PERFORMING OPERATIONS; TRANSPORTING

TRANSPORTING

VEHICLES IN GENERAL

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

NOTE

Attention is drawn to the Note following the title of class B60

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Optical viewing arrangements ({house mirrors and spies A47G 1/00; antiglare equipment, e.g. polarising, for windscreens or windows B60J 3/00; devices per sec 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]
B60R 5/006

take precedence; external trunks
arranged at rear of vehicle { (B60R 5/003

) }
preference } 
arranged at front of vehicle { (B60R 5/003

) e.g. skis inside vehicles }
stowing or holding means for elongated articles,
vehicles B61D 37/003

B60R 7/04

for passengers' property smaller than suitcases
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) }

7/03 . [mounted on or under a seat]

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) }

7/01 . [for supporting maps]

7/02 . [for supporting spectacles]

7/05 . [for supporting tissues or tissue boxes]

7/07 . [for supporting flowers or flower vases]

7/07 . [for stowing money or valuables, e.g. using
safes]

7/08 . [for stowing tape cartridges, compact discs, or the
like]

7/09 . [for supporting hats, clothes or clothes hangers]

7/06 . [for supporting umbrellas]

7/10 . [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

9/043 . [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

9/045 . [for ladders (B60R 9/0423 takes precedence)]

9/05 . Carriers characterised by wind deflecting means
(wind deflectors for open roofs B60J 7/22)
B60R

9/052  .  .  .  Carriers comprising elongate members extending only transversely of vehicle (B60R 9/08 takes precedence)
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 grilles, e.g. steering-wheel or column]
2011/0012  .  .  .  [Seats or parts thereof]
2011/0014  .  .  .  [Arm-rests]
2011/0015  .  .  .  [Back-rests]
2011/0017  .  .  .  [Head-rests]
2011/0019  .  .  .  [Side or rear panels]
2011/0021  .  .  .  [Doors]
2011/0022  .  .  .  [Pillars]
2011/0024  .  .  .  [Rear shelves]
2011/0026  .  .  .  [Windows, e.g. windscreen]
2011/0028  .  .  .  [Ceiling, e.g. roof rails]
2011/0029  .  .  .  [Floor, e.g. side sills, fire wall]
2011/0031  .  .  .  [Seat belts]
2011/0033  .  .  .  [Rear-view mirrors]
2011/0035  .  .  .  [Sun visors]
2011/0036  .  .  .  [Luggage compartment]
2011/0038  .  .  .  [Engine compartment]
2011/004  .  .  .  [outside the vehicle]
2011/0042  .  .  .  (characterised by mounting means)
2011/0043  .  .  .  (for integrated articles, i.e. not substantially protruding from the surrounding parts)
2011/0045  .  .  .  [for 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 use, 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]
11/027  .  .  .  .  .  .  [for Din-sized apparatus]
11/0276  .  .  .  .  .  .  [for rear passenger use]
11/0282  .  .  .  .  .  .  [for the use of several passengers, e.g. simultaneously]
11/0288  .  .  .  .  .  [Apparatus made of several modules independently mounted]
11/0294  .  .  .  .  [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  .  .  .  .  .  .  [for internal load compartments, e.g. car trunks]
13/011  .  .  .  .  .  .  [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]

CPC - 2019.05
Acoustic methods G10K 11/178
damping of sounds using compensation by electro-
against vibrations or noise B62D 33/0604
drivers’ cabs for load-carrying vehicles insulated
{ ( sound insulating linings for trains B61D 17/185
; Insulating elements, e.g. for sound insulation
})
{ thermal removable closures B62D 25/24

take precedence; { integral with roof structure
with roof structure ( B60R 13/06
, { B60J 10/25
; drainage openings having movable or
})
windows, windscreens, non-fixed roofs, doors,
{ Door edge guards
}
levers, pedals }
for fire walls or floors
{ for engine compartments
}
insulating function B60R 13/02
compartments ( wall or roof liners integrating the
adapted therefore }
arrangements or adaptations of floor mats or carpets
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 17/185)
{ Arrangements of fasteners and clips specially
adapted for attaching inner vehicle liners or
mouldings (devices for fastening or securing
F16B) }
( supported by adhesion with the roof panel)
{ self supporting head liners
}
specially adapted for roofs with openings

{ Side or rear panels
}

dashboard linings { thereon ( fastening strips or bars
}
inscriptive devices { thereon ( fastening strips or bars
}
means B60R 5/044

{ Connection or positioning of adjacent panels
}

{ Dashboard liners
}

{ specially adapted for roofs with openings
}

{ Arrangements of fasteners and clips specially
adapted for attaching inner vehicle liners or
mouldings (devices for fastening or securing
F16B) }

{ Doors
}

{ Pillars; Roof rails
}

{ Rear parcel liners (used as luggage covering
means B60R 5/044)

{ comprising removable or hinged parts (for
accessing storage compartments B60R 7/04; for
airbag deployment B60R 21/215) }

