

TORQUE SPECIFICATIONS**TORQUE SPECIFICATIONS**

Application	Ft. Lbs. (N.m)
A/C Compressor Bracket Bolts	
Upper Vertical Bolt	16-21 (22-29)
Horizontal Bolts	32-43 (43-58)
A/C Compressor-To-Bracket Bolts	32-43 (43-58)
Air Inlet Tube-To-Supercharger Bolts	15-18 (20-24)
Camshaft Locating Plate Bolt	58-65 (78-88)
Camshaft Sprocket Bolt	58-65 (78-88)
Connecting Rod Nuts	
Step 1	10-12 (14-16)
Step 2	(1) Tighten Additional 60-65 Degrees
Coolant Outlet-To-Intake Manifold Bolts	10-16 (16-22)
Crankshaft Pulley Bolt	141-156 (191-211)
Cylinder Block Coolant Drain Plug	24-32 (34-44)
Cylinder Head Bolts (2)	
Step 1 - Cylinder Head Bolts	21 (29)
Step 2 - Cylinder Head Bolts	44 (59)
Step 3 - Cylinder Head Bolts	Loosen All Bolts
Step 4 - Cylinder Head Bolts	89 INCH Lbs. (10)
Step 5 - Intake Manifold Bolts/Nuts (3)	35 INCH Lbs. (4)
Step 6 - Intake Manifold Bolts/Nuts	13 (18)
Step 7 - Intake Manifold Bolts/Nuts	15 (20)
Step 8 - Intake Manifold Bolts/Nuts	Loosen All Bolts/Nuts
Step 9 - Cylinder Head Bolts	21 (29)
Step 10 - Cylinder Head Bolts	(4) Tighten Additional 60-65 Degrees
Step 11 - Cylinder Head Sub-Bolts	80-106 INCH Lbs. (9-12)
Step 12 - Intake Manifold Bolts/Nuts	35 INCH Lbs. (4)
Step 13 - Intake Manifold Bolts/Nuts	80 INCH Lbs. (9)
Step 14 - Intake Manifold Bolts/Nuts	71-89 INCH Lbs. (8- 10)
Distributor Hold Down Bolt	10-13 (14-17)
EGR Pipe	29-36 (39-49)

2003 Nissan Xterra SE S/C

2003 ENGINES Engine Mechanical - VG33E & VG33ER - Xterra

EGR Valve Bolts	12-15 (16-20)
Engine Coolant Temperature Sensor	15-21 (20-29)
Engine Mounts	
Bracket Bolts	32-41 (43-55)
Lower Mount Nut	32-41 (43-55)
Upper Mount Nut	44-58 (59-78)
Engine Slinger Bolts	15-19 (20-26)
Exhaust Manifold Bolts ⁽⁵⁾	21-24 (29-33)
Generator	
Adjustment Bolt	12-15 (16-20)
Mounting Bolts	16-21 (22-29)
Intake Manifold Collector-To-Intake Manifold ⁽⁶⁾	
With Supercharger	19-23 (25-31)
Without Supercharger	13-16 (18-22)
Main Bearing Cap Bolts ⁽⁷⁾	66-74 (90-100)
Oil Drain Plug	21-29 (28-39)
Oil Filter Adapter Bolts	12-15 (16-20)
Oil Pump Cover Bolts	
6 mm Bolts	53-71 INCH Lbs. (6-8)
8 mm Bolts	16-21 (22-29)
Oil Pump Regulator Plug	29-51 (39-69)
Oil Strainer-To-Oil Pump Bolts	12-13 (16-17)
Rocker Arm Shaft Bolts	13-16 (18-22)
Spark Plug	15-22 (20-30)
Starter Bolts	22-27 (30-36)
Supercharger Bypass Valve Actuator Bolts	16-21 (22-29)
Supercharger-To-Intake Manifold Collector Bolts ⁽⁸⁾	18-23 (25-31)
Thermal Transmitter	15-20 (20-27)
Thermostat Housing Bolts	12-15 (16-20)
Throttle Body Bolts ⁽⁹⁾	
Step 1	80-97 INCH Lbs. (9-11)
Step 2	13-16 (18-22)
Timing Belt Tensioner Nut	32-43 (43-58)
Transmission Crossmember Bolts	55-64 (75-87)
Transmission Mount Nuts	30-38 (41-52)
Water Pump Bolts	12-16 (16-22)
INCH Lbs. (N.m)	
Air Inlet Tube Support Bolts	106-124 (12-14)

