

Manual Codes - Q Section

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Section Q1				
Q11 Wheels; tyres; connections				
Q11-A	Wheels; Wheel assemblies	Includes novel aspects of vehicle wheels, including emergency space saver and spare wheels. This code can be used when the whole wheel assembly is being claimed and where no specific components of the wheel assembly are novel.	Wheelend assembly	B60B009/00-B60B009/24; B60B011/00-B60B011/10; B60B019/00; B60B019/04- B60B019/14
Q11-A01	Spoked wheels	Includes wheels with separable/replacable spokes, nipples etc., such as bicycle wheels.		B60B001/00-B60B001/14; B60B009/26; B60B009/28
Q11-A02	Disc wheels	Includes wheels with single disc body, e.g. cast alloy wheels (with or without cut-outs to simulate spokes), and pressed steel disc wheels.		B60B003/00-B60B003/18
Q11-A03	Rims			B60B021/00-B60B025/22
Q11-A04	Hubs	Includes hub bearing assemblies - see also Q62-G for more detail.		B60B027/00-B60B027/06
Q11-A05	Axles	Includes all axle details including quick release bicycle wheel axles.		B60B035/00-B60B035/18
Q11-A06	Wheel bearings	Also see Q62-G for specific bearing types.	Tapered roller bearings	
Q11-A07	Wheel covers	Includes covers for decorative or aerodynamic purposes.	Hub caps	B60B007/00-B60B007/20
Q11-A08	Castors			B60B033/00-B60B033/08
Q11-A15	Traction increasing equipment	Includes mechanical devices for increasing friction between wheel and the ground.		B60C027/00-B60C027/22
Q11-A15A	Lugs, spikes, snow chains etc.	Includes tyres with built-in or attachable spikes or chains removably fastenable to tyres.		B60B015/00-B60B015/28
Q11-A15B	Applying traction increasing material, e.g. sand	Dispensing of particulate material such as sand in front of tyre path.		B60B039/00-B60B039/12
Q11-A17	Rail engaging arrangements	Includes wheels with flanged edges for engaging rails. Also see Q19-R02 for vehicles usable on road/rail, and possibly Q21 for railway vehicles per se.		B60B017/00-B60B017/02; B60B019/02
Q11-A19	Wheel-axle combinations, e.g. wheel sets	Includes overall novel wheel/axle combination, e.g. the whole rear axle/wheels used on a commercial lorry (also see Q19-C02).		B60B037/00-B60B037/12
Q11-A20	Wheel nuts/fastening elements	Includes wheel nuts and bolts and anti-theft locking wheel nuts (see also Q61-A codes). Also includes quick release wheel fastening elements.	Spinner, skewer	
Q11-A28	Wheel manufacture/assembly/disassembly	Includes equipment for manufacturing and assembling/dismantling wheels, such as metal presses and casting equipment or jigs for enabling manual building of spoked wheels. For apparatus for (de)mounting wheel onto vehicle also see Q16-A02.		B60B029/00; B60B031/00- B60B031/06
Q11-A30	Other wheel details			B60B005/00-B60B005/04; B60B030/00-B60B030/10
Q11-B	Tyres			B60C001/00; B60C003/00- B60C003/08
Q11-B01	Tyre type			
Q11-B01A	Inflatable tyres	Can be used to highlight the fact that the tyre construction is applicable to a pneumatic tyre.		B60C005/00-B60C005/24
Q11-B01A1	Inner tubes			
Q11-B01A3	Emergency or restricted use tyres	Includes tyres that can be temporarily used in a damaged or deflated condition, e.g. using additional inflatable or non-inflatable supporting elements.		
Q11-B01A3A	Run-flat tyres	Includes run-flat arrangements, e.g. by enabling folding of tyre side wall (see also Q11-B05),		
Q11-B01A5	Folding tyres	See Q19-A01 for folding bicycle tyres, and e.g. Q11-B03 for Kevlar (RTM) beads per se.		

Q11-B01H	Heavy duty tyres	Includes tyres used in general heavy duty		
Q11-B01S	Solid tyres	Includes solid rubber tyres and tyres with a solid, e.g. foam material, insert.		B60C007/00-B60C007/28
Q11-B01X	Other tyre types			
Q11-B02	Valves	See also Q66 codes for valves per se.		B60C029/00-B60C029/06
Q11-B03	Beads	Includes beads and other similar ply overlap		B60C015/00-B60C015/06
Q11-B04	Reinforcements or ply arrangements	Includes cross ply, reinforcing cords, layers, inlays etc.		B60C009/00-B60C009/30
Q11-B05	Tyre sidewalls	Includes grooves and rib markings or coloured inlays, e.g. white walls.		B60C013/00-B60C013/04
Q11-B06	Tread bands, patterns and anti-skid inserts	Includes tread patterns, anti-skid inserts vulcanised into tyre and wear-indicators.		B60C011/00-B60C011/24
Q11-B15	Emergency/puncture repair arrangements	Includes emergency use accessories such as tyre sealant sprays to temporarily repair tyre until it can be properly mended/changed.		B60C-017/00-017/10
Q11-B20	Tyre manufacture, mounting and inspection	Includes all mechanical aspects of tyre manufacture such as vulcanising, or equipment for mounting of tyres on wheels (also see Q16-A02) or inspecting tyres. Also includes equipment for balancing wheels and associated balance weights (see also S02-J05 for static or dynamic balance testing per se).		
Q11-B30	Other tyre details	Includes wheel tape used to cover spoke nipples to protect inner tube (see also Q19-A for bicycles).		B60C019/00-B60C023/20
Q11-C	Connections	Includes assemblies between e.g. towing and towed vehicles.		B60D-001/00; B60D007/00
Q11-C01	Traction couplings or hitches	Includes ball and socket hitches or bolt/shackle type hitches mounted on towing vehicle. For power take offs (PTOs) per se, e.g. used on agricultural tractors, see also Q19-G and Q13-C instead. Also includes fifth wheel traction couplings used on articulated lorries (see also Q19-C02). For electrical aspects such as 7pin electrics, see X22-X01A and V04-D codes instead.	Tractor-trailer	B60D001/01-B60D001/07
Q11-C02	Draw gear or towing devices	Includes e.g. Vor Y shaped tubular frameworks and hitch arrangements forming part of towed vehicle. Also includes towing chains or ropes, and safety arrangements such as stabiliser bars fixed to towed vehicle for limiting sway of e.g. towed trailer/caravan.		B60D001/00-B60D001/66; B60K025/02; 60K025/06; B62D053/08-B62D053/12
Q11-C05	Fittings to facilitate pushing			B60D003/00
Q11-C07	Gangways for coupled vehicles	Includes removable walkways between vehicles, e.g. between lorry cab and trailer.		B60D005/00
Q11-C09	Other connection details	Includes damping arrangements for limiting vibration etc. between towing vehicle and towed assembly/trailer.		

Q12 Suspension				
Q12-A	Rigid suspensions; Rigid connection between axle and frame			B60G001/00-001/04
Q12-B	Resilient suspensions	Includes independent resilient suspension for single wheels and resilient suspension for wheel sets or axles with inter-related movement, e.g. live axles.		B60G003/00-B60G003/28; B60G005/00-B60G005/06; B60G007/00-B60G009/04
Q12-B01	Spring arrangements			B60G011/00
Q12-B01A	Leaf			B60G011/02-B60G011/12
Q12-B01B	Coil			B60G011/14-B60G011/16
Q12-B01C	Torsion bar springs			B60G011/18-B60G011/20
Q12-B01D	Rubber springs	Includes elastomers.		B60G011/22-B60G011/24
Q12-B01E	Fluid springs	Includes hydraulic and air springs.		B60G011/26-B60G011/30
Q12-B01F	Combination of different spring types	Includes suspensions employing both coil springs and air springs.		B60G011/32-B60G011/64
Q12-B02	Vibration dampers; Shock absorbers		Damper	B60G013/00- B60G013/02;B60G013/14- B60G013/18
Q12-B02A	Mechanical damper	Includes coil springs used to provide a dampering function.		B60G013/04
Q12-B02B	Fluid damper	Includes hydraulic, pneumatic/air and quasi-fluid, i.e. having powdered medium, dampers.		B60G013/06-12
Q12-B03	Spring/damper combinations	Includes coil-over dampers. This code can be used in conjunction with other Q12-B codes to highlight the type of springs and dampers being used.	Racing car, sports car	B60G015/00-B60G015/14
Q12-B04	Spring/damper characteristic adjustment; Vehicle ride height control	Includes control of air pressure within air springs.	Height control	B60G017/00 –B60G017/08
Q12-B06	Mountings; Brackets	Includes suspension mounting arrangements such as bushes and brackets.	Nylon, poly, bush	
Q12-B07	Suspension connections/linkages	Includes Panhard rods, Watt linkages, trailing arms, wishbones etc. Also includes upper and lower ball joints.	Double wishbones, outboard, inboard	
Q12-B09	Roll/stability control arrangements	Includes mechanical anti-roll bars per se.	Stabiliser	
Q12-B15	Lubrication arrangements		Oil, grease, nipple	
Q12-X	Other suspension details			B60G021/00-B60G025/00

Q13 Powertrain/transmission systems and their control				
Q13-A	Powertrain/Transmission systems	For electrical aspects of transmissions see X22-G codes only.		B60K017/00; B60K017/04-B60K017/16; B60K017/36
Q13-A01	Transmission type			
Q13-A01A	Automatic transmission	Includes transmissions where gears are changed under load, so that power continues to be transmitted to drive wheels while shifting. Includes sun and planet gears, planet carriers etc.		
Q13-A01A1	Double clutch transmission	Includes transmissions using two multiplate clutches arranged on drive side with next gear being preselected in transmission unit not currently transmitting power.		
Q13-A01C	Continuously variable transmission (CVT)	Includes e.g. mechanical belt wrap transmissions.	Toroidal transmission	
Q13-A01E	Semi-automatic	Includes manual transmissions where clutch is electronically disengaged during gear shifting, avoiding the need for a driver's clutch pedal.	Paddleshift, clutchless	
Q13-A01M	Manual transmission	Includes gearing and synchronisers e.g. used to allow collar and gear to make frictional contact before dog teeth make contact to avoid need for double-clutching.	Synchromesh	
Q13-A01X	Other transmission types			
Q13-A02	Torque converter	Includes fluid coupling type torque converters used in multi-speed and automatic transmissions and lockup clutches used to lock the two halves of the converter together to eliminate slippage when the converter is up to speed. Also see Q13-A01A for automatic transmissions per se.	Hydrodynamic torque converter	
Q13-A03	Clutch	Includes both wet and dry plate friction clutches. Also includes mechanical lock-up clutches used in e.g. torque converters (see also Q13-A02).		B60K017/02
Q13-A05	Retarder	Includes hydrodynamic retarders, including primary retarders fitted on drive input side, e.g. for low speed braking of buses, and secondary retarders fitted on drive output side, e.g. for higher speed or downhill braking of trucks.		
Q13-A07	Drive shafts	Includes prop shafts and half shafts. Also includes constant velocity joints and other connections (see also Q63-A codes).	CV joint, universal joint	B60K017/22-B60K017/24
Q13-A09	Differentials	Includes open and limited slip differentials (See Q13-A11 for 4WD diff locks). See also Q13-A11 for mechanical Torsen (RTM) differentials or viscous couplings used in all wheel drive off-road vehicles.	LSD, open, diff, plate, Torsen (RTM), viscous coupling, final drive unit, bevel gears	
Q13-A11	All wheel drive	Includes both permanent and disengageable all wheel drive and four wheel drive systems. Includes viscous couplings, transfer cases and lockable differentials (see also Q13-A09). For electrical aspects of four or all wheel drive systems see X22-G05 instead, and for systems using intelligent brake application see X22-C02 codes.	AWD, 4WD, four-wheel drive, all-terrain, transfer case, high-low range	B60K017/34-B60K017/356
Q13-A15	Cranks		Pedal arm	B62M003/00-B62M003/06; B62M003/16; B62M001/02; B62M001/12; B62M005/00; B62M001/12-B62M001/16; B62M003/14; B62M003/14
Q13-A16	Pedals		SPD, clipless	B62M003/08-B62M003/12
Q13-A18	Chains/belts	Includes endless chains and belts.	Chain, belt	
Q13-A20	Lubrication arrangements	Includes oil seals and drain plugs e.g. for gearboxes or differentials.		
Q13-A22	Cooling arrangements	Includes transmission oil coolers.		
Q13-A30	Other transmission hardware			B60K017/26-B60K017/32

Q13-B	Powertrain/Transmission control arrangements	Includes gear levers per se and gear knobs.	Control	
Q13-C	Auxiliary drives, e.g. from PTO, driven wheel	Includes power take-offs used on e.g. agricultural tractors (see also Q19-G). For mechanical aspects of hitches per se, see Q11-C01.		B60K025/00-B60K025/10
Q13-X	Other transmission details	Includes transaxles, i.e. where gearbox and differential etc. are combined into one unit.		

