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WSM

WORKSHOP MANUAL
TRACTOR,
FRONT LOADER,BACKHOE

B26,TL500,BT820

Kubota

KiSC issued 05, 2021 A

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TO THE READER

This Workshop Manual has been prepared to provide servicing personnel with information on the mechanism, service and maintenance of KUBOTA Tractor BX26, KUBOTA Front Loader TL500 and KUBOTA backhoe BT820. It is divided into three parts, “General”, “Mechanism” and “Servicing” for each section.

■ **General**

Information on the tractor identification, the general precautions, maintenance check list, check and maintenance and special tools are described.

■ **Mechanism**

Information on the construction and function are included. This part should be understood before proceeding with troubleshooting, disassembling and servicing.

Refer to Diesel Engine / Tractor Mechanism Workshop Manual (Code No. 9Y021-01874 / 9Y021-18201) for the one which has not been described to this workshop manual.

■ **Servicing**

Information on the troubleshooting, servicing specification lists, tightening torque, checking and adjusting, disassembling and assembling and servicing which cover procedures, precautions, factory specifications and allowable limits.

All information illustrations and specifications contained in this manual are based on the latest product information available at the time of publication.

The right is reserved to make changes in all information at any time without notice.

January 2007

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Record of Revisions

For pdf, use search function {Search word} to find all the revised locations.

Last digit of the Code No.	Month of Revision	Main Revised Point and Corrective Measures {Search word}	Reference Page
4	2017.06	Revised the contents of safety decals	9-1, 9-2
5	2018.08	Changed the SAFETY DECALS.	4 to 7
		Changed the SPECIFICATIONS.	8
		Added the [2] ENGINE MODEL IDENTICATION.	G-2 to G-3
		Added the [4] E4 ENGINE.	G-5
		Changed the LUBRICANTS, FUEL AND COOLANT.	G-11 to G-14
		Changed the MAINTENANC INTERVALS.	G-19
6	2019.01	Changed the SAFETY DECALS.	5, 7
		Changed and added description the Biodiesel Fuel (BDF).	G-13, G-19
7	2019.03	Changed information about the engine specifications.	8
8	2020.07	Changed the SAFETY DECALS.	4, 6, 7
		Added adjustment of spill guard cable.	9-S13
9	2021.05	Correcting lift arm free play.	7-S3, 7-S10

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.

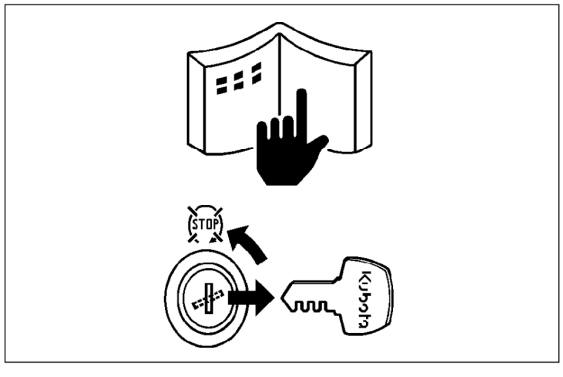
DANGER : Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

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.

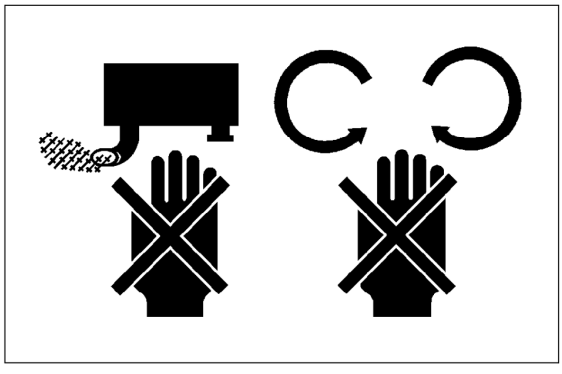


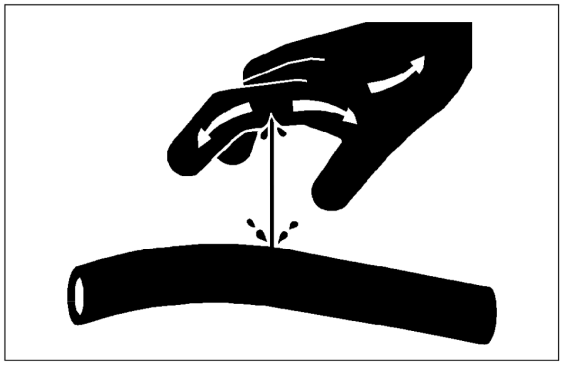
BEFORE SERVICING AND REPAIRING

- 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 firm and level ground, and set the parking brake.
- Lower the implement to the ground.
- Stop the engine, and remove the key.
- Disconnect the battery negative cable.
- Hang a "**DO NOT OPERATE**" tag in operator station.

SAFETY STARTING

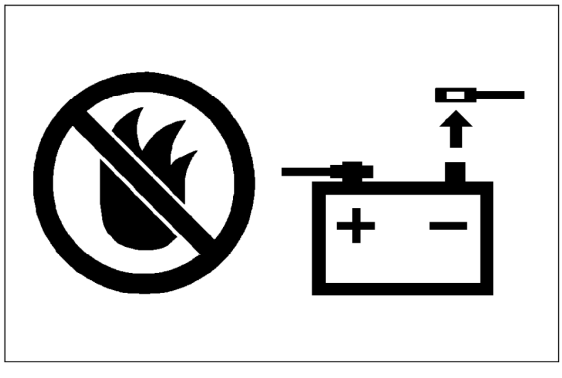
- Do not start the engine by shorting across starter terminals or bypassing the safety start switch.
- Do not alter or remove any part of machine safety system.
- Before starting the engine, make sure that all shift levers are in neutral positions or in disengaged positions.
- Never start the engine while standing on ground. Start the engine only from operator's seat.





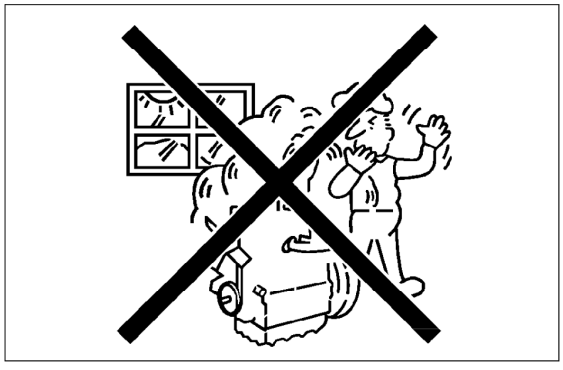
SAFETY WORKING

- Do not work on the machine while under the influence of alcohol, medication, or other substances or while fatigued.
- Wear close fitting clothing and safety equipment appropriate to the job.
- Use tools appropriate to the work. Makeshift tools, parts, and procedures are not recommended.
- When servicing is performed together by two or more persons, take care to perform all work safely.
- Do not work under the machine that is supported solely by a jack. Always support the machine by safety stands.
- Do not touch the rotating or hot parts while the engine is running.
- Never remove the radiator cap while the engine is running, or immediately after stopping. Otherwise, hot water will spout out from radiator. Only remove radiator cap when cool enough to touch with bare hands. Slowly loosen the cap to first stop to relieve pressure before removing completely.
- Escaping fluid (fuel or hydraulic oil) under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or fuel lines. Tighten all connections before applying pressure.



