CASE CONSTRUCTION

OPERATOR'S MANUAL

COMPACT CRAWLER EXCAVATOR

CX27B TIER 4

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TABLE OF CONTENTS

CHAPTER 1
GENERAL INFORMATION
To the Owner 1-1
Right, Left, Front, and Rear of the Machine 1-2
Machine Components 1-3
Identification Numbers 1-4

CHAPTER 2
SAFETY, DECALS, AND HAND SIGNALS
Table of Contents 2-1
Safety Rules 2-3
Operator Precautions 2-5
Decals 2-10
Hand Signals 2-25

CHAPTER 3
INSTRUMENTS AND CONTROLS
Table of Contents 3-1
Operator Cab and Operator Seat 3-3
Machine Access Compartments and Doors 3-7
Operator's Compartment Controls and Accessories 3-8

CHAPTER 4
OPERATING INSTRUCTIONS
Table of Contents 4-1
Before Operating the Machine 4-3
Operating the Machine 4-3
Starting and Stopping Machine Engine 4-4
Starting and Stopping Machine Engine in Cold Climates 4-5
Control Decal 4-9
Basic Operation of Hydraulic Controls 4-10
Practices to Improve Efficiency 4-17
Transportation 4-21
Machine Storage 4-24
Optional Equipment 4-25
Hydraulic Breaker 4-25

CHAPTER 5
LUBRICATION, FILTERS, AND FLUIDS
Table of Contents 5-1
Fluids and Filters 5-3
Lubricant Specifications 5-5
Use of Bio-Degradable Oils 5-5

CHAPTER 6
MAINTENANCE AND ADJUSTMENTS
Table of Contents 6-1
General Information 6-3
General Safety 6-3
Releasing Pressure in the Hydraulic System 6-6
Lubrication and Maintenance Quick Reference Chart 6-8
Daily Inspection and Maintenance 6-10
50 hour maintenance: 6-15
250 Hour Maintenance 6-23
500 Hour Maintenance 6-28

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1000 Hour Maintenance 6-31
1500 Hour Maintenance 6-34
2000 Hour Maintenance 6-35
5000 Hour Maintenance 6-44
Special Procedures 6-45

CHAPTER 7
ELECTRICAL
Table of Contents 7-1

CHAPTER 8
SPECIFICATIONS
Table of Contents 8-1
General Specifications 8-3
Lifting Capacities 8-10
Torque Specifications 8-11

CHAPTER 9
INDEX

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CHAPTER 2

SAFETY, DECALS, AND HAND SIGNALS

TABLE OF CONTENTS

SAFETY RULES . . . 2-3
- Personal Safety . . . 2-3
- Safety Area . . . 2-3
- Utility Safety . . . 2-4

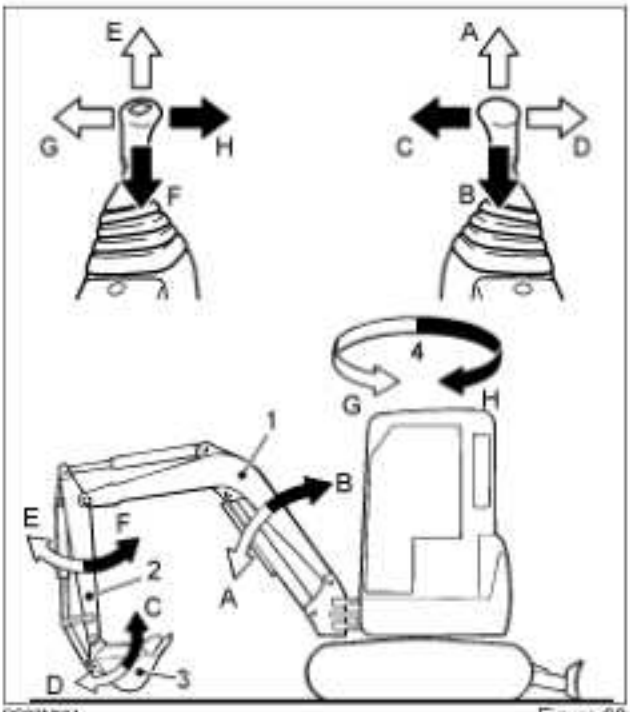
OPERATOR PRECAUTIONS . . . 2-5
- Personnel . . . 2-5
- General . . . 2-5
- Mounting and Dismounting Precautions . . . 2-5
- Starting and Stopping Precautions . . . 2-5
- Operating Precautions . . . 2-6
- Maintenance Precautions . . . 2-7
- Fuel Handling Precautions . . . 2-8
- Burn Prevention . . . 2-8
- Hazardous Chemical Precautions . . . 2-8
- Transporting Precautions . . . 2-8
- Roll-Over Protective Structure (If equipped) . . . 2-8
- Fire Extinguisher . . . 2-8
- Fire Prevention . . . 2-8
- Seat Belt Precautions . . . 2-9
- Emergency Exit Hammer . . . 2-9
- Specific Precautions to this Machine . . . 2-9