Q14 Vehicle accessories				
Q14-A	Seats; Saddles			B60N002/00-B60N002/72
Q14-B	Beds			
Q14-C	Safety devices	For electrical aspects, see X22-J11 for general passenger safety devices.		
Q14-C01	Safety belts; Body harnesses	See X22-J03B codes only for electrical aspects of seat belts.	Seatbelt	B60R022/00-B60R022/48
Q14-C02	Inflatable occupant restraints	Includes inflatable airbags, knee bolsters and side/curtain airbags. See X22-J07 only for electrical aspects of airbags.	SRS	B60R021/00-B60R021/34
Q14-C03	Visual signalling, e.g. reflectors	For reflectors built into vehicle light see X22 and X26 codes only.		
Q14-C04	Audible signalling, e.g. horns	Includes mechanical devices only. See X22-B03H and W05 codes for electrical aspects of vehicle horns.		B60Q005/00
Q14-C05	Portable emergency signal devices	For portable illuminated signalling devices see X22-B03E/T07-X and possibly X26 or W05 codes only.	Warning triangle	B60Q007/00-B60Q007/02
Q14-C06	Crash bars, crash pads	See also Q19-A or Q19-B for bicycles and motorcycles respectively. Also includes side impact protection bars (also see Q17-A06 for doors).		B62J027/00; B62J029/00
Q14-C07	Stabilisers	Includes stabilisers used when learning to ride a bicycle (see also Q19-A)		B62H007/00
Q14-C15	Pedestrian safety systems	includes passive systems such as pedestrian friendly bonnets or deformable bumpers (see also Q17-A12).		
Q14-C20	Other safety devices			
Q14-D	Anti-glare equipment; Sun shades; Visors; Curtains; Screens	For electrical aspects such as electrochromic window		B60J003/00-B60J003/06
Q14-E	Mirrors	See X22-J04 only for electrical aspects of vehicle mirrors.	Rear-view	B60R001/00-B60R001/12
Q14-F	Luggage/item storage arrangements			B60R005/00-B60R005/04; B60R011/00-B60R011/06
Q14-F01	Interior compartments/ fittings		Net, cup holder	B60R007/00- B60R007/14
Q14-F02	Exterior fittings/racks e.g. for luggage/sports equipment	Includes panniers and cycle carriers. Also includes removable racks for carrying other equipment such as canoes. See Q15 codes for vehicles specifically designed to carry specific loads.		B60R009/00-B60R009/12
Q14-G	Sidecars; Forecars	Also see Q19-B for motorcycles per se.	Motorcycle	B62K027/00-B62K027/16
Q14-H	Anti-theft arrangements	Includes steering column lock, steering wheel lock, locking wheel nuts (see also Q11-A15) and other mechanical anti-theft assemblies.		B60R025/00-B60R025/10
Q14-H01	Locks	Includes vehicle door lock assemblies. For electrical aspects of vehicle door locks see X22-D01 codes		
Q14-I	Steps, e.g. running boards	Includes lift arrangements, e.g. for disabled person. For disabled person aids used on disabled person-specific vehicles such as invalid carriages, see Q15-B13 also.		B60R003/00-B60R003/04
Q14-J	Stands	Includes supports and holders for parking cycle.		B62H001/00-B62H001/14; B62H003/00-B62H003/12
Q14-K	Mudguards; Chain guards; Weather guards			
Q14-L	Sanitation devices	Includes toilets and washing facilities.		B60R015/00-B60R015/04
Q14-M	Heating/ventilating/air-conditioning systems	Includes mechanical aspects such as ducting and air directing nozzles. For electrical aspects see X22-J02 codes.		B60H001/00-B60H003/06
Q14-N	Windscreen wipers	Includes all aspects of windscreen/window cleaning such as windscreen wiper blades, screen washers, windscreen scraper/sponge etc. For electrical aspects of vehicle windscreen wipers/washers see X22-J01.		
Q14-X	Other vehicle accessories			B60J011/00; B60N003/00- B60N005/00

Q15 Transporting special loads				
Q15-A	Vehicles for transporting special loads and modified to facilitate loading/unloading/consolidating			B60P001/00-B60P001/64
Q15-A01	Using tipping movement of load supporting surface	Includes dump trucks and tipper lorries (see also Q19-E for construction vehicles per se).		B60P001/04-B60P001/34
Q15-A02	Using endless chains and belts	Includes use of cargo (un)loading conveyor belts.		B60P001/36-B60P001/38
Q15-A03	Using screw conveyors	Includes use of screw conveyors e.g. to unload particulate material.		B60P001/40-B60P001/42
Q15-A04	Using loading ramp	Includes use of cargo bed that can be raised to an inclined position to assist unloading.		B60P001/43
Q15-A05	Using loading platform			B60P001/44-B60P001/46
Q15-A06	Using cranes			B60P001/54
Q15-A07	Using rollers			B60P001/52
Q15-A08	Using vibrators or fluid in direct contact with load	See also V06-D for vibration generators, and X22 for electrical aspects of cargo handling arrangements.		B60P001/58-B60P001/62
Q15-A15	Other loading/unloading arrangements			B60P001/02; B60P001/48-B60P001/50; B60P001/56; B60P001/64
Q15-B	Vehicle adapted to transport special loads	Also see Q19 codes for further vehicle applications, e.g. Q19-C for commercial vehicles per se.		B60P003/00
Q15-B01	For transporting prefabricated buildings	Includes vehicles or trailers specifically for transporting mobile homes.		B60P003/022-B60P003/025
Q15-B02	For transporting money or other valuables	Includes armoured cars.		B60P003/03
Q15-B03	For transporting reels	Includes vehicle for transporting large cable or wire drums.		B60P003/035
Q15-B04	For transporting animals/meat	Includes lorries or trailers for transporting live animals such as pigs, sheep or cows, or processed meat.		B60P003/04-B60P003/05
Q15-B05	For transporting refrigerated goods	Includes refrigerated lorries (see also Q19-C02). See also X27 for refrigeration systems per se.		B60P003/20
Q15-B06	For transporting bottles			B60P003/055
Q15-B07	Vehicle/crane transporter	Includes car transporter lorries.		B60P003/06-B60P003/12; B60P003/28
Q15-B08	Tanker vehicles	Includes tanker lorries carrying fluids such as petrol, milk or chemicals.		B60P003/22-B60P003/24
Q15-B09	Spraying vehicles			B60P003/30
Q15-B10	Vehicles with living accommodation	For caravans and mobile homes or camper vans per se, see Q19-F01 and Q19-F02 codes respectively.		B60P003/32-B60P003/39
Q15-B11	For transporting mixed concrete	Also see Q19-E for construction vehicles per se.	Concrete mixer	B60P003/16
Q15-B12	For carrying long loads			B60P003/40-B60P003/41
Q15-B13	For transporting persons	Includes wheelchair lifting arrangements and other vehicle fittings specifically designed to adapt vehicle for solely transporting disabled persons, e.g. invalid carriages. For disabled person aids/accessories such as wheelchair lifts used on conventional vehicles see Q14-I instead. See Q19-H03 for ambulances per se. Electrical aspects of e.g. disabled person aids can be coded in X22-X and S05-K codes.		
Q15-B30	Other vehicle adaptations/modifications	Includes vehicles specifically designed to carry other loads such as gas tanks/cylinders.		B60P003/14; B60P003/18; B60P003/42
Q15-C	On-board weighing arrangements	Also see S02-D codes for weighing per se, and X22-X06K for electrical on-board vehicle weighing arrangements.		B60P005/00
Q15-D	Securing of loads	Includes novel straps and tie-down assemblies for specific loads.		B60P007/00-B60P007/18
Q15-X	Other vehicles predominantly for carrying specific loads			B60P009/00

Q16 Vehicle servicing; maintenance, cleaning equipment; Vehicle design and manufacture				
Q16		When a more specific code exists elsewhere, then Q16 codes are not required. For example, a wheel assembly apparatus can be adequately covered in Q11-A28 and does not require the application of a Q16-D code.		
Q16-A	Vehicle servicing/maintenance/cleaning equipment			
Q16-A01	Vehicle cleaning apparatus	See X25-H09C for electrical aspects of car washers.		B60S001/00-B60S003/06
Q16-A02	Servicing/repairing equipment	Includes all equipment/methods for servicing, maintaining and repairing vehicles. For electrical aspects of vehicle servicing equipment, see e.g. X22-X16. For off-board wheel balancer see S02-J codes and Q11-B20.		B60S005/00-B60S005/06
Q16-A03	Vehicle supporting/lifting/manoeuvring apparatus	See X25-F05 codes for electrical aspects of e.g. vehicle engine hoists or drive-on ramps.	Axle stands, jack	B60S009/00-B60R013/02
Q16-D	Vehicle design/manufacture/assembly	This code is used to highlight a vehicle manufacturing aspect that cannot be covered elsewhere. For vehicle tyre manufacture see Q11-B20 instead. See T01 codes for electrical CAD/CAM systems.		B62D065/00-B62D065/18
Q16-D01	Production line assembly equipment	See X25-X14 only for electrical aspects of assembly line equipment, and X25-F01 codes for e.g. conveyors per se.		
Q16-R	Vehicle salvaging; recycling	See X25-W04 for electrical aspects of vehicle/material recycling.		B62D067/00
Q16-X	Other vehicle servicing/manufacturing equipment not provided for			

Q17 Vehicle construction; Fittings; Propulsion arrangements				
Q17-A	Vehicle construction			
Q17-A01	Under structures; Chassis; Subframe; Connections	Includes tubular spaceframe constructions. Also includes passenger protection arrangements such as crumple zones built into the chassis.		
Q17-A02	Superstructures; Superstructure sub units and connections	Includes side panels, door pillars, fixed roofs, floors etc.		B62K011/02-B62K011/10; B60K011/12; B62M007/00- B62M007/14
Q17-A03	Combined superstructure and frame; Monocoque	Includes monocoques used in racing cars (see also Q19-F03).		
Q17-A04	Cycle frames	See also Q19-A for bicycles per se. Also includes motorcycle frames (see also Q19-B).		B62D025/00-B62D033/10
Q17-A05	Streamlining arrangements	Includes spoilers and other valances or wind deflectors. For electrical aspects of exterior fittings such as speed responsive spoilers, see X22-X05 only.		B62D023/00
Q17-A06	Doors	For electrical aspects such as electric sliding doors or electric door locks, instead see X22-X05 and X22-D01 codes respectively. Includes side impact beams (see also Q14-C06 for crash bars per se).		
Q17-A07	Windows	For electrical aspects see X22-H codes only.		B62D035/00-B62D039/00
Q17-A08	Sunroof; Removable roof panels; Convertible soft top roof	For electrical aspects see X22-J08 only.	Targa top, roadster	B60J005/00-B60J005/14
Q17-A09	Sealing arrangements	Includes rubber seals and other water-proofing arrangements.	Drainage channel, sealing strip	B60J001/00-B60J001/20
Q17-A10	Body finishing arrangements	Includes decorative trim elements and liners for load compartments such as pick-up truck load beds.	Rubbing strip	B62D021/00-B62D021/20; B62D024/00-B62D024/04
Q17-A11	Dashboard; Instrumentation	Includes plastic dashboard mouldings, mountings and clips. See X22-E only for electrical aspects of vehicle dashboards/instrumentation, and S02 codes for dials/displays.		B60J010/00-B60J010/12; B60R- 013/06-B60R-013/07
Q17-A12	Exterior fittings; Bumpers	Includes bullbars and A-frames mounted on front of off-road vehicle. For pedestrian friendly bumpers see Q14-C15 also.		B60R013/00-B60R-013/04; B60R013/10
Q17-A13	Spare wheel stowing, holding or mounting arrangements			B60K035/00-B60K037/06
Q17-A14	Endless track arrangements	Includes e.g tank and bulldozer Caterpillar (RTM) tracks (see also Q19-D and Q19-E codes for military and construction vehicles per se). Also see Q19-X for unspecified type tracked vehicles.		B60R019/00-B60R019/56
Q17-A15	Air cushion vehicle equipment	See also Q19-R01 for air cushion vehicles per se. Includes inflatable skirts. Also see Q24 codes for hovercraft per se.	Hovercraft	B62D043/00-B62D043/10
Q17-A20	Other vehicle constructions/fittings			B62D041/00; B62D049/00- B62D051/00
Q17-E	Engine propulsion arrangements	This can be applied to highlight vehicle engine application, with novel engine details/internals being covered in e.g. Q51 codes for novel internal combustion engine details. For electrical aspects of vehicle engines see X22-A codes only.		
Q17-E01	Engine mounting arrangements	For electrically controlled vibration reducing engine mountings see X22-A12 only.	Bush	B60K003/00-B60K006/12; B60K008/00
Q17-E02	Engine cooling arrangements	Includes radiators per se. For electrical aspects of engine cooling, such as electric water pumps, see X22-A10 only.	Water, cooling, antifreeze	B60K011/00-B60K011/08
Q17-E03	Engine lubricating arrangements	Includes e.g. sumps and oil pick up pipes. See X22-A09 for electrical oil pumps etc.	Oil	
Q17-E04	Fuel supply arrangements; Fuel tanks	Includes tanks for storing petrol, diesel, hydrogen etc. For electrical fuel supply arrangements see X22-A02 codes and X22-A03A codes for corresponding control details.	Fuel, tank, carburettor	B60K015/00-B60K015/10; B62J035/00-B62J037/00

Q17-E05	Propulsion unit control arrangements	Includes e.g. throttle cables, accelerator pedals, hand controls etc. For electrical aspects such as electronic throttle controls and electric pedal details see X22-A03B and X22-X12 codes instead.	Control	B60K026/00-B60K; B60K041/00-B60K041/20
Q17-E15	Other propulsion details	Includes engine heating/warming arrangements e.g. using diverted exhaust gas. Also includes vehicle exhaust systems (see also Q51-J codes) and turbo/superchargers (see also Q51-H05A).		B60K013/00-B60K013/06; B62D057/00-B62D057/04
Q17-N	Noise/Vibration/Harshness reduction arrangements	Includes all mechanical aspects associated with reducing noise, vibration and harshness within vehicle, such as use of sound deadening materials. This can be used in conjunction with other Q codes as appropriate, e.g. with Q12 for suspension based NVH reduction. For electrical NVH aspects see the relevant X22 codes such as X22-G03N for transmission based NVH reduction, X22-X08 for general passenger compartment noise reduction and X22-A12 for engine noise/vibration reduction.	NVH	B60R-013/08
Q17-X	Other vehicle construction; Fittings; Propulsion arrangements not provided for			B60K016/00; B60R017/00-B60R017/02; B60R027/00; B62D061/00-B62D063/04

