

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### TRANSPORTING

#### B60 VEHICLES IN GENERAL

(NOTE omitted)

#### B60K ARRANGEMENT OR MOUNTING OF PROPULSION UNITS OR OF TRANSMISSIONS IN VEHICLES; ARRANGEMENT OR MOUNTING OF PLURAL DIVERSE PRIME-MOVERS IN VEHICLES; AUXILIARY DRIVES FOR VEHICLES; INSTRUMENTATION OR DASHBOARDS FOR VEHICLES; ARRANGEMENTS IN CONNECTION WITH COOLING, AIR INTAKE, GAS EXHAUST OR FUEL SUPPLY OF PROPULSION UNITS IN VEHICLES

##### NOTES

- In this subclass, the following terms or expressions are used with the meanings indicated:
  - "conjoint control of drive units" includes such control for vehicles or of general applicability;
  - "auxiliary drives" means drives of auxiliary or external machines or devices from the propulsion unit, transmission, or other parts of the vehicle, and includes the control of such drives;
  - "transmission" means all propulsion parts linking propulsion units, e.g. engines, to ultimate propulsive elements, e.g. wheels;
  - "drive unit" means propulsion unit conjoint with transmission, a "drive unit" can additionally include the ultimate driven unit;
  - "sub-unit" means, e.g. propulsion unit, clutch, gearing or brake system;
  - "hybrid vehicle" means vehicles with plural diverse prime-movers for mutual or common propulsion
- 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.

Arrangement or mounting of propulsion units in vehicles (of control devices for such units [B60K 26/00](#); elastic mountings [per se F16F](#); propulsion units or their control [per se, see the relevant classes](#))

<b>1/00</b>	<b>Arrangement or mounting of electrical propulsion units</b> ( <a href="#">B60K 7/00</a> takes precedence; arrangement or mounting of plural diverse prime-movers for mutual or common propulsion <a href="#">B60K 6/00</a> ; electric transmission arrangements <a href="#">B60K 17/12</a> ; electric equipment or propulsion of electrically-propelled vehicles <a href="#">per se B60L</a> ; current-collectors for power supply lines of electrically-propelled vehicles <a href="#">B60L 5/00</a> )	1/04	. of the electric storage means for propulsion (exchanging batteries for electric propulsion of vehicles <a href="#">B60L 53/80</a> ; for auxiliary purposes only <a href="#">B60R 16/04</a> ; supplying batteries to, or removing batteries from, vehicles <a href="#">B60S 5/06</a> )
2001/001	. {one motor mounted on a propulsion axle for rotating right and left wheels of this axle}	2001/0405	. . {characterised by their position}
2001/003	. {with means for cooling the electrical propulsion units}	2001/0411	. . . {Arrangement in the front part of the vehicle}
2001/005	. . {the electric storage means}	2001/0416	. . . {Arrangement in the rear part of the vehicle}
2001/006	. . {the electric motors}	2001/0422	. . . {Arrangement under the front seats}
2001/008	. {with means for heating the electrical propulsion units}	2001/0427	. . . {Arrangement between the seats}
1/02	. comprising more than one electric motor	2001/0433	. . . {Arrangement under the rear seats}
		2001/0438	. . . {Arrangement under the floor}
		2001/0444	. . . {Arrangement on a trailer}
		2001/045	. . . {Arrangement in a wheel, e.g. a spare wheel}
		2001/0455	. . {Removal or replacement of the energy storages}
		2001/0461	. . . {from the side}
		2001/0466	. . . {from above}
		2001/0472	. . . {from below}
		2001/0477	. . . {from the back}
		2001/0483	. . . {from the front}
		2001/0488	. . . {with arrangements for pivoting}
		2001/0494	. . . {with arrangements for sliding}

<p><b>3/00</b> Arrangement or mounting of steam or gaseous-pressure propulsion units (<a href="#">B60K 7/00</a> takes precedence; arrangement or mounting of plural diverse prime-movers for mutual or common propulsion <a href="#">B60K 6/00</a>; gaseous-pressure transmission arrangements <a href="#">B60K 17/10</a>)</p> <p>3/02 . of piston type</p> <p>3/04 . of turbine type</p> <p><b>5/00</b> Arrangement or mounting of internal-combustion or jet-propulsion units (<a href="#">B60K 7/00</a> takes precedence; arrangement or mounting of plural diverse prime-movers for mutual or common propulsion <a href="#">B60K 6/00</a>)</p> <p>2005/003 . {the internal combustion or jet propulsion unit is arranged between the front and the rear axle}</p> <p>2005/006 . {the internal combustion or jet propulsion unit is arranged behind the rear axle}</p> <p>5/02 . with the engine main axis, e.g. crankshaft axis, substantially in or parallel to the longitudinal centre line of the vehicle</p> <p>5/04 . with the engine main axis, e.g. crankshaft axis, transversely to the longitudinal centre line of the vehicle</p> <p>5/06 . . with the engine main axis substantially vertical</p> <p>5/08 . comprising more than one engine</p> <p>5/10 . providing for ready detachment of engine</p> <p>5/12 . Arrangement of engine supports {<a href="#">supports comprising both a plastic spring and a fluid damper F16F 13/06</a>}</p> <p>5/1208 . . {Resilient supports (<a href="#">B60K 5/1241</a> - <a href="#">B60K 5/1291</a> take precedence)}</p> <p>5/1216 . . . {characterised by the location of the supports relative to the motor or to each other (<a href="#">B60K 5/1225</a> takes precedence)}</p> <p>5/1225 . . . {comprising resilient rings surrounding a part of the unit}</p> <p>5/1233 . . . {comprising protective elements, e.g. for protecting against heat, dust}</p> <p>5/1241 . . {Link-type support (<a href="#">B60K 5/125</a>, <a href="#">B60K 5/1275</a> take precedence)}</p> <p>5/125 . . {Telescopic supports, e.g. telescopic dampers (<a href="#">B60K 5/1275</a> takes precedence)}</p> <p>5/1258 . . {Wire-type supports (<a href="#">B60K 5/1275</a> takes precedence)}</p> <p>5/1266 . . {Supports comprising friction damping devices (<a href="#">B60K 5/125</a>, <a href="#">B60K 5/1283</a> take precedence)}</p> <p>5/1275 . . {Plastically deformable supports}</p> <p>5/1283 . . {Adjustable supports, e.g. the mounting or the characteristics being adjustable}</p> <p>5/1291 . . {Supports comprising stoppers}</p>	<p><b>6/00</b> Arrangement or mounting of plural diverse prime-movers for mutual or common propulsion, e.g. hybrid propulsion systems comprising electric motors and internal combustion engines {; <b>Control systems therefor, i.e. systems controlling two or more prime movers, or controlling one of these prime movers and any of the transmission, drive or drive units</b> (arrangement or mounting in vehicles of electrical gearing, in which an electrical machine serves only as reduction gearing and not as the prime mover and in which no electrical storing means are used <a href="#">B60K 17/12</a>; control and regulation of purely electrical prime movers <a href="#">B60L</a>; prime-movers comprising electrical and internal combustion motors in a common engine block or housing <i>per se</i> <a href="#">F02B 65/00</a>; electric motors or motor-generators used for starting the combustion engine <a href="#">F02N 11/04</a>; electric motors for synchronising gearing <a href="#">F16H 3/12</a> )}{<b>Informative references: mechanical gearings with secondary electric drive <a href="#">F16H 3/72</a>; arrangements for handling mechanical energy structurally associated with the dynamo-electric machine <a href="#">H02K 7/00</a>; machines comprising structurally interrelated motor and generator parts <a href="#">H02K 51/00</a>; dynamo-electric machines not otherwise provided for in <a href="#">H02K</a> see <a href="#">H02K 99/00</a></b>}</p> <p><b>NOTE</b></p> <p>In this subgroup, the following expressions are used, with the meanings indicated :</p> <ul style="list-style-type: none"> <li>• "energy storing means" means apparatus for storing propulsive energy and providing stored energy to drive the prime mover or the ultimate propulsive elements</li> <li>• "hybrid electric vehicle" (HEV) means a vehicle with an electrical prime mover and a combustion engine, in which the electrical prime mover and the combustion engine either singly or in combination, drive the ultimate propulsive elements, e.g. wheels</li> <li>• "motor-generator" means an electric motor, or an electric generator, or an electrical machine which can be used for both functions, as a motor or a generator</li> <li>• "prime mover" means a propulsion unit or source of motive power providing a mechanical output, e.g. via a rotating shaft</li> </ul> <p>6/08 . Prime-movers comprising combustion engines and mechanical or fluid energy storing means</p> <p>6/10 . . by means of a chargeable mechanical accumulator, e.g. flywheel</p> <p>6/105 . . . {the accumulator being a flywheel}</p> <p>6/12 . . by means of a chargeable fluidic accumulator</p> <p>2006/123 . . . {for driving pneumatic motors}</p> <p>2006/126 . . . {the hydraulic accumulator starts the engine}</p> <p>6/20 . the prime-movers consisting of electric motors and internal combustion engines, e.g. HEVs</p> <p><b>NOTE</b></p> <p>When classifying in one of groups <a href="#">B60K 6/22</a>, <a href="#">B60K 6/42</a> or <a href="#">B60K 6/50</a>, further technical information, which is considered to represent information of interest for search, should also be classified in the other subgroups of main</p>
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## B60K 6/20

