

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](#)

- 1/00 Optical viewing arrangements** ([house mirrors and spies A47G 1/00](#); } [antiglare equipment, e.g. polarising, for windscreens or windows B60J 3/00](#); { [visual aids for tractors B62D 49/0614](#); } [devices per se G02B](#))
- 1/001 . {integrated in the windows, e.g. Fresnel lenses}
- 1/002 . {specially adapted for covering the peripheral part of the vehicle, e.g. for viewing tyres, bumpers or the like ([integrated in the windows B60R 1/001](#); [combined with rear-view mirrors B60R 1/08](#))}
- 1/003 . . {for viewing trailer hitches}
- 1/005 . {specially adapted for viewing traffic-lights}
- 1/006 . {Side-view mirrors, e.g. V-shaped mirrors located at the front or rear part of the vehicle ([combined with rear-view mirrors B60R 1/08](#); [side-view periscopes B60R 1/10](#))}
- 1/007 . . {specially adapted for covering the lateral blind spot not covered by the usual rear-view mirror}
- 1/008 . {allowing the driver to see passengers, e.g. for busses ([combined with rear-view mirrors B60R 1/08](#))}
- 1/02 . Rear-view mirror arrangements ([periscope arrangements B60R 1/10](#))
- 1/025 . . {comprising special mechanical means for correcting the field of view in relation to particular driving conditions, e.g. change of lane; scanning mirrors}
- 1/04 . . mounted inside vehicle {([B60R 1/025](#), [B60R 1/08](#) take precedence)}
- 1/06 . . mounted on vehicle exterior {([B60R 1/025](#), [B60R 1/08](#) take precedence)}
- 1/0602 . . . {comprising means for cleaning or deicing}
- 1/0605 . . . {specially adapted for mounting on trucks, e.g. by C-shaped support means}
- 1/0607 {with remote position control adjustment}
- 1/061 {by manually actuated mechanical means, e.g. push-pull cables}
- 1/0612 {by electrically actuated means}
- 1/0615 {by hydraulically or pneumatically actuated means}
- 1/0617 {foldable along the vehicle, e.g. in case of external force applied thereon}
- 1/062 . . . with remote control for adjusting position {([B60R 1/0607](#) takes precedence)}
- 1/0625 {by hydraulically or pneumatically powered actuators}
- 1/064 by manually powered actuators
- 1/066 for adjusting the mirror relative to its housing
- 1/068 using cables
- 1/07 by electrically powered actuators
- 1/072 for adjusting the mirror relative to its housing
- 1/074 for retracting the mirror arrangements to a non-use position alongside the vehicle
- 1/076 . . . yieldable to excessive external force and provided with an indexed use position ([B60R 1/0617](#), [B60R 1/074](#) take precedence)
- 1/078 . . . easily removable; mounted for bodily outward movement, e.g. when towing
- 1/08 . . involving special optical features, e.g. avoiding blind spots {, e.g. convex mirrors; Side-by-side associations of rear-view and other mirrors ([B60R 1/025](#), [B60R 1/10](#) take precedence)}
- 1/081 . . . {avoiding blind spots, e.g. by using a side-by-side association of mirrors}
- 1/082 {using a single wide field mirror or an association of rigidly connected mirrors}
- 1/083 . . . {Anti-glare mirrors, e.g. "day-night" mirrors}
- 1/084 {using a removable filtering or hiding screen ([associated with windows or windscreens B60J 3/00](#))}
- 1/085 {using a combination of interchangeable reflecting surfaces, e.g. reversible mirrors}
- 1/086 {using a mirror angularly movable between a position of use and a non-glare position reflecting a dark field to the user, e.g. situated behind a transparent glass used as low-reflecting surface; Wedge-shaped mirrors}
- 1/087 {with remote or automatic control means}
- 1/088 {using a cell of electrically changeable optical characteristic, e.g. liquid-crystal or electrochromic mirrors}
- 1/089 {using a liquid filtering layer of variable thickness}
- 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}	7/046	. . {mounted on door}
2001/1269	. . {with sun visors}	7/05	. . mounted on sun visor
2001/1276	. . {with radio receivers, loud-speakers or buzzers}	7/06	. . mounted on or below dashboards
2001/1284	. . {with communication systems other than radio-receivers, e.g. keyless entry systems, navigation systems; with anti-collision systems}	7/08	. Disposition of racks, clips, {holders, containers} or the like {for supporting specific articles (B60R 7/005 takes precedence)}
2001/1292	. . {with holding means for personal articles}	7/081	. . {for supporting maps}
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)	7/082	. . {for supporting spectacles}
3/002	. {Running boards (for vehicle tops B60R 3/005 ; at the sides of the vehicle for carrying loads B60R 9/02)}	7/084	. . {for supporting tissues or tissue boxes}
3/005	. {Catwalks, running boards for vehicle tops, access means for vehicle tops; Handrails therefor}	7/085	. . {for supporting flowers or flower vases}
3/007	. {Removable steps or ladders, e.g. foldable (as access means for vehicle tops B60R 3/005)}	7/087	. . {for stowing money or valuables, e.g. using safes}
3/02	. Retractable steps {or ladders, e.g. movable under shock (B60R 3/005 takes precedence)}	7/088	. . {for stowing tape cartridges, compact discs, or the like}
3/04	. with provisions for shoe scraping	7/10	. . for supporting hats, clothes or clothes hangers
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)	7/12	. . for supporting umbrellas
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)}	7/14	. . for supporting weapons
5/006	. {stowing or holding means for elongated articles, e.g. skis inside vehicles}	9/00	Supplementary fittings on vehicle exterior for carrying loads, e.g. luggage, sports gear or the like
5/02	. arranged at front of vehicle {(B60R 5/003 takes precedence)}	9/02	. at the sides, e.g. on running-board
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)}	9/04	. Carriers associated with vehicle roof (B60R 9/08 takes precedence)
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)}	9/042	. . Carriers characterised by means to facilitate loading or unloading of the load, e.g. rollers, tracks, or the like
5/042	. . . {to create an enclosed luggage compartment of increased capacity, e.g. with ventilation apertures for transporting dogs}	9/0423	. . . {for ladders}
5/044	. . {luggage covering means, e.g. parcel shelves}	9/0426	. . . {for small vehicles, e.g. invalid chairs, perambulators}
