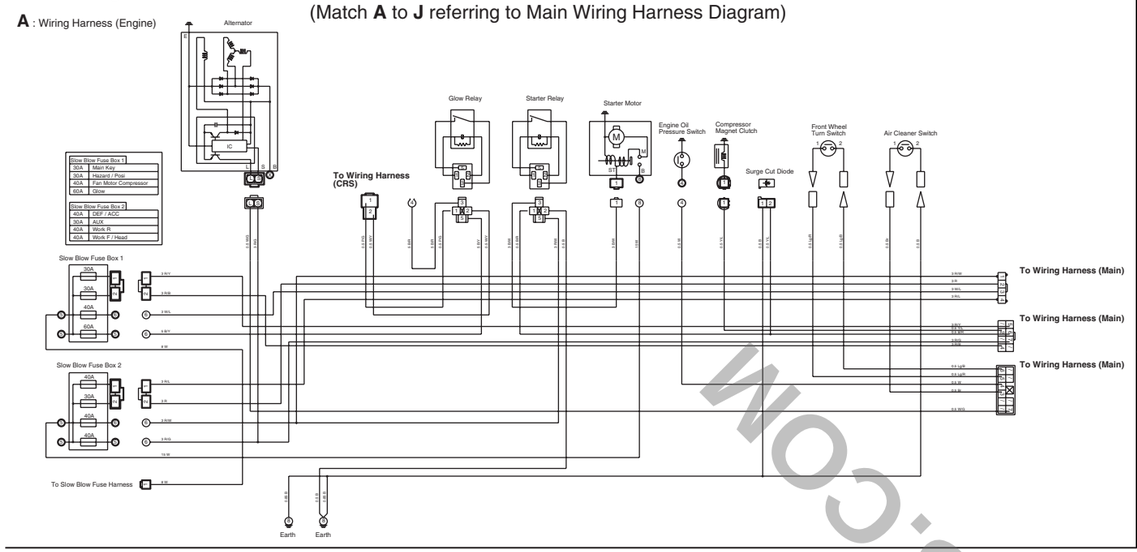
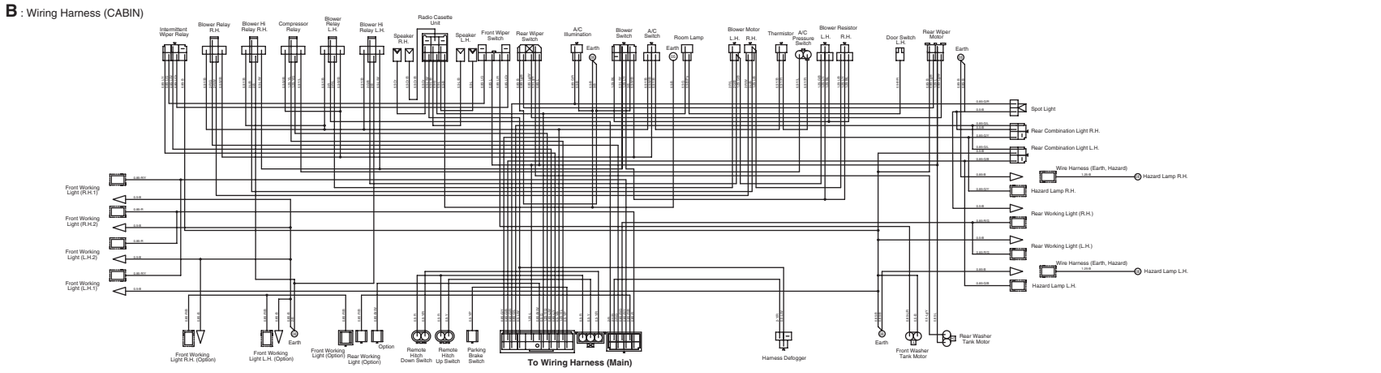
Sub Wiring Harness Diagram M126X, M135X for USA

(Match **A** to **J** referring to Main Wiring Harness Diagram)

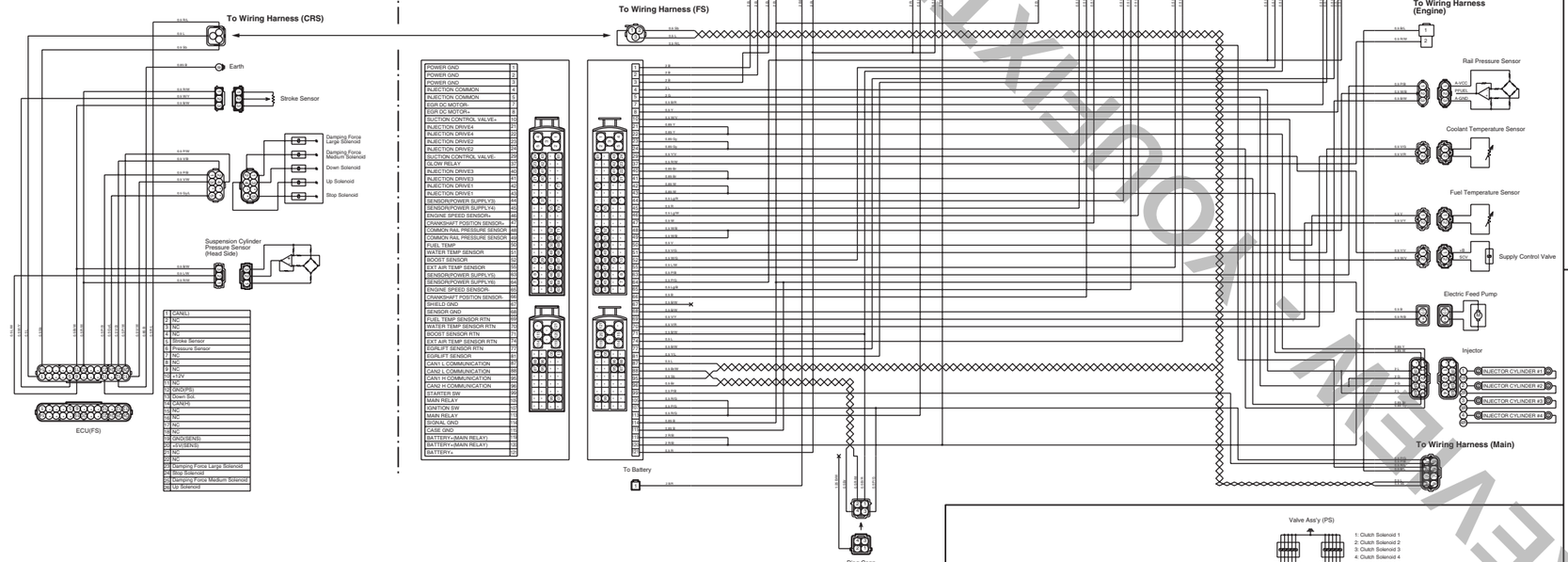
A : Wiring Harness (Engine)



B : Wiring Harness (CABIN)



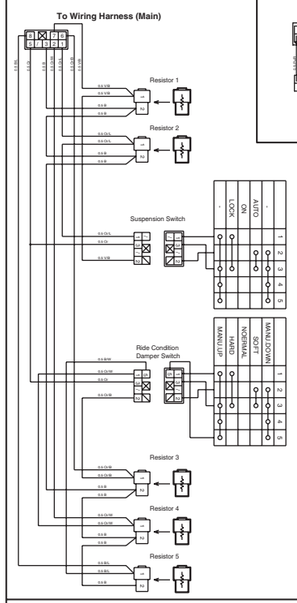
C : Wiring Harness (CRS)



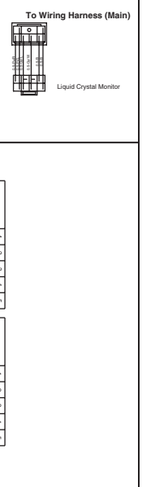
1	POWER GND	1	
2	POWER GND	2	
3	POWER GND	3	
4	INJECTION COMMON	4	
5	INJECTION COMMON	5	
6	EGR DC MOTOR-	6	
7	EGR DC MOTOR+	7	
8	SUCTION CONTROL VALVE+	8	
9	INJECTION DRIVE4	9	
10	INJECTION DRIVE4	10	
11	INJECTION DRIVE2	11	
12	INJECTION DRIVE2	12	
13	INJECTION DRIVE2	13	
14	SUCTION CONTROL VALVE-	14	
15	GLOW RELAY	15	
16	INJECTION DRIVE3	16	
17	INJECTION DRIVE3	17	
18	INJECTION DRIVE1	18	
19	INJECTION DRIVE1	19	
20	SENSOR/POWER (SUPPLY3)	20	
21	SENSOR/POWER (SUPPLY4)	21	
22	ENGINE SPEED SENSOR+	22	
23	CRANKSHAFT POSITION SENSOR+	23	
24	COMMON RAIL PRESSURE SENSOR	24	
25	COMMON RAIL PRESSURE SENSOR	25	
26	FUEL TEMP	26	
27	WATER TEMP SENSOR	27	
28	BOOST SENSOR	28	
29	EXT AIR TEMP SENSOR	29	
30	SENSOR/POWER (SUPPLY5)	30	
31	SENSOR/POWER (SUPPLY6)	31	
32	ENGINE SPEED SENSOR-	32	
33	CRANKSHAFT POSITION SENSOR-	33	
34	SHIELD GND	34	
35	SENSOR GND	35	
36	FUEL TEMP SENSOR RTN	36	
37	WATER TEMP SENSOR RTN	37	
38	BOOST SENSOR RTN	38	
39	EXT AIR TEMP SENSOR RTN	39	
40	EGR/LIFT SENSOR RTN	40	
41	EGR/LIFT SENSOR	41	
42	CAN1 L COMMUNICATION	42	
43	CAN2 L COMMUNICATION	43	
44	CAN1 H COMMUNICATION	44	
45	CAN2 H COMMUNICATION	45	
46	STARTER SW	46	
47	MAIN RELAY	47	
48	IGNITION SW	48	
49	MAIN RELAY	49	
50	SIGNAL GND	50	
51	CASE GND	51	
52	BATTERY+(MAIN RELAY)	52	
53	BATTERY+(MAIN RELAY)	53	
54	BATTERY+	54	

1	CAN(L)
2	NC
3	NC
4	NC
5	Stroke Sensor
6	Pressure Sensor
7	NC
8	NC
9	NC
10	+5V
11	NC
12	GND(PS)
13	Down Sol.
14	CAN(H)
15	NC
16	NC
17	NC
18	NC
19	GND(SENS)
20	+5V(SENS)
21	NC
22	NC
23	Damping Force Large Solenoid
24	Stop Solenoid
25	Damping Force Medium Solenoid
26	Up Solenoid

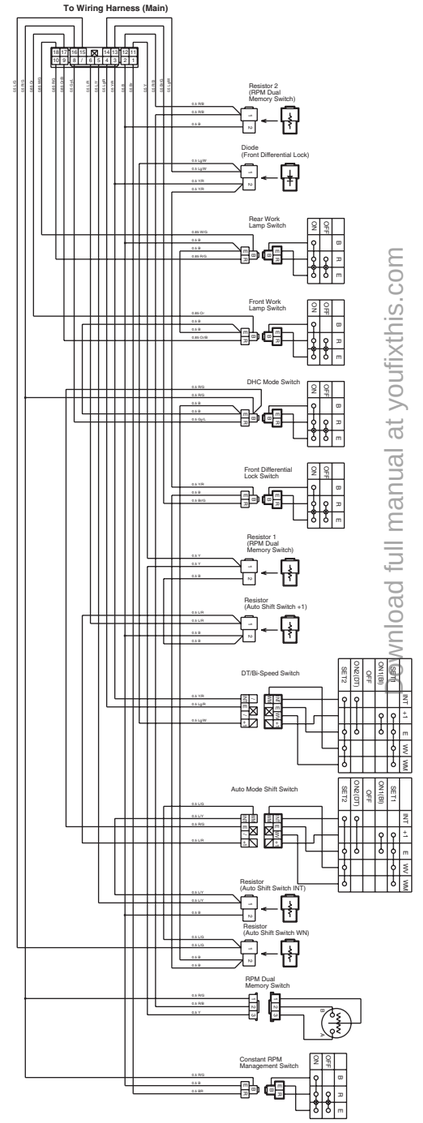
D : Wiring Harness (FS Switch, Option)



