

Symbol	Typ	Titel
B	Sektion	SECTION B — PERFORMING OPERATIONS; TRANSPORTING
B60	Untersektion	TRANSPORTING
B60	Klasse	VEHICLES IN GENERAL
B60T	Unterkategorie	VEHICLE BRAKE CONTROL SYSTEMS OR PARTS THEREOF; BRAKE CONTROL SYSTEMS OR PARTS THEREOF, IN GENERAL (electrodynamic brake systems for vehicles, in general B60L; conjoint control of vehicle sub-units of different type or different function, road vehicle drive control systems for purposes other than the control of a particular sub-unit B60W; brakes <u>per se</u>, 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 [1, 2006.01]
B60T 1/00	Hauptgruppe	Arrangements of braking elements, i.e. of those parts where braking effect occurs
B60T 1/02	1-Punkt Untergruppe	. acting by retarding wheels
B60T 1/04	2-Punkt Untergruppe	... acting directly on tread
B60T 1/06	2-Punkt Untergruppe	... acting otherwise than on tread, e.g. employing rim, drum, disc, or transmission
B60T 1/08	2-Punkt Untergruppe	... using fluid or powdered medium
B60T 1/087	3-Punkt Untergruppe	... in hydrodynamic, i.e. non-positive displacement, retarders [3]
B60T 1/093	3-Punkt Untergruppe	... in hydrostatic, i.e. positive displacement, retarders [3]
B60T 1/10	2-Punkt Untergruppe	... by utilising wheel movement for accumulating energy, e.g. driving air compressors (using propulsion unit as braking means, <u>see</u> the relevant class)
B60T 1/12	1-Punkt Untergruppe	. acting otherwise than by retarding wheels, e.g. jet- action
B60T 1/14	2-Punkt Untergruppe	... directly on road (portable devices, e.g. chocks, B60T 3/00)
B60T 1/16	2-Punkt Untergruppe	... by increasing air resistance, e.g. flaps
B60T 3/00	Hauptgruppe	Portable devices for preventing unwanted movement of vehicles, e.g. chocks
B60T 5/00	Hauptgruppe	Vehicle modifications to facilitate cooling of brakes
		<u>Brake control systems or parts thereof</u>
B60T 7/00	Hauptgruppe	Brake-action initiating means
B60T 7/02	1-Punkt Untergruppe	. for personal initiation
B60T 7/04	2-Punkt Untergruppe	... foot-actuated
B60T 7/06	3-Punkt Untergruppe	... Disposition of pedal
B60T 7/08	2-Punkt Untergruppe	... hand-actuated
B60T 7/10	3-Punkt Untergruppe	... Disposition of hand control
B60T 7/12	1-Punkt Untergruppe	. for automatic initiation; for initiation not subject to will of driver or passenger
B60T 7/14	2-Punkt Untergruppe	... operated upon collapse of driver (dead-man's devices for electrically-propelled vehicles B60L 3/02)
B60T 7/16	2-Punkt Untergruppe	... operated by remote control, i.e. initiating means not mounted on vehicle
B60T 7/18	3-Punkt Untergruppe	... operated by wayside apparatus

Symbol	Typ	Titel
B60T 7/20	2-Punkt Untergruppe	... specially adapted for trailers, e.g. in case of uncoupling of trailer (inertia-actuated overrun brakes B60T 13/08)
B60T 7/22	2-Punkt Untergruppe	... initiated by contact of vehicle, e.g. bumper, with an external object, e.g. another vehicle [4]
B60T 8/00	Hauptgruppe	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)
B60T 8/17	1-Punkt Untergruppe	. Using electrical or electronic regulation means to control braking [2006.01]
B60T 8/171	2-Punkt Untergruppe	... Detecting parameters used in the regulation; Measuring values used in the regulation [2006.01]
B60T 8/172	2-Punkt Untergruppe	... Determining control parameters used in the regulation, e.g. by calculations involving measured or detected parameters [2006.01]
B60T 8/173	2-Punkt Untergruppe	... Eliminating or reducing the effect of unwanted signals, e.g. due to vibrations or electrical noise [2006.01]
