# SECTION MAINTENANCE

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## PREPARATION

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## Special Service Tool

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#### The actual shapes of TechMate tools may differ from those of special service tools illustrated here.

Tool number (TechMate No.) Tool name		Description	С
KV10115801 (J-38956) Oil filter wrench		Removing and installing oil filter a: 64.3 mm (2.531 in)	D
	S-NT375		F

## **Commercial Service Tool**

Tool name (TechMate No.)		Description
Power tool ( — )		Loosening nuts and bolts
Spark plug wrench ( — )	PBIC0190E	Removing and installing spark plug a: 14 mm (0.55 in)
Radiator cap tester ( — )	JPBIA0399ZZ	Checking radiator and radiator tank cap
	PBIC1982E	
Radiator cap tester adapter ( — )		Adapting radiator cap tester to reservoir tank cap and water outlet (front) filler neck a: 28 (1.10) dia. b: 31.4 (1.236) dia. c: 41.3 (1.626) dia. Unit: mm (in)
	S-NT564	

## < FEATURES OF NEW MODEL >

## FEATURES OF NEW MODEL ABOUT GT-R MAINTENANCE

## Description

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The GT-R is equipped with special systems. These systems are different from those used on conventional vehicles to allow for the high performance driving characteristics of the vehicle. The GT-R should be main-tained by a GT-R certified NISSAN dealer.

Special skill, knowledge and equipment are necessary to properly inspect and adjust the GT-R engine, transmission, suspension and brakes to maintain performance. A GT-R certified NISSAN dealer has the GT-R certified technical staff and the special equipment to properly maintain the GT-R.

The installation/use of parts other than genuine NISSAN parts, fluids and lubricants may cause the vehicle to malfunction (i.e. cease functioning normally, damage vehicle parts) and result in the vehicle requiring non-warranty protected repairs. NISSAN recommends maintenance items that require the replacement of parts, engine oil, oil filters and air filters, should be performed by a GT-R certified dealer. Make sure the specified fluids and parts are used when the maintenance is performed. NISSAN also recommends the replacement of parts such as the brakes should be performed by a GT-R certified NISSAN dealer.

## **GT-R Special Specification Parts**

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## CAUTION:

#### Only use the following required fluids and parts in the GT-R to avoid possible vehicle damage.

ENGINE OIL

#### Mobil 1 (0W-40) (100% synthetic oil)

Mobil 1 (0W-40) (100% synthetic) is the factory fill oil. The VR38 engine with its plasma-sprayed bores was developed using this oil. NISSAN cannot ensure proper engine operation and durability if other 0W-40 synthetic oil is used. If Mobil 1 (0W-40) is not available, Mobil 1 (10W-40) (100% synthetic) may be used; however, some performance loss may be noticed. Furthermore, replacement of the engine oil with MOTUL NISMO COMPETITION OIL type 2193E (5W-40) is recommended for frequent high performance driving opportunities. The use of additives, chemical materials or abrasive compounds is prohibited.

The use of additives, chemical materials, abrasive compounds or other high performance engine oils may cause internal engine damage.

#### ENGINE OIL MAINTENANCE

- When the vehicle is delivered, the engine oil level is 0.39 in (10 mm) below the H mark on the engine oil dipstick for optimum high performance driving. The engine oil can be filled up to the H mark if not engaging in performance driving.
- Because of the high performance characteristics of the GT-R engine, more frequent oil level inspections are necessary. Check the oil level every 1,800 miles (3,000 km) and adjust as necessary. Also, change the engine oil based on the driving conditions.
- Some amount of oil is consumed by your engine under normal operating conditions, and oil consumption by itself does not necessarily indicate any malfunction.
- For information about the oil replacement intervals for performance driving, refer to the interval for replacing oil after high performance driving.

Make sure to replace the oil filter when the engine oil is changed.

#### TRANSMISSION OIL

#### Genuine NISSAN Transmission oil R35 special (100% synthetic oil)

The GT-R uses a multiple-disc dual wet clutch transmission. The specially developed transmission oil maximizes the friction characteristics of the clutch and the lubrication of the gear bearings.

#### The use of additives is prohibited.

The use of additives or other transmission oil may cause internal transmission or clutch damage.

DIFFERENTIAL OIL (front and rear)

#### Differential Oil R35 COMPETITION type 2189E

Use only the Differential Oil R35 COMPETITION type 2189E that can keep the oil temperature low in order to protect all parts of the differential and maximize the performance of the Limited Slip Differential (LSD).

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## **ABOUT GT-R MAINTENANCE**

## < FEATURES OF NEW MODEL >

#### The use of additives is prohibited.

Using additives or any other than the specified differential oil may cause the oil temperature to increase and the final drive to be damaged. Also it may cause vibration and adversely the vehicle handling characteristics.

#### BRAKE FLUID

#### Genuine NISSAN Brake Fluid R35 Special II

Genuine NISSAN Brake Fluid R35 Special II is the factory fill brake fluid. The Vehicle Dynamic Control (VDC) unit and other related parts were specially designed for this brake fluid. NISSAN cannot ensure proper operation of the vehicle if other brake fluid is used.

#### TIRES AND ROAD WHEELS

#### Tires

The GT-R uses specially designed run-flat tires and matching road wheels. Use of these specially developed tires and wheels provides the greatest potential for maximum performance.

- Using non-genuine GT-R tires may cause power train system damage if the vehicle is driven in a flat tire situation, even if run flat tires are used. This may also prevent the vehicle from being stopped safely.
- Using non-genuine GT-R tires may also cause tire failure due to excessive heat buildup caused by tire distortion while driving.
- Using non-genuine GT-R tires may affect the operation of the VDC system.

#### Tire replacement:

- When tire replacement is required, replacing tires as a set of four with new tires is recommended. However, if a tire is punctured or damaged, it may be possible to replace only the damaged tire. Determining whether one tire or a complete set of tires should be replaced is based on a number of factors including tire wear and condition.
- The GT-R uses specially designed run-flat tires which have a rigid side wall. Special equipment and proce-
- Specific tire changing equipment must be used to remove the GT-R tires from the wheel and to install the GT-R tires onto the wheel. It is only possible to reuse the tires when they have no cracks and/or deformations on the bead portion of the tire. If the incorrect equipment is used to remove the GT-R tires from the wheel and to install the GT-R tires onto the wheel, cracks and deformation may occur on the bead portion of the tires meaning that the tires cannot be reused.

#### Road wheels

Using non-genuine GT-R wheels may cause the following:

vehicle vibration

- the tire coming loose from the wheel during a flat tire
- reduced wheel lug nut tightness

## BRAKE PAD AND DISC ROTOR

This vehicle is equipped with cross-drilled floating rotors and radial-mounted six-piston monoblock calipers. This helps to achieve excellent stopping performance and fade-resistance.

Using non-genuine GT-R Brake pads or rotors can affect vehicle braking performance and the operation of the ABS and VDC system.

#### Replacement of brake pads and disc rotors

NISSAN generally recommends to replace all four sets of brake pads and disc rotors at the same time to maintain maximum brake performance.

However, replacing only the brake pads may be allowed in some cases (four wheels or only front wheels depending on the conditions). A GT-R certified technician must inspect the vehicle and determine that only the brake pads need to be replaced. In this case, replacing all brake pads and disc rotors as a set is not necessary.

Note that the replacement of brake pads and the disc rotors as a set on all four wheels should be performed when a GT-R certified technician determines that this is the correct repair.

If the inside of the disc rotors are cold during the winter and the surface becomes hot due to a heavy force being applied repeatedly to the brakes, cracks may occur near the coolant hole on the surface of the disc rotor. Cracks may also occur due to a heavy force being repeatedly applied to the brakes during high performance driving. In these cases it may be necessary to replace the disc rotors or brake pads depending on the condition of the crack.

## EXHAUST MUFFLER AND TRUNK CARPET

The GT-R exhaust system is designed to provide the maximum vehicle performance and to protect the vehicle from high exhaust gas temperatures.

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## **ABOUT GT-R MAINTENANCE**

#### < FEATURES OF NEW MODEL >

If non-genuine GT-R specification parts are used it is possible that the muffler or other exhaust system parts will deform and cause damage to the underbody. Non-genuine GT-R specification parts can also affect vehicle performance and possibly lead to turbocharger, engine or power train related parts including transmission, damage.

Also, do not remove the trunk carpet from the vehicle for any reason. The carpet insulates the vehicle interior from the heat of the muffler and from the noise of the transmission.

#### TITANIUM MUFFLER AND TRUNK CARPET (if so equipped)

The vehicle is equipped with a label under the console lid that provides the body to the titanium muffler clearance specification (for example rear bumper to muffler tube clearance).

Since the exhaust gas temperature of the high performance engine reaches a high temperature (1,832°F (1,000°C) or more), the muffler may be deformed or lowered due to the heat and then the underbody or peripheral parts may be damaged. Therefore, periodic inspections for the clearance between the muffler and the peripheral parts are required.

Your GT-R has been tested on a test circuit to ensure the suspension components "settle" prior to shipping. Following this circuit test the odometer reading at the time of vehicle shipment is as listed.

Please note a small amount of additional mileage may have been added in the subsequent onward transportation. In addition your GT-R has been inspected and tested by the factory test personnel.

The titanium muffler specifications are provided on a label under the console lid should the muffler need to be adjusted. Please do not remove the label from the console lid. See a GT-R certified NISSAN dealer for detailed information.

If a non-genuine titanium muffler is used, the muffler may become deformed and damage the underbody due to the high performance engine reaching high exhaust gas temperatures (1,832°F (1,000°C) or more). The highest-class titanium alloy is used for genuine parts to ensure the resistance strength and creeping characteristics against high exhaust gas temperature. In addition, further cooling effects are secured by adopting additional cooling fins and by applying partial plate thickness reduction. Since genuine titanium mufflers are made of titanium alloy, the surface color will change depending on the driving conditions, which is not unusual. Prior to shipping from factory, all vehicles receive balance aligning for engine, transmission, and clutch, as well as quench driving of brake pads and rotors. As a result, the muffler surface color may differ depending on the vehicle.

Never remove the trunk carpet from the vehicle for any reason. The carpet insulates the vehicle interior from the heat of the muffler and from the noise of the transmission.

#### Never Allow Oil or Grease to Adhere to the Titanium Muffler.

If the muffler is heated when oil or grease adhere to the muffler surface, the color of this area will be different from that of the surrounding area.

To remove the oil or grease, check that the surface temperature of the muffler has cooled, wash the area with a neutral detergent, wipe it with a brake cleaner-sprayed clean shop cloth and gently tap it with a dry shop cloth to dry.

Be careful not to allow the brake cleaner to splatter on rubber parts, bumper, etc.

#### DRY CARBON FIBER PARTS (if so equipped)

Because of the characteristics of the material, the dry carbon fiber parts may turn yellow due to exposure to ultraviolet rays. The surfaces of dry carbon fiber parts are coated with a special ultraviolet protection paint. To maintain the appearance of these parts, it is important to take proper care of them.

#### NOTICE:

- Do not use compound agents on clear-coated dry carbon fiber parts (such as the NISMO model's bumper, side sill protector, rear spoiler, etc.).
- Do not use any chemical agents (wax, coating agent, compound agent, etc.) on matte-painted dry carbon fiber parts (such as the rear diffuser, a rear spoiler that is of specifications other than NISMO, etc.).
- When dry carbon fiber parts become dirty, prepare a dilute cleaning solution by mixing one capful of mild detergent in a bucket of water, and use that mixture to clean the parts.

#### NOTE:

The surfaces of the dry carbon fiber parts are lightly coated like a race car so that you can feel the proper texture of real carbon, which may feel rough. This is normal.

#### ATTE PAINT (if so equipped)

If your vehicle is equipped with matte paint, special care is necessary to clean your vehicle to maintain the appearance of the matte paint.

## GENERAL MAINTENANCE

## Explanation of General Maintenance

General maintenance includes those items which should be checked during the normal day-to-day operation of the vehicle. They are essential if the vehicle is to continue operating properly. The owners can perform checks and inspections themselves or have a GT-R certified NISSAN dealers do them.

## OUTSIDE THE VEHICLE

The maintenance items listed here should be performed from time to time, unless otherwise specified.

Item		Reference page
Tires	<ul> <li>Check the pressure with a gauge often and always prior to long distance trips. Adjust the pressure in all tires to the pressure specified. Check carefully for damage, cuts or excessive wear.</li> <li><b>NOTE:</b></li> <li>Check the pressure of all four tires on the multi function display. See the separate Multi Function Display Owner's Manual.</li> <li>The tires of this vehicle are filled with nitrogen gas. When the tire pressure is low, fill the tires with nitrogen. Contact a GT-R certified NISSAN dealer for information on filling the tires with nitrogen.</li> <li>If nitrogen is not available, compressed air may be safely used under normal driving conditions. However, NISSAN recommends refilling with nitrogen for maximum tire performance.</li> </ul>	<u>WT-81</u>
Wheel nuts	When checking the tires, make sure no nuts are missing, and check for any loose nuts. Tighten if necessary.	_
Tire rotation	Tires cannot be rotated because the vehicle is equipped with different sized tires in the front and rear.	_
Tire Pressure Monitoring System (TPMS) transmitter components	Replace the TPMS transmitter grommet seal, valve core and cap when the tires are replaced due to wear or age.	<u>WT-78</u>
Tire, wheel alignment and balance	If the vehicle should pull to either side while driving on a straight and level road, or if you detect uneven or abnormal tire wear, there may be a need for wheel alignment. If the steering wheel or seat vibrates at normal highway speeds, wheel balancing may be needed. Wheel alignment needs to be measured and adjusted by a GT-R certified NISSAN dealer.	<u>WT-81</u> FSU-12 RSU-12
Windshield	Clean the windshield on a regular basis. Check the windshield at least every six months for cracks or other damage. Have a damaged windshield repaired by a qualified repair facility.	_
Windshield wiper blades	Check for cracks or wear if they do not wipe properly.	_
Doors and engine hood	Check that all doors and the engine hood operate properly. Also make sure that all latches lock securely. Lubricate if necessary. Make sure that the secondary latch keeps the hood from opening when the primary latch is released. When driving in areas using road salt or other corrosive materials, check lubri- cation frequently.	<u>MA-48</u>
Lamps	Clean the headlamps on a regular basis. Make sure that the headlamps, stop lamps, tail lamps, turn signal lamps, and other lamps are all operating properly and installed securely. Also check headlamp aim.	_

## **INSIDE THE VEHICLE**

The maintenance items listed here should be checked on a regular basis, such as when performing periodic maintenance, cleaning the vehicle, etc.

