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FOREWORD

This manual covers the service procedures of the TOYOTA BATTERY FORKLIFT 5FBE10-20 Series. Please use this manual for providing quick, correct servicing of the corresponding forklift models.

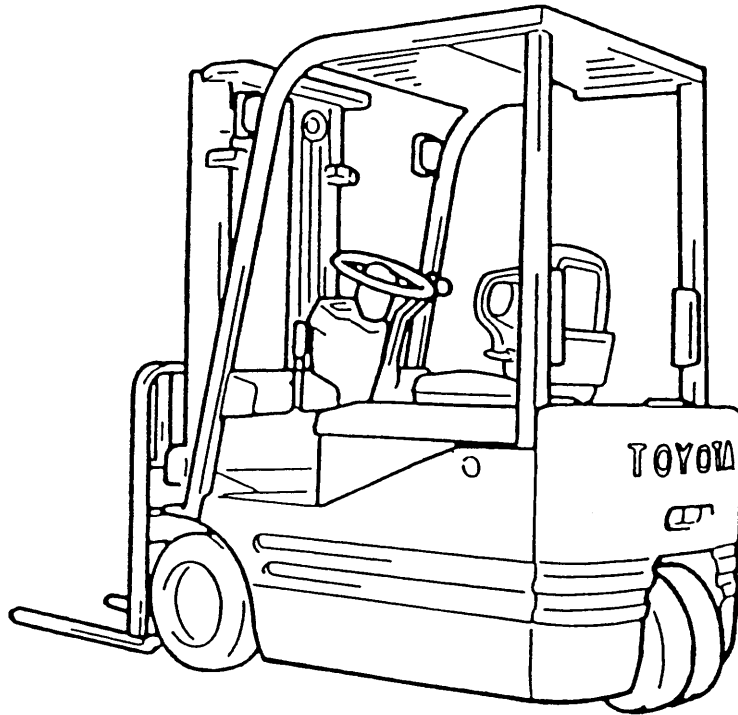
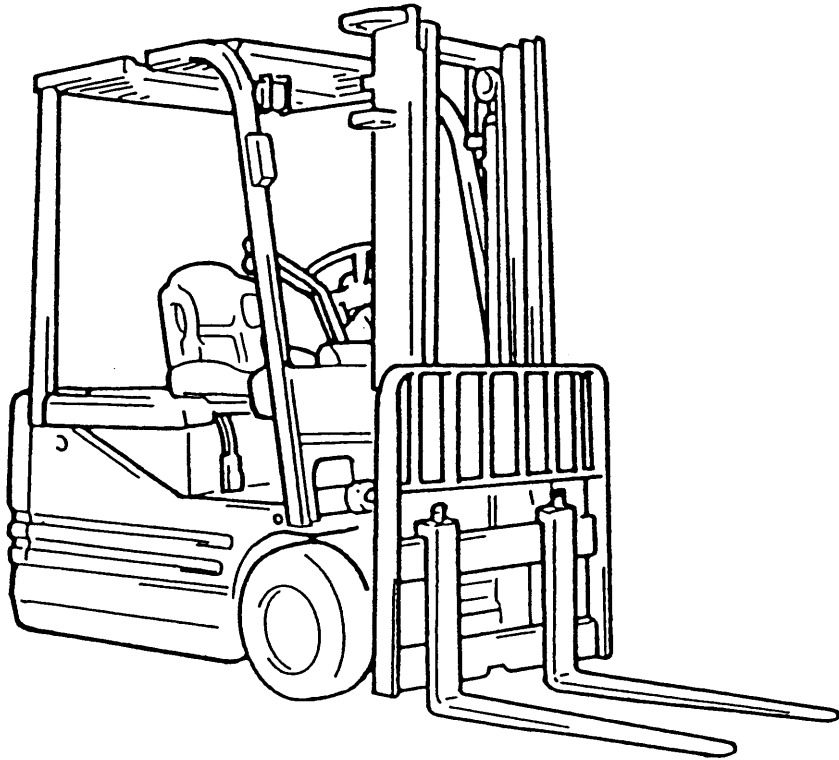
This manual deals with the above models as of September 1998. Please understand that disagreement can take place between the descriptions in the manual and actual vehicles due to change in design and specifications. Any change or modifications thereafter will be informed by Toyota Industrial Vehicles' Parts & Service News.

TOYOTA MOTOR CORPORATION

GENERAL

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EXTERIOR VIEWS

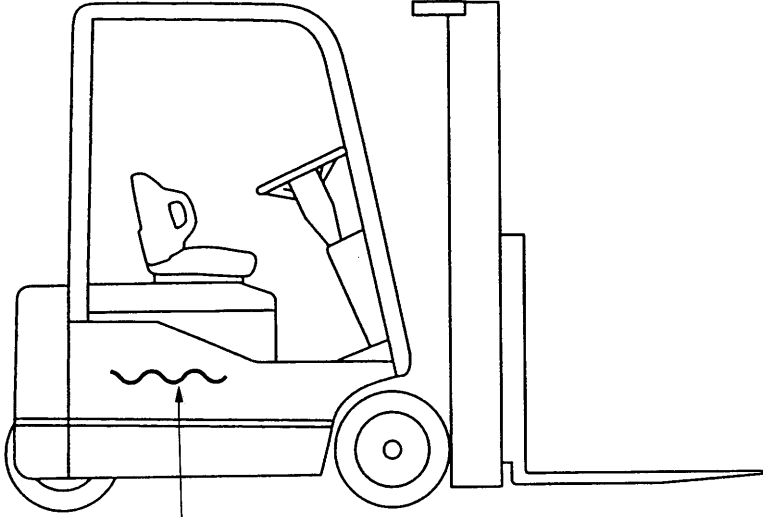


VEHICLE MODEL

Load capacity	Model	Battery capacity AH/5HR	Voltage V	Control circuit
1.0 ton	5FBE10	280	*36 or 48	MCS-III A
1.25 ton	5FBE13	↑	↑	↑
1.5 ton	5FBE15	390	↑	↑
1.75 ton	5FBE18	↑	↑	↑
1.815 ton	5FBE20	375	↑	↑

*: 36 V is provided for UL specification.

