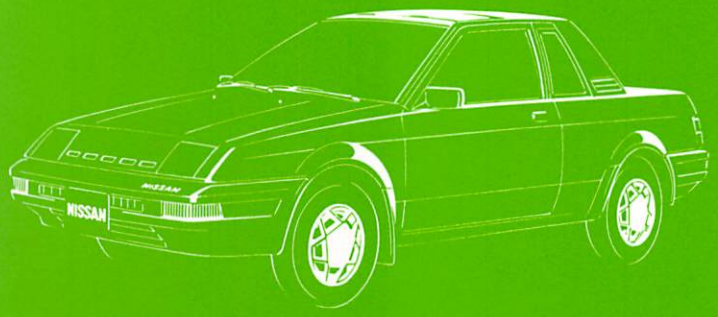


DATSUN

1983 DATSUN NISSAN PULSAR NX

SERVICE MANUAL SUPPLEMENT-II

TURBO

THE NAME OF QUALITY
NISSAN
NISSAN MOTOR CO.,LTD.

NISSAN PULSAR NX

Model N12 Series

FOREWORD

This service manual has been prepared primarily for the purpose of assisting service personnel in providing effective service and maintenance of the 1983 NISSAN PULSAR NX series for TURBO vehicles equipped with a manual transmission.

This manual includes procedures for maintenance, adjustments, removal and installation, disassembly and assembly of components, and trouble-shooting.

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. If your NISSAN model differs from the specifications contained in this manual, consult your NISSAN/DATSUN dealer for information.

The right is reserved to make changes in specifications and methods at any time without notice.

NISSAN MOTOR CO., LTD.

QUICK REFERENCE INDEX

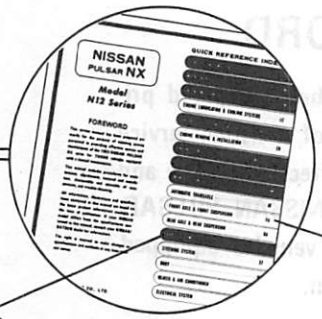
HOW TO USE THIS MANUAL

- This Service Manual is designed as a guide for servicing models equipped with the E15ET engine with M/T (model RS5F31A).

- This manual includes service procedures specified for models equipped with the E15ET engine with M/T (model RS5F31A).
  This manual does not contain procedures which are the same as those for vehicles without the E15ET engine with M/T (model RS5F31A).
  Please use this manual is conjunction with the NISSAN PULSAR NX series Service Manual (Pub. No. SM3E0N12U0) and the NISSAN PULSAR NX series with TURBO Service Manual (Pub. No. SM3E-N12SU0).

Servicing of TURBO vehicles equipped with M/T (model RS5F31A)

Specific section titles are printed white on a black background in the QUICK REFERENCE INDEX.



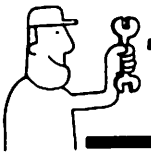
Those sections which are printed black on a white background are not contained in this manual.

YES

This Service Manual contains information on the modifications resulting from the installation of the E15ET engine with M/T (model RS5F31A).
The section titles found in the new and old Service Manuals are as indicated below.

NO

Service procedures are the same as those for the non-TURBO series and TURBO vehicles equipped with A/T (model RL3F01A). Carry out the servicing of TURBO vehicles equipped with A/T (model RL3F01A) in accordance with the Service Manual for non-TURBO series and TURBO vehicles equipped with A/T (model RL3F01A).



IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the mechanic and the efficient functioning of the vehicle.
The service methods in this Service Manual are described in such a manner that the service may be performed safely and accurately.
Special service tools have been designed to permit safe and proper performance of service. Be sure to use them.

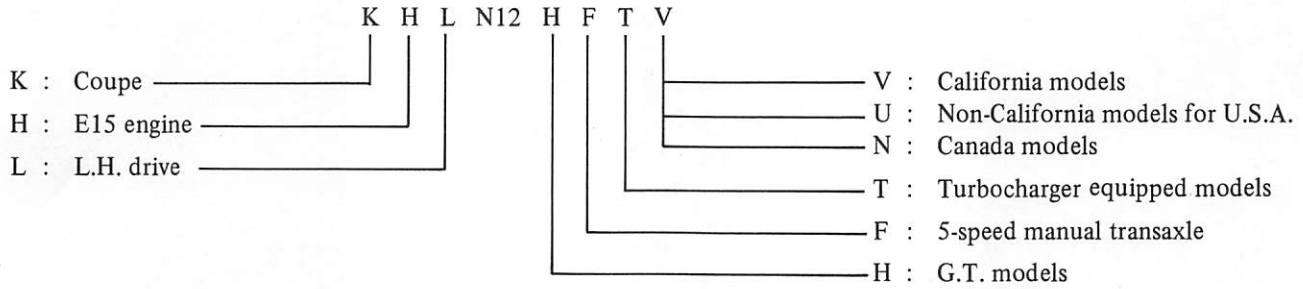
Service varies with the procedures used, the skills of the mechanic and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first completely satisfy himself that neither his safety nor the vehicle's safety will be jeopardized by the service method selected.

SECTION GI

MODEL VARIATION

Destination	Body	Grade	Model	Engine	Transaxle	Road wheel size ... offset mm (in)	Tire size
California	Coupe	GT	KHLN12HFTV	E15ET	RS5F31A	4-1/2J×13 (Steel) ... 42 (1.65) 5J×13 (Aluminum) ... 40 (1.57)	175/70SR13
Non-California			KHLN12HFTU				
Canada			KHLN12HFTN				

Prefix and suffix designations



SECTION MA

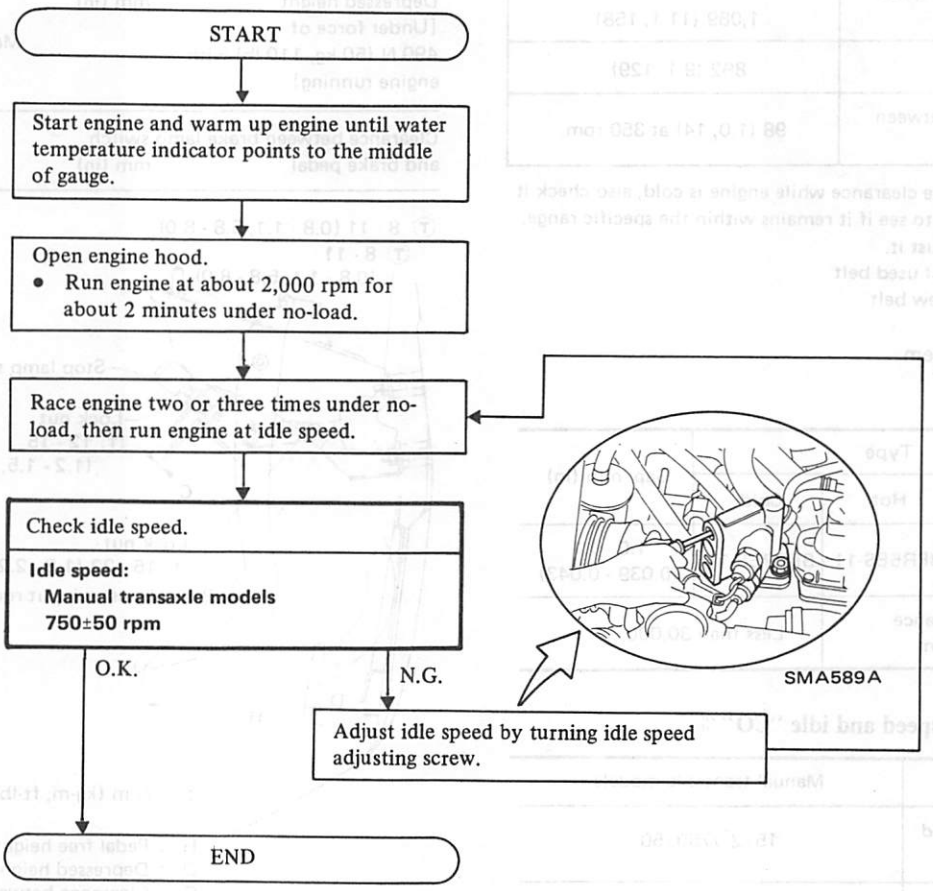
ENGINE MAINTENANCE

AFTER ENGINE WARM-UP

ADJUSTING IDLE RPM (U.S.A.)

Preparation

1. Connect engine tachometer in its proper position.
2. On air conditioner equipped models, the air conditioner system should be "OFF".
3. Apply parking brake and block both front and rear wheels with chocks.
4. The electrical components (lights, heater, all accessories, etc.) should be turned off so that idle speed can be inspected and/or adjusted accurately. (Refer to EF & EC section.)
5. Make the check after the radiator cooling fan has stopped. If it is operating, wait until it stops.



SERVICE DATA AND SPECIFICATIONS (S.D.S.)