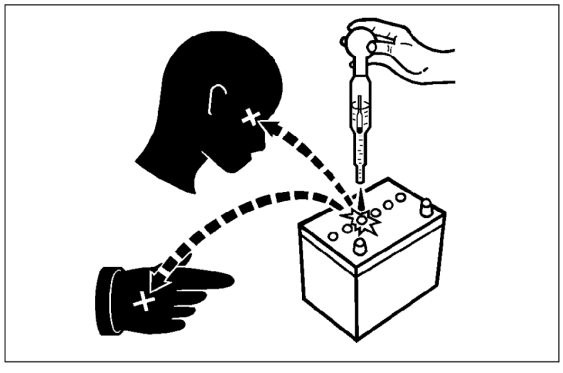
AVOID FIRES

- Fuel is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.
- To avoid sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- Battery gas can explode. Keep sparks and open flame away from the top of battery, especially when charging the battery.
- Make sure that no fuel has been spilled on the engine.



VENTILATE WORK AREA

- If the engine must be running to do some work, make sure the area is well ventilated. Never run the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.

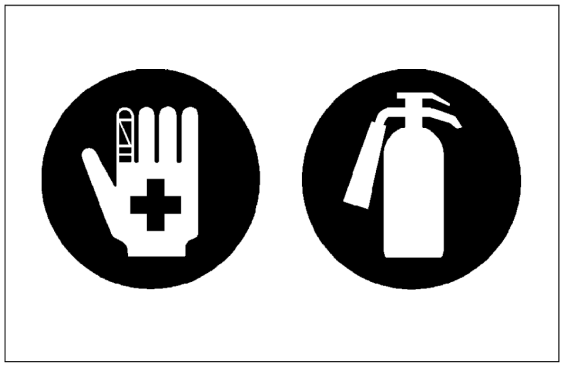


PREVENT ACID BURNS

- Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, clothing and cause blindness if splashed into eyes. Keep electrolyte away from eyes, hands and clothing. If you spill electrolyte on yourself, flush with water, and get medical attention immediately.

DISPOSE OF FLUIDS PROPERLY

- Do not pour fluids into the ground, down a drain, or into a stream, pond, or lake. Observe relevant environmental protection regulations when disposing of oil, fuel, coolant, electrolyte and other harmful waste.



PREPARE FOR EMERGENCIES

- Keep a first aid kit and fire extinguisher handy at all times.
- Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.

SAFETY DECALS

The following safety decals are installed on the machine.
If a decal becomes damaged, illegible or is not on the machine, replace it. The decal part number is listed in the parts list.

(1) Part No. 6C430-4742-1

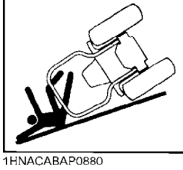
⚠CAUTION

TO AVOID PERSONAL INJURY:
1. Read and understand the operator's manual before operation.
2. Before starting the engine, make sure that everyone is at a safe distance from the tractor and that the PTO is OFF.
3. Do not allow passengers on the tractor at any time.
4. Before allowing other people to use the tractor, have them read the operator's manual.
5. Check the tightness of all nuts and bolts regularly.
6. Keep all shields in place and stay away from all moving parts.
7. Lock the two brake pedals together before driving on the road.
8. Slow down for turns, or rough roads, or when applying individual brakes.
9. On public roads use SMV emblem and hazard lights, if required by local traffic and safety regulations.
10. Pull only from the drawbar.
11. Before dismounting, lower the implement to the ground, set the parking brake, stop the engine and remove the key.
12. Securely support tractor and implements before working underneath.

1AGAEBMAP068E

(2) Part No. 32771-4925-1

⚠ WARNING



TO AVOID PERSONAL INJURY OR DEATH FROM ROLL-OVER :
1. Kubota recommends the use of a Roll-Over Protective structures (ROPS) and seat belt in almost all applications.
2. To ensure ROPS protection. do not operate tractor without loader mainframe.
3. Never use just the seat belt or just the ROPS. They must be used together. For further details. consult your Operator's Manual or your local dealer.

1HNACABAP0880

(3) Part No. 6C410-4743-1

⚠WARNING

BEFORE DISMOUNTING TRACTOR:
1. **ALWAYS SET PARKING BRAKE.**
   Leaving transmission in gear with the engine stopped will not prevent tractor from rolling.
2. **PARK ON LEVEL GROUND WHENEVER POSSIBLE.**
   If parking on a slope, position tractor across the slope.
3. **LOWER ALL IMPLEMENTS TO THE GROUND.**
4. **STOP THE ENGINE.**

1AGAEBMAP069E

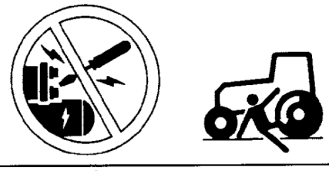
(4) Part No. 32741-4751-1

⚠CAUTION

TO AVOID PERSONAL INJURY:
BEFORE STARTING THE ENGINE
1. Make sure the parking brake is set.
2. Make sure the range gear shift lever (L-M-H) is in "NEUTRAL" position.

1HNABABAP065E

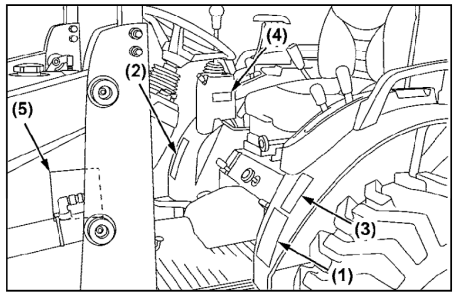
(5) Part No. 6C090-4965-1



⚠ DANGER

TO AVOID POSSIBLE INJURY OR DEATH FROM A MACHINE RUNAWAY.
1. Do not start engine by shorting across starter terminals or bypassing the safety start switch. Machine may start in gear and move if normal starting circuitry is bypassed.
2. Start engine only from operator s seat with transmission and PTO OFF.
   Never start engine while standing on the ground.

1AGAEBMAP074E



9Y1210004ICI008US

(1) Part No. 6C200-4959-1

(2) Part No. 6C392-3014-2

1AGAECHAP067A

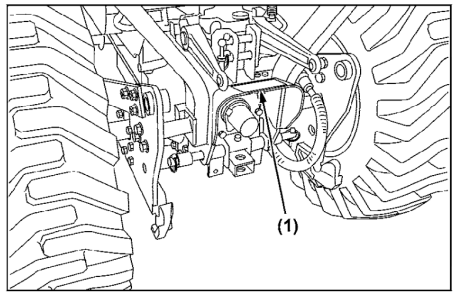
(3) Part No. TC420-4956-1

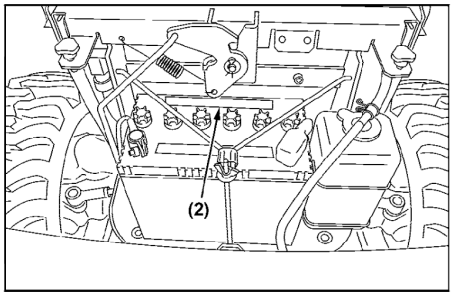
Diesel fuel only No fire

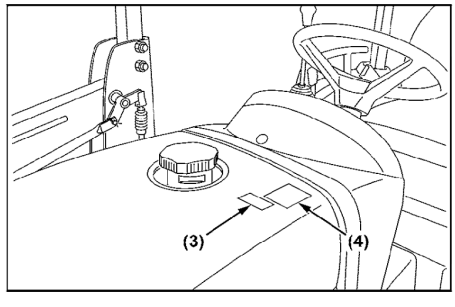
1AGAIDHAP154E

(4) Part No. 6C420-4744-1

1AGAIHFAP069A







9Y1210004ICI005US

(1) Part No. 32751-4921-2

⚠ WARNING

TO AVOID SERIOUS PERSONAL INJURY OR DEATH:

1. Keep tractor seat in forward position except when operating backhoe.
2. Using seat in reversed position while operating attachments other than backhoe may result in entanglement with PTO shaft or 3-point hitch.

