

DATSUN 280ZX Model S130 Series

SECTION WT

WHEEL AND TIRE

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WT

CAUTION:
When the front wheels are aligned in an excessive toe-in or toe-out condition, the tires will tend to develop a feathered edge. Center wear is caused by oversteer.

Note:
a. Be sure to check the wheel nut torque, after the wheel has been run for the first 1000 km (600 miles) also in cases of replacing tires (also in cases of retightening tires, the retightening and carry 10,000 km (6,000 miles) thereafter. Retighten if necessary.)
b. It is recommended that new tires be installed in pairs on the same axle. When replacing only one tire, it should be paired with the most tread, to equalize braking traction.
c. When replacing original tires with those tires of an optional room-temperature and different diameter, the speedometer must be manually corrected for the difference in gear ratio.
1. To replace a tire with a different size torque, refer to lifting points (Section G) for jacking up.

WARNING:
Never get under car while it is supported only by jack.
Always use safety stands to support side member of body construction when you must get beneath car.

WHEEL AND TIRE

MAINTENANCE

TIRE INFLATION

Correct tire pressure is very important for steering ease and riding comfort. Correct pressure also makes for a quieter ride and extends tire life.

If all tires are inspected frequently and maintained at correct pressure, any sharp objects in tread can be quickly detected and abnormal wear, which invites serious problems, can be avoided.

After inflating tires, valves should be checked for leakage. Without valve caps, leakage will occur due to dirt and water, resulting in underinflation. Accordingly, whenever tire pressure is checked, be sure to tighten valve caps firmly by hand.

TIRE WEAR

Tread wear indicator

Tires are provided with "tread wear indicator" at six places around tire circumference, indicating 1.6 mm ($\frac{1}{16}$ in) tread depth. When tires wear and then marks appear, replace them with new ones.

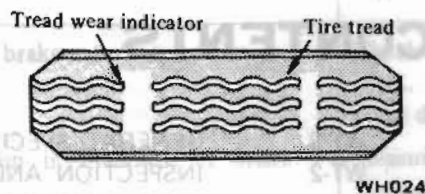


Fig. WT-1 Tread Wear Indicator

Uneven wear

Uneven wear is caused by incorrect camber or caster, malfunctioning suspension, unbalanced wheel, out-of-round brake drum, or other mechanical conditions. To stop this abnormal wear, correct the above faulty parts.

TIRE REPLACEMENT

CAUTION:

Different types of tires, such as bias, bias belted and radial tires, must not be mixed except in an emergency. Mixed use of different types of tires can adversely affect car handling and may cause driver to lose control.

Note:

- Be sure to check the wheel nut torque, after the wheel has been run for the first 1,000 km (600 miles) (also in cases of repairing flat tires, tire rotation, etc.) and every 10,000 km (6,000 miles) thereafter. Retighten if necessary.
- It is recommended that new tires be installed in pairs on the same axle. When replacing only one tire, it should be paired with the most tread, to equalize braking traction.
- When replacing original tires with those tires of an optional recommended size and of different diameter, the speedometer must be recalibrated.

