

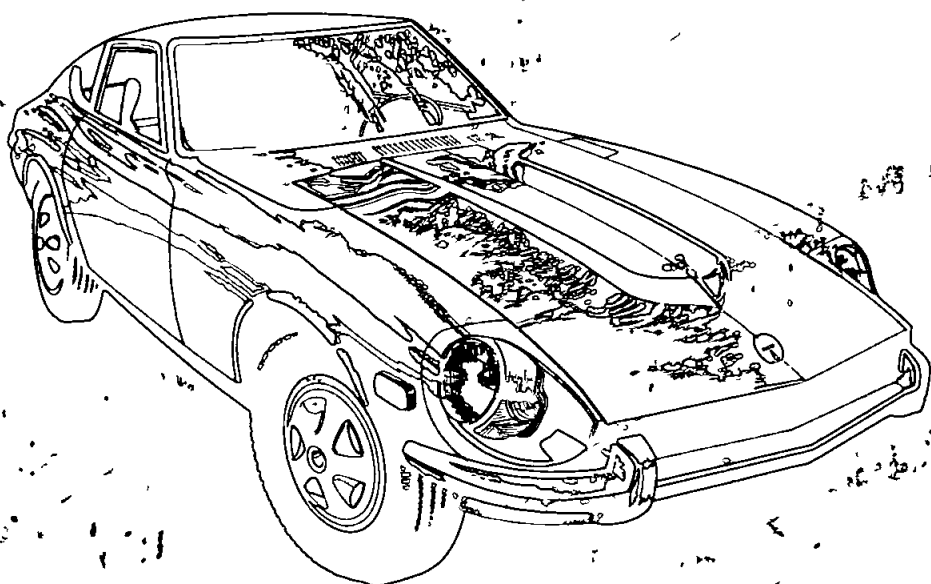
Datsun

CHILTON'S
Repair &
Tune-Up
Guide

Repairs
Specifications
Do-It-Yourself Maintenance

1961-1972 Sports cars

1961
1962
1963
1964



CHILTON'S Repair and Tune-Up Guide

Datsun

Second Edition

ILLUSTRATED

Prepared by the

Automotive Editorial Department

Chilton Book Company

Chilton Way

Radnor, Pa 19089

215—687-8200

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CHILTON BOOK COMPANY

RADNOR, PENNSYLVANIA

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Published in Radnor, Pa , by Chilton Book Company
and simultaneously in Ontario, Canada,
by Thomas Nelson & Sons, Ltd
Second Edition All Rights Reserved
ISBN 0-8019-5660-9 Library of Congress Catalog Card No 72-188664
Manufactured in the United States of America *Fifth Printing, April 1974*

Acknowledgments

Devon Datsun, West Lancaster Avenue, Devon, Pa , 19333
Nissan Motor Corporation in USA, Secaucus, N J 07094

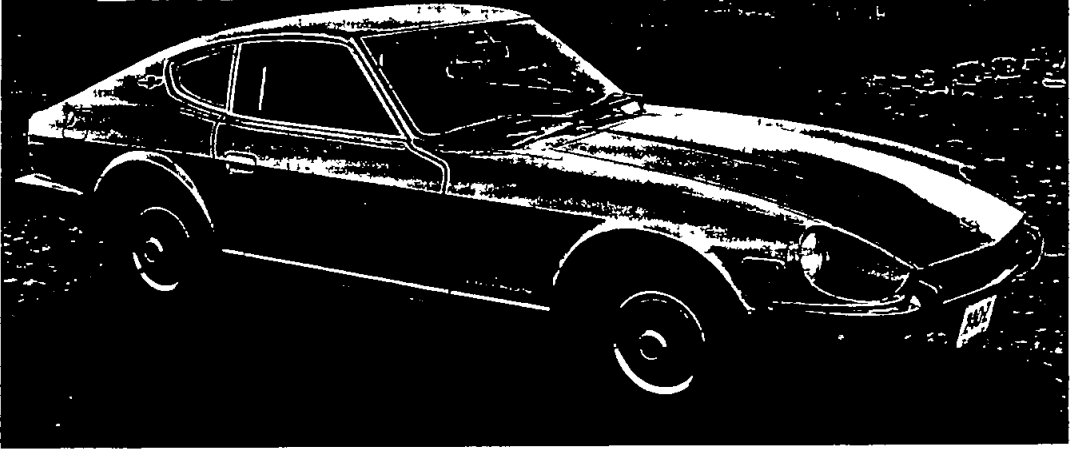
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General Information, Lubrication and Maintenance



Introduction

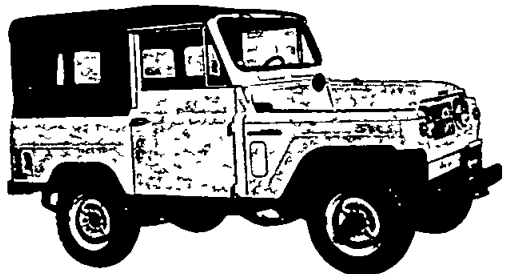
Datsun, then known as DAT, began producing cars in 1913. The name DAT was derived from the beginning letters of the three founder's last names. The name Datson, for son of DAT, was used later and finally evolved into Datsun. The first Datsun was a two seater with motorcycle fenders and a four-speed transmission. In 1933, a reorganization led to the formation of Nissan Motor Company, Ltd., which is now the parent company of Datsun. Datsun cars made their first United States appearance at the 1958 Los Angeles Imported Car Show. Cars were first imported in 1960, and since then sales have risen to a yearly total of over 150,000.