Q18 Brake systems; Steering systems; Control				
Q18	Brake systems; Steering systems; Control	Includes mechanical aspects only. For electrical aspects of vehicle braking and steering systems see X22-C02/X22-C05 codes instead.		
Q18-A	Braking systems; Control	For electrical aspects of braking systems, see X22-C02 codes only.		B60K041/20; B60K041/24-B60K041/26
Q18-A01	Braking system components			B60T001/00-B60T001/16; B60T015/00-B60T017/16; B60T011/00-B60T011/34; B60T013/00-B60T013/74
Q18-A01A	Discs	Includes novel brakes discs per se.		
Q18-A01B	Drums	Includes novel brakes drums per se.		
Q18-A01C	Pads	Includes novel brake pads and associated materials.		
Q18-A01D	Callipers	Includes novel hydraulic brake callipers and mechanical cable operated callipers.	4-pot, V, side-pull, cantilever	
Q18-A01E	Cylinders/reservoirs, e.g. master cylinder			
Q18-A01F	Valves			
Q18-A01G	Brake force adjusting arrangements	Includes brake bias valves (also see Q18-A01E). Includes all systems and methods for adjusting braking force. See X22-C02C for electrical brake pressure control systems.		B60T008/00-B60T010/04
Q18-A01X	Other brake system components	Includes brake pipes, hoses, hydraulic lines, clips etc.		
Q18-A03	Brake assemblies	These codes are only applied when the brake system as a whole is novel. For individual novel brake system components such as discs or callipers see the relevant Q18-A01 codes only .		
Q18-A03A	Disc brake assemblies			
Q18-A03B	Drum brake assemblies			
Q18-A03C	Brake assemblies with braking member acting on periphery of drum or wheel rim etc.	Includes bicycle cantilever brakes (see also Q19-A).		
Q18-A03X	Other brake assemblies			
Q18-A05	Brake cooling arrangements			B60T005/00
Q18-A07	Brake action initiating devices	Includes mechanical driver actuated devices. For electrical aspects of brake actuation devices see X22-X12 and X22-C02 codes.		B60T007/00
Q18-A07A	Foot pedal	Includes brake pedal per se and aftermarket alloy drilled pedal pads or rubber covers. See X22-X12 only for electrical aspects of brake pedals.		B60T007/02-B60T007/06
Q18-A07B	Hand control (e.g. brake lever)	includes brake levers (also see Q19-A for bicycles and Q19-B for motorcycles).		B60T007/08-B60T007/10
Q18-A07C	Automatic brake initiation	For electrical aspects of automatic brake initiation see X22-C02D codes only.		B60T007/12-B60T007/22
Q18-A10	Portable wheel chocks	Includes portable chocks e.g. for preventing vehicle from moving during servicing or wheel changing.		B60T003/00
Q18-A15	Brake safety devices; Monitoring	Includes mechanical aspects of e.g. brake safety such as brake pad wear indicators (see also Q18-A01B).		B60T017/18-B60T017/22
Q18-A30	Other brake systems	Includes deployable braking parachutes. Also includes exhaust braking, e.g. used on diesel engine trucks (see also Q19-C02 and Q51-D03) for sustained slowing down long hills, to prevent overheating of mechanical friction brakes (also see Q51-J for		
Q18-B	Steering systems; Control	For electrical aspects of steering systems, see X22-C05 codes only.		
Q18-B01	Steering controls	For electrical aspects of e.g. steering wheels, see X22-C05C only.		B62D001/00-B62D001/02
Q18-B01A	Hand wheels; Steering wheel	Includes steering wheels per se and covering elements. See Also Q14-C02 for steering wheel		B62D001/04-B62D001/11
Q18-B01B	Hand levers			B62D001/12-B62D001/14

Q18-B01C	Handlebars; Grips; Stems	Includes handlebars, grips, stems, bar-ends etc. (also see Q19-A for bicycles and Q19-B for motorcycles per se).		
Q18-B01D	Steering column	Includes column per se.		B62D001/16-B62D001/20
Q18-B01D1	Rake/reach adjustment mechanisms	Includes telescopic and tiltable steering columns to enable adjustment of driving position.		
Q18-B01D3	Clamps	Includes steering column mounting clamps.		
Q18-B01X	Other steering controls			B62D001/22-B62D001/28
Q18-B02	Steering gears/racks	Includes steering racks and associated pinion gears.		B62D003/00
Q18-B02A	Mechanical type	Includes steering arrangements utilising a mechanical rack/gear arrangement. If hydraulic power assistance is also used see Q18-B06C as well.		B62D003/02-B62D003/12
Q18-B02B	Hydraulic type	Includes systems using hydraulic piston/cylinder assemblies instead of a mechanical rack arrangement to displace steering arms. Also see Q18-B06C for hydraulic power steering.		B62D003/14
Q18-B03	Steering linkages; Stub axles or their mounting	Includes universal joints, e.g. for interconnecting upper and lower steering columns, and tie rod ends.		B62D007/00-B62D007/22
Q18-B06	Power assisted steering systems	For electrical power assisted steering systems see X22-C05A codes only.		B62D005/00
Q18-B06A	Mechanical, e.g. using power take-off			B62D005/02
Q18-B06C	Fluid	Includes hydraulic power assistance.		B62D005/06-B62D005/32
Q18-B07	Automatic steering control arrangements	For electrical automatic steering systems see X22-C05B only.		B62D006/00-B62D006/10
Q18-B09	Other deflectable wheel steering apparatus	Includes passive four wheel steering (4WS) systems (see X22-C05A1 only for electrical 4WS systems).		B62D009/00-B62D009/04; B62K001/14
Q18-B12	Steering non-deflectable wheels, i.e. endless tracks	Includes steering of tracked vehicles. (also see Q19-D for military tanks and Q19-E for bulldozers).		B62D011/00-B62D011/24
Q18-B15	Other steering arrangements not provided for			B62D012/00- B62D019/00;B62K011/12
Q19 Vehicle applications				
Q19-A	Cycles	Includes bicycles, unicycles, tricycles, tandems, recumbent cycles. For electrical aspects or accessories for bicycles, see X22-P01 only.		(B62K001/00; B62K003/00- B62K003/16; B62K013/02; B62K005/02-B62K005/06; B62K009/02; B62K013/04; B62K009/00-B62K009/02; B62K007/00-B62K007/04; B62K013/06)
Q19-B	Motorcycles; Scooters; Mopeds	See X22-P02 only for electrical aspects of motorcycles.		B62J035/00-B62J037/00; B62K011/00-B62K011/14; B62M007/00-B62M007/14
Q19-C	Commercial vehicles	See X22-P05 codes only for electrical aspects of commercial vehicles.		
Q19-C01	Bus/Coach	See X22-P05A for electrical aspects of buse and coaches.		B62D031/00-B62D031/04; B62D047/00-B62D047/02
Q19-C02	Lorry/Truck	Includes tractor-trailer over-the-highway vehicles. See X22-P05B for electrical aspects of lorries.	Articulated lorry, HGV	B62D053/00-B62D053/12
Q19-C03	Taxi	See X22-P05C for electrical aspects of taxis.		
Q19-C04	Refuse collecting vehicle	See X22-P05X for electrical aspects of dust carts.		B65F003/B65F003/28
Q19-C05	Snow removing vehicle; Snow plough; Road cleaning vehicles	See X25-U05 for electrical aspects of road cleaning and X22-P05X e.g. for snow ploughs.	Road sweeper	
Q19-C06	Forklift truck	See X25-F05A and X21-A01B or X22-P05F for electrical aspects of forklift trucks.		
Q19-C07	Hearse			A61G021/00
Q19-C09	Other commercial vehicles	Includes milk floats, pick-up trucks and commercial vans.		
Q19-D	Military vehicles	Includes tanks, armoured personnel carriers etc. See W07 and possibly X22-P06 for electrical aspects of military vehicles.		F41H007/00-F41H007/10; F41H011/16

Q19-E	Construction vehicles	Includes bulldozers, excavators and cranes. See X25-U (construction), X25-D01 (earth mover) and X22-P07 for electrical aspects. For unspecified use tracked vehicles see Q19-X instead.		
Q19-F	Recreational vehicles	Includes MPVs (multipurpose vehicles), SUVs (sports utility vehicles), people carriers and quad bikes. See X22-P08 for electrical aspects of recreational vehicles.	RV	
Q19-F01	Caravan; trailer tent			
Q19-F02	Camper van; Motorhome	For equipment adapting vehicle to provide living or sleeping accommodation see Q15-B10.		
Q19-F03	Racing/sports cars; Go-carts	See Q22-C instead for children's push-along go-karts.		
Q19-F04	Snow mobile	For sledges see Q22-C01 instead.		
Q19-G	Agricultural vehicles	Includes tractors, combine harvesters and agricultural implements. See X22-P09/X22-X11 and X25-N codes for electrical aspects of agricultural vehicles per se.		A01D090/00-A01D090/16
Q19-H	Emergency vehicles	See X22-P10 only for electrical aspects of emergency vehicles.		
Q19-H01	Police car			
Q19-H02	Fire engine			A62C027/00
Q19-H03	Ambulance			A61G003/00-A61G003/08
Q19-J	Trailers	See also Q19-C02 for articulated lorry trailers. For electrical aspects of trailers see X22-P11 only.		B62D013/00-B62D013/06; B62D021/20; B62D059/00- B62D059/04; B62D063/06- B62D063/08
Q19-P	Electric vehicle	Only mechanical aspects of electric vehicles are coded here. See the electrical X21 codes only, when the novelty is electrical in nature.		
Q19-Q	Hybrid vehicle	Only includes mechanical aspects of hybrid vehicles.		
Q19-Q01	Hybrid-electric	Includes series/parallel/mixed hybrid-electric and hybrid-fuel cell vehicles. See X22-P04 and X21-A01D codes only for hybrid electric vehicles where the novelty is electrical in nature.		
Q19-Q05	Hybrid-mechanical	Includes hybrid-flywheel and hybrid-pneumatic		
Q19-R	Convertible vehicles (usable on/in different terrain)			
Q19-R01	Amphibious vehicles; Air cushion vehicles, e.g. for transporting heavy loads over small distances	Includes hovercraft type vehicles. Also see Q24-P10 and Q24-P30 for mechanical aspects for marine hovercraft and amphibious vessels respectively, or W06-C codes for electrical aspects.		B60F003/00; B60V001/00- B60V001/22; B60V003/00- B60V003/02
Q19-R02	Vehicles usable on road/rail	Includes motor vehicles with outriggers to allow travel on railway track. Also see Q21 for mechanical railway details, or X22-X and X23-A codes for electrical aspects.		B60F001/00-B60F001/04
Q19-R03	Vehicles convertible into aircraft	Also see Q25 for mechanical aspects of aircraft, or W06-B codes for electrical aspects.		
Q19-R09	Other convertible vehicles usable in or on different media			B60F005/00-B60F005/02
Q19-X	Other vehicle types	Includes unspecified use tracked vehicles (see Q17-A14 for endless track arrangements per se).		