1. To replace a tire with a jack in a safe manner, refer to Lifting Points (Section GI) for jacking up.

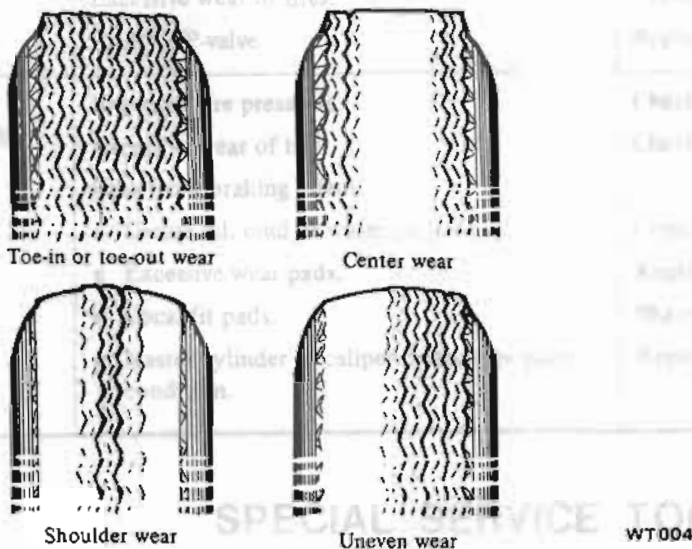


Fig. WT-2 Abnormal Tire Wear

Toe-in or toe-out wear

When the front wheels are aligned in an excessive toe-in or toe-out condition, the tires will tend to scrape the tread rubber off and the tread will develop a feathered edge.

Center wear

Center wear is caused by overinflation of the tire.

Shoulder wear

This wear may be caused by underinflation, incorrect wheel camber, or continued excessive speed around curves. In general, the first two causes are the most common. Underinflation causes wear on both sides of treads, while camber causes wear on only one side of tread.

WARNING:

Never get under car while it is supported only by jack. Always use safety stands to support side member of body construction when you must get beneath car.

Wheel and Tire

2. To install wheel, tighten wheel nuts in criss-cross fashion.

As for aluminum wheels, proceed as follows:

(1) Snugly tighten four nuts after wheel is positioned. See Fig. WT-3.

(2) Slightly pull wheel back to properly align nuts with bolt holes in wheel, and tighten nuts as much as possible with your fingers.

(3) Tighten four nuts evenly with a wheel wrench in criss-cross fashion.

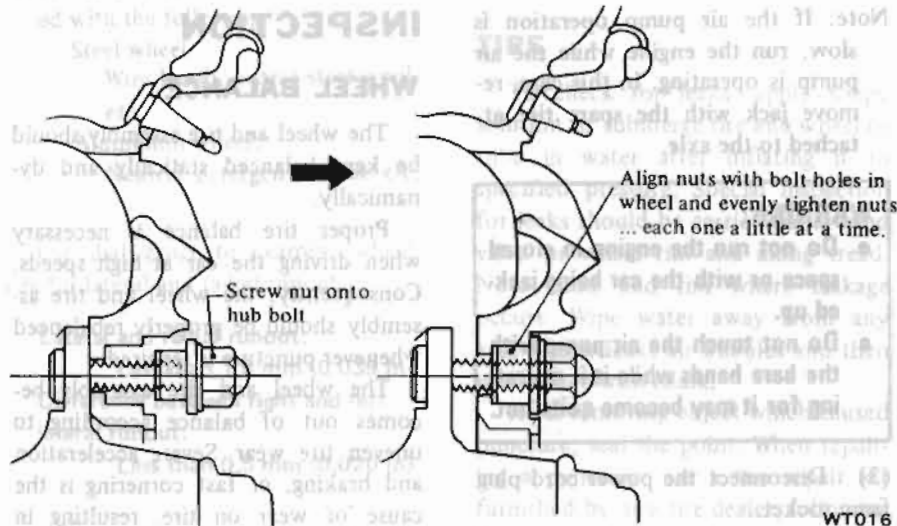


Fig. WT-3 Installing Aluminum Wheel

Tightening torque:

Wheel nut

Steel wheel

8.0 to 10.0 kg-m

(58 to 72 ft-lb)

Aluminum wheel

8.0 to 10.0 kg-m

(58 to 72 ft-lb)

CAUTION:

Two types of wheel nuts are used; one is designed for use with steel wheel and the other for use with aluminum wheel. Do not mix different types of wheel nuts.



For aluminum wheels only

For steel wheels only

Fig. WT-4 Wheel Nut

TIRE ROTATION

Tires tend to wear unevenly and become unbalanced after a certain running distance. Uneven tire wear often results in tire noise which is attributed to rear axle gears, bearing, etc. Front tires also tend to wear unevenly because of improperly aligned front wheels.