Item		Reference page	IVI/
Warning lamps and chimes	Make sure that all warning lamps and chimes are operating properly.	_	
Windshield wiper and washer	Check that the wipers and washer operate properly and that the wipers do not streak.	_	
Windshield defroster	Check that the air comes out of the defroster outlets properly and in sufficient quantity when operating the heater or air conditioner.	_	

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## **GENERAL MAINTENANCE**

#### < PERIODIC MAINTENANCE >

Item		Reference page				
Steering wheel	iteering wheel       Check that it has the specified play. Check for changes in the steering condition, such as excessive play, hard steering or strange noises.         Free play: Less than 35 mm (1.38 in)					
Seats	Check seat position controls such as seat adjusters, seatback recliner, etc. to make sure they operate smoothly and that all latches lock securely in every position. Check that the head restrains move up and down smoothly and that the locks (if equipped) hold securely in all latched positions.	_				
Seat belts	Check that all parts of the seat belt system (e.g. buckles, anchors, adjusters and retractors) operate properly and smoothly, and are installed securely. Check the belt webbing for cuts, fraying, wear or damage.	<u>MA-48</u>				
Accelerator pedal	Check the pedal for smooth operation and make sure the pedal does not catch or require uneven effort. Keep the floor mat away from the pedal.	_				
Brakes	Check that the brakes do not pull the vehicle to one side when applied.	_				
Brake pedal and booster	Check the pedal for smooth operation. If the brake pedal suddenly goes down further than normal, the pedal feels spongy or the vehicle seems to take longer to stop, see a GT-R certified NISSAN dealer immediately. Keep the floor mat away from the pedal.	<u>BR-8</u> <u>BR-14</u>				
Parking brake	Check the parking brake operation regularly. The vehicle should be securely held on a fairly steep hill with only the parking brake applied. If the parking brake needs to be adjusted, see a GT-R certified NISSAN dealer.	<u>PB-4</u>				
Transmission "Park" mechanism	On a fairly steep hill, check that the vehicle is held securely with the shift lever in the P (Park) position without applying any brakes.	_				

## UNDER THE HOOD AND VEHICLE

The maintenance items listed here should be checked periodically (e.g. each time you check the engine oil or refuel).

Item		Reference page			
Windshield washer fluid	Check that there is adequate fluid in the reservoir.	_			
Engine coolant level	Check the coolant level when the engine is cold.	<u>CO-9</u>			
Radiator and hoses	_				
Brake fluid level	Make sure that the brake fluid level is between the "MAX" and "MIN" lines on the reservoir.	<u>MA-44</u>			
Battery	Check the fluid level in each cell. It should be between the "MAX" and "MIN" lines. Vehicles operated in high temperatures or under severe conditions require frequent checks of the battery fluid level.	<u>PG-3</u>			
Engine drive belt	Make sure that no belt is frayed, worn, cracked or oily.	<u>MA-23</u>			
Engine oil level	Check the level after parking the vehicle on a level spot and turning off the en- gine. Wait at least 5 minutes for the oil to drain back into the oil pan before checking the oil.	<u>LU-8</u>			
Power steering fluid level and lines	Check the level when the fluid is cold, with the engine off. Check the lines for improper attachment, leaks, cracks, etc.	<u>MA-46</u>			
Exhaust system	Make sure there are no loose supports, cracks or holes. If the sound of the exhaust seems unusual or there is a smell of exhaust fumes in the engine compartment, immediately have the exhaust system inspected by a GT-R certified NISSAN dealer.	MA-31 MA-31 MA-32 MA-33			
Underbody       The underbody is frequently exposed to corrosive substances such as those used on icy roads or to control dust. It is very important to remove these substances, otherwise rust will form on the floor pan, frame, fuel lines and around the exhaust system. At the end of winter, the underbody should be thoroughly flushed with plain water, being careful to clean those areas where mud and dirt can easily accumulate.		_			
Fluid leaks					

## PERFORMANCE OPTIMIZATION SERVICES

#### < PERIODIC MAINTENANCE >

## PERFORMANCE OPTIMIZATION SERVICES

## Explanation of Performance Optimization Services

In addition to the regular maintenance recommended by NISSAN, the GT-R requires the following Inspections;

• Measurement and adjustment of wheel Alignment

- Transmission settings
- Checking the exhaust finisher and rear bumper clearance

These inspections are required at the following intervals: 1,000 miles, 12 months, 24 months and 36 months.

These inspections will be performed free of charge for labor at a GT-R certified NISSAN dealer only. See the DISSAN GT-R Warranty Information Booklet for details.

After the four free inspections, these items are included in the regular scheduled maintenance.

\*Repairs and adjustments involving part replacement, etc. determined to be necessary as a result of these inspections must be performed at the customer's expense.

Inspection item			on timing Months)	1	Remarks	
		12M	24M	36M	]	(
Measurement and adjustment of wheel alignment (Unladen*1)	x	х	x	х	Front       FSU-29, "TYPE 1 : Wheel Alignment"*2 FSU-30, "TYPE 2 : Wheel Alignment"*2         Rear       RSU-38, "TYPE 1 : Wheel Alignment" RSU-39, "TYPE 2 : Wheel Alignment"	
Transmission settings	Х	Х	Х	Х	-	-

X: Applicable

\*1: Fuel full

\*2: Kingpin inclination data are just reference values.

 This vehicle is equipped with a high performance suspension. The vehicle's wheel alignment needs to be measured and adjusted (if necessary) by a GT-R certified NISSAN dealer as necessary as the vehicle is driven and the suspension parts break-in. Whether the vehicle is primarily for city driving or high performance driving, settings can be performed according to the customer's needs.
 Preventing toe-out:

Regarding the amount of toe-in, because toe-out causes lopsided wear on the tires or damage to localized areas inside the tires due to heat generation, be sure to adjust to toe-in. Also, heat may be generated in localized areas if the toe-in amount is excessive. Particularly when engaging in high performance driving or driving at extremely high speed, be sure to adjust the front toe-in to 0.059 in (1.5 mm) or less, and rear toe-in to 0.079 in (2.0 mm) or less. Any damage caused by failing to adjust the toe-in within the specified range will not be covered by warranty.

 The design of the clutch and transmission requires inspection and adjustment of the clutch and shift forks by a GT-R certified NISSAN dealer at the recommended intervals. If the transmission setting is not complete, excessive loads may be applied to the transmission and power train system parts during starting and shifting, which may result in a malfunction or damage. Refer to <u>TM-20</u>, "<u>MAINTENANCE : Description (GT-R certified NISSAN dealer)</u>".

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## PERFORMANCE OPTIMIZATION SERVICES

#### < PERIODIC MAINTENANCE >

## Sample of GT-R Performance Optimization Service Log

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Every time performance optimization services are carried out, be sure to fill the measured values and adjusted values in the performance optimization service log of the customer's GT-R service and maintenance guide shown below.

	easurement and Adjustment of wheel alignment		Transmission Settings		Customer Name		
eas	easured Values		Measured Values		Address		
	Total Toe-In		lin/mm	Engine Speed	rpm		
		LH	Deg/min (Dec/Deg)	Trans. Oil Temp. °F(°C )			
R	Camber	RH	Deg/min (Dec/Deg)			L	
	Caster	LH	Deg/min (Dec/Deg)	Status of Transmission Set	tting		
	-	RH	Deg/min (Dec/Deg)		Previous Learned Value	Mileage	Miles/
	Total Toe-In		in/mm	Clutch Gear Learning	Current Learned Value	Dealer Name	inited,
R	Camber	LH	Deg/min (Dec/Deg)		* Circle the settings as delivered to the Customer		
Camper		RH	Deg/min (Dec/Deg)	en ele a le comingo de denvered			
R	Total Toe-In Camber Caster	LH RH LH	in/mm Deg/min (Dec/Deg) Deg/min (Dec/Deg) Deg/min (Dec/Deg)	Adjust clutch A capacity sett Adjust clutch B capacity sett	•	]	
		RH	Deg/min (Dec/Deg)				
	Total Toe-In		in/mm				
ы	Camber	LH RH	Deg/min (Dec/Deg) Deg/min (Dec/Deg)				

## < PERIODIC MAINTENANCE >

## PERIODIC MAINTENANCE

## Introduction of Periodic Maintenance

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Two different maintenance schedules are provided, and should be used, depending upon the conditions in which the vehicle is mainly operated. After 60,000 miles (100,000 km) or 60 months, continue the periodic maintenance at the same mileage/time intervals.

	Follow Periodic Maintenance Schedule 1 if the driving habits frequently include one or more of the following driving conditions:	Emission Control Sys- tem Maintenance		C
Schedule 1	<ul> <li>Repeated short trips of less than 5 miles (8 km).</li> <li>Repeated short trips of less than 10 miles (16 km) with outside temperatures remaining below freezing.</li> <li>Operating in hot weather in stop-and-go "rush hour" traffic.</li> <li>Extensive idling and/or low speed driving for long distances, such as police, taxi or door-to-door delivery use.</li> <li>Driving in dusty conditions.</li> <li>Driving on rough, muddy, or salt spread roads.</li> </ul>	Chassis and Body Maintenance	<u>MA-11</u>	D
Schedule 2	Follow Periodic Maintenance Schedule 2 if none of driving conditions shown in	Emission Control Sys- tem Maintenance	MA 12	F
Schedule 2	Schedule 1 apply to the driving habits.	Chassis and Body Maintenance	<u>MA-12</u>	

## Schedule 1

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## EMISSION CONTROL SYSTEM

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Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary. []: At the mileage intervals only <>: Performed based on the number of months only.

MAINTENANCE OPERATION					MAIN	TENAN	ICE INT	ERVAL	-			Refer-	-
Perform at number of miles, kilo- meters or months, whichever comes first.	Miles x 1,000 (km x 1,000) Months	6 (10) 6	12 (20) 12	18 (30) 18	24 (40) 24	30 (50) 30	36 (60) 36	42 (70) 42	48 (80) 48	54 (90) 54	60 (100) 60	ence Section - Page or - Content Title	
Drive belt	NOTE (1)				۱*		۱*		*		*	<u>MA-23</u>	-
Air cleaner filter	NOTE (2)					[R]					[R]	<u>MA-27</u>	-
EVAP vapor lines					<b>I</b> *				*			<u>MA-30</u>	-
Fuel lines					<b>I</b> *				*			<u>MA-27</u>	-
Fuel filter	NOTE (3)											_	-
Engine coolant					R*				R*			<u>MA-24</u>	-
Engine oil	NOTE (4)	R	R	R	R	R	R	R	R	R	R	<u>MA-27</u>	-
Engine oil filter (Use genuine NISSAN engine oil filter or equiv- alent.)	NOTE (4)	R	R	R	R	R	R	R	R	R	R	<u>MA-28</u>	-
Spark plugs (Iridium-tipped type) (Except for NISMO model)	NOTE (5)										[R]	<u>MA-29</u>	-
Spark plugs (Iridium-tipped type) (For NISMO model)	NOTE (6)					[R]					[R]	<u>MA-29</u>	-
Intake & exhaust valve clear- ance*	NOTE (7)											<u>EM-20</u>	-
Engine startability and abnormal sound			< <b> </b> >*		<l>*</l>		<l>*</l>		< >*		<l>*</l>	-	- 1
Driving performance at low and accelerating speed			<l>*</l>		<l>*</l>		<l>*</l>		< >*		<l>*</l>	_	-
Throttle chamber deposits	NOTE (8)		< <u> </u> >*		<l>*</l>		< >*		< <u> </u> >*		<l>*</l>	<u>MA-30</u>	-

NOTE:

#### < PERIODIC MAINTENANCE >

(1) Replace the drive belt if found damaged or if the auto belt tensioner reading reaches the maximum limit.

(2) If operating mainly in dusty conditions, more frequent maintenance may be required.

(3) Maintenance-free item. For service procedures, refer to FL section.

(4) Replace the engine oil and engine oil filter at the same time. After a high performance driving [engine oil temperature while driving:  $230^{\circ}F$  ( $110^{\circ}C$ ) –  $266^{\circ}F$  ( $130^{\circ}C$ )], change both engine oil and oil filter every 3,000 miles (5,000 km). If engine oil temperature exceeds  $266^{\circ}F$  ( $130^{\circ}C$ ) while driving, change both engine oil and oil filter immediately even when the timing is premature for changing oil. For engine oil temperature history, refer to <u>EC-172</u>, "<u>CONSULT Function (GT-R certified NISSAN dealer</u>)"</u>.

(5) Replace spark plug when the spark plug gap reaches 1.0 mm (0.039 in) or more, even if within specified periodic replacement mileage.

(6) Replace spark plug when the spark plug gap reaches 0.9 mm (0.035 in) or more, even if within specified periodic replacement mileage.

(7) Periodic maintenance is not required. However, if valve noise increases, inspect valve clearance.

(8) Visually inspect the throttle chamber for deposits and clean as necessary.

\*Maintenance items and intervals with "\*" are recommended by NISSAN for reliable vehicle operation. The owner need not perform such maintenance in order to maintain the emission warranty or manufacturer recall liability. Other maintenance items and intervals are required.

## CHASSIS AND BODY

Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary. []: At the mileage intervals only. < >: Performed based on the number of months only.

MAINTENANCE OPERATIO	ON				MAIN	TENAN	ICE INT	ERVAL	-			Reference
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000) Months	6 (10) 6	12 (20) 12	18 (30) 18	24 (40) 24	30 (50) 30	36 (60) 36	42 (70) 42	48 (80) 48	54 (90) 54	60 (100) 60	Section - Page or - Content Title
Brake lines & cables			Ι		Ι		I		I		I	<u>MA-44</u>
Brake hoses											<r></r>	MA-44
Brake pads & rotors		I	Ι	Ι	Ι	Ι	I	I	I	I	I	<u>MA-45</u>
Brake fluid					<r></r>				<r></r>			<u>MA-44</u>
Transmission oil & differen- tial gear oil (front & rear)			Ι		Ι		[R]		I		I	MA-33 MA-40 MA-41 DLN-112 DLN-114
Steering gear & linkage, axle & suspension parts		I	I	I	I	I	I	I	I	I	I	<u>MA-45</u> <u>MA-47</u>
Steering linkage ball joints		Ι	Ι	Ι	Ι	Ι	I	I	I	I	I	<u>ST-25</u>
Front suspension ball joints		I	Ι	Ι	Ι	Ι	I	I	I	I	I	FSU-20
Drive shaft boots and pro- peller shaft		I	Ι	Ι	Ι	I	I	I	I	I	I	<u>MA-47</u> <u>MA-39</u> <u>MA-39</u>
Exhaust system		I	I	I	I	I	I	I	I	I	I	<u>MA-31</u> <u>MA-31</u> <u>MA-32</u> <u>MA-33</u>
In-cabin microfilter			R		R		R		R		R	<u>VTL-7</u>
Transmission settings	NOTE (1)								I		I	<u>TM-20</u>
Measurement and adjust- ment of wheel alignment	NOTE (1)								I		I	<u>FSU-12</u> RSU-12

#### NOTE:

(1) If the performance optimization services at 36 months (free of charge) including this inspection have not been finished yet, this inspection is not necessary.

## Schedule 2

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## EMISSION CONTROL SYSTEM

#### < PERIODIC MAINTENANCE >

Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary. []: At the mileage intervals only < >: Performed based on the number of months only.