B60T 8/174	2-Punkt Untergruppe	... characterised by using special control logic, e.g. fuzzy logic [2006.01]
B60T 8/175	2-Punkt Untergruppe	... 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) [2006.01]
B60T 8/1755	2-Punkt Untergruppe	... 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) [2006.01]
B60T 8/176	2-Punkt Untergruppe	... Brake regulation specially adapted to prevent excessive wheel slip during vehicle deceleration, e.g. ABS (B60T 8/1755 takes precedence) [2006.01]
B60T 8/1761	3-Punkt Untergruppe	... responsive to wheel or brake dynamics, e.g. wheel slip, wheel acceleration or rate of change of brake fluid pressure [2006.01]
B60T 8/1763	3-Punkt Untergruppe	... responsive to the coefficient of friction between the wheels and the ground surface (B60T 8/1764 takes precedence) [2006.01]
B60T 8/1764	3-Punkt Untergruppe	... Regulation during travel on surface with different coefficients of friction, e.g. between left and right sides, mu-split [2006.01]
B60T 8/1766	3-Punkt Untergruppe	... Proportioning of brake forces according to vehicle axle loads, e.g. front to rear of vehicle [2006.01]
B60T 8/1769	3-Punkt Untergruppe	... specially adapted for vehicles having more than one driven axle, e.g. four-wheel drive vehicles [2006.01]
B60T 8/18	1-Punkt Untergruppe	. responsive to vehicle weight or load, e.g. load distribution (B60T 8/30 takes precedence; responsive to weight and speed condition B60T 8/58) [4]
B60T 8/20	2-Punkt Untergruppe	... with stepwise control action
B60T 8/22	2-Punkt Untergruppe	... with continuous control action
B60T 8/24	1-Punkt Untergruppe	. responsive to vehicle inclination or change of direction, e.g. negotiating bends
B60T 8/26	1-Punkt Untergruppe	. characterised by producing differential braking between front and rear wheels
B60T 8/28	2-Punkt Untergruppe	... responsive to deceleration [4]
B60T 8/30	2-Punkt Untergruppe	... responsive to load [4]
B60T 8/32	1-Punkt Untergruppe	. responsive to a speed condition, e.g. acceleration or deceleration (B60T 8/28 takes precedence; electric devices on electrically propelled vehicles indicating the wheel slip B60L 3/10; measuring linear or angular speed <u>per se</u> G01P 3/00) [4]

Symbol	Typ	Titel
B60T 8/34	2-Punkt Untergruppe	... having a fluid pressure regulator responsive to a speed condition [4]
B60T 8/36	3-Punkt Untergruppe	... including a pilot valve responding to an electromagnetic force [4]
B60T 8/38	3-Punkt Untergruppe	... including valve means of the relay or driver controlled type [4]
B60T 8/40	3-Punkt Untergruppe	... 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 [4]
B60T 8/42	3-Punkt Untergruppe	... having expanding chambers for controlling pressure [4]
B60T 8/44	3-Punkt Untergruppe	... 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 [4]
B60T 8/46	3-Punkt Untergruppe	... the pressure being reduced by exhausting fluid [4]
B60T 8/48	3-Punkt Untergruppe	... connecting the brake actuator to an alternative or additional source of fluid pressure [4]
B60T 8/50	3-Punkt Untergruppe	... having means for controlling the rate at which pressure is reapplied to the brake [4]
B60T 8/52	2-Punkt Untergruppe	... 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 [4]
B60T 8/54	2-Punkt Untergruppe	... by mechanical means [4]
B60T 8/56	2-Punkt Untergruppe	... having means for changing the coefficient of friction [4]
B60T 8/58	2-Punkt Untergruppe	... responsive to speed and another condition or to plural speed conditions [4]
