OPERATOR'S MANUAL

KUBOTA TRACTOR MODELS BX1870-BX2370-BX2670

AUX. valve equipped machine

READ AND SAVE THIS MANUAL
## Abbreviation List

<table>
<thead>
<tr>
<th>Abbreviations</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2WD</td>
<td>Two Wheel Drive</td>
</tr>
<tr>
<td>4WD</td>
<td>Four Wheel Drive</td>
</tr>
<tr>
<td>API</td>
<td>American Petroleum Institute</td>
</tr>
<tr>
<td>ASABE</td>
<td>American Society of Agricultural and Biological Engineers, USA</td>
</tr>
<tr>
<td>ASTM</td>
<td>American Society of Testing and Materials, USA</td>
</tr>
<tr>
<td>DIN</td>
<td>Deutsches Institut für Normung, GERMANY</td>
</tr>
<tr>
<td>DT</td>
<td>Dual Traction [4WD]</td>
</tr>
<tr>
<td>fpm</td>
<td>Feet Per Minute</td>
</tr>
<tr>
<td>Hi-Lo</td>
<td>High Speed-Low Speed</td>
</tr>
<tr>
<td>HST</td>
<td>Hydrostatic Transmission</td>
</tr>
<tr>
<td>m/s</td>
<td>Meters Per Second</td>
</tr>
<tr>
<td>PTO</td>
<td>Power Take Off</td>
</tr>
<tr>
<td>RH/LH</td>
<td>Right-hand and left-hand sides are determined by facing in the direction of forward travel</td>
</tr>
<tr>
<td>ROPS</td>
<td>Roll-Over Protective Structures</td>
</tr>
<tr>
<td>rpm</td>
<td>Revolutions Per Minute</td>
</tr>
<tr>
<td>r/s</td>
<td>Revolutions Per Second</td>
</tr>
<tr>
<td>SAE</td>
<td>Society of Automotive Engineers, USA</td>
</tr>
<tr>
<td>SMV</td>
<td>Slow Moving Vehicle</td>
</tr>
</tbody>
</table>

### 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.

### IMPORTANT

The engine in this machine is not equipped by the manufacturer with a standard spark arrester. It is a violation of California Public Resource Code Section 4442 to use or operate this engine on or near any forest-covered, brush-covered land, or grass-covered land unless the exhaust system is equipped with a working spark arrester meeting state laws. Other states or federal areas may have similar laws.
UNIVERSAL SYMBOLS

As a guide to the operation of your tractor, various universal symbols have been utilized on the instruments and controls. The symbols are shown below with an indication of their meaning.

- Safety Alert Symbol
- Read Operator’s Manual
- Hourmeter/Elapsed Operating Hours
- Diesel Fuel
- Fuel-Level
- Empty
- Full
- Engine-Run
- Diesel Preheat/Glow Plugs (Low Temperature Start Aid)
- Starter Control
- Engine-Stop
- Engine Oil-Pressure
- Engine Coolant-Temperature
- Battery Charging Condition
- Electrical Power-accessories
- Hazard Warning Lights
- Turn Signal
- Headlight
- Work Light
- Engine Speed Control
- Slow
- Fast
- Brake
- Parking Brake
- Four-Wheel Drive-Off
- Four-Wheel Drive-On
- Speed set-Off
- Speed set-On
- Differential Lock
- Hydraulic Control-Lowered Position
- Hydraulic Control-Raised Position
- 3-Point Lowering Speed Control
- Remote Cylinder-Retract
- Remote Cylinder-Extend
- Mid-PTO
- Mid-Rear-PTO
- Rear-PTO
- Power Take-Off Clutch Control-Off Position
- Power Take-Off Clutch Control-On Position
FOREWORD

You are now the proud owner of a KUBOTA Tractor. This tractor is a product of KUBOTA's quality engineering and manufacturing. It is made of the excellent materials and under rigid quality control systems. It will give you long, satisfactory service. To obtain the best use of your tractor, please read this manual carefully. It will help you become familiar with the operation of the tractor and contains many helpful hints about tractor maintenance. It is KUBOTA's policy to utilize, as quick as possible, every advance in our research. The immediate use of new techniques in the manufacturing of products may cause some small parts of this manual to become outdated. KUBOTA distributors and dealers will have the most up-to-date information. Please do not hesitate to consult them.

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 assemble 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.
CONTENTS

Easy Checker(TM) ................................................................. 23
Fuel Gauge ........................................................................... 23
Coolant Temperature Gauge .............................................. 23
Hourmeter/Tachometer ....................................................... 24
PARKING ............................................................................... 24
Parking ................................................................................. 24
ACCESSORY .......................................................................... 25
12V Electric Outlet ............................................................... 25
Operator's Manual Holder (BX1870D) ................................. 25
Glove Box (BX2370D, BX2670D) ........................................... 25
OPERATING TECHNIQUES .................................................. 26
Differential Lock ................................................................. 26
Operating the Tractor on a Road ......................................... 26
Operating on a Slopes and Rough Terrain ......................... 27
Transport the Tractor Safely ............................................... 27
Directions for Use of Power Steering ................................. 27
PTO ...................................................................................... 28
PTO OPERATION .................................................................... 28
PTO Select Lever ............................................................... 28
PTO Clutch Lever .............................................................. 29
PTO Shaft Cover and Shaft Cap ......................................... 29
Stationary PTO ................................................................. 30
PTO Drive Shaft .............................................................. 30
THREE-POINT HITCH & DRAWBAR .................................... 31
3-POINT HITCH ................................................................. 32
Attaching and detaching implements .................................. 32
Lifting Rod (Right) .............................................................. 32
Top Link ............................................................................. 32
Check Chains ................................................................. 32
HITCH ............................................................................... 32
HYDRAULIC UNIT ................................................................ 33
3-POINT HITCH CONTROL SYSTEM ................................... 33
Hydraulic Control .............................................................. 33
3-point Hitch Lowering Speed ........................................... 33
AUXILIARY HYDRAULICS .................................................. 34
Hydraulic Outlet ............................................................... 34
MOWER LIFT LINKAGE SYSTEM ........................................... 34
Cutting Height Control Dial .............................................. 34
Hydraulic Control Unit Use Reference Chart ..................... 35
AUXILIARY HYDRAULIC CONTROL VALVE (IF EQUIPPED) .... 36
Valve Lock ......................................................................... 36
Auxiliary Hydraulic Ports .................................................. 36
Control Lever and Hydraulic Hose Connections .................. 37
Controlling Loader (Only if equipped with loader) .............. 38
TIRES, WHEELS AND BALLAST ........................................... 39
TIRES ............................................................................... 39
Inflation Pressure .............................................................. 39
Dual Tires ............................................................. 39
WHEEL TREAD ................................................................. 40
SAFE OPERATION

Careful operation is your best insurance against an accident.

Read and understand this manual carefully before operating the tractor.

All operators, no matter how much experience they may have, should read this and other related manuals before operating the tractor or any implement attached to it. It is the owner’s obligation to instruct all operators in safe operation.

1. **BEFORE OPERATING THE TRACTOR**

1. Know your equipment and its limitations. Read this entire manual before attempting to start and operate the tractor.
2. Pay special attention to the danger, warning and caution labels on the tractor.
3. Do not operate tractor or any implement attached to it while under the influence of alcohol, medication, controlled substances or while fatigued.
4. Carefully check the vicinity before operating tractor or any implement attached to it. Do not allow any bystanders around or near tractor during operation.
5. Before allowing other people to use your tractor, explain how to operate and have them read this manual before operation.
6. Never wear loose, torn, or bulky clothing around tractor. It may catch on moving parts or controls, leading to the risk of an accident. Use additional safety items, e.g. hard hat, safety boots or shoes, eye and hearing protection, gloves, etc., as appropriate or required.
7. Do not allow passengers to ride on any part of the tractor at anytime. The operator must remain in the tractor seat during operation.
8. Check brakes, linkage pins and other mechanical parts for improper adjustment and wear. Replace worn or damaged parts promptly. Check the tightness of all nuts and bolts regularly. (For further details, see "MAINTENANCE" section.)
9. Keep your tractor clean. Dirt, grease, and trash build up may contribute to fires and lead to personal injury.
10. Use only implements meeting the specifications listed under "IMPLEMENT LIMITATIONS" in this manual or implements approved by KUBOTA.
11. Use proper weights on the front or rear of the tractor to reduce the risk of upsets. When using the front loader, put an implement or ballast on the 3-point hitch to improve stability. Follow the safe operating procedures specified in the implement or attachment manual.
12. Do not modify the tractor. Unauthorized modification may affect the function of the tractor, which may result in personal injury.