Datsun has had much success in several types of automotive competition. A Datsun 1600 roadster took the F-Production class trophy in 1967 and 1970. Datsun 240Z's swept the first three places in the C-Production class at the 1970 American Road Race of Champions. The 510 two door sedan has been declared the overall winner in the 2.5 Liter Challenge of SCCA Trans-Am racing. A Datsun 510 four door sedan won the 1970 East African Safari and in 1971, the same grueling cross-country rally was won by a 240Z sports car.

The intention of *Chilton's Repair and Tune-up Guide for the Datsun* is to cover maintenance and repair procedures that the

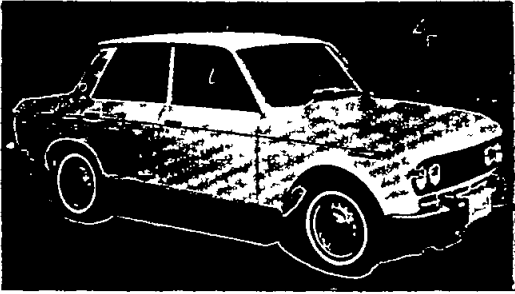
owner or the average repair shop will be able to perform without special tools or equipment. Jobs that absolutely require special factory tools, such as automatic transmission overhaul, are best left to an authorized Datsun dealer. Datsun models that were imported since 1961 are covered. The tune-up and troubleshooting section is especially designed to enable the owner to diagnose and correct any minor problems before they become major repair jobs. A chapter is devoted to each operating system and includes repair and overhaul procedures.

Model Identification



Nissan Patrol, four-wheel drive (L60)

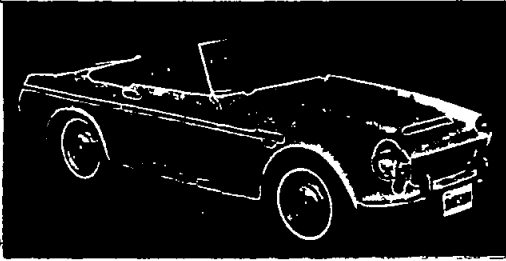
2 GENERAL INFORMATION



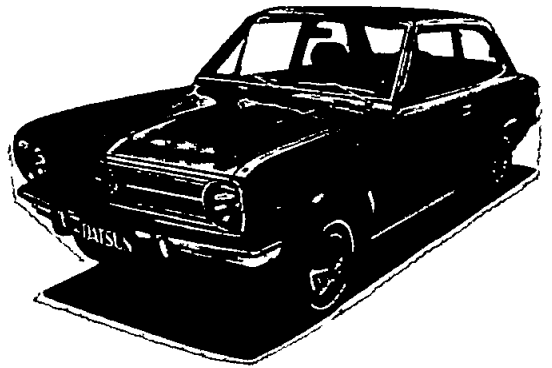
RL411 sedan PL410 and PL411 are similar with slightly different grilles



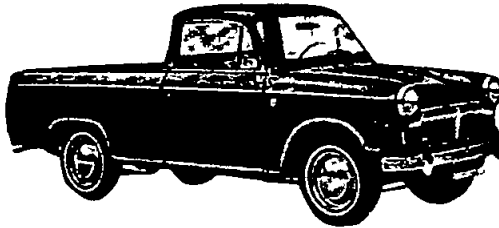
PL510 sedan, 1970 model



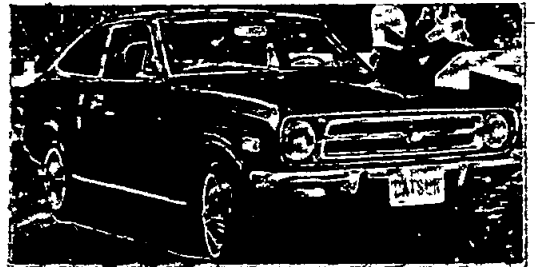
SPL310 1,500 cc sportscar, SPL311 1,600 cc sportscar, SRL311 2,000 cc sportscar



LB110 1,200 cc sedan



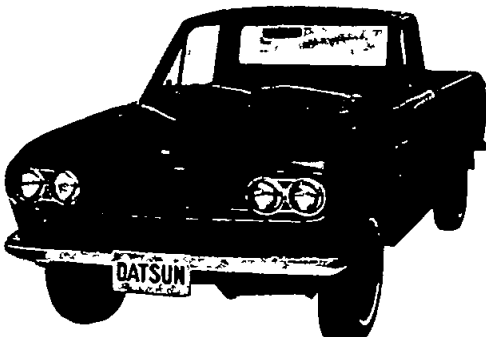
L320 1,200 cc pickup



KLB110 1,200 cc coupe



L520 1,300 cc pickup



PL521 1,600 cc pickup

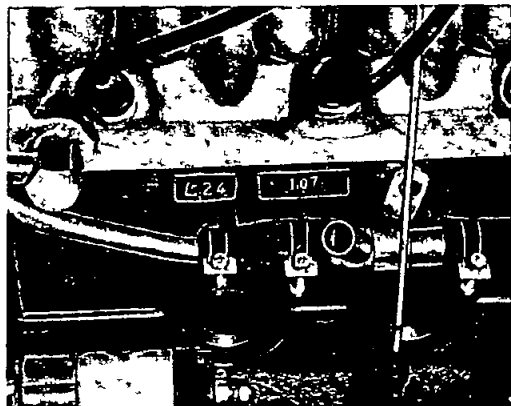


HLS30 (240 Z) coupe

Serial Number Identification

ENGINE

The engine number, on the Nissan Patrol engine, is stamped on the lower right front corner of the cylinder block. On all other models, the engine number is stamped on the right side top edge of the cylinder block. The engine serial number is preceded by the engine model code.



