

**CPC****COOPERATIVE PATENT CLASSIFICATION****B60S****SERVICING, CLEANING, REPAIRING, SUPPORTING, LIFTING, OR MANOEUVRING OF VEHICLES, NOT OTHERWISE PROVIDED FOR****NOTE**

Attention is drawn to the Note following the title of class [B60](#).

**B60S 1/00**

**Cleaning of vehicles** (by apparatus not integral with vehicle [B60S 3/00](#); cleaning in general [B08B](#); de-icing of aircraft [B64D](#); heating arrangements specially adapted for transparent or reflecting areas [H05B 3/84](#))

- B60S 1/02 . . Cleaning windscreens, windows or optical devices {(wind deflectors specially adapted for preventing soiling of windows or windscreens [B60J 1/2002](#))}
- B60S 1/023 . . . {including defroster or demisting means}
- B60S 1/026 . . . . {using electrical means}
- B60S 1/04 . . Wipers or the like, e.g. scrapers
- B60S 1/0402 . . . . {completely or partially concealed in a cavity}
- B60S 1/0405 . . . . . {the cavity being equipped with a movable cover}
- B60S 1/0408 . . . . {Means for influencing the aerodynamic quality of wipers, e.g. clip-on wind deflectors ([B60S 1/32](#) takes precedence)}
- B60S 1/0411 . . . . {the windscreens, windows or optical devices being movable with respect to fixed wipers}
- B60S 1/0413 . . . . {Modular wiper assembly}
- B60S 1/0416 . . . . . {including other vehicle fittings}
- B60S 1/0419 . . . . . {the support structure being integrally molded}
- B60S 1/0422 . . . . . {having a separate transverse element}
- B60S 1/0425 . . . . . . {characterised by the attachment of the wiper shaft holders to the transverse element}
- B60S 1/0427 . . . . . . {characterised by the attachment of the wiper motor holder to the transverse element}
- B60S 1/043 . . . . {Attachment of the wiper assembly to the vehicle}
- B60S 1/0433 . . . . . {Attachement of a wiper modular assembly to the vehicle}
- B60S 1/0436 . . . . . {Attachement of separate wiper shaft holders to the vehicle ([B60S 1/0425](#) takes precedence)}
- B60S 1/0438 . . . . . {Attachement of separate wiper motor assembly to the vehicle}
- B60S 1/0441 . . . . . {characterised by the attachment means}
- B60S 1/0444 . . . . . . {comprising vibration or noise absorbing means}
- B60S 1/0447 . . . . . . {non-screw fixation, (e.g. snap-in, bayonet-type..)}
- B60S 1/045 . . . . . . {having a pre-attachment device (i.e. to hold elements in position during mounting)}
- B60S 1/0452 . . . . {Position of the wipers relative to the vehicle}