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Section Q2				
Q21 Railways				
Q21	Railways	For electrical aspects of railways see X23 codes.		
Q21-A	Railway track arrangements/construction			B61B001/00-B61B001/02
Q21-A01	Track construction per se	Includes mechanical aspects such as track rails and sleepers per se. Also includes track maintenance assemblies and maintenance vehicles. For track inspection, see Q21-C03I instead.		
Q21-A02	Railway stops fixed to permanent way; Track brakes; Sand tracks; Buffers			B61K007/00-B61K007/22
Q21-A03	Stations; Station equipment	Includes platform doors, turnstiles etc. See X23-A09A for electrical offboard/station aspects.		
Q21-A04	Track/station based equipment for transferring passengers, articles or freight to or from train	Includes gangplank and ramp assemblies. For train mounted aspects, see Q21-J06 and Q21-J07 codes instead.		B61K001/00-B61K001/02
Q21-A05	Track based rail or wheel flange lubrication devices			B61K003/00-B61K003/02
Q21-A06	Turntables; Traversers			B61J001/00-B61J001/10
Q21-A07	Shunting or short distance haulage devices			B61J003/00-B61J003/12
Q21-A08	Track mounted derailleurs; Apparatus for placing vehicles on track	Includes portable or fixed track mounted jacks and hoists for lifting rail cars. For train mounted lifting apparatus see Q21-M03 instead.		B61K005/00-B61K005/02
Q21-A15	Other railway track arrangements			B61J001/12
Q21-B	Railway type	These codes are intended to highlight specific types of special railways.		
Q21-B01	Elevated railway	See also Q21-B02 for monorail systems.		B61C013/04
Q21-B01A	With suspended vehicles			B61B003/00-B61B003/02
Q21-B01B	Without suspended vehicles			B61B005/00-B61B005/02
Q21-B02	Monorail	See also Q21-B01 for elevated monorail systems.		B61B013/04-B61B013/06; B61C013/08
Q21-B03	Rope/cable railways	Includes aerial runways. See also Q21-C01D1 for novel traction arrangements utilising cables, ropes or chains.		B61B012/00-B61B012/12; B61H009/02; B61B007/00- B61B007/06; B61C013/06
Q21-B03A	Tramway or funicular system	Includes tramways or funiculars using rigid tracks and cable or chain traction. For trams per se see Q21-C03G instead. For novel cable/chain traction assemblies see Q21-C01D1 also.		B61B009/00; B61D013/00- B61D013/02
Q21-B03B	Power-and-free systems	Includes overhead systems with suspended vehicles that can be engaged with drive train when powered or disengaged when in free unpowered or stopped mode. For power and free conveyors see Q35 class or X25-F codes if electrical.		B61B010/00-B61B010/04
Q21-B03C	Ski lift, sleigh lift or trackless systems with guided towing cables only			B61B011/00
Q21-B04	Rack railway			B61B013/02; B61C011/04
Q21-B05	Sliding or levitation systems			B61B013/08
Q21-B05A	Magnetic suspension arrangements	See X23-A01A4 and X12-C codes for electrical aspects of magnetic levitation systems and electro-and super-conducting magnets per se.		B60L013/00; B60L013/04- B60L013/10
Q21-B09	Other railway types	Includes tunnel systems. Also see Q35 class for e.g. pneumatic tube conveying arrangements or X25-F codes for electrical conveying systems.		B61B013/00; B61B015/00; B61C013/00-B61C013/02
Q21-C	Locomotive/motor railcar type	These codes are applied to classify the locomotive type when the novelty being coded is mechanical. If the novelty is electrical in nature then see X23 and other EPI codes instead.		
Q21-C01	Type of propulsion for locomotive or railcar			
Q21-C01A	Steam locomotives or railcars			B61C001/00-B61C001/14; B61C009/02-B61C009/06

Q21-C01B	Electric locomotives or railcars	This code is applied when the novelty of the patent is mechanical but is applicable specifically to electric locomotives. See X23 codes instead when the patent novelty is electrical in nature.	B61C003/00-B61C003/02; B61C009/38-B61C009/52
Q21-C01C	IC engined or gas turbine engined locomotives or motor railcars	See also Q21-C01B for diesel-electric locomotives.	B61C005/00-B61C005/04; B61C009/08-B61C009/36
Q21-C01D	Other propulsion systems for locomotives or motor railcars (e.g. with propulsion devices between or alongside rails, e.g. pneumatic systems.		B61B013/12) (B61C007/00- B61C007/04;B61C011/00
Q21-C01D1	Tractive effort applied to cables or chains	See also Q21-B03 codes for e.g. funiculars.	B61C011/02
Q21-C01D2	Tractive effort applied to racks		B61C011/04
Q21-C01D3	Tractive effort applied or supplied by aerodynamic force or fluid reaction		B61C011/06
Q21-C03	Type of carriage or wagon	These codes are intended to highlight specific types carriage or wagon construction.	
Q21-C03A	Passenger carriages	This code is mainly applied when the novelty relates to the carriage superstructure itself or fittings such as windows, doors or bulkheads etc. permanently mounted to/inside the carriage. Novel accessories such as seats used in a passenger carriage are not normally included here (see Q21-J03).	B61D001/00-B61D001/08
Q21-C03B	Wagons or vans	Includes freight wagons.	B61D003/00-B61D003/20
Q21-C03C	Tank wagons for carrying fluent materials	Includes tankers for carrying liquids.	B61D005/00-B61D005/06
Q21-C03D	Hopper cars	Includes e.g. wagons for carrying particulate material with dispensing openings at bottom of wagon.	B61D007/00-B61D007/32
Q21-C03E	Tipping wagons		B61D009/00-B61D009/14
Q21-C03F	Mine cars	See X25-D02 for electrical aspects of mining vehicles.	B61D011/00-B61D011/02
Q21-C03G	Tramway vehicles	The code is applied for novel trams per se. For cable/rope driven tram or funicular railways in general see Q21-B03A instead.	B61D013/00-B61D013/02
Q21-C03H	Buffer cars		B61D015/06
Q21-C03I	Railway inspection trolleys	Includes all types of railway inspection vehicles. For novel track maintenance vehicles, also see Q21-A01.	B61D015/08-B61D015/12
Q21-C03X	Other railway vehicles		B61D015/00-B61D015/04
Q21-D	Rail vehicle construction; fittings; Underframes; Suspension; Transmissions		B61D017/00; B61D017/24- B61D017/26
Q21-D01	Superstructures	Includes wall panels, floors, bulkheads and roofs etc. For movable roof assemblies see Q21-D17 instead.	
Q21-D02	Underframes; Chassis		
Q21-D03	Bogies	Includes wheel/axle assemblies fastened to chassis.	
Q21-D04	Connections between underframes and bogies, e.g. to allow relative movement	Includes suspension arrangements. See X23-A01C for electrical aspects of railway suspension systems.	
Q21-D05	Adjustment of wheel axles or bogies when rounding curves	Includes e.g. passive carriage tilt control. See X23-A01C for railway train active suspension/carriage tilt control. Also includes arrangements for adjusting orientation/steering of wheels e.g. when rounding bend to reduce wheel flange and rail head wear.	B61F005/38-B61F005/48
Q21-D06	Axle boxes and their mounting	Includes wheel bearing arrangements inside axle box.	B61F015/00-B61F015/28; B61F005/28-B61F005/36
Q21-D07	Lubrication assembly for axle box	Includes lubrication arrangements and oil sumps for axle box wheel bearings.	
Q21-D08	Arrangements to allow use on tracks of different width	Includes systems for adjusting wheel spacing to allow train to run on different gauge tracks.	B61F007/00
Q21-D09	Derailment preventing equipment		B61F009/00
Q21-D10	Rail engaging elements, e.g. wheels or balls	Includes wheels and other assemblies for engaging tracks, overhead rails etc.	B61F011/00
Q21-D11	Wheel guards; Bumpers; Obstruction removers		B61F019/00-B61F019/10
Q21-D12	Couplings; Draught or buffering appliances		
Q21-D12A	Couplings	Includes couplings between carriages.	B61G001/00-B61G007/14

Q21-D12B	Draw gear			B61G009/00-B61G009/24
Q21-D12C	Buffers			B61G011/00-B61G011/18
Q21-D13	Transmission systems	Includes power transmission arrangements.	Drive shaft, gearing	B61C009/00-B61C009/52
Q21-D14	Aerodynamic modifications to reduce air resistance	Includes spoilers and other wind deflectors, especially for high speed trains.		B61D017/02-B61D017/22
Q21-D15	Doors			B61D019/00-B61D019/02
Q21-D16	Windows			B61D025/00
Q21-D17	Movable roofs; Covers; Tarpaulins	For fixed roofs see Q21-D01 for novel train superstructures.		B61D039/00
Q21-D25	Other rail vehicle constructions, fittings	Includes constructions/fittings designed for safety purposes, such as fire resistant bulkheads (see also Q21-D01). Accessories such as fire extinguishers are included in Q21-J09 only.		
Q21-F	Brake systems	See X23-A01B for electrical braking systems. Q18-A codes may also need to be applied when they provide a more detailed breakdown of the brake system.		
Q21-F01	Braking arrangements acting on wheels			B61H001/00-B61H005/00
Q21-F02	Brakes with braking members co-operating with track			B61H007/00-B61H007/12
Q21-F03	Hydrostatic, hydrodynamic or aerodynamic brakes	Includes air brakes.		B61H011/06-B61H011/10
Q21-F04	Brake wear compensating mechanisms	Includes mechanical adjusters to compensate for brake pad wear.		B61H015/00
Q21-F05	Brake actuation mechanisms	Includes brake actuating levers.	Dead mans handle	B61H013/00-B61H013/38
Q21-F09	Other braking arrangements			B61H009/00-B61H009/06; B60H011/00-B60H011/04; B60H011/14-B60H011/16
Q21-J	Rail vehicle accessories	See X23-A13 for electrical train accessories. Other Q14 codes may also need to be applied when a more detailed breakdown exists.		
Q21-J01	Sleeping accommodation; Beds	See X27-A03 for electrical aspects of furniture per se.		B61D031/00
Q21-J02	Heating; cooling; ventilating; air-conditioning	Includes mechanical ducting and vents.		B61D027/00
Q21-J03	Seats			B61D033/00
Q21-J04	Sanitation arrangements	Includes toilets and washing facilities.		B61D035/00
Q21-J05	Steps	Includes all train mounted arrangements for assisting boarding of passengers such as fixed or movable steps, or wheelchair lifting or ramp assemblies etc.		B61D023/00-B61D023/02
Q21-J06	Cargo/luggage loading and unloading arrangements	Includes cargo loading ramps and hoists. For platform based cargo/passenger handling, see Q21-A04 instead.		B61D047/00
Q21-J07	Cargo/luggage storing/securing arrangements	Includes cargo storage compartments and restraining devices such as luggage nets or straps.		B61D045/00
Q21-J09	Other rail vehicle accessories	Includes accessories designed for safety purposes such as fire extinguishers and glass hammers mounted inside train. See Q21-D25 for train constructional features designed specifically for safety purposes.	Fire extinguishers, emergency	B61D037/00; B61D041/00- B61D043/00; B61D049/00; B61K013/00-B61K013/04
Q21-M	Locomotive servicing/maintenance; Cleaning; Train/track design and manufacture	For track maintenance equipment see Q21-A01 instead. Track inspection vehicles are coded in Q21-C03I only.		
Q21-M01	Train cleaning apparatus	Includes equipment for washing the exterior of the train or train specific equipment for cleaning the inside of the train.		Train cleaning apparatus
Q21-M02	Locomotive servicing equipment, e.g. filling locomotive with water or sand	Includes water columns and coal bunkers (see also Q21-C01A for steam locomotives).		B41K011/00, B61C008/00, B61K011/02
Q21-M03	Rail vehicle mounted locomotive supporting/lifting/manoeuvring apparatus (e.g. breakdown recovery train)	Includes train mounted cranes for manoeuvring train after derailment or accident. For track mounted equipment such as cranes and jack assemblies, see Q21-A08 instead.		B61K005/04-B61K005/06

Q21-M05	Train design/manufacture/assembly/refurbishment	See e.g. T01 codes for computer/CAD/CAM systems for train design and manufacture.		B62D065/00-B62D065/18
Q21-M09	Other locomotive servicing/manufacturing equipment not provided for			
Q21-S	Safety and signalling equipment	For electrical aspects of railway safety or signalling see X23-B codes.		B61K009/00
Q21-S01	Points and signalling	See X23-B03 for electrical aspects of points and signals and their operation.		B61L005/00
Q21-S01A	Points and scotch blocks and their operating devices	Includes locking mechanisms for points.		B61L005/02-B61L005/10; B61L011/00-B61L011/08
Q21-S01C	Signals and their operating devices	For warning signals used at level crossing to warn motorists, see Q21-S07C.		B61L013/00-B61L013/04
Q21-S01C1	Visible signals	Includes flags, semaphores and reflectors. See X23-B03 for electrical/illuminated signals.		B61L005/12-B61L005/18
Q21-S01C2	Audible signals	Includes pneumatic horns.		B61L005/20-B61L005/24
Q21-S01C3	Signalling indicators on train			B61L015/00-B61L015/02
Q21-S01E	Arrangement for interlocking between points and signals	See X23-B04A codes for electrical interlocking between points and signals.		B61L019/00-B61L019/16
Q21-S05	Train traffic control; Track/station blocking	Includes arrangements for dividing track into block sections so that multiple trains are not present in a signal block, to reduce the risk of collisions. See X23-B04C for electrical aspects of track/station blocking.	Anti-collision	B61L023/00; B61L023/34
Q21-S05A	For controlling traffic in one direction only		One-way	B61L023/08-B61L023/20
Q21-S05C	For controlling traffic in two directions over same pair of rails	Includes e.g. using token system, tablets, staffs etc.	Single track	B61L023/22-B61L023/32
Q21-S07	Safety systems for rail/road crossing traffic	See X23-B05A and maybe T07-A05A for electrical aspects of railway crossing systems.		B61L029/00
Q21-S07A	Guards; Gates	Includes mechanical gates and barriers per se.		B61L029/02-B61L029/06
Q21-S07B	Operation of gates	Includes actuating arrangements for opening and closing gates/barriers.		B61L029/08-B61L029/22
Q21-S07C	Warning devices for road traffic	See T07-A05A for electrical aspects of railway crossing road traffic warning systems.		B61L029/24-B61L029/32
Q21-X	Other locomotive aspects	Includes locomotive aspects that are not covered elsewhere.		B61J005/02; B61K003/02

Q22 Hand/animal drawn vehicles				
Q22-A	Hand carts			
Q22-A01	With single axis carrying transport wheels	Includes wheelbarrows.		B62B001/00-B62B001/26
Q22-A02	With more than one axis carrying transport wheels	Includes four-wheeled barrows.		B62B003/00-B62B003/18
Q22-A03	Accessories for hand carts	Includes handle grips and brakes.		B62B005/00-B62B005/08
Q22-B	Carriages for children; Perambulators		Pram, pushchair	B62B007/00
Q22-B01	With single wheel axis			B62B007/02
Q22-B02	With more than one wheel axis	Includes three and four wheeled, twin axle pushchairs		B62B007/04-B62B007/14
Q22-B03	Accessories for children's carriages/perambulators	Includes luggage racks, bottle holders etc.		B62B009/00-B62B009/28
Q22-C	Other hand propelled vehicles	Includes unpowered children's go-karts.		B62B011/00
Q22-C01	Sledges/ice boats		Toboggan	B62B013/00-B62B019/04; B62M027/00-B62M027/02
Q22-C02	Wheelchairs	See S05-G02A for electrical aspects of wheelchairs, and X21-A01A and S05-K01 for electrical aspects of mobility vehicles.		
Q22-D	Land vehicles drawn by animals	Includes e.g. horse-drawn carts.	Sulky	B62C001/00-B62C011/04