{ made of a plurality of visible parts
}

{ integrating other functions or accessories
}

{ (External) Ornamental or guard strips; Ornamental
inscriptive devices (thereon (fastening strips or bars
to sheets or plates by means of clips F16R 5/12)
}

{ Door edge guards
}

{ Foot boards
}

Sealing strips (sealing arrangements for vehicle
windows, windscreens, non-fixed roofs, doors, or
similar devices B60J 10/00)

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)

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-
aoustic methods G10K 11/178)

{ Arrangements of fasteners or clips specially
adapted therefore
}

{ 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)

{ Insulating partitions, e.g. between front and
rear seats
}

{ for fire walls or floors
}

{ for engine compartments
}

{ for duct, cable or rod passages, e.g. between
engine and passenger compartments

{ specially adapted for movable parts, e.g. gears
levers, pedals

[Connection or positioning of adjacent panels]}

{ Arrangement of elements of electric or fluid
circuits specially adapted for vehicles and not
otherwise provided for;

{ Arrangements of fasteners and clips specially
adapted for attaching inner vehicle liners or
mouldings (devices for fastening or securing
F16B) }

{ supported by adhesion with the roof panel)

{ self supporting head liners
}

{ specially adapted for roofs with openings

{ Side or rear panels
}

{ Doors
}

{ Pillars; Roof rails
}

{ Rear parcel liners (used as luggage covering
means B60R 5/044)

{ comprising removable or hinged parts (for
accessing storage compartments B60R 7/04; for
airbag deployment B60R 21/215) }

{ made of a plurality of visible parts
}

{ integrating other functions or accessories
}

{ (External) Ornamental or guard strips; Ornamental
inscriptive devices (thereon (fastening strips or bars
to sheets or plates by means of clips F16R 5/12)
}

{ Door edge guards
}

{ Foot boards
}

Sealing strips (sealing arrangements for vehicle
windows, windscreens, non-fixed roofs, doors, or
similar devices B60J 10/00)

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)

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-
aoustic methods G10K 11/178)

{ Arrangements of fasteners or clips specially
adapted therefore
}

{ 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)

{ Insulating partitions, e.g. between front and
rear seats
}

{ for fire walls or floors
}

{ for engine compartments
}

{ for duct, cable or rod passages, e.g. between
engine and passenger compartments

{ specially adapted for movable parts, e.g. gears
levers, pedals

[Connection or positioning of adjacent panels]}

{ Arrangement of elements of electric or fluid
circuits specially adapted for vehicles and not
otherwise provided for;

{ Arrangements of fasteners and clips specially
adapted for attaching inner vehicle liners or
mouldings (devices for fastening or securing
F16B) }

{ supported by adhesion with the roof panel)

{ self supporting head liners
}

{ specially adapted for roofs with openings

{ Side or rear panels
}

{ Doors
}

{ Pillars; Roof rails
}

{ Rear parcel liners (used as luggage covering
means B60R 5/044)

{ comprising removable or hinged parts (for
accessing storage compartments B60R 7/04; for
airbag deployment B60R 21/215) }

{ made of a plurality of visible parts
}

{ integrating other functions or accessories
}

{ (External) Ornamental or guard strips; Ornamental
inscriptive devices (thereon (fastening strips or bars
to sheets or plates by means of clips F16R 5/12)
}

{ Door edge guards
}

{ Foot boards
}

Sealing strips (sealing arrangements for vehicle
windows, windscreens, non-fixed roofs, doors, or
similar devices B60J 10/00)

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)

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-
aoustic methods G10K 11/178)
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 charging batteries [H02J 7/00]

16/0307 . . . [using generators driven by a machine different from the vehicle motor]

16/0315 . . . [using multiplexing techniques (multiplexing for transmission of signals G08C 15/00; multiplexing for electrical communication in general H04D)]

16/0322 . . . [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}

19/0002 . . . [Wheel guards]

19/0005 . . . [Crash attenuators, i.e. means added to highway service vehicles for softening high speed impacts]

19/0007 . . . [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 22/2; for rail vehicles B60J 19/04; safety equipment for cycles B62J 27/00; ) integral with waterborne vessels or specially adapted therefor B63B 59/02)

19/023 . . . [Details]

19/026 . . . [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

2019/006 . . . [Structural beams therefor, e.g. shock-absorbing (bumper beams made of cellular materials B60R 19/221)]

2019/1813 . . . [made of metal]

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

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

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

2019/184 . . . [Blow moulded]

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

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

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

2019/1866 . . . [Cellular structures]

2019/1873 . . . [Cellular materials]

2019/188 . . . [Blow molded structures]

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

2019/1893 . . . [comprising a multiplicity of identical adjacent shock-absorbing means]

19/20 . . . containing [mainly] gas or liquid, e.g. inflatable (connection of valves to inflatable elastic bodies B60C 29/00)

19/205 . . . [inflatable in the direction of an obstacle upon impending impact, e.g. using air bags]

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

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

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

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

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

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

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

2019/264 . . . [using cellular structures]

2019/266 . . . [using friction sufaces]