DECALS . . . 2-10
- Boom and Arm Movement - Caution . . . 2-11
- Hydraulic Oil - Warning . . . 2-11
- Safety Controls - Warning . . . 2-12
- Hot Surfaces - Caution . . . 2-12
- Pressurized Fluids and Lubricants - Warning . . . 2-13
- Engine Stop - Caution . . . 2-13
- Counterweight Swing Area - Danger . . . 2-14
- Engine Stop - Warning . . . 2-14
- Booster Cable - Warning . . . 2-15
- track Tension Adjuster - Warning . . . 2-15
- Keep Clear of Working Area - Danger . . . 2-16
- Battery - Danger . . . 2-17
- Selector Valve - Caution . . . 2-18
- Safety Lock Lever - Warning . . . 2-18
- Seat Belt - Warning . . . 2-19
- Falling Front Window - Caution . . . 2-20
- Hydraulic Oil Check Position - Notice . . . 2-21
- Stop Engine - Danger . . . 2-22
- Confirm Attachment Movement- Warning . . . 2-22
- Do Not Operate This Machine- Warning . . . 2-23
- California Proposition 65 - Warning . . . 2-23
- California Proposition 65 - Warning . . . 2-24
- use Specified Diesel Oil for Fuel . . . 2-24

HAND SIGNALS . . . 2-25
- Raise Load Vertically . . . 2-25
- Lower Load Vertically . . . 2-25
- Move Load In Horizontally . . . 2-25
- Move Load Out Horizontally . . . 2-25
- Raise Boom . . . 2-25

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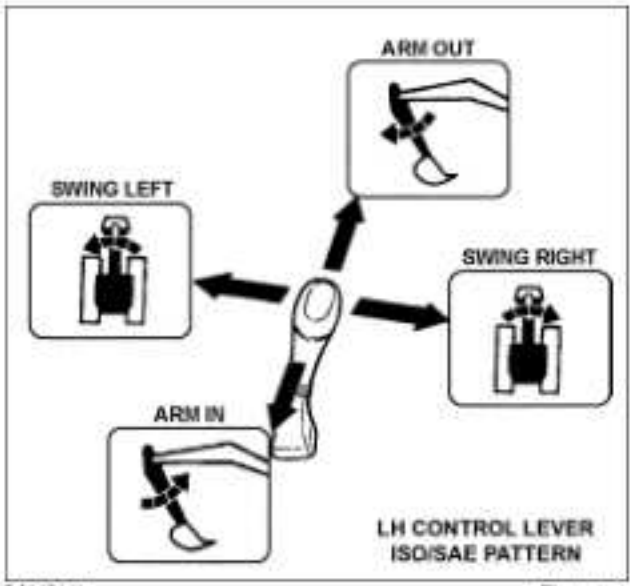
OPERATING CONTROL LEVERS



BS07N061 Figure 38

LH CONTROL LEVER			RH CONTROL LEVER		
2	E	Arm Out	1	A	Boom Down
	F	Arm In		B	Boom Up
4	G	Swing Left	3	C	Bucket In
	H	Swing Right		D	Bucket Out

Left Hand Operator Control Lever (ISO/SAE Pattern)



DC040562 Figure 39

WARNING: *Hydraulic controls are designed for and set to an ISO operating pattern. Changing the control pattern will effect the operation of the machine controls. Make certain patterns match machine movement. Failure to comply could result in injury or death.*

The Left Hand Operator Control Lever is located at the top front of the left hand operator console. Its purpose is to allow the operator to control operations of the swing and arm. Operating speed of function is variable from stop to full stroke depending on how far lever is operated. The left hand operator control lever has the following basic operational functions.

