

NISSAN

GT-R

MODEL R35 SERIES

QUICK REFERENCE INDEX

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

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FOREWORD

This manual contains maintenance and repair procedure for the 2014 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

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.

Some works can be performed by GT-R certified NISSAN dealer only. Check the works able to be performed at your dealership by referring "Always read before works".

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Always read before works.

1. The service items unmentioned on this manual should be performed by a GT-R certified NISSAN dealer. Because those service items require the special equipment and the GT-R certified technical staff who completed special training.
2. The limited service items permissible at a regular dealership, such as maintenance, periodic replacement of some parts or consumables, are shown below:

- A regular dealership can perform the service items listed below:

Works	Be able to do
Maintenance	Periodic maintenance
Periodic replacement of some parts or consumables	• Air cleaner filter • Spark plugs • Battery • Wiper rubber refill • In-cabin microfilter • Lamp bulb * For engine oil or oil filter, a regular dealership can perform the replacement only when all the following cases are satisfied: • If the customer strongly hopes to replace engine oil and oil filter at the regular dealership, • If the regular dealership judges necessary to keep a good relationship with the customer, • The regular dealership can strictly observe the instructed methods and designated brand. The designated engine oil: Mobil 1, 0W-40. (However, the replacement of transmission oil, differential gear oil, and brake fluid is requested to be performed by GT-R certified NISSAN dealer.)
Interior and exterior	Permissible except for steering member and window glasses.



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.*

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 GT-R
ENGINE TUNE-UP DATA (VR38DETT)

PFP:00000

ELS0003W

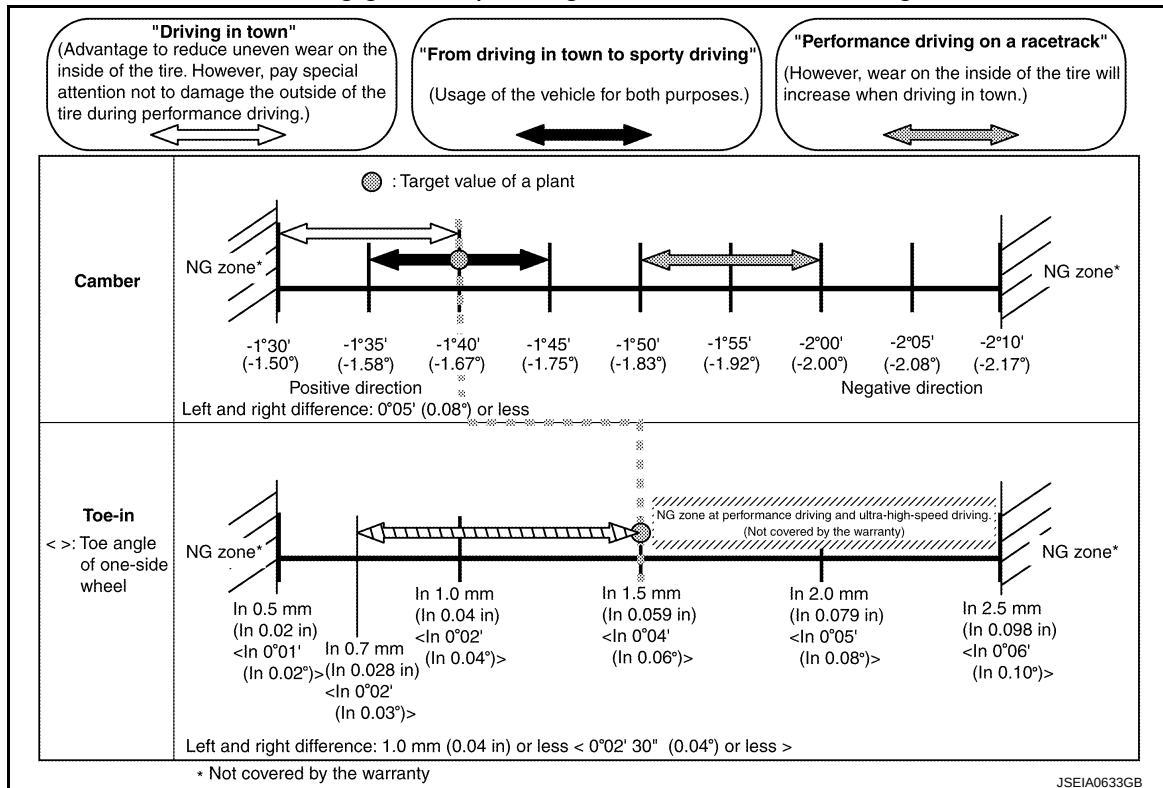
Engine model		VR38DETT
Firing order		1-2-3-4-5-6
Idle speed (In "P" or "N" position)	rpm	825 ± 50
Ignition timing (BTDC at idle speed)		27° ± 5°
Tensions of drive belt		Auto adjustment by auto tensioner
Reservoir tank cap relief pressure	kPa (kg/cm ² , psi)	
Standard		122.3 - 151.7 (1.2 - 1.5, 18 - 22)
Limit		107 (1.1, 16)
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)	157 (1.6, 23)
Compression pressure	kPa (kg/cm ² , psi)/rpm	
Standard		970 (9.89, 141)/200
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) 0.7 - 0.8 (0.028 - 0.031)

