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Edition: December 2012 Revision:December 2012 Publication No. SM3E-1D40U0	A GENERAL INFORMATION B ENGINE	GI General Information EM Engine Mechanical LU Engine Lubrication System
		EM Engine Mechanical
		-
		CO Engine Cooling System
		EC Engine Control System
		FL Fuel System
		EX Exhaust System
		STR Starting System
		ACC Accelerator Control System
•	C HYBRID	HBC Hybrid Control System
		HBB Hybrid Battery System
•	D TRANSMISSION & DRIVE-	CL Clutch
	LINE	TM Transaxle & Transmission
		DLN Driveline
		FAX Front Axle
		RAX Rear Axle
NISSAN '	E SUSPENSION	FSU Front Suspension
	E GOO! ENGION	RSU Rear Suspension
FRONTIER		SCS Suspension Control System
FRUITIER		WT Road Wheels & Tires
MODEL D40 SERIES	F BRAKES	BR Brake System
	1 BICAREO	PB Parking Brake System
		BRC Brake Control System
	G STEERING	ST Steering System
	G STEERING	STC Steering Control System
•	H RESTRAINTS	SB Seat Belt
	n RESTRAINTS	
		SBC Seat Belt Control System
		SR SRS Airbag
	I VENTUATION LIEATED 8	SRC SRS Airbag Control System
	I VENTILATION, HEATER & AIR CONDITIONER	VTL Ventilation System
		HA Heater & Air Conditioning System
	J BODY INTERIOR	HAC Heater & Air Conditioning Control System
	J BODY INTERIOR	INT Interior IP Instrument Panel
		SE Seat
		ADP Autodrive Positioner System
	K DODY EXTERIOR	AP Adjustable Pedals
	K BODY EXTERIOR, DOORS. ROOF & VEHICLE	DLK Door & Lock SEC Security Control System
	SECURITY	
		GW Glass & Window System
		PWC Power Window Control System
		RF Roof
		EXT Exterior
	L DDIVED CONTROL C	BRM Body Repair Manual
	L DRIVER CONTROLS	MIR Mirrors
		EXL Exterior Lighting System
		INL Interior Lighting System
		WW Wiper & Washer
		DEF Defogger
<u></u>	M ELECTRICAL & DOMES	HRN Horn
All rights reserved. No part	M ELECTRICAL & POWER CONTROL	PWO Power Outlet
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Nissan North America, Inc.	O CRUISE CONTROL	CCS Cruise Control System
	P MAINTENANCE	MA Maintenance

# **FOREWORD**

This manual contains maintenance and repair procedure for the 2013 NISSAN FRONTIER.

In order to assure your safety and the efficient functioning of the vehicle, this manual should be read thoroughly. It is especially important that the PRECAUTIONS in the GI section be completely understood before starting any repair task.

All information in this manual is based on the latest product information at the time of publication. The right is reserved to make changes in specifications and methods at any time without notice.

# IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the technician 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. Service varies with the procedures used, the skills of the technician and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first be completely satisfied that neither personal safety nor the vehicle's safety will be jeopardized by the service method selected.





### PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

Your comments are important to NISSAN and will help us to improve our Service Manuals. Use this form to report any issues or comments you may have regarding our Service Manuals. Please print this form and type or write your comments below. Mail or fax to:

Nissan North America, Inc. Technical Service Information 39001 Sunrise Drive, P.O. Box 9200 Farmington Hills, MI USA 48331 FAX: (248) 488-3880

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What information repairing custome	should be included in NISSAN Servicer vehicles?  YOUR NAME:	ice Manuals to better support you in servicing or				

# QUICK REFERENCE CHART: FRONTIER

Engine Tune-up Data: QR25DE

#### INFOID:0000000009314184

# **GENERAL SPECIFICATIONS**

Cylinder arrangement		In-line 4		
Displacement cm <sup>3</sup> (cu in)		2,488 (151.82)		
Bore and stroke mm (in)		89.0 x 100.0 (3.504 x 3.937)		
Valve arrangement		DOHC		
Firing order		1-3-4-2		
Number of pieton rings	Compression	2		
Number of piston rings	Oil	1		
Compression ratio		9.5		
Standard		1,304 (13.3, 189)		
Compression pressure kPa (kg/cm², psi) / 250 rpm	Minimum	1,108 (11.3, 161)		
ki a (kg/ciii , psi// 200 ipiii	Differential limit between cylinders	100 (1.0, 14)		

### **DRIVE BELT**

Tension of drive belt	Auto adjustment by auto-tensioner

# SPARK PLUG

Make	NGK
Standard type*	PLZKAR6A-11
Gap (nominal)	1.1 mm (0.043 in)

<sup>\*:</sup> Always check with the Parts Department for the latest parts information.