(continued)

- group [B60K 6/00](#) to enable searching using a combination of classification symbols
- 6/22 . . characterised by apparatus, components or means specially adapted for HEVs
  - 6/24 . . . characterised by the combustion engines
  - 6/26 . . . characterised by the motors or the generators
  - 2006/262 . . . . {the motor or generator are used as clutch, e.g. between engine and driveshaft}
  - 2006/264 . . . . {with outer rotor and inner stator}
  - 2006/266 . . . . {with two coaxial motors or generators}
  - 2006/268 . . . . {Electric drive motor starts the engine, i.e. used as starter motor}
  - 6/28 . . . characterised by the electric energy storing means, e.g. batteries or capacitors
  - 6/30 . . . characterised by chargeable mechanical accumulators, e.g. flywheels
  - 6/32 . . . characterised by the fuel cells
  - 6/34 . . . characterised by the absence of energy storing means
  - 6/36 . . . characterised by the transmission gearings
  - 6/365 . . . . with the gears having orbital motion
  - 6/38 . . . characterised by the driveline clutches ([shift clutches within the gearing or transmission B60K 6/36](#) {, [B60K 6/54](#)})
  - 2006/381 . . . . {characterized by driveline brakes}
  - 6/383 . . . . One-way clutches or freewheel devices
  - 6/387 . . . . Actuated clutches, i.e. clutches engaged or disengaged by electric, hydraulic or mechanical actuating means
  - 6/40 . . . characterised by the assembly or relative disposition of components
  - 6/405 . . . . Housings
  - 6/42 . . characterised by the architecture of the hybrid electric vehicle
  - 6/44 . . . Series-parallel type
  - 6/442 . . . . Series-parallel switching type
  - 6/445 . . . . Differential gearing distribution type
  - 6/448 . . . . Electrical distribution type
  - 6/46 . . . Series type
  - 6/48 . . . Parallel type
  - 2006/4808 . . . . {Electric machine connected or connectable to gearbox output shaft}
  - 2006/4816 . . . . {Electric machine connected or connectable to gearbox internal shaft}
  - 2006/4825 . . . . {Electric machine connected or connectable to gearbox input shaft}
  - 2006/4833 . . . . {Step up or reduction gearing driving generator, e.g. to operate generator in most efficient speed range}
  - 2006/4841 . . . . . {the gear provides shifting between multiple ratios}
  - 6/485 . . . . Motor-assist type
  - 6/50 . . Architecture of the driveline characterised by arrangement or kind of transmission units
  - 6/52 . . . Driving a plurality of drive axles, e.g. four-wheel drive
  - 6/54 . . . Transmission for changing ratio
  - 2006/541 . . . . {without reverse ratio using instead electric reversing}
  - 2006/542 . . . . {with overdrive ratio}
  - 6/543 . . . . the transmission being a continuously variable transmission
  - 6/547 . . . . the transmission being a stepped gearing
- 7/00 Disposition of motor in, or adjacent to, traction wheel (roller-skate driving mechanisms [A63C 17/12](#))**
- 7/0007 . {the motor being electric}
  - 7/0015 . {the motor being hydraulic}
  - 7/0023 . {the motor being pneumatic}
  - 2007/003 . {with two or more motors driving a single wheel}
  - 2007/0038 . {the motor moving together with the wheel axle}
  - 2007/0046 . {the motor moving together with the vehicle body, i.e. moving independently from the wheel axle}
  - 2007/0053 . {the motor moving relative to the vehicle body and to the wheel axle}
  - 2007/0061 . {the motor axle being parallel to the wheel axle}
  - 2007/0069 . {the motor axle being perpendicular to the wheel axle}
  - 2007/0076 . . {the motor axle being horizontal}
  - 2007/0084 . . {the motor axle being vertical}
  - 2007/0092 . {the motor axle being coaxial to the wheel axle}
- 8/00 Arrangement or mounting of propulsion units not provided for in one of the preceding main groups**
- Arrangements in connection with cooling, air intake, gas exhaust, fuel supply, or power supply of propulsion units in vehicles**
- 11/00 Arrangement in connection with cooling of propulsion units (heating the interior space [B60H](#); cooling internal combustion engines [per se F01P](#))**
- 11/02 . with liquid cooling
  - 11/04 . . Arrangement or mounting of radiators, radiator shutters, or radiator blinds ({[B60K 11/085](#) takes precedence})
  - 11/06 . with air cooling
  - 11/08 . Air inlets for cooling; Shutters or blinds therefor ({radiator or grille guards [B60R 19/52](#)})
  - 11/085 . . {with adjustable shutters or blinds}
- 13/00 Arrangement in connection with combustion air intake or gas exhaust of propulsion units (extensions for melting snow or ice on roads or like surfaces [E01H 5/00](#), [E01H 6/00](#); forming part of the engine [F01N](#); supplying combustion engines with combustible mixtures or constituents [F02M](#))**
- 13/02 . concerning intake
  - 13/04 . concerning exhaust ({collecting exhaust gases with central suction systems not forming part of vehicles, e.g. in workshops or tunnels [B08B 15/002](#), otherwise along carriageways [E01C 1/005](#);} extensions for melting snow on roads [E01H 5/00](#), [E01H 6/00](#); exhaust or silencing apparatus for internal combustion engines [per se F01N](#); {pipes, joints or supports therefor [F16L](#)})
  - 13/06 . using structural parts of the vehicle as ducts, e.g. frame parts
- 15/00 Arrangement in connection with fuel supply of combustion engines {or other fuel consuming energy converters, e.g. fuel cells}; Mounting or construction of fuel tanks (tanks in general [B65D](#), [F17C](#); supplying combustion engines with combustible mixtures or constituents [F02M](#))**
- 15/01 . Arrangement of fuel conduits (chassis frame forming fluid conduit means [B62D 21/17](#))
  - 15/013 . . {of gas conduits}