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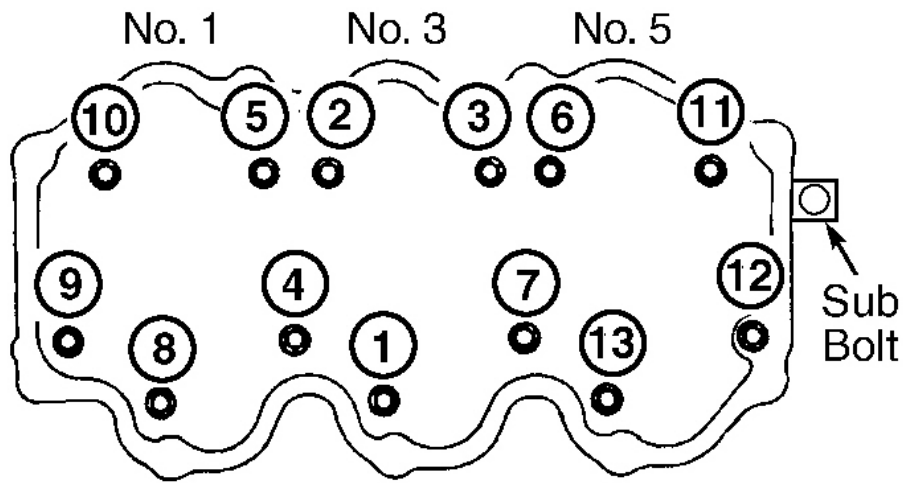
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2003 Nissan Xterra SE S/C

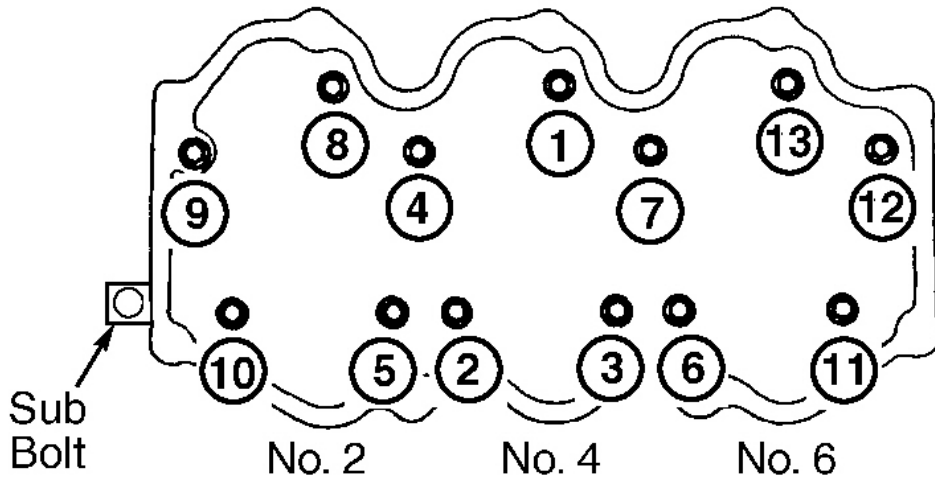
2003 ENGINES Engine Mechanical - VG33E & VG33ER - Xterra

Exhaust Manifold Cover Bolts	80-97 (9-11)
Intake Manifold Bolts/Nuts ⁽³⁾	
Step 1	35 (4)
Step 2	80 (9)
Step 3	71-89 (8-10)
Oil Pan Bolts ⁽¹⁰⁾	53-71 (6-8)
Oil Pressure Switch	106-150 (12-17)
Oil Pump Cover Screws	53-71 (6-8)
Oil Strainer Support Bolt	53-71 (6-8)
Rear Camshaft Cover Bolts	71-97 (8-11)
Rear Oil Seal Retainer Bolts	53-71 (6-8)
Rocker Cover Bolts	9-27 (1-3)
Timing Belt Cover Bolts	27-44 (3-5)
Water Pump Pulley Nuts	53-89 (6-10)