- **FORWARD** - Variable speed ARM out.
- **BACKWARD** - Variable speed ARM in.
- **LEFT** - Variable speed left SWING.
- **RIGHT** - Variable speed right SWING.
- **CENTER** - Neutral position.

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FLUIDS AND FILTERS

REQUIRED FLUIDS/LUBRICANTS AND CAPACITIES

ENGINE

Type of Oil ---------- Engine Oil SAE 15W30

Capacity:

Engine Oil (H Level) -----5.5 liters (1.5 gal)

Engine Oil (L Level) -----3.6 liters (1.0 gal)

NOTE: *See **ENGINE OIL LEVEL** in Chapter 6 for proper oil filling and/or checking engine oil level.*

HYDRAULIC

Type of Oil ---------- Hydraulic Oil AW 46

Capacity:

Hydraulic Tank ---------- 20 liters (5.3 gal)

Hydraulic System ----------34 liters (9.0 gal)

NOTE:

1. *See **HYDRAULIC OIL LEVEL** in Chapter 6 for proper filling and/or checking hydraulic oil level.*

TRAVEL MOTOR REDUCTION UNIT

Type of Oil ---------- SAE 90 GL4 Gear Oil

Capacity ---------- 0.7 liters (0.18 gal) Each x 2

NOTE: *See **TRAVEL MOTORS REDUCTION UNIT OIL** in Chapter 6 for proper filling and/or checking oil level.*

UPPER ROLLERS

Type of Oil ---------- SAE 90 GL4 Gear Oil

Capacity ---------- 45 cc (2.7 cu. in.) Each

IDLERS

Type of Oil ---------- SAE 90 GL4 Gear Oil

Capacity ---------- 80 cc (4.8 cu. in.) Each

OPERATING LEVER JOINT

Type of Oil ---------- EP Grease EP/2

Capacity ---------- As required in each joint

NOTE: *See **CONTROL LEVER JOINT LUBRICATION** in chapter 6 for proper lubrications.*

UPPER ATTACHMENT PINS

Type of Oil ---------- EP Grease EP/2

Capacity ---------- As required in each pin

NOTE: *See **ATTACHMENT LUBRICATION** in Chapter 6 for proper lubrications.*

SWING BEARING

Type of Oil ---------- EP Grease EP/2

Capacity --------- As required (1 place - swing 90° x 4)

NOTE: *See **SWING BEARING LUBRICATION** in Chapter 6 for proper lubrication.*

TRACK TENSION ADJUSTMENT

Type of Oil ---------- EP Grease EP/2

Capacity ---------- As required (2 places)

NOTE: *See **TRACK TENSION** in Chapter 6 for proper procedures in injecting grease.*

RADIATOR

Coolant ---------- Ethylene-glycol Coolant Solution

ENGINE COOLANT MIXTURE	
Expected Minimum Temp.	**Long Life Coolant**
-14.5°C (5.9°F)	30% mixed
-34°C (-29.2°F)	50% mixed

Capacity:

Radiator ----------1.3 liters (0.34 gal)

Cooling System ----------3.8 liters (1.0 gal)

NOTE: *See **ENGINE COOLANT CHANGE** in Chapter 6 for proper coolant filling and/or coolant level check.*