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)
. . . in the direction of an obstacle before a collision, extending during driving of the vehicle, i.e. to increase the energy absorption capacity of the bumper (inflatable bumpers B60R 19/20)

extending primarily along the sides of, or completely encircling, a vehicle (ornamental or guard strips B60R 13/04)

Bumper guards

Guard strips

spring- or pivotally-mounted

combined with, or convertible into, other devices or objects, e.g. bumpers combined with road brushes, bumpers convertible into beds

with obstacle sensors of electric or electronic type

with air passages, e.g. for cooling

with lights or registration plates

[Radiator or grille guards ; Radiator grilles (cooling aspects B60K 11/08)]

[Bull bars]

[Radiator grilles]

[integral with bumpers]

Obstruction removers or deflectors (B60R 19/16, B60R 21/34 take precedence)

[Devices for cutting wire-type obstructions]

[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

[on vehicle sides]

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 2800; 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)

[Type of accident]

[Frontal collision]

[Lateral collision]

[Oblique collision]

[Rear collision or recoiling bounce after frontal collision]

[Free fall]

[Fall in water]

[Roll-over]

[Underrun collision]

[Offset collision]

[Pole collision]

[Post collision measures, e.g. notifying emergency services]

[characterised by occupant or pedestrian]

[Position of passenger]

[lying down]

[standing]

[Body parts of the occupant or pedestrian affected by the accident]

[Arms]

[Chest]

[Feet]

[Head]

[Knees]

[Legs]

[Pelvis]

[Shoulders]

[Type of passenger]

[woman, e.g. pregnant]

[Type of vehicles]

[Buses]

[Trailers, e.g. caravans]

[Convertible cars]

[Utility vehicles]

[Agricultural vehicles, e.g. tractors]

[Fork-lift trucks]

[Working vehicles]

[Pick-up trucks; Light trucks; Sport utility vehicles]

[Racing cars]

[Cycles, e.g. motorcycles]

[Railway vehicles]

[Aircraft]

[Boats]

[Amusement vehicles]

[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 22/34)])

[Mounting of electrical components in vehicles]

[Means for detecting collision, impending collision or roll-over]

[the monitored value being used for calculating occupant displacement]

[Safing sensors]

[Controlling a plurality of restraint devices]

[Communication circuits for data transmission]

[Architecture]

[Bus]

[between the airbag system and other vehicle electronic systems]

[between different sensors and airbag control unit]

[between the airbag control unit and pyrotechnic fuses or equivalent actuators]

[Transmission medium]

[wireless]

[optical]

[Transmission method]

[power and data signal using transmission medium]

[specific data frames]

[Prevention of malfunction]

[Problems or faults]

