SERVICE MANUAL

E215B
E215BLC

Print No. 87731205

NEW HOLLAND CONSTRUCTION

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3.3.4 BOSS SECTION DIMENSIONAL DRAWING

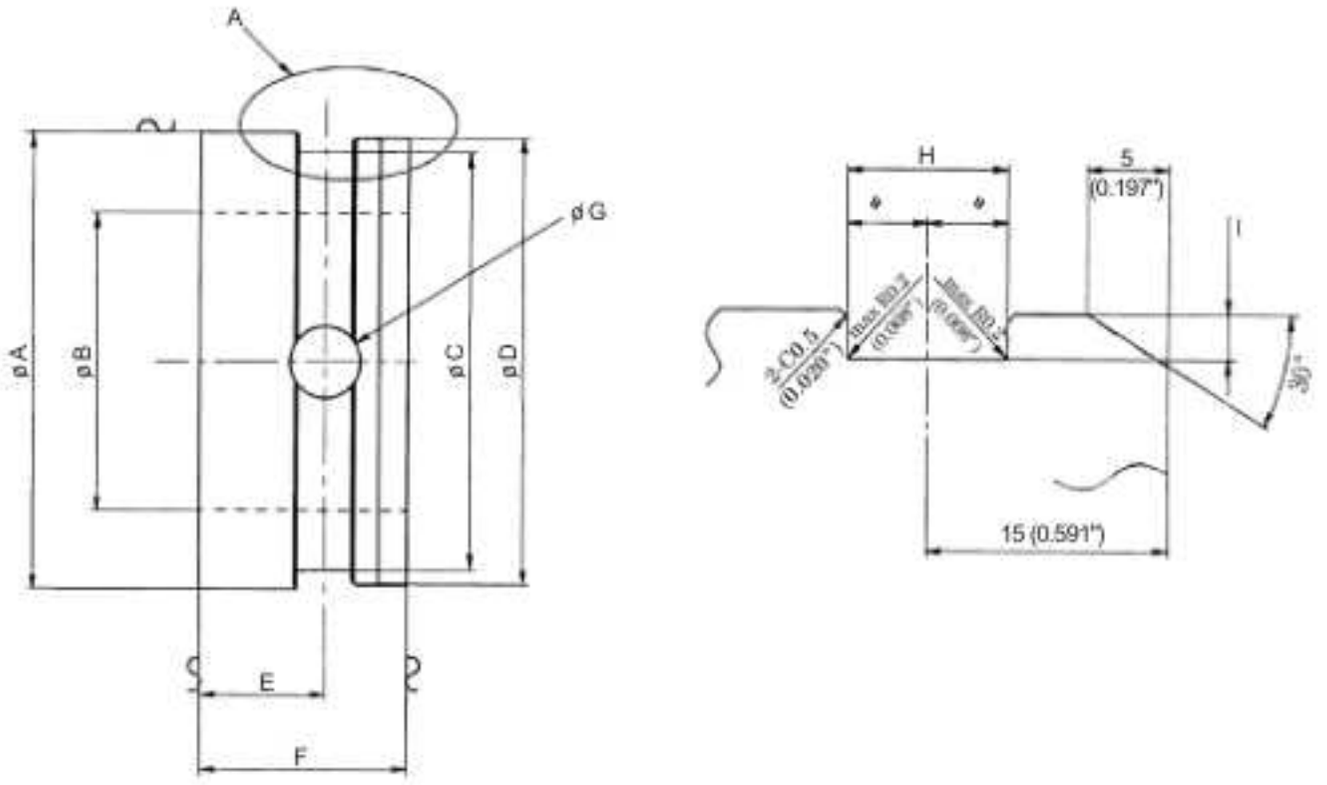


Fig. 3-9 Dimension of boss section

Unit : mm (ft-in)

Type of bucket	Capacity of bucket m³ (cu•yd)	Part No. of bucket	Part No. of boss	øA	øB	øC	øD	E	F	øG	H	I
Hoe bucket	[STD] 0.80 (1.05)	YN61B00316F1	YB61B01002P1	114.3 (4.50")	84 (3.31")	105.5 (4.15")	111.5 (4.39")	23 (0.91")	38 (1.50")	17 (0.669")	13 (0.512")	2.5 (0.098")
	0.51 (0.67)	YN61B00287F1										
	0.70(0.92)	YN61B00286F1										
	0.93(1.21)	YN61B00288F1										

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33.1.13 ENGINE

33.1.13.1 PREPARATION FOR REMOVING

(1) Remove battery ground (See 33.1.3 BATTERY)

(2) Remove bonnet and guard (See 33.1.4 GUARD) Remove under cover (See 33.1.5 UNDER COVER)

(3) Remove air cleaner hose (See 33.1.9 AIR CLEANER)

(4) Remove counterweight (See 33.1.11 COUNTERWEIGHT)

(5) Remove radiator hose and inter-cooler hose (See 33.1.12 RADIATOR & OIL COOLER)

(6) Remove fuel hose and heater hose, and if necessary disconnect air-con hose.