◆ CAB, ROPS

1. KUBOTA recommends the use of a CAB or Roll Over Protective Structures (ROPS) and seat belt in almost all applications. This combination will reduce the risk of serious injury or death, should the tractor be upset. Check for overhead clearance which may interfere with a CAB or ROPS.
2. Set parking brake and stop engine. Remove any obstruction that may prevent raising or folding of the ROPS. Do not allow any bystanders. Always perform function from a stable position at the rear of the tractor. Hold the top of the ROPS securely when raising or folding. Make sure all pins are installed and locked.
3. If the CAB or ROPS is loosened or removed for any reason, make sure that all parts are reinstalled correctly before operating the tractor.
4. Never modify or repair any structural member of a CAB or ROPS because welding, bending, drilling, grinding, or cutting may weaken the structure.
5. A damaged CAB or ROPS structure must be replaced, not repaired or revised.
6. If any structural member of the CAB or ROPS is damaged, replace the entire structure at your local KUBOTA Dealer.
7. If the tractor is equipped with a foldable ROPS it may be temporarily folded down only when absolutely necessary for areas with height constraints. (There is no operator protection provided by the ROPS in the folded position. For operator safety the ROPS should be placed in the upright and locked position and the seat belt fastened for all other operations.)
8. Always use the seat belt if the tractor has a CAB or ROPS. Do not use the seat belt if a foldable ROPS is down or there is no ROPS. Check the seat belt regularly and replace if frayed or damaged.
SAFE OPERATION

2. OPERATING THE TRACTOR

Operator safety is a priority. Safe operation, specifically with respect to overturning hazards, entails understanding the equipment and environmental conditions at the time of use. Some prohibited uses which can affect overturning hazards include traveling and turning with implements and loads carried too high etc. This manual sets forth some of the obvious risks, but the list is not, and cannot be, exhaustive. It is the operator's responsibility to be alert for any equipment or environmental condition that could compromise safe operation.

◆ Starting
1. Always sit in the operator's seat when starting engine or operating levers or controls. Adjust seat per instructions in the operating the tractor section. Never start engine while standing on the ground.
2. Before starting the engine, make sure that all levers (including auxiliary control levers) are in their neutral positions, that the parking brake is engaged, and that the Power Take-Off (PTO) is disengaged or "OFF". Fasten the seat belt if the tractor has a CAB, a fixed ROPS or a foldable ROPS in the upright and locked position.
3. 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.
4. Do not operate or idle engine in a non-ventilated area. Carbon monoxide gas is colorless, odorless, and deadly.
5. Check before each use that operator presence controls are functioning correctly. Test safety systems. (See "Checking Engine Start System" and "Checking OPC System" in "EVERY 50 HOURS" in "PERIODIC SERVICE" section.) Do not operate unless they are functioning correctly.

◆ Working
1. Pull only from the hitch. Never hitch to axle housing or any other point except hitch; such arrangements will increase the risk of serious personal injury or death due to a tractor upset.
2. Keep all shields and guards in place. Replace any that are missing or damaged.
3. Avoid sudden starts. To avoid upsets, slow down when turning, on uneven ground, and before stopping.
4. The tractor cannot turn with the differential locked and attempting to do so could be dangerous.
5. Do not operate near ditches, holes, embankments, or other ground surface features which may collapse under the tractor's weight. The risk of tractor upset is even higher when the ground is loose or wet. Tall grass can hide obstacles, walk the area first to be sure.
6. Watch where you are going at all times. Watch for and avoid obstacles. Be alert at row ends, near trees, and other obstructions.
7. When working in groups, always let the others know what you are going to do before you do it.
8. Never try to get on or off a moving tractor.
9. Always sit in the operator's seat when operating levers or controls.
10. Do not stand between tractor and implement or trailed vehicle unless parking brake is applied.
11. Do not operate or tow at speeds exceeding specific travel speed.

◆ Safety for children
Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to machines and the work they do.
1. Never assume that children will remain where you last saw them.
2. Keep children out of the work area and under the watchful eye of another responsible adult.
3. Be alert and shut your machine down if children enter the work area.
4. Never carry children on your machine. There is no safe place for them to ride. They may fall off and be run over or interfere with your control of the machine.
5. Never allow children to operate the machine even under adult supervision.
6. Never allow children to play on the machine or on the implement.
7. Use extra caution when backing up. Look behind and down to make sure area is clear before moving.

◆ Operating on slopes
Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution.
1. To avoid upsets, always back up steep slopes. If you cannot back up the slope or if you feel uneasy on it, do not operate on it. Stay off slopes too steep for safe operation.
2. Driving forward out of a ditch, mired condition or up a steep slope increases the risk of a tractor to be upset backward. Always back out of these situations. Extra caution is required with four-wheel drive models because their increased traction can give the operator false confidence in the tractor’s ability to climb slopes.
3. Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, direction or apply brake and make sudden motions of the steering wheel.
4. Avoid changing gears speed when climbing or going down a slope. If on a slope changing gears to neutral could cause loss of control.
5. Special attention should be made to the weight and location of implements and loads as such will affect the stability of the tractor.
6. To improve stability on slope, follow recommendations for proper ballasting as shown in "BALLAST" section.

◆ Driving the tractor on the road
1. Check the front wheel engagement. The braking characteristics are different between two and four wheel drive. Be aware of the difference and use carefully.
2. Always slow the tractor down before turning. Turning at high speed may tip the tractor over.
3. Make sure that the Slow Moving Vehicle (SMV) sign is clean and visible. Use hazard lights and turn signals as required.
4. On public roads use the SMV emblem and hazard lights, if required by local traffic and safety regulations.
5. Observe all local traffic and safety regulations.
6. Turn the headlights on.
7. Drive at speeds that allow you to maintain control at all times.
8. Do not apply the differential lock while traveling at road speeds. The tractor may run out of control.
9. Avoid sudden motions of the steering wheel as they can lead to a dangerous loss of stability. The risk is especially great when the tractor is traveling at road speeds.
10. Keep the ROPS in the "UP" position and wear the seat belt when driving the tractor on the road. Otherwise, you will not be protected in the event of a tractor roll-over.
11. Do not operate an implement while the tractor is on the road. Lock the 3-point hitch in the raised position.
12. When towing other equipment, use a safety chain and place an SMV emblem on it as well.
13. Set the implement lowering speed knob in the "LOCK" position to hold the implement in the raised position.

4. When parking your machine if at all possible park on a firm, flat and level surface; if not, park across a slope. Set the parking brake(s), lower the implements to the ground, remove the key from the ignition and lock the cab door (if equipped) and chock the wheels.

3. PARKING THE TRACTOR

1. Disengage the PTO, lower all implements to the ground, place all control levers in their neutral positions, set the parking brake, stop the engine, remove the key from the ignition and lock the cab door (if equipped). Leaving transmission in gear with the engine stopped will not prevent tractor from rolling.

2. Make sure that the tractor has come to a complete stop before dismounting.

3. Avoid parking on steep slopes, if at all possible park on a firm and level surface; if not, park across a slope with chock the wheels.

Failure to comply with this warning may allow the tractor to move and could cause injury or death.
5. USING 3-POINT HITCH

1. Use the 3-point hitch only with equipment designed for 3-point hitch usage.
2. When using a 3-point hitch mounted implement, be sure to install the proper counterbalance weight on the front of the tractor.
3. When transporting on the road, set the implement lowering speed knob in the "LOCK" position to hold the implement in the raised position.

4. To avoid injury from separation:
   Do not extend lift rod beyond the groove on the threaded rod.

6. SERVICING THE TRACTOR

Before servicing the tractor, park it on a firm, flat and level surface, set the parking brake, lower all implements to the ground, place the gear shift lever in neutral, stop the engine and remove the key.

1. Allow the tractor time to cool off before working on or near the engine, muffler, radiator, etc.
2. 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. If the tractor has a coolant recovery tank, add coolant or water to the tank, not the radiator. (See "Checking Coolant Level" in "DAILY CHECK" in "PERIODIC SERVICE" section.)
3. Always stop the engine before refueling. Avoid spills and overfilling.
4. Do not smoke when working around battery or when refueling. Keep all sparks and flames away from battery and fuel tank. The battery presents an explosive hazard, because it gives off hydrogen and oxygen especially when recharging.
5. Before "jump starting" a dead battery, read and follow all of the instructions. (See "JUMP STARTING" in "OPERATING THE ENGINE" section.)
6. Keep first aid kit and fire extinguisher handy at all times.
7. Disconnect the battery's ground cable before working on or near electric components.
8. To avoid the possibility of battery explosion, do not use or charge the refillable type battery if the fluid level is below the LOWER (lower limit level) mark. Check the fluid level regularly and add distilled water as required so that the fluid level is between the UPPER and LOWER levels.
9. To avoid sparks from an accidental short circuit, always disconnect the battery's ground cable (-) first and reconnect it last.
10. Do not attempt to mount a tire on a rim. This should be done by a qualified person with the proper equipment.
11. Always maintain the correct tire pressure. Do not inflate tires above the recommended pressure shown in the operator's manual.

12. Securely support the tractor when either changing wheels or adjusting the wheel tread width.

13. Make sure that wheel bolts have been tightened to the specified torque.

14. Do not work under any hydraulically supported devices. They can settle, suddenly leak down, or be accidentally lowered. If it is necessary to work under tractor or any machine elements for servicing or adjustment, securely support them with stands or suitable blocking beforehand.

15. Escaping hydraulic fluid under pressure has sufficient force to penetrate skin, causing serious personal injury. Before disconnecting hydraulic lines, be sure to release all residual pressure. Before applying pressure to the hydraulic system, make sure that all connections are tight and that all lines, pipes, and hoses are free of damage.

