

SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B60 VEHICLES IN GENERAL

B60G VEHICLE SUSPENSION ARRANGEMENTS (air-cushion vehicles B60V; connections between vehicle bodies and vehicle frames B62D 24/00) [5]

Note(s)

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

Subclass index

RIGID SUSPENSION.....	1/00
RESILIENT SUSPENSION	
General structures	
for single wheels; single sets of tandem wheels; pivoted suspension arms and accessories therefor....	3/00, 5/00, 7/00
for rigid axle or axle housing for two or more wheels.....	9/00
Characterised by arrangement, location, or kind of: springs; vibration-dampers; or combined springs and dampers.....	11/00, 13/00, 15/00
Characterised by adjustment.....	17/00
SUSPENSIONS WITH MEANS FOR SENSING GROUND UNEVENNESS.....	23/00
INTERCONNECTED SYSTEMS FOR RESILIENTLY-SUSPENDED WHEELS.....	21/00
OTHER SUSPENSION ARRANGEMENTS.....	99/00

1/00	Suspensions with rigid connection between axle and frame [1, 2006.01]	3/26	• • • Means for maintaining substantially-constant wheel camber during suspension movement [1, 2006.01]
1/02	• with continuous axle [1, 2006.01]		
1/04	• with divided axle [1, 2006.01]	3/28	• • at least one of the arms itself being resilient, e.g. leaf spring [1, 2006.01]
3/00	Resilient suspensions for a single wheel (pivoted suspension arms <i>per se</i> , attachment thereof to sprung part of the vehicle, buffer means for limiting movement of arms B60G 7/00; characterised by arrangement, location, or type of springs B60G 11/00) [1, 2006.01]	5/00	Resilient suspensions for a set of tandem wheels or axles having interrelated movements [1, 2006.01]
3/01	• the wheel being mounted for sliding movement, e.g. in or on a vertical guide (camber maintaining means B60G 3/26) [5, 2006.01]	5/01	• the set being characterised by having more than two successive axles [5, 2006.01]
3/02	• with a single pivoted arm [1, 2006.01]	5/02	• mounted on a single pivoted arm [1, 2006.01]
3/04	• • the arm being essentially transverse to the longitudinal axis of the vehicle [1, 2006.01]	5/03	• • the arm itself being resilient, e.g. a leafspring (B60G 5/053 takes precedence) [5, 2006.01]
3/06	• • • the arm being rigid [1, 2006.01]	5/04	• with two or more pivoted arms, the movements of which are resiliently interrelated [1, 2006.01]
3/08	• • • • the arm forming the axle housing [1, 2006.01]	5/047	• • at least one arm being resilient, e.g. a leafspring (B60G 5/053 takes precedence) [5, 2006.01]
3/10	• • • the arm itself being resilient, e.g. leaf spring [1, 2006.01]	5/053	• • a leafspring being used as equilibration unit between two axle-supporting units [5, 2006.01]
3/12	• • the arm being essentially parallel to the longitudinal axis of the vehicle [1, 2006.01]	5/06	• • the arms turning on a common pivot [1, 2006.01]
3/14	• • • the arm being rigid [1, 2006.01]	7/00	Pivoted suspension arms; Accessories thereof (means for maintaining substantially-constant wheel camber during suspension movement B60G 3/26) [1, 2006.01]
3/16	• • • the arm itself being resilient, e.g. leaf spring [1, 2006.01]	7/02	• Attaching arms to sprung part of vehicle [1, 2006.01]
3/18	• with two or more pivoted arms, e.g. parallelogram [1, 2006.01]	7/04	• Buffer means for limiting movement of arms [1, 2006.01]
3/20	• • all arms being rigid [1, 2006.01]	9/00	Resilient suspensions for a rigid axle or axle housing for two or more wheels [1, 2006.01]
3/22	• • • a rigid arm forming the axle housing [1, 2006.01]	9/02	• the axle or housing being pivotally mounted on the vehicle [1, 2006.01]
3/24	• • • a rigid arm being formed by the live axle [1, 2006.01]		

- 9/04 • the axle or housing not being pivotally mounted on the vehicle [1, 2006.01]

11/00 Resilient suspensions characterised by arrangement, location, or kind of springs (single-wheel suspension by pivoted arm resilient in itself B60G 3/00; adjusting spring characteristic B60G 17/00; springs per se F16F) [1, 2006.01]

Note(s)

In this group, the following terms or expressions are used with the meanings indicated:

- "torsion bar" includes torsion tube or the like;
- "rubber" includes synthetic substitutes of a similar nature.

