WSM

WORKSHOP MANUAL
COMPACT TRACK LOADER

SVL75-2

Kubota

KiSC issued 04, 2020 A

CONTENTS

TO THE READER
TO THE READER
I INFORMATION
CONTENTS
INFORMATION
1. SAFETY FIRST I-1
2. SAFETY PRECAUTIONS FOR WORK..... I-2
3. SAFETY DECALS I-7
4. MAIN SPECIFICATIONS..... I-12
5. DIMENSIONS I-13
G GENERAL
CONTENTS
GENERAL
1. MACHINE IDENTIFICATION.....G-1
2. ENGINE IDENTIFICATION G-2
3. MUFFLER FULL ASSEMBLY IDENTIFICATION G-4
4. GENERAL PRECAUTIONS.....G-6
5. HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING.....G-10
6. LUBRICANT, FUEL AND COOLANT G-17
7. TIGHTENING TORQUES.....G-18
8. MAINTENANCE.....G-22
9. SPECIAL TOOL.....G-65
1 ENGINE
CONTENTS
MECHANISM
1. SPECIFICATIONS..... 1-M1
2. DIMENSIONS..... 1-M2
3. PERFORMANCE CURVES..... 1-M3
4. ENGINE BODY..... 1-M4
5. LUBRICATING SYSTEM..... 1-M6
6. COOLING SYSTEM 1-M7
7. COMMON RAIL SYSTEM (CRS) 1-M9
8. EGR SYSTEM 1-M22
9. EXHAUST SYSTEM 1-M24
SERVICING
1. TROUBLESHOOTING..... 1-S1
2. SERVICING SPECIFICATIONS 1-S5
3. TIGHTENING TORQUES OF SCREWS, BOLTS AND NUTS FOR SPECIAL USE 1-S10
4. CHECKING, REMOVING AND SERVICING 1-S12
2 MACHINE BODY
CONTENTS
SERVICING
1. FRONT ATTACHMENT..... 2-S1
2. UPPER STRUCTURE 2-S9
3. TRACK FRAME 2-S36
3 HYDRAULIC SYSTEM
CONTENTS
MECHANISM
1. HYDRAULIC CIRCUIT 3-M1
2. HYDRAULIC DEVICE LAYOUT 3-M3
3. HYDRAULIC SYSTEM 3-M4
4. HST PUMP 3-M50
5. GEAR PUMP 3-M53
6. TRAVEL CONTROL PILOT VALVE 3-M55
7. FRONT CONTROL PILOT VALVE..... 3-M62
8. CONTROL VALVE..... 3-M69
9. TRAVEL MOTOR..... 3-M73
10. LIFT ARM CYLINDER 3-M75
11. BUCKET CYLINDER 3-M76
12. HYDRAULIC QUICK HITCH CYLINDER..... 3-M77
13. UNLOAD VALVE 3-M78
14. AUX SOLENOID VALVE 3-M81
15. HYDRAULIC QUICK HITCH SOLENOID VALVE (OPTION)..... 3-M82
16. HIGH-FLOW SOLENOID VALVE (OPTION)..... 3-M84
SERVICING
1. TROUBLESHOOTING.....3-S1
2. SERVICE DATA.....3-S9
3. PERFORMANCE CHECKS AND ADJUSTMENT METHODS.....3-S12
4. REMOVING/INSTALLING 3-S25
5. HYDRAULIC HOSE.....3-S170
4 ELECTRICAL SYSTEM
CONTENTS
SERVICING
1. DIAGNOSING MALFUNCTION.....4-S1
2. WIRING CIRCUIT.....4-S4
3. ELECTRONIC EQUIPMENT LAYOUT 4-S5
4. UNPLUGGING ELECTRICAL CONNECTORS AND WIRING LAYOUT.....4-S6
5. CONNECTOR TERMINAL.....4-S20
6. TROUBLESHOOTING FOR START-UP PROBLEM 4-S22
7. INSPECTION.....4-S23
8. INSTRUMENT PANEL.....4-S32
9. TROUBLESHOOTING.....4-S55
10. FLOW CHART OF THE USER MODE AND SERVICE MODE SETTINGS.....4-S158
5 CABIN
CONTENTS
MECHANISM
1. AIR CONDITIONER SYSTEM..... 5-M1
2. WIPER 5-M19
SERVICING
1. TROUBLESHOOTING.....5-S1
2. MAINTENANCE AND SERVICE RELATED SPECIFICATIONS 5-S4
3. PRECAUTIONS WHEN REPAIRING THE REFRIGERANT SYSTEM 5-S5
4. INSPECTING AND CHARGING THE REFRIGERANT SYSTEM 5-S10
5. INSPECTION AND DISASSEMBLY.....5-S19
6. REMOVING AND INSTALLING WINDOW 5-S55
7. WINDOW WASHER 5-S64

8. HYDRAULIC HOSE ROUTING 5-S66

FOR FULL COMPLETE MANUAL

CLICK HERE

INFORMATION

CONTENTS

1. SAFETY FIRST I-1
2. SAFETY PRECAUTIONS FOR WORK I-2
   [1] PRECAUTIONS BEFORE WORKING I-2
   [2] PRECAUTIONS WHEN WORKING I-3
3. SAFETY DECALS I-7
   [1] LOCATIONS I-7
   [2] CARE OF LABELS I-11
4. MAIN SPECIFICATIONS I-12
5. DIMENSIONS I-13

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.**

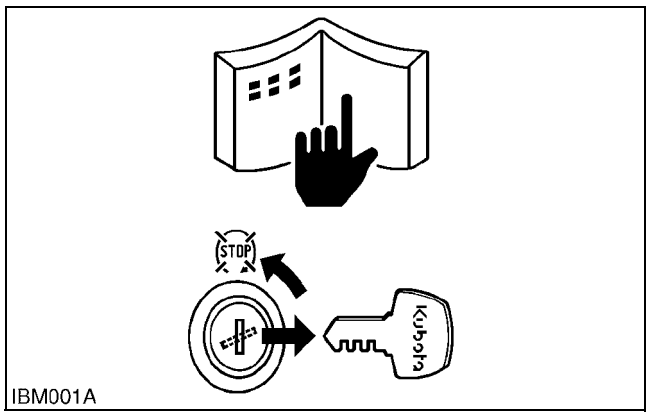
■ IMPORTANT
- **Indicates that equipment or property damage could result if instructions are not followed.**

■ NOTE
- **Gives helpful information.**

RY9212007INI0001US0

2. SAFETY PRECAUTIONS FOR WORK

[1] PRECAUTIONS BEFORE WORKING

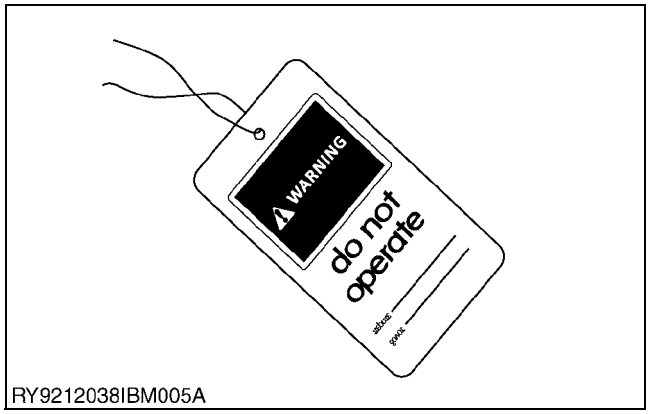


IBM001A

Before servicing and repairing

- Be sure to read all of the instructions and safety precautions in this manual and the operator's manual, as well the various labels affixed to the machine.
- Be sure to stop the engine when you are out of the driver's seat to clean and inspect the machine body and machine itself, or to check and adjust various parts.
- Choose non-hazardous flat, firm ground for inspection.

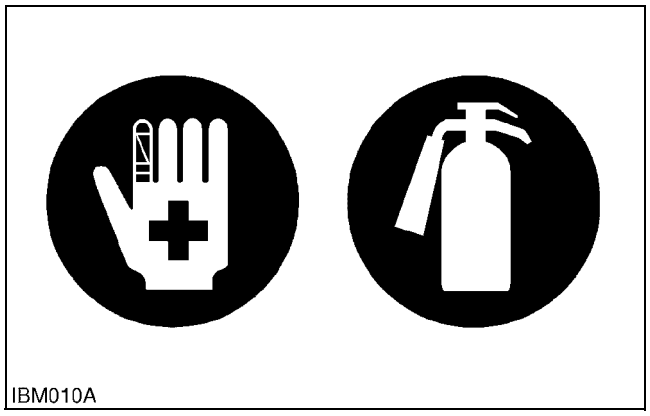
RY9212038INI0001US0



RY9212038IBM005A

- When performing maintenance on the equipment, hang the DO NOT OPERATE sign where it will be obvious from and around the driver's seat.
- When performing maintenance or repairs, always lower attachments to the ground, stop the engine and secure the tracks with blocks.
- When performing maintenance on the equipment, always disconnect the negative battery cable.
- Before using tools, make sure you understand how to use them correctly and use tools in good condition and of the right size for the job.

