

Operation & Maintenance Manual

150A 150FA

CRANE

SERIAL NUMBERS

150A - 09695 and up

150FA - 09695 and up

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PARTS BOOK - MICROFICHE:	
Chassis & Engine	BEPM003600
OPERATION & MAINTENANCE MANUAL:	
Chassis & Engine	CEAMC20081
SHOP MANUAL:	
150A	SMC-150A-3
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INTRODUCTION

INTRODUCTION

1. FORWARD

This manual describes the following procedures for the 150A or 150FA crane: operation, handling, lubrication, maintenance, and specifications. Reading this manual prior to operating the machine will familiarize the operator with the controls and safe operation of the machine.

Continuing design improvements of the machine can lead to changes in detail, which may not be reflected in this manual. Consult your local distributor or Komatsu America International Company for the latest available information of your machine.

If you sell the machine, give this manual to the new owner.

2. GENERAL

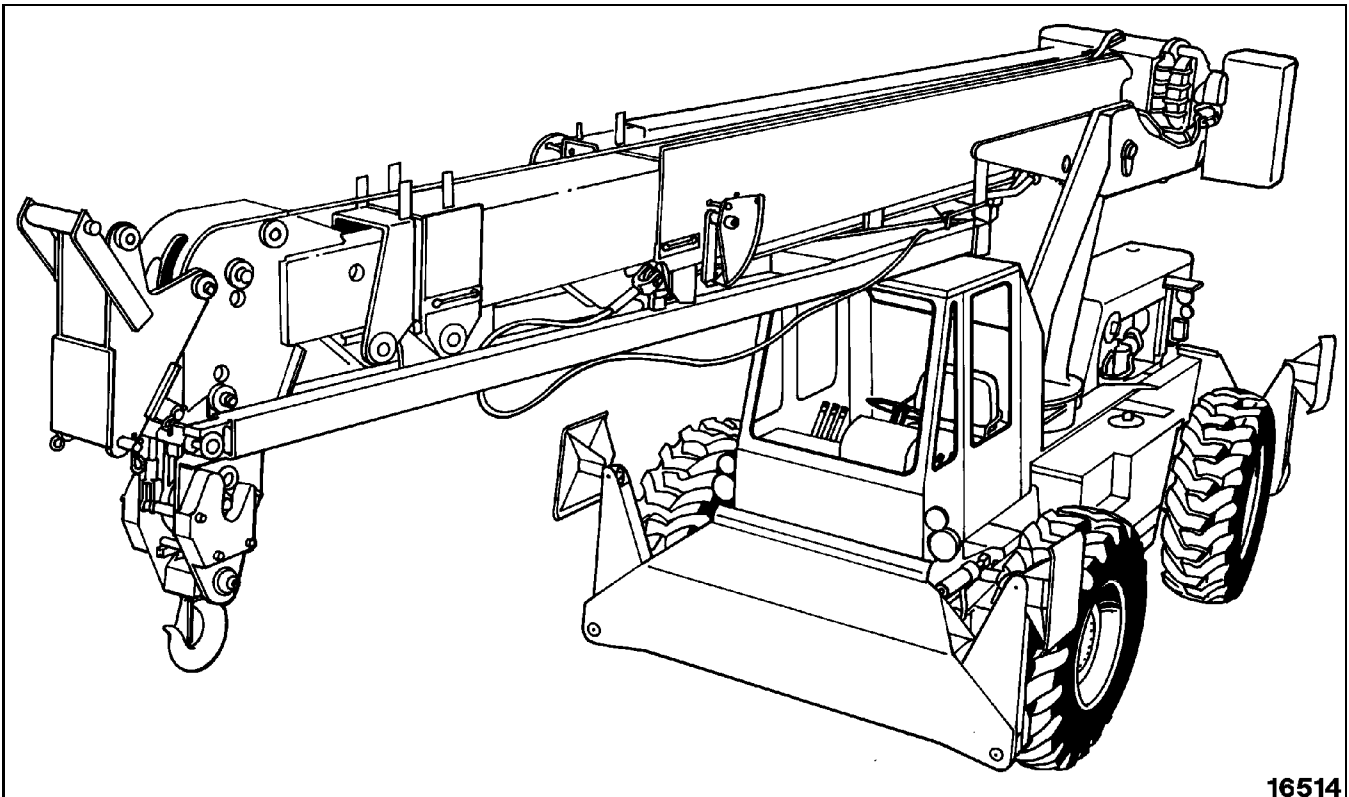
Some illustrations in this manual are of general application of the model, and may not accurately reflect your machine in detail.

Throughout this manual, the terms “left,” “right,” “front,” and “rear” are used. To avoid confusion, all directions are indicated from the operator’s seat while the operator faces the windshield.