B60T 8/60	3-Punkt Untergruppe	... using electrical circuitry for controlling the braking action, the circuitry deriving a control function relating to the dynamic of the braked vehicle or wheel [4]
B60T 8/62	4-Punkt Untergruppe	.... wherein the individual vehicle wheels are provided (i) with self-contained braking systems operating the individual wheels in accordance with its dynamic state or (ii) with a central processing unit which receives input from individual wheels or wheel groups and produces a plurality of control signals for separately operating individual wheels or groups of wheels [4]
B60T 8/64	4-Punkt Untergruppe	.... wherein the controlled braking action is characterised by the manner in which the braking fluid pressure is reduced or reapplied [4]
B60T 8/66	4-Punkt Untergruppe	.... wherein the braking action is responsive to the difference between a computed or other theoretical vehicle speed and an actual speed of a wheel thereof [4]
B60T 8/68	5-Punkt Untergruppe	..... wherein the braking action is controlled by a difference between the rate of change of vehicle velocity and the rate of change of wheel velocity [4]
B60T 8/70	5-Punkt Untergruppe	..... sensing both acceleration and deceleration of either the vehicle or the wheel [4]
B60T 8/72	2-Punkt Untergruppe	... responsive to a difference between a speed condition, e.g. deceleration, and a fixed reference (B60T 8/66 takes precedence) [4]
B60T 8/74	3-Punkt Untergruppe	... sensing a rate of change of velocity [4]
B60T 8/76	3-Punkt Untergruppe	... two or more sensing means from different wheels indicative of the same type of speed condition [4]
B60T 8/78	3-Punkt Untergruppe	... using electrical circuitry for controlling the braking action, the circuitry deriving a control function relating to the dynamics of the braked vehicle or wheel [4]
B60T 8/80	4-Punkt Untergruppe	.... Means sensing a rate of change of velocity [4]
B60T 8/82	4-Punkt Untergruppe	.... two or more sensing means from different wheels indicative of the same type of speed condition [4]

Symbol	Typ	Titel
B60T 8/84	4-Punkt Untergruppe	.... wherein two wheels or wheel groups are controlled in dependence on the behaviour of a reference wheel or wheel group, with means for changing the reference wheel, e.g. "select high, select low" operation [4]
B60T 8/86	2-Punkt Untergruppe	... 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 [4]
B60T 8/88	2-Punkt Untergruppe	... with failure responsive means, i.e. means for detecting and indicating faulty operation of the speed responsive control means [4]
B60T 8/90	3-Punkt Untergruppe	... using a simulated speed signal to test speed responsive control means [4]
B60T 8/92	3-Punkt Untergruppe	... automatically taking corrective action [4]
B60T 8/94	4-Punkt Untergruppe	.... on a fluid pressure regulator [4]
B60T 8/96	4-Punkt Untergruppe	.... on speed responsive control means [4]
B60T 10/00	Hauptgruppe	Control or regulation for continuous braking making use of fluid or powdered medium, e.g. for use when descending a long slope [4]
B60T 10/02	1-Punkt Untergruppe	. with hydrodynamic brake [4]
B60T 10/04	1-Punkt Untergruppe	. with hydrostatic brake [4]
B60T 11/00	Hauptgruppe	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 B60T 13/00) [5]
B60T 11/04	1-Punkt Untergruppe	. transmitting mechanically [5]
B60T 11/06	2-Punkt Untergruppe	... Equalising arrangements [5]
B60T 11/08	2-Punkt Untergruppe	... providing variable leverage [5]
B60T 11/10	1-Punkt Untergruppe	. transmitting by fluid means, e.g. hydraulic [5]
B60T 11/12	2-Punkt Untergruppe	... the transmitted force being varied therein (B60T 11/16-B60T 11/28 take precedence) [5]
