WSM

WORKSHOP MANUAL
TRACTOR

B2650HSDC,B3350HSDC



KiSC issued 05, 2014 A

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y111-08221

Order the manual at mid-west-tech.com >

INFORMATION

CONTENTS

1. SAFETY FIRST I-1
2. SAFETY DECALS I-4
3. SPECIFICATIONS I-8
4. TRAVELING SPEEDS I-9
5. DIMENSIONS I-10

KiSC issued 05, 2014 A

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

GENERAL

CONTENTS

1. TRACTOR IDENTIFICATION G-1
   [1] MODEL NAME AND SERIAL NUMBER G-1
   [2] CYLINDER NUMBER G-2
2. GENERAL PRECAUTIONS G-3
3. HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING G-4
   [1] WIRING G-4
   [2] BATTERY G-6
   [3] FUSE G-6
   [4] CONNECTOR G-6
   [5] HANDLING OF CIRCUIT TESTER G-7
   [6] COLOR OF WIRING G-8
4. LUBRICANTS, FUEL AND COOLANT G-9
5. TIGHTENING TORQUES G-11
   [1] GENERAL USE SCREWS, BOLTS AND NUTS G-11
   [2] STUD BOLTS G-11
   [3] METRIC SCREWS, BOLTS AND NUTS G-12
   [4] AMERICAN STANDARD SCREWS, BOLTS AND NUTS WITH UNC OR UNF THREADS G-12
   [5] PLUGS G-12
6. MAINTENANCE CHECK LIST G-13
7. CHECK AND MAINTENANCE G-15
   [1] DAILY CHECK G-15
   [2] CHECK POINTS OF INITIAL 50 HOURS G-19
   [3] CHECK POINTS OF EVERY 50 HOURS G-21
   [4] CHECK POINTS OF EVERY 100 HOURS G-22
   [5] CHECK POINTS OF EVERY 200 HOURS G-27
   [6] CHECK POINTS OF EVERY 300 HOURS G-30
   [7] CHECK POINTS OF EVERY 400 HOURS G-32
   [8] CHECK POINT OF EVERY 800 HOURS G-32
   [9] CHECK POINT OF EVERY 1500 HOURS G-32
   [10]CHECK POINT OF EVERY 3000 HOURS G-32
   [11]CHECK POINTS OF EVERY 1 YEAR G-33
   [12]CHECK POINTS OF EVERY 2 YEARS G-34
   [13]OTHERS G-36
8. SPECIAL TOOLS G-41
   [1] SPECIAL TOOLS FOR ENGINE G-41
   [2] SPECIAL TOOLS FOR TRACTOR G-49
   [3] SPECIAL TOOLS FOR CABIN G-53
9. TIRES G-56
   [1] TIRE PRESSURE G-56
   [2] TREAD ADJUSTMENT G-57
      (1) Front Wheels G-57
      (2) Rear Wheels G-57
   [3] BALLAST G-58
   [4] TIRE LIQUID INJECTION G-59
10. IMPLEMENT LIMITATIONS G-61

