

STARTER - HITACHI

1993 Nissan Sentra

1993 ELECTRICAL
Nissan Starters - Hitachi

Altima, Maxima, NX, Pathfinder, Pickup, Quest, Sentra

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	
S114-754	2
Maxima	
S114-461A	1
S114-756	2
NX & Sentra	
S114-630	4
S114-701B	3
S114-767	2
S114-769	2
Pathfinder & Pickup	
S114-527A	6
S114-528	5
S114-607C	4
S114-703A	3
Quest	
S114-757	2

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

Application	Maximum Amps	Minimum RPM
Altima		
S114-754	85	2950
Maxima		
S114-461A	100	3000
S114-756	90	2950

NX & Sentra			
S114-630		60	 7000
S114-701B		90	 2950
S114-767		90	 2950
S114-769		85	 2950
Pathfinder & Pickup			
S114-527A		90	 2950
S114-528		90	 2650
S114-607C		60	 7000
S114-703A		90	 2950
Quest			
S114-757		90	 2900

REMOVAL & INSTALLATION

STARTER MOTOR

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

Removal & Installation

Disconnect negative battery 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. 1-6.

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		
S114-754	 3.1-5.7 (1.4-2.6)	47 (12)
Maxima		
S114-461A	 4.0-4.9 (1.8-2.2)	47 (12)
S114-756	 4.0-4.9 (1.8-2.2)	43 (11)
NX & Sentra		
S114-630	 4.0-4.9 (1.8-2.2)	43 (11)
S114-701B	 4.0-4.9 (1.8-2.2)	43 (11)
S114-767	 3.1-5.7 (1.4-2.6)	41 (10.5)
S114-769	 3.1-5.7 (1.4-2.6)	41 (10.5)
Pathfinder & Pickup		
S114-527A	 4.0-4.9 (1.8-2.2)	43 (11)
S114-528	 4.0-4.9 (1.8-2.2)	43 (11)
S114-607C	 4.0-4.6 (1.8-2.1)	43 (11)
S114-703A	 4.0-4.9 (1.8-2.2)	43 (11)
Quest		
S114-757	 4.0-4.9 (1.8-2.2)	43 (11)

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	
S114-754	1.10 (28)
Maxima	
S114-461A	1.26 (32)
S114-756	1.26 (32)
NX & Sentra	
S114-630	1.54 (39)
S114-701B	1.26 (32)
S114-767	1.10 (28)
S114-769	1.10 (28)
Pathfinder & Pickup	
S114-527A	1.26 (32)
S114-528	1.26 (32)
S114-607C	1.54 (39)
S114-703A	1.26 (32)
Quest	
S114-757	1.26 (32)

