like}
- 2011/0073 {using key-type connections}
- 2011/0075 {using a containment or docking space}
- 2011/0077 {using adhesive means, e.g. hook and loop fasteners}
- 2011/0078 {Quick-disconnect two-parts mounting means}
- 2011/008 . . . {Adjustable or movable supports}
- 2011/0082 {collapsible, e.g. for storing after use}
- 2011/0084 {with adjustment by linear movement in their operational position}
- 2011/0085 {with adjustment by rotation in their operational position}
- 2011/0087 {around two axes}
- 2011/0089 {around three axes, i.e. universally mounted}
- 2011/0091 {the article being mounted on a flexible shaft}
- 2011/0092 {with motorization}
- 2011/0094 . {characterised by means for covering after user, e.g. boxes, shutters or the like}
- 2011/0096 . {Theft prevention of articles}
- 2011/0098 . . {using electric or electronic means, e.g. alarms, codes}
- 11/02 . . for radio sets, television sets, telephones, or the like; Arrangement of controls thereof
- 11/0205 . . . {for radio sets ([B60R 11/0211 takes precedence](#))}
- 11/0211 . . . {for record carriers apparatus, e.g. video recorders, tape players or CD players}
- 11/0217 . . . {for loud-speakers}
- 11/0223 {of flat type}
- 11/0229 . . . {for displays, e.g. cathodic tubes}
- 11/0235 {of flat type, e.g. LCD}
- 11/0241 . . . {for telephones}
- 11/0247 . . . {for microphones or earphones}
- 11/0252 . . . {for personal computers, e.g. laptops, notebooks}
- 11/0258 . . . {for navigation systems}
- 11/0264 . . . {for control means}
- 2011/027 . . . {for Din-sized apparatus}
- 2011/0276 . . . {for rear passenger use}
- 2011/0282 . . . {for the use of several passengers, e.g. simultaneously}
- 2011/0288 . . . {Apparatus made of several modules independently mounted}
- 2011/0294 . . . {Apparatus with multi-functionalities, e.g. radio and telephone}
- 11/04 . . Mounting of cameras operative during drive; Arrangement of controls thereof relative to the vehicle
- 11/06 . . for tools or spare parts ([for vehicle roof parts B60J 7/20](#); [for spare wheels B62D](#))
- 13/00 Elements for body-finishing, identifying, or decorating; Arrangements or adaptations for advertising purposes**
- 13/005 . . {Manufacturers' emblems, name plates, bonnet ornaments, mascots or the like; Mounting means therefor}
- 13/01 . . Liners for load platforms or load compartments
- 13/011 . . . {for internal load compartments, e.g. car trunks}
- 13/013 {comprising removable or hinged parts, e.g. for accessing storage compartments}
- 2013/015 . . . {made of a plurality of visible parts}
- 2013/016 . . . {integrating other functions or accessories}
- 2013/018 . . . {Connection or positioning of adjacent panels}

- 13/02 . . {Internal} Trim mouldings {; Internal} Ledges; Wall liners {for passenger compartments}; Roof liners ([B60R 13/01](#) takes precedence {; padded linings for the vehicle interior [B60R 21/04](#); arrangements or adaptations of floor mats or carpets in vehicles [B60N 3/04](#); internal lining for trains [B61D 17/18](#))
- 13/0206 . . {Arrangements of fasteners and clips specially adapted for attaching inner vehicle liners or mouldings (devices for fastening or securing [F16B](#))}
- 13/0212 . . {Roof or head liners (movable head-liners [B60J 7/0007](#))}
- 13/0218 . . . {supported by adhesion with the roof panel}
- 13/0225 . . . {self supporting head liners}
- 13/0231 . . . {specially adapted for roofs with openings}
- 13/0237 . . {Side or rear panels}
- 13/0243 . . . {Doors}
- 13/025 . . . {Pillars; Roof rails}
- 13/0256 . . {Dashboard liners}
- 13/0262 . . {Mid-console liners}
- 13/0268 . . {Rear parcel liners (used as luggage covering means [B60R 5/044](#))}
- 13/0275 . . {comprising removable or hinged parts (for accessing storage compartments [B60R 7/04](#); for airbag deployment [B60R 21/215](#))}
- 2013/0281 . . {made of a plurality of visible parts}
- 2013/0287 . . {integrating other functions or accessories}
- 2013/0293 . . {Connection or positioning of adjacent panels}
- 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](#))}
- 13/043 . . {Door edge guards}
- 2013/046 . . {Foot boards}
- 13/06 . . Sealing strips (sealing arrangements for vehicle windows, windscreens, non-fixed roofs, doors, or similar devices [B60J 10/00](#))
- 13/07 . . Water drainage or guide means not integral with roof structure ([B60R 13/06](#), [B60J 10/25](#)) take precedence; {integral with roof structure [B62D 25/07](#); drainage openings having movable or removable closures [B62D 25/24](#)}
- 13/08 . . 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](#))}
- 2013/0807 . . {Arrangements of fasteners or clips specially adapted therefore}
- 13/0815 . . {Acoustic or thermal insulation of passenger compartments (wall or roof liners integrating the insulating function [B60R 13/02](#); insulating floor mats or carpets [B60N 3/04](#))}
- 13/0823 . . . {Insulating partitions, e.g. between front and rear seats}
- 13/083 . . . {for fire walls or floors}
- 13/0838 . . {for engine compartments}
- 13/0846 . . {for duct, cable or rod passages, e.g. between engine and passenger compartments}
- 13/0853 . . . {specially adapted for movable parts, e.g. gears levers, pedals}
- 13/0861 . . {for covering undersurfaces of vehicles, e.g. wheel houses}
- 13/0869 . . {for protecting heat sensitive parts, e.g. electronic components}
- 13/0876 . . {for mounting around heat sources, e.g. exhaust pipes}
- 13/0884 . . {for mounting around noise sources, e.g. air blowers}
- 13/0892 . . {for humidity insulation (sealing strips [B60R 13/06](#))}
- 13/10 . . Registration, licensing, or like devices
- 13/105 . . {Licence- or registration plates, provided with mounting means, e.g. frames, holders, retainers, brackets}
- 15/00 Arrangements or adaptations of sanitation devices**
- 15/02 . . Washing facilities {(in railway vehicles [B61D 35/002](#))}
- 15/04 . . Toilet facilities {(in railway vehicles [B61D 35/005](#))}
- 16/00 Electric or fluid circuits specially adapted for vehicles and not otherwise provided for; Arrangement of elements of electric or fluid circuits specially adapted for vehicles and not otherwise provided for** {(devices for protecting vehicle occupants in case of accidents [B60R 21/00](#); safety belts [B60R 22/00](#); central door locking [E05B 49/00](#), [E05B 77/50](#))}
- 16/005 . . {Electro-mechanical devices, e.g. switched (electric switches in general [H01H](#))}
- 16/02 . . electric {constitutive elements}
- 16/0207 . . {Wire harnesses}
- 16/0215 . . . {Protecting, fastening and routing means therefor}
- 16/0222 {Grommets}
- 16/023 . . for transmission of signals between vehicle parts or subsystems
- 16/0231 . . . {Circuits relating to the driving or the functioning of the vehicle (monitoring tyres [B60C 23/00](#); indicating overspeed [B60K 31/00](#); for dash boards [B60K 37/00](#), [B60Q 3/10](#); for indicating emergencies [B60Q 1/52](#); brake control systems [B60T](#); registering or indicating the working of vehicles [G07C 5/00](#); measuring distance [G01C](#), e.g. combinations of speed and distance [G01C 23/00](#); engine indicators [G01L](#); measuring speed or acceleration [G01P](#))}
- 16/0232 {for measuring vehicle parameters and indicating critical, abnormal or dangerous conditions}
- 16/0233 {Vehicle tilting, overturning or roll over}
- 16/0234 {related to maintenance or repairing of vehicles}
- 16/0235 {for lighting devices combined with starting or ignition devices for road vehicles}
- 16/0236 {for economical driving}
- 16/0237 . . . {circuits concerning the atmospheric environment ([meteorology G01W](#))}