# Engine Tune-up Data: VQ40DE

INFOID:0000000009314183

### **GENERAL SPECIFICATIONS**

Cylinder arrangement	V-6			
Displacement cm <sup>3</sup> (cu in)	3,954 (241.30)			
Bore and stroke mm (in)		95.5 × 92.0 (3.76 × 3.622)		
Valve arrangement		DOHC		
Firing order		1-2-3-4-5-6		
Number of pieton rings	Compression	2		
Number of piston rings	Oil	1		
Number of main bearings		4		
Compression ratio		9.7		
·	Standard	1,275 (13.0, 185)		
Compression pressure kPa (kg/cm <sup>2</sup> , psi)/300 rpm	Minimum	981 (10.0, 142)		
Ki a (Kg/ciii , psi//ood ipiii	Differential limit between cylinders	98 (1.0, 14)		

# Cylinder number FRONT SEM713A Valve timing (Intake valve timing control - "OFF") BDC PBIC0187E Unit: degree d f а С е 244 240 64 58 -4 6

# **DRIVE BELT**

Tension of drive belts		Auto adjustment by auto-tensioner	

# SPARK PLUG

Make	NGK
Standard type*	DILFR5A-11
Gap (nominal)	1.1 mm (0.043 in)

<sup>\*:</sup> Always check with the Parts Department for the latest parts information.

# Front Wheel Alignment (Unladen\*1)\*6

INFOID:0000000009314182

Drive type		2WD	4WD	
	Minimum	-0° 30′ (-0.50°)	-0° 15′ (-0.25°)	
Camber	Nominal	0° 15′ (0.25°)	0° 30′ (0.50°)	
Degree minute (decimal degree)	Maximum	1° 0′ (1.00°)	1° 15′ (1.25°)	
	Cross camber	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less	
	Minimum	2° 15′ (2.25°)	2° 0′ (2.00°)	
Caster	Nominal	3° 0′ (3.00°)	2° 45′ (2.75°)	
Degree minute (decimal degree)	Maximum	3° 45′ (3.75°)	3° 30′ (3.50°)	
	Cross caster	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less	
Kingpin inclination Degree minute (decimal degree)	Nominal	13° 0′ (13.00°)	12° 45′ (12.75°)	

					2013	
Drive type				2WD 4WD		
			Lines parallel to center line of bo	ody		
			B			
			Front	Total toe-in = A - B		
		Minin		In 1.2 mm (In 0.05 in)		
	Distance		Nominal	In 3.2 mm (In 0.12 in)		
T. (-1 ( 1 -			Maximum	In 5.2 mm (In 0.20 in)		
Total toe-in				In 0° 4′ 48″ (In 0.08°)		
	Angle Degree minute (Decimal degree)		Nominal	In 0° 14′ 24″ (In 0.24°)		
	Degree minute	(Decimal degree)	Maximum	In 0° 24′ (	In 0.40°)	
\M\bool turning	Inside Degree minute (D		ecimal degree)	33° 26′ – 35° 26′ * <sup>2</sup> (33.43° – 35.43°)	33° 36′– 35° 36′ * <sup>4</sup> (33.60°– 35.60°)	
Wheel turning angle (full turn)  Outside  Degree minute (De		ecimal degree)	29° 22′– 31° 22′ * <sup>3</sup> (29.37°– 31.37°)	29° 44′– 31° 44′ * <sup>5</sup> (29.73°– 31.73°)		

<sup>\*1:</sup> Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

- \*2: Target value 35° 26' (35.43°)
- \*3: Target value 31° 22' (31.37°)
- \*4: Target value 35° 36' (35.60°)
- \*5: Target value 31° 44′ (31.73°)

# General Specification (Rear)

INFOID:0000000009314180

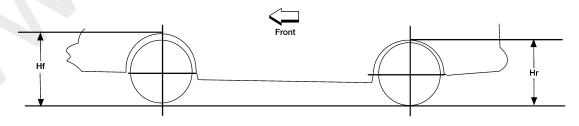
Suspension type	Rigid axle with semi-elliptic leaf springs
Shock absorber type	Double-acting hydraulic