- 11/02 • having leaf springs only [1, 2006.01]
- 11/04 • • arranged substantially parallel to the longitudinal axis of the vehicle [1, 2006.01]
- 11/06 • • arranged obliquely to the longitudinal axis of the vehicle [1, 2006.01]
- 11/08 • • arranged substantially transverse to the longitudinal axis of the vehicle [1, 2006.01]
- 11/10 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle [1, 2006.01]
- 11/107 • • • Sliding or rolling mountings [5, 2006.01]
- 11/113 • • • Mountings on the axle (B60G 11/107 takes precedence) [5, 2006.01]
- 11/12 • • • Links, pins, or bushes [1, 2006.01]
- 11/14 • having helical, spiral, or coil springs only [1, 2006.01]
- 11/15 • • Coil springs resisting deflection by winding up [5, 2006.01]
- 11/16 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle [1, 2006.01]
- 11/18 • having torsion-bar springs only [1, 2006.01]
- 11/20 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle [1, 2006.01]
- 11/22 • having rubber springs only [1, 2006.01]
- 11/23 • • of the torsional-energy-absorption type [5, 2006.01]
- 11/24 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle [1, 2006.01]
- 11/26 • having fluid springs only, e.g. hydropneumatic springs (B60G 15/12 takes precedence) [1, 2006.01]
- 11/27 • • wherein the fluid is a gas [5, 2006.01]
- 11/28 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle [1, 2006.01]
- 11/30 • • having pressure fluid accumulator therefor, e.g. accumulator arranged in vehicle frame [1, 2006.01]
- 11/32 • having springs of different kinds [1, 2006.01]
- 11/34 • • including leaf springs [1, 2006.01]
- 11/36 • • • and also helical, spiral, or coil springs [1, 2006.01]
- 11/38 • • • and also rubber springs [1, 2006.01]
- 11/40 • • • the rubber springs being attached to the axle [1, 2006.01]
- 11/42 • • • the rubber springs being attached to sprung part of the vehicle [1, 2006.01]
- 11/44 • • • and also torsion-bar springs [1, 2006.01]
- 11/46 • • • and also fluid springs [1, 2006.01]

- 11/48 • • not including leaf springs [1, 2006.01]
- 11/50 • • • having helical, spiral, or coil springs, and also torsion-bar springs [1, 2006.01]
- 11/52 • • • having helical, spiral, or coil springs, and also rubber springs [1, 2006.01]
- 11/54 • • • with rubber springs arranged within helical, spiral or coil springs [1, 2006.01]
- 11/56 • • • having helical, spiral or coil springs, and also fluid springs [1, 2006.01]
- 11/58 • • • arranged coaxially [1, 2006.01]
- 11/60 • • • having both rubber springs and torsion-bar springs [1, 2006.01]
- 11/62 • • • having both rubber springs and fluid springs [1, 2006.01]
- 11/64 • • • having both torsion-bar springs and fluid springs [1, 2006.01]

13/00 Resilient suspensions characterised by arrangement, location, or type of vibration-dampers (adjusting damping effect B60G 17/06; vibration-dampers per se F16F) [1, 2006.01]

- 13/02 • having dampers dissipating energy, e.g. frictionally [1, 2006.01]
- 13/04 • • mechanically, e.g. having frictionally-engaging springs as damping elements [1, 2006.01]
- 13/06 • • of fluid type [1, 2006.01]
- 13/08 • • • hydraulic [1, 2006.01]
- 13/10 • • • pneumatic [1, 2006.01]
- 13/12 • • • quasi-fluid, i.e. having powdered medium [1, 2006.01]
- 13/14 • having dampers accumulating utilisable energy, e.g. compressing air [1, 2006.01]
- 13/16 • having dynamic absorbers as main damping means, i.e. spring-mass system vibrating out of phase [1, 2006.01]
- 13/18 • • combined with energy-absorbing means [1, 2006.01]

15/00 Resilient suspensions characterised by arrangement, location, or type of combined spring and vibration-damper, e.g. telescopic type (combined spring and vibration-dampers per se F16F) [1, 5, 2006.01]

