

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### TRANSPORTING

#### B60 VEHICLES IN GENERAL

(NOTE omitted)

#### B60T VEHICLE BRAKE CONTROL SYSTEMS OR PARTS THEREOF; BRAKE CONTROL SYSTEMS OR PARTS THEREOF, IN GENERAL (electrodynamic brake systems for vehicle, in general [B60L](#); brakes *per se*, i.e. devices where braking effect occurs, including ultimate brake actuators, [F16D](#)); ARRANGEMENT OF BRAKING ELEMENTS ON VEHICLES IN GENERAL; PORTABLE DEVICES FOR PREVENTING UNWANTED MOVEMENT OF VEHICLES; VEHICLE MODIFICATIONS TO FACILITATE COOLING OF BRAKES

##### NOTE

In this subclass, the term "brake control systems" includes brake control systems for vehicles or of general applicability

##### WARNING

The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

<a href="#">B60T 8/20</a>	covered by	<a href="#">B60T 8/18</a>
<a href="#">B60T 8/22</a>	covered by	<a href="#">B60T 8/18</a>
<a href="#">B60T 8/60 - B60T 8/70</a>	covered by	<a href="#">B60T 8/17</a>
<a href="#">B60T 8/78 - B60T 8/84</a>	covered by	<a href="#">B60T 8/17</a>
<a href="#">B60T 13/122</a>	covered by	<a href="#">B60T 13/147</a> , <a href="#">B60T 13/167</a>
<a href="#">B60T 13/125</a>	covered by	<a href="#">B60T 13/141</a>
<a href="#">B60T 13/128</a>	covered by	<a href="#">B60T 13/145</a> , <a href="#">B60T 13/165</a>
<a href="#">B60T 13/13</a>	covered by	<a href="#">B60T 13/146</a> , <a href="#">B60T 13/166</a>
<a href="#">B60T 13/132</a>	covered by	<a href="#">B60T 13/143</a> , <a href="#">B60T 13/162</a>
<a href="#">B60T 13/135</a>	covered by	<a href="#">B60T 13/144</a> , <a href="#">B60T 13/163</a>
<a href="#">B60T 13/138</a>	covered by	<a href="#">B60T 13/148</a> , <a href="#">B60T 13/168</a>
<a href="#">B60T 13/60</a>	covered by	<a href="#">B60T 13/58</a>
<a href="#">B60T 15/06</a>	covered by	<a href="#">B60T 15/04</a>
<a href="#">B60T 15/08</a>	covered by	<a href="#">B60T 15/04</a>

<b>1/00</b>	<b>Arrangements of braking elements, i.e. of those parts where braking effect occurs {specially for vehicles}</b>	1/10	. . by utilising wheel movement for accumulating energy, e.g. driving air compressors (using propulsion unit as braking means, <a href="#">see the relevant class</a> )
1/005	. {by locking of wheel or transmission rotation}		
1/02	. acting by retarding wheels	1/12	. acting otherwise than by retarding wheels, e.g. jet action
1/04	. . acting directly on tread		
1/06	. . acting otherwise than on tread, e.g. employing rim, drum, disc, or transmission {or on double wheels}	1/14	. . directly on road (portable devices, e.g. chocks <a href="#">B60T 3/00</a> )
1/062	. . . {acting on transmission parts}	1/16	. . by increasing air resistance, e.g. flaps
1/065	. . . {employing disc ( <a href="#">B60T 1/062</a> takes precedence)}	<b>3/00</b>	<b>Portable devices for preventing unwanted movement of vehicles, e.g. chocks</b>
1/067	. . . {employing drum ( <a href="#">B60T 1/062</a> takes precedence)}	<b>5/00</b>	<b>Vehicle modifications to facilitate cooling of brakes</b>
1/08	. . using fluid or powdered medium	<b><u>Brake control systems or parts thereof</u></b>	
1/087	. . . in hydrodynamic, i.e. non-positive displacement, retarders	<b>7/00</b>	<b>Brake-action initiating means</b>
1/093	. . . in hydrostatic, i.e. positive displacement, retarders	7/02	. for personal initiation
		7/04	. . foot actuated
		7/042	. . . {by electrical means, e.g. using travel or force sensors}