5/045	. . . {collapsible or transformable}	9/045	. . Carriers being adjustable or transformable, e.g. expansible, collapsible {(transformable into tents B60P 3/36 ; into beds B60P 3/38)}
5/047	. . . . {collapsible by rolling-up}	9/048	. . Carriers characterised by article-gripping, {-covering,}-retaining, or -locking means
5/048	. . . . {of accordion-type, i.e. collapsible by sliding and folding}	9/0485	. . . {for ladders (B60R 9/0423 takes precedence)}
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)	9/05	. . Carriers characterised by wind deflecting means (wind deflectors for open roofs B60J 7/22)
7/005	. {Nets or elastic pockets tensioned against walls or backrests}	9/052	. . Carriers comprising elongate members extending only transversely of vehicle (B60R 9/08 takes precedence)
7/02	. in separate luggage compartment {(B60R 7/005 takes precedence)}	9/055	. . Enclosure-type carriers, e.g. containers, boxes (B60R 9/048 takes precedence)
7/04	. in driver or passenger space, {e.g. using racks (B60R 7/005 , B60R 7/08 take precedence)}	9/058	. . characterised by releasable attaching means between carrier and roof
7/043	. . {mounted on or under a seat}	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}	11/0205	. . {for radio sets (B60R 11/0211 takes precedence)}
2011/0015	. . . . {Back-rests}	11/0211	. . {for record carriers apparatus, e.g. video recorders, tape players or CD players}
2011/0017	. . . . {Head-rests}	11/0217	. . {for loud-speakers}
2011/0019	. . . {Side or rear panels}	11/0223	. . . {of flat type}
2011/0021	. . . . {Doors}	11/0229	. . {for displays, e.g. cathodic tubes}
2011/0022	. . . . {Pillars}	11/0235	. . . {of flat type, e.g. LCD}
2011/0024	. . . . {Rear shelves}	11/0241	. . {for telephones}
2011/0026	. . . {Windows, e.g. windscreen}	11/0247	. . {for microphones or earphones}
2011/0028	. . . {Ceiling, e.g. roof rails}	11/0252	. . {for personal computers, e.g. laptops, notebooks}
2011/0029	. . . {Floor, e.g. side sills, fire wall}	11/0258	. . {for navigation systems}
2011/0031	. . . {Seat belts}	11/0264	. . {for control means}
2011/0033	. . . {Rear-view mirrors}	2011/027	. . {for Din-sized apparatus}
2011/0035	. . . {Sun visors}	2011/0276	. . {for rear passenger use}
2011/0036	. . . {Luggage compartment}	2011/0282	. . {for the use of several passengers, e.g. simultaneously}
2011/0038	. . . {Engine compartment}	2011/0288	. . {Apparatus made of several modules independently mounted}
2011/004	. . {outside the vehicle}	2011/0294	. . {Apparatus with multi-functionalities, e.g. radio and telephone}
2011/0042	. {characterised by mounting means}	11/04	. Mounting of cameras operative during drive; Arrangement of controls thereof relative to the vehicle (cameras per se G03B)
2011/0043	. . {for integrated articles, i.e. not substantially protruding from the surrounding parts}	11/06	. for tools or spare parts (for vehicle roof parts B60J 7/20 ; for spare wheels B62D)
2011/0045	. . . {with visible part, e.g. flush mounted}	13/00	Elements for body-finishing, identifying, or decorating; Arrangements or adaptations for advertising purposes
2011/0047	. . . . {using hidden fastening means}	13/005	. {Manufacturers' emblems, name plates, bonnet ornaments, mascots or the like; Mounting means therefor}
2011/0049	. . {for non integrated articles}	13/01	. Liners for load platforms or load compartments
2011/005	. . . {Connection with the vehicle part}	13/011	. . {for internal load compartments, e.g. car trunks}
2011/0052	. . . . {using screws, bolts, rivets or the like}	13/013	. . . {comprising removable or hinged parts, e.g. for accessing storage compartments}
2011/0054	. . . . {using cigarette lighter}	2013/015	. . {made of a plurality of visible parts}
2011/0056	. . . . {using suction cups}	2013/016	. . {integrating other functions or accessories}
2011/0057	. . . . {using magnetic means}	2013/018	. . {Connection or positioning of adjacent panels}
2011/0059	. . . . {using clips, clamps, straps or the like}	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)
2011/0061	. . . . {using key-type connections}	13/0206	. . {Arrangements of fasteners and clips specially adapted for attaching inner vehicle liners or mouldings (devices for fastening or securing F16B)}
2011/0063	. . . . {using adhesive means, e.g. hook and loop fasteners}	13/0212	. . {Roof or head liners (movable head-liners B60J 7/0007)}
2011/0064	. . . {Connection with the article}	13/0218	. . . {supported by adhesion with the roof panel}
2011/0066	. . . . {using screws, bolts, rivets or the like}	13/0225	. . . {self supporting head liners}
2011/0068	. . . . {using suction cups}	13/0231	. . . {specially adapted for roofs with openings}
2011/007	. . . . {using magnetic means}	13/0237	. . {Side or rear panels}
2011/0071	. . . . {using latches, clips, clamps, straps or the like}	13/0243	. . . {Doors}
2011/0073	. . . . {using key-type connections}	13/025	. . . {Pillars; Roof rails}
2011/0075	. . . . {using a containment or docking space}	13/0256	. . {Dashboard liners}
2011/0077	. . . . {using adhesive means, e.g. hook and loop fasteners}	13/0262	. . {Mid-console liners}
2011/0078	. . . {Quick-disconnect two-parts mounting means}	13/0268	. . {Rear parcel liners (used as luggage covering means B60R 5/044)}
2011/008	. . {Adjustable or movable supports}	13/0275	. . {comprising removable or hinged parts (for accessing storage compartments B60R 7/04 ; for airbag deployment B60R 21/215)}
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; Arrangements of control thereof ({stowing of tape cartridges, compact discs or the like B60R 7/088; } of aerials H01Q)		

2013/0281	. . {made of a plurality of visible parts}	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)}
2013/0287	. . {integrating other functions or accessories}	16/005	. {Electro-mechanical devices, e.g. switched (electric switches in general H01H)}
2013/0293	. . {Connection or positioning of adjacent panels}	16/02	. electric {constitutive elements}
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)}	16/0207	. . {Wire harnesses}
13/043	. . {Door edge guards}	16/0215	. . . {Protecting, fastening and routing means therefor}
2013/046	. . {Foot boards}	16/0222	. . . . {Grommets}