Q24 Ships; Waterborne vessels; Related equipment				
Q24-A	Ship construction; Fittings			
Q24-A01	Hulls			
Q24-A01A	Hydrodynamic or hydrostatic features	Includes e.g. hydrofoils and hydroplanes. Also includes other features such as shock-wave/drag reducing bow assembly.		
Q24-A01B	Hull shell			
Q24-A01C	Frames			
Q24-A01D	Keels	See Q24-E05A instead for movable rudders.		
Q24-A01D1	Movable/drop keels/centre boards			
Q24-A01E	Stern posts			
Q24-A01F	Shaft brackets			
Q24-A01G	Stems			
Q24-A01H	Decks	Includes flooring.		
Q24-A01I	Bulkheads	Also see Q24-B09H for watertight arrangements for bulkheads.		
Q24-A01J	Gratings			
Q24-A01K	Panellings; Linings	Includes dividing walls/partitions.		
Q24-A01L	Reinforcements for carrying localised loads			
Q24-A01M	Collapsible; foldable; inflatable hulls	Includes inflatable dinghy hull assemblies.		
Q24-A01N	Ballasting; Self-bailing equipment; Scuppers	Includes bilge pumps.		
Q24-A01P	Other hull details	Includes catamaran twin hull arrangements and trimaran triple hull arrangements.		
Q24-A03	Windows; Doors; Ports			
Q24-A03A	Windows; Port holes			
Q24-A03B	Doors			
Q24-A03C	Ports; Hatches			
Q24-A05	Superstructures; Masts	Includes conning towers. See W06-A codes for radar installations and W02 codes for radio masts etc.		
Q24-A15	Other ship construction; fittings			
Q24-B	Ship accessories	Includes ship accessories that are not covered below, such as mechanical aspects of shipboard lighting or signalling (see also X26 for lighting per se).		
Q24-B01	Passenger/crew accommodating arrangements; Cabins; Galleys	Includes mechanical kitchen equipment specifically for ship and other passenger/crew cabin arrangements.		
Q24-B01A	Furniture – vessel specific	Includes furniture specifically designed for marine/ship application, such as seats, beds etc.		
Q24-B01C	Sanitation arrangements			
Q24-B01C1	Toilets			
Q24-B01C2	Washing facilities; Showers	See X27-A02A4 for electrical aspects of showers and wash basins, and X27-E03A for electrical aspects of water heating.		
Q24-B02	Load accommodating arrangements			
Q24-B02A	Load accommodating compartments	Includes e.g. movable/detachable decks, and storage tanks.		
Q24-B02C	Ship-board load handling arrangements	Includes e.g. derricks, cranes, winches, chutes, cableways, conveyors for loading/unloading.		
Q24-B03	Heating; Ventilating; Air-conditioning	Includes mechanical aspects only. See W06-C01C5 for electrical aspects of HVAC systems.	Duct, vent	
Q24-B05	Instrumentation	Includes e.g. mechanical gauges, periscopes. See S02 codes for further details of instrumentation per se, and W06-B01B codes for electrical instrumentation details.		
Q24-B07	Desalination plants – fresh water production			
Q24-B09	Emergency/safety equipment	Includes ship-board safety devices. For personal equipment such as life jackets and life rings etc. see Q24-X01A instead.		
Q24-B09A	Fire fighting equipment	For electrical aspects such as fire alarms or automatic sprinkler systems, see W05-B and W06-C codes respectively.	Fire extinguisher, hose	
Q24-B09C	Life boat equipment			
Q24-B09C1	Fastening or storage on deck			

Q24-B09C2	Deployment devices	Includes e.g. hoists, davits, winches.	
Q24-B09E	Reducing risk of capsizing or sinking		
Q24-B09E1	by improving stability	Includes use of e.g. ballast tanks	
Q24-B09E3	by improving buoyancy	Includes use of e.g. buoyancy chambers, and emergency inflatable devices used to prevent the vessel from sinking.	
Q24-B09G	Anti-collision arrangements, e.g. feelers	Includes all arrangements designed to reduce possibility of collision.	
Q24-B09H	Watertight arrangements	Includes e.g. watertight doors/bulkheads (see also Q24-A01H and Q24-A03B).	
Q24-B10	Waste water/Sewage treatment plants	See Q24-B01C for sanitation and toilet systems per se.	
Q24-C	Tying-up; anchoring, towing/pushing equipment		
Q24-C01	Mooring equipment	See Q24-C05 only for mooring accessories such as chains. Applied when mooring against jetty, pier or other vessel.	
Q24-C02	Anchoring arrangements	See Q24-C05 only for anchoring accessories such as chains. Applied when ground-engaging anchor is utilised.	
Q24-C02A	Anchors		
Q24-C03	Boat hooks		
Q24-C04	Towing/pushing equipment	Includes couplings between towed and towing vessels. See Q24-P15 for tugs per se.	
Q24-C05	Ancillaries, e.g. chains; ropes; clamps, bollards; fairleads; hawsers	Includes ancillaries used for e.g. mooring, anchoring or tying-up.	
Q24-E	Marine propulsion and steering		
Q24-E01	Propulsive elements	These codes describe the type of propulsive elements used on the ship and are generally only applied when the type of propulsive element has some bearing on the novelty.	
Q24-E01A	Directly acting on water	Includes water jet propulsion systems (see also Q24-P21 for recreational vessels such as jet-skis).	
Q24-E01A1	Of rotary type		
Q24-E01A1A	Propellers	Includes propellers per se, and propeller driven vessels when the propulsion aspect is important.	
Q24-E01A1C	Paddle wheels		Paddle steamer
Q24-E01A3	Of non-rotary type, e.g. flaps	Includes oars (see also Q24-E01G for muscle power).	
Q24-E01C	Directly acting on air (e.g. for hovercraft)	Also see Q24-P10 for hovercraft per se, and Q24-P30 for swamp boats having large propeller acting on air.	
Q24-E01E	Directly acted on by wind (e.g. sails, Magnus effect)	For superstructure details such as masts, see Q24-A05 also.	
Q24-E01G	Using muscle power	Includes use of e.g. oars, movable thwarts, foot rests, sculls.	
Q24-E01X	Using other means	Includes e.g. using water currents, e.g. tidal flow, or direct engagement with water bed.	
Q24-E02	Propulsion power plant	These codes describe the type of propulsion used on the ship and are generally only applied when the type of propulsion system has some bearing on the novelty.	
Q24-E02A	Using internal combustion engines	Also see Q51 codes for a more detailed breakdown of internal combustion engines.	
Q24-E02A1	Outboard motors		
Q24-E02A3	Inboard motors		
Q24-E02B	Using external combustion engine, e.g. gas turbine	Also see Q52 codes for a more detailed breakdown of external combustion engines.	
Q24-E02C	Using steam		
Q24-E02C1	Using steam turbine		
Q24-E02C3	Using positive displacement steam engine		
Q24-E02D	Using hydraulic fluid motor		
Q24-E02E	Using nuclear energy	See X14 codes for nuclear power per se.	

Q24-E02F	Using land vehicle supported on vessel	Includes vessels where propulsion is effected e.g. by the drive wheels of a vehicle being carried on the vessel.		
Q24-E02G	Using land based animal/vehicle, e.g. horse	Includes horse drawn canal boats (see also Q24-P09).		
Q24-E03	Transmission systems	Includes novel drive trains.		
Q24-E03A	Gearing	Includes gearboxes. Also see Q64-C codes for gearing per se.		
Q24-E03C	Clutch			
Q24-E03E	Drive shafts; propeller shafts; shaft tubes; seals etc.	Also see Q62 codes for drive shafts per se.		
Q24-E05	Steering arrangements			
Q24-E05A	Steering by rudders	Includes rudder and tiller assemblies per se.		
Q24-E05C	Steering by propulsive elements	Includes systems changing direction of propeller shaft.		
Q24-E05E	Steering/slowing by extensible flaps	Includes "air-brake" type extensible flaps.		
Q24-E05G	Steering by deflecting propeller slipstream	Includes use of rudder type elements mounted in the propeller slipstream. Also includes deflection of the jet stream in jet type boats e.g. by controlling nozzle direction (see also Q24-P21 for jet-skis per se).		
Q24-E05X	Other steering arrangements			
Q24-M	Military equipment	See W07 codes for electrical aspects of military equipment and W06-C codes for electrical aspects of ships. See Q24-P30 for military vessel application.		
Q24-M01	Offensive equipment			
Q24-M01A	Guns and missile launchers	See W07-E05 for electrical aspects of weapons launching systems. Also includes torpedo launchers.		
Q24-M01B	Mine and depth charge launchers			
Q24-M01E	Ammunition stores and handlers			
Q24-M03	Defensive equipment	Includes e.g. camouflage or armour. For electrical aspects of active camouflage see W07-F03 instead.		
Q24-M03A	Mine sweeping/clearing	E.g. using towed mechanical cables. For electrical aspects of mine detection/sweeping/clearing see e.g. W07-F05 and W06-C codes instead.		
Q24-P	Vessels or floating structures adapted for special purposes			
Q24-P01	Pipe laying vessels			
Q24-P02	Cable laying vessels	See also X12-G01A7G for installation of underwater electric cables.		
Q24-P03	Ice breakers			
Q24-P04	Fishing vessels	Includes small fishing boats and large commercial trawlers.		
Q24-P05	Barges or lighters			
Q24-P06	Environmental vessels, e.g. for collecting pollution from open water	Includes vessels adapted to clear up or contain environmental disasters such as oil spillages.		
Q24-P07	For transporting marine vessels			
Q24-P08	Floating buildings	Includes floating vessels normally designed to be static at a fixed location.		
Q24-P09	Canal boat			
Q24-P10	Waterborne air cushion vehicle	Includes hovercraft.		B60V003/06
Q24-P11	Submarine	Includes semi-submersibles. Also see Q24-P13 for military submarines.		
Q24-P12	Flying boat	Includes airfoil boats and ground effect craft. See Q25-P04 for flying boats and sea planes.		
Q24-P13	Military vessels	Includes e.g. aircraft carriers, destroyers, frigates. For electrical aspects of military ships see W06-C and W07 codes respectively.		
Q24-P14	Ferries			
Q24-P15	Tugs	Also see Q24-C04 for pushing and towing equipment per se.		
Q24-P16	Light ships	See X26 codes for electrical lighting per se.		
Q24-P17	Pontoons	Includes inflatable structures. For ground-engaging piers and jettys, see Q24-R15 instead.		

Q24-P18	Buoys	Respectively see W06-C07 or W06-C09 for electrical aspects of port-side buoys or buoys out at sea.		
Q24-P19	Rafts			
Q24-P20	Canoes; Kayaks			
Q24-P21	Sports/Pleasure equipment, e.g. surfboards, sail boards, water skis	Includes all recreational vessels such as small sailing boats (see also Q24-E01E for sail arrangements per se), personal watercraft and jet-skis.		
Q24-P30	Other special purpose vessels	Includes swamp boats and amphibious vessels (see also Q19-R01). Also includes non-specific commercial vessels.		
Q24-R	Port, harbour, marina equipment	See W06-C07 for electrical aspects of port		
Q24-R01	Dry-docks	See also Q24-R09 for maintenance equipment per se.		
Q24-R02	Vessel launching/hauling-out	Includes slipways and boat hoists		
Q24-R03	Passenger handling equipment	Includes steps and other dockside passenger handling equipment.		
Q24-R05	Load/vehicle handling equipment	Includes vehicle loading ramps.		
Q24-R09	Marine craft servicing and maintenance equipment	See W06-C07 for electrical aspects of ship maintenance.		
Q24-R10	Cleaning equipment	Includes hull scrapers.		
Q24-R15	Other ground/port based equipment	Includes piers and jetties (also see Q21-P17 for inflatable jetties/pontoons).		
Q24-X	Other waterborne vessel details and related equipment			
Q24-X01	Life saving in the water			
Q24-X01A	Life jackets; Vests; Buoyancy aids; Rings			
Q24-X01B	Shark screens; Nets			
Q24-X04	Diving equipment	See also W04-X codes for electrical aspects of sports equipment per se.		
Q24-X05	Ship/boat manufacture	See W06-C08 for electrical aspects of ship manufacture.		
Q24-X06	Salvaging equipment	Includes equipment used to raise sunken vessels.		
Q24-X07	Ship design and testing	Includes e.g. using towing tanks or model basins for designing.		
Q24-X11	Boat trailers; other over-land boat transportation devices	See also Q19-J for trailers per se. For vehicles specifically designed to carry specific loads such as vehicles or boats, see Q15-B07.		

