NEW HOLLAND

COMPACT CRAWLER EXCAVATOR

E50BSR TIER 4

OPERATOR'S MANUAL

PJ06-08890~

82PJ00043ZE01 NA

Issued 01Nov 08

NEW HOLLAND CONSTRUCTION

www.newhollandconstruction.com

MidWestTech | New Holland E50BSR Tier 4 Compact Crawler Excavator Operator's Manual... Order the manual at mid-west-tech.com >

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 4-16
Hydraulic Breaker 4-20
Transportation 4-26
Machine Storage 4-30

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

MidWestTech | New Holland E50BSR Tier 4 Compact Crawler Excavator Operator's Manual... Order the manual at mid-west-tech.com >

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: 6-17
250 Hour Maintenance 6-25
500 Hour Maintenance 6-30
1000 Hour Maintenance 6-34
1500 Hour Maintenance 6-37
2000 Hour Maintenance 6-38
5000 Hour Maintenance 6-47
Special Procedures 6-48

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

MidWestTech | New Holland E50BSR Tier 4 Compact Crawler Excavator Operator's Manual... Order the manual at mid-west-tech.com >

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

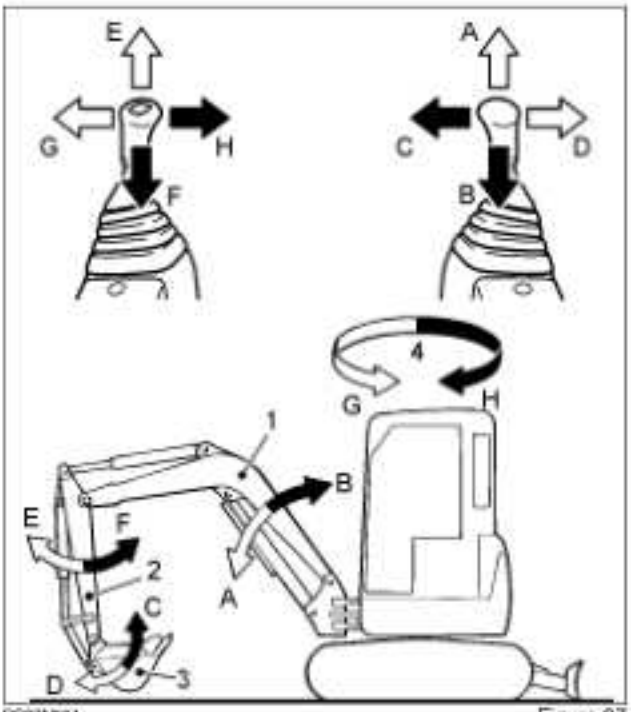
OPERATOR PRECAUTIONS . . . 2-5
- Personnel . . . 2-5
- General . . . 2-5
- Mounting and Dismounting Precautions . . . 2-5
- Starting and Stopping Precautions . . . 2-5
- Operating Precautions . . . 2-6
- Maintenance Precautions . . . 2-7
- Fuel Handling Precautions . . . 2-8
- Burn Prevention . . . 2-8
- 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
- Window Lock - Caution . . . 2-19
- Falling Front Window - Caution . . . 2-20
- Hydraulic Oil Check Position - Notice . . . 2-21
- Cap and Key Cover - Caution . . . 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

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

MidWestTech | New Holland E50BSR Tier 4 Compact Crawler Excavator Operator's Manual... Order the manual at mid-west-tech.com >

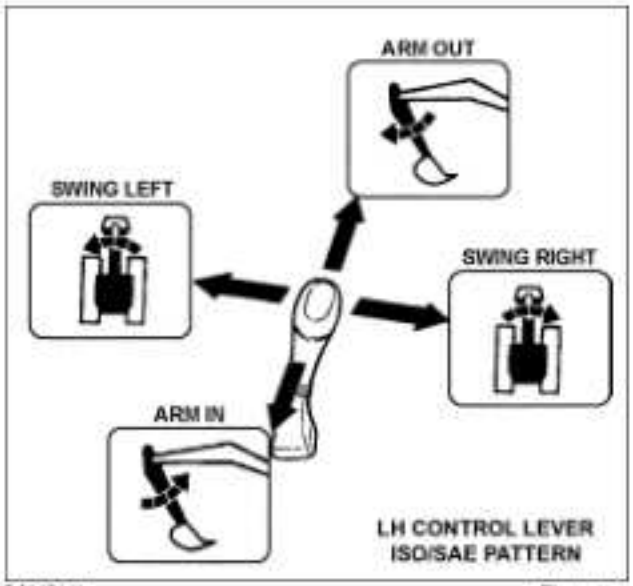
OPERATING CONTROL LEVERS



BS07N061 Figure 37

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 38

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.*

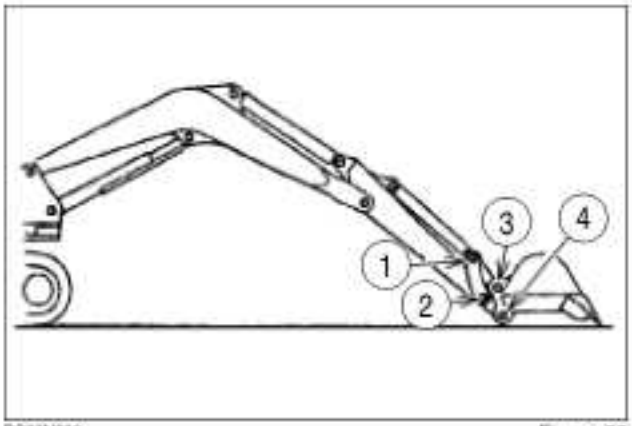
The Left Hand Operator Control Lever is located at the top front of the left hand operator console. Its purpose is to allow the operator to control operations of the swing and arm. Operating speed of function is variable from stop to full stroke depending on how far lever is operated. The left hand operator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