3. INTENDED USE

The 150A or 150FA crane is intended for lifting material objects only. It is not designed for lifting people. NEVER modify the boom so that it can lift people, according to ASME B30.5-1994.

Also, NEVER place attachments that exceed 300 lbs. to the front or rear of the outriggers.

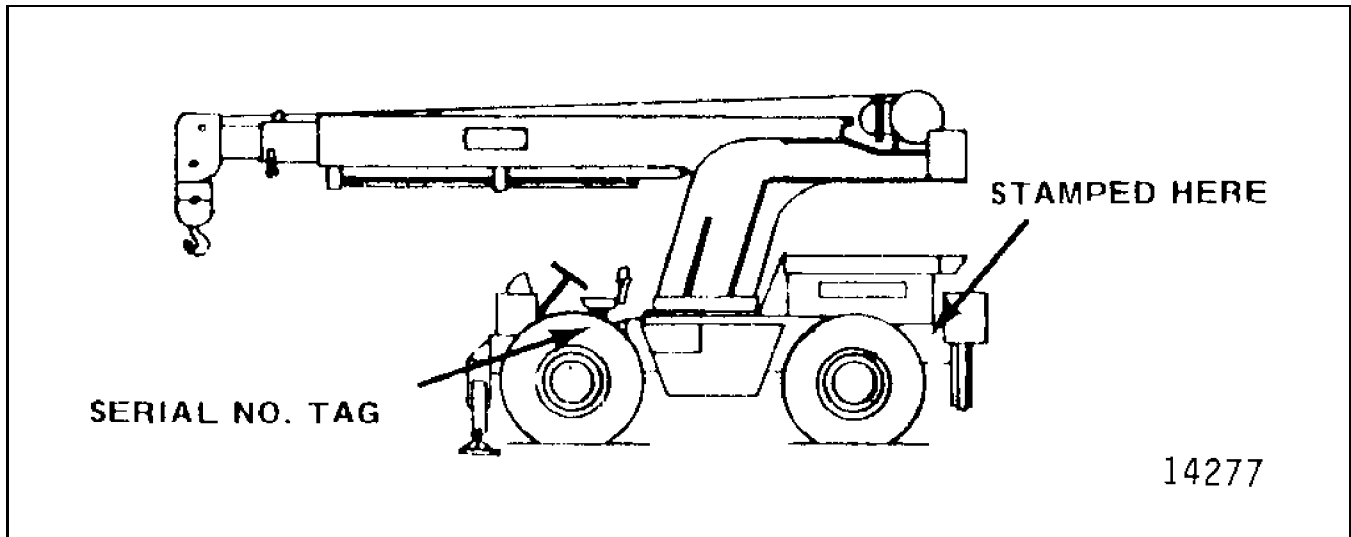


16514

Typical crane with optional equipment.

4. P.I.N. LOCATION

When corresponding with the distributor or when parts are required, you must furnish the Product Identification Number (P.I.N.). The P.I.N. is stamped on the frame as shown in the illustration below.



The number stamped on the frame should agree with the number on the serial number tag, which is located on the left side of the seat box.

5. TABLE OF CONTENTS

1.	FORWARD	0-2
2.	GENERAL	0-2
3.	INTENDED USE	0-2
4.	P.I.N. LOCATION	0-3
5.	TABLE OF CONTENTS	0-4
6.	SAFETY PRECAUTIONS	1-2
7.	PRE-UNLOADING CHECKS	1-8
8.	MACHINE TRANSPORT	1-9
	8.1 DRIVING	1-9
	8.2 SHIPPING	1-9
9.	MACHINE STORAGE	1-9
	9.1 PREPARATION FOR STORAGE	1-9
	9.2 MACHINE SERVICE DURING STORAGE	1-11
	9.2.1 ONE MONTH REPETITIVE SERVICE	1-11
	9.2.2 SIX MONTH REPETITIVE SERVICE	1-12
10.	PREPARING FOR OPERATION	1-13
11.	THEFT DETERRENT PRACTICES	1-14
	11.1 DISCOURAGE THEFT AND VANDALISM	1-14
	11.2 ASSIST IN ATTEMPT TO RECOVER STOLEN MACHINES	1-14
12.	PREPARATION FOR USE	2-2
13.	UNIVERSAL SYMBOLS	2-3
14.	OPERATIONAL CONTROLS AND INSTRUMENTATION	2-4
	14.1 MANIFOLD CONTROL VALVE LEVERS	2-4
	14.1.1 CONTROLS IDENTIFIED	2-5
	14.2 HYDRAULIC PUMPS	2-6
	14.2.1 THIRTY GALLON PUMP	2-6
	14.2.2 FIFTY GALLON PUMP	2-6
	14.3 OPERATING CONTROLS	2-7
	14.3.1 CONTROLS IDENTIFIED	2-7
	14.4 INSTRUMENT PANEL	2-9
	14.4.1 CLUSTER GAUGE - EARLIER PRODUCTION	2-9
	14.4.2 NONCLUSTER INSTRUMENT PANEL - EARLIER PRODUCTION	2-9
	14.4.3 NONCLUSTER INSTRUMENT PANEL - CURRENT PRODUCTION	2-10
	14.4.4 INSTRUMENT PANEL IDENTIFICATION	2-10
	14.5 OPERATOR'S SEAT	2-13
	14.5.1 RIDGED SEAT	2-13
	14.5.2 SUSPENSION SEAT	2-13
	14.5.3 SEAT BELT (nonretractable)	2-13
	14.6 MISCELLANEOUS GAUGES AND VALVES	2-14
	14.6.1 LEVEL INDICATOR	2-14
	14.6.2 BOOM ANGLE INDICATOR	2-14
	14.6.3 HEATER SHUTOFF VALVE (if equipped)	2-14
	14.7 ACCESS COVERS, HOOD SIDES AND DOORS	2-15