Q25 Aircraft; aviation, cosmonautics				
Q25	Aircraft; aviation, cosmonautics	See Q25-S for cosmonautics per se and Q25-X for non-specific aircraft/spacecraft systems such as aircraft/spacecraft manufacture (Q25-X05). See W06-B codes for electrical aspects of aircraft and spacecraft.		
Q25-A	Aircraft construction; Fittings	For aircraft manufacturing arrangements see Q25-X05.		
Q25-A01	Fuselages	Includes aircraft body construction and interior trim. Includes nose cones.		
Q25-A01A	Air frames	Includes fuselage subframes/chassis.		
Q25-A01C	Decks	Includes flooring.		
Q25-A01E	Bulkheads			
Q25-A01G	Skins; panels; linings; insulation	Includes fuselage outer coverings and internal trim or partitioning for defining internal compartments.		
Q25-A02	Wings			
Q25-A02A	Ribs; spars; stringers	Includes wing internal structures.		
Q25-A02C	Skins; panels	Includes wing outer coverings.		
Q25-A03	Windows; doors; hatches	Includes windows, doors and hatches either mounted on the exterior of the fuselage or internally, e.g. between the cockpit and passenger compartment. Also includes maintenance inspection hatches.		
Q25-A03A	Windows	Includes windows and window frames.		
Q25-A03A1	Blinds	Includes blinds built into window/fuselage construction and also removable blind assemblies.		
Q25-A03C	Doors			
Q25-A03E	Hatches	Includes inspection hatch covers.		
Q25-A04	Stabilising/aerodynamic surfaces	Includes tail planes; nose planes; fins; nacelles. For control surfaces per se, such as movable flaps and rudders, see Q25-C05 codes instead. For nose cones per se, see Q25-A01 instead.		
Q25-A05	Undercarriages; alighting gear	Includes all types of landing gear.		
Q25-A05A	Wheels assemblies	Includes aircraft wheels and tyres. For novel tyres etc. see also Q11 codes for a more detailed breakdown.		
Q25-A05B	Skis; runners	Includes skis for landing on snow.		
Q25-A05C	Float assemblies	Includes buoyant floats for landing on water. See also Q25-P04 for sea planes per se.		
Q25-A05F	Air cushion alighting gear			B60V003/08
Q25-A05G	Arrestor hooks, e.g. for use on aircraft carrier	Includes all arrangements for slowing or stopping aircraft, including air-brake parachutes.		
Q25-B	Aircraft accessories	Includes aircraft lighting/signalling.		
Q25-B01	Passenger/crew accommodating arrangements; Cabins; Galleys	Includes mechanical aspects of kitchen equipment, e.g. food carts. Also includes retractable steps to assist boarding of crew/passengers.		
Q25-B01A	Furniture – aircraft specific	Includes e.g. aircraft specific tables, trays and seats, including ejector seats (see also Q25-M for military aircraft).		
Q25-B01C	Sanitation arrangements	Also includes waste water and sewage processing systems.		
Q25-B01C1	Toilets			
Q25-B01C2	Washing facilities; Showers			
Q25-B02	Load accommodating arrangements			
Q25-B02A	Load accommodating compartments/decks	Includes luggage and cargo holds and passenger compartment overhead storage compartments.		
Q25-B02C	Aircraft-board load handling arrangements	Includes e.g. derricks, cranes, winches, chutes, cableways and conveyors for loading/unloading. See Q25-R05 for airport based load handling equipment.		
Q25-B03	Heating; Ventilating; Air-conditioning	Includes ducting etc. For electrical aspects of HVAC systems used in aircraft, see W06-B01C5 instead.		
Q25-B04	De-icing arrangements	Includes e.g. using ducted hot gas. For electrical de-icing arrangements see W06-B01C4 and X25-B codes for electrical heating per se.		

Q25-B05	Instrumentation (mechanical aspects)	For electrical aspects of aircraft instrumentation see W06-B01B and S02 codes. Includes mechanical displays and signalling flags etc.		
Q25-B09	On-board safety/emergency equipment			
Q25-B09A	Fire fighting equipment	Includes fire blankets and extinguishers used on-board aircraft.		
Q25-B09C	Emergency oxygen supplies	See W06-B01C9 for electrical aspects of emergency oxygen supply systems.		
Q25-B09E	Escape slides (and other emergency exit arrangements)	Includes inflatable emergency slides. See also Q25-B01A for ejector seats.		
Q25-B09G	Parachutes	See Q25-X03 for parachute training equipment.		
Q25-B15	Other aircraft accessories	E.g. includes dropping, releasing articles and liquids, e.g. to fight forest fire or for crop spraying (see X25-X05 and X25-N01B respectively for electrical aspects of fire-fighting and crop spraying).		
Q25-C	Aircraft propulsion and steering; attitude/altitude control			
Q25-C01	Propulsive elements	These code describe the type of propulsive elements being used and are generally only applied when the type of propulsive element has some bearing on the aircraft.		
Q25-C01A	Directly acting on air			
Q25-C01A1	Rotary propellers	See also Q25-C02B for turboprop external combustion engine propulsion system. Also includes helicopter rotors (also see Q25-C05C if rotor control surface positioning/feathering is detailed).		
Q25-C01A3	Of non-rotary type, e.g. flappable wings	Also see Q25-P03 for ornithopters per se.		
Q25-C01E	Directly acted on by wind	Includes e.g. hang glider canopy.		
Q25-C01G	Using muscle power	Includes use of pedal power.		
Q25-C01X	Using other means			
Q25-C02	Propulsion power plant	These codes describe the type of propulsion used on the aircraft and are generally only applied when the type of aircraft propulsion has some bearing on the novelty. Includes mounting arrangements for the propulsion system.		
Q25-C02A	Using internal combustion engines			
Q25-C02B	Using external combustion engine		Gas turbine, RAMJET, SCRAMJET, turbojet, turboprop	
Q25-C02G	Using land based animal/vehicle	Includes e.g. using vehicle to tow glider during take-		
Q25-C03	Transmission systems	Includes novel drive trains.		
Q25-C03A	Gearing			
Q25-C03C	Clutch			
Q25-C03E	Drive shafts; propeller shafts etc.			
Q25-C05	Steering/attitude/altitude control arrangements; stabilisation			
Q25-C05A	By rudders	Includes rudder assemblies.		
Q25-C05C	By flaps/control surfaces	Includes aerodynamic control surfaces and their control, e.g. includes flaps in aircraft wings.		
Q25-C05E	By propulsion plant	Includes use of e.g. tiltable turbine engines to achieve steering/attitude control.		
Q25-C05G	Aircraft stabilisation	Includes e.g. transferring fuel to adjust trim, or ballast supply/discharge.		
Q25-C05H	Influencing air flow over aircraft surfaces	Includes boundary-layer flow control and e.g. use of slots, ducts, porous or rough surface areas, Magnus effect or shock wave generators to adjust air flow over aircraft surfaces. For use of flaps and other movable control surfaces to adjust air flow, see Q25-C05C instead, and for fixed aerodynamic assemblies such as tail planes or nose planes, see Q25-A04 instead.		

Q25-M	Military equipment	Includes both offensive and defensive equipment. Respectively see W06-B and W07 codes for electrical aspects of military equipment and aircraft per se. For other systems used on military aircraft, instead see Q25-P30 for military application per se.		
Q25-P	Aircraft adapted for special purposes			
Q25-P01	Lighter-than-air aircraft			
Q25-P01A	Airship		Blimp, dirigible	
Q25-P01B	Balloon		Hot air balloon	
Q25-P02	Rotorcraft; Helicopter			
Q25-P03	Ornithopter	Includes aircraft utilising a wing flapping motion.		
Q25-P04	Sea plane	Includes amphibious aircraft. Also includes flying boats. Flying ground effect craft are coded in Q24-		
Q25-P05	Glider	For towing arrangements used to launch glider also see Q25-R07.		
Q25-P06	Microlight			
Q25-P07	Hang-glider			
Q25-P08	VTOL (Vertical-take-off and landing) aircraft			
Q25-P09	Kites			
Q25-P10	Convertible aircraft	Includes e.g. motor vehicle convertible into aircraft (see also Q19-R03).		B60F005/02
Q25-P30	Other special purpose aircraft	Includes military and commercial aircraft, and other specific aircraft not covered elsewhere.		
Q25-R	Airport, ground or aircraft carrier equipment	See W06-B02 for electrical aspects of airport or runway equipment.		
Q25-R01	Aircraft storage; Hangars	Includes moorings for airships.		
Q25-R02	Airfield/runway construction	Includes airfield construction methods and e.g. mechanical aspects of runway lighting (see also W06-B02E and X26).		
Q25-R03	Passenger handling equipment	Includes ground-based steps and aircraft stands. For retractable steps built into aircraft see Q25-B01 instead.		
Q25-R05	Load handling equipment	Includes ground-based hoists, ramps, conveyors etc. used to (un)load aircraft.		
Q25-R07	Aircraft launching/towing gear; Arresting gear	Includes equipment for launching gliders (see also Q25-P05).		
Q25-R09	Aircraft servicing and maintenance equipment	For aircraft manufacture see Q25-X05 instead. See W06-B08 for electrical aspects of aircraft maintenance.		
Q25-R10	Cleaning equipment	Includes exterior washing assemblies and cleaning of aircraft interior, e.g. during flight changeover.		
Q25-R15	Other ground/aircraft carrier based equipment			
Q25-S	Space/cosmonautic vehicles/equipment	These codes are used in isolation and are not intended to be used in conjunction with other Q25 codes, except Q25-X codes for non-specific aircraft/spacecraft systems and equipment. See W06-B03 instead for electrical aspects of		
Q25-S01	Cosmonautic vehicle type			
Q25-S01A	Artificial satellites; Space stations	For satellite communication systems per se, see W02-C03B1 codes only.		
Q25-S01B	Space shuttles			
Q25-S01C	Space rockets			
Q25-S01D	Extraterrestrial vehicles	See W06-B03X for electrical aspects of extraterrestrial buggies or autonomous robotic vehicles.	Moon buggy	
Q25-S02	Navigation and position control	Includes e.g. using jets, gyros, inertia, Earth's magnetic field, gravity gradient.		
Q25-S03	Instrumentation	Includes mechanical aspects. See S02 for instrumentation in general and W06-B01B for electrical aspects of aircraft instrumentation.		
Q25-S04	Propulsion systems	Includes solid rocket boosters.		
Q25-S05	Life support equipment	Includes mechanical aspects of heating and air-conditioning equipment.		

Q25-S06	Protection/safety/emergency devices	Includes systems for protecting the space craft per se. For astronaut protecting space suits see Q25-X01 only.		
Q25-S06A	Protection against radiation	For EMI suppression see V04-U and W06-B09 codes.		
Q25-S06B	Protection against meteorites/foreign bodies		Impact protection	
Q25-S06C	Thermal protection	Includes mechanical heat shields and tiles. Also includes thermal insulation on space craft to protect astronauts from temperature extremes.		
Q25-S07	Crew/passenger accommodation	Includes living and sleeping equipment.		
Q25-S07A	Sanitation arrangements	Includes toilet and washing equipment.		
Q25-S08	Systems for re-entry into Earth's atmosphere; retarding/landing devices	Includes parachutes, space capsules.		
Q25-S09	Coupling/separating equipment	Includes gas-tight docking equipment. Also includes couplings between cosmonautic vehicles or parts of them, e.g. between separable rocket stages or between solid rocket booster and space shuttle.		
Q25-S10	Ground equipment	Includes rocket launching tower.		
Q25-S15	Other space/cosmonautic equipment	Includes other space vehicle aspects not already covered.		
Q25-X	Other aircraft/cosmonautic details and related equipment			
Q25-X01	Flying suits; Space suits	See W06-B03D for electrical aspects of space suits.	Anti-G suit	
Q25-X03	Parachute training equipment	See W06-B04 for electrical aspects of training equipment.		
Q25-X04	Astronaut training equipment; Simulators	See W06-B04 for electrical aspects of astronaut training/immulation equipment.		
Q25-X05	Aircraft manufacture	Includes both aircraft and spacecraft manufacturing systems and assembly and disassembly equipment and methods. See W06-B08 for electrical aspects of aircraft or spacecraft manufacture.		
Q25-X07	Aircraft design and testing	Includes both aircraft and spacecraft design and testing, e.g. using wind tunnels.		

