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00	2021-03-31	Initial version
01	2021-06-18	Addition of test results Editorial changes and corrections
02	2021-09-21	Addition of test results Editorial changes and corrections
03	2021-12-17	Addition of test results Editorial changes and corrections
04	2022-03-30	Addition of test results Editorial changes and corrections
05	2022-06-30	Addition of test results Editorial changes and corrections
06	2022-08-30	Addition of test results Editorial changes and corrections

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Glossary:

CI	compression ignition
CO	carbon monoxide
dyn.	dynamics
GTAA	granting type approval authority
HC	hydro carbons
ISC	in-service conformity
NMHC	non-methane hydro carbons
NO <sub>x</sub>	nitrogen oxides
PI	positive ignition
PM	particle mass
PN	particle number
RDE	real driving emissions
start.	started
THC	total hydro carbons
und.	undefined
VIN	vehicle identification number

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**A. Quick overview and main conclusions**

With the new in-service conformity in accordance with Regulation (EU) 2018/1832, Annex II, Part B, the granting type approval authority has to conduct tests (type 1 and RDE (type 1a), optional type 4 and type 6) for at least 5 % (or a minimum of two families) of the manufacturers ISC families granted at the relative type approval authority.

The four manufacturers listed below are obliged to perform ISC tests under supervision of SNCH S.A for all their ISC families exceeding 5000 vehicles sold within the EU within the relevant year.

All ISC-families shown in this report have sales numbers below 100000 vehicles during the relevant year within the EU, thus only one sample of minimum 3 vehicles has to be tested:

- Audi AG
- Mazda Motor Corporation
- Subaru Corporation
- VW AG

UTAC was chosen by SNCH S.A. to perform all the type approval authority ISC tests as an independent technical service.

All vehicles, except one, (manufacturer tests and UTAC tests on behalf of SNCH S.A.) passed the type 1 (and RDE, type 1a) test with emissions below the allowed limit. According to the statistical procedure laid down in the Regulation, all ISC families finalised so far could be closed after the third vehicle tested (except one family needed an additional fourth car). Only one failing test reported.

**B. ISC activities performed by the manufacturer in the previous year:**

**1) Information gathering by manufacturer**

The manufacturers recorded sales and produced numbers for each ISC family. If sales/produced numbers pass the mark of 5000 for the given year, an ISC procedure has to be performed for the ISC family in case.

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2) ISC testing (including planning and selection of families tested, and final results of tests)

**Audi AG:**

Total amount of ISC families	20
Amount of ISC families with > 5000 vehicles sold in previous year	<b>9</b>

ISC-families to test (type 1) by manufacturer:

#	ISC family	# of cars tested	# of cars failed	status
1	3G01	<u>3</u>	0	<u>pass</u>
2	4D02-A	<u>3</u>	0	<u>pass</u>
3	4D02-B	3	0	pass
4	4G04	3	0	pass
5	4G05-A	<u>3</u>	0	<u>pass</u>
6	4H02	<u>3</u>	0	<u>pass</u>
7	4H03	<u>3</u>	0	<u>pass</u>
8	6H00	<u>3</u>	0	<u>pass</u>
9	6H01	3	0	<u>pass</u>

The manufacturer requested additional time to conduct the ISC tests due to reduced availability of appropriate vehicles (closed dealers due to the sanitary crisis).

Please refer to *Appendix B – Audi AG* for final results.

**Audi Sport GmbH:**

Total amount of ISC families	5
Amount of ISC families with > 5000 vehicles sold in previous year	<b>0</b>

No ISC tests required.

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**Audi Hungaria Zrt.:**

Total amount of ISC families	1
Amount of ISC families with > 5000 vehicles sold in previous year	0

No ISC tests required.

**Bentley Motors Limited:**

Bentley is a small volume manufacturer, thus no ISC tests are required.

**Ford Werke GmbH:**

Total amount of ISC families	1
Amount of ISC families with > 5000 vehicles sold in previous year	0

No ISC tests required.

**Mazda Motor Corporation:**

Total amount of ISC families	9
Amount of ISC families with > 5000 vehicles sold in previous year	6

ISC-families to test (type 1) by manufacturer:

#	ISC family	# of cars tested	# of cars failed	status
1	13-MAZ-0001	3	0	pass
2	13-MAZ-0002	3	0	pass
3	13-MAZ-0003	3	0	pass
4	13-MAZ-0005	3	0	pass
5	13-MAZ-0006	3	0	pass
6	13-MAZ-0007	3	0	pass

The manufacturer requested additional time to conduct the ISC tests. Delay on renovation work on manufacturers testing facilities as well as reduced availability of appropriate vehicles led to the delay of ISC tests.

Please refer to *Appendix B – Mazda Motor Corporation* for final results.

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**Mazda Motor Logistics Europe:**

Total amount of ISC families	3
Amount of ISC families with > 5000 vehicles sold in previous year	0

No ISC tests required.