# Wheelarch Height (Unladen\*1)

INFOID:0000000009314181

King Cab

Unit: mm (in)



LEIA0085E

Drive type	2WD				4V	VD
Engine type	QR2	25DE	VQ40DE			
Tire size	P235/75R15 P265/70R16		P265/70R16	P265/75R16	P265/70R16	P265/75R16

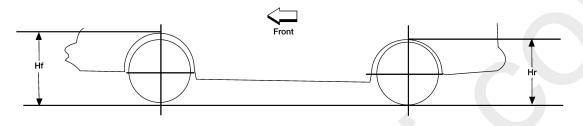
<sup>\*6:</sup> Some vehicles may be equipped with straight (non-adjustable) lower link bolts and washers. In order to adjust camber and caster on these vehicles, first replace the lower link bolts and washers with adjustable (cam) bolts and washers.

Front wheelarch height (Hf)	850	865	868	880	881	893
	(33.46)	(34.06)	(34.17)	(34.65)	(34.68)	(35.16)
Rear wheelarch height (Hr)	878	887	895	907	904	917
	(34.57)	(34.92)	(35.24)	(35.71)	(35.59)	(36.10)

<sup>\*1:</sup> Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

Crew Cab

Unit: mm (in)



LEIA0085E

Engine type		VQ40DE								
Drive type	2WD						4WD			
Tire size	P265/	70R16	P265/75R16	P265/0	60R18	P265/	70R16	P265/75R16	P265/	60R18
Wheel base	Short	Long	Short	Short	Long	Short	Long	Short	Short	Long
Front wheelarch height (Hf)	867 (34.13)	870 (34.25)	879 (34.61)	866 (34.09)	869 (34.21)	879 (34.61)	882 (34.72)	891 (35.08)	879 (34.61)	882 (34.72)
Rear wheelarch height (Hr)	892 (35.12)	892 (35.12)	904 (35.59)	892 (35.12)	892 (35.12)	905 (35.63)	902 (35.51)	918 (36.14)	905 (35.63)	902 (35.51)

<sup>\*1:</sup> Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

# **Brake Specifications**

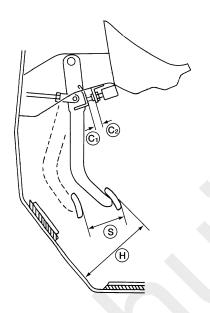
INFOID:0000000009314178

Unit: mm (in)

Engine Type		QR25DE	VQ40DE	
Front brake	Brake model	CLZ33VA		
	Rotor outer diameter × thickness	283 × 28 (11.142 × 1.102)	296 × 28 (11.654 × 1.102)	
	Pad Length × width × thickness	140 × 50.5 × 10 (5	5.51 × 1.99 × 0.39)	
	Cylinder bore diameter (each)	46.4 (1.83)		
Rear brake	Brake model	CLZ14VA		
	Rotor outer diameter × thickness	286 × 18 (11	.260 × 0.709)	
	Pad length × width × thickness	87.6 × 35.5 × 11.0 (3.449 × 1.398 × 0.433)		
	Cylinder bore diameter	38.1	(1.50)	
Control valve	Valve model	Electric brake for	orce distribution	
Brake booster	Booster model	C2	15T	
	Diaphragm diameter	215 (8	8.465)	

Brake Pedal

Unit: mm (in)



AWFIA0557ZZ

Pedal free height (H)	M/T	174.7 +10/-0 (6.88 +0.39/-0)
redai liee neight (n)	A/T	182.1 +10/-0 (7.17 +0.39/-0)
Pedal full stroke (S)	•	153 (6.02)
Clearance between pedal stopper(C1) and threaded end of stop lamp switch and ASCD cance (C2) (if equipped)	0.74 - 1.96 (0.029 - 0.077)	

# Front Disc Brake

Unit: mm (in)

Engine type		QR25DE / VQ40DE
Brake model		CLZ33VA
Drake ned	Standard thickness (new)	10.0 (0.394)
Brake pad Min	Minimum thickness	2.0 (0.079)
Standard thickness (new)		28.0 (1.102)
Dies reter	Minimum thickness	26.0 (1.024)
Disc rotor	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006)
	Runout limit (with it attached to the vehicle)	0.05 (0.0020)

