

# Additional Items Related to SAE J1979

# Items

1. Differences between CCR1968.2(ISOR) and SAE J1979-2(DA)
  - Increment condition of mini-numerator and mini-denominator
  - NRCs(negative response code) allowed
2. Additional change
  - Related to CCM Readiness Bit not fixed to “completed”, additional changes needed.

# Increment condition of mini-N and mini-D (1/2)

- CCR1968.2(ISOR)

(d)(5.7.1)(B)(ii)

(ii) The mini-numerator shall be incremented at the end of a driving cycle if and only if the associated monitor ran and completed on the driving cycle.

mini-numerator:  
at the end of a driving cycle

(d)(5.7.2)(B)(ii)

(ii) The mini-denominator for non-hybrid vehicles and hybrid vehicles that are not plug-in hybrid electric vehicles shall be incremented at the end of a driving cycle if and only if the general denominator increments during the driving cycle as described in section (d)(5.6.2). The mini-denominator for plug-in hybrid electric vehicles shall be incremented at the end of a driving cycle if and only if the criteria in

mini-denominator:  
at the end of a driving cycle

- J1979DA (202104)

Monitor Activity Ratio  
- Mini-Numerator

Behavior

- Increment counter when the DEM receives a PASS report for the DTC
  - i.e. when DTC Status Bit 6 (*TestNotCompletedThisOperationCycle*) transitions from 1 to 0

mini-numerator:  
PASS reported by a monitor

Monitor Activity Ratio  
- Mini-Denominator

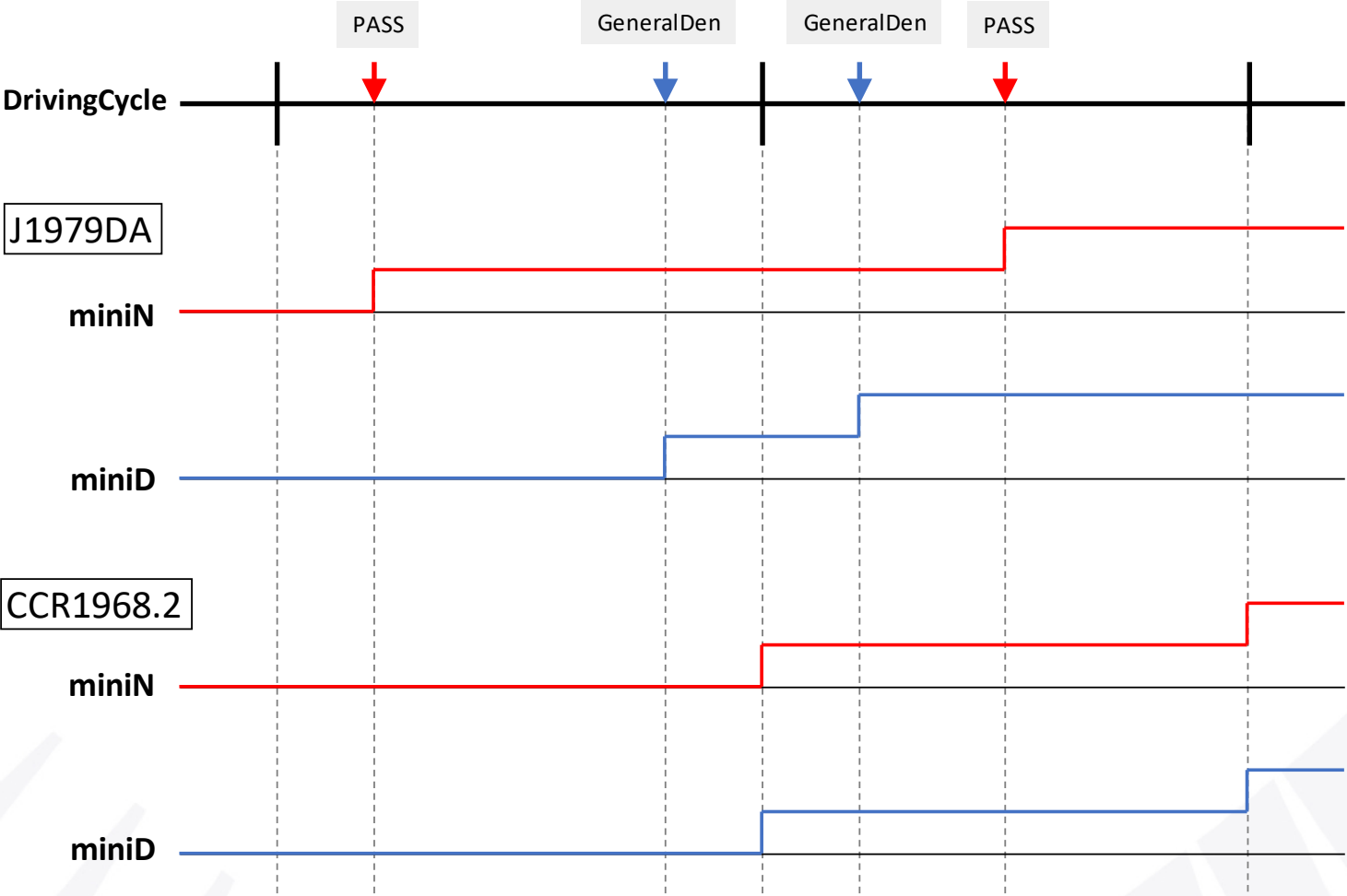
Behavior

- Increment counter when the General Denominator increments

mini-denominator:  
when the general denominator increments

# Increment condition of mini-N and mini-D (2/2)

## Example



# NRCs allowed (1/2)

- CCR1968.2(ISOR)

(g)(3.4.2)

(3.4.2) For vehicles using SAE J1979-2, except as provided in sections (g)(3.4.2)(A), (g)(3.4.2)(B), and (g)(4.7.4)(B), the OBD II system may not respond with a negative response code (NRC) in response to a request message from a scan tool.