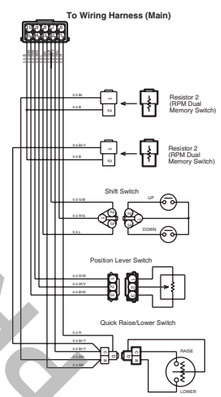
E : Wiring Harness (Monitor)



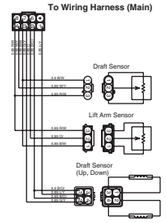
F : Wiring Harness (Bi-speed, Position)



I : Wiring Harness (Arm Position)

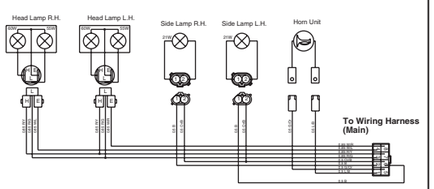


J : Wiring Harness (2, 3P)

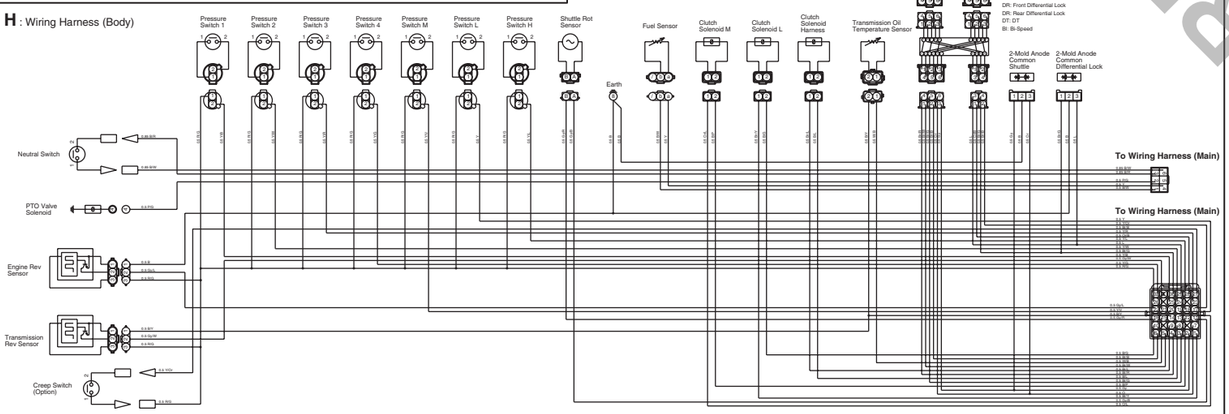


Wiring Harness (FS Harness, Option)

G : Wiring Harness (Head Lamp)



H : Wiring Harness (Body)

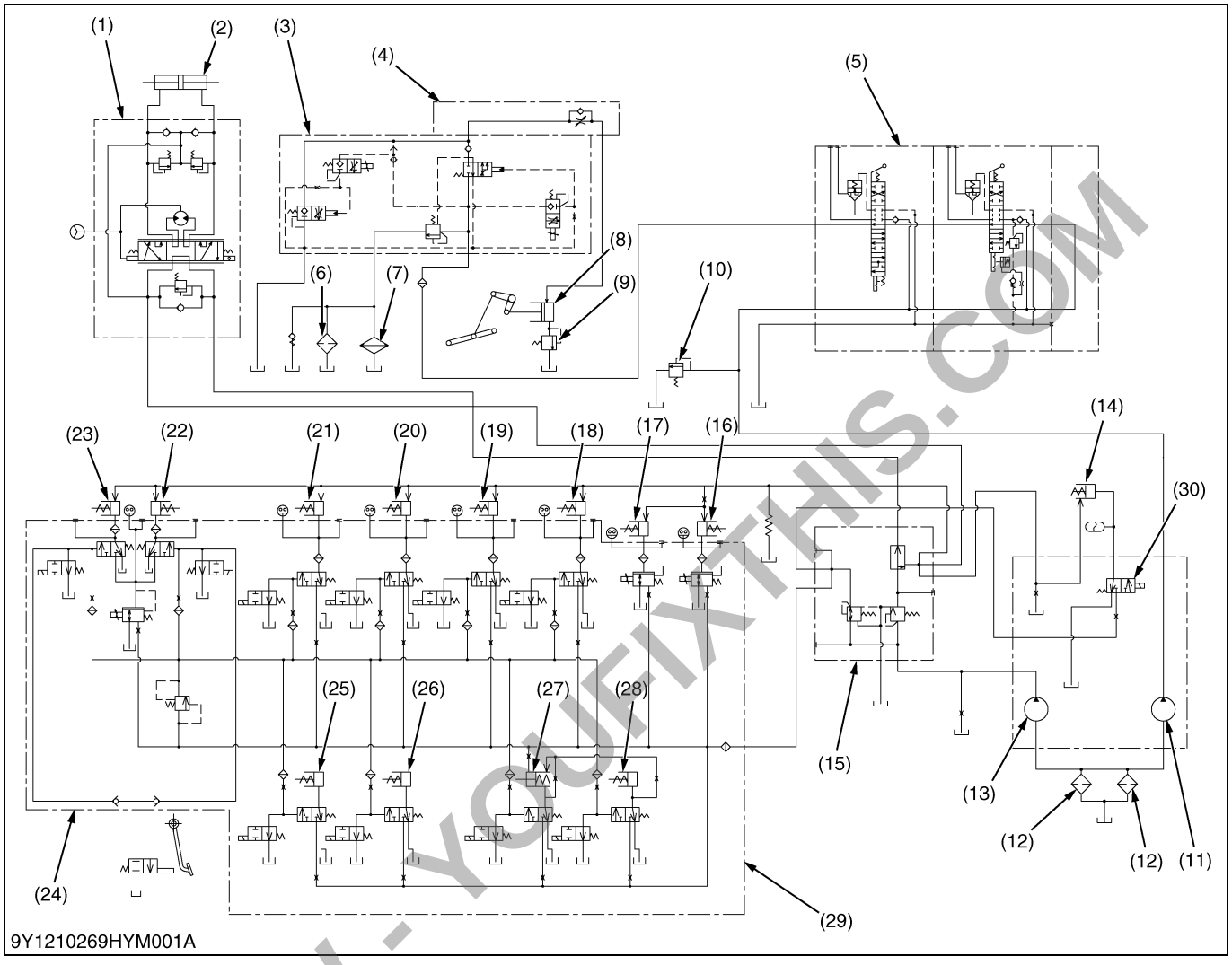


Color of Wiring

B ..... Black	B/L ..... Black / Blue	G/B .....Green / Black	Lg/B ..... Light Green / Black	W/B .....White / Black	Pu/Y ..... Purple / Yellow
G ..... Green	B/P ..... Black / Pink	G/L .....Green / Blue	Lg/R ..... Light Green / Red	W/G .....White / Green	Pu/R ..... Purple / Red
L ..... Blue	B/Pu ..... Black / Purple	G/R .....Green / Red	Lg/W ..... Light Green / White	W/L ..... White / Blue	Pu/B ..... Purple / Black
P ..... Pink	B/R .....Black / Red	G/W .....Green / White	Lg/Y ..... Light Green / Yellow	W/R .....White / Red	Pu/W ..... Purple / White
W ..... White	B/W ..... Black / White	G/Y .....Green / Yellow	Or/W ..... Orange / White	W/Y .....White / Yellow	P/G .....Pink / Green
Y ..... Yellow	B/Y ..... Black / Yellow	G/P .....Green / Pink	Or/B ..... Orange / Black	W/Pu .... White / Purple	P/L ..... Pink / Blue
Br ..... Brown	B/Or ..... Black / Orange	G/Or ..... Green / Orange	Or/G ..... Orange / Green	Y/B .....Yellow / Black	P/B ..... Pink / Black
Lg ..... Light Green	Br/B .....Brown / Black	L/B ..... Blue / Black	Or/L ..... Orange / Blue	Y/G .....Yellow / Green	P/W ..... Pink / White
Or ..... Orange	Br/Y .....Brown / Yellow	L/G ..... Blue / Green	R/B ..... Red / Black	Y/L ..... Yellow / Blue	Gy/L ..... Gray / Blue
Sb ..... Sky Blue	Br/W .....Brown / White	L/Or .....Blue / Orange	R/G ..... Red / Green	Y/R .....Yellow / Red	Gy/W .....Gray / White
Gy ..... Gray	Br/R .....Brown / Red	L/R ..... Blue / Red	R/L ..... Red / Blue	Y/Br .....Yellow / Brown	Gy/R .....Gray / Red
Pu ..... Purple	Br/G ..... Brown / Green	L/W ..... Blue / White	R/W ..... Red / White	Y/Pu ..... Yellow / Purple	Gy/B .....Gray / Black
B/G ..... Black / Green	Br/L ..... Brown / Blue	L/Y ..... Blue / Yellow	R/Y .....Red / Yellow	Y/Or ..... Yellow / Orange	

PREVIEW ONLY
www.KISC.COM
Download full manual at youfixthis.com

2. HYDRAULIC CIRCUIT



(1) Power Steering Controller
(2) Power Steering Cylinder
(3) Control Valve
(4) 3-Point Hitch Lowering Lock Valve
(5) Auxiliary Control Valve
(6) Return Filter
(7) Oil Cooler
(8) Hydraulic Cylinder
(9) Cylinder Safety Valve
(10) Relief Valve for 3-Point Hitch
(11) Hydraulic Pump (for 3-Point Hitch)
(12) Oil Filter
(13) Hydraulic Pump (for Power Steering / PTO / Power Shift / 4WD/Bi-speed)
(14) PTO Clutch
(15) Regulator Valve
(16) Main Shift Clutch H
(17) Main Shift Clutch L
(18) Main Shift Clutch 4
(19) Main Shift Clutch 3
(20) Main Shift Clutch 2
(21) Main Shift Clutch 1
(22) Master Clutch R
(23) Master Clutch F
(24) Clutch Safety Valve
(25) Differential Lock Clutch F
(26) Differential Lock Clutch R
(27) 4WD Clutch
(28) Bi-speed Clutch
(29) Power Shift Valve Assembly
(30) PTO Valve