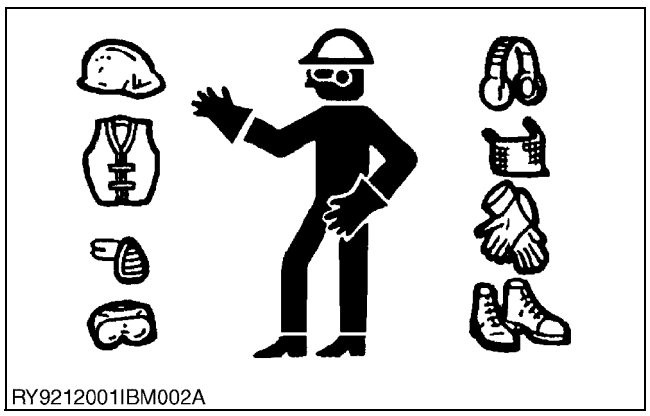
RY9212038INI0002US0


IBM010A

Be Ready for an Emergency

- Keep a first-aid kit and fire extinguisher close at hand so you can use it when needed.
- Keep emergency contact information for doctors, hospitals and ERs handy.

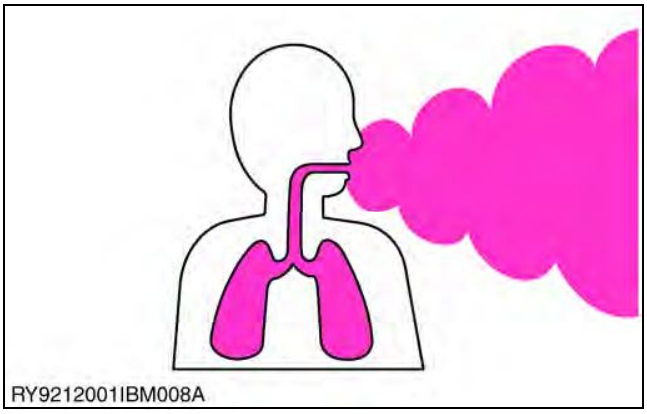
RY9212001INI0004US0


RY9212001IBM002A

- Wear clothes appropriate for working on equipment. Do not wear loose-fitting clothes as they may catch on the machine controls.
- When working on the equipment, use all safety gear, such as a helmet, safety glasses and shoes, that are required by law or regulation.
- Never perform maintenance while drowsy or under the influence of alcohol or drugs.

RY9212001INI0005US0

[2] PRECAUTIONS WHEN WORKING


RY9212001IBM008A

- Stop the machine on a hard and level location and make sure the area around the machine is free of obstacles and hazardous materials. When parking the machine indoors, select a spot that can be properly ventilated.
- When performing work such as with a hammer, fragments may chipping off, so make sure only authorized persons are around the machine.
- Before servicing the machine, clean it off so there is no mud, debris, oil or the like sticking to it.

RY9212001INI0006US0

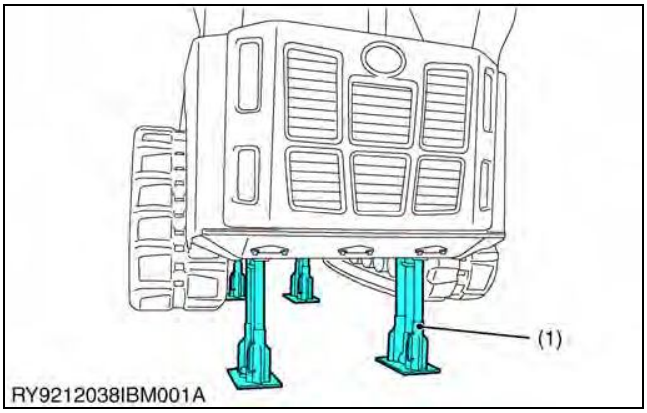

RY9212001IBM003A

- Before getting on/off of the machine, clean off around the steps so there is no mud on them. Always give yourself 3-point support when getting on/off the machine.

CAUTION

- **3-point support means using both legs and one hand or both hands and one leg as you climb up/down.**

RY9212038INI0003US0

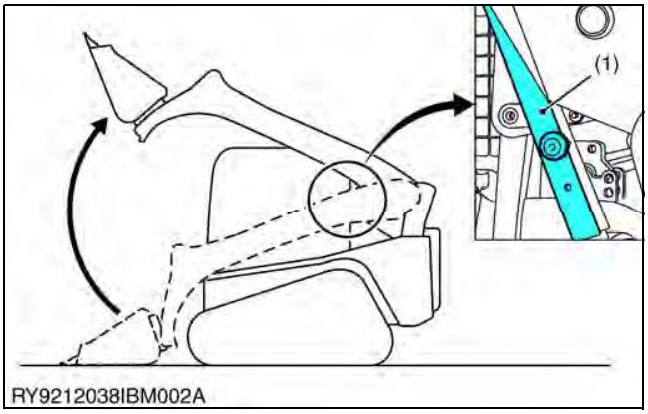


RY9212038IBM001A

- When you need to access the underside of the machine for maintenance purposes, but sure to support the machine with a safety stand. Getting under the machine while supporting the machine by machine's own hydraulic cylinder or using a hydraulic jack can be extremely dangerous in the event of a hydraulic fluid leakage or similar mishap.

(1) Safety stand

RY9212038INI0004US0

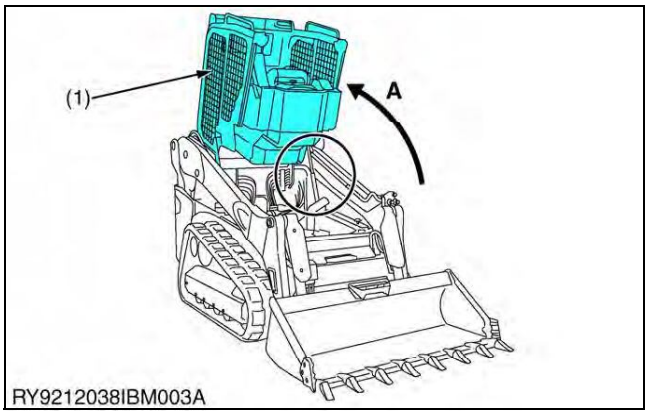


RY9212038IBM002A

- Make sure the lift arm stopper is properly engaged before performing any work beneath raised lift arms. Never attempt to do any work or move under the lift arms when they are not properly supported.
- Keep in mind that the lift arms may fall whenever hydraulic lines are disconnected, loosened, or removed. Any malfunction or failure in the hydraulics can also cause lift arms to drop.
- Always perform the necessary repairs or service whenever the lift arm stopper becomes damaged or malfunctioned, or part are missing. Damaged or malfunction the lift arm stopper may cause the lift arms to fall causing serious injury or death.

(1) Lift arm stopper

RY9212038INI0005US0

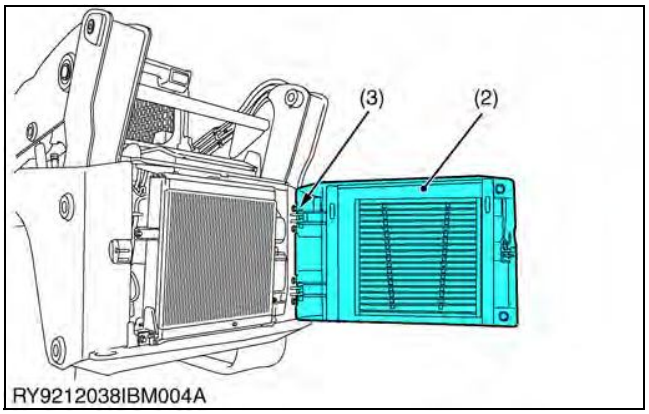


RY9212038IBM003A

- Do not raise or lower the cabin while the engine is running as it may move, cause the machine to become unstable, resulting in serious injury or death. Always lower the working parts of the machine to the ground and stop the engine before attempting to raise or lower the cabin.
- Make sure the cabin is properly and securely supported with a stopper when tilted to prevent if from falling and causing serious injury.

(1) Cabin

RY9212038INI0006US0



RY9212038IBM004A

- When opening the rear door to perform maintenance, be sure to insert the pin into the "LOCKED" position to hold the door in place.

(2) Rear door (2) Rear door lock

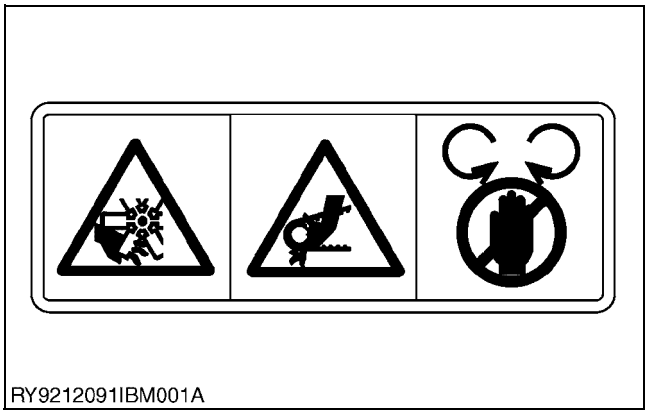
RY9212038INI0007US0


RY9212001IBM004A

Starting the Machine Safely

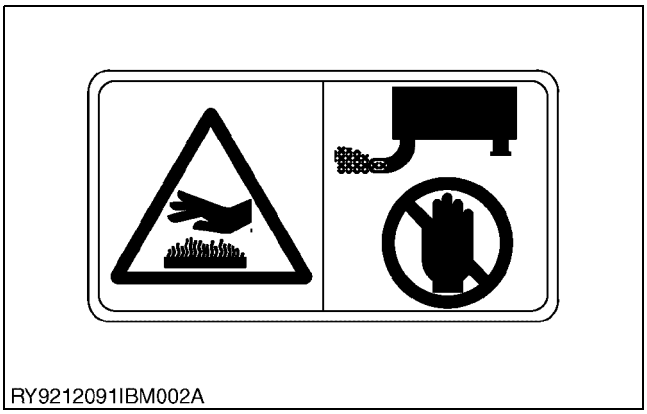
- Before starting the engine, always sit in the driver's seat and make sure the area is safe and clear.
- As it is dangerous, never start the engine from anywhere but the driver's seat.
- Always check and make sure control lever(s) are not engaged before starting the engine.
- Never start the engine by hot-wiring the starter circuit. This is not only dangerous, but may damage the machine.