(7) If necessary, remove pump, muffler and radiator.

(8) Remove harness connector (Refer to ELECTRIC SYSTEM)

1) Remove E/G ground cable
2) Starter cable-Starter B terminal
3) Remove the connector that connects the upper harness with the engine and ECU harness.
4) Upper harness

- CN-206–E/G sub harness
- P5–Alternator B terminal
- CN-136–E/G speed sensor
- CN-141, CN142–Pump proportional valve
- CN-139, CN-140–P1,P2 pump pressure sensor
- CN-212–Glow
- P3–Starter motor C terminal

Note

Prepare a stand, which withstands the weight of the engine assy and can place the removed engine firmly. (Refer to Tools)

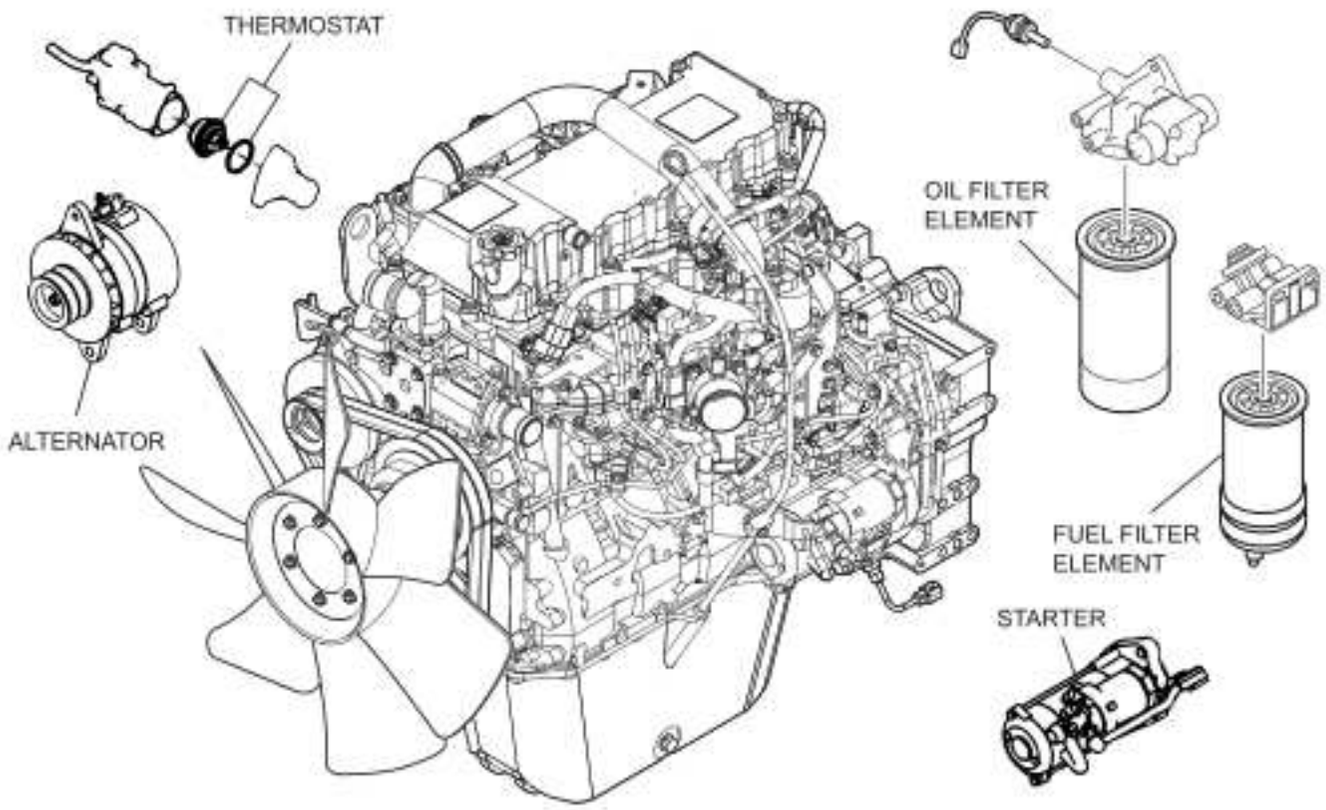


Fig. 33-64 Outside view of engine

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Table46-43

Error code	B174		
Trouble	P2 side option pressure sensor's wiring is disconnected.		
Judging condition	The input voltage from P2 side option pressure sensor is 4.7V or more.		
Symptom	The selection of conflux does not work.		
Control in the event of failure	Set proportional valve output rate of P1 and P2 pumps to 0mA. (Hydraulic pump emergency mode) Set output of P2 unload proportional valve to 0mA. (Valve emergency mode)		
Returned in normal condition	It returns automatically in normal condition.		
Service diagnosis checking screen	Screen No.	6	B-17 P2 OPT.
	Screen No.		
	Screen No.		
Checking object			Checking contents and remedy
1	• P2 side option pressure sensor SE-11		When B174 is cancelled and other error occurs by turning starter switch on after exchanging the connector with other sensor. Check sensor unit for possible failure. If failure found, replace it.
2	• Wiring between P2 side option pressure sensor and controller CN-303F CN-102F		When B174 is displayed after turning the starter switch on after the connector is exchanged with other sensor. Check wiring for possible failure according to the wiring checking procedure and repair it if necessary.
3	• Mechatro controller		Check that the error is corrected after replacement of controller.

Table46-44

Error code	C012		
Trouble	P1 pump pressure sensor outputs error		
Judging condition	After starter switch ON and engine does not start yet. And the input voltage from the P1 pump pressure sensor after starter switch ON is in the range of 1.4V or more to less than 4.7V.		
Symptom	The P1 pump operability becomes poor.		
Control in the event of failure	Normal control		
Returned in normal condition	Not returned automatically under normal condition. Switch the power OFF once and turns on it again.		
Service diagnosis checking screen	Screen No.	7	C-1 PUMP P1
	Screen No.		
	Screen No.		
Checking object			Checking contents and remedy
1	• P1 pump pressure sensor SE-22		When C012 is cancelled and other error occurs by turning starter switch on after exchanging the connector with other sensor. Check sensor unit for possible failure. If failure found, replace it.