9Y1210269HYM0002US0

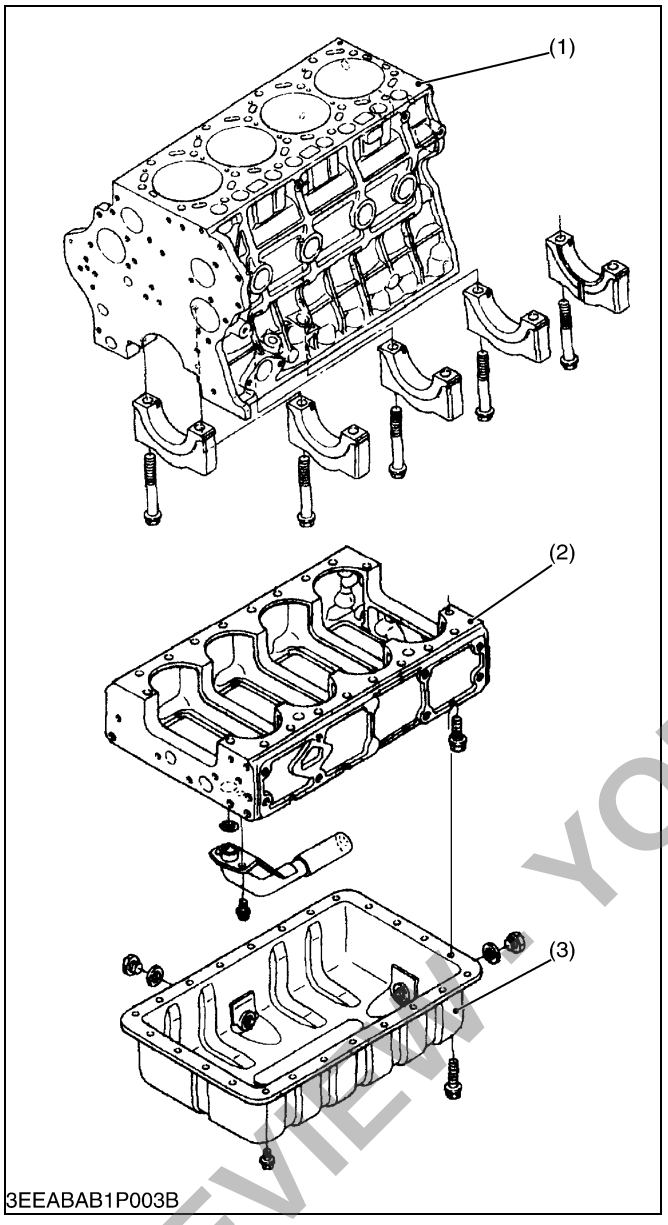
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. ENGINE BODY

[1] CYLINDER BLOCK

(1) V3800-CR-TI



3EEABAB1P003B

V3 series TI engine employs separate type crankcases - the crankcase 1 (1) with combustion part and the crankcase 2 (2) which supports the crankcase 1 (1) and reduces noise.

Since it is a hanger type, you can easily assemble / disassemble it. The cylinder is a linerless type which enables good cooling operation, less strain and good abrasion resistance.

(1) Crankcase 1
(2) Crankcase 2
(3) Oil Pan

9Y1210269ENM0041US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3. TIGHTENING TORQUES

Tightening torque of screws, bolts and nuts on the table below are especially specified.
(For general screws, bolts and nuts : See “TIGHTENING TORQUES” on page G-11.)

[V3800-CR-TI]

Item	N·m	kgf·m	lbf·ft
Starter's terminal B mounting nut	9.8 to 11	1.0 to 1.2	7.3 to 8.6
Power steering turning hose retaining nut	22 to 27	2.2 to 2.8	16 to 20
Oil cooler pipe nut	49 to 68	5.0 to 7.0	37 to 50
Oil cooler hose retaining nut	46 to 52	4.6 to 5.4	34 to 39
Front axle support mounting screw (M14, UBS)	167 to 196	17.0 to 20.0	123 to 144
Delivery hose retaining nut	22 to 27	2.2 to 2.8	16 to 20
Engine and clutch housing mounting screw, nut (standard type)	124 to 147	12.6 to 15.0	91.2 to 108
Engine and clutch housing mounting nut (wide type)	167 to 196	17.0 to 20.0	123 to 144
Engine and clutch housing mounting stud bolt	39 to 45	3.9 to 4.6	29 to 33
Damper disc mounting screw	48 to 55	4.9 to 5.7	36 to 41
Cylinder head cover screw 1	6.87 to 11.2	0.700 to 1.15	5.07 to 8.31
Cylinder head cover screw 2	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31
*Cylinder head screw	98.1 to 107	10.0 to 11.0	72.4 to 79.5
*Connecting rod screw	79 to 83	8.0 to 8.5	58 to 61
*Flywheel screw	98.1 to 107	10.0 to 11.0	72.4 to 79.5
*Crankshaft screw	255 to 274	26.0 to 28.0	188 to 202
*Main bearing case screw	138 to 147	14.0 to 15.0	102 to 108
Rocker arm bracket nut	49 to 55	5.0 to 5.7	37 to 41
Injector clamp nut	24 to 27	2.4 to 2.8	18 to 20
Injection pipe retaining nut	23 to 36	2.3 to 3.7	17 to 26
Overflow pipe joint screw	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31
Overflow pipe joint screw	16 to 19	1.6 to 2.0	12 to 14
Overflow pipe joint screw	7.9 to 12	0.80 to 1.3	5.8 to 9.4
Oil switch taper screw	15 to 19	1.5 to 2.0	11 to 14
Oil cooler joint screw	40 to 44	4.0 to 4.5	29 to 32
Oil pump cover screw	7.9 to 9.3	0.80 to 0.95	5.8 to 6.8
Starter's terminal B mounting nut	9.8 to 11	1.0 to 1.2	7.3 to 8.6
Intake air heater terminal nut	3.5 to 5.3	0.35 to 0.55	2.6 to 3.9
Supply pump gear mounting nut	59 to 68	6.0 to 7.0	44 to 50
Supply pump mounting nut	24 to 27	2.4 to 2.8	18 to 20
Gear case cover	24 to 27	2.4 to 2.8	18 to 20
Relief valve retaining screw	69 to 78	7.0 to 8.0	51 to 57
Idle gear mounting screw	24 to 27	2.4 to 2.8	18 to 20
Plate mounting screw	24 to 27	2.4 to 2.8	18 to 20
Camshaft position pulsar gear mounting screw	4.7 to 5.6	0.48 to 0.58	3.5 to 4.1
Camshaft set screw	24 to 27	2.4 to 2.8	18 to 20
Flywheel housing mounting screw	78 to 90	7.9 to 9.2	58 to 66
Crankcase 2 mounting screw	49 to 55	5.0 to 5.7	37 to 41

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Error Code

Display	Item	Condition	Remark
E-H02	Lift Arm Sensor	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. or Ground Harness from Sensor is disconnected.
E-H04	Position Lever Sensor	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. Ground Harness from Sensor is disconnected.
E-H07	Lift Arm Top Limit Adjustment Dial	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring for sensor line is disconnected or is short-circuited. Power source line (5V) for switch box is disconnected. Ground wiring from Sensor is disconnected.
E-H08	Draft sensor	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. Ground Harness from Sensor is disconnected.
E-H11	Foot Throttle Sensor	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. Ground Harness from Sensor is disconnected.
E-H13	Hand Throttle Sensor	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. or Ground Harness from Sensor is disconnected.
E-H14	Draft Ratio Adjustment Dial	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring for sensor line is disconnected or is short-circuited. Power source line (5V) for switch box is disconnected. Ground wiring from Sensor is disconnected.
E-H15	3-Point Hitch Lowering Speed Adjustment Dial	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. Ground Harness from Sensor is disconnected.
E-R16	Rev-Limiter Control Dial	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. Ground Harness from Sensor is disconnected.
E-R20	Clutch Pedal Sensor	Sensor Output Voltage : below 0.2 V or more than 4.9 V	Wiring from sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. Ground Harness from Sensor is disconnected.
E-H23	T/M Oil Temperature Sensor	Sensor Output Voltage : below 0.1 V or more than 4.9 V	Wiring for sensor is disconnected or is short-circuited. Power source line (5 V) for ECU(MAIN) is disconnected. Ground Harness from Sensor is disconnected.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1. SAFETY FIRST

⚠ SAFETY FIRST

- **This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully.**
- **It is essential that you read the instructions and safety regulations before you attempt to repair or use this unit.**

⚠ DANGER
- **Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

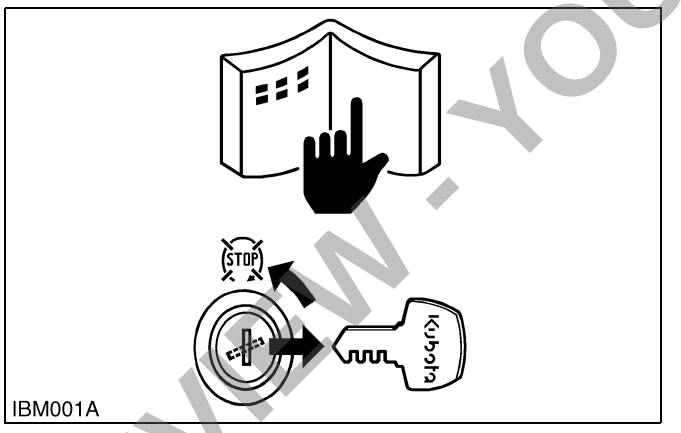
⚠ WARNING
- **Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION
- **Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

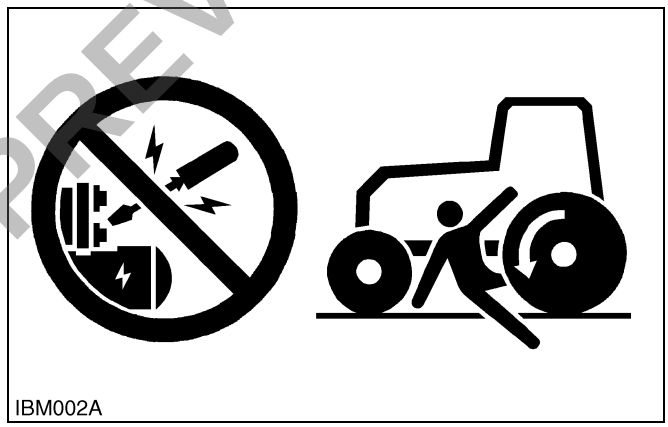
■ IMPORTANT
- **Indicates that equipment or property damage could result if instructions are not followed.**

■ NOTE
- **Gives helpful information.**

WSM000001INI0001US0



IBM001A


IBM002A

BEFORE YOU START SERVICE

- Read all instructions and safety instructions in this manual and on your machine safety decals.
- Clean the work area and machine.
- Park the machine on a stable and level ground, and set the parking brake.
- Lower the implement to the ground.
- Stop the engine, then remove the key.
- Disconnect the battery negative cable.
- Hang a **"DO NOT OPERATE"** tag in the operator station.

WSM000001INI0010US0

START SAFELY

- Do not do the procedures below when you start the engine.
  - short across starter terminals
  - bypass the safety start switch
- Do not alter or remove any part of machine safety system.
- Before you start the engine, make sure that all shift levers are in neutral positions or in disengaged positions.
- Do not start the engine when you stay on the ground. Start the engine only from operator's seat.

