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QUICK REFERENCE INDEX

<b>A GENERAL INFORMATION</b>	<b>GI General Information</b>
<b>B ENGINE</b>	<b>EM Engine Mechanical</b>
	<b>LU Engine Lubrication System</b>
	<b>CO Engine Cooling System</b>
	<b>EC Engine Control System</b>
	<b>FL Fuel System</b>
	<b>EX Exhaust System</b>
	<b>STR Starting System</b>
<b>C ELECTRIC POWER TRAIN</b>	<b>ACC Accelerator Control System</b>
<b>D TRANSMISSION &amp; DRIVELINE</b>	<b>TM Transaxle &amp; Transmission</b>
	<b>DLN Driveline</b>
	<b>FAX Front Axle</b>
	<b>RAX Rear Axle</b>
<b>E SUSPENSION</b>	<b>FSU Front Suspension</b>
	<b>RSU Rear Suspension</b>
	<b>SCS Suspension Control System</b>
	<b>WT Road Wheels &amp; Tires</b>
<b>F BRAKES</b>	<b>BR Brake System</b>
	<b>PB Parking Brake System</b>
	<b>BRC Brake Control System</b>
<b>G STEERING</b>	<b>ST Steering System</b>
	<b>STC Steering Control System</b>
<b>H RESTRAINTS</b>	<b>SB Seat Belt</b>
	<b>SBC Seat Belt Control System</b>
	<b>SR SRS Airbag</b>
	<b>SRC SRS Airbag Control System</b>
<b>I VENTILATION, HEATER &amp; AIR CONDITIONER</b>	<b>VTL Ventilation System</b>
	<b>HA Heater &amp; Air Conditioning System</b>
	<b>HAC Heater &amp; Air Conditioning Control System</b>
<b>J BODY INTERIOR</b>	<b>INT Interior</b>
	<b>IP Instrument Panel</b>
	<b>SE Seat</b>
<b>K BODY EXTERIOR, DOORS, ROOF &amp; VEHICLE SECURITY</b>	<b>DLK Door &amp; Lock</b>
	<b>SEC Security Control System</b>
	<b>GW Glass &amp; Window System</b>
	<b>PWC Power Window Control System</b>
<b>L DRIVER CONTROLS</b>	<b>EXT Exterior</b>
	<b>BRM Body Repair</b>
	<b>MIR Mirrors</b>
	<b>EXL Exterior Lighting System</b>
	<b>INL Interior Lighting System</b>
	<b>WW Wiper &amp; Washer</b>
	<b>DEF Defogger</b>
	<b>HRN Horn</b>
<b>M ELECTRICAL &amp; POWER CONTROL</b>	<b>PWO Power Outlet</b>
	<b>BCS Body Control System</b>
	<b>LAN LAN System</b>
	<b>PCS Power Control System</b>
	<b>CHG Charging System</b>
	<b>PG Power Supply, Ground &amp; Circuit Elements</b>
<b>N DRIVER INFORMATION &amp; MULTIMEDIA</b>	<b>MWI Meter, Warning Lamp &amp; Indicator</b>
	<b>WCS Warning Chime System</b>
<b>O CRUISE CONTROL &amp; DRIVER ASSISTANCE</b>	<b>AV Audio, Visual &amp; Navigation System</b>
	<b>CCS Cruise Control System</b>
<b>P MAINTENANCE</b>	<b>DMS Drive Mode System</b>
	<b>MA Maintenance</b>

**NISSAN**  
**GT-R**  
**MODEL R35 SERIES**

**A**  
**B**  
**C**  
**D**  
**E**  
**F**  
**G**  
**H**  
**I**  
**J**  
**K**  
**L**  
**M**  
**N**  
**O**  
**P**

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# FOREWORD

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This manual contains maintenance and repair procedure for the 2016 NISSAN R35.

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

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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.

The service items marked (GT-R certified Nissan dealer) on the content should be performed at a GT-R certified Nissan dealer.