1HNACABAP0770

(2) Part No. 6C430-4754-1

California Proposition 65

⚠ WARNING ⚠

Engine exhaust, some of its constituents, certain vehicle components and fluids, contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

1HNABABAP0720

(3) Part No. 6C830-4747-1

⚠WARNING

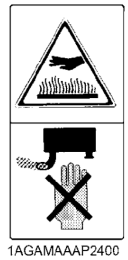
TO AVOID EXPOSURE TO DUST CONTAINING SILICA PARTICLES:

- This dust can cause serious injury to the lungs under some exposure levels.
- Be aware of and follow the OSHA (or other regulatory body) guidelines for exposure to airborne crystalline silica.
- To meet OSHA silica guidelines, use appropriate personal protective equipment and dust abatement systems, such as waterspray systems.

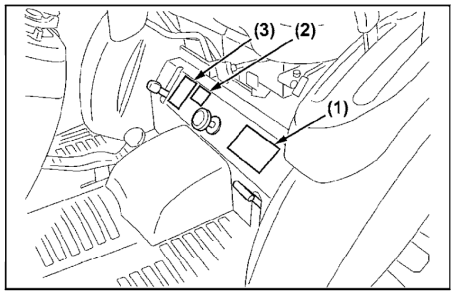
1AGAIJHAP177A

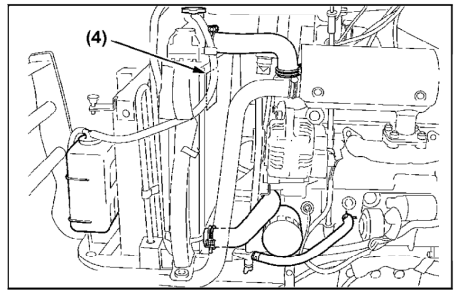
(4) Part No. TA040-4958-1

Do not touch hot surface like muffler, etc.



1AGAMAAAP2400





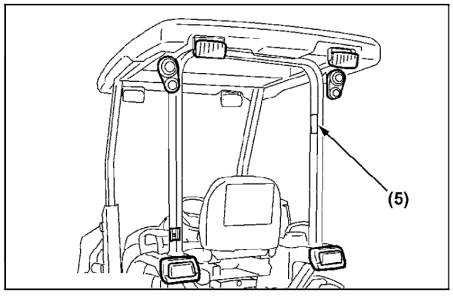
9Y1210004ICI009US

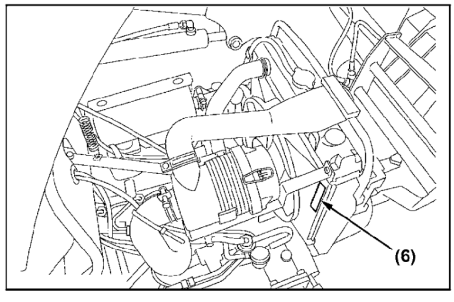
(5) Part No. 6C140-4746-1

1AGAMAAAP3870

(6) Part No. 32751-4958-1
Do not get your hands close to engine fan and fan belt.

1AGAMAAAP2620





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.
4. If a component with danger, warning and caution label(s) affixed is replaced with new part, make sure new label(s) is (are) attached in the same location(s) as the replace component.
5. Mount new danger, warning and caution labels by applying on a clean dry surface and pressing any bubbles to outside edge.

9Y1210004ICI010US

SPECIFICATIONS

Model			B26
			4WD
PTO power*			14.5 kW (19.5 HP)*
Engine	Maker		KUBOTA
	Model		D1105-E4-TLB-1
	Type		Indirect injection. Vertical, water-cooled 4-cycle diesel
	No. of cylinders		3
	Bore and stroke		ϕ 78 × 78.4 mm (ϕ 3.1 × 3.1 in.)
	Total displacement		1123 cm^3 (68.5 cu. in.)
	Rated engine HP (97/68/EC)		17.8 kW (23.8 HP) / 2800 min^{-1} (rpm)
	Rated revolution		2800 min^{-1} (rpm)
	Low idling revolution		1050 to 1150 min^{-1} (rpm)
	Maximum torque		77.6 N·m (57.2 lbf·ft)
	Battery		12 V, RC: 79 min., CCA: 433A
	Fuel		Diesel fuel No. 1 [below –10 °C (14 °F)], Diesel fuel No. 2 [above –10 °C (14 °F)]
Capacities	Fuel tank		31 L (8.1 U.S.gals, 6.8 Imp.gals)
	Engine crankcase (with filter)		3.0 L (3.2 U.S.qts, 2.6 Imp.qts)
	Engine coolant		4.5 L (4.7 U.S.qts, 4.0 Imp.qts)
	Transmission case (with oil tank)		26 L (6.9 U.S.gals, 5.7 Imp.gals)
Dimensions	Overall length (without 3P)		2557 mm (100.7 in.)
	Overall width (min. tread)		1365 mm (53.7 in.)
	Overall height (with canopy)		2273 mm (89.5 in.)
	Wheel base		1581 mm (62.2 in.)
	Min. ground clearance		350 mm (13.8 in.)
	Tread	Front	905 mm (35.6 in.)
		Rear	1050 mm (41.3 in.)
Weight (with ROPS and FOPS, main frame)			1182 kg (2606 lbs)
Clutch			N/A
Traveling system	Tires	Front	23 × 8.50-14
		Rear	12.4-16
	Steering		Hydrostatic type power steering
	Transmission		Main-hydrostatic transmission, 3 range gear shift (3 forward, 3 reverse)
	Brake		Wet disk type
	Min. turning radius (without brake)		2.5 m (8.2 feet)
Hydraulic unit	Hydraulic control system		Position control
	Pump capacity		3P: 26.3 L/min. (7.0 U.S.gals/min., 5.8 Imp.gals/min.) Power steering: 16.0 L/min. (4.2 U.S.gals/min., 3.5 Imp.gals/min.)
	Three point hitch		SAE Category 1
	Max. lift force	At lift points	970 kg (2139 lbs)
		24 in. behind lift point	760 kg (1676 lbs)
PTO	Rear PTO		SAE 1-3/8, 6 splines
	PTO / Engine speed		1 speed 540 min^{-1} (rpm) / 2768 min^{-1} (rpm)

NOTE: * Manufacture's estimate
The company reserves the right to change the specifications without notice.

W1028103

TRAVELLING SPEEDS

(At rated engine rpm)

Model		**B26**			
Tire size (Rear)		12.4-16 R4 IND		12.4-16 Farm	
	Range gear shift lever	km/h	mph	km/h	mph
Forward	Low	0 to 4.5	0 to 2.8	0 to 4.8	0 to 3.0
	Middle	0 to 8.4	0 to 5.2	0 to 8.9	0 to 5.5
	High	0 to 17.8	0 to 11.1	0 to 18.6	0 to 11.5
Reverse	Low	0 to 4.0	0 to 2.5	0 to 4.2	0 to 2.6
	Middle	0 to 7.4	0 to 4.6	0 to 7.9	0 to 4.9
	High	0 to 15.8	0 to 9.8	0 to 16.5	0 to 10.3