B60T 11/14	2-Punkt Untergruppe	... the transmitted force being substantially unchanged [5]
B60T 11/16	2-Punkt Untergruppe	... Master control, e.g. master cylinders (master cylinders associated with vacuum boosters B60T 13/565) [5]
B60T 11/18	3-Punkt Untergruppe	... Connection thereof to initiating means [5]
B60T 11/20	3-Punkt Untergruppe	... Tandem, side-by-side, or other multiple master-cylinder units [5]
B60T 11/21	4-Punkt Untergruppe	.... with two pedals operating on respective circuits, pressures therein being equalised when both pedals are operated together, e.g. for steering (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) [5]
B60T 11/22	3-Punkt Untergruppe	... characterised by being integral with reservoir [5]
B60T 11/224	3-Punkt Untergruppe	... 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 [5]
B60T 11/228	3-Punkt Untergruppe	... Pressure-maintaining arrangements, e.g. for replenishing the master cylinder chamber with fluid from a reservoir (B60T 11/232 takes precedence) [5]
B60T 11/232	3-Punkt Untergruppe	... Recuperation valves [5]
B60T 11/236	3-Punkt Untergruppe	... Piston sealing arrangements [5]
B60T 11/24	2-Punkt Untergruppe	... Single initiating means operating on more than one circuit, e.g. dual circuits (multiple master-cylinder units B60T 11/20) [5]

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B60T 11/26	2-Punkt Untergruppe	... Reservoirs (integral with master controls B60T 11/22) [5]
B60T 11/28	2-Punkt Untergruppe	... Valves specially adapted therefor (recuperation valves B60T 11/232) [5]
B60T 11/30	3-Punkt Untergruppe	... Bleed valves for hydraulic brake systems [5]
B60T 11/32	3-Punkt Untergruppe	... Automatic cut-off valves for defective pipes [5]
B60T 11/34	3-Punkt Untergruppe	... Pressure-reducing or limiting valves [5]
B60T 13/00	Hauptgruppe	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 B60T 8/00; valves incorporated in such systems B60T 15/00)
B60T 13/02	1-Punkt Untergruppe	. with mechanical assistance or drive
B60T 13/04	2-Punkt Untergruppe	... by spring or weight (fluid-released B60T 13/10)
B60T 13/06	2-Punkt Untergruppe	... by inertia, e.g. flywheel
B60T 13/08	3-Punkt Untergruppe	... Overrun brakes (automatic brake-action initiating means specially adapted for trailers B60T 7/20)
B60T 13/10	1-Punkt Untergruppe	. with fluid assistance, drive, or release
B60T 13/12	2-Punkt Untergruppe	... the fluid being liquid
B60T 13/122	3-Punkt Untergruppe	... Systems using both master cylinder and distributor valve; Structural associations of master cylinder with distributor valve [6]
B60T 13/125	3-Punkt Untergruppe	... Systems using brake pressure distributor valve without master cylinder [6]
B60T 13/128	3-Punkt Untergruppe	... Systems using booster hydraulically combined with master cylinder [6]
B60T 13/13	4-Punkt Untergruppe	.... with additional direct hydraulic output from booster to brake circuit [6]
B60T 13/132	3-Punkt Untergruppe	... Systems using booster having mechanical output, e.g. to master cylinder [6]
B60T 13/135	3-Punkt Untergruppe	... Boosters characterised by control valve in booster piston [6]
B60T 13/138	3-Punkt Untergruppe	... Pressure supply arrangements [6]
B60T 13/14	4-Punkt Untergruppe	.... using accumulators or reservoirs [6]
B60T 13/16	4-Punkt Untergruppe	.... using pumps directly, i.e. without interposition of accumulators or reservoirs [6]
B60T 13/18	5-Punkt Untergruppe	..... with control of pump output delivery [6]
B60T 13/20	5-Punkt Untergruppe	..... with control of pump driving means [6]