<Examples: "Removal and Installation (GT-R certified Nissan dealer)">

**NISSAN MOTOR CO., LTD.**



# PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

Your comments are important to NISSAN and will help us to improve our Service Manuals. Use this form to report any issues or comments you may have regarding our Service Manuals. Please print this form and type or write your comments below. Mail or fax to:

Nissan North America, Inc.  
Technical Service Information  
39001 Sunrise Drive, P.O. Box 9200  
Farmington Hills, MI USA 48331  
FAX: (248) 488-3880

**SERVICE MANUAL: Model:** \_\_\_\_\_ **Year:** \_\_\_\_\_

**PUBLICATION NO. (Refer to Quick Reference Index):** \_\_\_\_\_

Please describe any Service Manual 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: \_\_\_\_\_

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

Please comment: \_\_\_\_\_

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

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DATE: \_\_\_\_\_ YOUR NAME: \_\_\_\_\_ POSITION: \_\_\_\_\_

DEALER: \_\_\_\_\_ DEALER NO.: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE/PROV./COUNTRY: \_\_\_\_\_ ZIP/POSTAL CODE: \_\_\_\_\_

**QUICK REFERENCE CHART GT-R  
ENGINE TUNE-UP DATA (VR38DETT)  
EXCEPT FOR NISMO**

PF0:00000

ELS0003W

Engine model			VR38DETT	
Firing order			1-2-3-4-5-6	
Idle speed (In "P" or "N" position)	rpm		825 ± 50	
Ignition timing (BTDC at idle speed)			27° ± 5°	
Tensions of drive belt			Auto adjustment by auto tensioner	
Reservoir tank cap relief pressure	kPa (kg/cm <sup>2</sup> , psi)		122.3 - 151.7 (1.2 - 1.5, 18 - 22)	
	Standard			
	Limit		107 (1.1, 16)	
Cooling system leakage testing pressure	kPa (kg/cm <sup>2</sup> , psi)		157 (1.6, 23)	
Compression pressure	kPa (kg/cm <sup>2</sup> , psi)/rpm		970 (9.89, 141)/200	
	Standard			
	Minimum			800 (8.16, 116)/200
	Differential limit between cylinders		100 (1.02, 14.5)/200	
Spark plug (Iridium-tipped type)	Make		NGK	
	Standard type		DILKAR8A8	
	Gap (Nominal)	mm (in)	Standard	0.7 - 0.8 (0.028 - 0.031)
			Limit	1.0 (0.039)

**FOR NISMO**

Engine model			VR38DETT	
Firing order			1-2-3-4-5-6	
Idle speed (In "P" or "N" position)	rpm		825 ± 50	
Ignition timing (BTDC at idle speed)			27° ± 5°	
Tensions of drive belt			Auto adjustment by auto tensioner	
Reservoir tank cap relief pressure	kPa (kg/cm <sup>2</sup> , psi)		180 - 195 (1.84 - 1.99, 26 - 28)	
	Standard			
	Limit		150 (1.53, 22)	
Cooling system leakage testing pressure	kPa (kg/cm <sup>2</sup> , psi)		200 (2.04, 29)	
Compression pressure	kPa (kg/cm <sup>2</sup> , psi)/rpm		970 (9.89, 141)/200	
	Standard			
	Minimum			800 (8.16, 116)/200
	Differential limit between cylinders		100 (1.02, 14.5)/200	
Spark plug (Iridium-tipped type)	Make		NGK	
	Standard type		DILKAR8A8	
	Gap (Nominal)	mm (in)	Standard	0.7 - 0.8 (0.028 - 0.031)
			Limit	1.0 (0.039)