**Skoda Auto a.s.:**

Total amount of ISC families	1
Amount of ISC families with > 5000 vehicles produced <sup>1)</sup> in previous year	0

<sup>1)</sup> only produced volumes were available. For the future, sales numbers will be considered.

No ISC tests required.

**Subaru Corporation:**

Total amount of ISC families	4
Amount of ISC families with > 5000 vehicles sold in previous year	1

ISC-families to test (type 1) by manufacturer:

#	ISC family	# of cars tested	# of cars failed	status
1	ISC20DICON	3	0	pass

Please refer to *Appendix B - Subaru Corporation* for final results.

**Toyota Motor Europe:**

Total amount of ISC families	1
Amount of ISC families with > 5000 vehicles sold in previous year	0

No ISC tests required.

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**VW AG:**

Total amount of ISC families	30
Amount of ISC families with > 5000 vehicles sold in previous year	<b>15</b>

ISC-families to test (type 1) by manufacturer:

#	ISC family	# of cars tested	# of cars failed	status
1	13-VWx-715W_A1_DFFA_FD7_0_A_1_0-000	3	0	pass
2	13-VWx-715W_A1_DGTE_FM6_0_A_1_0-000	3	0	pass
3	13-VWx-715W_A1_DKRF_FM6_0_A_1_3-000	3	0	pass
4	13-VWx-715W_A1_DPCA_FD7_0_B_1_0-000	3	0	pass
5	13-VWx-715W_A1_DPCA_FM6_0_A_1_0-000	3	0	pass
6	13-VWx-715W_AA_CHYE_FM5_0_A_1_0-000	3	0	pass
7	13-VWx-715W_AW_DKRF_FD7_0_A_1_1-000	3	0	pass
8	13-VWx-715W_AW_DKLA_FM5_0_A_1_1-000	3	0	pass
9	13-VWx-715W_AW_DKRF_FM6_0_A_1_1-000	3	0	pass
10	13-VWx-715W_C1_DGTD_FD7_0_A_1_0-000	3	0	pass
11	13-VWx-715W_C1_DGTD_FM5_0_A_1_0-000	3	0	pass
12	13-VWx-715W_C1_DKLA_FM5_0_A_1_1-000	3	0	pass
13	13-VWx-715W_C1_DKRF_FD7_0_A_1_1-000	3	0	pass
14	13-VWx-715W_C1_DKRF_FM6_0_A_1_1-000	3	0	pass
15	13-VWx-715W_3C_DSRB_FD7_0_A_1_0-000	3	0	pass

Please refer to *Appendix B – VW AG* for final results.

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C. ISC activities performed by accredited laboratories or technical services in the previous year:

3) Information gathering and risk assessment

No data available.

4) ISC testing (including planning and selection of families tested, and final results of tests)

The following three vehicles have been tested on behalf of TNO:

#	Manufacturer	ISC family	technical service	test type	status
1	Audi AG	4H02	EMISIA S.A.	RDE type 1a	pass
2	Mazda Motor Corporation	13-MAZ-0004	TÜV NORD	RDE type 1a	pass
3	VW AG	13-VWx-715W_3C_DSRB_FD7_0_A_1_0-000	TÜV NORD	RDE type 1a	pass

Please refer to *Appendix C - TNO* for final results.



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D. ISC activities performed by the granting type approval authority in the previous year:

5) Information gathering and risk assessment

SNCH S.A. did not do any kind of testing or monitoring or sensing beforehand the ISC tests. For the applicable ISC-families, two potentially high-emitters have been reported to SNCH S.A. The risk assessment was based on the available data from the manufacturers, e.g., sales numbers and emission related warranty claims.

The total amount of sold (produced) vehicles was chosen as the most important criterion for the risk assessment. A large number of cars on the road gives high potential for pollution. Second criterion for the risk assessment was the emission related warranty claims the manufacturer reported. Also, the potential high emitters were included into the selection. Based on this data, the initial choice of ISC families was done. Reduced vehicle availability however led to some changes.

6) ISC testing (including planning and selection of families tested, and final results of tests)

**Audi AG:**

Total amount of ISC families	20
Amount of ISC families with > 5000 vehicles sold in previous year	9
Amount of ISC families to be tested by GTAA (5 % or at least 2)	<b>2</b>

Tested ISC-families (type 1 and RDE):

#	ISC family	# of cars tested	# of cars failed	status
1	6H01	3	0	pass
2	4D02-A	3	0	pass

Please refer to *Appendix D – Audi AG* for final results.