MidWestTech | New Holland E50BSR Tier 4 Compact Crawler Excavator Operator's Manual... Order the manual at mid-west-tech.com >

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)

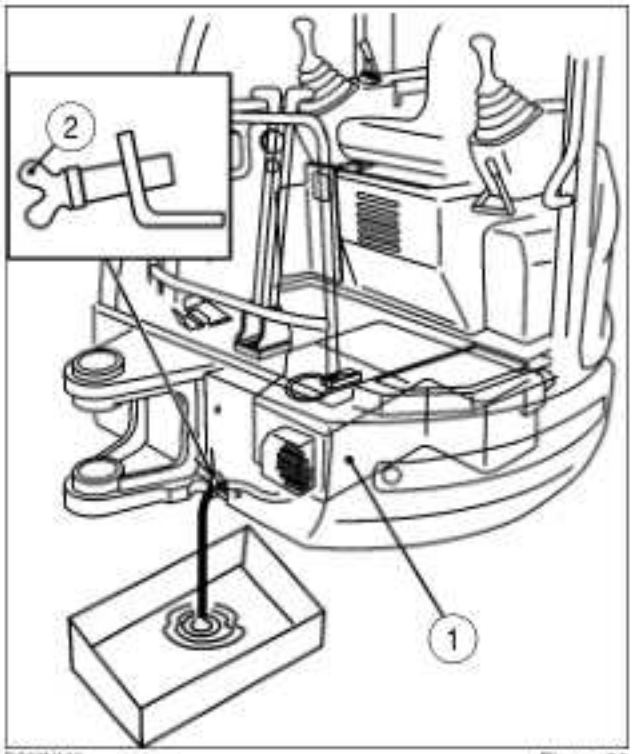
During the first 50 hours of operation, grease attachment every 8 hours. After the initial run-in period, grease every 50 hours.

1. Park the machine on a firm, level surface with both attachments resting on the ground. Turn the engine off. Place the cancellation lever in the locked position. Keep all unauthorized personnel clear of the area.
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 that 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. Failure to comply could result in injury or death.*

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.

1. Park the machine on a firm, level surface with both attachments resting on the ground. Turn the engine off. Place the cancellation lever in the locked position. Keep all unauthorized personnel clear of the area.
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.

MidWestTech | New Holland E50BSR Tier 4 Compact Crawler Excavator Operator's Manual... Order the manual at mid-west-tech.com >

LIFT CAPACITIES CAB MODEL

5 ft. 1 in (1.56 m) Arm

Lift capacities calculated using 15.7 in (400 mm) shoes 247 lb (112 kg) bucket, blade down, 771 lb (350 kg) additional counterweight

Load (Lift Point) Height	5 ft (1.5 m) END - SIDE		7.5 ft (2.3 m) END - SIDE		10 ft (3.0 m) END - SIDE		12.5 ft (3.8 m) END - SIDE		15 ft (4.6 m) END - SIDE	
+ 10 ft (3.0 m)									2120 lb 960 kg	1490 lb 670 kg
+7.5 ft (2.3 m)							2410 lb 1090 kg	1990 lb 900 kg	2260 lb 1020 kg	1460 lb 600 kg
+5 ft (1.52 m)			6180 lb 2800 kg	4210 lb 1910 kg	3750 lb 1700 kg	2700 lb 1220 kg	2900 lb 1310 kg	1900 lb 860 kg	2490 lb 1130 kg	1420 lb 640 kg
+2.5 ft (0.8 m)			4940 lb 2240 kg	3920 lb 1780 kg	4650 lb 2100 kg	2540 lb 1150 kg	3360 lb 1520 kg	1820 lb 820 kg	2730 lb 1240 kg	1380 lb 620 kg
Ground Level	3330 lb 1510 kg	3330 lb 1510 kg	5840 lb 2650 kg	3860 lb 1750 kg	5100 lb 2310 kg	2460 lb 1110 kg	3670 lb 1660 kg	1770 lb 800 kg	2880 lb 1310 kg	1340 lb 610 kg
-2.5 ft (-0.8 m)	5220 lb 2370 kg	5220 lb 2370 kg	7800 lb 3530 kg	3860 lb 1750 kg	5130 lb 2320 kg	2430 lb 1100 kg	3720 lb 1690 kg	1740 lb 790 kg	2850 lb 1290 kg	1330 lb 600 kg
-5.0 ft (-1.52 m)	7310 lb 3310 kg	7310 lb 3310 kg	6950 lb 3150 kg	3910 lb 1770 kg	4720 lb 2140 kg	2450 lb 1100 kg	3420 lb 1550 kg	1760 lb 790 kg		
-7.5 ft (-2.3 m)	9340 lb 4230 kg	8880 lb 4020 kg	5370 lb 2430 kg	4020 lb 1820 kg	3670 lb 1660 kg	2530 lb 1140 kg				

* Rated loads are hydraulic limits rather than tipping load limits

MidWestTech | New Holland E50BSR Tier 4 Compact Crawler Excavator Operator's Manual... Order the manual at mid-west-tech.com >