

WINCH

PREPARATION	WI- 2
ON-VEHICLE INSPECTION	WI- 2
WINCH	WI- 4
SERVICE SPECIFICATIONS.....	WI- 8

PREPARATION RECOMMENDED TOOLS

W1002-01

	09082-00040 TOYOTA Electrical Tester.	
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EQUIPMENT

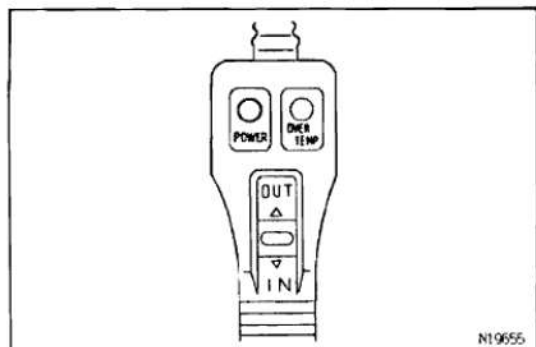
W1003-01

Hexagon Wrench (3 mm)	Winch Wire
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LUBRICANT

W1008-01

Item	Capacity	Classification
MP grease No.2	—	—



N19655

ON — VEHICLE INSPECTION WINCH REMOTE CONTROL SWITCH INSPECTION

W1008-01

1. CONNECT WINCH CONTROL SWITCH CONNECTOR

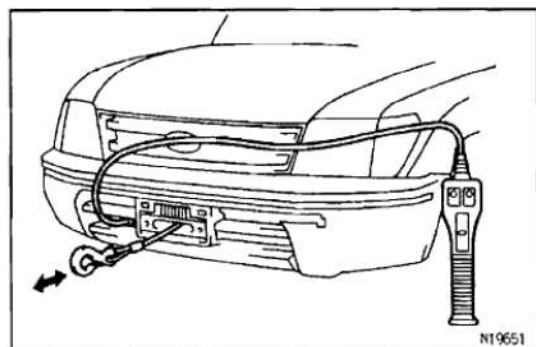
2. INSPECT WINCH CONTROL SWITCH

- (a) The power indicator light will light when the ignition switch is turned ON.

- (b) Operate winch control switch, confirm winch function.

HINT: Be careful not to tighten or strain the winch wire.

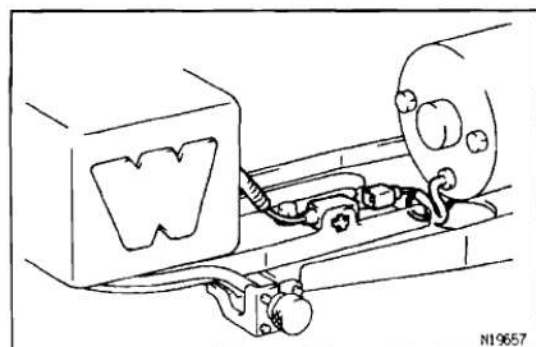
- (c) Turn ignition switch OFF.