**FRONT WHEEL ALIGNMENT**

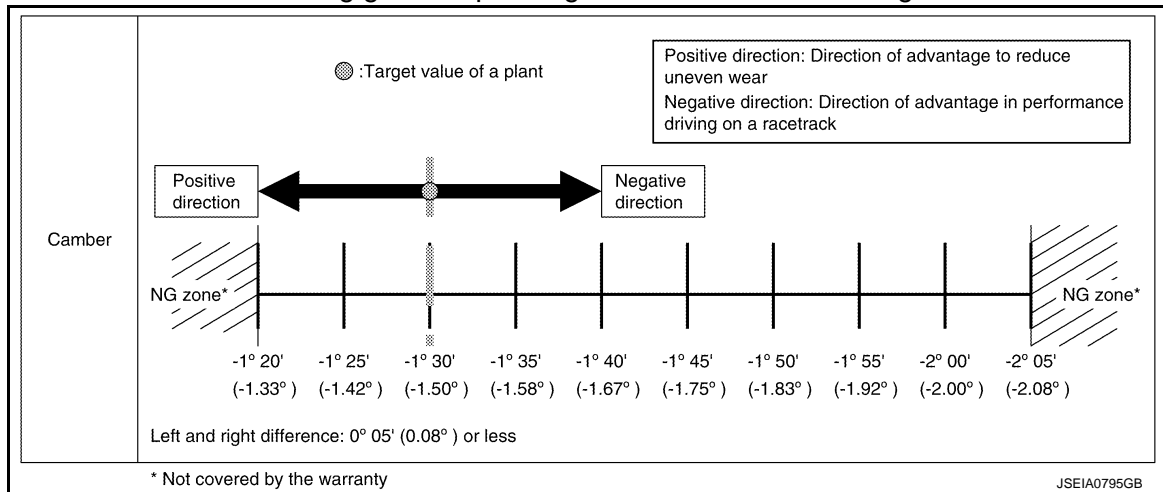
For GT-R Black edition and GT-R Premium edition

**CAUTION:**

- When adjusting wheel alignment, refer to “PRECAUTION FOR WHEEL ALIGNMENT”.
- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items).
- To adjust wheel alignment, set tire pressure at 250 kPa (2.5 kg/cm<sup>2</sup>, 36 psi). After adjusting wheel alignment, adjust tire pressure to the specified value.

**CAMBER, TOE-IN**

Setting guide depending on the customer's driving



Item		Standard	
Toe-in	Total toe-in Distance	Minimum	In 0.5 mm (In 0.020 in)
		Nominal	In 1.7 mm (In 0.067 in)
		Maximum	In 2.9 mm (In 0.114 in)
		Left and right difference	1.0 mm (0.039 in) or less
Toe angle (Left wheel or right wheel) Degree minute (Decimal degree)		Minimum	In 0° 01' (0.02°)
		Nominal	In 0° 04' (0.07°)
		Maximum	In 0° 07' (0.11°)
		Left and right difference	0° 02' 30" (0.04°) or less

- The adoption of the adjustment mechanism allows the GTR wheel alignment to be changed, if necessary. To adjust wheel alignment, check the level of tire wear and consult with the customer.
- To adjust the wheel alignment effectively for performance driving on a racetrack, adjust the camber in the negative direction within the adjustment range.
- To adjust the wheel alignment effectively for preventing uneven wear, adjust the camber in the positive direction, and in addition, adjust the toe-in distance in the IN direction.
- Target adjustment values may not be satisfied, depending on the level of vehicle adaptability, measurement error of the alignment tester, and the vehicle attitude during adjustment.
- Never set to toe-out.
  - Always adjust to toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
  - For the above reasons, always adjust to toe-in for the vehicle of a customer who drives on a racetrack.
- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Remarks for up to the mileage of 1,000 miles or 2,000 km
  - Toe angle of one-side wheel: See reference value.

CASTER, KINGPIN INCLINATION

Item		Standard
Caster Degree minute (Decimal degree)	Minimum	5° 40' (5.67°)
	Nominal	6° 00' (5.00°)
	Maximum	6° 40' (6.66°)
	Left and right difference	0° 30' (0.50°) or less
Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 10' (9.17°)
	Nominal	9° 20' (9.33°)
	Maximum	9° 30' (9.50°)

Measure value under unladen\* conditions.