- 16/0238 . . . {Electrical distribution centers}
- 16/0239 . . . {Electronic boxes}

- 16/027 . . . between relatively movable parts of the vehicle, e.g. between steering wheel and column {(devices for measuring, signalling or controlling tyre pressure or temperature specially adapted for mounting on vehicles [B60C 23/00](#))}
- 16/03 . . for supply of electrical power to vehicle subsystems {or for (circuit arrangements for charging batteries [H02J 7/00](#))}
- 16/0307 . . . {using generators driven by a machine different from the vehicle motor}
- 16/0315 . . . {using multiplexing techniques (multiplexing for transmission of signals [G08C 15/00](#); multiplexing for electrical communication in general [H04J](#))}
- 2016/0322 {Temporary code for documents to be reclassified to [G08C](#), [H04L](#) or [H04Q](#)}
- 16/033 . . . characterised by the use of electrical cells or batteries (for propulsion purposes [B60K 1/04](#); supplying batteries to, or removing batteries from, vehicles [B60S 5/06](#); testing of charge state [G01R 31/36](#))
- 16/037 . . for occupant comfort {, e.g. for automatic adjustment of appliances according to personal settings, e.g. seats, mirrors, steering wheel}
- 16/0373 . . . {Voice control (in general [G10L](#))}
- 16/04 . . Arrangement of batteries
- 16/06 . . for removing electrostatic charges (carrying-off electrostatic charges in general [H05F 3/00](#))
- 16/08 . fluid
- 17/00 Arrangements or adaptations of lubricating systems or devices (lubricating in general [F16N](#))**
- 17/02 . Systems, e.g. central lubrication systems
- 19/00 Wheel guards; Radiator guards, (e.g. grilles); Obstruction removers; Fittings damping bouncing force in collisions ({reinforcement elements for side doors [B60J 5/0412](#); } mudguards [B62D](#))**
- 2019/002 . {Wheel guards}
- 2019/005 . {Crash attenuators, i.e. means added to highway service vehicles for softening high speed impacts}
- 2019/007 . {Means for adjusting or regulating the crash absorption capacity of the vehicle, e.g. when detecting an impending collision}
- 19/02 . Bumpers, i.e. impact receiving or absorbing members for protecting vehicles or fending off blows from other vehicles or objects ({[B60R 19/56](#) takes precedence; initiating brake action by contact of bumper with an external object [B60T 7/22](#); for rail vehicles [B61F 19/04](#); safety equipment for cycles [B62J 27/00](#);} integral with waterborne vessels or specially adapted therefor [B63B 59/02](#))
- 19/023 . . {Details}
- 2019/026 . . {Buffers, i.e. bumpers of limited extent}
- 19/03 . . characterised by material, e.g. composite ([B60R 19/18](#) takes precedence)
- 19/04 . . formed from more than one section {in a side-by-side arrangement}
- 19/12 . . . vertically spaced
- 19/14 . . . having folding parts
- 19/16 . . . having deflecting members, e.g. rollers, balls
- 19/18 . . {characterised by the cross-section;} Means within the bumper to absorb impact
- 2019/1806 . . . {Structural beams therefor, e.g. shock-absorbing (bumper beams made of cellular materials [B60R 19/22](#))}
- 2019/1813 {made of metal}
- 2019/182 {of light metal, e.g. extruded}
- 2019/1826 {of high-tension steel}
- 2019/1833 {made of plastic material}
- 2019/184 {Blow moulded}
- 2019/1846 {comprising a cellular structure}
- 2019/1853 {of reinforced plastic material}
- 2019/186 . . . {Additional energy absorbing means supported on bumper beams, e.g. cellular structures or material}
- 2019/1866 {Cellular structures}
- 2019/1873 {Cellular materials}
- 2019/188 {Blow molded structures}
- 2019/1886 . . . {Bumper fascias and fastening means therefor (on fenders [B60R 2019/247](#))}
- 2019/1893 . . . {comprising a multiplicity of identical adjacent shock-absorbing means}
- 19/20 . . . containing {mainly} gas or liquid, e.g. inflatable (connection of valves to inflatable elastic bodies [B60C 29/00](#))
- 19/205 {inflatable in the direction of an obstacle upon impending impact, e.g. using air bags}
- 19/22 . . . containing {mainly} cellular material, e.g. solid foam
- 19/24 . . Arrangements for mounting bumpers on vehicles
- 2019/242 . . . {on two vertical sleeves, e.g. on energy absorber ends}
- 2019/245 . . . {with adjusting means to compensate manufacturing tolerances, e.g. between bumper and energy absorbers}
- 2019/247 . . . {Fastening of bumpers' side ends}
- 19/26 . . . comprising yieldable mounting means ({[B60R 19/38](#) takes precedence;} springs, shock absorbers, or means for damping vibrations *per se* [F16F](#))
- 2019/262 {with means to adjust or regulate the amount of energy to be absorbed}
- 2019/264 {using cellular structures}
- 2019/266 {using friction surfaces}
- 2019/268 {with rebound preventing means, e.g. ratchets}
- 19/28 Metallic springs
- 19/285 {comprising only leaf springs, e.g. the mounting means forming part of the guard itself}
- 19/30 Elastomeric material ({[B60R 19/34](#) takes precedence})
- 19/32 Fluid shock absorbers {, e.g. with coaxial coil springs}
- 19/34 destroyed upon impact, e.g. one-shot type
- 19/36 Combinations of yieldable mounting means of different types {(fluid shock absorbers with coaxial coil springs [B60R 19/32](#))}
- 19/38 . . . adjustably or movably mounted, e.g. horizontally displaceable for securing a space between parked vehicles {(adjustably mounted for compensating manufacturing tolerances [B60R 19/24](#), [B60R 19/26](#))}

19/40	. . . . in the direction of an obstacle before a collision {, or extending during driving of the vehicle, i.e. to increase the energy absorption capacity of the bumper (inflatable bumpers B60R 19/20)}	2021/0037	. . . . {standing}
19/42	. . extending primarily along the sides of, or completely encircling, a vehicle (ornamental or guard strips B60R 13/04)	2021/0039	. . {Body parts of the occupant or pedestrian affected by the accident}
19/44	. . Bumper guards	2021/0041	. . . . {Arms}
19/445	. . . {Guard strips}	2021/0044	. . . . {Chest}
19/46	. . . spring- or pivotally-mounted	2021/0046	. . . . {Feet}
19/48	. . combined with, or convertible into, other devices or objects, e.g. bumpers combined with road brushes, bumpers convertible into beds	2021/0048	. . . . {Head}
19/483	. . . {with obstacle sensors of electric or electronic type}	2021/0051	. . . . {Knees}
2019/486	. . . {with air passages, e.g. for cooling}	2021/0053	. . . . {Legs}
19/50	. . . with lights or registration plates	2021/0055	. . . . {Pelvis}
2019/505	. . . . {with lights}	2021/0058	. . . . {Shoulders}
19/52	. Radiator or grille guards {; Radiator grilles (cooling aspects B60K 11/08)}	2021/006	. . {Type of passenger}
2019/522	. . {Bull bars}	2021/0062	. . . . {woman, e.g. pregnant}
2019/525	. . {Radiator grilles}	2021/0065	. {Type of vehicles}
2019/527	. . . {integral with bumpers}	2021/0067	. . {Buses}
19/54	. Obstruction removers or deflectors (B60R 19/16 , B60R 21/34 take precedence)	2021/0069	. . {Trailers, e.g. caravans}
19/545	. . {Devices for cutting wire-type obstructions}	2021/0072	. . {Convertible cars}
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	2021/0074	. . {Utility vehicles}
19/565	. . {on vehicle sides}	2021/0076	. . . . {Agricultural vehicles, e.g. tractors}
21/00	Arrangements or fittings on vehicles for protecting or preventing injuries to occupants or pedestrians in case of accidents or other traffic risks (safety belts or body harnesses in vehicles B60R 22/00; devices, apparatus or methods for life-saving in general A62B; safety devices for propulsion unit control specially adapted for, or arranged in, vehicles B60K 28/00; seats constructed to protect the occupant from the effect of abnormal g-forces, e.g. crash or safety seats, B60N 2/42; energy-absorbing arrangements for hand wheels for steering vehicles B62D 1/11; energy-absorbing arrangements for vehicle steering columns B62D 1/19; harnessing in aircraft B64D 25/00)	2021/0079	. . . . {Fork-lift trucks}