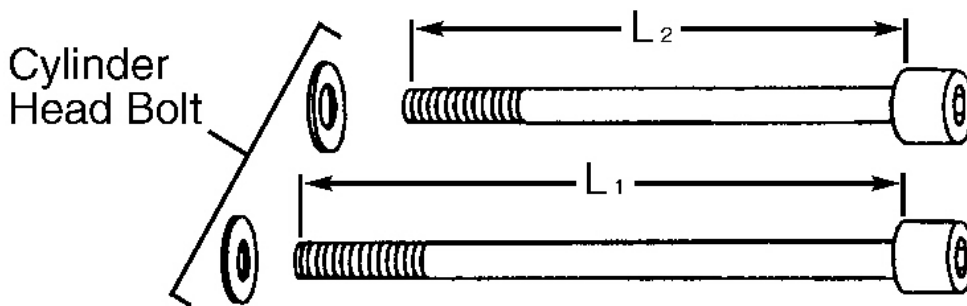
- (1) If torque angle wrench is not available, tighten an additional 28-32 (38-44 N.m).
- (2) Tighten cylinder head bolts in sequence. See [Fig. 214](#) .
- (3) Tighten intake manifold bolts/nuts in sequence. See [Fig. 215](#) .
- (4) If torque angle wrench is not available, tighten an additional 40-47 ft. lbs. (54-64 N.m).
- (5) Tighten exhaust manifold bolts in sequence. See [Fig. 216](#) .
- (6) Tighten intake manifold collector bolts in sequence. See [Fig. 217](#) .
- (7) Tighten main bearing cap bolts using 3 steps in sequence. See [Fig. 218](#) .
- (8) Tighten supercharger bolts in sequence. See [Fig. 219](#) .
- (9) Tighten throttle body bolts in sequence. See [Fig. 220](#) .
- (10) Tighten oil pan bolts in sequence. See [Fig. 221](#) .



RIGHT SIDE



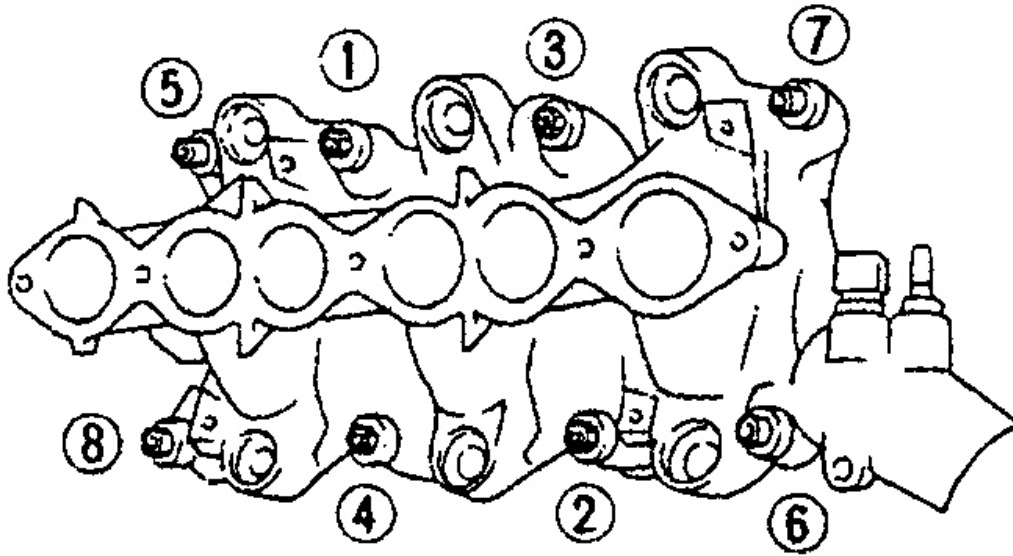
LEFT SIDE



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Fig. 214: Identifying Cylinder Head Bolt Tightening Sequence

Courtesy of NISSAN MOTOR CO., U.S.A.

