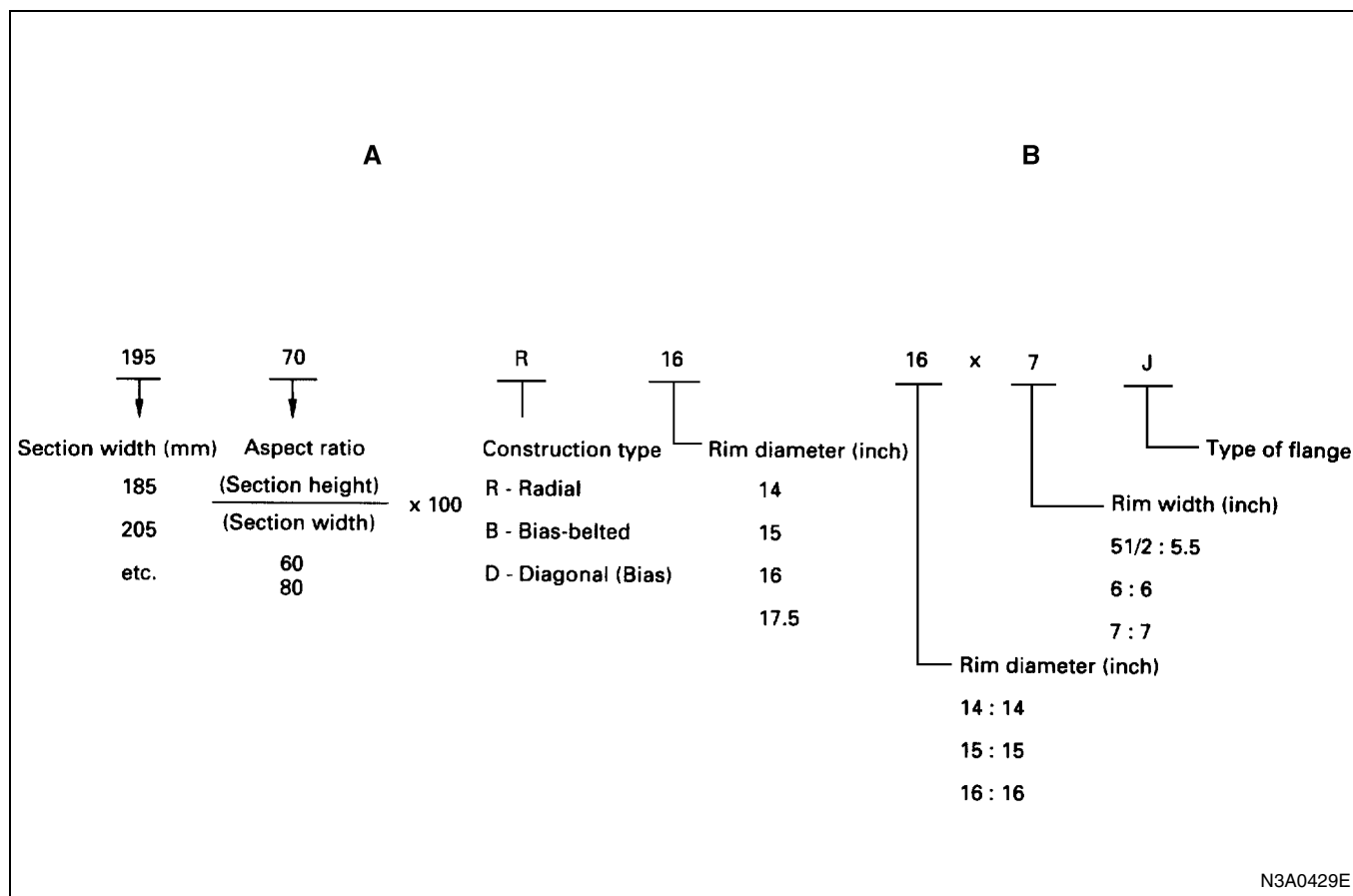

STEERING, SUSPENSION, WHEELS AND TIRES

SECTION 3E
WHEELS AND TIRES

Contents

GENERAL DESCRIPTION	3E-2
ON-VEHICLE SERVICE	3E-3
Wheel and Tire Assembly.....	3E-3
UNIT REPAIR	3E-6
Tires.....	3E-6
Wheels.....	3E-9
Balancing Wheel and Tire	3E-10