[Cut lines]
2021/01143 . . .  [Short circuits]
2021/0115 . . . .  [Current leakage]
2021/01156 . . . .  [Current or voltage overload]
2021/01163 . . . .  [Insufficient current or voltage]
2021/0117 . . . .  [Noise]
2021/01177 . . . .  [Misdeployment, e.g. during assembly, disassembly, accident salvage or recycling]
2021/01184 . . . .  [Fault detection or diagnostic circuits (in power circuits B60R 2021/01129)]
2021/0119 . . . .  [Plausibility check]
2021/01197 . . . .  [Warning devices]
2021/01204 . . . .  [Actuation parameters of safety arrangements]
2021/01211 . . . .  [Expansion of air bags]
2021/01218 . . . .  [control of expansion speed]
2021/01225 . . . .  [control of expansion volume]
2021/01231 . . . .  [control of expansion timing or sequence]
2021/01238 . . . .  [control of expansion shape]
2021/01245 . . . .  [selection of seat for bag expansion]
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 collisions or roll-over]
2021/01302 . . . .  [monitoring vehicle body vibrations or noise]
2021/01304 . . . .  [monitoring rough road condition]
2021/01306 . . . .  [monitoring vehicle inclination]
2021/01308 . . . .  [monitoring distance between vehicle body and road]
2021/01311 . . . .  [monitoring the braking system, e.g. ABS]
2021/01313 . . . .  [monitoring the vehicle steering system or the dynamic control system]
2021/01315 . . . .  [monitoring occupant displacement]
2021/01317 . . . .  [monitoring seat belt tension]
21/0132 . . . . . . .  [responsive to vehicle motion parameters, e.g. to vehicle longitudinal or transversal deceleration or speed value]
2021/01322 . . . .  [comprising variable thresholds, e.g. depending from other collision parameters]
2021/01325 . . . .  [Vertical acceleration]
2021/01327 . . . .  [Angular velocity or angular acceleration]
21/0133 . . . . . . .  [by integrating the amplitude of the input signal]
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]
2021/01345 . . . .  [using mechanical sensing means]
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 21/01555)]
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]
21/01504 . . . .  [detecting bag displacement]
21/01508 . . . .  [detecting forces or pressure in bags or modules]
21/01512 . . . .  [Passenger detection systems]
21/01516 . . . .  [using force or pressure sensing means]
21/0152 . . . . . . .  [using strain gauges]
21/01522 . . . . . . .  [using fluid means]
21/01524 . . . . . . .  [using electric switches]
21/01526 . . . . . . .  [using piezoelectric elements]
21/01528 . . . . . . .  [mounted on the bag]
21/0153 . . . . . . .  [using field detection presence sensors]
21/01532 . . . . . . .  [using electric or capacitive field sensors]
21/01534 . . . . . . .  [using electromagneticwaves, e.g. infrared]
21/01536 . . . . . . .  [using ultrasonic waves]
21/01538 . . . . . . .  [for image processing, e.g. cameras or sensor arrays]
21/0154 . . . . . . .  [in combination with seat heating]
21/01542 . . . . . . .  [detecting passenger motion]
21/01544 . . . . . . .  [detecting seat belt parameters, e.g. length, tension or height-adjustment]
21/01546 . . . . . . .  [using belt buckle sensors]
21/01548 . . . . . . .  [sensing the amount of belt winded on retractor]
21/0155 . . . . . . .  [sensing belt tension]
21/01552 . . . . . . .  [detecting position of specific human body parts, e.g. face, eyes or hands]
21/01554 . . . . . . .  [Seat position sensors]
21/01556 . . . . . . .  [Child-seat detection systems]
21/01558 . . . . . . .  [monitoring crash strength]
21/0156 . . . . . . .  [by deceleration]
21/01562 . . . . . . .  [by speed]
21/01564 . . . . . . .  [Manually or key-actuated inhibition switches]
21/01566 . . . . . . .  [Devices for warning or indicating mode of inhibition]
21/017 . . . . . . .  [including arrangements for providing electric power to safety arrangements (or their actuating means, e.g. to pyrotechnic fuses or electromagnetic valves)]
21/0173 . . . . . . .  [Diagnostic or recording means therefor]
21/0176 . . . . . . .  [for firing circuits using only mechanical switches as collision detecting means, in series with pyrotechnic fuses]
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)]
2021/0206 . . . .  [Self-supporting restraint systems, e.g. restraining arms, plates or the like]
2021/0213 . . . .  [mounted on floor]
2021/022 . . . . . . .  [mounted on seats]
2021/0226 . . . . . . .  [mounted on fire wall]
2021/0233 . . . . . . .  [mounted on steering-wheel]
2021/024 . . . . . . .  [mounted on dash-board]
2021/0246 . . . . . . .  [mounted on side walls]
2021/0253 . . . . . . .  [mounted on roof]
2021/135  . . . [Reinforcement cages for closed vehicle bodies]
2021/134  . . . [using external airbags]
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)
2021/161  . . . [characterised by additional means for controlling deployment trajectory]
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]
21/164  . . . [combined with vehicle venting means for reducing or avoiding the passenger compartment overpressure during inflation]
2021/165  . . . [reusable, e.g. in case of multiple collisions]
2021/167  . . . [comprising anti-theft devices]
2021/168  . . . [for restraining luggages]
21/18  . . . the inflatable member formed as a belt or harness or combined with a belt or harness arrangement
21/20  . . . Arrangements for storing inflatable members in their non-use or deflated condition; Arrangement or mounting of air bag modules or components
21/201  . . . Packaging straps or envelopes for inflatable members
21/203  . . . in steering wheels or steering columns
21/206  . . . 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]
21/205  . . . [using modules containing inflator, bag and cover attachable to the steering wheel as a complete sub-unit (steering wheel covers with tear lines B60R 21/2165; assembling of modules B60R 21/217)]
21/206  . . . in the lower part of dashboards, e.g. for protecting the knees
21/207  . . . in vehicle seats
21/2072  . . . [in children's seats]
21/2074  . . . [in head rests]
21/2076  . . . [Removable covers with tear seams]
21/2078  . . . [in rear seats]
21/21  . . . in vehicle side panels, e.g. doors (pillar mounted arrangements B60R 21/213)
21/213  . . . in vehicle roof frames or pillars
21/214  . . . in roof panels
21/215  . . . characterised by the covers for the inflatable member ((B60R 21/2176 takes precedence)
21/026  . . . [Rigid partitions inside vehicles, e.g. between passengers and load compartments (B60R 21/12 takes precedence)]
2021/0266  . . . [comprising energy absorbing means]
2021/0273  . . . [automatically movable to an operative position, e.g. in case of collision or impending collision]
2021/0286  . . . [Means preventing passenger from falling out of vehicles]
2021/0286  . . . [Padded or energy absorbing driving control initiating means, e.g. gear lever, pedals (B60R 21/09 takes precedence; padded linings for steering control means B60R 21/05)]
2021/0293  . . . [Additional pads or cushions in vehicle compartments, e.g. movably mounted]
21/04  . . . Padded linings for the vehicle interior [: Energy absorbing structures associated with padded or non-padded linings]
2021/0407  . . . [using gas or liquid as energy absorbing means]
2021/0414  . . . [using energy absorbing ribs]
2021/0421  . . . [using honeycomb structures]
21/0428  . . . [associated with the side doors or panels, e.g. displaced towards the occupants in case of a side collision]
2021/0435  . . . [associated with the side or roof pillars]
2021/0442  . . . [associated with the roof panel]
21/045  . . . associated with the instrument panel or dashboard
21/05  . . . associated with the steering wheel, {steering hand lever or {steering} column (yieldable steering columns B62D 1/18]
21/055  . . . Padded (or energy-absorbing) fittings {, e.g. seat belt anchors (sun visors B60J 3/00; head rests B60N 2/80)}
21/06  . . . Safety nets, transparent sheets, curtains, or the like, e.g. between occupants and glass ((B60R 21/026 , B60R 21/11, B60R 21/12, B60R 21/16 take precedence)
2021/065  . . . [comprising energy absorbing mounting means]
21/08  . . . [automatically] movable from an inoperative to an operative position, e.g. in a collision (electrical circuits for triggering safety arrangements B60R 21/01)
21/09  . . . Control elements or operating handles movable from an operative to an out-of-the-way position, e.g. [pedals,] switch knobs, window cranks (specially adapted for brake pedals, e.g. by venting of master cylinder or destruction of force transmitting rod, B60T 7/065)]
21/11  . . . Overhead guards, e.g. against loads falling down (specially adapted for fork-lift trucks B60F 9/07545)
21/12  . . . which protect the occupants against personal attack from the inside or the outside of the vehicle
21/13  . . . Roll-over protection (electrical circuits for triggering safety arrangements B60R 21/01)
21/131  . . . [Protective devices for drivers in case of overturning of tractors (means for preventing overturning or tipping of tractors B62D 49/08]
21/132  . . . [Roll bars for convertible vehicles]
21/134  . . . [movable from a retracted to a protection position]
21/135  . . . [automatically during an accident]
2021/21506 . . . . . . (comprising tearing tabs, legs or the like for holding the lid before deployment)