RY9212001INI0008US0


RY9212091IBM001A

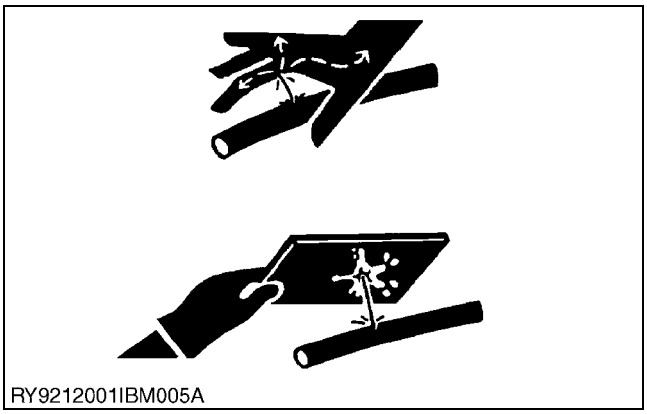
- Whenever it is necessary to open the engine covers or bonnet in order to service the machine, always prop them open.
- If it is absolutely necessary to run the engine while working on the machine, make sure you are clear of all rotating or moving parts. Also take care not to leave anything, such as tools or rags, near any moving parts.

RY9212001INI0009US0


RY9212091IBM002A

- The engine, muffler, radiator, hydraulic line, etc., have parts that remain very hot even after the engine has been stopped. Be sure to avoid these parts, as touching them can result in burns. Radiator coolant, hydraulic fluid and oil also remain hot. Therefore, do not attempt to remove caps and plugs, etc., before these fluids have sufficiently cooled.
- Make sure the coolant temperature has dropped sufficiently before opening the radiator cap.
  Also, since the inside of the radiator is pressurized, when removing the cap, first loosen it to release the pressure before removing the cap completely.

RY9212001INI0016US0


RY9212001IBM005A

- The pressure in the hydraulic circuit stays at pressure even after the engine stops.
  Before removing parts, such as hydraulic devices from the machine, first release the pressure. Please note that when releasing residual pressure, the machine itself and/or implements may move without warning, so be very careful when releasing the pressure.
- Oil gushing out under pressure is extremely dangerous as it may pierce your skin or your eyes. Similarly, oil leaking out of pinholes is not visible.
  So when checking for oil leaks, always wear safety glasses and gloves and use a piece of cardboard or a wood block to shield yourself from oil.

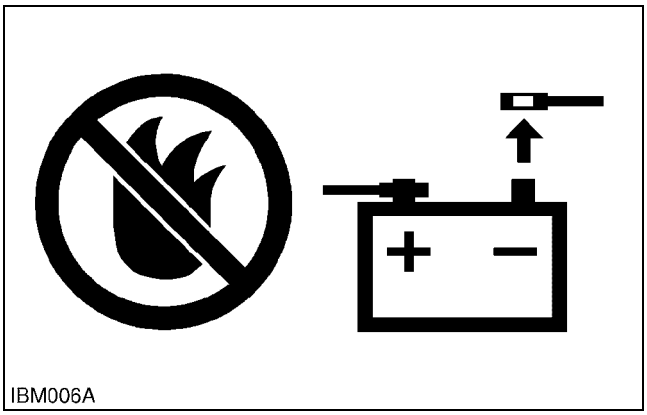
RY9212001INI0011US0

No Smoking or Open Flames while Fueling


RY9212001IBM006A

- Fuel is extremely flammable and dangerous.
  Never smoke near fuel. If fuel is spilled on the machine, its engine, or electrical parts, it may cause a fire. If fuel is spilled, wipe it all up immediately.
- Never smoke while filling the machine with fuel.
  And always tighten the fuel cap securely and wipe up any spilled fuel.

RY9212001INI0012US0


IBM006A

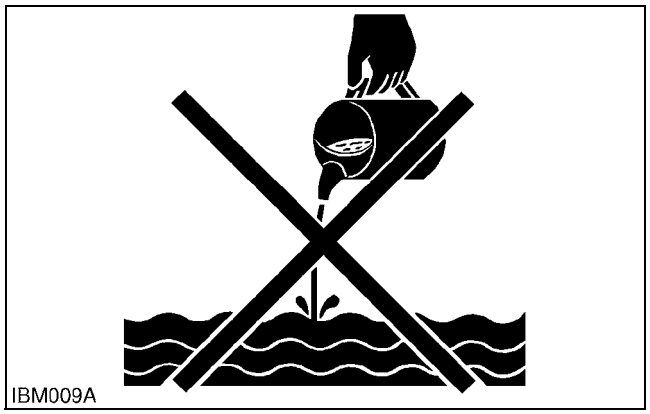
- Always wear safety glasses and gloves when handling the battery.
- The gas generated by the battery is flammable. Never weld or use tools like a grinder near the battery. And never smoke near it.
- When disconnecting the battery, always disconnect the negative cable first. When connecting the battery, always connect the positive cable first.

RY9212001INI0013US0


RY9212001IBM007A

- Grease is under high pressure inside the hydraulic cylinder. It is very dangerous to loosen a grease nipple quickly as it may shoot off. Always loosen grease nipples slowly.
- And never face a grease nipple while loosening it.

RY9212001INI0014US0


IBM009A

Dispose of Waste Fluids Properly

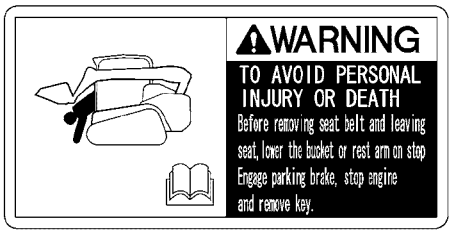
- Never dispose of waste fluids on the ground, in the gutter, a river, pond or lake. Always dispose of hazardous substances like waste oil, coolant and electrolytic fluid in accordance with the relevant environmental protection regulations.
- Keep the safety plates clean so they can be read. If a safety plate is damaged and comes off or becomes illegible, put a plate with the same warnings back in its place.