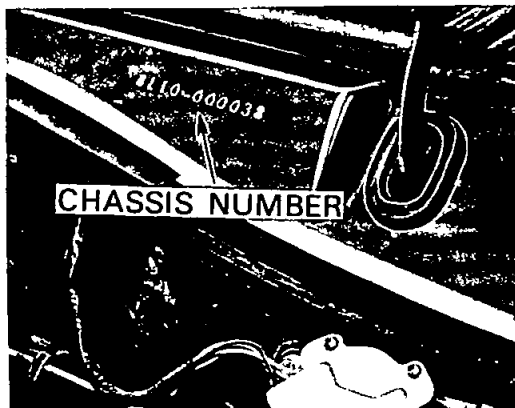
Engine model and serial number, L24 OHC six

Engine Identification Chart

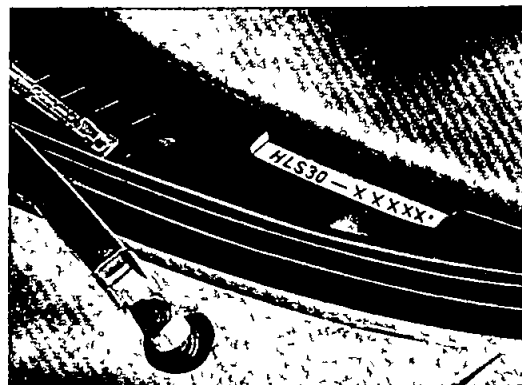
Number of Cylinders	Cu In Displacement (cc Displacement)	Type	Engine Model Code
6	241.3 (3,956)	OHV	P
4	72.5 (1,189)	OHV	E1
4	90.6 (1,488)	OHV	G
4	79.0 (1,299)	OHV	J
4	97.3 (1,595)	OHV	R
4	120.9 (1,982)	OHC	U20
4	97.3 (1,595)	OHC	L16
6	146.0 (2,393)	OHC	L24
4	71.5 (1,171)	OHV	A12

CHASSIS

The Nissan Patrol and L320 pickup chassis number is located on top of the right frame member, in the engine compartment. On all other models, the chassis number is on the firewall under the hood. Late model vehicles also have the chassis number on a plate attached to the top of the instrument panel on the driver's side. The chassis serial number is preceded by the model designation.



Chassis model and serial number, LB110 1,200 cc sedan



Chassis model and serial number, 240 Z coupe

VEHICLE

The vehicle identification plate is attached to the hood ledge or the firewall. This plate is mounted on the right front suspension strut housing on the HLS30 (240 Z). The identification plate gives the vehicle model, engine displacement in cc, SAE horsepower rating, wheelbase, engine number, and chassis number.

DATSUN		TYPE HLS30
ENGINE CAPACITY	2,393 cc	
MAX HP at RPM	151 HP at 5,600 rpm	
WHEEL BASE	2,305 mm	
ENGINE NO	L24- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
CAR NO	HLS30- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
NISSAN MOTOR CO., LTD. YOKOHAMA JAPAN		

Vehicle identification plate, 240 Z coupe (HLS30)

4 GENERAL INFORMATION

Vehicle Identification

<i>Year</i>	<i>Model</i>	<i>Serial Numbers</i>	
1961-1969	L60 Patrol (4 wheel drive)		
To 1966	L320 (1200 Pickup)		
1965	L520 (1300 Pickup)	L520-00001—L520-004603	April 1965—Sept 1965
1966	L520 (1300 Pickup)	L520-004604—L520-019000	Oct 1965—Sept 1966
1967	L520 (1300 Pickup)	L520-019001—L520-160000	Oct 1966—Sept 1967
1968	L520 (1300 Pickup)	L520-160001—termination	Oct 1967—termination
1968	L521 (1300 Pickup)	L521-000001—L521-038554	May 1968—Sept 1968
1969	L521 (1300 Pickup)	L521-038555—L521-180000	Oct 1968—June 1969
1970	PL521 (1600 Pickup)	PL521-180071—PL521-255904 PL521-255905—PL521-350000 PL521-350001—	July 1969—Sept 1969 Oct 1969—Jan 1970 Feb 1970—
1963-1965	PL410 Sedan		
1965-1967	PL411 Sedan	PL411-300000	
1966-1968	RL411 Sedan		
From 1971	LB110 (1200 Sedan)	LB110-00001	
From 1971	KLB110 (1200 Coupe)	LB110-70001	
1968	PL510 (1600 Sedan)	L510-00011—L510-009999 PL510-00011—PL510-040010	Oct 1967—Sept 1968
1969	PL510 (1600 Sedan)	L510-010000— PL510-040011—	Oct 1968—Sept 1969
1970	PL510 (1600 Sedan)	L510-040000— PL510-095000—	Oct 1969— July 1969—
1971	PL510 (1600 Sedan)	PL510-200011—	Aug 1970—
1968	WPL510 (1600 Wagon)	WPL510-800001—WPL510-805000	Oct 1967—Sept 1968
1969	WPL510 (1600 Wagon)	WPL510-805001—	Oct 1968—
1970	WPL510 (1600 Wagon)	WPL510-842001— WPL510-11499—	Oct 1969— July 1969—
1971	WPL510 (1600 Wagon)	WPL510-883501—	Aug 1970—
1962-1965	SPL310 (1500 Roadster)		
1965, 1966, 1967	SPL311 (1600 Roadster)	SPL311-10001—SPL311-11000	To engine No R-40000
Late 1967	SPL311 (1600 Roadster-Metric)	SPL311-11001—SPL311-17000	From engine No R-40001—Sept 1967
1968	SPL311 (1600 Roadster)	SPL311-17001—SPL311-24000	Oct 1967—Sept 1968
1969	SPL311 (1600 Roadster)	SPL311-24001—SPL311-27000	Oct 1968—June 1969
Late 1967	SRL311 (2000 Roadster)	SRL311-00001—SRL311-01000	To Sept 1967
1968	SRL311 (2000 Roadster)	SRL311-01001—SRL311-03000	Oct 1967—Sept 1968
1969	SRL311 (2000 Roadster)	SRL311-07001—SRL311-13000	Oct 1968—June 1969
From 1971	HLS30 (240 Z Coupe)	HLS30-03013—	