KiSC issued 05, 2014 A

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

MECHANISM

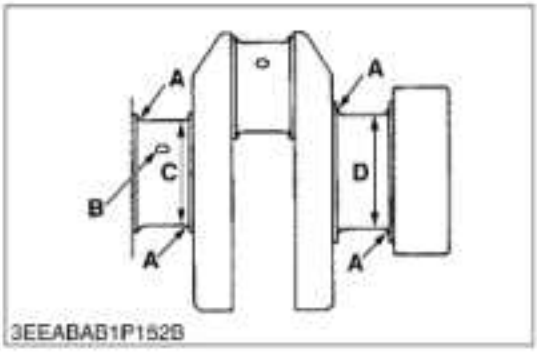
CONTENTS

1. ENGINE BODY 1-M1
   [1] CLOSED BREATHER 1-M1
   [2] HALF-FLOATING HEAD COVER 1-M1
   [3] ENGINE CONTROL SYSTEM [V1505-T-E4] 1-M2
   [4] ELECTRONIC GOVERNOR [V1505-T-E4] 1-M2
   [5] GOVERNOR [D1305-E4] 1-M3
2. REFORMER AND AFTER TREATMENT DEVICES 1-M5
   [1] REFORMING MECHANISM 1-M5
   [2] AFTER TREATMENT DEVICES 1-M6
   [3] DPF REGENERATION SYSTEM 1-M11
      (1) Regeneration Mode (Inhibit Version) 1-M11
      (2) Indicator and Switch Lamp (Inhibit Version) 1-M12
      (3) PM Warning Level (Inhibit Version) 1-M13
      (4) Regeneration Mode (Default Version) 1-M16
      (5) Indicator and Switch Lamp (Default Version) 1-M17
      (6) Warning Level (Default Version) 1-M18

KiSC issued 05, 2014 A

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

(Continued)



3EEABAB1P152B

(Reference)

- Undersize dimensions of crankshaft journal

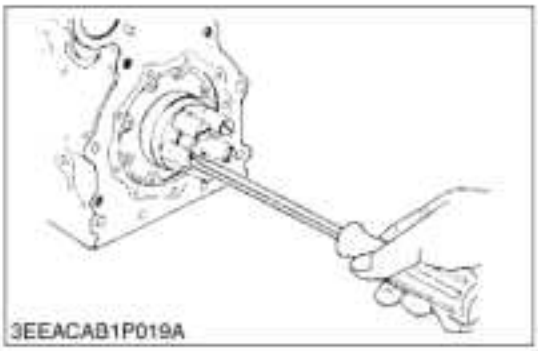
[D1305-E4]

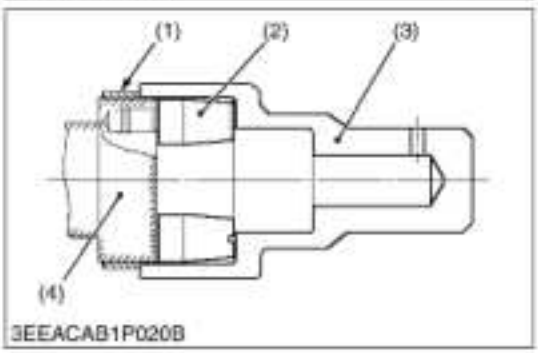
Undersize	0.20 mm 0.0079 in.	0.40 mm 0.016 in.
Dimension **A**	2.3 to 2.7 mm radius 0.091 to 0.10 in. radius	2.3 to 2.7 mm radius 0.091 to 0.10 in. radius
*Dimension **B**	1.0 to 1.5 mm relief 0.040 to 0.059 in. relief	1.0 to 1.5 mm relief 0.040 to 0.059 in. relief
Dimension **C**	51.721 to 51.740 mm dia. 2.0363 to 2.0370 in. dia.	51.521 to 51.540 mm dia. 2.0284 to 2.0291 in. dia.
The crankshaft must be fine-finished to higher than Rmax = 0.8S *Holes to be de-burred and edges rounded with 1.0 to 1.5 mm (0.040 to 0.059 in.) relief.		

[V1505-T-E4]

Undersize	0.20 mm 0.0079 in.	0.40 mm 0.016 in.
Dimension **A**	2.3 to 2.7 mm radius 0.091 to 0.10 in. radius	2.3 to 2.7 mm radius 0.091 to 0.10 in. radius
*Dimension **B**	1.0 to 1.5 mm relief 0.040 to 0.059 in. relief	1.0 to 1.5 mm relief 0.040 to 0.059 in. relief
Dimension **C**	47.734 to 47.750 mm dia. 1.8793 to 1.8799 in. dia.	47.534 to 47.550 mm dia. 1.8715 to 1.8720 in. dia.
Dimension **D**	51.721 to 51.740 mm dia. 2.0362 to 2.0370 in. dia.	51.521 to 51.540 mm dia. 2.0284 to 2.0291 in. dia.
The crankshaft must be fine-finished to higher than Rmax = 0.8S *Holes to be de-burred and edges rounded with 1.0 to 1.5 mm (0.040 to 0.059 in.) relief.		