(A) The OBD II system may respond with NRC \$22, \$31, \$72, or \$78 in response to a Service \$14 (i.e., clear/reset emission-related diagnostic information) request message from a scan tool.

(B) The OBD II system may respond with NRC \$78 in response to a request message for tracking data specified in sections (g)(6.3) through (g)(6.5) and (g)(6.12) from a scan tool.

## No NRC allowed except:

- Service\$14 ((g)(3.4.2)(A))
- Service\$22 ITID\$F8xx ((g)(3.4.2)(B), (g)(4,7,4)(B))

- J1979DA (202104)

- Defined in Table 12 - Proper response from server/ecu on functional or physical requests for OBD on UDS ECUs
- See next page.

# NRCs allowed (2/2)

| J1979-2 Table 12 - Proper response from server/ecu on functional or physical requests for OBDonUDS ECUs |                |  |            |          | CCR1968.2(ISOR) |          |
|---|----------------|--|------------|----------|-----------------|----------|
| Service   | SF             | Condition  | Functional | Physical | Functional      | Physical |
| all   | all            | Service Not Supported  | N/A        | \$11     | N/A             | N/A      |
| all   | all            | Subfunction Not Supported  | N/A        | \$12     | N/A             | N/A      |
| all   | all            | Incorrect Message length Or Invalid Format   | \$13       | \$13     | N/A             | N/A      |
| all   | all            | Unsupported DID/MID/TID/ITID/RID requested   | N/A        | \$31     | N/A             | N/A      |
| \$19  | \$04           | Unsupported DTCSSRN<br>Unsupported DTCMREC   | N/A        | \$31     | N/A             | N/A      |
| \$19  | \$06           | Unsupported DTCSSRN<br>Unsupported DTCMREC   | N/A        | \$31     | N/A             | N/A      |
| \$19  | \$1A           | UnSupported Information DTCEDR   | N/A        | \$31     | N/A             | N/A      |
| \$19  | \$42/\$55      | Supported DTCSSRN/FGID/DTC SVM requested, data not available, conditions correct                     | \$78       | \$78     | N/A             | N/A      |
| \$19  | \$56           | Unsupported RGID   | N/A        | \$31     | N/A             | N/A      |
| \$19  | \$42/\$55/\$56 | Unsupported FGID   | N/A        | \$31     | N/A             | N/A      |
| \$14  | -              | conditions not correct   | \$22       | \$22     | \$22            | \$22     |
| \$14  | -              | Unsupported GODTC, unsupported addressing method   | N/A        | \$31     | N/A             | \$31     |
| \$14  | -              | Supported GODTC, conditions correct  | \$78       | \$78     | \$78            | \$78     |
| \$14  | -              | ClearDTC not possible due to corrupt NV memory   | \$72       | \$72     | \$72            | \$72     |
| \$31  | \$01           | Supported RID requested, conditions not correct  | \$22       | \$22     | N/A             | N/A      |
| \$31  | \$01           | Routine is currently active and cannot be restarted  | \$24       | \$24     | N/A             | N/A      |
| \$22  | -              | Supported ITID requested, data not available, conditions correct (CVN, NOx Binning,and GHG Tracking) | \$78       | \$78     | \$78            | \$78     |
| \$22  | -              | DID \$F810 requested during initialization<br>* \$F810: Protocol Identification                      | \$21       | \$21     | N/A             | N/A      |

# Additional changes

Now, readiness for CCM is not fixed to “completed” for SAE J1979-2.

(g)(4.1.2)(B)

- (4.1) Readiness Status:
  - (4.1.2) For vehicles using SAE J1979-2:
    - (xv) Gasoline Comprehensive Component: input component rationality fault diagnostics, output component/system functional checks, sections (e)(15.2.3)(A)(i) through (iii), (e)(15.2.3)(B)(i)b., (e)(15.2.3)(B)(ii)b., and (e)(15.2.3)(C) through (F)
    - (xxxi) Diesel Comprehensive Component: input component rationality fault diagnostics, output component/system functional checks, sections (f)(15.2.3)(A)(i) through (iii), (f)(15.2.3)(B)(i)b., (f)(15.2.3)(B)(ii)b., and (f)(15.2.3)(C) through (F)

So the condition “other than the comprehensive components readiness bit” is no more needed.

CCR1968.2:2019  
(g)(4.4.6)(D)

- (ii) For 30 percent of 2019, 60 percent of 2020, and 100 percent of 2021 and subsequent model year vehicles, the readiness bits (refer to section (g)(4.1)) for all monitored components and systems in all modules that reported supported readiness for a readiness bit **other than the comprehensive components readiness bit** are set to “not complete” in conjunction with the reprogramming event.

CCR1968.2:2019  
(g)(4.8.2)(B)

- (B) For 30 percent of 2019, 60 percent of 2020, and 100 percent of 2021 and subsequent model year vehicles, if the VIN is reprogrammable, in conjunction with reprogramming of the VIN, the OBD II system shall erase all emission-related diagnostic information identified in section (g)(4.10.1) in all control modules that reported supported readiness for a readiness bit **other than the comprehensive components readiness bit**.