2021/21512 . . . . . . (the lid being displaced towards the occupant during deployment (B60R 2021/2161, B60R 2021/21525 take precedence))

2021/21518 . . . . . . (comprising a lock unlocked during deployment)

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)

2021/21531 . . . . . . (using a stretchable wall liner)

2021/21537 . . . . . . (characterised by hinges)

2021/21543 . . . . . . (with emblems)

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

2021/21652 . . . . . . (the tearing being done or assisted by cutters)

2021/21654 . . . . . . (the tearing being done or assisted by heating or pyrotechnic means)

21/21656 . . . . . . (Steering wheel covers or similar cup-shaped covers)

21/21658 . . . . . . (with integrated switches, e.g. horn switches)

21/217 . . . . . . Inflation fluid source retainers, e.g. reaction canisters; Connection of bags, covers, diffusers or inflation fluid sources therewith or together

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 2021/2170 takes precedence))

2021/2172 . . . . . . (the cover being connected to the surrounding part and to the module, e.g. floating mounts)

2021/2173 . . . . . . (the module or part thereof being movably mounted on the vehicle)

2021/2175 . . . . . . (using energy absorbing means)

21/2176 . . . . . . (the air bag components being completely enclosed in a soft or semi-rigid housing or cover)

2021/2177 . . . . . . (Reaction canisters characterised by material)

2021/2178 . . . . . . (Plastic)

21/23 . . . . . . Inflatable members (B60R 21/18 takes precedence; connection to inflation fluid source retainers B60R 21/217)

21/231 . . . . . . characterised by their shape, construction or spatial configuration

2021/23107 . . . . (the bag being integrated in a multi-bag system)

2021/23115 . . . . (with inflatable support compartments creating an internal suction volume)

2021/23123 . . . . (Heat protection panels)

2021/2313 . . . . . . (comprising sensitive compartments)

21/23138 . . . . . . (specially adapted for side protection (B60R 21/23184, B60R 21/232 take precedence))

2021/23146 . . . . . . (seat mounted)

2021/23153 . . . . . . (specially adapted for rear seat passengers)

2021/23161 . . . . . . (specially adapted for protecting at least two passengers, e.g. preventing them from hitting each other)

2021/23169 . . . . . . (specially adapted for knee protection)

2021/23176 . . . . . . (specially adapted for foot protection)

21/23184 . . . . . . (‘Tubular air bags connected to the vehicle at their two extremities’)

2021/23192 . . . . . . (Roof bags, i.e. protecting the occupant in a roll-over situation)

21/232 . . . . . . Curtain-type airbags deploying mainly in a vertical direction from their top edge

21/233 . . . . . . comprising a plurality of individual compartments; comprising two or more bag-like members, one within the other (B60R 21/232 takes precedence)

2021/23308 . . . . . . (the individual compartments defining the external shape of the bag)

2021/23316 . . . . . . (‘Inner seams, e.g. creating separate compartments or used as tethering means’)

2021/23324 . . . . . . (‘Inner walls crating separate compartments, e.g. communicating with vents’)

2021/23332 . . . . . . (‘using independent bags, one within the other’)