B60T 13/22	3-Punkt Untergruppe	... Brakes applied by springs or weights and released hydraulically
B60T 13/24	2-Punkt Untergruppe	... the fluid being gaseous
B60T 13/26	3-Punkt Untergruppe	... Compressed-air systems
B60T 13/36	4-Punkt Untergruppe	.... direct, i.e. brakes applied directly by compressed air
B60T 13/38	4-Punkt Untergruppe	.... Brakes applied by springs or weights and released by compressed air
B60T 13/40	4-Punkt Untergruppe	.... indirect, i.e. compressed-air booster units
B60T 13/44	5-Punkt Untergruppe	..... with two-chamber booster units

Symbol	Typ	Titel
B60T 13/45	5-Punkt Untergruppe	..... with multiple booster units, e.g. tandem booster units [5]
B60T 13/46	3-Punkt Untergruppe	... Vacuum systems
B60T 13/48	4-Punkt Untergruppe	.... direct, i.e. brakes applied directly by vacuum
B60T 13/50	4-Punkt Untergruppe	.... Brakes applied by springs or weights and released by vacuum
B60T 13/52	4-Punkt Untergruppe	.... indirect, i.e. vacuum booster units
B60T 13/56	5-Punkt Untergruppe	..... with two-chamber booster units
B60T 13/563	5-Punkt Untergruppe	..... with multiple booster units, e.g. tandem booster units [5]
B60T 13/565	5-Punkt Untergruppe	..... characterised by being associated with master cylinders, e.g. integrally formed [5]
B60T 13/567	5-Punkt Untergruppe	..... characterised by constructional features of the casing or by its strengthening or mounting arrangements [5]
B60T 13/569	5-Punkt Untergruppe	..... characterised by piston details, e.g. construction, mounting of diaphragm [5]
B60T 13/57	5-Punkt Untergruppe	..... characterised by constructional features of control valves [5]
B60T 13/573	5-Punkt Untergruppe	..... characterised by reaction devices [5]
B60T 13/575	6-Punkt Untergruppe	..... using resilient discs or pads [5]
B60T 13/577	6-Punkt Untergruppe	..... using levers [5]
B60T 13/58	2-Punkt Untergruppe	... Combined or convertible systems
B60T 13/60	3-Punkt Untergruppe	... both fluid pressure and vacuum
B60T 13/62	3-Punkt Untergruppe	... both straight and automatic
B60T 13/64	3-Punkt Untergruppe	... both single and multiple, e.g. single and tandem
B60T 13/66	2-Punkt Untergruppe	... Electrical control in fluid-pressure brake systems
B60T 13/68	3-Punkt Untergruppe	... by electrically-controlled valves
B60T 13/70	3-Punkt Untergruppe	... by fluid-controlled switches
B60T 13/72	3-Punkt Untergruppe	... in vacuum systems
B60T 13/74	1-Punkt Untergruppe	. with electrical assistance or drive
B60T 15/00	Hauptgruppe	Construction, arrangement, or operation of valves incorporated in power brake systems and not covered by groups B60T 11/00 or B60T 13/00 (valve structures responsive to a speed condition B60T 8/34; connection of valves to inflatable elastic bodies B60C 29/00) [4]
B60T 15/02	1-Punkt Untergruppe	. Application and release valves
B60T 15/04	2-Punkt Untergruppe	... Driver's valves
B60T 15/06	3-Punkt Untergruppe	... Single driver's valves for pressure brakes without automatic control
B60T 15/08	3-Punkt Untergruppe	... Driver's valves for pressure brakes having automatic control (automatic initiation of braking in general B60T 7/12)
B60T 15/10	3-Punkt Untergruppe	... for vacuum brakes
B60T 15/12	3-Punkt Untergruppe	... combined with relay valves or the like

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B60T 15/14	3-Punkt Untergruppe	... influencing electric control means
B60T 15/16	3-Punkt Untergruppe	... Arrangements enabling systems to be controlled from two or more positions