Lubrication Recommended Lubricants

Temperature (°F)	Under 10	10-32	32-90	Over 90
Engine Oil API Designation MS, SD, SE	10W-30, 10W, or 5W-20	10W-30, 10W-40, or 10W	10W-30, 10W-40, or 20W	10W-30, 10W-40, 20W-40, or 30W *
Gear Oil API Designation MP, EP, or MPS	80	90	90	140

* 40W may be used for high speeds in temperatures over 90

Recommended Fuels

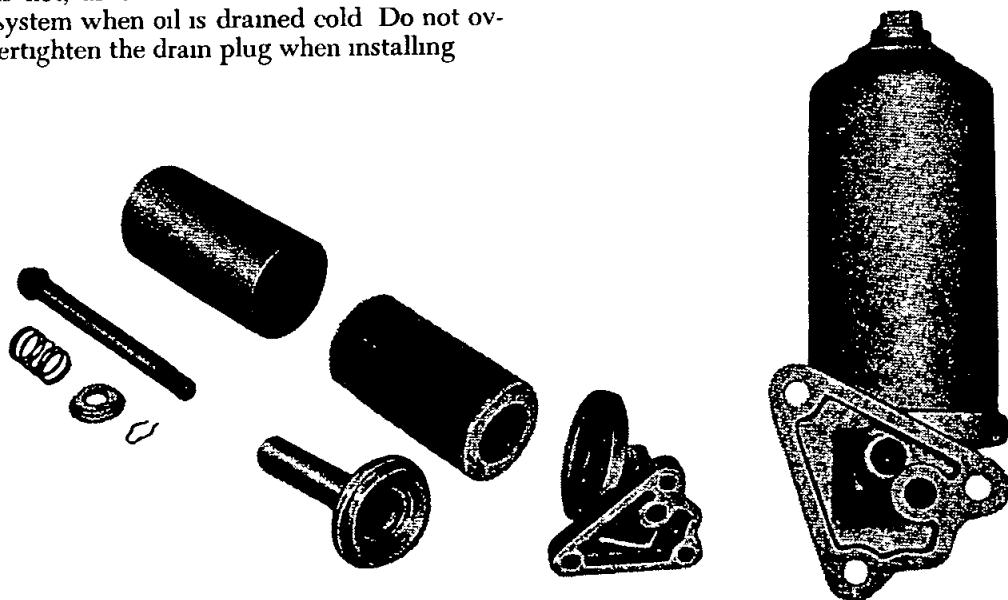
Regular	Premium
Patrol, L320 Pickup, PL410 Sedan, L520 Pickup, L521 Pickup, PL411 Sedan, RL411 Sedan, 510 Sedan and Wagon, PL521 Pickup, LB110 Sedan and Coupe	SPL310, SPL311, and SRL311 Roadsters, 240Z Coupe

OIL CHANGES

All Datsun engines use a wet sump type oil supply in their lubrication systems. Draining the oil is accomplished by removing the drain plug at the bottom of the oil pan. Always drain the oil when the engine is hot, as contaminants will remain in the system when oil is drained cold. Do not overtighten the drain plug when installing.

OIL FILTER

The oil filter should be replaced every 6,000 miles on all models. Some early engines use a replaceable inner element within a permanent housing. All others use a throw-away cartridge type filter.



Components of replaceable element oil filter

Lubrication Intervals

Service	Every 500 miles	Every 1,000 miles	Every 2,000 miles	Every 3,000 miles	Every 5,000 miles	Every 12,000 miles	Every 24,000 miles	Every 30,000 miles
Grease suspension	L320	SPL310	L60 L520 L521 PL521 PL410		PL411 SPL311 SRL311	Early PL510 WPL510 RL411		Late PL510 WPL510 LB110 KLB110 HLS30
Change engine oil ^①	L320		L60 L520 L521 PL521 SPL310 PL410	RL411 PL411 SPL311 SRL311 PL510 WPL510 LB110 KLB110 HLS30				
Change oil filter ^①					All models			
Change transmission oil ^①					L320 PL410 SPL310	L60 L520 L521 PL521 RL411 PL411 SPL311 SRL311 Early PL510 WPL510	Late PL510 WPL510 LB110 KLB110 HLS30	
Change differential oil ^①					L320 PL410 SPL310	L60 L520 L521 PL521 RL411 PL411 SPL311 SRL311	PL510 WPL510 LB110 KLB110 HLS30	
Pack wheel bearings					L320 PL410 SPL310	L60 L520 L521 PL521	RL411 PL411 SPL311 SRL311	PL510 WPL510 LB110 KLB110 HLS30

^① These services should be performed after the first 600-1000 miles on a new car or rebuilt units