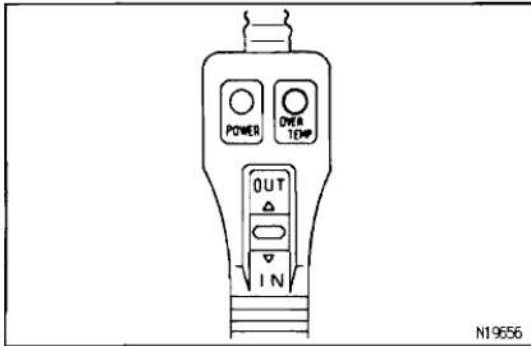
N19651

3. INSPECT OVERHEAT TEMPERATURE INDICATOR

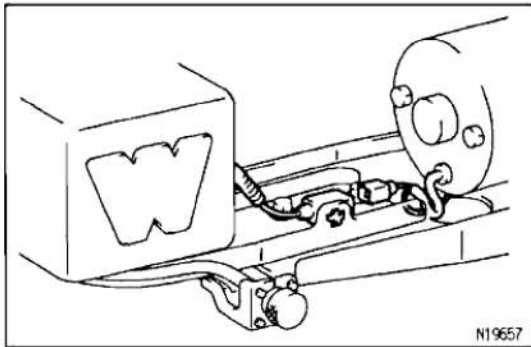
- (a) Turn ignition switch OFF.
 (b) Remove the front grille.
 (c) Remove the front bumper.
 (d) Disconnect the connector.



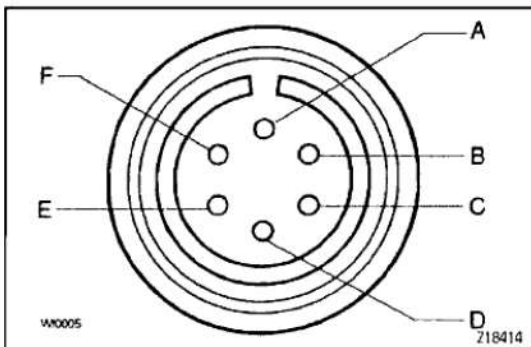
N19657



- (e) When ignition switch ON, the overheat temperature indicator light will light and buzzer sound.
- (f) Turn ignition switch OFF.



- (g) Connect the connector.
 - (h) Install the front bumper.
 - (i) Install the front grille.
- 4. DISCONNECT WINCH CONTROL SWITCH CONNECTOR**



5. CHECK WINCH REMOTE CONTROL SWITCH CIRCUIT

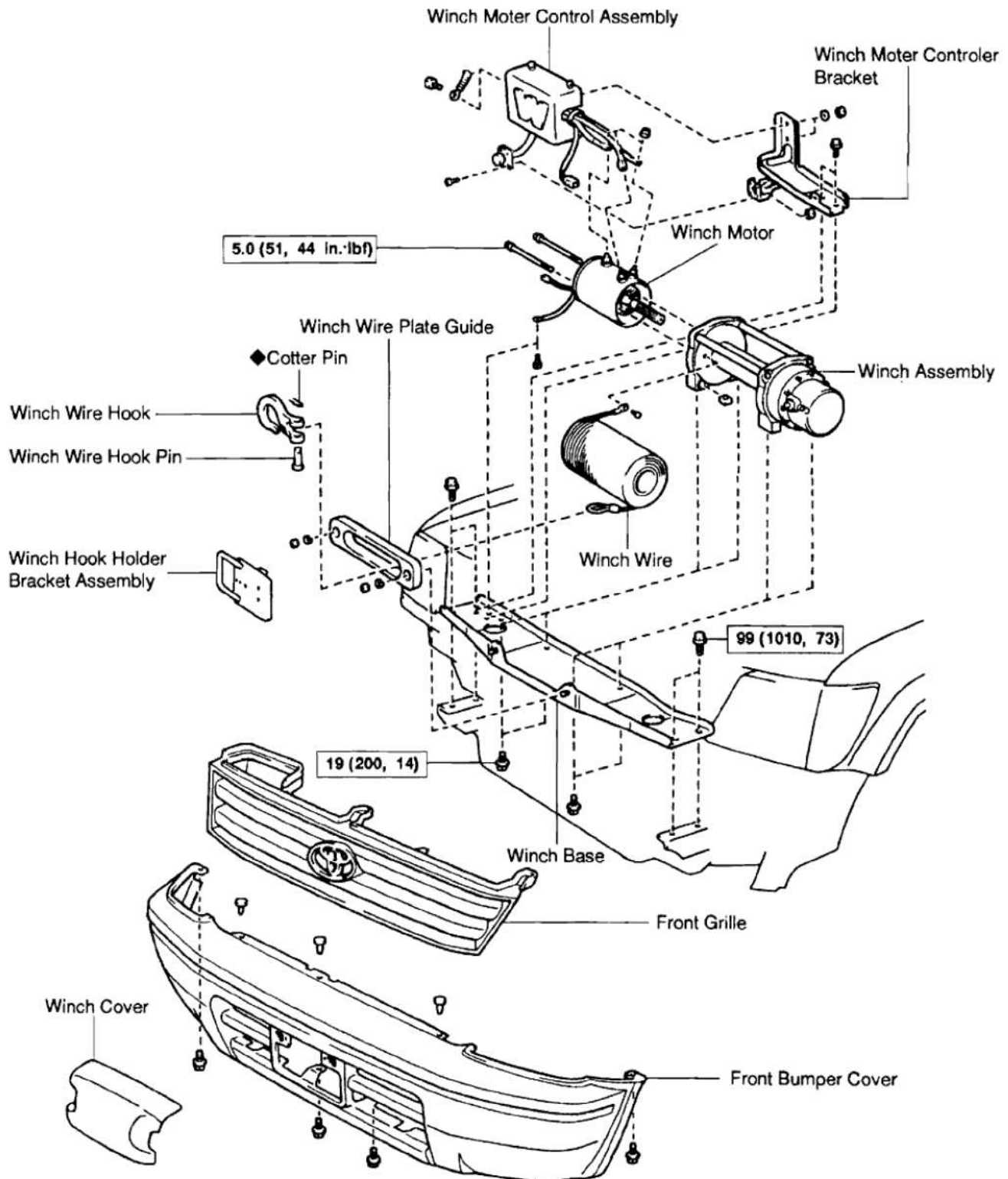
Check that there is continuity between terminals.

