

STARTER - MITSUBISHI

1993 Nissan Sentra

1993 ELECTRICAL
Nissan Starters - Mitsubishi

Altima, NX, Pathfinder, Pickup, Sentra, 240SX, 300ZX

DESCRIPTION

Starter is a conventional 12-volt, 4-pole brush-type motor, with direct or reduction gear drive. See STARTER IDENTIFICATION DIRECTORY. The starter-mounted solenoid shifts overrunning clutch and pinion into flywheel when starter is energized.

STARTER IDENTIFICATION DIRECTORY

Application	Fig. No.
Altima	
M1T73881ZC	1
NX & Sentra	
M1T77281 (1.6L Federal)	2
M1T72985A (2.0L)	2
M3T37783 (1.6L Calif.)	3
Pathfinder & Pickup	
M1T60281	4
M3T38482	3
240SX	
M1T72781A	2
300ZX	
M2T25281	5

TROUBLE SHOOTING

NOTE: See TROUBLE SHOOTING - BASIC PROCEDURES article in GENERAL INFORMATION section.

BENCH TESTING

STARTER NO-LOAD TEST

Connect starter in series with a 12-volt battery, a voltmeter and a 1000-amp ammeter. Operate starter. If amperage exceeds maximum specification or if RPM is less than minimum specification, repair or replace starter. See STARTER NO-LOAD TEST SPECIFICATIONS table.

STARTER NO-LOAD TEST SPECIFICATIONS TABLE

Application	Maximum Amps	Minimum RPM
Altima		
M1T73881ZC	88	3000
NX & Sentra		
M1T77281	75	4000
M1T72985A	75	4000
M3T37783	60	6500
Pathfinder & Pickup		
M1T60281	75	4000
M3T38482	60	6500

240SX				
M1T72781A	.....	75	.....	4000
300ZX				
M2T25281	.....	70	.....	2000

REMOVAL & INSTALLATION

STARTER MOTOR

NOTE: To remove starter, remove exhaust manifold heat insulator on 4WD Pathfinder and Pickup with 3.0L or exhaust manifold on 2WD Pathfinder and Pickup with 3.0L.

Removal & Installation

Disconnect battery negative cable. Raise and support vehicle if necessary. Disconnect starter wiring. Remove starter mounting bolts. Remove starter. To install, reverse removal procedure.

OVERHAUL

NOTE: For exploded views of starters, see Figs. 1-5.

BRUSHES & SPRINGS

Check brush spring tension, contact surface condition and brush length. Check lead clip and wire connections. Check condition of brush holders. See BRUSH SPRING TENSION & MINIMUM BRUSH LENGTH table.

BRUSH SPRING TENSION & MINIMUM BRUSH LENGTH

Application		Spring Tension Lbs. (kg)	Brush Length In. (mm)
Altima			
M1T73881ZC	....	3.1-5.7 (1.4-2.6)	.47 (12.0)
NX & Sentra			
M1T77281	.....	3.1-5.7 (1.4-2.6)	.47 (12.0)
M1T72985A	.....	3.1-5.7 (1.4-2.6)	.47 (12.0)
M3T37783	.....	3.1-5.7 (1.4-2.6)	.45 (11.5)
Pathfinder & Pickup			
M1T60281	.....	3.1-5.7 (1.4-2.6)	.47 (12.0)
M3T38482	.....	3.1-5.7 (1.4-2.6)	.45 (11.5)
240SX			
M1T72781A	.....	3.1-5.7 (1.4-2.6)	.47 (12.0)
300ZX			
M2T25281	.....	3.1-5.7 (1.4-2.6)	.45 (11.5)