Accordingly, to equalize tire wear, it is necessary to rotate tires periodically as recommended in the "Periodic Maintenance".

Radial Tire

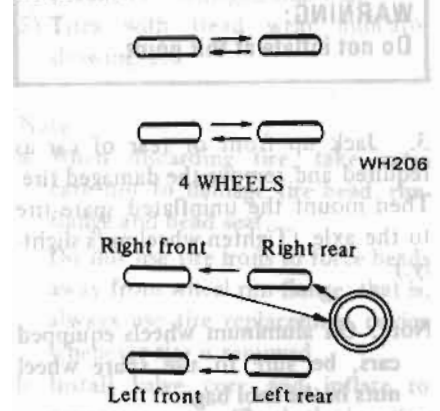


Fig. WT-5 Tire Rotation

Note: Do not include the Space Saver Spare tire or the Foldable Spare tire in tire rotation.

SPARE TIRE

This model is equipped with the Space Saver Spare tire or the Foldable Spare tire.

The spare tire is designed for emergency use only. It is stored in a deflated condition.

An inflator (canister or air pump) has been provided to inflate the spare.

The spare tire can be used repeatedly for emergency situations. However, the canister must be replaced after each inflation.

Be sure to obtain the proper size canister for spare tire size.

CAUTION:

The spare tire is restricted in driving speed up to a maximum of 80 km/h (50 MPH) for short distances and emergency use only.

Inflation with approved inflator

1. Before changing tire, carefully read the caution and directions affixed on both the inflator and the spare tire.
2. Remove the uninflated spare tire and the inflator from rear compartment.

WARNING:
Do not inflate at this point.

MAINTENANCE

3. Jack up front or rear of car as required and remove the damaged tire. Then mount the uninflated spare tire to the axle. (Tighten wheel nuts slightly.)

Note: On aluminum wheels equipped cars, be sure to use spare wheel nuts in the tool bag.

The wheel nuts for aluminum wheels must not be used on the spare tire wheel to avoid the wheel coming off the axle and causing personal injury.

4. Using Canister

(1) With tire valve at 6 o'clock position, inflate the spare tire with the canister. Place tire canister on the tire inflation valve and push squarely until gas can be heard entering the tire. It takes about 3 minutes.

WARNING:
The metal parts of the canister become extremely cold during inflation and can cause frost bite. Therefore, avoid contact with the metal, use a glove or other means of protection.

(2) To ensure complete emptying of the canister, hold the canister in position for one minute after sound stops.

Note:

- a. If temperature is below -10°C (14°F), the canister must be warmed on the windshield defroster for five to ten minutes to provide tire inflation.
- b. In cold weather, the tire may not look fully inflated. Therefore, drive slowly for the first mile, as the tire temperature rises the pressure will increase.

Using Air Pump

(1) Remove the valve cap from the spare tire and securely connect the air

pump hose in its place.
(2) Connect the power cord plug of the air pump to the cigarette lighter socket. The spare tire may be inflated to the recommended pressure 2.0 kg/cm^2 (28 psi) in about 6 minutes. Adjust the tire pressure per the tire placard with tire pressure gauge.

Note: If the air pump operation is slow, run the engine while the air pump is operating. In this case, remove jack with the spare tire attached to the axle.

WARNING:

- Do not run the engine in closed space or with the car being jacked up.
- Do not touch the air pump with the bare hands while it is operating for it may become quite hot.

(3) Disconnect the power cord plug from socket.

Check the tire for air leakage, and then securely install and tighten the valve cap.

5. Lower car and fully tighten wheel nuts.

Note: Do not install the wheel cover on the spare tire.

Deflation

1. Deflate tire by depressing button on tire inflation valve or by removing valve core.

WARNING:
To avoid personal injury, do not inhale the gas which is vented while the tire is deflating.

- 2. Flatten tire. The spare tire becomes folded gradually while deflating.
- 3. Store tire in rear compartment.

