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SECTION **WT**
ROAD WHEELS & TIRES

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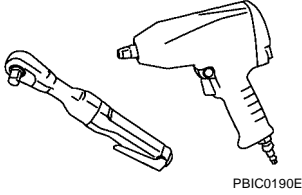
PREPARATION

PREPARATION

PF0:00002

Commercial Service Tools

EES0024X

Tool name	Description
<p data-bbox="147 296 261 323">Power tool</p>  <p data-bbox="842 499 915 516">PBIC0190E</p>	<p data-bbox="995 296 1214 323">Removing wheel nuts</p>

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

EES0019D

Use the chart below to help you find the cause of the symptom. If necessary, repair or replace these parts.

Reference page																	
Possible cause and SUSPECTED PARTS																	
Symptom	TIRES	Noise	x	x	x	x	x	x		x	x	x		x	x	x	
		Shake	x	x	x	x	x		x		x	x		x	x	x	
		Vibration			x				x		x	x					x
		Shimmy	x	x	x	x	x	x	x		x	x		x	x	x	
	ROAD WHEEL	Shudder	x	x	x	x	x		x		x	x		x	x	x	
		Poor quality ride or handling	x	x	x	x	x		x		x	x		x			
		Noise	x	x				x			x	x	x	x	x	x	
		Shimmy, Shudder	x	x				x				x	x	x	x	x	
		Out-of-round															
		Imbalance															
		Incorrect tire pressure															
		Uneven tire wear															
		Deformation or damage															
		Non-uniformity															
		Incorrect tire size															
		DIFFERENTIAL (Transaxle)															
		FRONT AXLE AND FRONT SUSPENSION															
		REAR AXLE AND REAR SUSPENSION															
		TIRES															
		ROAD WHEEL															
		BRAKE															
		STEERING															

x: Applicable

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WT

WHEEL

WHEEL

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Inspection

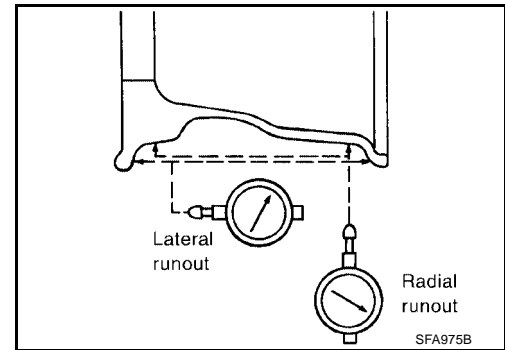
EES0019E

1. Check tires for wear and improper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.
- a. Remove tire from wheel and mount wheel on a tire balance machine.
- b. Set dial indicator as shown in the illustration.

Wheel runout (Dial indicator value):

Refer to [WT-8, "Road Wheel"](#) .

3. Check front wheel bearings for looseness.
4. Check front suspension for looseness.



WHEEL AND TIRE ASSEMBLY

WHEEL AND TIRE ASSEMBLY

PFP:40300

Balancing Wheels REMOVAL

EES0019F

1. Remove inner and outer balance weights from the wheel.

CAUTION:

- Be careful not to scratch the wheel during removal procedures.

2. Using releasing agent, remove double-faced adhesive tape from the wheel.

CAUTION:

- Be careful not to scratch the wheel during removal.
- After removing double-faced adhesive tape, wipe clean traces of releasing agent from the wheel.

WHEEL BALANCE ADJUSTMENT

NOTE:

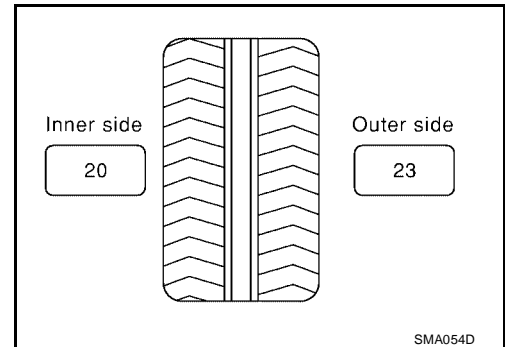
If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for wheels.

1. Set wheel on wheel balancer using the center hole as a guide. Start the tire balance machine.

2. When inner and outer unbalance values are shown on the wheel balancer indicator, multiply outer unbalance value by 1.6 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value and install it to the designated outer position of, or at the designated angle in relation to the road wheel.

CAUTION:

- Do not install the inner balance weight before installing the outer balance weight.
- Before installing the balance weight, be sure to clean the mating surface of the wheel.



Indicated unbalance value $\times 5/3$ = balance weight to be installed

Calculation example:

23 g (0.81 oz.) $\times 5/3$ = 38.33 g (1.35 oz.) = 40 g (1.41 oz.) balance weight (closer to calculated balance weight value)

Note that balance weight value must be closer to the calculated balance weight value.

Example:

37.4 g = 35 g (1.23 oz.)

37.5 g = 40 g (1.41 oz.)