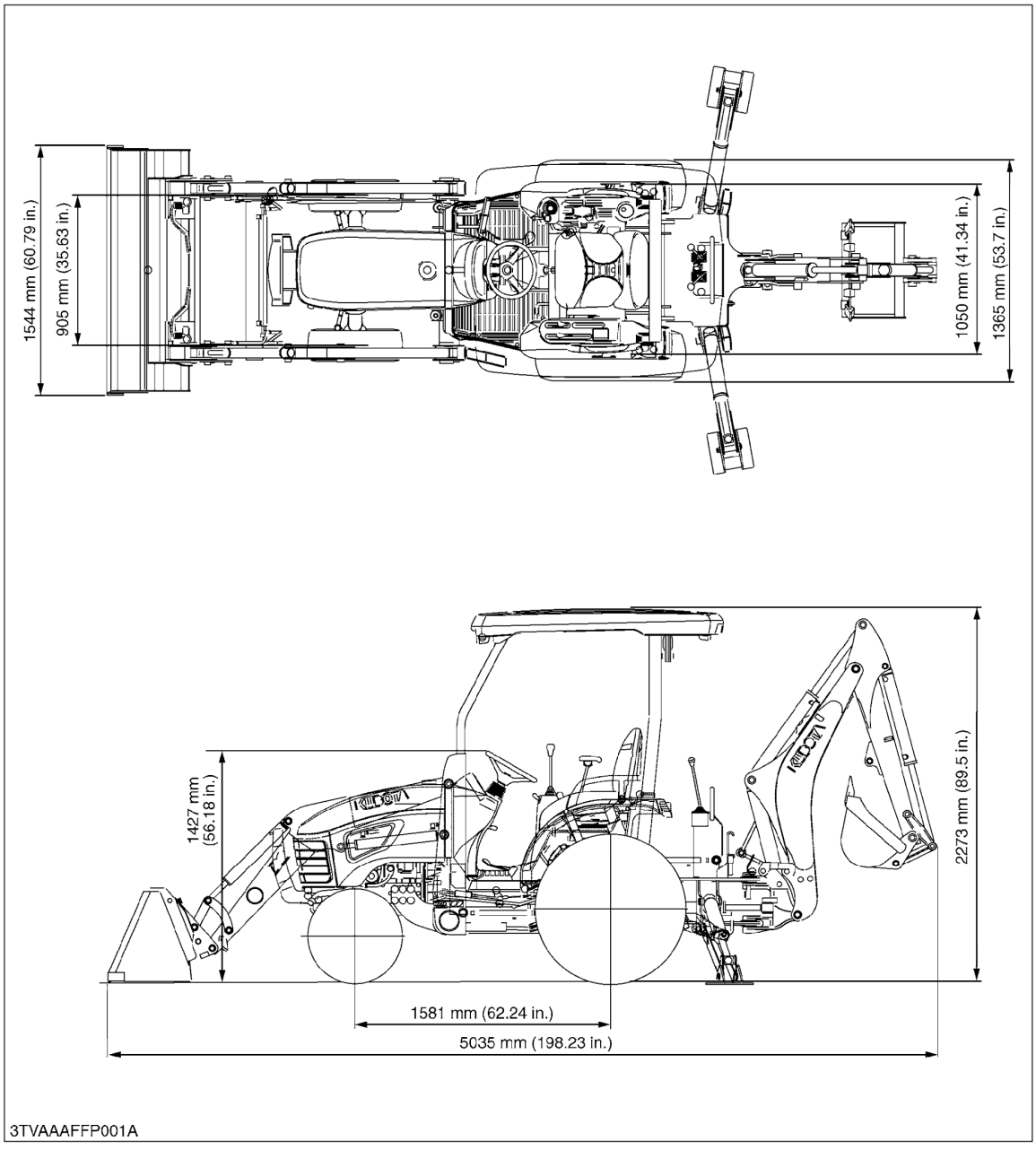
W1035065

Model		**B26**	
Tire size (Rear)		13.6-16 Turf	
	Range gear shift lever	km/h	mph
Forward	Low	0 to 4.9	0 to 3.1
	Middle	0 to 9.1	0 to 5.7
	High	0 to 19.0	0 to 11.8
Reverse	Low	0 to 4.3	0 to 2.7
	Middle	0 to 8.1	0 to 5.0
	High	0 to 16.9	0 to 10.5

The company reserves the right to change the specifications without notice.

W1030295

DIMENSIONS



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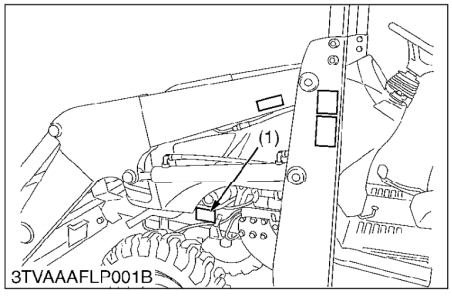
G GENERAL

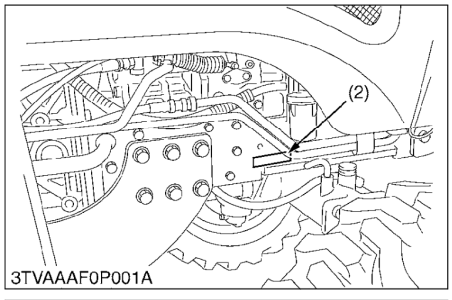
GENERAL

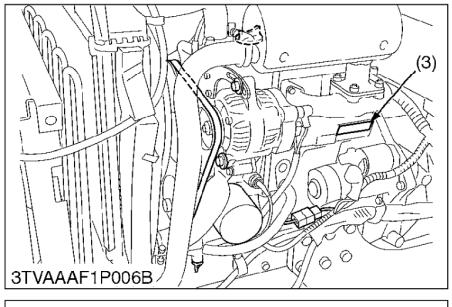
CONTENTS

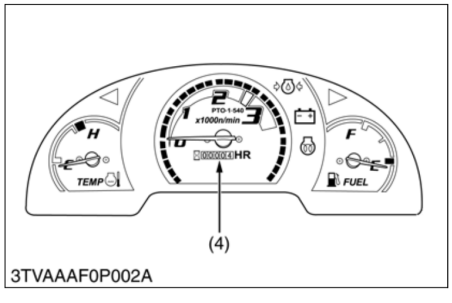
1. TRACTOR IDENTIFICATION

[1] MODEL NAME AND SERIAL NUMBERS







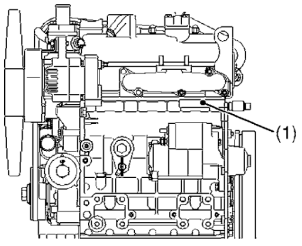


When contacting your local KUBOTA distributor, always specify engine serial number, tractor serial number and hour meter reading.

(1) Tractor Identification Plate
(2) Tractor Serial Number
(3) Engine Serial Number
(4) Hour Meter (IntelliPanel Display)

W10106000

[2] ENGINE MODEL IDENTIFICATION



3EEAEAC0P001C

The alpha numeric model number of each KUBOTA diesel engine has a definite meaning. Each letter and number provides some technical information about the engine.

The first alpha letter (E, Z, D, V, F, S) used in KUBOTA model number designates the number of cylinders in the engine. This method of naming comes from the German numbering system.

Alpha Letter	Number of Cylinders	Alpha Letter	Number of Cylinders
E	1	V	4
Z	2	F	5
D	3	S	6

The numerical portion of the model number denotes the approximate engine cubic centimeter displacement.

■ Engine Serial Number

The engine serial number is an identified number for the engine. It is marked after the engine model number.

New serial number has been applied since January, 1998.

It indicates month and year of manufacture as follows.