- 2015/016 . . {Fuel conduits having more than one internal passage, e.g. for different types of fuel}
- 15/03 . Fuel tanks ([chassis frame comprising fluid storage compartment B62D 21/16](#) ; [Details of the fuel feeding system related to the fuel tank F02M 37/0076](#))
- 15/03006 . . {Gas tanks ([B60K 15/07 takes precedence](#))}
- 2015/03013 . . . {Control systems for LPG tanks}
- 2015/03019 . . . {Filling of gas tanks}
- 2015/03026 . . . {comprising a valve}
- 2015/03032 . . {Manufacturing of fuel tanks}
- 2015/03039 . . . {made of a combination of non metallic and metallic materials}
- 2015/03046 . . . {made from more than one layer}
- 2015/03052 . . . {Fuel tanks made of two balloons, one inside the other}
- 2015/03059 . . . {Fuel tanks with double shells or more}
- 2015/03065 . . . . {with material filled between the walls}
- 2015/03072 . . {Arrangements for reducing evaporation}
- 2015/03078 . . . {Membranes, layers or the like covering the surface of the fuel}
- 2015/03085 . . . . {using inflatable bags or bladders in the tanks}
- 2015/03092 . . {with latent heat storages to reduce the evaporation of fuel}
- 2015/03098 . . {with a device for mixing liquids in the fuel tank, e.g. for mixing oil and fuel}
- 2015/03105 . . {with supplementary interior tanks inside the fuel tank}
- 2015/03111 . . {Swirl pots}
- 2015/03118 . . {Multiple tanks, i.e. two or more separate tanks}
- 2015/03125 . . . {Suction lines for dual tanks}
- 2015/03131 . . . {Systems for filling dual tanks}
- 2015/03138 . . . {Pumping means between the compartments}
- 2015/03144 . . . {Fluid connections between the tanks}
- 2015/03151 . . . {Mechanical connection between the tanks}
- 2015/03157 . . . {for supply different types of fuel to the motor}
- 2015/03164 . . {Modular concepts for fuel tanks}
- 2015/03171 . . {Expansion tanks}
- 15/03177 . . {made of non-metallic material, e.g. plastics, or of a combination of non-metallic and metallic material ([B60K 15/03006 takes precedence](#))}
- 2015/03184 . . {Exchangeable tanks, i.e. the empty tank is replaced by refilled tank}
- 2015/0319 . . {with electronic systems, e.g. for controlling fuelling or venting}
- 2015/03197 . . . {Systems for exchanging data}
- 2015/03203 . . . . {during refuelling}
- 2015/0321 . . {characterised by special sensors, the mounting thereof}
- 2015/03217 . . . {Fuel level sensors}
- 2015/03223 . . . . {comprising at least two level fuel sensors}
- 2015/0323 . . . {Sensors for detecting presence or absence of the filling nozzle}
- 2015/03236 . . {characterised by special filters, the mounting thereof}
- 2015/03243 . . {characterised by special pumps, the mounting thereof}
- 2015/0325 . . . {Jet pumps}
- 2015/03256 . . {characterised by special valves, the mounting thereof}
- 2015/03263 . . . {Ball valves}
- 2015/03269 . . . {Flap valves}
- 2015/03276 . . . {Valves with membranes}
- 2015/03282 . . . {Umbrella type valves}
- 2015/03289 . . . {Float valves; Floats therefor}
- 2015/03296 . . . {Pressure regulating valves}
- 2015/03302 . . . {Electromagnetic valves}
- 2015/03309 . . . {Tanks specially adapted for particular fuels}
- 2015/03315 . . . {for hydrogen}
- 2015/03322 . . . {for methanol}
- 2015/03328 . . . {Arrangements or special measures related to fuel tanks or fuel handling}
- 2015/03335 . . . . {for fast filling of fuel tanks, e.g. specific filler pipes for pressurised fuelling}
- 2015/03342 . . . . {to allow automatic or robotised filling of the tank}
- 2015/03348 . . . . {for supplying additives to fuel}
- 2015/03355 . . . . {for supplying different types of fuel}
- 2015/03361 . . . . {for checking the quality or quantity of fuel during filling of fuel tank}
- 2015/03368 . . . . {for preventing overfilling of tanks}
- 2015/03375 . . . . {to improve security}
- 2015/03381 . . . . {for preventing explosions}
- 2015/03388 . . . . {in case of a roll over of the vehicle}
- 2015/03394 . . . . {for preventing expulsion of fuel during filling of the tank}
- 2015/03401 . . . . {for preventing electrostatic charges}
- 2015/03407 . . . . {to protect tanks against projectiles}
- 2015/03414 . . . . {associated with the fuel tank for cooling heated fuel}
- 2015/03421 . . . . {to protect the fuel tank against heat}
- 2015/03427 . . . . {for heating fuel, e.g. to avoiding freezing}
- 2015/03434 . . . . {for preventing theft of fuel}
- 2015/0344 . . . . {comprising baffles}
- 2015/03447 . . . . {for improving the sealing}
- 2015/03453 . . . . {for fixing or mounting parts of the fuel tank together}
- 2015/0346 . . . . . {by welding}
- 2015/03467 . . . . . {by clip or snap fit fittings}
- 2015/03473 . . . . . {for draining or emptying a fuel tank}
- 2015/0348 . . . . . {for returning the fuel from the motor}
- 2015/03486 . . . {characterised by the materials the tank or parts thereof are essentially made from}
- 2015/03493 . . . . {made of plastics}
- 15/035 . . . characterised by venting means
- 15/03504 . . . . {adapted to avoid loss of fuel or fuel vapour, e.g. with vapour recovery systems}
- 2015/03509 . . . . . {with a droplet separator in the vent line}
- 2015/03514 . . . . . {with vapor recovery means}
- 15/03519 . . . . . {Valve arrangements in the vent line}
- 2015/03523 . . . . . {Arrangements of the venting tube}
- 2015/03528 . . . . . {Mounting of venting tubes}
- 2015/03533 . . . . . {the venting tube being movable with the fuel level}
- 2015/03538 . . . . . {the venting tube being connected with the filler tube}
- 2015/03542 . . . . . {Mounting of the venting means}
- 2015/03547 . . . . . {the venting means are integrated in the fuel cap or inlet cover}
- 2015/03552 . . . . . {the venting means are integrated into the fuel filler pipe}
- 2015/03557 . . . . . {comprising elements of the venting device integrated in the fuel tank, e.g. vapor recovery means}
- 2015/03561 . . . . . {Venting means working at specific times}