- 7/045 . . . {with locking and release means, e.g. providing parking brake application}
- 7/047 . . . . {Hand-actuated release means}
- 7/06 . . . Disposition of pedal
- 7/065 . . . . {with means to prevent injuries in case of collision (for vehicle pedals in general by moving them from an operative to an out-of-the way position [B60R 21/09](#))}
- 7/08 . . hand actuated
- 7/085 . . . {by electrical means, e.g. travel, force sensors}
- 7/10 . . . Disposition of hand control
- 7/101 . . . . {by means of a pull rod}
- 7/102 . . . . {by means of a tilting lever}
- 7/104 . . . . . {with a locking mechanism}
- 7/105 . . . . . {the lock being released by means of a push button}
- 7/107 . . . . {with electrical power assistance}
- 7/108 . . . . {with mechanisms to take up slack in the linkage to the brakes}
- 7/12 . . for automatic initiation; for initiation not subject to will of driver or passenger {(limiting speed of vehicles other than rail vehicles [B60K 31/00](#))}
- 7/122 . . {for locking of reverse movement}
- 7/124 . . {Brakes for railway vehicles coming into operation in case of accident, derailment or damage of rolling stock or superstructure (self-acting brakes in general [F16D 59/00](#))}
- 7/126 . . {Brakes for railway vehicles coming into operation in case of exceeding a predetermined speed (self-acting brakes in general [F16D 59/00](#))}
- 7/128 . . {Self-acting brakes of different types for railway vehicles ([B60T 7/12](#) takes precedence; self-acting brakes in general [F16D 59/00](#))}
- 7/14 . . operated upon collapse of driver (deadman's devices for electrically propelled vehicles [B60L 3/02](#))
- 7/16 . . operated by remote control, i.e. initiating means not mounted on vehicle
- 7/18 . . . operated by wayside apparatus
- 7/20 . . specially for trailers, e.g. in case of uncoupling of {or overrun by} trailer (inertia-actuated overrun brakes [B60T 13/08](#))
- 7/203 . . . {with automatic brake release or reduction in case of reverse travel, e.g. by means of mechanisms mounted on the draw bar}
- 7/206 . . . . {by means of mechanisms mounted on trailer drum brakes}
- 7/22 . . initiated by contact of vehicle, e.g. bumper, with an external object, e.g. another vehicle {, or by means of contactless obstacle detectors mounted on the vehicle}
- 8/00 Arrangements for adjusting wheel-braking force to meet varying vehicular or ground-surface conditions, e.g. limiting or varying distribution of braking force (by changing number of effective brake cylinders in power brake systems [B60T 17/10](#))**
- 8/17 . . Using electrical or electronic regulation means to control braking {(detecting or indicating faulty operation [B60T 8/885](#))}
- 8/1701 . . {Braking or traction control means specially adapted for particular types of vehicles (for vehicles having more than one drive axle [B60T 8/1769](#))}
- 8/1703 . . . {for aircrafts}
- 8/1705 . . . {for rail vehicles}
- 8/1706 . . . {for single-track vehicles, e.g. motorcycles}
- 8/1708 . . . {for lorries or tractor-trailer combinations}
- 8/171 . . Detecting parameters used in the regulation; Measuring values used in the regulation
- 8/172 . . Determining control parameters used in the regulation, e.g. by calculations involving measured or detected parameters {([B60T 8/17551](#) takes precedence)}
- 8/1725 . . . {Using tyre sensors, e.g. Sidewall Torsion sensors [SWT] (for tyre pressure and temperature detection [B60C 23/00](#))}
- 8/173 . . Eliminating or reducing the effect of unwanted signals, e.g. due to vibrations or electrical noise
- 8/174 . . characterised by using special control logic, e.g. fuzzy logic {, neural computing}
- 8/175 . . Brake regulation specially adapted to prevent excessive wheel spin during vehicle acceleration, e.g. for traction control (safety devices for propulsion unit control responsive to, or preventing, skidding of wheels [B60K 28/16](#))
- 8/1755 . . Brake regulation specially adapted to control the stability of the vehicle, e.g. taking into account yaw rate or transverse acceleration in a curve (road vehicle drive control systems for control of driving stability otherwise than by controlling a particular sub-unit [B60W 30/02](#))
- 8/17551 . . . {determining control parameters related to vehicle stability used in the regulation, e.g. by calculations involving measured or detected parameters}
- 8/17552 . . . {responsive to the tire sideslip angle or the vehicle body slip angle}
- 8/17554 . . . {specially adapted for enhancing stability around the vehicles longitudinal axle, i.e. roll-over prevention (road vehicle drive control systems for roll-over prevention otherwise than by controlling a particular sub-unit [B60W 30/04](#))}
- 8/17555 . . . {specially adapted for enhancing driver or passenger comfort, e.g. soft intervention or pre-actuation strategies}
- 8/17557 . . . {specially adapted for lane departure prevention (road vehicle drive control systems for lane keeping otherwise than by controlling a particular sub-unit [B60W 30/12](#))}
- 8/17558 . . . {specially adapted for collision avoidance or collision mitigation (road vehicle drive control systems for collision avoidance otherwise than by controlling a particular sub-unit [B60W 30/09](#))}
- 8/176 . . Brake regulation specially adapted to prevent excessive wheel slip during vehicle deceleration, e.g. ABS ([B60T 8/1755](#) takes precedence)
- 8/1761 . . . responsive to wheel or brake dynamics, e.g. wheel slip, wheel acceleration or rate of change of brake fluid pressure
- 8/17613 . . . . {based on analogue circuits or digital circuits comprised of discrete electronic elements}
- 8/17616 . . . . {Microprocessor-based systems}
- 8/1763 . . . responsive to the coefficient of friction between the wheels and the ground surface ([B60T 8/1764](#) takes precedence)
- 8/17633 . . . . {based on analogue circuits or digital circuits comprised of discrete electronic elements}