ENGINE MAINTENANCE

INSPECTION AND ADJUSTMENT

Basic mechanical system

Valve clearance mm (in)	Hot	Intake	0.28 (0.011)
		Exhaust	0.28 (0.011)
	Cold*1	Intake	0.22 (0.009)
		Exhaust	0.22 (0.009)

Drive belt deflection (Cold)	Used*2	New*3
Alternator mm (in)	13 - 17 (0.51 - 0.67)	10 - 14 (0.39 - 0.55)
Air conditioner mm (in)	9 - 11 (0.35 - 0.43)	7 - 9 (0.28 - 0.35)
Power steering mm (in)	7 - 9 (0.28 - 0.35)	6.5 - 8.5 (0.256 - 0.335)
Pushing force N (kg, lb)	98 (10,22)	
Engine compression pressure kPa (kg/cm², psi) Standard	1,089 (11.1, 158)	
Minimum	892 (9.1, 129)	
Differential limit between cylinders	98 (1.0, 14) at 350 rpm	

*1 After checking valve clearance while engine is cold, also check it when engine is hot to see if it remains within the specific range. If it does not readjust it.
*2 Adjust deflection of used belt
*3 Set deflection of new belt

Ignition and fuel system

Spark plugs

Destination	Type			Gap mm (in)
	Standard	Hot	Cold	
All	BPR6ES-11	BPR5ES-11	BPR7ES-11	1.0 - 1.1 (0.039 - 0.043)
High tension cable resistance ohm			Less than 30,000	

Ignition timing, idle speed and idle "CO" %

	Manual transaxle models
Ignition timing/idle speed (B.T.D.C. degree/rpm)	15±2°/750±50
"CO"% at idle speed	Idle mixture screw is preset and sealed at factory

Emission control system Unit: kPa (mmH₂O, inH₂O)

Vapor line leakage test	Supplied pressure	3.923 (400, 15.75)
	Pressure variation	Less than 0.245 (25, 0.98)

TIGHTENING TORQUE

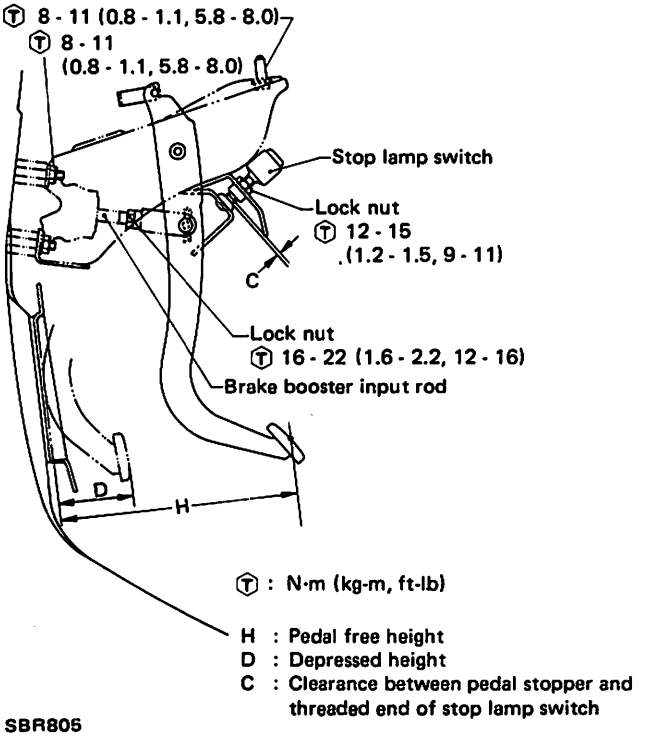
Unit	N·m	kg-m	ft-lb
Valve rocker adjusting nut	16 - 21	1.6 - 2.1	12 - 15
Oil pan drain plug	35 - 47	3.6 - 4.8	26 - 35
Spark plug	20 - 29	2.0 - 3.0	14 - 22

CHASSIS AND BODY MAINTENANCE

BRAKE SYSTEM

Brake pedal

Pedal ratio		4.2
Maximum stroke		140
Free height	mm (in)	194 - 204 (7.64 - 8.03)
Depressed height [Under force of 490 N (50 kg, 110 lb) with engine running]	mm (in)	More than 80 (3.15)
Clearance between brake lamp switch and brake pedal	mm (in)	0 - 1 (0 - 0.04)



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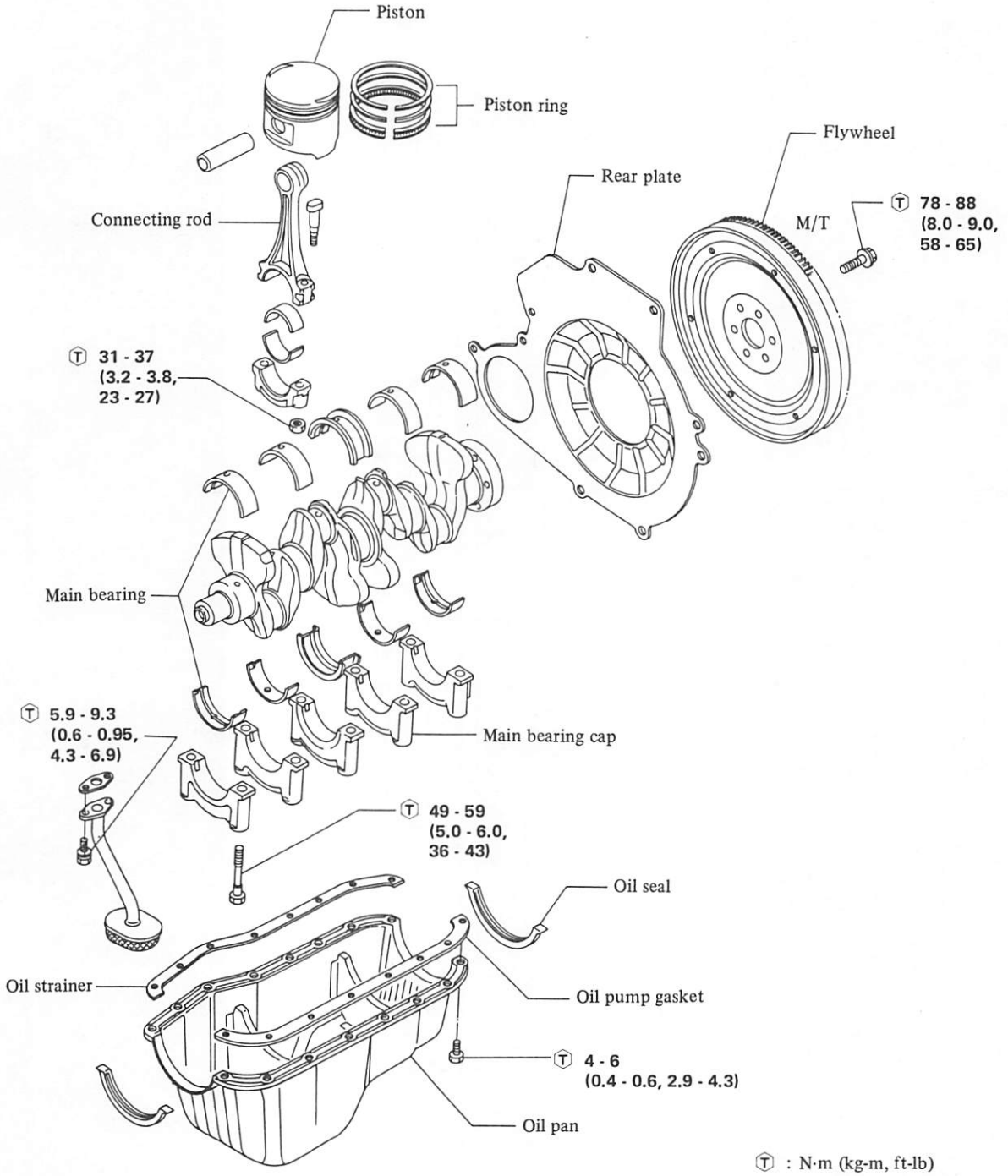
SECTION EM

ENGINE COMPONENTS (Internal parts)



Ⓣ : N·m (kg-m, ft-lb)

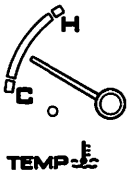
SEM193A

SECTION EF & EC

MIXTURE RATIO FEEDBACK SYSTEM INSPECTION

Preparation

1. Make sure that the following parts are in good order.
   - Battery
   - Ignition system
   - Engine oil and coolant levels
   - Fuses
   - E.C.C.S. harness connectors
   - Vacuum hoses
   - Air intake system (oil filler cap, oil level gauge, etc.)
   - Valve clearance, engine compression
2. On air conditioner equipped models, checks should be carried out while the air conditioner is "OFF".



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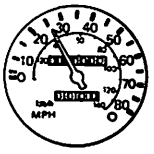

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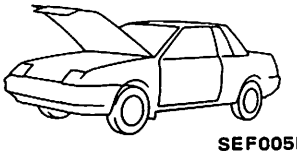

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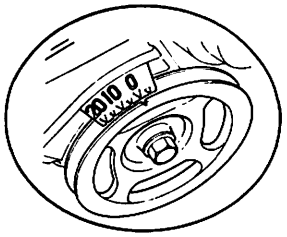

SEF332A

Ⓐ

Check ignition timing with a timing light.

15 ± 2° B.T.D.C.

O.K.

N.G.

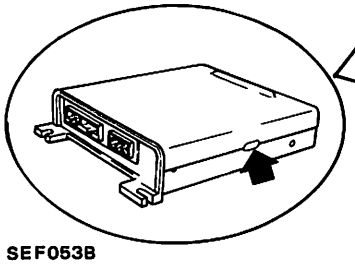
Adjust ignition timing by turning distributor after loosening bolt which secures distributor.

Ⓑ Ⓒ


SEF052B

Run engine at about 2,000 rpm for about 2 minutes under no-load.

Turn diagnosis mode selector fully counterclockwise.
Make sure that inspection lamp on control unit goes on and off more than 4 times during 10 seconds (2,000 rpm).


SEF053B

O.K.

N.G.

Turn off engine and connect idle control valve harness connector.

END

Check exhaust gas sensor harness:
1) Turn off engine and disconnect battery ground cable.
2) Disconnect 16-pin connector from control unit.
3) Disconnect exhaust gas sensor harness connector and connect terminal for exhaust gas sensor to ground with a jumper wire.
4) Check for continuity between terminal No. 24 for 16-pin connector and ground metal on car body.

Continuity exists ..... O.K.
Continuity does not exist ..... N.G.

O.K.

N.G.

Connect 16-pin connector to control unit and connect battery ground cable.

Correct or replace E.F.I. harness.

Replace exhaust gas sensor.

N.G.

Replace control unit (C.E.C.U.).

O.K.