B60S 1/0455	. . . .	{Device for lifting the wipers off the screen in its parking position or at extremes of wipe}
B60S 1/0458	. . . .	{Arrangement wherein the windscreen frame cooperates with the wipers}
B60S 1/0461	. . . . .	{Arrangement of the side pillars}
B60S 1/0463	. . . . .	{Arrangement of the cow}
B60S 1/0466	. . . . .	{Arrangement of wipers on openable windows}
B60S 1/0469	. . . . .	{Devices for assisting the wiper positioning on the vehicle}
B60S 1/0472	. . . . .	{Arrangement of the wipers on right or left-hand drive vehicles}
B60S 1/0475	. . . .	{Cleaning of wiper blades}
B60S 1/0477	. . . . .	{Arrangement for deicing or for removing debris from wiper blades ( <a href="#">heated wiper blade B60S 1/3805</a> )}
B60S 1/048	. . . . .	{with a heating device for the wiper parking position}
B60S 1/0483	. . . . .	{the cleaning device being separated from the vehicle ( <a href="#">renovating blade rubbers B60S 2001/3846</a> )}
B60S 1/0486	. . . . .	{the cleaning device being integrated with the vehicle}
B60S 1/0488	. . . .	{Wiper arrangement for crash protection or impact absorption}
B60S 1/0491	. . . .	{Additional elements being fixed on wipers or parts of wipers not otherwise provided for, e.g. covers, antennae or lights}
B60S 1/0494	. . . .	{Wipers actuated by wind force only}
B60S 1/0497	. . . .	{Wiper units as items separate from vehicle, e.g. for emergency use or retro-fittable}
B60S 1/06	. . . .	characterised by the drive ( <a href="#">producing other than swinging movement B60S 1/44</a> )
B60S 1/08	. . . . .	electrically driven {(conjoint control of windscreen wiper motor and liquid supply of windscreen washer <a href="#">B60S 1/482</a> ; conjoint control of windscreen wiper motor and means for cleaning parts o parts other than windscreens or front windows <a href="#">B60S 1/56</a> , <a href="#">B60S 1/58</a> , <a href="#">B60S 1/606</a> )}
B60S 1/0803	. . . . .	{Intermittent control circuits}
B60S 1/0807	. . . . .	{using electronic control means, e.g. tubes, semiconductors ( <a href="#">B60S 1/0818</a> , <a href="#">B60S 1/0896</a> take precedence)}
B60S 1/0811	. . . . . . .	{combined with mechanical control means, e.g. thermal relays}
B60S 1/0814	. . . . .	{using several drive motors; motor synchronisation circuits}
B60S 1/0818	. . . . .	{including control systems responsive to external conditions, e.g. by detection of moisture, dirt or the like}
B60S 1/0822	. . . . . . .	{characterized by the arrangement or type of detection means}
B60S 1/0825	. . . . . . .	{Capacitive rain sensor}
B60S 1/0829	. . . . . . .	{Oscillator-resonator rain sensor}
B60S 1/0833	. . . . . . .	{Optical rain sensor}
B60S 1/0837	. . . . . . .	{with a particular arrangement of the optical elements}
B60S 1/084	. . . . . . .	{including a hologram}
B60S 1/0844	. . . . . . .	{including a camera}
B60S 1/0848	. . . . . . . .	{Cleaning devices for cameras on vehicle}
B60S 1/0851	. . . . . . .	{Resistive rain sensor}

B60S 1/0855	. . . . .	{Ultrasonic rain sensor}
B60S 1/0859	. . . . .	{Other types of detection of rain, e.g. by measuring friction or rain drop impact}
B60S 1/0862	. . . . .	{including additional sensors (vehicle speed sensors <a href="#">B60S 1/0896</a> )}
B60S 1/0866	. . . . .	{including a temperature sensor (heating devices for windshield <a href="#">B60H</a> )}
B60S 1/087	. . . . .	{including an ambient light sensor (control of vehicle lights <a href="#">B60Q</a> )}
B60S 1/0874	. . . . .	{characterized by the position of the sensor on the windshield}
B60S 1/0877	. . . . .	{at least part of the sensor being positioned between layers of the windshield}
B60S 1/0881	. . . . .	{characterized by the attachment means on the windshield}
B60S 1/0885	. . . . .	{the sensor being integrated in a rear-view mirror module}
B60S 1/0888	. . . . .	{characterized by the attachment of the elements in a unit}
B60S 1/0892	. . . . .	{Testing and production of rain sensors}
B60S 1/0896	. . . . .	{including control systems responsive to a vehicle driving condition, e.g. speed}
B60S 1/10	. . . . .	pneumatically driven
B60S 1/105	. . . . .	{with means for stopping or setting the wipers at their limit of movement}
B60S 1/12	. . . . .	hydraulically driven
B60S 1/125	. . . . .	{with means for stopping or setting the wipers at their limit of movement}
B60S 1/14	. . . . .	personally driven
B60S 1/16	. . . . .	Means for transmitting drive
B60S 1/163	. . . . .	{with means for stopping or setting the wipers at their limit of movement}
B60S 1/166	. . . . .	{characterised by the combination of a motor-reduction unit and a mechanism for converting rotary into oscillatory movement}
B60S 1/18	. . . . .	mechanically {( <a href="#">B60S 1/166</a> takes precedence)}
B60S 1/185	. . . . .	{with means for stopping or setting the wipers at their limit of movement}
B60S 1/20	. . . . .	by cable drives; by flexible shafts
B60S 1/22	. . . . .	by rotary cams
B60S 1/24	. . . . .	by rotary cranks
B60S 1/245	. . . . .	{with particular rod arrangements between the motor driven axle and the wiper arm axle}
B60S 1/26	. . . . .	by toothed gearing
B60S 1/28	. . . . .	characterised by a plurality of wipers ( <a href="#">B60S 1/06</a> takes precedence)
B60S 1/30	. . . . .	arranged both outside and inside
B60S 1/32	. . . . .	characterised by constructional features of wiper blade arms {or blades}
B60S 1/34	. . . . .	Wiper arms; Mountings therefor {(wiper arms provided with liquid spreading means <a href="#">B60S 1/522</a> ; with gas spreading means <a href="#">B60S 1/544</a> )}
B60S 1/3402	. . . . .	{with means for obtaining particular wiping patterns (by varying the effective length of the angularly oscillating arm <a href="#">B60S 1/365</a> )}