- 15/02 • having mechanical spring [1, 2006.01]
- 15/04 • • and mechanical damper [1, 2006.01]
- 15/06 • • and fluid damper [1, 2006.01]
- 15/07 • • • the damper being connected to the stub axle and the spring being arranged around the damper [5, 2006.01]
- 15/08 • having fluid spring [1, 2006.01]
- 15/10 • • and mechanical damper [1, 2006.01]
- 15/12 • • and fluid damper [1, 2006.01]
- 15/14 • • • the damper being connected to the stub axle and the spring being arranged around the damper [5, 2006.01]

17/00 Resilient suspensions having means for adjusting the spring or vibration-damper characteristics, for regulating the distance between a supporting surface and a sprung part of vehicle or for locking suspension during use to meet varying vehicular or surface conditions, e.g. due to speed or load [1, 5, 2006.01]

- 17/005 • Suspension locking arrangements [5, 2006.01]
- 17/015 • the regulating means comprising electric or electronic elements (B60G 17/005 takes precedence) [5, 2006.01]

- 17/016 • • characterised by their responsiveness, when the vehicle is travelling, to specific motion, a specific condition, or driver input **[2006.01]**
- 17/0165 • • • to an external condition, e.g. rough road surface, side wind **[2006.01]**
- 17/017 • • characterised by their use when the vehicle is stationary, e.g. during loading, engine start-up or switch-off **[2006.01]**
- 17/018 • • characterised by the use of a specific signal treatment or control method **[2006.01]**
- 17/0185 • • • for failure detection **[2006.01]**
- 17/019 • • characterised by the type of sensor or the arrangement thereof **[2006.01]**
- 17/0195 • • characterised by the regulation being combined with other vehicle control systems **[2006.01]**
- 17/02 • Spring characteristics (B60G 17/005-B60G 17/015 take precedence) **[1, 5, 2006.01]**
- 17/027 • • Mechanical springs regulated by fluid means (B60G 17/033 takes precedence) **[5, 2006.01]**
- 17/033 • • characterised by regulating means acting on more than one spring **[5, 2006.01]**
- 17/04 • • Fluid-spring characteristics **[1, 2006.01]**
- 17/044 • • • Self-pumping fluid springs (pumps for liquids F04) **[5, 2006.01]**
- 17/048 • • • with the regulating means inside the fluid springs (B60G 17/044 takes precedence) **[5, 2006.01]**
- 17/052 • • • Pneumatic spring characteristics (B60G 17/048 takes precedence) **[5, 2006.01]**
- 17/056 • • • Regulating distributors or valves (B60G 17/044-B60G 17/048 take precedence) **[5, 2006.01]**
- 17/06 • Characteristics of dampers (B60G 17/015 takes precedence) **[1, 5, 2006.01]**
- 17/08 • • Characteristics of fluid dampers (adjusting fluid dampers in general F16F 9/44-F16F 9/53) **[1, 2006.01]**
- 21/00 **Interconnection systems for two or more resiliently-suspended wheels, e.g. for stabilising a vehicle body with respect to acceleration, deceleration or centrifugal forces** (B60G 17/033 takes precedence; steering deflectable wheels combined with means for inwardly inclining the vehicle body on bends B62D 9/02) **[1, 5, 2006.01]**
- 21/02 • permanently interconnected **[1, 2006.01]**
- 21/04 • • mechanically **[1, 2006.01]**
- 21/045 • • • between wheels on different axles on the same side of the vehicle, i.e. the left or the right side **[5, 2006.01]**
- 21/05 • • • between wheels on the same axle but on different sides of the vehicle, i.e. the left and right wheel suspensions being interconnected **[5, 2006.01]**
- 21/055 • • • Stabiliser bars **[5, 2006.01]**
- 21/06 • • fluid **[1, 2006.01]**
- 21/067 • • • between wheels on different axles on the same side of the vehicle, i.e. the left or the right side **[5, 2006.01]**
- 21/073 • • • between wheels on the same axle but on different sides of the vehicle, i.e. the left and right wheel suspensions being interconnected **[5, 2006.01]**
- 21/08 • characterised by use of gyroscopes (gyroscopes for stabilising vehicle bodies without controlling suspension arrangements B62D 37/06) **[1, 4, 5, 2006.01]**
- 21/10 • not permanently interconnected, e.g. operative only on acceleration, only on deceleration, or only at off-straight position of steering **[1, 2006.01]**
- 23/00 **Wheel suspensions with automatic means for sensing unevenness ahead of wheels or for moving wheels up or down in accordance therewith** **[1, 2006.01]**
- 99/00 **Subject matter not provided for in other groups of this subclass** **[2010.01]**