FRAME NUMBER

Punching position		
	Upper face of side member of frame RH	
	Vehicle model	Punching format
1 ton series	5FBE10	5FBE13-10011 5FBE13E10011 (EEC spec.) (1993.1 ~ 1993.9) 5FBE13 [⊗] 10011 (EEC spec.) (1993.10 ~)
	5FBE13	
1.5 ton series	5FBE15	5FBE18-10011 5FBE18E10011 (EEC spec.) (1993.1 ~ 1993.9) 5FBE18 [⊗] 10011 (EEC spec.) (1993.10 ~)
	5FBE18	
2.0 ton series	5FBE20	5FBE20-10011

HOW TO USE THIS MANUAL

EXPLANATION METHOD

1. Operation procedure

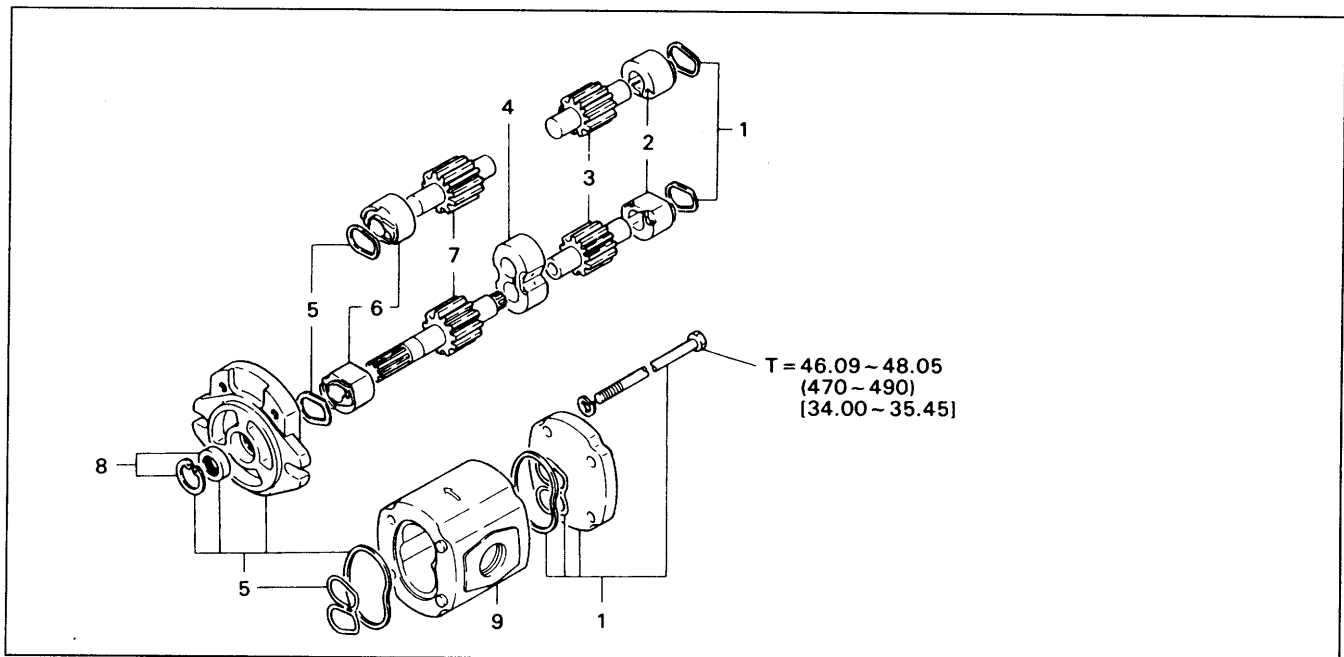
(1) The operation procedure is described in either pattern A or pattern B below.

Pattern A: Explanation of each operation step with a photo or illustration.

Pattern B: Explanation of operation procedure by indicating step numbers in one illustration, followed by explanation of cautions and notes summarized as point operations.

Example of description in pattern B

DISASSEMBLY·INSPECTION·REASSEMBLY Tightening torque unit T=N·m (kgf-cm)[ft-lbf]



Disassembly Procedure

- 1 Remove the cover. **[Point 1]**
- 2 Remove the bush **[Point 2]** ← Operation explained later
- 3 Remove the gear.

Point operations Explanation of key point for operation with an illustration

[Point 1]

Disassembly: Put a match mark when removing the pump cover.

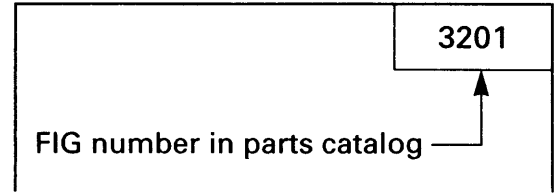
[Point 2]

Inspection: Measure the bush inside diameter.
Bush inside diameter limit: 19.12 mm (0.7528 in)

2. How to read components figures

- (1) The components figure use the illustration in the parts catalog for the vehicle model. Please refer to the catalog for checking the part name.
The number at the right shoulder of each components figure indicates the Fig. number in the parts catalog.

(Example)



3. Matters omitted in this manual

- (1) This manual omits description of the following jobs, but perform them in actual operation:
- ① Cleaning and washing of removed parts as required
 - ② visual inspection (Partially described)

TERMINOLOGY

Caution:

Important matters of which negligence may cause accidents. Be sure to observe them.

Note:

Important items of which negligence may cause accidents or matters in operation procedure requiring special attention.

Standard: Values showing allowable range in inspection and adjustment.

Limit: Maximum or minimum allowable value in inspection or adjustment.