RY9212001INI0015US0

3. SAFETY DECALS

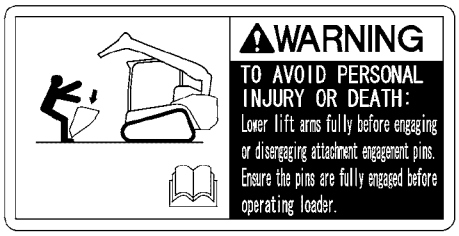
[1] LOCATIONS

(1) Part No. V0511-5735-2



1BCAAAAAP079E

(2) Part No. V0511-5740-2



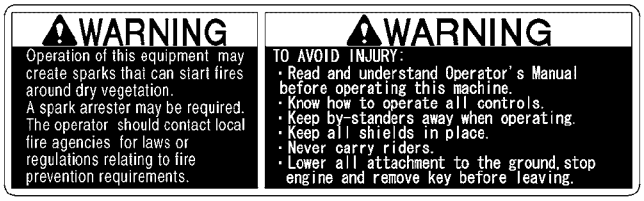
1BCAAAAAP071E

(3) Part No. V0511-5772-1



1BCAAAAAP221E

(4) Part No. V0511-5731-2



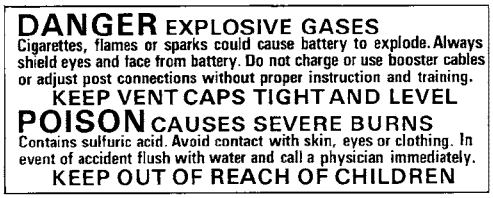
1BCAAAAAP081E

(5) Part No. V0511-5732-2

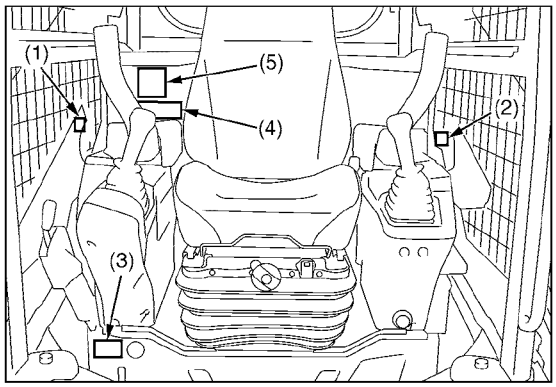


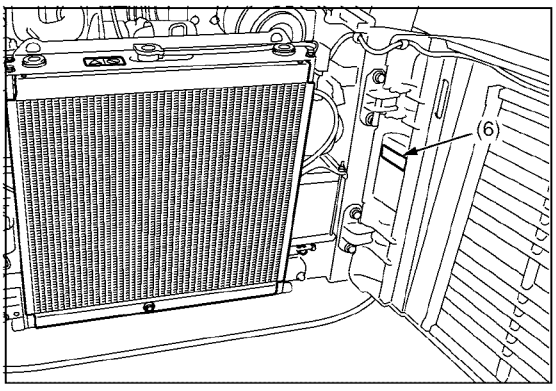
1BCAAAAAP076E

(6) Part No. 6C040-5559-1



1BAAGAAAP0360

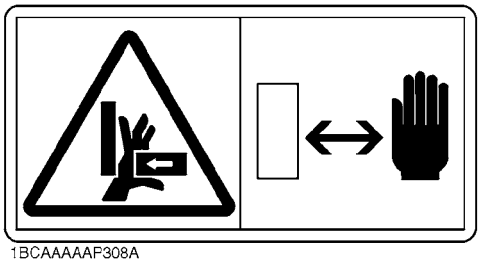




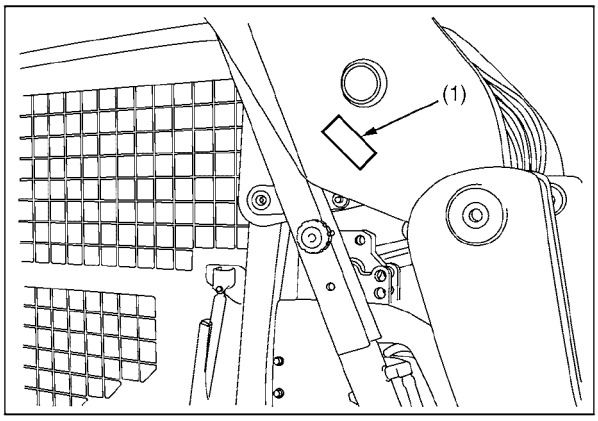
RY9212213ICI001A

RY9212213INI0001US0

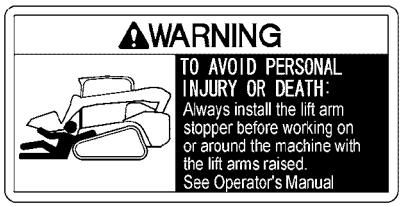
(1) Part No. V1311-5734-1 [Both sides]



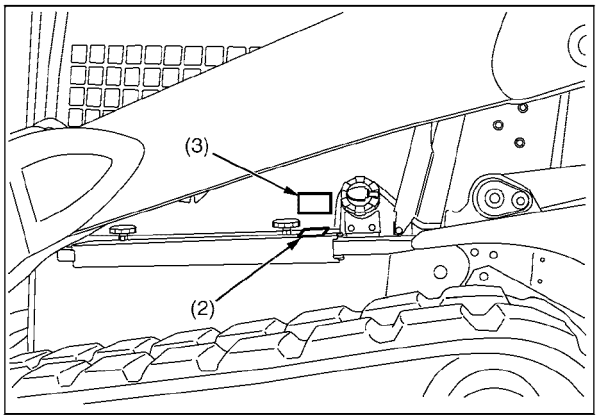
1BCAAAAAP308A



(2) Part No. V0511-5741-2

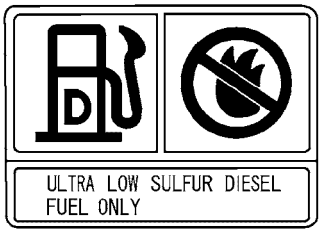


1BCAAAAAP078E

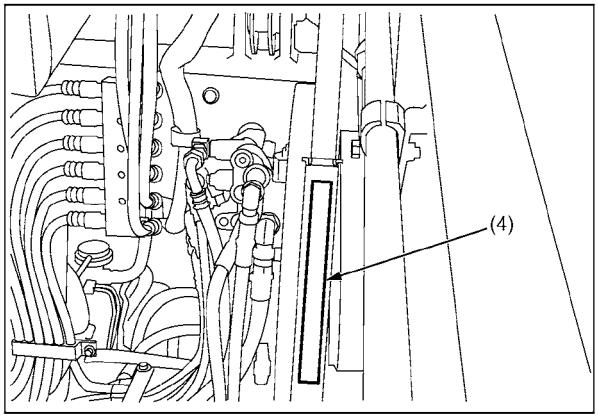


(3) Part No. RD358-5736-1

Diesel fuel only No fire



1BAAGAAAP1810



(4) Part No. V0511-5743-1

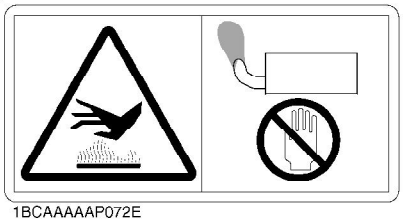


1BCAAAAAP137E

RY9212134ICI002A

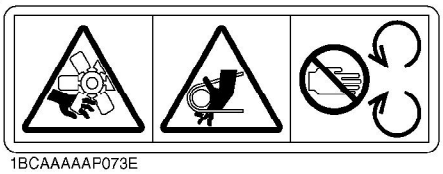
RY9212134INI0002US0

(1) Part No. V0511-5738-1



1BCAAAAAP072E

(2) Part No. V0511-5739-1



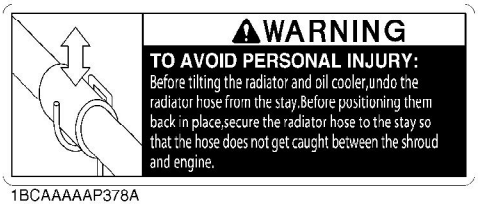
1BCAAAAAP073E

(3) Part No. RD517-5754-1



1BAABAGAP2650

(4) Part No. V0521-5744-1



1BCAAAAAP378A

(5) Part No. V0621-5748-1



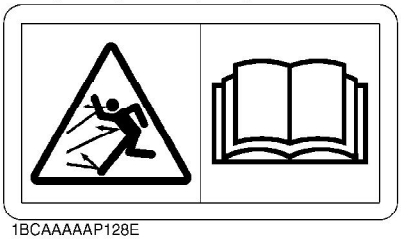
1BCAAAAAP072E

(6) Part No. TC660-9861-1

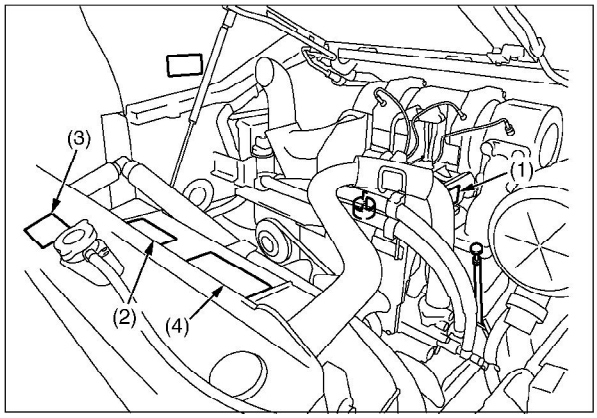


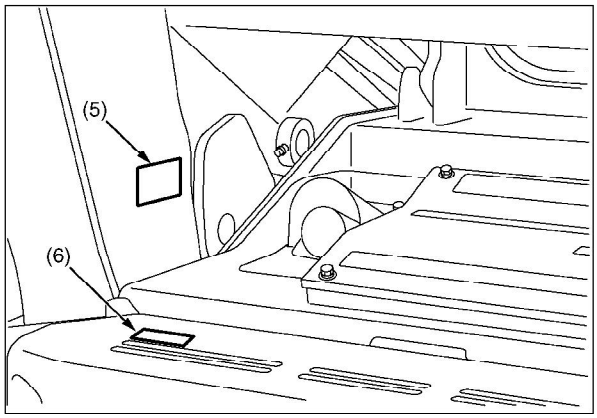
1AGAHAKAP051A

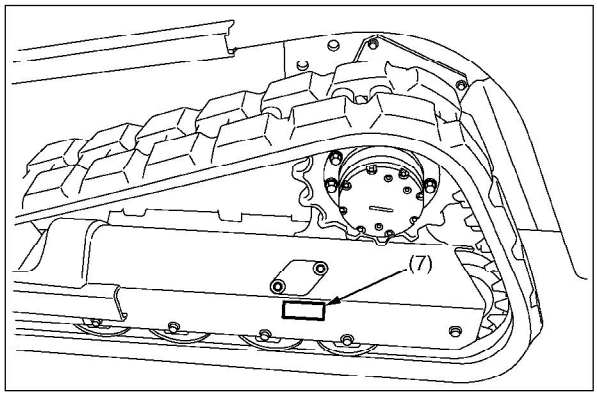
(7) Part No. V0511-5764-1 [Both sides]
Do not loosen the grease nipple compleately or too quickly.