GENERAL DESCRIPTION



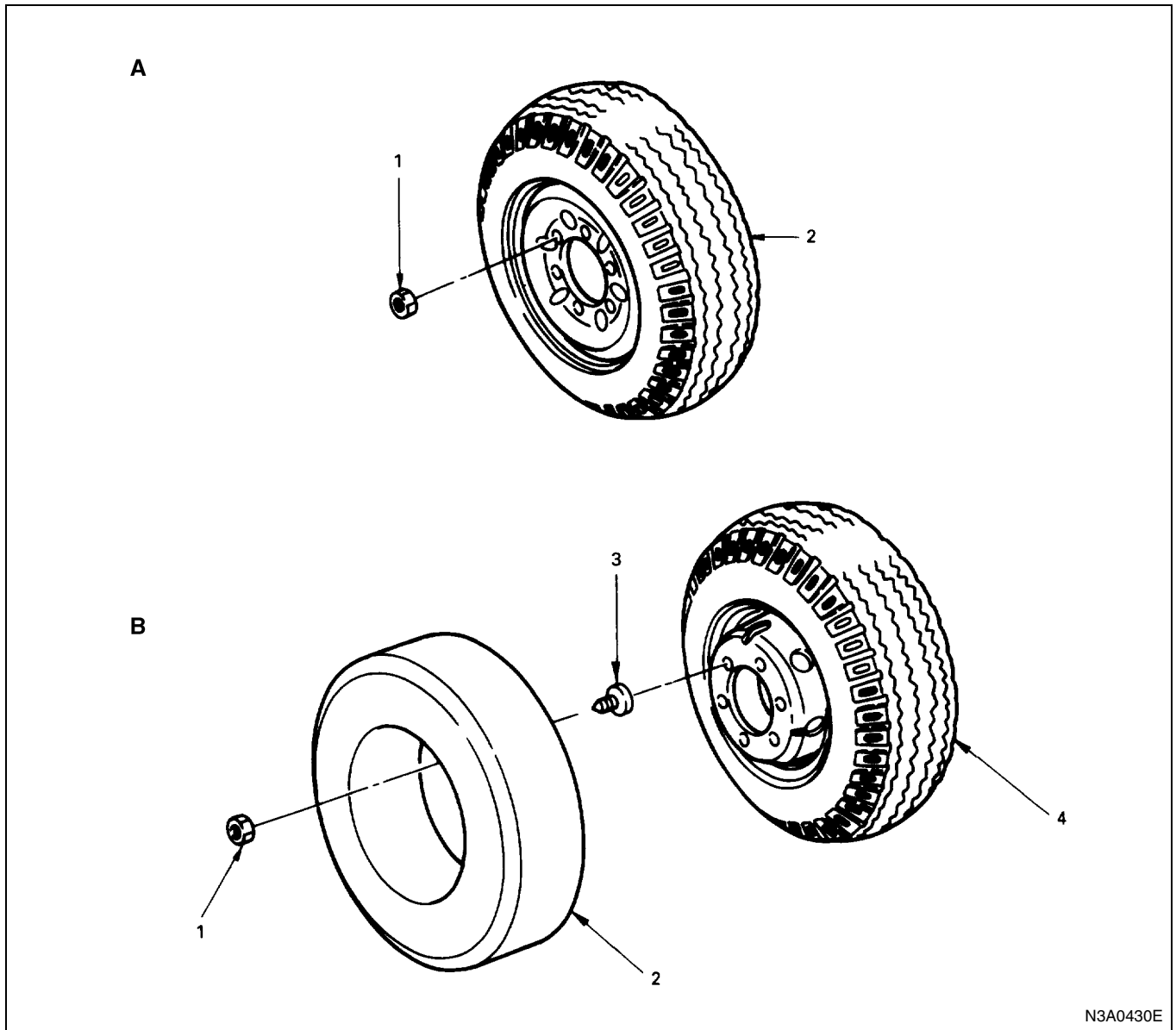
Legend

A. Metric tire size format

B. Rim size format

Replaced wheels or tires must be equivalent to the original one in load capacity, specified dimension and mounting configuration. Improper size or type may affect bearing life, brake performance, speedometer/odometer calibration, vehicle ground clearance and tire clearance to the body and chassis.

All models are equipped with metric sized steel belted radial tires. Correction of tire pressures and driving habits have an important influence on tire life. Heavy cornering, excessively rapid acceleration and unnecessary sharp braking increase premature and uneven wear.