ABBREVIATIONS

Abbreviation (code)	Meaning	Abbreviation (code)	Meaning
ASSY	Assembly	RR	Rear
EHPS	Electrical hydraulic power steering	SAE	Society of Automotive Engineers (USA)
FR	Front	SST	Special service Tool
L/	Less	STD	Standard
LH	Left hand	T =	Tightening torque
OPT	Option	〇〇T	Number of teeth (〇〇)
O/S	Oversize	U/S	Undersize
PS	Power steering	W/	With
RH	Right hand		

LIST OF ABBREVIATIONS AND SYMBOLS

Symbol	Name	Symbol	Name	Symbol	Name
BATT	Battery	FR _Y	Flasher Relay	PB _{SN}	Snubber Print Board
B _Z	Buzzer	H	Horn	PL _W	Working Pilot Lamp
CA	Absorber Capacitor	IWP	Wheel Position Indicator	RA	Absorber Resistor
CAD/P	Drive/Pump Absorber Capacitor	LBU-L	Back-Up Lamp, LH	RAD/P	Drive/Pump Absorber Resistor
CH	Charger	LBU-R	Back-Up Lamp, RH	PCK1/2	Check Resistor No.1/2
CH _F	Forward Chime	LC-L	Clearance Lamp, LH	SA	Surge Absorber
CH _R	Reverse Chime	LC-R	Clearance Lamp, RH	SLL	Lequid Level Sensor
CSD/P	Drive/Pump Current Sensor	LF-L	Flasher Lamp, LH	SN1	Sunbber No.1
CS _{PS}	Power Steering Current Sensor	LF-LR	Flasher Lamp, LH (Rear)	SNC1/2	Snubber Capacitor 1/2
DAD/P	Drive/Pump Absorber Diode	LF-R	Flasher Lamp, RH	SNR1/2	Snubber Resistor 1/2
D _{CH}	Charger Diode	LF-RR	Flasher Lamp, RH (Rear)	SSP	Steering Pressure Sensor
DC-SDD	DC-DC Converter & Source Drive (Drive)	LH-L	Head Lamp, LH	SSL	Speed Sensor, LH
DC-SDP	DC-DC Converter & Source Drive (Pump)	LH-R	Head Lamp, RH	SS _R	Speed Sensor, RH
DF1/2	FLY-WHEEL Diode, No.1/2	LR-F	Rotaly Forward Lamp	STH	Thermo Sensor
DF3/4	FLY-WHEEL Diode No.3/4	LR-R	Rotaly Reverse Lamp	SW _{AC}	Accel Switch
DISP	Display	LS _{ATT1/2}	Attachment Limit Switch No.1/2	SW _F	Flasher Switch
DM _{D/P}	Drive/Pump Motor	LS _B	Brake Limit Switch	SW _H	Horn Switch
DM _{PS}	Power Steering Motor	LS _D	Dead Man Limit Switch	SW _{KY}	Key Switch
DS _{BU}	Back-Up Direction Switch	LS _{L1/2}	Lift Limit Switch No.1/2	SW _L	Light Switch
DS _F	Forward Direction Switch	LS _{ST}	Stop lamp limit Switch	SW _{PB}	Parking Brake Limit Switch
DS _{FO}	Forward Optional Direction Switch	LST-L	Stop Lamp, LH	SW _{SC}	Speed Control Switch
DS _R	Reverse Direction Switch	LST-R	Stop Lamp, RH	TF	Transformer
F1	Drive Fuse	LS _T	Tilt Limit Switch	THR	Thermal Relay
F2	Pump Fuse	L _{T-L}	Tail Lamp, LH	TM	Main Transistor
F3	Power Steering Fuse	L _{T-R}	Tail Lamp, RH	TMD	Main Drive Transistor
F4	Lamp Fuse	L _W	Working Lamp	TMP	Main Pump Transistor
F5	Control Circuit Fuse	MF _L	Forward Contactor, LH	TM _{PS}	Main Power Steering Transistor
F _{CH}	Charger Fuse	MF _R	Forward Contactor, RH	TU	Timer Unit
		MP	Pump Contactor	VRAD	Accel Drive Variable resistor
		M _{PS}	Power Steering Contactor	VRSP	Steering Position Variable resistor (Steering potentiometer)
		MR _L	Reverse Contactor, LH		
		MR _R	Reverse Contactor, RH		
		MS _{CH}	Charger Magnet Switch		
		PB _{CPU}	Computer Print Board		
		PB _{EHPS}	EHPS Print Board		

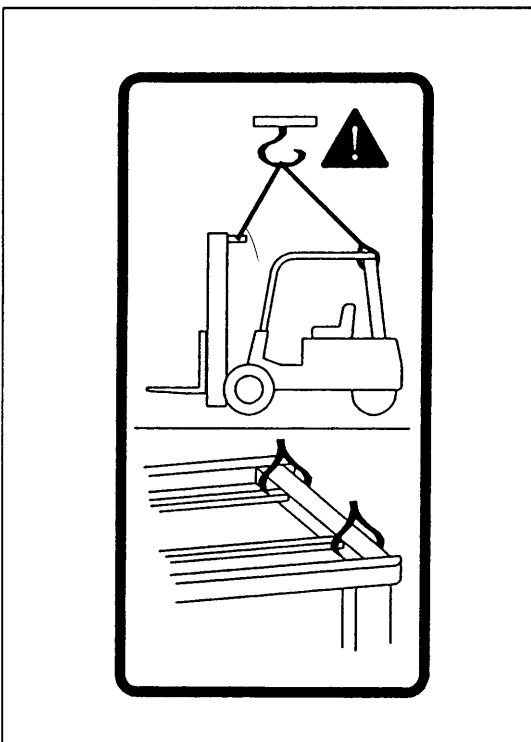
OPERATIONAL TIPS

1. Safe operation
 - (1) After jacking up, always support with wooden blocks on rigid stands.
 - (2) When hoisting the vehicle or its heavy component, use wire rope(s) with a sufficient reserve in load capacity.
 - (3) Always disconnect the battery plugs before the inspection or servicing of electrical parts.
2. Tactful operation
 - (1) Prepare the mechanic tools, necessary measuring instruments (circuit tester, megger, oil pressure gauge, etc.) and SSTs before starting operation.
 - (2) Before disconnecting wiring, always check the cable color and wiring state.
 - (3) When overhauling functional parts, complicated portions or related mechanisms, arrange the parts neatly to prevent confusion.
 - (4) When disassembling and inspecting such a precision part as the control valve, use clean tools and operate in a clean location.
 - (5) Follow the described procedures for disassembly, inspection and reassembly.
 - (6) Replace, gaskets, packings and O-rings with new ones each time of disassembly.
 - (7) Use genuine Toyota parts for replacement.
 - (8) Use specified bolt and nuts. Observe the specified tightening torque at the time of reassembly. If no tightening torque is specified, tighten the bolt or nut according to the standard tightening torque table.
3. Grasping the trouble state

When a trouble occurs, do not attempt immediate disassembly or replacement but first check if the trouble requires disassembly or replacement for remedying.
4. How to treat liquid waste

When draining liquid waste from a vehicle, use a pan or other suitable container to collect the liquid.

