Edition: July 2005	QUICK REFERENCE INDEX		
Revision: July 2005	A GENERAL INFORMATION	GI	General Information
Publication No. SM6E-1T30U0	B ENGINE		Engine Mechanical
		LU	Engine Lubrication System
		СО	Engine Cooling System
		EC	Engine Control System
		FL	Fuel System
		EX	Exhaust System
		ACC	Accelerator Control System
	C TRANSMISSION/	CL	Clutch
	TRANSAXLE	MT	Manual Transaxle
		AT	Automatic Transaxle
	D DRIVELINE/AXLE	TF	Transfer
	Ī		Propeller Shaft
		RFD	Rear Final Drive
		FAX	Front Axle
NISSAN		RAX	Rear Axle
	E SUSPENSION	FSU	Front Suspension
X-TRAIL		RSU	Rear Suspension
MODEL T30 SERIES		WT	Road Wheels & Tires
	F BRAKES	BR	Brake System
		РВ	Parking Brake System
		BRC	Brake Control System
	G STEERING	PS	Power Steering System
	H RESTRAINTS	SB	Seat Belts
		SRS	Supplemental Restraint System (SRS)
	I BODY	BL	Body, Lock & Security System
		GW	Glasses, Window System & Mirrors
		RF	Roof
		El	Exterior & Interior
		IP	Instrument Panel
		SE	Seat
	J AIR CONDITIONER	ATC	Automatic Air Conditioner
		MTC	Manual Air Conditioner
	K ELECTRICAL	SC	Starting & Charging System
		LT	Lighting System
		DI	Driver Information System
		ww	Wiper, Washer & Horn
		BCS	Body Control System
		LAN	LAN System
		AV	Audio, Visual & Telephone System
		ACS	Auto Cruise Control System
		PG	Power Supply, Ground & Circuit Elements
	L MAINTENANCE	MA	Maintenance
© 2005 NISSAN MOTOR CO.,LTD.	M INDEX	IDX	Alphabetical Index

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## **FOREWORD**

This manual contains maintenance and repair procedure for the 2006 NISSAN X-TRAIL.

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.

NISSAN MOTOR CO., LTD.



#### 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) 488-3910

SERVICE MANUA	AL: Model:	Year:	
PUBLICATION NO	D. (Refer to Quick Reference Index	i):	
	ny Service Manual issues or probler		
Page number(s)	Note: Please in	clude a copy of each page, i	marked with your comments.
Are the trouble d	iagnosis procedures logical and e	easy to use? (circle your ar	nswer) YES NO
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Please describe th	ne issue or problem in detail:		
_	on of the manual clear and easy to	, <u>-</u>	er) YES NO
What information repairing custom	should be included in NISSAN S er vehicles?	Service Manuals to better s	upport you in servicing or
DATE:	YOUR NAME:	P(	OSITION:
DEALER:	DEALER NO.:	ADDRESS:	
CITY:	STATE/PROV./COU	NTRY: ZIP/F	POSTAL CODE:

## INCH TO METRIC CONVERSION TABLE

(Rounded-off for automotive use)