FUEL TANK

Type of Fuel ---------- Diesel Fuel grade No. 2

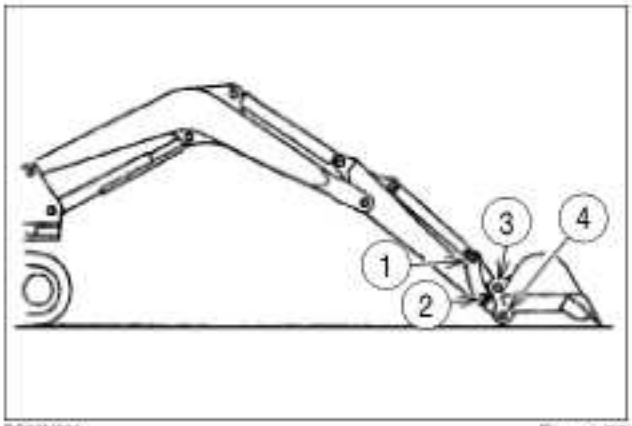
Capacity ----------Fuel Tank - 200 liters (53 gal)

NOTE: *See FUEL LEVEL in Chapter 6 for proper filling and/or checking the fuel level.*

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50 HOUR MAINTENANCE:

ATTACHMENT LUBRICATION



B507N028 Figure 25

1. BUCKET CYLINDER ROD PIN (1)
2. IDLER LINK/ARM CONNECTING PIN (1)
3. BUCKET LINK PIN (1)
4. ARM/BUCKET CONNECTING PIN (1)

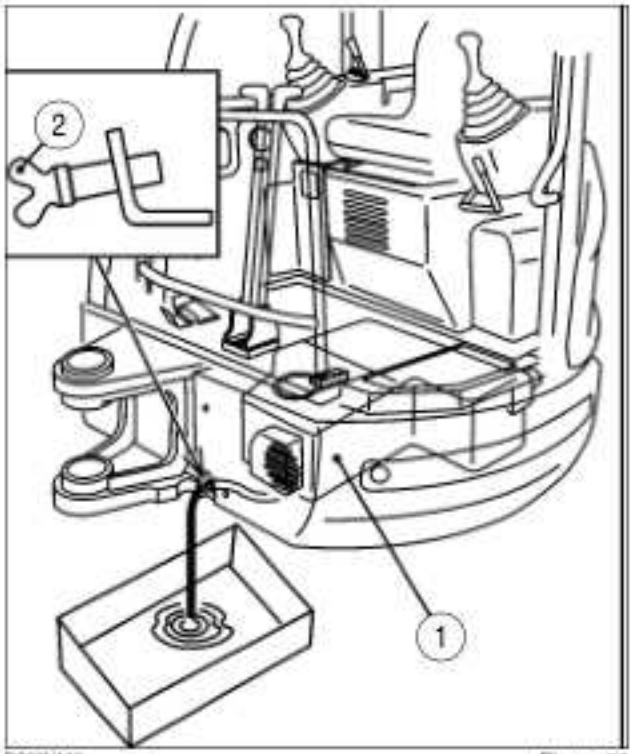
During the first 50 hours of operation, grease attachment every 8 hours. After the initial run-in period, grease every 50 hours.

1. Move the machine to firm level ground and place the bucket/attachment on the ground. Turn the engine off.
2. Clean the grease fitting before greasing. Replace any damaged grease fitting.
3. Lubricate with a grease gun through the grease fittings shown. Wipe off any grease the leaks out of the pin connection.

IMPORTANT: *Dispose of all waste in accordance with environmental regulations.*

WARNING: *The machine and attachment should not be moved when greasing. Personal injury may result. Move attachment to a different position, stop the engine and lubricate the attachment again. Repeat this procedure until the front attachment is completely lubricated.*

DRAIN FUEL TANK SEDIMENT



B507N126 Figure 26

1. FUEL TANK
2. DRAIN PLUG

WARNING: *Do not smoke or allow any open flame near by when draining fuel. Stop engine. Thoroughly clean up any spilled fuel.*

1. Draining water and sediment is most effectively performed in the morning. Turn the upper structure of the machine so the drain plug (2) is midway between the crawler belts.
2. Place a suitable container under the drain plug (2) to catch the discharged fuel.
3. Slowly loosen the drain plug (2) to drain water and sediment. When clean fuel begins to flow, tighten the drain plug.
4. Check for fuel leakage after tightening drain plug. If fuel is leaking, stop the engine, and consult your authorized dealer for repair.

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