Cooperative Patent Classification

Performing Operations; Transporting

Transporting

Performing Operations; Transporting

Vehicles in General

Conjoint Control of Vehicle Sub-units of Different Type or Different Function; Control Systems Specially Adapted for Hybrid Vehicles; Road Vehicle Drive Control Systems for Purposes Not Related to the Control of a Particular Sub-unit

Notes

1. This subclass does not cover the control of a single sub-unit; such control is classified in the relevant place for the sub-unit, e.g. F02D, F16H. Where a single sub-unit is controlled by means of signals or commands from other sub-units, the control of this single sub-unit is classified in the relevant place for this sub-unit. For example, the control of variable-ratio gearing by means of signals from the engine or the accelerator is classified in the subclass for gearing, F16H.

2. Conjoint control of driveline units, e.g. engines, and variable-ratio gearing occurring only transiently during ratio shift and being also characterised by the control of the gearing is also classified in the subclass for gearing, F16H.

3. In groups B60W 20/00 - B60W 50/00, the first place priority rule is applied, i.e. at each hierarchical level, classification is made in the first appropriate place.

4. When classifying in group B60W 10/00, classification must also be made in groups B60W 20/00 - B60W 50/00 in order to identify the purpose or use of the control.

5. In this subclass, the following terms are used with the meanings indicated:
   • “conjoint control” means that a programmed or condition-responsive (main) automatic controller on board the vehicle, embodying control logic for vehicle sub-units of different type or different function, sends control signals to actuators of two or more vehicle sub-units. (three or more vehicle sub-units for groups B60W 30/00-B60W 30/16), so that the sub-units act together to solve a particular problem or in response to a particular driving condition, [in order to improve stability, comfort or safety; by managing the global dynamics of the vehicle];
   • “drive control system” means an electronic system in a road vehicle for automatically controlling the movement [by managing the global dynamics] of that vehicle in order to take certain actions [in order to improve stability, comfort or safety];
   • “road vehicle” means a [motorised passenger] vehicle normally under the control of a human driver for transportation on roads, e.g. an automobile, truck or bus;
   • “sub-unit” means one of the following vehicle systems: [driveline systems, e.g.] propulsion system, clutch system, change-speed gearing system, system for distributing drive torque between front and rear axles, axle differential system, brake system, steering system, suspension system, [and, particularly for hybrid vehicles,] energy storage means, fuel cells, or auxiliary equipment.

10/00 Conjoint control of vehicle sub-units of different type or different function (for propulsion of purely electrically-propelled vehicles with power supplied within the vehicle B60L 11/00)

Note

When classifying in this group, each controlled sub-unit must be separately identified by a classification in a relevant place in this group.

10/02 including control of driveline clutches

10/03 [Fluid clutches, e.g. torque converters]

10/05 [Clutches for bridging a fluid gearing, e.g. lock-up]

10/06 including control of propulsion units

10/08 including control of combustion engines

10/09 including control of electric propulsion units, e.g. motors or generators

10/10 including control of change-speed gearings

10/11 with separate change-speed gear trains arranged in series

10/12 with two input flow paths, e.g. double clutch transmission selection of one of the torque flow paths by the corresponding input clutch

10/13 with planetary gears

10/14 including control of all-wheel-driveline means, e.g. transfer gears or clutches for dividing torque between front and rear axle (B60W 10/14 takes precedence)

10/15 including control of differentials

CPC - 2019.01
Central differentials for dividing torque between front and rear axles

Axle differentials, e.g. for dividing torque between left and right wheels

Including control of braking systems

[including control of parking brakes]

with wheel brakes

[hydraulic brakes]

**WARNING**

this group is not complete pending a reorganisation, see also B60W 10/184

Electric brakes

**WARNING**

this group is not complete pending a reorganisation, see also B60W 10/184

Acting within the driveline, e.g. retarders

with exhaust brakes

including control of steering systems

including control of suspension systems

including control of energy storage means

for electrical energy, e.g. batteries or capacitors

including control of fuel cells

including control of auxiliary equipment, e.g. air-conditioning compressors or oil pumps