21/2334 . . . . . . Expansion control features

21/2338 . . . . . . Tethers

2021/23382 . . . . . . (‘Internal tether means’)

2021/23384 . . . . . . (‘having ends which are movable or detachable during deployment’)

2021/23386 . . . . . . (‘External tether means’)

2021/23388 . . . . . . (‘having ends which are movable or detachable during deployment’)

21/2342 . . . . . . Tear seams

21/2346 . . . . . . Soft diffusers

21/235 . . . . . . characterised by their material

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)

2021/23557 . . . . . . (Molding)

2021/23561 . . . . . . (Sealing)

2021/23566 . . . . . . (Nesting of panels, i.e. for material utilisation)

2021/23571 . . . . . . (characterised by connections between panels)
producing gas under pressure in general vehicle B60R 21/20 or means to control inflation fluid flow; blasting cartridges for pyrotechnic (B60R 21/268 using instantaneous generation of gas, e.g. takes precedence) characterised by the inflation fluid source, (e.g. in case of overpressure (B60R 21/30 takes precedence; venting means on inflatable member walls B60R 21/239)) characterised by means to control the venting) characterised by the way they are folded characterised by their venting means [comprising means to control the venting] 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) [the inflation fluid being transferred to the inflatable member by the mechanical deformation of the fluid container during an impact] [using a filter through which the inflation gas passes] [a cooling agent being added to the inflation fluid] [for filling the bag with foam] [Ignitors] [triggered by mechanical means] [of elongated shape] [of film shape] [using fluid materials] [using a combination of inflators] [characterised by auto-ignition means] [characterised by heating or heat insulating means, e.g. for use under extreme temperatures] [characterised by casing] [Material] [characterised by fluid flow controlling valves] with means other than bag structure to diffuse or guide inflation fluid [Gas guiding means, e.g. ducts] [for diverting the gas into a plurality of bags] [Curtain bag nozzles] [Elongated tubular diffusers, e.g. curtain-type using a variable source, e.g. plural stage or controlled output (hybrid inflators B60R 21/272)] [with a plurality of inflation levels] [The volume of gas being continuously adjustable] using instantaneous generation of gas, e.g. pyrotechnic (B60R 21/268 takes precedence) [comprising a plurality of combustion chambers or sub-chambers] [using only solid reacting substances, e.g. pellets, powder] [the reacting substances being supported by the inflatable member walls, or by a flexible support within it] [comprising a plurality of combustion chambers or sub-chambers] using instantaneous release of stored pressurised gas ([B60R 21/2605 takes precedence]) [comprising a plurality of pressure chambers] with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators [using a fluid fuel gas generator] [characterised by means to rupture or open the fluid source] 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]) [comprising means to control the venting] [using means to draw ambient air into the flow line and mix such air with the inflation fluid] [Arrangements for non-electric triggering of inflation (electrical circuits for triggering safety arrangements B60R 21/01)] [Connections between collision detecting means and inflators using pyrotechnic transmission lines] Protecting non-occupants of a vehicle, e.g. pedestrians ([B60R 19/02 takes precedence]) [using deformable body panel, bodywork or components] [means outside vehicle body] using airbags using means for lifting bonnets 22/00 Safety belts or body harnesses in vehicles (safety belts or body harnesses in general A62B 35/00) [Knee, leg or head belts] [for restraining detainees] [for restraining luggages] [for restraining detainees] [for restraining luggages] [Sleeve or tubular members enveloping the seat belt] using means for lifting bonnets (B60R 22/30) [Adaptations for use by small passengers, e.g. children (B60R 22/20 takes precedence; using belt anti-slip devices B60R 22/30)] [Means for holding the tongue or buckle in a non-use position, e.g. for easy access by the user] [with means for facilitating access to rear seats in two-door cars] [Three-point seat belt systems comprising two side lower and one side upper anchoring devices (B60R 22/022, B60R 22/03 take precedence)] [Adaptations for use by small passengers, e.g. children (B60R 22/20 takes precedence; using belt anti-slip devices B60R 22/30)] [Adaptations for use with children seats or luggages] [at least two ends of the belt being retractable after use] [Four-point seat belt systems, e.g. with the two upper points connected together]
Anchoring devices

NOTE

Groups

B60R 22/02 [B60R 22/022] - B60R 22/08, B60R 22/18 - B60R 22/48 take precedence over group B60R 22/10

22/105 . . . (for children (adaptation of children's seats for seat belts B60N 2/265, B60N 2/280))

22/12 . . Construction of belts or harnesses (B60R 21/18 takes precedence ; woven fabrics for safety belts D03D 1/0005)

22/14 . . incorporating enlarged restraint areas, e.g. vests, nets { crash pads, optionally for children (crash pads for occupants' safety on vehicles in general B60R 21/02)

22/16 . . using belts which become permanently deformed, i.e. one time use

22/18 . . Anchoring devices

22/1806 . . (for buckles)

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

22/1818 . . (Belt guides)

22/1825 . . [using rollers]

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

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

22/1843 . . [comprising an elongated sleeve]