# Rear Disc Brake

Unit: mm (in)

Engine type		QR25DE / VQ40DE
Brake model		CLZ14VA
Brake pad	Standard thickness (new)	11.0 (0.433)
	Minimum thickness	2.0 (0.079)

Engine type		QR25DE / VQ40DE
Brake model		CLZ14VA
	Standard thickness (new)	18.0 (0.709)
Disc rotor  Minimum thickness  Maximum uneven wear (measured a	Minimum thickness	16.0 (0.630)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006)
	Runout limit (with it attached to the vehicle)	0.05 (0.0020)

# FOR USA AND CANADA: Fluids and Lubricants

INFOID:0000000009314170

# QR25DE

Description			Capacity (Approximate)	
Description		Metric	US measure	Imp measure
Fuel		80 <i>l</i>	21-1/8 gal	17-5/8 gal
Engine oil	With oil filter change	4.6 ℓ	4-7/8 qt	4 qt
Drain and refill	Without oil filter change	4.3 ℓ	4-1/2 qt	3-3/4 qt
Dry engine (engine overhaul)		5.0 ℓ	5-1/4 qt	4-3/8 qt
Cooling system With reservoir at MAX level		9.4 ℓ	10 qt	8-1/4 qt
Automatic transmission fluid (ATF)		10.3 ℓ	10-7/8 qt	9-1/8 qt
Manual transmission fluid (MTF) (5 M/T)		2.9 ℓ	6-1/8 pt	5-1/8 pt
Rear final drive oil	C200	1.6 ℓ	3-3/8 pt	2-7/8 pt
Power steering fluid (PS	SF)	1.0 ℓ	2-1/8 pt	1-3/4 pt
Brake and clutch fluids		_	_	_
Multi-purpose grease		_	_	_
Windshield washer fluid		4.5 ℓ	1-1/4 gal	1 gal
Air conditioning system refrigerant		0.70 ± 0.05 kg	1.54 ± 0.11 lb	$1.54 \pm 0.11 \; lb$
Air conditioning system	oil	180 m ℓ	6.1 fl oz	6.3 fl oz

# VQ40DE

Description			Capacity (Approximate)		
Description	Description		US measure	Imp measure	
Fuel		80 <i>l</i>	21-1/8 gal	17-5/8 gal	
Engine oil	With oil filter change	5.1 ℓ	5-3/8 qt	4-1/2 qt	
Drain and refill	Without oil filter change	4.8 ℓ	5-1/8 qt	4-1/4 qt	
Dry engine (engine overhaul)		6.3 ℓ	6 5/8 qt	5-1/2 qt	
Cooling system	With reservoir at MAX level	10.2 ℓ	10-3/4 qt	9 qt	
Automatic transmission fluid (ATF)		10.3 ℓ	10-7/8 qt	9-1/8 qt	
Manual transmission fluid	2WD	4.0 ℓ	8-3/8 pt	7 pt	
(MTF) (6 M/T)	4WD	4.2 ℓ	8-7/8 pt	7-3/8 pt	

Description			Capacity (Approximate)	
Description		Metric	US measure	Imp measure
Rear final drive oil	C200	1.6 ℓ	3-3/8 pt	2-7/8 pt
	M226	2.01 ℓ	4-1/4 pt	3-1/2 pt
Transfer fluid	TX15B	2.0 ℓ	2-1/8 qt	1-3/4 qt
Front final drive oil		0.85 ℓ	1-3/4 pt	1-1/2 pt
Power steering fluid (PSF)		1.0 ℓ	2-1/8 pt	1-3/4 pt
Brake and clutch fluid		_	_	_
Multi-purpose grease		_	_	_
Windshield washer fluid		4.5 ℓ	1-1/4 gal	1 gal
A/C system refrigerant		0.70 ± 0.05 kg	1.54 ± 0.11 lb	1.54 ± 0.11 lb
A/C system oil		180 m ℓ	6.1 fl oz	6.3 fl oz