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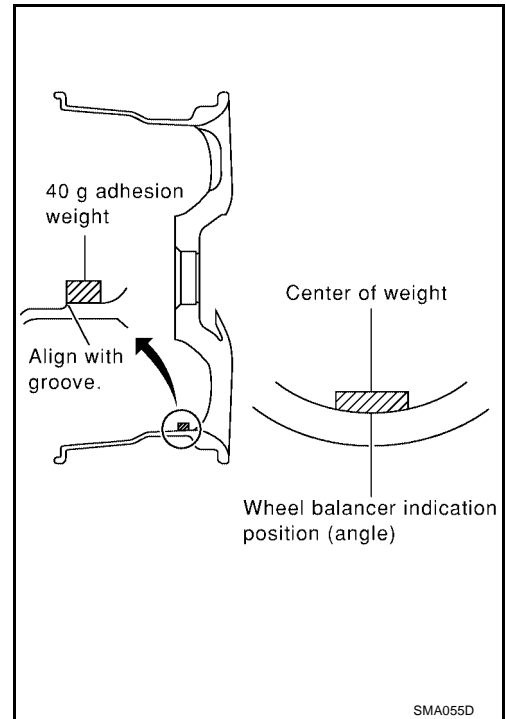
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WHEEL AND TIRE ASSEMBLY

- a. Install balance weight in the position shown.
- b. When installing balance weight to wheels, set it into the grooved area on the inner wall of the wheel as shown so that the balance weight center is aligned with the wheel balancer indication position (angle).

CAUTION:

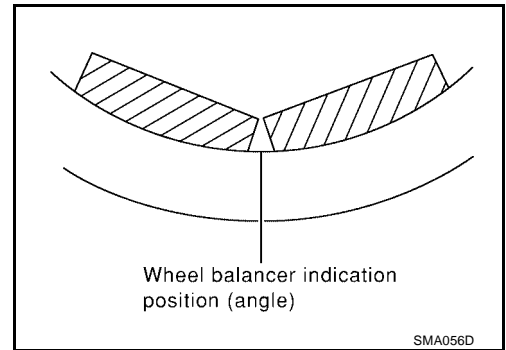
- Always use genuine Nissan adhesion balance weights.
- Balance weights are not reusable; always replace with new ones.
- Do not install more than three sheets of balance weight.



- c. If calculated balance weight value exceeds 50 g (1.76 oz.), install two balance weight sheets in line with each other as shown.

CAUTION:

Do not install one balance weight sheet on top of another.



3. Start wheel balancer again.
4. Install drive-in balance weight on inner side of road wheel in the wheel balancer indication position (angle).

CAUTION:

Do not install more than two balance weights.

5. Start wheel balancer. Make sure that inner and outer residual unbalance values are 5 g (0.18 oz.) each or below.
 - If either residual unbalance value exceeds 5 g (0.18 oz.), repeat installation procedures.

Wheel Balance (Maximum Allowable Unbalance)

Maximum allowable unbalance	Dynamic (At rim flange)	5 g (0.18 oz.) (one side)
	Static	10 g (0.35 oz.)

Rotation

EES0019G

- Follow the maintenance schedule for tire rotation service intervals. Refer to [MA-6, "PERIODIC MAINTENANCE"](#).

WHEEL AND TIRE ASSEMBLY

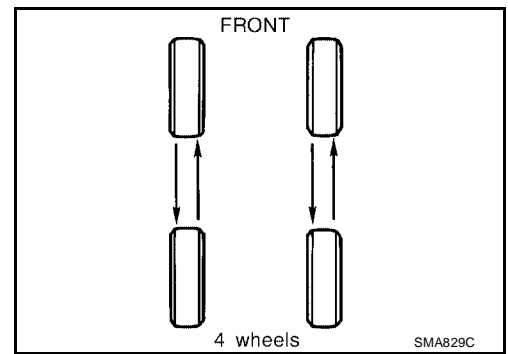
- Do not include the T-type spare tire when rotating the tires as shown.
- Tighten wheel nuts to specification.

CAUTION:

When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.

Wheel nut : 108 N·m (11 kg·m, 80 ft·lb)

- After rotating the tires, adjust the tire pressure.



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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Road Wheel

EES0019H

Wheel type	Aluminum	
Maximum radial runout limit	Lateral mm (in)	0.3 (0.012) or less
	Radial mm (in)	0.3 (0.012) or less
Allowable quantity of residual unbalance	Dynamic (On the ear part)	Less than 5 g (0.18 oz.) (per side)
	Static (On the ear part)	Less than 10 g (0.35 oz.)

Tire

EES0019I

Unit: kPa (kg/cm², psi)

Tire size	Air pressure	
	Conventional tire	Spare tire
T145/80(R/D)*17	—	420 (4.2, 60) **
225/55R17	230 (2.3, 33)	230 (2.3, 33)
245/45R18	220 (2.2, 32)	220 (2.2, 32)

*: R or D depending on manufacturer.

** : United States only