2	• Wiring between P1 pump pressure sensor and controller CN-139F CN-103F		When C012 is displayed after turning the starter switch on after the connector is exchanged with other sensor. Check wiring for possible failure according to the wiring checking procedure and repair it if necessary.
3	• Mechatro controller		Check that the error is corrected after replacement of controller.

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(1) Assembling spindle

1) Set spindle (101) on work bench.

2) Fit outer ring of taper roller bearing (149) into the center hole of spindle.

3) Place piston (161) in the cylinder hole of spindle.

4) Place steel balls (162) in piston hole.



Note

Apply grease to the steel ball to fix on the piston hole to be sure the steel ball does not drop out of the piston during assembly which will be carried out later.

5) Attach L side of pivot (167) to the left side in the picture.

6) Insert shaft (102).



Note

Apply grease to spline of shaft and slowly insert it taking care not to damage the lip of oil seal.

(2) Assembling rotary section

1) Apply grease to the sliding surface of swash plate (103) and pivot.

2) Tilt the swash plate and place it in spindle.



Note

- Make sure that the speed is changed in High and Low smoothly while blowing air through the drilled hole after assembling the swash plate in.
- Apply clean hydraulic oil to the sliding surface of swash plate.

3) Turn work bench sideways.

4) Set cylinder block (104), piston (105), spring (114), thrust ball (108) and retainer plate (107) and insert it in the shaft.



Note

- Apply clean hydraulic oil to the sliding surface of cylinder block, piston, thrust ball and shoe (106).
- On inserting cylinder block assembly in the shaft, fix the reduction unit side of shaft first and the insertion can be performed smoothly.

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33.2.2.3.11 Disassembling P2 unload spool

(1) Loosen socket bolts (273), and remove spring cover (202) of P2 unload spool and O-ring (261).

(2) Draw out the assembly which is consist of P2 unload spool (310), spring seat (331), spring (327, 329), stopper (336) and bolt (333) from casing A (101).

CAUTION

When drawing out the spool assy, use care so as not to score casing A (101).

(3) Fix the P2 unload spool assy with vise via a protective plate (aluminum plate etc.) and remove bolt (333). Then remove spring seat (331), spring (327, 329) and stopper (336) from P2 unload spool (310).



Fig. 33-167 Removing P2 unload spring cover (202)



Fig. 33-168 Drawing out P2 unload spool assy (310)

33.2.2.3.12 Removing spool covers

(1) Travel, boom, bucket, arm 1, arm 2 and option
Loosen socket bolts (273) and remove spool cover (205) and O-ring (264).

(2) Swing
Loosen socket bolts (273) and remove spool cover (206) and O-ring (264), (266). Do not disassemble spool cover (206) further unless there is special reason.



Fig. 33-169 Removing spool cover (205),(206)

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