ON-VEHICLE SERVICE**Wheel and Tire Assembly****Legend**

- A. Front tire, Rear single tire
B. Rear dual tire
1. Wheel nut (outer)

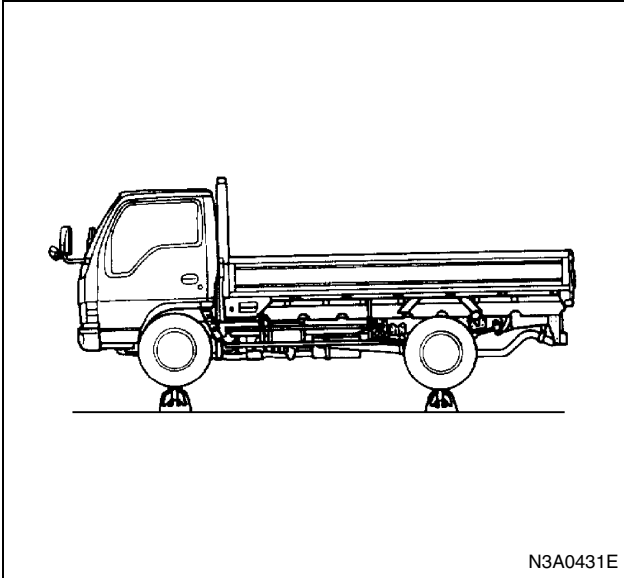
2. Wheel and tire assembly (front or outer)
3. Wheel nut (inner)
4. Wheel and tire assembly (inner)

3E-4 WHEELS AND TIRES

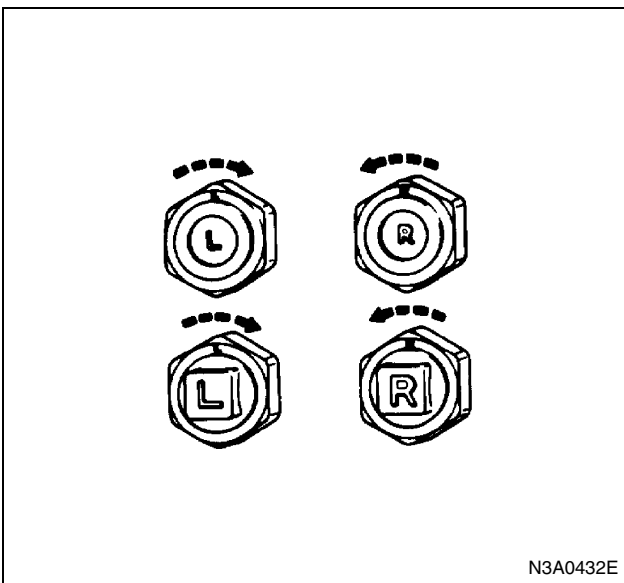
Removal

Preparations

- Raise the vehicle and support jack up point with suitable safety stands. Refer to "Lifting Instruction" in Section 0A.



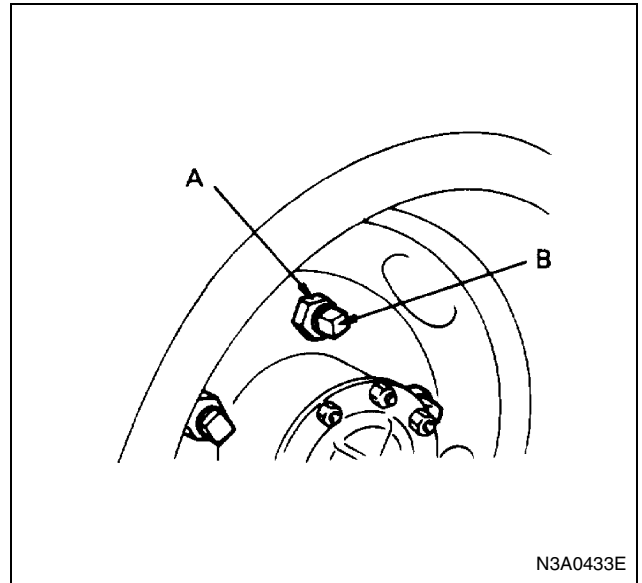
1. Wheel Nut (Outer)
 2. Wheel and Tire Assembly (Front or Outer)
 3. Wheel Nut (Inner)
 4. Wheel and Tire Assembly (Inner)
- Loosen the wheel nuts with the wheel nut wrench. The wheel nuts on the right side wheels have right-hand threads and the wheel nuts on the left side wheels have left-hand threads.



To change the inner wheel on either side of the rear of the vehicle:

- 1) Completely loosen the six-sided outer wheel nut (A) with the wheel wrench.
- 2) Using the opposite side of the wheel wrench, unscrew the four-sided inner wheel nut (B) approximately one full turn.

- 3) Repeat this procedure with the remaining outer and inner wheel nuts.