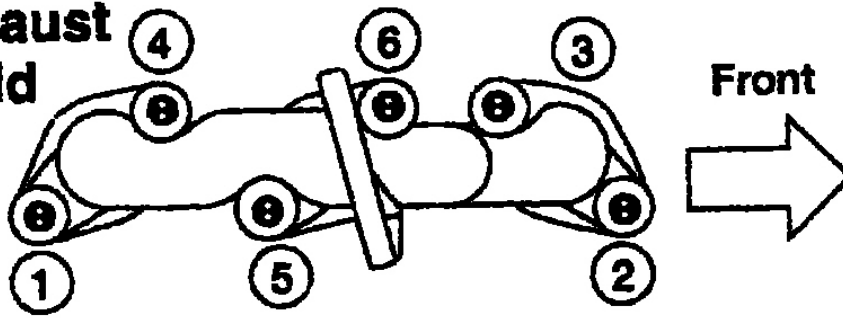


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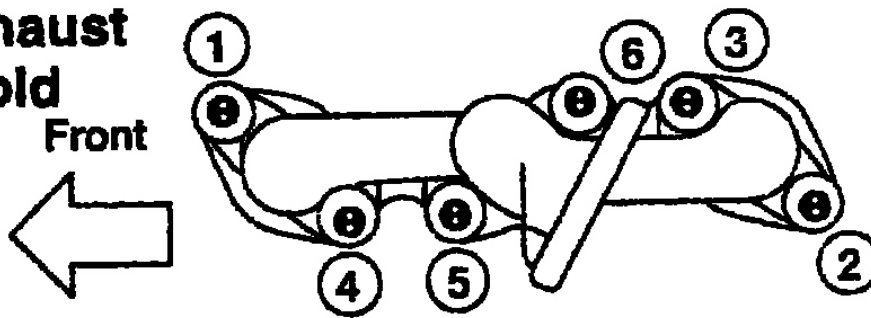
Fig. 215: Identifying Intake Manifold Bolt/Nut Tightening Sequence

Courtesy of NISSAN MOTOR CO., U.S.A.