SW position	Tester connection	Specified condition
Neutral	A – B	Continuity
	B – C	
	B – E	
IN	B – C	Continuity
	B – D	
OUT	B – C	Continuity
	B – F	

If there is no continuity, replace the remote control switch.

WINCH COMPONENTS

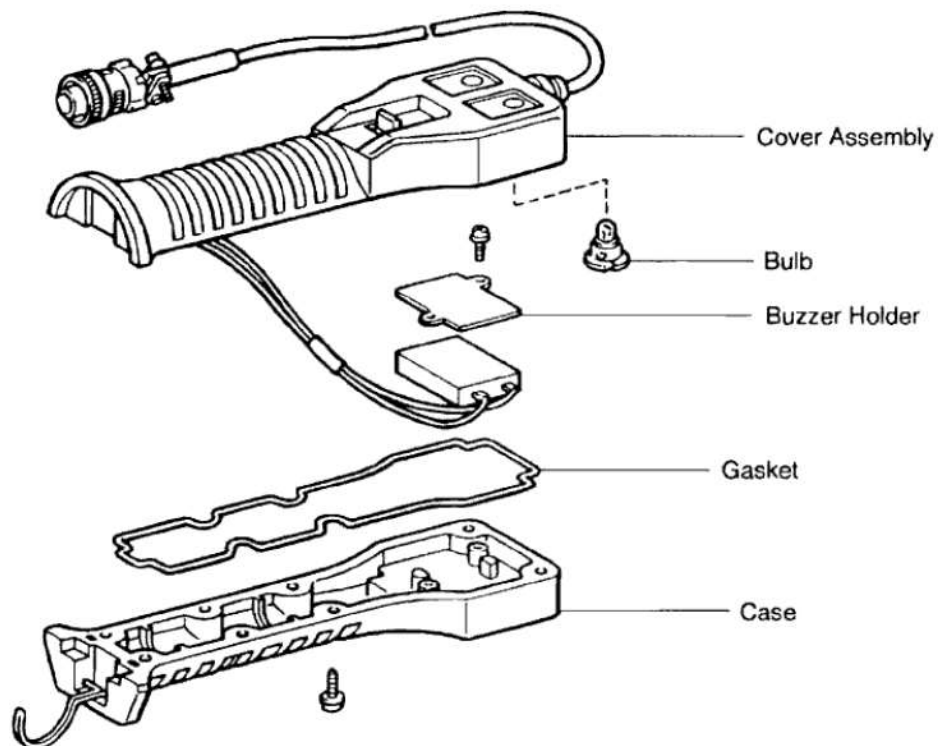
W1007 - 01



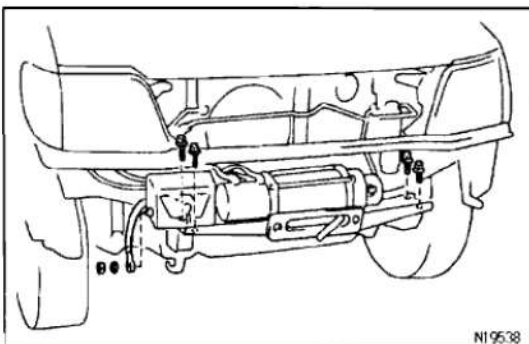
N·m (kgf·cm, ft·lbf) : Specified torque