**Control systems specially adapted for hybrid vehicles** ([hybrid vehicle design, B60K 60/0; electric vehicles B60L])

- Controlling the power contribution of each of the prime movers to meet required power demand
- Using model predictive control [MPC] strategies, i.e. control methods based on models predicting performance ([utilising navigation and traffic information in the control strategy B60W 20/12])
- Using control strategies taking into account route information ([estimation or calculation of non-directly measurable driving parameters B60W 40/00])
- In order to stay within battery power input or output limits; in order to prevent overcharging or battery depletions
- In conjunction with braking regeneration
- Control strategies specially adapted for achieving a particular effect
- For reducing engine exhaust emissions
- For noise reduction
- For avoiding ageing of fuel
- For achieving enhanced acceleration
- Control strategies involving selection of hybrid configuration, e.g. selection between series or parallel configuration
- Control strategies involving selection of transmission gear ratio ([control of change speed gearings, together with other vehicle sub-units B60W 10/10; HEV transmission gearing B60K 6/36: gearings and control thereof F16H])
- Controlling the engagement or disengagement of prime movers, e.g. for transition between prime movers ([power-up or power-down of the driveline B60W 30/192])

Control strategies for responding to system failures, e.g. for fault diagnosis, failsafe operation or limp mode

**Purposes of road vehicle drive control systems not related to the control of a particular sub-unit, e.g. of systems using conjoint control of vehicle sub-units [or, or advanced driver assistance systems for ensuring comfort, stability and safety or drive control systems for propelling or retarding the vehicle (anti-lock brake systems [ABS B60T 8/00])]**

- Control of vehicle driving stability
- [related to comfort of drivers or passengers]
- Related to roll-over prevention
- [about the pitch axis]
- [about the roll axis]
- Improving turning performance

**WARNING**

This group is not complete pending a reorganisation, see also B60W 30/02

Automatic manoeuvring for parking (controlling only the steering B62D 15/0285)

**WARNING**

B60W 30/06 and subgroups are not complete pending a reorganisation; see provisionally also group B62D 15/0285

- [Active safety systems] predicting or avoiding probable or impending collision, e.g. attempting to minimise its consequences
- [Vehicle operation after collision]
- Taking automatic action to adjust vehicle attitude in preparation for collision, e.g. braking for nose dropping
- Taking automatic action to avoid collision, e.g. braking and steering
- Predicting travel path or likelihood of collision
- [the prediction being responsive to vehicle dynamic parameters]
- [the prediction being responsive to traffic or environmental parameters]
- Path keeping ([cruise control for automatically following a preceding vehicle B60W 30/165])
- Lane keeping
- [Adaptive] cruise control
- [Speed control (B60W 30/16 takes precedence)]
- [Speed limiting]
- Control of distance between vehicles, e.g. keeping a distance to preceding vehicle
- [Speed limiting therefor]
- Automatically following the path of a preceding lead vehicle, e.g. "electronic tow-bar"
- with provision for special action when the preceding vehicle comes to a halt, e.g. stop and go
- Propelling the vehicle
- [related to particular drive situations]
- [Start-stop drive, e.g. in a traffic jam]
- [Drive off, accelerating from standstill]
- [Reversing]
30/1801 . . . . \{Preparing for stopping\}
30/18109 . . . . \{Braking\}
30/18118 . . . . \{Hill holding\}
30/18127 . . . . \{Regenerative braking\}
30/18136 . . . . \{Engine braking\}
30/18145 . . . . \{Cornering\}
30/18154 . . . . \{Approaching an intersection\}
30/18163 . . . . \{Lane change; Overtaking manoeuvres\}
30/18172 . . . . \{Preventing, or responsive to skidding of wheels\}
30/18181 . . . . \{Propulsion control with common controlling member for different functions\}
30/1819 . . . . \{Propulsion control with control means using analogue circuits, relays or mechanical links\}
30/182 . . . . \Selecting between different operative modes, e.g. comfort and performance modes\n30/184 . . . . \{Preventing damage resulting from overload or excessive wear of the driveline\}
30/1843 . . . . \{Overheating of driveline components (B60W 30/186 takes precedence)\}
30/1846 . . . . \{Preventing of breakage of drive line components, e.g. parts of the gearing\}
30/186 . . . . \{excessive wear or burn out of friction elements, e.g. clutches\}
30/188 . . . . \{Controlling power parameters of the driveline, e.g. determining the required power\}
30/1882 . . . . \{characterised by the working point of the engine, e.g. by using engine output chart\}
30/1884 . . . . \{Avoiding stall or overspeed of the engine\}
30/1886 . . . . \{Controlling power supply to auxiliary devices\}
30/1888 . . . . \{Control of power take off [PTO]\}
30/19 . . . . \{Improvement of gear change, e.g. by synchronisation or smoothing gear shift\}
30/192 . . . . \{Mitigating problems related to power-up or power-down of the driveline, e.g. start-up of a cold engine\}
30/194 . . . . \{related to low temperature conditions, e.g. high viscosity of hydraulic fluid\}
30/20 . . . . \{Reducing vibrations in the driveline\}
30/203 . . . . \{related or induced by the clutch\}
30/206 . . . . \{related or induced by the engine\}
40/00 \{Estimation or calculation of [non-directly measurable] driving parameters for road vehicle drive control systems not related to the control of a particular sub-unit, [e.g. process diagnostic or vehicle driver interfaces]\}
40/02 . . . . \{related to ambient conditions\}
40/04 . . . . \{Traffic conditions\}
40/06 . . . . \{Road conditions\}
40/064 . . . . \{Degree of grip\}
40/068 . . . . \{Road friction coefficient\}
40/072 . . . . \{Curvature of the road\}
B60W