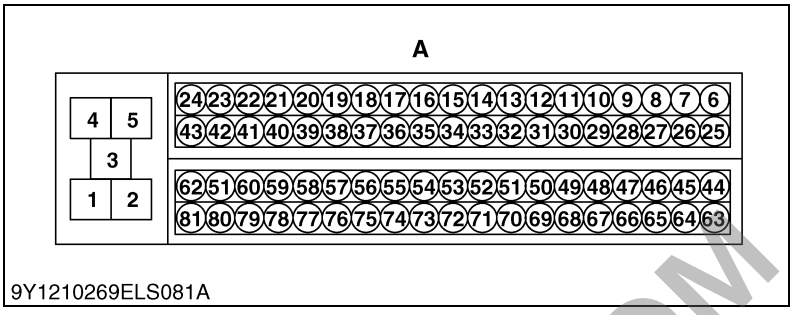
WSM000001INI0015US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

(3) Arrangement of ECU (MAIN) Connector Pin





A : 81P Connector

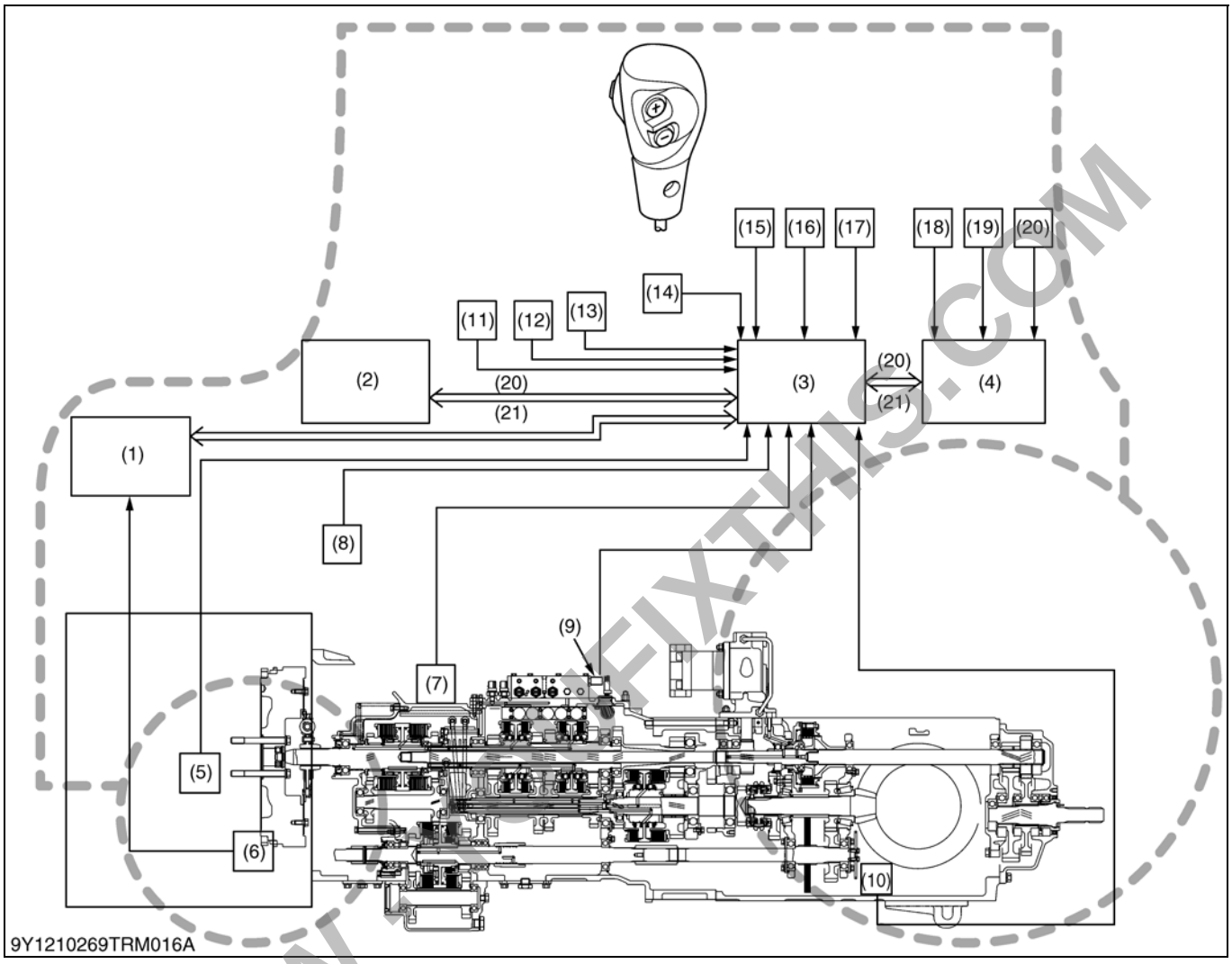
(To be continued)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

[2] ELECTRIC CONTROL SYSTEM

(1) Control System



(1) ECU (CRS)
(2) INSTRUMENT PANEL ECU
(3) ECU (MAIN)
(4) ECU (SUB)
(5) Turning Angle Switch
(6) Crankshaft Position Sensor
(7) Shuttle Rotation Sensor
(8) Clutch Pedal Sensor
(9) Oil Temperature Sensor
(10) Travelling Speed Sensor
(11) Shuttle Switch
(12) Foot Throttle Sensor
(13) Hand Throttle Sensor
(14) Power Shift / Range Shift Lever Sensor
(15) Rev-limiter Control Dial
(16) RPM Dual Memory Switch
(17) Constant RPM Management Switch
(18) Auto Mode Switch
(19) Auto Mode Sensitivity Adjustment Dial
(20) Down Hill Control Switch
(21) CAN (Hi Side)
(22) CAN (Lo Side)

9Y1210269TRM0028US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1. TROUBLESHOOTING

■ **NOTE**

- **This troubleshooting shows only mechanical failures. Regarding the failures of common rail system (CRS), please refer to the diagnosis manual "COMMON RAIL SYSTEM ENGINE".**

Symptom	Probable Cause	Solution	Reference Page
Engine Does Not Start	No fuel	Replenish fuel	–
	Air in the fuel system	Vent air	G-40
	Water in the fuel system	Drain the water in fuel system	G-33
	Electric fuel feed pump malfunctioning	Replace	G-33
	Fuel hose clogged	Clean or replace	G-32
	Fuel filter clogged	Replace	G-32
	Excessively high viscosity of fuel or engine oil at low temperature	Use specified fuel or engine oil	G-8
	Fuel with low cetane number	Use specified fuel	G-8
	Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S37
	Injector clogged	Replace	1-S41
	Supply pump malfunctioning	Replace	1-S35
	Seizure of crankshaft, camshaft, piston, cylinder or bearing	Repair or replace	1-S60 1-S61 1-S65 1-S68 1-S69
	Compression leak from cylinder	Replace head gasket, tighten cylinder head screw	1-S46 1-S47
	Improper valve timing	Correct or replace timing gear	1-S60
	Piston ring and cylinder worn	Replace	1-S66
	Excessive valve clearance	Adjust	1-S20 1-S21
Starter Does Not Run	Battery discharged	Charge or replace	G-22
	Starter malfunctioning	Repair or replace	9-S92
	Key switch malfunctioning	Replace	9-S85
	Wiring disconnected	Connect	–

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3. SPECIFICATIONS

Model			M100X	M110X	M126X	M135X
Engine	Model		V3800DICR-TIE3		V6108-TIE3	
	Type		Direct injection, W/turbocharger, water-cooled, 4-cycle diesel			
	Number of cylinder		4			
	Total displacement		3769 cm^3 (230 cu.in.)		6124 cm^3 (374 cu.in.)	
	Bore and stroke		100 × 120 mm (3.94 × 4.72 in.)		118 × 140 mm (4.65 × 5.51 in.)	
	Net power		72.9 kW (97.7 HP)*	80.2 kW (107.5 HP)*	93.2 kW (100 HP)*	100.7 kW (135 HP)*
	PTO power (factory observe)		63.4 kW (85 HP)* / 2600 min^{-1} (rpm)	70.9 kW (95 HP)* / 2600 min^{-1} (rpm)	80.6 kW (108 HP)* / 2200 min^{-1} (rpm)	88.0 kW (118 HP)* / 2200 min^{-1} (rpm)
	Maximum torque		323 N·m (33.0 kgf·m, 238 lbf·ft) / 1500 min^{-1} (rpm)	363 N·m (37.1 kgf·m, 267 lbf·ft) / 1500 min^{-1} (rpm)	475 N·m (48.5 kgf·m, 350 lbf·ft) / 1300 min^{-1} (rpm)	323 N·m (33.0 kgf·m, 238 lbf·ft) / 1500 min^{-1} (rpm)
	Battery capacity		12 V, 100 Ah at 20 hours, 900CCA		12 V, 160 Ah at 20 hours, 1090CCA	
	Fuel		Diesel fuel No. 1 [below −10 °C (14 °F], Diesel fuel No. 2-D [above −10 °C (14 °F)]			
	Fuel tank capacity		190 L (50.2 U.S.gal, 41.8 Imp.gals)			
	Engine oil capacity		10.5 L (11.1 U.S.qts, 9.2 Imp.qts)		14.6 L (15.4 U.S.qts, 12.8 Imp.qts)	
	Coolant capacity		9.0 L (9.5 U.S.qts, 7.9 Imp.qts)		15.0 L (15.9 U.S.qts, 13.2 Imp.qts)	
Dimensions	Overall length		4230 mm (166.5 in.)		4360 mm (171.7 in.)	
	Overall width (min. tread)		2125 mm (83.7 in.)		2180 mm (85.8 in.)	
	Overall height		2640 mm (103.9 in.)	2690 mm (105.9 in.)	2725 mm (107.3 in.)	
	Wheel base		2435 mm (95.9 in.)		2690 mm (105.9 in.)	
	Tread	Front	1580 to 1680 mm (62.2 to 66.1 in.)		1775 to 1875 mm (69.9 to 73.8 in.)	
		Rear	1500 to 2005 mm (59.1 to 78.9 in.)		1590 to 2085 mm (62.6 to 82.1 in.)	
	Crop clearance		560 mm (22.0 in.)	590 mm (23.2 in.)	615 mm (24.2 in.)	
Weight			4020 kg (8862 lbs)	4105 kg (9050 lbs)	4660 kg (10273 lbs)	
Travelling system	Standard tire size	Front	12.4R24	13.6R24	14.9R24	
		Rear	18.4R30	18.4R34	18.4R38	
	Clutch		Multiple wet disc, Electronic Hydraulically operated			
	Steering		Hydrostatic power steering			
	Braking system		Hydraulically operated wet disk			
	Differential		Bevel gears with differential lock (Front, Rear)			
Hydraulic system	Hydraulic control system		Electronic draft control			
	Pump capacity		68.4 L (18.1 U.S.gals, 15.0 Imp.gals) / min.		77.2 L (20.4 U.S.gals, 17.0 Imp.gals) / min.	
	Three point hitch		SAE Category 2			
	Max. lifting force	At lift points**	2635 kg (5809 lbs) at lower link end with links horizontal			
		24 in. behind lift points	2360 kg (5203 lbs)			
	Remote hydraulic control		Two remote valve with detent and self-canceling			
	System pressure		19.7 MPa (201 kgf/cm^2 , 2857 psi)			
	Traction system		Swinging drawbar, adjustable in direction			
PTO system	Live PTO (Indipen-dent)	Direction of turning	Clockwise, viewed from tractor rear			
		Standard PTO	6 spline : 540 min^{-1} / 2205 min^{-1} 21 spline : 1000 min^{-1} / 2389 min^{-1}		6 spline : 540 min^{-1} / 1994 min^{-1} 21 spline : 1000 min^{-1} / 2050 min^{-1}	

■ **NOTE**

- ***Manufacture's estimate**
  **** At lower link and with links horizontal.**
  The company reserves the right to change the specifications without notice.