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**Mazda Motor Corporation:**

Total amount of ISC families	9
Amount of ISC families with > 5000 vehicles sold in previous year	6
Amount of ISC families to be tested by GTAA (5 % or at least 2)	<b>2<sup>2)</sup></b>

<sup>2)</sup> includes the potentially high-emitting vehicles

Tested ISC-families (type 1 and RDE):

#	ISC family	# of cars tested	# of cars failed	status
1	13-MAZ-0004	3	0	pass
2	13-MAZ-0003	4	1	pass

Please refer to *Appendix D – Mazda Motor Corporation* for final results.

**Subaru Corporation:**

Total amount of ISC families	4
Amount of ISC families with > 5000 vehicles sold in previous year	1
Amount of ISC families to be tested by GTAA (5 % or at least 2)	<b>2<sup>3)</sup></b>

<sup>3)</sup> an additional family has been chosen due to the reporting of potentially high-emitting vehicles

Tested ISC-families (type 1 and RDE):

#	ISC family	# of cars tested	# of cars failed	status
1	ISC25MICON	3	0	pass
2	ISC20DICON	3	0	pass

Please refer to *Appendix D – Subaru Corporation* for final results.

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**VW AG:**

Total amount of ISC families	30
Amount of ISC families with > 5000 vehicles produced <sup>1)</sup> in previous year	15
Amount of ISC families to be tested by GTAA (5 % or at least 2)	<b>2</b>

Tested ISC-families (type 1 and RDE):

#	ISC family	# of cars tested	# of cars failed	status
1	13-VWx-715W_AW_DKLA_FM5_0_A_1_1-000	3	0	pass
2	13-VWx-715W_A1_DFFA_FD7_0_A_1_0-000	3	0	pass

Please refer to *Appendix D – VW AG* for final results.

7) Detailed investigations

Based on the results so far, no detailed investigations were deemed necessary.

8) Remedial measures

No remedial measures to be taken.



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E. Assessment of the yearly expected emissions decrease due to any ISC remedial measures

Not applicable.

F. Lessons Learned (including for performance of instruments used)

Hard to find the appropriate cars.

G. Report of other invalid tests

Please refer to *Appendix C - TNO*.

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**Appendix B – Audi AG**

ISC family	VIN	type 1																	
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN						
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>						
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI						
1000		500		100		68		60		80		-		170		4,5		6	
3G01	WAUZZZGA0LA__702	123,4	-	13,5	-	12,0	-	15,0	-	-	-	0,18	0,03						
	WAUZZZGA8LA__238	210,7	-	14,7	-	12,1	-	18,6	-	-	-	0,08	0,01						
	WAUZZZGA3LA__770	222,0	-	22,9	-	20,3	-	16,7	-	-	-	0,21	0,01						
4D02-A	WAUZZZ8V2KA__125	-	32,3	-	-	-	-	-	23,2	-	27,3	0,16	0,03						
	WAUZZZF33L1__277	-	15,1	-	-	-	-	-	28,7	-	31,9	0,12	0,02						
	WAUZZZGA8LA__210	-	15,1	-	-	-	-	-	19,8	-	24,8	0,15	0,06						
4D02-B	WAUZZZF40LA__973	-	23,6	-	-	-	-	-	31,9	-	36,7	0,12	0,03						
	WAUZZZFY1L2__808	-	23,8	-	-	-	-	-	32,2	-	37,3	0,09	0,07						
	WAUZZZFY2L2__695	-	15,7	-	-	-	-	-	25,6	-	29,5	0,16	0,16						
4G04	WAUZZZ8VXLA__633	87,3	-	14,9	-	12,9	-	17,4	-	-	-	0,05	0,00						
	WAUZZZGA2LA__459	110,6	-	14,0	-	11,6	-	15,3	-	-	-	0,06	0,01						
	WAUZZZGA8LA__395	97,6	-	16,0	-	13,6	-	23,1	-	-	-	0,15	0,00						
4G05-A	WAUZZZF38M1__058	269,6	-	12,4	-	10,4	-	12,1	-	-	-	0,20	0,39						
	WAUZZZGA5LA__057	294,4	-	24,3	-	21,8	-	15,9	-	-	-	0,08	0,44						
	WAUZZZF34L1__649	229,8	-	12,2	-	10,3	-	12,5	-	-	-	0,24	0,63						
4H02	WAUZZZF46LA__401	202,3	-	12,1	-	10,7	-	11,5	-	-	-	0,15	0,35						
	WAUZZZF47LA__992	137,9	-	13,0	-	10,8	-	4,4	-	-	-	0,08	0,19						
	WAUZZZF52LN__874	314,4	-	21,5	-	18,2	-	9,2	-	-	-	0,21	0,57						
4H03	WAUZZZF21LN__100	-	16,4	-	-	-	-	-	26,1	-	30,8	0,18	0,14						
	WAUZZZF55LA__917	-	30,8	-	-	-	-	-	29,3	-	35,7	0,07	0,03						
	WAUZZZF45LA__926	-	27,3	-	-	-	-	-	31,6	-	36,5	0,08	0,06						
6H00	WAUZZZF2XLN__686	-	203,5	-	-	-	-	-	26,7	-	53,6	0,16	0,01						
	WAUZZZF47KA__231	-	142,8	-	-	-	-	-	22,2	-	49,4	0,27	0,09						
	WAUZZZF20KN__065	-	221,7	-	-	-	-	-	35,8	-	63,6	0,10	0,00						
6H01	WAUZZZF27LN__003	-	202,7	-	-	-	-	-	41,2	-	61,2	0,93	0,01						
	WAUZZZF21LN__241	-	88,6	-	-	-	-	-	35,2	-	53,6	3,22	0,02						
	WAUZZZF16LD__216	-	189,1	-	-	-	-	-	52,6	-	82,1	0,55	0,02						