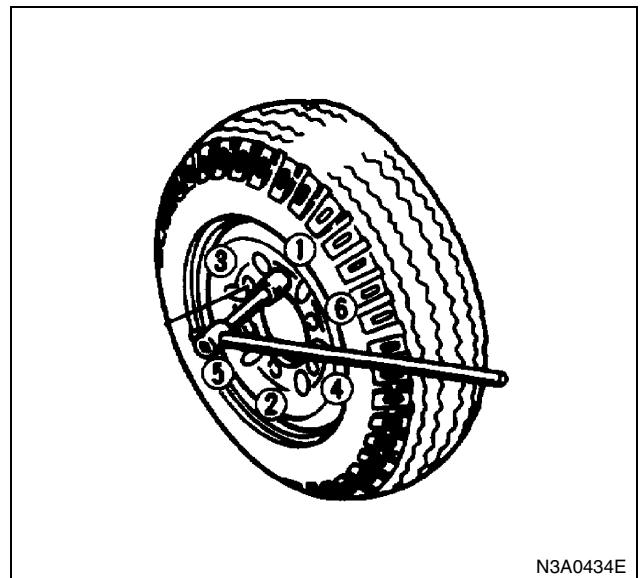


Installation

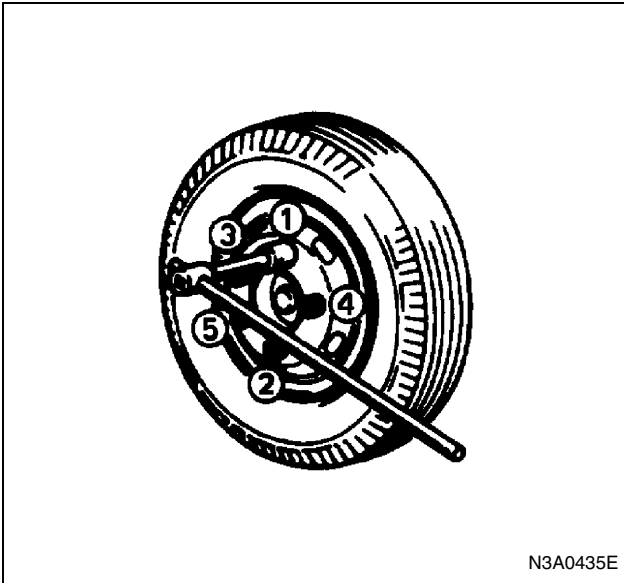
1. Wheel and Tire Assembly (Inner)
 2. Wheel Nut (Inner)
 3. Wheel and Tire Assembly (Front or Outer)
 4. Wheel Nut (Outer)
- Tighten wheel nuts in numerical sequence.

Tighten:

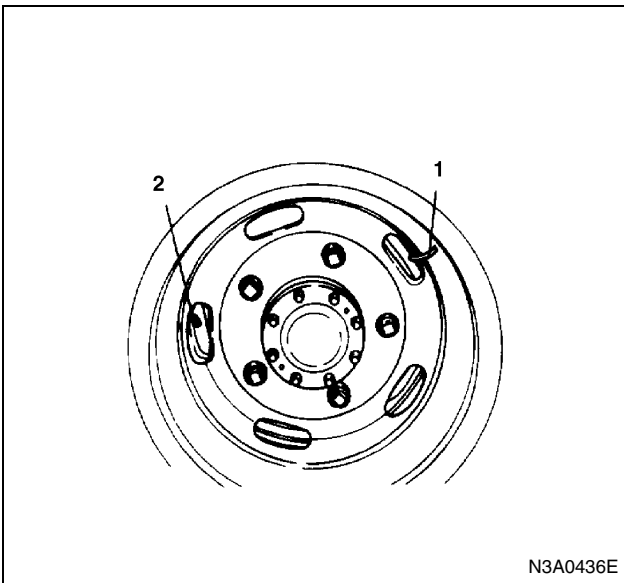
- Front wheel nut to
NHR, NKR Single tire, NKR Flat low: 167 N·m (17 kg·m/123 lb·ft)
Except above models: 441 N·m (45 kg·m/325 lb·ft)
- Rear wheel nut to
NHR, NKR Single tire: 167 N·m (17 kg·m/123 lb·ft)
NHR Dual tire, NKR Flat low: 294 N·m (30 kg·m/217 lb·ft)
Except above models: 441 N·m (45 kg·m/325 lb·ft)
- 6 studs



- 5 studs

**Notice:**

When installing the rear wheels, take care so that the dual tires' valves (1) (2) are dislocated or that the inner valve (2) will not be hidden.