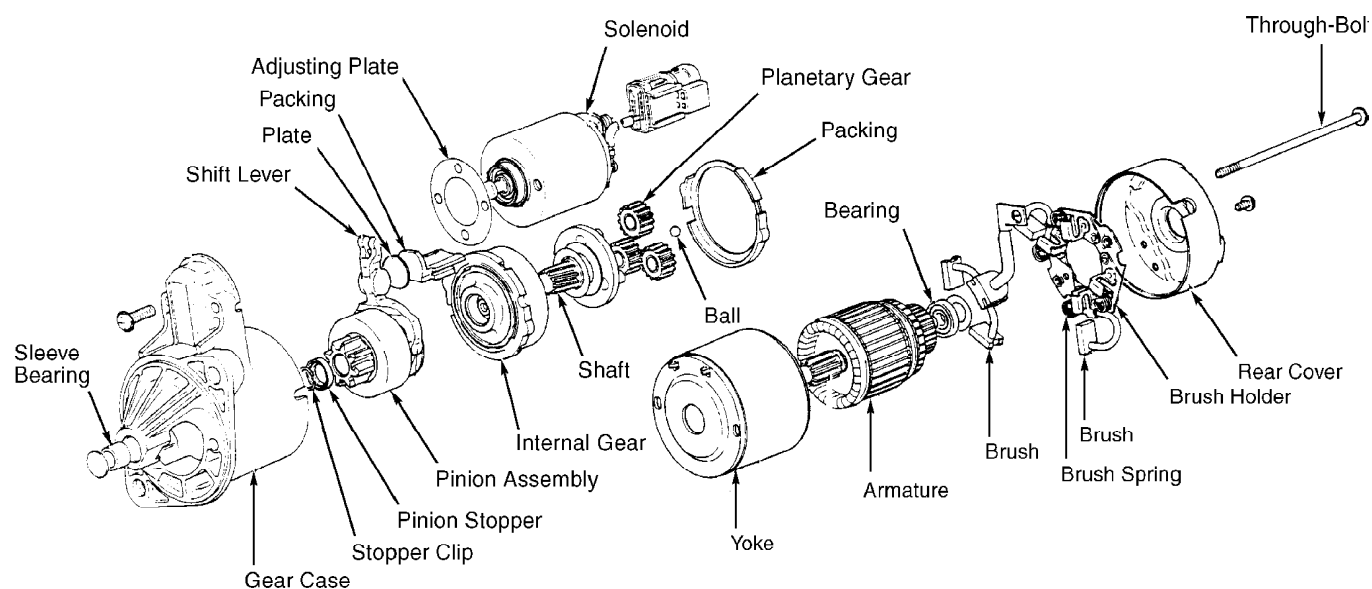
COMMUTATOR

Inspect commutator for roughness, grooves, burns, pitting and out-of-round. If necessary, sand lightly with 500-600 grit sandpaper. If mica insulator undercut is less than .008" (.20), undercut to .020-.031" (.50-.80 mm). Replace armature if commutator diameter is less than specified. See COMMUTATOR MINIMUM DIAMETER table.

COMMUTATOR MINIMUM DIAMETER

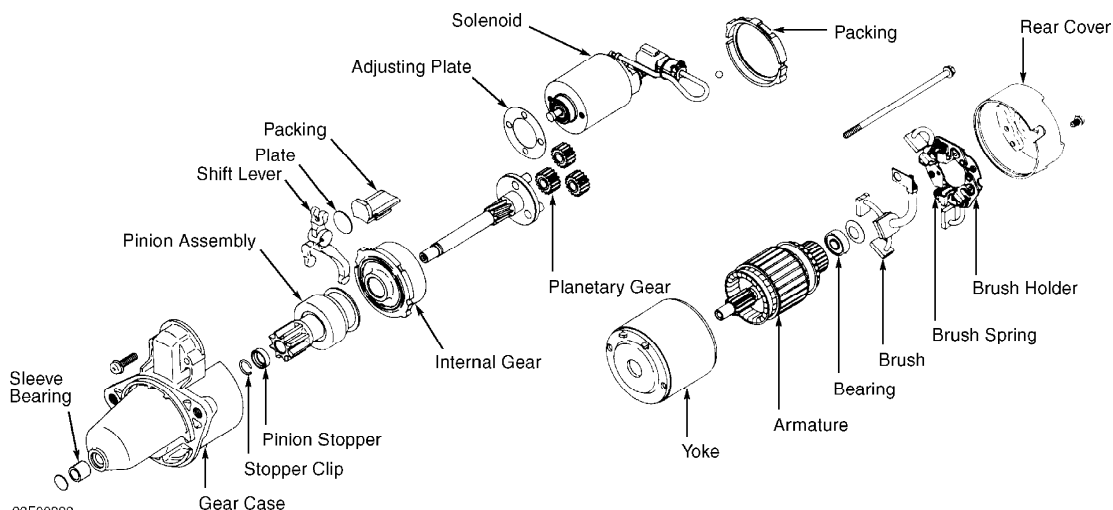
Application	In. (mm)
Altima	

M1T73881ZC	1.134	(28.8)
NX & Sentra		
M1T77281	1.134	(28.8)
M1T72985A	1.134	(28.8)
M3T37783	1.236	(31.4)
Pathfinder & Pickup		
M1T60281	1.134	(28.8)
M3T38482	1.236	(31.4)
240SX		
M1T72781A	1.134	(28.8)
300ZX		
M2T25281	1.236	(31.4)