14.7.1	BATTERY BOXES AND FUEL TANK COVERS	2-15
14.7.2	CAB DOORS	2-15
14.7.3	TOOL BOX COVER	2-15
15.	BEFORE STARTING ENGINE	2-16
16.	ENTERING THE OPERATOR'S CAB	2-21
17.	START-UP PROCEDURE	2-22
18.	ENGINE WARM-UP	2-22
18.1	AFTER ENGINE WARM-UP	2-23
19.	ENGINE SHUTDOWN	2-23
19.1	AFTER ENGINE SHUTDOWN	2-23
20.	APPLICATION	2-23
20.1	LIFTING CAPACITIES	2-24
20.2	LIFTING UNKNOWN WEIGHT	2-24
20.3	LIFTING KNOWN WEIGHT	2-24
20.4	PICK AND CARRY	2-24
20.5	OPERATING RADIUS AND LIFT ZONES	2-25
20.6	WORKING RANGES	2-26
20.7	RELATION OF BOOM HEIGHT TO WORKING ANGLE	2-27
20.8	JIB CAPACITIES	2-28
20.9	LIFTING WITH SLING	2-28
20.10	HAND SIGNALS	2-29
21.	UNUSUAL OPERATING CONDITIONS	2-30
21.1	OPERATING IN EXTREME COLD	2-30
21.2	OPERATING IN EXTREME HEAT	2-31
21.3	OPERATING IN DUSTY OR SANDY AREA	2-32
21.4	OPERATING IN RAINY OR EXTREME HUMID CONDITIONS	2-32
21.5	OPERATING IN SALT WATER AREAS	2-32
21.6	OPERATING AT HIGH ALTITUDES	2-32
22.	OPERATING AUXILIARY/OPTIONAL ACCESSORIES	2-33
22.1	ETHER STARTING AID	2-33
22.1.1	STARTING PROCEDURE	2-33
22.1.2	PREVENTIVE MAINTENANCE	2-33
23.	STOWABLE JIB AND GANTRY - 20 FOOT (6.1 M)	2-35
23.1	JIB EXTENSION PROCEDURE	2-35
23.2	JIB STOWAGE PROCEDURE	2-46
24.	PRECAUTIONS FOR LUBRICATION	3-2
24.1	GENERAL	3-2
24.2	DURING LUBRICATION	3-3
24.3	LUBRICATION INSTRUCTIONS	3-4
24.4	PERIODIC SERVICE CHART CODES	3-5
24.5	PERIODIC CHART: 3-SECTION BOOM ONLY	3-6
24.6	PERIODIC SERVICE CHART: 4-SECTION BOOM ONLY	3-7
24.7	PERIODIC SERVICE TABLE: BOOM ONLY	3-8
24.8	PERIODIC SERVICE CHART: CHASSIS ONLY (CLARK AXLE)	3-10
24.9	PERIODIC SERVICE CHART: CHASSIS ONLY (MERITOR AXLE)	3-11
24.10	PERIODIC SERVICE TABLE - CHASSIS ONLY	3-12
24.11	DAILY/10 HOUR SERVICE	3-18
24.11.1	STEERING CYLINDER BEARINGS	3-18
24.11.2	TIE ROD ENDS	3-19