9Y1210269INI0001US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

6. MAINTENANCE

No.	Item		Service Interval														Since then	Important		Reference page
			50	100	150	200	250	300	350	400	450	500	550	600	650	700				
1	Hydraulic oil filter (suction side)	Replace	★					☆						☆			every 300 Hr			G-17
2	Hydraulic oil filter (return side)	Replace	★					☆						☆			every 300 Hr			G-17
3	Engine oil	Change	★							☆				☆			every 400 Hr			G-18, G-31
4	Engine oil filter	Replace	★							☆				☆			every 400 Hr			G-19, G-31
5	Engine start system	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr			G-19
6	Wheel bolt torque	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr			G-20
7	Battery condition	Check		☆		☆		☆		☆		☆		☆		☆	every 100 Hr	*4		G-21
8	Greasing	–		☆		☆		☆		☆		☆		☆		☆	every 100 Hr			G-26
9	Fan belt [M100X, M110X]	Adjust		☆		☆		☆		☆		☆		☆		☆	every 100 Hr			G-23
10	Brake pedal	Adjust		☆		☆		☆		☆		☆		☆		☆	every 100 Hr			G-24
11	Parking brake lever	Adjust		☆		☆		☆		☆		☆		☆		☆	every 100 Hr			G-24
12	Fuel line	Check		☆		☆		☆		☆		☆		☆		☆	every 100 Hr		@	G-25
		Replace															every 2 years			G-39
13	Air cleaner element [Double type] Primary element	Clean		☆		☆		☆		☆		☆		☆		☆	every 100 Hr	*1	@	G-23
		Replace															every 1 year	*2		G-36
	Secondary element	Replace															every 1 year			G-36
14	Toe-in	Adjust				☆				☆				☆			every 200 Hr			G-29
15	Oil cooler line	Check				☆				☆				☆			every 200 Hr			G-28
		Replace															every 2 years			G-39
16	Power steering oil line	Check				☆				☆				☆			every 200 Hr			G-29
		Replace															every 2 years			G-39
17	Radiator hose and clamp	Check				☆				☆				☆			every 200 Hr			G-27
		Replace															every 2 years			G-39
18	Intake air line	Check				☆				☆				☆			every 200 Hr		@	G-28
		Replace															every 2 years	*3		G-39
19	Fuel tank water	Drain				☆				☆				☆			every 200 Hr			G-31
20	Inner air filter	Clean				☆				☆				☆			every 200 Hr			G-30
21	Fresh air filter	Clean				☆				☆				☆			every 200 Hr			G-30
22	Air conditioner condenser	Clean				☆				☆				☆			every 200 Hr			G-30
23	Air conditioner drive belt [M100X, M110X]	Adjust				☆				☆				☆			every 200 Hr			G-31

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

4. LUBRICANS FUEL AND COOLANT

No.	Place	Capacity				Lubricants, fuel and coolant
		M100X	M110X	M126X	M135X	
1	Fuel	190 L 50.2 U.S.gals 41.8 Imp.gals				• No. 2-D diesel fuel • No. 1-D diesel fuel if temperature is below –10 °C (14 °F)
2	Cooling system	9.0 L 9.5 U.S.qts 7.9 Imp.qts		14.6 L 15.4 U.S.qts 12.9 Imp.qts		Fresh clean soft water with anti-freeze
	Recovery tank	1.1 L 1.2 U.S.qts 1.0 Imp.qts		1.5 L 1.6 U.S.qts 1.4 Imp.qts		
3	Washer liquid	1.3 L 1.4 U.S.qts 1.1 Imp.qts				Automobile washer liquid
4	Engine crankcase (with filter)	10.5 L 11.1 U.S.qts 9.2 Imp.qts		14.6 L 15.4 U.S.qts 12.8 Imp.qts		**Engine oil** API Service Classification: CF or CI-4 [External **EGR** type engine] • Above 25 °C (77 °F) SAE30, SAE10W-30 or 15W-40 • 0 to 25 °C (32 to 77 °F) SAE20, SAE10W-30 or 15W-40 • Below 0 °C (32 °F) SAE10W, SAE10W-30 or 15W-40
5	Transmission case	60 L 63.4 U.S.qts 52.8 Imp.qts				KUBOTA UDT or SUPER UDT fluid*
6	Brake oil (reservoir and lines)	0.3 L 0.3 U.S.qts 0.3 Imp.qts				KUBOTA UDT or SUPER UDT fluid* or Turbine oil 32 (See below) regular type, multipurpose straight mineral oil Mobil DTE Oil #32 TEXACO Regal Oil #32 CHEVRON -GST Oil #32 TERESSO OIL #32 Never use automotive brake oil.
7	Front differential case oil	7.0 L 7.4 U.S.qts 6.2 Imp.qts		13.0 L 13.7 U.S.qts 11.4 Imp.qts		KUBOTA UDT or SUPER UDT fluid* or SAE80, SAE90 gear oil
	Front axle gear case oil	3.5 L 3.7 U.S.qts 3.1 Imp.qts		4.5 L 4.8 U.S.qts 4.0 Imp.qts		

■ **NOTE**

- ***KUBOTA original transmission hydraulic fluid.**

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

INFORMATION

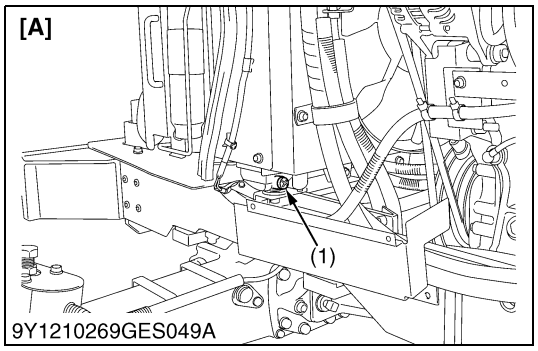
CONTENTS

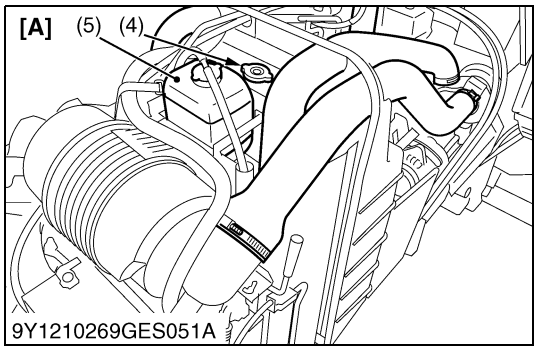
1. SAFETY FIRST I-1
2. SAFETY DECALS I-4
3. SPECIFICATIONS I-10
4. TRAVELING SPEED I-11
5. DIMENSIONS I-12

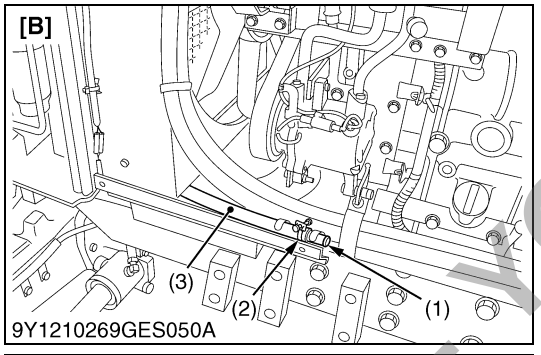
PREVIEW - YOUFIXTHIS.COM

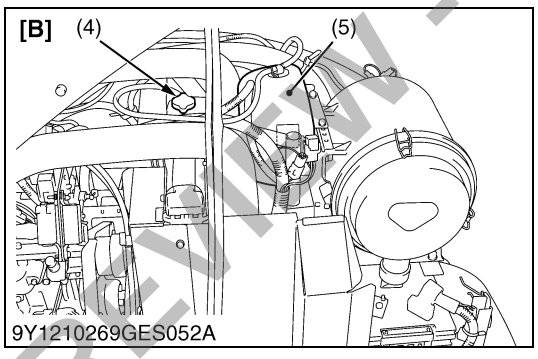
Download full manual at youfixthis.com

[13] CHECK POINTS OF EVERY 2 YEARS









Flushing Cooling System and Changing Coolant

CAUTION

- **Do not remove radiator cap while coolant is hot. When cool, slowly rotate cap to the first stop and allow sufficient time for excess pressure to escape before removing the cap completely.**

1. Stop the engine and let it cool down.
2. To drain the coolant, remove the radiator drain plug and the radiator cap. The radiator cap must be removed to completely drain the coolant.
3. After all coolant is drained, install the drain cock.
4. Fill with clean soft water and cooling system cleaner.
5. Follow directions of the cleaner instruction.
6. After flushing, fill with clean soft water and anti-freeze until the coolant level is just below the radiator cap.
   Install the radiator cap securely.
7. Fill with coolant up to the **"FULL"** mark of recovery tank.
8. Start and operate the engine for few minutes.
9. Stop the engine, remove the key and let cool.
10. Check coolant level of recovery tank and add coolant if necessary.
11. Properly dispose of used coolant.

■ **IMPORTANT**

- **Do not start engine without coolant.**
- **Use clean, fresh water and anti-freeze to fill the radiator and recovery tank.**
- **When the anti-freeze is mixed with water, the anti-freeze mixing ratio must be less than 50 %.**
- **Securely tighten radiator cap. If the cap is loose or improperly fitted, water may leak out and the engine could overheat.**

■ **NOTE**

- **On cabin type machines, fresh water circulates through the heater. This means that one more liter or so of fresh water is required.**
  In changing fresh water, pour fresh water up to the filler port of the recovery tank. Turn ON the heater (shift the temperature control lever toward WARM), and run the engine for a while in order to warm fresh water. Then stop the engine.
  When fresh water has cooled down, some of the fresh water in the recovery tank is sucked. Now the recovery tank is appropriately filled with coolant.

Coolant	Capacity	M100X M110X	9.6 L 10.1 U.S.qts 8.4 Imp.qts
		M126X M135X	14.6 L 15.4 U.S.qts 12.8 Imp.qts

(1) Drain Plug
(2) Clamp Band
(3) Radiator Hose
(4) Radiator Cap
(5) Recovery Tank

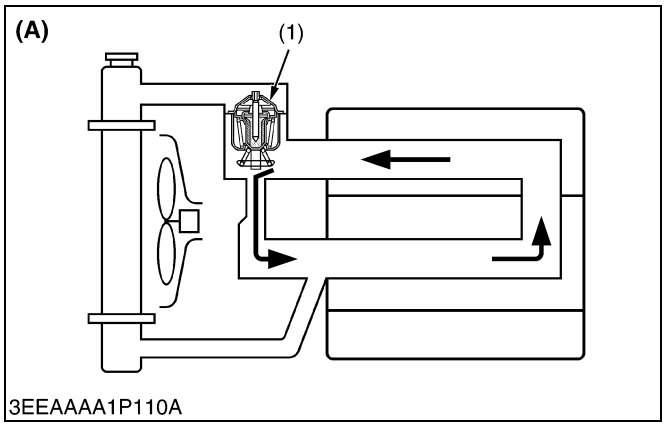
[A] M100X, M110X
[B] M126X, M135X

(To be continued)

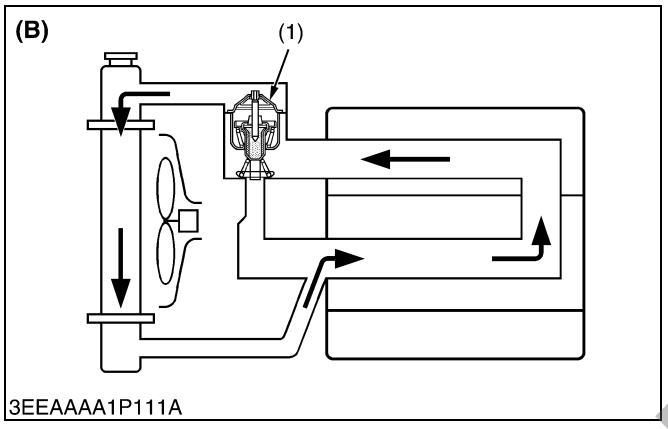
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

[2] BOTTOM BYPASS SYSTEM



3EEAAAA1P110A



3EEAAAA1P111A

Bottom bypass system is introduced in the V6108 engine for improving the cooling performance of the radiator.

While the temperature of coolant in the engine is low, the thermostat is held closed and the coolant is allowed to flow through the bypass pipe and to circulate in the engine.