2015/03566	. . . . {comprising means for stopping the venting of fuel vapor, e.g. during refuelling or engine stop}	2015/0523	. . . . {with sliding connection to the vehicle body}
2015/03571	. . . . {Venting during driving}	2015/053	. . . . {with hinged connection to the vehicle body}
2015/03576	. . . . {Venting during filling the reservoir}	2015/0538	. . . . {with open or close mechanism automatically actuated}
2015/0358	. . . {the venting is actuated by specific signals or positions of particular parts}	2015/0546	. . . . {Arrangements for checking the position of the inlet cover}
2015/03585	. . . . {by gas pressure}	2015/0553	. . . . {Details concerning the inlet box or bowl in the vehicle car body panel}
2015/0359	. . . . {by filler cap or inlet cover position}	2015/0561	. . . . {Locking means for the inlet cover}
2015/03595	. . . . {by filler nozzle}	2015/0569	. . . . {with actuator fixed to the inlet cover}
15/04	. . Tank inlets ( <a href="#">B60K 15/077</a> takes precedence)	2015/0576	. . . . {with actuator fixed to the vehicle body}
15/0403	. . . {Anti-siphoning devices}	2015/0584	. . . . {the locking bolt is linearly moved to lock or unlock}
15/0406	. . . {Filler caps for fuel tanks}	2015/0592	. . . . {with storage means for the cap}
15/0409	. . . . {Provided with a lock}	15/06	. . characterised by fuel reserve systems
2015/0412	. . . . {the key can only be withdrawn when the cap is placed on the filler neck}	15/061	. . . {with level control}
2015/0416	. . . . {electrically actuated}	2015/062	. . . . {Arrangement for filling the fuel reserve systems}
2015/0419	. . . . {Self-sealing closure caps, e.g. that don't have to be removed manually}	15/063	. . Arrangement of tanks
2015/0422	. . . . {actuated by the inlet cover}	2015/0631	. . . {the fuel tank forming at least part of the vehicle floor}
2015/0425	. . . . {actuated by a motor}	2015/0632	. . . {the fuel tank is arranged below the front seat}
2015/0429	. . . . {actuated by the nozzle}	2015/0633	. . . {the fuel tank is arranged below the rear seat}
2015/0432	. . . . {having a specific connection between the cap and the vehicle or tank opening}	2015/0634	. . . {the fuel tank is arranged below the vehicle floor}
2015/0435	. . . . {using a sliding connection}	2015/0635	. . . {the fuel tank is arranged between the seats}
2015/0438	. . . . {using screw or bayonet}	2015/0636	. . . {the fuel tank being part of the chassis or frame}
2015/0441	. . . . {with torque control}	2015/0637	. . . {the fuel tank is arranged in the front of the vehicle}
2015/0445	. . . . {using hinges}	2015/0638	. . . {the fuel tank is arranged in the rear of the vehicle}
2015/0448	. . . . {comprising spherical valve type closures}	2015/0639	. . . {the fuel tank is arranged near or in the roof}
2015/0451	. . . . {Sealing means in the closure cap}	15/067	. . . Mounting of tanks
2015/0454	. . . . {combined closing of the fuel inlet and bodywork inlet by one element which is visible from outside}	2015/0675	. . . . {allowing deflection movements of the tank in case of a crash}
2015/0458	. . . {Details of the tank inlet}	15/07	. . . . of gas tanks
2015/0461	. . . . {comprising a filler pipe shutter, e.g. trap, door or flap for fuel inlet}	15/073	. . Tank construction specially adapted to the vehicle ( <a href="#">B60K 15/077</a> takes precedence)
2015/0464	. . . . {comprising a flexible or extendable filler pipes, e.g. corrugated, foldable or with bellows}	15/077	. . with means modifying or controlling distribution or motion of fuel, e.g. to prevent noise, surge, splash or fuel starvation
2015/0467	. . . . {Fuel tanks with more than one filler pipe}	2015/0772	. . . {Floats in the fuel tank}
2015/047	. . . . {Manufacturing of the fuel inlet or connecting elements to fuel inlet, e.g. pipes or venting tubes}	2015/0775	. . . {for reducing movement or slash noise of fuel}
2015/0474	. . . . {Arrangement of fuel filler pipes in relation to vehicle body}	2015/0777	. . . {in-tank reservoirs or baffles integrally manufactured with the fuel Tank}
2015/0477	. . . . {Details of the filler neck tank side}	15/10	. concerning gas-producing plants
2015/048	. . . . {Arrangements for sealing the fuel inlet during filling}	<b>16/00</b>	<b>Arrangements in connection with power supply of propulsion units in vehicles from forces of nature, e.g. sun or wind</b> ( <a href="#">electric propulsion with power supply from forces of nature, e.g. sun or wind B60L 8/00</a> ; <a href="#">marine propulsion by wind motors driving water-engaging propulsive elements B63H 13/00</a> ; <a href="#">wind motors specially adapted for installation on vehicles F03D 9/32</a> )
2015/0483	. . . . {Means to inhibit the introduction of too small or too big filler nozzles}		<b>NOTE</b>
2015/0487	. . . . {Means to shield vehicle bodywork from fuel, e.g. during filling}		When classifying in this group, details of sail or rigging arrangements which are suited for marine wind propulsion are also classified in the
2015/049	. . . . {Means for determining the position of the filler nozzle in the filler pipe}		
2015/0493	. . . . {Means for checking absence or presence of closure cap}		
2015/0496	. . . . {the fuel inlet being arranged on the top of the fuel tank}		
15/05	. . . Inlet covers		
2015/0507	. . . . {Arrangements for adjusting the inlet cover}		
2015/0515	. . . . {Arrangements for closing or opening of inlet cover}		

B60K 16/00 (continued)	relevant groups of subclass <a href="#">B63H</a> , e.g. in groups <a href="#">B63H 8/00</a> , <a href="#">B63H 9/04</a> .	17/3462	. . . . {with means for changing distribution of torque between front and rear wheels}
2016/003	. {solar power driven}	17/3465	. . . . . {self-actuated means, e.g. differential locked automatically by difference of speed}
2016/006	. {wind power driven}	17/3467	. . . . . {combined with a change speed gearing, e.g. range gear}
<b>Arrangement or mounting of transmissions or their control in vehicles (torque-transmitting axles <a href="#">B60B</a>; combined transmission and steering gear for steering non-deflectable wheels <a href="#">B62D</a>)</b>			
<b>17/00</b>	<b>Arrangement or mounting of transmissions in vehicles (clutches <a href="#">per se</a>, e.g. construction thereof, <a href="#">F16D</a>; gearing <a href="#">per se</a>, e.g. construction thereof, <a href="#">F16H</a>)</b>	17/348	. . having differential means for driving one set of wheels, e.g. the front, at one speed and the other set, e.g. the rear, at a different speed ( <a href="#">B60K 17/346</a> takes precedence)
17/02	. characterised by arrangement, location, or kind of clutch	17/35	. . . including arrangements for suppressing or influencing the power transfer, e.g. viscous clutches ( <a href="#">differential gearing with locking devices</a> { <a href="#">F16H 48/20</a> })
17/04	. characterised by arrangement, location, or kind of gearing ( <a href="#">electric equipment or propulsion of electrically-propelled vehicles</a> <a href="#">B60L</a> )	17/3505	. . . . . {with self-actuated means, e.g. by difference of speed}
17/043	. . {Transmission unit disposed in on near the vehicle wheel, or between the differential gear unit and the wheel}	17/351	. . . . . {comprising a viscous clutch}
17/046	. . . {with planetary gearing having orbital motion}	17/3515	. . . . . {with a clutch adjacent to traction wheel, e.g. automatic wheel hub}
17/06	. . of change-speed gearing ( <a href="#">B60K 17/10</a> - <a href="#">B60K 17/16</a> take precedence)	17/352	. . . . . {manually operated}
17/08	. . . of mechanical type	17/354	. . having separate mechanical assemblies for transmitting drive to the front or to the rear wheels or set of wheels
17/10	. . of fluid gearing ( <a href="#">of fluid clutches</a> <a href="#">B60K 17/02</a> )	17/356	. . having fluid or electric motor, for driving one or more wheels ( <a href="#">disposition of motor in, or adjacent to, traction wheel</a> <a href="#">B60K 7/00</a> )
17/105	. . . {Units comprising at least a part of the gearing and a torque-transmitting axle, e.g. transaxles ( <a href="#">B60K 17/14</a> takes precedence)}	17/358	. . {all driven wheels being steerable}
17/12	. . of electric gearing ( <a href="#">of electrically-actuated clutches</a> <a href="#">B60K 17/02</a> )	17/36	. for driving tandem wheels
17/14	. . the motor of fluid or electric gearing being disposed in or adjacent to traction wheel ( <a href="#">B60K 7/00</a> takes precedence)	<b>20/00</b>	<b>Arrangement or mounting of change-speed gearing control devices in vehicles (movable cabs having special adaptations of vehicle control devices <a href="#">B62D 33/06</a>; such control devices <a href="#">per se</a> <a href="#">F16H</a>)</b>
17/145	. . . {the electric gearing being disposed in or adjacent to traction wheel}	20/02	. of initiating means ( <a href="#">control mechanisms in general</a> <a href="#">G05G</a> )
17/16	. . of differential gearing	20/04	. . floor mounted
17/165	. . . {provided between independent half axles ( <a href="#">B60K 17/18</a> , <a href="#">B60K 17/20</a> take precedence)}	20/06	. . mounted on steering column or the like
17/18	. . . {in which the differential movement is obtained by resilient means}	20/08	. . Dashboard means
17/20	. . . {in which the differential movement is limited}	<b>23/00</b>	<b>Arrangement or mounting of control devices for vehicle transmissions, or parts thereof, not otherwise provided for (movable cabs having special adaptations of vehicle control devices <a href="#">B62D 33/06</a>; such control devices <a href="#">per se</a> <a href="#">F16D</a>, <a href="#">F16H</a>)</b>
17/22	. characterised by arrangement, location, or type of main drive shafting, e.g. cardan shaft	2023/005	. {Adjusting multiple pedals, e.g. for their initial position}
17/24	. . Arrangements of mountings for shafting	23/02	. for main transmission clutches
17/26	. characterised by arrangement, location, of type of freewheel device	2023/025	. . {Adjusting of clutch pedal positions}
17/28	. characterised by arrangement, location, or type of power take-off	23/04	. for differential gearing
17/30	. the ultimate propulsive elements, e.g. ground wheels, being steerable	2023/043	. . {Control means for varying left-right torque distribution, e.g. torque vectoring}
17/303	. . {with a gearwheel on the steering knuckle or kingpin axis}	2023/046	. . {Axle differential locking means}
17/306	. . {with a universal joint in the axis of the steering knuckle}	23/06	. for freewheel devices
17/32	. the ultimate propulsive elements, e.g. ground wheels, being rockable about a horizontal pivot	23/08	. for changing number of driven wheels {, for switching from driving one axle to driving two or more axles ( <a href="#">B60K 17/3515</a> takes precedence)}
17/34	. for driving both front and rear wheels, e.g. four wheel drive vehicles ( <a href="#">arrangement or mounting of control devices for changing number of driven wheels</a> <a href="#">B60K 23/08</a> )	23/0808	. . {for varying torque distribution between driven axles, e.g. by transfer clutch}
17/342	. . having a longitudinal, endless element, e.g. belt or chain, for transmitting drive to wheels	2023/0816	. . . {for varying front-rear torque distribution with a central differential}
17/344	. . having a transfer gear	2023/0825	. . . . . {for adding torque to the front wheels}
17/346	. . . the transfer gear being a differential gear	2023/0833	. . . . . {for adding torque to the rear wheels}
		2023/0841	. . . . . {for locking a central differential, e.g. by using a lock-up clutch}