\*: Fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.

- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.

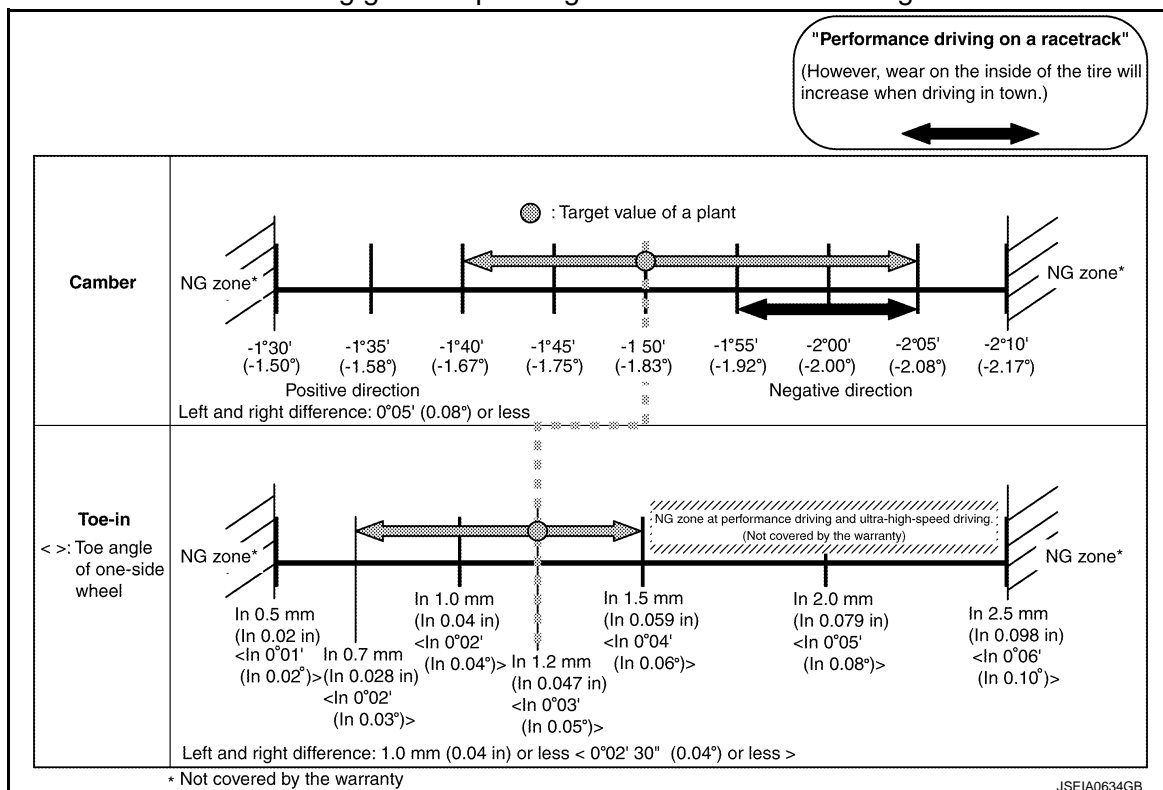
For GT-R Track edition, GT-R N-package and GT-R NISMO

**CAUTION:**

- When adjusting wheel alignment, refer to “PRECAUTION FOR WHEEL ALIGNMENT”.
- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items).
- To adjust wheel alignment, set tire pressure at 250 kPa (2.5 bar, 2.5 kg/cm<sup>2</sup>, 36 psi). After adjusting wheel alignment, adjust tire pressure to the specified value.

CAMBER, TOE-IN

Setting guide depending on the customer's driving



- Adjust wheel alignment to the customer's driving style.
- Never set to toe-out.
- Always adjust to toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
- Always adjust toe-in to 1.5 mm (0.059 in) or less because too much toe-in may promote local heat generation.