				-			•		-		ber	of months only.	А
MAINTENANCE OPERATION					MAIN	TENAN	ICE IN	TERVA	L			Reference	
Perform at number of miles, kilo- meters or months, whichever comes first.	Miles x 1,000 (km x 1,000) Months	6 (10) 6	12 (20) 12	18 (30) 18	24 (40) 24	30 (50) 30	36 (60) 36	42 (70) 42	48 (80) 48	54 (90) 54	60 (100) 60	Section - Page or - Content Ti- tle	В
Drive belt	NOTE (1)				۱*		*		۱*		<b>I</b> *	<u>MA-23</u>	0
Air cleaner filter						[R]					[R]	<u>MA-27</u>	С
EVAP vapor lines					<b>I</b> *				*			<u>MA-30</u>	
Fuel lines					<b>I</b> *				*			<u>MA-27</u>	D
Fuel filter	NOTE (2)											-	
Engine coolant					R*				R*			<u>MA-24</u>	_
Engine oil	NOTE (3)	R	R	R	R	R	R	R	R	R	R	<u>MA-27</u>	E
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent.)	NOTE (3)	R	R	R	R	R	R	R	R	R	R	<u>MA-28</u>	F
Spark plugs (Iridium-tipped type) (Except for NISMO model)	NOTE (4)										[R]	<u>MA-29</u>	
Spark plugs (Iridium-tipped type) (For NISMO model)	NOTE (5)					[R]					[R]	<u>MA-29</u>	G
Intake & exhaust valve clear- ance*	NOTE (6)											<u>EM-20</u>	Н
Engine startability and abnormal sound			<l>*</l>		<l>*</l>		<l>*</l>		< <b> </b> >*		<l>*</l>	-	
Driving performance at low and accelerating speed			<l>*</l>		<l>*</l>		<l>*</l>		< >*		<l>*</l>	-	
Throttle chamber deposits	NOTE (7)		<l>*</l>		<l>*</l>		<l>*</l>		< >*		<l>*</l>	<u>MA-30</u>	

#### NOTE:

(1) Replace the drive belt if found damaged or if the auto belt tensioner reading reaches the maximum limit.

(2) Maintenance-free item. For service procedures, refer to FL section.

(3) Replace the engine oil and engine oil filter at the same time. After a high performance driving [engine oil temperature while driving:  $X = 230^{\circ}F (110^{\circ}C) - 266^{\circ}F (130^{\circ}C)$ ], change both engine oil and oil filter every 3,000 miles (5,000 km). If engine oil temperature exceeds 266°F (130°C) while driving, change both engine oil and oil filter immediately even when the timing is premature for changing oil. For engine oil temperature history, refer to <u>EC-172</u>, "<u>CONSULT Function (GT-R certified NISSAN dealer)</u>".

(4) Replace spark plug when the spark plug gap reaches 1.0 mm (0.039 in) or more, even if within specified periodic replacement mileage.

(5) Replace spark plug when the spark plug gap reaches 0.9 mm (0.035 in) or more, even if within specified periodic replacement mileage.

(6) Periodic maintenance is not required. However, if valve noise increases, inspect valve clearance.

(7) Visually inspect the throttle chamber for deposits and clean as necessary.

\*Maintenance items and intervals with "\*" are recommended by NISSAN for reliable vehicle operation. The owner need not perform such maintenance in order to maintain the emission warranty or manufacturer recall liability. Other maintenance items and intervals are required.

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#### < PERIODIC MAINTENANCE >

Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary.[]: At the mileage intervals only. < >: Performed based on the number of months only.

MAINTENANCE OPERAT	ION				MAIN	ITENAN		ERVAL				Reference
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000) Months	6 (10) 6	12 (20) 12	18 (30) 18	24 (40) 24	30 (50) 30	36 (60) 36	42 (70) 42	48 (80) 48	54 (90) 54	60 (100) 60	Section - Page or - Content Title
Brake lines & cables			I		I		I		I		-	<u>MA-44</u>
Brake hoses											<r></r>	<u>MA-44</u>
Brake pads & rotors			I		I		I		I		Ι	<u>MA-45</u>
Brake fluid					<r></r>				<r></r>			<u>MA-44</u>
Transmission oil & differ- ential gear oil (front & rear)			I		I		[R]		I		I	<u>MA-33</u> <u>MA-40</u> <u>MA-41</u> <u>DLN-112</u> <u>DLN-114</u>
Steering gear & linkage, axle & suspension parts					I				I			<u>MA-45</u> MA-47
Steering linkage ball joints					I				I			<u>ST-25</u>
Front suspension ball joints					I				I			<u>FSU-20</u>
Drive shaft boots and pro- peller shaft			I		I		I		I		Ι	<u>MA-47</u> <u>MA-39</u> <u>MA-39</u>
Exhaust system					I				I			<u>MA-31</u> <u>MA-31</u> <u>MA-32</u> <u>MA-33</u>
In-cabin microfilter			R		R		R		R		R	<u>VTL-7</u>
Transmission setting	NOTE (1)								I		Ι	<u>TM-20</u>
Measurement and adjust- ment of wheel alignment	NOTE (1)								I		I	<u>FSU-12</u> <u>RSU-12</u>

#### NOTE:

(1) If the performance optimization services at 36 months (free of charge) including this inspection have not been finished yet, this inspection is not necessary.

## ADDITIONAL MAINTENANCE ITEMS

## Description

The information and specifications below apply only when engaging in performance driving.

- The following information applies only if the owners engage in performance driving such as driving your GT-R for extended periods under the following conditions.
- Higher-RPM (approaching red line) operation
- Frequent high pedal force braking from moderate and higher speeds
- Frequent throttle activation
- Fast revving throughout the RPM range

In such cases, the following additional maintenance guidelines apply.

We recommend that all GT-R maintenance be performed at a GT-R certified NISSAN dealer. NISSAN will only pay for NISSAN GT-R Performance Optimization Services performed at a GT-R certified NISSAN dealer.

## Precautions on Performance Driving

## Checking the temperature of the coolant and oils on the multi- function display.

When the temperatures of the engine coolant and oil, and the oil pressure exceed the normal range, the color of the meter on the multifunction display turns red to warn the driver.

When engaging in high performance driving, switch the display to the function meter to display the temperature of the engine coolant and oil, and the oil pressure. When the color of the meterdisplay turns red, perform cool down driving. When the values of the temperature and pressure return to the normal range, the color of the meter display will turn back to white.

#### Warning temperature:

- Engine coolant temperature: 230°F (110°C) or higher\*1
- Engine oil temperature: 275°F (135°C) or higher<sup>\*1</sup>
- Transmission oil temperature: 284°F (140°C) or higher\*2

\*1: If the engine coolant temperature increases above 230°F (110°C), the color of the meter display changes to red to warn of a possible overheat condition and engine output is reduced. When the engine oil temperature is higher than 275°F (135°C), the meter display changes to red maximum engine speed is automatically limited to 4,000 rpm, and the transmission automatically changes from the M position to the A position.

\*2: If the transmission oil temperature increases to over 284°F (140°C), the color of the meter display on the multi function display changes to red. However, the vehicle can continue to be driven until the temperature reaches 295°F (146°C). If the oil temperature exceeds 248°F (140°C) while driving (the color of the meter display turns red), change both the transmission and the differential oil after driving because these fluids have deteriorated because of the heat.

## COOL DOWN

Cool down the vehicle to help extend the life of the vehicle if coolant temperatures are extremely high. Drive the vehicle at 37 to 50 MPH (60 to 80 km/h), in 5th or 6th gear for 2 to 3 miles (3 to 5 km) and then stop the M engine.

#### **REFUELING PRECAUTIONS**

#### WARNING:

Do not attempt to top off the fuel tank after the fuel pump nozzle shuts off automatically. Continued refueling may cause fuel overflow, resulting in fuel spray and possibly a fire. The fuel tank is full at the first automatic shutoff.

To maximize vehicle performance, the fuel tank is located as low as possible to lower the vehicle center of gravity. The tank is also divided into two parts. This fuel tank design causes higher pressures inside the tank than other vehicles so fuel spillage is possible by trying to top off the fuel tank after automatic shutoff. When more than half of the fuel remains in the tank, the pressure and temperature in the fuel tank may increase. This may cause evaporated fuel spray and a hissing sound when the fuel cap is opened. It may be difficult to refuel the vehicle, but this does not indicate a malfunction.

This phenomenon may not occur after the temperature inside the fuel tank decreases.

To avoid the above phenomenon, open the cap gently to gradually release the pressure from the tank, then slowly refuel the vehicle.

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## ADDITIONAL MAINTENANCE ITEMS

< PERIODIC MAINTENANCE >

## Inspection and Adjustments before Performance Driving

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## The information and specifications below apply only when engaging in performance driving.

#### FLUIDS

- Check the engine, transmission, differential and under vehicle surfaces for oil and coolant leaks.
- Check the fluid levels and adjust as necessary using the specified fluid as described under the conditions listed in RECOMMENDED FLUIDS AND MAINTENANCE INTERVAL.
- NISSAN recommends to adjust the engine oil level to be 0.4 in (10 mm)(1/2 US qt (0.5 liter)) below the H mark on the engine oil dipstick.
   Before checking the oil level, run the engine until it reaches operating temperature and wait at least 5 minutes after turning off the engine. Make sure the oil level always remains above the L mark.

When the vehicle is delivered, the engine oil is set to "H - 0.4 in (10 mm)" for optimal high performance driving.

• Adjust the power steering fluid level to the R mark on the power steering dipstick when the fluid temperature is hot or when the fluid temperature is cold.

#### Fluid temperature:

Hot: 122 to 176°F (50 to 80°C) Cold: 32 to 86°F (0 to 30°C)

## COOLANT LEVEL and MIXTURE RATIO

Check the coolant level in the pressurized coolant reservoir. Adjust the level so that the fluid is between the MAX marking. For the coolant, use Genuine NISSAN Long Life Coolant.

## **CAUTION:**

# Do not overfill the coolant. This may increase the pressure in the cooling system and cause coolant leaks.

To maximize vehicle performance, the coolant mixture ratio should be a combination of 30% coolant/antifreeze and 70% demineralized or distilled water for maximum cooling system performance regardless of ambient temperatures.

If ambient temperatures are anticipated below 5°F (-15°C), make sure a proper mixture ratio of 50% antifreeze and 50% demineralized or distilled water mix is used.

## ENGINE and POWERTRAIN

- Inspect the areas surrounding of the catalytic converter for heat deterioration.
- Check the engine, transmission, differential and under the vehicle for oil and coolant leaks.
- Always perform the transmission setting. After that, adjust the clutch clearance so that the clearance is smaller than the usual clearance. Large clutch clearance increases clutch heat generation. This leads to an increase in temperature of the transmission oil. In addition, a more direct shifting feel can be obtained by adjusting the clearance to be small. Perform the adjustment again after High Performance Driving.

## CAUTION:

# Failure to have the clutch properly adjusted before performance driving may cause the transmission oil temperature to increase which may cause transmission damage.

- Inspect to see whether the clearance between the exhaust finisher and rear bumper is maintained at above 0.24 in (6 mm) (up/down) and above 0.20 in (5 mm) (left/right).
- Inspect drive shaft universal joint dust boots for cracks and damage. Replace as necessary.

## SUSPENSION and WHEEL ALIGNMENT

- Check the steering and suspension system and other links for loose and/or damaged parts.
- Measure and adjust the wheel alignment.

## Preventing toe-out:

Regarding the amount of toe-in, because toe-out causes lopsided wear on the tires or damage to localized areas inside the tires due to heat generation, be sure to adjust to toe-in. Also, heat may be generated in localized areas if the toe-in amount is excessive. Particularly when engaging in high performance driving or driving at extremely high speed, be sure to adjust the front toe-in to 0.059 in (1.5 mm) or less, and rear toe-in to 0.079 in (2.0 mm) or less. Any damage caused by failing to adjust the toe-in within the specified range will not be covered by warranty.

Excessive toe-out can cause uneven tire wear or damage to areas inside the tires due to high heat. Be sure to have the wheel alignment toe setting checked and adjusted before any performance driving.

## WHEELS and TIRES

- Check tire wear and cracking.
- Inspect the tire side wall for damage.
- Check the tire pressure and adjust the pressure as necessary when the tires are cold.

## **MA-16**

#### Tire pressure:

When the tire temperature has increased after the vehicle was driven at high speed or you have engaged in A high performance driving, adjust the tire pressure as follows to balance the rigidity between the front and rear tires.

Condition	Pressure PSI (kPa)	В
Starting to drive (Tires are cold)	Front: 30.5 (210) Rear: 29 (200)	C
Increasing tire pressure (Tires are hot)	Front: Not exceeding 39.2 (270) Rear: Not exceeding 37.8 (260)	C

The tire pressure changes depending on the outside temperature or altitude. Check the tire pressure regularly and when the climate conditions change.

#### WARNING:

Keep your tires inflated to the correct tire pressure. Driving with low tire pressure can damage some powertrain systems and affect the operation of the ABS and VDC systems. Low tire pressure may also cause tire failure and result in serious personal injury or death.

- Make sure the tire valve stem cap is installed and that the valve stem is tight. When installing the cap, make sure to tighten the cap by hand. If a tool is used to tighten the cap, the cap may be damaged.
- Make sure the wheel nuts are tight.
- Make sure the drive shaft nuts are tight.
- Make sure to replace the grommet seal, the valve core and the valve cap of the Tire Pressure Monitoring System (TPMS) sensor attached to the wheel every 3 years for performance driving use. Replace them every 5 years even when not engaging in performance driving. A dirty grommet seal will cause the air leak from the tire.
- Make sure that the TPMS sensor installation nuts and the sensor valve are tight and there is no nitrogen H leak.
- Use only a NISSAN genuine valve cap or equivalent.
- Check wheel hub run out and that the wheel rotates smoothly without any friction. Check these with the tires removed whenever an inspection is performed with the vehicle jacked up.
- Secure road wheel balance weights with aluminum tape.
- Check that the wheel nuts are not stripped.
- Make sure the tire has not slipped on the wheel causing the assembly to be out of balance. The reference marks on the tire and wheel should be aligned. If the reference marks are not aligned, the tire has slipped on the wheel. Have the wheels/tires rebalanced. Make sure the old reference marks are erased and new reference marks are applied to the wheel and tire. When installing new tires on the wheels, make sure new reference marks are applied to the wheels and tires.

#### BRAKES

- Check for the heat deterioration of the brakes and parts around the brakes.
- It is recommended that you remove air from the brake system after any of the following:
  - When engaging in high performance driving for the first time after purchasing a new vehicle.
  - After replacing the brake fluid.
  - When engaging in high performance driving for a sustained period of time.

It is recommended that bleeding the brake be performed when the brake calipers are hot (about 212°F (100°C)).

• Remove the grease of the front brake pads completely.

#### Brake Pad Brake-in Procedure:

NISSAN recommends performing the brake pad break in procedure until the surface of the brake pad is covered with a 0.04 to 0.08 in (1 to 2 mm) thick white coating. To achieve this result the temperature of the brake pads must reach 1,112°F (600°C). To achieve this result perform the following:

- Drive the vehicle at a speed of 75 MPH (120 km/h) and slow down to 12 MPH (20 km/h) with a 0.6G rate of braking. Repeat this procedure about 15 times.
- Cool down the brakes by driving at 37 to 50 MPH (60 to 80 km/h), in 5th or 6th gear for 2 to 3 miles (3 to 5 km) after the break in procedure is completed.

#### CAUTION:

#### Never perform the break in procedure on a public road.

Inspection and Adjustments after Performance Driving

#### NOTE:

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At the completion of performance driving, all fluids and adjustments should be returned to their normal conditions and settings as specified.