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*Appendix B – Mazda Motor Corporation*

ISC family	VIN	type 1															
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN				
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>				
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI				
1000		500		100		68		60		80		170		4,5		6	
13-MAZ-0001	JMZKFGWMA00__934	104,7	-	16,1	-	12,3	-	9,9	-	-	-	0,19	2,25				
	JMZGL62M801__474	107,9	-	15,0	-	11,4	-	8,6	-	-	-	0,24	2,78				
	JMZKFGWMA90__991	113,0	-	11,6	-	9,3	-	8,0	-	-	-	0,14	2,14				
13-MAZ-0002	JMZKFGW2A90__344	-	67,4	-	-	-	-	-	56,7	-	64,7	0,10	0,95				
	JMZGL691691__195	-	80,8	-	-	-	-	-	67,5	-	81,2	0,19	0,54				
	JMZGL692601__157	-	51,4	-	-	-	-	-	65,3	-	67,6	0,08	0,06				
13-MAZ-0003	JMZDK6W7A01__105	187,5	-	13,4	-	11,3	-	9,5	-	-	-	0,67	4,13				
	JMZDK6W7601__328	157,6	-	12,2	-	9,5	-	17,4	-	-	-	0,11	2,10				
	JMZDK6W7601__944	120,3	-	8,8	-	6,4	-	14,2	-	-	-	0,11	1,99				
13-MAZ-0005	3MDDJ6H550M__032	100,4	-	6,6	-	5,6	-	8,2	-	-	-	0,37	1,80				
	3MDDJ6H550M__535	185,5	-	11,9	-	10,4	-	9,4	-	-	-	0,39	3,47				
	3MDDJ6H550M__850	170,8	-	8,4	-	6,8	-	10,7	-	-	-	0,24	3,12				
13-MAZ-0006	JMZBP6HE601__573	98,0	-	10,8	-	7,9	-	5,9	-	-	-	0,16	2,27				
	JMZBP6HE601__360	141,4	-	18,1	-	14,3	-	8,8	-	-	-	0,28	3,09				
	JMZDM6WE600__712	138,8	-	17,4	-	13,1	-	10,4	-	-	-	0,21	4,21				
13-MAZ-0007	JMZDMFWH600__251	290,4	-	29,1	-	26,5	-	5,8	-	-	-	0,30	0,65				
	JMZDMFWHA00__163	265,9	-	27,8	-	24,6	-	18,1	-	-	-	0,14	0,28				
	JMZBP6SH601__093	187,5	-	18,7	-	17,4	-	11,6	-	-	-	0,10	1,94				

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*Appendix B – Subaru Corporation*

ISC family	VIN	type 1											
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI
		1000	500	100	-	68	-	60	80	-	170	4,5	6
ISC20DICON	JF1GT3LC5KG__317	272,5	-	26,6	-	24,4	-	16,9	-	-	-	-	-
	JF1GT3LC5KG__439	281,1	-	29,8	-	27,2	-	18,9	-	-	-	-	-
	JF1GT3LC5KG__325	299,4	-	26,4	-	24,0	-	19,2	-	-	-	-	-