- For the above reasons, always adjust to toe-in for the vehicle of a customer who drives on a racetrack.
- Engaging in performance driving on a racetrack and ultra-high-speed driving, be sure to adjust toe-in to 1.5 mm (0.059 in) or less. If used beyond this range, it is not covered by the warranty.
- Insufficient negative camber during hard cornering on a racetrack may result in tire wear. Therefore, recommend the customer to adjust negative camber angle in the negative direction when driving on a racetrack. [To avoid uneven wear, recommend the customer to have the camber angle aligned in the positive direction at an inspection after performance driving (at customer's expense).]
- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Remarks for up to the mileage of 1,000 miles or 2,000 km
- Toe angle of one-side wheel: See reference value.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping shock absorber.

CASTER, KINGPIN INCLINATION

Except GTR Track edition

Item		Standard
Caster Degree minute (Decimal degree)	Minimum	5° 55' (5.92°)
	Nominal	6° 15' (6.25°)
	Maximum	6° 35' (6.58°)
	Left and right difference	0° 30' (0.50°) or less
Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 30' (9.50°)
	Nominal	9° 40' (9.67°)
	Maximum	9° 50' (9.83°)

Measure value under unladen\* conditions.

\*: Fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.

- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping shock absorber.

GTR Track edition

Item		Standard
Caster Degree minute (Decimal degree)	Minimum	5° 45' (5.75°)
	Nominal	6° 05' (6.08°)
	Maximum	6° 45' (6.75°)
	Left and right difference	0° 30' (0.50°) or less
Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 30' (9.50°)
	Nominal	9° 40' (9.67°)
	Maximum	9° 50' (9.83°)

Measure value under unladen\* conditions.

\*: Fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.

- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping shock absorber.

**REAR WHEEL ALIGNMENT**

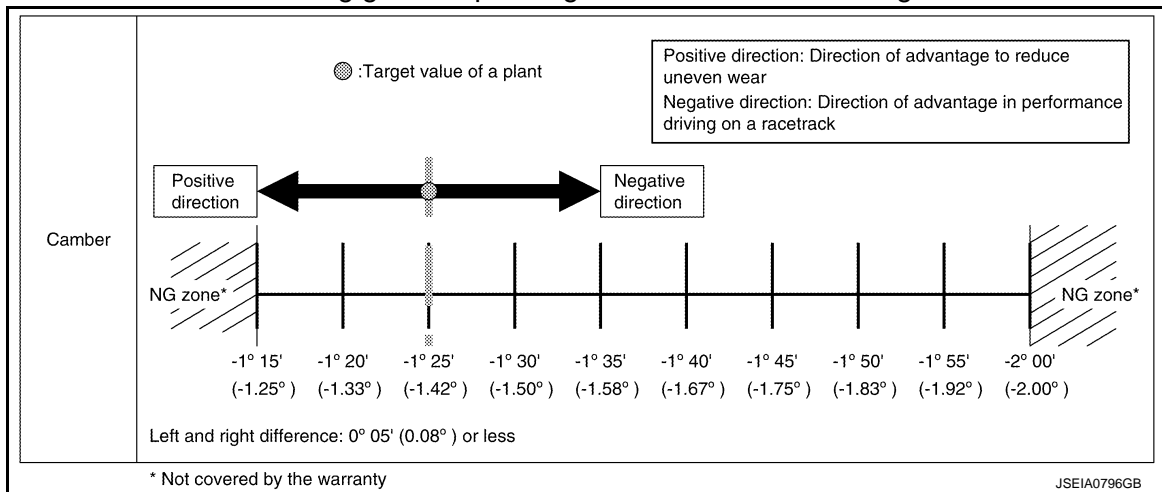
For GT-R Black edition and GT-R Premium edition

**CAUTION:**

- When adjusting wheel alignment, refer to “PRECAUTION FOR WHEEL ALIGNMENT”.
- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items).
- To adjust wheel alignment, set tire pressure at 250 kPa (2.5 kg/cm<sup>2</sup>, 36 psi). After adjusting wheel alignment, adjust tire pressure to the specified value.