2050/0016 . . . . . [State machine analysis]
2050/0017 . . . . . [Modal analysis, e.g. for determining system stability]
2050/0018 . . . . . [Method for the design of a control system]
2050/0019 . . . . . [Control system elements or transfer functions]
2050/002 . . . . . . [Integrating means]
2050/0021 . . . . . [Differentiating means]
2050/0022 . . . . . [Gains, weighting coefficients or weighting functions]
2050/0024 . . . . . [Variable gains]
2050/0025 . . . . . [Transfer function weighting factor]
2050/0026 . . . . . [Lookup tables or parameter maps]
2050/0027 . . . . . [Minimum/maximum value selectors]
2050/0028 . . . . . [Mathematical models, e.g. for simulation]
2050/0029 . . . . . [Mathematical model of the driver]
2050/0031 . . . . . [Mathematical model of the vehicle]
2050/0032 . . . . . [Quarter vehicle model, i.e. only one vehicle corner]
2050/0033 . . . . . [Single-track, 2D vehicle model, i.e. two-wheel bicycle model]
2050/0034 . . . . . [Multiple-track, 2D vehicle model, e.g. four-wheel model]
2050/0035 . . . . . [Multiple-track, 3D vehicle model, e.g. including roll and pitch conditions]
2050/0036 . . . . . [Multiple-track, 3D multi-body vehicle model, e.g. combination of models for vehicle sub-units]
2050/0037 . . . . . [Mathematical models of vehicle sub-units]
2050/0039 . . . . . [of the propulsion unit]
2050/004 . . . . . . [of the clutch]
2050/0041 . . . . . [of the drive line]
2050/0042 . . . . . [Transfer function lag; delays]
2050/0043 . . . . . [Signal treatments, identification of variables or parameters, parameter estimation or state estimation]
2050/0044 . . . . . [In digital systems]
2050/0045 . . . . . [using databus protocols]
2050/0047 . . . . . [Digital-analogue (D/A) or analogue-digital (A/D) conversion]
2050/0048 . . . . . [Addition or subtraction of signals]
2050/0049 . . . . . [Signal offset]
2050/005 . . . . . . [Sampling]
2050/0051 . . . . . [combined with averaging]
2050/0052 . . . . . [Filtering, filters]
2050/0054 . . . . . [Cut-off filters, retarders, delaying means, dead zones, threshold values or cut-off frequency]
2050/0055 . . . . . [High-pass filters]
2050/0056 . . . . . [Low-pass filters]
2050/0057 . . . . . [Frequency analysis, spectral techniques or transforms]
2050/0058 . . . . . [Signal modulation for data transmission]
2050/0059 . . . . . [Signal noise suppression]
2050/006 . . . . . . [Interpolation; Extrapolation]
2050/0062 . . . . . [Adapting control system settings]
2050/0063 . . . . . [Manual parameter input, manual setting means, manual initialising or calibrating means (for vehicle control input means, control panels see B60K 37/00)]
2050/0064 . . . . . [using a remote, e.g. cordless, transmitter or receiver unit, e.g. remote keypad or mobile phone]
2050/0065 . . . . . [using a personalised data carrier, e.g. magnetic card, memory card or electronic ignition key]