2021/0002	. {Type of accident}	2021/0081	. . . . {Working vehicles}
2021/0004	. . {Frontal collision}	2021/0083	. . . . {Pick-up trucks; Light trucks; Sport utility vehicles}
2021/0006	. . {Lateral collision}	2021/0086	. . {Racing cars}
2021/0009	. . {Oblique collision}	2021/0088	. . {Cycles, e.g. motorcycles}
2021/0011	. . {Rear collision or recoiling bounce after frontal collision}	2021/009	. . {Railway vehicles}
2021/0013	. . {Free fall}	2021/0093	. . {Aircraft}
2021/0016	. . {Fall in water}	2021/0095	. . {Boats}
2021/0018	. . {Roll-over}	2021/0097	. . {Amusement vehicles}
2021/002	. . {Underrun collision}	21/01	. Electrical circuits for triggering {passive} safety arrangements, {e.g. airbags, safety belt tighteners,} in case of vehicle accidents or impending vehicle accidents {(electrical circuits for transmission of signals between steering wheel and the vehicle itself B60R 16/027 ; for electrically actuating belt retractor locking means B60R 22/343)}
2021/0023	. . {Offset collision}	2021/01006	. . {Mounting of electrical components in vehicles}
2021/0025	. . {Pole collision}	2021/01013	. . {Means for detecting collision, impending collision or roll-over}
2021/0027	. {Post collision measures, e.g. notifying emergency services}	2021/0102	. . . . {the monitored value being used for calculating occupant displacement}
2021/003	. {characterised by occupant or pedestrian}	2021/01027	. . . . {Safing sensors}
2021/0032	. . {Position of passenger}	2021/01034	. . {Controlling a plurality of restraint devices}
2021/0034	. . . {Lying down}	2021/0104	. . {Communication circuits for data transmission}
		2021/01047	. . . . {Architecture}
		2021/01054	. . . . {Bus}
		2021/01061	. . . . . {between the airbag system and other vehicle electronic systems}
		2021/01068	. . . . . {between different sensors and airbag control unit}
		2021/01075	. . . . . {between the airbag control unit and pyrotechnic fuses or equivalent actuators}
		2021/01081	. . . . {Transmission medium}
		2021/01088	. . . . . {wireless}
		2021/01095	. . . . . {optical}
		2021/01102	. . . . {Transmission method}
		2021/01109	. . . . . {power and data signal using transmission medium}
		2021/01115	. . . . . {specific data frames}
		2021/01122	. . {Prevention of malfunction}
		2021/01129	. . . . {Problems or faults}
		2021/01136	. . . . . {Cut lines}

2021/01143	. . . .	{Short circuits}	2021/01345	. . . .	{using mechanical sensing means}
2021/0115	. . . .	{Current leakage}	21/0136	. . .	responsive to actual contact with an obstacle {, e.g. to vehicle deformation, bumper displacement or bumper velocity relative to the vehicle (monitoring crash strength in combination with passenger seat detection B60R 21/01558)}
2021/01156	. . . .	{Current or voltage overload}	21/015	. . .	including means for detecting the presence or position of passengers, passenger seats or child seats {, and the related safety parameters therefor, e.g. speed or timing of airbag inflation in relation to occupant position or seat belt use}
2021/01163	. . . .	{Insufficient current or voltage}	21/01504	. . .	{detecting bag displacement}
2021/0117	. . . .	{Noise}	21/01508	. . .	{detecting forces or pressure in bags or modules}
2021/01177	. . . .	{Misdeployment, e.g. during assembly, disassembly, accident salvage or recycling}	21/01512	. . .	{Passenger detection systems}
2021/01184	. . .	{Fault detection or diagnostic circuits (in power circuits B60R 2021/01129)}	21/01516	. . . .	{using force or pressure sensing means}
2021/0119	. . . .	{Plausibility check}	21/0152	. . . . .	{using strain gauges}
2021/01197	. . . .	{Warning devices}	21/01522	. . . . .	{using fluid means}
2021/01204	. .	{Actuation parameters of safety arrangements}	21/01524	. . . . .	{using electric switches}
2021/01211	. . .	{Expansion of air bags}	21/01526	. . . . .	{using piezoelectric elements}
2021/01218	. . . .	{control of expansion speed}	21/01528	. . . .	{mounted on the bag}
2021/01225	. . . .	{control of expansion volume}	21/0153	. . . .	{using field detection presence sensors}
2021/01231	. . . .	{control of expansion timing or sequence}	21/01532	. . . . .	{using electric or capacitive field sensors}
2021/01238	. . . .	{control of expansion shape}	21/01534	. . . . .	{using electromagnetic waves, e.g. infrared}
2021/01245	. . . .	{selection of seat for bag expansion}	21/01536	. . . . .	{using ultrasonic waves}
2021/01252	. . .	{Devices other than bags}	21/01538	. . . . .	{for image processing, e.g. cameras or sensor arrays}
2021/01259	. . . .	{Brakes}	21/0154	. . . . .	{in combination with seat heating}
2021/01265	. . . .	{Seat belts}	21/01542	. . . . .	{detecting passenger motion}
2021/01272	. . . . .	{Belt tensioners}	21/01544	. . . . .	{detecting seat belt parameters, e.g. length, tension or height-adjustment}
2021/01279	. . . . .	{Load limiters}	21/01546	. . . . .	{using belt buckle sensors}
2021/01286	. .	{Electronic control units}	21/01548	. . . . .	{sensing the amount of belt winded on retractor}
2021/01293	. . .	{programmable for use in different vehicles or with different airbags configurations}	21/0155	. . . . .	{sensing belt tension}
21/013	. .	including means for detecting collisions, impending collisions or roll-over	21/01552	. . . . .	{detecting position of specific human body parts, e.g. face, eyes or hands}
2021/01302	. . .	{monitoring vehicle body vibrations or noise}	21/01554	. . .	{Seat position sensors}
2021/01304	. . .	{monitoring rough road condition}	21/01556	. . .	{Child-seat detection systems}
2021/01306	. . .	{monitoring vehicle inclination}	21/01558	. . .	{monitoring crash strength}
2021/01308	. . .	{monitoring distance between vehicle body and road}	21/0156	. . . . .	{by deceleration}
2021/01311	. . .	{monitoring the braking system, e.g. ABS}	21/01562	. . . . .	{by speed}
2021/01313	. . .	{monitoring the vehicle steering system or the dynamic control system}	21/01564	. . .	{Manually or key-actuated inhibition switches}
2021/01315	. . .	{monitoring occupant displacement}	21/01566	. . .	{Devices for warning or indicating mode of inhibition}
2021/01317	. . .	{monitoring seat belt tension}	21/017	. .	including arrangements for providing electric power to safety arrangements {or their actuating means, e.g. to pyrotechnic fuses or electro-mechanic valves}
21/0132	. . .	responsive to vehicle motion parameters {, e.g. to vehicle longitudinal or transversal deceleration or speed value}	21/0173	. . .	{Diagnostic or recording means therefor}
2021/01322	. . . .	{comprising variable thresholds, e.g. depending from other collision parameters}	21/0176	. . . . .	{for firing circuits using only mechanical switches as collision detecting means, in series with pyrotechnic fuses}
2021/01325	. . . .	{Vertical acceleration}	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)}
2021/01327	. . . .	{Angular velocity or angular acceleration}	2021/0206	. .	{Self-supporting restraint systems, e.g. restraining arms, plates or the like}
21/0133	. . . .	{by integrating the amplitude of the input signal}	2021/0213	. . .	{mounted on floor}
		WARNING	2021/022	. . .	{mounted on seats}
		Group(s) B60R 21/0133 - B60R 21/01338 are incomplete pending reclassification of documents from group B60R 21/0132 .			