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Appendix B – VW AG

ISC family	VIN	type 1											
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI
		1000	500	100	-	68	-	60	80	-	170	4,5	6
13-VWx- 715W_A1_DFFA_ FD7_0_A_1_0-000	WVGZZA1ZLV__710	-	23,3	-	-	-	-	-	42,1	-	47,0	0,13	0,02
	WVGZZA1ZLV__304	-	13,0	-	-	-	-	-	42,1	-	47,3	0,05	0,01
	WVGZZA1ZLV__660	-	13,0	-	-	-	-	-	38,9	-	43,5	0,09	0,04
13-VWx- 715W_A1_DGTE_ FM6_0_A_1_0-000	WVGZZA1ZLV__384	-	71,3	-	-	-	-	-	40,5	-	47,2	0,19	0,02
	WVGZZA1ZLV__134	-	41,7	-	-	-	-	-	41,4	-	46,3	0,14	0,01
	WVGZZA1ZLV__371	-	58,7	-	-	-	-	-	38,9	-	44,6	0,21	0,03
13-VWx- 715W_A1_DKRF_ FM6_0_A_1_3-000	WVGZZA1ZLV__328	200,9	-	18,1	-	15,6	-	13,5	-	-	-	0,00	0,02
	WVGZZA1ZLV__188	153,6	-	14,2	-	12,3	-	16,7	-	-	-	0,02	0,05
	WVGZZA1ZLV__188	215,9	-	16,7	-	14,8	-	14,1	-	-	-	0,14	0,01
13-VWx- 715W_A1_DPCA_ FD7_0_B_1_0-000	WVGZZA1ZLV__050	82,6	-	11,6	-	9,6	-	17,3	-	-	-	0,08	0,00
	WVGZZA1ZLV__051	85,2	-	16,2	-	14,0	-	17,4	-	-	-	0,37	0,00
	WVGZZA1ZLV__635	109,9	-	14,1	-	12,1	-	14,4	-	-	-	0,11	0,01
13-VWx- 715W_A1_DPCA_ FM6_0_A_1_0-000	WVGZZA1ZLV__414	64,3	-	12,6	-	10,4	-	25,0	-	-	-	0,07	0,01
	WVGZZA1ZLV__925	102,6	-	14,5	-	12,0	-	29,4	-	-	-	0,00	0,01
	WVGZZA1ZLV__758	87,3	-	14,7	-	12,0	-	23,7	-	-	-	0,04	0,00
13-VWx- 715W_AA_CHYE_ FM5_0_A_1_0-000	WVWZZAAZLD__342	350,6	-	40,7	-	37,9	-	9,5	-	-	-	-	-
	WVWZZAAZLD__343	225,8	-	27,2	-	25,4	-	8,8	-	-	-	-	-
	WVWZZAAZLD__148	214,2	-	13,2	-	11,7	-	8,7	-	-	-	-	-
13-VWx- 715W_AW_DKRF_ FD7_0_A_1_1-000	WVWZZAWZLY__146	202,0	-	14,5	-	12,7	-	15,0	-	-	-	0,05	0,02
	WVWZZAWZLY__956	225,7	-	16,2	-	13,8	-	14,9	-	-	-	0,08	0,08
	WVWZZAWZLY__868	164,5	-	11,4	-	9,8	-	13,6	-	-	-	0,12	0,01
13-VWx- 715W_AW_DKLA_ FM5_0_A_1_1-000	WVWZZAWZLY__162	157,5	-	12,7	-	11,1	-	15,1	-	-	-	0,10	0,00
	WVWZZAWZLY__775	137,7	-	12,5	-	11,0	-	14,1	-	-	-	0,02	0,06
	WVWZZAWZLY__929	179,2	-	17,5	-	15,4	-	16,6	-	-	-	0,15	0,01
13-VWx- 715W_AW_DKRF_ FM6_0_A_1_1-000	WVWZZAWZLY__795	187,4	-	28,3	-	26,3	-	15,7	-	-	-	0,00	0,01
	WVWZZAWZLY__531	201,7	-	18,4	-	16,2	-	19,0	-	-	-	0,00	0,01
	WVWZZAWZLY__627	143,7	-	16,5	-	14,7	-	17,6	-	-	-	0,05	0,04
13-VWx- 715W_C1_DGTD_ FD7_0_A_1_0-000	WVGZZC1ZLY__794	-	21,8	-	-	-	-	25,0	-	30,0	0,14	0,01	
	WVGZZC1ZLY__930	-	22,0	-	-	-	-	17,5	-	23,2	0,05	0,02	
	WVGZZC1ZLY__084	-	13,8	-	-	-	-	23,2	-	28,8	0,08	0,01	
13-VWx- 715W_C1_DGTD_ FM5_0_A_1_0-000	WVGZZC1ZLY__997	-	35,9	-	-	-	-	30,2	-	35,1	0,14	0,01	
	WVGZZC1ZLY__201	-	31,2	-	-	-	-	33,1	-	37,7	0,12	0,00	
	WVGZZC1ZLY__916	-	80,1	-	-	-	-	28,2	-	32,3	0,16	0,01	
13-VWx- 715W_C1_DKLA_ FM5_0_A_1_1-000	WVGZZC1ZLY__919	170,3	-	15,7	-	13,9	-	17,2	-	-	-	0,20	0,02
	WVGZZC1ZLY__430	187,3	-	13,7	-	11,8	-	16,5	-	-	-	0,11	0,01
	WVGZZC1ZLY__447	169,5	-	14,2	-	12,4	-	16,9	-	-	-	0,23	0,00
13-VWx- 715W_C1_DKRF_ FD7_0_A_1_1-000	WVGZZC1ZLY__979	209,0	-	16,3	-	14,5	-	16,9	-	-	-	0,32	0,06
	WVGZZC1ZLY__746	258,3	-	17,1	-	14,6	-	17,5	-	-	-	0,26	0,02
	WVGZZC1ZLY__523	165,9	-	14,1	-	12,6	-	16,1	-	-	-	0,32	0,01
13-VWx- 715W_C1_DKRF_ FM6_0_A_1_1-000	WVGZZC1ZLY__206	168,7	-	16,3	-	14,3	-	17,3	-	-	-	0,01	0,02
	WVGZZC1ZLY__649	192,2	-	15,6	-	13,7	-	19,6	-	-	-	0,11	0,06
	WVGZZC1ZLY__114	203,7	-	17,3	-	15,4	-	18,0	-	-	-	0,13	0,04
13-VWx- 715W_3C_DSRB_ FD7_0_A_1_0-000	WVWZZ3CZLE__557	-	26,6	-	-	-	-	24,5	-	30,4	0,34	0,07	
	WVWZZ3CZLE__924	-	25,4	-	-	-	-	25,8	-	31,6	0,05	0,04	
	WVWZZ3CZLE__638	-	27,0	-	-	-	-	24,8	-	30,3	0,14	0,07	