16. Fluid escaping from pinholes may be invisible. Do not use hands to search for suspected leaks; use a piece of cardboard or wood. Use of safety goggles or other eye protection is also highly recommended. If injured by escaping fluid, see a medical doctor at once. This fluid will produce gangrene or severe allergic reaction.

17. Waste products such as used oil, fuel, hydraulic fluid, and batteries, can harm the environment, people, pets and wildlife. Please dispose properly. See your local Recycling Center or KUBOTA Dealer to learn how to recycle or get rid of waste products.
7. DANGER, WARNING AND CAUTION LABELS

(1) Part No. K2651-6557-2

![Image of WARNING label]

WARNING

1. Kubota recommends the use of a Roll-Over Protective Structures (ROPS) and seat belt in almost all applications.
2. Remove the ROPS only when it substantially interferes with operation or itself presents a safety risk.
   (Examples: include work in orchards and vineyards.)
3. Never use just the seatbelt or just the ROPS. They must be used together. For further details, consult your Operator's Manual or your local dealer.

(2) Part No. K2561-6548-2

![Image of CAUTION label]

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. Slow down for turns, or rough roads.
8. On public roads use SMV emblem and hazard lights, if required by local traffic and safety regulations.
9. Pull only from the hitch.
10. Before dismounting lower the implement to the ground, set the parking brake, stop the engine and remove the key.
11. Securely support tractor and implements before working underneath.

(3) Part No. K2561-6552-2

Do not put hands under the rear fender.

![Image of WARNING label]

WARNING

TO AVOID PERSONAL INJURY: KEEP HANDS AWAY FROM PINCH POINTS OF LIFT ARMS.

(4) Part No. K1272-6585-2

Diesel fuel No fire only

![Image of WARNING label]

ULTRA LOW SULFUR DIESEL FUEL ONLY

(5) Part No. K2591-6557-2

![Image of WARNING label]

WARNING

TO AVOID PERSONAL INJURY OR DEATH FROM ROLL-OVER:
1. Keep Roll-Over Protective Structures (ROPS) in the upright and locked position.
2. Fasten SEAT BELT before operating.

THERE IS NO OPERATOR PROTECTION WHEN THE ROPS IS IN THE FOLDED POSITION.
1. Check the operating area and fold the ROPS only when absolutely necessary.
2. Do not wear SEAT BELT if ROPS is folded.
3. Raise and lock ROPS as soon as vertical clearance allows.
4. Read ROPS related instructions and warnings.

![Image of diagram]

1AGA Giám...
(1) Part No. K2581-6554-1

**WARNING**

TO AVOID PERSONAL INJURY:
1. Keep PTO shield in place at all times.
2. Do not operate the PTO at speeds faster than the speed recommended by the implement manufacturer.
3. For trailing PTO-driven implements, set hitch at towing position. (see operator’s manual)

(2) Part No. K2581-6555-1

**CAUTION**

TO AVOID PERSONAL INJURY FROM SEPARATION:
- Groove
- Groove

DO NOT EXTEND LIFT ROD BEYOND THE GROOVE ON THE THREADED ROD.

(3) Part No. K2581-6556-1

**WARNING**

TO AVOID PERSONAL INJURY:
1. Attach pulled or towed loads to the hitch only.
2. Use the 3-point hitch only with equipment designed for 3-point hitch usage.

(4) Part No. K2651-6568-1

**WARNING**

Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrester may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.
(1) Part No. K2581-6541-1

**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.

(3) Part No. K2581-6542-1
Do not touch hot surface like muffler, etc.

(4) Part No. K2581-6543-1
Stay clear of engine fan and fanbelt.

---

(2) [BX1870D, BX2370D]
Part No. K2581-6547-1
Stay clear of engine fan and fanbelt.

---

[BX1870D, BX2370D]

[BX2670D]
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 local KUBOTA Dealer.
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 replaced component.
5. Mount new danger, warning and caution labels by applying on a clean dry surface and pressing any bubbles to outside edge.

8. CARE OF DANGER, WARNING AND CAUTION LABELS
SERVICING OF TRACTOR

Your dealer is interested in your new tractor and has the desire to help you get the most value from it. After reading this manual thoroughly, you will find that you can do some of the regular maintenance yourself. However, when in need of parts or major service, be sure to see your KUBOTA Dealer.

For service, contact the KUBOTA Dealership from which you purchased your tractor or your local KUBOTA Dealer. When in need of parts, be prepared to give your dealer both the tractor and engine serial numbers. Locate the serial numbers now and record them in the space provided.

<table>
<thead>
<tr>
<th>Type</th>
<th>Serial No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractor</td>
<td></td>
</tr>
<tr>
<td>ROPS</td>
<td></td>
</tr>
<tr>
<td>Engine</td>
<td></td>
</tr>
<tr>
<td>Date of Purchase</td>
<td></td>
</tr>
<tr>
<td>Name of Dealer</td>
<td></td>
</tr>
</tbody>
</table>

(To be filled in by purchaser)

◆ Warranty
This tractor is warranted under the KUBOTA Limited Express Warranty, a copy of which may be obtained from your selling dealer. No warranty shall, however, apply if the tractor has not been handled according to the instruction given in the Operator's Manual even if it is within the warranty period.

◆ Scrapping the tractor and its procedure
To put the tractor out of service, correctly follow the local rules and regulations of the country or territory where you scrap it. If you have questions, consult your local KUBOTA Dealer.
(1) Engine serial number

(1) ROPS identification plate
(ROPS serial No.)
## SPECIFICATIONS

### SPECIFICATION TABLE

<table>
<thead>
<tr>
<th>Model</th>
<th>BX1870D</th>
<th>BX2370D</th>
<th>BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO power *1</td>
<td>kW (HP)</td>
<td>10.2 (13.7)</td>
<td>13.2 (17.7)</td>
</tr>
</tbody>
</table>

### Engine

<table>
<thead>
<tr>
<th>Maker</th>
<th>KUBOTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>D722</td>
</tr>
<tr>
<td>Type</td>
<td>Indirect injection, vertical, water-cooled, 4-cycle diesel</td>
</tr>
<tr>
<td>Number of cylinders</td>
<td>3</td>
</tr>
</tbody>
</table>

| Bore and stroke (mm (in.)) | 67x68 (2.64x2.68) | 72x73.6 (2.83x2.90) | 76x73.6 (2.99x2.90) |
| Total displacement (cm³(cu. in.)) | 719 (43.9) | 898 (54.8) | 1001 (61.1) |
| Engine gross power *2 (kW) | 13.4 (18.0) | 17.1 (23.0) | 19.0 (25.5) |
| Rated revolution (rpm) | 3200 |
| Low idling revolution (rpm) | 1350 to 1550 |
| Maximum torque (N·m (lbf·ft)) | 44.9 (33.1) | 56.1 (41.4) | 60.2 (44.4) |
| Battery | 12V, RC: 55min, CCA:450A |
| Fuel | Diesel fuel No.2 [above -10 °C (14 °F)] Diesel fuel No.1 [below -10 °C (14 °F)] |

### Capacities

| Fuel tank (L (U.S.gals.)) | 25 (6.6) |
| Engine crankcase (with filter) (L (U.S.qts.)) | 2.9 (0.06) | 3.1 (0.33) | 3.5 (0.37) |
| Engine coolant (L (U.S.qts.)) | 2.5 (0.26) | 2.7 (0.28) | 2.9 (0.31) |
| Recovery tank (L (U.S.qts.)) | 0.4 (0.04) |
| Transmission case (L (U.S.gals.)) | 11.6 (3.1) |

### Dimensions

| Overall length (without 3p) (mm (in.)) | 2035 (80.1) | 2120 (83.5) |
| Overall length (with 3p) (mm (in.)) | 2340 (92.1) | 2425 (95.5) |
| Overall width (min. tread) (mm (in.)) | 1145 (45.1) |
| Overall height (mm (in.)) | 2190 (86.2) | 2215 (87.2) |
| Wheel base (mm (in.)) | 1340 (52.8) | 1400 (55.1) |
| Min. ground clearance (mm (in.)) | 150 (5.9) | 175 (6.9) |
| Tread Front (mm (in.)) | 880 (34.6) | 930 (36.6) |
| Tread Rear (mm (in.)) | 820 (32.2) |
| Weight (with ROPS) (kg (lbs.)) | 610 (1345) | 640 (1410) | 665 (1466) |

### Clutch

| Clutch | N / A |

### Traveling system

| Tire Front | 16x7.50-8 | 18x8.50-10 |
| Rear       | 24x12.00-12 | 26x12.00-12 |
| Steering  | Hydrostatic type power steering |
| Transmission | Main: Hydrostatic transmission, High-Low gear shift (2 forward, 2 reverse) |
| Brake  | Wet disk type |
| Min. turning radius (m (feet)) | 2.18 (7.15) | 2.3 (7.5) |
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>BX1870D</th>
<th>BX2370D</th>
<th>BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydraulic unit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulic control system</td>
<td>Directional control, auto-return lever system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump capacity</td>
<td>L/min. (gals/min.)</td>
<td>23.5 (6.2)</td>
<td></td>
</tr>
<tr>
<td>System pressure</td>
<td>MPa (kgf/cm²)[psi]</td>
<td>12.3 to 12.8 (126 to 130) [1790 to 1850]</td>
<td></td>
</tr>
<tr>
<td>Three point hitch</td>
<td>SAE Category 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three point hitch, Max lift force *3</td>
<td>At lift points N (lbs.) 24in. behind lift points N (lbs.)</td>
<td>5390 (1210)</td>
<td>3040 (680)</td>
</tr>
<tr>
<td>Remote control valve coupler (rear : Option) System</td>
<td>2 valves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote control valve coupler (front : Option) Coupler System</td>
<td>ISO 7341 series A</td>
<td>2 valves</td>
<td>ISO 7241-1 series B</td>
</tr>
<tr>
<td>Remote control valve coupler (front : Option) Coupler (nipple) System</td>
<td>ISO 7341 series A</td>
<td>2 valves</td>
<td>ISO 7241-1 series B</td>
</tr>
<tr>
<td>PTO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rear PTO Revolution rpm</td>
<td>1 speed (540 rpm at 3142 engine rpm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MID-PTO Revolution rpm</td>
<td>USA No.5 (KUBOTA 10-tooth) involute spline</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**NOTE:**

*1 Manufacturer's estimate
*2 SAE J1995
*3 See and check "IMPLEMENT LIMITATIONS".

### TRAVELING SPEEDS

(At rated engine rpm)

<table>
<thead>
<tr>
<th>Model</th>
<th>BX1870D</th>
<th>BX2370D, BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tire size (Rear)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 x 12.00 - 12</td>
<td></td>
<td>26 x 12.00 - 12</td>
</tr>
<tr>
<td><strong>Speed control pedal</strong></td>
<td><strong>Range gear shift lever</strong></td>
<td><strong>km / h</strong></td>
</tr>
<tr>
<td><strong>Forward</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>0 to 6.0</td>
<td>0 to 3.7</td>
</tr>
<tr>
<td>High</td>
<td>0 to 12.5</td>
<td>0 to 7.8</td>
</tr>
<tr>
<td><strong>Reverse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>0 to 4.5</td>
<td>0 to 2.8</td>
</tr>
<tr>
<td>High</td>
<td>0 to 9.5</td>
<td>0 to 5.9</td>
</tr>
</tbody>
</table>

The company reserves the right to change the specification without notice.
The KUBOTA Tractor has been thoroughly tested for proper performance with implements sold or approved by KUBOTA. Use with implements which are not sold or approved by KUBOTA and which exceed the maximum specifications listed below, or which are otherwise unfit for use with the KUBOTA Tractor may result in malfunctions or failures of the tractor, damage to other property and injury to the operator or others. [Any malfunctions or failures of the tractor resulting from use with improper implements are not covered by the warranty.]

<table>
<thead>
<tr>
<th>Implement Limitations</th>
<th>Tread (max. width)</th>
<th>Lower link end max. lifting weight $W_0$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Front</td>
<td>Rear</td>
</tr>
<tr>
<td>BX1870D</td>
<td>880 mm (34.6 in.)</td>
<td>820 mm (32.2 in.)</td>
</tr>
<tr>
<td>BX2370D, BX2670D</td>
<td>910 mm (35.8 in.)</td>
<td>550 kg (1210 lbs.)</td>
</tr>
</tbody>
</table>

### Actual Figures

<table>
<thead>
<tr>
<th>Implement weight $W_1$ and / or size</th>
<th>Max. Hitch Load $W_2$</th>
<th>Trailer loading weight $W_3$ Max. capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX1870D</td>
<td>250 kg (550 lbs.)</td>
<td>800 kg (1765 lbs.)</td>
</tr>
<tr>
<td>BX2370D, BX2670D</td>
<td>(Shown on the next page)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
- Implement size may vary depending on soil operating conditions.
- Strictly follow the instructions outlined in the operator’s manual of the mounted or trailed machinery or trailer, and do not operate the combination tractor - machine or tractor - trailer unless all instructions have been followed.
- Forestry Application
  - Following hazards exist:
    (a) toppling trees, primarily in case a rear-mounted tree grab-crane is mounted at the rear of the tractor;
    (b) penetrating objects in the operator’s enclosure, primarily in case a winch is mounted at the rear of the tractor.
  - Optional equipments such as OPS (Operator Protective Structure), FOPS (Falling Object Protective Structure), etc. to deal with these hazards and other related hazards are not available for this tractor. Without such optional equipment use is limited to tractor specific applications like transport and stationary work.
## IMPLEMENT LIMITATIONS

<table>
<thead>
<tr>
<th>Implement</th>
<th>Remarks</th>
<th>BX1870D</th>
<th>BX2370D, BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mower</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-mount</td>
<td>Max. cutting width cm(in.)</td>
<td>137 (54)</td>
<td>152 (60)</td>
</tr>
<tr>
<td></td>
<td>Max. weight kg(lbs.)</td>
<td>95 (210)</td>
<td>140 (309)</td>
</tr>
<tr>
<td>Rotary-Cutter</td>
<td>Max. cutting width cm(in.)</td>
<td>107 (42)</td>
<td>107 (42)</td>
</tr>
<tr>
<td>(1 Blade)</td>
<td>Max. weight kg(lbs.)</td>
<td>140 (309)</td>
<td>140 (309)</td>
</tr>
<tr>
<td>Rear-mount</td>
<td>Max. cutting width cm(in.)</td>
<td>122 (48)</td>
<td>152 (60)</td>
</tr>
<tr>
<td>(2 or 3 Blade)</td>
<td>Max. weight kg(lbs.)</td>
<td>115 (250)</td>
<td>140 (309)</td>
</tr>
<tr>
<td>Flail-mower</td>
<td>Max. cutting width cm(in.)</td>
<td>107 (42)</td>
<td>107 (42)</td>
</tr>
<tr>
<td></td>
<td>Max. cutting width cm(in.)</td>
<td>122 (48)</td>
<td>122 (48)</td>
</tr>
<tr>
<td><strong>Rotary tiller</strong></td>
<td>Max. tilling width cm(in.)</td>
<td>107 (42)</td>
<td>107 (42)</td>
</tr>
<tr>
<td></td>
<td>Max. weight kg(lbs.)</td>
<td>170 (375)</td>
<td>170 (375)</td>
</tr>
<tr>
<td><strong>Bottom plow</strong></td>
<td>Max. size in.</td>
<td>12 x 1</td>
<td>14 x 1</td>
</tr>
<tr>
<td><strong>Disc plow</strong></td>
<td>Max. size in.</td>
<td>22 x 1</td>
<td>22 x 1</td>
</tr>
<tr>
<td><strong>Cultivator</strong></td>
<td>Max. size cm(in.)</td>
<td>122 (48) 1 Row</td>
<td>122 (48) 1 Row</td>
</tr>
<tr>
<td><strong>Disc harrow</strong></td>
<td>Max. harrowing width cm(in.)</td>
<td>122 (48)</td>
<td>137 (54)</td>
</tr>
<tr>
<td></td>
<td>Max. weight kg(lbs.)</td>
<td>120 (265)</td>
<td>140 (309)</td>
</tr>
<tr>
<td><strong>Sprayer</strong></td>
<td>Max. tank capacity L(U.S.gals.)</td>
<td>150 (40)</td>
<td>150 (40)</td>
</tr>
<tr>
<td><strong>Front blade</strong></td>
<td>Max. cutting width cm(in.)</td>
<td>137 (54)</td>
<td>152 (60)</td>
</tr>
<tr>
<td></td>
<td>Sub frame</td>
<td>Necessary</td>
<td>Necessary</td>
</tr>
<tr>
<td><strong>Rear blade</strong></td>
<td>Max. cutting width cm(in.)</td>
<td>137 (54)</td>
<td>152 (60)</td>
</tr>
<tr>
<td></td>
<td>Max. weight kg(lbs.)</td>
<td>140 (309)</td>
<td>160 (353)</td>
</tr>
<tr>
<td><strong>Front loader</strong></td>
<td>Max. lifting capacity kg(lbs.) (Bucket pivot pin, Max. height)</td>
<td>280 (617) *2</td>
<td>340 (750) *2</td>
</tr>
<tr>
<td></td>
<td>Max. width cm(in.)</td>
<td>122 (48)</td>
<td>122 (48)</td>
</tr>
<tr>
<td><strong>Box blade</strong></td>
<td>Max. cutting width cm(in.)</td>
<td>122 (48)</td>
<td>122 (48)</td>
</tr>
<tr>
<td></td>
<td>Max. weight kg(lbs.)</td>
<td>170 (375)</td>
<td>170 (375)</td>
</tr>
<tr>
<td><strong>Snow blower (Front)</strong></td>
<td>Max. working width cm(in.)</td>
<td>127 (50)</td>
<td>127 (50)</td>
</tr>
<tr>
<td></td>
<td>Max. weight kg(lbs.)</td>
<td>160 (353)</td>
<td>160 (353)</td>
</tr>
<tr>
<td></td>
<td>Sub frame</td>
<td>Necessary</td>
<td>Necessary</td>
</tr>
<tr>
<td><strong>Post hole digger</strong></td>
<td>Digging depth cm(in.)</td>
<td>114 (45)</td>
<td>114 (45)</td>
</tr>
<tr>
<td><strong>Rotary broom</strong></td>
<td>Cleaning width cm(in.)</td>
<td>119 (47)</td>
<td>119 (47)</td>
</tr>
<tr>
<td><strong>Trailer</strong></td>
<td>Max. load capacity kg(lbs.)</td>
<td>800 (1765) *1</td>
<td>800 (1765) *1</td>
</tr>
<tr>
<td></td>
<td>Max. weight kg(lbs.)</td>
<td>1100 (2425)</td>
<td>1100 (2425)</td>
</tr>
</tbody>
</table>

**NOTE:**
- Backhoes cannot be attached.
- Implement size may vary depending on soil operating conditions.
- Reduce speed and trailer loads when operating in slippery conditions or when operating on slopes and utilize front wheel drive.
- The valve contains the weight of KUBOTA standard bucket.

---

*1 Reduce speed and trailer loads when operating in slippery conditions or when operating on slopes and utilize front wheel drive.

*2 The valve contains the weight of KUBOTA standard bucket.
IMPLEMENT LIMITATIONS

§ Front Loader
Fixation points on the body of the tractor where the front loader must be installed.
Install the front loader frame to the frame of the tractor as shown.

<table>
<thead>
<tr>
<th>Location</th>
<th>Bolt/Nut</th>
<th>Required Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main frames</td>
<td>M14 bolts/nuts</td>
<td>147 N-m (15.0 kgf-m, 108 lbf-ft)</td>
</tr>
</tbody>
</table>

(1) 6-M14 bolts

§ Rear Ballast

⚠️ CAUTION
To avoid personal injury:
- For tractor stability and operator’s safety, rear ballast should be added to the rear of the tractor in the form of 3-point counter weight and rear wheel ballast. The amount of rear ballast will depend on the application.

<table>
<thead>
<tr>
<th>Implement as Counter Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box Blade</td>
</tr>
<tr>
<td>Rear Blade</td>
</tr>
<tr>
<td>Rotary Tiller</td>
</tr>
<tr>
<td>Ballast Box</td>
</tr>
</tbody>
</table>

Approx. 190 kg (420 lbs.)

⚠️ DANGER
To avoid personal injury:
- Special attention should be made when lifting the load, keep the bucket correctly positioned to prevent spillages.

IMPORTANT:
- Not all risks are listed.
  Refer to front loader operator’s manual.
INSTRUMENT PANEL AND CONTROLS

Instrument Panel, Switches and Hand Controls

ILLUSTRATED CONTENTS

(1) Easy Checker(TM)............................................... 11,23
(2) Tachometer.......................................................... 24
(3) Hazard light switch................................................ 19
(4) Turn signal light switch.......................................... 19
(5) Head light switch................................................... 19
(6) Fuel gauge........................................................... 23
(7) Coolant temperature gauge...................................... 23
(8) Hourmeter............................................................ 24
(9) Key switch........................................................... 11
ILLUSTRATED CONTENTS

(1) Brake pedal.......................................................... 11,19,21,24
(2) Parking brake lock pedal.............................................. 11,19,21,24
(3) 3-Point hitch lowering speed knob............................. 33
(4) Cutting height control dial........................................ 34
(5) PTO select lever.......................................................... 28
(6) PTO clutch lever....................................................... 11,29
(7) Differential lock pedal................................................... 26
(8) Speed set rod (BX2370D, BX2670D)............................ 22
(9) Hand throttle lever.................................................... 11,21
(10) Auxiliary hydraulic control lever (if equipped).............. 36
(11) Lock lever (if equipped).............................................. 11,36
(12) Speed control pedal................................................ 11,21
(13) Hydraulic control lever............................................. 11,33,34
(14) Front wheel drive lever............................................. 20
(15) Range gear shift lever (Hi-Lo).................................... 11,20
(16) Operator’s seat....................................................... 18
(17) Seat belt............................................................... 19
PRE-OPERATION CHECK

DAILY CHECK
To prevent trouble from occurring, it is important to know the condition of the tractor well. Check it before starting.

⚠️ CAUTION
To avoid personal injury:
- Be sure to check and service the tractor on a level surface with the engine shut off and the parking brake "ON" and implement lowered to the ground.

Check item
- Walk around inspection
- Check engine oil level
- Check transmission oil level
- Check coolant level
- Clean grill and radiator screen
- Check air cleaner evacuator valve
  (When used in a dusty place)
- Check brake pedal
- Check indicators, gauges and meter
- Check lights
- Check wire harness
- Check seat belt and ROPS
- Check movable parts
- Refuel
  (See "DAILY CHECK" in "PERIODIC SERVICE" section.)
- Care of danger, warning and caution labels
  (See "DANGER, WARNING AND CAUTION LABELS" in "SAFE OPERATION" section.)
OPERATING THE ENGINE

CAUTION
To avoid personal injury:
- Read "SAFE OPERATION" in the front of this manual.
- Read the danger, warning and caution labels located on the tractor.
- To avoid the danger of exhaust fume poisoning, do not operate the engine in a closed building without proper ventilation.
- Never start engine while standing on ground. Start engine only from operator's seat.
- Make it a rule to set all shift levers to "NEUTRAL" positions and to place PTO lever in "OFF" position before starting the engine.

IMPORTANT:
- Do not use starting fluid or ether.
- To protect the battery and the starter, make sure that the starter is not continuously turned for more than 30 seconds.

STARTING THE ENGINE

1. Make sure the parking brake is set.

1. To set the parking brake:
   (1) Depress the brake pedal.
   (2) Latch the brake pedal on pushing and holding the parking brake lock pedal then releasing pressure on the brake pedal.
2. To release the parking brake, depress the brake pedal again.

NOTE:
- It is recommended that the operator practice engaging and disengaging the parking brake on a flat surface without the engine running before operating the tractor for the first time.

2. Place the PTO clutch lever in "OFF" position.

3. Place the speed set rod in "OFF" position. (BX2370D, BX2670D)
   Place the speed control pedal in "NEUTRAL" position.
   Place the range gear shift lever (Hi-Lo) in "NEUTRAL" position.

(1) Speed set rod (BX2370D, BX2670D)  "ON"  "OFF"
(2) Speed control pedal  "Hi"  "Lo"  "ON"  "OFF"
(3) Range gear shift lever (Hi-Lo)  "Hi"  "Lo"  "ON"  "OFF"
(4) PTO clutch lever

NOTE:
- The speed control pedal automatically returns to "NEUTRAL" when the operator's foot is released from the pedal.
4. Lock the auxiliary hydraulic control lever in "NEUTRAL" position. (if equipped)

To lower implement, move the hydraulic control lever forward.
Check that implement is down at lowest position.

5. Move the hydraulic control lever forward. (With the implement in place.)

6. Set the throttle lever to about 1/2 way.

7. Insert the key into the key switch and turn it "ON".
OPERATING THE ENGINE

Check Easy Checker(TM) Lamps:
1. When the key is turned "ON", lamps (2) (3) (4) (5) (6) only should come on. If trouble should occur at any location while the engine is running, the warning lamp corresponding to that location comes on.

(1) Turn signal/Hazard light indicator
(2) Preheat
(3) Electrical charge
(4) Engine oil pressure
(5) Coolant temperature indicator
(6) Low fuel indicator
(7) Key switch

IMPORTANT:
- Daily checks with the Easy Checker(TM) only, are not sufficient. Never fail to conduct daily checks carefully by referring to Daily Check section.
  (See "DAILY CHECK" in "PERIODIC SERVICE" section.)

8. Turn the key to "PREHEAT" position and hold it for about 2 to 3 seconds.

For the appropriate preheating time, refer to the table below:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Preheating Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 0°C (32°F)</td>
<td>2 to 3 sec.</td>
</tr>
<tr>
<td>-5 to 0°C (23 to 32°F)</td>
<td>5 sec.</td>
</tr>
<tr>
<td>-15 to -5°C (5 to 23°F)</td>
<td>10 sec.</td>
</tr>
</tbody>
</table>

NOTE:
- Glow plug indicator (2) comes on while engine is being preheated.

9. Turn the key to "START" position and release it when the engine starts.

IMPORTANT:
- Because of safety devices, the engine will not start except when the speed control pedal is in "NEUTRAL" position and the PTO clutch lever is in "OFF" position respectively.

Cold Weather Starting
When the ambient temperature is below -5°C (23°F) and the engine is very cold. If the engine fails to start after 10 seconds, turn off the key for 30 seconds. Then repeat steps 8 and 9. To protect the battery and the starter, make sure that the starter is not continuously turned for more than 30 seconds.

Block Heater (Option)
A block heater is available as an option from your dealer. It will assist you in starting your tractor when the ambient temperature is below -15°C (5°F).

10. Check to see that all the lamps on the Easy Checker(TM) are "OFF".

If the lamp is still "ON", immediately stop the engine and determine the cause.

STOPPING THE ENGINE

1. After slowing the engine to idle, turn the key to "OFF".

2. Remove the key.

NOTE:
- If key does not stop the engine, consult your local KUBOTA Dealer.
**WARMING UP**

**CAUTION**

To avoid personal injury:
- Be sure to set the parking brake during warm-up.
- Be sure to set all shift levers to "NEUTRAL" positions and to place PTO lever in "OFF" position during warm-up.

