

## DENM Mapping



### About the C2C-CC

Enhancing road safety and traffic efficiency by means of Cooperative Intelligent Transport Systems and Services (C-ITS) is the dedicated goal of the CAR 2 CAR Communication Consortium (C2C-CC). The industrial driven, non-commercial association was founded in 2002 by vehicle manufacturers affiliated with the idea of cooperative road traffic based on Vehicle-to-Vehicle Communications (V2V) and supported by Vehicle-to-Infrastructure Communications (V2I). The Consortium members represent worldwide major vehicle manufactures, equipment suppliers and research organisations.

Over the years, the C2C-CC has evolved to be one of the key players in preparing the initial deployment of C-ITS in Europe and the subsequent innovation phases. C2C members focus on wireless V2V communication applications based on Direct Communication and concentrate all efforts on creating standards to ensure the interoperability of cooperative systems, spanning all vehicle classes across borders and brands. As a key contributor, the C2C-CC and its members work in close cooperation with the European and international standardisation organisations

## Disclaimer

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| Codes according to DENM/CDD standard |                           |                                     | ALERT-C (ISO 14819-2:2021) |                                               |
|--------------------------------------|---------------------------|-------------------------------------|----------------------------|-----------------------------------------------|
| DENM index                           | CauseCode                 | SubCauseCode                        | Code                       | Text                                          |
| 1_0                                  | trafficCondition          | unavailable                         | 1601                       | delays (Q)                                    |
| 1_1                                  | trafficCondition          | increasedVolumeOfTraffic            | 122                        | heavy traffic (with average speeds Q)         |
| 1_2                                  | trafficCondition          | trafficJamSlowlyIncreasing          | 125                        | traffic building up (with average speeds Q)   |
| 1_3                                  | trafficCondition          | trafficJamIncreasing                | 130                        | danger of stationary traffic                  |
| 1_4                                  | trafficCondition          | trafficJamStronglyIncreasing        | 130                        | danger of stationary traffic                  |
| 1_5                                  | trafficCondition          | trafficStationary                   | 101                        | stationary traffic                            |
| 1_6                                  | trafficCondition          | trafficJamSlightlyDecreasing        | 135                        | traffic easing                                |
| 1_7                                  | trafficCondition          | trafficJamDecreasing                | 135                        | traffic easing                                |
| 1_8                                  | trafficCondition          | trafficJamStronglyDecreasing        | 135                        | traffic easing                                |
| 1_9                                  | trafficCondition          | trafficJamStable                    | 115                        | slow traffic (with average speeds Q)          |
| 2_0                                  | accident                  | unavailable                         | 201                        | (Q) accident(s)                               |
| 2_1                                  | accident                  | multiVehicleAccident                | 203                        | multi-vehicle accident (involving Q vehicles) |
| 2_2                                  | accident                  | heavyAccident                       | 202                        | (Q) serious accident(s)                       |
| 2_3                                  | accident                  | accidentInvolvingLorry              | 204                        | accident involving (a/Q) heavy lorr(y/ies)    |
| 2_4                                  | accident                  | accidentInvolvingBus                | 335                        | accident involving (a/Q) bus(es)              |
| 2_5                                  | accident                  | accidentInvolvingHazardousMaterials | 205                        | (Q) accident(s) involving hazardous materials |
| 2_6                                  | accident                  | accidentOnOppositeLane              | 209                        | (Q) accident(s) in the opposing lanes         |
| 2_7                                  | accident                  | unsecuredAccident                   | 857                        | (Q) unprotected accident area(s)              |
| 2_8                                  | accident                  | assistanceRequested                 | 201                        | (Q) accident(s)                               |
| 3_0                                  | roadworks                 | unavailable                         | 701                        | (Q sets of) roadworks                         |
| 3_1                                  | roadworks                 | majorRoadworks                      | 702                        | (Q sets of) major roadworks                   |
| 3_2                                  | roadworks                 | roadMarkingWork                     | 824                        | (Q sets of) road marking work. Danger         |
| 3_3                                  | roadworks                 | slowMovingRoadMaintenance           | 1700                       | (Q) slow moving maintenance vehicle(s)        |
| 3_4                                  | roadworks                 | shortTermStationaryRoadworks        | 703                        | (Q sets of) maintenance work                  |
| 3_5                                  | roadworks                 | streetCleaning                      | 701                        | (Q sets of) roadworks                         |
| 3_6                                  | roadworks                 | winterService                       | 701                        | (Q sets of) roadworks                         |
| 4_0                                  | reserved for future usage | -                                   | -                          | -                                             |
| 5_0                                  | impassability             | unavailable                         | 402                        | blocked                                       |
| 5_1                                  | impassability             | flooding                            | 907                        | flooding                                      |
| 5_2                                  | impassability             | dangerOfAvalanches                  | 993                        | closed due to avalanche risk                  |
| 5_3                                  | impassability             | blastingOfAvalanches                | 709                        | (Q sections of) blasting work                 |