**Version:** 1  
**Date:** 16.03.2021

**Vérification:**  
**Validation:**
**Appendix C - TNO**

ISC family	VIN	trip dyn.	RDE (type 1a, total trip)					RDE (type 1a, urban trip)				
			NO <sub>x</sub>		PN		CO	NO <sub>x</sub>		PN		CO
			mg/km		#/km*10 <sup>11</sup>		mg/km	mg/km		#/km*10 <sup>11</sup>		mg/km
			PI	CI	PI	CI	PI / CI	PI	CI	PI	CI	PI / CI
ISC_4-Zylinder_Otto_MLB_HEV	WAUZZZFY4K2___133	valid	18,3	-	1,03	-	96,2	36,4	-	2,17	-	88,0
13-MAZ-0004	JMZBP6H8601___477	valid	-	40,1	-	0,00	39,4	-	46,7	-	0,00	40,1
13-VWx-715W_3C_DSRB_FD7_0_A_1_0-000	WVWZZZ3CZLE___135	valid	-	5,4	-	0,00	23,6	-	11,2	-	0,00	35,6

Following additional tests were done on request by TNO. The performed tests do not represent a valid RDE test cycle:

ISC family	VIN	trip dyn.	cold start and dynamic drive					stop & go				
			NO <sub>x</sub>		PN		CO	NO <sub>x</sub>		PN		CO
			mg/km		#/km*10 <sup>11</sup>		mg/km	mg/km		#/km*10 <sup>11</sup>		mg/km
			PI	CI	PI	CI	PI / CI	PI	CI	PI	CI	PI / CI
13-MAZ-0004	JMZBP6H8601___477	not valid	-	257,6	-	0,01	88,2	-	163,4	-	0,00	30,5
13-VWx-715W_3C_DSRB_FD7_0_A_1_0-000	WVWZZZ3CZLE___135	not valid	-	22,9	-	0,02	47,6	-	9,4	-	0,02	76,4

ISC family	VIN	trip dyn.	way to motorway					mixed route				
			NO <sub>x</sub>		PN		CO	NO <sub>x</sub>		PN		CO
			mg/km		#/km*10 <sup>11</sup>		mg/km	mg/km		#/km*10 <sup>11</sup>		mg/km
			PI	CI	PI	CI	PI / CI	PI	CI	PI	CI	PI / CI
13-MAZ-0004	JMZBP6H8601___477	not valid	-	145,3	-	0,00	61,4	-	693,8	-	0,00	31,1
13-VWx-715W_3C_DSRB_FD7_0_A_1_0-000	WVWZZZ3CZLE___135	not valid	-	8,6	-	0,00	18,9	-	111,9	-	0,06	72,2

ISC family	VIN	trip dyn.	idling			regular driving						
			NO <sub>x</sub>	PN	CO	NO <sub>x</sub>	PN	CO	NO <sub>x</sub>	PN	CO	
			g/h	#/h*10 <sup>11</sup>	g/h	mg/km	#/km*10 <sup>11</sup>	mg/km	mg/km	#/km*10 <sup>11</sup>	mg/km	
			PI	CI	PI / CI	PI	CI	PI / CI	PI	CI	PI / CI	
13-MAZ-0004	JMZBP6H8601___477	not valid	-	0,04	-	0,00	0,06	-	60,0	-	0,00	193,5
13-VWx-715W_3C_DSRB_FD7_0_A_1_0-000	WVWZZZ3CZLE___135	not valid	-	0,14	-	0,07	0,58	-	23,1	-	0,01	18,5

**Version:** 1  
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**Vérification:**  
**Validation:**
**Appendix D – Audi AG**