#### FLUIDS

- Check the engine, transmission, differential and under the vehicle for oil and coolant leaks.
- Check the fluid levels and adjust as necessary using the specified fluid as described under the conditions listed in RECOMMENDED FLUIDS AND MAINTENANCE INTERVAL. If you do not drive under the conditions listed, refer to the applicable NISSAN Service and Maintenance Guide.
- When changing fluids, be sure to use the specified fluids as described in the RECOMMENDED FUELS/ LUBRICANTS Chart in the Technical and Consumer Information section of owner's manual.

#### **Recommended Fluids and Maintenance Interval**

ITEMS	I	Engine Oil
GT-R SPECIFIED FLUIDS	Mobil 1 (0W-40)* <sup>1</sup>	
	When the oil temperature stays below 230°F (110°C) while driving	Change engine oil and engine oil filter at the same inter- val as Schedule 1 and 2 in the 2015 NISSAN GT-R Ser- vice and Maintenance Guide section.
MAINTENANCE INTERVAL	When the oil temperature reaches between 230°F (110°C) and 266°F (130°C) while driving	Change engine oil and engine oil filter every 3,000 miles (5,000 km).
	When the oil temperature exceeds 266°F (130°C) while driving	Change engine oil and engine oil filter immediately after stopping.

ITEMS	Tra	nsmission Oil
GT-R SPECIFIED FLUIDS	Genuine NISSAN Transmission Oil R35 Special	
	When the oil temperature stays below 248°F (120°C) while driving	Change transmission oil at the same interval as Sched- ule 1 and 2 in the 2015 NISSAN GT-R Service and Main- tenance Guide section.
MAINTENANCE INTERVAL	When the oil temperature reaches between 248°F (120°C) and 284°F (140°C) while driving	Change transmission oil every 3,000 miles (5,000 km).
	When the oil temperature exceeds 284°F (140°C) while driving	Change both transmission oil and differential oil immedi- ately after stopping. Differential oil temperature usually increases concurrently.

ITEMS	Differential Oil (front and rear)							
GT-R SPECIFIED FLUIDS	Differential Oil R35 COMPETITION type 2189E*2							
	When the oil temperature stays below 248°F (120°C) while driving	Change differential oil at the same interval as Schedule 1 and 2 in the 2015 NISSAN GT-R Service and Mainte- nance Guide section.						
MAINTENANCE INTERVAL	When the oil temperature reaches between 248°F (120°C) and 284°F (140°C) while driving	Change differential oil every 3,000 miles (5,000 km).						
	When the oil temperature exceeds 284°F (140°C) while driving	Change both transmission oil and differential oil immedi- ately after stopping. Differential oil temperature usually increases concurrently as the transmission oil tempera- ture.						

ITEMS	Brake Fluid
GT-R SPECIFIED FLUIDS	Genuine NISSAN Brake Fluid R35 Special II* <sup>3</sup>
MAINTENANCE INTERVAL	Change brake fluid every 3,000 miles (5,000 km).

\*1: Mobil 1 (0W-40) (100% synthetic) is the factory fill oil. The VR38 engine with its plasma-sprayed bores was developed using this oil. NISSAN cannot ensure proper engine operation and durability if other 0W-40 synthetic oil is used. If Mobil 1 (0W-40) is not available, Mobil 1 (10W-40) (100% synthetic) may be used, however, some performance loss may be noticed.

\*2: The differential oil temperature cannot be displayed on the multi function display. The differential oil temperature can be checked with the transmission oil temperature since both usually increases or decrease concurrently.

## ADDITIONAL MAINTENANCE ITEMS

#### < PERIODIC MAINTENANCE >

\*3: Genuine NISSAN Brake Fluid R35 Special II is the factory fill brake fluid. The Vehicle Dynamic Control (VDC) unit and other related parts were specially designed for this brake fluid and NISSAN cannot ensure the best performance and proper operation of the vehicle if other brake fluid is used.

#### SUSPENSION and WHEEL ALIGNMENT

- Check the steering and suspension system and other links for loose and/or damaged parts.
- Measure and adjust the wheel alignment.

#### Preventing Toe-out:

Regarding the amount of toe-in, because toe-out causes lopsided wear on the tires or damage to localized areas inside the tires due to heat generation, be sure to adjust to toe-in. Also, heat may be generated in localized areas if the toe-in amount is excessive. Particularly when engaging in high performance driving or driving at extremely high speed, be sure to adjust the front toe-in to 0.059 in (1.5 mm) or less, and rear toe-in to 0.079 in (2.0 mm) or less. Any damage caused by failing to adjust the toe-in within the specified range will not be covered by warranty.

#### WHEEL and TIRES

- Check tire wear and cracking.
- Inspect the tire side wall for damage.
- Check the tire pressure and adjust the pressure as necessary when the tires are cold. (See previous page's charts)
- Check that the wheel nuts are not stripped. Check if there is no deformation on the contact surface of the nuts.
- Make sure the wheel nuts are tight.
- Make sure the drive shaft nuts are tight.
- Check wheel hub run out and that the wheel rotates smoothly without any friction. Check these with the tires removed whenever an inspection is performed with the vehicle jacked up.
- Make sure the tire has not slipped on the wheel causing the assembly to be out of balance. The reference marks on the tire and wheel should be aligned. If the reference marks are not aligned, the tire has slipped on the wheel. Have the wheels/tires rebalanced. Make sure the old reference marks are erased and new reference marks are applied to the wheel and tire. When installing new tires on the wheels, make sure new reference marks are applied to the wheels and tires.
- Make sure that the TPMS sensor installation nuts and the sensor valve are tight and there is no nitrogen leak.

#### BRAKES

- Check for the heat deterioration of the brakes and parts around the brakes.
- Check the condition of the brake pads and disc rotors and replace them as necessary.
- Apply MOLYKOTE<sup>®</sup> 7439 to the top and bottom of the front brake pads.

#### ENGINE and POWERTRAIN

- Inspect the area surrounding the catalytic converter for heat deterioration.
- Inspect to see whether the clearance between the exhaust finisher and rear bumper is maintained at above 0.24 in (6 mm) (up/down) and above 0.20 in (5 mm) (left/right).
- Inspect drive shaft universal joint dust boots for cracks and damage. Replace as necessary.
- Check the engine, transmission, differential and under the vehicle for oil and coolant leaks.
- The clutch clearance and shift fork position may need to be adjusted.
- Check that there is no abnormal noise, vibrations or warning lights illuminated when making tight turns at slow speed (for tight corner braking phenomenon).

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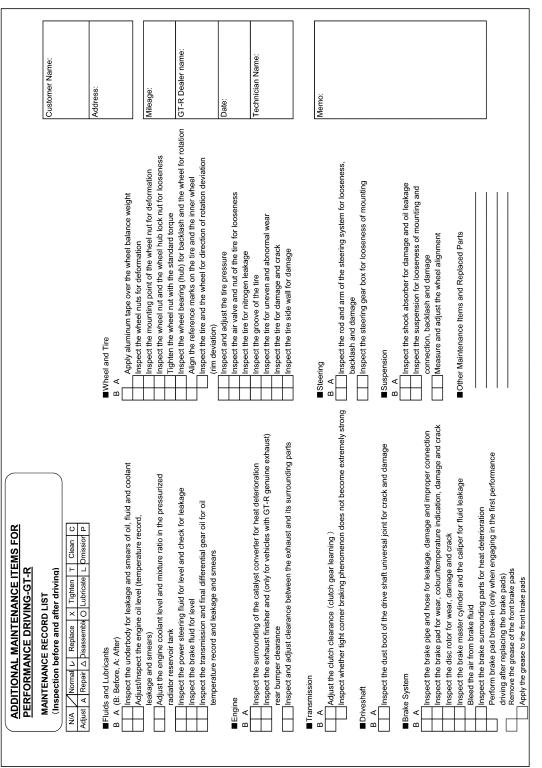
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## ADDITIONAL MAINTENANCE ITEMS

## < PERIODIC MAINTENANCE >

## MAINTENANCE RECORD LIST



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## **RECOMMENDED FLUIDS AND LUBRICANTS**

## < PERIODIC MAINTENANCE >

## **RECOMMENDED FLUIDS AND LUBRICANTS**

## Fluids and Lubricants

The following are approximate capacities. The actual refill capacities may be slightly different. When refilling, B follow the procedures described elsewhere in this manual.

			Capa	city (Approxi	mate)	
			US measure	Imp measure	Liter	Recommended Fluids/Lubricants
Engine oil	With oil filter cha	nge	5-1/4 qt	4-3/8 qt	5.0	• Mobil 1 (0W-40)
Drain and refill	Without oil filter	change	4-3/4 qt	4 qt	4.5	• Mobil 1 (0W-40) (100% synthetic) is the factory fill oil. The VR38 engine
Dry engine (Overhaul)			6-4/8 qt	5-4/8 qt	6.2	with its plasma-sprayed bores was developed using this oil. NISSAN cannot ensure proper engine opera- tion and durability if other 0W-40 synthetic oil is used. If Mobil 1 (0W- 40) is not available, Mobil 1 (10W- 40) (100% synthetic) may be used; however, some performance loss may be noticed. For further details, see "Engine Oil Recommendation".
	With reservoir	Except for NISMO	12 qt	10 qt	11.3	
Cooling system	tank	For NISMO	12-3/8 qt	10-2/8 qt	11.7	Genuine NISSAN Long Life Anti- freeze/ Coolant (blue) or equivalent
- •	Reservoir tank	Except for NISMO	1-4/8 qt	1-2/8 qt	1.4	neeze/ Coolant (blue) or equivalent
		For NISMO	1-7/8 qt	1-5/8 qt	1.8	
Transmission oil*	1		9-7/8 qt	8-1/4 qt	9.4	<ul> <li>Genuine NISSAN Transmission Oil R35 Special</li> <li>The use of fluids and lubricants other than the specified may cause vehicle malfunctions and result in non-warranty vehicle repairs.</li> </ul>
		Front	1-3/8 pt	1-1/8 pt	0.65	Genuine NISSAN Differential Oil
Differential gear o	Dil	Rear	2-7/8 pt	2-3/8 pt	1.35	<ul> <li>R35 COMPETITION type 2189E</li> <li>The use of fluids and lubricants other than the specified may cause vehicle malfunctions and result in non-warranty vehicle repairs.</li> </ul>
Transfer fluid			_	_		_
Power steering fl	uid (PSF)		1-1/8 qt	7/8 qt	1.0	<ul> <li>Genuine NISSAN PSF or equivalent</li> <li>DEXRON™ VI type ATF may also be used.</li> </ul>
Brake fluid			_	_	_	<ul> <li>Genuine NISSAN Brake Fluid R35 Special II</li> <li>Genuine NISSAN Brake Fluid R35 Special II is the factory fill brake fluid. The Vehicle Dynamic Control (VDC) unit and other related parts were specially designed for this brake flu- id and NISSAN cannot ensure the best performance and proper opera- tion of the vehicle if other brake fluid is used.</li> </ul>
Multi-purpose gre	ase					NLGI No. 2 (Lithium soap base)
Windshield wash					_	Genuine NISSAN Windshield Wash- er Concentrate Cleaner & Antifreeze or equivalent
Fuel recommend	ation		_			Refer to GI-30, "Fuel".

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## **RECOMMENDED FLUIDS AND LUBRICANTS**

#### < PERIODIC MAINTENANCE >

\*1: All of the fluid cannot be removed when servicing the transmission. The actual refill amount may be less than shown.

## Engine Oil Recommendation

INFOID:000000011487240

It is essential to choose the correct grade, quality, and viscosity engine oil to ensure satisfactory engine life and performance. Mobil 1 (0W-40) (100% synthetic) is the factory fill oil. The VR38 engine with its plasmasprayed bores was developed using this oil. NISSAN cannot ensure proper engine operation and durability if other 0W-40 synthetic oil is used. If Mobil 1 (0W-40) is not available, Mobil 1 (10W-40) (100% synthetic) may be used; however, some performance loss may be noticed.

#### Using an engine oil other than that specified could adversely affect the engine.

## Anti-Freeze Coolant Mixture Ratio

INFOID:000000011487241

The engine cooling system is filled at the factory with a pre-diluted mixture of 50% Genuine NISSAN Long Life Antifreeze/Coolant (blue) and 50% water to provide year-round anti-freeze and coolant protection. The anti-freeze solution contains rust and corrosion inhibitors. Additional engine cooling system additives are not necessary.

#### WARNING:

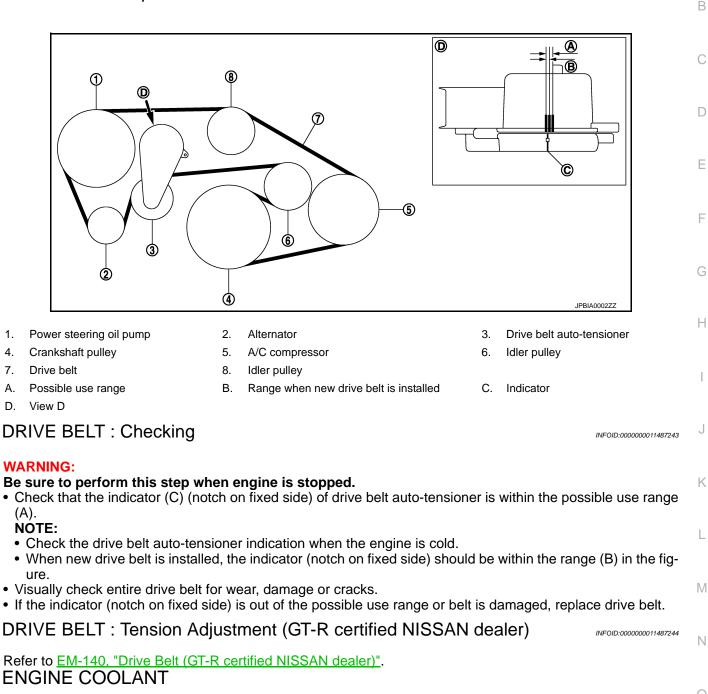
- Never remove the radiator or coolant reservoir cap when the engine is hot. Wait until the engine and radiator cool down. Serious burns could be caused by high pressure fluid escaping from the radiator. See precautions in "If your vehicle overheats" found in the "In case of emergency' section of this manual.
- The radiator is equipped with a pressure type radiator cap. To prevent engine damage, use only a genuine NISSAN radiator cap.

#### **CAUTION:**

- When adding or replacing coolant, be sure to use only Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent. Genuine NISSAN Long Life Antifreeze/Coolant (blue) is pre-diluted to provide antifreeze protection to -34°F (-37°C). If additional freeze protection is needed due to weather where you operate your vehicle, add Genuine NISSAN Long Life Antifreeze/Coolant (blue) concentrate following the directions on the container. If an equivalent coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) is used, follow the coolant manufactur's instructions to maintain minimum antifreeze protection to -34°F (-37°C). The use of other types of coolant solutions other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) is used, follow the coolant manufactur's instructions to maintain minimum antifreeze protection to -34°F (-37°C). The use of other types of coolant solutions other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent may damage the engine cooling system.
- The life expectancy of the factory-fill coolant is 24,000 miles (38,400 km) or 2 years. Mixing any other type of coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue), including Genuine NISSAN Long Life Antifreeze/Coolant (green), or the use of non-distilled water will reduce the life expectancy of the factory-fill coolant. Refer to the GT-R Service and Maintenance Guide for more details.