For five minutes after engine start-up, allow engine to warm up without applying any load, this is to allow oil to reach every engine part. If load should be applied to the engine without this warm-up period, trouble such as seizure, breakage or premature wear may develop.

**Warm-up and Transmission Oil in the Low Temperature Range**

Hydraulic oil serves as transmission fluid. In cold weather, the oil may be cold with increased viscosity. This can cause delayed oil circulation or abnormally low hydraulic pressure for some time after engine start-up. This in turn can result in premature wear in the hydraulic system or malfunctions such as resistance in the speed control pedal and difficulty engaging the range gear shift lever. To prevent the above, observe the following instructions:

Warm up the engine at about 50% of rated rpm according to the table below:

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Warm-up time requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 0°C (32°F)</td>
<td>At least 5 minutes</td>
</tr>
<tr>
<td>-10 to 0°C (14 to 32°F)</td>
<td>5 to 10 minutes</td>
</tr>
<tr>
<td>-20 to -10°C (-4 to 14°F)</td>
<td>10 to 15 minutes</td>
</tr>
<tr>
<td>Below -20°C (-4°F)</td>
<td>More than 15 minutes</td>
</tr>
</tbody>
</table>

**IMPORTANT:**
- Do not operate the tractor under full load condition until it is sufficiently warmed up.

**JUMP STARTING**

**CAUTION**

To avoid personal injury:
- Battery gases can explode. Keep cigarettes, sparks, and flames away from battery.
- If tractor battery is frozen, do not jump start engine.
- Do not connect other end of negative (-) jumper cable to negative (-) terminal of tractor battery.
- When carrying on the following steps 4 and 11, do not allow the positive (+) terminal of the battery to touch other parts.

When jump starting engine, follow the instructions below to safely start the engine.

1. Bring helper vehicle with a battery of the same voltage as disabled tractor within easy cable reach. "THE VEHICLES MUST NOT TOUCH".
2. Engage the parking brakes of both vehicles and put the shift levers in "NEUTRAL". Shut both engines off.
3. Put on safety goggles and rubber gloves.
4. Take the dead battery out and put it on the step.
5. Ensure the vent caps are securely in place. (if equipped)
6. Attach the red clamp to the positive (red, (+) or pos.) terminal of the dead battery and clamp the other end of the same cable to the positive (red, (+) or pos.) terminal of the helper battery.
7. Clamp the other cable to the negative (black, (-) or neg.) terminal of the helper battery.
8. Clamp the other end to the engine block or frame of the disabled tractor as far from the dead battery as possible.
9. Start the helper vehicle and let its engine run for a few moments. Start the disabled tractor.
10. Disconnect the jumper cables in the exact reverse order of attachment. (Steps 8, 7 and 6).
11. Put the battery back and fix it.

(1) Dead battery  
(2) Jumper cables  
(3) Engine block or frame  
(4) Helper battery

**IMPORTANT:**
- This machine has a 12volt negative (-) ground starting system.
- Use only same voltage for jump starting.
- Use of a higher voltage source on tractors electrical system could result in severe damage to tractors electrical system.
- Use only matching voltage source when "Jump starting" a low or dead battery condition.
OPERATING NEW TRACTOR

How a new tractor is handled and maintained determines the life of the tractor.

A new tractor just off the factory production line has been, of course, tested, but the various parts are not broken in, so care should be taken to operate the tractor for the first 50 hours at a slower speed and avoid excessive work or operation until the various parts become "broken-in". The manner in which the tractor is handled during the "breaking-in" period greatly affects the life of your tractor. Therefore, to obtain the maximum performance and the longest life of the tractor, it is very important to properly break-in your tractor. In handling a new tractor, the following precautions should be observed.

- Do not Operate the Tractor at Full Speed for the First 50 Hours.
  - Do not start quickly or apply the brakes suddenly.
  - In winter, operate the tractor after fully warming up the engine.
  - Do not run the engine at speeds faster than necessary.
  - On rough roads, slow down to suitable speeds.
  - Do not operate the tractor at fast speed.

The above precautions are not limited only to new tractors, but to all tractors. But it should be especially observed in the case of new tractors.

- Changing Lubricating Oil for New Tractors

The lubricating oil is especially important in the case of a new tractor. The various parts are not "broken-in" and are not accustomed to each other; small metal grit may develop during the operation of the tractor; and this may wear out or damage the parts. Therefore, care should be taken to change the lubricating oil a little earlier than would ordinarily be required.

For further details of change interval hours, see "MAINTENANCE" section.

BOARDING AND LEAVING THE TRACTOR

1. Never try to get on or off a moving tractor or jump off the tractor to exit.
2. Face the tractor when getting into or out of the tractor. Do not use the controls as hand holds to prevent inadvertent machine movements.
3. Always keep steps and floor clean to avoid slippery conditions.

OPERATING FOLDABLE ROPS

⚠️ CAUTION

To avoid personal injury:
- When raising or folding the ROPS, apply parking brake, stop the engine and remove the key. Always perform function from a stable position at the rear of tractor.
- Fold the ROPS down only when absolutely necessary and fold it up and lock it again as soon as possible.
- Before proceeding to fold ROPS, check for any possible interference with installed implements and attachments. If interference occurs, contact your KUBOTA Dealer.

- To Fold the ROPS

1. Loosen the holding knob bolts.
2. Remove both set pins.

3. Fold the ROPS.

**CAUTION**

*To avoid personal injury:*
- Hold the ROPS tightly with both hands and fold the ROPS slowly and carefully.

4. Align set pin holes and insert both set pins and secure them with the hair pins.

**CAUTION**

*To avoid personal injury:*
- Make sure that both set pins are properly installed and secured with the hair pins.

---

**To Raise the ROPS to Upright Position**

1. Remove both hair pins and set pins.

2. Raise ROPS to the upright position.

**CAUTION**

*To avoid personal injury:*
- Hold the ROPS tightly with both hands and raise the ROPS slowly and carefully.
3. Align set pin holes, insert both set pins. Secure them with the hair pins.

**CAUTION**

To avoid personal injury:
- Make sure that both set pins are properly installed as soon as the ROPS is in the upright position and secured with the hair pins.

4. Tighten the holding knob bolts.

**Adjustment of Foldable ROPS**
- Adjust free fall of the ROPS upper frame regularly.
- If you feel less friction in folding the ROPS, tighten the nut (1) until you feel the right friction in the movement.
STARTING

1. Adjust the operator's position and engage the seat belt.

NOTE:
- The seat and suspension should be adjusted to ensure that the controls are comfortably at hand for the operator, ensuring that the operator maintains a good posture.

Operator's Seat

⚠️ CAUTION
To avoid personal injury:
- Make adjustments to the seat only while the tractor is stopped.
- Make sure that the seat is completely secured after each adjustment.
- Do not allow any person other than the operator to ride on the tractor.

---

1. Adjust the operator's position and engage the seat belt.

(1) Seat
(2) Position adjust lever
(3) Backrest tilt adjust lever (BX2370D, BX2670D)
(4) Arm rest
(5) Seat belt

◆ Travel adjustment
Pull up the position adjust lever and slide the seat backward or forward, as required. The seat will lock in position when the lever is released.

◆ Tilt adjustment (BX2370D, BX2670D)
Pull the backrest tilt adjust lever and tilt the backrest to the desired position.

IMPORTANT:
- After adjusting the operator's seat, be sure to check that the seat is properly locked.
- Be sure the operator's seat is out of contact with the top link.
Seat Belt

CAUTION
To avoid personal injury:
- Always use the seat belt when the ROPS is installed.
- Do not use the seat belt if the tractor is not equipped with ROPS.

Adjust the seat belt for proper fit and connect to the buckle. The seat belt is auto-locking retractable type.

Head Light Switch
(A) ...... Head lights "ON".
(B) ...... Head lights "OFF".

Hazard Light Switch
When hazard light switch is turned counter-clockwise, the hazard lights flash along with the indicator on the instrument panel. Turn the switch clockwise to turn off the light.
(A) ...... Hazard lights "ON".
(B) ...... Hazard lights "OFF".

Turn Signal Light Switch
To indicate a right turn, turn the switch clockwise.
To indicate a left turn, turn the switch counter-clockwise. When the left or right turn signal is activated in combination with the hazard lights, the indicated turning light will flash and the other will stay on.

NOTE:
- Be sure to return switch to center position after turning.

3. Check the Brake Pedal.

Brake Pedal
Make sure to latch the brake pedal with the parking brake lock pedal. Use both right and left feet for the procedure.

CAUTION
To avoid personal injury:
- An accident may occur if the tractor is suddenly braked, such as by heavy towed loads shifting forward or loss of control.
- The braking characteristics are different between two and four wheel drive. Be aware of the difference and use carefully.
- When driving on icy, wet or loose surfaces, make sure the tractor is correctly ballasted to avoid skidding and loss of steering control. Operate at reduced speed.
4. Start the engine.

5. Raise the Implement.
   (see "HYDRAULIC UNIT" section.)

   Move the hydraulic control lever rearward.

6. Select the Travel Speed.

   Range Gear Shift Lever (Hi-Lo)
   The range gear shift can only be shifted when tractor is completely stopped.