Do not throw away oil, fuel, cooling water, oil filters, batteries, or other injurious materials since these materials may adversely affect human health and the environment. Sort liquid waste into different types and seek the service of experts for proper disposal.

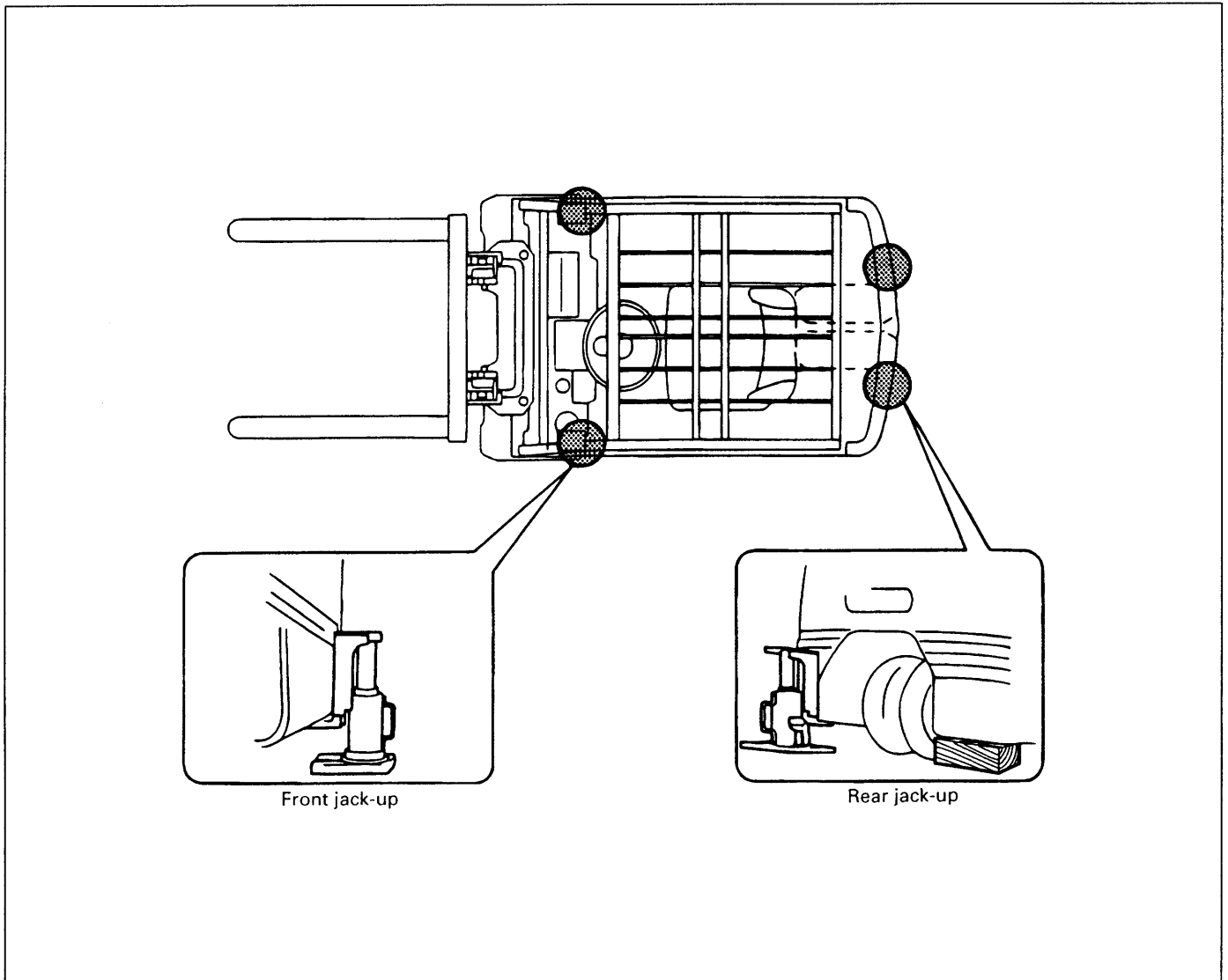


Hoisting the vehicle

Loop wire ropes on the mast hook hole and the rear of the head guard to hoist the vehicle.

JACK-UP POINTS

The vehicle often needs to be jacked up during assembly and reassembly. Be sure to jack up the vehicle at the right positions. Placing a jack in the wrong position or jacking up the vehicle in the wrong manner may cause an unexpected accident.



Front jack-up

If a jack with a short bearing plate is used, the vehicle may fall off the jack. Be sure to use jacks with a bearing plate at least 80 mm long.

Rear jack-up

When jacking up only one side (right or left) of the vehicle, be sure to fit a suitable stock under the weight on the opposite side.

The vehicle may tip over if it is jacked up on one side in an unsafe manner. Make sure that the vehicle maintains its balance during jack-up.

CIRCUIT TESTER

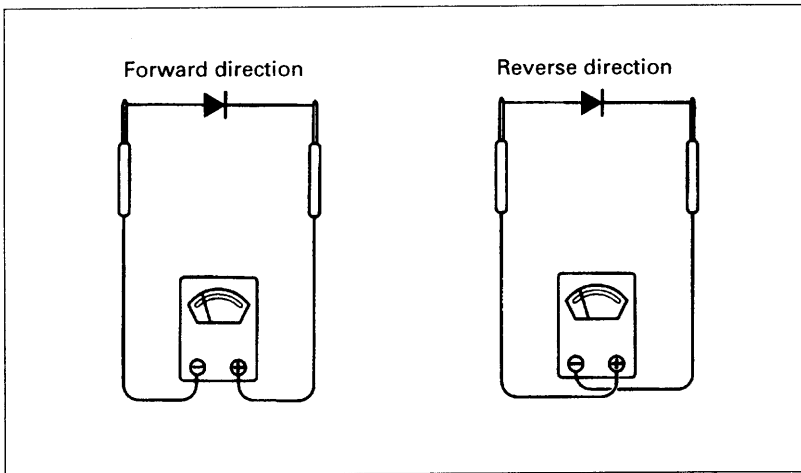
Circuit testers are available in both the analog and digital types. They should be used selectively according to the purpose of measurement.