9Y1210822ENS0111US0


3EEACAB1P019A



3EEACAB1P020B

Replacing Crankshaft Sleeve

1. Remove the used crankshaft sleeve.
2. Set the sleeve guide (2) to the crankshaft.
3. Heat a new sleeve to a temperature between 150 and 200 °C (302 and 392 °F), and fix the sleeve to the crankshaft as shown in figure.
4. Press fit the sleeve using the auxiliary socket for pushing (3).

■ **NOTE**

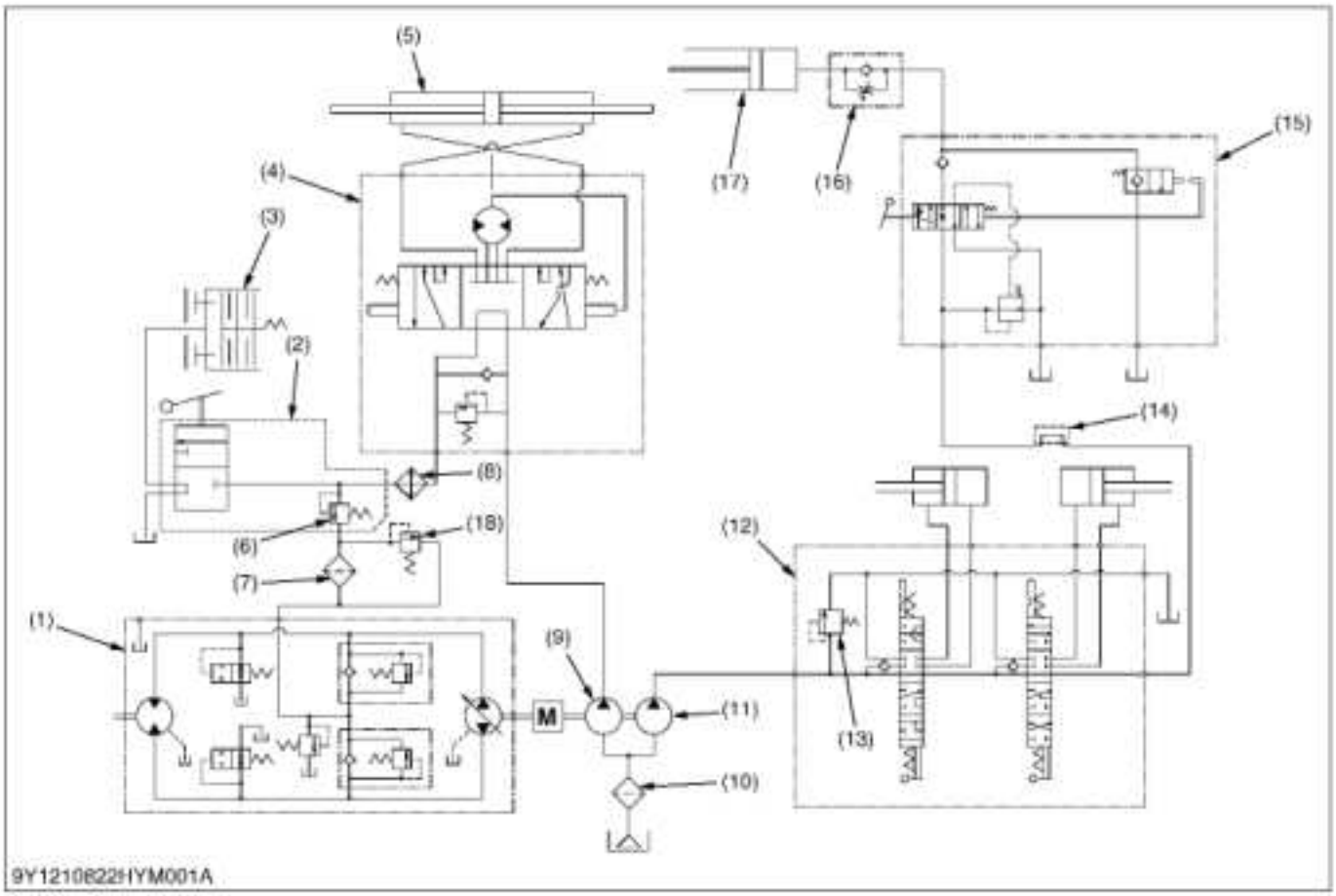
- **Mount the sleeve with its largely chamfered surface facing outward.**
- **Should heating is not enough, a sleeve might stop halfway, so careful.**