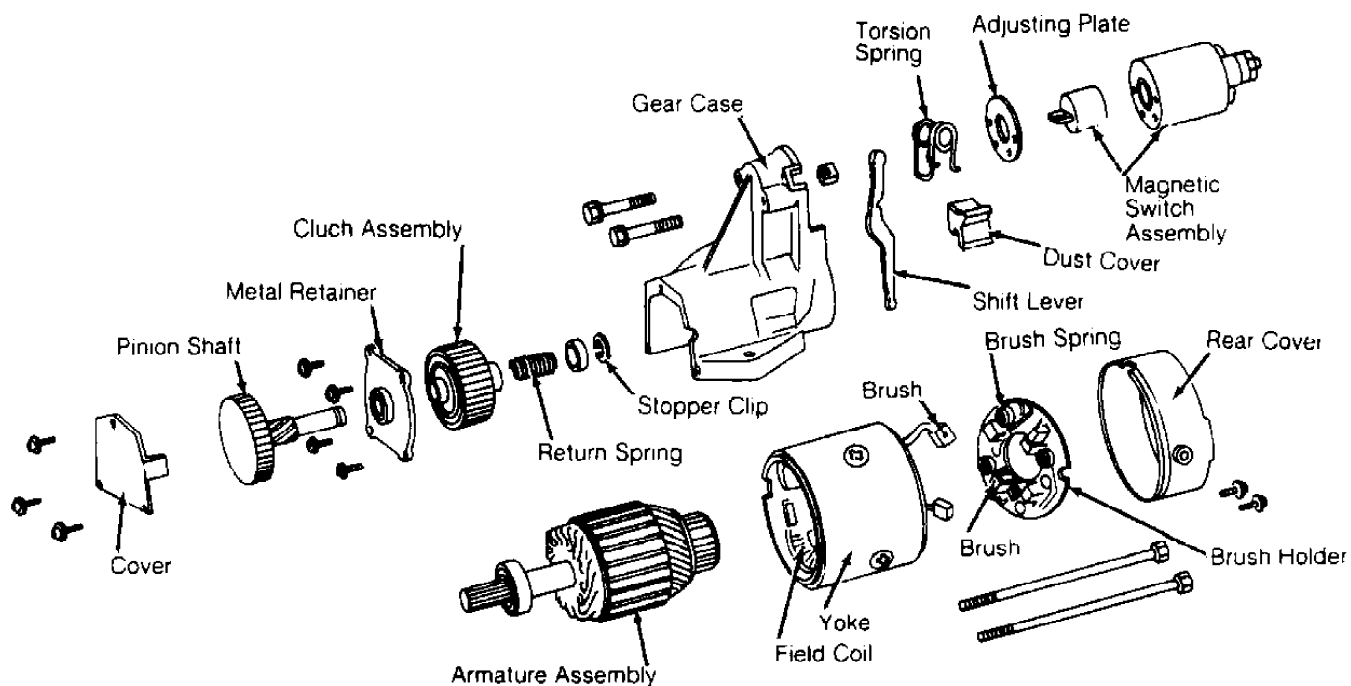
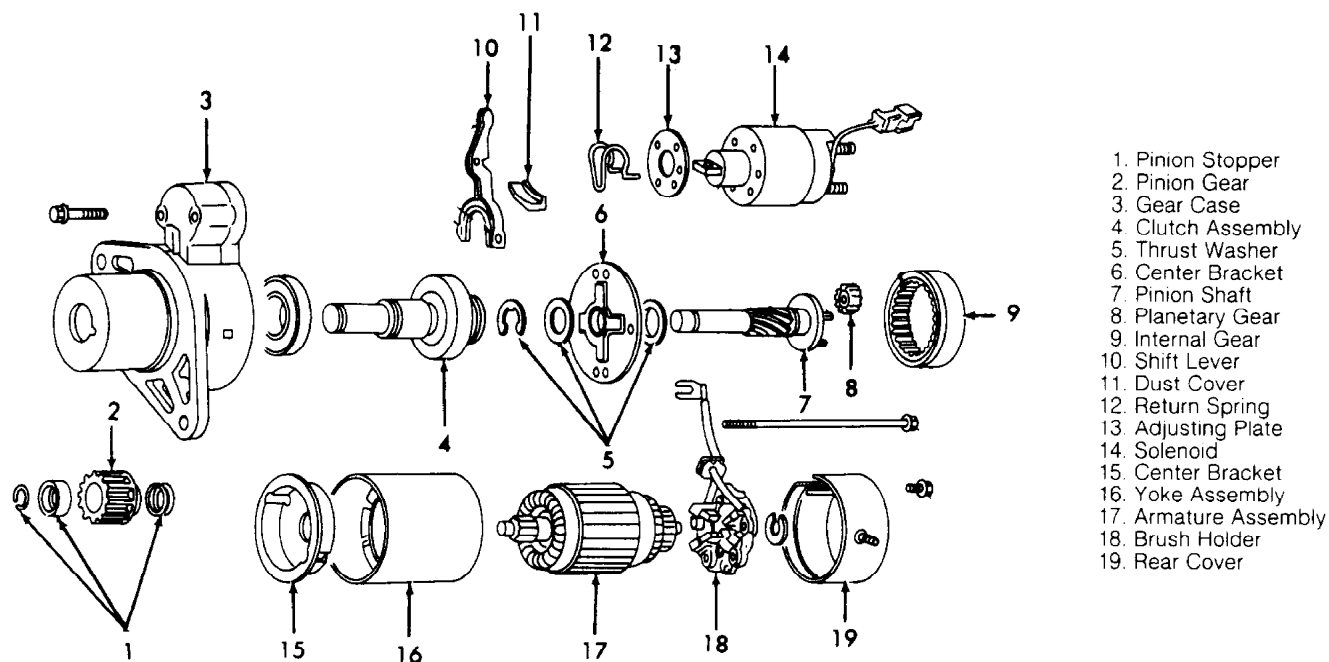