INTRODUCTION

24.11.3	TRANSMISSION SHIFT LINKAGE	3-19
24.11.4	HYDRAULIC OIL LEVEL	3-20
24.11.5	ENGINE OIL LEVEL	3-21
24.11.6	TRANSMISSION OIL LEVEL	3-22
24.11.7	WATER TRAP	3-22
24.11.8	AIR CLEANER SYSTEM	3-23
24.11.9	AIR FILTER ELEMENT SERVICE	3-24
24.12	AIR FILTER ELEMENT CLEANING	3-24
24.12.1	CLEANING WITH COMPRESSED AIR	3-25
24.12.2	CLEANING WITH WATER	3-25
24.12.3	INSPECTING THE CLEANED ELEMENT	3-25
24.12.4	ENGINE FAN BLADE	3-25
24.12.5	ENGINE DRIVE BELT	3-25
24.12.6	BOOM SIDE WEAR PLATES	3-26
24.12.7	COOLANT LEVEL	3-26
24.12.8	HOOK BLOCK	3-27
24.12.9	DEFORMATION INDICATORS	3-27
24.13	WEEKLY/50 HOUR SERVICE	3-27
24.13.1	OUTRIGGER CYLINDERS - BASE END	3-28
24.13.2	OUTRIGGER CYLINDERS - ROD END	3-28
24.13.3	OUTRIGGER PIVOT PINS	3-28
24.13.4	OUTRIGGER PAD PIVOT BEARINGS	3-29
24.13.5	AXLE TRUNNION BEARINGS - UPPER	3-29
24.13.6	AXLE TRUNNION BEARINGS - LOWER	3-30
24.13.7	STEERING VALVE	3-30
24.13.8	BRAKE PEDAL BEARING AND PARKING BRAKE CABLE	3-31
24.13.9	HYDRAULIC PUMP SLIP JOINT	3-31
24.13.10	PEDESTAL BEARING	3-31
24.13.11	SWING PINION BEARING	3-32
24.13.12	LIFT CYLINDER - BASE END	3-32
24.13.13	LIFT CYLINDER - ROD END	3-32
24.13.14	BOOM HINGE PIN	3-33
24.13.15	WEAR PAD SUPPORTS	3-33
24.13.16	HEAD BLOCK SHEAVES	3-33
24.13.17	PIVOTING HOOK BLOCK SHEAVES	3-34
24.13.18	PIVOTING HOOK BLOCK BEARING & PIVOT	3-34
24.13.19	HOSE REEL BEARING, POWER BOOM	3-34
24.13.20	HOSE SHEAVES, POWER BOOM (FRONT)	3-35
24.13.21	BOOM EXTENSION WEAR PLATES & HOSE SHEAVE GREASE FITTING (REAR)	3-35
24.13.22	UPPER AND LOWER WEAR PLATES (REAR)	3-35
24.13.23	SIDE WEAR PLATES (FRONT)	3-36
24.13.24	LOWER WEAR PLATES (FRONT)	3-36
24.13.25	TROLLEY POWER BOOM	3-36
24.13.26	CONTROL LEVER LINKAGE	3-37
24.13.27	TRANSMISSION SHIFT LINKAGE	3-37
24.13.28	PEDESTAL GEAR AND PINION	3-37
24.13.29	AXLE PLANETARY DRIVE OIL LEVEL	3-38
24.13.30	AXLE DIFFERENTIAL OIL LEVEL	3-39
24.13.31	SWING-DRIVE GEAR CASE OIL LEVEL	3-40
24.13.32	HOIST GEAR CASE OIL LEVEL	3-40
24.13.33	MASTER BRAKE CYLINDER AND RESERVOIR	3-41
24.13.34	HYDRAULIC TANK SCREEN AND MAGNET	3-42
24.13.35	BREATHER	3-43
24.13.36	BATTERY	3-44
24.13.37	TIRES	3-44
24.14	100 HOUR INSPECTION	3-45
24.15	100 HOUR SERVICE	3-45
24.15.1	UNIVERSAL JOINTS AND SLIP JOINT (TRANSMISSION TO FRONT AXLE)	3-45