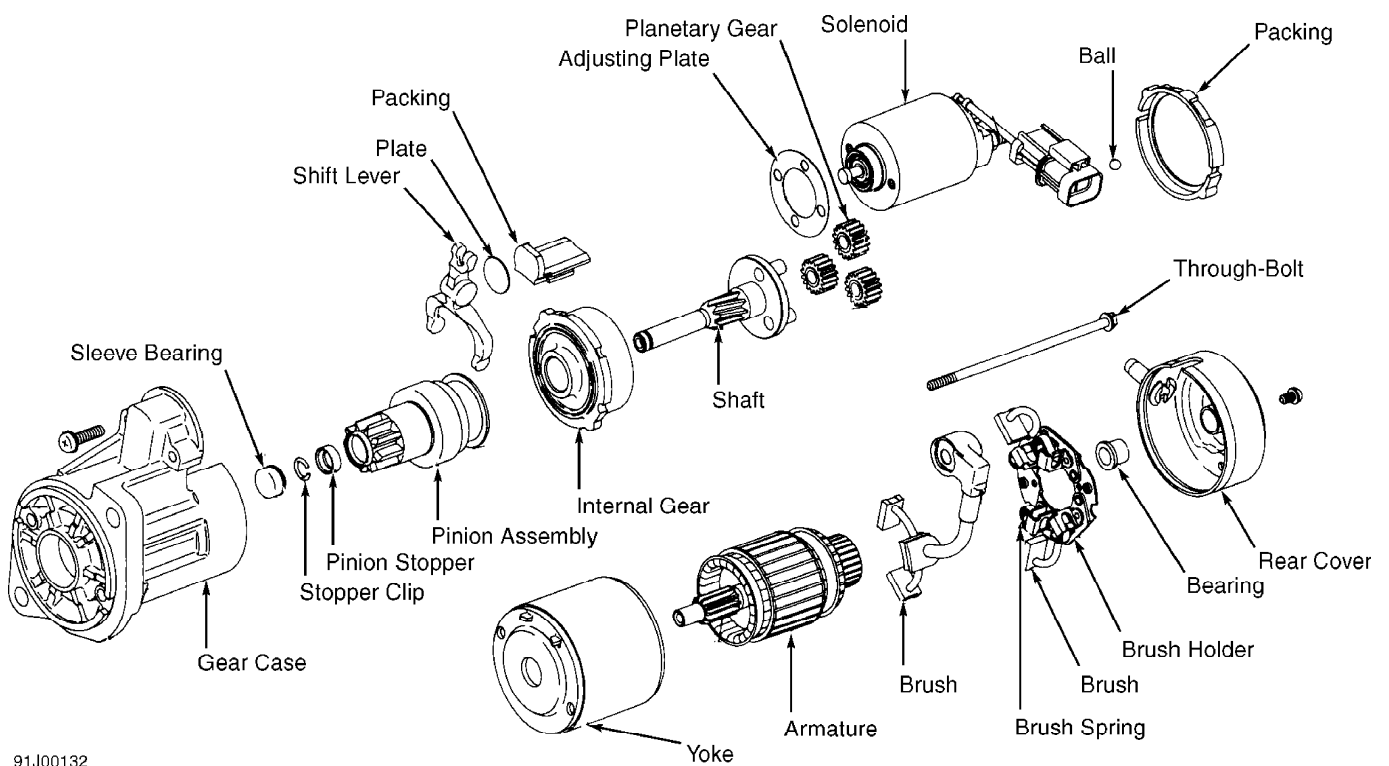
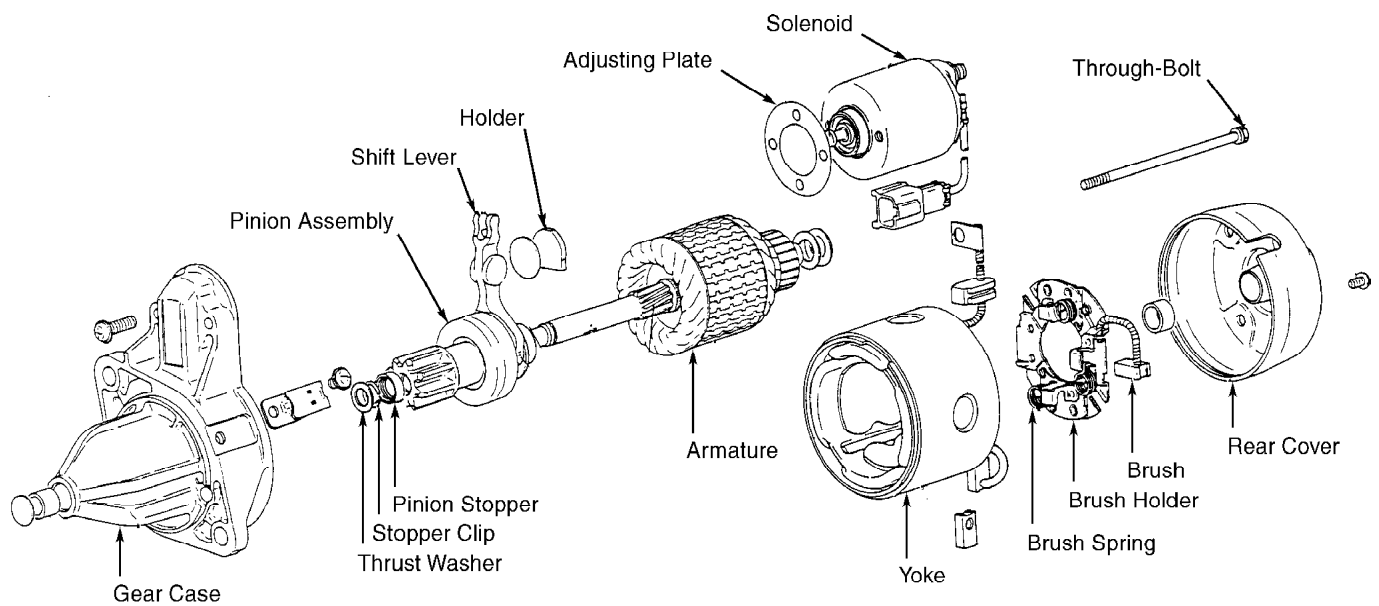
90A02749