ISC family	VIN	type 1											
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI
		1000	500	100	-	68	-	60	80	-	170	4,5	6
6H01	WAUZZZF2XLN__698	-	237,7	-	-	-	-	-	50,7	-	75,2	0,53	0,02
	WAUZZZF21LN__392	-	198,1	-	-	-	-	-	47,4	-	70,1	0,64	0,03
	WAUZZZF20LN__362	-	300,3	-	-	-	-	-	52,3	-	90,5	0,69	0,01
4D02-A	WAUZZZFYXK2__149	-	29,1	-	-	-	-	-	29,2	-	35,9	0,42	0,11
	WAUZZZFY0L2__426	-	19,2	-	-	-	-	-	27,6	-	33,4	0,30	0,06
	WAUZZZFY8K2__171	-	11,9	-	-	-	-	-	26,2	-	30,5	0,58	0,05

ISC family	VIN	trip dyn.	RDE (type 1a, total trip)					RDE (type 1a, urban trip)				
			NO <sub>x</sub>		PN		CO	NO <sub>x</sub>		PN		CO
			mg/km		#/km*10 <sup>11</sup>		mg/km	mg/km		#/km*10 <sup>11</sup>		mg/km
			PI	CI	PI	CI	PI / CI	PI	CI	PI	CI	PI / CI
			126	168	9	9	-	126	168	9	9	-
6H01	WAUZZZF2XLN__698	valid	-	51,6	-	4,11	195,8	-	69,0	-	1,72	320,6
	WAUZZZF21LN__392	valid	-	59,7	-	1,65	151,6	-	65,5	-	1,61	208,8
	WAUZZZF20LN__362	valid	-	38,2	-	0,09	156,0	-	65,2	-	0,03	271,4
4D02-A	WAUZZZFYXK2__149	valid	-	77,3	-	1,75	22,8	-	79,1	-	1,21	38,8
	WAUZZZFY0L2__426	valid	-	76,4	-	1,96	39,9	-	108,7	-	4,48	70,3
	WAUZZZFY8K2__171	valid	-	32,1	-	0,09	54,0	-	43,0	-	0,15	76,1

**Version:** 1  
**Date:** 16.03.2021

**Vérification:**  
**Validation:**

Appendix D – Mazda Motor Corporation

ISC family	VIN	type 1											
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI
		1000	500	100	-	68	-	60	80	-	170	4,5	6
13-MAZ-0004	JMZBP6H8601__704	-	147,5	-	-	-	-	-	42,5	-	73,8	0,02	0,02
	JMZBP6H8601__850	-	97,7	-	-	-	-	-	41,8	-	67,6	0,15	0,02
	JMZBP6H8601__108	-	122,1	-	-	-	-	-	28,8	-	61,0	0,02	0,02
13-MAZ-0003	JMZKFGW7600__695	155,1	-	16,4	-	11,9	-	18,3	-	-	-	0,63	6,04
	JMZDK6W7601__686	155,5	-	14,3	-	9,9	-	15,8	-	-	-	0,27	1,79
	JMZDK6W7601__183	125,4	-	11,5	-	8,8	-	10,8	-	-	-	0,19	2,04
	JMZDK6W7601__837	137,6	-	11,8	-	8,9	-	12,7	-	-	-	0,25	1,38

ISC family	VIN	trip dyn.	RDE (type 1a, total trip)						RDE (type 1a, urban trip)					
			NO <sub>x</sub>		PN		CO	NO <sub>x</sub>		PN		CO		
			mg/km		#/km*10 <sup>11</sup>		mg/km	mg/km		#/km*10 <sup>11</sup>		mg/km		
			PI	CI	PI	CI	PI / CI	PI	CI	PI	CI	PI / CI		
			126	168	9	9	-	126	168	9	9	-		
13-MAZ-0004	JMZBP6H8601__704	valid	-	96,9	-	0,00	35,0	-	125,8	-	0,03	33,8		
	JMZBP6H8601__850	valid	-	69,0	-	0,00	119,1	-	98,0	-	0,02	164,9		
	JMZBP6H8601__108	valid	-	41,7	-	0,00	105,3	-	57,8	-	0,00	136,5		
13-MAZ-0003	JMZKFGW7600__695	valid	26,4	-	5,1	-	61,1	45,9	-	5,3	-	60,3		
	JMZDK6W7601__686	valid	18,3	-	1,6	-	87,2	36,2	-	3,4	-	152,8		
	JMZDK6W7601__183	valid	11,5	-	0,9	-	30,7	21,4	-	1,2	-	25,4		
	JMZDK6W7601__837	-	-	-	-	-	-	-	-	-	-	-		