UNIT REPAIR

Tires

Replacement

When replacement is necessary, the original metric tire size should be used. Most metric tire sizes do not have exact corresponding alphanumeric tire sizes. It is recommended that new tires be installed in pairs on the same axle, if necessary to replace only one tire, it should be paired with tire having the most tread, to equalize braking traction.

Caution:

Do not mix different types of tires such as radial, bias and bias-belted tires except in emergencies, because car handling may be seriously affected and may result in loss of control.

Tire Dismounting

Remove valve cap on valve stem and deflate the air. Then use a tire changing machine to mount or dismount tires. Follow the equipment manufacturer's instruction. Do not use hand tools or tire lever alone to change tires as they may damage the tire beads or wheel rim.

Tire Mounting

Rim bead seats should be cleaned with a wire brush or coarse steel wool to remove lubricants and light rust.

Before mounting a tire, the bead area should be well lubricated with an approved tire lubricant.

After mounting, inflate the tire to 196kPa (2 kg/cm², 28 psi) so that beads are completely seated. Inflate the air to specified pressure and install valve cap to the stem.

WARNING:

NEVER STAND OVER TIRE WHEN INFLATING. BEAD MAY BREAK WHEN BEAD SNAPS OVER RIM'S SAFETY HUMP AND CAUSE SERIOUS PERSONAL INJURY.

NEVER EXCEED SPECIFIED PRESSURE WHEN INFLATING. IF SPECIFIED PRESSURE WILL NOT SEAT BEADS, DEFLATE, RE-LUBRICATE AND RE-INFLATE.

OVER INFLATION MAY CAUSE THE BEAD TO BREAK AND CAUSE SERIOUS PERSONAL INJURY.

Tire Repair

There are many different materials on the market used to repair tires.

Manufacturers have published detailed instructions on how and when to repair tires. These instructions can be obtained from the tire manufacturer if they are not included with the repair kit.

Tire Size and Tire Inflation Pressure

Vehicle model	Tire size		Tire inflation pressure kPa (kg/cm ² , psi)	
	Front	Rear	Front	Rear
NHR55	6.00-15-8PR	5.50-13-8PR	417 (4.25, 60)	417 (4.25, 60)
	6.00R15-8PR	155R13-8PR	441 (4.50, 64)	441 (4.50, 64)
	6.50-15-10PR	6.50-15-10PR	490 (5.00, 71)	490 (5.00, 71)
	6.50-15-6PR	7.00-15-10PR	319 (3.25, 46)	490 (5.00, 71)
	7.00-15-8PR	7.00-15-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.00-15-10PR	7.00-15-10PR	490 (5.00, 71)	490 (5.00, 71)
	185/80R15	175R14-8	441 (4.50, 64)	441 (4.50, 64)
	205/80R15	205/80R15	441 (4.50, 64)	441 (4.50, 64)
NHR55 (For GCC)	185/80R15	155R13-8PR	441 (4.50, 64)	441 (4.50, 64)
	205/80R15	205/80R15	441 (4.50, 64)	441 (4.50, 64)
	7.00R15-10PR	7.00R15-10PR	515 (5.25, 75)	515 (5.25, 75)
	6.00R15-8PR	155R13-8PR	441 (4.50, 64)	441 (4.50, 64)
NHR69	6.00-15-8PR	5.50-13-8PR	417 (4.25, 60)	392 (4.00, 57)
	6.00R15-8PR	155R13-8PR	441 (4.50, 64)	441 (4.50, 64)