When the temperature exceeds the thermostat valve opening level, the thermostat fully opens itself to prevent the hot coolant from flowing through the bypass into the engine.

In this way, the radiator can increase its cooling performance.

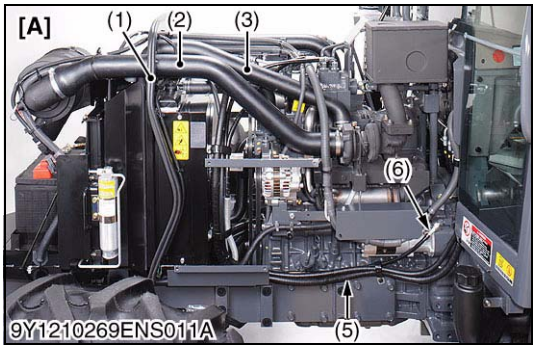
(1) Thermostat

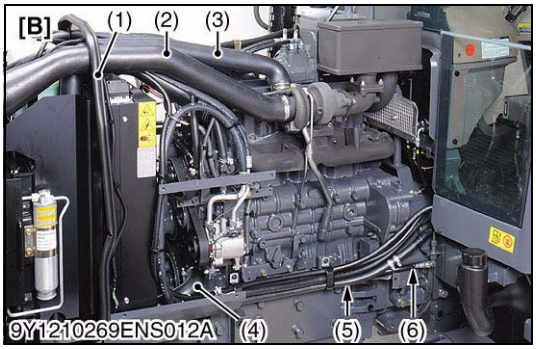
(A) Bypass Opened
(B) Bypass Closed

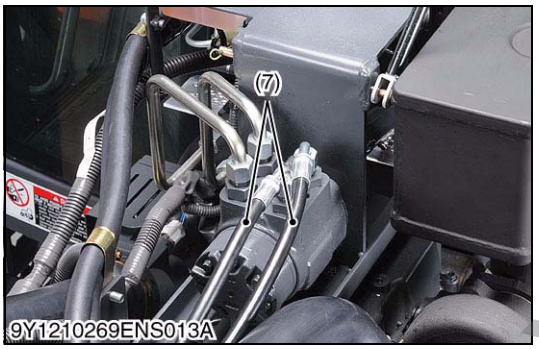
9Y1210269ENM0010US0

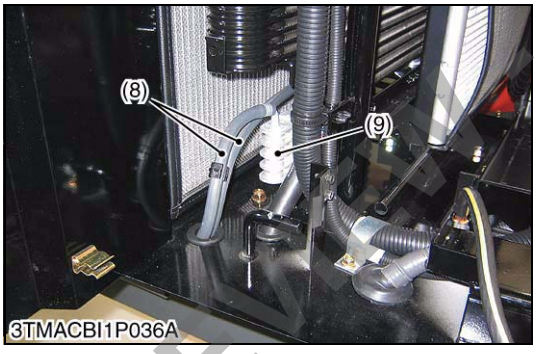
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com









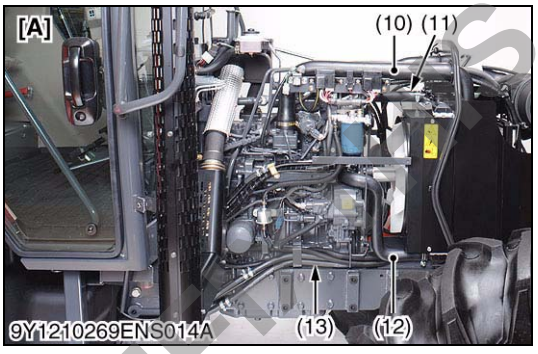
Hoses and Plate

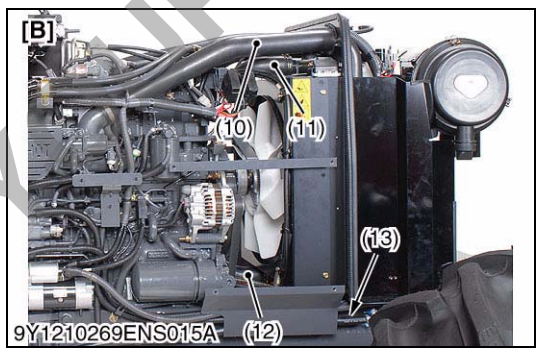
1. Remove the shield weather strip and plate (1).
2. Disconnect the air cleaner hoses (2), (3) from the turbocharger.
3. Disconnect the radiator hose (4).
4. Disconnect the oil cooler hose (5).
5. Disconnect the power steering hose (7).
6. Disconnect the fuel hose (8) from the fuel cooler (9).
7. Disconnect the differential lock hose (6).
8. Disconnect the radiator hose (11), (12) and oil cooler hose (13).
9. Disconnect the intercooler hose (10).

(When reassembling)

- Be sure to connect the power steering hoses to original position.

Tightening torque	Power steering hose retaining nut	21.6 to 27.4 N·m 2.2 to 2.8 kgf·m 16.0 to 20.2 lbf·ft





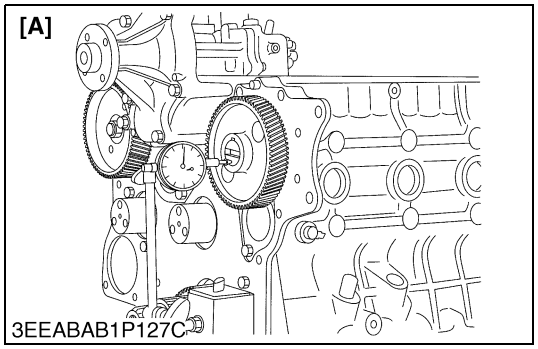
(1) Plate
(2) Air Cleaner Hose
(3) Air Cleaner Hose
(4) Radiator Hose
(5) Oil Cooler Hose
(6) Front Differential Lock Hose
(7) Power Steering Hose
(8) Fuel Hose
(9) Fuel Cooler
(10) Intercooler Hose
(11) Radiator Hose
(12) Radiator Hose
(13) Oil Cooler Hose

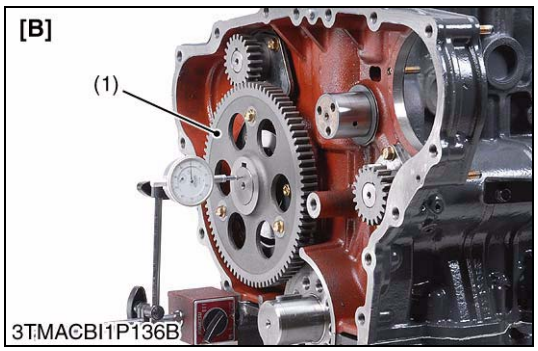
[A] V3800-CR-TI
[B] V6108-CR-TI

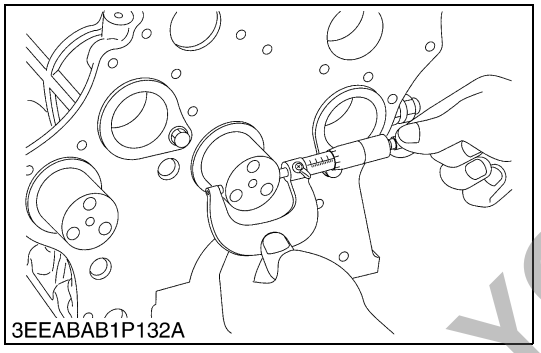
9Y1210269ENS0019US0

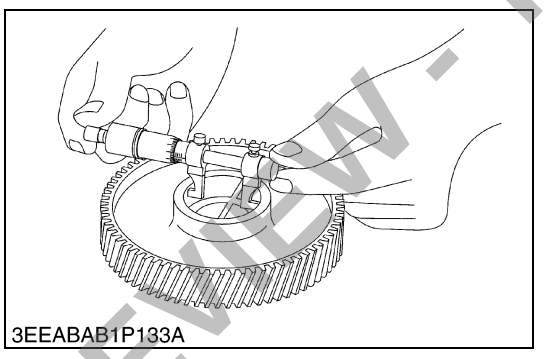
PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com









Camshaft Side Clearance

1. Set a dial indicator with its tip on the camshaft.
2. Measure the side clearance by moving the cam gear to the front and rear.
3. If the measurement exceeds the allowable limit, replace the camshaft stopper.

[V3800-CR-TI]

Side clearance	Factory spec.	0.070 to 0.22 mm 0.0028 to 0.0086 in.
	Allowable limit	0.30 mm 0.012 in.

[V6108-CR-TI]

Side clearance of camshaft	Factory spec.	0.1 mm 0.0039 in.

(1) Cam Gear

[A] V3800-CR-TI
[B] V6108-CR-TI

9Y1210269ENS0128US0

Oil Clearance between Idle Gear Shaft 1, 2 and Idle Gear 1, 2 Bushing (V3800-CR-TI)

1. Measure the idle gear shaft O.D. with an outside micrometer.
2. Measure the idle gear bushings I.D. with an inside micrometer, and calculate the oil clearance.
3. If the oil clearance exceeds the allowable limit, replace the bushing.

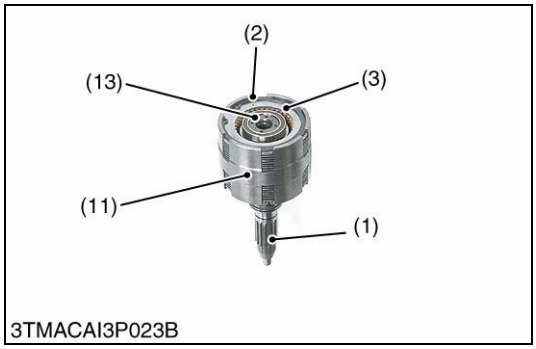
Oil clearance between idle gear 1, 2 shaft and idle gear 1, 2 bushing	Factory spec.	0.050 to 0.091 mm 0.0020 to 0.0035 in.
	Allowable limit	0.10 mm 0.0039 in.

Idle gear 1, 2 bushing I.D.	Factory spec.	45.025 to 45.050 mm 1.7727 to 1.7736 in.
Idle gear 1, 2 shaft O.D.	Factory spec.	44.959 to 44.975 mm 1.7701 to 1.7706 in.