1BCAAAAAP128E



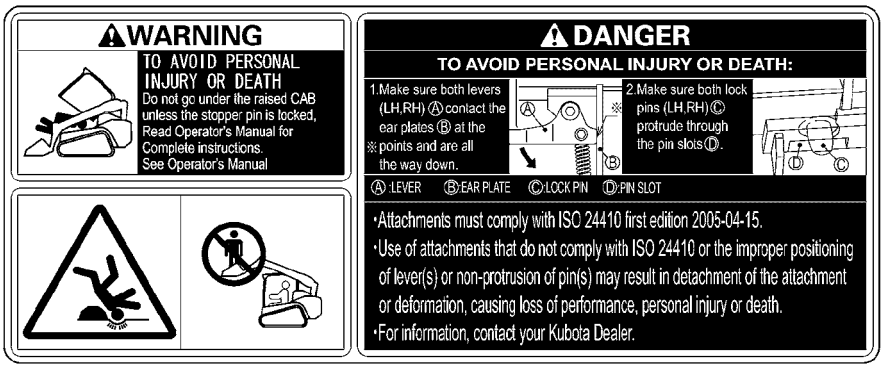




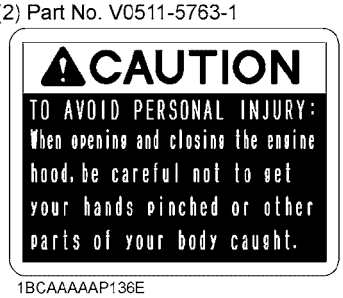
RY9212213ICI003A

RY9212213INI0002US0

(1) Part No. V0521-5773-1



(2) Part No. V0511-5763-1



1BCAAAAAP136E

(3) Part No. RB419-5793-1 (Closed cab model)

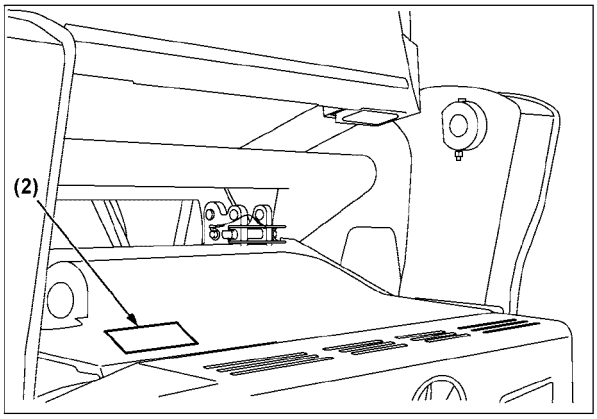


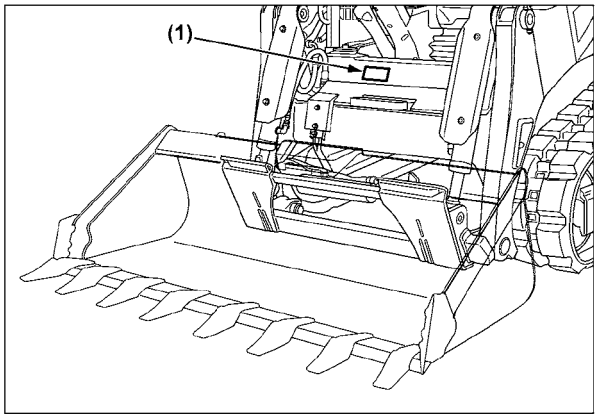
1BAAABYAP158E

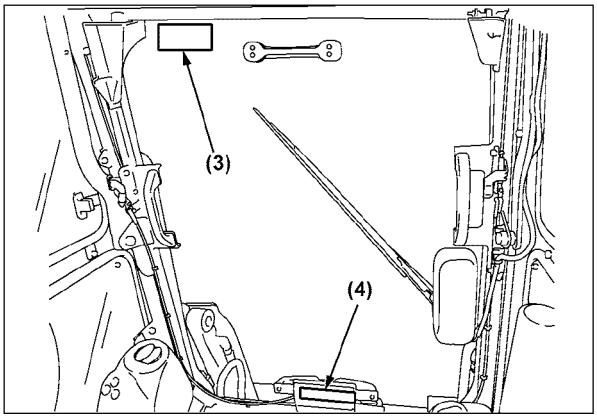
(4) Part No. V0511-5745-2 (Closed cab model)



1BCAAAAAP171E







RY9212038ICI004A

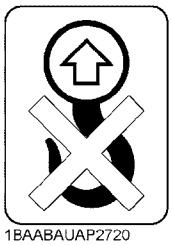
RY9212038INI0011US0

(1) Part No. V0511-5754-1

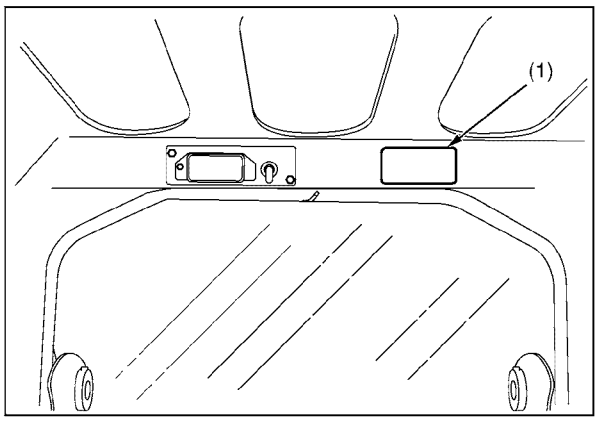


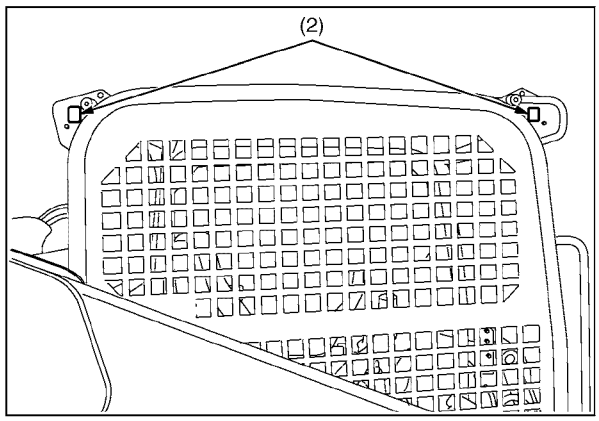
1BCAAAAAP070E

(2) Part No. RB419-5796-1 [Both sides]



1BAABAUAP2720





RY9212038ICI005A

RY9212038INI0012US0

[2] CARE OF LABELS

CARE OF DANGER, WARNING AND CAUTION LABELS

1. Keep danger, warning and caution labels clean and free from obstructing material.
2. Clean danger, warning and caution labels with soap and water, dry with a soft cloth.
3. Replace damaged or missing danger, warning and caution labels with new labels from your KUBOTA dealer.
4. If a component with danger, warning and caution label(s) affixed is replace with new part, make sure new label(s) is (are) attached in the same locations(s) as the replace component.
5. Mount new danger, warning and caution labels by applying on a clean dry surface and pressure any bubbles to outside edge.

RY9212007INI0015US0

4. MAIN SPECIFICATIONS

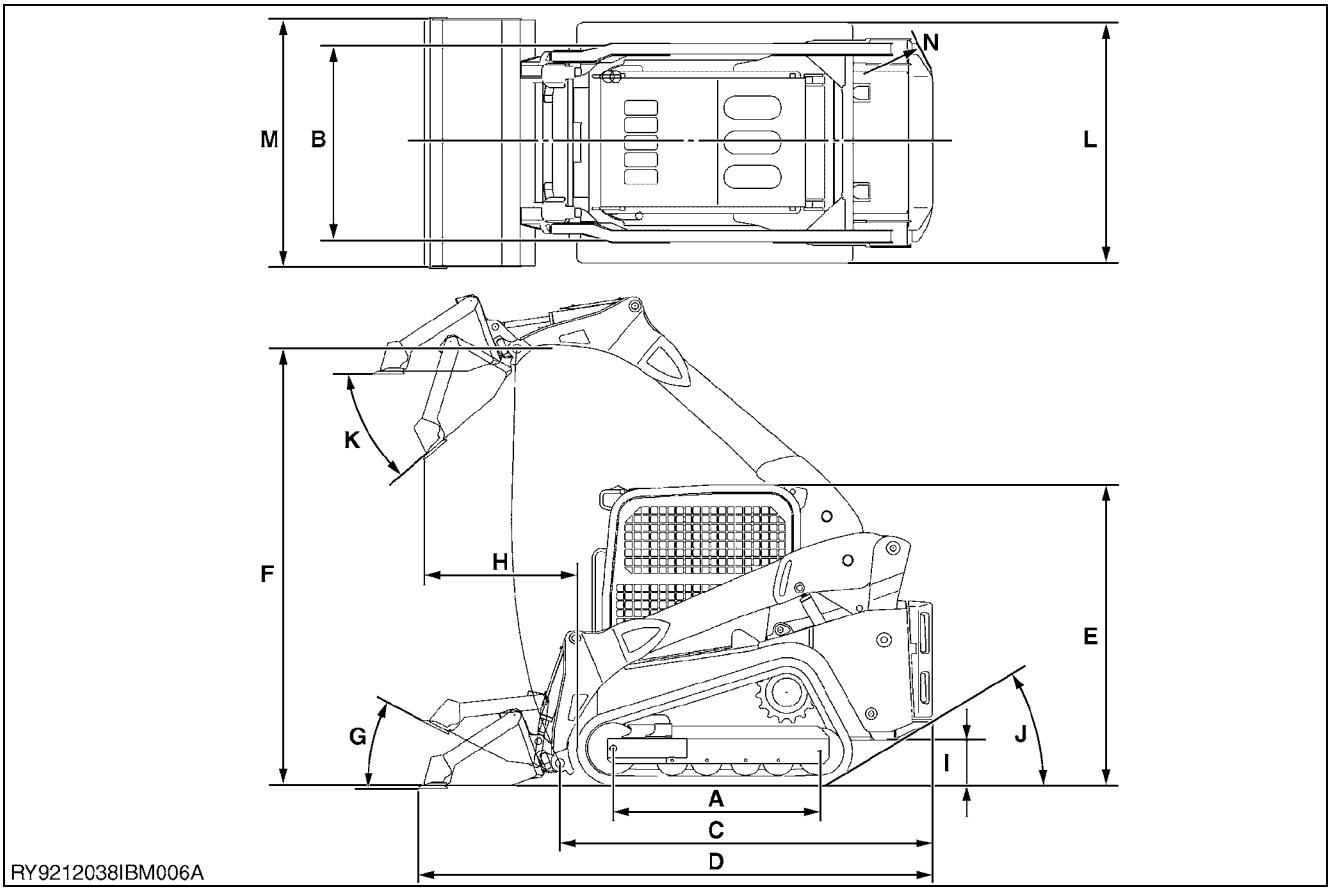
			KUBOTA CTL (Compact Track Loader)	
Model name			SVL75-2	
Type			Open Cab	Closed Cab
Operating weight (including operator's weight)			4100 kg (9039 lbs)	4225 kg (9314 lbs)
Engine	Type		Water cooled 4 cycle diesel engine with 4 cylinder EPA Interim Tier 4	
	Model name		KUBOTA V3307-CR-TE4	
	Total displacement		3331 cc (203.3 cu.in)	
	Engine power	SEA J1955 gross	55.4 kW (74.3 HP)	
	Rated speed		2400 rpm	
	Low idling speed		1150 rpm	
Performance	Rated operating capacity		1043 kg (2300 lbs)	
	Tipping load		2980 kg (6570 lbs)	
	Breakout force	Bucket	2814 kg (6204 lbs)	
		Lift arm	2162 kg (4766 lbs)	
	Travel speed	Fast	11.5 km/h (7.1 mph)	
		Slow	7.5 km/h (4.7 mph)	
	Ground pressure (with operator)		[Standard track] 39.2 kPa (0.40 kgf/cm^2) (5.6 psi)	[Wide track] 33.0 kPa (0.34 kgf/cm^2) (4.7 psi)
Battery capacity			12 V RC: 160 min, CCA 900A	
Pressure connection for attachments	Max. displacement (Theoretical)	Standard flow	66.0 L/min (17.4 US gal/min)	
		Hi-flow	110.9 L/min (29.3 US gal/min)	
	Max. pressure		22 MPa (224 kgf/cm^2) (3185 psi)	
Fuel tank capacity			93 L (24.6 US gal)	