Analog type: This type is convenient for observing movement during operation, but the measured value should only be used for reference or rough judgement.

Digital type: Fairly accurate reading is possible, but it is difficult to observe the variation or movement.

1. Difference in measurement results with the digital type and analog type
 *The result may be different between measurements with the analog type and digital type. Always use a circuit tester according to its operation manual. Cautions when the polarities are different between the analog type and digital type are described below.

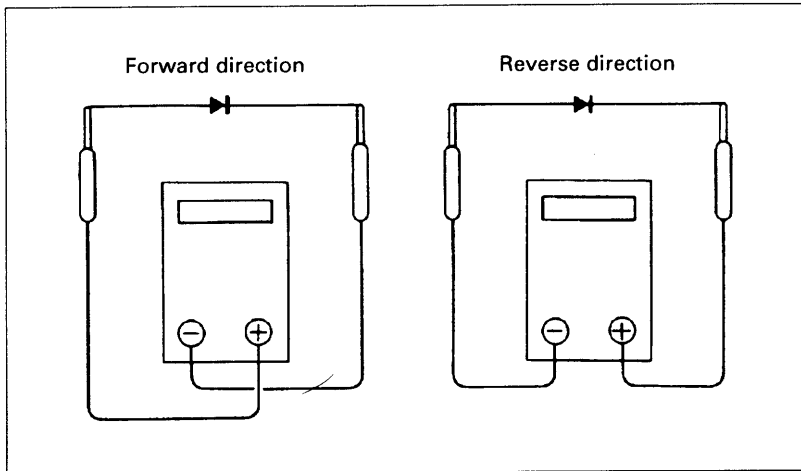
(1) Analog circuit tester



Measurement result example
 Tester range: KΩ range

	Analog type
Forward	Continuity shall exist
	11 KΩ
Reverse	No continuity
	∞

(2) Digital circuit tester



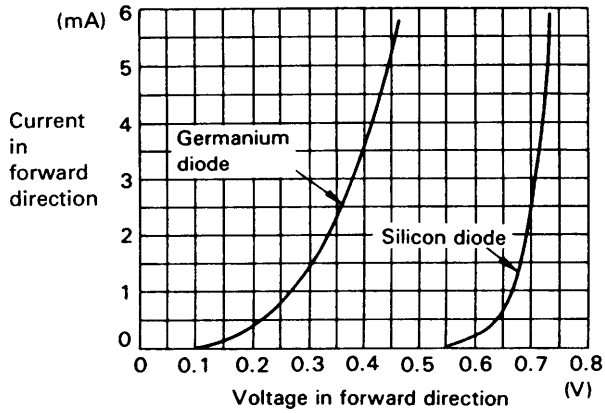
Measurement result example
 Tester range: 2 MΩ range

	Digital type
Forward	No continuity
	1
Reverse	Continuity shall exist
	2 MΩ

2. Difference in result of measurement with circuit tester

The circuit tester power supply voltage depends on the tester type. 1.5 V, 3.0 V or 6.0 V is used. The resistance of a semiconductor such as a diode varies with the circuit tester power supply voltage.

The diode characteristics are shown in the figure below.

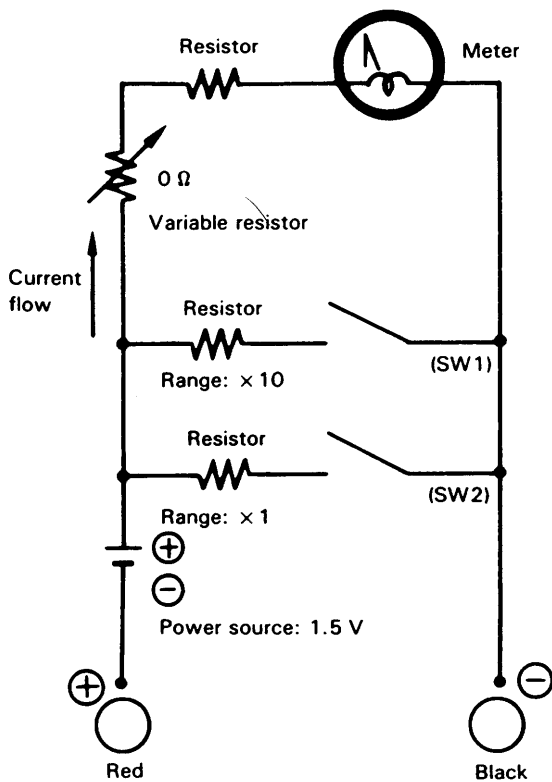


The resistance values of the same semiconductor measured with two types of circuit testers having different power supply voltages are different.

This manual describes the results of measurement with a circuit tester whose power supply voltage is 3.0 V.

3. Difference in measurement result by measurement range (analog type)

In the analog type circuit tester, changing the measurement range switches over the internal circuit to vary the circuit resistance. Even when the same diode is measured, the measurement result varies with the measurement range.



Always use the range described in the repair manual for measurement.








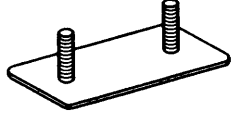
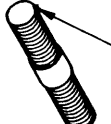

STANDARD BOLT AND NUT TIGHTENING TORQUE

How to judge tightening torque of a standard bolt or nut.

1. How to judge tightening torque of a standard bolt.
Find out the type of the bolt from the list below.
Then, find the bolt tightening torque from the table.
2. How to judge tightening torque of a standard nut.
The nut tightening torque can be judged from the bolt type. (See the item above.)