Oil Filter Applications

Year	Model	AC	Fram	Furolator
1962-65	Patrol, SPL310, SPL311, PL410, L520 Pickup, L320 Pickup	AC-32A	CH-820PL	MF-52A
1966-On	PL411, LB110, KLB110, L520 Pickup, RL411, SPL311, SRL311, L521 Pickup	PF-34	PH-2825	PER-42
1968-On	PL521 Pickup, 24OZ, PL510, WPL510	—	PH-2850	PER-17

Engine	Filter type	Location on engine
P	Replaceable element	Left side, on bracket
E1, G	Replaceable element	Right side, on bracket
R	Replaceable element or cartridge	Right side, on bracket
J, U20	Cartridge	Right side, on bracket
L16, L24	Cartridge	Right side, screwed into block
A12	Cartridge	Right side, on oil pump

R&R, Replaceable Element Filter

- 1 Unscrew mounting bolt which passes through housing
- 2 Remove housing, element seat, and element Discard element
- 3 Wash out housing in a safe solvent Dry thoroughly If bolt is removed from housing, note location of spring, felt washer, and rubber washer
- 4 Install new rubber sealing ring into bracket A tiny bit of grease may help keep the ring in position
- 5 Install new element into housing Replace element seat Torque bolt to 14-18 ft lbs

R&R, Throw-Away Cartridge Filter

- 1 Unscrew cartridge and discard A strap wrench is a great help in removing these filters If the cartridge has been overtightened and cannot be unscrewed, drive a long punch through it Then use the punch as a handle to unscrew the cartridge



Removing spin-off oil filter

- 2 Screw on the new cartridge with a new gasket Tighten it by hand until it just contacts the block or bracket
- 3 Tighten the cartridge 1/2 turn farther by hand Overtightening these cartridges will cause leaking or extreme difficulty in removing

Routine Maintenance

AIR CLEANER

All Datsuns, except the Patrol, use a replaceable paper element air cleaner The Patrol element is permanent, and should be washed with solvent and refilled with oil Air filters should be cleaned or replaced every 20,000 miles or sooner under severe conditions

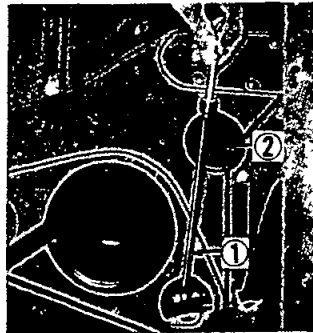
FLUID LEVEL CHECKS

Engine Oil

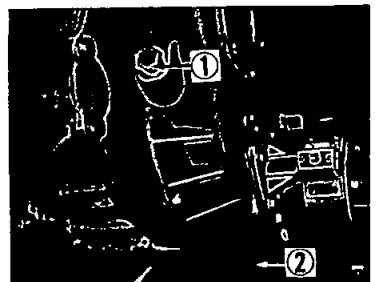
All Datsuns use the conventional dipstick oil level gauge Maintain the oil level between the high and low marks

Transmission

Datsun manual transmissions have two oil level checking methods Depending on the transmission type, the oil level is checked either by a dipstick located under a rubber cover over the transmission or at the filler plug on the side of the transmission The dipstick is marked for the correct oil level On the other type, gear oil level should be maintained just below the filler plug The Patrol transmission is checked at the top by a dipstick, and the transfer case at the side filler plug The automatic transmission dipstick is at the right rear of the engine It has a scale on each side, one for COLD and the other for HOT The transmission is considered hot after 15 miles of highway driving



Checking Patrol transmission oil level



Transfer case plugs

8 GENERAL INFORMATION

- 1 Park on a level surface with the engine running. If transmission is not hot, shift into Drive, Low, then Neutral. Shift into Neutral (PL510, WPL510) or Park (HLS30). Block the wheels and set the handbrake.
- 2 Remove, wipe, and replace dipstick. Check fluid level on appropriate scale. The level should be at F.
- 3 If fluid level is below F, leave the engine running and add fluid through the dipstick tube until the F mark is reached.

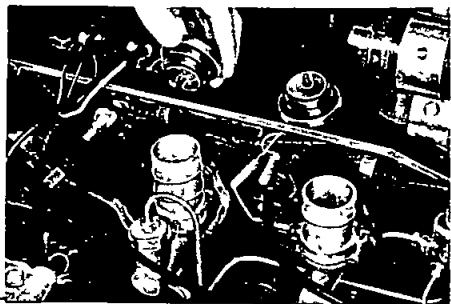
CAUTION Do not overfill, as this may cause transmission malfunction and damage.

Fluids recommended by the manufacturer are:

British BW Unit	American BW Unit	Nissan Unit
See owner's manual	Caltex (Texaco) Texamatic Fluid 6673	Caltex (Texaco) Texamatic Fluid 6991 or Texamatic 4571A
	Shell Automatic Transmission Fluid Dexron	Chevron RPM ATF Special
	BP Autran DX	Castrol TQF
	Mobil ATF 220	BP Autran B
	Castrol TQ Dexron	Esso (Enco) Clide
	Union ATF Dexron	Mobil ATF 210
	Humble 1956	Shell ATF Donax T7

Brake and Clutch Master Cylinders

Brake and clutch fluid level should be maintained at the normal mark located on the reservoir.