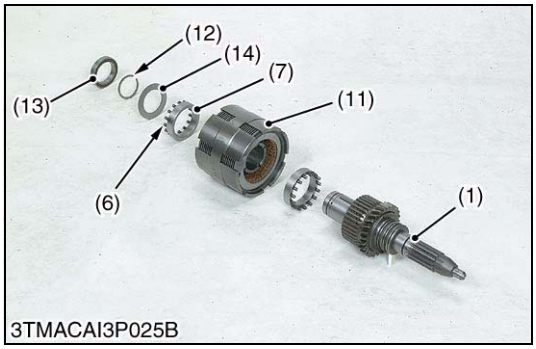
9Y1210269ENS0129US0

PREVIEW - YOUFIXTHIS.COM

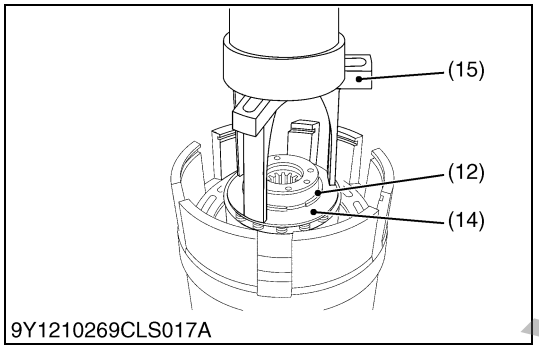
Download full manual at youfixthis.com



3TMACAI3P023B



3TMACAI3P025B



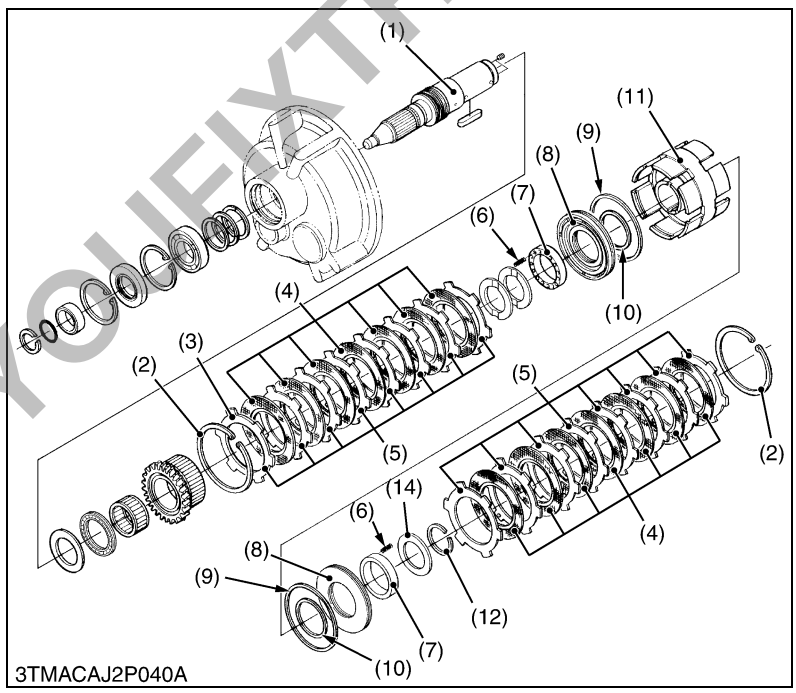
9Y1210269CLS017A

Disassembling Master Clutch

1. Remove the internal snap ring (2).
2. Remove the pressure plate (3), drive plates (5) and clutch discs (4).
3. Remove the bearing (13).
4. Press the thrust collar (14) lightly with hand press, using hydraulic clutch spring compressor (15) (see page G-63), and remove the external snap ring (12).
5. Tap out the input shaft (1) from clutch body (11).

(When reassembling)

- Replace the external snap rings (12) with new ones.
- Install the clutch discs (4) and drive plate (5) mutually.
- When installing the internal snap ring (2) to the clutch body, align its split portion to the notched portion of clutch body.
- Apply enough transmission fluid to the discs (4).
- Do not confuse the pressure plate (3) and drive plate (5). The pressure plate (3) is thicker than the drive plate.
- Confirm the moving of the piston (8) smoothly when pressure air at 0.5 to 1.0 MPa (5 to 10 kgf/cm^2, 71 to 142 psi) is sent to clutch pack. (Refer to photo left.)



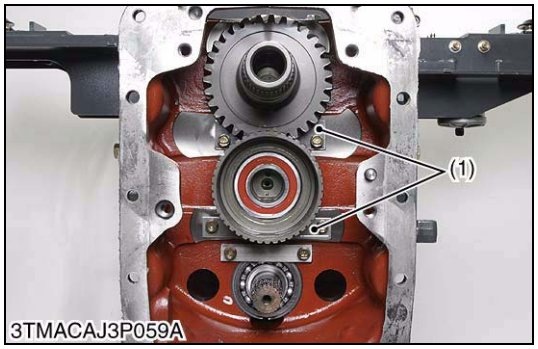
3TMACAJ2P040A

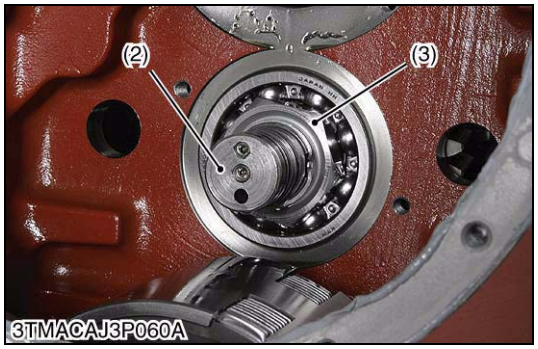
(1) Input Shaft
(2) Internal Snap Ring
(3) Pressure Plate
(4) Clutch Disc
(5) Drive Plate
(6) Spring
(7) Spring Holder
(8) Piston
(9) D-ring
(10) D-ring
(11) Clutch Body
(12) External Snap Ring
(13) Bearing
(14) Thrust Collar
(15) Hydraulic Clutch Spring Compressor

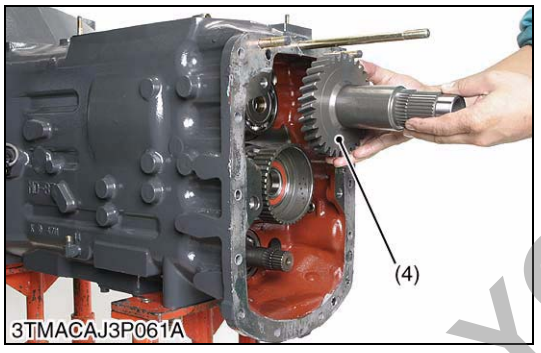
9Y1210269CLS0029US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com







31T Gear Shaft

1. Remove the bearing retainers (1).
2. Set the pinion locking tool (Code No. 07916-52311) for locking the counter shaft (2).
3. Remove the staking nut (3) using a counter shaft nut socket.
4. Tap out the counter shaft (2) to the rear about 20 to 30 mm (0.8 to 1.2 in.).
5. Remove the 31T gear shaft (4).

(When reassembling)

Tightening torque	Bearing retainer mounting screw	23.5 to 27.5 N·m 2.4 to 2.8 kgf·m 17.4 to 20.3 lbf·ft
	Counter shaft staking nut	147.1 to 196.1 N·m 15 to 20 kgf·m 108.5 to 144.7 lbf·ft

(1) Bearing Retainer
(2) Counter Shaft
(3) Staking Nut
(4) 31T Gear Shaft

9Y1210269TRS0025US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

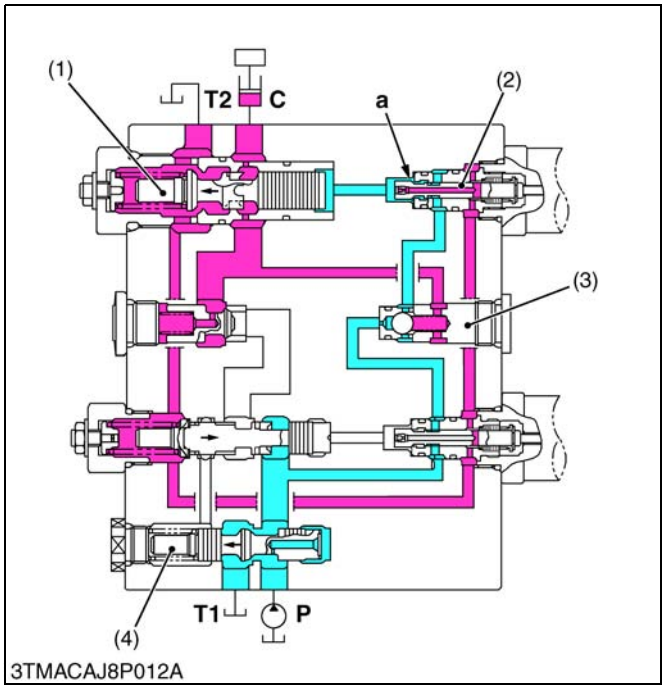
SERVICING

CONTENTS

1. TROUBLESHOOTING....6-S1
2. SERVICING SPECIFICATIONS....6-S2
3. TIGHTENING TORQUES....6-S4
4. CHECKING, DISASSEMBLING AND SERVICING....6-S5
   - [1] CHECKING AND ADJUSTING....6-S5
   - [2] PREPARATION....6-S7
     - (1) Separating Front Axle....6-S7
   - [3] DISASSEMBLING AND ASSEMBLING....6-S12
     - (1) Bevel Gear Case Assembly....6-S12
     - (2) Front Differential Assembly....6-S16
   - [4] SERVICING....6-S22

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



3TMACAJ8P012A

Lowering

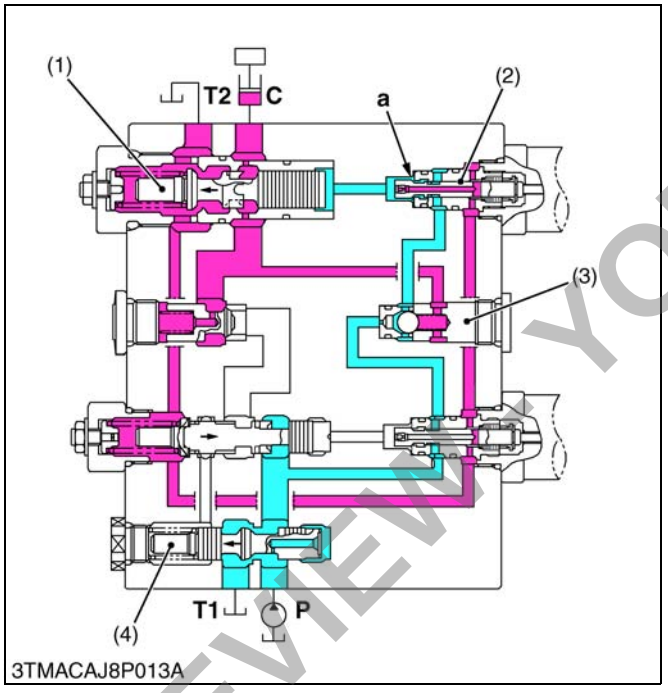
[When the C port pressure is higher than the unload pressure]

When the lowering solenoid is energized, the lowering pilot spool (2) moves to the left and the path **"a"** opens.

The pressure oil from the **"C"** port opens the shuttle valve, goes through the lowering pilot spool path (a), and moves the lowering main spool (1) to the left.

By moving the lowering main spool to the left, the path from the cylinder port to the tank port **"T2"** opens, and the oil in cylinder port **"C"** returns to the tank.

(1)	Main Spool for Lowering	**C :**	**Cylinder Port**
(2)	Pilot Spool for Lowering	**P :**	**Pump Port**
(3)	High Pressure Selecting Valve	**T1 :**	**Tank Port 1**
		T2 :	**Tank Port 2**
(4)	Compensation Spool	**a :**	**Path**



3TMACAJ8P013A

[When the C port pressure is lower than the unload pressure]

When the lowering solenoid is energized, the lowering pilot spool (2) moves to the left and the path **"a"** opens.

The oil from goes through the shuttle valve and the path of the lowering pilot spool (2), and moves the lowering main spool (1) to the left.

By moving the lowering main spool to the left, the path from the cylinder port to the tank port **"T2"** opens, and the oil in cylinder port **"C"** returns to the tank.