2050/0066 . . . . . [using buttons or a keyboard connected to the on-board processor]
2050/0067 . . . . . [Confirmation by the driver]
2050/0068 . . . . . [Giving intention of direction, e.g. by indicator lights, steering input]
2050/007 . . . . . . [Switching between manual and automatic parameter input, and vice versa]
2050/0071 . . . . . [Controller overrides driver automatically]
2050/0072 . . . . . [Controller asks driver to take over]
2050/0073 . . . . . [Driver overrides controller]
2050/0074 . . . . . [Driver shifts control to the controller, e.g. by pressing a button]
2050/0075 . . . . . [Automatic parameter input, automatic initialising or calibrating means]
2050/0077 . . . . . [involving external transmission of data to or from the vehicle]
2050/0078 . . . . . [using Global Position System data]
2050/0079 . . . . . [using telemetry]
2050/008 . . . . . . [using data transmitted between vehicles, e.g. for platooning, control of inter-vehicle distance]
2050/0081 . . . . . [using satellite communication]
2050/0082 . . . . . [for initialising the control system]
2050/0083 . . . . . [Setting, resetting, calibration]
2050/0085 . . . . . [Setting or resetting initial positions]
2050/0086 . . . . . [Recalibrating datum positions, e.g. by using check cycles]
2050/0087 . . . . . [Resetting start and end points of actuator travel]
2050/0088 . . . . . [Adaptive recalibration]
2050/0089 . . . . . [Historical data record of previous events]
2050/009 . . . . . . [Priority selection]
2050/0091 . . . . . [of control inputs]
2050/0093 . . . . . [of the engine]
2050/0094 . . . . . [of control units]
2050/0095 . . . . . [Automatic control mode change]
2050/0096 . . . . . [Control during transition between modes]
50/0097 . . . . . . [Predicting future conditions]
50/0098 . . . . . . [Details of control systems ensuring comfort, safety or stability not otherwise provided for]
50/02 . . . . . . [Ensuring safety in case of control system failures, e.g. by diagnosing, circumventing or fixing failures]
50/0205 . . . . . . [Diagnosing or detecting failures; Failure detection models]
2050/0021 . . . . . [Means for detecting failure or malfunction]
2050/00215 . . . . . [Sensor drifts or sensor failures]
2050/0022 . . . . . [Actuator failures]
50/0225 . . . . . . [Failure correction strategy]
50/023 . . . . . . [Avoiding failures by using redundant parts]
50/029 . . . . . . [Adapting to failures or work around with other constraints, e.g. circumvention by avoiding use of failed parts]
2050/00292 . . . . . [Fail-safe or redundant systems, e.g. limp-home or backup systems]
2050/00295 . . . . . [Inhibiting action of specific actuators or systems]
2050/00297 . . . . . [Control Giving priority to different actuators or systems]
50/032 . . . . . . [Fixing failures by repairing failed parts, e.g. loosening a sticking valve]
Indexing codes relating to the special location or on the principle of their operation