- 8/17636 . . . . {Microprocessor-based systems}
- 8/1764 . . . Regulation during travel on surface with different coefficients of friction, e.g. between left and right sides, mu-split {or between front and rear}
- 8/1766 . . . Proportioning of brake forces according to vehicle axle loads, e.g. front to rear of vehicle
- 8/1769 . . . specially adapted for vehicles having more than one driven axle, e.g. four-wheel drive vehicles
- 8/18 . . responsive to vehicle weight or load, e.g. load distribution ({using electrical circuitry on regulation means [B60T 8/17](#); } [B60T 8/30](#) takes precedence; responsive to weight and speed condition [B60T 8/58](#))
- NOTE**
- [B60T 8/1887](#) and [B60T 8/1893](#) take precedence over [B60T 8/1806](#) - [B60T 8/1881](#)
- 8/1806 . . {characterised by the calibration process or the means therefor}
- 8/1812 . . {characterised by the means for pressure reduction}
- 8/1818 . . . {Lever mechanism}
- 8/1825 . . . {Means for changing the diaphragm area submitted to pressure}
- 8/1831 . . . {pressure reducing or limiting valves}
- 8/1837 . . {characterised by the load-detecting arrangements}
- 8/1843 . . . {Arrangements for detecting air spring pressure}
- 8/185 . . . {Arrangements for detecting vehicle level}
- 8/1856 . . . {Arrangements for detecting suspension spring load ([B60T 8/1843](#) takes precedence)}
- 8/1862 . . . . {comprising sensors of the type providing a fluid output signal representing the load on the vehicle suspension}
- 8/1868 . . . . {comprising sensors of the type providing a mechanical output signal representing the load on the vehicle suspension}
- 8/1875 . . . . {comprising sensors of the type providing an electrical output signal representing the load on the vehicle suspension}
- 8/1881 . . {characterised by failure-responsive means}
- 8/1887 . . {especially adapted for tractor-trailer combinations}
- 8/1893 . . {especially adapted for railway vehicles}
- 8/24 . . responsive to vehicle inclination or change of direction, e.g. negotiating bends ({using electrical circuitry or regulation means [B60T 8/17](#)})
- 8/241 . . {Lateral vehicle inclination}
- 8/243 . . . {for roll-over protection}
- 8/245 . . {Longitudinal vehicle inclination}
- 8/246 . . {Change of direction}
- 8/248 . . {Trailer sway, e.g. for preventing jackknifing}
- 8/26 . . characterised by producing differential braking between front and rear wheels ({using electrical circuitry or regulation means [B60T 8/17](#)})
- 8/261 . . {specially adapted for use in motorcycles}
- 8/262 . . {using valves with stepped characteristics ([B60T 8/261](#), [B60T 8/266](#) take precedence)}
- 8/263 . . . {for pneumatic brake systems}
- 8/265 . . . {for hydraulic brake systems}
- 8/266 . . {using valves or actuators with external control means ([B60T 8/261](#) takes precedence)}
- 8/267 . . . {for hybrid systems with different kind of brakes on different axles}
- 8/268 . . . {using the valves of an ABS, ASR or ESP system}
- 8/28 . . responsive to deceleration ({[B60T 8/261](#), [B60T 8/262](#), [B60T 8/266](#) take precedence})
- 8/282 . . . {using ball and ramp}
- 8/285 . . . {using horizontal moving mass}
- 8/287 . . . {using pendulums}
- 8/30 . . responsive to load ({[B60T 8/261](#), [B60T 8/262](#), [B60T 8/266](#) take precedence})
- 8/303 . . . {using pneumatic valves}
- 8/306 . . . {using hydraulic valves}
- 8/32 . . responsive to a speed condition, e.g. acceleration or deceleration ({using electrical circuitry or regulation means [B60T 8/17](#)}; [B60T 8/28](#) takes precedence; electric devices on electrically propelled vehicles indicating the wheel slip [B60L 3/10](#); measuring linear or angular speed per se [G01P 3/00](#))
- 8/3205 . . {acceleration ([B60T 8/34](#), [B60T 8/52](#), [B60T 8/54](#), [B60T 8/56](#), [B60T 8/58](#), [B60T 8/72](#), [B60T 8/86](#), [B60T 8/88](#) take precedence)}
- 8/321 . . {deceleration ([B60T 8/34](#), [B60T 8/52](#), [B60T 8/54](#), [B60T 8/56](#), [B60T 8/58](#), [B60T 8/72](#), [B60T 8/86](#), [B60T 8/88](#) take precedence)}
- 8/3215 . . . {Systems characterised by having means acting on components of the drive line, e.g. retarder, clutch or differential gear ([B60T 8/322](#) takes precedence)}
- 8/322 . . . {Systems specially adapted for vehicles driven by more than one axle, e.g. Four Wheel-Drive vehicles}
- 8/3225 . . . {Systems specially adapted for single-track vehicles, e.g. motorcycles ([B60T 8/3235](#) takes precedence)}
- 8/323 . . . {Systems specially adapted for tractor-trailer combinations}
- 8/3235 . . . {Systems specially adapted for rail vehicles}
- 8/324 . . . . {Speed measurement by means of centrifugal governors or the like}
- 8/3245 . . . . {responsive to the speed difference between wheels and rail, or between two wheels or two axles}
- 8/325 . . . {Systems specially adapted for aircraft}
- 8/3255 . . . {Systems in which the braking action is dependent on brake pedal data}
- 8/326 . . . . {Hydraulic systems}
- 8/3265 . . . . . {with control of the booster ([B60T 8/3275](#) takes precedence)}
- 8/327 . . . . {Pneumatic systems}
- 8/3275 . . . . {Systems with a braking assistant function, i.e. automatic full braking initiation in dependence of brake pedal velocity}
- 8/328 . . . {Systems sharing components with other fluid systems onboard the vehicle}
- 8/3285 . . . . {the other fluid systems being suspension elements}
- 8/329 . . . {Systems characterised by their speed sensor arrangements}
- 8/3295 . . . {Systems in which there is a pulsating signal superposed on the command signal}

- 8/34 . . . having a fluid pressure regulator responsive to a speed condition
- 8/341 . . . {Systems characterised by their valves (B60T 8/36, B60T 8/38 take precedence)}
- 8/342 . . . . {Pneumatic systems}
- 8/343 . . . {Systems characterised by their lay-out (B60T 8/349 takes precedence)}
- 8/344 . . . . {Hydraulic systems}
- 8/345 . . . . . {having more than one brake circuit per wheel}
- 8/346 . . . . . {2 Channel systems (B60T 8/345 takes precedence)}
- 8/347 . . . . . {3 Channel systems (B60T 8/345 takes precedence)}
- 8/348 . . . . . {4 Channel systems (B60T 8/345 takes precedence)}
- 8/349 . . . {Systems adapted to control a set of axles, e.g. tandem axles}
- 8/36 . . . including a pilot valve responding to an electromagnetic force
- 8/3605 . . . . {wherein the pilot valve is mounted in a circuit controlling the working fluid system}
- 8/361 . . . . {wherein the pilot valve is mounted in a circuit controlling an auxiliary fluid system}
- 8/3615 . . . . {Electromagnetic valves specially adapted for anti-lock brake and traction control systems (electromagnetic valves in general F16K 31/06)}
- 8/362 . . . . . {in pneumatic systems (B60T 8/3655, B60T 8/3675 and B60T 8/369 take precedence)}
- 8/3625 . . . . . {having at least one vacuum connection}
- 8/363 . . . . . {in hydraulic systems (B60T 8/3655, B60T 8/3675 and B60T 8/369 take precedence)}
- 8/3635 . . . . . {switching between more than two connections, e.g. 3/2-valves (B60T 8/364, B60T 8/3645 and B60T 8/365 take precedence)}
- 8/364 . . . . . {switching between a number of discrete positions as a function of the applied signal, e.g. 3/3-valves (B60T 8/3645 takes precedence)}
- 8/3645 . . . . . {having more than one electromagnetic coil inside a common housing}
- 8/365 . . . . . {combining a plurality of functions in one unit, e.g. pressure relief}
- 8/3655 . . . . . {Continuously controlled electromagnetic valves}
- 8/366 . . . . . {Valve details}
- 8/3665 . . . . . {Sliding valves}
- 8/367 . . . . . {Seat valves, e.g. poppet valves}
- 8/3675 . . . . . {integrated in modulator units}
- 8/368 . . . . . {combined with other mechanical components, e.g. pump units, master cylinders}
- 8/3685 . . . . . {characterised by the mounting of the modulator unit onto the vehicle}
- 8/369 . . . . . {Valves using piezo-electric elements (in general F16K 31/004)}
- 8/3695 . . . . . {wherein the pilot valve is mounted separately from its power section (B60T 8/3605, B60T 8/361 and B60T 8/3615 take precedence)}
- 8/38 . . . including valve means of the relay or driver controlled type
- 8/40 . . . comprising an additional fluid circuit including fluid pressurising means for modifying the pressure of the braking fluid, e.g. including wheel driven pumps for detecting a speed condition, or pumps which are controlled by means independent of the braking system
- 8/4004 . . . . {Repositioning the piston(s) of the brake control means by means of a fluid pressurising means in order to reduce the brake pressure}
- 8/4009 . . . . . {the brake control means being the wheel cylinders}
- 8/4013 . . . . . {Fluid pressurising means for more than one fluid circuit, e.g. separate pump units used for hydraulic booster and anti-lock braking}
- 8/4018 . . . . . {Pump units characterised by their drive mechanisms (B60T 8/4095 takes precedence)}
- 8/4022 . . . . . {Pump units driven by an individual electric motor (B60T 8/4027 takes precedence)}
- 8/4027 . . . . . {Pump units driven by (parts of) the vehicle propulsion unit}
- 8/4031 . . . . . {Pump units characterised by their construction or mounting (pump units in combination with valve blocks B60T 8/36)}
- 8/4036 . . . . . {Pump units characterised by their failure-responsive means (B60T 8/88 takes precedence)}
- 8/404 . . . . . {Control of the pump unit}
- 8/4045 . . . . . {involving ON/OFF switching}
- 8/405 . . . . . {involving the start-up phase}
- 8/4054 . . . . . {involving the delivery pressure control (B60T 8/4072 takes precedence)}
- 8/4059 . . . . . {involving the rate of delivery}
- 8/4063 . . . . . {involving the direction of fluid flow}
- 8/4068 . . . . . {the additional fluid circuit comprising means for attenuating pressure pulsations}
- 8/4072 . . . . . {Systems in which a driver input signal is used as a control signal for the additional fluid circuit which is normally used for braking}
- 8/4077 . . . . . {Systems in which the booster is used as an auxiliary pressure source}
- 8/4081 . . . . . {Systems with stroke simulating devices for driver input (B60T 8/4077 takes precedence)}
- 8/4086 . . . . . {the stroke simulating device being connected to, or integrated in the driver input device}
- 8/409 . . . . . {characterised by details of the stroke simulating device}
- 8/4095 . . . . . {including wheel driven pumps for detecting a speed condition}
- 8/42 . . . having expanding chambers for controlling pressure {, i.e. closed systems}
- 8/4208 . . . . . {Debooster systems}