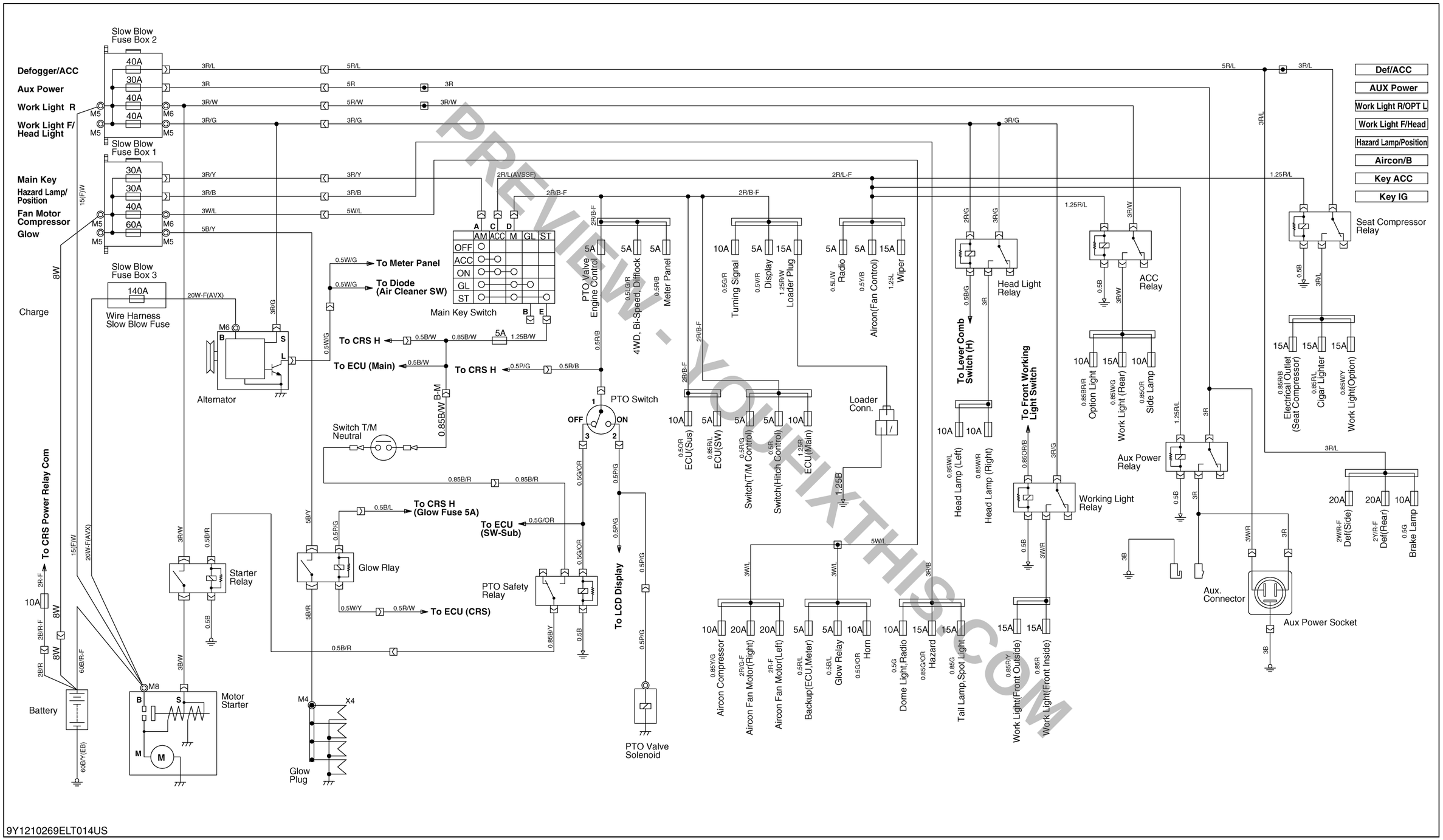
(1)	Main Spool for Lowering	**C :**	**Cylinder Port**
(2)	Pilot Spool for Lowering	**P :**	**Pump Port**
(3)	High Pressure Selecting Valve	**T1 :**	**Tank Port 1**
		T2 :	**Tank Port 2**
(4)	Compensation Spool	**a :**	**Path**

9Y1210269HYM0012US0

PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

(2) CANADA Model



9Y1210269ELT014US

PREVIEW - YOUFIXTHIS.COM

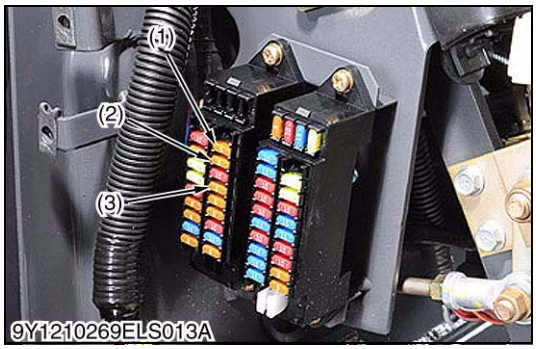
Download full manual at youfixthis.com

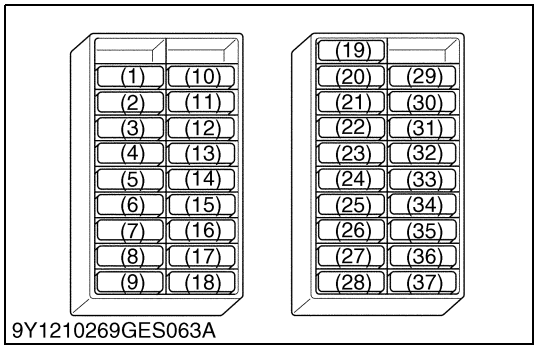
Display	Item	Condition	Remark
E-H24	3-Point Hitch Solenoid	Solenoid Output Voltage or Current is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R28	Bi-Speed Solenoid	Solenoid Output Voltage is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R29	4WD Solenoid	Solenoid Output Voltage is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R31	Solenoid (Main shift 1)	Solenoid Output Voltage is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R32	Solenoid (Main shift 2)	Solenoid Output Voltage is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R33	Solenoid (Main shift 3)	Solenoid Output Voltage is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R34	Solenoid (Main shift 4)	Solenoid Output Voltage is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R35	Solenoid (Main shift L)	Solenoid Output Voltage or Current is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R36	Solenoid (Main shift H)	Solenoid Output Voltage or Current is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R37	Solenoid (Master Clutch)	Solenoid Output Voltage or Current is abnormal	Wiring for solenoid is disconnected or is short-circuited.
E-R38	Pressure Switch 1 OFF	Pressure Switch can not be turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R39	Pressure Switch 2 OFF	Pressure Switch can not be turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R40	Pressure Switch 3 OFF	Pressure Switch can not be turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R41	Pressure Switch 4 OFF	Pressure Switch can not be turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R42	Pressure Switch L OFF	Pressure Switch can not be turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R43	Pressure Switch H OFF	Pressure Switch can not be turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R44	Pressure Switch M OFF	Pressure Switch can not be turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R45	Pressure Switch 1 ON	Pressure Switch is always turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R46	Pressure Switch 2 ON	Pressure Switch is always turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.
E-R47	Pressure Switch 3 ON	Pressure Switch is always turned on	Switch Failure or the problem occurs in hydraulic circuit. Wiring is disconnected or is short-circuited.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

(2) Checking Fuse and Grounding Wire





Fuses

1. Remove the left lower rear bonnet.
2. Check the fuses 5 A for circuit line (1) and 10 A for load line (2) related to power shift inside the fuse box and the fuse 5 A of the meter panel (3).
3. If any of the fuses is blown, replace it with the one having same capacity.

■ **IMPORTANT**

- **If a fuse is blown, check the cause and be sure to replace it with the one having same capacity.**

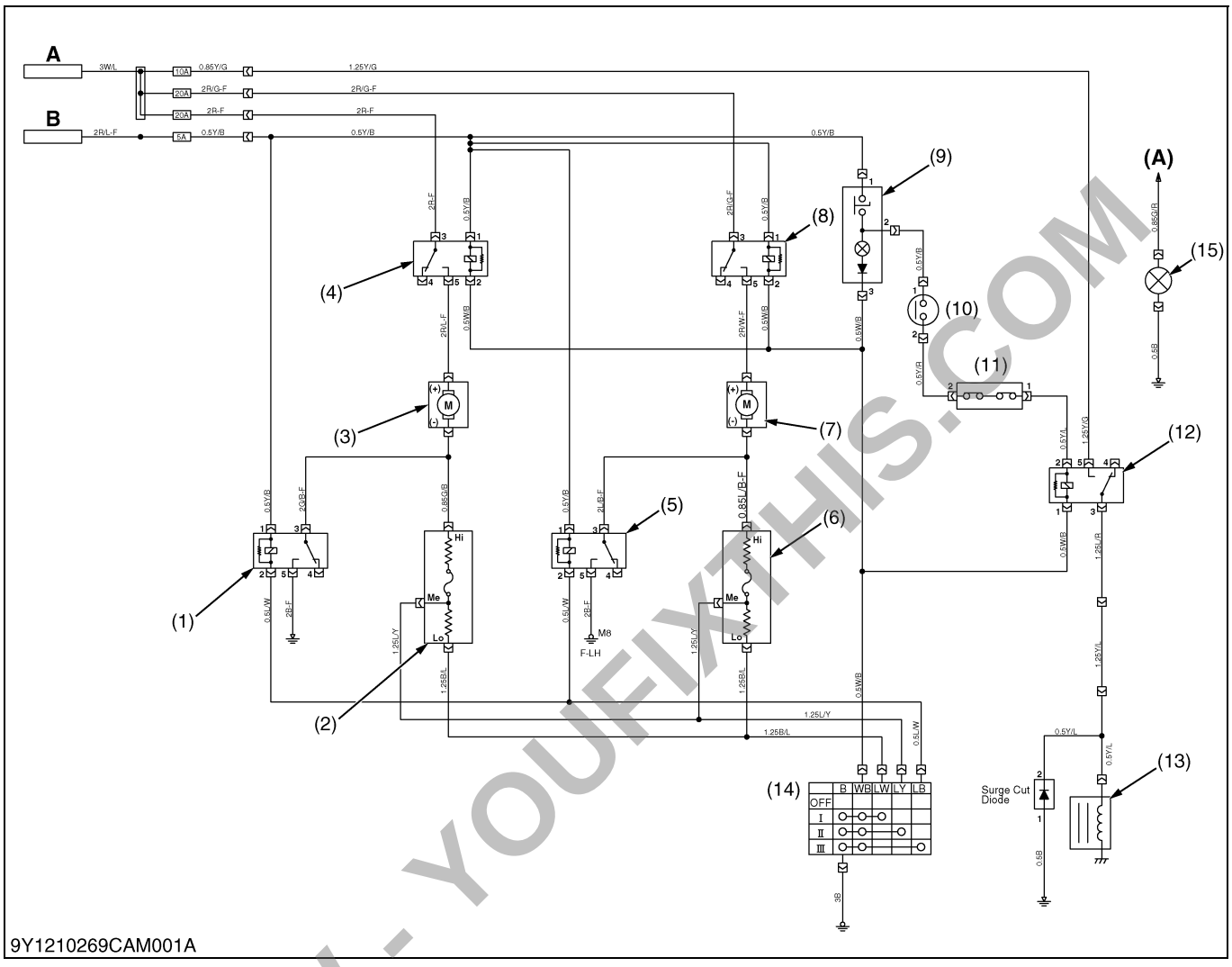
(1) Fuse (5 A) Power Source for Circuit Line (3) Meter Panel Fuse (10 A)
(2) Fuse (10 A) Power Source for Load Line

(To be continued)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

[3] ELECTRICAL SYSTEM



9Y1210269CAM001A

(1) Blower Hi Relay L.H.
(2) Blower Resistance L.H.
(3) Blower Motor L.H.
(4) Blower Relay L.H.
(5) Blower Hi Relay R.H.
(6) Blower Resistance R.H.
(7) Blower Motor R.H.
(8) Blower Relay R.H.
(9) A/C Switch
(10) Thermistor
(11) A/C Pressure Switch
(12) Compressor Relay
(13) Compressor Magnet Clutch
(14) Blower Switch
(15) A/C Unit Illumination

A : Air Conditioner/B
B : Key ACC

(A) To Light Switch

9Y1210269CAM0007US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 690 pages

The full manual includes:

- All 690 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Kubota M100X, M110X, M126X, M135X Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual