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# NISSAN SENTRA

MODEL B15 SERIES

QUICK REFERENCE INDEX

# FOREWORD

**This manual contains maintenance and repair procedures for the 2003 NISSAN SENTRA.**

**In order to assure your safety and the efficient functioning of the vehicle, this manual should be read thoroughly. It is especially important that the PRECAUTIONS in the GI section be completely understood before starting any repair task.**

**All information in this manual is based on the latest product information at the time of publication. The right is reserved to make changes in specifications and methods at any time without notice.**

# IMPORTANT SAFETY NOTICE

**The proper performance of service is essential for both the safety of the technician and the efficient functioning of the vehicle.**
**The service methods in this Service Manual are described in such a manner that the service may be performed safely and accurately.**
**Service varies with the procedures used, the skills of the technician and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first be completely satisfied that neither personal safety nor the vehicle's safety will be jeopardized by the service method selected.**

NISSAN NORTH AMERICA, INC.
Technical Publications Department
Gardena, California

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Your comments are important to NISSAN and will help us to improve our Service Manuals.
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**SERVICE MANUAL: Model:** _____ **Year:** _____

**PUBLICATION NO. (Please photocopy back cover):** _____

**VEHICLE INFORMATION VIN:** _____ **Production Date:** _____

Please describe any issues or problems in detail:

Page number(s) _____ *Note: Please include a copy of each page, marked with your comments.*

_____

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**Are the trouble diagnosis procedures logical and easy to use? (circle your answer) YES NO**

If no, what page number(s)?_____*Note: Please include a copy of each page, marked with your comments.*

Please describe the issue or problem in detail: _____

_____

_____

_____

**Is the organization of the manual clear and easy to follow? (circle your answer) YES NO**

Please comment: _____

_____

_____

_____

_____

**What information should be included in NISSAN Service Manuals to better support you in servicing or repairing customer vehicles?**

_____

_____

_____

_____

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

CITY:_____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

# QUICK REFERENCE CHART: SENTRA (EQUIPPED WITH 1.8L, QG ENGINE)

## Engine Tune-Up Data

| | | |
|---|---|---|
| Engine | | QG18DE |
| Classification | | Gasoline |
| Cylinder arrangement | | 4, in-line |
| Displacement $cm^3$ (cu in) | | 1,769 (107.94) |
| Bore × stroke mm (in) | | 80.0 x 88.0 (3.150 x 3.465) |
| Valve arrangement | | DOHC |
| Firing order | | 1-3-4-2 |
| Number of piston rings | Compression | 2 |
| | Oil | 1 |
| Number of main bearings | | 5 |
| Compression ratio | | 9.5 |

### Drive Belt Deflection and Tension

| Component | | Deflection Adjustment Unit: mm (in) | | | Tension Adjustment *1 Unit: N (kg, lb) | | |
|---|---|---|---|---|---|---|---|
| | | Used Belt | | New Belt | Used Belt | | New Belt |
| | | Limit | After Adjustment | | Limit | After Adjustment | |
| Generator | With air conditioner compressor | 8.1 (0.319) | 5.3 - 5.7 (0.209 - 0.244) | 4.5 - 5.0 (0.177- 0.197) | 292 (30, 66) | 652 - 740 (66.5 - 75.5, 146.6 - 166.4) | 789 - 877 (80.5 - 89.5, 177.4 - 197.1) |
| | Without air conditioner compressor | 10.2 (0.402) | 6.5 - 7.0 (0.256 - 0.276) | 5.5 - 6.1 (0.217 - 0.240) | 292 (30, 60) | 652 - 740 (66.5 - 75.5, 146.6 - 166.4) | 789 - 877 (80.5 - 89.5, 177.4 - 197.1) |
| Power steering oil pump | | 7.1 (0.280) | 4.4 - 4.9 (0.173 - 0.193) | 3.9 - 4.4 (0.154 - 0.173) | 196 (20, 44) | 495 - 583 (50.5 -59.5, 111.4 - 131.2) | 603- 691 (61.5 - 70.5, 135.6 - 155.5) |
| Applied pushing force | | 98 N (10 kg, 22 lb) | | | — | | |

*1: If the belt tension gauge cannot be installed at check points shown, check belt tension at a different location on the belt.