(1) Crankshaft Sleeve
(2) Sleeve Guide
(3) Auxiliary Socket for Pushing
(4) Crankshaft

9Y1210822ENS0112US0

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

1. HYDRAULIC CIRCUIT



(1) Hydrostatic Transmission (HST)
(2) Independent PTO Control Valve
(3) Independent PTO Clutch
(4) Power Steering Controller
(5) Power Steering Cylinder
(6) Relief Valve
(7) Oil Filter Cartridge
(8) Oil Cooler
(9) Hydraulic Pump (for Power Steering, Independent PTO and HST)
(10) Oil Filter Cartridge
(11) Hydraulic Pump (for 3-Points Hitch)
(12) Hydraulic Block (for Front Loader)
(13) Relief Valve
(14) Hydraulic Block
(15) Control Valve
(16) Lowering Speed Adjusting Valve
(17) Hydraulic Cylinder
(18) Relief Valve

(1) Hydraulic System

The hydraulic system consist of hydraulic pumps (9) (11), power steering, independent PTO, HST (1), and 3-points hitch and other components.

1. Hydraulic power take off from the hydraulic block type outlet to operate the implements such as a front loader, front blade, rear blade and etc..
2. Hydraulic oil operates power steering, independent PTO clutch, HST and 3-point hitch.

9Y1210822KYM0001US0

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

CHARGING SYSTEM

Symptom	Probable Cause	Solution	Reference Page
Charging Lamp Does Not Light When Main Switch Is Turned ON	Fuse blown (10A)	Replace	8-S10
	Wiring harness disconnected or improperly connected	Replace meter panel	8-M1, 8-S13
	Regulator damaged	Replace	8-S57
	Alternator damaged	Repair or Replace	8-S56
Charging Lamp Does Not Go Off When Engine Is Running	Wiring harness disconnected or improperly connected	Replace meter panel	8-M1, 8-S13
	Regulator damaged	Replace	8-S57
	Alternator damaged	Repair or Replace	8-S56

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

[3] ENGINE CONTROL SYSTEM [V1505-T-E4]


9Y1210786ENM002A

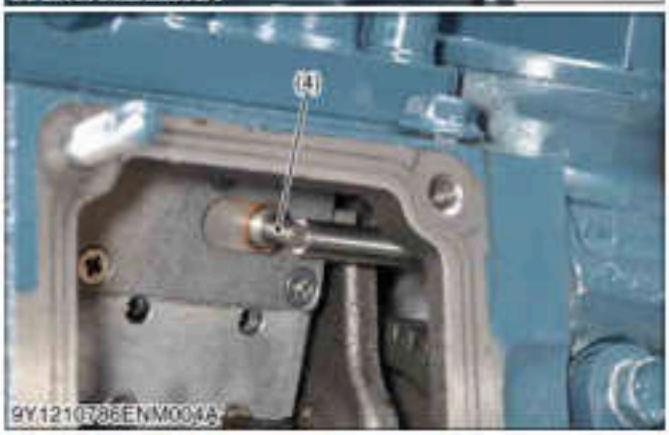
The ECU will use signal inputs, from the engine sensors, to control the fuel metering and speed control, while the engine is running. As well, the ECU will provide diagnostic control.

9Y1210822ENM0003US0

[4] ELECTRONIC GOVERNOR [V1505-T-E4]



9Y1210786ENM003A



9Y1210786ENM004A


9Y1210786ENM005A

Electronic Governor

The actuator (1) and rack sensor (2) are set on either side of the injection pump (3) control rack. Here, the rack sensor (2) is continually pushing on the control rack pin (4). Therefore, the amount of change of the actuator (1) is expressed as the signal output of the rack sensor (2).