BOLT STRENGTH TYPE IDENTIFICATION METHOD

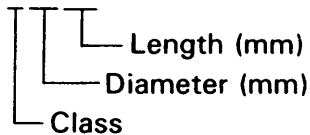
1. Identification by bolt shape

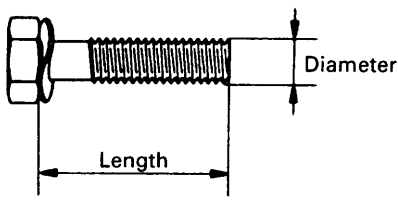
	Shape and class	Class
Hexagon head bolt	 Bolt head No.	4 = 4T 5 = 5T 6 = 6T 7 = 7T 8 = 8T
	 No mark	4T
Hexagon flange bolt	 No mark	4T
Hexagon head bolt	 Two protruding lines	5T
Hexagon flange bolt	 Two protruding lines	6T
Hexagon head bolt	 Three protruding lines	7T
Hexagon head bolt	 Four protruding lines	8T
Welded bolt		4T
Stud bolt	 No mark	4T
	 Grooved	6T

2. Identification by part No.

Hexagon head bolt

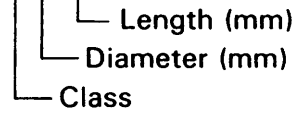
Part No. 91611-40625

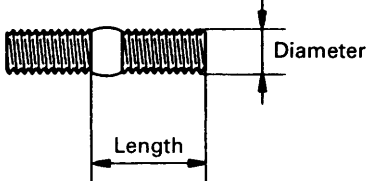




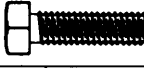
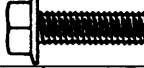
Stud bolt

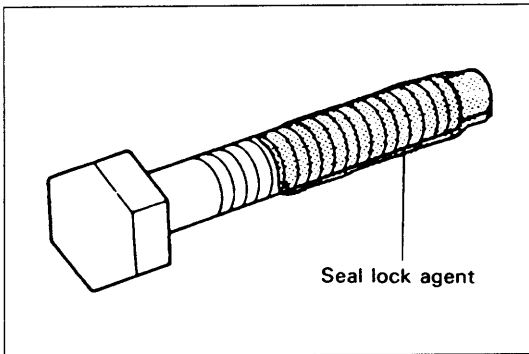
Part No. 92132-40614





TIGHTENING TORQUE TABLE

Class	Diameter mm	Pitch mm	Specified torque					
			Hexagon head bolt 			Hexagon flange bolt 		
			N·m	kgf·cm	ft-lbf	N·m	kgf·cm	ft-lbf
4T	6	1.0	5.4	55	48 in-lbf	5.9	60	52 in-lbf
	8	1.25	13	130	9	14	145	10
	10	1.25	25	260	19	28	290	21
	12	1.25	47	480	35	53	540	39
	14	1.5	75	760	55	83	850	61
	16	1.5	113	1150	83	–	–	–
5T	6	1.0	6.4	65	56 in-lbf	7.5	75	65 in-lbf
	8	1.25	16	160	12	18	175	13
	10	1.25	32	330	24	36	360	26
	12	1.25	59	600	43	65	670	48
	14	1.5	91	930	67	100	1050	76
	16	1.5	137	1400	101	157	1600	116
6T	6	1.0	7.8	80	69 in-lbf	8.8	90	78 in-lbf
	8	1.25	19	195	14	21	215	16
	10	1.25	38	400	29	43	440	32
	12	1.25	72	730	53	79	810	59
	14	1.5	110	1100	80	123	1250	90
	16	1.5	170	1750	127	191	1950	141
7T	6	1.0	11	110	8	12	120	9
	8	1.25	25	260	19	28	290	21
	10	1.25	52	530	38	58	590	43
	12	1.25	95	970	70	103	1050	76
	14	1.5	147	1500	108	167	1700	123
	16	1.5	226	2300	166	–	–	–
8T	6	1.0	12	125	9	14	145	9
	8	1.25	29	300	22	32	330	24
	10	1.25	61	620	45	68	690	50
	12	1.25	108	1100	80	123	1250	90
	14	1.5	172	1750	127	196	2000	145
	16	1.5	265	2700	195	299	3050	221



PRECOAT BOLTS

(Bolts with seal lock agent coating on threads)

1. Do not use the precoat bolt as it is in either of the following cases:
 - (a) After it is removed.
 - (b) When the precoat bolt is moved (loosened or tightened) by tightness check, etc.

Note:

For torque check, use the lower limit of the allowable tightening torque range. If the bolt moves, retighten it according to the steps below.

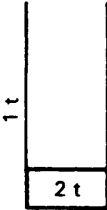
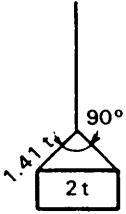
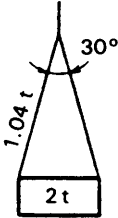
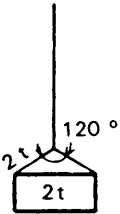
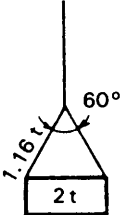
2. Method for reuse of precoat bolts
 - (1) Wash the bolt and threaded hole. (The threaded hole must be washed even for replacement of the bolt.)
 - (2) Perfectly dry the washed parts by air blowing.
 - (3) Coat the specified seal lock agent to the threaded portion of the bolt.

HIGH PRESSURE HOSE FITTING TIGHTENING TORQUE

1. When connecting a high pressure hose, wipe the hose fitting and mating nipple contact surfaces with clean cloth to remove foreign matters and dirt. Also check no dent or other damage on the contact surfaces before installation.
2. When connecting a high pressure hose, hold the hose to align the fitting with the nipple and tighten the fitting.
3. The maximum tightening torque must not exceed twice the standard tightening torque.