B60S 1/3404	. . . . .	{the wiper blades being moved substantially parallel with themselves}
B60S 1/3406	. . . . .	{the wiper blades being rotated with respect to the wiper arms around an axis perpendicular to the wiped field ( <a href="#">B60S 1/3404</a> takes precedence)}
B60S 1/3409	. . . . .	{the wiper arms consisting of two or more articulated elements}
B60S 1/3411	. . . . .	{with means for varying wiper-blade pressure on windshield during operation}
B60S 1/3413	. . . . .	{with means for holding the arm off the glass in an intermediate position between the working position and the fully folded back position}
B60S 1/3415	. . . . .	{with means for supplying cleaning fluid to windscreen cleaners, e.g. washers ( <a href="#">arrangement of nozzles B60S 1/52</a> )}
B60S 1/3418	. . . . .	{with means for additionally adjusting the wiper arm working position with respect to the surface to be wiped}
B60S 1/342	. . . . .	{with means for temporarily uncoupling the wiper arm from the drive}
B60S 1/3422	. . . . .	{Means arranged in the wiper structure to lift the arm at extremes of wipe ( <a href="#">means arranged on the vehicle body B60S 1/0455</a> )}
B60S 1/3425	. . . . .	{Constructional aspects of the arm}
B60S 1/3427	. . . . .	{Arm piece, link piece and mounting head formed as one element}
B60S 1/3429	. . . . .	{Arm pieces}
B60S 1/3431	. . . . .	{Link pieces}
B60S 1/3434	. . . . .	{Manufacturing details thereof}
B60S 1/3436	. . . . .	{Mounting heads}
B60S 1/3438	. . . . .	{Manufacturing details thereof}
B60S 1/344	. . . . .	{Flat-type mounting heads}
B60S 1/3443	. . . . .	{Wiper shafts}
B60S 1/3445	. . . . .	{Joints between elements}
B60S 1/3447	. . . . .	{the elements being an arm piece and a link piece}
B60S 1/345	. . . . .	{the elements being a link piece and a mounting head}
B60S 1/3452	. . . . .	{the joint being a snap fit pivot joint}
B60S 1/3454	. . . . .	{the joint being at end of mounting head furthest away from blade}
B60S 1/3456	. . . . .	{Locks or stays for holding arms in fully folded back position}
B60S 1/3459	. . . . .	{the element being a mounting head and a shaft}
B60S 1/3461	. . . . .	{with means to adjust the orientation of the head relative to shaft}
B60S 1/3463	. . . . .	{Means to press blade onto screen}
B60S 1/3465	. . . . .	{with coil springs}
B60S 1/3468	. . . . .	{Mountings therefor}
B60S 1/347	. . . . .	{with adjustment means to adjust wiping pressure ( <a href="#">during wiping B60S 1/3411</a> )}
B60S 1/3472	. . . . .	{with adjustment means to keep wiping pressure constant ( <a href="#">varying wiping pressure B60S 1/3411</a> )}
B60S 1/3475	. . . . .	{with blade or leaf springs}