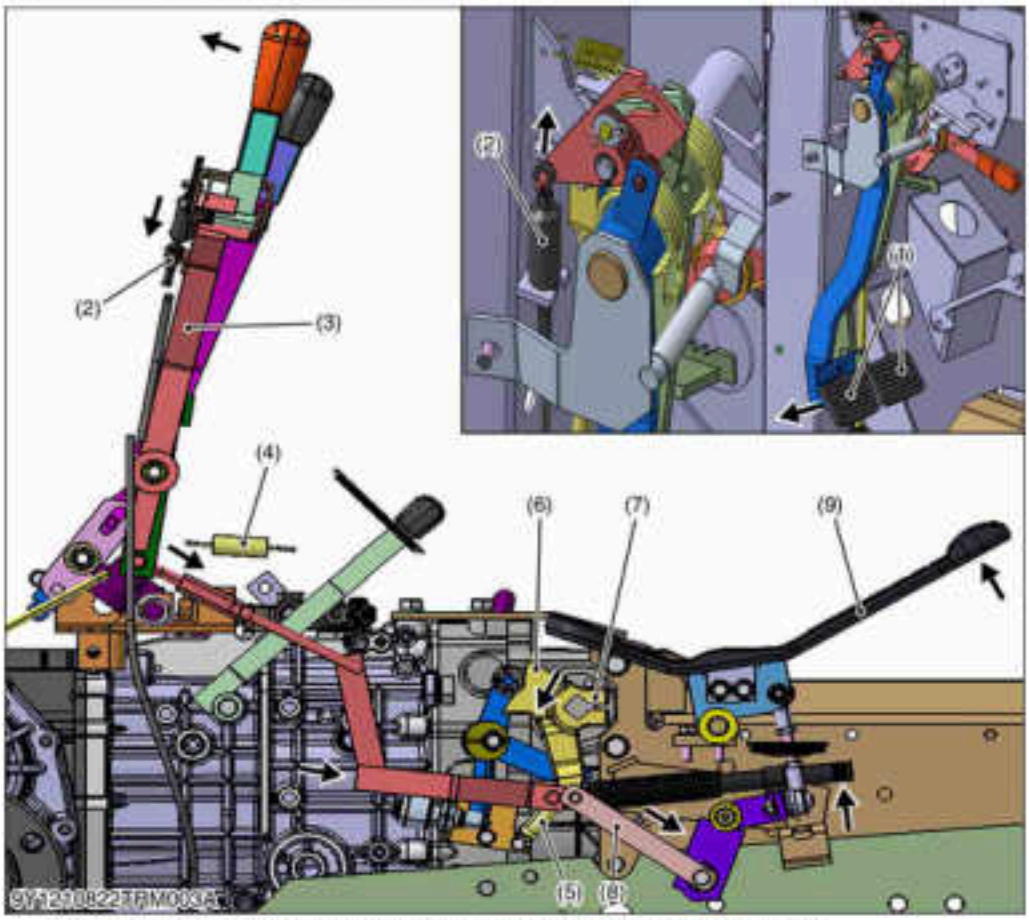
The ECU regulates the amount of fuel injected through controlling the actuator (1). Also, the ECU monitors the amount of fuel injected using the signal from the rack sensor (2) to estimate the amount of Particulate Matter (PM) deposited in the DPF.

(1) Actuator
(2) Rack Sensor
(3) Injection Pump
(4) Control Rack Pin

9Y1210822ENM0004US0

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

(2) Cruise Control Release



(1) Brake Pedal
(2) Cruise Cable
(3) Cruise Control Lever
(4) Return Spring
(5) Return Spring
(6) Neutral Holder
(7) Trunnion Shaft
(8) HST Plate
(9) HST Pedal

Cruise control release is done by depressing the brake pedals (1).

When an operator depresses the brake pedal (1), the cruise cable (2) is pulled by the brake pedals (1).