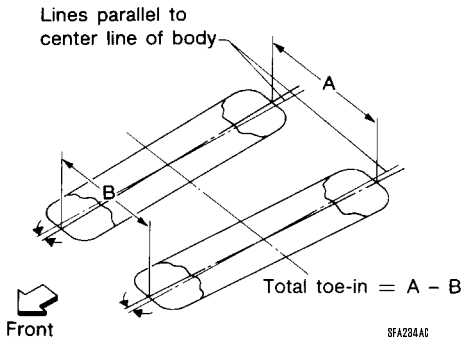
### Spark Plugs (Double Platinum - Tipped)

| | | |
|---|---|---|
| Type | Standard | PLFR5A-11 |
| | Hot | PLFR4A-11 |
| | Cold | PLFR6A-11 |
| Plug gap | | nominal 1.1 mm (0.043 in) |

# QUICK REFERENCE CHART: SENTRA (EQUIPPED WITH 1.8L, QG ENGINE)

**2003**

## Front Wheel Alignment (Unladen*1)




| | | | |
|---|---|---|---|
| Camber<br>Degree minute (decimal degree) | | Minimum | –1°10' (–1.17°) |
| | | Nominal | –0°25' (–0.42°) |
| | | Maximum | 0°20′ (0.33°) |
| | | Left and right difference | 45′ (0.75°) or less |
| Caster<br>Degree minute (decimal degree) | | Minimum | 0°51′ (0.85°) |
| | | Nominal | 1°36′ (1.60°) |
| | | Maximum | 2°21′ (2.35°) |
| | | Left and right difference | 45′ (0.75°) or less |
| Kingpin inclination<br>Degree minute (decimal degree) | | Minimum | 13°58′ (13.97°) |
| | | Nominal | 14°43′ (14.72°) |
| | | Maximum | 15°28′ (15.47°) |
| Total toe-in | Distance (A - B)<br>mm (in) | Minimum | 1 (0.039") |
| | | Nominal | 2 (0.079") |
| | | Maximum | 3 (0.118") |
| | Angle (left plus right)<br>Degree minute (decimal degree) | Minimum | 5.5′ (0.08°) |
| | | Nominal | 11′ (0.18°) |
| | | Maximum | 16′ (0.27°) |
| Wheel turning angle<br>Full turn*2 | Inside<br>Degree minute (decimal degree) | Minimum | 34° (34.0°) |
| | | Nominal | 37° (37.0°) |
| | | Maximum | 38° (38.0°) |
| | Outside<br>Degree minute (decimal degree) | Nominal | 31° (31.0°) |

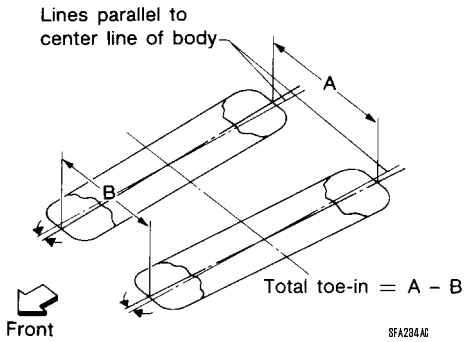
*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

*2: On power steering models, wheel turning force (at circumference of steering wheel) of 98 to 147 N (10 to 15 kg, 22 to 33 lb) with engine idle.