13/06	. Sealing strips (sealing arrangements for vehicle windows, windscreens, non-fixed roofs, doors, or similar devices B60J 10/00)	16/023	. . for transmission of signals between vehicle parts or subsystems
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 })	16/0231	. . . {Circuits relating to the driving or the functioning of the vehicle (for dash boards B60K 37/00 , B60Q 3/04 ; for indicating emergencies B60Q 1/52 ; registering or indicating the working of vehicles G07C 5/00 ; measuring distance G01C , e.g. combinations of speed and distance G01C 23/00 ; engine indicators G01L ; measuring speed or acceleration G01P ; brake control systems B60T ; monitoring tyres B60C 23/00 ; indicating overspeed B60K 31/00)}
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)}	16/0232	. . . . {for measuring vehicle parameters and indicating critical, abnormal or dangerous conditions}
2013/0807	. . {Arrangements of fasteners or clips specially adapted therefore}	16/0233	. . . . . {Vehicle tilting, overturning or roll over}
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)}	16/0234	. . . . . {related to maintenance or repairing of vehicles}
13/0823	. . . {Insulating partitions, e.g. between front and rear seats}	16/0235	. . . . . {for lighting devices combined with starting or ignition devices for road vehicles}
13/083	. . . {for fire walls or floors}	16/0236	. . . . . {for economical driving}
13/0838	. . {for engine compartments}	16/0237	. . . {circuits concerning the atmospheric environment (meteorology G01W)}
13/0846	. . {for duct, cable or rod passages, e.g. between engine and passenger compartments}	16/0238	. . . {Electrical distribution centers}
13/0853	. . . {specially adapted for movable parts, e.g. gears levers, pedals}	16/0239	. . . {Electronic boxes}
13/0861	. . {for covering undersurfaces of vehicles, e.g. wheel houses}	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)}
13/0869	. . {for protecting heat sensitive parts, e.g. electronic components}	16/03	. . for supply of electrical power to vehicle subsystems {or for (circuit arrangements for charging batteries H02J 7/00)}
13/0876	. . {for mounting around heat sources, e.g. exhaust pipes}	16/0307	. . . {using generators driven by a machine different from the vehicle motor}
13/0884	. . {for mounting around noise sources, e.g. air blowers}	16/0315	. . . {using multiplexing techniques (multiplexing for transmission of signals G08C 15/00 ; multiplexing for electrical communication in general H04J)}
13/0892	. . {for humidity insulation (sealing strips B60R 13/06)}	2016/0322	. . . . {Temporary code for documents to be reclassified to G08C , H04L or H04Q }
13/10	. Registration, licencing, or like devices	16/033	. . . characterised by the use of electrical cells or batteries (for propulsion puposes B60K 1/04 ; supplying batteries to, or removing batteries from, vehicles B60S 5/06 ; testing of charge state G01R 31/36)
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)}		

16/037	. . for occupant comfort, {e.g. for automatic adjustment of appliances according to personal settings, e.g. seats, mirrors, steering wheel}	19/205	. . . . {inflatable in the direction of an obstacle upon impending impact, e.g. using air bags}
16/0373	. . . {Voice control (in general G10L)}	19/22	. . . containing {mainly} cellular material, e.g. solid foam
16/04	. . Arrangement of batteries	19/24	. . Arrangements for mounting bumpers on vehicles
16/06	. . for removing electrostatic charges (carrying-off electrostatic charges in general H05F 3/00)	2019/242	. . . {on two vertical sleeves, e.g. on energy absorber ends}
16/08	. fluid	2019/245	. . . {with adjusting means to compensate manufacturing tolerances, e.g. between bumper and energy absorbers}
17/00	Arrangements or adaptations of lubricating systems or devices (lubricating in general F16N)	2019/247	. . . {Fastening of bumpers' side ends}
17/02	. Systems, e.g. central lubrication systems	19/26	. . . comprising yieldable mounting means ((B60R 19/38 takes precedence;) springs, shock absorbers, or means for damping vibrations per se F16F)
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)	2019/262	. . . . {with means to adjust or regulate the amount of energy to be absorbed}
2019/002	. {Wheel guards}	2019/264	. . . . {using cellular structures}
2019/005	. {Crash attenuators, i.e. means added to highway service vehicles for softening high speed impacts}	2019/266	. . . . {using friction surfaces}
2019/007	. {Means for adjusting or regulating the crash absorption capacity of the vehicle, e.g. when detecting an impending collision}	2019/268	. . . . {with rebound preventing means, e.g. ratchets}
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)	19/28	. . . . Metallic springs
19/023	. . {Details}	19/285	. . . . . {comprising only leaf springs, e.g. the mounting means forming part of the guard itself}
2019/026	. . {Buffers, i.e. bumpers of limited extent}	19/30	. . . . Elastomeric material {(B60R 19/34 takes precedence)}
19/03	. . characterised by material, e.g. composite (B60R 19/18 takes precedence)	19/32	. . . . Fluid shock absorbers {, e.g. with coaxial coil springs}
19/04	. . formed from more than one section {in a side-by-side arrangement}	19/34	. . . . destroyed upon impact, e.g. one-shot type
19/12	. . . vertically spaced	19/36	. . . . Combinations of yieldable mounting means of different types {(fluid shock absorbers with coaxial coil springs B60R 19/32)}
19/14	. . . having folding parts	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)}
19/16	. . . having deflecting members, e.g. rollers, balls	19/40	. . . . in the direction of an obstacle before a collision, {or extending during driving of the vehicle, i.e. to increase the energy absorption capacity of the bumper (inflatable bumpers B60R 19/20)}
19/18	. . {characterised by the cross-section;} Means within the bumper to absorb impact	19/42	. . extending primarily along the sides of, or completely encircling, a vehicle (ornamental or guard strips B60R 13/04)
2019/1806	. . . {Structural beams therefor, e.g. shock-absorbing (bumper beams made of cellular materials B60R 19/22)}	19/44	. . Bumper guards
2019/1813	. . . . {made of metal}	19/445	. . . {Guard strips}