- 2023/085 . . {automatically actuated}
- 2023/0858 . . . {with electric means, e.g. electro-hydraulic means}
- 2023/0866 . . . {with hydraulic means only}
- 2023/0875 . . . {with mechanical means only}
- 2023/0883 . . {manually actuated}
- 2023/0891 . . . {with actuator levers, e.g. shift levers or linkage for changing two-wheel to four-wheel drive}
  
- 25/00** **Auxiliary drives** ([B60K 16/00](#) takes precedence; arrangements of tyre-inflating pumps mounted on vehicles [B60C 23/10](#); driving tyre-inflating pumps [B60C](#); driving engine auxiliaries [F02B](#))
- 2025/005 . {driven by electric motors forming part of the propulsion unit}
  - 25/02 . directly from an engine shaft
- 2025/022 . . {by a mechanical transmission}
- 2025/024 . . . {with variable ratio}
- 2025/026 . . {by a hydraulic transmission}
- 2025/028 . . {by a pneumatic transmission}
- 25/04 . from static or dynamic pressure or vacuum, developed by the engine
- 25/06 . from the transmission power take-off ([transmissions having power-take-off B60K 17/28](#))
- 2025/065 . . {the transmission being fluidic, e.g. hydraulic}
- 25/08 . from a ground wheel, e.g. engaging the wheel tread or rim
- 25/10 . directly from oscillating movements due to vehicle running motion, e.g. suspension movement ([resilient suspensions having dampers accumulating utilisable energy, e.g. compressing air, B60G 13/14](#))
- 2025/103 . . {by electric means}
- 2025/106 . . {by fluid means}
  
- 26/00** **Arrangements or mounting of propulsion unit control devices in vehicles**
- 26/02 . of initiating means or elements
- 26/021 . . {with means for providing feel, e.g. by changing pedal force characteristics}
- 2026/022 . . . {with tactile feedback from a controller, e.g. vibrations}
- 2026/023 . . . {with electrical means to generate counter force or torque}
- 2026/024 . . {Adjustable consoles, e.g. for changing position of mounting casings}
- 2026/025 . . {Input devices for controlling electric drive motors}
- 2026/026 . . {Adjusting of accelerator pedal positions}
- 2026/027 . . {Acceleration input members mounted on a seat}
- 2026/028 . . {Acceleration input members mounted on steering wheel or column}
- 2026/029 . . {Joystick type control devices for acceleration}
- 26/04 . of means connecting initiating means or elements to propulsion unit
- 2026/043 . . {with mechanical gearings}
- 2026/046 . . {with electrical transmission means}

- 28/00** **Safety devices for propulsion-unit control, specially adapted for, or arranged in, vehicles, e.g. preventing fuel supply or ignition in the event of potentially dangerous conditions** (for electrically-propelled vehicles [B60L 3/00](#); road vehicle drive control systems for purposes not related to the control of a particular sub-unit [B60W 30/00](#); drive control systems specially adapted for autonomous road vehicles [B60W 60/00](#))

**WARNING**

Groups [B60K 28/00](#) - [B60K 28/165](#) are impacted by reclassification into groups [B60W 60/00](#) - [B60W 60/007](#), [B60W 2300/00](#) - [B60W 2530/213](#), [B60W 2540/041](#) - [B60W 2540/049](#), [B60W 2552/00](#) - [B60W 2556/65](#), [B60W 2710/00](#) - [B60W 2720/406](#), and [B60W 2754/00](#) - [B60W 2900/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 2028/003 . {inhibiting the starter motor, e.g. by controlling ignition or park lock circuits}
- 2028/006 . {disconnecting the electric power supply, e.g. the vehicle battery}
- 28/02 . responsive to conditions relating to the driver
- 28/04 . . responsive to presence or absence of the driver, e.g. to weight or lack thereof
- 28/06 . . responsive to incapacity of driver
- 28/063 . . . {preventing starting of vehicles}
- 28/066 . . . {actuating a signalling device ([B60K 28/063](#) takes precedence)}
- 28/08 . responsive to conditions relating to the cargo, e.g. overload
- 28/10 . responsive to conditions relating to the vehicle
- 28/12 . . responsive to conditions relating to doors or doors locks, e.g. open door
- 28/14 . . responsive to accident or emergency, e.g. deceleration, tilt of vehicle
- 28/16 . . responsive to, or preventing, skidding of wheels ([brake control systems for vehicle drive stability B60T 8/1755](#); arrangements responsive to a speed condition for adjusting wheel braking force [B60T 8/32](#); control of vehicle driving stability otherwise than by controlling the propulsion unit only [B60W 30/02](#); preventing wheel slippage by reducing power in rail vehicles [B61C 15/00](#))
- 28/165 . . . {acting on elements of the vehicle drive train other than the propulsion unit and brakes, e.g. transmission, clutch, differential ([acting on brakes B60T 8/17](#))}
  
- 31/00** **Vehicle fittings, acting on a single sub-unit only, for automatically controlling vehicle speed, i.e. preventing speed from exceeding an arbitrarily established velocity or maintaining speed at a particular velocity, as selected by the vehicle operator** (fittings acting on two or more sub-units [B60W 30/14](#); speedometers [G01P](#); systems or devices for controlling speed in general [G05D 13/00](#) ; in traffic anti-collision system for road vehicles [G08G 1/16](#))

**NOTE**

In this group:

## B60K 31/00

(continued)

- the means ordinarily includes a device, e.g. a servomechanism, for operating a velocity-affecting element of the vehicle, e.g. the throttle;
- a means for preventing a vehicle from exceeding a particular speed is often referred to as a "governor", whereas a means for maintaining the vehicle within a relatively narrow speed range is generally designated as "speed control". Since these two functions are frequently interrelated, no attempt has been made to identify such means as being particularly adapted to perform only one, or the other of the functions.