■ **NOTE**

- **Specifications subject to change without notice.**

RY9212213INI0003US0

5. DIMENSIONS



		SVL75-2
A	Length of track on ground	1436 mm (56.5 in.)
B	Track gauge	1355 mm (53.3 in.)
C	Length w/o bucket	2768 mm (109 in.)
D	Length w/bucket on ground	3576 mm (140.8 in.)
E	Height to top of cab	2083 mm (82 in.)
F	Bucket hinge pin height at max. lift	3025 mm (119.1 in.)
G	Rollback angle at carry position	27 °
H	Reach at max. lift and dump	1060 mm (41.7 in.)
I	Ground clearance	296 mm (11.7 in.)
J	Departure angle	31.5 °
K	Max. dump angle	40 °
L	Vehicle width	1675 mm (65.9 in.)
M	Width with bucket	1727 mm (68 in.)
N	Turning radius from center-machine rear	2720 mm (107.1 in.)

■ **NOTE**
- **Above dimensions are based on the machine with KUBOTA standard bucket.**
- **Above dimensions are based on the machine with KUBOTA standard rubber track.**
- **Specifications subject to change without notice.**

RY9212213INI0004US0

G GENERAL

GENERAL

CONTENTS

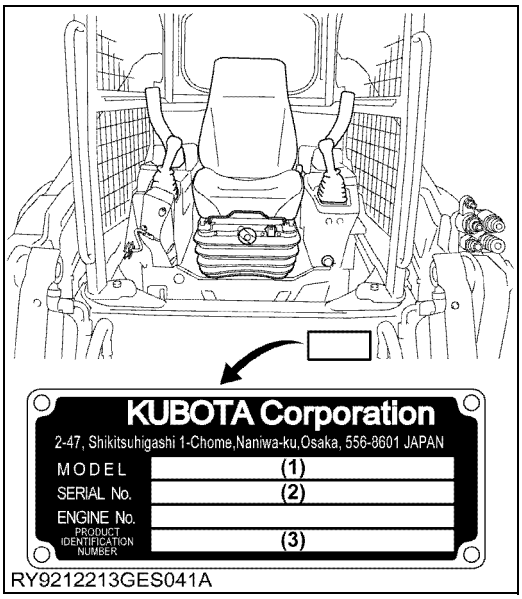
1. MACHINE IDENTIFICATION G-1
2. ENGINE IDENTIFICATION G-2
   [1] ENGINE NUMBER G-2
   [2] E4B ENGINE G-3
   [3] CYLINDER NUMBER G-3
3. MUFFLER FULL ASSEMBLY IDENTIFICATION G-4
   [1] PART NUMBER AND SERIAL NUMBER G-4
4. GENERAL PRECAUTIONS G-6
5. HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING G-10
   [1] WIRING G-10
   [2] FUSES G-14
   [3] CONNECTOR G-14
   [4] WASHING THE MACHINE WITH A HIGH-PRESSURE WASHER G-16
6. LUBRICANT, FUEL AND COOLANT G-17
7. TIGHTENING TORQUES G-18
   [1] GENERAL USE SCREWS, BOLTS AND NUTS G-18
   [2] STUD BOLTS G-18
   [3] TORQUE FOR HYDRAULIC HOSE FITTINGS G-19
      (1) Torque for Hydraulic Hose Fittings G-19
      (2) Torques of Lock-Nuts for Elbows with Male Seats and Adaptors with O-rings (Straight Threads) G-20
      (3) Torque for Tapering Adaptors G-20
   [4] HOSE CLAMP SCREW TORQUE G-21
8. MAINTENANCE G-22
   [1] MAINTENANCE INTERVAL G-22
   [2] OPENING AND CLOSING OF PARTS G-25
   [3] DISCHARGING MUD FROM OPERATOR ROOM AND MAIN FRAME G-29
   [4] DAILY CHECKS G-30
   [5] REGULAR CHECKS AND MAINTENANCE WORK G-38
      (1) Every 50 Service Hours G-38
      (2) Every 250 Service Hours G-40
      (3) Every 500 Service Hours G-43
      (4) Every 1000 Service Hours G-45
      (5) Every 1500 Service Hours G-47
      (6) Every 2000 Service Hours G-48
      (7) Every 3000 Service Hours G-48
      (8) Annual Servicing G-54
      (9) Biennial Servicing G-57
      (10) Servicing as Required G-60
   [6] OTHER ADJUSTMENTS AND REPLACEMENTS G-61
      (1) Purging of the Fuel System G-61
      (2) Adjustment of Tracks G-61
      (3) Fuses G-63
9. SPECIAL TOOL G-65

1. MACHINE IDENTIFICATION

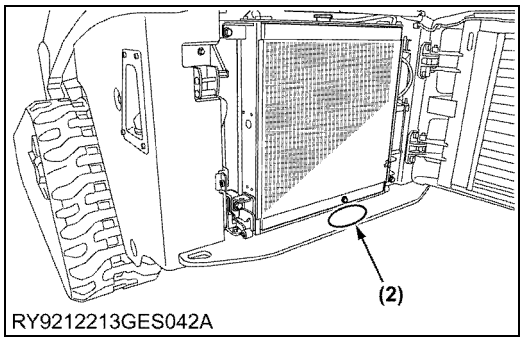
■ **IMPORTANT**

- **Before contacting the customer support, note the loader model, serial number, product identification number, engine type, engine serial number, and hour meter indication.**

Serial number to 42770



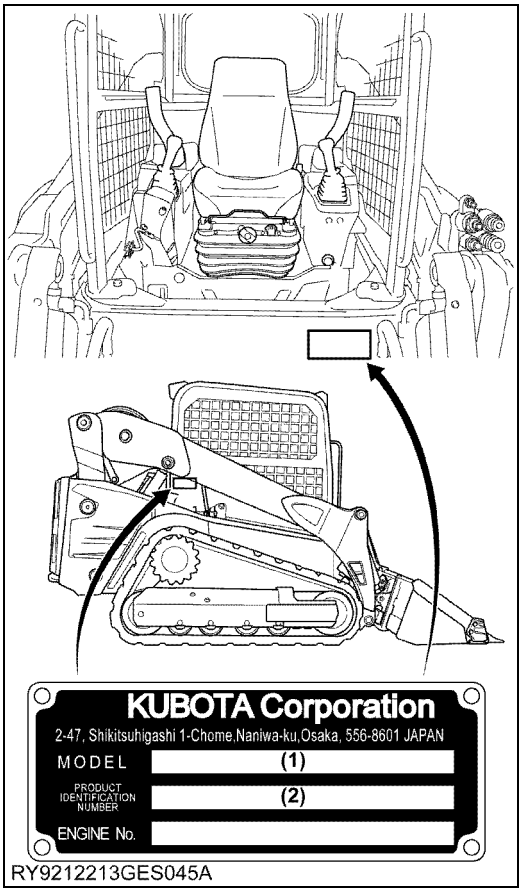
RY9212213GES041A



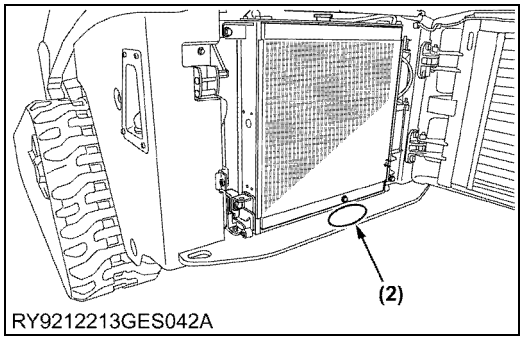
RY9212213GES042A

(1) Model
(2) Serial Number
(3) Product Identification Number

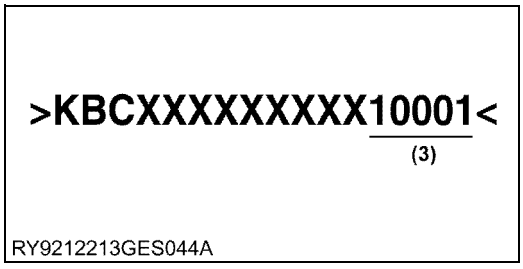
Serial number from 42771



RY9212213GES045A



RY9212213GES042A



RY9212213GES044A

■ **NOTE**

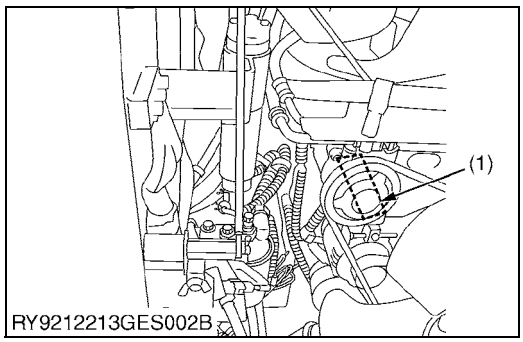
- **The name plate is on the front or side of the machine.**