# QUICK REFERENCE CHART: SENTRA (EQUIPPED WITH 1.8L, QG ENGINE)

**2003**

## Rear Wheel Alignment (Unladen*)




| | | | |
|---|---|---|---|
| Camber<br>Degree minute (decimal degree) | | Minimum | –1°45′ (–1.75°) |
| | | Nominal | –1°00′ (–1.00°) |
| | | Maximum | –0°15′ (–0.25°) |
| Total toe-in | Distance (A - B)<br>mm (in) | Minimum | –3 (–0.12) |
| | | Nominal | 1 (0.04) |
| | | Maximum | 5 (0.20) |
| | Angle (left plus right)<br>Degree minute (decimal degree) | Minimum | –16′ (–0.27°) |
| | | Nominal | 5′30″ (0.09°) |
| | | Maximum | 26′ (0.43°) |

*: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

## Brake

Unit: mm (in)

| | | |
|---|---|---|
| Front brake | Brake model | CL25VA |
| | Cylinder bore diameter | 57.2 (2.252) |
| | Pad length × width × thickness | 125.6 × 46.0 × 11.0 (4.94 × 1.811 × 0.433) |
| | Rotor outer diameter × thickness | 257 × 22 (10.12 × 0.87) |
| Rear brake | Brake model | LT20G |
| | Cylinder bore diameter/caliper bore diameter | 15.87 (5/8) type a<br>17.45 (11/16) type b |
| | Lining length × width × thickness | 219.4 × 35 × 4.5<br>(8.64 × 1.38 × 0.177) |
| | Drum inner diameter/Disc diameter × thickness | 203.2 (8) |
| Master cylinder | Cylinder bore diameter | 23.81 (15/16) |
| Control valve | Valve model | Dual proportioning valve |
| | Split point [kPa (kg/cm$^2$, psi)] × reducing ratio | 1,961 (20,284) × 0.2 |
| Brake booster | Booster model | M215T |
| | Diaphragm diameter | Primary: 230 (9.06)<br>Secondary: 205 (8.07) |
| Brake fluid | Recommended brake fluid | Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent, DOT 3 (US FMVSS No. 116) |

### Disc Brake - Repair Limits

Unit: mm (in)

| | |
|---|---|
| Brake model | CL25VA |
| Pad wear limit<br>Minimum thickness | 2.0 (0.079) |
| Rotor repair limit<br>Minimum thickness | 20 (0.79) |

# QUICK REFERENCE CHART: SENTRA (EQUIPPED WITH 1.8L, QG ENGINE)

**2003**

### Drum Brake - Repair Limits

Unit: mm (in)

| | | |
|---|---|---|
| Brake model | | LT20G |
| Lining wear limit | Minimum thickness | 1.5 (0.059) |
| Drum repair limit | Maximum inner diameter | 204.5 (8.05) |
| | Maximum out-of round | 0.03 (0.0012) |

## Refill Capacities

### Engine Coolant Capacity (Approximate)

Unit: ℓ (US qt, Imp qt)

| | | |
|---|---|---|
| Drain and refill without reservoir | M/T (RS5F70A) | 6.0 (6 3/8, 5 1/4) |
| | A/T (RE4F03B) | 5.9 (6 1/4, 5 1/4) |
| Reservoir tank (at MAX level) | | 0.7 (3/4, 5/8) |

### Engine Oil Capacity (Approximate)

Unit: ℓ (US qt, Imp qt)

| | | |
|---|---|---|
| Drain and refill | With oil filter change | 2.7 (2 7/8, 2 3/8) |
| | Without oil filter change | 2.5 (2 5/8, 2 1/4) |
| Dry engine (engine overhaul) | | 3.1 (3 1/4, 2 3/4) |

### Miscellaneous Capacities (Approximate)

| System description | | Metric measurement | US measurement | Imp measurement |
|---|---|---|---|---|
| Fuel tank | | 50 ℓ | 13 1/4 gal | 11 gal |
| Power steering system | | 1.0 ℓ | 2 1/8 pt | 1 3/4 pt |
| Transaxle | M/T (RS5F70A) | 3.0 ℓ | 3 1/8 qt | 2 5/8 qt |
| | A/T (RE4F03B) | 7.0 ℓ | 7 3/8 qt | 6 1/8 qt |
| Air conditioning system | Refrigerant | 0.45 - 0.55 kg | 0.99 - 1.21 lb | 0.99 - 1.21 lb |
| | Compressor oil | 180 mℓ | 6.1 fl oz | 6.3 fl oz |