DIAGNOSTIC PROCEDURE FOR PROBLEMS

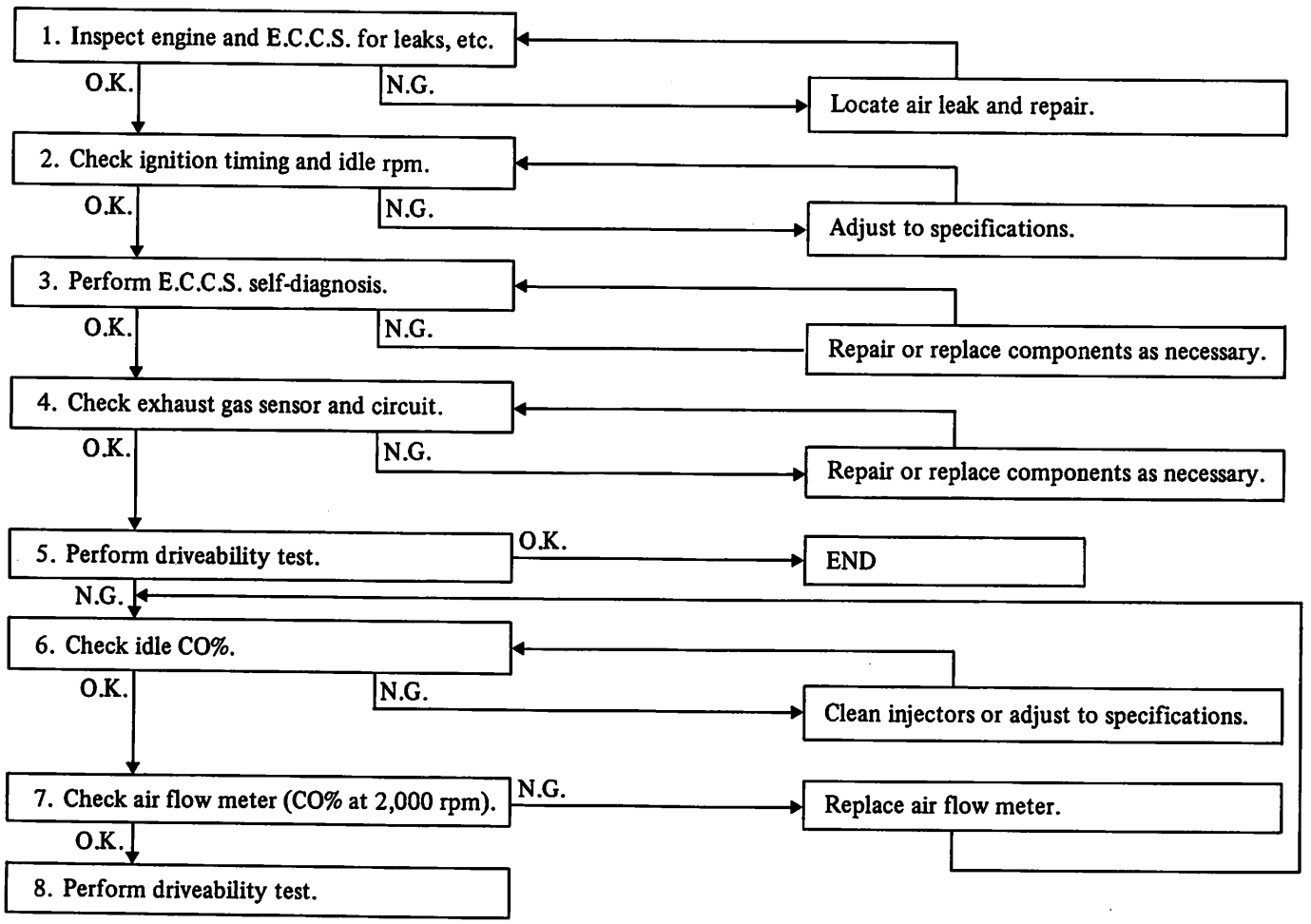
DIAGNOSIS

INTERMITTENT PROBLEM

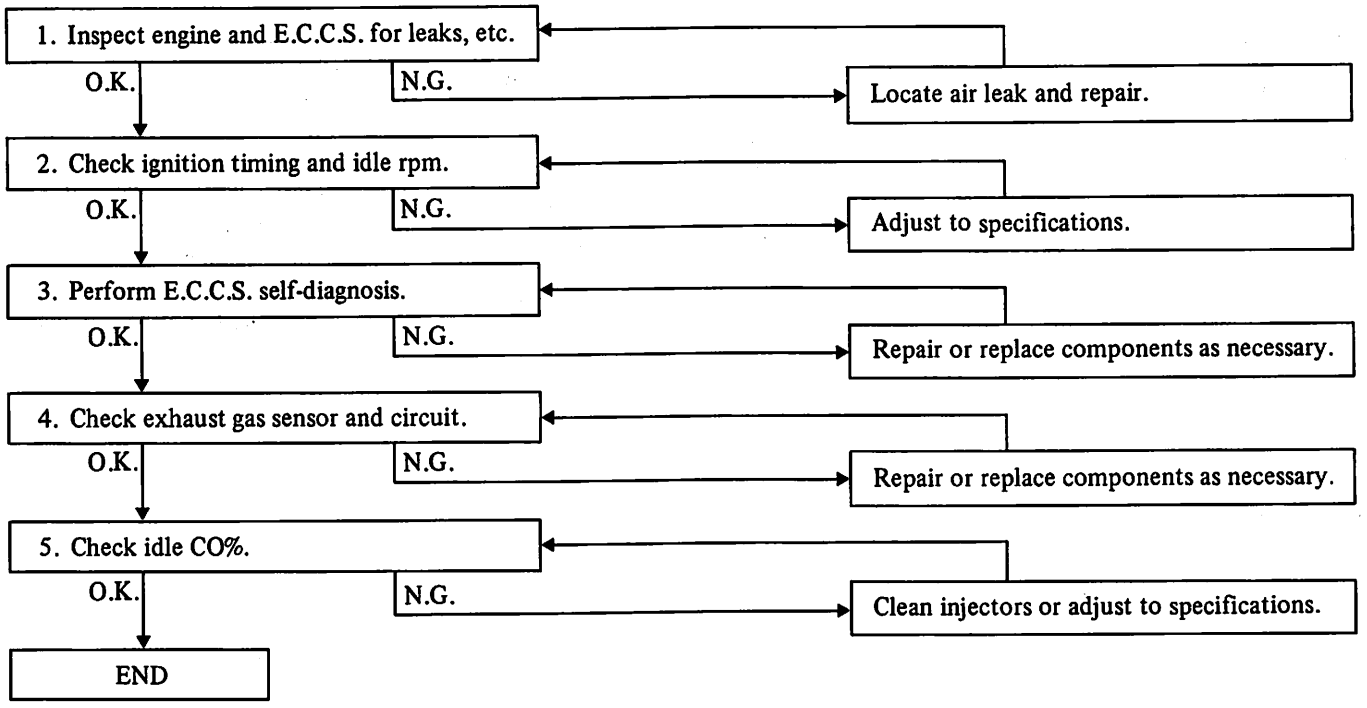
DIAGNOSTIC CHARTS CANNOT BE USED TO DIAGNOSE INTERMITTENT FAILURES. This is because many intermittent problems are caused at electrical connections, and if intermittent problems are not corrected, unnecessary component replacement will be indicated and the problems may remain. Therefore, DIAGNOSIS OF INTERMITTENT PROBLEMS SHOULD START WITH A VISUAL AND PHYSICAL INSPECTION OF THE CONNECTORS involved in the circuit, especially control unit, and flow meter, water temperature sensor and exhaust gas sensor connectors.

CAUTION:
When connecting or disconnecting E.C.C.S. harness connector to or from any E.C.C.S. unit, ensure that the ignition switch is in the "OFF" position and that the negative battery terminal is disconnected. Removing and installing these connectors with the ignition switch left in the "ON" position will damage control unit.