		Until reclassification is complete, groups B60R 21/0132 and B60R 21/0133 - B60R 21/01338 should be considered in order to perform a complete search.			
21/01332	. . . .	{by frequency or waveform analysis}			
21/01334	. . . . .	{using Fourier analysis}			
21/01336	. . . . .	{using filtering}			
21/01338	. . . . .	{using vector analysis}			
21/0134	. . .	responsive to imminent contact with an obstacle {, e.g. using radar systems}			

B60R

2021/0226	. . . {mounted on fire wall}	21/131	. . . {Protective devices for drivers in case of overturning of tractors (means for preventing overturning or tipping of tractors B62D 49/08)}
2021/0233	. . . {mounted on steering-wheel}	2021/132	. . . {Roll bars for convertible vehicles}
2021/024	. . . {mounted on dash-board}	2021/134	. . . {movable from a retracted to a protection position}
2021/0246	. . . {mounted on side walls}	2021/135	. . . {automatically during an accident}
2021/0253	. . . {mounted on roof}	2021/137	. . . {Reinforcement cages for closed vehicle bodies}
21/026	. . {Rigid partitions inside vehicles, e.g. between passengers and load compartments (B60R 21/12 takes precedence)}	2021/138	. . . {using external airbags}
2021/0266	. . . {comprising energy absorbing means}	21/16	. . Inflatable occupant restraints or confinements designed to inflate upon impact or impending impact, e.g. air bags ({protective garments with automatically inflatable shock-absorbing means A41D 13/018 ; } connection of valves to inflatable elastic bodies B60C 29/00)
2021/0273	. . {automatically movable to an operative position, e.g. in case of collision or impending collision}	2021/161	. . . {characterised by additional means for controlling deployment trajectory}
2021/028	. . {Means preventing passenger from falling out of vehicles}	2021/162	. . . {Means for diverting, destroying or blocking the bag in case of dangerous deployment, e.g. during rescue operations or use of rear-facing children seats}
21/0286	. . {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)}	21/164	. . . {combined with vehicle venting means for reducing or avoiding the passenger compartment overpressure during inflation}
2021/0293	. . {Additional pads or cushions in vehicle compartments, e.g. movably mounted}	2021/165	. . . {reusable, e.g. in case of multiple collisions}
21/04	. . Padded linings for the vehicle interior {; Energy absorbing structures associated with padded or non-padded linings}	2021/167	. . . {comprising anti-theft devices}
2021/0407	. . . {using gas or liquid as energy absorbing means}	2021/168	. . . {for restraining luggages}
2021/0414	. . . {using energy absorbing ribs}	21/18	. . . the inflatable member formed as a belt or harness or combined with a belt or harness arrangement
2021/0421	. . . {using honeycomb structures}	21/20	. . . Arrangements for storing inflatable members in their non-use or deflated condition; Arrangement or mounting of air bag modules or components
21/0428	. . . {associated with the side doors or panels, e.g. displaced towards the occupants in case of a side collision}	21/201	. . . . Packaging straps or envelopes for inflatable members
2021/0435	. . . {associated with the side or roof pillars}	21/203	. . . . in steering wheels or steering columns
2021/0442	. . . {associated with the roof panel}	21/2032	. . . . {the inflator or inflatable member not being rotatable with the steering wheel; Arrangements using the steering column or steering wheel rim for storing, supplying or evacuating the inflation gas or for storing the inflatable member}
21/045	. . . associated with the instrument panel or dashboard	21/2035	. . . . {using modules containing inflator, bag and cover attachable to the steering wheel as a complete sub-unit (steering wheel covers with tear lines B60R 21/21656 ; assembling of modules B60R 21/217)}
21/05	. . . associated with the steering wheel, {steering} hand lever or {steering} column (yieldable steering columns B62D 1/18)	21/2037	. . . . . {the module or a major component thereof being yieldably mounted, e.g. for actuating the horn switch or for protecting the driver in a non-deployment situation (horn switches integrated in steering wheel covers with tear lines B60R 21/21658)}
21/055	. . Padded {or energy-absorbing} fittings {, e.g. seat belt anchors (sun visors B60J 3/00; head rests B60N 2/80)}	21/205	. . . . in dashboards
21/06	. . Safety nets, transparent sheets, curtains, or the like, e.g. between occupants and glass ({ B60R 21/026 }, B60R 21/11 , B60R 21/12 , B60R 21/16 take precedence)	21/206	. . . . in the lower part of dashboards, e.g. for protecting the knees
2021/065	. . . {comprising energy absorbing mounting means}	21/207	. . . . in vehicle seats
21/08	. . . {automatically} movable from an inoperative to an operative position, e.g. in a collision (electrical circuits for triggering safety arrangements B60R 21/01)	21/2072	. . . . {in children's seats}
21/09	. . Control elements or operating handles movable from an operative to an out-of-the way position, e.g. {pedals,} switch knobs, window cranks {(specially adapted for brake pedals, e.g. by venting of master cylinder or destruction of force transmitting rod, B60T 7/065)}	2021/2074	. . . . {in head rests}
21/11	. . Overhead guards, e.g. against loads falling down {(specially adapted for fork-lift trucks B66F 9/07545)}	2021/2076	. . . . {Removable covers with tear seams}
21/12	. . which protect the occupants against personal attack from the inside or the outside of the vehicle	2021/2078	. . . . {in rear seats}
21/13	. . Roll-over protection (electrical circuits for triggering safety arrangements B60R 21/01)		

B60R

21/21	. . . .	in vehicle side panels, e.g. doors (pillar mounted arrangements B60R 21/213)	21/231	. . . .	characterised by their shape, construction or spatial configuration
21/213	. . . .	in vehicle roof frames or pillars	2021/23107	. . . .	{the bag being integrated in a multi-bag system}
21/214	. . . .	in roof panels	2021/23115	. . . .	{with inflatable support compartments creating an internal suction volume}
21/215	. . . .	characterised by the covers for the inflatable member (B60R 21/2176 takes precedence)	2021/23123	. . . .	{Heat protection panels}
2021/21506	. . . .	{comprising tearing tabs, legs or the like for holding the lid before deployment}	2021/2313	. . . .	{comprising sensitive compartments}
2021/21512	. . . .	{the lid being displaced towards the occupant during deployment (B60R 2021/2161 , B60R 2021/21525 take precedence)}	21/23138	. . . .	{specially adapted for side protection (B60R 21/23184 , B60R 21/232 take precedence)}
2021/21518	. . . .	{comprising a lock unlocked during deployment}	2021/23146	. . . .	{seat mounted}
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}	2021/23153	. . . .	{specially adapted for rear seat passengers}
2021/21531	. . . .	{using a stretchable wall liner}	2021/23161	. . . .	{specially adapted for protecting at least two passengers, e.g. preventing them from hitting each other}
2021/21537	. . . .	{characterised by hinges}	2021/23169	. . . .	{specially adapted for knee protection}
2021/21543	. . . .	{with emblems}	2021/23176	. . . .	{specially adapted for foot protection}
21/2155	. . . .	with complex motion of the cover; Retraction under the lining during opening	21/23184	. . . .	{Tubular air bags connected to the vehicle at their two extremities}
21/216	. . . .	comprising tether means for limitation of cover motion during deployment	2021/23192	. . . .	{Roof bags, i.e. protecting the occupant in a roll-over situation}
2021/2161	. . . .	{the cover being displaced towards the occupant during deployment}	21/232	. . . .	Curtain-type airbags deploying mainly in a vertical direction from their top edge
2021/2163	. . . .	{with energy absorbing or elastic means}	21/233	. . . .	comprising a plurality of individual compartments; comprising two or more bag-like members, one within the other (B60R 21/232 takes precedence)