- 8/4216 . . . . . {having a mechanically actuated expansion unit ([B60T 8/4225](#) and [B60T 8/4266](#) take precedence)}
  - 8/4225 . . . . . {having a fluid actuated expansion unit}
  - 8/4233 . . . . . {with brake pressure relief by introducing fluid pressure into the expansion unit ([B60T 8/4241](#) takes precedence)}
  - 8/4241 . . . . . {pneumatically}
  - 8/425 . . . . . {using a vacuum}
  - 8/4258 . . . . . {with brake pressure relief by creating vacuum inside the expansion unit}
  - 8/4266 . . . . . {having an electro-mechanically actuated expansion unit, e.g. solenoid, electric motor, piezo stack}
  - 8/4275 . . . . . {Pump-back systems}
  - 8/4283 . . . . . {having a pressure sensitive inlet valve}
  - 8/4291 . . . . . {having means to reduce or eliminate pedal kick-back}
  - 8/44 . . . . . co-operating with a power-assist booster means associated with a master cylinder for controlling the release and reapplication of brake pressure through an interaction with the power assist device {, i.e. open systems}
  - 8/441 . . . . . {using hydraulic boosters ([B60T 8/445](#), [B60T 8/446](#), [B60T 8/447](#) take precedence)}
  - 8/442 . . . . . {the booster being a fluid return pump, e.g. in combination with a brake pedal force booster}
  - 8/443 . . . . . {using compressed air ([B60T 8/445](#), [B60T 8/446](#), [B60T 8/448](#) take precedence)}
  - 8/444 . . . . . {using vacuum ([B60T 8/445](#), [B60T 8/446](#), [B60T 8/448](#) take precedence)}
  - 8/445 . . . . . {replenishing the released brake fluid volume into the brake piping}
  - 8/446 . . . . . {replenishing the released brake fluid volume via the master cylinder}
  - 8/447 . . . . . {Reducing the boost of the power-assist booster means to reduce brake pressure}
  - 8/448 . . . . . {the power-assist booster means being a vacuum or compressed air booster}
  - 8/449 . . . . . {of the multiple booster type}
  - 8/46 . . . . . the pressure being reduced by exhausting fluid
  - 8/48 . . . . . connecting the brake actuator to an alternative or additional source of fluid pressure {, e.g. traction control systems}
  - 8/4809 . . . . . {Traction control, stability control, using both the wheel brakes and other automatic braking systems}
  - 8/4818 . . . . . {in pneumatic brake systems}
  - 8/4827 . . . . . {in hydraulic brake systems}
  - 8/4836 . . . . . {wherein a booster output pressure is used for normal or anti lock braking ([B60T 8/4845](#), [B60T 8/4863](#), [B60T 8/489](#) take precedence)}
  - 8/4845 . . . . . {using a booster or a master cylinder for traction control}
  - 8/4854 . . . . . {pneumatic boosters}
  - 8/4863 . . . . . {closed systems ([B60T 8/4845](#), [B60T 8/489](#) take precedence)}
  - 8/4872 . . . . . {pump-back systems}
  - 8/4881 . . . . . {having priming means}
  - 8/489 . . . . . {using separate traction control modulators}
  - 8/50 . . . . . having means for controlling the rate at which pressure is reapplied to {or released from} the brake
  - 8/5006 . . . . . {Pressure reapplication by pulsing of valves ([B60T 8/5012](#), [B60T 8/5018](#), [B60T 8/505](#), [B60T 8/5056](#) take precedence)}
  - 8/5012 . . . . . {Pressure reapplication using a plurality of valves in parallel}
  - 8/5018 . . . . . {Pressure reapplication using restrictions ([B60T 8/5012](#), [B60T 8/505](#) take precedence)}
  - 8/5025 . . . . . {in hydraulic brake systems}
  - 8/5031 . . . . . {open systems}
  - 8/5037 . . . . . {closed systems}
  - 8/5043 . . . . . {debooster systems}
  - 8/505 . . . . . {Pressure reapplication in a mu-split situation, i.e. a situation with different coefficients of friction on both sides of the vehicle}
  - 8/5056 . . . . . {Pressure reapplication using memory devices}
  - 8/5062 . . . . . {using memory chambers}
  - 8/5068 . . . . . {having decay means}
  - 8/5075 . . . . . {Pressure release by pulsing of valves ([B60T 8/5081](#), [B60T 8/5087](#) take precedence)}
  - 8/5081 . . . . . {Pressure release using a plurality of valves in parallel}
  - 8/5087 . . . . . {Pressure release using restrictions ([B60T 8/5081](#) takes precedence)}
  - 8/5093 . . . . . {in hydraulic brake systems}
  - 8/52 . . . . . Torque sensing, i.e. wherein the braking action is controlled by forces producing or tending to produce a twisting or rotating motion on a braked rotating member
  - 8/54 . . . . . by mechanical means
  - 8/56 . . . . . having means for changing the coefficient of friction
  - 8/58 . . . . . responsive to speed and another condition or to plural speed conditions
- NOTE**
- In this group, a single condition which is itself responsive to, or representative of, another single condition is not regarded as plural conditions
- 8/72 . . . . . responsive to a difference between a speed condition, e.g. deceleration, and a fixed reference
  - 8/74 . . . . . sensing a rate of change of velocity
  - 8/76 . . . . . two or more sensing means from different wheels indicative of the same type of speed condition
  - 8/86 . . . . . wherein the brakes are automatically applied in accordance with a speed condition and having means for overriding the automatic braking device when a skid condition occurs
  - 8/88 . . . . . with failure responsive means, i.e. means for detecting and indicating faulty operation of the speed responsive control means
  - 8/885 . . . . . {using electrical circuitry}
  - 8/90 . . . . . using a simulated speed signal to test speed responsive control means