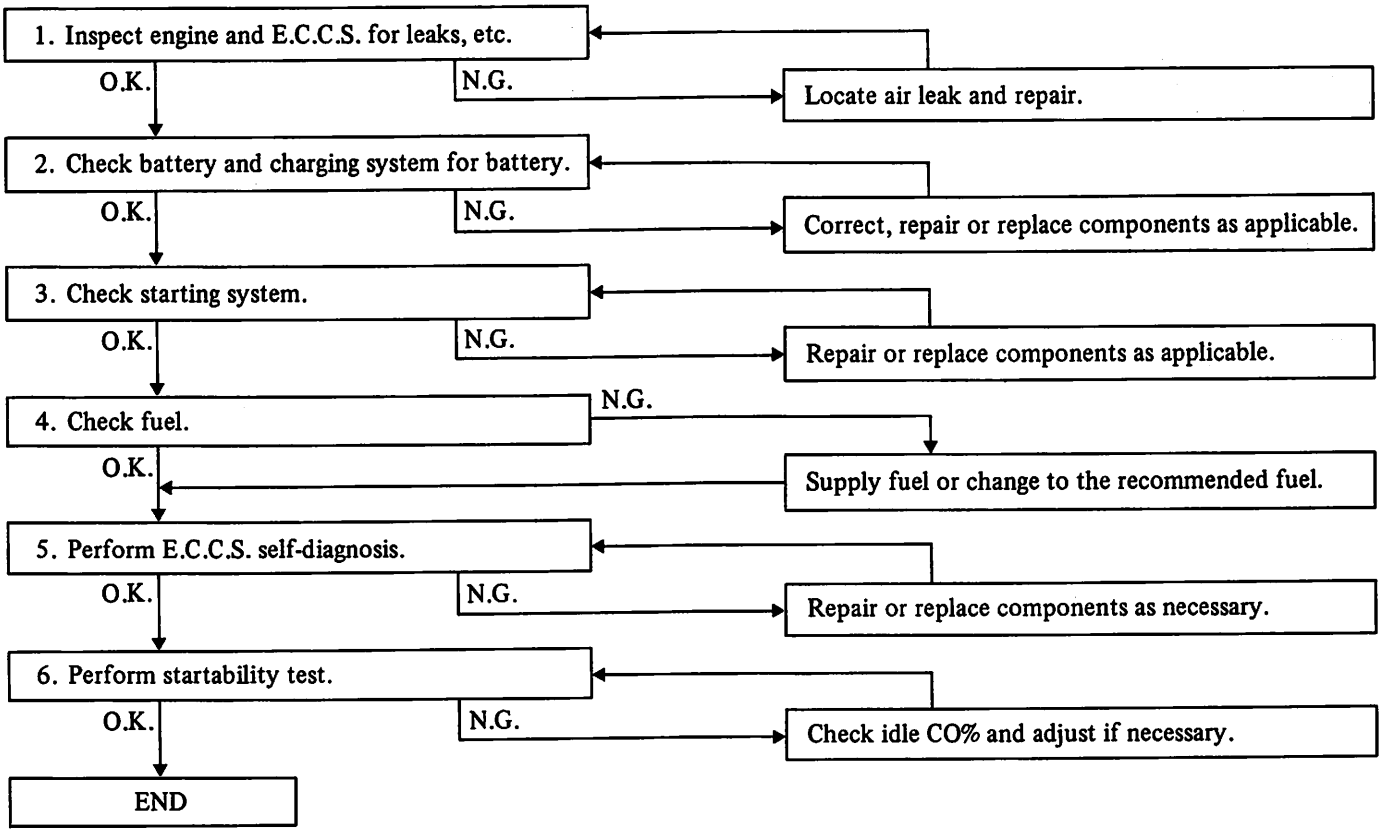
DRIVEABILITY



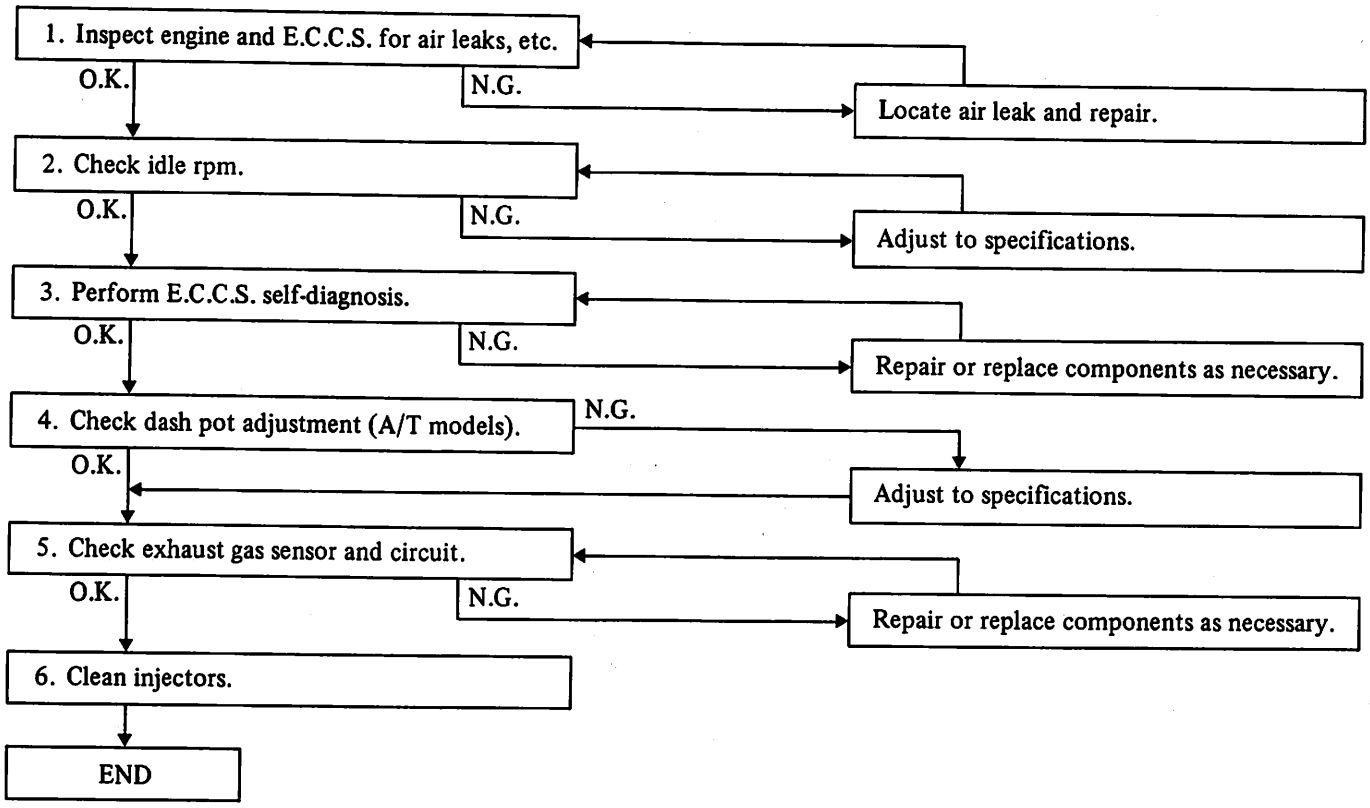
IMPROPER IDLING



ENGINE STARTABILITY



ENGINE STALL



DIAGNOSTIC STEPS FOR DRIVEABILITY

1. Inspect engine and E.C.C.S. for leaks.
(1) Check clamps at all air intake components.
(2) Check vacuum hoses for leakage.
(3) Check air cleaner filter for clogging.
(4) Visually inspect for leaks at the following:
- Dipstick
- Intake manifold gasket
- Valve rocker cover
- E.G.R. valve gasket
- Oil filler cap
- Air intake hoses and duct
- Air regulator gasket
- I.C.V. gasket
- Emergency relief valve

(5) Check E.G.R. valve seat and operation.
(6) Check air regulator operation.
2. Check ignition timing and idle rpm.

a. This check or adjustment should be performed under the following conditions:
- **Headlamp switch: OFF**
- **Heater blower: OFF**
- **Air conditioning switch: OFF (if equipped)**

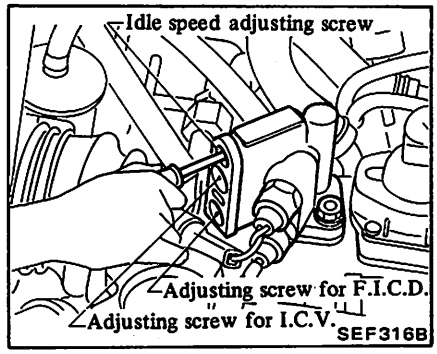
b. Make the check after the radiator cooling fan has stopped. If it is operating, wait until it stops.

(1) Warm engine to operating temperature.
(2) Turn off engine and disconnect idle control valve harness connector.
(3) Start engine and run engine at idle speed.
(4) Race engine two or three times under no-load, then run engine at idle speed.
(5) Check idle speed.

M/T: 750±50 rpm
A/T: 650±50 rpm
(in "D" position)

If necessary, adjust to the specified rpm by turning the idle speed adjusting screw.

Do not use adjusting screw for I.C.V. or adjusting screw for F.I.C.D., which are sealed with rubber caps.



(6) Check ignition timing with a timing light.

15°±2° B.T.D.C.

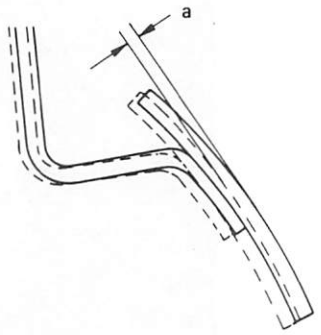
Adjust as necessary.
(7) Connect idle control valve harness to idle control valve.
3. Perform E.C.C.S. self-diagnosis. Follow the procedure in E.C.C.S. SELF-DIAGNOSTIC SYSTEM.
4. Check exhaust gas sensor and circuit.
(1) Verify that the engine is still at operating temperature.

SECTION FE

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

INSPECTION AND ADJUSTMENT

ACCELERATOR SYSTEM



SFE431

Free play at pedal pad center "a"	mm (in)	1 - 3 (0.04 - 0.12)

SECTION CL

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

GENERAL SPECIFICATIONS

CLUTCH CONTROL SYSTEM

Type of clutch control	Mechanical

CLUTCH DISC

Type	200CBL
Facing size Outer dia. x Inner dia. x Thickness mm (in)	200 x 130 x 3.5 (7.87 x 5.12 x 0.138)
Thickness of disc assembly Free mm (in)	8.90 - 9.60 (0.3504 - 0.3780)
At load 3,923 N mm (in) (400 kg, 882 lb)	8.0 - 8.4 (0.315 - 0.331)
Number of torsion springs	6

CLUTCH COVER

Model	C200S
Full load N (kg, lb)	4,413 (450, 992)

INSPECTION AND ADJUSTMENT

CLUTCH DISC

Unit: mm (in)

Model	200CBL
Wear limit of facing surface to rivet head	0.3 (0.012)
Runout limit	0.7 (0.028)
Distance of runout checking point (from the hub center)	95 (3.74)
Maximum backlash of spline (at outer edge of disc)	0.4 (0.016)

CLUTCH COVER

Unit: mm (in)

Model	C200S
Diaphragm spring height	31.0 - 33.0 (1.220 - 1.299)
Unevenness of diaphragm spring toe height	Less than 0.5 (0.020)