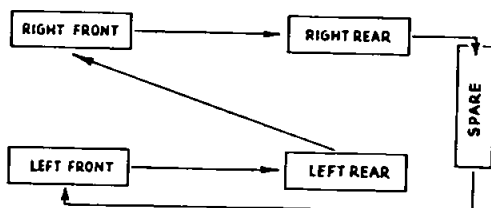
Brake and clutch master cylinders

Rear Axle

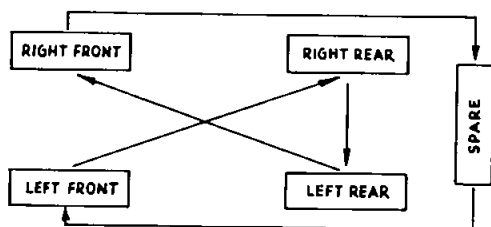
Rear axle oil level should be maintained just below the filler plug located on the rear cover of the third member. Front axle level on the Patrol should be checked at the same time as the rear axle.

TIRE ROTATION

Tires should be rotated according to the proper diagram every 3,000 miles on the L320 pickup and SPL310 Roadster, and every 6,000 miles on all other models.



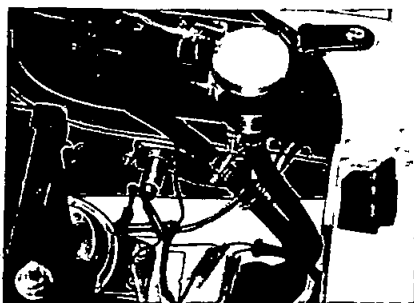
Tire rotation diagram No 1



Tire rotation diagram No 2

FUEL FILTER

All engines have a filter in the fuel line. The filter is mounted in the engine compartment. L16, L24, and A12 engines have a nonserviceable cartridge filter. This unit is simply replaced every 24,000 miles. All other models have a glass bowl type filter, with a removeable element. Both types of filter can be visually checked for the presence of excessive sediment or water.



510 cartridge fuel filter

Capacities and Pressures

Model	Engine Crankcase Refill after Draining (qts)		Transmission Refill after Draining (pts)				Differential (pts)	Fuel Tank (gals)	Cooling System (qts)	Normal Fuel Pressure (psi)	Maximum coolant pressure (psi)
	With Filter	Without Filter	Manual			Auto (total capacity)					
			5-Speed	4-Speed	5-Speed						
L60	3 6	NA	42①				2 6 front and rear	19 0	5 2	NA	NA
PL410	3 3	3 0	3 8				2 0	10 8	5 4	NA	6
SPL310	NA	4 2	4 6				1 8	11 3	6 9	NA	4-6
PL411	NA	3 1	3 8	4 7			2 2	11 0	5 7	NA	6
RL411	NA	3 5	4 3				1 9	11 0	7 1	NA	4-6
SPL311	NA	4 3	4 6				2 0	11 4	8 4	3 4-4 3	4-6
SRL311	NA	4 3	5 4			2 0	11 4	9 0	3 4-4 3	13	
SRL311 with two twin-choke carburetors	NA	7 5	5 4			2 0	11 4	9 0	3 4-4 3	13	
L320	3 8	3 2	4 3				1 8	9 3	5 7	NA	NA
L520, L521	3 8	3 2	4 2				1 7	10 8	5 9	2 1-2 5	6
PL510	5 2	4 4	6 4				11 4②	1 7	11 9	6 8, 7 2 with heater	2 6-3 4 13
WPL510	5 2	4 4	6 4				11 4②	2 1	11 9	6 8, 7 2 with heater	2 6-3 4 13
PL521	4 4	3 6	4 2				1 7	10 8	6 8, 7 4 with heater	2 6-3 4	13
HLS30	4 7	4 3	3 2	3 2	12 8		2 1	15 9	8 5	3 4-4 3	13
LB110	NA	2 9	4 3				1 8	9 3	5 7	NA	13

①—4 8 pts —without power takeoff, 7 8 pts —transfer case

②—1 5 pts —oil cooler

Tire Rotation Patterns

No 1	No 2
L60	SPL311
PL410	SRL311
SPL310	L521
PL411	PL, WPL510
RL411	PL521
L320	HLS30
L520	LB, KLB110

Tire Pressures

Model	Lightly Loaded (psi) front/rear	Heavily loaded or high speed (psi) front/rear
SPL310 SPL311 SRL311	22/22	25 5/25 5
PL410 PL411 RL411	22/22	24/24
PL510 WPL510	24/28	28/32
HLS30	28/28①	32/32
LB110 KLB110	17/17②	22/22②
L320③	22/60	22/60
L520③	22/60	22/60
L521④ PL521	21/25	21/42
L60	22/30-35⑤	24/50-60⑥

- ① 24/24 with non-radial tires
- ② 24/24 with radial tires
- ③ 6 00x14, 6 ply/6 00x14, 8 ply
- ④ 6 00x14, 6 ply/6 00x14, 6 ply
- ⑤ 6 ply
- ⑥ 8 ply

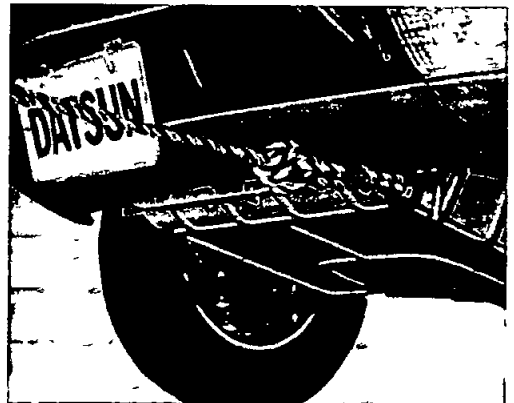
BATTERY

All Datsun models are equipped with a 12-volt battery. Vehicles with the E1 and G engines are unusual in having a positive ground electrical system, rather than the more usual negative ground. The battery is located under the hood in all models except the L60. On the L60, the battery is under the front seat. To gain access to the battery in the HLS30 (240 Z coupe), first open the hood, then the inspection flap in the fender. The inspection flap must be closed before the hood