## ENGINE MAINTENANCE DRIVE BELT

**DRIVE BELT : Exploded View** 



## **ENGINE COOLANT : Inspection**

## BASIC INSPECTION

#### Checking Engine Room

- Visually check engine room for smears<sup>\*1</sup> and leakage<sup>\*2</sup> of engine coolant when engine is cool. **NOTE:** 
  - \*1: Engine coolant does not drop.
  - \*<sup>2</sup>: Engine coolant drop.

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## < PERIODIC MAINTENANCE >

- Check engine assembly and cooling system for smears and leakage of engine coolant.
- Observe the clearance between the engine and radiator to check that there is no engine coolant collected on the front under cover.

Additional Inspection

- Check that engine coolant temperature history is not stored in ECM. Refer to <u>EC-172</u>, "<u>CONSULT Function</u> (<u>GT-R certified NISSAN dealer</u>)".
- Perform this additional inspection after driving under conditions listed below:
- Higher-RPM (approaching redline) operation
- Frequent high pedal force braking from moderate and higher speeds
- Frequent throttle activation
- Fast revving throughout the RPM range
- 1. Remove front under cover. Refer to EXT-40, "FRONT UNDER COVER : Exploded View".
- 2. Visually check the bottom of the engine for smears and leakage of engine coolant.

#### LEVEL

- Check that the reservoir tank engine coolant level is at the midpoint between the "MIN" (B) to "MAX" (A) with the engine cold.
   CAUTION:
  - If engine coolant level exceeds the MAX line, leakage of engine coolant may occur during the rise in internal pressure in the engine coolant path. Therefore, thoroughly check that engine coolant level is below the MAX line.
  - Refill Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent in its quality mixed with water (distilled or demineralized). Refer to <u>MA-21, "Fluids and Lubricants"</u>.
- Adjust the engine coolant level if necessary.
- Check that the reservoir tank cap is tightened.



Engine Assembly

- 1. Visually check engine assembly and surround area for smears of engine coolant.
- 2. Wipe out smeared engine coolant using part cleaner or the equivalent.
- 3. Check again for engine coolant smears.

#### Radiator and Cooling System

• To check for leakage, apply pressure to the cooling system with the radiator cap tester (commercial service tool) (A) and radiator cap tester adapter (commercial service tool) (B).

#### Testing pressure : Refer to CO-28, "Radiator".

#### WARNING:

Never remove radiator cap and reservoir tank cap when engine is hot. Serious burns could occur from high-pressure engine coolant escaping from engine cooling system. CAUTION:

Higher test pressure than that specified may cause radiator damage.

#### NOTE:

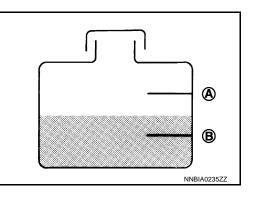
In a case that engine coolant decreases, fill radiator with engine coolant.

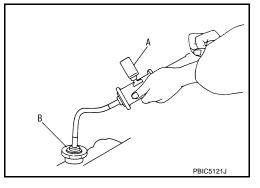
• If anything is found, repair or replace damaged parts.

## ENGINE COOLANT : Draining

#### WARNING:

- Never change engine coolant when the engine is hot to avoid being scalded.
- Wrap a thick cloth around reservoir tank cap and carefully remove reservoir tank cap. First, turn reservoir tank cap a quarter of a turn to release built-up pressure. Then turn reservoir tank cap all the way.
- 1. Remove engine undercover. Refer to EXT-37, "ENGINE UNDER COVER : Exploded View".

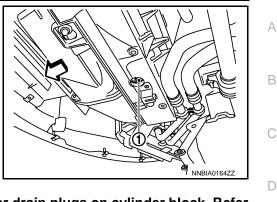




## MA-24

## < PERIODIC MAINTENANCE >

- 2. Open radiator drain plug (1) at the bottom of radiator, and then remove reservoir tank cap.



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When draining all of engine coolant in the system, open water drain plugs on cylinder block. Refer to EM-58, "Setting (GT-R certified NISSAN dealer)".

- 3. Remove reservoir tank if necessary, drain engine coolant, and clean reservoir tank before installing.
- Check drained engine coolant for contaminants such as rust, corrosion or discoloration. If contaminated, flush the engine cooling system. Refer to <u>CO-11, "Flushing"</u>.

## **ENGINE COOLANT : Refilling**

#### **CAUTION:**

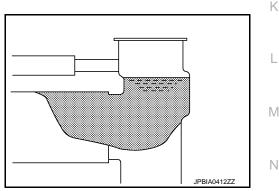
- Do not reuse O-rings.
- Do not put additive such as waterleak preventive, since it may cause cooling waterway clogging.
  When refilling use Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent in its quality mixed with water (distilled or demineralized). Refer to MA-21, "Fluids and Lubricants".
- 1. Install reservoir tank if removed.
- Install radiator drain plug.
   CAUTION:
   Be sure to clean drain plug and install with new O-ring.

## Tightening torque : Refer to CO-15, "Exploded View (GT-R certified NISSAN dealer)".

If water drain plugs on cylinder block are removed, close and tighten them. Refer to <u>EM-114, "Disassembly and Assembly (GT-R certified NISSAN dealer)"</u>.

- 3. Check that each hose clamp has been firmly tightened.
- 4. Fill radiator to specified level.
  - Pour engine coolant through engine coolant filler neck slowly of less than 2  $\ell$  (2-1/8 US qt, 1-3/4 Imp qt) a minute to allow air in system to escape.

Engine coolant capacity (With reservoir tank at "MAX" level) : Refer to <u>CO-28,</u> <u>"Periodical Maintenanc</u> <u>e Specification"</u>.



- 5. Install radiator cap.
- Fill reservoir tank to "MAX" level line with engine coolant if necessary.
  - A : MAX
  - B : MIN

Reservoir tank engine coolant capacity (At "MAX" level)

: Refer to <u>CO-28,</u> <u>"Periodical Maintenanc</u> <u>e Specification"</u>.

7. Install reservoir tank cap, and then start the engine.

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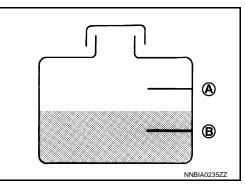
## < PERIODIC MAINTENANCE >

8. Warm up engine until thermostat opens. Standard for warming-up time is approximately 10 minutes at 3,000 rpm.

• Check thermostat opening condition by touching radiator hose (lower) to see a flow of warm water. CAUTION:

#### Watch water temperature gauge so as not to overheat engine.

- 9. Stop the engine and cool down to less than approximately 50°C (122°F).
  - Cool down using fan to reduce the time.
  - If necessary, refill radiator up to filler neck with engine coolant.
- 10. Repeat steps 6 through 9 two or more times with radiator cap and reservoir tank cap installed until engine coolant level no longer drops.
- 11. When the coolant level of the radiator stops lowering, refill reservoir tank to the midpoint between the "MIN" (B) and "MAX" (A) of the reservoir tank.



- 12. Check cooling system for leakage with engine running.
- 13. Warm up the engine, and check for sound of engine coolant flow while running engine from idle up to 3,000 rpm with heater temperature controller set at several positions between "COOL" and "WARM".
  Sound may be noticeable at heater unit.
- 14. Repeat step 13 three times.
- 15. If sound is heard, bleed air from cooling system by repeating steps from 3 to 13 until engine coolant level no longer drops.
- 16. Recheck reservoir tank engine coolant level with the engine completely cold. Refer to <u>MA-23. "ENGINE</u> <u>COOLANT : Inspection"</u>.

## ENGINE COOLANT : Flushing

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1. Install reservoir tank if removed, and radiator drain plug. CAUTION:

Be sure to clean drain plug and install with new O-ring.

Tightening torque : Refer to CO-15, "Exploded View (GT-R certified NISSAN dealer)".

If water drain plugs on cylinder block are removed, close and tighten them. Refer to <u>EM-114, "Disassembly and Assembly (GT-R certified NISSAN dealer)"</u>.

- 2. Fill radiator and reservoir tank with water.
- 3. Run the engine and warm it up to normal operating temperature.
- 4. Rev the engine two or three times under no-load.
- 5. Stop the engine and wait until it cools down.
- 6. Drain water from the system. Refer to CO-10, "Draining".
- 7. Repeat steps 1 through 6 until clear water begins to drain from radiator.

## **FUEL LINES**

## < PERIODIC MAINTENANCE >

## FUEL LINES : Inspection (GT-R certified NISSAN dealer)

- · Check fuel lines, fuel filler cap and fuel tank for improper attachment, leakage, cracks, damage, loose connections, chafing or deterioration.
  - А : Engine
  - : Fuel line в
  - С : Fuel tank
- If necessary, repair or replace damaged parts.

## AIR CLEANER FILTER

## AIR CLEANER FILTER : Removal and Installation

#### REMOVAL

1. Unhook clips (A) and remove holder (1) from air cleaner case.

2. Remove air cleaner filter (2) from holder (1).

## INSTALLATION

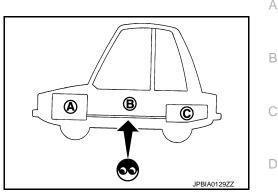
Note the following, and install in the reverse order of removal.

 Install the air cleaner filter by aligning the seal with the notch of air cleaner case. ENGINE OIL

## **ENGINE OIL : Draining**

#### WARNING:

- Be careful not to get burned, as engine oil may be hot.
- Prolonged and repeated contact with used engine oil may cause skin cancer. Try to avoid direct skin contact with used engine oil. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.
- 1. Warm up the engine, and check for engine oil leakage from engine components. Refer to LU-8, "Inspection".
- 2. Stop the engine and wait for 5 minutes.
- 3. Loosen oil filler cap.



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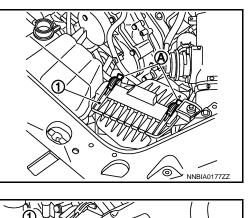
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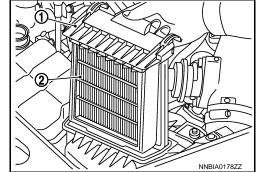
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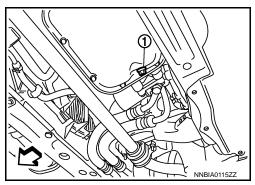
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## **MA-27**

## < PERIODIC MAINTENANCE >

- 4. Remove front undercover. Refer to EXT-40. "FRONT UNDER COVER : Exploded View".
- 5. Remove drain plug (1) and then drain engine oil.



## **ENGINE OIL : Refilling**

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1. Install drain plug with new washer. Refer to <u>EM-97, "Exploded View (GT-R certified NISSAN dealer)"</u>. CAUTION:

#### Be sure to clean drain plug and install with new washer.

#### Tightening torque : Refer to EM-97, "Exploded View (GT-R certified NISSAN dealer)".

2. Refill with new engine oil.

Engine oil specification and viscosity: Refer to MA-21, "Fluids and Lubricants".

Engine oil capacity : Refer to LU-21, "Periodical Maintenance Specification".

#### **CAUTION:**

- When filling engine oil, never pull out oil level gauge.
- The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.
- Always use oil level gauge to determine the proper amount of engine oil in engine.
- 3. Warm up the engine and check area around drain plug and oil filter for engine oil leakage.
- 4. Stop the engine and wait for 5 minutes.
- 5. Check the engine oil level. Refer to LU-8, "Inspection".

## **OIL FILTER**

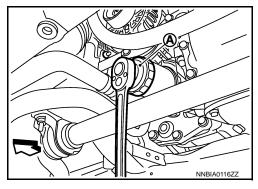
## **OIL FILTER : Removal and Installation**

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## REMOVAL

## **CAUTION:**

- Oil filter is provided with relief valve. Use genuine NISSAN oil filter or equivalent.
- Be careful not to get burned when engine and engine oil may be hot.
- When removing, prepare a shop cloth to absorb any engine oil leakage or spillage.
- Never allow engine oil to adhere to drive belt.
- Completely wipe off any engine oil that adheres to engine and vehicle.
- 1. Remove front undercover. Refer to EXT-40, "FRONT UNDER COVER : Exploded View".
- Using oil filter wrench [SST: KV10115801 (J-38956)] (A), remove oil filter.

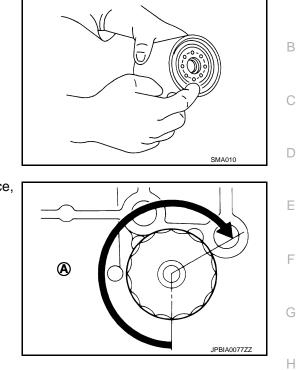


## INSTALLATION

## < PERIODIC MAINTENANCE >

- 1. Remove foreign materials adhering to oil filter installation surface.
- 2. Apply engine oil to the oil seal contact surface of new oil filter.

- 3. Screw oil filter manually until it touches the installation surface, then tighten it by 2/3 turn (A). Or tighten to the specification.
  - **Oil filter:** • 17.7 N·m (1.8 kg-m, 13 ft-lb)



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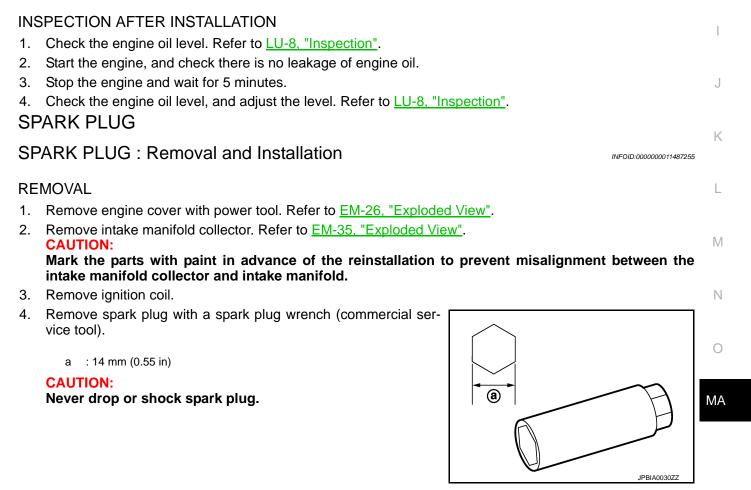
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**OIL FILTER : Inspection** 



INSTALLATION

Installation is the reverse order of removal.

## **SPARK PLUG : Inspection**

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#### **INSPECTION AFTER REMOVAL**

Use the standard type spark plug for normal condition.

Spark plug (Standard type) : Refer to EM-141, "Spark Plug".

#### CAUTION:

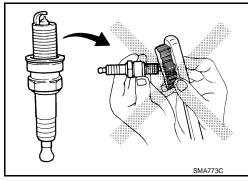
- Never drop or shock spark plug.
- Never use a wire brush for cleaning.
- If plug tip is covered with carbon, spark plug cleaner may be used.

**Cleaner air pressure:** 

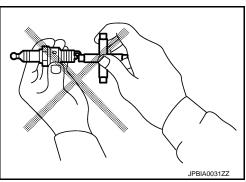
Less than 588 kPa (6 kg/cm<sup>2</sup>, 85 psi)

**Cleaning time:** 

Less than 20 seconds



- Measure spark plug gap. When it exceeds the limit, replace spark plug even if it is within the specified replacement mileage. Refer to <u>EM-141, "Spark Plug"</u>.
- Spark plug gap adjustment is not required between replacement intervals.