| Codes according to DENM/CDD standard |                                    |                   | ALERT-C (ISO 14819-2:2021) |                                                                 |
|--------------------------------------|------------------------------------|-------------------|----------------------------|-----------------------------------------------------------------|
| DENM index                           | CauseCode                          | SubCauseCode      | Code                       | Text                                                            |
| 5_4                                  | impassability                      | landslips         | 947                        | road closed due to landslips                                    |
| 5_5                                  | impassability                      | chemicalSpillage  | 207 (Q)                    | chemical spillage accident(s)                                   |
| 5_6                                  | impassability                      | winterClosure     | 401                        | closed                                                          |
| 5_7                                  | impassability                      | sinkhole          | 916                        | road surface in poor condition                                  |
| 5_8                                  | impassability                      | earthquakeDamage  | 915                        | earthquake damage                                               |
| 5_9                                  | impassability                      | fallenTrees       | 926                        | blocked by (Q) fallen trees                                     |
| 5_10                                 | impassability                      | rockfalls         | 945                        | closed due to rockfalls                                         |
| 5_11                                 | impassability                      | sewerOverflow     | 956                        | closed due to sewer collapse                                    |
| 5_12                                 | impassability                      | stormDamage       | 925                        | blocked by storm damage                                         |
| 5_13                                 | impassability                      | subsidence        | 949                        | closed due to subsidence                                        |
| 5_14                                 | impassability                      | burstPipe         | 62 (Q)                     | burst pipe(s)                                                   |
| 5_15                                 | impassability                      | burstWaterMain    | 957                        | road closed due to burst water main                             |
| 5_16                                 | impassability                      | fallenPowerCables | 987                        | blocked by fallen power cables                                  |
| 5_17                                 | impassability                      | snowDrifts        | 1016                       | snow drifts (above Q hundred metres)                            |
| 6_0                                  | adverseWeatherCondition-Adhesion   | unavailable       | 1003                       | slippery road (above Q hundred metres)                          |
| 6_1                                  | adverseWeatherCondition-Adhesion   | heavyFrostOnRoad  | 1115                       | heavy frost                                                     |
| 6_2                                  | adverseWeatherCondition-Adhesion   | fuelOnRoad        | 1058                       | petrol on road. Danger                                          |
| 6_3                                  | adverseWeatherCondition-Adhesion   | mudOnRoad         | 1055                       | mud on road. Danger                                             |
| 6_4                                  | adverseWeatherCondition-Adhesion   | snowOnRoad        | 1012                       | snow on the road (above Q hundred metres)                       |
| 6_5                                  | adverseWeatherCondition-Adhesion   | iceOnRoad         | 1006                       | ice (above Q hundred metres)                                    |
| 6_6                                  | adverseWeatherCondition-Adhesion   | blackIceOnRoad    | 1008                       | black ice (above Q hundred metres)                              |
| 6_7                                  | adverseWeatherCondition-Adhesion   | oilOnRoad         | 1057                       | oil on road. Danger                                             |
| 6_8                                  | adverseWeatherCondition-Adhesion   | looseChippings    | 1056                       | loose chippings. Danger                                         |
| 6_9                                  | adverseWeatherCondition-Adhesion   | instantBlackIce   | 1008                       | black ice (above Q hundred metres)                              |
| 6_10                                 | adverseWeatherCondition-Adhesion   | roadsSalted       | 2043                       | road salted                                                     |
| 7_0                                  | aquaplaning                        | unavailable       | 1002                       | danger of aquaplaning                                           |
| 8_0                                  | reserved for future usage          | -                 | -                          | -                                                               |
| 9_0                                  | hazardousLocation-SurfaceCondition | unavailable       | 1037                       | extremely hazardous driving conditions (above Q hundred metres) |
| 9_1                                  | hazardousLocation-SurfaceCondition | rockfalls         | 998                        | rockfalls. Danger                                               |
| 9_2                                  | hazardousLocation-SurfaceCondition | earthquakeDamage  | 915                        | earthquake damage                                               |
| 9_3                                  | hazardousLocation-SurfaceCondition | sewerCollapse     | 918 (Q)                    | collapsed sewer(s)                                              |