21/2165	. . . .	characterised by a tear line for defining a deployment opening	2021/23308	. . . .	{the individual compartments defining the external shape of the bag}
2021/21652	. . . .	{the tearing being done or assisted by cutters}	2021/23316	. . . .	{Inner seams, e.g. creating separate compartments or used as tethering means}
2021/21654	. . . .	{the tearing being done or assisted by heating or pyrotechnic means}	2021/23324	. . . .	{Inner walls crating separate compartments, e.g. communicating with vents}
21/21656	. . . .	{Steering wheel covers or similar cup-shaped covers}	2021/23332	. . . .	{using independent bags, one within the other}
21/21658	. . . .	{with integrated switches, e.g. horn switches}	21/2334	. . . .	Expansion control features
21/217	. . . .	Inflation fluid source retainers, e.g. reaction canisters; Connection of bags, covers, diffusers or inflation fluid sources therewith or together	21/2338	. . . .	Tethers
21/2171	. . . .	{specially adapted for elongated cylindrical or bottle-like inflators with a symmetry axis perpendicular to the main direction of bag deployment, e.g. extruded reaction canisters (B60R 21/2176 takes precedence)}	2021/23382	. . . .	{Internal tether means}
2021/2172	. . . .	{the cover being connected to the surrounding part and to the module, e.g. floating mounts}	2021/23384	. . . .	{having ends which are movable or detachable during deployment}
2021/2173	. . . .	{the module or part thereof being movably mounted on the vehicle}	2021/23386	. . . .	{External tether means}
2021/2175	. . . .	{using energy absorbing means}	2021/23388	. . . .	{having ends which are movable or detachable during deployment}
21/2176	. . . .	{the air bag components being completely enclosed in a soft or semi-rigid housing or cover}	21/2342	. . . .	Tear seams
2021/2177	. . . .	{Reaction canisters characterised by material}	21/2346	. . . .	Soft diffusers
2021/2178	. . . .	{Plastic}	21/235	. . . .	characterised by their material
21/23	. . . .	Inflatable members (B60R 21/18 takes precedence ; connection to inflation fluid source retainers B60R 21/217)	2021/23504	. . . .	{characterised by material}
			2021/23509	. . . .	{Fabric}
			2021/23514	. . . .	{coated fabric}
			2021/23519	. . . .	{Resin (for coating fabric B60R 2021/23514)}
			2021/23523	. . . .	{Composite (coated fabric B60R 2021/23514)}
			2021/23528	. . . .	{Metal}
			2021/23533	. . . .	{characterised by the manufacturing process}
			2021/23538	. . . .	{Sewing}
			2021/23542	. . . .	{Weaving}
			2021/23547	. . . .	{one piece weaving}

2021/23552	. . . . .	{Knitting}	2021/2642	. . . . .	{comprising a plurality of combustion chambers or sub-chambers}
2021/23557	. . . . .	{Molding}	21/2644	. . . . .	{using only solid reacting substances, e.g. pellets, powder}
2021/23561	. . . . .	{Sealing}	21/2646	. . . . .	{the reacting substances being supported by the inflatable member walls, or by a flexible support within it}
2021/23566	. . . . .	{Nesting of panels, i.e. for material utilisation}	2021/2648	. . . . .	{comprising a plurality of combustion chambers or sub-chambers}
2021/23571	. . . . .	{characterised by connections between panels}	21/268	. . . . .	using instantaneous release of stored pressurised gas {(B60R 21/26005 takes precedence)}
2021/23576	. . . . .	{Sewing}	2021/2685	. . . . .	{comprising a plurality of pressure chambers}
2021/2358	. . . . .	{Bonding}	21/272	. . . . .	with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators
2021/23585	. . . . .	{Vulcanisation}	2021/2725	. . . . .	{using a fluid fuel gas generator}
2021/2359	. . . . .	{Welding}	21/274	. . . . .	characterised by means to rupture or open the fluid source
2021/23595	. . . . .	{Sealing}	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)}
21/237	. . . . .	characterised by the way they are folded	2021/2765	. . . . .	{comprising means to control the venting}
2021/2375	. . . . .	{Folding devices}	21/30	. . . . .	with means to draw ambient air into the flow line and mix such air with the inflation fluid
21/239	. . . . .	characterised by their venting means	21/33	. . . . .	Arrangements for non-electric triggering of inflation (electrical circuits for triggering safety arrangements B60R 21/01)
2021/2395	. . . . .	{comprising means to control the venting}	2021/335	. . . . .	{Connections between collision detecting means and inflators using pyrotechnic transmission lines}
21/26	. . . . .	characterised by the inflation fluid source or means to control inflation fluid flow {(arrangement or mounting thereof to the vehicle B60R 21/20; blasting cartridges for producing gas under pressure in general F42B 3/04; initiators or igniters therefor F42B 3/10)}	21/34	. . . . .	Protecting non-occupants of a vehicle, e.g. pedestrians {(B60R 19/02 takes precedence)}
21/26005	. . . . .	{the inflation fluid being transferred to the inflatable member by the mechanical deformation of the fluid container during an impact}	2021/343	. . . . .	{using deformable body panel, bodywork or components}
2021/26011	. . . . .	{using a filter through which the inflation gas passes}	2021/346	. . . . .	{means outside vehicle body}
2021/26017	. . . . .	{a cooling agent being added to the inflation fluid}	21/36	. . . . .	using airbags
2021/26023	. . . . .	{for filling the bag with foam}	21/38	. . . . .	using means for lifting bonnets
2021/26029	. . . . .	{Igniters}	22/00		Safety belts or body harnesses in vehicles (safety belts or body harnesses in general A62B 35/00)
2021/26035	. . . . .	{triggered by mechanical means}	22/001	. . . . .	{Knee, leg or head belts}
2021/26041	. . . . .	{of elongated shape}	2022/003	. . . . .	{for restraining detainees}
2021/26047	. . . . .	{of film shape}	2022/005	. . . . .	{for restraining luggages}
2021/26052	. . . . .	{using fluid materials}	2022/006	. . . . .	{Sleeve or tubular members enveloping the seat belt for enhancing comfort or protection}
2021/26058	. . . . .	{using a combination of inflators}	2022/008	. . . . .	{Belts; Fixing thereof specially adapted for pregnant users}
2021/26064	. . . . .	{characterised by auto-ignition means}	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)}
2021/2607	. . . . .	{characterised by heating or heat insulating means, e.g. for use under extreme temperatures}	2022/021	. . . . .	{Means for holding the tongue or buckle in a non-use position, e.g. for easy access by the user}
2021/26076	. . . . .	{characterised by casing}	22/022	. . . . .	{with means for facilitating access to rear seats in two-door cars}
2021/26082	. . . . .	{Material}	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)}
2021/26088	. . . . .	{Plastic}			
2021/26094	. . . . .	{characterised by fluid flow controlling valves}			
21/261	. . . . .	with means other than bag structure to diffuse or guide inflation fluid			
2021/2612	. . . . .	{Gas guiding means, e.g. ducts}			
2021/2615	. . . . .	{for diverting the gas into a plurality of bags}			
2021/2617	. . . . .	{Curtain bag nozzles}			
21/262	. . . . .	Elongated tubular diffusers, e.g. curtain-type			
21/263	. . . . .	using a variable source, e.g. plural stage or controlled output (hybrid inflators B60R 21/272)			
2021/2633	. . . . .	{with a plurality of inflation levels}			
2021/2636	. . . . .	{The volume of gas being continuously adjustable}			
21/264	. . . . .	using instantaneous generation of gas, e.g. pyrotechnic (B60R 21/268 takes precedence)			

- 22/024 . . . {Adaptations for use by small passengers, e.g. children ([B60R 22/20](#) takes precedence; using belt anti-slip devices [B60R 22/30](#))}
- 2022/025 . . . {Adaptations for use with children seats or luggages}
- 2022/026 . . . {at least two ends of the belt being retractable after use}
- 2022/027 . . {Four-point seat belt systems, e.g. with the two upper points connected together}
- 2022/028 . . {specially adapted for use in sleeping position, e.g. for reclining seats}
- 2022/029 . . {Belt storage; Devices or systems for controlling winding up of unused seat belt}