2019/182	. . . . . {of light metal, e.g. extruded}	19/46	. . . spring- or pivotally-mounted
2019/1826	. . . . . {of high-tension steel}	19/48	. . combined with, or convertible into, other devices or objects, e.g. bumpers combined with road brushes, bumpers convertible into beds
2019/1833	. . . . . {made of plastic material}	19/483	. . . {with obstacle sensors of electric or electronic type}
2019/184	. . . . . {Blow moulded}	2019/486	. . . {with air passages, e.g. for cooling}
2019/1846	. . . . . {comprising a cellular structure}	19/50	. . . with lights or registration plates
2019/1853	. . . . . {of reinforced plastic material}	2019/505	. . . . {with lights}
2019/186	. . . {Additional energy absorbing means supported on bumper beams, e.g. cellular structures or material}	19/52	. Radiator or grille guards {; Radiator grilles (cooling aspects B60K 11/08)}
2019/1866	. . . . {Cellular structures}	2019/522	. . {Bull bars}
2019/1873	. . . . {Cellular materials}	2019/525	. . {Radiator grilles}
2019/188	. . . . {Blow molded structures}	2019/527	. . . {integral with bumpers}
2019/1886	. . . {Bumper fascias and fastening means therefor (on fenders B60R 2019/247)}	19/54	. Obstruction removers or deflectors (B60R 19/16 , B60R 21/34 take precedence)
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)		

19/545	. . {Devices for cutting wire-type obstructions}	2021/009	. . {Railway vehicles}
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	2021/0093	. . {Aircraft}
19/565	. . {on vehicle sides}	2021/0095	. . {Boats}
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)	2021/0097	. . {Amusement vehicles}
2021/0002	. {Type of accident}	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)}
2021/0004	. . {Frontal collision}	2021/01006	. . {Mounting of electrical components in vehicles}
2021/0006	. . {Lateral collision}	2021/01013	. . {Means for detecting collision, impending collision or roll-over}
2021/0009	. . {Oblique collision}	2021/0102	. . . {the monitored value being used for calculating occupant displacement}
2021/0011	. . {Rear collision or recoiling bounce after frontal collision}	2021/01027	. . . {Safing sensors}
2021/0013	. . {Free fall}	2021/01034	. . {Controlling a plurality of restraint devices}
2021/0016	. . {Fall in water}	2021/0104	. . {Communication circuits for data transmission}
2021/0018	. . {Roll-over}	2021/01047	. . . {Architecture}
2021/002	. . {Underrun collision}	2021/01054	. . . . {Bus}
2021/0023	. . {Offset collision}	2021/01061	. . . . {between the airbag system and other vehicle electronic systems}
2021/0025	. . {Pole collision}	2021/01068	. . . . {between different sensors and airbag control unit}
2021/0027	. {Post collision measures, e.g. notifying emergency services}	2021/01075	. . . . {between the airbag control unit and pyrotechnic fuses or equivalent actuators}
2021/003	. {characterised by occupant or pedestrian}	2021/01081	. . . {Transmission medium}
2021/0032	. . {Position of passenger}	2021/01088	. . . . {wireless}
2021/0034	. . . {lying down}	2021/01095	. . . . {optical}
2021/0037	. . . {standing}	2021/01102	. . . {Transmission method}
2021/0039	. . {Body parts of the occupant or pedestrian affected by the accident}	2021/01109	. . . . {power and data signal using transmission medium}
2021/0041	. . . {Arms}	2021/01115	. . . . {specific data frames}
2021/0044	. . . {Chest}	2021/01122	. . {Prevention of malfunction}
2021/0046	. . . {Feet}	2021/01129	. . . {Problems or faults}
2021/0048	. . . {Head}	2021/01136	. . . . {Cut lines}
2021/0051	. . . {Knees}	2021/01143	. . . . {Short circuits}
2021/0053	. . . {Legs}	2021/0115	. . . . {Current leakage}
2021/0055	. . . {Pelvis}	2021/01156	. . . . {Current or voltage overload}
2021/0058	. . . {Shoulders}	2021/01163	. . . . {Insufficient current or voltage}
2021/006	. . {Type of passenger}	2021/0117	. . . . {Noise}
2021/0062	. . . {woman, e.g. pregnant}	2021/01177	. . . . {Misdeployment, e.g. during assembly, disassembly, accident salvage or recycling}
2021/0065	. {Type of vehicles}	2021/01184	. . . {Fault detection or diagnostic circuits (in power circuits B60R 2021/01129)}
2021/0067	. . {Buses}	2021/0119	. . . . {Plausibility check}
2021/0069	. . {Trailers, e.g. caravans}	2021/01197	. . . . {Warning devices}
2021/0072	. . {Convertible cars}	2021/01204	. . {Actuation parameters of safety arrangements}
2021/0074	. . {Utility vehicles}	2021/01211	. . . {Expansion of air bags}
2021/0076	. . . {Agricultural vehicles, e.g. tractors}	2021/01218	. . . . {control of expansion speed}
2021/0079	. . . {Fork-lift trucks}	2021/01225	. . . . {control of expansion volume}
2021/0081	. . . {Working vehicles}	2021/01231	. . . . {control of expansion timing or sequence}
2021/0083	. . . {Pick-up trucks; Light trucks; Sport utility vehicles}	2021/01238	. . . . {control of expansion shape}
2021/0086	. . {Racing cars}	2021/01245	. . . . {selection of seat for bag expansion}
2021/0088	. . {Cycles, e.g. motorcycles}	2021/01252	. . . {Devices other than bags}
		2021/01259	. . . . {Brakes}
		2021/01265	. . . . {Seat belts}
		2021/01272	. . . . {Belt tensioners}
		2021/01279	. . . . {Load limiters}
		2021/01286	. . {Electronic control units}
		2021/01293	. . . {programmable for use in different vehicles or with different airbags configurations}

21/013	. . .	including means for detecting collisions, impending collision or roll-over	21/01538	. . . . .	{for image processing, e.g. cameras or sensor arrays}
2021/01302	. . .	{monitoring vehicle body vibrations or noise}	21/0154	. . . . .	{in combination with seat heating}
2021/01304	. . .	{monitoring rough road condition}	21/01542	. . . . .	{detecting passenger motion}
2021/01306	. . .	{monitoring vehicle inclination}	21/01544	. . . . .	{detecting seat belt parameters, e.g. length, tension or height-adjustment}
2021/01308	. . .	{monitoring distance between vehicle body and road}	21/01546	. . . . .	{using belt buckle sensors}
2021/01311	. . .	{monitoring the braking system, e.g. ABS}	21/01548	. . . . .	{sensing the amount of belt winded on retractor}
2021/01313	. . .	{monitoring the vehicle steering system or the dynamic control system}	21/0155	. . . . .	{sensing belt tension}
2021/01315	. . .	{monitoring occupant displacement}	21/01552	. . . . .	{detecting position of specific human body parts, e.g. face, eyes or hands}