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Section Q5				
Q51 Internal combustion engines; Reciprocating engines; Rotary engines				
Q51	Internal combustion engines; Reciprocating engines; Rotary engines	Also see Q17-E for vehicle internal combustion engine propulsion arrangements. For electrical aspects of motor vehicle engines see X22-A codes <i>per se</i> .		
Q51-A	Reciprocating positive displacement engines including steam engines			F01B003/00,005/00
Q51-A01	Engine type	These codes are normally applied when the engine type has a direct bearing on the novelty. For example, a novel intake/exhaust valve drive for a V6 engine would get Q51-A01B, but a magnetic sump drain plug for an in-line 4 cylinder engine would not get Q51-A01B because the number of cylinders in the engine is not important when talking about a novel sump plug.		
Q51-A01A	With single cylinder			F01B001/01
Q51-A01B	With multiple cylinders	Includes, in-line 4, V5, straight/V6, V8, W10, V12 etc. engines.		F01B001/02-12
Q51-A01C	With multiple pistons in same cylinder			F01B007/00-20
Q51-A01D	With movable cylinders			
Q51-A01E	With precombustion chambers			
Q51-A03	Component parts			
Q51-A03A	Cylinders; Cylinder heads	See Q51-D for valves. Includes precombustion chambers <i>per se</i> (see also Q51-A01E).		F01B021/00-04
Q51-A03B	Pistons	Includes pistons with charge flow guides, i.e. scoops in piston head for swirl control.	Swirl control	
Q51-A03C	Seals; Gaskets; Piston rings	Includes oil control rings. Includes head gaskets (see also Q51-A03A) and cam/rocker cover gaskets.		
Q51-A03D	Casings; Crankcases; Cam/rocker covers	Includes sumps, windage trays, baffles.		
Q51-A03E	Piston to output shaft connections; Connecting rods	Includes con rods connecting pistons to drive shaft. For connections from drive shaft to other transmission shafts or wheels, see Q62 codes. Also includes crankshafts (see Q62-B01also).		F01B009/00-08
Q51-B	Rotary or oscillating piston engines			F01C001/02-46, F01C003/00-08, F01C005/00-08, F01C007/00
Q51-B01	Rotary combustion engines	Includes four-stroke, Otto cycle Wankel engines.		
Q51-B01A	With single rotor			
Q51-B01B	With multiple rotors			
Q51-B03	Component parts			
Q51-B03C	Rotor seals			F01C019/00-12
Q51-B03E	Connections between piston and casing	Includes drive arrangements for cooperating members, e.g. for rotary piston and casing.		F01C017/00-06
Q51-B05	Oscillating piston engines	Includes engines with pistons oscillating in a toroidal cylinder. See Q53-C for fluid driven oscillating piston engines.		F01C009/00
Q51-C	Hot gas positive displacement engines	See Q53-A instead for positive displacement engines driven by liquid.		
Q51-C01	Open cycle			
Q51-C02	Closed cycle	i.e. positive displacement engines that are operated	Closed cycle, heat, cool,	
Q51-D	Engine/fuel type	Engines are in general assumed to be petrol/gasoline unless otherwise stated. See X22-A20 for electrical aspects of vehicle engine/fuel types.		
Q51-D01	Petrol/gasoline			
Q51-D03	Diesel			
Q51-D05	Mixed fuels	Includes engines running on dual fuels such as		
Q51-D07	Single unconventional fuel	Includes engines running on e.g. alcohol or bio-fuels.		
Q51-D07A	Gaseous fuel	Using LPG, natural gas, hydrogen.		
Q51-D07C	Bio-fuel; Alcohol	Includes engines running on free fatty acid methyl ester ("bio-diesel") or alcohol such as methanol or ethanol.		

Q51-E	Valve gear; Valve drive arrangements	Includes 4-valve drives for IC engines. For electrical aspects of vehicle engine intake/exhaust valve gear see X22-A11 and X22-A03G codes instead. Also see Q66 codes if a more detailed breakdown of valves is available.		F01L001/00-3/24
Q51-E01	Lift valves; Poppet valves	Includes valve guides and novel valve elements per se.		
Q51-E02	Slide valves			F01L005/00-24
Q51-E03	Rotary or oscillating valve gear			F01L007/00-18
Q51-E04	Steam engine valve gear			F01L015/00-F01L031/00
Q51-E05	Valve drive arrangements; Valve adjustment/control; Cam control	Includes all valve drive, adjustment or control systems. Includes hydraulic valve clearance adjusters for motor vehicle engines.		
Q51-E05A	Camshafts; Cams; Eccentrics	Includes novel camshafts per se.		
Q51-E05B	Tappets; Pushrods; Rocking arms etc.	Includes valve lifter arrangements.		
Q51-F	Lubrication	See X22-A10 for electrical aspects of vehicle engine lubrication, such as electric oil pumps. For oil pressure monitoring for motor vehicle engines, see X22-E01C.		F01M
Q51-F01	Pressure lubrication			F01M011/00-25
Q51-F02	Mixed with fuel and/or air		Two-stroke	F01M003/00-04
Q51-F03	Breathing/ventilating	Includes crankcase breathing and cam cover breathing. Includes feeding of crankcase or cam cover air and any entrained oil back into induction system or to oil catch tank/filter.		
Q51-G	Cooling	See Q51-H05A for turbocharger intercooling.		F01P
Q51-G01	Air cooling	Includes forced air feeding, i.e. fans.	Air cooled	F01P001/00-10
Q51-G02	Liquid cooling		Water cooled	F01P003/00-22
Q51-H	Charge feed i.e. fuel or air supply	For electrical fuel/air supply aspects of motor vehicle engines see X22-A02 and X22-A03 codes instead. Also see Q17-E04 for vehicle engine fuel supply.		
Q51-H01	Fuel feed	Also see Q17-E04 for vehicle fuel systems per se. For electrical vehicle fuel pumps and fuel control see X22-A02D and X22-A03A codes respectively.		F02M013/00-15/02
Q51-H01A	Carburettion (carburettors)	See X22-A02C for electrical aspects of IC engine carburettors.		F02M1/00-19/02
Q51-H01B	Fuel injection	Includes systems using e.g. compressed air or mechanical control. See X22-A02A codes only for electrical fuel injection apparatus and X22-A03A1 codes for fuel injection control.		F02M039-059
Q51-H01B1	Common rail arrangement	For electrical aspects of common rail injection systems see X22-A02A3.		
Q51-H01C	Fuel pump	E.g. using compressed air or mechanically controlled fuel injection pump. See X22-A02D for electric fuel pumps and X22-A03A3 for electric fuel pump control. Includes gear pumps and rotary vane type pumps. Also see Q55 or Q56 for pumps in general.		
Q51-H01D	Fuel pressure regulator	Includes pressure relief valves.		
Q51-H01F	Fuel filter	See X22-A02B for electrical aspects of fuel filters.		
Q51-H01G	Fuel treatment	Includes e.g. fuel additive arrangements or water injection. See X22-A02F for electrical fuel treatment systems.		
Q51-H01X	Other fuel systems	Includes fuel lines, hoses and pipework. Includes fuel heating arrangements See X22-A02B only for electrical fuel heaters.		
Q51-H05	Air intake systems	See X22-A03B for electrical aspects of air intake systems/throttles.		F02M035/00-16
Q51-H05A	Supercharging; Turbocharging	Respectively see X22-A14 and X22-A03C for electrical aspects of motor vehicle super/turbochargers and their control.		F02B033/00-44
Q51-H05C	Throttle valve	Intake air control valves.		

Q51-H05E	Intake flow swirl/turbulisation control	Includes mechanical arrangements for promoting mixing of air and fuel, e.g. using scoops in piston head (see also Q51-A03B).		
Q51-I	Ignition systems	Includes ignition systems using e.g. application of direct heat, incandescence, friction, pyrophoric or catalytic ignition. See X22-A01 codes only for vehicle IC engine electrical ignition systems per se.		
Q51-J	Exhaust systems; Pollution control	See X22-A07 and X22-A03J for electrical aspects of vehicle exhaust/emissions control systems. Also includes exhaust braking, e.g. for diesel-engined trucks (see also Q18-A30).		
Q51-J01	Silencing systems	Includes use of resonance, sound absorbing materials or baffles. For electrical aspects of engine noise reduction see X22-A12 (including active noise suppression - possibly see W04-V07 also).		
Q51-J02	Exhaust gas cleaning systems	See X22-A07 or X22-A03J for electrical aspects of motor vehicle engine exhaust gas cleaning and pollution control. See X22-A05 and S03-E codes for vehicle exhaust gas sensors per se.		
Q51-J02A	Exhaust gas filters	Includes e.g. diesel particulate filters (see also Q51-D03).		
Q51-J02B	Catalytic cleaning; Catalytic converters	Includes catalyst materials and catalytic converters, construction. For electrical aspects see X22-A07 only.		
Q51-J02C	Inertial or centrifugal separators			
Q51-J02D	Secondary air/fluid supply	For electrical aspects of secondary air control used in in motor vehicle exhausts, see X22-A03L.		
Q51-K	Starting systems	For motor vehicle IC engine electrical starting see X22-A08, or X22-A04 for electric starter motors per se. Also see relevant X11 and X13 codes for motor hardware and control respectively.		
Q51-K01	Using muscle power	E.g. using hand cranks, pull cords and motorcycle kickstarts (see also Q19-B).		
Q51-K02	Using mechanical power storage	E.g. using springs or inertia.		
Q51-K03	Using auxiliary engines			
Q51-K09	Other starting arrangements	Includes e.g. using explosive cartridges.		
Q51-X	Other engine details	Includes IC engine details not already covered such as engine mountings (see Q17-E01 for vehicle engine mountings) or engine heating/warming.		

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Q52 Reaction engines: External combustion; Gas turbines; Rockets				
Q52	Reaction engines: External combustion; Gas turbines; Rockets	For power generation gas turbines see X11-C01, for aircraft gas turbines engines see W06-B01 codes and for electrical aspects of gas turbines used in land vehicle propulsion see X22-P03.		
Q52-A	Gas Turbine engines	See Q25-C02B for aircraft gas turbine engines per se.		
Q52-A01	Turbofan engines			
Q52-A02	Component parts			
Q52-A02A	Rotor and stator	Includes rotor and stator blades. Also includes blade manufacturing methods (see also Q24-X05 or Q25-X05 for ship and aircraft turbine engine blade		
Q52-A02B	Combustion chamber	Includes charge flow guidance and cooling.		
Q52-A02C	Nozzles, Nacelles	Also see Q25-A04 for aircraft engine nacelles per se.		
Q52-A02D	Afterburner			
Q52-A03	Intake/exhaust configuration, Intake heating/cooling	Includes air intake ducts and lips etc.		
Q52-B	Non-turbine reaction engines			
Q52-B01	Pulse jet			
Q52-B02	Ram jet			
Q52-B03	Rocket engines	Includes solid fuel engine constructions. Also see Q25-S04 for spacecraft propulsion systems per se.		
Q52-B04	Composite pulse, ram, rocket engine combinations	Includes SCRAM jets.		
Q52-C	Fuel supply systems	Also see Q25-C02B for aircraft jet engines and their fuel supply per se.		
Q52-C01	Fuel heating			
Q52-C02	Fuel supply control	See W06-B01A5 for aircraft engine electrical fuel supply control.		
Q52-C03	Fuel injection			
Q52-D	Starting systems	Includes fluid or mechanical drives e.g. using cartridges or starter turbines.		
Q52-E	Ignition systems	See W06-B01C9 for electrical ignition systems for aircraft turbine engines.		
Q52-F	Lubrication			
Q52-X	Other engine details	Includes cooling arrangements.		

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Q53 Positive displacement fluid engines (i.e. driven by fluid)				
Q53	Positive displacement fluid engines (i.e. driven by fluid)	Includes positive displacement engines driven by	Hydraulic motor	
Q53-A	Reciprocating piston fluid engines	See Q51-A codes for positive displacement reciprocating engines driven by gas.		
Q53-B	Rotary piston fluid engines	See Q51-B codes for positive displacement rotary engines driven by gas.		
Q53-C	Oscillating piston engines			
Q53-G	Component parts	Includes valve gear, pistons, cylinders seals.		
Q53-X	Other positive displacement fluid engines/machines			
Q54 Non-positive displacement fluid engines (i.e. driven by fluid); Miscellaneous motors and machines for producing mechanical power/thrust				
Q54	Non-positive displacement fluid engines (i.e. driven by fluid); Miscellaneous motors and machines for producing mechanical power/thrust	Includes non-positive displacement engines driven by liquid.	Hydraulic motor	
Q54-A	Impulse type engines	Includes turbines with jets of high velocity liquid impinging on bladed or similar rotors e.g. Pelton wheels, waterwheels.		
Q54-B	Reaction type engines	Includes e.g. Francis turbines, propeller turbines and Kaplan turbines. See Q51-C02 for closed cycle turbine engines driven by gaseous medium.		
Q54-C	Friction type engines	Using non-bladed rotors, e.g. serrated.		
Q54-D	Endless chain type engines/machines			
Q54-E	Spring motors			
Q54-F	Gravity and inertia motors	Includes flywheel energy storage.		
Q54-G	Producing mechanical energy from wind, i.e. wind motors			
Q54-H	Producing mechanical energy from geothermal or solar energy			
Q54-I	Producing mechanical energy from muscle power	Includes treadmills or horse mills.		
Q54-X	Other non-positive displacement fluid engines/machines; other mechanical energy systems	Includes perpetua mobilia using hydrostatic thrust, or using liquid flow, e.g. swinging flap type. Also includes ocean thermal energy conversion, using pressure or thermal differences, etc. Also see X15 codes for non-fossil fuel electricity generation.		
Q55 Positive displacement fluid machines/pumps/compressors (i.e. for driving fluid)				
Q55	Positive displacement fluid machines/pumps/compressors (i.e. for driving fluid)	These codes are applied for liquid driven positive displacement machines such as pumps, compressors, fans etc.		
Q55-A	Reciprocating piston fluid pumps			
Q55-B	Rotary piston fluid pumps			
Q55-C	Oscillating piston fluid pumps			
Q55-D	Diaphragm operated fluid pumps			
Q55-G	Component parts	Includes valves, seals, rotors, casings.		
Q55-X	Other positive displacement fluid machines			

Q56 Non-positive displacement fluid machines/pumps/compressors (i.e. for driving fluid)				
Q56	Non-positive displacement fluid machines/pumps/compressors (i.e. for driving fluid)	These codes are applied for liquid driven non-positive displacement machines such as pumps, compressors, fans etc.		
Q56-A	Radial flow pumps	Includes centrifugal pumps and helic-centrifugal pumps or compressors.		
Q56-B	Axial flow pumps	Includes e.g. screw type pumps or compressors.		
Q56-C	Pumps pumping fluid by direct contact of another fluid or using inertia of fluids to be pumped			
Q56-C01	Jet pumps	Includes pumps in which fluid flow is induced by pressure drop caused by velocity of another fluid flow.		
Q56-C02	Diffusion pumps			
Q56-D	Siphons			
Q56-G	Pump component parts	Includes shafts, bearings, rotors, casings, cooling strainers, cavitation reducers etc. used in pumps or compressors.		
Q56-X	Other non-positive displacement machines/pumps/compressors	Includes e.g. hydraulic rams.		
Q57 Fluid pressure actuators; Hydraulic/pneumatics in general				
Q57	Fluid pressure actuators; Hydraulic/pneumatics in general			
Q57-A	Telemotors; with movement proportional to pump output			
Q57-B	Servomotors; with position of output conforming to input			
Q57-C	Combined servo and telemotors			
Q57-D	Pyrotechnic actuators	For motor vehicle safety systems such as vehicle airbags, see Q14-C02 also.		
Q57-E	Component parts	Includes valve gear, guide vanes etc. used in fluid pressure actuators or hydraulics in general.		
Q57-X	Other fluid pressure actuators and fluid dynamic control aspects.	Includes general devices for influencing the flow of fluids.		