◆Non-reusable part

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COMPONENTS (Cont'd)

N19676

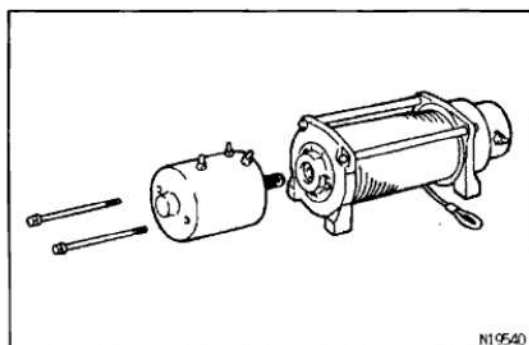
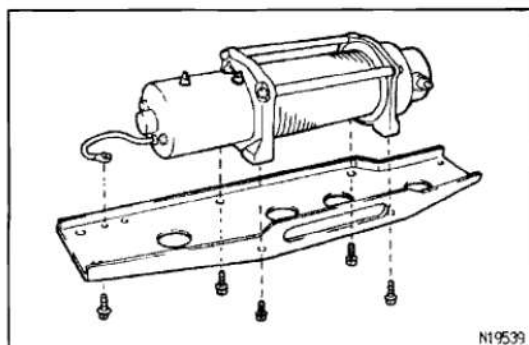
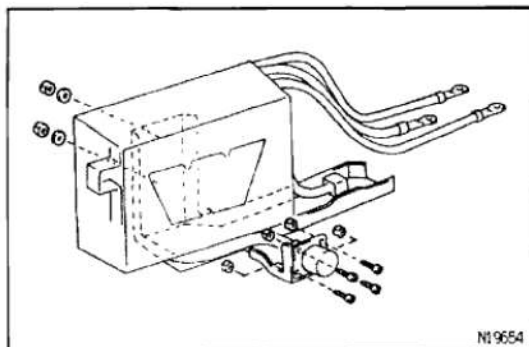
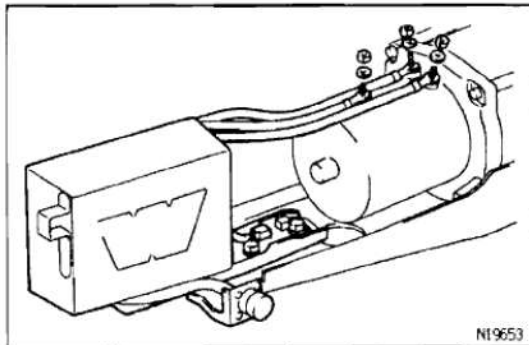
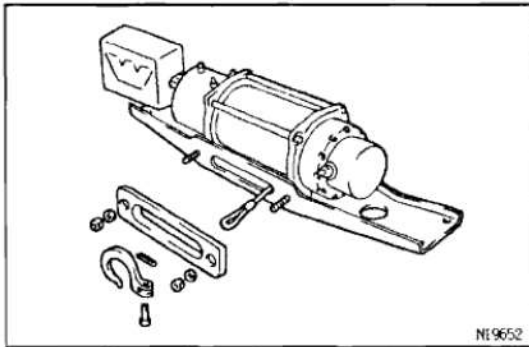
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WINCH REMOVAL