[Year of manufacture]

Alphabet or Number	Year	Alphabet or Number	Year
W	1998	D	2013
X	1999	E	2014
Y	2000	F	2015
1	2001	G	2016
2	2002	H	2017
3	2003	J	2018
4	2004	K	2019
5	2005	L	2020
6	2006	M	2021
7	2007	N	2022
8	2008	P	2023
9	2009	R	2024
A	2010	S	2025
B	2011	T	2026
C	2012	V	2027

(1) Engine Model Identification

(To be continued)

(Continued)

[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.

e.g. D1105 - 7 B A001

(a) (b)(c) (d)

(a) Engine Model Name: D1105
(b) Year: 7 indicates 2007
(c) Month: A or B indicates January
(d) Lot number: (0001 ~ 9999 or A001 ~ Z999)

W1108842

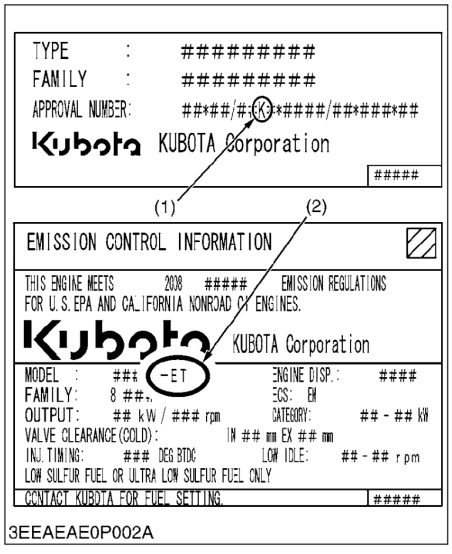
[3] E3 ENGINE

[Example: Engine Model Name D1105-E3B-XXX]

The emission controls previously implemented in various countries to prevent air pollution will be stepped up as Non-Road Emission Standards continue to change. The timing or applicable date of the specific Non-Road 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 Non-Road Emission regulations. For Kubota Engines, E3 will be the designation that identifies engine models affected by the next emission phase (See the table below).

When servicing or repairing ###-E3 series engines, use only replacement parts for that specific E3 engine, designated by the appropriate E3 Kubota Parts List and perform all maintenance services listed in the appropriate Kubota Operator's Manual or in the appropriate E3 Kubota Workshop Manual. Use of incorrect replacement parts or replacement parts from other emission level engines (for example: E2 engines), may result in emission levels out of compliance with the original E3 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. E3 engines are identified with "ET" at the end of the Model designation, on the US EPA label. Please note: E3 is not marked on the engine.



3EEAEAE0P002A

Category (1)	Engine output classification	EU regulation
K	From 19 to less than 37 kW	STAGE IIIA
J	From 37 to less than 75 kW	STAGE IIIA
I	From 75 to less than 130 kW	STAGE IIIA

Category (2)	Engine output classification	EPA regulation
ET	Less than 19 kW	Tier 4
	From 19 to less than 56 kW	Interim Tier 4
	From 56 to less than 75 kW	Tier 3
	From 75 to less than 130 kW	Tier 3

(1) EU regulation engine output classification category
(2) “E3” engines are identified with “ET” at the end of the Model designation, on the US EPA label.
“E3” designates Tier 3 and some Interim Tier 4 / Tier 4 models, depending on engine output classification.

W1031971

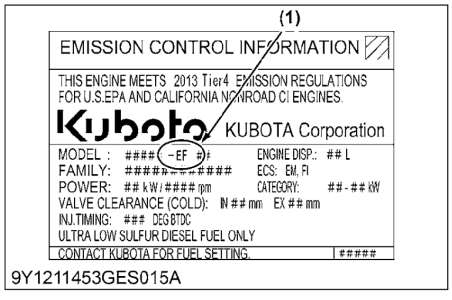
[4] E4B ENGINE

[Example: Engine Model Name D1105-E4B-XXX]

The emission controls previously implemented in various countries to prevent air pollution will be stepped up as Non-Road Emission Standards continue to change. The timing or applicable date of the specific Non-Road 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 Non-Road 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 E4B Kubota Parts List and perform all maintenance services listed in the appropriate Kubota Operator's Manual or in the appropriate E4B 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 EU regulations. Please refer to the emission label located on the engine head cover to identify Output classification and Emission Control Information.

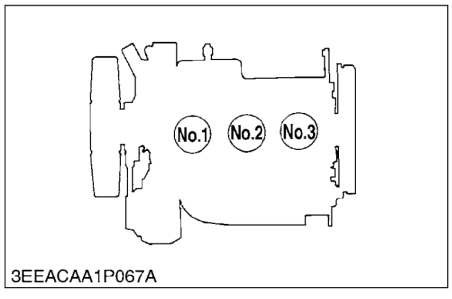


9Y1211453GES015A

Category	Engine output classification	EPA regulation
ET	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

(1) "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.

[5] CYLINDER NUMBER



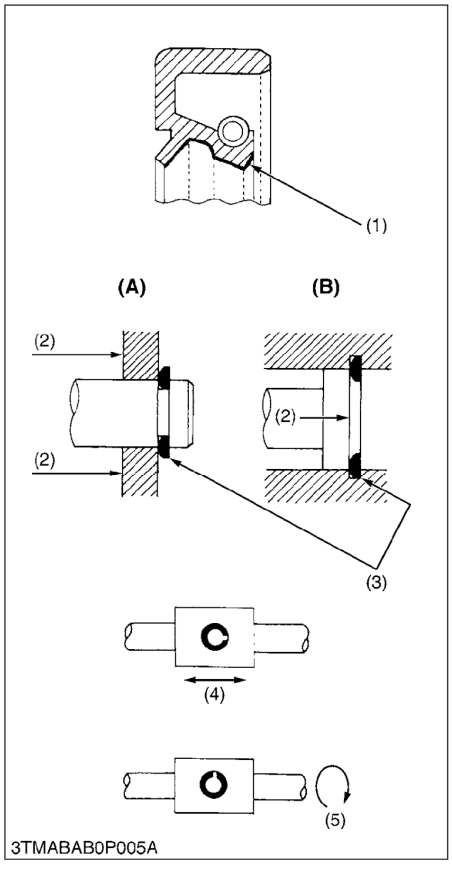
3EEACAA1P067A

The cylinder numbers of KUBOTA diesel engine are designated as shown in the figure.

The sequence of cylinder numbers is given as No.1, No.2 and No.3 starting from the gear case side.

W1011077

2. GENERAL PRECAUTIONS



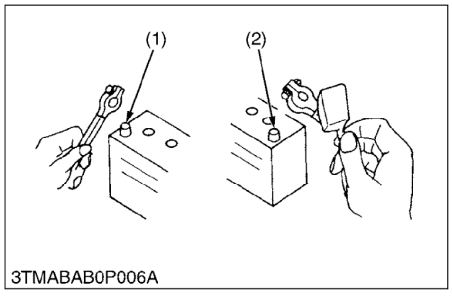
- During disassembly, carefully arrange removed parts in a clean area to prevent confusion later. Screws, bolts and nuts should be installed in their original position to prevent reassembly errors.
- When special tools are required, use KUBOTA genuine special tools. Special tools which are not frequently used should be made according to the drawings provided.
- Before disassembling or servicing electrical wires, always disconnect the ground cable from the battery first.
- Remove oil and dirt from parts before measuring.
- Use only KUBOTA genuine parts for parts replacement to maintain machine performance and to assure safety.
- Gaskets and O-rings must be replaced during reassembly. Apply grease to new O-rings or oil seals before assembling. See the figure left side.
- When reassembling external snap rings or internal snap rings, they must be positioned so that sharp edge faces against the direction from which a force is applied. See the figure left side.
- When inserting spring pins, their splits must face the direction from which a force is applied. See the figure left side.
- To prevent damage to the hydraulic system, use only specified fluid or equivalent.