B60T 15/18	2-Punkt Untergruppe	... 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
B60T 15/20	3-Punkt Untergruppe	... controlled by two fluid pressures
B60T 15/22	4-Punkt Untergruppe	.... with one or more auxiliary valves, for braking, releasing, filling reservoirs
B60T 15/24	3-Punkt Untergruppe	... controlled by three fluid pressures
B60T 15/26	4-Punkt Untergruppe	.... without a quick braking action
B60T 15/28	5-Punkt Untergruppe	..... and having auxiliary valves
B60T 15/30	4-Punkt Untergruppe	.... with a quick braking action
B60T 15/32	5-Punkt Untergruppe	..... and having auxiliary valves
B60T 15/34	3-Punkt Untergruppe	... controlled alternatively by two or three fluid pressures
B60T 15/36	2-Punkt Untergruppe	... Other control devices or valves characterised by definite functions
B60T 15/38	3-Punkt Untergruppe	... for quick take-up and heavy braking, e.g. with auxiliary reservoir for taking-up slack
B60T 15/40	4-Punkt Untergruppe	.... with separate take-up and applying cylinders
B60T 15/42	3-Punkt Untergruppe	... with a quick braking action, i.e. with accelerating valves actuated by brake-pipe pressure variation
B60T 15/44	4-Punkt Untergruppe	.... and operating independently of the main control device
B60T 15/46	3-Punkt Untergruppe	... for retarding braking action to prevent rear vehicles of a vehicle train from overtaking the forward ones
B60T 15/48	3-Punkt Untergruppe	... for filling reservoirs
B60T 15/50	4-Punkt Untergruppe	.... with means for limiting or relieving pressure in reservoirs
B60T 15/52	3-Punkt Untergruppe	... 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
B60T 15/54	3-Punkt Untergruppe	... for controlling exhaust from triple valve or from brake cylinder
B60T 15/56	3-Punkt Untergruppe	... for filling reservoirs by means of a secondary supply pipe
B60T 15/58	3-Punkt Untergruppe	... for supplying control impulses through a secondary air pipe
B60T 15/60	3-Punkt Untergruppe	... for releasing or applying brakes when vehicles of a vehicle train are uncoupled
B60T 17/00	Hauptgruppe	Component parts, details, or accessories of brake systems not covered by groups B60T 8/00, B60T 13/00 or B60T 15/00, or presenting other characteristic features (air compressors F04) [4]
B60T 17/02	1-Punkt Untergruppe	. Arrangements of pumps or compressors, or control devices therefor
B60T 17/04	1-Punkt Untergruppe	. Arrangement of piping, valves in the piping, e.g. cut-off valves, couplings or air hoses (traction couplings involving joints for supply lines, electric circuits, or the like B60D 1/62; couplings peculiar to railway vehicles for, or combined with, couplings or connectors for fluid conduits or electric cables B61G 5/06; pipes, cut-off valves, couplings, air hoses <u>per se</u> F16C, F16K, F16L) [4]
B60T 17/06	1-Punkt Untergruppe	. Applications or arrangements of reservoirs

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B60T 17/08	1-Punkt Untergruppe	. Brake cylinders other than ultimate actuators (with built-in wear-compensating mechanisms, ultimate actuators F16D)
B60T 17/10	2-Punkt Untergruppe	. . 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
B60T 17/12	3-Punkt Untergruppe	. . . according to vehicle weight
B60T 17/14	3-Punkt Untergruppe	. . . according to vehicle speed
B60T 17/16	2-Punkt Untergruppe	. . Locking of brake cylinders
B60T 17/18	1-Punkt Untergruppe	. Safety devices; Monitoring
B60T 17/20	2-Punkt Untergruppe	. . Safety devices operable by passengers other than the driver
B60T 17/22	2-Punkt Untergruppe	. . Devices for monitoring or checking brake systems; Signal devices