50/06 . Improving the dynamic response of the control system, e.g. improving the speed of regulation or avoiding hunting or overshoot

50/08 . Interaction between the driver and the control system

50/09 . [Selecting or switching between different modes of propelling]

50/10 . [Changing the parameters of the control units, e.g. changing limit values, working points by control input]

50/11 . [where the control system corrects or modifies a request from the driver]

50/12 . Limiting control by the driver depending on vehicle state, e.g. interlocking means for the control input for preventing unsafe operation

50/13 . Means for informing the driver, warning the driver or prompting a driver intervention

2400/00 Indexing codes relating to detected, measured or calculated conditions or factors

2420/00 Indexing codes relating to the type of sensors based on the principle of their operation

2420/10 . Transducer, e.g. piezoelectric elements

2420/20 . Resistance type, e.g. potentiometer as level indicator

2420/22 . Strain gauge

2420/225 . Wheatstone bridge circuit

2420/24 . Capacitance type, e.g. as level indicator

2420/30 . Switches, e.g. mercury or ball type switches

2420/40 . Photo or light sensitive means, e.g. infrared sensors

2420/403 . Image sensing, e.g. optical camera

2420/406 . Fiber optic sensor

2420/42 . Image sensing, e.g. optical camera

2420/50 . Magnetic or electromagnetic sensors

2420/103 . Hall effect or magnetoresistive, i.e. active wheel speed sensors

2420/506 . Inductive sensors, i.e. passive wheel sensors

2420/52 . Radar, Lidar

2420/54 . Audio sensitive means, e.g. ultrasound

2420/60 . Doppler effect

2420/62 . Laser

2420/90 . Single sensor for two or more measurements

2420/905 . the sensor being an xyz axis sensor

2422/00 Indexing codes relating to the special location or mounting of sensors

2422/10 . on a suspension arm

2422/20 . on or inside a spring

2422/202 . the spring being a coil spring

2422/205 . the spring being a pneumatic spring

2422/207 . the spring being a leaf spring

2422/40 . on a damper

2422/50 . on a steering column

2422/70 . on the wheel or the tire

2422/80 . on wheel hub bearing

2422/90 . on bumper, e.g. collision sensor

2422/95 . Measuring the same parameter at multiple locations of the vehicle

B60W
Input parameters relating to a particular sub-units

2510/02 . Clutches
2510/0208 . Clutch engagement state, e.g. engaged or disengaged
2510/0216 . Clutch engagement rate
2510/0225 . Clutch actuator position
2510/0233 . of torque converter lock-up clutch
2510/0241 . Clutch slip, i.e. difference between input and output speeds
2510/025 . Slip change rate
2510/0258 . Clutch friction coefficient
2510/0266 . Moment of inertia
2510/0275 . Clutch torque
2510/0283 . Clutch input shaft speed
2510/0291 . Clutch temperature
2510/03 . Combustion engines, Gas turbines
2510/0304 . Throttle position
2510/0309 . Throttle change rate
2510/0314 . Position of fuel or air injector
2510/0319 . Air-fuel ratio
2510/0323 . Fuel flow rate
2510/0328 . Inlet air flow rate
2510/0333 . Turbocharger state
2510/0338 . Engine speed
2510/0342 . Idle condition
2510/0347 . Coasting condition
2510/0352 . Speed change rate
2510/0357 . Engine torque
2510/0361 . Torque change rate
2510/0366 . Engine power
2510/03671 . Engine manifold pressure
2510/03676 . Engine temperature
2510/0368 . Engine exhaust temperature
2510/03685 . Engine crank angle
2510/0369 . Engine braking signal
2510/03695 . Inertia
2510/0308 . Electric propulsion units
2510/0381 . Speed
2510/0382 . Speed change rate
2510/0383 . Torque
2510/0384 . Torque change rate
2510/0385 . Power
2510/0386 . Power change rate
2510/0387 . Temperature
2510/0388 . Inertia
2510/0309 . Other types of propulsion units, e.g. fluid motors, or type not specified
2510/0310 . Change speed gearings
2510/031005 . Transmission ratio engaged
2510/03101 . Transmission neutral state
2510/031015 . Input shaft speed, e.g. turbine speed
2510/03102 . Input speed change rate
2510/031025 . Input torque
2510/03103 . Input torque change rate
2510/031035 . Input power
2510/03104 . Output speed
2510/031045 . Output speed change rate
2510/03105 . Output torque
2510/031055 . Output torque change rate
2510/03106 . Output power
2510/031065 . Transmission of zero torque

Input parameters relating to overall vehicle dynamics

2520/04 . Vehicle stop
2520/06 . Direction of travel
2520/10 . Longitudinal speed
2520/1005 . Longitudinal acceleration
2520/12 . Lateral speed
2520/125 . Lateral acceleration
2520/14 . Yaw
2520/16 . Pitch
2520/18 . Roll
2520/20 . Sideslip angle
2520/22 . Articulation angle, e.g. between tractor and trailer
2520/26 . Wheel slip
2520/263 . Slip values between front and rear axle
2520/266 . Slip values between left and right wheel
2520/28 . Wheel speed
2520/30 . Wheel torque
2520/40 . Torque distribution
2520/403 . between front and rear axle
2520/406 . between left and right wheel

Input parameters relating to other vehicle conditions or values

2530/10 . Weight
2530/12 . Catalyst or filter state
2530/14 . Historical data
2530/145 . Mileage
2530/16 . Driving resistance
2530/18 . Distance travelled
### Input parameters relating to the driver