(1) Grease
(2) Force
(3) Sharp Edge
(4) Axial Force
(5) Rotating Movement

(A) External Snap Ring
(B) Internal Snap Ring

W10109040

3. HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING



3TMABAB0P006A

To ensure safety and prevent damage to the machine and surrounding equipment, heed the following precautions in handling electrical parts and wiring.

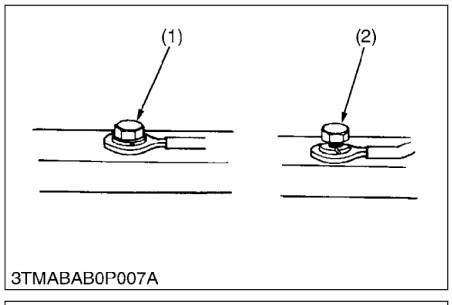
■ **IMPORTANT**

- **Check electrical wiring for damage and loosened connection every year. To this end, educate the customer to do his or her own check and at the same time recommend the dealer to perform periodic check for a fee.**
- **Do not attempt to modify or remodel any electrical parts and wiring.**
- **When removing the battery cables, disconnect the negative cable first. When installing the battery cables, connect the positive cable first.**

(1) Negative Terminal (2) Positive Terminal

W10111140

[1] WIRING

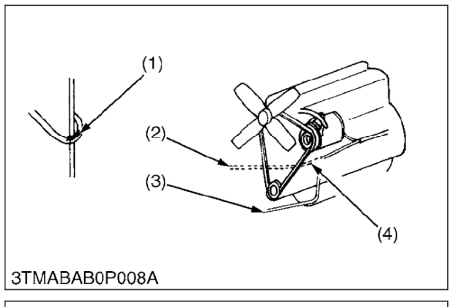


3TMABAB0P007A

- Securely tighten wiring terminals.

(1) Correct (Securely Tighten) (2) Incorrect (Loosening Leads to Faulty Contact)

W10112160

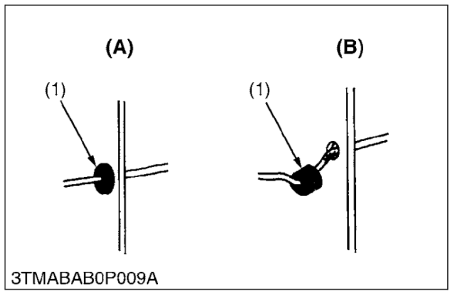


3TMABAB0P008A

- Do not let wiring contact dangerous part.

(1) Dangerous Part (3) Wiring (Correct)
(2) Wiring (Incorrect) (4) Dangerous Part

W10113130



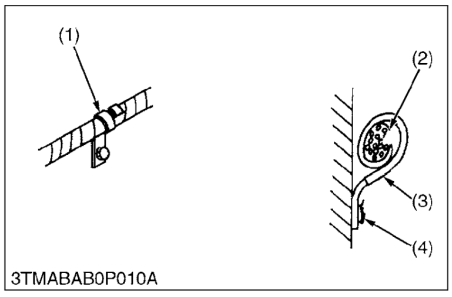
3TMABAB0P009A

- Securely insert grommet.

(1) Grommet

(A) Correct
(B) Incorrect

W10113880

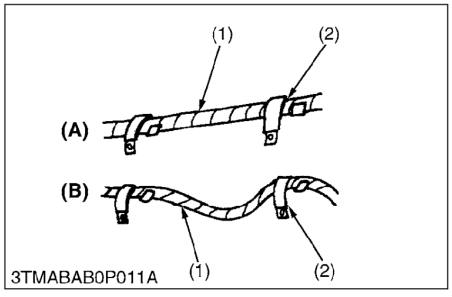


3TMABAB0P010A

- Securely clamp, being careful not to damage wiring.

(1) Clamp
• Wind Clamp Spirally
(2) Wire Harness
(3) Clamp
(4) Welding Dent

W10114580

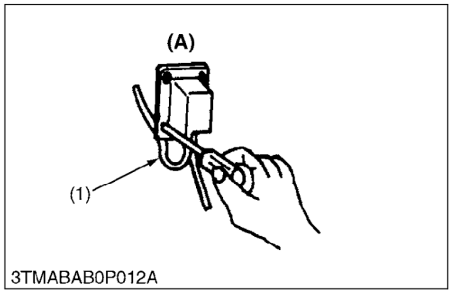


3TMABAB0P011A

- Clamp wiring so that there is no twist, unnecessary sag, or excessive tension, except for movable part, where sag be required.

(1) Wiring
(2) Clamp
(A) Correct
(B) Incorrect

W10115870

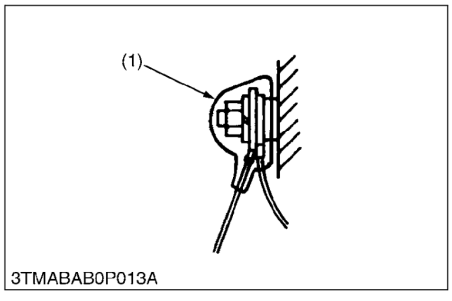


3TMABAB0P012A

- In installing a part, take care not to get wiring caught by it.

(1) Wiring
(A) Incorrect

W10116700



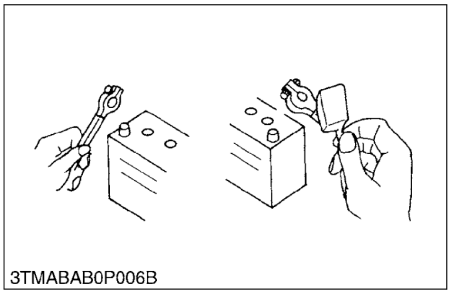
3TMABAB0P013A

- After installing wiring, check protection of terminals and clamped condition of wiring, only connect battery.

(1) Cover
• Securely Install Cover

W10117350

[2] BATTERY


3TMABAB0P006B

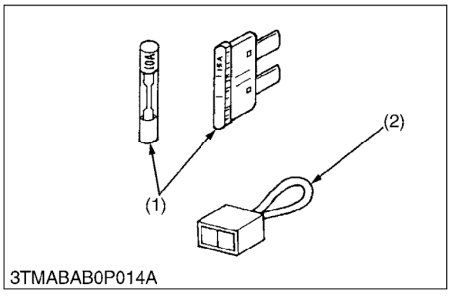
- Take care not to confuse positive and negative terminal posts.
- When removing battery cables, disconnect negative cable first. When installing battery cables, check for polarity and connect positive cable first.
- Do not install any battery with capacity other than is specified (Ah).
- After connecting cables to battery terminal posts, apply high temperature grease to them and securely install terminal covers on them.
- Do not allow dirt and dust to collect on battery.

CAUTION

- **Take care not to let battery liquid spill on your skin and clothes. If contaminated, wash it off with water immediately.**
- **Before recharging the battery, remove it from the machine.**
- **Before recharging, remove cell caps.**
- **Do recharging in a well-ventilated place where there is no open flame nearby, as hydrogen gas and oxygen are formed.**

W10118160

[3] FUSE



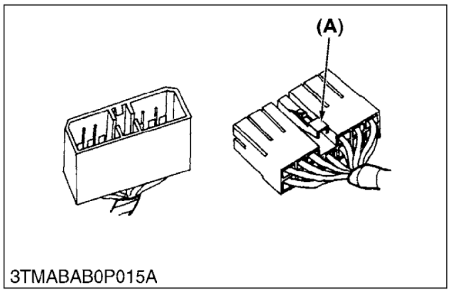
3TMABAB0P014A

- Use fuses with specified capacity.
  Neither too large or small capacity fuse is acceptable.
- Never use steel or copper wire in place of fuse.
- Do not install working light, radio set, etc. on machine which is not provided with reserve power supply.
- Do not install accessories if fuse capacity of reserve power supply is exceeded.