B60S 1/3477	. . . . .	{with elastomeric or rubber springs}
B60S 1/3479	. . . . .	{Means to cover the wiper parts}
B60S 1/3481	. . . . .	{for mounting head}
B60S 1/3484	. . . . .	{integral with arm or link piece}
B60S 1/3486	. . . . .	{Means to allow blade to follow curvature of the screen (i.e. rotation along longitudinal axis of the arm)}
B60S 1/3488	. . . . .	{Means for mounting wiper arms onto the vehicle}
B60S 1/349	. . . . .	{Means for mounting the wiper bearing to the vehicle body}
B60S 1/3493	. . . . .	{Means for mounting the wiper shaft in the wiper bearing}
B60S 1/3495	. . . . .	{Means for mounting the drive mechanism to the wiper shaft}
B60S 1/3497	. . . . .	{Additional means for guiding the blade other than the arm or blade joint}
B60S 1/36	. . . . .	Variable-length arms
B60S 1/365	. . . . .	{the effective length being automatically varied during angular oscillation of the arm}
B60S 1/38	. . . . .	Wiper blades {(provided with liquid spreading means <a href="#">B60S 1/524</a> ; provided with gas spreading means <a href="#">B60S 1/546</a> )}
B60S 1/3801	. . . . .	{characterised by a blade support harness consisting of several articulated elements ( <a href="#">B60S 1/3803</a> , <a href="#">B60S 1/3806</a> take precedence)}
B60S 1/3803	. . . . .	{heated wiper blades}
B60S 1/3805	. . . . .	{electrically}
B60S 1/3806	. . . . .	{Means, or measures taken, for influencing the aerodynamic quality of the wiper blades}
B60S 1/3808	. . . . .	{Spoiler integral with the squeegee}
B60S 1/381	. . . . .	{Spoilers mounted on the squeegee or on the vertebra}
B60S 2001/3812	. . . . .	{Means of supporting or holding the squeegee or blade rubber}
B60S 2001/3813	. . . . .	{characterised by a support harness consisting of several articulated elements}
B60S 2001/3815	. . . . .	{characterised by the joint between elements}
B60S 2001/3817	. . . . .	{characterised by a backing strip to aid mounting of squeegee in support}
B60S 2001/3818	. . . . .	{the backing strip being a channel-like element, e.g. not continuous}
B60S 2001/382	. . . . .	{the backing strip being an essentially planar reinforcing strip, e.g. vertebra}
B60S 2001/3822	. . . . .	{characterised by additional means to prevent longitudinal sliding of squeegee in support, e.g. clips}
B60S 2001/3824	. . . . .	{the blade or squeegee pivoting about an axis parallel to blade longitudinal axis}
B60S 2001/3825	. . . . .	{the squeegee mounted directly to or in wiper blade arm}
B60S 2001/3827	. . . . .	{characterised by the squeegee or blade rubber or wiping element}
B60S 2001/3829	. . . . .	{characterised by the material of the squeegee or coating thereof}
B60S 2001/3831	. . . . .	{cleaning by scrubbing or abrasive action}

B60S 2001/3832	. . . . .	{cleaning by rigid or semi-rigid scraping elements, e.g. for removing ice}
B60S 2001/3834	. . . . .	{equipped with brush-like elements}
B60S 2001/3836	. . . . .	{characterised by cross-sectional shape}
B60S 2001/3837	. . . . .	{with more than one wiping edge or lip}
B60S 2001/3839	. . . . .	{with longitudinally split squeegee, with squeegee parts}
B60S 2001/3841	. . . . .	{Squeegee modifications to prevent longitudinally sliding of squeegee in support structure}
B60S 2001/3843	. . . . .	{equipped with removable cover or protective elements}
B60S 2001/3844	. . . . .	{equipped with means to indicate wear or usage of blade}
B60S 2001/3846	. . . . .	{Devices for renewing or renovating blade wiping edges, e.g. cutters}
B60S 1/3848	. . . . .	{Flat-type wiper blade, i.e. without harness}
B60S 1/3849	. . . . .	{Connectors therefor; Connection to wiper arm; Attached to blade}
B60S 1/3851	. . . . .	{Mounting of connector to blade assembly}
B60S 1/3853	. . . . .	{Snap-fit, e.g. elastic connection}
B60S 1/3855	. . . . .	{by welding, gluing or the like}
B60S 1/3856	. . . . .	{Gripping the blade}
B60S 1/3858	. . . . .	{with protrusions cooperating with holes}
B60S 1/386	. . . . .	{made in two halves}
B60S 1/3862	. . . . .	{Transport of liquid there through}
B60S 1/3863	. . . . .	{Connectors having a spoiler}
B60S 1/3865	. . . . .	{Connectors having an integral pivot pin for connection with the wiper arm}
B60S 1/3867	. . . . .	{pin formed on the interior of side walls}
B60S 1/3868	. . . . .	{pin formed on the exterior of side walls}
B60S 1/387	. . . . .	{the connector being suitable for receiving different types of adapter}
B60S 1/3872	. . . . .	{without connector, e.g. connection to wiper arm via squeegee or vertebra}
B60S 1/3874	. . . . .	{with a reinforcing vertebra}
B60S 1/3875	. . . . .	{rectangular section}
B60S 1/3877	. . . . .	{embedded in the squeegee}
B60S 1/3879	. . . . .	{placed in side grooves in the squeegee}
B60S 1/3881	. . . . .	{in additional element, e.g. spoiler}
B60S 1/3882	. . . . .	{C-shape section}
B60S 1/3884	. . . . .	{Wire-shaped section}
B60S 1/3886	. . . . .	{End caps}
B60S 1/3887	. . . . .	{Mounting of end caps}
B60S 1/3889	. . . . .	{cooperating with holes in the vertebra}
B60S 1/3891	. . . . .	{with locking device}
B60S 1/3893	. . . . .	{cooperating with holes in the squeegee}