(1) Model
(2) Product Identification Number
(3) Serial Number

RY9212213GEG0087US0

2. ENGINE IDENTIFICATION

[1] ENGINE NUMBER



You must identify the engine model name and serial number before you start a job. When you get in touch with the manufacturer, always tell your engine model name and serial number.

Engine Serial Number

The engine serial number is an identified number for the engine.
It appears after the engine model number.
It shows the month and year of manufacture as below.

Year of manufacture

Alphabet or Number	Year	Alphabet or Number	Year
1	2001	F	2015
2	2002	G	2016
3	2003	H	2017
4	2004	J	2018
5	2005	K	2019
6	2006	L	2020
7	2007	M	2021
8	2008	N	2022
9	2009	P	2023
A	2010	R	2024
B	2011	S	2025
C	2012	T	2026
D	2013	V	2027
E	2014		

Month of manufacture

Month	Engine Lot Number	
January	A0001 ~ A9999	B0001 ~ BZ999
February	C0001 ~ C9999	D0001 ~ DZ999
March	E0001 ~ E9999	F0001 ~ FZ999
April	G0001 ~ G9999	H0001 ~ HZ999
May	J0001 ~ J9999	K0001 ~ KZ999
June	L0001 ~ L9999	M0001 ~ MZ999
July	N0001 ~ N9999	P0001 ~ PZ999
August	Q0001 ~ Q9999	R0001 ~ RZ999
September	S0001 ~ S9999	T0001 ~ TZ999
October	U0001 ~ U9999	V0001 ~ VZ999
November	W0001 ~ W9999	X0001 ~ XZ999
December	Y0001 ~ Y9999	Z0001 ~ ZZ999

* Alphabetical letters "I" and "O" are not used.

(a) (b)(c) (d)
e.g. V3307-CR-TE4 - B BA001

(1) Engine Model Name and Serial Number

(a) Engine Model Name **V3307-CR-TE4**
(b) Year: B indicates 2011
(c) Month: A or B indicates January
(d) Lot Number: (**0001 ~ 9999** or **A001 ~ Z999**)

RY9212213GEG0002US0

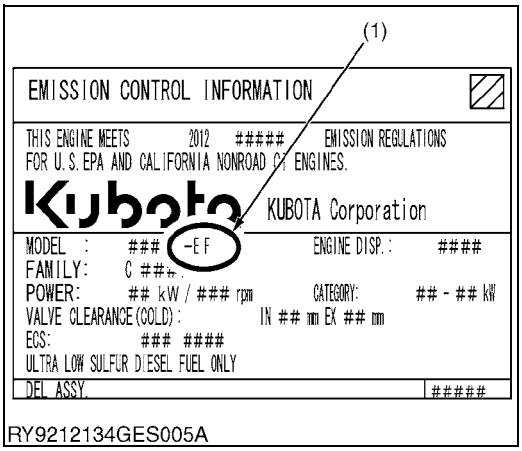
[2] E4B ENGINE

[Example: Engine Model Name V3307-CR-**TE4(C)B**-XXXX]

The emission controls previously implemented in various countries to prevent air pollution will be stepped up as Nonroad Emission Standards continue to change. The timing or applicable date of the specific Nonroad Emission regulations depends on the engine output classification.

Over the past several years, KUBOTA has been supplying diesel engines that comply with regulations in the respective countries affected by Nonroad Emission regulations. For KUBOTA Engines, E4B will be the designation that identifies engine models affected by the next emission phase (See the table below).

When servicing or repairing ###-E4B series engines, use only replacement parts for that specific E4B engine, designated by the appropriate KUBOTA Parts List and perform all maintenance services listed in the appropriate KUBOTA Operator's Manual or in the appropriate KUBOTA Workshop Manual. Use of incorrect replacement parts or replacement parts from other emission level engines (for example: E3B engines), may result in emission levels out of compliance with the original E4B design and EPA or other applicable regulations.Please refer to the emission label located on the engine head cover to identify Output classification and Emission Control Information. E4B engines are identified with "EF" at the end of the Model designation, on the US EPA label. Please note: E4B is not marked on the engine.



RY9212134GES005A

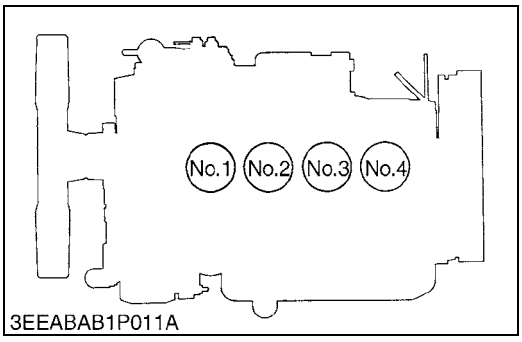
Category (1)	Engine output classification	EPA regulation
EF	Less than 19 kW	Tier 4
	From 19 to less than 56 kW	Interim Tier 4
	From 56 to less than 75 kW	Interim Tier 4
	From 75 to less than 130 kW	Interim Tier 4

■ **NOTE**

- **"E4B" engines are identified with "EF" at the end of the Model designation, on the US EPA label.**
  "E4B" designates some Interim Tier 4 / Tier 4 models, depending on engine output classification.

RY9212213GEG0003US0

[3] CYLINDER NUMBER



3EEABAB1P011A

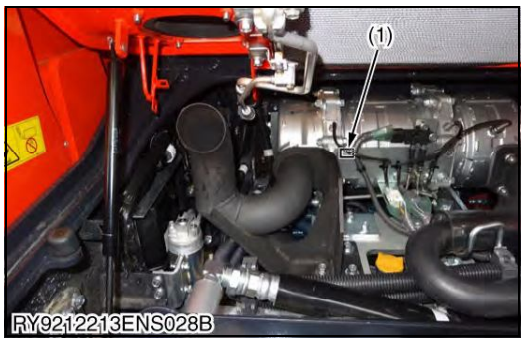
You can see the cylinder numbers of KUBOTA diesel engine in the figure.

The sequence of cylinder numbers is No.1, No.2, No.3 and No.4 and it starts from the front cover side.

RY9212134GEG0005US0

3. MUFFLER FULL ASSEMBLY IDENTIFICATION

[1] PART NUMBER AND SERIAL NUMBER



Diesel Particulate Filter (hereinafter referred to as the "DPF") Muffler Full Assembly Serial Number

The DPF muffler full assembly serial number is an identified number for the DPF muffler full assembly.

It shows the month and year of manufacture as below.

Year of manufacture

Alphabet or Number	Year	Alphabet or Number	Year
1	2001	F	2015
2	2002	G	2016
3	2003	H	2017
4	2004	J	2018
5	2005	K	2019
6	2006	L	2020
7	2007	M	2021
8	2008	N	2022
9	2009	P	2023
A	2010	R	2024
B	2011	S	2025
C	2012	T	2026
D	2013	V	2027
E	2014		

Month of manufacture

Month	DPF Muffler Full Assembly Lot Number	
January	A0001 ~ A9999	B0001 ~ BZ999
February	C0001 ~ C9999	D0001 ~ DZ999
March	E0001 ~ E9999	F0001 ~ FZ999
April	G0001 ~ G9999	H0001 ~ HZ999
May	J0001 ~ J9999	K0001 ~ KZ999
June	L0001 ~ L9999	M0001 ~ MZ999
July	N0001 ~ N9999	P0001 ~ PZ999
August	Q0001 ~ Q9999	R0001 ~ RZ999
September	S0001 ~ S9999	T0001 ~ TZ999
October	U0001 ~ U9999	V0001 ~ VZ999
November	W0001 ~ W9999	X0001 ~ XZ999
December	Y0001 ~ Y9999	Z0001 ~ ZZ999

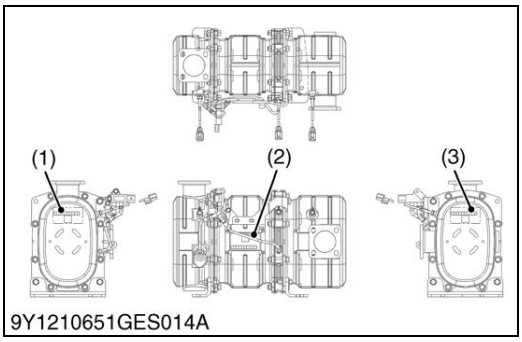
* Alphabetical letters "I" and "O" are not used.