# FOR MEXICO: Fluids and Lubricants

INFOID:0000000009314173

# VQ40DE

Description			Capacity (Approximate)	)
Description		Metric	US measure	Imp measure
Fuel		80 <i>l</i>	21-1/8 gal	17-5/8 gal
Engine oil	With oil filter change	5.1 ℓ	5-3/8 qt	4-1/2 qt
Drain and refill	Without oil filter change	4.8 ℓ	5-1/8 qt	4-1/4 qt
Dry engine (engine overh	naul)	6.3 ℓ	6-5/8 qt	5-1/2 qt
Cooling system (with reservoir at "MAX" level)		10.2 ℓ	10-3/4 qt	9 qt
Automatic transmission fluid (ATF)		10.3 ℓ	10-7/8 qt	9-1/8 qt
Rear final drive oil		2.01 ℓ	4-1/4 pt	3-1/2 pt
Transfer fluid		2.0 ℓ	2-1/8 qt	1-3/4 qt
Front final drive oil		0.85 ℓ	1-3/4 pt	1-1/2 pt
Power steering fluid (PSF	=)	1.0 ℓ	2-1/8 pt	1-3/4 pt
Brake fluid		_	_	_
Multi-purpose grease		_	_	_
Windshield washer fluid		4.5 ℓ	1 1/4 gal	1 gal
A/C system refrigerant		$0.70 \pm 0.05 \text{ kg}$	1.54 ± 0.11 lb	1.54 ± 0.11 lb
A/C system oil		180 m ℓ	6.1 fl oz	6.3 fl oz

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< HOW TO USE THIS MANUAL >

# HOW TO USE THIS MANUAL

### HOW TO USE THIS MANUAL

Description INFOID:0000000008793095

This volume explains "Removal, Disassembly, Installation, Inspection and Adjustment" and "Trouble Diagnoses".

Terms (INFOID:0000000008793096

 The captions WARNING and CAUTION warn you of steps that must be followed to prevent personal injury and/or damage to some part of the vehicle.

**WARNING** indicates the possibility of personal injury if instructions are not followed.

**CAUTION** indicates the possibility of component damage if instructions are not followed.

BOLD TYPED STATEMENTS except WARNING and CAUTION give you helpful information.

Standard value: Tolerance at inspection and adjustment.

Limit value: The maximum or minimum limit value that should not be exceeded at inspection and adjustment.

Units INFOID:000000008793097

• The **UNITS** given in this manual are primarily expressed as the SI UNIT (International System of Unit), and alternatively expressed in the metric system and in the yard/pound system.

Also with regard to tightening torque of bolts and nuts, there are descriptions both about range and about the

standard tightening torque.

"Example" Range

Outer Socket Lock Nut : 59 - 78 N·m (6.0 - 8.0 kg-m, 43 - 58 ft-lb)

**Standard** 

Drive Shaft Installation Bolt : 44.3 N·m (4.5 kg-m, 33 ft-lb)

Contents

• A QUICK REFERENCE INDEX, a black tab (e.g. Ex) ) is provided on the first page. You can quickly find the first page of each section by matching it to the section's black tab.

- THE CONTENTS are listed on the first page of each section.
- THE TITLE is indicated on the upper portion of each page and shows the part or system.
- THE PAGE NUMBER of each section consists of two or three letters which designate the particular section and a number (e.g. "BR-5").
- THE SMALL ILLUSTRATIONS show the important steps such as inspection, use of special tools, knacks of
  work and hidden or tricky steps which are not shown in the previous large illustrations.
   Assembly, inspection and adjustment procedures for the complicated units such as the automatic transaxle
  or transmission, etc. are presented in a step-by-step format where necessary.

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Revision: December 2012 GI-3 2013 Frontier

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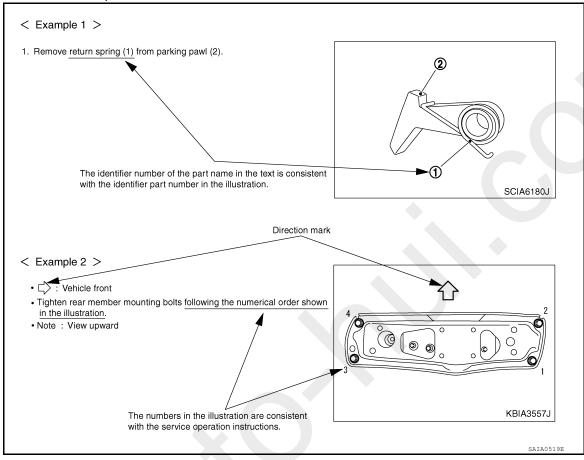
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# Relation between Illustrations and Descriptions

INFOID:000000000879309

The following sample explains the relationship between the part description in an illustration, the part name in the text and the service procedures.