## THROTTLE CHAMBER

**THROTTLE CHAMBER : Inspection** 

INFOID:000000011487257

Visually inspect the throttle chamber for deposits and clean as necessary. Refer to <u>EC-454, "Diagnosis Proce-</u> <u>dure (GT-R certified NISSAN dealer)"</u>

## EVAP VAPOR LINES

**EVAP VAPOR LINES : Inspection** 

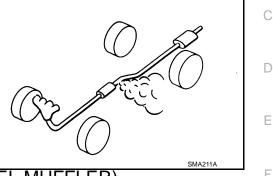
- 1. Visually inspect EVAP vapor lines for improper attachment and for cracks, damage, loose connections, chafing and deterioration. Refer to <u>EC-638</u>, "Inspection".
- Inspect fuel tank filler cap vacuum relief valve for clogging, sticking, etc. Refer to <u>EC-400</u>, "Component Inspection (GT-R certified NISSAN dealer)".

## CHASSIS MAINTENANCE EXHAUST SYSTEM (STAINLESS STEEL MUFFLER)

#### EXHAUST SYSTEM (STAINLESS STEEL MUFFLER) : Inspection (GT-R certified NIS-SAN dealer) INFOID:000000011487259

Check exhaust pipes, muffler, and mounting for improper attachment, leakage, cracks, damage or deterioration.

• If anything is found, repair or replace damaged parts.



EXHAUST PIPE AND MUFFLER (STAINLESS STEEL MUFFLER)

EXHAUST PIPE AND MUFFLER (STAINLESS STEEL MUFFLER) : Inspection and Adjustment (GT-R certified NISSAN dealer) INFOID:000000011487260

## **CAUTION:**

- When performing a high performance driving, check the clearance of finisher and rear bumper, if н necessarv.
- Check rear bumper clearance before performing a clearance check / adjustment of finisher and the rear bumper. Refer to EXT-22, "Removal and Installation".

1.CLEARANCE CHECK OF FINISHER AND REAR BUMPER (VERTICAL DIRECTION)

Measure the clearance of finisher and the rear bumper as shown in the figure.

## NOTĚ:

The figure shows an example of left side finisher. (Right side is symmetric.)

Standard

- Limit
- 10.9 mm (0.429 inch) **A**:
- 6 mm (0.24 in) or more

10.4 mm (0.409 inch) 6 mm (0.24 in) or more

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## Measurement result

**B**:

"Limit" or more>>GO TO 2.

Less than "Limit">>GO TO 3.

2.CLEARANCE CHECK OF FINISHER AND REAR BUMPER (LATERAL DIRECTION)

Measure the clearance of finisher and the rear bumper as shown in the figure.

## NOTĚ:

The figure shows an example of left side finisher. (Right side is symmetric.)

## Standard

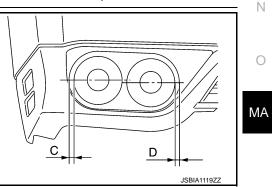
- Limit
- C: 10.4 mm (0.409 inch)
  - 10.3 mm (0.406 inch)

5 mm (0.20 in) or more 5 mm (0.20 in) or more

Measurement result

D:

"Limit" or more>>INSPECTION END Less than "Limit">>GO TO 4.



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## < PERIODIC MAINTENANCE >

# **3.** MAIN MUFFLER ASSEMBLY INSTALLATION ADJUSTMENT (VERTICAL DIRECTION)

- 1. Apply protective tape to rear bumper guards to protect them from damage.
- 2. Remove rear diffuser (center). Refer to EXT-44, "REAR DIFFUSER : Exploded View".
- 3. Adjust the mounting bracket with the following procedure. **NOTE:**

When removing mounting bracket, support the main muffler assembly using a transmission jack.

Upward Adjustment (if clearance "B" is less than "Limit")

- 1. Loosen the mounting bracket No.4 installation bolts (A).
- 2. Move the mounting bracket No.4 (1) upward and adjust it to make the clearance above lower limit. Then temporarily tighten the bolts.
- 3. Confirm the clearance "B"

NOTE:

If clearance does not become within the range of the limit, perform step 2 again.

4. Tighten the mounting bracket No.4 installation bolts.

## C : 22.0 N·m (2.2 kg-m)

Downward Adjustment (if clearance "A" is less than "Limit"

1. Remove the mounting bracket No.4 installation nuts (A).

2. Add a pice of spacer (2). Then temporarily tighten the nuts. CAUTION:

Add the spacer one by one, put same number of spacers to left and right sides. (two pieces maximum)

3. Confirm the clearance "A" NOTE:

If clearance does not become within the range of the limit, perform step 2 again.

4. Tighten the mounting bracket No.4 installation nuts.



Measure the clearance again.>>GO TO 1.

**4.** MAIN MUFFLER ASSEMBLY INSTALLATION ADJUSTMENT (LATERAL DIRECTION)

- 1. Apply protective tape to rear bumper guards to protect them from damage.
- 2. Remove rear diffuser (center). Refer to EXT-44, "REAR DIFFUSER : Exploded View".
- 3. Remove mounting bracket No.3 and mounting bracket No.4, and re-install them moving main muffler assembly to the direction where the clearance can be kept. Refer to <u>EX-7</u>, "<u>Removal and Installation (GT-R certified NISSAN dealer</u>)".

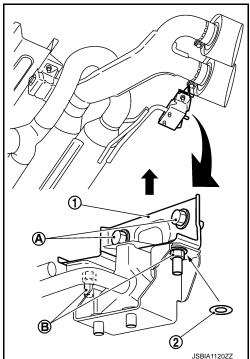
NOTE:

When removing mounting bracket, support the main muffler assembly using a transmission jack.

Measure the clearance again.>>GO TO 1. EXHAUST SYSTEM (TITANIUM MUFFLER)

## EXHAUST SYSTEM (TITANIUM MUFFLER) : Inspection (GT-R certified NISSAN dealer)

## CHECKING EXHAUST SYSTEM

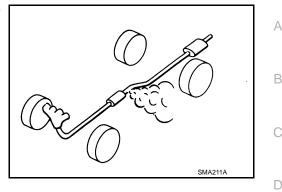


#### < PERIODIC MAINTENANCE >

Check exhaust pipes, muffler, and mounting for improper attachment, leakage, cracks, damage or deterioration.
 CAUTION:

#### Carefully check each weld.

- If anything is found, repair or replace damaged parts.



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## ADDITIONAL INSPECTION

Perform this additional inspection after driving under conditions listed below:

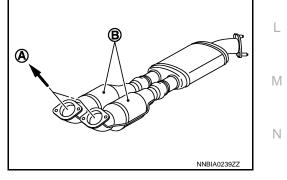
- Higher-RPM (approaching redline) operation
- · Frequent high pedal force braking from moderate and higher speeds
- Frequent throttle activation
- Fast revving throughout the RPM range
- After a high performance driving, check the rear lower link bush and pillow ball for backlash. Refer to <u>RSU-33</u>, "<u>TYPE 2</u>: <u>Inspection (GT-R certified NISSAN dealer)</u>".
   NOTE:
  - Perform this to check impact of muffler heat on rear lower link.
- After a high performance driving, check the main muffler assembly. Refer to <u>EX-15</u>, "Inspection (<u>GT-R certified NISSAN dealer</u>)".
- SUB MUFFLER (TITANIUM MUFFLER)

# SUB MUFFLER (TITANIUM MUFFLER) : Inspection (GT-R certified NISSAN dealer)

#### NOTE:

This inspection is for the following countries:

- Algeria
- Lebanon
- South Africa
- Russia
- 1. Remove the sub muffler from the vehicle. Refer to EX-14, "Exploded View".
- View the sub muffler catalyst from the three way catalyst side to visually check the honeycomb structural body in the catalyst for clogging, crud, and elution. Replace the sub muffler if necessary.
  - A. To three way catalyst
  - B. Catalyst
- 3. After inspection is completed, install removed parts.



## TRANSMISSION OIL

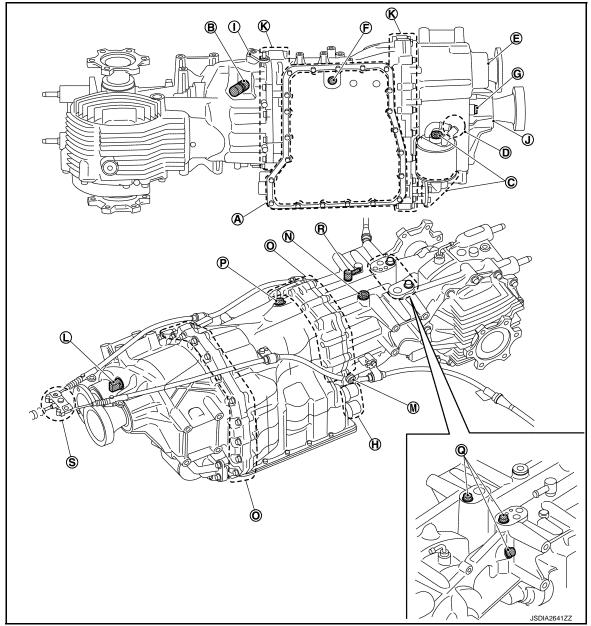
## **TRANSMISSION OIL : Inspection**

#### LEAKAGE CHECK

• Visually check transmission assembly surrounding area (oil seal, drain plug, filler plug, transmission case, etc.) for smears and leakage of transmission oil.

## < PERIODIC MAINTENANCE >

Check also the leakage or bleeding around rear final drive. For rear final drive check, refer to <u>DLN-112</u>, <u>"Inspection"</u>.



#### < PERIODIC MAINTENANCE >

Status	tus Parts		Required operation	Reference
	Trans- mission assem- bly (on- board/ single unit)	A: Mating surface between oil pan and case	Check the seal surface condition. Replace the oil pan gasket only if there is a non-standard condi- tion. Check for oil leakage.	<u>TM-382</u>
		B: Park position switch	Check the mounting surface condition. Replace the plain washer only if there is not any other mal- functioning condition. Check for oil leakage.	<u>TM-384</u>
		<ul> <li>C: Heat exchanger &amp; bracket mounting surface and heat exchanger mounting bolt</li> <li>D: Water hose connection (Engine cool- ant)</li> </ul>	<ul> <li>C: Check the seal surface condition. If it is normal, replace the O-ring of the part where oil leakage arises and the single-use parts removed during procedure. Check for oil leakage.</li> <li>D: Check the seal surface condition. If it is normal, replace the clamp of the part where engine coolant leakage arises. Check for engine coolant leakage.</li> </ul>	<u>TM-388</u> , <u>TM-386</u>
		E: Front oil seal	Check the oil seal mounting surface and sliding surface condition. Replace the front oil seal only if there is not any other malfunctioning condition. Check for oil leakage.	<u>TM-391</u>
Oil leak-		F: Drain plug	Replace the drain plug. Check for oil leakage.	<u>TM-382</u>
age <sup>*1, *2</sup>		G: Filler plug	Replace the filler plug gasket. Check for oil leak- age.	<u>TM-405</u>
		<ul> <li>H: Transmission harness connector</li> <li>I: Oil seal of parking lever</li> <li>J: Oil seal of companion flange (transmission side) of main propeller shaft assembly</li> <li>K: Transmission case joining portion</li> <li>L: AWD solenoid</li> </ul>	Replace the transmission assembly.	<u>TM-403</u>
		M: 3rd-5th check pin	Replace the plain washer. Check for oil leakage.	<u>TM-405</u>
	Trans- mission assem- bly (sin- gle unit)	N: Filler plug	Replace the filler plug gasket. Check for oil leak- age.	<u>TM-405</u>
		O: Transmission case joining portion	Replace the transmission assembly.	<u>TM-403</u>
		<ul><li>P: Idler bolt</li><li>Q: Plug</li></ul>	Replace the plain washer or O-ring. Check for oil leakage.	<u>TM-405</u>
		R: Breather	Clean and wipe spouted oil with a part cleaner. Fill with oil to the specified oil level, if necessary.	_
Oil smears <sup>*3</sup>	Each part of the transmission assembly, including the parts requiring oil leakage check.		Use part cleaner or the equivalent to wipe out smeared oil. Then, check for oil leakage.	_
Grease drop <sup>*4</sup>	S: Parking cable		Wipe excess grease off.	_

• \*1: When the oil drops

• \*2: If oil leakage is detected, perform necessary procedures, check for oil leakage, and adjust oil level to the proper level.

• \*3: When the oil does not drop

• \*4: The grease applied to parking cable part can melt to generate a drop due to heat. Be careful not to confuse it with transmission oil leakage.

## CONDITION CHECK

Remove the filler plug, insert a finger into the filler hole, and judge the oil conditions from the transmission oil applied to the inside of the transmission case. **CAUTION:** 

Be careful not to cut the finger with edges.

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#### < PERIODIC MAINTENANCE >

Transmission oil status	Possible cause	Required operation	
Varnish-like condition (It is as thick as varnish).	Clutch is burned.	Change the transmission oil. Check the trans- mission assembly or any other parts on the ve- hicle.	
Milky or cloudy	<ul> <li>Water is mixed in the fluid.</li> <li>Example:</li> <li>Inflow of engine coolant by internal explosion of heat exchanger</li> <li>Inflow of water from breather by flood, etc.</li> </ul>	Change the transmission oil. Check for flooded area.	
A large amount of metal particles are contained in the fluid.	Sliding portions in the transmission assembly are excessively worn.	Change the transmission oil. Check the trans- mission assembly operation for any malfunc- tioning condition.	

## OIL CHANGE TIMING

#### Judging When to Change Transmission Oil by Oil Temperature

Transmission oil temperature while driving	Interval of transmission oil change
Not exceeding 120°C (248°F)	Change both transmission oil and differential oil every 60,000 km (36,000 miles)
From 120°C (248°F) – 140°C (284°F)	Change both transmission oil and differential oil every 5,000 km (3,000 miles)
Higher than 140°C (284°F)	Change both transmission oil and differential oil immediately.

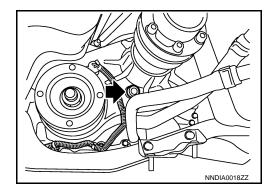
How to Check Transmission Oil Temperature History With CONSULT

- 1. Turn ignition switch ON.
- 2. Select "SHOW OIL TEMP HISTORY" in "Work support" in "TRANSMISSION".
- 3. Check transmission oil temperature frequency history to judge the timing of oil change.

Transmission oil temperature frequency history	Timing of oil chang
At least one count in "Oil Temperature Frequency 5"	Change both transmission oil and differential oil immediately.
At least one count in "Oil Temperature Frequency 4"	Change both transmission oil and differential oil ever 5,000 km (3,000 miles).
No count in both "Oil Temperature Frequency 4" and "Oil Temper- ature Frequency 5"	Change both transmission oil and differential oil ever 60,000 km (36,000 miles).