W008-01

1. REMOVE WINCH COVER
 2. REMOVE FRONT CRILLE
 3. REMOVE FRONT BUMPER COVER
 4. REMOVE WINCH ASSEMBLY
- Remove the 4 bolts and nut.
Torque: 99 N·m (1010 kgf·cm, 73 ft·lbf)



WINCH ASSEMBLY DISASSEMBLY

1. REMOVE WINCH HOOK HOLDER BRACKET ASSEMBLY

2. REMOVE WINCH WIRE PLATE GUIDE

- Remove the cotter pin and winch wire hook pin, winch wire hook.
- Remove the 2 nuts and washers, winch wire plate guide.

Torque: 95 N·m (970 kgf·cm, 70 ft·lbf)

3. REMOVE WINCH MOTOR CONTROLLER ASSEMBLY

- Disconnect the connector.
- Remove the 3 nuts and washers, then disconnect wire harness.
- Remove the 2 bolts.

- Remove the 2 nuts and washers.

- Remove the 4 screws and winch motor control assembly from winch controller bracket.

4. REMOVE WINCH MOTOR AND WINCH ASSEMBLY

- Remove winch motor ground bolt.

- Remove the 4 bolts.

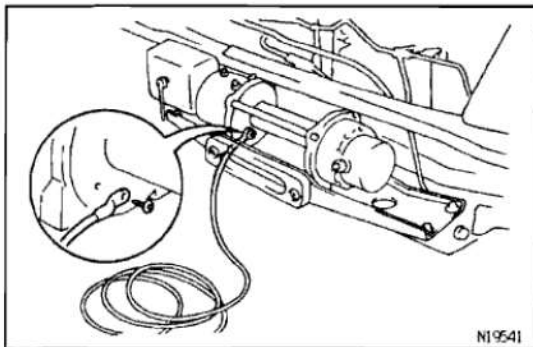
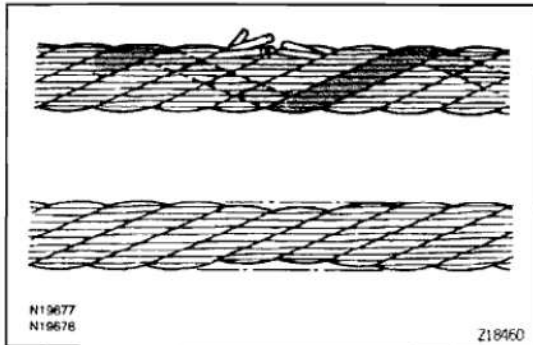
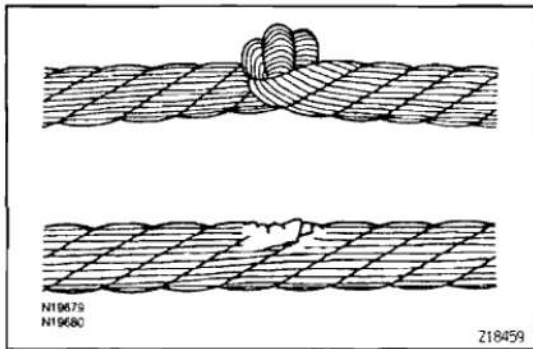
Torque: 19 N·m (200 kgf·cm, 14 ft·lbf)

- Remove the winch motor and winch assembly from winch base.

- Remove the 2 bolts.