2021/01317	. . .	{monitoring seat belt tension}	21/01554	. . .	{Seat position sensors}
21/0132	. . .	responsive to vehicle motion parameters {, e.g. to vehicle longitudinal or transversal deceleration or speed value}	21/01556	. . .	{Child-seat detection systems}
2021/01322	. . . . .	{comprising variable thresholds, e.g. depending from other collision parameters}	21/01558	. . .	{monitoring crash strength}
2021/01325	. . . . .	{Vertical acceleration}	21/0156	. . . . .	{by deceleration}
2021/01327	. . . . .	{Angular velocity or angular acceleration}	21/01562	. . . . .	{by speed}
21/0133	. . . . .	{by integrating the amplitude of the input signal}	21/01564	. . .	{Manually or key-actuated inhibition switches}
WARNING			21/01566	. . .	{Devices for warning or indicating mode of inhibition}
Group(s) B60R 21/0133 - B60R 21/01338 are incomplete pending reclassification of documents from group B60R 21/0132 .			21/017	. . .	including arrangements for providing electric power to safety arrangements {or their actuating means, e.g. to pyrotechnic fuses or electro-mechanic valves}
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.			21/0173	. . .	{Diagnostic or recording means therefor}
21/01332	. . . . .	{by frequency or waveform analysis}	21/0176	. . . . .	{for firing circuits using only mechanical switches as collision detecting means, in series with pyrotechnic fuses}
21/01334	. . . . .	{using Fourier analysis}	21/02	. . .	Occupant safety arrangements or fittings, {e.g. crash pads (seat belts with crash pads B60R 22/14 ; removable children's seats having a front guard or barrier B60N 2/2839)}
21/01336	. . . . .	{using filtering}	2021/0206	. . .	{Self-supporting restraint systems, e.g. restraining arms, plates or the like}
21/01338	. . . . .	{using vector analysis}	2021/0213	. . .	{mounted on floor}
21/0134	. . .	responsive to imminent contact with an obstacle {, e.g. using radar systems}	2021/022	. . .	{mounted on seats}
2021/01345	. . . . .	{using mechanical sensing means}	2021/0226	. . .	{mounted on fire wall}
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)}	2021/0233	. . .	{mounted on steering-wheel}
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}	2021/024	. . .	{mounted on dash-board}
21/01504	. . .	{detecting bag displacement}	2021/0246	. . .	{mounted on side walls}
21/01508	. . .	{detecting forces or pressure in bags or modules}	2021/0253	. . .	{mounted on roof}
21/01512	. . .	{Passenger detection systems}	21/026	. . .	{Rigid partitions inside vehicles, e.g. between passengers and load compartments (B60R 21/12 takes precedence)}
21/01516	. . . . .	{using force or pressure sensing means}	2021/0266	. . .	{comprising energy absorbing means}
21/0152	. . . . .	{using strain gauges}	2021/0273	. . .	{automatically movable to an operative position, e.g. in case of collision or impending collision}
21/01522	. . . . .	{using fluid means}	2021/028	. . .	{Means preventing passenger from falling out of vehicles}
21/01524	. . . . .	{using electric switches}	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)}
21/01526	. . . . .	{using piezoelectric elements}	2021/0293	. . .	{Additional pads or cushions in vehicle compartments, e.g. movably mounted}
21/01528	. . . . .	{mounted on the bag}	21/04	. . .	Padded linings for the vehicle interior; {Energy absorbing structures associated with padded or non-padded linings}
21/0153	. . . . .	{using field detection presence sensors}	2021/0407	. . .	{using gas or liquid as energy absorbing means}
21/01532	. . . . .	{using electric or capacitive field sensors}	2021/0414	. . .	{using energy absorbing ribs}
21/01534	. . . . .	{using electromagnetic waves, e.g. infrared}	2021/0421	. . .	{using honeycomb structures}
21/01536	. . . . .	{using ultrasonic waves}			

21/0428	. . . {associated with the side doors or panels, e.g. displaced towards the occupants in case of a side collision}	21/18	. . . the inflatable member formed as a belt or harness or combined with a belt or harness arrangement
2021/0435	. . . {associated with the side or roof pillars}	21/20	. . . Arrangements for storing inflatable members in their non-use or deflated condition; Arrangement or mounting of air bag modules or components
2021/0442	. . . {associated with the roof panel}	21/201	. . . . Packaging straps or envelopes for inflatable members
21/045	. . . associated with the instrument panel or dashboard	21/203	. . . . in steering wheels or steering columns
21/05	. . . associated with the steering wheel, {steering} hand lever or {steering} column (yieldable steering columns B62D 1/18)	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}
21/055	. . Padded {or energy-absorbing} fittings, {e.g. seat belt anchors (sun visors B60J 3/00 ; head rests B60N 2/48)}	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)}
21/06	. . 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)	21/2037	. . . . {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)}
2021/065	. . . {comprising energy absorbing mounting means}	21/205	. . . . in dashboards
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)	21/206	. . . . in the lower part of dashboards, e.g. for protecting the knees
21/09	. . Control elements or operating handles movable from an operative to an out-of-the way position, e.g. {pedals,} switch knobs, window cranks {(specially adapted for brake pedals, e.g. by venting of master cylinder or destruction of force transmitting rod, B60T 7/065)}	21/207	. . . . in vehicle seats
21/11	. . Overhead guards, e.g. against loads falling down {(specially adapted for fork-lift trucks B66F 9/07545)}	21/2072	. . . . {in children's seats}
21/12	. . which protect the occupants against personal attack from the inside or the outside of the vehicle	2021/2074	. . . . {in head rests}
21/13	. . Roll-over protection (electrical circuits for triggering safety arrangements B60R 21/01)	2021/2076	. . . . {Removable covers with tear seams}
21/131	. . . {Protective devices for drivers in case of overturning of tractors (means for preventing overturning or tipping of tractors B62D 49/08)}	2021/2078	. . . . {in rear seats}
2021/132	. . . {Roll bars for convertible vehicles}	21/21	. . . . in vehicle side panels, e.g. doors (pillar mounted arrangements B60R 21/213)