22/185 . . with stopping means for acting directly upon the belt in an emergency, e.g. by clamping or friction (B60R 22/195 takes precedence; combined with the retractor B60R 22/42))

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

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

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

NOTE

If the type of belt tensioner is not specified and can be used indifferently for pulling belt anchors or rotating belt reels, the documents are classified in B60R 22/46

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

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

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

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

22/1955 . . . [Linear actuators]

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

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

22/1958 . . . [characterised by spring actuators (B60R 22/1953 takes precedence)]

22/20 . . . adjustable in position, e.g. in height

22/201 . . . [with the belt anchor connected to a slider movable in a vehicle-mounted track for passive restraint systems B60R 22/06)]

22/202 . . . [the slider comprising spring-actuated locking means (B60R 22/205 takes precedence)]

22/203 . . . [the locking means being movably mounted on the slider]

22/205 . . . [the slider comprising emergency actuated locking means]

22/206 . . . [Adjustable stop members for restraint systems comprising belt anchor vehicle mounted tracks, e.g. for passive seat belts]

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

22/208 . . . [by automatic or remote control means]

22/22 . . . secured to the vehicle floor

22/24 . . . secured to the side, door, or roof of the vehicle

22/26 . . . secured to the seat

22/263 . . . [Front seats]

22/266 . . . [Rear seats, e.g. benches]

22/28 . . . incorporating energy-absorbing devices {(belt anchors provided with energy-absorbing means for protecting the occupants in case of physical contact therewith B60R 21/055; belt retractors comprising energy-absorbing means B60R 22/341, B60R 22/4676)}

22/281 . . . [for buckles]

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

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

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

22/285 . . . [using friction surfaces]

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

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

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

22/289 . . . [Energy-absorption curves]

22/30 . . . Coupling devices other than buckles, including length-adjusting fittings {or anti-slip devices (adaptations of manual three-point seat belt systems for use by small passengers using other means than belt anti-slip devices B60R 22/024; buckles A44B 11/00; releasable fastenings in general F16B)}

22/32 . . . Devices for releasing in an emergency, e.g. after an accident ; Remote or automatic unblocking devices (unlocking devices for retractors B60R 22/3416)

22/320 . . . [using electric means]

22/321 . . . [using automatic actuating means (B60R 22/321 takes precedence)]
B60R

22/324 . . .  [triggered by strong traction on the seat belt, e.g. with temperisition]

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 2022/446)]

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)]

2022/4657 . . .  [comprising a plurality of charges]

2022/4661 . . .  [comprising venting means, e.g. for avoiding overpressure in case of fire or for allowing return motion with energy absorption]

2022/4666 . . .  [characterised by electric actuators]
B60R

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

25/001  [ Anti-theft devices acting on jacking means or props, e.g. for trailers]
25/002  [ Locking of control actuating or transmitting means (of steering mechanism B60R 25/02)]
25/003  [ Locking of control actuating means]
25/005  [ Of foot actuated control means (rods connecting pedals and steering wheels B60R 25/021)]
25/006  [ Using means preventing access, e.g. boxes, shutters]
25/007  [ Of hand actuated control means]
25/008  [ Comprising means for locking two or more control means together, e.g. hand-brake handle and gear shift lever]

25/01  Operating on vehicles systems or fittings, e.g. on doors, seats or windscreen
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]
25/02  Operating on the steering mechanism
25/021  Restraining movement of the steering column or steering wheel hub, e.g. restraining means controlled by ignition switch
25/02102  [ With supplementary safety device preventing operation of the starter of an engine already running]
25/02105  [ Arrangement of the steering column thereof]
25/02107  [ Comprising overload clutching means]
25/0211  [ Comprising a locking member radially and linearly moved towards the steering column]

25/02113  [ Manually actuated, e.g. using removable lockingmeans]
25/02115  [ Key actuated]
25/02118  [ With linear bolt motion parallel to the lock axis]
25/02121  [ Comprising safety devices avoiding locking until removal of the key]
25/02123  [ Using an axially slidable lock cylinder]
25/02126  [ With linear bolt motion perpendicular to the lock axis]
25/02128  [ Comprising safety devices avoiding locking until removal of the key]
25/02131  [ By using an axially slidable lock cylinder]
25/02134  [ Comprising a locking member axially moved along the steering column]
25/02136  [ Manually actuated, e.g. using removable locking members]
25/02139  [ Key actuated]
25/02142  [ Comprising externally controlled safety devices for preventing locking during vehicle running condition]
25/02144  [ Interlocked with gear box or gear lever]
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]