- 31/0008 . {including means for detecting potential obstacles in vehicle path}
- 2031/0016 . . {Identification of obstacles; Selection of a target vehicle}
- 2031/0025 . . {Detecting position of target vehicle, e.g. vehicle driving ahead from host vehicle}
- 2031/0033 . . {Detecting longitudinal speed or acceleration of target vehicle}
- 2031/0041 . . {Detecting lateral speed of target vehicle}
- 2031/005 . . {Selecting more than one target vehicle, e.g. using several preceding vehicles as target}
- 31/0058 . {responsive to externally generated signalling}
- 31/0066 . {responsive to vehicle path curvature}
- 31/0075 . . {responsive to vehicle steering angle}
- 31/0083 . . {responsive to centrifugal force acting on vehicle due to the path it is following}
- 2031/0091 . {Speed limiters or speed cutters}
- 31/02 . including electrically actuated servomechanism {including an electric control system or a servomechanism in which the vehicle velocity affecting element is actuated electrically}
- 31/04 . . and means for comparing one electrical quantity, e.g. voltage, pulse, waveform, flux, or the like, with another quantity of a like kind, which comparison means is involved in the development of an electrical signal which is fed into the controlling means
- 31/042 . . . {where at least one electrical quantity is set by the vehicle operator}
- 31/045 . . . . {in a memory, e.g. a capacitor}
- 31/047 . . . . . {the memory being digital}
- 31/06 . including fluid pressure actuated servomechanism {in which the vehicle velocity affecting element is actuated by fluid pressure}
- 31/08 . . and one or more electrical components for establishing or regulating input pressure
- 31/10 . . and means for comparing one electrical quantity, e.g. voltage, pulse, waveform, flux, or the like, with another quantity of a like kind, which comparison means is involved in the development of a pressure which is fed into the controlling means
- 31/102 . . . {where at least one electrical quantity is set by the vehicle operator}
- 31/105 . . . . {in a memory, e.g. a capacitor}
- 31/107 . . . . . {the memory being digital}
- 31/12 . including a device responsive to centrifugal forces {(centrifugal force acting on the vehicle due to the path it is following [B60K 31/0083](#), motor speed limiting by governors [G05D 13/10](#))}

- 31/14 . . having an electrical switch which is caused to function by the centrifugal force
- 31/16 . having means to prevent or discourage unauthorised use or adjusting of the controlling means {(vehicle theft prevention in general [B60R 25/00](#))}
- 31/18 . including a device to audibly, visibly, or otherwise signal the existence of unusual or unintended speed {to the driver of the vehicle (devices primarily intended for indicating speed to other traffic [B60Q 1/54](#))}
- 31/185 . . {connected to the speedometer display, e.g. by sensors or switches responsive to the position of the indicator needle (arrangement of pointers in automobile speedometers for indicating predetermined speeds by the detection of the position of the indicator needle [G01P 1/11](#))}

**Instruments specially adapted for vehicles or dashboards; Arrangement of instruments or dashboards in or on vehicles**

**35/00 Instruments specially adapted for vehicles; Arrangement of instruments in or on vehicles**

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/20](#) - [B60K 2360/48](#), [B60K 2360/60](#) - [B60K 2360/62](#) and [B60K 2360/92](#) - [B60K 2360/96](#)}

**WARNING**

Group [B60K 35/00](#) is impacted by reclassification into groups [B60K 35/10](#), [B60K 35/20](#) - [B60K 35/29](#), [B60K 35/40](#) - [B60K 35/425](#), [B60K 35/50](#) - [B60K 35/53](#), [B60K 35/55](#), [B60K 35/60](#), [B60K 35/65](#) - [B60K 35/658](#), [B60K 35/70](#), [B60K 35/80](#) - [B60K 35/81](#), [B60K 35/85](#) and [B60K 35/90](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/10 . Input arrangements, i.e. from user to vehicle, associated with vehicle functions or specially adapted therefor

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/11](#) - [B60K 2360/149](#)}

**WARNING**

Group [B60K 35/10](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).

Groups [B60K 35/00](#) and [B60K 35/10](#) should be considered in order to perform a complete search.

- 35/20 . Output arrangements, i.e. from vehicle to user, associated with vehicle functions or specially adapted therefor

**NOTE**

{In the groups [B60K 35/20](#) - [B60K 35/22](#) and [B60K 35/26](#), it is desirable to add the indexing codes of [B60K 2360/151](#) - [B60K 2360/1526](#)}

B60K 35/20  
(continued)

**WARNING**

Groups [B60K 35/20](#), [B60K 35/21](#), [B60K 35/211](#), [B60K 35/212](#), [B60K 35/213](#), [B60K 35/214](#), [B60K 35/215](#), [B60K 35/22](#), [B60K 35/223](#), [B60K 35/25](#), [B60K 35/26](#), [B60K 35/265](#), [B60K 35/28](#), [B60K 35/285](#) and [B60K 35/29](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/21 . . . using visual output, e.g. blinking lights or matrix displays
- 35/211 . . . {producing three-dimensional [3D] effects, e.g. stereoscopic images}
- 35/212 . . . {displaying on manual operation elements, e.g. on a knob}
- 35/213 . . . {Virtual instruments}
- 35/214 . . . {Variable gauge scales, e.g. scale enlargement to adapt to maximum driving speed}
- 35/215 . . . characterised by the combination of multiple visual outputs, e.g. combined instruments with analogue meters and additional displays
- 35/22 . . . Display screens
- 35/223 . . . . {Flexible displays}
- 35/23 . . . Head-up displays [HUD] (optical aspects of head-up displays [G02B 27/01](#))

**WARNING**

Group [B60K 35/23](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).

Group [B60K 35/23](#) is also impacted by reclassification into groups [B60K 35/231](#), [B60K 35/232](#), [B60K 35/233](#), [B60K 35/234](#) and [B60K 35/235](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/231 . . . . characterised by their arrangement or structure for integration into vehicles

**WARNING**

Group [B60K 35/231](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/23](#).

Groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 35/231](#) should be considered in order to perform a complete search.

- 35/232 . . . . controlling the projection distance of virtual images depending on the condition of the vehicle or the driver

**WARNING**

Group [B60K 35/232](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/23](#).

Groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 35/232](#) should be considered in order to perform a complete search.

- 35/233 . . . . controlling the size or position in display areas of virtual images depending on the condition of the vehicle or the driver

**WARNING**

Group [B60K 35/233](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/23](#).

Groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 35/233](#) should be considered in order to perform a complete search.