Repair

Note: Only qualified tire experts are authorized to dismount the spare tire from its rim or repair it in any way. Improper service can result in

serious personal injury. Contact authorized B.F. Goodrich dealers (for Space Saver Spare tire) or authorized Bridgestone or DATSUN dealers (for Foldable Spare tire) if service is required.

INSPECTION

WHEEL BALANCE

The wheel and tire assembly should be kept balanced statically and dynamically.

Proper tire balance is necessary when driving the car at high speeds. Consequently, the wheel and tire assembly should be properly rebalanced whenever puncture is repaired.

The wheel and tire assembly becomes out of balance according to uneven tire wear. Severe acceleration and braking, or fast cornering is the cause of wear on tire, resulting in unbalance of tire and wheel assembly.

The symptom of unbalance appears as tramps, car shake and steering malfunction.

To correct unbalance, use proper wheel balancer.

Maximum allowable unbalance at rim flange:

10 gr (0.35 oz)

Balance weight:

10 to 60 gr (0.35 to 2.12 oz)

at 10 gr (0.35 oz) interval

Note:

- a. Be sure to place correct balance weights on inner edge of rim. See Fig. WT-6.
- b. Do not put more than two weights on each side.
- c. Two types of balance weights are used; one is designed for use with steel wheel and the other for use with aluminum wheel. Do not mix different types of balance weights.

WHEEL

In order to ensure satisfactory steering condition as well as maximum tire life, proceed as follows.

Check wheel rim, especially rim

Wheel and Tire

flange and bead seat, for rust, distortion, cracks or other faults which might cause air leaks. Function of tubeless tire depends on a good seat between tire bead and wheel rim. Thoroughly remove rust, dust, oxidized rubber or sand from wheel rim.

Note: Rim bead seats should be cleaned with the following.

Steel wheel:

Wire brush, coarse steel wool, etc.

Aluminum wheel:

Neutral detergent, cloth, etc.

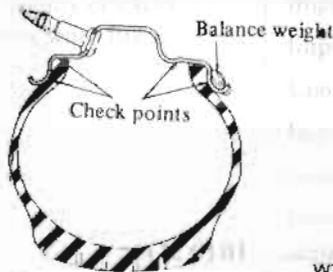
Use dial gauge to examine wheel rim for lateral and radial runout.

Lateral and radial runout:

Less than 1.0 mm (0.039 in)

Difference between right and left lateral runout:

Less than 0.5 mm (0.020 in)



WT005

Fig. WT-6 Wheel Rim Runout Check Points

Wheel must be replaced when any of the following problems occurs.

- 1) Bent, dented or heavily rusted
- 2) Elongated bolt holes
- 3) Excessive lateral or radial runout
- 4) Air leaks through welds
- 5) Wheel nuts won't stay tight

TIRE

To check for leaks, apply soapy solution or submerge tire and wheel or tube in water after inflating it to specified pressure. Special inspection for leaks should be carried out around valve or wheel rim and along tread. Note bead and rim where leakage occurs. Wipe water away from any area which leaks air bubbles and then mark place with chalk.

After removing object which caused puncture, seal the point. When repairing a puncture, use a tire repair kit furnished by any tire dealer, following instructions provided with kit. If a puncture is too large or there is some damage to tire fabric, repair should be carried out by authorized tire dealer.

Discard when any of the following problems occurs:

- 1) Broken or damaged bead wire.
- 2) Ply or tread separation.
- 3) Worn fabric damage on tubeless tire.

- 4) Cracked or damaged side wall.
- 5) Tires with tread wear indicator showing, etc.

Note:

a. When discarding tire, take extra care not to damage tire bead, rim-flange and bead seat.

Do not use tire irons to force beads away from wheel rim-flange; that is, always use tire replacement device whenever tire is removed.

b. Install valve core and inflate to proper pressure. Check the locating rings of the tire to be sure they show around the rim flanges on both sides.