RH exhaust manifold

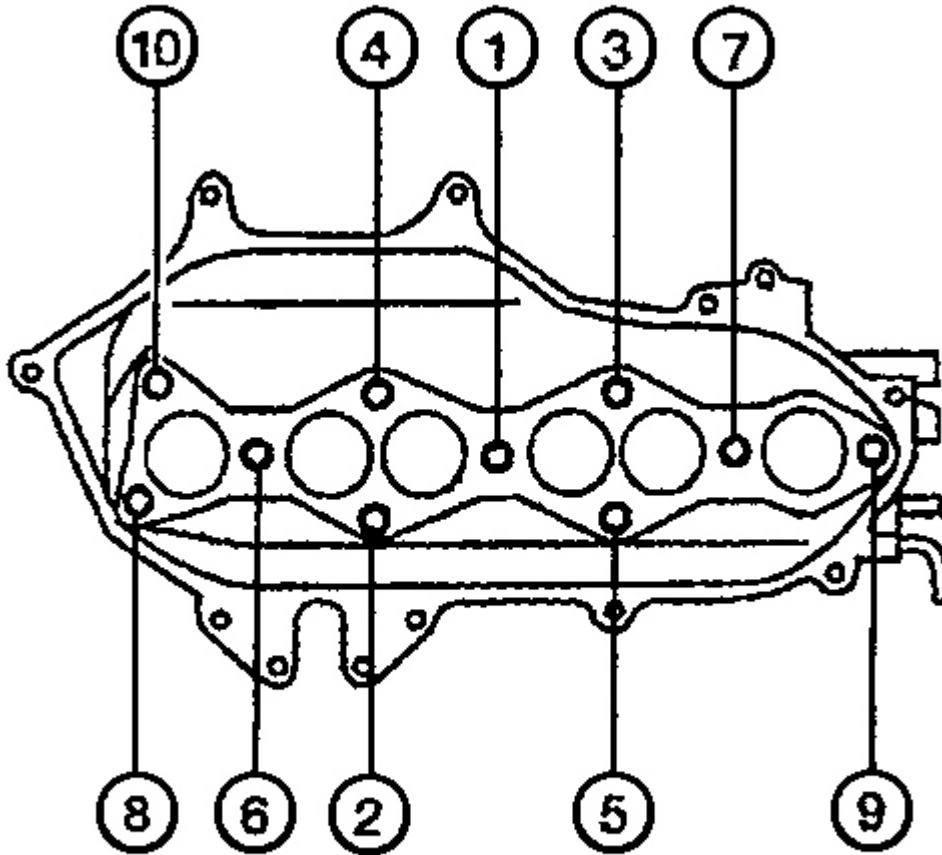


LH exhaust manifold



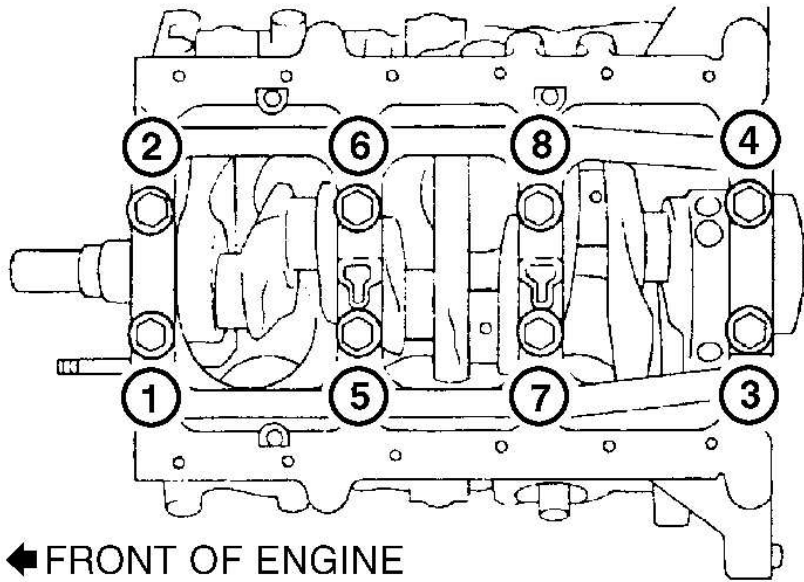
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Fig. 216: Identifying Exhaust Manifold Bolt Tightening Sequence
Courtesy of NISSAN MOTOR CO., U.S.A.



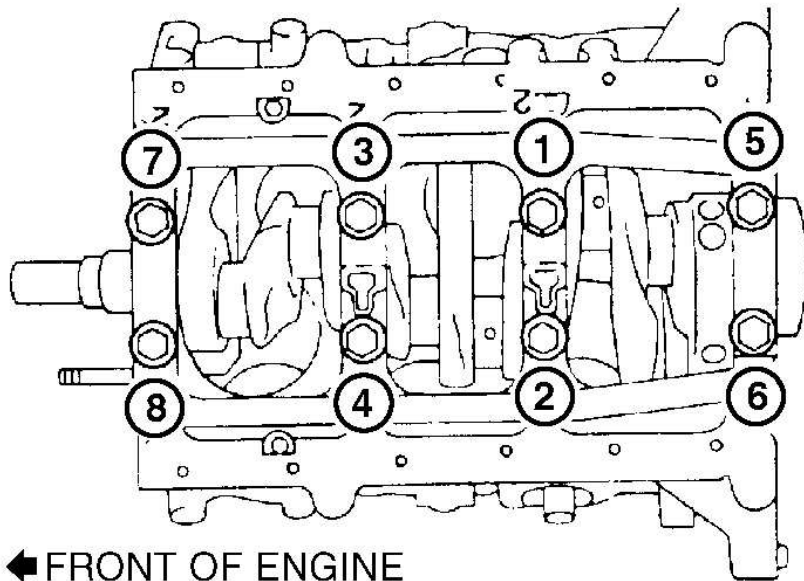
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Fig. 217: Identifying Intake Manifold Collector Bolt Tightening Sequence
Courtesy of NISSAN MOTOR CO., U.S.A.