FRONT WHEEL ALIGNMENT

EXCEPT TRACK PACK-SPECIFIC SUSPENSION

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.
- When driving on a racetrack, recommend to adjust the alignment to the "Performance driving on a racetrack" setting. If the negative camber angle is insufficient driving on a technical course including many tight turns may result in wear on the outside of the tire and this can cause an accident. [To avoid uneven wear, servicing the vehicle after performance driving (at the customer's expense) is recommended to result the alignment to the original setting.]
- 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
- Camber angle NG zone (positive side): -1°20' (-1.33°)
- 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° 20' (9.34°)
	Nominal	9° 30' (9.50°)
	Maximum	9° 40' (9.66°)

Measure value under unladen* conditions.

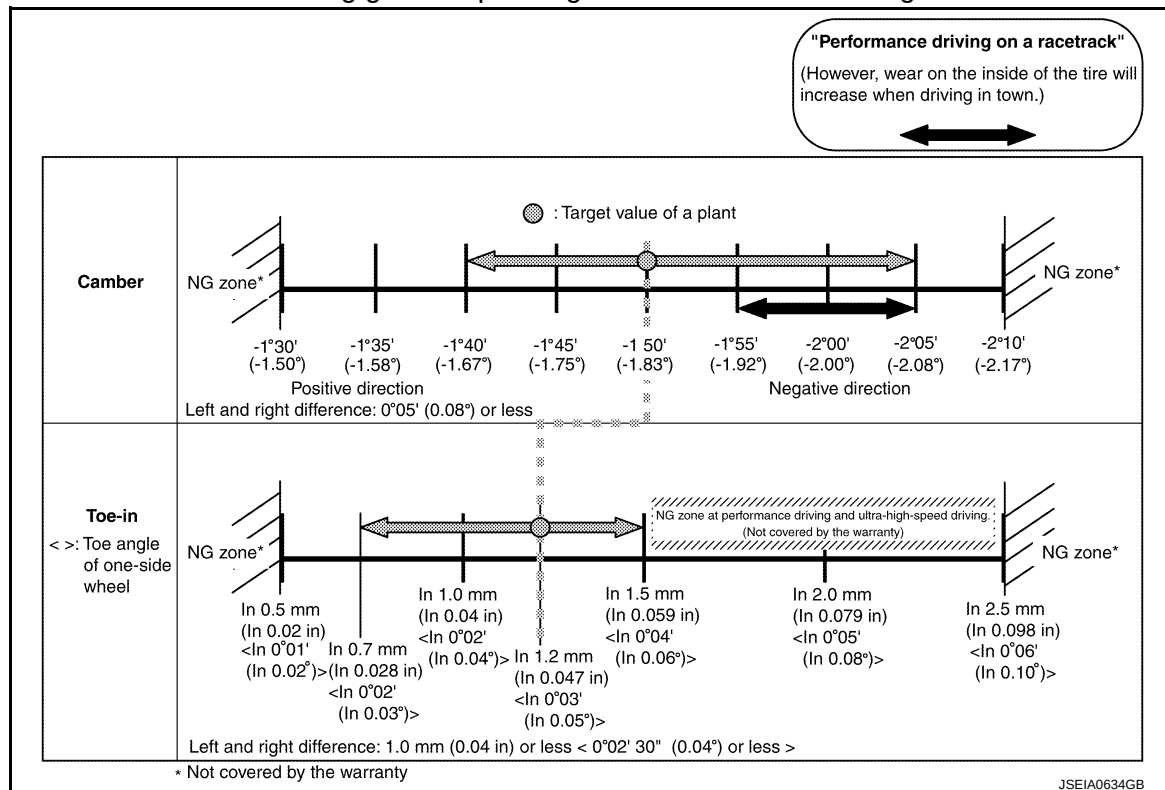
*: Fuel, engine coolant and lubricant are full. Jack, hand tools and mats are in designated positions.