   CAUTION
   To avoid personal injury:
   ● Make sure the range shift lever is fully engaged into "H" or "L" position before climbing or descending a slope.

   IMPORTANT:
   Do not force the range gear shift lever.
   ● If it is difficult to shift the range shift lever into "NEUTRAL" position;
     (1) Depress the brake pedal firmly for several seconds.
     (2) Without reducing the brake pedal force, shift the range shift lever.
   ● If it is difficult to shift the range shift lever into "L" or "H" from "NEUTRAL" position;
     (1) Slightly depress the speed control pedal to rotate the gears inside of transmission.
     (2) Release the speed control pedal to "NEUTRAL" position.
     (3) Shift the range shift lever.
   ● To avoid damage of transmission, stop tractor before shifting between ranges.

   Front Wheel Drive Lever

   CAUTION
   To avoid personal injury:
   ● Do not engage the front wheel drive when traveling at road speed.
   ● When driving on icy, wet or loose surfaces, make sure the tractor is correctly ballasted to avoid skidding and loss of steering control. Operate at reduced speed and engage front wheel drive.
   ● An accident may occur if the tractor is suddenly braked, such as by heavy towed loads shifting forward or loss of control.
   ● The braking characteristics are different between two and four wheel drive. Be aware of the difference and use carefully.

   Use the lever to engage the front wheels with the tractor stopped. Shift the lever to "ON" to engage the front wheel drive.
IMPORTANT:
- To avoid damage of transmission, when front wheel drive lever is not smoothly shifted, slightly step forward or rearward on speed control pedal.
- Tires will wear quickly if front wheel drive is engaged on paved roads.

Front wheel drive is effective for the following jobs:
1. When greater pulling force is needed, such as working in a wet field, when pulling a trailer, or when working with a front-end loader.
2. When working in sandy soil.
3. When working on a hard soil where a rotary tiller might push the tractor forward.
4. Additional braking at reduced speed.

7. Accelerate the Engine.

Hand Throttle Lever
Pulling the throttle lever back increases engine speed, and pushing it forward decreases engine speed.

8. Unlock the Parking Brake.

Parking Brake Pedal
To release the parking brake, depress the brake pedal again.

9. Depress the Speed Control Pedal.

Speed Control Pedal

WARNING
To avoid personal injury:
- Do not operate if tractor moves on level ground with foot off Speed Control Pedal.

Forward Pedal
Depress the forward pedal with the toe of your right foot to move forward.

Reverse Pedal
Depress the reverse pedal with the heel of your right foot to move backward.
To prevent serious damage to the HST, do not adjust the stopper bolts.

When you stand up from the seat with the speed control pedal stepped on, the engine will stop regardless of whether the machine is moving or not. This is because the tractor is equipped with Operator Presence Control system (OPC).

**Speed Set Device (BX2370D, BX2670D)**

The Speed Set Device is designed for tractor operating efficiency and operator’s comfort. This device will provide a constant forward operating speed by mechanically holding the speed control pedal at a selected position.

**To engage Speed Set Device**
1. Accelerate speed to desired level using Speed Control Pedal.
2. Push and hold the speed set rod downward to "ON" position.
4. Release the speed set rod and desired speed will be maintained.

**To disengage Speed Set Device**
1. Depress the brake pedal.

If you step on the pedal on the forward acceleration side, the speed set device will disengage.

Speed set device will not operate in reverse.

**STopping**

**Stopping**
1. Slow the engine down.
2. Step on the brake pedal.
3. After the tractor has stopped, disengage the PTO, lower the implement to the ground, shift the range gear shift lever to "NEUTRAL" and set the parking brake.
CHECK DURING DRIVING

- Immediately Stop the Engine if:
  - The engine suddenly slows down or accelerates,
  - Unusual noises suddenly are heard,
  - Exhaust fumes suddenly become very dark,

While driving, make the following checks to see that all the parts are functioning normally.

- Easy Checker(TM)
  If the warning lamps in the Easy Checker(TM) come on during operation, immediately stop the engine, and find the cause as shown below.
  Never operate the tractor while Easy Checker(TM) lamp is "ON".

- Fuel Gauge
  When the key switch is "ON", the fuel gauge indicates the fuel level.
  It's for the check if the gauge is working.
  When the fuel is close to empty level, the low fuel indicator of the Easy Checker(TM) comes on and the segment K1 of the fuel gauge starts blinking at 1-second intervals.
  Be careful not to empty the fuel tank. Otherwise air may enter the fuel system.
  Should this happen, the system should be bled. (See "Bleeding Fuel System" in "SERVICE AS REQUIRED" in "PERIODIC SERVICE" section.)

- Coolant Temperature Gauge
  To avoid personal injury:
  - Do not remove radiator cap until coolant temperature is well below its boiling point. Then loosen cap slightly to the stop to relieve any pressure before removing cap completely.

  Overheat indication:
  1. When the coolant temperature stays at 125 °C (257 °F) for 5 seconds, the indicator on the Easy Checker(TM) comes on.
  2. When the coolant temperature stays above 130 °C (266 °F) for 5 seconds, the indicator remains on and all segments of the coolant temperature gauge start blinking at 1-second intervals.
  3. When the coolant temperature stays below 120 °C (248 °F) for 5 seconds, the indicator turns off.

  If the coolant temperature indicator on the Easy Checker(TM) comes on:
  1. Place the PTO clutch lever in "OFF" (DISENGAGE) position.

NOTE:
- For checking and servicing of your tractor, consult your local KUBOTA Dealer for instructions.
2. Move the machine to the level surface, and apply the parking brake.
3. Place the throttle lever in the engine idle position, and let the engine run for a few minutes.
4. Check the Cooling System, after it has sufficient time to cool down.

Check the following items:
1. Shortage or leakage of the coolant.
2. Foreign matter on the radiator net or dust and dirt between the radiator fins.
3. Looseness of fan belt.
4. Blockage in the radiator tube.
   (See "PERIODIC SERVICE" section.)

**PARKING**

**Parking**

⚠️ **CAUTION**
To avoid personal injury:
BEFORE DISMOUNTING TRACTOR

- ALWAYS SET PARKING BRAKE AND LOWER ALL IMPLEMENTS TO THE GROUND.
Leaving transmission in gear with the engine stopped will not prevent the tractor from accidental rolling.
- STOP THE ENGINE AND REMOVE THE KEY.

1. When parking, be sure to set the parking brake.
   To set the parking brake;
   (1) Depress the brake pedal.
   (2) Latch the brake pedal with the parking brake lock pedal.

2. Before getting off the tractor, disengage the PTO, lower all implements to the ground, place all control levers in their "NEUTRAL" positions, set the parking brake, stop the engine and remove the key.
3. If it is necessary to park on an incline, be sure to chock the wheels to prevent accidental rolling of the machine.
ACCESSORY

■ 12V Electric Outlet

An auxiliary light or other devices may be connected to this connector.

NOTE:

- Do not connect a light or other device that draws more than 120 watts to this connector, or the battery may discharge very rapidly or the outlet may fail.

IMPORTANT:

- Do not use as a cigarette lighter.
- Do not use when wet.

■ Glove Box (BX2370D, BX2670D)

■ Operator's Manual Holder (BX1870D)
OPERATING TECHNIQUES

Differential Lock

WARNING
To avoid personal injury due to loss of steering control:

- Do not operate the tractor at high speed with differential lock engaged.
- Do not attempt to turn with the differential lock engaged.
- Be sure to release the differential lock before making a turn in field conditions.

If one of the rear wheels should slip, step on the differential lock pedal. Both wheels will then turn together, reduce slippage.

Differential lock is maintained only while the pedal is depressed.

Operating the Tractor on a Road

CAUTION
To avoid personal injury:

- When traveling on road with 3-point hitch mounted implement attached, be sure to have sufficient front weight on the tractor to maintain steering ability.

Be sure SMV emblem and warning lamps are clean and visible. If towed or rear-mounted equipment obstructs these safety devices, install SMV emblem and warning lamps on equipment.

Consult your local KUBOTA Dealer for further details.

1. Loosen the flange nut and turn the bracket vertically and fasten the flange nut.
2. Set SMV emblem.
Operating on a Slopes and Rough Terrain

⚠️ CAUTION
To avoid personal injury:
- Always back up when going up a steep slope. Driving forward could cause the tractor to tip over backward. Stay off hills and slopes too steep for safe operation.
- Avoid changing gears when climbing or descending a slope.
- If operating on a slope, never disengage shift levers to "NEUTRAL". Doing so could cause loss of control.
- Do not drive the tractor close to the edges of ditches or banks which may collapse under the weight of the tractor. Especially when the ground is loose or wet.

1. Slow down for slopes, rough ground, and sharp turns, especially when transporting heavy, rear mounted equipment.
2. Before descending a slope, be sure that the range lever is in the low "aiser" so that speed can be controlled without using brakes.

Transport the Tractor Safely
1. The tractor, if damaged, must be carried on a truck. Secure the tractor tightly with ropes.
2. Follow the instruction below when towing the tractor: Otherwise, the tractor's powertrain may get damaged.
   - Set the all shift levers to "NEUTRAL" position.
   - If possible, start engine and select 2WD, if creep speed is fitted ensure that it is disengaged.
   - Tow the tractor using its front hitch or drawbar.
   - Never tow faster than "10 km/h (6.2 mph)".