Torque: 5.0 N·m (51 kgf·cm, 44 in·lbf)

- Remove the winch motor from winch assembly.



WINCH WIRE INSPECTION

1. INSPECT WINCH WIRE

Inspect the winch wire for the following items. If damage, replace the winch wire.

- Wire than 12 severed strands per wind
- Wire diameter of less than 7.5 mm (0.295 in.)

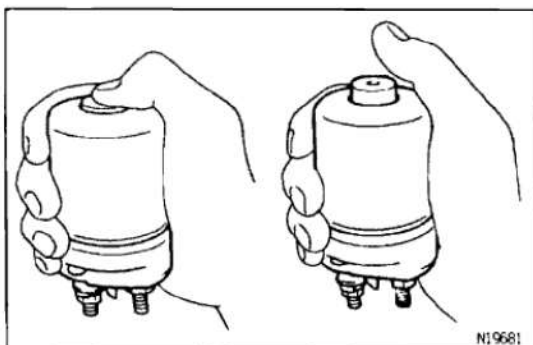
- Kinks
- Corrosion
- Fraying

2. REMOVE WINCH WIRE

- (a) Turn the winch clutch lever to the FREE position.
- (b) Hold the hook and pull on it to pull out the winch wire.
- (c) Using a hexagon wrench (3 mm), remove the bolt.

3. INSTALL WINCH WIRE

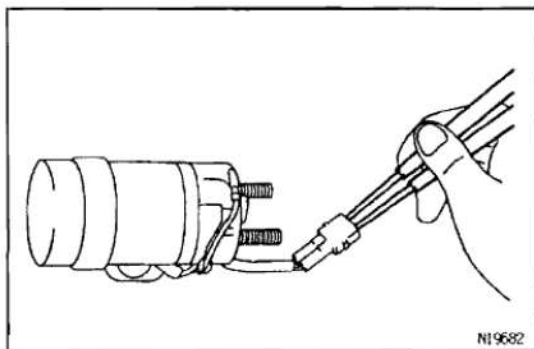
- (a) Using a hexagon wrench (3 mm), install the bolt.
- (b) Using the winch wire control switch, wind the winch wire.



MAGNET SWITCH NO.1 INSPECTION

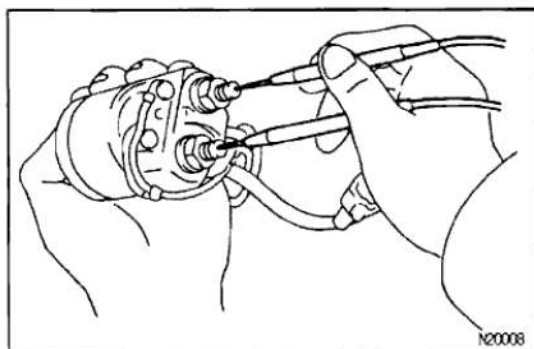
INSPECT MAGNET SWITCH NO.1

- (a) Remove the cover and stopper.
- (b) Push in the plunger and release it. Check that it returns quickly to its original position.



- (c) Using an ohmmeter, check for continuity between the connector terminals.

Standard: Continuity



- (d) Using an ohmmeter, check for no continuity between the terminals with the plunger released.

Standard: Plunger is free..... Continuity

Plunger is pushed..... No continuity

WINCH ASSEMBLY ASSEMBLY

W9008-01

Assembly is in the reverse order of disassembly.

WINCH ASSEMBLY INSTALLATION

W900C-01

Installation is in the reverse order of removal.

SERVICE SPECIFICATIONS TORQUE SPECIFICATIONS

W9004-01

Part tightened	N-m	kgf-cm	ft-lbf
WINCH	—	—	—
Winch Assembly x Body	99	1010	73
Winch Wire Plate Guide x Winch Base	95	970	70
Winch Base x Winch Assembly	19	200	14
Winch Motor x Winch Assembly	5.0	51	44 in.-lbf