B60S 1/3894	. . . . .	{having a particular shape}
B60S 1/3896	. . . . .	{with openings at the longitudinal extremities}
B60S 2001/3898	. . . . .	{method for manufacturing wiper blades}
B60S 1/40	. . . . .	Connections between blades and arms
B60S 1/4003	. . . . .	{Multi-purpose connections for two or more kinds of arm ends}

**NOTE**

Multi-aspect classification is applied for technical subjects relating to the arms and covered by subgroups [B60S 1/4006](#) to [B60S 1/4083](#)

B60S 1/4006	. . . . .	{for arms provided with a hook-shaped end}
B60S 1/4009	. . . . .	{comprising a detachable intermediate element mounted on the hook-shaped end}
B60S 2001/4012	. . . . .	{the element being provided with bearing surfaces on its side walls}
B60S 1/4016	. . . . .	{the element being provided with retention means co-operating with the hook-shaped end of the arm}
B60S 1/4019	. . . . .	{the retention means being protrusions or holes}
B60S 2001/4022	. . . . .	{the element being provided with a locking element movable thereon}
B60S 2001/4025	. . . . .	{the element being able to receive pivot pins of different diameters}
B60S 2001/4029	. . . . .	{the element being able to receive arms of different widths}
B60S 2001/4032	. . . . .	{the element being able to receive arms with hooks of different radiuses}
B60S 2001/4035	. . . . .	{the connection being covered by a removable cover mounted on the blade}
B60S 1/4038	. . . . .	{for arms provided with a channel-shaped end}
B60S 1/4041	. . . . .	{the channel-shaped end comprising a pivot pin mounted between the side walls}
B60S 1/4045	. . . . .	{comprising a detachable intermediate element mounted on the channel-shaped end}
B60S 1/4048	. . . . .	{the element being provided with retention means co-operating with the channel-shaped end of the arm}
B60S 2001/4051	. . . . .	{the intermediate element engaging the side walls of the arm}
B60S 2001/4054	. . . . .	{the intermediate element engaging the back part of the arm}
B60S 2001/4058	. . . . .	{comprising a separate locking element, e.g. in addition to an intermediate element}
B60S 2001/4061	. . . . .	{covered by a removable cover mounted on the blade}
B60S 1/4064	. . . . .	{the channel-shaped end being provided with protrusions on, or holes in, the side walls to create a pivot}
B60S 1/4067	. . . . .	{for arms provided with a side pin}
B60S 1/407	. . . . .	{with means provided on the arm for locking the side pin}
B60S 1/4074	. . . . .	{with means provided on the blade for locking the side pin}