[QR25DE]

# QUICK REFERENCE CHART: SENTRA (EQUIPPED WITH 2.5L, QR ENGINE)

## Engine Tune-Up Data

| | | |
|---|---|---|
| Engine | | QR25DE |
| Cylinder arrangement | | 4 in-line |
| Displacement cm$^3$ (cu in) | | 2,488 (151.82) |
| Bore and stroke mm (in) | | 89.0 x 100 (3.50 - 3.94) |
| Valve arrangement | | DOHC |
| Firing order | | 1-3-4-2 |
| Number of piston rings | Compression | 2 |
| | Oil | 1 |
| Compression ratio | | 9.5 |
| Compression pressure kPa (kg/cm$^2$, psi) / 250 rpm | Standard | 1,250 (12.8, 182) |
| | Minimum | 1,060 (10.8, 154) |
| | Differential limit between cylinders | 100 (1.0, 14) |

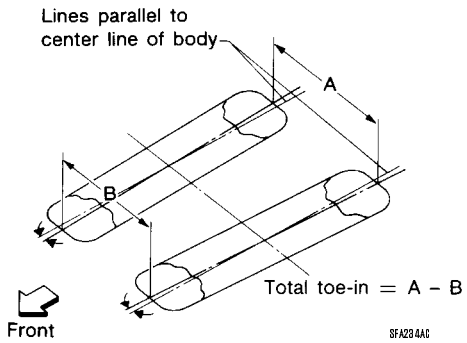
### Drive Belt Deflection and Tension

| | |
|---|---|
| Tension of drive belts | Auto adjustment by auto-tensioner |

### Spark Plugs (Double Platinum Tipped)

| | | |
|---|---|---|
| Type | Standard | PLFR5A-11 |
| | Hot | PLFR4A-11 |
| | Cold | PLFR6A-11 |
| Plug gap | | nominal 1.1 mm (0.043 in) |

## Front Wheel Alignment (Unladen*1)

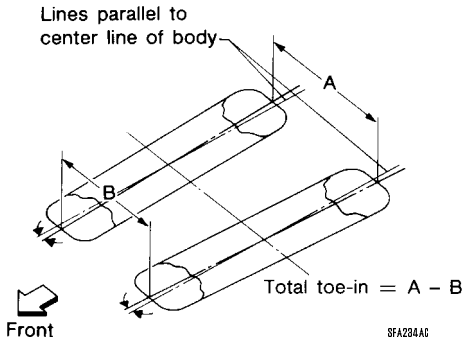



| | | |
|---|---|---|
| Camber Degree minute (decimal degree) | Minimum | –1°12' (–1.2°) |
| | Nominal | –0°27' (–0.45°) |
| | Maximum | 0°18′ (0.3°) |
| | Left and right difference | 45′ (0.75°) or less |
| Caster Degree minute (decimal degree) | Minimum | 0°58′ (0.97°) |
| | Nominal | 1°43′ (1.72°) |
| | Maximum | 2°28′ (2.47°) |
| | Left and right difference | 45′ (0.75°) or less |
| Kingpin inclination Degree minute (decimal degree) | Minimum | 14°03′ (14.05°) |
| | Nominal | 14°46′ (14.77°) |
| | Maximum | 15°31′ (15.52°) |

| | | | |
|---|---|---|---|
| Total toe-in | Distance (A - B) mm (in) | Minimum | 1 (0.039”) |
| | | Nominal | 2 (0.079”) |
| | | Maximum | 3 (0.118”) |
| | Angle (left plus right) Degree minute (decimal degree) | Minimum | 5.5′ (0.08°) |
| | | Nominal | 11′ (0.18°) |
| | | Maximum | 16′ (0.27°) |
| Wheel turning angle Full turn*2 | Inside Degree minute (decimal degree) | Minimum | 29° (29.0°) |
| | | Nominal | 32° (32.0°) |
| | | Maximum | 33° (33.0°) |
| | Outside Degree minute (decimal degree) | Nominal | 27° (27.0°) |