24.15.2	UNIVERSAL JOINTS AND SLIP JOINT (TRANSMISSION TO REAR AXLE)	3-46
24.15.3	HYDRAULIC TANK FILTER	3-47
24.15.4	DRAIN, FUEL TANK	3-47
24.15.5	TRANSMISSION OIL COOLER	3-47
24.16	250 HOUR SERVICE	3-48
24.16.1	TRANSMISSION OIL FILTER	3-48
24.16.2	ENGINE OIL & FILTER	3-48
24.16.3	AIR CLEANER SYSTEM	3-50
24.16.4	COOLANT SYSTEM	3-50
24.17	500 HOUR INSPECTION	3-50
24.18	500 HOUR SERVICE	3-51
24.18.1	HYDRAULIC TANK BREATHER	3-51
24.18.2	DRAIN, TRANSMISSION FLUID	3-52
24.18.3	TRANSMISSION BREATHER	3-53
24.18.4	STEERING KNUCKLE UNIVERSAL JOINT	3-53
24.18.5	AXLE BREATHER	3-53
24.18.6	RETRACT REEL - SPRING MOTOR	3-54
24.18.7	ENGINE FUEL FILTERS	3-55
24.18.8	ANTIFREEZE CONCENTRATION	3-55
24.18.9	HOOK BLOCK	3-56
24.19	1,000 HOUR SERVICE	3-57
24.19.1	DRAIN, PLANETARY DRIVE FLUID	3-57
24.19.2	DRAIN, AXLE FLUID	3-58
24.19.3	DRAIN, ENGINE RADIATOR	3-58
24.19.4	DRAIN, HOIST GEAR CASE	3-59
24.19.5	HOIST GEAR CASE BREATHER	3-59
24.19.6	DRAIN, SWING DRIVEGEAR CASE	3-59
24.19.7	SWING DRIVE GEAR CASE BREATHER AND FILL PLUG	3-60
24.19.8	HYDRAULIC OIL TANK FILTERS	3-60
24.19.9	DRAIN, HYDRAULIC OIL TANK	3-60
24.19.10	ENGINE ADJUSTMENTS	3-61
24.19.11	BELT TENSION	3-61
24.20	BIENNIALY / 2,000 HOUR SERVICE	3-62
24.20.1	ENGINE VIBRATION DAMPER	3-62
24.20.2	COOLANT FLUSH	3-62
24.21	NOT SPECIFIED	3-64
24.21.1	WIRE ROPE	3-64
24.21.2	WEAR PADS	3-64
24.21.3	ENGINE RADIATOR	3-64
25.	FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE	3-65
25.1	PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS	3-65
25.2	ENGINE OIL SPECIFICATIONS	3-67
25.2.1	NORMAL OPERATION	3-67
25.2.2	ARCTIC OPERATION	3-67
25.3	TRANSMISSION, TORQUE CONVERTER AND OIL COOLER AND HYDRAULIC SYSTEM OIL SPECIFICATIONS	3-68
25.4	FRONT AND REAR AXLE, PLANETARY GEARS	3-68
25.5	DIESEL FUEL SPECIFICATIONS	3-69
25.6	COOLANT SPECIFICATIONS	3-69
25.6.1	GENERAL	3-69
25.6.2	WATER	3-69
25.6.3	ANTIFREEZE	3-70
26.	OIL SPECIFICATIONS	3-72
26.1	MULTIGRADE DIESEL ENGINE OIL	3-72
26.2	GEAR LUBRICANT	3-72
26.3	HYDRAULIC OIL	3-73
26.4	EXTREME PRESSURE GREASE	3-73

INTRODUCTION

26.5	AUTOMATIC TRANSMISSION FLUID	3-73
26.6	HYDRAULIC BRAKE FLUID	3-73
26.7	OIL CHANGE RECOMMENDATIONS	3-74
27.	BOOM HOSE REPLACEMENT	3-75
28.	BOOM WEAR PAD SUPPORT ADJUSTMENT	3-75
29.	HYDRAULIC SYSTEM CARE	3-76
30.	COOLING SYSTEM	3-77
31.	TORQUE CONVERTER OIL COOLER	3-78
32.	VENTING AND PRIMING THE ENGINE	3-78
33.	ENGINE CRANKCASE VENTILATION	3-78
34.	ELECTRICAL SYSTEM	3-79
34.1	CIRCUIT BREAKERS	3-79
35.	BATTERIES	3-80
35.1	GENERAL BATTERY MAINTENANCE	3-80
35.2	CLEANING THE BATTERIES	3-81
35.3	MAINTENANCE-FREE BATTERY	3-81
35.4	BATTERY CHARGING	3-81
35.4.1	TESTING MAINTENANCE-FREE BATTERIES	3-82
35.4.2	CHARGING INSTRUCTIONS	3-84
35.4.3	SLOW CHARGING	3-84
35.4.4	AFTER CHARGING	3-85
36.	SERVICE BRAKE ADJUSTMENT	3-86
36.1	MERITOR AXLE	3-86
36.2	CLARK DS-17220 & DS-13311 AXLES	3-86
37.	HOIST AND SWING BRAKE OPERATION	3-87
37.1	HOIST BRAKE	3-87
37.2	SWING BRAKE	3-87
38.	PARKING BRAKE ADJUSTMENT	3-88
39.	RETRACT REEL- SPRING MOTOR	3-89
40.	ROTARY JOINT DRIVE SCREWS	3-91
41.	TIRES	3-92
41.1	RIM CENTERING	3-92
41.2	TIRE INFLATION	3-92
42.	CLUTCH PACK PRESSURE CHECKS	3-93
42.1	CLARK 18000 SERIES TRANSMISSION	3-93
43.	WIRE ROPE	3-94
43.1	WIRE ROPE SPECIFICATIONS	3-94
43.2	MANUFACTURER'S IDENTIFICATION	3-94
43.3	WIRE ROPE LINE PULL	3-95
43.4	MAINTENANCE RECOMMENDATIONS	3-96
43.5	SERVICE AND INSPECTION OF WIRE ROPE	3-96
43.5.1	RESTING THE HOOK BLOCK	3-96