MANUAL TRANSAXLE

SECTION MT

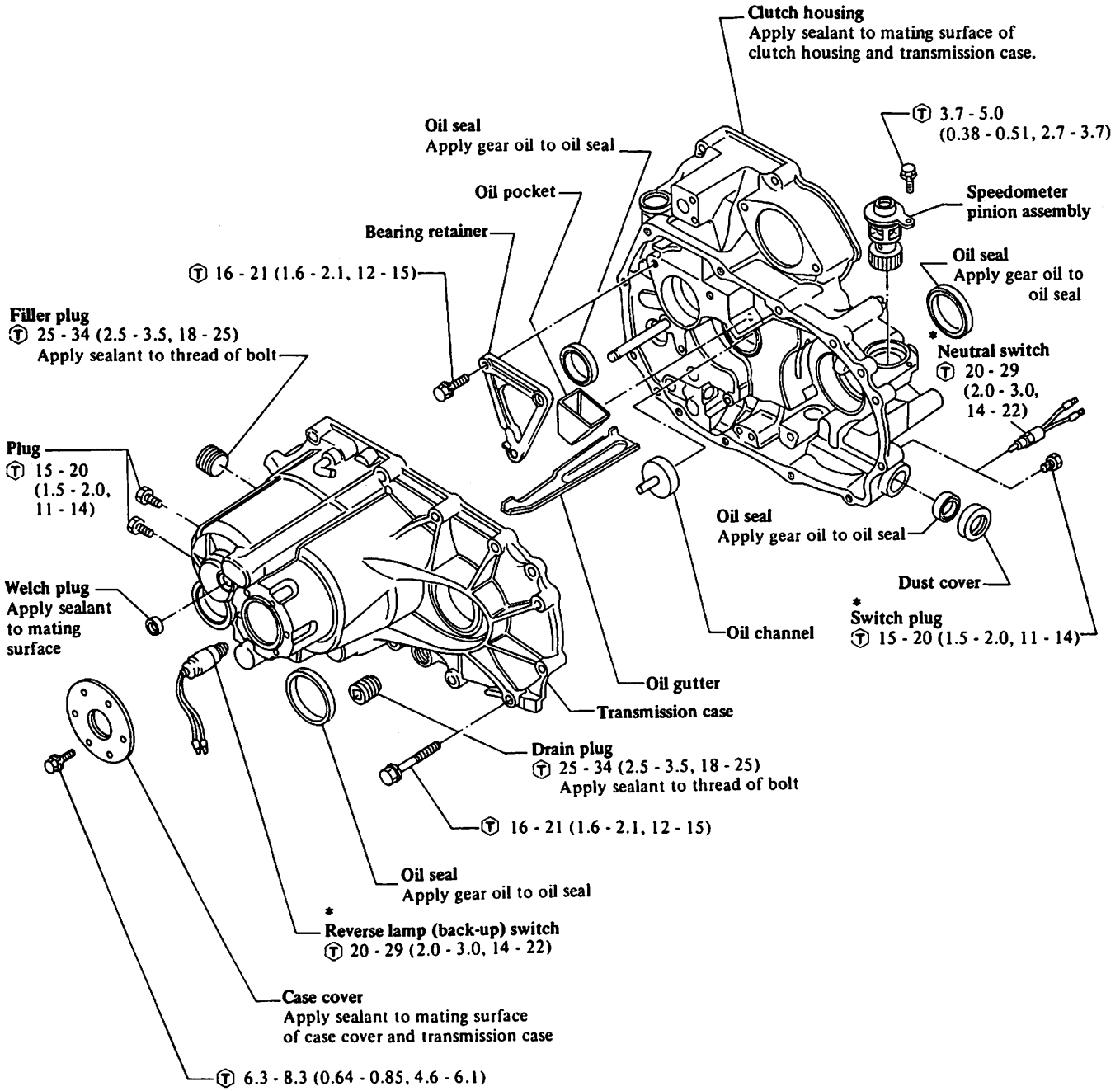
CONTENTS

MT

★: Refer to Service Manual "DATSUN NISSAN MODEL B11 & N12 SERIES"

MANUAL TRANSAXLE
[Model : RS5F31A (5-speed)]

Case component

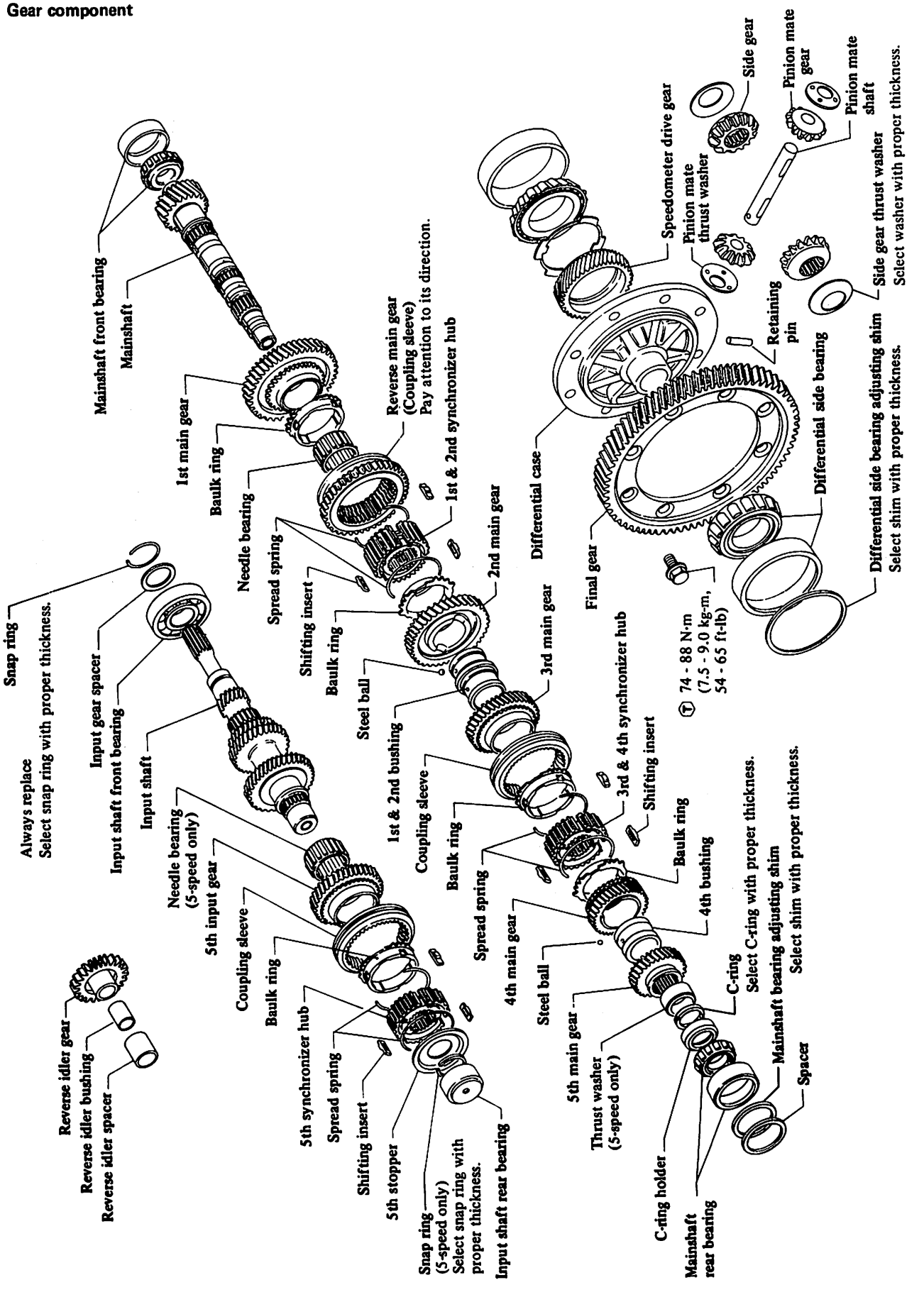


* Apply locking sealer to threads of switches.

Ⓣ : N·m (kg-m, ft-lb)

SMT735

Gear component

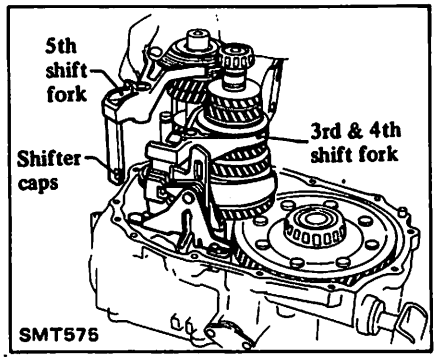


SMT834

CLUTCH HOUSING

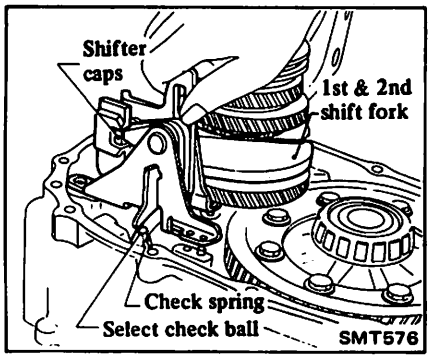
DISASSEMBLY

1. Wipe off dirt and grease.
2. Drain oil.
3. Remove transmission case.
4. Draw out reverse idler spacer and fork shaft, then remove 5th, 3rd & 4th shift fork. **Be careful not to lose shifter caps.**



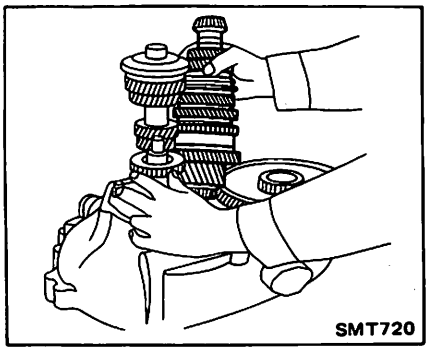
5. Remove control bracket with 1st & 2nd shift fork.

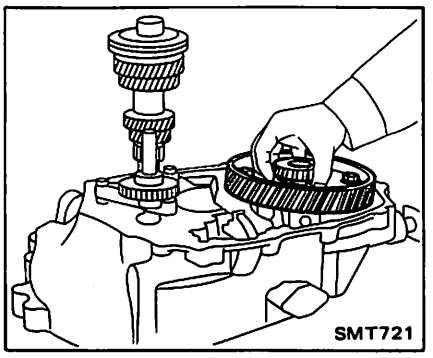
Be careful not to lose select check ball, check spring and shifter caps.



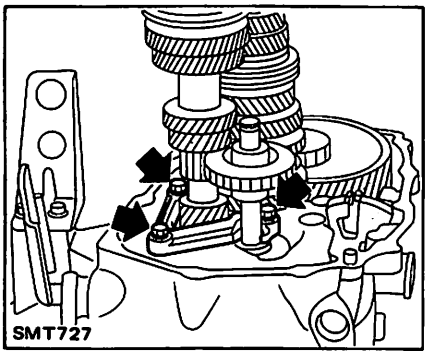
6. Remove mainshaft and final drive assembly.

Always withdraw mainshaft straight out. Failure to do so can damage resin oil channel on clutch housing side.





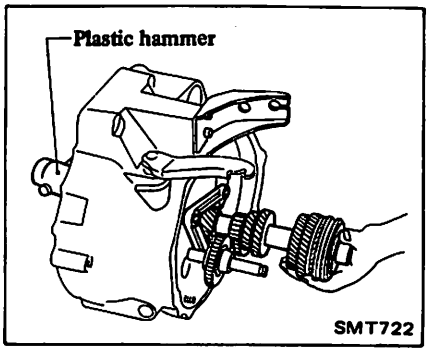
7. Remove bearing retainer securing bolts.



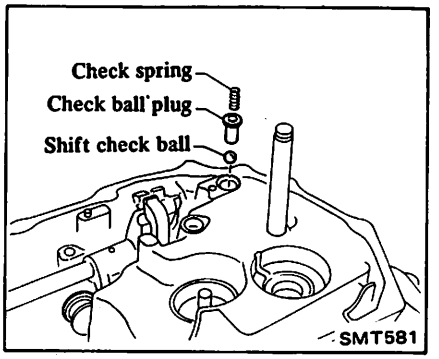
8. Turn clutch housing so its side faces down. Lightly tap input shaft end (on engine side) with a plastic hammer, then remove input shaft together with bearing retainer and reverse idler gear.

Do not draw out reverse idler shaft from clutch housing because these fittings will be loose.

When removing input shaft, be careful not to scratch oil seal lip with shaft spline.