*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.
*2: On power steering models, wheel turning force (at circumference of steering wheel) of 98 to 147 N (10 to 15 kg, 22 to 33 lb) with engine idle.

## Rear Wheel Alignment (Unladen*)




| | | | |
|---|---|---|---|
| Camber Degree minute (decimal degree) | | Minimum | –1°45′ (–1.75°) |
| | | Nominal | –1°00′ (–1.00°) |
| | | Maximum | –0°15′ (–0.25°) |
| Total toe-in | Distance (A - B) mm (in) | Minimum | –3 (–0.12) |
| | | Nominal | 1 (0.04) |
| | | Maximum | 5 (0.20) |
| | Angle (left plus right) Degree minute (decimal degree) | Minimum | –16′ (–0.27°) |
| | | Nominal | 5′30″ (0.09°) |
| | | Maximum | 26′ (0.43°) |

*: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

## Brake

Unit: mm (in)

| | | |
|---|---|---|
| Front brake | Brake model | CL25VB |
| | Cylinder bore diameter | 57.2 (2.252) |
| | Pad length × width × thickness | 125.6 × 46.0 × 11.0 (4.94 × 1.811 × 0.433) |
| | Rotor outer diameter × thickness | 280 × 22 (11.02 × 0.87) |
| Rear brake | Brake model | CL9HC |
| | Cylinder bore diameter/caliper bore diameter | 33.96 (1 11/32) |
| | Lining length × width × thickness | 89.1 × 39.5 × 10 (3.508 × 1.555 × 0.39) |
| | Drum inner diameter/Disc diameter × thickness | 258 × 9 (10.16 × 0.35) |
| Master cylinder | Cylinder bore diameter | 23.81 (15/16) |

| | | |
|---|---|---|
| Control valve | Valve model | Dual proportioning valve |
| | Split point [kPa (kg/cm$^2$, psi)] × reducing ratio | 2,942 (30,427) × 0.2 |
| Brake booster | Booster model | M215T |
| | Diaphragm diameter | Primary: 230 (9.06)<br>Secondary: 205 (8.07) |
| Brake fluid | Recommended brake fluid | Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent, DOT 3 (US FMVSS No. 116) |

### Disc Brake - Repair Limits

Unit: mm (in)

| Brake model | CL25VB (Front) | CL9HC (Rear) |
|---|---|---|
| Pad wear limit<br>Minimum thickness | 2.0 (0.079) | 2.0 (0.079) |
| Rotor repair limit<br>Minimum thickness | 20 (0.79) | 8 (0.31) |

## Refill Capacities

### Engine Coolant Capacity (Approximate)

Unit: ℓ (US qt, Imp qt)

| | | |
|---|---|---|
| Drain and refill (without reservoir) | M/T (RS5F51A, RS6F51H) | 6.1 (6 1/2, 5 3/8) |
| | A/T (RE4F04B) | 6.0 (6 3/8, 5 1/4) |
| Reservoir tank (at MAX level) | | 0.7 (3/4, 5/8) |

### Engine Oil Capacity (Approximate)

Unit: ℓ (US qt, Imp qt)

| | | |
|---|---|---|
| Drain and refill | With oil filter change | 3.9 (4 1/8, 3 3/8) |
| | Without oil filter change | 3.7 (3 7/8, 3 1/4) |
| Dry engine (engine overhaul) | | 4.4 (4 5/8, 3 7/8) |