25/0215  Using electric means, e.g. electric motors or solenoids
25/02153  [ Comprising a locking member radially and linearly moved towards the steering column]
25/02156  [ Comprising a locking member axially moved along the steering column]
25/022  Operating on the steering wheel, e.g. bars locked to the steering wheel rim (B60R 25/021 takes precedence)
25/0221  [ Restraining means joining the steering wheel with another part of the car, e.g. pedals]
25/0222  [ By disjoining steering wheel and column]
25/0224  [ Restraining of steering wheel by collapsing against column]
25/0225  [ Using a rod locked on the steering wheel rim (B60R 25/0221 takes precedence)]
25/0227  [ Using means preventing access, e.g. boxes enclosing the steering wheel (B60R 25/014 takes precedence)]
25/0228  [ Comprising a locking bolt or fork slidable between or around the steering wheel spokes]
25/023  Countermeasures against the physical destruction of the steering lock
25/04  Operating on the propulsion system, e.g. engine or drive motor
25/0405  [ From the external]
25/041  [ Preventing use of engine operating on the fluid supply]
25/0415  [ With safe immobilisation]
25/042  Operating on the fuel supply
25/043  By blocking the exhaust
25/044  By limiting or blocking the air supply
25/045  By limiting or cutting the electrical supply to the propulsion unit

CPC - 2019.05
Means to switch the anti-theft system on or off

- Actuating a signalling device
- Using mechanical identifiers
- Using hidden switches
- By restraining wheel rotation, e.g. wheel clamps
- Comprising ground-engaging means
- Comprising means for deflating tyres
- Actuating a signalling device

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)

- Alarm systems characterised by arm or disarm features
- Alarm systems characterised by the type of sensor, e.g. current sensing means (using door lock sensors B60R 25/101)

- Mechanical sensors, e.g. pendulums (B60R 25/101 takes precedence)
- Comprising associated circuitry
- Sonic sensors; Signal treatment therefor
- Fuel level sensors
- Zone surveillance means, e.g. parking lots, truck depots

Alarm systems characterised by the type of warning signal, e.g. visual, audible

- Signal coming from the exhaust
- Remote signals alerting owner or authorities, e.g. radio signals
- Alarm systems characterised by features related to the general power supply
- 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

- Preventing jamming or interference of said signal
- Characterised by the type of theft warning signal, e.g. visual or audible signals with special characteristics
- Signal coming from the exhaust

- Means to switch the anti-theft system on or off
- Antitheft state indicator
- Central base unlocks or authorises unlocking
- With data signals passing through the human body

- By using the door logic and door and engine unlock means
- By hand gestures
- By foot gestures
- Ignition switch geometry
- With means for preventing jamming or interference of a remote switch control signal

- Combined with personal settings of other vehicle devices, e.g. mirrors, seats, steering wheels
- Remote starting of engine
- Using hidden switches
- Using mechanical identifiers

Subject matter not provided for in other groups of this subclass

- Protections against martens or rodents

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

Details of viewing arrangements using cameras and displays, specially adapted for use in a vehicle

- Characterised by the type of camera system used
- Using cameras with adjustable capturing direction
- Using 360 degree surveillance camera system
- Using camera systems provided with artificial illumination device, e.g. IR light source

- Using multiple cameras
- Using night vision cameras
- Using stereoscopic cameras
- Using 'non-standard' camera systems, e.g. camera sensor used for additional purposes i.a. rain sensor, camera sensor split in multiple image areas

- Characterised by the type of display used
- Displaying a blind spot scene on the vehicle part responsible for the blind spot
- Using a head-up display

- Using multi-purpose displays, e.g. camera image and navigation or video on same display
- Characterised by the type of image processing
- Combing image information with other obstacle sensor information, e.g. using RADAR/LIDAR/SONAR sensors for estimating risk of collision
combining image information with GPS information or vehicle data, e.g. vehicle speed, gyro, steering angle data

using joined images, e.g. multiple camera images

using merged images, e.g. merging camera image with stored images

merging camera image with lines or icons

using a re-scaling of images

virtually distinguishing relevant parts of a scene from the background of the scene

by overlaying the real scene, e.g. through a head-up display on the windshield

characterised by the details of the power supply or the coupling to vehicle components

Image calibration

triggering from stand-by mode to operation mode

using wireless transmission

using a data bus

characterised by the display information being shared, e.g. external display, data transfer to other traffic participants or centralised traffic controller

characterised by monitoring and displaying vehicle exterior scenes from a transformed perspective

with an adjustable viewpoint

the adjustment being automatic

from a bird’s eye viewpoint

characterised by an event-triggered choice to display a specific image among a selection of captured images

characterised by the intended use of the viewing arrangement

for monitoring and displaying scenes of vehicle interior, e.g. for monitoring passengers or cargo

for child monitoring

for monitoring and displaying vehicle exterior blind spot views

in addition to a rear-view mirror system

for pedestrian protection

for lane monitoring

for replacing a rear-view mirror system

for bad weather conditions or night vision

for aiding parking

for monitoring rearward traffic

for vehicle security, e.g. parked vehicle surveillance, burglar detection

for facilitating docking to a trailer

for vehicle path indication

for obstacle warning

Indexing scheme relating to vehicle anti-theft devices

Communication protocols, communication systems of vehicle anti-theft devices

Bluetooth

Near field communication [NFC]

Radio frequency identification data [RFID]

Internet

Encryption

Communication devices for vehicle anti-theft devices

Personal digital assistant [PDA]

Mobile phones

Satellites