- 35/234 . . . . controlling the brightness, colour or contrast of virtual images depending on the driving conditions or on the condition of the vehicle or the driver

**WARNING**

Group [B60K 35/234](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 2360/349](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/235 . . . . with means for detecting the driver's gaze direction or eye points

**WARNING**

Group [B60K 35/235](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 2360/149](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/25 . . . using haptic output
- 35/26 . . . using acoustic output
- 35/265 . . . . {Voice}
- 35/28 . . . characterised by the type of the output information, e.g. video entertainment or vehicle dynamics information; characterised by the purpose of the output information, e.g. for attracting the attention of the driver

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/16](#) - [B60K 2360/179](#)}

- 35/285 . . . . {for improving awareness by directing driver's gaze direction or eye points}

- 35/29 . . . Instruments characterised by the way in which information is handled, e.g. showing information on plural displays or prioritising information according to driving conditions

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/18](#) - [B60K 2360/199](#)}

- 35/40 . Instruments specially adapted for improving the visibility thereof to the user, e.g. fogging prevention or anti-reflection arrangements

**WARNING**

Groups [B60K 35/40](#) - [B60K 35/425](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/405 . . {Fogging prevention}
- 35/415 . . {Glare prevention}
- 35/425 . . {Anti-reflection arrangements}
- 35/50 . Instruments characterised by their means of attachment to or integration in the vehicle ([B60K 35/231](#) takes precedence)

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/816](#) - [B60K 2360/834](#)}

**WARNING**

Group [B60K 35/50](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/60](#).

Group [B60K 35/50](#) is also impacted by reclassification into groups [B60K 37/00](#), [B60K 37/10](#) and [B60K 37/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/53 . . Movable instruments, e.g. slidable

**WARNING**

Group [B60K 35/53](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).

Group [B60K 35/53](#) is also impacted by reclassification into group [B60K 35/55](#).

Groups [B60K 35/00](#), [B60K 35/53](#) and [B60K 35/55](#) should be considered in order to perform a complete search.

- 35/55 . Instruments with parts that can change their shape or position to configure an active screen, e.g. by folding or by rolling

**WARNING**

Group [B60K 35/55](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/53](#).

Groups [B60K 35/00](#), [B60K 35/53](#) and [B60K 35/55](#) should be considered in order to perform a complete search.

- 35/60 . Instruments characterised by their location or relative disposition in or on vehicles ([arrangements of lighting devices on dashboards B60Q 3/10](#))

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/77](#) - [B60K 2360/797](#)}

**WARNING**

Group [B60K 35/60](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).

Group [B60K 35/60](#) is also impacted by reclassification into groups [B60K 35/50](#) and [B60K 37/00](#) - [B60K 37/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/65 . Instruments specially adapted for specific vehicle types or users, e.g. for left- or right-hand drive

**NOTE**

{In the groups [B60K 35/65](#) - [B60K 35/658](#), it is desirable to add the indexing codes of [B60K 2360/731](#) - [B60K 2360/741](#)}

**WARNING**

Groups [B60K 35/65](#), [B60K 35/652](#), [B60K 35/654](#), [B60K 35/656](#) and [B60K 35/658](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 35/652 . . {for left- or right-hand drive}
- 35/654 . . {the user being the driver}
- 35/656 . . {the user being a passenger}
- 35/658 . . {the instruments being ergonomically adjustable to the user}

- 35/70 . Instrument provisions for avoiding injuries to vehicle occupants in case of accidents

**WARNING**

Group [B60K 35/70](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 2360/652](#).

Groups [B60K 35/00](#), [B60K 2360/652](#) and [B60K 35/70](#) should be considered in order to perform a complete search.

- 35/80 . Arrangements for controlling instruments

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/55](#) - [B60K 2360/577](#)}

**WARNING**

Groups [B60K 35/80](#) and [B60K 35/81](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).

Groups [B60K 35/00](#), [B60K 35/80](#) and [B60K 35/81](#) should be considered in order to perform a complete search.

- 35/81 . . for controlling displays
- 35/85 . Arrangements for transferring vehicle- or driver-related data

**NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/583](#) - [B60K 2360/595](#)}

- B60K 35/85** (continued) **WARNING**  
 Group [B60K 35/85](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).  
 Groups [B60K 35/00](#) and [B60K 35/85](#) should be considered in order to perform a complete search.
- 35/90 . Calibration of instruments, e.g. setting initial or reference parameters; Testing of instruments, e.g. detecting malfunction  
**WARNING**  
 Group [B60K 35/90](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).  
 Groups [B60K 35/00](#) and [B60K 35/90](#) should be considered in order to perform a complete search.
- 37/00** **Dashboards** (as road-vehicle superstructure sub-units [B62D 25/14](#))  
**NOTE**  
 {In this group, it is desirable to add the indexing codes of [B60K 2360/40](#) - [B60K 2360/48](#), [B60K 2360/65](#) - [B60K 2360/6992](#) and [B60K 2360/84](#) }  
**WARNING**  
 Group [B60K 37/00](#) is incomplete pending reclassification of documents from groups [B60K 35/50](#) and [B60K 35/60](#).  
 Group [B60K 37/00](#) is also impacted by reclassification into groups [B60K 37/10](#) and [B60K 37/20](#).  
 All groups listed in this Warning should be considered in order to perform a complete search.
- 37/10 . Arrangements for attaching the dashboard to the vehicle  
**WARNING**  
 Group [B60K 37/10](#) is incomplete pending reclassification of documents from groups [B60K 35/50](#), [B60K 35/60](#) and [B60K 37/00](#).  
 All groups listed in this Warning should be considered in order to perform a complete search.
- 37/20 . Dashboard panels  
**WARNING**  
 Group [B60K 37/20](#) is incomplete pending reclassification of documents from groups [B60K 35/50](#), [B60K 35/60](#) and [B60K 37/00](#).  
 All groups listed in this Warning should be considered in order to perform a complete search.

- 2310/22 . Displays for target speed
- 2310/24 . Speed setting methods
- 2310/242 . . setting initial target speed, e.g. initial algorithms
- 2310/244 . . changing target speed or setting a new target speed, e.g. changing algorithms
- 2310/246 . . releasing speed control, e.g. inhibiting speed control if a brake pedal is depressed
- 2310/248 . . resuming speed control, e.g. returning to old target speed
- 2310/26 . Distance setting methods, e.g. determining target distance to target vehicle
- 2310/262 . . setting initial distance to preceding vehicle, e.g. initial algorithms
- 2310/264 . . changing distance, e.g. reducing the distance for overtaking
- 2310/266 . . releasing distance control, e.g. inhibiting control if target vehicle lost or changing lane
- 2310/268 . . resuming distance control, e.g. changing target vehicle
- 2310/28 . Following time setting methods, e.g. elapsed delay between preceding and host vehicle
- 2310/30 . Mode switching, e.g. changing from one cruise control mode to another

**Details of instruments or dashboards**

- 2360/00** **Indexing scheme associated with groups [B60K 35/00](#) or [B60K 37/00](#) relating to details of instruments or dashboards**
- 2360/11 . Instrument graphical user interfaces or menu aspects
  - 2360/111 . . for controlling multiple devices
  - 2360/113 . . Scrolling through menu items
  - 2360/115 . . Selection of menu items
  - 2360/117 . . Cursors
  - 2360/119 . . Icons
  - 2360/122 . Instrument input devices with reconfigurable control functions, e.g. reconfigurable menus
  - 2360/126 . Rotatable input devices for instruments
  - 2360/128 . Axially displaceable input devices for instruments
  - 2360/131 . Pivotal input devices for instruments
  - 2360/133 . Multidirectional input devices for instruments
  - 2360/135 . . Joysticks
  - 2360/137 . . Jog-dials
  - 2360/139 . Clusters of instrument input devices
  - 2360/141 . Activation of instrument input devices by approaching fingers or pens
  - 2360/143 . Touch sensitive instrument input devices
  - 2360/1434 . . Touch panels
  - 2360/1438 . . Touch screens
  - 2360/1442 . . . Emulation of input devices
  - 2360/1446 . . Touch switches
  - 2360/145 . Instrument input by combination of touch screen and hardware input devices
  - 2360/146 . Instrument input by gesture
  - 2360/1464 . . 3D-gesture
  - 2360/1468 . . Touch gesture
  - 2360/1472 . . . Multi-touch gesture
  - 2360/1476 . . . Handwriting
  - 2360/148 . Instrument input by voice

**2310/00** **Arrangements, adaptations or methods for cruise controls**

- 2310/20 . Operator actuated switches or levers for cruise control or speed limiting systems

2360/149 . Instrument input by detecting viewing direction not otherwise provided for

**WARNING**

Group [B60K 2360/149](#) is impacted by reclassification into group [B60K 35/235](#).