8/92	. . . automatically taking corrective action	11/236	. . . Piston sealing arrangements
8/94	. . . . on a fluid pressure regulator	11/24	. . Single initiating means operating on more than one circuit, e.g. dual circuits ( <a href="#">multiple master cylinder units B60T 11/20</a> )
8/96	. . . . on speed responsive control means		
<b>10/00</b>	<b>Control or regulation for continuous braking making use of fluid or powdered medium, e.g. for use when descending a long slope</b>	11/26	. . Reservoirs ( <a href="#">integral with master controls B60T 11/22</a> )
10/02	. with hydrodynamic brake	11/28	. . Valves specially adapted therefor ( <a href="#">recuperation valves B60T 11/232</a> )
10/04	. with hydrostatic brake	11/30	. . . Bleed valves for hydraulic brake systems
<b>11/00</b>	<b>Transmitting braking action from initiating means to ultimate brake actuator without power assistance or drive or where such assistance or drive is irrelevant (the power assistance or drive being essential <a href="#">B60T 13/00</a>)</b>	11/32	. . . Automatic cut-off valves for defective pipes
11/04	. transmitting mechanically	11/323	. . . . {in hydraulic systems}
11/043	. . {in case of steerable wheels}	11/326	. . . . {in pneumatic systems}
11/046	. . {Using cables ( <a href="#">B60T 11/043 takes precedence</a> )}	11/34	. . . Pressure reducing or limiting valves {(for arrangements for adjusting wheel-braking force responsive to vehicle weight or load <a href="#">B60T 8/1831</a> )}
11/06	. . Equalising arrangements	<b>13/00</b>	<b>Transmitting braking action from initiating means to ultimate brake actuator with power assistance or drive; Brake systems incorporating such transmitting means, e.g. air-pressure brake systems (arrangements for adjusting wheel-braking force to meet varying vehicular or ground-surface conditions <a href="#">B60T 8/00</a>; valves incorporated in such systems <a href="#">B60T 15/00</a>)</b>
11/08	. . providing variable leverage	13/02	. with mechanical assistance or drive {(combined with fluid pressure <a href="#">B60T 13/588</a> )}
11/10	. transmitting by fluid means, e.g. hydraulic	13/04	. . by spring or weight ( <a href="#">fluid released B60T 13/10</a> )
11/101	. . {equalising arrangements}	13/06	. . by inertia, e.g. flywheel
11/102	. . {in combination with mechanical elements}	13/065	. . . {of the propulsion system}
11/103	. . {in combination with other control devices (conjoint control of brake system and at least another sub-unit <a href="#">B60K 41/00</a> )}	13/08	. . . Overrun brakes
11/105	. . . {with brake locking after actuation, release of the brake by a different control device, e.g. gear lever}	13/10	. with fluid assistance, drive, or release
11/106	. . . . {locking and release of the brake by the clutch}	13/12	. . the fluid being liquid
11/107	. . {overrun brakes with fluid means}	13/14	. . . using accumulators or reservoirs {fed by pumps}
11/108	. . {to a trailer fluid system}	13/141	. . . . {Systems with distributor valve ( <a href="#">B60T 13/147 takes precedence</a> )}
11/12	. . the transmitted force being varied therein ( <a href="#">B60T 11/16 - B60T 11/26 take precedence</a> )	13/142	. . . . {Systems with master cylinder}
11/14	. . the transmitted force being substantially unchanged	13/143	. . . . {Master cylinder mechanically coupled with booster}
11/16	. . Master control, e.g. master cylinders (master cylinders associated with vacuum boosters <a href="#">B60T 13/565</a> )	13/144	. . . . . {Pilot valve provided inside booster piston}
11/165	. . . {Single master cylinders for pressurised systems}	13/145	. . . . . {Master cylinder integrated or hydraulically coupled with booster}
11/18	. . . Connection thereof to initiating means	13/146	. . . . . {Part of the system directly actuated by booster pressure}
11/20	. . . Tandem, side-by-side, or other multiple master cylinder units	13/147	. . . . . {In combination with distributor valve}
11/203	. . . . {Side-by-side configuration}	13/148	. . . . . {Arrangements for pressure supply}
11/206	. . . . . {with control by a force distributing lever}	13/16	. . . using pumps directly, i.e. without interposition of accumulators or reservoirs
11/21	. . . . with two pedals operating on respective circuits, pressures therein being equalised when both pedals are operated together, e.g. for steering ( <a href="#">steering non-deflectable wheels or endless tracks by differentially driving ground-engaging elements on opposite vehicle sides using brakes as main steering effecting means B62D 11/08</a> )	13/161	. . . . . {Systems with master cylinder}
11/22	. . . characterised by being integral with reservoir	13/162	. . . . . {Master cylinder mechanically coupled with booster}
11/224	. . . with pressure-varying means, e.g. with two stage operation provided by use of different piston diameters including continuous variation from one diameter to another	13/163	. . . . . {Pilot valve provided inside booster piston}
11/228	. . . Pressure-maintaining arrangements, e.g. for replenishing the master cylinder chamber with fluid from a reservoir ( <a href="#">B60T 11/232 takes precedence</a> )	13/165	. . . . . {Master cylinder integrated or hydraulically coupled with booster}
11/232	. . . Recuperation valves	13/166	. . . . . {Part of the system directly actuated by booster pressure}
		13/167	. . . . . {In combination with distributor valve}
		13/168	. . . . . {Arrangements for pressure supply}
		13/18	. . . . . with control of pump output delivery {, e.g. by distributor valves ( <a href="#">B60T 13/167 takes precedence</a> )}