43.5.2	WIRE ROPE REMOVAL	3-97
43.5.3	WIRE ROPE INSTALLATION	3-98
43.5.4	HOOK AND HEAD BLOCK REEVING	3-98
43.5.5	BREAKING IN THE WIRE ROPE	3-98
43.5.6	IMPORTANCE OF LUBRICATION	3-99
43.5.7	RECOMMENDED LUBRICANTS FOR WIRE ROPE	3-99
43.5.8	METHODS OF LUBRICATION	3-100
43.5.9	LUBRICATION IN STORAGE	3-101
43.5.10	IDLE ROPES	3-101
43.5.11	COMPONENT PARTS OF A WIRE ROPE	3-101
43.5.12	INSPECTION OF WIRE ROPES, SHEAVES & DRUM	3-102
43.6	HOOK BLOCK	3-106
43.6.1	5 TON SINGLE-PART LINE HOOK BLOCK	3-106
43.6.2	15 TON MULTI-PART LINE HOOK BLOCK	3-106
43.6.3	DEFORMATION INDICATORS	3-106
43.6.4	ANGLE INDICATORS	3-106
43.7	HOOK-BLOCK LATCH	3-107
43.7.1	SERIAL NUMBERS 08624 THRU 10316	3-107
43.7.2	SERIAL NUMBERS 10317 THRU 10940	3-107
43.7.3	SERIAL NUMBERS 10941 AND UP	3-107
50.	GENERAL DESCRIPTION	4-2
50.1	SPECIFICATION SHEET	4-3
50.2	150A - DIMENSION AND RATINGS	4-4
50.3	150FA - DIMENSIONS AND RATING	4-5
50.4	TIRE INFLATION	4-6
50.5	LIQUID CAPACITIES	4-6
51.	METRIC CONVERSIONS	4-8
52.	TORQUE VALUES	4-14
52.1	BOLT GRADE IDENTIFICATION CHART	4-14
52.2	TYPE 1, 5 AND 8 NON-PHOSPHATE COATED HARDWARE	4-14
52.3	GENERAL TORQUE VALUES FOR ENGLISH FASTENERS	4-15
52.4	TORQUE VALUES FOR TYPE 8 PHOSPHATE COATED HARDWARE	4-16
52.5	TORQUE VALUES FOR STANDARD METRIC FASTENERS	4-17
52.6	TORQUE VALUES FOR HOSE CLAMPS	4-18
52.7	TORQUE VALUES FOR SPLIT-FLANGE CONNECTIONS	4-18
52.8	TORQUE VALUES FOR HYDRAULIC TUBES AND FITTINGS	4-20
53.	SPECIFIC BOLT TORQUES	4-21
53.1	HOIST MOUNTING BOLTS	4-21
53.1.1	150A	4-21
53.1.2	150FA	4-21
53.2	ROTARY JOINT TO BASE PLATE BOLTS	4-21
53.3	SUPPORT BOLTS	4-21
53.4	COUNTERWEIGHT BOLTS	4-23
53.4.1	150A	4-23
53.4.2	150FA	4-23
53.5	ROTARY JOINT DRIVE SCREWS	4-23
53.6	BASE PLATE TO FRAME NUTS	4-23
53.7	PEDESTAL TO SWING BEARING BOLTS	4-24
53.8	WHEEL LUG NUTS	4-24
53.9	FRONT AXLE TO FRAME LOCK NUTS	4-24
53.10	REAR AXLE RUBBER MOUNTS TO FRAME LOCK NUTS	4-25
53.11	REAR AXLE TO REAR AXLE MOUNT BOLTS	4-25
53.12	FRONT OUTRIGGER BOLTS	4-25
53.13	PRIMARY MANIFOLD TO ADAPTOR BLOCK BOLTS	4-26
53.14	SWING BEARING TO BASE PLATE BOLTS	4-26

INTRODUCTION

53.14.1 NOT PAINTED	4-26
53.14.2 PAINTED	4-26
54. DECAL LOCATIONS	4-27

SAFETY



WARNING

Read and follow all safety precautions. Failure to do so may result in serious injury or death.

This safety section also contains precautions for optional equipment and attachments.



6. SAFETY PRECAUTIONS

GENERAL SAFETY

Before operating the machine, read this manual completely and have a thorough understanding of it.

Only trained and authorized personnel should be allowed to operate the machine.

If safety and warning product graphics become defaced, replace them.

DO NOT rush through a job. Rushing through a job is a leading cause of equipment-related injuries.

Think before you act. That means the operator must be alert and not tired. That also means the operator must not use drugs or alcohol that would affect the operator's concentration and decision-making capabilities.

When working with other people, ensure that all personnel understand the handsignals prescribed by ANSI, which are in this manual.