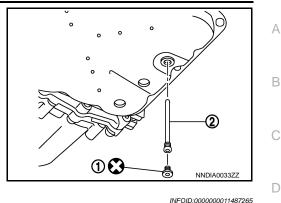
## **TRANSMISSION OIL : Draining**

- 1. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
- 2. Remove the heat insulator.
- 3. Remove the filler plug ( $\leftarrow$ ).



### < PERIODIC MAINTENANCE >

- Remove the drain plug (1) and drain tube (2) from the oil pan, 4 and then drain the transmission oil.
- Install the drain tube to the oil pan. Refer to TM-382, "Exploded 5. View".



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TRANSMISSION OIL : Filling

REPLACEMENT/ADJUSTMENT PROCEDURE NOTE:

Replace the filler plug gasket and drain plug with new ones after oil level adjustment.

: Refer to TM-407, "General

Remove the filler plug (+) and drain plug, and then fill with the 1 transmission oil until it leaks from the drain hole.

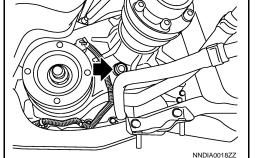
### Transmission oil

Specification".

### CAUTION:

- Always use the specified transmission oil. In addition, always use the filler after cleaning. If use/mixed use/misuse of the transmission oil other than the specified brand occurs, the original performance cannot be obtained or it may cause serious malfunctions.
- Check that dust does not mix.
- Always use paper towels. Never use waste cloth.
- 2. Install the filler plug and drain plug. Refer to TM-405, "Exploded View" (filler plug), TM-382, "Exploded <u>View</u> (drain plug).
- 3. Start engine with shift position in P range and keep it until transmission system check is complete. **CAUTION:** 
  - Κ If the oil does not fully circulate in transmission oil line after engine start, it could cause an oil flowing sound (such as hissing sound). Keep it at idle for several minutes in that case.
  - Because of incomplete oil circuit in transmission oil line, a transmission warning light could illuminate at transmission system check. In this case, keep it at idle for several minutes, and then restart the engine.
- 4. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds)  $\rightarrow$  N range (wait for 5 seconds)  $\rightarrow$  R range (wait for 5 seconds)  $\rightarrow$  P range.
- 5. Stop the engine.
- 6. Remove the filler plug and drain plug, and then fill with the transmission oil until it leaks from the drain hole.
- 7. Install the filler plug and drain plug. Refer to TM-405, "Exploded View" (filler plug), TM-382, "Exploded View" (drain plug).
- 8. Install the heat insulator.
- 9. Start the engine and run it at idle. Run the engine until the oil temperature reaches 50°C (122°F) while checking FLUID TEMP in "DATA MONITOR" of CONSULT.
- MA 10. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds)  $\rightarrow$  N range (wait for 5 seconds)  $\rightarrow$  R range (wait for 5 seconds)  $\rightarrow$  P range.
- 11. Stop the engine and wait for 5 minutes.
- 12. Remove the drain plug. Install the drain plug when the transmission oil begins to drip (1 drop/1 sec d). Refer to TM-382, "Exploded View".
  - CAUTION: • Perform from step 11 to step 12 within 25 minutes.
  - Repeat the procedure from step 6 if the transmission oil does not leak from the drain hole.

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### **MA-37**

### < PERIODIC MAINTENANCE >

### • Never reuse drain plug.

13. Replace the filler plug gasket with new ones. CAUTION:

### Never reuse filler plug gasket.

- 14. Install the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
- 15. Select "OIL TEMP HISTORY RESET" in "WORK SUPPORT" of CONSULT.
- 16. Touch "START" to reset oil temperature history.

# REFILL ADJUSTMENT PROCEDURE

### NOTE:

Replace the filler plug gasket and drain plug with new ones after oil level adjustment.

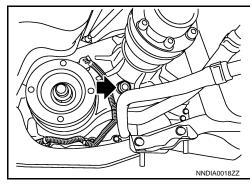
- 1. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
- 2. Remove the heat insulator.
- 3. Start engine with shift position in P range and keep it until transmission system check is complete.
- 4. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds)  $\rightarrow$  N range (wait for 5 seconds)  $\rightarrow$  P range.
- 5. Stop the engine.
- 6. Remove the filler plug ( ) and drain plug, and then fill with the transmission oil until it leaks from the drain hole.

### Transmission oil

: Refer to <u>TM-407, "General</u> Specification".

### CAUTION:

• Always use the specified transmission oil. In addition, always use the filler after cleaning. If use/mixed use/misuse of non-specified transmission oil other than the specified brand occurs, the original performance cannot be obtained or it may cause serious malfunctions.



- Check that dust does not mix.
- Always use paper towels. Never use waste cloth.
- 7. Install the filler plug and drain plug. Refer to <u>TM-405</u>, "<u>Exploded View</u>" (filler plug), <u>TM-382</u>, "<u>Exploded View</u>" (drain plug).
- 8. Install the heat insulator.
- 9. Start the engine and run it at idle. Run the engine until the oil temperature reaches 50°C (122°F) while checking FLUID TEMP in "DATA MONITOR" of CONSULT.
- 10. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds)  $\rightarrow$  N range (wait for 5 seconds)  $\rightarrow$  P range.
- 11. Stop the engine and wait for 5 minutes.
- Remove the drain plug. Install the drain plug when the transmission oil begins to drip the drop status (1 drop/1 second). Refer to <u>TM-382, "Exploded View"</u>.
   CAUTION:
  - Perform from step 11 to step 12 within 25 minutes.
  - Repeat the procedure from step 6 if the transmission oil does not leak from the drain hole.
  - Never reuse drain plug.
- 13. Replace the filler plug gasket with new ones. CAUTION:

Never reuse filler plug gasket.

14. Install the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".

### TRANSFER FLUID

TRANSFER FLUID : Transfer Fluid

### CAUTION:

Refer to <u>TM-368, "Filling"</u> because the transfer is integrated with the transmission. FRONT PROPELLER SHAFT: 3F56A-D0J75

### **MA-38**

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< PERIODIC MAINTENANCE >

# FRONT PROPELLER SHAFT: 3F56A-D0J75 : Inspection (GT-R certified NISSAN dealer)

### NOISE

- Check the propeller shaft tube surface for dents or cracks. If damaged, replace propeller shaft assembly.
- If center bearing is noisy or damaged, replace propeller shaft assembly.

### RUNOUT

If vibration is present at high speed, inspect propeller shaft runout first.

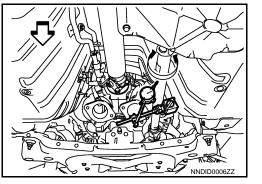
1. With a dial indicator, measure propeller shaft runout at runout measuring points by rotating final drive companion flange.

C: The front of vehicle

Limit

Propeller shaft runout

: Refer to <u>DLN-54, "Pro-</u> peller Shaft Runout (GT-<u>R certified NISSAN</u> <u>dealer)"</u>.



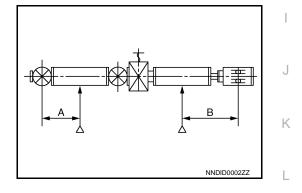
- 2. If runout still exceeds specifications, separate propeller shaft from final drive companion flange or transfer companion flange; then rotate companion flange 90, 180, 270 degrees and install propeller shaft.
- 3. Check runout again. If runout still exceeds specifications, replace propeller shaft assembly.
- 4. Check the vibration by driving vehicle.

### RUNOUT MEASURING POINT

Propeller shaft runout measuring point (point "△")

Dimension

A: 330 mm (12.99 in) B: 421 mm (16.57 in)



# MAIN PROPELLER SHAFT: 2F71A-VL101

MAIN PROPELLER SHAFT: 2F71A-VL101 : Inspection (GT-R certified NISSAN dealer)

### NOISE

Check the main propeller shaft tube surface for dents or cracks. If damaged, replace main propeller shaft assembly.

### RUNOUT

If vibration is present at high speed, inspect main propeller shaft runout first.

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### < PERIODIC MAINTENANCE >

1. With a dial indicator, measure propeller shaft runout at several points by rotating final drive companion flange with hands.

✓⊐: The front of vehicle

Limit Main propeller shaft runout

: Refer to DLN-63, "Propeller Shaft Runout (GT-R certified NISSAN dealer)".

### **CAUTION:**

When rotating the main propeller shaft, use a spanner or a suitable tool on the hex end (A) of the rebro joint and rotate the shaft in the clockwise direction as viewed from the crankshaft (in the counterclockwise direction, as viewed from the back of the vehicle).

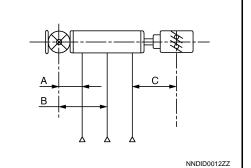
- If runout still exceeds specifications, separate the main propeller 2. shaft from the transmission companion flange. Rotate the companion flange in five steps; 60°, 120°, 180°, 240°, and 300° and install main propeller shaft.
- 3. Check runout again. If runout still exceeds specifications, replace propeller shaft assembly.
- 4. Check the vibration by driving vehicle.

### RUNOUT MEASURING POINT

Runout measuring point for the main propeller shaft (point "△")

**Dimension** 

A: 220 mm (8.66 in) B: 524 mm (20.63 in) C: 280 mm (11.02 in)



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# FRONT DIFFERENTIAL GEAR OIL: F160A

# FRONT DIFFERENTIAL GEAR OIL: F160A : Inspection

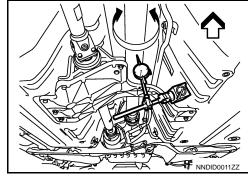
### OIL LEAKAGE

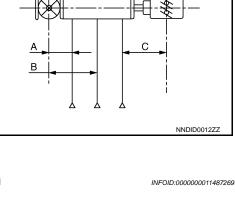
Visually check final drive assembly surrounding area for smears and leakage of defferential gear oil.

Status	Parts	Required operation		
Smoore ! Each part on the final drive assembly		Use part cleaner or the equivalent to wipe out smeared oil. Then, check for oil leakage.		
Leakage <sup>*2</sup>	Oil seal	Check the oil seal mounting surface and sliding surface for abnor- malities. If it is normal, replace only oil seal. Then, check for oil leakage.		
	Filler plug	Replace the filler plug gasket. Then, check for oil leakage.		
	Drain plug	Replace the drain plug gasket. Then, check for oil leakage.		
	Mating surface between Gear carrier and rear cover.	Check the seal surface for abnormalities. If it is normal, replace only rear cover gasket. Then, check for oil leakage.		

\*1: When the oil does not drop

\*2: When the oil drops





### < PERIODIC MAINTENANCE >

### OIL LEVEL

 Remove filler plug (1) and gasket. Then check that oil is filled up (A) from mounting hole for the filler plug.
 CAUTION:

### Never start engine while checking oil level.

• Set a gasket on filler plug (1) and install it on final drive, and then tighten to the specified torque.

Standard Filler plug tightening torque

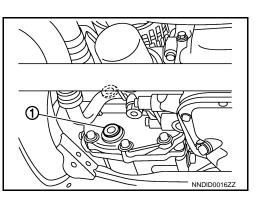
: 35 N·m (3.6 kg-m, 26 ft-lb)

### CAUTION:

#### Never reuse gasket.

FRONT DIFFERENTIAL GEAR OIL: F160A : Draining (GT-R certified NISSAN dealer)

- 1. Stop the engine.
- 2. Remove drain plug (1) and drain gear oil.
- Set a gasket on drain plug (1) and install it to final drive and tighten to the specified torque. Refer to <u>DLN-82, "Exploded View (GT-R certified NISSAN dealer)"</u>.
   CAUTION: Never reuse gasket.



# FRONT DIFFERENTIAL GEAR OIL: F160A : Refilling (GT-R certified NISSAN dealer)

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1. Remove filler plug (1). Fill up with new gear oil until oil level reaches the specified level (A).

Oil grade and Viscosity Oil capacity

: Refer to <u>MA-21</u>, "Fluids and <u>Lubricants"</u>. : Refer to <u>DLN-104</u>, "General Specifications".

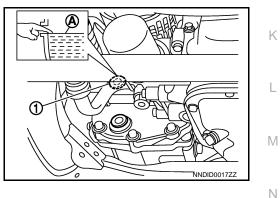
 After refilling oil, check oil level. Set a gasket to filler plug (1), and then install it to final drive and tighten to the specified torque. Refer to <u>DLN-82, "Exploded View (GT-R certified NIS-SAN dealer)"</u>. <u>CAUTION:</u>

#### CAUTION: Never reuse gasket.

REAR DIFFERENTIAL GEAR OIL

**REAR DIFFERENTIAL GEAR OIL : Inspection** 

**OIL LEAKAGE** 



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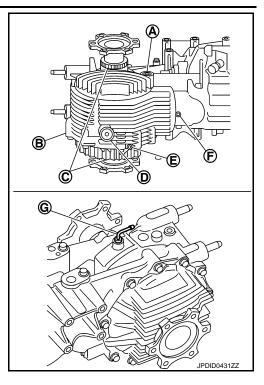
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### < PERIODIC MAINTENANCE >

• Visually check final drive assembly surrounding area for smears and leakage of differential gear oil.



Status	Parts		Required operation		
Leakage <sup>*1, 2</sup>	Transmission assembly (on-board/single unit)	A: Filler plug	<ol> <li>Replace gasket. Refer to <u>DLN-118</u>, "Exploded View (GT-R certified NISSAN dealer)".</li> <li>If oil leakage continues even after replace the transmission assembly. Refer to <u>TM-403</u>, "Exploded View (GT-R certified NIS-SAN dealer)".</li> </ol>		
		B: Side cover	Replace the transmission assembly. Refer to <u>TM-403</u> , "Exploded View ( <u>GT-R certified NISSAN dealer)</u> "		
		C: Oil seal	Replace side oil seal. Refer to <u>DLN-115</u> , " <u>Exploded View (GT-R certi-fied NISSAN dealer)</u> ". <b>CAUTION:</b> Always replace side oil seal together with side flange. (If side oil seal is abnormal, then side flange may also be abnormal.)		
		D: Drain plug	<ol> <li>Replace gasket. Refer to <u>DLN-118</u>, "<u>Exploded View (GT-R certified NISSAN dealer)</u>".</li> <li>If oil leakage continues even after replace the transmission assembly. Refer to <u>TM-403</u>, "<u>Exploded View (GT-R certified NISSAN dealer)</u>".</li> </ol>		
		E: Guide hole	<ol> <li>Replace side oil seal (left side). Refer to <u>DLN-115. "Exploded</u> <u>View (GT-R certified NISSAN dealer)"</u>. CAUTION: Always replace side oil seal (left side) together with side flange (left side). [If side oil seal (left side) is abnormal, then side flange (left side) may also be abnormal.]</li> <li>If oil leakage continues even after replacing side oil seal, check guide hole. If guide hole is abnormal, replace transmission as- sembly. Refer to <u>TM-403</u>, "Exploded View (GT-R certified NIS- <u>SAN dealer)</u>".</li> </ol>		
		F: Air vent	Replace the transmission assembly. Refer to <u>TM-403</u> , "Exploded View ( <u>GT-R certified NISSAN dealer)</u> ".		
	Transmission assembly (single unit)	G: Breather	Clean and wipe spouted oil with a part cleaner. Fill with oil to the spec- ified oil level, if necessary.		
Smears <sup>*3</sup>	Each part on the final driving the parts requiring oil		Use part cleaner or the equivalent to wipe out smeared oil. Then, check for oil leakage.		