← FRONT OF ENGINE

REMOVAL SEQUENCE



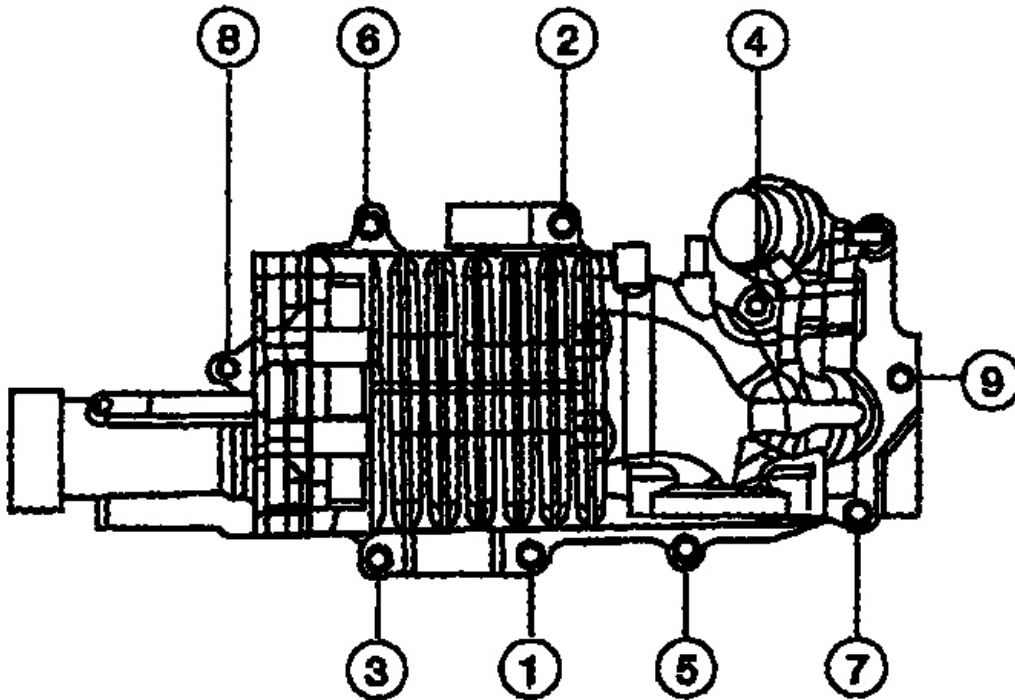
← FRONT OF ENGINE

TIGHTENING SEQUENCE

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Fig. 218: Identifying Main Bearing Cap Bolt Removal & Installation Sequence

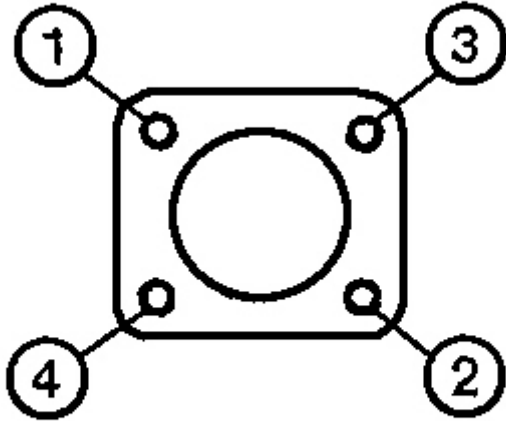
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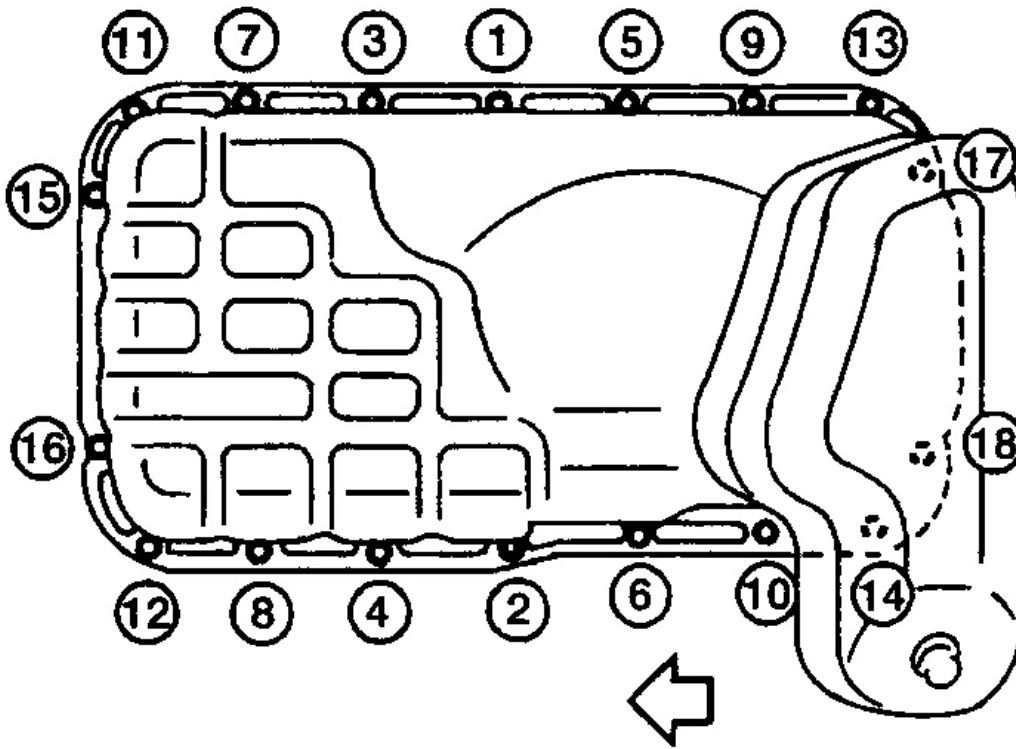
Fig. 219: Identifying Supercharger Bolt Tightening Sequence

Courtesy of NISSAN MOTOR CO., U.S.A.



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Fig. 220: Identifying Throttle Body Bolt Tightening Sequence
Courtesy of NISSAN MOTOR CO., U.S.A.



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Fig. 221: Identifying Oil Pan Bolt Tightening Sequence
Courtesy of NISSAN MOTOR CO., U.S.A.