13/20	. . . . with control of pump driving means	13/565	. . . . . characterised by being associated with master cylinders, e.g. integrally formed
13/22	. . . Brakes applied by springs or weights and released hydraulically	13/567	. . . . . characterised by constructional features of the casing or by its strengthening or mounting arrangements
13/24	. . the fluid being gaseous	13/5675	. . . . . {Supportstruts}
13/241	. . . {Differential pressure systems}	13/569	. . . . . characterised by piston details, e.g. construction, mounting of diaphragm
13/242	. . . . {The control valve is provided as one unit with the servomotor cylinder}	13/57	. . . . . characterised by constructional features of control valves
13/243	. . . . . {Mechanical command of the control valve, mechanical transmission to the brakes}	13/573	. . . . . characterised by reaction devices
13/244	. . . . . {Mechanical command of the control valve, hydraulic transmission to the brakes}	13/575	. . . . . using resilient discs or pads
13/245	. . . . . {Hydraulic command of the control valve, hydraulic transmission to the brake}	13/577	. . . . . using levers
13/246	. . . . {The control valve is provided apart from the servomotor cylinder}	13/58	. . Combined or convertible systems
13/247	. . . . . {Mechanical command of the control valve, mechanical transmission to the brakes}	13/581	. . . {both hydraulic and pneumatic}
13/248	. . . . . {Mechanical command of the control valve, hydraulic transmission to the brakes}	13/583	. . . . {using converters}
13/249	. . . . . {Hydraulic command of the control valve, hydraulic transmission to the brakes}	13/585	. . . {comprising friction brakes and retarders}
13/26	. . . Compressed-air systems	13/586	. . . . {the retarders being of the electric type}
13/261	. . . . {systems with both indirect application and application by springs or weights and released by compressed air}	13/588	. . . {both fluid and mechanical assistance or drive}
13/263	. . . . . {specially adapted for coupling with dependent systems, e.g. tractor-trailer systems}	13/62	. . . both straight and automatic
13/265	. . . . . {dependent systems, e.g. trailer systems}	13/64	. . . both single and multiple, e.g. single and tandem
13/266	. . . . {Systems with both direct and indirect application, e.g. in railway vehicles}	13/66	. . Electrical control in fluid-pressure brake systems
13/268	. . . . {using accumulators or reservoirs}	13/662	. . . {characterised by specified functions of the control system components}
13/36	. . . . direct, i.e. brakes applied directly by compressed air	13/665	. . . {the systems being specially adapted for transferring two or more command signals, e.g. railway systems ( <a href="#">B60T 13/662</a> takes precedence)}
13/365	. . . . . {for railway vehicles}	13/667	. . . . {and combined with electro-magnetic brakes}
13/38	. . . . Brakes applied by springs or weights and released by compressed air ( <a href="#">B60T 13/261</a> takes precedence)}	13/68	. . . by electrically-controlled valves { <a href="#">B60T 13/662</a> and <a href="#">B60T 13/665</a> take precedence}
13/385	. . . . . {Control arrangements therefor}	13/683	. . . . {in pneumatic systems or parts thereof (in vacuum systems <a href="#">B60T 13/72</a> )}
13/40	. . . . indirect, i.e. compressed air booster units {indirect systems}	13/686	. . . . {in hydraulic systems or parts thereof}
13/403	. . . . . {specially adapted for coupling with dependent systems, e.g. tractor-trailer systems}	13/70	. . . by fluid-controlled switches
13/406	. . . . . {specially adapted for transfer of two or more command signals, e.g. railway systems (with electrical control <a href="#">B60T 13/665</a> )}	13/72	. . . in vacuum systems {or vacuum booster units}
13/44	. . . . . with two-chamber booster units	13/74	. with electrical assistance or drive
13/45	. . . . . with multiple booster units, e.g. tandem booster units	13/741	. . {acting on an ultimate actuator}
13/46	. . . Vacuum systems	13/743	. . . {with a spring accumulator}
13/465	. . . . {for railway vehicles}	13/745	. . {acting on a hydraulic system, e.g. a master cylinder}
13/48	. . . . direct, i.e. brakes applied directly by vacuum	13/746	. . {and mechanical transmission of the braking action}
13/50	. . . . Brakes applied by springs or weights and released by vacuum	13/748	. . {acting on electro-magnetic brakes (combined with fluid-pressure brake systems <a href="#">B60T 13/667</a> )}
13/52	. . . . indirect, i.e. vacuum booster units	<b>15/00</b>	<b>Construction arrangement, or operation of valves incorporated in power brake systems and not covered by groups <a href="#">B60T 11/00</a> or <a href="#">B60T 13/00</a> (valve structures responsive to a speed condition <a href="#">B60T 8/34</a>; valves in general <a href="#">F16K</a>)</b>
13/56	. . . . . with two-chamber booster units	15/02	. Application and release valves
13/563	. . . . . with multiple booster units, e.g. tandem booster units	15/021	. . {Railway control or brake valves}
		15/022	. . . {with one slide valve, e.g. an emergency slide valve}
		15/024	. . . . {with quick braking action and evacuation of air to a reservoir, to the atmosphere or to the brake cylinder}
		15/025	. . {Electrically controlled valves}
		15/027	. . . {in pneumatic systems}
		15/028	. . . {in hydraulic systems}
		15/04	. . Driver's valves