**Version:** 1  
**Date:** 16.03.2021

**Vérification:**  
**Validation:**

*Appendix D – Subaru Corporation*

ISC family	VIN	type 1											
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI
		1000	500	100	-	68	-	60	80	-	170	4,5	6
ISC25MICON	JF1BS9LC2LG_563	536,9	-	28,8	-	25,8	-	22,1	-	-	-	-	-
	JF1BS9LC2KG_053	625,2	-	33,3	-	30,1	-	26,9	-	-	-	-	-
	JF1BS9LC2LG_284	503,9	-	27,3	-	25,1	-	24,2	-	-	-	-	-
ISC20DICON	JF1GT3LC5KG_772	339,0	-	27,1	-	24,3	-	19,1	-	-	-	-	-
	JF1GT3LC5KG_711	411,6	-	29,8	-	26,9	-	19,4	-	-	-	-	-
	JF1GT3LC5KG_635	532,1	-	29,2	-	26,4	-	19,0	-	-	-	-	-

ISC family	VIN	trip dyn.	RDE (type 1a, total trip)						RDE (type 1a, urban trip)					
			NO <sub>x</sub>		PN		CO	NO <sub>x</sub>		PN		CO		
			mg/km		#/km*10 <sup>11</sup>		mg/km	mg/km		#/km*10 <sup>11</sup>		mg/km		
			PI	CI	PI	CI	PI / CI	PI	CI	PI	CI	PI / CI		
			126	168	9	9	-	126	168	9	9	-		
ISC25MICON	JF1BS9LC2LG_563	valid	13,0	-	-	-	1002,8	29,2	-	-	-	685,0		
	JF1BS9LC2KG_053	valid	15,2	-	-	-	652,1	23,0	-	-	-	0,1		
	JF1BS9LC2LG_284	valid	27,2	-	-	-	3852,2	49,1	-	-	-	791,1		
ISC20DICON	JF1GT3LC5KG_772	valid	10,0	-	-	-	186,9	29,3	-	-	-	223,9		
	JF1GT3LC5KG_711	valid	8,8	-	-	-	763,8	19,7	-	-	-	620,6		
	JF1GT3LC5KG_635	valid	5,9	-	-	-	579,0	17,2	-	-	-	748,8		

**Version:** 1  
**Date:** 16.03.2021

**Vérification:**  
**Validation:**
**Appendix D – VW AG**

ISC family	VIN	type 1											
		CO		THC		NMHC		NO <sub>x</sub>		THC + NO <sub>x</sub>		PM	PN
		mg/km		mg/km		mg/km		mg/km		mg/km		mg/km	#/km*10 <sup>11</sup>
		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI / CI	PI / CI
		1000	500	100	-	68	-	60	80	-	170	4,5	6
13-VWx- 715W_AW_DKLA_ FM5_0_A_1_1-000	WVWZZZAWZLY__504	141,4	-	11,0	-	9,3	-	12,1	-	-	-	0,07	0,01
	WVWZZZAWZLY__381	134,0	-	11,6	-	10,1	-	12,8	-	-	-	0,05	0,01
	WVWZZZAWZLY__666	168,2	-	13,4	-	11,7	-	12,0	-	-	-	0,05	0,04
13-VWx- 715W_A1_DFFA_ FD7_0_A_1_0-000	WVGZZA1ZLV__540	-	21,1	-	-	-	-	-	43,8	-	49,6	0,15	0,03
	WVGZZA1ZLV__906	-	26,7	-	-	-	-	-	40,1	-	46,2	0,13	0,15
	WVGZZA1ZLV__566	-	33,1	-	-	-	-	-	46,1	-	63,5	0,45	0,02

ISC family	VIN	trip dyn.	RDE (type 1a, total trip)						RDE (type 1a, urban trip)					
			NO <sub>x</sub>		PN		CO	NO <sub>x</sub>		PN		CO		
			mg/km		#/km*10 <sup>11</sup>		mg/km	mg/km		#/km*10 <sup>11</sup>		mg/km		
			PI	CI	PI	CI	PI / CI	PI	CI	PI	CI	PI / CI		
			126	168	9	9	-	126	168	9	9	-		
13-VWx- 715W_AW_DKLA_ FM5_0_A_1_1-000	WVWZZZAWZLY__504	valid	4,0	-	0,00	-	27,1	10,2	-	0,00	-	13,2		
	WVWZZZAWZLY__381	valid	6,3	-	0,03	-	103,0	14,8	-	0,02	-	159,4		
	WVWZZZAWZLY__666	valid	4,8	-	0,04	-	61,7	12,7	-	0,02	-	39,6		
13-VWx- 715W_A1_DFFA_ FD7_0_A_1_0-000	WVGZZA1ZLV__540	valid	-	40,8	-	0,04	72,5	-	82,2	-	0,09	142,4		
	WVGZZA1ZLV__906	valid	-	34,3	-	0,25	75,7	-	59,9	-	0,32	124,2		
	WVGZZA1ZLV__566	valid	-	69,6	-	0,06	53,1	-	69,0	-	0,09	80,2		