**CAMBER, TOE-IN**

Setting guide depending on the customer's driving



Item		Standard	
Toe-in	Total toe-in Distance	Minimum	In 0.2 mm (In 0.008 in)
		Nominal	In 1.9 mm (In 0.075 in)
		Maximum	In 3.6 mm (In 0.142 in)
		Left and right difference	1.0 mm (0.039 in) or less
	Toe angle (Left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 01' (0.02°)
		Nominal	In 0° 05' (0.08°)
		Maximum	In 0° 09' (0.15°)
		Left and right difference	0° 02' 30" (0.04°) or less

- The adoption of the adjustment mechanism allows the GTR wheel alignment to be changed, if necessary. To adjust wheel alignment, check the level of tire wear and consult with the customer.
- To adjust the wheel alignment effectively for performance driving on a racetrack, adjust the camber in the negative direction within the adjustment range.
- To adjust the wheel alignment effectively for preventing uneven wear, adjust the camber in the positive direction, and in addition, adjust the toe-in distance in the IN direction.
- Target adjustment values may not be satisfied, depending on the level of vehicle adaptability, measurement error of the alignment tester, and the vehicle attitude during adjustment.
- Never set to toe-out.
  - Always adjust to toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
  - For the above reasons, always adjust to toe-in for the vehicle of a customer who drives on a racetrack.
- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Remarks for up to the mileage of 1,000 miles or 2,000 km
  - Toe angle of one-side wheel: See reference value.



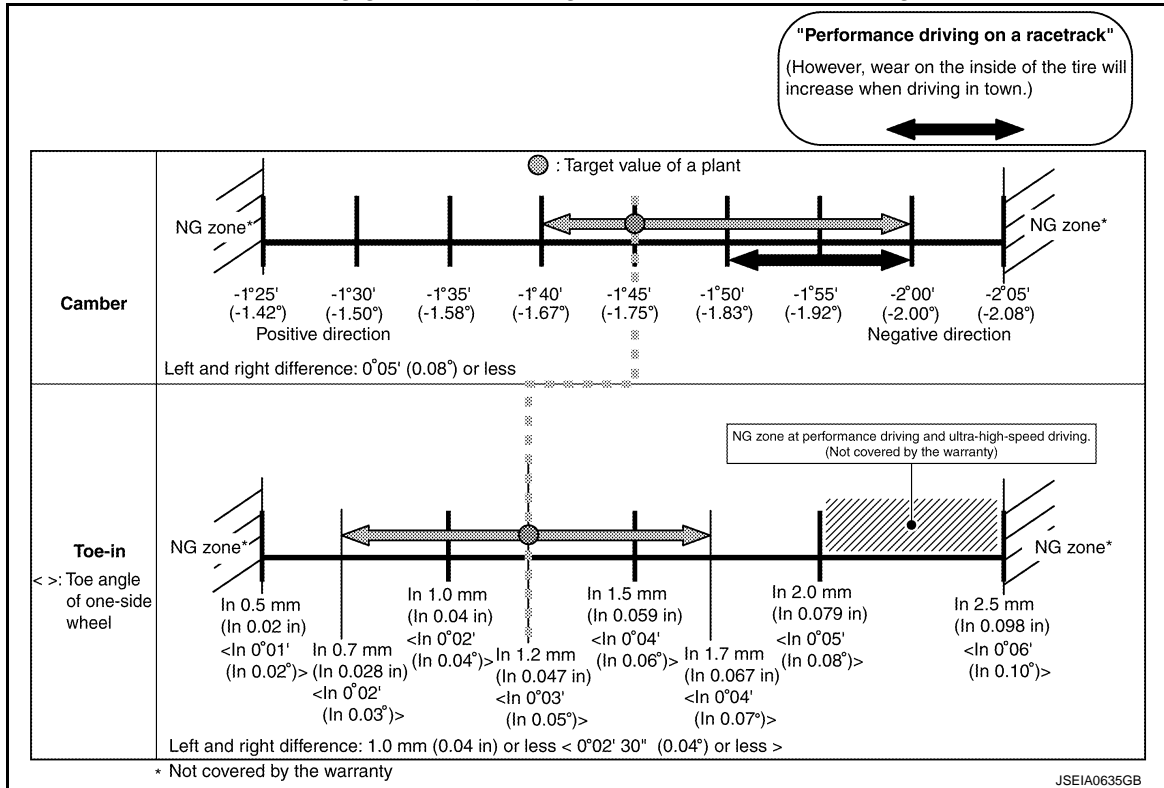
For GT-R Track edition, GT-R N-package and GT-R NISMO