- 22/03 . . Means for presenting the belt or part thereof to the wearer {, e.g. foot-operated}
- 22/04 . . Passive restraint systems, i.e. systems both applied and removed automatically, e.g. by movement of the vehicle door
- 22/06 . . having the belt or harness connected to a member slidable in a vehicle-mounted track
- 22/08 . . having the belt retractor mounted on or in a vehicle closure, e.g. the door
- 22/10 . . specially adapted for children or animals ([children's seats B60N 2/24](#))
- NOTE**
- Groups
[B60R 22/02](#) {[B60R 22/022](#)} - [B60R 22/08](#),
[B60R 22/18](#) - [B60R 22/48](#) take precedence over group [B60R 22/10](#)
- 22/105 . . {for children (adaptation of children's seats for seat belts [B60N 2/265](#), [B60N 2/2803](#))}
- 22/12 . . Construction of belts or harnesses ([B60R 21/18](#) takes precedence {; woven fabrics for safety belts [D03D 1/0005](#))}
- 22/14 . . incorporating enlarged restraint areas, e.g. vests, nets {, crash pads, optionally for children ([crash pads for occupants' safety on vehicles in general B60R 21/02](#))}
- 22/16 . . using belts which become permanently deformed, i.e. one time use
- 22/18 . . Anchoring devices
- 2022/1806 . . {for buckles}
- 2022/1812 . . {Connections between seat belt and buckle tongue}
- 2022/1818 . . {Belt guides}
- 2022/1825 . . . {using rollers}
- 2022/1831 . . . {comprising a slotted plate sliding in its plane, e.g. inside circular guides}
- 2022/1837 . . . {comprising a universal mounting, e.g. spherical or cardan-type}
- 2022/1843 . . . {comprising an elongated sleeve}
- 22/185 . . with stopping means for acting directly upon the belt in an emergency, e.g. by clamping or friction ([B60R 22/195](#) takes precedence; combined with the retractor [B60R 22/42](#))}
- 22/1855 . . . {the means being sensitive to belt tension}
- 22/19 . . with means for reducing belt tension during use under normal conditions ([included in the retractor B60R 22/44](#))}
- 22/195 . . with means to tension the belt in an emergency, {e.g. means of the through-anchor or splitted reel type} (electrical circuits for triggering safety arrangements {[B60R 21/01](#)})
- NOTE**
- If the type of belt tensioner is not specified and can be used indifferently for pulling belt anchors or rotating belt reels, the documents are classified in [B60R 22/46](#)
- 22/1951 . . . {characterised by arrangements in vehicle or relative to seat belt}
- 22/1952 . . . {Transmission of tensioning power by cable; Return motion locking means therefor}
- 22/1953 {the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash}
- 22/1954 . . . {characterised by fluid actuators, e.g. pyrotechnic gas generators ([actuating a cable B60R 22/1952](#))}
- 22/1955 {Linear actuators}
- 22/1956 {Mechanical triggering means therefor ([also adapted for air bag inflators B60R 21/33](#))}
- 2022/1957 . . . {characterised by electric actuators}
- 22/1958 . . . {characterised by spring actuators ([B60R 22/1953](#) takes precedence)}
- 22/20 . . adjustable in position, e.g. in height
- 22/201 . . . {with the belt anchor connected to a slider movable in a vehicle-mounted track ([for passive restraint systems B60R 22/06](#))}
- 22/202 {the slider comprising spring-actuated locking means ([B60R 22/205](#) takes precedence)}
- 22/203 {the locking means being movably mounted on the slider}
- 22/205 {the slider comprising emergency actuated locking means}
- 22/206 . . . {Adjustable stop members for restraint systems comprising belt anchor vehicle mounted tracks, e.g. for passive seat belts}
- 2022/207 . . . {Horizontally or transversally adjustable}
- 2022/208 . . . {by automatic or remote control means}
- 22/22 . . secured to the vehicle floor
- 22/24 . . secured to the side, door, or roof of the vehicle
- 22/26 . . secured to the seat
- 2022/263 . . . {Front seats}
- 2022/266 . . . {Rear seats, e.g. benches}
- 22/28 . . incorporating energy-absorbing devices ([belt anchors provided with energy-absorbing means for protecting the occupants in case of physical contact therewith B60R 21/055](#); belt retractors comprising energy-absorbing means [B60R 22/341](#), [B60R 22/4676](#))}
- 2022/281 . . . {for buckles}
- 2022/282 . . . {using fluids or vico-elastic materials}
- 2022/283 . . . {using tearing or scoring of material}
- 2022/284 . . . {using electric or magnetic braking means}
- 2022/285 . . . {using friction surfaces}
- 2022/286 . . . {using deformation of material}
- 2022/287 {of torsion rods or tubes}
- 2022/288 . . . {with means to adjust or regulate the amount of energy to be absorbed}
- 2022/289 . . . {Energy-absorption curves}

- 22/30 . . . Coupling devices other than buckles, including length-adjusting fittings {or anti-slip devices (adaptations of manual three-point seat belt systems for use by small passengers using other means than belt anti-slip devices B60R 22/024; buckles A44B 11/00; releasable fastenings in general F16B)}
- 22/32 . . . Devices for releasing in an emergency, e.g. after an accident {; Remote or automatic unbuckling devices (unlocking devices for retractors B60R 22/3416)}
- 22/321 . . . {using electric means}
- 22/322 . . . {using automatic actuating means (B60R 22/321 takes precedence)}
- 22/324 . . . {triggered by strong traction on the seat belt, e.g. with temporisation}
- 22/325 . . . {using remote control means (B60R 22/321, B60R 22/322 take precedence)}
- 2022/327 . . . {using pyrotechnic means}
- 2022/328 . . . {comprising means for cutting the belt}
- 22/34 . . . Belt retractors, e.g. reels (anchoring devices {, e.g. guide loops} , with means to tension the belt in an emergency B60R 22/195)
- 2022/3402 . . . {Retractor casings; Mounting thereof}
- 22/3405 . . . {of the non-rotary type}
- 22/3408 . . . {without locking means (B60R 22/3405 takes precedence)}
- 22/341 . . . {comprising energy-absorbing means}
- 22/3413 . . . {operating between belt reel and retractor frame (B60R 22/4676 takes precedence)}
- 22/3416 . . . {Unlocking devices for retractors (B60R 22/3405 takes precedence)}
- 2022/3419 . . . {with end lock preventing means}
- 2022/3421 . . . {with means for locking the belt reel in a non-use position, e.g. for seat mounted retractor when the seat is in a non-locked condition}
- 2022/3424 . . . {Multi-spool or multi-belt retractors}
- 2022/3427 . . . {Seat belt connection on reels}
- 22/343 . . . with electrically actuated locking means {(B60R 22/3405 takes precedence)}
- 22/347 . . . with means for permanently locking the retractor during the wearing of the belt {(B60R 22/3405) , B60R 22/343, B60R 22/415 take precedence}
- 2022/3475 . . . {having means for acting directly upon the belt, e.g. by clamping or friction}
- 22/35 . . . the locking means being automatically actuated
- 22/353 . . . in response to belt movement when a wearer applies the belt
- 2022/3535 {comprising anti-cinch devices}
- 22/357 in response to fastening of the belt buckle
- 22/36 . . . self-locking in an emergency {(B60R 22/3405) , B60R 22/343 take precedence}
- 22/38 . . . responsive only to belt movement
- 2022/385 {with adjustable sensitivity}
- 22/40 . . . responsive only to vehicle movement
- 2022/401 {with adjustable sensor}
- 2022/402 {automatically adjustable to keep a vertical position, e.g. irrespective of seat or vehicle tilting}
- 2022/403 {using externally controlled means, e.g. linked with seat back hinge}
- 2022/404 {with remote sensor, e.g. for mounting on seat}
- 22/405 . . . responsive to belt movement and vehicle movement
- 22/41 . . . with additional means for preventing locking {during unwinding} under predetermined conditions
- 22/415 . . . with additional means allowing a permanent locking of the retractor during the wearing of the belt
- 22/42 . . . having means for acting directly upon the belt, e.g. by clamping or friction {(not combined with the retractor B60R 22/185)}
- 22/44 . . . with means for reducing belt tension during use under normal conditions {(not included in the retractor B60R 22/19; B60R 22/3405 takes precedence)}