2021/134	. . . . {movable from a retracted to a protection position}	21/213	. . . . in vehicle roof frames or pillars
2021/135	. . . . {automatically during an accident}	21/214	. . . . in roof panels
2021/137	. . . {Reinforcement cages for closed vehicle bodies}	21/215	. . . . characterised by the covers for the inflatable member ({ B60R 21/2176 takes precedence})
2021/138	. . . {using external airbags}	2021/21506	. . . . {comprising tearing tabs, legs or the like for holding the lid before deployment}
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)	2021/21512	. . . . {the lid being displaced towards the occupant during deployment (B60R 2021/2161 , B60R 2021/21525 take precedence)}
2021/161	. . . {characterised by additional means for controlling deployment trajectory}	2021/21518	. . . . {comprising a lock unlocked during deployment}
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}	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}
21/164	. . . {combined with vehicle venting means for reducing or avoiding the passenger compartment overpressure during inflation}	2021/21531	. . . . {using a stretchable wall liner}
2021/165	. . . {reusable, e.g. in case of multiple collisions}	2021/21537	. . . . {characterised by hinges}
2021/167	. . . {comprising anti-theft devices}	2021/21543	. . . . {with emblems}
2021/168	. . . {for restraining luggages}	21/2155	. . . . with complex motion of the cover; Retraction under the lining during opening
		21/216	. . . . comprising tether means for limitation of cover motion during deployment
		2021/2161	. . . . {the cover being displaced towards the occupant during deployment}
		2021/2163	. . . . {with energy absorbing or elastic means}

21/2165	. . . . .	characterised by a tear line for defining a deployment opening	21/232	. . . . .	Curtain-type airbags deploying mainly in a vertical direction from their top edge
2021/21652	. . . . .	{the tearing being done or assisted by cutters}	21/233	. . . . .	comprising a plurality of individual compartments; comprising two or more bag-like members, one within the other (B60R 21/232 takes precedence)
2021/21654	. . . . .	{the tearing being done or assisted by heating or pyrotechnic means}	2021/23308	. . . . .	{the individual compartments defining the external shape of the bag}
21/21656	. . . . .	{Steering wheel covers or similar cup-shaped covers}	2021/23316	. . . . .	{Inner seams, e.g. creating separate compartments or used as tethering means}
21/21658	. . . . .	{with integrated switches, e.g. horn switches}	2021/23324	. . . . .	{Inner walls crating separate compartments, e.g. communicating with vents}
21/217	. . . . .	Inflation fluid source retainers, e.g. reaction canisters; Connection of bags, covers, diffusers or inflation fluid sources therewith or together	2021/23332	. . . . .	{using independent bags, one within the other}
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)}	21/2334	. . . . .	Expansion regulating features
2021/2172	. . . . .	{the cover being connected to the surrounding part and to the module, e.g. floating mounts}	21/2338	. . . . .	Tethers
2021/2173	. . . . .	{the module or part thereof being movably mounted on the vehicle}	2021/23382	. . . . .	{Internal tether means}
2021/2175	. . . . .	{using energy absorbing means}	2021/23384	. . . . .	{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}	2021/23386	. . . . .	{External tether means}
2021/2177	. . . . .	{Reaction canisters characterised by material}	2021/23388	. . . . .	{having ends which are movable or detachable during deployment}
2021/2178	. . . . .	{Plastic}	21/2342	. . . . .	Tear seams
21/23	. . . . .	Inflatable members (B60R 21/18 takes precedence ; connection to inflation fluid source retainers B60R 21/17)	21/2346	. . . . .	Soft diffusers
21/231	. . . . .	characterised by their shape, construction or spatial configuration	21/235	. . . . .	characterised by their material
WARNING			2021/23504	. . . . .	{characterised by material}
Groups B60R 21/2334 - B60R 21/2346 are not complete, pending a reorganisation; see provisionally also group B60R 21/233			2021/23509	. . . . .	{Fabric}
2021/23107	. . . . .	{the bag being integrated in a multi-bag system}	2021/23514	. . . . .	{coated fabric}
2021/23115	. . . . .	{with inflatable support compartments creating an internal suction volume}	2021/23519	. . . . .	{Resin (for coating fabric B60R 2021/23514)}
2021/23123	. . . . .	{Heat protection panels}	2021/23523	. . . . .	{Composite (coated fabric B60R 2021/23514)}
2021/2313	. . . . .	{comprising sensitive compartments}	2021/23528	. . . . .	{Metal}
21/23138	. . . . .	{specially adapted for side protection (B60R 21/23184 , B60R 21/232 take precedence)}	2021/23533	. . . . .	{characterised by the manufacturing process}
2021/23146	. . . . .	{seat mounted}	2021/23538	. . . . .	{Sewing}
2021/23153	. . . . .	{specially adapted for rear seat passengers}	2021/23542	. . . . .	{Weaving}
2021/23161	. . . . .	{specially adapted for protecting at least two passengers, e.g. preventing them from hitting each other}	2021/23547	. . . . .	{one piece weaving}
2021/23169	. . . . .	{specially adapted for knee protection}	2021/23552	. . . . .	{Knitting}
2021/23176	. . . . .	{specially adapted for foot protection}	2021/23557	. . . . .	{Molding}
21/23184	. . . . .	{Tubular air bags connected to the vehicle at their two extremities}	2021/23561	. . . . .	{Sealing}
2021/23192	. . . . .	{Roof bags, i.e. protecting the occupant in a roll-over situation}	2021/23566	. . . . .	{Nesting of panels, i.e. for material utilisation}
			2021/23571	. . . . .	{characterised by connections between panels}
			2021/23576	. . . . .	{Sewing}
			2021/2358	. . . . .	{Bonding}
			2021/23585	. . . . .	{Vulcanisation}
			2021/2359	. . . . .	{Welding}
			2021/23595	. . . . .	{Sealing}
			21/237	. . . . .	characterised by the way they are folded
			2021/2375	. . . . .	{Folding devices}
			21/239	. . . . .	characterised by their venting means
			2021/2395	. . . . .	{comprising means to control the venting}

- 21/26 . . . characterised by the inflation fluid source or means to control inflation fluid flow {[\(arrangement or mounting thereof to the vehicle B60R 21/20; blasting cartridges for producing gas under pressure in general F42B 3/04; Initiators or igniters therefor F42B 3/10\)](#)}