- 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.

TRACK PACK-SPECIFIC SUSPENSION

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.
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- 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

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.

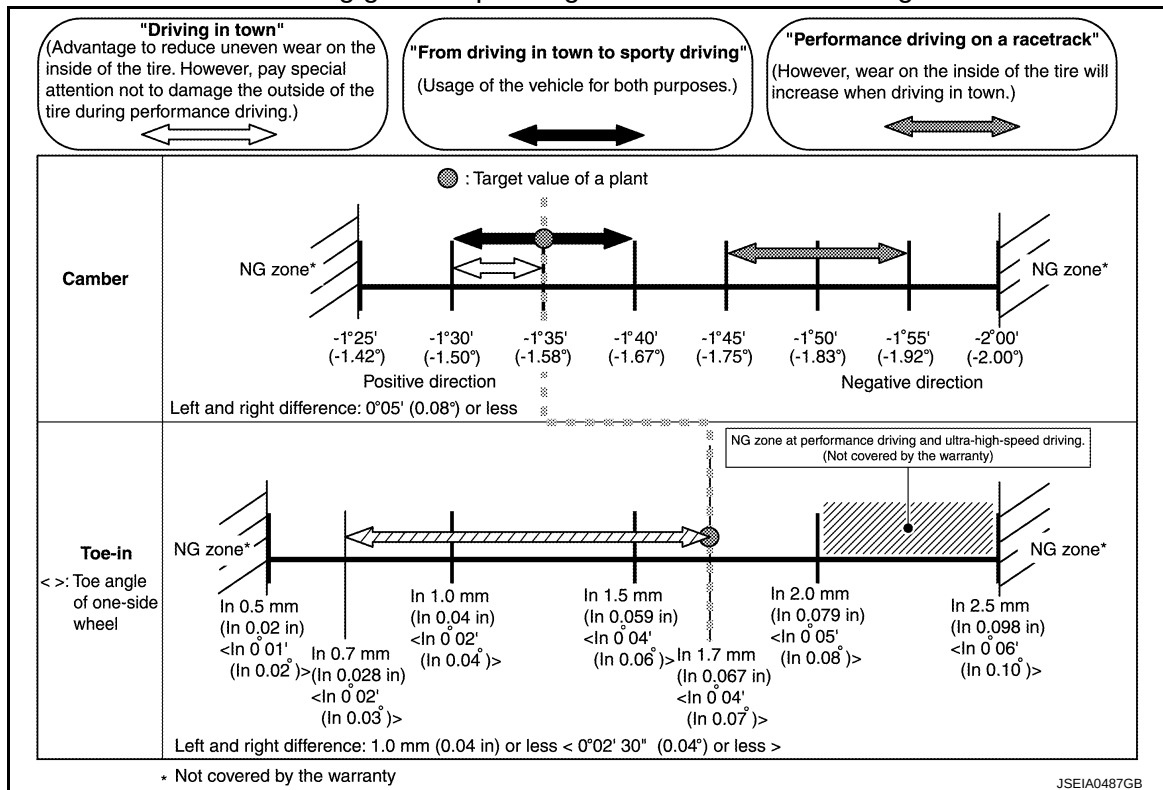
- Wheel alignment can be changed in process of time and mileage, as suspension parts do not adjust to each other up to the mileage of about 1,000 miles or 2,000 km.
- Each part of the suspension may not conform during a normal driving because of the adoption of a hard rate coil spring and a high damping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