- 2022/4406 {Spring shapes; Spring characteristic; Springs with adjustable anchoring means}
- 2022/4413 {by connecting the retracting spring to the belt reel by means of a transmission which decreases the spring force when the belt is pulled out, e.g. using conical pulleys}
- 2022/442 {using one spring and one additional retraction device in parallel}
- 2022/4426 {the additional retraction device being a second spring}
- 2022/4433 {externally controlled}
- 2022/444 {the additional retraction device being an electric actuator}
- 2022/4446 {using one spring and one additional retraction device in series}
- 2022/4453 {the additional retraction device being a second spring}
- 2022/446 {with external control means}
- 2022/4466 {the additional retraction device being an electric actuator}
- 2022/4473 {using an electric retraction device (combined with a spring B60R 2022/444, B60R 2022/4466)}
- 2022/448 {using a fluid actuated retraction device}
- 2022/4486 {for cancelling the belt tension}
- 2022/4493 {for braking the belt reel using friction surfaces or the like}
- 22/46 . . . {Reels} with means to tension the belt in an emergency {by forced winding up} (electrical circuits for triggering safety arrangements B60R 21/01 {tensioners using reels only guiding the belt during normal use, e.g. splitted reels B60R 22/195})
- 22/4604 {characterised by arrangements in vehicle or relative to seat belt}
- 2022/4609 {using a plurality of tensioners}
- 2022/4614 {one pretensioner acting on a plurality of belts}
- 22/4619 {Transmission of tensioning power by cable, e.g. using a clutch on reel side}
- 22/4623 {the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash}
- 22/4628 {characterised by fluid actuators, e.g. pyrotechnic gas generators (actuating a cable B60R 22/4619)}
- 22/4633 {Linear actuators, e.g. comprising a piston moving along reel axis and rotating along its own axis}
- 2022/4638 {comprising a piston moving along or in parallel to the reel axis}

2022/4642	. . . . {the gas directly propelling a flexible driving means, e.g. a plurality of successive masses, in a tubular chamber}	25/02	. . . operating on the steering mechanism
2022/4647	. . . . . {the driving means being a belt, a chain or the like}	25/021	. . . restraining movement of the steering column or steering wheel hub, e.g. restraining means controlled by ignition switch
22/4652	. . . . {Mechanical triggering means therefor (also adapted for air bag inflators B60R 21/33)}	25/02102	. . . . {with supplementary safety device preventing operation of the starter of an engine already running}
2022/4657	. . . . {comprising a plurality of charges}	25/02105	. . . . {Arrangement of the steering column thereof}
2022/4661	. . . . {comprising venting means, e.g. for avoiding overpressure in case of fire or for allowing return motion with energy absorption}	25/02107	. . . . . {comprising overload clutching means}
2022/4666	. . . {characterised by electric actuators}	25/0211	. . . . {comprising a locking member radially and linearly moved towards the steering column}
22/4671	. . . {characterised by spring actuators (B60R 22/4623 takes precedence)}	25/02113	. . . . . {manually actuated, e.g. using removable locking means}
22/4676	. . . {comprising energy-absorbing means operating between belt reel and retractor frame}	25/02115	. . . . . {key actuated}
2022/468	. . . {characterised by clutching means between actuator and belt reel}	25/02118	. . . . . {with linear bolt motion parallel to the lock axis}
2022/4685	. . . {with means to adjust or regulate the tensioning force in relation to external parameters}	25/02121	. . . . . {comprising safety devices avoiding locking until removal of the key}
2022/469	. . . {reusable}	25/02123	. . . . . {using an axially slidable lock cylinder}
2022/4695	. . . {without winding function during normal use}	25/02126	. . . . . {with linear bolt motion perpendicular to the lock axis}
22/48	. Control systems, alarms, or interlock systems, for the correct application of the belt or harness	25/02128	. . . . . {comprising safety devices avoiding locking until removal of the key}
2022/4808	. . {Sensing means arrangements therefor}	25/02131	. . . . . {by using an axially slidable lock cylinder}
2022/4816	. . . {for sensing locking of buckle}	25/02134	. . . . . {comprising a locking member axially moved along the steering column}
2022/4825	. . . {for sensing amount of belt winded on retractor}	25/02136	. . . . . {manually actuated, e.g. using removable locking members}
2022/4833	. . . {for sensing locking of retractor}	25/02139	. . . . . {key actuated}
2022/4841	. . . {for sensing belt tension}	25/02142	. . . . . {comprising externally controlled safety devices for preventing locking during vehicle running condition}
2022/485	. . . {for sensing belt anchor position, belt orientation, or the like}	25/02144	. . . . . {interlocked with gear box or gear lever}
2022/4858	. . . {for sensing pressure on seat}	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}
2022/4866	. . {Displaying or indicating arrangements thereof}	25/0215	. . . . . using electric means, e.g. electric motors or solenoids
2022/4875	. . . {on vehicle exterior}	25/02153	. . . . . {comprising a locking member radially and linearly moved towards the steering column}
2022/4883	. . {Interlock systems}	25/02156	. . . . . {comprising a locking member axially moved along the steering column}
2022/4891	. . . {preventing use of the vehicle when the seatbelt is not fastened}	25/022	. . . operating on the steering wheel, e.g. bars locked to the steering wheel rim (B60R 25/021 takes precedence)
25/00	Fittings or systems for preventing or indicating unauthorised use or theft of vehicles (locks for vehicles E05B 77/00-E05B 85/00)	25/0221	. . . . . {restraining means joining the steering wheel with another part of the car, e.g. pedals}
25/001	. {Anti-theft devices acting on jacking means or props, e.g. for trailers}	25/0222	. . . . . {by disjoining steering wheel and column}
25/002	. {Locking of control actuating or transmitting means (of steering mechanism B60R 25/02)}	25/0224	. . . . . {restraining of steering wheel by collapsing against column}
25/003	. . {locking of control actuating means}	25/0225	. . . . . {using a rod locked on the steering wheel rim (B60R 25/0221 takes precedence)}
25/005	. . . {of foot actuated control means (rods connecting pedals and steering wheels B60R 25/0221)}	25/0227	. . . . . {using means preventing access, e.g. boxes enclosing the steering wheel (B60R 25/014 takes precedence)}
25/006	. . . . {using means preventing access, e.g. boxes, shutters}	25/0228	. . . . . {comprising a locking bolt or fork slidable between or around the steering wheel spokes}
25/007	. . . {of hand actuated control means}		
25/008	. . . . {comprising means for locking two or more control means together, e.g. hand-brake handle and gear shift lever}		
25/01	. operating on vehicle systems or fittings, e.g. on doors, seats or windscreens		
25/012	. . {Airbags triggered}		
25/014	. . {comprising means for locking the seat or parts thereof in a driving prevention position}		
25/016	. . {comprising means for shuttering the windscreen or part thereof}		
25/018	. . {Thief traps}		

25/023	. . . Countermeasures against the physical destruction of the steering lock	25/2027	. . {with data signals passing through the human body}
25/04	. . operating on the propulsion system, e.g. engine or drive motor	25/2036	. . {by using the door logic and door and engine unlock means}
2025/0405	. . . {from the external}	25/2045	. . {by hand gestures}
2025/041	. . . {Preventing use of engine operating on the fluid supply}	25/2054	. . {by foot gestures}
2025/0415	. . . {with safe immobilisation}	25/2063	. . {Ignition switch geometry}
25/042	. . . operating on the fuel supply	25/2072	. . {with means for preventing jamming or interference of a remote switch control signal}