Component

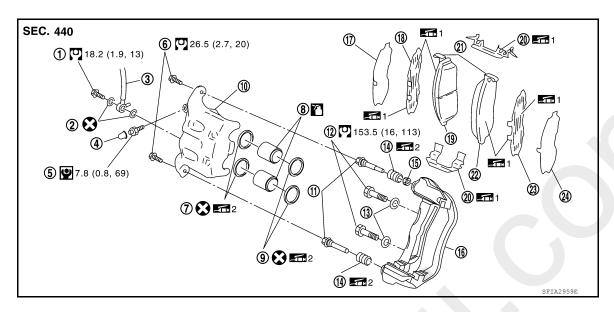
THE LARGE ILLUSTRATIONS are exploded views (see the following) and contain tightening torques, lubrication points, section number of the PARTS CATALOG (e.g. SEC. 440) and other information necessary to perform repairs.

The illustrations should be used in reference to service matters only. When ordering parts, refer to the appropriate **PARTS CATALOG**.

Always check with the **PARTS DEPARTMENT** for the latest parts information.

Components shown in an illustration may be identified by a circled number. When this style of illustration is used, the text description of the components will follow the illustration.

### < HOW TO USE THIS MANUAL >



1. Union bolt

4. Cap

7. Piston seal

10. Cylinder body

Washer 13.

16. Torque member

19. Inner pad

22. Outer pad

1: PBC (Poly Butyl Cuprysil) grease 2: Rubber grease or silicone-based grease

2. Copper washer

5. Bleed valve

Piston 8.

11. Sliding pin

Sliding pin boot 14.

Inner shim cover 17.

Pad retainer 20.

23. Outer shim

Brake hose

6. Sliding pin bolt

9. Piston boot

12. Torque member mounting bolt

15. Bushing

18. Inner shim

Pad wear sensor

Outer shim cover

: Brake fluid

Refer to GI section for additional symbol definitions.

### **SYMBOLS**

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
Ø	Tightening torque The tightening torque specifications of bolts and nuts may be presented	8	Always replace after every disassembly.
<b>9</b>	as either a range or a standard tightening torque.	₽	Apply petroleum jelly.
<b>-</b>	Should be lubricated with grease. Unless otherwise indicated, use recommended multi-purpose grease.	<b>1</b> (M)	Apply molybdenum added petroleum jelly.
7	Should be lubricated with oil.	ATF	Apply ATF.
	Sealing point	*	Select with proper thickness.
	Sealing point with locking sealant.	*	Adjustment is required.
<b></b>	Checking point		

# How to Read Wiring Diagram

CONNECTOR SYMBOLS

Most of connector symbols in wiring diagrams are shown from the terminal side.

GΙ

В

Е

F

Н

M

Ν

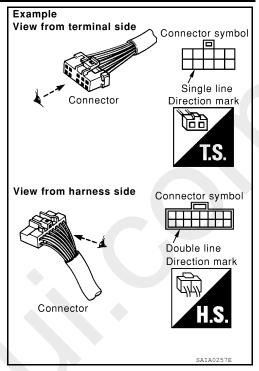
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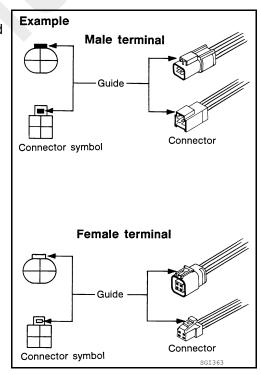
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### < HOW TO USE THIS MANUAL >

- Connector symbols shown from the terminal side are enclosed by a single line and followed by the direction mark.
- Connector symbols shown from the harness side are enclosed by a double line and followed by the direction mark.
- Certain systems and components, especially those related to OBD, may use a new style slide-locking type harness connector.
   For description and how to disconnect, refer to PG section, "Description", "HARNESS CONNECTOR".