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2540/2</td>
<td>Driver's voice</td>
</tr>
<tr>
<td>2540/4</td>
<td>Driver selection, e.g. driver confirmation</td>
</tr>
<tr>
<td>2540/6</td>
<td>Ignition switch</td>
</tr>
<tr>
<td>2540/10</td>
<td>Accelerator pedal position</td>
</tr>
<tr>
<td>2540/12</td>
<td>Brake pedal position</td>
</tr>
<tr>
<td>2540/14</td>
<td>Clutch pedal position</td>
</tr>
<tr>
<td>2540/16</td>
<td>Ratio selector position</td>
</tr>
<tr>
<td>2540/18</td>
<td>Rate of change</td>
</tr>
<tr>
<td>2540/20</td>
<td>Steering angle</td>
</tr>
<tr>
<td>2540/22</td>
<td>Accelerator thresholds, e.g. kickdown</td>
</tr>
<tr>
<td>2540/24</td>
<td>Rate of change</td>
</tr>
<tr>
<td>2540/26</td>
<td>Incapacity of driver</td>
</tr>
<tr>
<td>2540/28</td>
<td>Identity of driver</td>
</tr>
<tr>
<td>2540/30</td>
<td>Driving style</td>
</tr>
</tbody>
</table>

### Input parameters relating to exterior conditions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2550/0</td>
<td>from obstacle detection</td>
</tr>
<tr>
<td>2550/12</td>
<td>Ambient conditions, e.g. wind or rain</td>
</tr>
<tr>
<td>2550/13</td>
<td>Altitude</td>
</tr>
<tr>
<td>2550/14</td>
<td>Road conditions, road types or road features</td>
</tr>
<tr>
<td>2550/141</td>
<td>Type of road</td>
</tr>
<tr>
<td>2550/142</td>
<td>Road slope</td>
</tr>
<tr>
<td>2550/143</td>
<td>Road profile</td>
</tr>
<tr>
<td>2550/145</td>
<td>Road altitude</td>
</tr>
<tr>
<td>2550/146</td>
<td>Road curve radius</td>
</tr>
<tr>
<td>2550/147</td>
<td>Road bumpiness, e.g. pavement or potholes</td>
</tr>
<tr>
<td>2550/148</td>
<td>Coefficient of friction</td>
</tr>
<tr>
<td>2550/16</td>
<td>Country codes</td>
</tr>
<tr>
<td>2550/20</td>
<td>Traffic related input parameters</td>
</tr>
<tr>
<td>2550/22</td>
<td>Traffic rules, e.g. traffic signs</td>
</tr>
<tr>
<td>2550/30</td>
<td>Distance or speed relative to other vehicles</td>
</tr>
<tr>
<td>2550/302</td>
<td>the longitudinal speed of preceding vehicle</td>
</tr>
<tr>
<td>2550/304</td>
<td>the lateral speed of preceding vehicle</td>
</tr>
<tr>
<td>2550/306</td>
<td>the position of preceding vehicle</td>
</tr>
<tr>
<td>2550/308</td>
<td>Distance between vehicles</td>
</tr>
<tr>
<td>2550/40</td>
<td>Involving external transmission of data to or from the vehicle</td>
</tr>
<tr>
<td>2550/402</td>
<td>for navigation systems</td>
</tr>
<tr>
<td>2550/404</td>
<td>using telemetry</td>
</tr>
<tr>
<td>2550/406</td>
<td>using satellite communication</td>
</tr>
<tr>
<td>2550/408</td>
<td>Data transmitted between vehicles</td>
</tr>
</tbody>
</table>

### Other vehicle related input parameters not covered by groups B60W 2510/00 - B60W 2550/00

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>2560/02</td>
<td>Remaining fuel quantity in tank</td>
</tr>
<tr>
<td>2560/04</td>
<td>Fuel quality, e.g. water content due to age of fuel</td>
</tr>
<tr>
<td>2560/06</td>
<td>Fuel type</td>
</tr>
</tbody>
</table>

### Indexing codes relating to automatic control systems or control processes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2710/0</td>
<td>Output or target parameters relating to a particular sub-units</td>
</tr>
<tr>
<td>2710/2</td>
<td>Clutches</td>
</tr>
<tr>
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<td>Clutch engagement state</td>
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<td>Clutch actuator position</td>
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<td>Steering angle of wheels</td>
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<td>Sideslip angle</td>
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<td>2720/22</td>
<td>Articulation angle, e.g. between tractor and trailer</td>
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<td>Direction of travel</td>
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<td>Slip values between front and rear axle</td>
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<td>Involving external transmission of data to or from the vehicle</td>
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**2900/00** Indexing codes relating to the purpose of, or problem solved of road vehicle drive control systems not otherwise provided for in groups **B60W 30/00**