Groups [B60K 2360/149](#) and [B60K 35/235](#) should be considered in order to perform a complete search.

2360/151 . Instrument output devices for configurable output

- 2360/1515 . . Reconfigurable dials
- 2360/1523 . Matrix displays
- 2360/1526 . Dual-view displays
- 2360/16 . Type of output information
- 2360/161 . . Explanation of functions, e.g. instructions
- 2360/162 . . Visual feedback on control action
- 2360/163 . . Language
- 2360/164 . . Infotainment
- 2360/165 . . Videos and animations
- 2360/166 . . Navigation
- 2360/167 . . Vehicle dynamics information
- 2360/168 . . Target or limit values
- 2360/169 . . Remaining operating distance or charge
- 2360/171 . . Vehicle or relevant part thereof displayed
- 2360/172 . . Driving mode indication
- 2360/173 . . Reversing assist
- 2360/174 . . Economic driving
- 2360/175 . . Autonomous driving
- 2360/176 . . Camera images
- 2360/177 . . Augmented reality
- 2360/178 . . Warnings
- 2360/179 . . Distances to obstacles or vehicles
- 2360/18 . Information management
- 2360/182 . . Distributing information between displays
- 2360/184 . . Displaying the same information on different displays
- 2360/186 . . Displaying information according to relevancy
- 2360/1868 . . . according to driving situations
- 2360/1876 . . . according to vehicle situations
- 2360/188 . . Displaying information using colour changes
- 2360/191 . . Highlight information
- 2360/195 . . Blocking or enabling display functions
- 2360/197 . . Blocking or enabling of input functions
- 2360/199 . . for avoiding maloperation
- 2360/20 . Optical features of instruments
- 2360/21 . . using cameras
- 2360/23 . . using reflectors
- 2360/25 . . using filters
- 2360/27 . . using semi-transparent optical elements
- 2360/28 . . . for instruments which are not visible when inactive
- 2360/29 . . Holographic features
- 2360/31 . . Virtual images
- 2360/33 . . Illumination features
- 2360/331 . . . Electroluminescent elements
- 2360/332 . . . Light emitting diodes
- 2360/333 . . . Lasers
- 2360/334 . . . Projection means
- 2360/336 . . . Light guides
- 2360/338 . . . Light strips
- 2360/339 . . . Translucent dashboard skins

- 2360/34 . . . Backlit symbols
- 2360/341 . . . Illumination of dials
- 2360/343 . . . Illumination of matrix displays
- 2360/344 . . . . for additionally illuminating mechanical elements, e.g. pointers or control knobs
- 2360/345 . . . Illumination of controls
- 2360/347 . . . Optical elements for superposition of display information
- 2360/349 . . . Adjustment of brightness

**WARNING**

Group [B60K 2360/349](#) is impacted by reclassification into group [B60K 35/234](#).

Groups [B60K 2360/349](#) and [B60K 35/234](#) should be considered in order to perform a complete search.

- 2360/40 . Hardware adaptations for dashboards or instruments
- 2360/42 . . Circuit board features
- 2360/46 . . Electrical connections
- 2360/47 . . . using wireless power transfer or transmission.
- 2360/48 . . Sensors
- 2360/55 . Remote control arrangements
- 2360/56 . . using mobile devices
- 2360/563 . . . Vehicle displaying mobile device information
- 2360/566 . . . Mobile devices displaying vehicle information
- 2360/569 . . . Vehicle controlling mobile device functions
- 2360/573 . . . Mobile devices controlling vehicle functions
- 2360/577 . . . Mirror link with mobile devices
- 2360/583 . Data transfer between instruments
- 2360/586 . Wired data transfers
- 2360/589 . Wireless data transfers
- 2360/5894 . . SIM cards
- 2360/5899 . . Internet
- 2360/5905 . . Wi-fi
- 2360/5911 . . Bluetooth
- 2360/5915 . . Inter vehicle communication
- 2360/592 . Data transfer involving external databases
- 2360/595 . Data transfer involving internal databases
- 2360/60 . Structural details of dashboards or instruments
- 2360/61 . . Specially adapted for utility vehicles
- 2360/62 . . Anti-theft arrangements
- 2360/65 . . Features of dashboards
- 2360/652 . . . Crash protection features

**WARNING**

Group [B60K 2360/652](#) is impacted by reclassification into group [B60K 35/70](#).

Groups [B60K 2360/652](#) and [B60K 35/70](#) should be considered in order to perform a complete search.

- 2360/658 . . . Dashboard parts used as air ducts
- 2360/66 . . Projection screens or combiners
- 2360/68 . . Features of instruments
- 2360/682 . . . Arrangements to cover or hide instruments
- 2360/685 . . . Instruments movable with steering column
- 2360/688 . . . Frames or decorative parts
- 2360/691 . . . Housings
- 2360/692 . . . Sealings
- 2360/693 . . . Cover plate features
- 2360/695 . . . Dial features
- 2360/698 . . . Pointers of combined instruments

- 2360/6985 . . . . with only part of pointer being visible
- 2360/6992 . . . . Light conducting pointers
- 2360/731 . Instruments adaptations for specific vehicle types or users by comprising user programmable systems
- 2360/741 . Instruments adapted for user detection
- 2360/77 . Instrument locations other than the dashboard
- 2360/771 . . on the ceiling
- 2360/774 . . on or in the centre console
- 2360/777 . . on or in sun visors
- 2360/779 . . on or in rear view mirrors
- 2360/782 . . on the steering wheel
- 2360/785 . . on or in relation to the windshield or windows
- 2360/788 . . on or in side pillars
- 2360/791 . . on or in the transmission tunnel or parking brake lever
- 2360/794 . . on or in doors
- 2360/797 . . at the vehicle exterior
- 2360/816 . Fastening of displays or touch screens
- 2360/822 . Adjustment of instruments during mounting
- 2360/828 . Mounting or fastening exchangeable modules
- 2360/834 . . Docking arrangements
- 2360/84 . Mounting of dashboard components
- 2360/92 . Manufacturing of instruments
- 2360/96 . . by assembling

#### **Control mechanisms or devices**

- 2700/00** **Control mechanisms and elements applying a mechanical movement**
- 2700/02 . regulating mechanisms combined with non-mechanical transmissions
- 2702/00** **Control devices wherein the control is combined with or essentially influenced by the engine or coupling, e.g. in an internal combustion engine, the control device is coupled with a carburettor control device or influenced by carburettor depression**
- 2702/02 . Automatic transmission with toothed gearing
- 2702/04 . . Control dependent on speed
- 2702/06 . . Control dependent on torque
- 2702/08 . Semi-automatic or non-automatic transmission with toothed gearing
- 2702/10 . . without a preselection system
- 2702/12 . . . the control being mechanical
- 2702/14 . . . the control being hydraulic or pneumatic
- 2702/16 . . . the control being electric
- 2702/18 . . with a preselection system, e.g. semi-automatic
- 2702/20 . . . using different control members for preselection and actuating, e.g. shift actuation is initiated by clutch pedal with elastic connection for energy accumulation
- 2704/00** **Control devices, wherein the control is combined with or mainly influenced by the working of the engine or the main coupling, e.g. control device is linked to the carburettor control and is influenced by depression of pedal, for semi-automatic or non-automatic transmission having toothed wheels**
- 2704/02 . without preselection system, the control being mechanical
- 2704/04 . with preselection system, e.g. for semi-automatic transmission