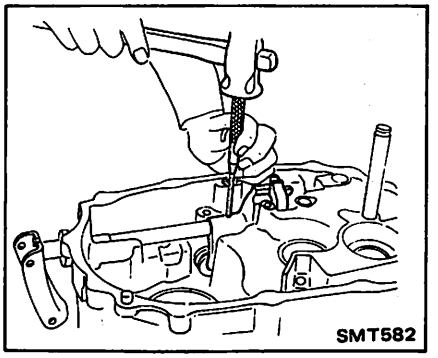


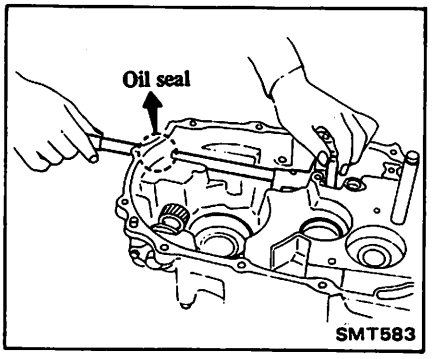
9. Remove oil pocket, shift check ball, check spring and check ball plug.



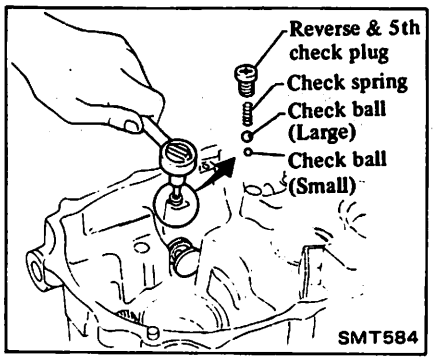
10. Drive retaining pin out of striking lever, then remove striking rod, striking lever and striking interlock.

a. **Select a position where retaining pin does not interfere with clutch housing when removing the former.**
b. **When removing striking rod, use care not to damage oil seal's lip. If necessary, tape edges of striking rod when removing the rod.**

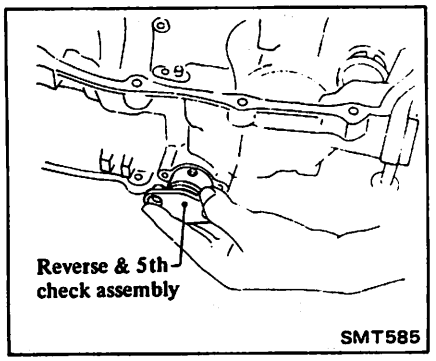




11. Remove reverse & 5th check plug, then detach check spring and check balls.



12. Remove reverse & 5th check assembly.



13. Remove clutch control shaft, clutch release bearing and clutch lever.
14. Remove mainshaft bearing outer race and differential side bearing outer race.
15. Remove oil channel.

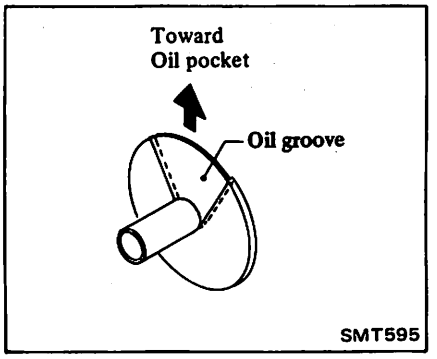
INSPECTION

1. Clean with solvent and check for cracks or cavities by means of dyeing test.
2. Check mating surface of clutch housing for small nicks, projections or sealant.

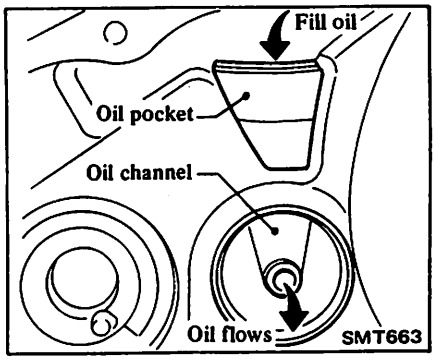
ASSEMBLY

1. Install a new oil channel.

Ensure that oil groove in oil channel always faces toward oil pocket when installing it on clutch housing.



2. Install mainshaft bearing outer race and differential side bearing outer race.
3. Install clutch control shaft, clutch release bearing and clutch lever.
4. Install oil pocket, then **make sure oil flows from oil pocket to oil channel.**

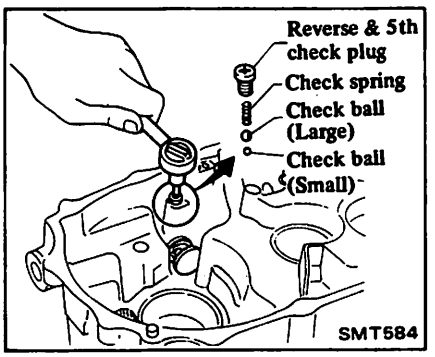


5. Install following parts in reverse order of disassembly.
- Reverse & 5th check assembly
- Reverse & 5th check plug (check spring, check balls)

a. Install smaller check ball first, then larger one.

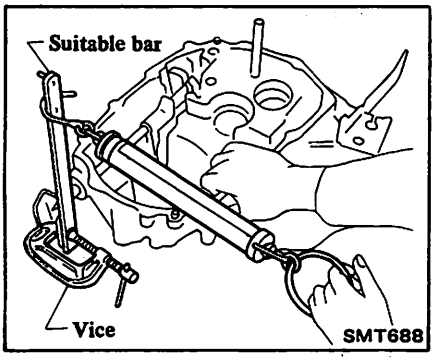
b. When replacing clutch housing, reverse & 5th check assembly, check spring and check plug, it is necessary to adjust reverse check force.

1) First, install used check plug or standard check plug and tighten it to the specified torque.



Ⓣ: Reverse & 5th check plug
19 - 25 N·m
(1.9 - 2.5 kg-m,
14 - 18 ft-lb)

2) Check reverse check force.

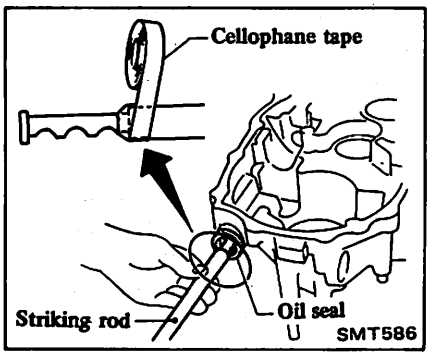


Reverse check force:
22.1 - 27.0 N·m
(225 - 275 kg-cm,
195 - 239 in-lb)

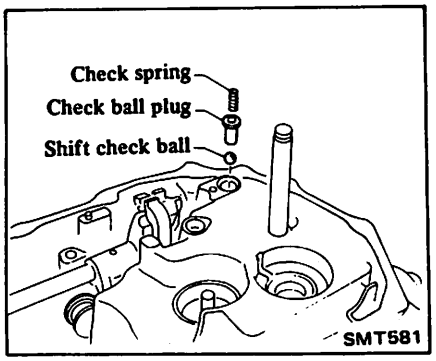
3) If reverse check force is not within the above range, select another check plug having a different length and reinstall it.
Reverse check plug:
Refer to S.D.S.

c. Apply locking sealer to thread of check plug.
- Striking lever
- Striking interlock
- Boot (for shift control oil seal)
- Striking rod

CAUTION:
When inserting striking rod into clutch housing, tape edges of striking rod to avoid damaging oil seal's lip if it hits against oil seal.

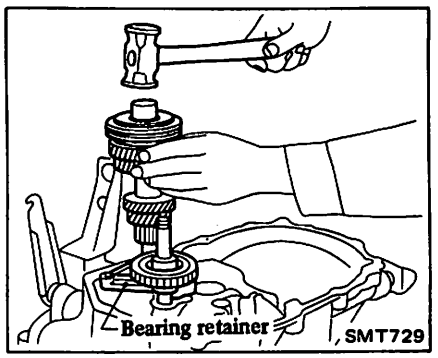


- Shift check related parts (check ball plug, shift check ball, check spring)



- Oil pocket
- Input shaft and reverse idler gear

Use care not to damage oil seal's lip by splines of input shaft while shaft is being inserted into clutch housing.



- Bearing retainer

Ⓣ : **16 - 21 N·m (1.6 - 2.1 kg-m, 12 - 15 ft-lb)**

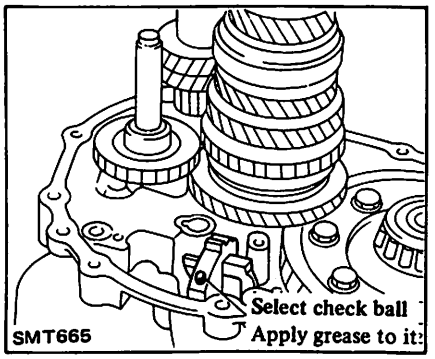
- Mainshaft

A resin oil channel is used at end of mainshaft on clutch housing side. Use care not to damage oil channel when inserting mainshaft into clutch housing.

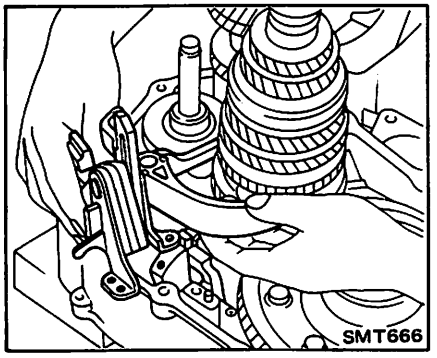
- Final drive assembly

If clutch housing is replaced with a new one, adjust differential side bearing rotary frictional force by selecting shim. Refer to Transmission Case for assembly and adjustment.

6. Apply grease to select check ball, then install it and check spring into striking interlock hole.



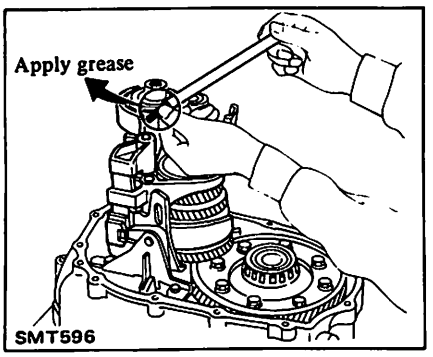
7. Apply grease to shifter caps, then install it to control bracket. Install control bracket with 1st & 2nd shift fork.