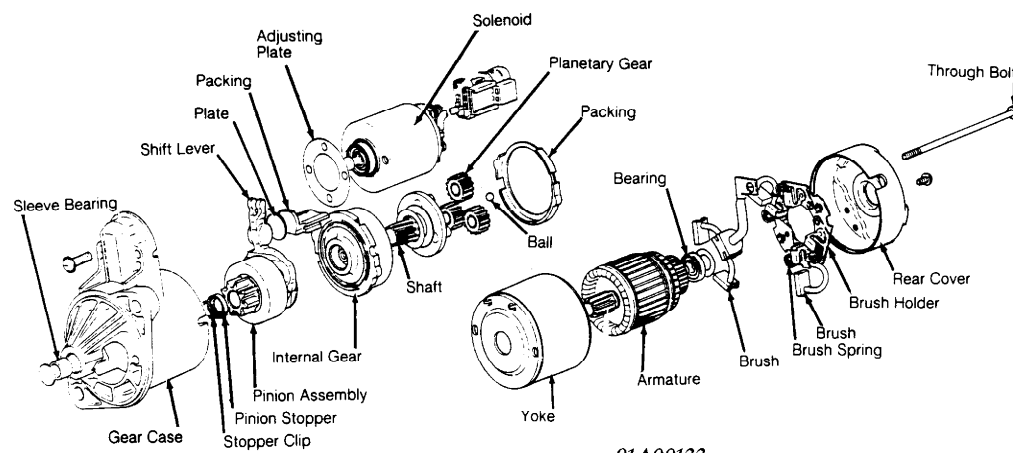
Fig. 1: View Of Starter M1T73881ZC (Altima)
Courtesy of Nissan Motor Co., U.S.A.



92F00922

Fig. 2: View Of Starters M1T72985A & M1T77281 (NX & Sentra) & M1T72781A (240SX)
Courtesy of Nissan Motor Co., U.S.A.





91A00133

Fig. 5: View Of Starter M2T25281 (300ZX)
 Courtesy of Nissan Motor Co., U.S.A.