B60S 1/4077	. . . . .	{characterised by the connecting part of, or an intermediate element mounted on, the wiper blade (means for locking the side pin <a href="#">B60S 1/4074</a> )}
B60S 2001/408	. . . . .	{the connecting part or the intermediate element being provided with holes for different diameters of pivoting pin}
B60S 1/4083	. . . . .	{for arms provided with a flat end}
B60S 1/4087	. . . . .	{the end being provided with protrusions or holes}
B60S 2001/409	. . . . .	{characterised by the arm or connecting part mounted on the arm presenting a shaped opening for bearing the pivot axis}
B60S 2001/4093	. . . . .	{characterised by the mounting of the pivot on the main yoke of the blade}
B60S 2001/4096	. . . . .	{Connections between arm and blade not using a cylindrical pivot axis on the blade}
B60S 1/42	. . . . .	resilient
B60S 1/44	. . .	the wiper blades having other than swinging movement, e.g. rotary {(the wiper blade support member, e.g. arm, having a swinging movement <a href="#">B60S 1/32</a> )}
B60S 1/46	. .	using liquid; Windscreen washers
B60S 1/48	. . .	Liquid supply therefor
B60S 1/481	. . . . .	{the operation of at least part of the liquid supply being controlled by electric means (electrical washing liquid warming-up means <a href="#">B60S 1/488</a> )}
B60S 1/482	. . . . .	{combined with the operation of windscreen wipers}
B60S 1/483	. . . . .	{using a supply pump driven by the windscreen-wiper motor}
B60S 1/485	. . . . .	{including control systems responsive to external conditions, e.g. by detection of moisture, dirt or the like}
B60S 1/486	. . . . .	{including control systems responsive to a vehicle driving condition, e.g. speed}
B60S 1/487	. . . . .	{the liquid being heated (nozzles provided with heating means <a href="#">B60S 1/52</a> )}
B60S 1/488	. . . . .	{electrically}
B60S 1/50	. . . . .	Arrangement of reservoir
B60S 1/52	. . . . .	Arrangement of nozzles; {Liquid spreading means} (nozzles per se <a href="#">B05B</a> )
B60S 1/522	. . . . .	{moving liquid spreading means, e.g. arranged in wiper arms}
B60S 1/524	. . . . .	{arranged in wiper blades}
B60S 1/526	. . . . .	{according to vehicle movement characteristics, e.g. speed, or climatic conditions, e.g. wind}
B60S 1/528	. . . . .	{the spreading means being moved between a rest position and a working position ( <a href="#">B60S 1/526</a> takes precedence)}
B60S 1/54	. .	using gas, e.g. hot air
B60S 1/542	. . .	{using wiping devices}
B60S 1/544	. . .	{moving gas spreading means, e.g. arranged in wiper arms}
B60S 1/546	. . . . .	{arranged in wiper blades}
B60S 1/548	. . . . .	{according to vehicle movement characteristics, e.g. speed, or climatic conditions, e.g. wind}



- B60S 1/56 . . specially adapted for cleaning other parts or devices than front windows or windscreens [{\(rear-view mirror arrangements mounted on vehicle exterior including cleaning devices B60R 1/0602\)}](#)
- B60S 1/563 . . . [{for registration, licensing or like devices}](#)
- B60S 1/566 . . . [{including wiping devices \(B60S 1/563, B60S 1/583 take precedence\)}](#)
- B60S 1/58 . . . for rear windows
- B60S 1/583 . . . . [{including wiping devices}](#)
- B60S 1/586 . . . . [{including defroster or demisting means}](#)
- B60S 1/60 . . . for signalling devices, e.g. reflectors
- B60S 1/603 . . . . [{the operation of at least a part of the cleaning means being controlled by electric means}](#)
- B60S 1/606 . . . . . [{combined with the operation of windscreen or front window cleaning means}](#)
- B60S 1/62 . Other vehicle fittings for cleaning
- B60S 1/64 . . for cleaning vehicle interiors, e.g. built-in vacuum cleaners
- B60S 1/66 . . for cleaning vehicle exterior
- B60S 1/68 . . . for freeing wheels or tyres from foreign matter, e.g. wheel scrapers
- B60S 1/685 . . . . [{for two-wheeled vehicles}](#)
- B60S 3/00** **Vehicle cleaning apparatus not integral with vehicles** [\(cleaning in general B08B; cleaning peculiar to waterborne vessels B63B 57/00, B63B 59/00; ground equipment for cleaning aircraft B64F 5/00; {multistage treatment applied to waste water from vehicle wash installations C02F 9/00}\)](#)
- B60S 3/002 . [{Vehicle drying apparatus}](#)
- B60S 3/004 . [{Conveyers for vehicle cleaning apparatus}](#)
- B60S 3/006 . [{specially adapted for railway vehicles \(B60S 3/008 takes precedence\)}](#)
- B60S 3/008 . [{for interiors of land vehicles}](#)
- B60S 3/04 . for exteriors of land vehicles [{\(B60S 3/002, B60S 3/004 take precedence; specially adapted for railway vehicles B60S 3/006\)}](#)
- B60S 3/041 . . [{specially adapted for two-wheeled vehicles}](#)
- B60S 3/042 . . [{Wheel cleaning devices \(integral with vehicle B60S 1/00\)}](#)
- B60S 3/044 . . [{Hand-held cleaning arrangements with liquid or gas distributing means \(B60S 3/045 takes precedence\)}](#)
- B60S 3/045 . . [{Other hand-held cleaning arrangements, e.g. with sponges, brushes, scrapers or the like \(brushes per se A46B\)}](#)
- B60S 3/047 . . . [{using liquid or gas distributing means \(B60S 3/048 takes precedence\)}](#)
- B60S 3/048 . . . [{with rotary or vibratory bodies contacting the vehicle}](#)
- B60S 3/06 . . with rotary bodies contacting the vehicle [{\(hand-held B60S 3/048\)}](#)
- B60S 3/063 . . . [{the axis of rotation being approximately vertical}](#)
- B60S 3/066 . . . [{the axis of rotation being approximately horizontal}](#)