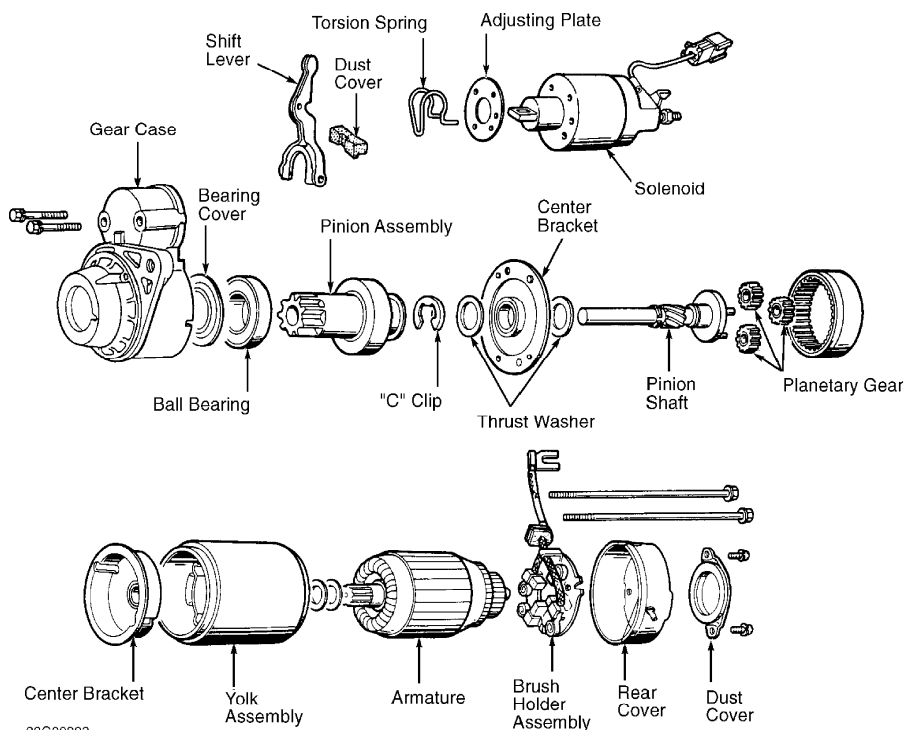