Know the location of the fire extinguisher and first-aid box and the emergency phone number.

Learn about the safety devices on the machine: guards, canopies, protective devices, roll-over protective structures, and seat belts. If the seat belt becomes worn, replace it.

Examine the lay of the land to determine the terrain, soil condition (soft, loose, rocky, or hard), and dangerous points (cliffs, rivers or streams, roads) before starting any work.

WORK WEAR

Avoid wearing loose fitting clothing, jewelry and having long hair when operating the machine. They can catch on the controls or in moving parts, which may cause injury or death.

If your work clothes become oil soaked, change them, if possible. Oil-soaked clothes can easily catch fire.

Wear a hard hat, safety glasses, and safety shoes or boots when operating the machine.

Wear leather gloves, especially when working with the wire rope (steel cable).



WARNING: Failure to follow these safety precautions may lead to a serious accident.

MACHINE SAFETY

Operate the machine within the manufacturer's specifications and limitations.

A thorough inspection of the hoisting machinery by a competent person must be performed annually. Record the dates, the findings, and any actions taken.

Before starting work each day, inspect the machine for loose outrigger foot connectors, hydraulic leaks, the holding ability of the swing and hoist brakes and the backup alarm operation (Reverse gear only). Also, check the rope (steel cable) for kinking, crushing, broken strands, main strand displacement, corrosion, and birdcaging, as well as rope connections. Repair any defects before operating the machine.

Maintain clearance within the swing radius of the crane's rotating superstructure so that no one is injured or property damaged.

Maintain maximum tire pressure at all times.

Inspect the engine compartment for dead leaves and paper, which can readily catch fire.

Before starting the engine, ensure that all control levers are in the NEUTRAL or HOLD position, especially the transmission.

After starting the engine, confirm that all gauges are reading accurately.

Check the operation of the steering, control levers, and pedals, especially the brake.

UNAUTHORIZED MODIFICATION

Modifications to the machine without Komatsu America International Company's authorization can create safety hazards.

Komatsu America International Company will not be responsible for any injury or damage caused by the unauthorized modification.

ENTERING OR LEAVING THE CAB

In normal circumstances, do not step on the tire to enter or exit the cab.

In normal circumstances, do not jump from the cab.

When entering or leaving the cab, maintain a three-point contact with the steps and handrail.

Clean all oil, mud, snow, and ice from the steps and handrails.

If the steps or handrails become damaged, repair them.

Do not use the machine's hydraulic hoses as a handrail when entering or leaving the cab.

**DRIVING AND PARKING SAFETY**

Ensure that no one is standing in front of, behind, or to the side of the machine before moving it.

Drive the machine at a speed at which it can be safely controlled; never exceed the speed limit while traveling on public roads.

Avoid sudden turns, starts, and stops.

At the job site, drive in a straight line so as to avoid weaving between obstacles.

Never throw the machine in neutral while coasting down a slope.

When travelling on public roads, never use the rear steering.

When needing to slow down while going down a slope, take your foot off the accelerator and use the engine as a brake so that the brake linings do not become glazed; use the service brakes only if needed.

When attempting a slope, drive directly up or down the slope; never drive horizontally or diagonally across a slope, or the machine may slide sideways and roll over.

Avoid turning while driving up or down a slope because the machine could slip sideways and roll over.

Do not change gears while going up or down a slope.

If the engine stalls while traveling on a slope, apply the parking brake and then throw the gear shift into neutral before restarting the engine.

Always observe traffic regulations and leave enough room between the machine and other cars in the event of an emergency.

Never take a passenger on the machine.

Know the weight of the crane and the weight limits of bridges before traveling over them.

Know the height, length, and width of the crane and the clearance of any overhead or viaduct before entering it.

Park the machine in a place where the ground is flat and firm outside the work area that is not prone to flooding, landslides, mudslides, or falling rocks.

When parking the machine, return the gear shift to the neutral position, apply the parking brake, retract and lower the boom and hook block.



WARNING: Failure to follow these safety precautions may lead to a serious accident.

OPERATIONAL SAFETY

Operating the crane in heavy winds could cause it to tip.

Never rest the boom on any object while attempting to hoist a load.

Never use the boom as a lever to move any object.

Never use the outrigger cylinder as a lifting or carrying device.

Never use the outrigger pad or arm as a pushing attachment.

Never block up under or anchor down the frame or outrigger box to pick up more payload.

Never attempt to lift payload without stable footing under tires and outrigger pads.

Never use the hoist line as a skidder (skidding objects to the crane).

Lower the outriggers to stabilize the crane. Level the machine after the outriggers are in place; never attempt to use the crane while on a slope. Depending on the surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the load.

Whenever possible, operate the crane with all outriggers down.

Never swing loads over personnel.

Never get off the crane while it is moving.

Never get out of the cab while the engine is running.