Nominal diameter of screw	Standard tightening torque N·m (kgf·cm) [ft·lbf]		Hose inside diameter mm (in)
	Standard	Tightening range	
7/16 - 20UNF	25 (250) [18.1]	24~26 (240~270) [17.4~19.5]	6 (0.24)
9/16 - 18UNF	49 (500) [36.2]	47~52(480~530) [34.7~38.3]	9 (0.35)
3/4 - 16UNF	59 (600) [43.4]	56~62 (570~630) [41.2~45.6]	12 (0.47)
7/8 - 14UNF	59 (600) [43.4]	56~62 (570~630) [41.2~45.6]	12 (0.47)
7/8 - 14UNF	78 (800) [57.9]	74~82 (760~840) [55.0~60.8]	15 (0.59)
1.1/16 - 12UNF	118 (1200) [86.8]	112~123 (1140~1250) [82.5~90.4]	19 (0.75)
1.5/16 - 12UNF	137 (1400) [101.3]	130~144 (1330~1470) [96.2~106.4]	25 (0.98)
PF1/4	25 (250) [18.1]	24~26 (240~270) [17.4~19.5]	6 (0.24)
PF3/8	49 (500) [36.2]	47~52 (480~530) [34.7~38.3]	9 (0.35)
PF1/2	59 (600) [43.4]	56~62 (570~630) [41.2~45.6]	12 (0.47)
PF3/4	118 (1200) [86.8]	112~123 (1140~1250) [82.5~90.4]	19 (0.75)
PF1	137 (1400) [101.3]	130~144 (1330~1470) [96.2~106.4]	25 (0.98)

WIRE ROPE SUSPENSION ANGLE LIST

Lifting angle	Tension	Compression	Suspension method	Lifting angle	Tension	Compression	Suspension method
0°	1.00 time	0 time		90°	1.41 time	1.00 time	
30°	1.04 time	0.27 time		120°	2.00 time	1.73 time	
60°	1.16 time	0.58 time					

SAFE LOAD FOR EACH WIRE ROPE SUSPENSION ANGLE Unit: N (ton) [lbf]

Rope diameter	Cutting load	Single-rope suspension	Two-rope suspension				Four-rope suspension			
			0°	0°	30°	60°	90°	0°	30°	60°
6 mm (0.24 in)	21380 (2.18) [4807]	3040 (0.31) [683.6]	6080 (0.62) [1367]	5880 (0.6) [1323]	5200 (0.53) [1169]	4310 (0.44) [970]	12160 (1.24) [2734]	11770 (1.2) [2646]	10400 (1.06) [2337]	8630 (0.88) [1940]
8 mm (0.32 in)	31480 (3.21) [7078]	4410 (0.45) [992.3]	8830 (0.9) [1985]	8530 (0.87) [1918]	7650 (0.78) [1720]	6280 (0.64) [1411]	17650 (1.8) [3969]	17060 (1.74) [3937]	15300 (1.56) [3440]	12550 (1.28) [2322]
10 mm (0.4 in)	49230 (5.02) [11.69]	6960 (0.71) [1565.6]	14020 (1.43) [3153]	13440 (1.37) [3021]	11770 (1.2) [2646]	9810 (1.0) [2205]	27460 (2.8) [6174]	26480 (2.7) [5954]	23540 (2.4) [5292]	19610 (2.0) [4410]
12.5 mm (0.5 in)	76880 (7.84) [17387]	10980 (1.12) [2469.5]	21570 (2.2) [4851]	21280 (2.1) [4631]	18630 (1.9) [4190]	14710 (1.5) [3308]	43150 (4.4) [9702]	41190 (4.2) [9261]	37270 (3.8) [8379]	29420 (3.0) [6615]
14 mm (0.56 in)	96400 (9.83) [21675]	13730 (1.4) [3087]	27460 (2.8) [6174]	26480 (2.7) [5954]	23540 (2.4) [5292]	18630 (1.9) [4190]	54920 (5.6) [12348]	52960 (5.4) [11907]	47070 (4.8) [10584]	37270 (3.8) [8379]

COMPONENTS WEIGHT

Item	Weight kg [lb]
Drive motor (One unit)	Approx. 41 [90]
Pump motor	Approx. 35 [77]
Counter weight	5FBE10: Approx. 393 [867]
	5FBE13: Approx. 556 [1226]
	5FBE15: Approx. 620 [1367]
	5FBE18: Approx. 785 [1731]
	5FBE20: Approx. 1070 [2360]
Mast W/lift bracket (with lift cylinder, less fork) [max. fork height = 3000 mm (118 in)]	*Approx. 400 [882] **Approx. 410 [904]

*: 1993. 1 ~ 1994. 1

**: 1994. 1 ~

RECOMMENDED LUBRICANTS AND CAPACITIES

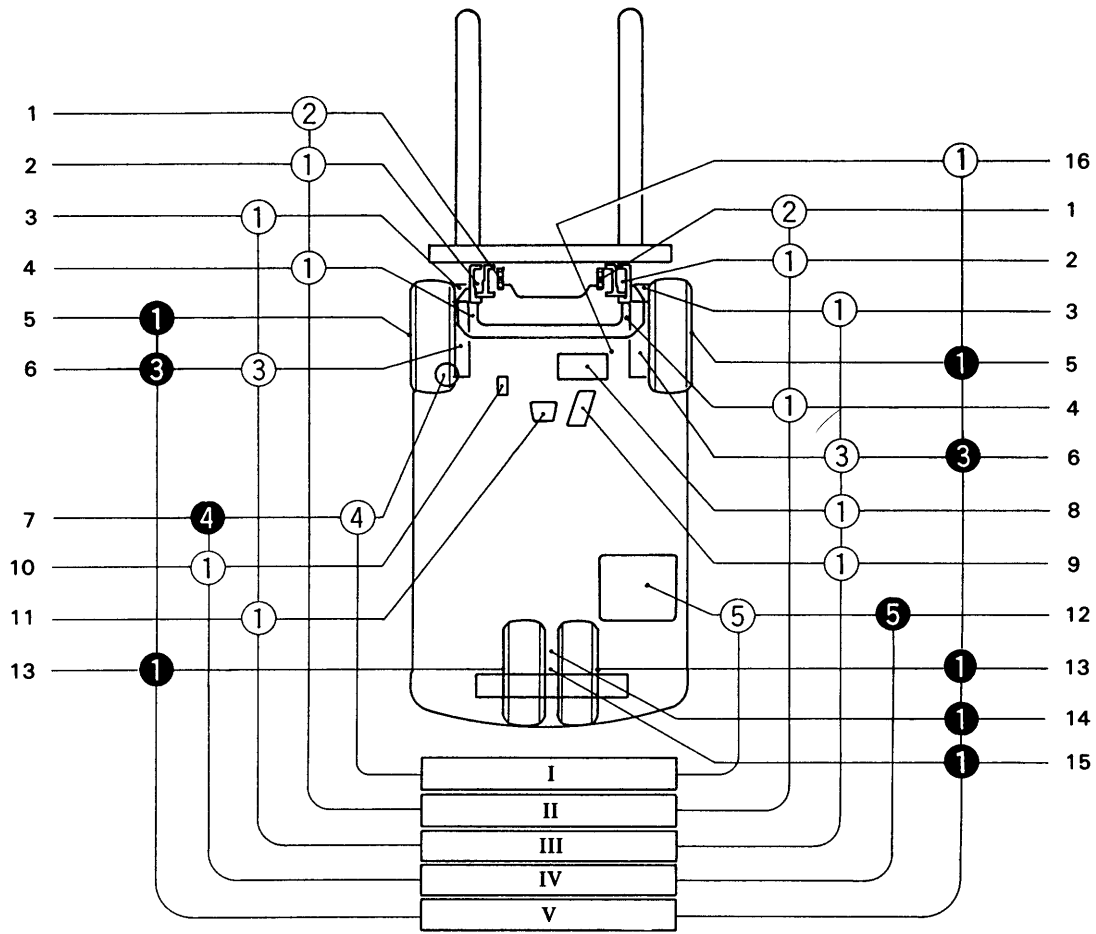
Application	Type	Capacity
Transmission	STD: Hypoid gear oil SAE85W-90 (API GL-4) 45S: Hypoid gear oil SAE75W-80W (API GL-4)	Right side: 1.7 ℓ (0.45 USgal) Left side: 1.8 ℓ (0.47 USgal) (1993.1 ~ 1998.1) 1.5 ℓ (0.40 USgal) (1.998.2 ~)
Hydraulic (total)	STD: Hydraulic oil ISO VG32 45S: MIL-H-5606-D	*16 ℓ (4.2 USgal) **21 ℓ (5.5 USgal)
Brake line	STD: SAE J-1703 DOT-3 45S: SAE J-1703 DOT-3 (1993.1 ~ 1998.1) Brake fluid arctic S (1998.2 ~)	Proper quantity
Chassis part	STD: MP grease No.2 45S: MIL-G-3278-A	Proper quantity