(1) Fuse (2) Slow Blow Fuse

W10120920

[4] CONNECTOR

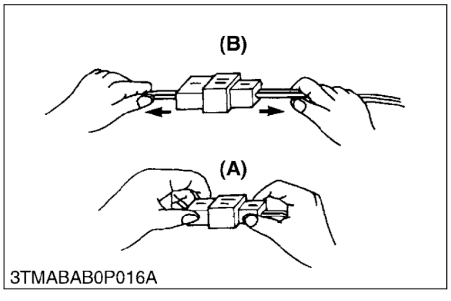


3TMABAB0P015A

- For connector with lock, push lock to separate.

(A) Push

W10122110

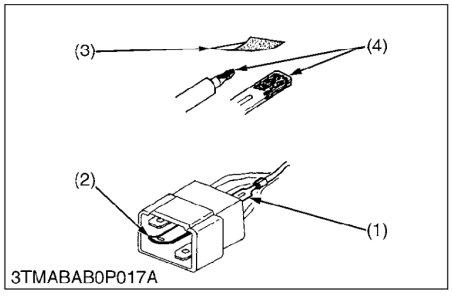


3TMABAB0P016A

- In separating connectors, do not pull wire harnesses.
- Hold connector bodies to separate.

(A) Correct **(B) Incorrect**

W10122720

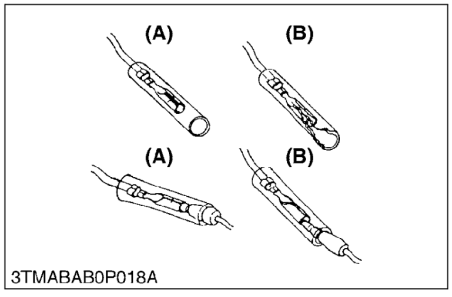


3TMABAB0P017A

- Use sandpaper to remove rust from terminals.
- Repair deformed terminal. Make certain there is no terminal being exposed or displaced.

(1) Exposed Terminal
(2) Deformed Terminal
(3) Sandpaper
(4) Rust

W10123460

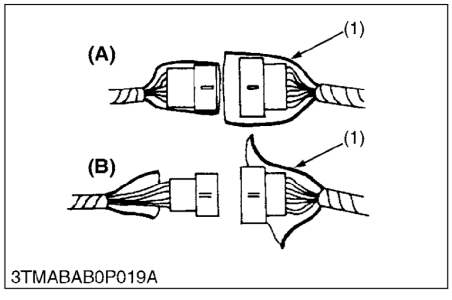


3TMABAB0P018A

- Make certain that there is no female connector being too open.

(A) Correct
(B) Incorrect

W10124300



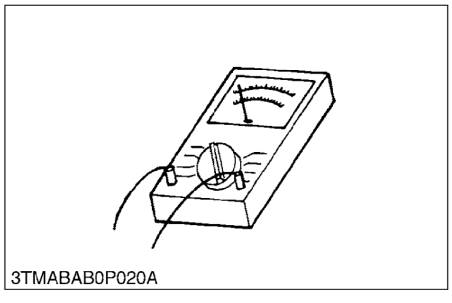
3TMABAB0P019A

- Make certain plastic cover is large enough to cover whole connector.

(1) Cover
(A) Correct
(B) Incorrect

W10125190

[5] HANDLING OF CIRCUIT TESTER


3TMABAB0P020A

- Use tester correctly following manual provided with tester.
- Check for polarity and range.

W10126840

4. LUBRICANTS, FUEL AND COOLANT

	Place	Capacity	Grade
		B26	
1	Fuel	31 L 8.1 U.S.gals 6.8 Imp.gals	No. 2-D diesel fuel No. 1-D diesel fuel if temperature is below –10 °C (14 °F)
2	Coolant (with recovery tank)	4.5 L 4.7 U.S.qts 4.0 Imp.qts	Fresh clean soft water with anti-freeze
3	Engine crankcase (with filter)	3.0 L 3.2 U.S.qts 2.6 Imp.qts	Engine oil: API Service Classification CF or better • Below –10 °C (14 °F): SAE10W-30 • –10 to 25 °C (14 to 77 °F): SAE20, 10W-30 or 15W-40 • Above 25 °C (77 °F): SAE30, 10W-30 or 15W-40
4	Transmission case (with oil tank)	26 L 6.9 U.S.gals 5.7 Imp.gals	KUBOTA SUPER UDT-2 fluid
5	Front axle case	4.7 L 5.0 U.S.qts 4.1 Imp.qts	KUBOTA SUPER UDT-2 fluid or SAE80 - SAE90 gear oil

Greasing

	Place	No. of greasing point	Capacity	Type of grease
6	Top link	1	Until grease overflows	Multipurpose type grease NLGI-2 or NLGI-1 (GC-L8)
	Left rod (RH)	1		
	Speed control pedal	1		
	Battery terminal	2	Moderate amount	
	Suspension adjuster	–		
	Lock plate	–		
	Spring hook	–		
	Reversible seat	–		

■ **NOTE**

- **The product name of KUBOTA genuine UDT fluid may be different from that in the Operator's Manual depending on countries or territories.**

■ **NOTE**

Engine Oil:

- Oil used in the engine should have an American Petroleum Institute (API) service classification and Proper SAE Engine Oil according to the ambient temperatures as shown above:
- Refer to the following table for the suitable API classification engine oil according to the engine type (with internal EGR, external EGR or non-EGR) and the fuel.

Fuel used	Engine oil classification (API classification)	
	Oil class of engines except external EGR*	Oil class of engines with external EGR*
Ultra Low Sulfur Fuel [< 0.0015 % (15 ppm)]	**CF**, **CF-4**, **CG-4**, **CH-4** or **CI-4**	**CF** or **CI-4** (Class **CF-4**, **CG-4** and **CH-4** engine oils cannot be used on EGR type engines)

*EGR: Exhaust Gas Re-circulation

- The CJ-4 engine oil is intended for DPF (Diesel Particulate Filter) type engines, and cannot be used on this tractor.

	Except external EGR	With external EGR
Model	B26TL	–

Fuel:

- Cetane number of 45 is minimum. Cetane number greater than 50 is preferred, especially for temperatures below –20 °C (–4 °F) or elevations above 1500 m (5000 ft).
- Diesel fuels specified to EN 590 or ASTM D975 are recommended.
- No.2-D is a distillate fuel of lower volatility for engines in industrial and heavy mobile service. (SAE J313 JUN87)

Transmission Oil:

*KUBOTA Super UDT-2: For an enhanced ownership experience, we highly recommend Super UDT-2 to be used instead of standard hydraulic/transmission fluid.

Super UDT-2 is a proprietary KUBOTA formulation that delivers superior performance and protection in all operating conditions.

Regular UDT is also permitted for use in this machine.

- Indicated capacities of water and oil are manufacturer's estimate.

■ Biodiesel Fuel (BDF)

B0-B20 Biodiesel fuels (BDF): mixed diesel fuels containing 20 % or less biodiesel can be utilized under the following conditions.

■ IMPORTANT

- **Refueling and handling fuel should be done with caution in order to avoid contact with the fuel and spillage that could create a potential environmental or fire hazard. Wear appropriate protective equipment when refueling.**

Applicable BDF:

1. Blended diesel fuels containing 6 % through 20 % BDF (B6 - B20) which comply with American Society for Testing and Materials (ASTM) D7467 Standard, as revised, can be used without adversely affecting the performance and durability of the engine and fuel system components.
2. Any mineral oil diesel fuel, if used, must conform to ASTM D975 (or the European EN590) Standard, as revised.
   B100 fuel used to make Biodiesel blended fuels must meet ASTM D6751 (or EN14214) Standard, as revised.
   The final blended fuel B20 must conform to ASTM D7467 Standard, as revised.
   Straight vegetable oil is NOT allowed in any blended fuel.
3. Allowable blended fuel is mineral oil diesel fuel blended with B100 (i.e. 100 % BDF).
   The blended fuel ratio shall be less than 20 % B100 and 80 % or more diesel fuel.
   The B100 source used for Biodiesel blends must be purchased from an accredited BQ-9000 marketer or producer.
   More information about qualified marketer(s) and producer(s) can be found at http://www.bq-9000.org .