Inches	(INDUITUEU-OII	TOT GUICITION	vc usc)	
.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	inches		inches	
.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	.100		.610	
.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           .330         7.62         .810         20.57           .310         7.87         .820         20.83	.110	2.79	.620	15.75
.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         21.34	.120		.630	
.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           .350         8.89         .860         21.84	.130	3.30	.640	16.26
.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	.140	3.56	.650	16.51
.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	.150	3.81	.660	16.76
.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	.160	4.06	.670	17.02
.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		4.32		17.27
.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				
.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				
.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				
.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				
.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				
.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				
.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 <th></th> <th></th> <td></td> <td></td>				
.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         24.13 <th></th> <th></th> <td></td> <td></td>				
.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         24.13           .450         11.43         .960         24.38 </td <th></th> <th></th> <td></td> <td></td>				
.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         24.13           .450         11.43         .960         24.38           .460         11.68         .970         24.64<				
.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         24.13           .450         11.43         .960         24.38           .460         11.68         .970         24.64           .470         11.94         .980         24.89				
.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         24.13           .450         11.43         .960         24.38           .460         11.68         .970         24.64           .470         11.94         .980         24.89           .480         12.19         .990         25.1				
.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         24.13           .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				
.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         24.13           .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				
.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         24.13           .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 <t< td=""><th></th><th></th><td></td><td></td></t<>				
.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         24.13           .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           .540         13.72         6.000		8.38		
.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         24.13           .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				
.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         24.13           .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				
.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         24.13           .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				
.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         24.13           .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 </td <th></th> <th></th> <td></td> <td></td>				
.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         24.13           .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         9.00				
.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         24.13           .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         1				
.410         10.41         .920         23.37           .420         10.67         .930         23.62           .430         10.92         .940         23.88           .440         11.18         .950         24.13           .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         508.00				
.420         10.67         .930         23.62           .430         10.92         .940         23.88           .440         11.18         .950         24.13           .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				
.430         10.92         .940         23.88           .440         11.18         .950         24.13           .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           .590         14.99         20.000         508.00	.420			
.440         11.18         .950         24.13           .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         254.00           .590         14.99         20.000         508.00	.430	10.92		23.88
.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				
.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				
.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	.460	11.68	.970	24.64
.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	.470	11.94	.980	24.89
.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		12.19		25.15
.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	.490	12.45	1.000	25.40
.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	.500	12.70	2.000	50.80
.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	.510	12.95	3.000	76.20
.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	.520	13.21	4.000	101.60
.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	.530	13.46	5.000	127.00
.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	.540	13.72	6.000	152.40
.570         14.48         9.000         228.60           .580         14.73         10.000         254.00           .590         14.99         20.000         508.00	.550		7.000	177.80
.580         14.73         10.000         254.00           .590         14.99         20.000         508.00	.560		8.000	
.590 <b>14.99</b> 20.000 <b>508.00</b>				
			10.000	254.00
.600 15.24			20.000	508.00
	.600	15.24		

## METRIC TO INCH CONVERSION TABLE

(Rounded-off for automotive use)

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	mm	inches	mm	inches
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				
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				
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				
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				
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				
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				
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 <th></th> <th></th> <th></th> <th></th>				
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<				
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         7				
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				
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 <td< th=""><th>10</th><th></th><th></th><th></th></td<>	10			
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 <t< th=""><th></th><th></th><th></th><th></th></t<>				
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         <		.472	62	2.441
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	13	.512	63	2.480
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	14	.551	64	2.520
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 <t< th=""><th>15</th><th>.591</th><th>65</th><th>2.559</th></t<>	15	.591	65	2.559
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 <t< th=""><th>16</th><th>.630</th><th>66</th><th>2.598</th></t<>	16	.630	66	2.598
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			67	
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				
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				
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				
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				
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				
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				
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 <th></th> <th></th> <th></th> <th></th>				
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 <th></th> <th></th> <th></th> <th></th>				
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 <th></th> <th></th> <th></th> <th></th>				
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 <th></th> <th></th> <th></th> <th></th>				
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 <th></th> <th></th> <th></th> <th></th>				
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 <th></th> <th></th> <th></th> <th></th>				
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				
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				
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				
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				
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				
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				3.307
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				3.346
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	36	1.417	86	3.386
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	37	1.457	87	3.425
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	38	1.496	88	3.465
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	39	1.535	89	3.504
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	40	1.575	90	3.543
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	41		91	
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	42		92	
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				
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				
46       1.811       96       3.780         47       1.850       97       3.819         48       1.890       98       3.858         49       1.929       99       3.898				
47     1.850     97     3.819       48     1.890     98     3.858       49     1.929     99     3.898				
48       1.890       98       3.858         49       1.929       99       3.898				
<b>49</b> 1.929 <b>99</b> 3.898				
1.709 100 3.937				
		1.703	100	3.731

ELS0003W

### **QUICK REFERENCE CHART X-TRAIL**

# QUICK REFERENCE CHART X-TRAIL ENGINE TUNE-UP DATA (QR25DE)

PFP:00000

Engine model		QR25DE
Firing order		1-3-4-2
Idle speed A/T (In P or N position) M/T (In Neutral position)		700±50
Ignition timing (BTDC a A/T (In P or N position) M/T (In Neutral position)	)	15°± 5°
CO% at idle		0.3 - 9.5 % and engine runs smoothly
Drive Belt	Tension of drive belt	Auto adjustment by auto-tensioner
Radiater cap relief pres	ssure kPa (kg/cm <sup>2</sup> , psi)	
	Standard	78 - 98 (0.8 - 1.0, 11 - 14)
	Limit	59 (0.6, 9)
Cooling system leakag sure	e testing pres- kPa (kg/cm <sup>2</sup> , psi)	157 (1.6, 23)
Compression pressure	kPa (kg/cm <sup>2</sup> , psi)/rpm	
	Standard	1,250 (12.8, 181) /250
	Minimum	1,060 (10.8, 154) /250
Spark plug	Make	NGK
	Standard type	PLFR5A - 11
	Hot type	PLFR4A - 11
	Cold type	PLFR6A - 11
	Gap (Nominal) mm (in)	1.1 ( 0.043 )