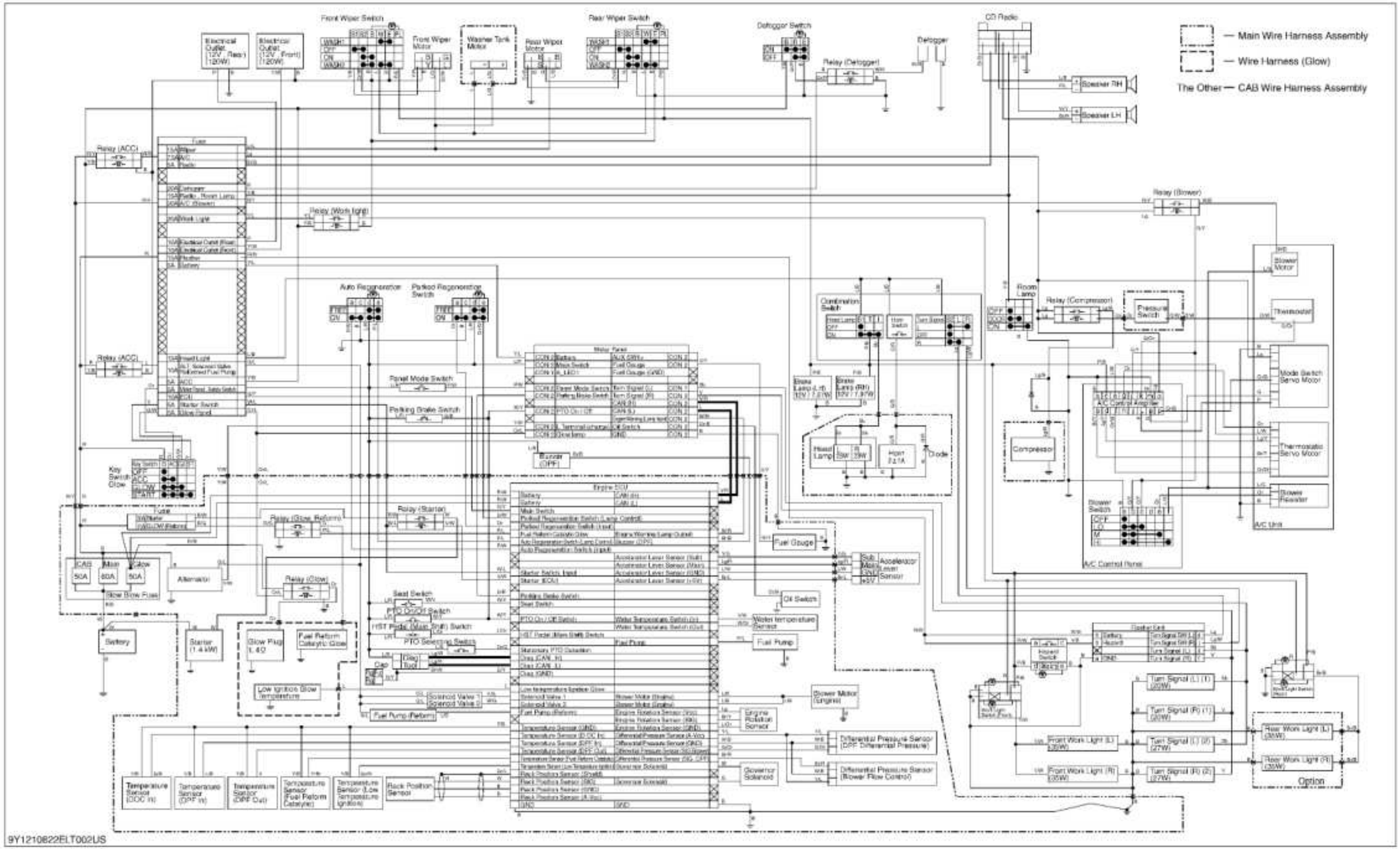
At the time, the cruise control lever (3) is free. The cruise control lever (3) is returned to **"NEUTRAL"** position by the return spring (4).

On the other hand, the return spring (5) pulls the neutral holder (6). The neutral holder (6) and the trunnion shaft (7) turns counterclockwise. Since the neutral holder (6) is connected to the HST plate (8), the HST plate (8) is pushed to the front side. The HST plate (8) pushes the HST pedal (9) to return to **"NEUTRAL"** position.

9Y1210822TRM0012US0

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y... Order the manual at mid-west-tech.com >

[2] B3350 (Inhibit Version)



KiSC issued 05, 2014 A

MidWestTech | Kubota B2650HSDC, B3350HSDC Tractor Service Manual | Publication 9Y111-08221 Order the manual at mid-west-tech.com >