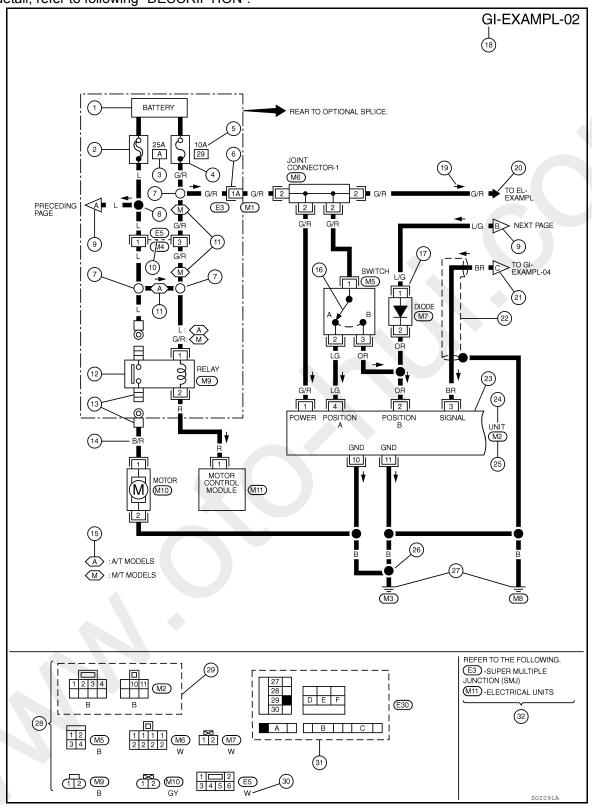


Male and female terminals
 Connector guides for male terminals are shown in black and
 female terminals in white in wiring diagrams.



SAMPLE/WIRING DIAGRAM - EXAMPL -

· For detail, refer to following "DESCRIPTION".



GI

В

D

Е

F

G

Н

K

M

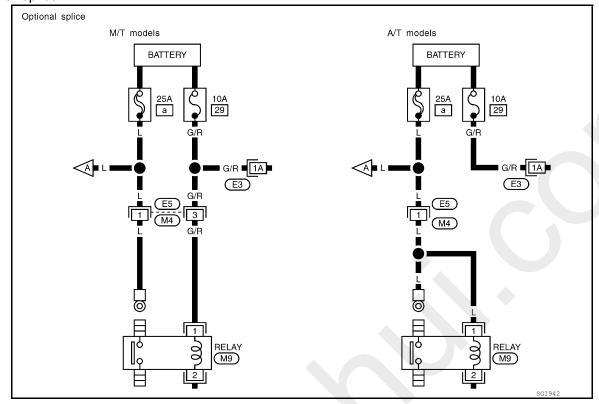
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### < HOW TO USE THIS MANUAL >

# Optional Splice



# **DESCRIPTION**

Num- ber	Item	Description
1	Power condition	This shows the condition when the system receives battery positive voltage (can be operated).
2	Fusible link	<ul> <li>The double line shows that this is a fusible link.</li> <li>The open circle shows current flow in, and the shaded circle shows current flow out.</li> </ul>
3	Fusible link/fuse location	This shows the location of the fusible link or fuse in the fusible link or fuse box. For arrangement, refer to PG section, POWER SUPPLY ROUTING.
4	Fuse	<ul> <li>The single line shows that this is a fuse.</li> <li>The open circle shows current flow in, and the shaded circle shows current flow out.</li> </ul>
5	Current rating	This shows the current rating of the fusible link or fuse.
6	Connectors	<ul> <li>This shows that connector E3 is female and connector M1 is male.</li> <li>The G/R wire is located in the 1A terminal of both connectors.</li> <li>Terminal number with an alphabet (1A, 5B, etc.) indicates that the connector is SMJ connector. Refer to PG section, SMJ (SUPER MULTIPLE JUNCTION).</li> </ul>
7	Optional splice	The open circle shows that the splice is optional depending on vehicle application.
8	Splice	The shaded circle shows that the splice is always on the vehicle.
9	Page crossing	<ul> <li>This arrow shows that the circuit continues to an adjacent page.</li> <li>The A will match with the A on the preceding or next page.</li> </ul>
10	Common connector	The dotted lines between terminals show that these terminals are part of the same connector.
11	Option abbreviation	This shows that the circuit is optional depending on vehicle application.
12	Relay	This shows an internal representation of the relay. For details, refer to PG section, STAN-DARDIZED RELAY.
13	Connectors	This shows that the connector is connected to the body or a terminal with bolt or nut.