WARNING:

When, while tire is being inflated, bead snaps over safety hump, it might break. Thus, to avoid serious personal injury, never stand over tire when inflating it. Never inflate to a pressure greater than 2.8 kg/cm² (40 psi). If beads fail to seat at that pressure, deflate the tire, lubricate it again, and then reinflate it. If the tire is over-inflated, the bead might break, possibly resulting in serious personal injury.

Tire	Car speed km/h (MPH)	Pressure kg/cm ² (psi, kPa)
P270HR-14	Under 100 (100)	2.1 (30)
	Over 100 (100)	2.3 (33)
C78-14	Under 80 (80)	2.1 (30)
	Over 80 (80)	2.3 (33)

Note: Inflation pressure should be measured when tires are cold.

TIGHTENING TORQUE

Wheel nut	kg-m (ft-lb)	kg-m (ft-lb)
Steel wheel	8.0 to 10.0 (58 to 72)	8.0 to 10.0 (58 to 72)
Aluminum wheel	8.0 to 10.0 (58 to 72)	8.0 to 10.0 (58 to 72)

SERVICE DATA AND SPECIFICATIONS

GENERAL SPECIFICATIONS

WHEEL

Size	Offset mm (in)	Remarks
5½JJ-14	15 (0.59)	Steel wheel
5½J-14	15 (0.59)	Aluminum wheel
6JJ-14	10 (0.39)	
5J-14	15 (0.59)	Steel wheel for Foldable Spare tire or Space Saver Spare tire

TIRE

Size	Remarks
195/70HR-14	Steel radial, tubeless
C78-14	Space Saver Spare tire or Foldable Spare tire

INSPECTION AND ADJUSTMENT

Wheel balance (Maximum allowable unbalance at rim flange)	gr (oz)	10 (0.35)
Tire balancing weight	gr (oz)	10 to 60 (0.35 to 2.12) Spacing 10 (0.35)
Wheel rim lateral and radial runout	mm (in)	Less than 1.0 (0.039)
Difference between right and left lateral runout	mm (in)	Less than 0.5 (0.020)

Recommended tire inflation pressure

Tire	Car speed km/h (MPH)	Pressure kg/cm ² (psi, kPa)
195/70HR-14	Under 160 (100)	2.0 (28, 200)
	Over 160 (100)	2.3 (32, 230)
C78-14	Under 80 (50)	2.0 (28, 200)

Note: Inflation pressure should be measured when tires are cold.

TIGHTENING TORQUE

Wheel nut		
Steel wheel	kg-m (ft-lb)	8.0 to 10.0 (58 to 72)
Aluminum wheel	kg-m (ft-lb)	8.0 to 10.0 (58 to 72)

DATSUN 280ZX Model S130 Series
TROUBLE DIAGNOSES AND CORRECTIONS

Condition	Probable cause	Corrective action
Wheel wobbles.	Improper tire pressure. Damaged tire or distorted wheel rim. Unbalanced wheel. Loose wheel nuts. Worn or damaged wheel bearing, or excessive play in wheel bearing. Improper front wheel alignment. Worn or damaged ball joint. Excessive steering linkage play or worn steering linkage. Loose steering linkage connection. Broken suspension spring. Faulty shock absorber.	Measure and adjust. Repair or replace. Balance. Tighten. Correct play or replace wheel bearing. Align. Replace. Adjust or replace. Tighten nuts to rated torque, or replace worn parts if any. Replace. Replace.
Unevenly or excessively worn tire.	Improper tire rotation. Improper tire pressure. Unbalanced wheel. Improperly adjusted brake. Improper wheel alignment. Excessively distorted or improperly installed suspension link. High speed on curves. Sudden starts and improper speed due to rapid acceleration or improper brake application.	Rotate tires periodically. Measure and adjust. Balance or replace. Adjust. Align. Repair, replace or, if necessary, reinstall. Reduce speed. Drive in a proper manner.
Tire squeals.	Improper tire pressure. Improper front wheel alignment. Distorted knuckle or suspension link.	Measure and adjust. Align. Repair or replace.