25/043	. . . by blocking the exhaust	25/2081	. . {combined with personal settings of other vehicle devices, e.g. mirrors, seats, steering wheels}
25/044	. . . by limiting or blocking the air supply	25/209	. . {Remote starting of engine}
25/045	. . . by limiting or cutting the electrical supply to the propulsion unit	25/21	. . using hidden switches
25/06	. . . operating on the vehicle transmission	25/22	. . using mechanical identifiers
25/063	. . . . {Locking of foot actuated control actuating means}	25/225	. . . {key in lock presence switch}
25/066	. . . . {Locking of hand actuated control actuating means}	25/23	. . using manual input of alphanumeric codes
25/08	. . operating on brakes or brake systems	25/24	. . using electronic identifiers containing a code not memorised by the user
25/083	. . . {Locking of foot-actuated control actuating means}	25/241	. . . {whereby access privileges are related to the identifiers}
25/086	. . . {Locking of hand-actuated control actuating means}	25/243	. . . {with more than one way to gain access}
25/09	. . by restraining wheel rotation, e.g. wheel clamps	25/245	. . . {where the antenna reception area plays a role}
25/093	. . . {comprising ground-engaging means}	25/246	. . . {characterised by the challenge triggering}
25/096	. . . {comprising means for deflating tyres}	25/248	. . . {Electronic key extraction prevention}
25/10	. . actuating a signalling device	25/25	. . using biometry
25/1001	. . {Alarm systems associated with another car fitting or mechanism, e.g. door lock or knob, pedals (features related to the general power supply B60R 25/1018)}	25/252	. . . {Fingerprint recognition}
25/1003	. . {Alarm systems characterised by arm or disarm features}	25/255	. . . {Eye recognition}
25/1004	. . {Alarm systems characterised by the type of sensor, e.g. current sensing means (using door lock sensors B60R 25/1001)}	25/257	. . . {Voice recognition}
25/1006	. . . {Mechanical sensors, e.g. pendulums (B60R 25/101 takes precedence)}	25/30	. . Detection related to theft or to other events relevant to anti-theft systems
25/1007	. . . . {comprising associated circuitry}	25/302	. . {using recording means, e.g. black box}
25/1009	. . . {Sonic sensors; Signal treatment therefor}	25/305	. . {using a camera}
25/101	. . . {Fuel level sensors}	25/307	. . {using data concerning maintenance or configuration}
25/1012	. . . {Zone surveillance means, e.g. parking lots, truck depots}	25/31	. . of human presence inside or outside the vehicle
2025/1013	. . {Alarm systems characterised by the type of warning signal, e.g. visual, audible}	25/32	. . of vehicle dynamic parameters, e.g. speed or acceleration
2025/1015	. . . {Signal coming from the exhaust}	25/33	. . of global position, e.g. by providing GPS coordinates
2025/1016	. . . {Remote signals alerting owner or authorities, e.g. radio signals}	25/34	. . of conditions of vehicle components, e.g. of windows, door locks or gear selectors
25/1018	. . {Alarm systems characterised by features related to the general power supply}	25/40	. . 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
25/102	. . a signal being sent to a remote location, e.g. a radio signal being transmitted to a police station, a security company or the owner	25/403	. . {Power supply in the vehicle}
25/1025	. . . {preventing jamming or interference of said signal}	25/406	. . {Power supply in the remote key}
25/104	. . characterised by the type of theft warning signal, e.g. visual or audible signals with special characteristics	99/00	Subject matter not provided for in other groups of this subclass
25/1045	. . . {Signal coming from the exhaust}	2099/005	. . {Protections against martens or rodents}
25/20	. . Means to switch the anti-theft system on or off	2225/00	Means indicating the functioning state of the alarm system, e.g. indicating arming, using leds
25/2009	. . {Antitheft state indicator}	2300/00	Details of viewing arrangements using cameras and displays, specially adapted for use in a vehicle
25/2018	. . {Central base unlocks or authorises unlocking}	2300/10	. . characterised by the type of camera system used
		2300/101	. . using cameras with adjustable capturing direction
		2300/102	. . using 360 degree surveillance camera system
		2300/103	. . using camera systems provided with artificial illumination device, e.g. IR light source
		2300/105	. . using multiple cameras
		2300/106	. . using night vision cameras
		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
- 2300/20 . characterised by the type of display used
- 2300/202 . . displaying a blind spot scene on the vehicle part responsible for the blind spot
- 2300/205 . . using a head-up display
- 2300/207 . . using multi-purpose displays, e.g. camera image and navigation or video on same display
- 2300/30 . characterised by the type of image processing
- 2300/301 . . combining image information with other obstacle sensor information, e.g. using RADAR/LIDAR/SONAR sensors for estimating risk of collision
- 2300/302 . . combining image information with GPS information or vehicle data, e.g. vehicle speed, gyro, steering angle data
- 2300/303 . . using joined images, e.g. multiple camera images
- 2300/304 . . using merged images, e.g. merging camera image with stored images
- 2300/305 . . . merging camera image with lines or icons
- 2300/306 . . using a re-scaling of images
- 2300/307 . . virtually distinguishing relevant parts of a scene from the background of the scene
- 2300/308 . . . by overlaying the real scene, e.g. through a head-up display on the windscreen
- 2300/40 . characterised by the details of the power supply or the coupling to vehicle components
- 2300/402 . . Image calibration
- 2300/404 . . triggering from stand-by mode to operation mode
- 2300/406 . . using wireless transmission
- 2300/408 . . using a data bus
- 2300/50 . characterised by the display information being shared, e.g. external display, data transfer to other traffic participants or centralised traffic controller
- 2300/60 . characterised by monitoring and displaying vehicle exterior scenes from a transformed perspective
- 2300/602 . . with an adjustable viewpoint
- 2300/605 . . . the adjustment being automatic
- 2300/607 . . from a bird's eye viewpoint
- 2300/70 . characterised by an event-triggered choice to display a specific image among a selection of captured images
- 2300/80 . characterised by the intended use of the viewing arrangement
- 2300/8006 . . for monitoring and displaying scenes of vehicle interior, e.g. for monitoring passengers or cargo
- 2300/8013 . . . for child monitoring
- 2300/802 . . for monitoring and displaying vehicle exterior blind spot views
- 2300/8026 . . . in addition to a rear-view mirror system
- 2300/8033 . . for pedestrian protection
- 2300/804 . . for lane monitoring
- 2300/8046 . . for replacing a rear-view mirror system
- 2300/8053 . . for bad weather conditions or night vision
- 2300/806 . . for aiding parking
- 2300/8066 . . for monitoring rearward traffic
- 2300/8073 . . for vehicle security, e.g. parked vehicle surveillance, burglar detection
- 2300/808 . . for facilitating docking to a trailer
- 2300/8086 . . for vehicle path indication
- 2300/8093 . . for obstacle warning
- 2325/00 Indexing scheme relating to vehicle anti-theft devices**
- 2325/10 . Communication protocols, communication systems of vehicle anti-theft devices
- 2325/101 . . Bluetooth
- 2325/103 . . Near field communication [NFC]
- 2325/105 . . Radio frequency identification data [RFID]
- 2325/106 . . Internet
- 2325/108 . . Encryption
- 2325/20 . Communication devices for vehicle anti-theft devices
- 2325/202 . . Personal digital assistant [PDA]
- 2325/205 . . Mobile phones
- 2325/207 . . Satellites
- 2325/30 . Vehicles applying the vehicle anti-theft devices
- 2325/302 . . Airplanes
- 2325/304 . . Boats
- 2325/306 . . Motorcycles
- 2325/308 . . Industrial vehicles
- 2325/40 . Programmable elements