### Miscellaneous Capacity (Approximate)

| System description | | Metric measurement | US measurement | Imp measurement |
|---|---|---|---|---|
| Fuel tank | | 50 ℓ | 13 1/4 gal | 11 gal |
| Power steering system | | 1.0 ℓ | 2 1/8 pt | 1 3/4 pt |
| Transaxle | M/T (RS5F51A, RS6F51H) | 2.3 ℓ | 2 3/8 qt | 2 qt |
| | A/T (RE4F04B) | 8.5 ℓ | 9 qt | 7 1/2 qt |
| Air conditioning system | Refrigerant | 0.45 - 0.55 kg | 0.99 - 1.21 lb | 0.99 - 1.21 lb |
| | Compressor oil | 180 mℓ | 6.1 fl oz | 6.3 fl oz |

## TEST VALUE AND TEST LIMIT (GST ONLY — NOT APPLICABLE TO CONSULT-II)

The following is the information specified in Mode 6 of SAE J1979.
The test value is a parameter used to determine whether a system/circuit diagnostic test is “OK” or “NG” while being monitored by the ECM during self-diagnosis. The test limit is a reference value which is specified as the maximum or minimum value and is compared with the test value being monitored.
These data (test value and test limit) are specified by Test ID (TID) and Component ID (CID) and can be displayed on the GST screen.

| SRT item | Self-diagnostic test item | DTC | Test value (GST display) | | Test limit | Conversion |
|---|---|---|---|---|---|---|
| | | | TID | CID | | |
| CATALYST | Three way catalyst function | P0420 | 01H | 01H | Max. | 1/128 |
| | | P0420 | 02H | 81H | Min. | 1 |
| EVAP SYSTEM | EVAP control system (Small leak) | P0442 | 05H | 03H | Max. | 1/128mm$^2$ |
| | EVAP control system purge flow monitoring | P0441 | 06H | 83H | Min. | 20mV |
| | EVAP control system (Very small leak) | P0456 | 07H | 03H | Max. | 1/128mm$^2$ |
| HO2S | Heated oxygen sensor 1 | P0133 | 09H | 04H | Max. | 16ms |
| | | P1143 | 0AH | 84H | Min. | 10mV |
| | | P1144 | 0BH | 04H | Max. | 10mV |
| | | P0132 | 0CH | 04H | Max. | 10mV |
| | | P0134 | 0DH | 04H | Max. | 1s |
| | Heated oxygen sensor 2 | P0139 | 19H | 86H | Min. | 10mV/500ms |
| | | P1147 | 1AH | 86H | Min. | 10mV |
| | | P1146 | 1BH | 06H | Max. | 10mV |
| | | P0138 | 1CH | 06H | Max. | 10mV |
| HO2S HTR | Heated oxygen sensor 1 heater | P0032 | 29H | 08H | Max. | 20mV |
| | | P0031 | 2AH | 88H | Min. | 20mV |
| | Heated oxygen sensor 2 heater | P0038 | 2DH | 0AH | Max. | 20mV |
| | | P0037 | 2EH | 8AH | Min. | 20mV |

## TEST VALUE AND TEST LIMIT (GST ONLY — NOT APPLICABLE TO CONSULT-II)

The following is the information specified in Mode 6 of SAE J1979.
The test value is a parameter used to determine whether a system/circuit diagnostic test is “OK” or “NG” while being monitored by the ECM during self-diagnosis. The test limit is a reference value which is specified as the maximum or minimum value and is compared with the test value being monitored.
These data (test value and test limit) are specified by Test ID (TID) and Component ID (CID) and can be displayed on the GST screen.