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|--------------------------------------|-------------------------------------|-----------------------|----------------------------|-----------------------------------------------------------------------------------------|
| DENM index                           | CauseCode                           | SubCauseCode          | Code                       | Text                                                                                    |
| 9_4                                  | hazardousLocation-SurfaceCondition  | subsidence            | 917                        | subsidence                                                                              |
| 9_5                                  | hazardousLocation-SurfaceCondition  | snowDrifts            | 1016                       | snow drifts (above Q hundred metres)                                                    |
| 9_6                                  | hazardousLocation-SurfaceCondition  | stormDamage           | 986                        | storm damage. Danger                                                                    |
| 9_7                                  | hazardousLocation-SurfaceCondition  | burstPipe             | 64                         | burst pipe. Danger                                                                      |
| 9_8                                  | hazardousLocation-SurfaceCondition  | volcanoEruption       | 1090                       | volcano eruption warning                                                                |
| 9_9                                  | hazardousLocation-SurfaceCondition  | fallingIce            | 861                        | snow and ice debris                                                                     |
| 9_10                                 | hazardousLocation-SurfaceCondition  | fire                  | 921                        | serious fire                                                                            |
| 10_0                                 | hazardousLocation-ObstacleOnTheRoad | unavailable           | 63 (Q)                     | object(s) on the road. Danger                                                           |
| 10_1                                 | hazardousLocation-ObstacleOnTheRoad | shedLoad              | 359 (Q)                    | shed load(s). Danger                                                                    |
| 10_2                                 | hazardousLocation-ObstacleOnTheRoad | partsOfVehicles       | 63 (Q)                     | object(s) on the road. Danger                                                           |
| 10_3                                 | hazardousLocation-ObstacleOnTheRoad | partsOfTyres          | 61 (Q)                     | object(s) on roadway {something that does not necessarily block the road or part of it} |
| 10_4                                 | hazardousLocation-ObstacleOnTheRoad | bigObjects            | 902 (Q)                    | obstructions on the road. Danger                                                        |
| 10_5                                 | hazardousLocation-ObstacleOnTheRoad | fallenTrees           | 906 (Q)                    | fallen trees. Danger                                                                    |
| 10_6                                 | hazardousLocation-ObstacleOnTheRoad | hubCaps               | 61 (Q)                     | object(s) on roadway {something that does not necessarily block the road or part of it} |
| 10_7                                 | hazardousLocation-ObstacleOnTheRoad | waitingVehicles       | 1991                       | danger of waiting vehicles on roadway                                                   |
| 11_0                                 | hazardousLocation-AnimalOnTheRoad   | unavailable           | 923                        | animals on the road. Danger                                                             |
| 11_1                                 | hazardousLocation-AnimalOnTheRoad   | wildAnimals           | 923                        | animals on the road. Danger                                                             |
| 11_2                                 | hazardousLocation-AnimalOnTheRoad   | herdOfAnimals         | 1068                       | herds of animals on roadway                                                             |
| 11_3                                 | hazardousLocation-AnimalOnTheRoad   | smallAnimals          | 922                        | animals on roadway                                                                      |
| 11_4                                 | hazardousLocation-AnimalOnTheRoad   | largeAnimals          | 1067                       | large animals on roadway                                                                |
| 11_5                                 | hazardousLocation-AnimalOnTheRoad   | wildAnimalsSmall      | 922                        | animals on roadway                                                                      |
| 11_6                                 | hazardousLocation-AnimalOnTheRoad   | wildAnimalsLarge      | 1067                       | large animals on roadway                                                                |
| 11_7                                 | hazardousLocation-AnimalOnTheRoad   | domesticAnimals       | 922                        | animals on roadway                                                                      |
| 11_8                                 | hazardousLocation-AnimalOnTheRoad   | domesticAnimalsSmall  | 922                        | animals on roadway                                                                      |
| 11_9                                 | hazardousLocation-AnimalOnTheRoad   | domesticAnimalsLarge  | 1067                       | large animals on roadway                                                                |
| 12_0                                 | humanPresenceOnTheRoad              | unavailable           | 1482                       | people on roadway. Danger                                                               |
| 12_1                                 | humanPresenceOnTheRoad              | childrenOnRoadway     | 1483                       | children on roadway. Danger                                                             |
| 12_2                                 | humanPresenceOnTheRoad              | cyclistOnRoadway      | 1484                       | cyclists on roadway. Danger                                                             |
| 12_3                                 | humanPresenceOnTheRoad              | motorcyclistOnRoadway | 1472                       | people on roadway                                                                       |