Vehicle model	Tire size		Tire inflation pressure kPa (kg/cm ² , psi)	
	Front	Rear	Front	Rear
NKR55	7.00-15-8PR	6.00-13-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.00-15-8PR	7.50-15-10PR	417 (4.25, 60)	515 (5.25, 75)
	7.50-15-10PR	7.50-15-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.00-15-8PR	7.00-15-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.00R16-10PR	7.00R16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.00-15-10PR	7.50-15-12PR	490 (5.00, 71)	564 (5.75, 82)
	7.00-15-10PR	7.00-15-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.00R15-10PR	7.00R15-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.00-16-10PR	7.00-16-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.00-16-8PR	7.00-16-8PR	417 (4.25, 60)	417 (4.25, 60)
NKR66	7.00-15-8PR	7.50-15-10PR	417 (4.25, 60)	515 (5.25, 75)
	7.00-15-8PR	7.00-15-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.00-16-14PR	7.00-16-14PR	711 (7.25, 103)	711 (7.25, 103)
	7.00R16-10PR	7.00R16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.50-15-10PR	7.50-15-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.00-15-10PR	7.50-15-12PR	490 (5.00, 71)	564 (5.75, 82)
	7.00R15-10PR	7.00R15-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.00-16-10PR	7.00-16-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.00-16-8PR	7.00-16-8PR	417 (4.25, 60)	417 (4.25, 60)
	195/85R16	195/85R16	588 (6.00, 85)	588 (6.00, 85)
	7.00-15-10PR	7.00-15-10PR	490 (5.00, 71)	490 (5.00, 71)
	205/85R16	205/85R16	588 (6.00, 85)	588 (6.00, 85)
NKR66 (For GCC)	195/85R16	195/85R16	588 (6.00, 85)	588 (6.00, 85)
	205/85R16	205/85R16	588 (6.00, 85)	588 (6.00, 85)
	7.00R16-10PR	7.00R16-10PR	515 (5.25, 75)	515 (5.25, 75)
	195/85R16	195/85R16	588 (6.00, 85)	588 (6.00, 85)
NKR69	7.00-15-8PR	7.50-15-10PR	417 (4.25, 60)	515 (5.25, 75)
	7.00-15-8PR	7.00-15-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.00-15-10PR	7.50-15-12PR	490 (5.00, 71)	564 (5.75, 82)
	7.00-15-10PR	7.00-15-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.00-16-8PR	7.00-16-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.00-16-10PR	7.00-16-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.00R16-10PR	7.00R16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.50-15-10PR	7.50-15-10PR	515 (5.25, 75)	515 (5.25, 75)
NKR71	7.00-16-14PR	7.00-16-14PR	711 (7.25, 103)	711 (7.25, 103)

3E-8 WHEELS AND TIRES

Vehicle model	Tire size		Tire inflation pressure kPa (kg/cm ² , psi)	
	Front	Rear	Front	Rear
NKR77	195/85R16	175R14-8PR	588 (6.00, 85)	441 (4.50, 64)
	7.00-15-8PR	7.00-15-8PR	417 (4.25, 60)	417 (4.25, 60)
	195/75R16C	195/75R16C	475 (4.75, 68)	475 (4.75, 68)
	195/85R16	195/85R16	588 (6.00, 85)	588 (6.00, 85)
	205R16C-8PR	205R16C-8PR	450 (4.50, 64)	450 (4.50, 64)
	7.00R16-10PR	7.00R16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.00-15-10PR	7.00-15-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.00-16-8PR	7.00-16-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.00-16-10PR	7.00-16-10PR	490 (5.00, 71)	490 (5.00, 71)
NPR66	7.00-16-10PR	7.00-16-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.50-16-10PR	7.50-16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.50-16-12PR	7.50-16-12PR	588 (6.00, 85)	588 (6.00, 85)
	7.00-16-12PR	7.00-16-12PR	564 (5.75, 82)	564 (5.75, 82)
	7.00R16-10PR	7.00R16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.50-16-8PR	7.50-16-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.50-16-14PR	7.50-16-14PR	637 (6.50, 92)	637 (6.50, 92)
	7.50R16-10PR	7.50R16-10PR	564 (5.75, 82)	564 (5.75, 82)
	7.50R16-12PR	7.50R16-12PR	637 (6.50, 92)	637 (6.50, 92)
NPR66 (For GCC)	205/85R16	205/85R16	588 (6.00, 85)	588 (6.00, 85)
	225/85R16	225/85R16	588 (6.00, 85)	588 (6.00, 85)
	7.50R16-12PR	7.50R16-12PR	637 (6.50, 92)	637 (6.50, 92)
	7.50-16-12PR	7.50-16-12PR	588 (6.00, 85)	588 (6.00, 85)
	7.50R16-10PR	7.50R16-10PR	564 (5.75, 82)	564 (5.75, 82)
	215/75R17.5	215/75R17.5	600 (6.00, 85)	600 (6.00, 85)
	215/85R16	215/85R16	588 (6.00, 85)	588 (6.00, 85)
NPR70	7.00-16-10PR	7.00-16-10PR	490 (5.00, 71)	490 (5.00, 71)
	7.50-16-10PR	7.50-16-10PR	515 (5.25, 75)	515 (5.25, 75)
	215/75R17.5	215/75R17.5	600 (6.00, 85)	600 (6.00, 85)
	215/85R16	215/85R16	588 (6.00, 85)	588 (6.00, 85)
	7.00-16-12PR	7.00-16-12PR	564 (5.75, 82)	564 (5.75, 82)
	7.00R16-10PR	7.00R16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.50-16-8PR	7.50-16-8PR	417 (4.25, 60)	417 (4.25, 60)
	7.50-16-12PR	7.50-16-12PR	588 (6.00, 85)	588 (6.00, 85)
	7.50-16-14PR	7.50-16-14PR	637 (6.50, 92)	637 (6.50, 92)
	7.50R16-10PR	7.50R16-10PR	564 (5.75, 82)	564 (5.75, 82)
	7.50R16-12PR	7.50R16-12PR	637 (6.50, 92)	637 (6.50, 92)

