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2003 NISSAN X-Trail (T30) OEM Service and Repair Workshop Manual

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PRECAUTIONS CONCERNING ON-BOARD SERVICING OF EV SYSTEMS

CAUTION:
When hood is opened, power supply (charge) to 12V battery is stopped even during power switch ON state. Therefore, never leave hood opened for long time with power switch ON, when servicing vehicle.

Also, lock hood unless necessary to prevent 12V battery voltage from dropping.

NOTE:
During READY state, power is supplied (charged) to 12V battery even if hood is opened.

PRECAUTIONS FOR SUPPLEMENTAL RESTRAINT SYSTEM (SRS) AIR BAG AND SEAT BELT PRE-TENSIONER : Precautions

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision.

Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:
Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**

- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".**

- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS
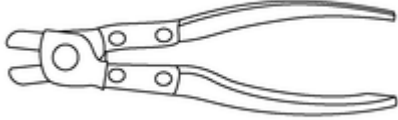
WARNING:
Always observe the following items for preventing accidental activation.

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition/power switch ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**

- **When using air or electric power tools or hammers, always switch the ignition/power switch OFF, disconnect the 12V battery or batteries, and wait at least 3 minutes before performing any service.**
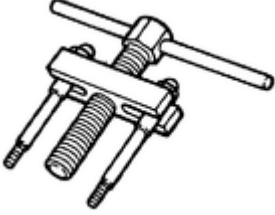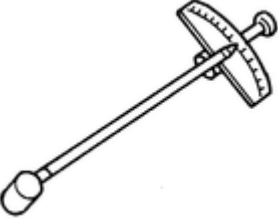
The actual shape of the tools may differ from those illustrated here.

Tool number Tool name		Description
KV40107300 Boot band crimping tool	RDE-001868956-02-LDIA0586ZZ	Installing boot bands (large diameter)

Tool name		Description
Steering wheel puller	RDE-001868955-01-ZA0819D	Removing steering wheel
Preload gauge	RDE-001868955-03-ZA0806D	Inspecting steering column rotating torque, pinion rotating torque and ball joint rotating torque
Pull gauge	RDE-001868955-02-ST024	Measuring steering wheel turning force and ball joint swinging force

Name	Description
Dow corning 111	Inner socket

STEERING ANGLE : Service Data

Item		Standard
Inner wheel	Minimum	36° 30′ (36.50°)
	Nominal	39° 30′ (39.50°)
	Maximum	40° 48′ (40.80°)
Outer wheel		33° 00′ (33.00°)

STEERING WHEEL : Service Data

Item	Standard
Steering wheel axial end play	0 mm (0 in)
Steering wheel play on the outer circumference	0 – 35 mm (0 – 1.38 in)
Steering wheel turning force	50 N (5.1 kg, 11.24 lb) or less

STEERING COLUMN : Service Data

Item	Standard
Steering column length minimum[*]	492.0 mm (19.37 in)
Tilt operating range[*]	50.0 mm (1.97 in)
Telescopic operating range[*]	60.0 mm (2.36 in)
Rotating torque	0 – 0.4 N·m (0 – 0.04 kg-m, 0 – 3.5 in-lb)

*: For measuring position, Refer to STEERING COLUMN : Inspection.

Steering gear model	R25N