**CAUTION:**

- When adjusting wheel alignment, refer to “PRECAUTION FOR WHEEL ALIGNMENT”.
- Adjust wheel alignment with the vehicle in customer's regular use condition (e.g. normal stock items).
- To adjust wheel alignment, set tire pressure at 250 kPa (2.5 bar, 2.5 bar, 2.5 kg/cm<sup>2</sup>, 36 psi). After adjusting wheel alignment, adjust tire pressure to the specified value.

CAMBER, TOE-IN

Setting guide depending on the customer's driving



- Adjust wheel alignment to the customer's driving style.
- Never set to toe-out.
- Always adjust to toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
- For the above reasons, always adjust to toe-in for the vehicle of a customer who drives on a racetrack.
- Engaging in performance driving on a racetrack and ultra-high-speed driving, be sure to adjust toe-in to 2.0 mm (0.079 in) or less. If used beyond this range, it is not covered by the warranty.
- Insufficient negative camber during hard cornering on a racetrack may result in tire wear. Therefore, recommend the customer to adjust negative camber angle in the negative direction when driving on a racetrack. [To avoid uneven wear, recommend the customer to have the camber angle aligned in the positive direction at an inspection after performance driving (at customer's expense).]
- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Remarks for up to the mileage of 1,000 miles or 2,000 km
- Toe angle of one-side wheel: See reference value.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping shock absorber.

**BRAKE PEDAL**

Unit: mm (in.)

Item	Standard
Brake pedal height	169.0 – 179.0 (6.65 – 7.05)
Clearance between the stop lamp switch and ASCD brake switch threaded end and the stopper rubber	0.2 – 1.96 (0.008 – 0.0772)
Brake pedal play	3.0 – 11.0 (0.118 – 0.433)
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	100 (3.94) or more

**FRONT DISC BRAKE**

Unit: mm (in.)

Item	Limit
Brake pad Wear thickness	4.5 (0.177)
Disc rotor Wear thickness	30.6 (1.205)

**REAR DISC BRAKE**

Unit: mm (in.)

Item	Limit
Brake pad Wear thickness	4.5 (0.177)
Disc rotor Wear thickness	28.0 (1.102)

**REFILL CAPACITIES**

ELS00040

UNIT		Liter	US measure
Fuel tank		73.8	19-1/2 gal
Engine Coolant (With reservoir tank at MAX level)	Except for NISMO	11.3	12 qt
	For NISMO	11.7	12-3/8 qt
Engine oil	Drain and refill		
	With oil filter change	5.0	5-1/4 qt
	Without oil filter change	4.5	4-3/4 qt
	Dry engine (Overhaul)	6.2	6-4/8 qt
Transmission		9.4	9-7/8 qt
Final drive	Front	0.65	1-3/8 pt
	Rear	1.35	2-7/8 pt
Power steering system		1.0	1-1/8 qt
Air conditioning system	Compressor oil	0.15	5.07 fl oz
	Refrigerant	0.5 kg	1.1 lb