45S: Refrigerator specification vehicle

*: For 3000 mm (118 in) maximum fork height

**: For 6000 mm (236 in) maximum fork height

LUBRICATION CHART



- 1. Chain
- 2. Mast strip
- 3. Tilt cylinder front pin
- 4. Mast support bushing
- 5. Front axle hub
- 6. Transmission housing
- 7. Reservoir tank
- 8. Oil control valve link pin
- 9. Accelerator pedal link
- 10. Tilt steering locking mechanism
- 11. Brake pedal link
- 12. Oil tank
- 13. Rear wheel bearing
- 14. Rear axle bearing
- 15. Steering rack & pinion
- 16. Limit switch controller
(cold storage models only)

- I Inspect every 8 hours (daily)
- II Inspect every 40 hours (weekly)
- III Inspect every 170 hours (monthly)
- IV Inspect every 1000 hours (6 monthly)
- V Inspect every 2000 hours (annually)

- Inspect and service
- Replace

- ① MP grease (STD)
MIL-G-3278-A (45S)
- ② Engine oil
- ③ Hypoid gear oil
- ④ Brake fluid
- ⑤ Hydraulic oil

PERIODIC MAINTENANCE

INSPECTION METHOD

I: Inspection. Repair or replacement if required.
 M: Measurement. Repair or adjustment if required.
 T : Retightening C: Cleaning L: Lubrication
 * : For new vehicle *1: Flaw detector

Item		Inspection Period			
		Every 1 month	Every 3 months	Every 6 months	Every 12 months
		Every 170 hours	Every 500 hours	Every 1000 hours	Every 2000 hours
ELECTRICAL SYSTEM					
Motor	Abnormal sound during revolution	I	←	←	←
	Loose terminal	T	←	←	←
	Insulation resistance		M	←	←
	Brush wear and sliding contact status			I	←
	Commutator fouling and damage			I	←
	Brush spring fatigue				M
Battery	Charge	I	←	←	←
	Battery fluid level	I	←	←	←
	Battery fluid specific gravity	M	←	←	←
	Loose terminal	I	←	←	←
	Abnormality at top of battery and battery case	I	←	←	←
	Insulation resistance		M	←	←
	Cell voltage measurement after charging				M
Charger	Timer operation	I	←	←	←
	Terminal loosening	I	←	←	←
	Operating voltage measurement		M	←	←
	Magnet switch function, contact fouling and roughening				I
Magnet contactor	Loose contact, damage and wear	I	←	←	←
	Auxiliary contact function, fouling and wear	I	←	←	←
	Arc chute installation status				I
	Timing and functioning				I
	Loose coil installation				I
	Loose main circuit lead installation				I
Microswitch	Timing and operating function	I	←	←	←
	Damage and loose installation	I	←	←	←

Item		Inspection Period		Every 1 month	Every 3 months	Every 6 months	Every 12 months
		Every 170 hours	Every 500 hours	Every 1000 hours	Every 2000 hours		
Direction lever	Operating conditions and damage	I	←	←	←		
Controller	Operation	I	←	←	←		
	Inside fouling and damage	C	←	←	←		
	Overcurrent limit valve						M
Fuse	Loosening	I	←	←	←		
Wiring (including charging cord)	Damage of wiring harness and loose clamp	I	←	←	←		
	Loose connection and taping status	I	←	←	←		
	Battery connector damage and connection status	I	←	←	←		
Accelerator	Operating and damage	I	←	←	←		
POWER TRAIN							
Transmission	Oil leak	I	←	←	←		
	Oil level	I	←	←	←		
	Gear function and sound	I	←	←	←		
TRAVELING EQUIPMENT							
Wheels	Tire air pressure	M	←	←	←		
	Tire cuts, damage and uneven wearing	I	←	←	←		
	Loose rim and hub nuts	T	←	←	←		
	Tire groove depth	M	←	←	←		
	Metal chips, pebbles and other foreign matter trapped in tire grooves	I	←	←	←		
	Rim and disc wheel damage	I	←	←	←		
	Abnormal sound and looseness of front wheel bearing	I	←	←	←		
	Abnormal sound and looseness of rear wheel bearing	I	←	←	←		
Front axle	Cracks, damage and deformation of case						I
Rear axle	Cracks, damage and deformation of rear axle						I