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|--------------------------------------|---------------------------------|------------------------------|----------------------------|----------------------------------------------|
| DENM index                           | CauseCode                       | SubCauseCode                 | Code                       | Text                                         |
| 12_4                                 | humanPresenceOnTheRoad          | pedestrian                   | 1482                       | people on roadway. Danger                    |
| 12_5                                 | humanPresenceOnTheRoad          | ordinary-pedestrian          | 1472                       | people on roadway                            |
| 12_6                                 | humanPresenceOnTheRoad          | road-worker                  | 1482                       | people on roadway. Danger                    |
| 12_7                                 | humanPresenceOnTheRoad          | first-responder              | 397                        | rescue and recovery work in progress         |
| 12_8                                 | humanPresenceOnTheRoad          | lightVruVehicle              | 1484                       | cyclists on roadway. Danger                  |
| 12_9                                 | humanPresenceOnTheRoad          | bicyclist                    | 1474                       | cyclists on roadway                          |
| 12_10                                | humanPresenceOnTheRoad          | wheelchair-user              | 1482                       | people on roadway. Danger                    |
| 12_11                                | humanPresenceOnTheRoad          | horse-and-rider              | 1067                       | large animals on roadway                     |
| 12_12                                | humanPresenceOnTheRoad          | rollerskater                 | 1482                       | people on roadway. Danger                    |
| 12_13                                | humanPresenceOnTheRoad          | e-scooter                    | 1484                       | cyclists on roadway. Danger                  |
| 12_14                                | humanPresenceOnTheRoad          | personal-transporter         | 1472                       | people on roadway                            |
| 12_15                                | humanPresenceOnTheRoad          | pedelec                      | 1474                       | cyclists on roadway                          |
| 12_16                                | humanPresenceOnTheRoad          | speed-pedelec                | 1484                       | cyclists on roadway. Danger                  |
| 12_17                                | humanPresenceOnTheRoad          | ptw                          | -                          |                                              |
| 12_18                                | humanPresenceOnTheRoad          | moped                        | -                          |                                              |
| 12_19                                | humanPresenceOnTheRoad          | motorcycle                   | -                          |                                              |
| 12_20                                | humanPresenceOnTheRoad          | motorcycle-and-sidecar-right | -                          |                                              |
| 12_21                                | humanPresenceOnTheRoad          | motorcycle-and-sidecar-left  | -                          |                                              |
| 13_0                                 | reserved for future usage       | -                            | -                          |                                              |
| 14_0                                 | wrongWayDriving                 | unavailable                  | 1701 (Q)                   | vehicle(s) on wrong carriageway              |
| 14_1                                 | wrongWayDriving                 | wrongLane                    | 1701 (Q)                   | vehicle(s) on wrong carriageway              |
| 14_2                                 | wrongWayDriving                 | wrongDirection               | 1701 (Q)                   | vehicle(s) on wrong carriageway              |
| 15_0                                 | rescueAndRecoveryWorkInProgress | unavailable                  | 397                        | rescue and recovery work in progress         |
| 15_1                                 | rescueAndRecoveryWorkInProgress | emergencyVehicles            | 397                        | rescue and recovery work in progress         |
| 15_2                                 | rescueAndRecoveryWorkInProgress | rescueHelicopterLanding      | 397                        | rescue and recovery work in progress         |
| 15_3                                 | rescueAndRecoveryWorkInProgress | policeActivityOngoing        | 1498                       | police activity ongoing                      |
| 15_4                                 | rescueAndRecoveryWorkInProgress | medicalEmergencyOngoing      | 1499                       | medical emergency ongoing                    |
| 15_5                                 | rescueAndRecoveryWorkInProgress | childAbductionInProgress     | 1500                       | child abduction in progress                  |
| 15_6                                 | rescueAndRecoveryWorkInProgress | prioritizedVehicle           | 1066                       | rescue and recovery work in progress. Danger |
| 15_7                                 | rescueAndRecoveryWorkInProgress | rescueAndRecoveryVehicle     | 1066                       | rescue and recovery work in progress. Danger |
| 16_0                                 | reserved for future usage       | -                            | -                          |                                              |

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|--------------------------------------|-------------------------------------------------|---------------------------|----------------------------|-----------------------------------------------|
| DENM index                           | CauseCode                                       | SubCauseCode              | Code                       | Text                                          |
| 17_0                                 | adverseWeatherCondition-ExtremeWeatherCondition | unavailable               | -                          |                                               |
| 17_1                                 | adverseWeatherCondition-ExtremeWeatherCondition | strongWinds               | 1205                       | strong winds (Q)                              |
| 17_2                                 | adverseWeatherCondition-ExtremeWeatherCondition | damagingHail              | 1132                       | damaging hail (visibility reduced to Q)       |
| 17_3                                 | adverseWeatherCondition-ExtremeWeatherCondition | hurricane                 | 1204                       | storm force winds (Q)                         |
| 17_4                                 | adverseWeatherCondition-ExtremeWeatherCondition | thunderstorm              | 1108                       | thunderstorms (visibility reduced to Q)       |
| 17_5                                 | adverseWeatherCondition-ExtremeWeatherCondition | tornado                   | 1201                       | tornadoes                                     |
| 17_6                                 | adverseWeatherCondition-ExtremeWeatherCondition | blizzard                  | 1130                       | blizzard (visibility reduced to Q)            |
| 18_0                                 | adverseWeatherCondition-Visibility              | unavailable               | 1318                       | visibility reduced (to Q)                     |
| 18_1                                 | adverseWeatherCondition-Visibility              | fog                       | 1301                       | dense fog (visibility reduced to Q)           |
| 18_2                                 | adverseWeatherCondition-Visibility              | smoke                     | 1309                       | smoke hazard (visibility reduced to Q)        |
| 18_3                                 | adverseWeatherCondition-Visibility              | heavySnowfall             | 1134                       | heavy snowfall. Visibility reduced (to Q)     |
| 18_4                                 | adverseWeatherCondition-Visibility              | heavyRain                 | 1136                       | heavy rain. Visibility reduced (to Q)         |
| 18_5                                 | adverseWeatherCondition-Visibility              | heavyHail                 | 1132                       | damaging hail (visibility reduced to Q)       |
| 18_6                                 | adverseWeatherCondition-Visibility              | lowSunGlare               | 1325                       | low sun glare                                 |
| 18_7                                 | adverseWeatherCondition-Visibility              | sandstorms                | 1326                       | sandstorms (visibility reduced to Q)          |
| 18_8                                 | adverseWeatherCondition-Visibility              | swarmsOfInsects           | 1340                       | swarms of insects (visibility reduced to Q)   |
| 19_0                                 | adverseWeatherCondition-Precipitation           | unavailable               | -                          |                                               |
| 19_1                                 | adverseWeatherCondition-Precipitation           | heavyRain                 | 1109                       | heavy rain (Q)                                |
| 19_2                                 | adverseWeatherCondition-Precipitation           | heavySnowfall             | 1101                       | heavy snowfall (Q)                            |
| 19_3                                 | adverseWeatherCondition-Precipitation           | softHail                  | 1106                       | hail (visibility reduced to Q)                |
| 20_0                                 | violence                                        | unavailable               | -                          |                                               |
| 20_1                                 | violence                                        | reserved for future usage | -                          |                                               |
| 20_2                                 | violence                                        | reserved for future usage | -                          |                                               |
| 20_3                                 | violence                                        | stoneThrowingPersons      | 897                        | people throwing objects onto the road. Danger |

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|--------------------------------------|---------------------------|---------------------------------|----------------------------|-------------------------------------------------------------|
| DENM index                           | CauseCode                 | SubCauseCode                    | Code                       | Text                                                        |
| 21_0                                 | reserved for future usage | -                               | -                          |                                                             |
| 22_0                                 | reserved for future usage | -                               | -                          |                                                             |
| 23_0                                 | reserved for future usage | -                               | -                          |                                                             |
| 24_0                                 | reserved for future usage | -                               | -                          |                                                             |
| 25_0                                 | reserved for future usage | -                               | -                          |                                                             |
| 26_0                                 | slowVehicle               | unavailable                     | 1754 (Q)                   | slow vehicle(s)                                             |
| 26_1                                 | slowVehicle               | maintenanceVehicle              | 829 (Q sets of)            | slow moving maintenance vehicles. Slow traffic              |
| 26_2                                 | slowVehicle               | vehiclesSlowingToLookAtAccident | 208                        | vehicles slowing to look at (Q) accident(s)                 |
| 26_3                                 | slowVehicle               | abnormalLoad                    | 1751 (Q)                   | abnormal load(s)                                            |
| 26_4                                 | slowVehicle               | abnormalWideLoad                | 1752 (Q)                   | wide load(s)                                                |
| 26_5                                 | slowVehicle               | convoy                          | 1755 (Q)                   | convoy(s)                                                   |
| 26_6                                 | slowVehicle               | snowplough                      | 681 (Q)                    | snowploughs                                                 |
| 26_7                                 | slowVehicle               | deicing                         | 675 (Q)                    | salting vehicles                                            |
| 26_8                                 | slowVehicle               | saltingVehicles                 | 675 (Q)                    | salting vehicles                                            |
| 27_0                                 | dangerousEndOfQueue       | unavailable                     | 138                        | queuing traffic (with average speeds Q). Approach with care |
| 27_1                                 | dangerousEndOfQueue       | suddenEndOfQueue                | 138                        | queuing traffic (with average speeds Q). Approach with care |
| 27_2                                 | dangerousEndOfQueue       | queueOverHill                   | 140                        | queuing traffic over the crest of a hill                    |
| 27_3                                 | dangerousEndOfQueue       | queueAroundBend                 | 139                        | queuing traffic around a bend in the road                   |
| 27_4                                 | dangerousEndOfQueue       | queueInTunnel                   | 138                        | queuing traffic (with average speeds Q). Approach with care |
| 28_0                                 | reserved for future usage | -                               | -                          |                                                             |
| 90_0                                 | reserved for future usage | -                               | -                          |                                                             |
| 91_0                                 | vehicleBreakdown          | unavailable                     | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_1                                 | vehicleBreakdown          | lackOfFuel                      | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_2                                 | vehicleBreakdown          | lackOfBatteryPower              | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_3                                 | vehicleBreakdown          | engineProblem                   | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_4                                 | vehicleBreakdown          | transmissionProblem             | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_5                                 | vehicleBreakdown          | engineCoolingProblem            | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_6                                 | vehicleBreakdown          | brakingSystemProblem            | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_7                                 | vehicleBreakdown          | steeringProblem                 | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_8                                 | vehicleBreakdown          | tyrePuncture                    | 393 (Q)                    | broken down vehicle(s). Danger                              |
| 91_9                                 | vehicleBreakdown          | tyrePressureProblem             | 393 (Q)                    | broken down vehicle(s). Danger                              |

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|--------------------------------------|----------------------------------|----------------------------------------------------------|----------------------------|------------------------------------|
| DENM index                           | CauseCode                        | SubCauseCode                                             | Code                       | Text                               |
| 91_10                                | vehicleBreakdown                 | vehicleOnFire                                            | 213                        | (Q) vehicle fire(s)                |
| 92_0                                 | postCrash                        | unavailable                                              | 201                        | (Q) accident(s)                    |
| 92_1                                 | postCrash                        | accidentWithoutECallTriggered                            | 201                        | (Q) accident(s)                    |
| 92_2                                 | postCrash                        | accidentWithECallManuallyTriggered                       | 201                        | (Q) accident(s)                    |
| 92_3                                 | postCrash                        | accidentWithECallAutomaticallyTriggered                  | 201                        | (Q) accident(s)                    |
| 92_4                                 | postCrash                        | accidentWithECallTriggeredWithoutAccessToCellularNetwork | 201                        | (Q) accident(s)                    |
| 93_0                                 | humanProblem                     | unavailable                                              | 1499                       | medical emergency ongoing          |
| 93_1                                 | humanProblem                     | glycemiaProblem                                          | 1499                       | medical emergency ongoing          |
| 93_2                                 | humanProblem                     | heartProblem                                             | 1499                       | medical emergency ongoing          |
| 94_0                                 | stationaryVehicle                | unavailable                                              | 393                        | (Q) broken down vehicle(s). Danger |
| 94_1                                 | stationaryVehicle                | humanProblem                                             | 1499                       | medical emergency ongoing          |
| 94_2                                 | stationaryVehicle                | vehicleBreakdown                                         | 393                        | (Q) broken down vehicle(s). Danger |
| 94_3                                 | stationaryVehicle                | postCrash                                                | 201                        | (Q) accident(s)                    |
| 94_4                                 | stationaryVehicle                | publicTransportStop                                      | 1734                       | (Q) slow vehicle(s), danger        |
| 94_5                                 | stationaryVehicle                | carryingDangerousGoods                                   | 1734                       | (Q) slow vehicle(s), danger        |
| 94_6                                 | stationaryVehicle                | vehicleOnFire                                            | 213                        | (Q) vehicle fire(s)                |
| 95_0                                 | emergencyVehicleApproaching      | unavailable                                              | 1706                       | (Q) emergency vehicles             |
| 95_1                                 | emergencyVehicleApproaching      | emergencyVehicleApproaching                              | 1707                       | (Q) high-speed emergency vehicles  |
| 95_2                                 | emergencyVehicleApproaching      | prioritizedVehicleApproaching                            | 1707                       | (Q) high-speed emergency vehicles  |
| 96_0                                 | hazardousLocation-DangerousCurve | unavailable                                              | -                          |                                    |
| 96_1                                 | hazardousLocation-DangerousCurve | dangerousLeftTurnCurve                                   | -                          |                                    |
| 96_2                                 | hazardousLocation-DangerousCurve | dangerousRightTurnCurve                                  | -                          |                                    |
| 96_3                                 | hazardousLocation-DangerousCurve | multipleCurvesStartingWithUnknownTurningDirection        | -                          |                                    |
| 96_4                                 | hazardousLocation-DangerousCurve | multipleCurvesStartingWithLeftTurn                       | -                          |                                    |
| 96_5                                 | hazardousLocation-DangerousCurve | multipleCurvesStartingWithRightTurn                      | -                          |                                    |
| 97_0                                 | collisionRisk                    | unavailable                                              | -                          |                                    |
| 97_1                                 | collisionRisk                    | longitudinalCollisionRisk                                | -                          |                                    |
| 97_2                                 | collisionRisk                    | crossingCollisionRisk                                    | -                          |                                    |
| 97_3                                 | collisionRisk                    | lateralCollisionRisk                                     | -                          |                                    |

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|--------------------------------------|--------------------|---------------------------------|----------------------------|------|
| DENM index                           | CauseCode          | SubCauseCode                    | Code                       | Text |
| 97_4                                 | collisionRisk      | vulnerableRoadUser              | -                          |      |
| 98_0                                 | signalViolation    | unavailable                     | -                          |      |
| 98_1                                 | signalViolation    | stopSignViolation               | -                          |      |
| 98_2                                 | signalViolation    | trafficLightViolation           | -                          |      |
| 98_3                                 | signalViolation    | turningRegulationViolation      | -                          |      |
| 99_0                                 | dangerousSituation | unavailable                     | -                          |      |
| 99_1                                 | dangerousSituation | emergencyElectronicBrakeEngaged | -                          |      |
| 99_2                                 | dangerousSituation | preCrashSystemEngaged           | -                          |      |
| 99_3                                 | dangerousSituation | espEngaged                      | -                          |      |
| 99_4                                 | dangerousSituation | absEngaged                      | -                          |      |
| 99_5                                 | dangerousSituation | aebEngaged                      | -                          |      |
| 99_6                                 | dangerousSituation | brakeWarningEngaged             | -                          |      |
| 99_7                                 | dangerousSituation | collisionRiskWarningEngaged     | -                          |      |