Pushing, Towing and Jump Starting

Cars equipped with a manual transmission may be push started. Cars with automatic transmissions must never be push started, or towed with the driveshaft con-

ected. To push start a manually shifted car, turn the ignition on, depress the clutch and place the shift lever in high gear. Before pushing, make sure that the bumpers of the cars do not override or body damage could result. Push the disabled car to about 10 or 15 mph and slowly release the clutch pedal. Before pushing or towing with the driveshaft connected, check for engine seizure. Check the oil level. If no oil shows on the dipstick, or if the oil is contaminated by water, further checking may require engine disassembly. **CAUTION** If the car is towed or push started in this condition, a broken crankshaft or bent connecting rod(s) could result. Water leakage into the cylinders causes a hydrostatic lock. Water will not compress, and if the engine is forced to turn over against this trapped water, damage will result.



240Z towing bracket

Unit bodied cars are equipped with towing brackets similar to the one shown for the 240Z. Vehicles with separate frame and body may be towed with the line attached to the bumper brackets or front crossmember. Under no circumstances should a towing connection be made at the steering linkage or suspension members. It is not recommended that a car be flat towed, i.e., with all four wheels on the ground, farther than 50 miles or faster than 35 mph unless the driveshaft is disconnected. On cars equipped with a steering wheel lock, turn the ignition to the on position if steering control is necessary. If there is known or suspected engine-drive-line damage or if it is necessary to tow longer distances and/or at higher speeds, tow the car with either the rear wheels raised or on a dolly, or disconnect the driveshaft.

Maintenance Intervals

<i>Service</i>	<i>Every 2,000 miles</i>	<i>Every 3 000 miles</i>	<i>Every 6,000, miles</i>	<i>Every 12,000 miles</i>
Torque cylinder head bolts ^①	L320	SPL310 PL410	L60 L520 L521 PL521 PL411 RL411 SPL311 SRL311	PL510 WPL510 HLS30 LB110 KLB110
Adjust valves			All models	
Clean and regap spark plugs	L60, L320 L520 L521 PL521	All other models		
Replace spark plugs				All models
Regap breaker points, check timing	L320 L520 L521 PL521	PL410 PL411 RL411 SPL310 SPL311 SRL311 PL510 WPL510 LB110 KLB110 HLS30	L60	
Replace breaker points, check timing				All models
Rotate tires ^②		L320 SPL310	All other models	
Check front end alignment		L320 PL410 SPL310		All other models
Adjust brakes, check lining ^③	L520 L521 PL521			All other models
Check emission control systems				All models

- ① Perform this operation after the first 600-1000 miles on a new car or a rebuilt engine
- ② Do not rotate tires on trucks with 6/8 ply tires, front/rear
- ③ Every 1,000 miles on L320, PL410, SPL310



Tune-up and Troubleshooting

Tune-up Procedures

SPARK PLUGS

Clean any foreign material from around the spark plugs prior to removing them. Use a spark plug socket with a rubber insert to remove the plugs. This will prevent cracking the porcelain insulator. Each spark plug should be individually inspected and, if necessary, replaced. Refer to the spark plug diagnosis section for an analysis of plug tip conditions. Clean reusable spark plugs and file the center electrode flat. Adjust the spark plug gap according to the Tune-Up Specifications chart with a wire type feeler gauge. Inspect the spark plug hole threads for rust and cleanliness and, if necessary, use a 14 mm plug tap to clean the threads. Lightly oil the threads and torque the spark plugs to 11–15 ft lbs.

BREAKER POINT R&R

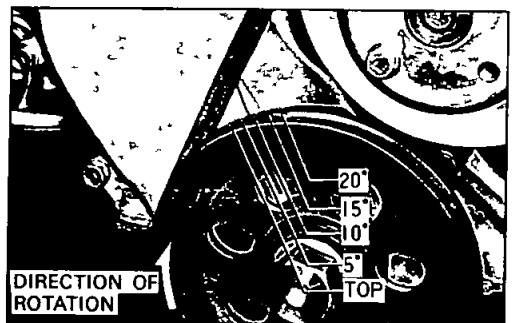
Release the distributor cap latches and remove the cap and rotor. Check the points for pitting or burning. Use a point file to clean the points. Turn the engine by hand until the distributor cam opens the breaker points. Loosen the setscrew. Adjust the points to the specified gap using a feeler gauge. Tighten the setscrew and recheck the gap. Apply a trace of bearing lubricant to the breaker cam. Replace the cap and rotor. Point dwell may be checked at this point if a dwell meter is available. Point

dwell figures are given in the Tune-Up Specifications Chart. The ignition timing should be checked each time the breaker points are adjusted.

NOTE: Some distributors are equipped with dual points. Adjust both point sets to the specified gap.

IGNITION TIMING

Ignition timing should be adjusted with the distributor vacuum line disconnected and the engine running at idle speed. A stroboscopic timing light must be used to obtain an accurate setting. The setting is indicated by the pointer on the engine front cover and the markings on the crankshaft pulley. The top dead center, or 0°, mark is located at the extreme left. The next mark may be either 5° or 10° before top dead center, depending on the engine model. The succeeding marks are 5° apart. To set the timing, disconnect the vacuum line and loosen the distributor clamp. Connect the



Timing marks, A12 engine

Tune-up Specifications

Year	Model	Spark Plugs		Distributor		Basic Ignition Timing (deg)	Compression Pressure (psi) @ 350 rpm	Valves Clearance (in.)		Intake Opens (deg) BTDC	Idle Speed (rpm)	Air Fuel Ratio (1) at idle	Per-centage of CO at idle
		Make Type	Gap (in.)	Point Dwell (deg)	Point Gap (in.)			In	Ex				
1981-1969	L60	NGK BP-6E	028-032	35-45	018-022	10 BTDC @ 450	145	016 Hot	016 Hob	N A	450	N A	N A
1969	L60 with emission control	NGK BP-6E	028-032	35-45	020	0 TDC @ 700	145	016 Hot	016 Hot	N A	750	N A	N A
1963-1965	PL410	NGK BP-6E, Hitachi L45	028-032	49-55	018-022	15 BTDC @ 600	165	014 Hot	014 Hot	14	600	N A	N A
1962-1965	SPL310	N A	028-032	49-55	018-022	16 BTDC @ 600	182	017 Hot	017 Hot	20	600	N A	N A
1965-1967	PL411	NGK BP-6E	028-032	49-55	018-022	15 BTDC @ 600	165	014 Hot	014 Hot	14	700	N A	N A
1966-1968	RL411	N A	028-032	49-55	018-022	18 BTDC @ 700	182	017 Hot	017 Hot	20	700	N A	N A
1965-1969	SPL311	NGK BP-6E	028-032	49-55	018-022	16 BTDC @ 600	181	017	017	20	600	N A	N A
1969	SPL311 with emission control	NGK BP-6E	032-036	49-55	018-022	0 TDC @ 700	181	017	017	20	700	12.0-12.5 ⁽³⁾	5-7 ⁽⁴⁾ 18-22 ⁽⁴⁾

Tune-up Specifications, continued

1967-1969	SRL311	NGK BP- 6E	028- 032	49- 55	018- 022	16 BTDC @ 600	166	008 Hot	012 Hot	18	600	N A	N A
1969	SRL311 with emission control	NGK BP- 6E	032- 036	49- 55	018- 022	0 TDC @ 700	166	008 Hot	012 Hot	18	700	12 0- 12 5③	5-7④ 1 8- 2 2⑥
1967-1969	SRL311 with two twin- choke side- draft carburetors	N A	028- 032	51- 58	016- 022	20 BTDC @ 700④	166	008 Hot	012 Hot	30	700	N A	N A
To 1966	L320	NGK BP- 6E	028- 032	49- 55	018- 022	15 BTDC @ 600	163	014	014	14	600	N A	N A
1965-1968	L520	NGK BP- 6E	028- 032	50- 55	018- 022	8 BTDC @ 600⑤	163	014	014	14	600	N A	N A
1969	L520 with emission control, L521	NGK BP- 6E	032- 036	50- 55	018- 022	0 TDC @ 700	163	014	014	14	700	13 3- 14 5	1-3
1968-1971	PL510, WPL510	NGK BP- 6E	028- 032	49- 55	018- 022	10 BTDC @ idle speed	171	008 Cold, 010 Hot	010 Cold, 012 Hot	16 PL510, 12 WPL510	600-700 manual, 575-650 automatic	N A	N A
1969-1971	PL510, WPL510 with emission control	NGK BP- 6E	032- 036	49- 55	018- 022	5 ATDC @ idle speed	171	008 Cold, 010 Hot	010 Cold, 012 Hot	16 PL510, 12 WPL510	700 manual, 600 automatic	12 0- 12 5③	1969 2 0- 2 4 1970 2-4③
1970-1971	PL521 with emission control	NGK BP- 6E	032- 036	49- 55	018- 022	10 BTDC @ 700	163	008 Cold, 010 Hot	010 Cold, 012 Hot	12	700	N A	2-4 ⑤

Tune-up Specifications, continued

1971	HLS30 with emission control	NGK BP-6E	N A	35-41	016-020	5 BTDC @ 750 ⑦	171-185	008 Cold, 010 Hot	010 Cold, 012 Hot	16	750 manual, 600 automatic	N A	5-7 ⑤
1971	HLS30	NGK BP-6E	031-035	35-41	018-022	17 BTDC @ 550	171-185	008 Cold, 010 Hot	010 Cold, 012 Hot	16	550	N A	N A
1971-1972	LB110, KLB110 with emission control	NGK BP-6E, Hitachi L46P	031-035	49-55	018-022	5 BTDC @ 700	193	010 Cold, 014 Hot	010 Cold, 014 Hot	14	700	N A	2-3
1972	PL510, WPL510 with emission control	NGK BP-6E	032-036	49-55	018-022	7 BTDC @ idle speed	171	008 Cold, 010 Hot	010 Cold, 012 Hot	16 PL510, 12 WPL510	700 manual, 600 automatic	12 0-12 5③	2
1972	All other models												

- ①—Torque to 11-15 ft lbs
- ②—NGK BP-6E corresponds to Autolite AG22 Bosch W175T30
- ③—Air pump disconnected
- ④—Vacuum line disconnected
- ⑤—Some early models are set at 15 BTDC @ 600
- ⑥—Air pump connected
- ⑦—Automatic with dual point distributor OTDC @ 600 above 40°F, 10BTDC @ 600 below 40°F
- ⑧—See engine compartment sticker for tune-up specifications

NOTE Emission control requires a very precise approach to tune-up Timing and idle speed are peculiar to the engine and its application, rather than to the engine alone Data for the particular application will be found on a sticker in the engine compartment on all late models The results of any adjustments or modifications should be checked with an air-fuel or CO meter