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Section Q6				
Q61 Fastening elements; Connections				
Q61	Fastening elements; Connections	E.g. for securing machine parts together. Includes both male (bolt) and female (nut) fastenings.		
Q61-A	Threaded fasteners			
Q61-A01	Nuts	For lock nuts see also Q61-A07A.	Female	
Q61-A03	Bolts	For torque limiting break bolts see also Q61-A07C.	Male	
Q61-A05	Screws			
Q61-A07	Special purpose fastener action			
Q61-A07A	Locking fasteners	Includes nylon insert locknuts (see also Q61-A01).		
Q61-A07C	Torque limiting	Includes e.g. break bolts (see also Q61-A03).		
Q61-A07E	Self tapping	Includes self tapping screws (see also Q61-A05).		
Q61-B	Friction grip fasteners	Includes clamps, clips and shrinkage connections.		
Q61-C	Key type connections	Includes bayonet connections.		
Q61-D	Rivet connections	Includes "peel" type rivets and rivnuts (also see Q61-A01).		
Q61-E	Nails, staples. Dowels			
Q61-F	Anti-tamper connections	Includes snap off fastener head that snaps off when predetermined tightening torque is reached to leave behind shaped anti-tamper head.		
Q61-G	Deformable connections	Includes e.g. split pins.		
Q61-H	Washers; Lock washers, Spring washers			
Q61-X	Other fastening elements	Includes hooks and eyes, suction cups etc.		
Q62 Shafts and bearings				
Q62	Shafts and bearings	For vehicle drive shafts see Q13-A07 and for wheel bearings see Q11-A06.		
Q62-A	Flexible shafts			
Q62-A01	For conveying rotary movement			
Q62-A02	For conveying sliding movement			
Q62-B	Rigid shafts			
Q62-B01	Crankshafts	See Q19-A and Q13-A15 for cycle cranks. Also see		
Q62-B02	Eccentric shafts (including camshafts)	See Q51-E05A for motor vehicle internal combustion engine camshafts.		
Q62-B03	Adjustable cranks			
Q62-C	Rigid connections, fixed joints			
Q62-D	Pivots, pivotal connections	Includes ball joints, trunnions, crank pins.		
Q62-G	Bearings	Includes bearing elements and their races. Also see Q11-A06 for vehicle wheel bearings. Also includes hydrodynamic bearings.		
Q62-G01	Sliding contact bearings			
Q62-G02	Rolling contact bearings			
Q62-G02A	Ball bearings	Includes bearings e.g. used to support a shaft or pulley. They can handle both axial and radial loads, though are usually used when the loading is fairly small.		
Q62-G02A1	Ball thrust bearings	Includes ball bearings subjected to axial thrust loading, such as those used in bar stools or Lazy Susan (RTM) turntables. These cannot handle much radial load.		
Q62-G02C	Roller bearings	Includes roller bearings used in conveyors where heavy radially loads need to be supported. Also includes needle roller bearings having small diameter cylinders designed to fit into tight spaces.		
Q62-G02C1	Tapered roller bearings	Includes motor vehicle wheel bearings subject to axial (cornering force) and radial (vehicle weight) loads. They are usually mounted in pairs facing opposite directions so that they can handle thrust in both directions.		

Q62-G02C3	Roller thrust bearings	Includes bearings used in gearsets such as those found in car transmissions between gears, and between the housing and the rotating shafts. These are suitable for handling large axial/thrust loads.		
Q62-G02E	Giant bearings	Includes giant (1.5m diameter) ball bearings used under buildings to provide earthquake protection, or giant roller bearings used to move very heavy objects (also see Q62-G02A and Q62-G02C respectively)		
Q62-G03	Magnetic bearings	Includes magnetic bearings used in high speed applications such as flywheel energy storage systems, where the flywheel rotating in excess of 50000 rpm can float on a magnetic field created by the bearing.		
Q62-G04	Elastic bearings			
Q62-G05	Combination bearings			
Q62-G07	Bearing play adjustment			
Q62-G09	Cooling and lubricating arrangements			
Q62-M	Manufacturing arrangements for shafts or bearings	For electrical metal grinding operations see X25-A03C2.		
Q62-X	Other shaft or bearing aspects not provided for	Includes mountings, housings, caps, covers.		

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Q63 Couplings; Clutches; Brakes; Springs; Dampers				
Q63	Couplings; Clutches; Brakes; Springs; Dampers	For vehicle clutches, brakes and suspension see Q13, Q18 and Q12 codes respectively.		
Q63-A	Couplings for transmitting rotary motion			
Q63-A01	For connecting shafts	Includes universal joints and CV (constant velocity joints).		
Q63-A02	Controlled movement coupling e.g. elastic couplings			
Q63-A03	Slip; Yielding; Impulse couplings	Includes couplings that permit relative rotational movement between the connected parts during drive; couplings that slip on overload and couplings that alternately accelerate/decelerate driven member.		
Q63-A04	Fluid couplings			
Q63-A05	Hose couplings including quick acting/release couplings			
Q63-B	Clutches	For motor vehicle clutches see Q13-A03, and for electrical aspects of vehicle powertrain hardware see X22-G01.		
Q63-B01	Interengaging clutches	I.e. clutches with interengaging parts.		
Q63-B02	Friction clutches	Includes wedge action clutches and wet and dry plate friction clutches.		
Q63-B03	Fluid actuated clutches; Fluid transmission clutches	Includes hydraulically actuated clutches. See Q13-A03 for motor vehicle clutches.		
Q63-B04	Manually operated clutches			
Q63-B05	Freewheel clutches, freewheels			
Q63-B06	Multiple/comboination clutches			
Q63-B09	Other clutch details			
Q63-D	Brakes	For vehicle brakes see Q18-A codes only. For electrical aspects of brakes or brake wear indicators see X22-C02 and X22-E02A respectively.		
Q63-D01	Drum brakes	See Q18-A01A for motor vehicle brake drums.		
Q63-D01A	Fluid actuated drum brakes			
Q63-D01B	Mechanically actuated drum brakes			
Q63-D01E	Drum brake components	Includes drums, brake shoes.		
Q63-D02	Disc brakes	See Q18-A01A for motor vehicle brake discs.		
Q63-D02A	Fluid actuated disc brakes			
Q63-D02B	Mechanically actuated disc brakes	For electrically actuated motor vehicle parking brake see X22-C02A.		
Q63-D02E	Disc brake components	Includes discs, brake pads, callipers.		
Q63-D03	Band brakes			
Q63-D03A	Fluid actuated band brakes			
Q63-D03B	Mechanically actuated band brakes			
Q63-D03E	Band brake components	Includes wear surfaces and adjusters.		
Q63-E	Springs; Shock absorbers; Dampers	See Q12-B codes for motor vehicle suspension spring/damper arrangements. See X22-M instead for electrical aspects of motor vehicle suspensions.		
Q63-E01	Springs	See Q12-B01 for motor vehicle suspension spring arrangements.		
Q63-E01A	Coil springs			
Q63-E01B	Leaf springs			
Q63-E01C	Cup springs			
Q63-E01D	Fluid springs			
Q63-E01E	Magnetic springs			
Q63-E01F	Torsion springs			
Q63-E01G	Elastic members e.g. elastomers			
Q63-E01X	Other springs			
Q63-E02	Shock absorbers; Dampers; Vibration suppression	See Q12-B02 for motor vehicle suspension dampers arrangements. For electrical aspects of vehicle dampers, including ride height control see X22-M codes.		
Q63-E02A	Using damping fluid			
Q63-E02B	Using damping mass/inertia	Includes flywheels, counterweights.		
Q63-E02C	Using friction			

Q63-E02G	Shock absorber/damper components	Includes seals, oil ports, split rings etc.		
Q63-E02X	Other shock absorbers/dampers			
Q63-E05	Spring/damper combinations	Includes coil over dampers. Also see Q19-F03 for racing car independent coil over dampers.		
Q64 Belts, Chains, Gearing				
Q64	Belts, Chains, Gearing	For vehicle powertrain aspects see Q13 codes.		
Q64-A	Driving belts	Includes timing belts used in vehicle engine (see also Q51-E05 for valve drive arrangements).		
Q64-A01	V-belts			
Q64-A02	Ropes or cables			
Q64-A03	Belt fastening arrangements	Includes turnbuckles, clamps.		
Q64-A04	Pulleys			
Q64-B	Chains			
Q64-B01	Driving chains	Includes timing chains used in vehicle engine (see		
Q64-B02	Hauling chain			
Q64-B03	Chain fastening arrangements	Includes links, shackles, hooks.		
Q64-B04	Sprockets			
Q64-C	Gearing			
Q64-C01	Mechanical gearing	Includes toothed gearing, helical gearing, ball or roller gearing.		
Q64-C01A	Cams, cam followers			
Q64-C01B	Toothed members; Worms			
Q64-C01C	Friction members	Includes friction discs and pulleys.		
Q64-C01L	Lubrication/cooling arrangements			
Q64-C03	Fluid gearing			
Q64-C05	Gearing control	Includes gear levers per se. For electrical aspects of motor vehicle transmission control see X22-G03 codes.		
Q64-D	Transmission linkages	Includes cam transmissions, wobble plate transmissions.		
Q65 Pistons; Cylinders; Packing				
Q65	Pistons; Cylinders; Packing	For pistons used in internal combustion engines see Q51 codes only.		
Q65-A	Pistons; Plungers	See Q51-A03B only for pistons used in internal combustion engines.		
Q65-B	Cylinders	Includes running faces and cylinder liners.		
Q65-C	Pressure vessels	Includes covers and closures.		
Q65-D	Seals Packing	Includes piston rings.		
Q65-X	Other piston, cylinder and seal details.			

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Q66 Valves; Taps; Cocks; Vents				
Q66	Valves; Taps; Cocks; Vents	For electrical aspects of mechanical valves see X25-L01 codes. Valve gear used in an internal combustion engine is coded in Q51-E only.		
Q66-A	Lift valves	Includes cut-off apparatus with closure members having component of their opening/closing motion		
Q66-B	Gate or sliding valves	Includes cut-off apparatus with closure members having a sliding movement along the seat for opening and closing.		
Q66-C	Diaphragm valves	Includes cut off apparatus with closure member deformed but not moved bodily.		
Q66-D	Rotary valves			
Q66-E	Multiway valves; Mixing valves and fittings incorporating them			
Q66-F	Valve construction			
Q66-F01	Valve members; Valve seats; Seals			
Q66-F02	Valve housings; Casings			
Q66-J	Valve actuation arrangements	Includes use of floats. See X25-L01A and V02-E02A1 for electromagnetically actuated solenoid valves.		
Q66-P	Functional valve types			
Q66-P01	Check valves			
Q66-P02	Safety valves; Equalising valves			
Q66-P03	Vent valves	Includes venting or aerating arrangements.		
Q66-P04	Fluid delivery valves			
Q66-X	Other valve/vent /tap details			
Q67 Pipes; Joints; Fittings				
Q67	Pipes; Joints; Fittings	For electrical aspects of large scale pipelines see X25-Y02.		
Q67-A	Pipes; Hoses	Also see Q18-A01X for vehicle brakes pipes/hoses per se.		
Q67-A01	Rigid pipes	Includes copper pipes.		
Q67-A02	Flexible pipes	Includes rubber hoses.		
Q67-A03	Pipelaying and repair	Includes pipe cleaning (See X25-H09 and X25-Y02 for electrical aspects).		
Q67-B	Pipe connections; Joints and Seals			
Q67-B01	Pipe connectors/joints	includes quick acting connectors, i.e. quick release/fastening, compression joints etc.		
Q67-B02	Seals	Includes rubber seals and gaskets.		
Q67-C	Pipe accessories	Includes e.g. pipe supports and holders such as hose clips.		
Q68 Other engineering elements				
Q68-A	Frames; Machinery, beds			
Q68-A01	Portable frames			
Q68-A02	Engine beds	For vehicle engine hoists, see Q16-A03.		
Q68-A03	Stands; Trestles	Also see Q16-D for trestles etc.used to support vehicle during assembly.		

CODE (max. 10 chars incl. spaces)	TITLE	SCOPE NOTES	KEYWORDS/SEARCH TERMS	IPC Concordance
Q69 Storing/distributing gas/liquid				
Q69-A	Variable capacity gas holders			
Q69-B	Fixed capacity gas holders	For motor vehicle hydrogen/natural gas etc. fuel tanks see Q17-E04 only.		
Q69-B01	Pressure vessels			
Q69-B02	Vessels not under pressure			
Q69-C	Vessel filling method or apparatus			
Q69-D	Vessel discharging method or apparatus			
Q69-E	Pipeline systems			