### < HOW TO USE THIS MANUAL >

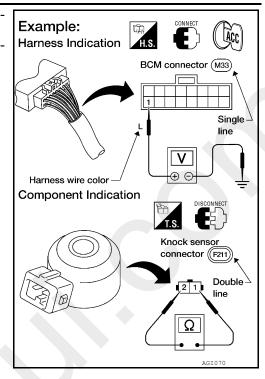
Num- ber	Item	Description		
		This shows a code for the color of the wire.		
14	Wire color	B = Black         OR or O = Orange           W = White         P = Pink           R = Red         PU or V (Violet) = Purple           G = Green         GY or GR = Gray           L = Blue         SB = Sky Blue           Y = Yellow         CH = Dark Brown           LG = Light Green         DG = Dark Green		
		When the wire color is striped, the base color is given first, followed by the stripe color as shown below:  Example: L/W = Blue with White Stripe		
15	Option description	This shows a description of the option abbreviation used on the page.		
16	Switch	This shows that continuity exists between terminals 1 and 2 when the switch is in the A position. Continuity exists between terminals 1 and 3 when the switch is in the B position.		
17	Assembly parts	Connector terminal in component shows that it is a harness incorporated assembly.		
18	Cell code	This identifies each page of the wiring diagram by section, system and wiring diagram page number.		
19 Current flow arrow		Arrow indicates electric current flow, especially where the direction of standard flow (vertically downward or horizontally from left to right) is difficult to follow.		
	A double arrow "      * " shows that current can flow in either direction depending on circuit operation.			
20	System branch	This shows that the system branches to another system identified by cell code (section and system).		
21	Page crossing	<ul> <li>This arrow shows that the circuit continues to another page identified by cell code.</li> <li>The C will match with the C on another page within the system other than the next or preceding pages.</li> </ul>		
22	Shielded line	The line enclosed by broken line circle shows shield wire.		
23	Component box in wave line	This shows that another part of the component is also shown on another page (indicated by wave line) within the system.		
24	Component name	This shows the name of a component.		
25	Connector number	<ul> <li>This shows the connector number.</li> <li>The letter shows which harness the connector is located in.</li> <li>Example: M: main harness. For detail and to locate the connector, refer to PG section "Main Harness", "Harness Layout". A coordinate grid is included for complex harnesses to aid in locating connectors.</li> </ul>		
26	Ground (GND)	The line spliced and grounded under wire color shows that ground line is spliced at the grounded connector.		
27	Ground (GND)	This shows the ground connection. For detailed ground distribution information, refer to "Ground Distribution" in PG section.		
28	Connector views	This area shows the connector faces of the components in the wiring diagram on the page.		
29	Common component	Connectors enclosed in broken line show that these connectors belong to the same component.		
30	Connector color	This shows a code for the color of the connector. For code meaning, refer to wire color codes, Number 14 of this chart.		
31	Fusible link and fuse box	This shows the arrangement of fusible link(s) and fuse(s), used for connector views of "POW-ER SUPPLY ROUTING" in PG section.  The open square shows current flow in, and the shaded square shows current flow out.		
32	Reference area	This shows that more information on the Super Multiple Junction (SMJ) and Joint Connectors (J/C) exists on the PG section. Refer to "Reference Area" for details.		

Harness Indication

Full download: http://manualplace.com/dowplownfonusEieThts-MANUAE-manual/

### < HOW TO USE THIS MANUAL >

- Letter designations next to test meter probe indicate harness (connector) wire color.
- Connector numbers in a single circle M33 indicate harness connectors.



### Component Indication

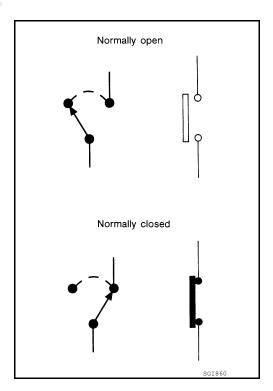
Connector numbers in a double circle F211 indicate component connectors.

#### Switch Positions

Switches are shown in wiring diagrams as if the vehicle is in the "normal" condition.

A vehicle is in the "normal" condition when:

- · ignition switch is "OFF",
- · doors, hood and trunk lid/back door are closed,
- · pedals are not depressed, and
- · parking brake is released.



Detectable Lines and Non-Detectable Lines

In some wiring diagrams, two kinds of lines, representing wires, with different weight are used.