Preparation:

1. Before using BDF concentrations greater than B5, you are advised to replace the engine oil, engine oil filter and fuel filter with new oil and filters. For replacement procedures, refer to the "PERIODIC SERVICE" section.

Product Warranty, Emission and Other Precautions:

1. The engine emission control system was certified according to current regulations based on the use of non-BDF. When using BDF, the owner is advised to check applicable local and federal emission regulations and comply with all of them.
2. BDF may cause restricted or clogged fuel filters during cold weather conditions, resulting in the engine not operating properly.
3. BDF encourages the growth of microorganisms which may cause degradation of the fuel.
   This in turn may cause fuel line corrosion or reduce fuel filter flow earlier than expected.
4. BDF inherently absorbs moisture which may cause degradation of the fuel earlier than expected.
   To avoid this, drain the water separator and fuel filter port often.
5. Do not use Biodiesel concentrations higher than 20 % (i.e. greater than B20).
   Engine performance and fuel consumption will be affected, and degradation of the fuel system components may occur.
6. Do not readjust the engine fuel control system as this will violate emission control levels for which the equipment was approved.
7. Compared with soybean-based and rapeseed-based feedstock, palm oil-based feedstock has a thicker consistency (i.e. higher viscosity) at lower temperatures.
   Consequently, fuel filter performance may be reduced, particularly during cold weather conditions.
8. The KUBOTA Warranty, as specified in the Owner's Warranty Information Guide, only covers defects in product materials and workmanship. Accordingly, any problems that may arise due to the use of poor quality fuels that fail to meet the above requirements, whether biodiesel or mineral oil based, are not covered by the KUBOTA Warranty.

Routine handling:

1. Avoid spilling BDF onto painted surfaces as this may damage the finish.
   If fuel is spilled immediately wipe clean and flush with soapy water to avoid permanent damage.
2. When using BDF, you are advised to maintain a full tank of fuel, especially overnight and during short term storage, to reduce condensation within the tank. Be sure to tighten the fuel cap after refueling to prevent moisture build up within the tank. Water in the Biodiesel mixture will damage fuel filters and may damage engine components.

(To be continued)

(Continued)

Maintenance Requirements when using BDF B0 through B5:

Follow the oil change intervals recommended by referring to the "MAINTENANCE" section. Extended oil change intervals may result in premature wear or engine damage.

Maintenance Requirements when using BDF B6 through B20:

The maintenance interval for fuel related parts changes.

See the table below for the new maintenance interval.

Items		Interval	Remarks
Fuel filter	Replace	every 200 Hr	
Fuel line	Check	every 6 months	Replace if any deterioration (crack, hardening, scar or deformation) or damage occurred.
	Replace	every 2 years	

Long Term Storage:

1. BDF easily deteriorates due to oxygen, water, heat and foreign substances.
   Do not store B6 through B20 longer than 1 month and B5 longer than 3 months.
2. When using B6 through B20 and storing the machine longer than 1 month, drain the fuel from the tanks and replace with light mineral oil diesel fuel.
   Subsequently, run the engine at least 30 minutes to remove all of the Biodiesel from the fuel lines.
3. When using B5 fuel and storing machine longer than 3 months, drain the fuel from the tanks and replace with light mineral oil diesel fuel.
   Subsequently, run the engine at least 30 minutes to remove all of the Biodiesel from the fuel lines.

Product: Kubota B26 TL500 BT820 Service Manual
Full Download: https://www.arepairmanual.com/downloads/kubota-b26-tl500-bt820-service-manual/

5. TIGHTENING TORQUES

[1] GENERAL USE SCREWS, BOLTS AND NUTS

Screws, bolts, and nuts whose tightening torques are not specified in this Workshop Manual should be tightened according to the table below.

Indication on top of bolt	⬡ 4 No-grade or 4T						⬡ 7 7T						⬡ 9 9T		
Material of bolt	SS400, S20C						S43C, S48C						SCr435, SCM435		
Material of opponent part	Ordinariness			Aluminum			Ordinariness			Aluminum			Ordinariness		
Unit / Diameter	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M6 (6 mm, 0.24 in.)	7.9 to 9.3	0.80 to 0.95	5.8 to 6.8	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	12.3 to 14.2	1.25 to 1.45	9.05 to 10.4
M8 (8 mm, 0.31 in.)	18 to 20	1.8 to 2.1	13 to 15	17 to 19	1.7 to 2.0	13 to 14	24 to 27	2.4 to 2.8	18 to 20	18 to 20	1.8 to 2.1	13 to 15	30 to 34	3.0 to 3.5	22 to 25
M10 (10 mm, 0.39 in.)	40 to 45	4.0 to 4.6	29 to 33	32 to 34	3.2 to 3.5	24 to 25	48 to 55	4.9 to 5.7	36 to 41	40 to 44	4.0 to 4.5	29 to 32	61 to 70	6.2 to 7.2	45 to 52
M12 (12 mm, 0.47 in.)	63 to 72	6.4 to 7.4	47 to 53	–	–	–	78 to 90	7.9 to 9.2	58 to 66	63 to 72	6.4 to 7.4	47 to 53	103 to 117	10.5 to 12.0	76.0 to 86.7
M14 (14 mm, 0.55 in.)	108 to 125	11.0 to 12.8	79.6 to 92.5	–	–	–	124 to 147	12.6 to 15.0	91.2 to 108	–	–	–	167 to 196	17.0 to 20.0	123 to 144
M16 (16 mm, 0.63 in.)	167 to 191	17.0 to 19.5	123 to 141	–	–	–	197 to 225	20.0 to 23.0	145 to 166	–	–	–	260 to 304	26.5 to 31.0	192 to 224
M18 (18 mm, 0.71 in.)	246 to 284	25.0 to 29.0	181 to 209	–	–	–	275 to 318	28.0 to 32.5	203 to 235	–	–	–	344 to 402	35.0 to 41.0	254 to 296
M20 (20 mm, 0.79 in.)	334 to 392	34.0 to 40.0	246 to 289	–	–	–	368 to 431	37.5 to 44.0	272 to 318	–	–	–	491 to 568	50.0 to 58.0	362 to 419

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[2] STUD BOLTS

Material of opponent part	Ordinariness			Aluminum		
Unit / Diameter	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M8 (8 mm, 0.31 in.)	12 to 15	1.2 to 1.6	8.7 to 11	8.9 to 11	0.90 to 1.2	6.5 to 8.6
M10 (10 mm, 0.39 in.)	25 to 31	2.5 to 3.2	18 to 23	20 to 25	2.0 to 2.6	15 to 18
M12 (12 mm, 0.47 in.)	29.5 to 49.0	3.0 to 5.0	21.7 to 36.1	31.4	3.2	23.1
M14 (14 mm, 0.55 in.)	62 to 73	6.3 to 7.5	46 to 54	–	–	–
M16 (16 mm, 0.63 in.)	98.1 to 112	10.0 to 11.5	72.4 to 83.1	–	–	–
M18 (18 mm, 0.71 in.)	172 to 201	17.5 to 20.5	127 to 148	–	–	–

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