Ⓣ : **Control bracket bolt 6.3 - 8.3 N·m (0.64 - 0.85 kg-m, 4.6 - 6.1 ft-lb)**

8. Install 3rd & 4th and 5th shift fork.
9. Insert fork shaft.

Apply grease to support spring before installing, in order to prevent spring from falling into hole for fork shaft on clutch housing.



10. Install reverse idler spacer.
11. Install transmission case.
12. Measure gear rotary frictional force and ensure that gear moves smoothly without binding. Refer to "Transmission Case" for assembly.
13. **Apply sealant to thread of drain plug,** then install it to transmission case.

Ⓣ : **25 - 34 N·m (2.5 - 3.5 kg-m, 18 - 25 ft-lb)**

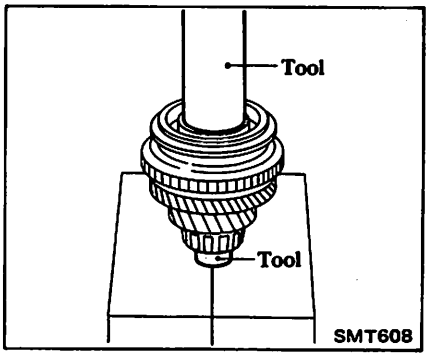
GEARS AND SHAFTS (Except final drive)

Refer to Service Manual "DATSUN NISSAN model B11 & N12 series" for other than main gears and mainshaft.

ASSEMBLY

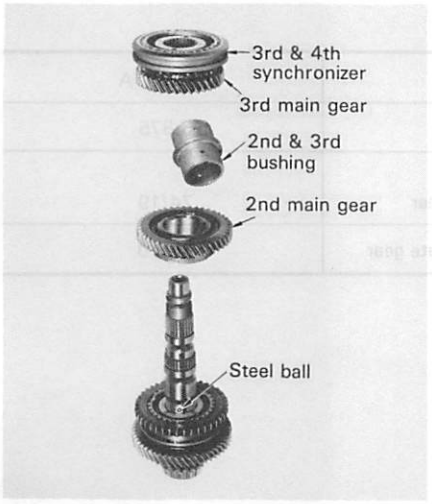
Main gears and mainshaft

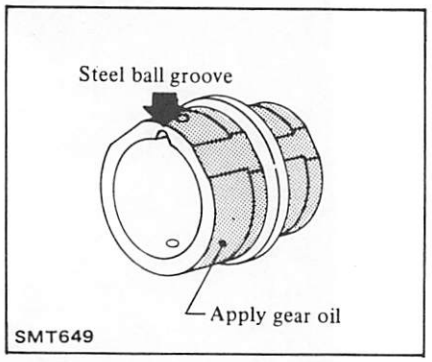
1. **Apply gear oil to 1st needle bearing,** then assemble needle bearing, 1st gear, 1st gear baulk ring, 1st & 2nd synchronizer assembly and 2nd gear baulk ring.



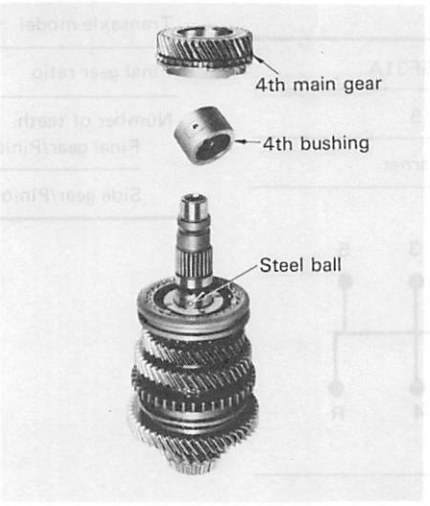
2. **Apply gear oil to 2nd & 3rd bushing outer surface,** then install steel ball, 2nd gear, 2nd & 3rd bushing, 3rd gear, and 3rd & 4th synchronizer assembly. 2nd & 3rd bushing has a groove in which steel ball fits. Slowly turn bushing to properly fit steel ball in its groove.

Before installing steel ball, apply grease to it.

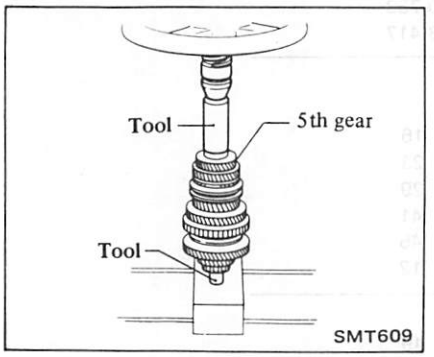




3. Apply grease to steel ball, then install it to mainshaft. **Apply gear oil to 4th bushing outer surface.** 4th bushing also has a groove in which steel ball fits. Ensure that steel ball fits properly in its groove when installing 4th bushing.

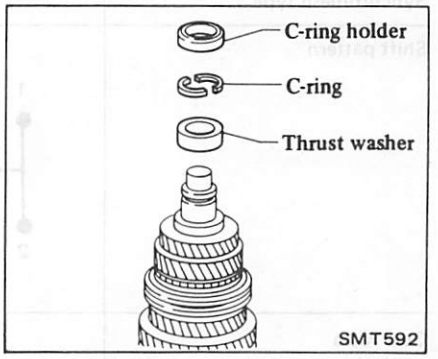


4. Install 5th gear.



5. Install thrust washer. Select C-ring that will minimize clearance of groove in mainshaft, then install C-ring and C-ring holder.

Allowable clearance of groove:
0 - 0.1 mm
(0 - 0.004 in)
C-ring:
Refer to S.D.S.

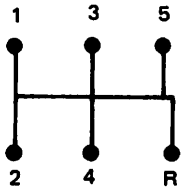


6. Install mainshaft front and rear bearing inner race.
7. Measure gear end play.
8. Install mainshaft assembly, input shaft assembly, bearing retainer, control bracket, shift forks, fork rod and transmission case.

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

GENERAL SPECIFICATIONS

TRANSAXLE

Transaxle model	RS5F31A
No. of speeds	5
Synchromesh type	Warner
Shift pattern	
Gear ratio	
1st	3.063
2nd	1.826
3rd	1.207
4th	0.902
5th	0.733
Rev.	3.417
Number of teeth	
Input gear	
1st	16
2nd	23
3rd	29
4th	41
5th	45
Rev.	12
Main gear	
1st	49
2nd	42
3rd	35
4th	37
5th	33
Rev.	41
Reverse idler gear	30
Oil capacity liter (US pt, Imp pt)	2.7 (5-3/4, 4-3/4)

FINAL GEAR

Transaxle model	RS5F31A
Final gear ratio	3.875
Number of teeth	
Final gear/Pinion gear	74/19
Side gear/Pinion mate gear	14/10

SECTION BR

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

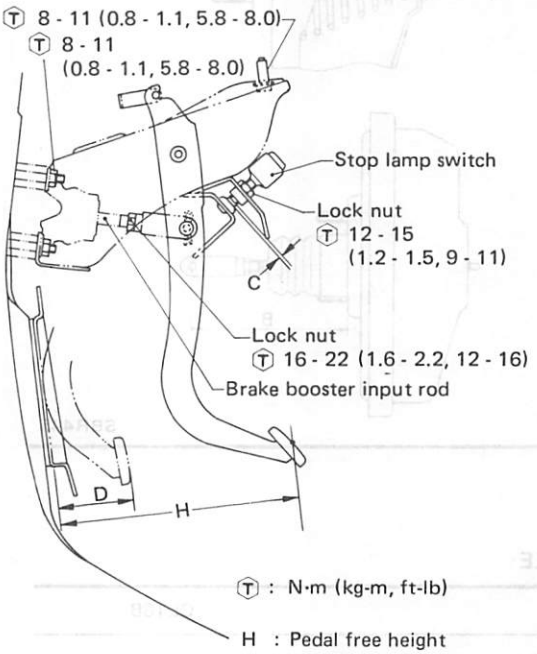
GENERAL SPECIFICATIONS

Front brake		
Brake model		CL18B
Pad Width x thickness x length	mm (in)	37.0 x 10.0 x 94.0 (1.457 x 0.394 x 3.701)
Rotor outer diameter	mm (in)	240 (9.45)
Caliper inner diameter	mm (in)	48.1 (1.894)
Rear brake		
Brake model		LT20A
Lining Width x thickness x length	mm (in)	35.0 x 4.5 x 195.0 (1.378 x 0.177 x 7.677)
Drum inner diameter	mm (in)	203.2 (8.00)
Wheel cylinder inner diameter	mm (in)	17.46 (11/16)
Master cylinder	mm (in)	
Inner diameter		
Large		25.4 (1)
Small		20.64 (13/16)
Brake booster		
Model		G20
Diaphragm diameter	mm (in)	203 (8)
Control valve		
Model		DP
Split point	kPa (kg/cm², psi)	1,961 (20, 284)
Reducing ratio		0.4
Recommended brake fluid		DOT 3

INSPECTION AND ADJUSTMENT

BRAKE PEDAL

Pedal ratio		4.2
Maximum stroke		140
Free height	mm (in)	194 - 204 (7.64 - 8.03)
Depressed height [Under force of 490 N (50 kg, 110 lb) with engine running]	mm (in)	More than 80 (3.15)
Clearance between brake lamp switch and brake pedal	mm (in)	0 - 1 (0 - 0.04)



Ⓣ : N·m (kg-m, ft-lb)

H : Pedal free height
D : Depressed height
C : Clearance between pedal stopper and threaded end of stop lamp switch

SBR805

BR

PARKING BRAKE

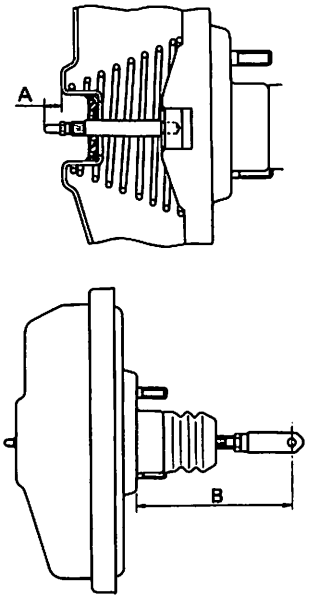
Type	Center lever type
Number of notches [At pulling force: 196 N (20 kg, 44 lb)]	6 - 7

CHECK VALVE

Maximum vacuum leakage [15 seconds after 66.7 kPa (500 mmHg, 19.69 inHg) is applied] kPa (mmHg, inHg)	1.3 (10, 0.39)