| SRT item | Self-diagnostic test item | DTC | Test value (GST display) | | Test limit | Conversion |
|---|---|---|---|---|---|---|
| | | | TID | CID | | |
| CATALYST | Three way catalyst function | P0420 | 01H | 01H | Max. | 1/128 |
| | | P0420 | 02H | 81H | Max. | 1 |
| EVAP SYSTEM | EVAP control system (Small leak) | P0442 | 05H | 03H | Max. | 1/128mm$^2$ |
| | EVAP control system purge flow monitoring | P0441 | 06H | 83H | Min. | 20mV |
| | EVAP control system (Very small leak) | P0456 | 07H | 03H | Max. | 1/128mm$^2$ |
| HO2S | A/F sensor 1 | P1281 | 4CH | 8FH | Min. | 5mV |
| | | P1282 | 4DH | 0FH | Max. | 5mV |
| | | P1283 | 4EH | 0FH | Max. | 0.002 |
| | | P1284 | 4FH | 8FH | Min. | 0.002 |
| | | P1288 | 50H | 8FH | Min. | 0.004 |
| | | P1286 | 51H | 0FH | Max. | 5mV |
| | | P1286 | 52H | 8FH | Min. | 5mV |
| | | P1289 | 53H | 8FH | Min. | 0.004 |
| | Heated oxygen sensor 2 | P0139 | 19H | 86H | Min. | 10mV/500ms |
| | | P1147 | 1AH | 86H | Min. | 10mV |
| | | P1146 | 1BH | 06H | Max. | 10mV |
| | | P0138 | 1CH | 06H | Max. | 10mV |
| HO2S HTR | A/F sensor 1 heater | P1032 | 57H | 04H | Max. | 5mV |
| | | P1031 | 58H | 04H | Min. | 5mV |
| | Heated oxygen sensor 2 heater | P0038 | 2DH | 0AH | Max. | 10mV |
| | | P0037 | 2EH | 8AH | Min. | 10mV |

## TEST VALUE AND TEST LIMIT (GST ONLY — NOT APPLICABLE TO CONSULT-II)

The following is the information specified in Mode 6 of SAE J1979.
The test value is a parameter used to determine whether a system/circuit diagnostic test is “OK” or “NG” while being monitored by the ECM during self-diagnosis. The test limit is a reference value which is specified as the maximum or minimum value and is compared with the test value being monitored.
These data (test value and test limit) are specified by Test ID (TID) and Component ID (CID) and can be displayed on the GST screen.

| SRT item | Self-diagnostic test item | DTC | Test value (GST display) | | Test limit | Conversion |
|---|---|---|---|---|---|---|
| | | | TID | CID | | |
| CATALYST | Three way catalyst function | P0420 | 01H | 01H | Max. | 1/128 |
| | | P0420 | 02H | 81H | Min. | 1 |
| EVAP SYSTEM | EVAP control system (Small leak) | P0442 | 05H | 03H | Max. | 1/128mm$^2$ |
| | EVAP control system purge flow monitoring | P0441 | 06H | 83H | Min. | 20mV |
| | EVAP control system (Very small leak) | P0456 | 07H | 03H | Max. | 1/128mm$^2$ |
| | | P1456 | 07H | 03H | Max. | 1/128mm$^2$ |
| HO2S | Heated oxygen sensor 1 | P0133 | 09H | 04H | Max. | 16ms |
| | | P1143 | 0AH | 84H | Min. | 10mV |
| | | P1144 | 0BH | 04H | Max. | 10mV |
| | | P0132 | 0CH | 04H | Max. | 10mV |
| | | P0134 | 0DH | 04H | Max. | 1s |
| | Heated oxygen sensor 2 | P0139 | 19H | 86H | Min. | 10mV/500ms |
| | | P1147 | 1AH | 86H | Min. | 10mV |
| | | P1146 | 1BH | 06H | Max. | 10mV |
| | | P0138 | 1CH | 06H | Max. | 10mV |
| HO2S HTR | Heated oxygen sensor 1 heater | P0032 | 29H | 08H | Max. | 20mV |
| | | P0031 | 2AH | 88H | Min. | 20mV |
| | Heated oxygen sensor 2 heater | P0038 | 2DH | 0AH | Max. | 20mV |
| | | P0037 | 2EH | 8AH | Min. | 20mV |