Never allow personnel to ride on any part of the crane.

Never two-block. It is an unsafe practice that could cause injury or damage property.

Always check the crane's "load-rating chart" mounted on the instrument panel cover. Comply with the radius for the amount of payload. chart lists the maximum allowable loads, not practical working loads. A practical working load depends on how level the machine is, the supporting surface, wind, and other factors affecting stability. Operating the crane above the "heavy line" values on the chart, the crane can tip over or damage the crane's structure.

Always position the boom point over the payload and then lift.

When the engine sound changes or a vibration occurs, check the gauges because something may be wrong with the machine.

Do not allow unauthorized persons in the work area.

SAFETY



WARNING: For reasons of safety, always follow these safety precautions.

DANGEROUS OPERATING CONDITIONS

Be extremely careful when working near the edge of the cliff, or the machine could fall over the side.

Work slowly when working near the shoulder of a road or other crowded areas.

When fog, smoke, rain, or mist reduces visibility, confirm if the operation can be performed safely before starting the work.

Working on river banks or atop loose soil, the weight and vibration of the machine may cause it to sink.

At night it is easy to misjudge the height and distance of objects. Arrange to have adequate lighting.

OPERATING NEAR POWER LINES

A person shall be designated to observe the clearance of the machine so that the operator can be given a timely warning.

If the power lines are rated less than 50 kV, the minimum clearance between the lines and any part of the crane shall be at least 10 feet.

If the power lines are rated more than 50 kV, the minimum clearance between the lines and any part of the crane shall be 10 feet plus 0.4 inches for each 1kV over 50 kV.

Or during transit with the boom lowered, the equipment clearance shall be at least 4 feet for when the lines carry less than 50 kV, at least 10 feet for lines from 51kV to 345 kV, and at least 16 feet for more than 346 kV.

Or near a transmitter where an electrical charge can be induced in the crane, the transmitter must first be de-energized. If voltage is induced in the crane, ground the upper rotating structure while protecting the crew from the electrical charge.

If the boom, line, or load contacts a live power line, **don't panic**. Stay in the cab and move the boom away from the line or have the current shut off. If you must leave the crane, jump clear and don't touch any part of the crane. Do not let any person touch the crane or the severed power line.

COLD WEATHER PRECAUTIONS

When the anticipated temperature will be below 20 E F (-7 E C) for an extended period of time, the machine should be stored inside when it is not in use.

If inside storage is not possible, start the engine before using the machine again. Let the engine run until the hydraulic oil in the tank reaches operational temperature before starting any work. If the hydraulic oil is not warmed up sufficiently prior to use, the hydraulic controls will be sluggish, which could be dangerous.

After completing operations, remove all snow and ice from the rope (cable) before storing it for the night.



WARNING: Failure to follow these safety precautions may lead to a serious accident.

BATTERY SAFETY

Always wear safety glasses when working with the battery.

Always check the level and specific gravity of the battery before jumping or charging it. If the electrolyte is frozen, let the battery thaw out in a warm place before jumping or charging it, **or the battery may explode!** And if the battery is low on electrolyte, add distilled water to the proper level before charging the battery.

Battery electrolyte is a mild sulfuric acid, which can quickly burn the skin and dissolve clothing. Should any electrolyte spill on you, immediately flush the area with water.

If battery acid should get in your eye, flush it with large amounts of water and see a doctor at once.

If a person accidentally drinks battery acid, drink large quantities of milk or vegetable oil and call the poison control center or see a doctor at once.

A battery generates hydrogen gas, especially during the charging process. Because hydrogen gas is explosive, keep sparks or flame away from the battery. Keep any metal tools away from the battery that may short circuit it, causing a spark. Also, ensure that the battery terminal connections are tight or a spark may occur.

Before disconnecting the battery, ensure that the machine is off.

Clean the top of the battery with a solution of baking soda and water ONLY. Baking soda neutralizes any acid atop the battery.

When jumping a battery with another battery, connect the jumper cable to the positive post of the weak battery first and then to the positive post of the jumper battery. Connect the ground jumper cable of the weak battery to a metal object of the machine giving the jump start. That way, any spark that occurs while making the last connection will be away from the battery.

When a battery needs to be recharged, remove it from the machine and place it in a well-ventilated room. Remove the vent caps from the battery. Connect the leads of the battery charger to the proper battery posts (positive lead to positive post and negative lead to negative post) before turning the battery charger on. Charge the battery at a rate lower than the battery rating or the battery may explode.

REFUELING SAFETY

Heat or flame can ignite diesel fuel and hydraulic oil. Thus, take the following precautions when refueling or adding hydraulic oil:

Stop the engine.

Do not smoke.

Should occur in well-ventilated places only.

Tighten the fuel or oil cap securely.

Prevent unauthorized persons from entering the fuel storage area.