- WARNING**
- Groups [B60R 21/261](#) - [B60R 21/264](#) are not complete, pending a reorganisation; see provisionally also this group
- 21/26005 {the inflation fluid being transferred to the inflatable member by the mechanical deformation of the fluid container during an impact}
- 2021/26011 {using a filter through which the inflation gas passes}
- 2021/26017 {a cooling agent being added to the inflation fluid}
- 2021/26023 {for filling the bag with foam}
- 2021/26029 {Igniters}
- 2021/26035 {triggered by mechanical means}
- 2021/26041 {of elongated shape}
- 2021/26047 {of film shape}
- 2021/26052 {using fluid materials}
- 2021/26058 {using a combination of inflators}
- 2021/26064 {characterised by auto-ignition means}
- 2021/2607 {characterised by heating or heat insulating means, e.g. for use under extreme temperatures}
- 2021/26076 {characterised by casing}
- 2021/26082 {Material}
- 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](#))
- 2021/2642 {comprising a plurality of combustion chambers or sub-chambers}
- 21/2644 {using only solid reacting substances, e.g. pellets, powder}
- 21/2646 {the reacting substances being supported by the inflatable member walls, or by a flexible support within it}
- 2021/2648 {comprising a plurality of combustion chambers or sub-chambers}
- 21/268 using instantaneous release of stored pressurized gas {([B60R 21/26005 takes precedence](#))}
- 2021/2685 {comprising a plurality of pressure chambers}
- 21/272 with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators
- 2021/2725 {using a fluid fuel gas generator}
- 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](#)
- 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](#))}
- 2021/2765 {comprising means to control the venting}
- 21/30 with means to draw ambient air into the flow line and mix such air with the inflation fluid
- 21/33 . . . Arrangements for non-electric triggering of inflation ([electrical circuits for triggering safety arrangements B60R 21/01](#))
- 2021/335 {Connections between collision detecting means and inflators using pyrotechnic transmission lines}
- 21/34 . . Protecting non-occupants of a vehicle, e.g. pedestrians {([B60R 19/02 takes precedence](#))}
- 2021/343 . . {using deformable body panel, bodywork or components}
- 2021/346 . . {means outside vehicle body}
- 21/36 . . using airbags
- 21/38 . . using means for lifting bonnets
- 22/00 Safety belts or body harnesses in vehicles ([safety belts or body harnesses in general A62B 35/00](#))**
- 22/001 . . {Knee, leg or head belts}
- 2022/003 . . {for restraining detainees}
- 2022/005 . . {for restraining luggages}
- 2022/006 . . {Sleeve or tubular members enveloping the seat belt for enhancing comfort or protection}
- 2022/008 . . {Belts; Fixing thereof specially adapted for pregnant users}
- 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](#))}
- 2022/021 . . {Means for holding the tongue or buckle in a non-use position, e.g. for easy access by the user}
- 22/022 . . {with means for facilitating access to rear seats in two-door cars}
- 22/023 . . {Three-point seat belt systems comprising two side lower and one side upper anchoring devices ([B60R 22/022, B60R 22/03 take precedence](#))}
- 22/024 . . . {Adaptations for use by small passengers, e.g. children ([B60R 22/20 takes precedence; using belt anti-slip devices B60R 22/30](#))}
- 2022/025 . . . {Adaptations for use with children seats or luggages}

2022/026	. . . {at least two ends of the belt being retractable after use}	anchors or rotating belt reels, the documents are classified in B60R 22/46
2022/027	. . {Four-point seat belt systems, e.g. with the two upper points connected together}	22/1951 . . . {characterised by arrangements in vehicle or relative to seat belt}
2022/028	. . {specially adapted for use in sleeping position, e.g. for reclining seats}	22/1952 . . . {Transmission of tensioning power by cable; Return motion locking means therefor}
2022/029	. . {Belt storage; Devices or systems for controlling winding up of unused seat belt}	22/1953 {the cable being pulled by mechanical means, e.g. pre-stressed springs, bumper displacement during crash}
22/03	. . Means for presenting the belt or part thereof to the wearer, {e.g. foot-operated}	22/1954 . . . {characterised by fluid actuators, e.g. pyrotechnic gas generators (actuating a cable B60R 22/1952)}
22/04	. Passive restraint systems, i.e. systems both applied and removed automatically, e.g. by movement of the vehicle door	22/1955 {Linear actuators}
22/06	. . having the belt or harness connected to a member slidable in a vehicle-mounted track	22/1956 {Mechanical triggering means therefor (also adapted for air bag inflators B60R 21/33)}
22/08	. . having the belt retractor mounted on or in a vehicle closure, e.g. the door	2022/1957 . . . {characterised by electric actuators}
22/10	. specially adapted for children or animals (children's seats B60N 2/24)	22/1958 . . . {characterised by spring actuators (B60R 22/1953 takes precedence)}
NOTE		22/20 . . adjustable in position, e.g. in height
Groups		22/201 . . . {with the belt anchor connected to a slider movable in a vehicle-mounted track (for passive restraint systems B60R 22/06)}
B60R 22/02 { B60R 22/022 } - B60R 22/08 , B60R 22/18 - B60R 22/48 take precedence over group B60R 22/10		22/202 {the slider comprising spring-actuated locking means (B60R 22/205 takes precedence)}
22/105	. . {for children (adaptation of children's seats for seat belts B60N 2/265 , B60N 2/2803)}	22/203 {the locking means being movably mounted on the slider}
22/12	. Construction of belts or harnesses (B60R 21/18 takes precedence; {woven fabrics for safety belts D03D 1/0005 })	22/205 {the slider comprising emergency actuated locking means}
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)}	22/206 . . . {Adjustable stop members for restraint systems comprising belt anchor vehicle mounted tracks, e.g. for passive seat belts}
22/16	. . using belts which become permanently deformed, i.e. one time use	2022/207 . . . {Horizontally or transversally adjustable}
22/18	. Anchoring devices	2022/208 . . . {by automatic or remote control means}