Vehicle model	Tire size		Tire inflation pressure kPa (kg/cm ² , psi)	
	Front	Rear	Front	Rear
NPR75	195/85R16	195/85R16	588 (6.00, 85)	588 (6.00, 85)
	205/75R17.5	205/75R17.5	750 (7.65, 108.7)	750 (7.65, 108.7)
	215/75R17.5	215/75R17.5	600 (6.00, 85)	600 (6.00, 85)
	215/75R16C	215/75R16C	525 (5.36, 76)	525 (5.36, 76)
NPR77	195/75R16C	195/75R16C	475 (4.75, 68)	475 (4.75, 68)
NPS71	7.50R16-12PR	7.50R16-12PR	637 (6.50, 92)	637 (6.50, 92)
NPS75	8.5R17.5	8.5R17.5	625 (6.4, 90.6)	625 (6.4, 90.6)
NQR66	7.50-16-14PR	7.50-16-14PR	637 (6.50, 92)	637 (6.50, 92)
	8.25-16-14PR	8.25-16-14PR	564 (5.75, 82)	564 (5.75, 82)
	8.25-16-12PR	8.25-16-12PR	490 (5.00, 71)	490 (5.00, 71)
NQR70	7.50-16-14PR	7.50-16-14PR	637 (6.50, 92)	637 (6.50, 92)
	215/75R17.5	215/75R17.5	600 (6.00, 85)	600 (6.00, 85)
	7.50-16-10PR	7.50-16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.50R16-10PR	7.50R16-10PR	564 (5.75, 82)	564 (5.75, 82)
	7.50R16-12PR	7.50R16-12PR	637 (6.50, 92)	637 (6.50, 92)
NQR71	7.50-16-14PR	7.50-16-14PR	637 (6.50, 92)	637 (6.50, 92)
	8.25-16-14PR	8.25-16-14PR	564 (5.75, 82)	564 (5.75, 82)
NQR71	8.25-16-12PR	8.25-16-12PR	490 (5.00, 71)	490 (5.00, 71)
NQR71 (For GCC)	215/75R17.5	215/75R17.5	600 (6.00, 85)	600 (6.00, 85)
NQR75	7.50-16-14PR	7.50-16-14PR	637 (6.50, 92)	637 (6.50, 92)
	215/75R17.5	215/75R17.5	600 (6.00, 85)	600 (6.00, 85)
	225/70R19.5	225/70R19.5	850 (8.50, 122)	850 (8.50, 122)
	7.50-16-10PR	7.50-16-10PR	515 (5.25, 75)	515 (5.25, 75)
	7.50-16-12PR	7.50-16-12PR	588 (6.00, 85)	588 (6.00, 85)
	7.50R16-10PR	7.50R16-10PR	564 (5.75, 82)	564 (5.75, 82)
	7.50R16-12PR	7.50R16-12PR	637 (6.50, 92)	637 (6.50, 92)

Wheels

Replacement

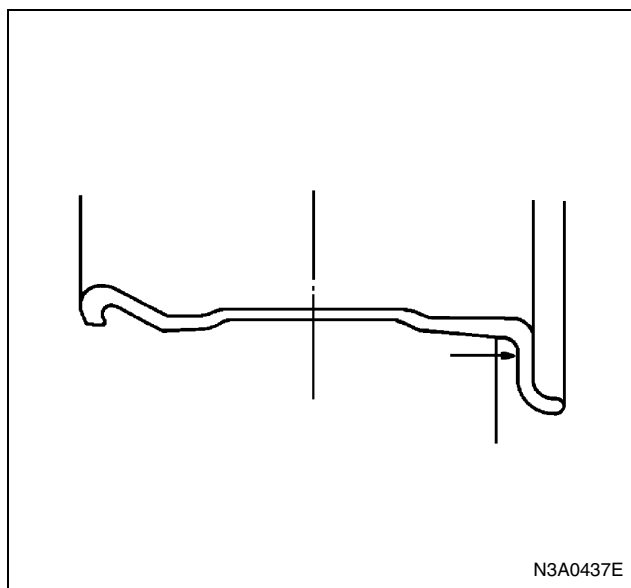
Damaged wheels and wheels with excessive run-out must be replaced.