(a)(b) (c)
e.g. CW0180

(1) DPF Muffler Full Assembly Part Number and Serial Number

(a) Year: C indicates 2012
(b) Month: W or X indicates November
(c) Lot Number: (**0001 ~ 9999** or **A001 ~ Z999**)

RY9212213GEG0004US0



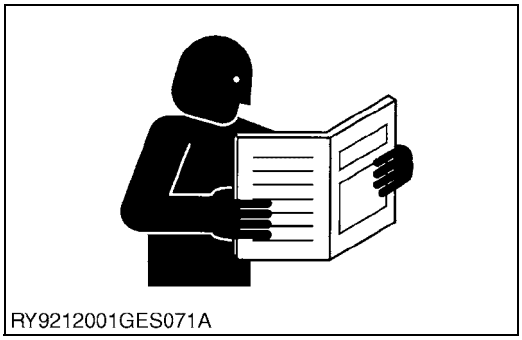
9Y1210651GES014A

You must keep the records of the filter comp (DPF) part number and serial number before you remove the DPF for cleaning.

(1) Body (DPF Outlet) Part Number and Serial Number
(2) Filter Comp (DPF) Part Number and Serial Number
(3) Catalyst (DOC) Part Number and Serial Number

RY9212134GEG0006US0

4. GENERAL PRECAUTIONS


RY9212001GES071A

Whenever performing maintenance on the machine, always read the Safety Precautions in this manual and the Operator's Manual carefully, become familiar with them and perform the work safely.

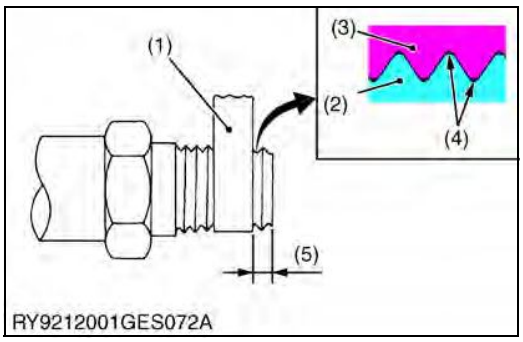
Before performing any maintenance on the machine, make sure it is sufficiently clean and choose a sufficiently clean location to perform any disassembly.

Before performing maintenance on the machine, always disconnect the negative battery cable first.

Whenever a special tool is required, use the special tool that KUBOTA recommends. Make any special tools that are not used very frequently according to the diagrams in this manual.

Always use genuine KUBOTA parts to maintain the performance and safety characteristics of the machine.

RY9212001GEG0011US0



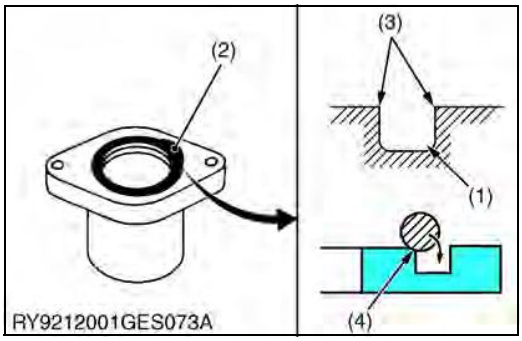
RY9212001GES072A

Plumber's Tape

- Wrap plumber's tape on the threads before tightening taper couplings. After wrapping (2 wraps) the plumber's tape, tighten to the specified torque. Once the coupling is tightened, do not loosen it as this will cause an oil leak.

(1) Plumber's Tape
(2) External Thread
(3) Internal Thread
(4) Gap
(5) Leave 1 to 2 Threads

RY9212001GEG0012US0



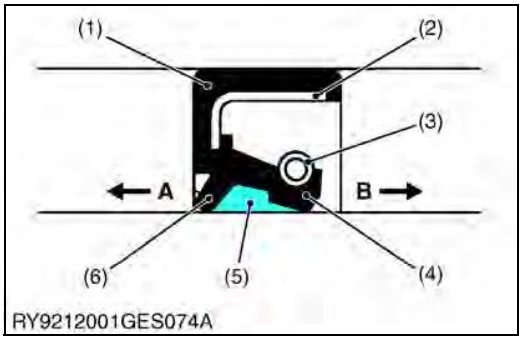
RY9212001GES073A

O-Ring

- Clean the groove the O-ring goes in and remove any burrs. Apply grease on the O-ring when inserting it in the groove (Except floating seals).
- When putting the O-ring in the groove, be careful as it is easy at the very end to twist the O-ring against the inside of the groove. If it gets twisted, roll it gently with your fingertip to untwist it.

(1) O-Ring Groove
(2) O-Ring
(3) Check for Burrs
(4) If the Ring Touches This Corner, It Will Twist

RY9212001GEG0013US0



RY9212001GES074A

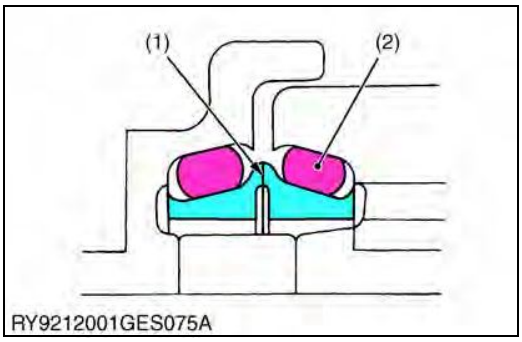
Oil Seal

- Do not face the lip of the oil seal in the wrong direction. Face the main lip toward the material to be sealed.
- After oil seals are replaced, apply grease to the moving parts around the lip to prevent the dry surfaces from wearing against each other when the engine is started. If the seal has a dust lip, fill the gap between the lips with grease.
- As a general rule, use a press to insert the oil seal in place. If that is not possible, use an appropriate tool to gently and evenly tap it into place, taking care that it does not go in at a slant. Press the seal all the way so it seats in the boss.

(1) Gasket
(2) Metal Ring
(3) Spring
(4) Main Lip
(5) Grease
(6) Dust Lip

A : Air (Outside)
B : Hydraulic Chamber (Inside)

RY9212001GEG0014US0

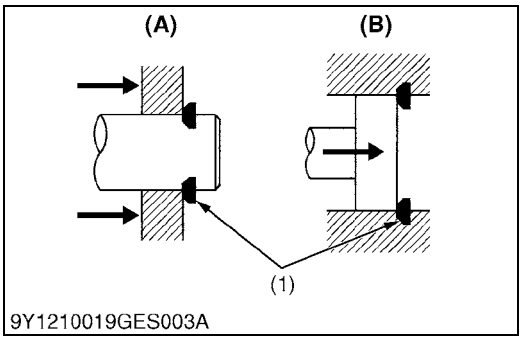


Floating Seal

- Be sure to wipe off any oil from the O-ring or surfaces that touch the O-ring (For wheel motors, apply a light film).
- When putting an O-ring into a floating seal, make sure the O-ring does not twist.
- Apply a light film of oil to surrounding surfaces when working to get the floating seal with O-ring in place; take care that the surrounding surfaces, O-ring and housing are parallel with each other.
- After getting the seal in place, turn the engine over 2 or 3 revolutions, to both create a film of oil on surrounding surfaces and to properly seat the face of the seal.

(1) Surrounding Surfaces
(2) O-Ring

RY9212001GEG0015US0

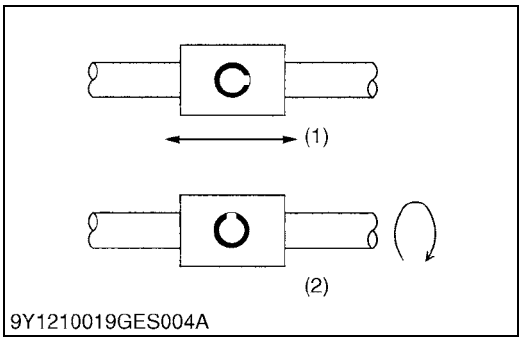


Snap Ring Related

- When installing external or internal snap rings, orient them as shown in the diagram so the angled side faces the direction of force.

(1) Position so the Angled Part Receives the Force
(A) External
(B) Internal

RY9212001GEG0016US0

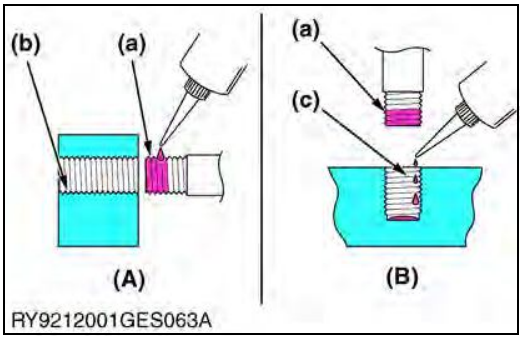


Spring Pins

- When driving a spring pin, face the split in the direction that receives the force, as shown in the diagram.

(1) With Lateral Movement
(2) With Rotational Movement

RY9212001GEG0017US0



Adhesive

- Clean and dry the area where adhesive will be applied with a solvent so it is free of moisture, oil and dirt.
- Apply adhesive all around the threads of the bolt except the first set of threads at the tip and fill the grooves between the threads. If the threads or the grooves are large, adjust the amount of adhesive accordingly and apply it all around the bolt hole as well.

(A) Bolt Through-Hole (Nut)
(B) Pocket Bolt Hold (Capsule Shape, etc.)
(a) Apply Here
(b) Do Not Apply
(c) Drip On

RY9212001GEG0018US0