BRAKE BOOSTER

Maximum vacuum leakage (15 seconds after engine is stopped) kPa (mmHg, inHg)			3.3 (25, 0.98)
Output rod length	"A"	mm (in)	10.375 - 10.425 (0.4085 - 0.4104)
Input rod length	"B"	mm (in)	150 (5.91)



SBR445

DISC BRAKE

Brake model		CL18B
Pad repair limit Minimum thickness	mm (in)	2.0 (0.079)
Rotor repair limit Maximum runout	mm (in)	Less than 0.07 (0.0028)
Maximum parallelism	mm (in)	Less than 0.02 (0.0008)
Minimum thickness	mm (in)	More than 10.0 (0.394)

DRUM BRAKE

Brake model		LT18A
Lining repair limit Minimum thickness	mm (in)	1.5 (0.059)
Drum repair limit Maximum inner diameter	mm (in)	181.0 (7.13)
Out-of-roundness	mm (in)	Less than 0.03 (0.0012)
Radial runout	mm (in)	Less than 0.05 (0.0020)
Taper [Measured at a point 45 mm (1.77 in) from inlet]	mm (in)	Less than 0.04 (0.0016)

TIGHTENING TORQUE

Item	N·m	kg-m	ft-lb
Brake pedal			
Pedal bracket to body	8 - 11	0.8 - 1.1	5.8 - 8.0
Stop lamp switch lock nut	12 - 15	1.2 - 1.5	9 - 11
Brake booster			
Brake booster to pedal bracket	8 - 11	0.8 - 1.1	5.8 - 8.0
Input rod lock nut	16 - 22	1.6 - 2.2	12 - 16
Brake booster to master cylinder	8 - 11	0.8 - 1.1	5.8 - 8.0
Master cylinder			
Secondary piston stopper bolt			
TOKICO make	2.0 - 3.4	0.2 - 0.35	1.4 - 2.5
NABCO make	1.5 - 2.9	0.15 - 0.30	1.1 - 2.2
Anti-skid system			
DP valve mounting bolt	4 - 5	0.4 - 0.5	2.9 - 3.6
Brake hose connector	17 - 20	1.7 - 2.0	12 - 14
Brake tube flare nut	15 - 18	1.5 - 1.8	11 - 13
Wheel cylinder air bleeder	7 - 9	0.7 - 0.9	5.1 - 6.5
Wheel nut	78 - 98	8.0 - 10.0	58 - 72
Front disc brake			
Baffle plate	3.2 - 4.3	0.33 - 0.44	2.4 - 3.2
Torque member fixing bolt	54 - 64	5.5 - 6.5	40 - 47
Torque member to cylinder body	22 - 31	2.2 - 3.2	16 - 23
Disc rotor to wheel hub	25 - 33	2.5 - 3.4	18 - 25
Rear drum brake			
Back plate	25 - 33	2.5 - 3.4	18 - 25
Wheel cylinder fixing bolt	6 - 8	0.6 - 0.8	4.3 - 5.8
Parking brake			
Center lever type			
Control lever to body	8 - 11	0.8 - 1.1	5.8 - 8.0
Adjuster lock nut	3.1 - 4.3	0.32 - 0.44	2.3 - 3.2
Front cable clamp to body	3.1 - 4.3	0.32 - 0.44	2.3 - 3.2

INCH TO METRIC CONVERSION TABLE

(Rounded-off for automotive use)

inches	mm	inches	mm
.100	2.54	.610	15.49
.110	2.79	.620	15.75
.120	3.05	.630	16.00
.130	3.30	.640	16.26
.140	3.56	.650	16.51
.150	3.81	.660	16.76
.160	4.06	.670	17.02
.170	4.32	.680	17.27
.180	4.57	.690	17.53
.190	4.83	.700	17.78
.200	5.08	.710	18.03
.210	5.33	.720	18.29
.220	5.59	.730	18.54
.230	5.84	.740	18.80
.240	6.10	.750	19.05
.250	6.35	.760	19.30
.260	6.60	.770	19.56
.270	6.86	.780	19.81
.280	7.11	.790	20.07
.290	7.37	.800	20.32
.300	7.62	.810	20.57
.310	7.87	.820	20.83
.320	8.13	.830	21.08
.330	8.38	.840	21.34
.340	8.64	.850	21.59
.350	8.89	.860	21.84
.360	9.14	.870	22.10
.370	9.40	.880	22.35
.380	9.65	.890	22.61
.390	9.91	.900	22.86
.400	10.16	.910	23.11
.410	10.41	.920	23.37
.420	10.67	.930	23.62
.430	10.92	.940	23.88
.440	11.18	.950	24.11
.450	11.43	.960	24.38
.460	11.68	.970	24.64
.470	11.94	.980	24.89
.480	12.19	.990	25.15
.490	12.45	1.000	25.40
.500	12.70	2.000	50.80
.510	12.95	3.000	76.20
.520	13.21	4.000	101.60
.530	13.46	5.000	127.00
.540	13.72	6.000	152.40
.550	13.97	7.000	177.80
.560	14.22	8.000	203.20
.570	14.48	9.000	228.60
.580	14.73	10.000	254.00
.590	14.99	20.000	508.00
.600	15.24		

METRIC TO INCH CONVERSION TABLE

(Rounded-off for automotive use)

mm	inches	mm	inches
1	.0394	51	2.008
2	.079	52	2.047
3	.118	53	2.087
4	.157	54	2.126
5	.197	55	2.165
6	.236	56	2.205
7	.276	57	2.244
8	.315	58	2.283
9	.354	59	2.323
10	.394	60	2.362
11	.433	61	2.402
12	472	62	2.441
13	.512	63	2.480
14	.551	64	2.520
15	.591	65	2.559
16	.630	66	2.598
17	.669	67	2.638
18	.709	68	2.677
19	.748	69	2.717
20	.787	70	2.756
21	.827	71	2.795
22	.866	72	2.835
23	.906	73	2.874
24	.945	74	2.913
25	.984	75	2.953
26	1.024	76	2.992
27	1.063	77	3.031
28	1.102	78	3.071
29	1.142	79	3.110
30	1.181	80	3.150
31	1.220	81	3.189
32	1.260	82	3.228
33	1.299	83	3.268
34	1.339	84	3.307
35	1.378	85	3.346
36	1.417	86	3.386
37	1.457	87	3.425
38	1.496	88	3.465
39	1.535	89	3.504
40	1.575	90	3.543
41	1.614	91	3.583
42	1.654	92	3.622
43	1.693	93	3.661
44	1.732	94	3.701
45	1.772	95	3.740
46	1.811	96	3.780
47	1.850	97	3.819
48	1.890	98	3.858
49	1.929	99	3.898
50	1.969	100	3.937

QUICK REFERENCE CHART : PULSAR NX 1983

ENGINE TUNE-UP DATA

Engine model		E15ET		
Firing order		1-3-4-2		
Ignition timing Idle speed (B.T.D.C. degree/rpm)		15°±2° 750±50		
CO% at idle speed		Idle mixture screw is preset and sealed at factory.		
Valve clearance (Hot) Intake & exhaust	mm (in)	0.28 (0.011)		
Drive belt deflection (Cold)		Used *1	New *2	
Alternator	mm (in)	13 - 17 (0.51 - 0.67)	10 - 14 (0.39 - 0.55)	
Air conditioner	mm (in)	9 - 11 (0.35 - 0.43)	7 - 9 (0.28 - 0.35)	
Pushing force	N (kg, lb)	98 (10, 22)		
Engine compression pressure Standard	kPa (kg/cm², psi)/rpm	1,089 (11.1, 158)/350		
Minimum		892 (9.1, 129)/350		
Spark plug	Type	BPR6ES-11		
	Gap mm (in)	1.0 - 1.1 (0.039 - 0.043)		
Tightening torque		N·m	kg-m	ft-lb
Valve rocker adjusting nut		16 - 21	1.6 - 2.1	12 - 15
Oil pan drain plug		35 - 47	3.6 - 4.8	26 - 35
Spark plug		20 - 29	2.0 - 3.0	14 - 22

*1 Adjust deflection of used belt
*2 Set deflection of new belt

WHEEL ALIGNMENT (Unladen*)

Camber	degree	−35' - 1°05'
Caster	degree	45' - 2°15'
Toe-in	mm (in)	0 - 2 (0 - 0.08)
	degree	0 - 6' (On both sides)
Turning angle Toe-out-turns (Inside/Outside)	degree	20°/17°30'
Inside		40°30' - 43°30'
Outside		31°30' - 34°30'

* Tankful of fuel, radiator coolant and engine oil full. Spare tire, jack, band tools, mats in designed position.

REAR WHEEL BEARING

Tightening torque	N·m (kg-m, ft-lb)	39 - 44 (4.0 - 4.5, 29 - 33)
Return angle	degree	90°

WHEEL AND TIRE

Tire size		175/70SR13
Inflation pressure *	psi (kPa)	26 (180)
Wheel nut tightening torque	N·m (kg-m, ft-lb)	78 - 98 (8 - 10, 58 - 72)

* Tire pressure should be checked when tires are COLD.

BRAKE

Unit: mm (in)

Disc brake Pad minimum thickness	2.0 (0.079)
Rotor repair limit Runout	Less than 0.07 (0.0028)
Parallelism circumferential direction	Less than 0.03 (0.0012)
Minimum thickness	10.0 (0.394)
Drum brake Lining minimum thickness	1.5 (0.059)
Drum repair limit Maximum inner diameter	204.5 (8.05)
Radial runout	Less than 0.05 (0.0020)
Out-of-roundness	Less than 0.03 (0.0012)
Taper	Less than 0.04 (0.0016)

REFILL CAPACITIES

Unit		Liter	US measure
Fuel tank		50	13-1/4 gal
Coolant	With heater	6.0	6-3/8 qt
	Without heater	5.4	5-3/4 qt
	Reservoir tank	0.7	3/4 qt
Engine oil	With oil filter	3.9	4-1/8 qt
	Without oil filter	3.4	3-5/8 qt
Transaxle	Automatic	6.0	6-3/8 qt
	Manual	2.7	5-3/4 qt
Windshield washer tank		1.5	1-5/8 qt
Air conditioning system	Compressor oil	150 mℓ	5.1 fl oz
	Refrigerant	0.8 - 1.0 kg	1.8 - 2.2 lb

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