\*1: When the oil drops

### < PERIODIC MAINTENANCE >

\*2: If oil leakage is detected, perform necessary procedures, check for oil leakage, and adjust oil level to the proper level.\*3: When the oil does not drop

• Visually check transmission assembly surrounding area (oil seal, drain plug, filler plug, transmission case, etc.) for smears and leakage of transmission oil. Refer to <u>TM-365</u>, "Inspection".

# OIL LEVEL

### Oil volume cannot be checked by oil level height.

1. Remove filler plug (1) and gasket. CAUTION:

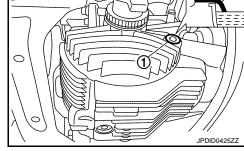
### Never start engine while checking oil level.

- 2. Insert wire (A) etc. from filler plug mounting hole to confirm if the oil attaches.
  - If oil does not attach at the end of the wire, confirm that there is not leakage, then refill the oil. Refer to <u>DLN-114</u>, <u>"Refilling</u> (<u>GT-R certified NISSAN dealer)"</u>.

### CAUTION:

### Prevent foreign matter from getting into final drive.

 Set a gasket on filler plug and install it on final drive, and then tighten to the specified torque. Refer to <u>DLN-118</u>, "Exploded <u>View (GT-R certified NISSAN dealer)"</u>.
 CAUTION: Never reuse gasket.



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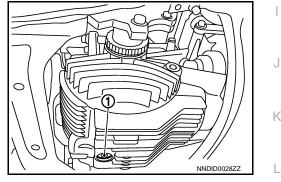
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# REAR DIFFERENTIAL GEAR OIL : Draining (GT-R certified NISSAN dealer)

- 1. Stop the engine.
- 2. Remove the drain plug (1) and drain gear oil.
- Set a gasket on drain plug (1) and install it to final drive and tighten to the specified torque. Refer to <u>DLN-118</u>, "Exploded <u>View (GT-R certified NISSAN dealer)"</u>. CAUTION: Never reuse gasket.



# REAR DIFFERENTIAL GEAR OIL : Refilling (GT-R certified NISSAN dealer)

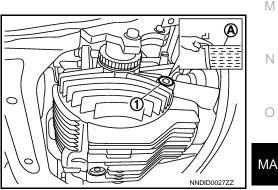
1. Remove filler plug (1). Refill oil up to filler plug mounting hole line (A).

Oil grade and Viscosity Oil capacity

: Refer to <u>MA-21, "Fluids and</u> <u>Lubricants"</u>. : Refer to <u>DLN-128, "General</u> Specifications".

- After refilling oil, drain 0.2 liter (3/8 US pt, 3/8 Imp pt) through filler plug mounting hole using oil syringe (commercial service tool) etc, to get the standard volume.
- Set a gasket to filler plug, and then install it to final drive and tighten to the specified torque. Refer to <u>DLN-118</u>, "<u>Exploded View (GT-R certified NISSAN dealer</u>)". CAUTION: Never reuse gasket.

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BRAKE LINES AND CABLES
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### BRAKE LINES AND CABLES : Inspection

 Check brake fluid lines and parking brake cables for improper attachment, leaks, chafing, abrasions, deterioration, etc.

# BRAKE FLUID

### **BRAKE FLUID** : Inspection

< PERIODIC MAINTENANCE >

### BRAKE FLUID LEVEL

- Check that the fluid level in the reservoir tank is within the specified range (MAX MIN lines).
- Visually check for any brake fluid leakage around the reservoir tank.
- Check the brake system for any leakage if the fluid level is extremely low (lower than MIN).
- Check the brake system for fluid leakage if the warning lamp remains illuminated even after the parking brake lever is released.
- Check the reservoir tank for the mixing of foreign matter (e.g. dust) and oils other than brake fluid.

### BRAKE LINE

1. Check the brake line (tube and hose) for any cracks or damage. CAUTION:

### Replace with new ones if necessary.

 Depress the brake pedal with a force of 785 N (80 kg, 176 lb) and hold down the pedal for approximately 5 seconds with the engine running. Check for any fluid leakage.
 CAUTION:

Retighten each part to the specified torque and repair any abnormal (damaged, worn, or deformed) part if any fluid leakage is present.

# BRAKE FLUID : Draining

### **CAUTION:**

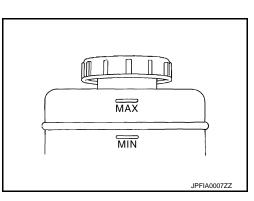
- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- 1. Remove tires. Refer to <u>WT-74, "EXCEPT NISMO : Exploded View"</u>.
- 2. Connect a vinyl tube to the bleeder valve.
- 3. Depress the brake pedal and loosen the bleeder valve to gradually discharge brake fluid.

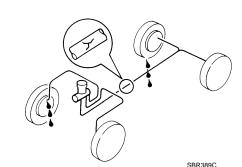
### BRAKE FLUID : Refilling

### CAUTION:

• Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.

# **CHASSIS MAINTENANCE**





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### < PERIODIC MAINTENANCE >

- Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.
- 1. Check that there is no foreign material in the reservoir tank, and refill the brake fluid with new one. CAUTION:

### Never reuse drained brake fluid.

- Loosen the bleeder valve, slowly depress the brake pedal to the full stroke, and then release the pedal. Repeat this operation at intervals of 2 or 3 seconds until all of the brake fluid is discharged. Then close the bleeder valve with the brake pedal depressed. Repeat the same work on each wheel.
- 3. Perform the air bleeding. Refer to <u>BR-11, "Bleeding Brake System"</u>.

# **DISC BRAKE**

# **DISC BRAKE : Inspection**

### DISC ROTOR

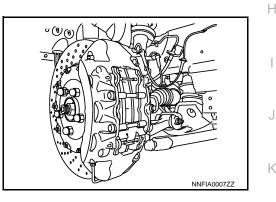
Check condition, wear, and damage.

### CALIPER

• Check for leakage.

### **BRAKE PAD**

• Check for wear or damage.



# DISC BRAKE : Front Disc Brake

		Unit: mm (in.)		
Item		Limit		
Brake pad	Wear thickness	4.5 (0.177)		
Disc rotor	Wear thickness	30.6 (1.205)		

### DISC BRAKE : Rear Disc Brake

Unit: mm (in.)

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	Item	Limit	0
Brake pad	Wear thickness	4.5 (0.177)	
Disc rotor	Wear thickness	28.0 (1.102)	MA

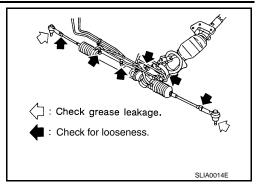
# STEERING GEAR AND LINKAGE

# STEERING GEAR AND LINKAGE : Inspection

### STEERING GEAR

### < PERIODIC MAINTENANCE >

- Check gear housing and boots for looseness, damage and grease leakage.
- Check connection with steering column for looseness.



### STEERING LINKAGE

Check ball joint, dust cover and other component parts for looseness, wear, damage and grease leakage. POWER STEERING FLUID AND LINES

# POWER STEERING FLUID AND LINES : Inspection

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### FLUID LEVEL

- 1. Check fluid level with engine stopped.
- 2. Check that fluid level is between MIN and MAX. CAUTION:

Adjust the fluid level to the R level (B) rather than the fluid level (A) in sports driving mode or in high road driving mode.

3. Fluid levels at HOT and COLD are different. Do not confuse them.

HOT : Fluid temperature  $50 - 80^{\circ}$ C ( $122 - 176^{\circ}$ F) COLD : Fluid temperature  $0 - 30^{\circ}$ C ( $32 - 86^{\circ}$ F)

**Recommended fluid** 

: Refer to <u>MA-21, "Fluids</u> and Lubricants".

**Fluid capacity** 

: Refer to <u>ST-34, "General</u> <u>Specifications"</u>.

### **CAUTION:**

- The fluid level must not exceed the MAX line. Excessive fluid causes fluid leakage from the cap.
- Never reuse drained power steering fluid.

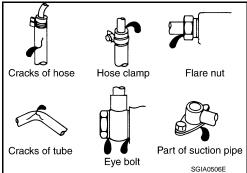
### FLUID LEAKAGE

Check hydraulic connections for fluid leakage, cracks, damage, looseness, or wear.

- 1. Run the engine until the fluid temperature reaches 50 to 80°C (122 to 176°F) in reservoir tank, and keep engine speed idle.
- 2. Turn steering wheel several times from full left stop to full right stop.
- Hold steering wheel at each lock position for five seconds and carefully check for fluid leakage.
   CAUTION:

Never hold the steering wheel in a locked position for more than 10 seconds. (There is the possibility that power steering oil pump assembly may be damaged.)

- 4. If fluid leakage at connections occurs, loosen flare nut and then retighten. Do not overtighten connector as this can damage O-ring, washer and connector.
- 5. If fluid leakage from oil pump occurs, check oil pump. Refer to <u>ST-31, "Inspection (GT-R certified NISSAN</u> dealer)".



### **MA-46**

Max

(A)

Min

R: Max

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HOT

BI R

COLD

Max

Min

R: Max

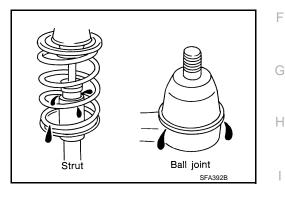
### < PERIODIC MAINTENANCE >

### 6. Check steering gear boots for accumulation of fluid leakage from steering gear. AXLE AND SUSPENSION PARTS

# AXLE AND SUSPENSION PARTS : Inspection

Check front and rear axle and suspension parts for excessive play, cracks, wear or other damage.

- Shake each wheel to check for excessive play.
- Check wheel bearings for smooth operation.
- Check axle and suspension nuts and bolts for looseness.
- Check strut (shock absorber) for oil leakage or other damage.
- Check suspension ball joint for grease leakage and ball joint dust cover for cracks or other damage.

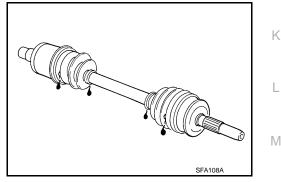


# DRIVE SHAFT

**DRIVE SHAFT : Inspection** 

Check boot and drive shaft for cracks, wear, damage and grease leakage.

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< PERIODIC MAINTENANCE >

# BODY MAINTENANCE

# LOCKS, HINGES AND HOOD LATCH

LOCKS, HINGES AND HOOD LATCH : Lubricating

INFOID:000000011487286

For hood and hood lock illustration. Refer to <u>DLK-214</u>, "HOOD ASSEMBLY : Exploded View" and <u>DLK-245</u>, "HOOD LOCK : Exploded View (GT-R certified NISSAN dealer)".

For door and door lock illustration. Refer to <u>DLK-227</u>, "DOOR <u>ASSEMBLY</u> : <u>Exploded View</u>" and <u>DLK-249</u>, "<u>DOOR LOCK</u> : <u>Exploded View</u> (<u>GT-R certified NISSAN dealer</u>)".

For trunk lid and trunk lid lock illustration. Refer to <u>DLK-234, "TRUNK LID ASSEMBLY : Exploded View"</u> and <u>DLK-254, "TRUNK LID LOCK : Exploded View"</u>.

# SEAT BELT, BUCKLES, RETRACTORS, ANCHORS AND ADJUSTERS

# SEAT BELT, BUCKLES, RETRACTORS, ANCHORS AND ADJUSTERS : Inspection

INFOID:0000000011487287

For front seat belt illustration. Refer to <u>SB-7, "SEAT BELT RETRACTOR : Exploded View"</u>. For rear seat belt illustration. Refer to <u>SB-12, "SEAT BELT RETRACTOR : Exploded View"</u>. **CAUTION:** 

• After any collision, inspect all seat belt assemblies, including retractors and other attached hardwares (I.e. anchor bolt, guide rail set). Nissan recommends to replace all seat belt assemblies in use during a collision, unless not damaged and properly operating after minor collision. Also inspect seat belt assemblies not in use during a collision, and replace if damaged or improperly

operating.

Seat belt pre-tensioner should be replaced even if the seat belts are not in use during a frontal collision where the driver and passenger air bags are deployed.

- If any component of seat belt assembly is questionable, do not repair. Replace as seat belt assembly.
- If webbing is cut, frayed, or damaged, replace belt assembly.
- Never oil tongue and buckle.
- Use a genuine NISSAN seat belt assembly.

For details, refer to <u>SB-5, "SEAT BELT RETRACTOR : Inspection"</u>, <u>SB-10, "SEAT BELT RETRACTOR :</u> <u>Inspection"</u> in SB section.

- Check anchors for loose mounting
- Check belts for damage
- Check retractor for smooth operation
- Check function of buckles and tongues when buckled and released

SERV < SERVICE DATA AND SPEC	VICE DATA AND SPECIF	ΙCΑΤΙΟ	NS (SDS)	
	AND SPECIFICAT	IONS	G (SDS)	,
SERVICE DATA AND	SPECIFICATIONS (SI	DS)	· · · ·	ŀ
DRIVE BELT		·		r
DRIVE BELT : Drive Bel	t (GT-R certified NISSAN	dealer)		INFOID:000000011487288
DRIVE BELT		·		C
Tension of drive belt Be	It tension is not necessary, as it is autom	atically adju	sted by drive bel	
ENGINE COOLANT				
ENGINE COOLANT : Pe	eriodical Maintenance Sp	ecificat	ion	INFOID:000000011772944
ENGINE COOLANT CAPAC	ITY (APPROXIMATELY)			
				Unit: ℓ (US qt, Imp qt)
Engine coolant capacity [With reserv	oir tank (Between MIN and MAX level)]	Except for NISMO		11.3 (12, 10)
		For NISM		11.7 (12-3/8, 10-2/8) 1.4 (1-4/8, 1-2/8)
Reservoir tank engine coolant capac	ity (Between MIN and MAX level)	Except for NISMO For NISMO		1.4 (1-4/8, 1-2/8) 1.8 (1-7/8, 1-5/8)
ENGINE OIL				
ENGINE OIL · Periodica	I Maintenance Specificat	ion		
				INFOID:000000011487290
ENGINE OIL CAPACITY (AF	PPROXIMATELY)			
				Unit: ℓ (US qt, Imp qt)
Drain and refill	With oil filter change	e 4.5 (4-3/4,		0 (5-1/4, 4-3/8)
Dry engine (Overhaul)	Without oil filter change			2 (6-4/8, 5-4/8)
SPARK PLUG				- (0 110, 0 110) 
SPARK PLUG : Spark P	lug			INFOID:000000011487291
SPARK PLUG				L
Maka			NCK	Unit: mm (in)
Make Standard type		NGK DILKAR8A8		
	Standard	0.7 - 0.8 (0.028 - 0.031) 1.0 (0.039)		
Gap (Nominal)	Limit			
ROAD WHEEL				
ROAD WHEEL : Road V	Vheel (GT-R certified NIS	SAN de	aler)	INFOID:000000011487292
ltem			Limit	M.
Radial runout	Lateral deflection	Less than 0.3 mm (0.012 in)		0.012 in)

Allowable unbalance

Dynamic (At flange)

Static (At flange)

Less than 5 g (0.17 oz) (one side)

Less than 10 g (0.35 oz)