15/041	. . . {controlling auxiliary pressure brakes, e.g. parking or emergency brakes ( <a href="#">B60T 15/048</a> takes precedence)}	15/38	. . . for quick take-up and heavy braking, e.g. with auxiliary reservoir for taking-up slack
15/043	. . . {controlling service pressure brakes ( <a href="#">B60T 15/048</a> takes precedence)}	15/40	. . . . with separate take-up and applying cylinders
15/045	. . . . {in multiple circuit systems, e.g. dual circuit systems}	15/42	. . . . with a quick braking action, i.e. with accelerating valves actuated by brake-pipe pressure variation
15/046	. . . . . {with valves mounted in tandem}	15/44	. . . . and operating independently of the main control device
15/048	. . . {Controlling pressure brakes of railway vehicles}	15/46	. . . for retarding braking action to prevent rear vehicles of a vehicle train overtaking the forward ones
15/10	. . . for vacuum brakes	15/48	. . . for filling reservoirs
15/12	. . . combined with relay valves or the like	15/50	. . . . with means for limiting or relieving pressure in reservoirs
15/14	. . . influencing electric control means	15/52	. . . for quick release of brakes, e.g. for influencing counter- pressure in triple valve or recirculating air from reservoir or brake cylinder to brake pipe
15/16	. . . Arrangements enabling systems to be controlled from two or more positions	15/54	. . . for controlling exhaust from triple valve or from brake cylinder
15/18	. . Triple or other relay valves which allow step-wise application or release and which are actuated by brake-pipe pressure variation to connect brake cylinders or equivalent to compressed air or vacuum source or atmosphere	15/56	. . . for filling reservoirs by means of a secondary supply pipe
15/181	. . . {Trailer control valves ( <a href="#">B60T 15/20</a> and <a href="#">B60T 15/243</a> take precedence)}	15/58	. . . for supplying control impulses through a secondary air pipe
15/182	. . . {Trailer brake valves ( <a href="#">B60T 15/20</a> and <a href="#">B60T 15/246</a> take precedence)}	15/60	. . . for releasing or applying brakes when vehicles of a vehicle train are uncoupled
15/184	. . . {Railway control or brake valves}	<b>17/00</b>	<b>Component parts, details, or accessories of power brake systems not covered by groups <a href="#">B60T 8/00</a>, <a href="#">B60T 13/00</a> or <a href="#">B60T 15/00</a>, or presenting other characteristic features (air compressors <a href="#">per se F04</a>)</b>
15/185	. . . . {with one slide valve}	17/002	. {Air treatment devices}
15/187	. . . . . {with a slide valve for initiation and a second slide valve for control of the braking}	17/004	. . {Draining and drying devices}
15/188	. . . . . {with a slide valve for initiation and annular valves for control of the braking}	17/006	. . {Anti-frost devices}
15/20	. . . controlled by two fluid pressures	17/008	. . {Silencer devices}
15/203	. . . . {Trailer control valves ( <a href="#">B60T 15/223</a> takes precedence)}	17/02	. Arrangements of pumps or compressors, or control devices therefor
15/206	. . . . {Trailer brake valves ( <a href="#">B60T 15/226</a> takes precedence)}	17/04	. Arrangements of piping, valves in the piping, e.g. cut-off valves, couplings or air hoses ( <a href="#">traction couplings involving joints for supply lines, electric circuits, or the like B60D 1/62</a> ; couplings peculiar to railway vehicles for, or combined with, couplings or connectors for fluid conduits or electric cables <a href="#">B61G 5/06</a> ; pipes, cut-off valves, couplings, air hoses <a href="#">per se F16C, F16K, F16L</a> )
15/22	. . . . with one or more auxiliary valves, for braking, releasing, filling reservoirs	17/043	. . {Brake line couplings, air hoses and stopcocks}
15/223	. . . . . {Trailer control valves}	17/046	. . {Devices for pipe guiding and fixing}
15/226	. . . . . {Trailer brake valves}	17/06	. Applications or arrangements of reservoirs
15/24	. . . controlled by three fluid pressures	17/08	. Brake cylinders other than ultimate actuators ( <a href="#">with built-in wear-compensating mechanisms, ultimate actuators F16D</a> )
15/243	. . . . {Trailer control valves}	17/081	. . {Single service brake actuators}
15/246	. . . . {Trailer brake valves}	17/083	. . {Combination of service brake actuators with spring loaded brake actuators}
15/26	. . . . without a quick braking action	17/085	. . {Spring loaded brake actuators}
15/28	. . . . . and having auxiliary valves	17/086	. . . {Spring loaded brake actuators with emergency release device}
15/30	. . . . with a quick braking action	17/088	. . {Mounting arrangements}
15/302	. . . . . {Railway control or brake valves with evacuation of air to a reservoir, to the atmosphere or to the brake cylinder}	17/10	. . Two or more cylinders acting on the same brake with means for rendering them effective selectively or successively, the number of effective cylinders being variable
15/304	. . . . . . {with one slide valve}	17/12	. . . according to vehicle weight
15/306	. . . . . . {with a slide valve for initiation and a second slide valve for control of the braking}	17/14	. . . according to vehicle speed
15/308	. . . . . . {with a slide valve for initiation and annular valves for control of the braking}		
15/32	. . . . . and having auxiliary valves		
15/34	. . . controlled alternatively by two or three fluid pressures		
15/36	. . Other control devices or valves characterised by definite functions {(electrically controlled valves in fluid-pressure brake systems <a href="#">B60T 15/027</a> , <a href="#">B60T 15/028</a> )}		