Fig. 1: View Of Starter S114-461A (Maxima)
Courtesy of Nissan Motor Co., U.S.A.



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Fig. 2: View Of Starters S114-754 (Altima), S114-756 (Maxima), S114-767/769 (NX & Sentra) & S114-757 (Quest)
 Courtesy of Nissan Motor Co., U.S.A.



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Fig. 3: View Of Starters S114-701B (NX & Sentra) & S114-703A (Pathfinder & Pickup)
 Courtesy of Nissan Motor Co., U.S.A.

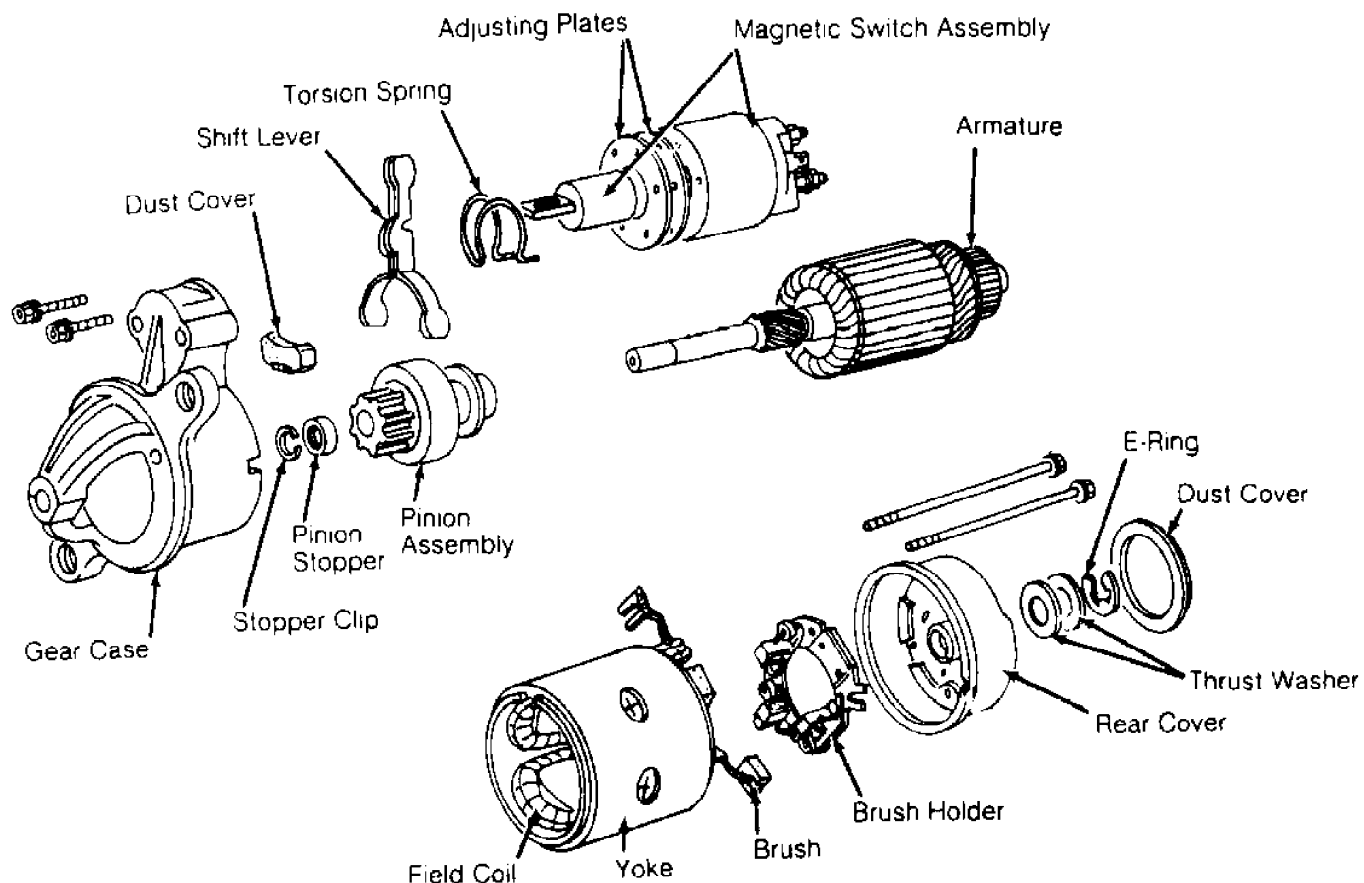


Fig. 4: View Of Starters S114-630 (NX & Sentra) & S114-607C (Pathfinder & Pickup)
 Courtesy of Nissan Motor Co., U.S.A.

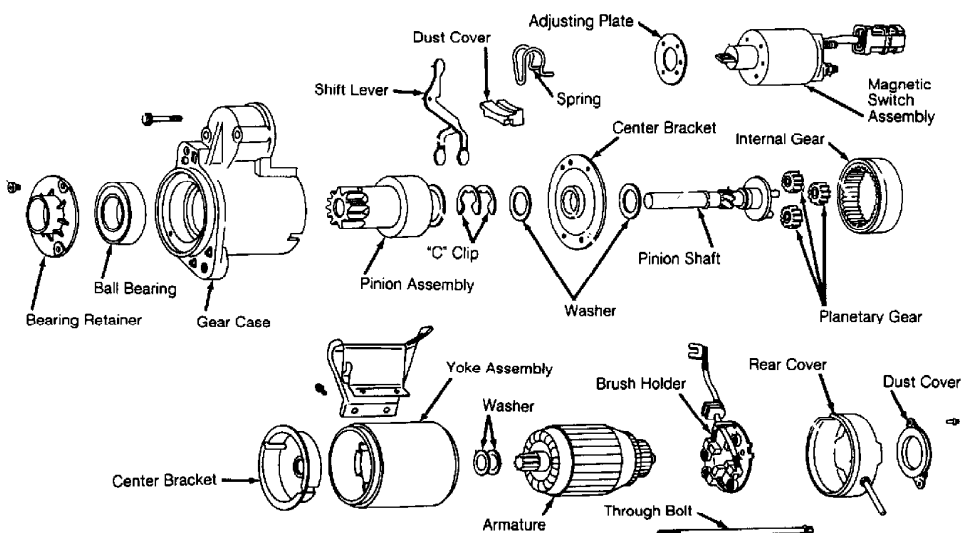


Fig. 5: View Of Starter S114-528 (Pathfinder & Pickup)
 Courtesy of Nissan Motor Co., U.S.A.