2022/1806	. . {for buckles}	22/22 . . secured to the vehicle floor
2022/1812	. . {Connections between seat belt and buckle tongue}	22/24 . . secured to the side, door, or roof of the vehicle
2022/1818	. . {Belt guides}	22/26 . . secured to the seat
2022/1825	. . . {using rollers}	2022/263 . . . {Front seats}
2022/1831	. . . {comprising a slotted plate sliding in its plane, e.g. inside circular guides}	2022/266 . . . {Rear seats, e.g. benches}
2022/1837	. . . {comprising a universal mounting, e.g. spherical or cardan-type}	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)}
2022/1843	. . . {comprising an elongated sleeve}	2022/281 . . {for buckles}
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)}	2022/282 . . {using fluids or vico-elastic materials}
22/1855	. . . {the means being sensitive to belt tension}	2022/283 . . {using tearing or scoring of material}
22/19	. . with means for reducing belt tension during use under normal conditions {(included in the retractor B60R 22/44)}	2022/284 . . {using electric or magnetic braking means}
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 })	2022/285 . . {using friction surfaces}
NOTE		2022/286 . . {using deformation of material}
If the type of belt tensioner is not specified and can be used indifferently for pulling belt		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}
- 2022/4647 {the driving means being a belt, a chain or the like}

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

25/023	. . . countermeasures against the physical destruction of the steering lock	25/20	. Means to switch the anti-theft system on or off
25/04	. . operating on the propulsion system, e.g. engine or drive motor	25/2009	. . {Antitheft state indicator}
2025/0405	. . . {from the external}	25/2018	. . {Central base unlocks or authorises unlocking}
2025/041	. . . {Preventing use of engine operating on the fluid supply}	25/2027	. . {with data signals passing through the human body}
2025/0415	. . . {with safe immobilisation}	25/2036	. . {by using the door logic and door and engine unlock means}
WARNING		25/2045	. . {by hand gestures}
Not complete pending reclassification; see also other subgroups of B60R 25/00		25/2054	. . {by foot gestures}
25/042	. . . operating on the fuel supply	25/2063	. . {Ignition switch geometry}
25/043	. . . by blocking the exhaust	25/2072	. . {with means for preventing jamming or interference of a remote switch control signal}
25/044	. . . by limiting or blocking the air supply	25/2081	. . {combined with personal settings of other vehicle devices, e.g. mirrors, seats, steering wheels}
25/045	. . . by limiting or cutting the electrical supply to the propulsion unit	25/209	. . {Remote starting of engine}
25/06	. . . operating on the vehicle transmission	25/21	. . using hidden switches
25/063	. . . . {Locking of foot actuated control actuating means}	25/22	. . using mechanical identifiers
25/066	. . . . {Locking of hand actuated control actuating means}	25/225	. . . {key in lock presence switch}
25/08	. . operating on brakes or brake system	25/23	. . using manual input or alphanumerical codes
25/083	. . . {Locking of foot-actuated control actuating means}	25/24	. . using electronic identifiers containing a code not memorised by the user
25/086	. . . {Locking of hand-actuated control actuating means}	25/241	. . . {whereby access privileges are related to the identifiers}
25/09	. . by restraining wheel rotation, e.g. wheel clamps	25/243	. . . {with more than one way to gain access}
25/093	. . . {comprising ground-engaging means}	25/245	. . . {where the antenna reception area plays a role}
25/096	. . . {comprising means for deflating tyres}	25/246	. . . {characterised by the challenge triggering}
25/10	. actuating a signalling device	25/248	. . . {Electronic key extraction prevention}
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)}	25/25	. . using biometry
25/1003	. . {Alarm systems characterised by arm or disarm features}	25/252	. . . {Fingerprint recognition}
25/1004	. . {Alarm systems characterised by the type of sensor, e.g. current sensing means (using door lock sensors B60R 25/1001)}	25/255	. . . {Eye recognition}
25/1006	. . . {Mechanical sensors, e.g. pendulums (B60R 25/101 takes precedence)}	25/257	. . . {Voice recognition}
25/1007	. . . . {comprising associated circuitry}	25/30	. Detection related to theft or to other events relevant to anti-theft systems
25/1009	. . . {Sonic sensors; Signal treatment therefor}	25/302	. . {using recording means, e.g. black box}
25/101	. . . {Fuel level sensors}	25/305	. . {using a camera}
25/1012	. . . {Zone surveillance means, e.g. parking lots, truck depots}	25/307	. . {using data concerning maintenance or configuration}
2025/1013	. . {Alarm systems characterised by the type of warning signal, e.g. visual, audible}	25/31	. . of human presence inside or outside the vehicle
2025/1015	. . . {Signal coming from the exhaust}	25/32	. . of vehicle dynamic parameters, e.g. speed or acceleration
2025/1016	. . . {Remote signals alerting owner or authorities, e.g. radio signals}	25/33	. . of global position, e.g. by providing GPS coordinates
25/1018	. . {Alarm systems characterised by features related to the general power supply}	25/34	. . of conditions of vehicle components, e.g. of windows, door locks or gear selectors
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	25/40	. 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
25/1025	. . . {preventing jamming or interference of said signal}	25/403	. . {Power supply in the vehicle}
25/104	. . characterised by the type of theft warning signal, e.g. visual or audible signals with special characteristics	25/406	. . {Power supply in the remote key}
25/1045	. . . {Signal coming from the exhaust}	99/00	Subject matter not provided for in other groups of this subclass
		2099/005	. {Protections against martens or rodents}
		2225/00	Means indicating the functioning state of the alarm system, e.g. indicating arming, using leds
		2300/00	Details of viewing arrangements using cameras and displays, specially adapted for use in a vehicle
		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
- 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