17/16	. . Locking of brake cylinders	2210/14	. . Rough roads, bad roads, gravel roads
17/18	. Safety devices; Monitoring	2210/16	. . Off-road driving conditions
17/20	. . Safety devices operable by passengers other than the driver {, e.g. for railway vehicles}	2210/20	. Road shapes
17/22	. . Devices for monitoring or checking brake systems; Signal devices	2210/22	. . Banked curves
17/221	. . . {Procedure or apparatus for checking or keeping in a correct functioning condition of brake systems (hydraulic pressure systems in general F15B 19/00, F15B 21/04; testing structures or apparatus G01M)}	2210/24	. . Curve radius
17/222	. . . . {by filling or bleeding of hydraulic systems}	2210/30	. Environment conditions or position therewithin
17/223	. . . . {Devices for pressurising brake systems acting on pedal}	2210/32	. . Vehicle surroundings
17/225	. . . {brake fluid level indicators (level indication in general G01F; H01H)}	2210/34	. . Blind spots
17/226	. . . {using devices being responsive to the difference between the fluid pressures in conduits of multiple braking systems}	2210/36	. . Global Positioning System [GPS]
17/227	. . . . {With additional functions, e.g. by-pass}	<b>2220/00</b>	<b>Monitoring, detecting driver behaviour; Signalling thereof; Counteracting thereof</b>
17/228	. . . {for railway vehicles}	2220/02	. Driver type; Driving style; Driver adaptive features
		2220/03	. Driver counter-steering; Avoidance of conflicts with ESP control
		2220/04	. Pedal travel sensor, stroke sensor; Sensing brake request
		2220/06	. Adjustment of accelerator pedal reaction forces
		<b>2230/00</b>	<b>Monitoring, detecting special vehicle behaviour; Counteracting thereof</b>
		2230/02	. Side slip angle, attitude angle, floating angle, drift angle
		2230/03	. Overturn, rollover
		2230/04	. Jerk, soft-stop; Anti-jerk, reduction of pitch or nose-dive when braking
		2230/06	. Tractor-trailer swaying
		2230/08	. Driving in reverse
<b>2201/00</b>	<b>Particular use of vehicle brake systems; Special systems using also the brakes; Special software modules within the brake system controller</b>	<b>2240/00</b>	<b>Monitoring, detecting wheel/tire behaviour; counteracting thereof</b>
2201/02	. Active or adaptive cruise control system; Distance control	2240/02	. Longitudinal grip (detection of road friction B60T 2210/10)
2201/022	. . Collision avoidance systems	2240/03	. Tire sensors
2201/024	. . Collision mitigation systems	2240/04	. Tire deformation
2201/03	. Brake assistants	2240/06	. Wheel load; Wheel lift
2201/04	. Hill descent control	2240/07	. Tire tolerance compensation
2201/06	. Hill holder; Start aid systems on inclined road	2240/08	. Spare wheel detection; Adjusting brake control in case of spare wheel use
2201/08	. Lane monitoring; Lane Keeping Systems	<b>2250/00</b>	<b>Monitoring, detecting, estimating vehicle conditions</b>
2201/081	. . using distance control	2250/02	. Vehicle mass
2201/082	. . using alarm actuation	2250/03	. Vehicle yaw rate
2201/083	. . using active brake actuation	2250/04	. Vehicle reference speed; Vehicle body speed
2201/084	. . using suspension control	2250/042	. . Reference speed calculation in ASR or under wheel spinning condition
2201/085	. . using several actuators; Coordination of the lane keeping system with other control systems	2250/06	. Sensor zero-point adjustment; Offset compensation
2201/086	. . using driver related features	2250/062	. . losing zero-point calibration of yaw rate sensors when travelling on banked roads or in case of temperature variations
2201/087	. . using active steering actuation	<b>2260/00</b>	<b>Interaction of vehicle brake system with other systems</b>
2201/088	. . using transmission control	2260/02	. Active Steering, Steer-by-Wire
2201/089	. . using optical detection	2260/022	. . Rear-wheel steering; Four-wheel steering
2201/09	. Engine drag compensation	2260/024	. . Yawing moment compensation during mu-split braking
2201/10	. Automatic or semi-automatic parking aid systems	2260/04	. Automatic transmission
2201/12	. Pre-actuation of braking systems without significant braking effect; Optimizing brake performance by reduction of play between brake pads and brake disc	2260/06	. Active Suspension System
2201/122	. . Pre-actuation in case of ESP control	2260/08	. Coordination of integrated systems
2201/124	. . Rain brake support [RBS]; Cleaning or drying brake discs, e.g. removing water or dirt	2260/09	. Complex systems; Conjoint control of two or more vehicle active control systems
2201/14	. Electronic locking-differential	<b>2270/00</b>	<b>Further aspects of brake control systems not otherwise provided for</b>
2201/16	. Curve braking control, e.g. turn control within ABS control algorithm		
<b>2210/00</b>	<b>Detection or estimation of road or environment conditions; Detection or estimation of road shapes</b>		
2210/10	. Detection or estimation of road conditions		
2210/12	. . Friction		
2210/122	. . . using fuzzy logic, neural computing		
2210/124	. . . Roads with different friction levels		
2210/13	. . Aquaplaning, hydroplaning		

## B60T

- 2270/10 . ABS control systems
- 2270/12 . . for all-wheel drive vehicles
- 2270/14 . . hydraulic model
- 2270/20 . ASR control systems
- 2270/202 . . for all-wheel drive vehicles
- 2270/203 . . hydraulic system components
- 2270/204 . . hydraulic model
- 2270/206 . . Monitoring, e.g. parameter monitoring,  
plausibility check
- 2270/208 . . adapted to friction condition
- 2270/211 . . Setting or adjusting start-control threshold
- 2270/213 . . Driving off under Mu-split conditions
- 2270/30 . ESP control system
- 2270/302 . . for all-wheel drive vehicles
- 2270/303 . . Stability control with active acceleration
- 2270/304 . . during driver brake actuation
- 2270/306 . . hydraulic system components
- 2270/308 . . hydraulic model
- 2270/311 . . Predefined control maps, lookup tables
- 2270/313 . . with less than three sensors (yaw rate, steering  
angle, lateral acceleration)
- 2270/40 . Failsafe aspects of brake control systems
- 2270/402 . . Back-up
- 2270/403 . . Brake circuit failure
- 2270/404 . . Brake-by-wire or X-by-wire failsafe
- 2270/406 . . Test-mode; Self-diagnosis
- 2270/408 . . Hierarchical failure detection
- 2270/411 . . Offset failure
- 2270/413 . . Plausibility monitoring, cross check, redundancy
- 2270/414 . . Power supply failure
- 2270/415 . . Short-circuit, open circuit failure
- 2270/416 . . Wheel speed sensor failure
- 2270/60 . Regenerative braking
- 2270/602 . . ABS features related thereto
- 2270/603 . . ASR features related thereto
- 2270/604 . . Merging friction therewith; Adjusting their  
repartition
- 2270/606 . . Axle differential or center differential features  
related thereto
- 2270/608 . . Electronic brake distribution (EBV/EBD) features  
related thereto
- 2270/611 . . Engine braking features related thereto
- 2270/613 . . ESP features related thereto
- 2270/82 . Brake-by-Wire, EHB
- 2270/83 . Control features of electronic wedge brake [EWB]
- 2270/84 . Driver circuits for actuating motor, valve and the  
like
- 2270/86 . Optimizing braking by using ESP vehicle or tire  
model
- 2270/88 . Pressure measurement in brake systems
- 2270/89 . Criteria for brake release