### FRONT WHEEL ALIGNMENT (Unladen\*)

ELS0003X

Camber	Degree minute (Decimal degree)	Minimum	$-0^{\circ}54'(-0.9^{\circ})$	
		Nominal	- 0° 24′ ( - 0.4° )	
		Maximum	0° 36′ ( 0.6° )	
		Left and right difference	45' ( $0.75^{\circ}$ ) or less	
Caster	Degree minute (Decimal degree)	Minimum	1° 42′ ( 1.7° )	
		Nominal	2° 27′ ( 2.45° )	
		Maximum	3° 12′ ( 3.2° )	
		Left and right difference	45' ( 0.75° ) or less	
Kingpin inclination	Degree minute (Decimal degree)	Minimum	12° 06′ ( 12.1°)	
		Nominal	13° 30′ ( 13.5° )	
		Maximum	13° 36′ ( 13.6° )	
Total toe-in	Distance (A – B)	Minimum	0 mm ( 0 in )	
		Nominal	1 mm ( 0.04 in )	
		Maximum	2 mm ( 0.08 in )	
	Angle (left plus right) Degree minute (Degree)	Nominal	2′ (0.04°)	
Wheel turning angle (Full turn)	Inside	MInimum	36° 00′ ( 36.0° )	
	Degree minute (Decimal degree)	Nominal	39° 00′ ( 39.0° )	
		Maximum	40° 00′ ( 40.0° )	
	Outside	Nominal	21° 00′ ( 21 0° )	
	Degree minute (Decimal degree)	INUITIIIIai	31° 00′ ( 31.0° )	

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

## REAR WHEEL ALIGNMENT (Unladen\*)

ELS0003Y

Camber Degree minute (Decimal degree)		Minimum	– 1° 25′ ( – 1.42° )
		Nominal	- 0° 40′ ( - 0.67° )
		Maximum	0° 05′ ( 0.08° )
	Distance ( A – B )	Minimum	0 mm ( 0 in )
		Nominal	1 mm ( 0.04 in )
Total toe-in		Maximum	2 mm ( 0.08 in )
	Angle (left plus right ) Degree minute (Degree)	Nominal	2′ (0.04°)

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

BRAKE ELSO003Z

Front brake Pad wear limit		2.0 mm ( 0.079 in )	
Rotor repair limit		26.0 mm ( 1.024 in )	
Rear brake Pad wear limit  Rotor repair limit		2.0 mm ( 0.079 in )	
		14.0 mm ( 0.551 in )	
Brake pedal height (front dash lower panel top surface)		156 - 166 mm ( 6.14 - 6.54 in )	
		164 - 174 mm (6.46 - 6.85 in)	
Pedal depressed height*		80 mm (3.15 in) or more	
		85 mm (3.35 in) or more	
	Rotor repair limit Pad wear limit Rotor repair limit  eight (front dash lower panel top surface)	Rotor repair limit  Pad wear limit  Rotor repair limit  neight (front dash lower panel top surface)  M/T model  A/T model  M/T model	

<sup>\*:</sup> Under force of 490 N(50 kg, 110 lb) with engine running.

### **QUICK REFERENCE CHART X-TRAIL**

### REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure	Imp measure
Fuel tank		60	15 - 7/8 gal	13 - 1/4 gal
Coolant ( With reservoir tank at "MAX" level )		7.1	7 - 1/2 qt	6 - 1/4 qt
Drain and refill				
Engine	With oil filter change	3.9	4 - 1/8 qt	3 - 3/8 qt
Engine	Without oil filter change	3.5	3 - 3/4 qt	3 - 1/8 qt
	Dry engine (Overhaul)	4.5	4 - 3/4 qt	4 qt
Transaxle	A/T	8.5	9 qt	7 - 1/2 qt
	M/T	2.2	2 - 3/8 qt	2 qt
Transfer		0.31	5/8 pt	1/2 pt
Differential carrier		0.55	1 - 1/8 pt	1 pt
Power steering system		1.0	1 - 1/8 qt	7/8 qt
Air conditioning system	Compressor oil	0.18	6.0 fl oz	6.3 fl oz
	Refrigerant	0.55 kg	1.21 lb	