Wheel Run-out at Rim

1.5 mm (0.059 in) or less

Caution:

Wheel repairs that use welding, heating or preening are not permitted. Replace wheel lug nuts if they are bent, dented, have excessive lateral or radial run-out, leak air through welds, have elongated bolt holes, will not stay tight, or if they are heavily rusted.



General Balance Procedure

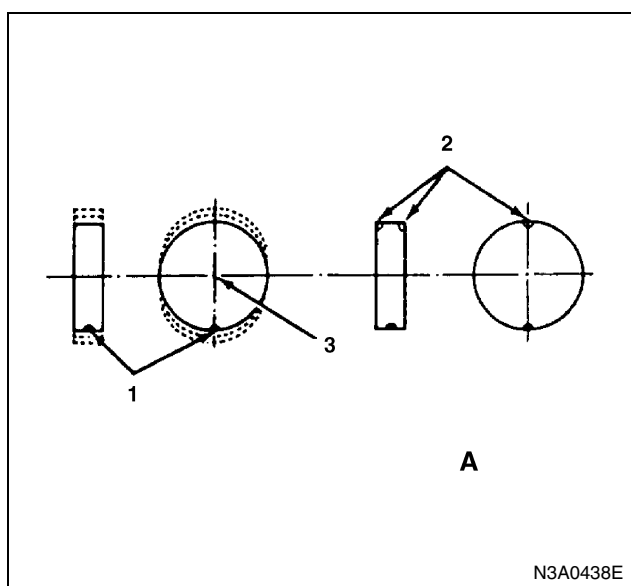
Deposits of mud, etc. must be cleaned from the inside of the rim.

The tire should be inspected for the following: match mount paint marks, bent rims, bulges, irregular tire wear, proper wheel size and inflation pressure. Then balance according to the equipment manufacturer's recommendations.

There are two types of wheel and tire balance.

Static balance is the equal distribution of weight around the wheel.

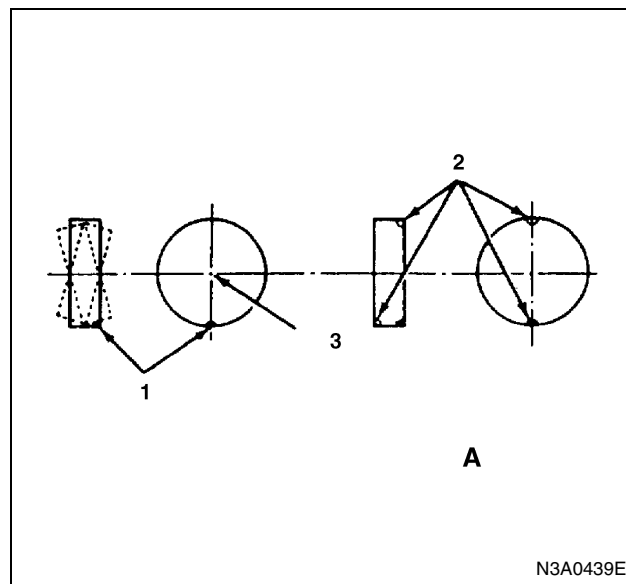
Assemblies that are statically unbalanced cause a bouncing action called tramp. This condition will eventually cause uneven tire wear.



Legend

- A. Corrective weights
- 1. Heavy spot wheel tramp
- 2. Add balance weights here
- 3. Center line of spindle

Dynamic balance is the equal distribution of weight on each side of the wheel center-line, so when the tire spins, there is no tendency for the assembly to move from side to side. Assemblies that are dynamically unbalanced may cause shimmy.



Legend

- A. Corrective weights
- 1. Heavy spot wheel shimmy
- 2. Add balance weights here
- 3. Center line of spindle

WARNING:

STONES SHOULD BE REMOVED FROM THE TREAD TO AVOID OPERATOR INJURY DURING SPIN BALANCING AND TO OBTAIN A GOOD BALANCE.

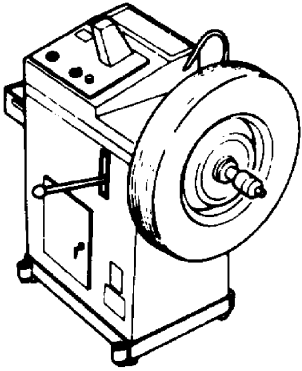
Balancing Wheel and Tire

On-Vehicle Balancing

On-Vehicle balancing methods vary with equipment and tool manufacturers. Be sure to follow each manufacturer's instructions during balancing operation.

Off-Vehicle Balancing

Most electronic off-vehicle balancers are more accurate than the on-vehicle spin balancers. They are easy to use and give a dynamic balance. Although they do not correct for drum or disc unbalance (as on vehicle spin balancing does), they are very accurate.



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