- B60S 5/00** **Servicing, maintaining, repairing or refitting of vehicles** ({collecting or removing exhaust gases in workshops [B08B 15/002](#); straightening vehicle body parts [B21D 1/12](#), [B21D 1/14](#)}; vehicles adapted to carry a workshop for servicing or maintenance [B60P 3/14](#); servicing rail locomotives [B61K](#)); {**registering or indicating the working of vehicles** [G07C 5/00](#); **testing of vehicles** [G01M 17/00](#); **arrangements for electrical testing** [G01R 31/00](#); **devices for monitoring or checking brake systems** [B60T 17/22](#); **filling or draining lubricant** [F01M 11/04](#); **means for collecting, retaining, or draining-off lubricant** [F16N 31/00](#); **draining of lubricant from gearing** [F16H 57/0406](#); **assembly or repair of springs or dampers** [F16F 9/3271](#); **tool, instrument or work supports or storage means used in association with vehicles** [B25H 5/00](#)}
- B60S 5/02** . Supplying fuel to vehicles; General disposition of plant in filling stations (apparatus for transferrring measured quantities of petrol, oil, or the like from storage space to vehicles [B67D](#))
- B60S 5/04** . Supplying air for tyre inflation (arrangement of tyre inflating devices on vehicles [B60C 23/00](#); tyre pressure gauges [G01L 17/00](#); {pumps actuated by muscle power [F04B 33/00](#)})
- B60S 5/043** . . {characterised by the inflation control means or the drive of the air pressure system}
- B60S 5/046** . . . {using electrical or electronical means}
- B60S 5/06** . Supplying batteries to, or removing batteries from, vehicles (circuit arrangements for charging batteries [H02J 7/00](#))
- B60S 9/00** **Ground-engaging vehicle fittings for supporting, lifting, or manoeuvring the vehicle, wholly or in part, e.g. built-in jacks** {**props for vehicle draw bars** [B60D 1/66](#); **anti-theft devices acting on vehicle jacking means** [B60R 25/001](#)}; (lifting devices in general [B66F](#), supports in general [F16M](#))
- B60S 9/02** . for only lifting or supporting
- B60S 9/04** . . mechanically
- B60S 9/06** . . . of screw-and-nut type
- B60S 9/08** . . . . the screw axis being substantially vertical
- B60S 9/10** . . by fluid pressure
- B60S 9/12** . . . of telescopic type
- B60S 9/14** . for both lifting and manoeuvring
- B60S 9/16** . . for operating only on one end of vehicle ([B60S 9/205](#) takes precedence)
- B60S 9/18** . . . mechanically
- B60S 9/20** . . . with fluid-pressure lift
- B60S 9/205** . . Power driven manoeuvring fittings, e.g. reciprocally driven steppers or rotatably driven cams (vehicles with ground-engaging propulsion means, e.g. walking members, [B62D 57/02](#))
- B60S 9/21** . . . comprising a rotatably driven auxiliary wheel or endless track, e.g. driven by ground wheel (track vehicles with additional or alternative ground wheels [B62D 55/02](#), [B62D 55/04](#); auxiliary drives from a ground wheel [B60K 25/08](#))
- B60S 9/215** . . . . driven by an auxiliary motor
- B60S 9/22** . Means for attaching lifting, supporting, or manoeuvring devices to vehicles (for separate devices [B60S 11/00](#))

- B60S 11/00**      **Vehicle modifications for receiving separate lifting, supporting, or manoeuvring devices**
- B60S 13/00**      **Vehicle-manoeuving devices separate from the vehicle** (vehicle lifting {e.g. liftable turntables} or pushing devices [B66F](#); {workshop equipment [B25H](#)})
- B60S 13/02      .    Turntables; Traversers (incorporated in vehicle-storing garages [E04H](#); {rotary display stands [A47F 5/02](#)})