REAR WHEEL ALIGNMENT

EXCEPT TRACK PACK-SPECIFIC SUSPENSION

CAMBER, TOE-IN

Setting guide depending on the customer's driving

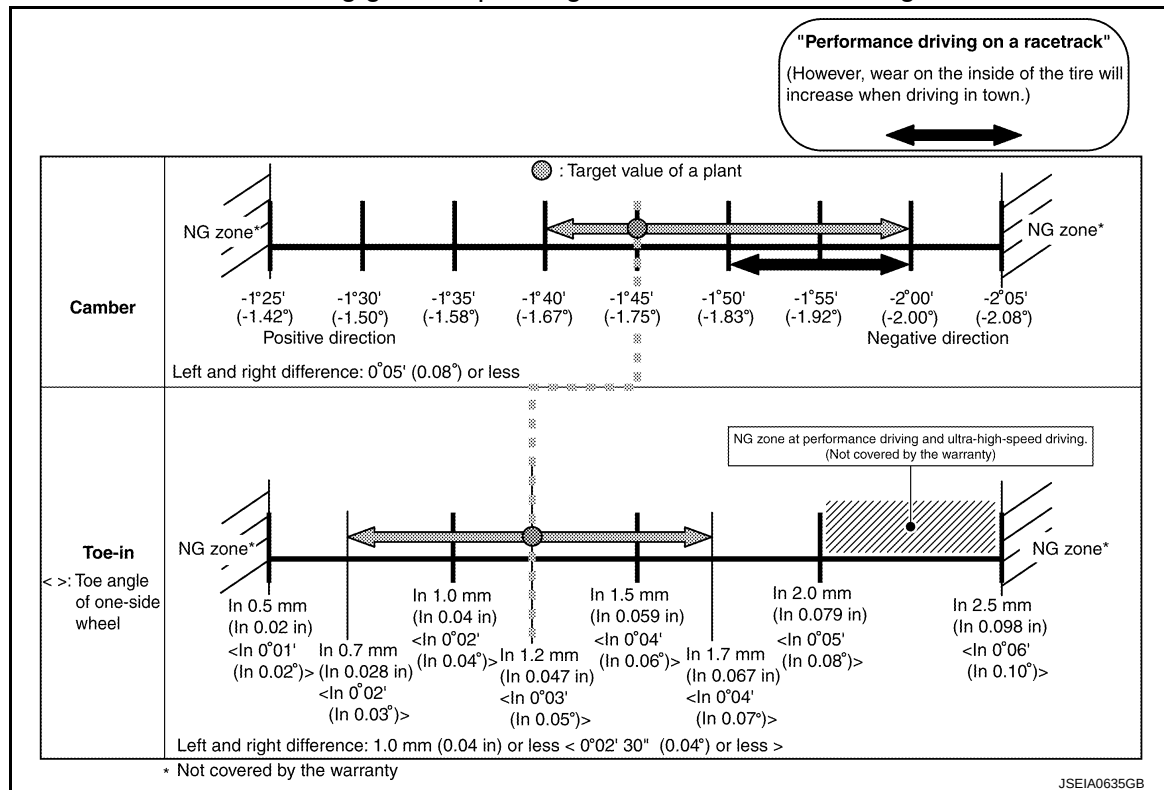


- Adjust wheel alignment to the customer's driving style.
- Never set to toe-out.
- Always adjust to toe-in. If the wheels change to toe-out, tire partial wear is accelerated and local heating may be accelerated in the inner side of tires.
- For the above reasons, always adjust to toe-in for the vehicle 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.
- When driving on a racetrack, recommend to adjust the alignment to the "Performance driving on a racetrack" setting. If the negative camber angle is insufficient driving on a technical course including many tight turns may result in wear on the outside of the tire and this can cause an accident. [To avoid uneven wear, servicing the vehicle after performance driving (at the customer's expense) is recommended to result the alignment to the original setting.]
- 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.

TRACK PACK-SPECIFIC SUSPENSION

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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)		11.3	12 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