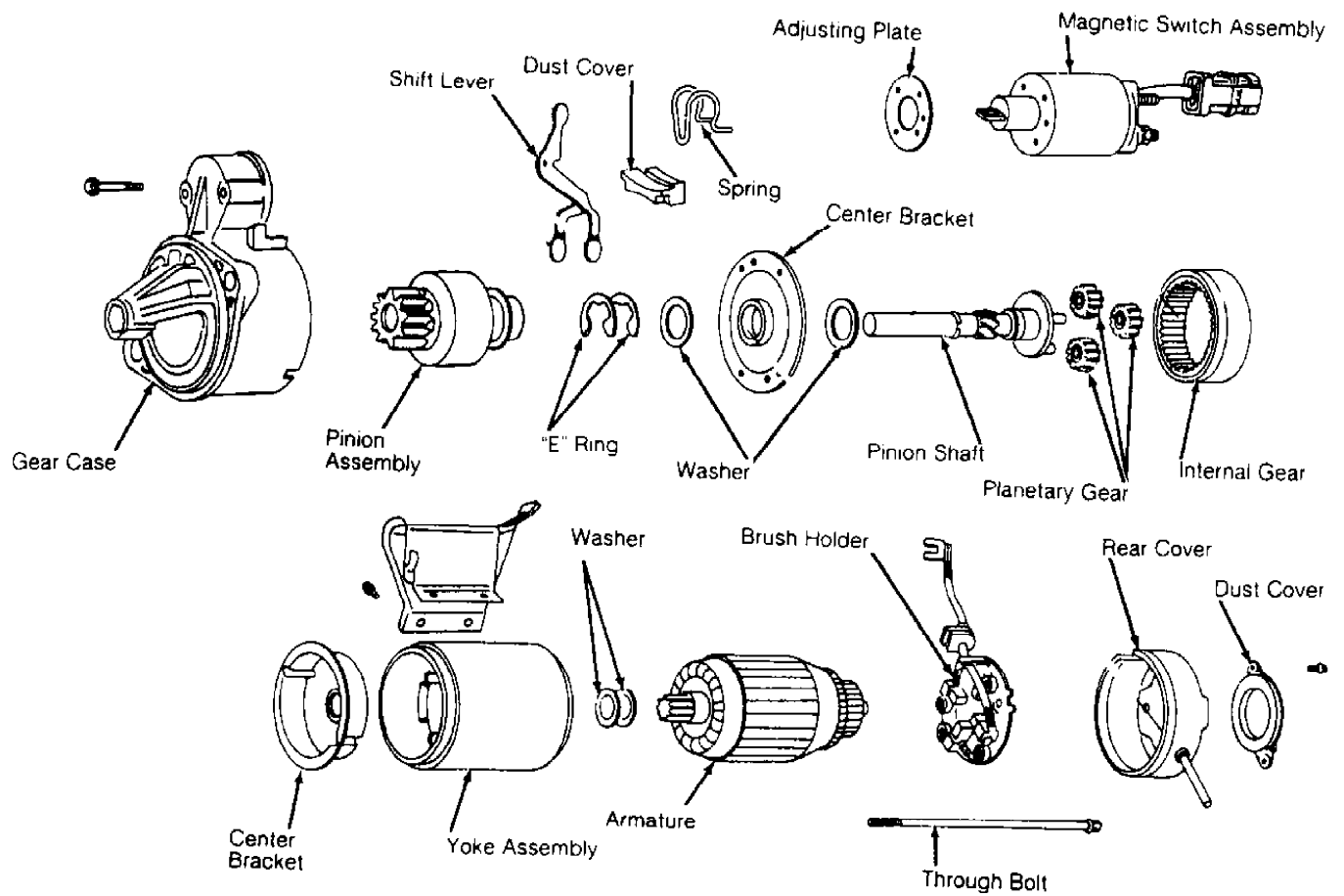


Fig. 6: View Of Starter S114-527A (Pathfinder & Pickup)
 Courtesy of Nissan Motor Co., U.S.A.