Directions for Use of Power Steering
1. Power steering is activated only while the engine is running. While the engine is stopped, the tractor functions in the same manner as tractors without power steering.
2. When the steering wheel is turned all the way to the stop, the relief valve is activated. Do not hold the steering wheel in this position for a long period of time.
3. Avoid turning the steering wheel while the tractor is stopped, or tires may wear out sooner.
4. The power steering mechanism makes the steering easier. Be careful when driving on a road at high speeds.
PTO OPERATION

⚠️ WARNING
To avoid personal injury:
- Before operation, be sure to select the position of the PTO select lever (mid, mid/rear, rear).

⚠️ CAUTION
To avoid personal injury:
- Disengage PTO, stop engine, and allow all rotating components to come to a complete stop before connecting, disconnecting, adjusting, or cleaning any PTO driven equipment.

PTO Select Lever
The tractor has a 540 rpm rear PTO speed and a 2500 rpm mid-PTO speed.

◆ Rear PTO
To use rear PTO, shift the PTO select lever to rear PTO position and the PTO clutch lever to "ON" position.

IMPORTANT:
- To avoid shock loads to the PTO, reduce engine throttle from full to half speed by pushing up on engine throttle when engaging the PTO, then open the throttle to the recommended speed.
- To avoid damage of transmission, when PTO select lever is not smoothly shifted, slightly shift PTO clutch lever.

◆ Mid-PTO
The Mid-PTO is available for KUBOTA approved implements.

To use Mid-PTO, shift the PTO select lever to Mid-PTO position and the PTO clutch lever to "ON" position.

To use mid and rear PTO at the same time, shift the PTO select lever to mid-rear PTO position and the PTO clutch lever to "ON" position.
**PTO Clutch Lever**

1. The PTO clutch lever engages or disengages the PTO clutch which gives the PTO independent control.
2. Shift the lever to "ON" to engage the PTO clutch. Shift the lever to "OFF" to disengage the PTO clutch.

**IMPORTANT:**
- To avoid shock loads to the PTO, reduce engine throttle from full to half speed by pushing up on engine throttle when engaging the PTO, then re-engage the engine to full.
- To avoid damage to PTO clutch and implement, shift the PTO clutch lever slowly, when engaging the PTO clutch. Do not keep the PTO clutch lever half way.

**NOTE:**
- Tractor engine will not start if the PTO clutch lever is in the engaged "ON" position.
- When you stand up from the seat with the PTO clutch lever at "ON" position, the engine will stop regardless of the position of the PTO select lever. This is because the tractor is equipped with Operator Presence Control system (OPC).

**PTO Shaft Cover and Shaft Cap**

Keep the PTO shaft cover in place at all times. Replace the PTO shaft cap when the PTO is not in use. Before connecting or disconnecting a drive shaft to PTO shaft, be sure engine is "OFF" and raise up the PTO shaft cover. Afterward be sure to return the PTO shaft cover to "NORMAL POSITION".

**IMPORTANT:**
- The universal joint of the PTO drive shaft is technically limited in its moving angle. Refer to the PTO Drive Shaft Instructions for proper use.
Stationary PTO
To park the tractor and use the PTO system (for chipper or pump, for example), start the PTO system in the following steps.
1. Apply the parking brakes and place blocks at the tires.
2. Make sure all shift levers are at "NEUTRAL", and start the engine.
3. Set the PTO select lever to rear only position.
4. Dismount the seat and tilt up.
5. Move the lever behind the seat frame the arrow direction to release the seat lock, and tilt the seat forward.
6. Set the PTO clutch lever to engage "ON".
7. Set the engine speed to provide recommended rear PTO speed.

NOTE:
- If the PTO clutch lever is shifted to "ON" (Engaged) position under the following condition, the engine will stop itself.

(1) The speed control pedal is not at "NEUTRAL" position.
(2) The PTO select lever is not at "REAR PTO" position.
(3) The seat is not tilted forward.

PTO Drive Shaft

1. When using a PTO drive shaft, read the operator's manual of the implement before operating the implement. PTO drive shafts are designed for specific machines and power requirement.
2. To adjust the length of the PTO drive shaft, refer to the following instructions.
   (1) To adjust the length, hold the half shafts next to each other in the shortest working position and mark them.
   (2) Shorten inner and outer guard tubes equally.
   (3) Shorten inner and outer sliding profiles tube by the same length as the guard tubes.
   (4) Round off all sharp edges and remove burrs. Grease sliding profiles.
3. Ensure that the PTO drive shaft is securely connected at both ends before operating.
Use holder plate to hold lower link higher while mowing with mid-mount mower only over uneven terrain.
3-POINT HITCH

Attaching and detaching implements

**CAUTION**

To avoid personal injury:
- Be sure to stop the engine and remove the key.
- Do not stand between tractor and implement unless parking brake is applied.
- Before attaching or detaching implement, locate the tractor and implement on a firm, flat and level surface.
- Whenever an implement or other attachment is connected to the tractor 3-point hitch, slowly move the 3-point hitch through the full range of operation and check for interference, binding or PTO separation before operating the machine.

**Lifting Rod (Right)**

**CAUTION**

To avoid personal injury from separation:
- Do not extend lift rod beyond the groove on the threaded rod or it may separate. See the illustration that is on the safety label part K2581-6555-1.

Level a 3-point mounted implement from side to side by turning the adjusting turnbuckle to shorten or lengthen the adjustable lifting rod with the implement on the ground. After adjustment, tighten the lock nut securely.

Do not extend lift rod beyond the groove on the threaded rod when extending it.

**Top Link**

1. Adjust the angle of the implement to the desired position by shortening or lengthening the top link.

2. The proper length of the top link varies according to the type of implement being used.

**NOTE:**
- When not using the top link, make it the shortest length and fix it to the top link holder.

**Check Chains**

Make sure that the check chains are installed in the figures below.

Adjust the turnbuckle to control horizontal sway of the implement.

After adjustment, retighten the lock nut.

**HITCH**

**WARNING**

To avoid personal injury:
- Never pull from the top link, the rear axle or any point above the hitch. Doing so could cause the tractor to tip over rearward causing personal injury or death.
HYDRAULIC UNIT

3-POINT HITCH CONTROL SYSTEM

CAUTION
To avoid personal injury:
- Before using the 3-point hitch controls, ensure that no person or object is in the area of the implement or 3-point hitch. Do not stand on or near the implement or between the implement and tractor when operating the 3-point hitch controls.

Hydraulic Control
Operating the hydraulic control lever actuates the hydraulic lift arm, which controls the elevation of 3-point hitch mounted implement.
To lower implement, move the hydraulic control lever forward; to raise it, move the hydraulic control lever rearward.
The positions (B) and (C) of the lever in contact with the inner stopper enables you to control the valve with ease in increments of approximately 6.4 mm (0.25 in.) at the lower link end.

- Do not operate until the engine is warmed up. If operation is attempted when the engine is still cold, the hydraulic system may be damaged.
- If noises are heard when implement is lifting after the hydraulic control lever has been activated, the hydraulic mechanism is not adjusted properly. Unless corrected the unit will be damaged. Contact your KUBOTA Dealer for adjustment.

3-point Hitch Lowering Speed

CAUTION
To avoid personal injury:
- Fast lowering speed may cause damage or injury. Lowering speed of implement should be adjusted to two or more seconds.

The lowering speed of the 3-point hitch can be controlled or locked in similar fashion to a water faucet, turn toward (A) to increase, (B) to reduce and (C) firmly to the stop for lock.

IMPORTANT:
- If the 3-point hitch can not be raised by setting the hydraulic control lever to the "UP" position after long term storage or when changing the transmission oil, follow these air bleeding procedures.
  1. Stop the engine.
  2. Set the hydraulic control lever to the down position and start the engine.
  3. Operate the engine at low idle speed for at least 30 seconds to bleed air from the system.

(1) Hydraulic control lever
(A) "DOWN"
(B) "SLOW DOWN"
(N) "NEUTRAL"
(C) "SLOW UP"
(D) "UP"

(1) 3-point hitch lowering speed knob
(A) "FAST"
(B) "SLOW"
(C) "LOCK"
AUXILIARY HYDRAULICS
On the tractor hydraulic outlet is provided.

Hydraulic Outlet
Hydraulic outlet is useful when adding hydraulically operated equipment such as front end loader, front blade, etc.

When implement is attached
1. Remove the block cover.
2. Attach the block outlet cover. (option)
   (The block outlet cover is standard part for KUBOTA implements)
3. Route the implement inlet, outlet and return pipes as shown in the illustration.

MOWER LIFT LINKAGE SYSTEM

Cutting Height Control Dial

When mounting the Mid-mount mower, turn the cutting height control dial to the desired height.
For further details, refer to the operator’s manual of ROTARY MOWER RCK60B-23BX, RCK54P-23BX, RCK54-23BX, RCK48P-18BX, and RCK48-18BX.

IMPORTANT:
When operating the tractor without Mid-mount mower:
1. Move the hydraulic lever rearward to raise the mower rear links to the highest position.
2. Set the cutting height control dial to "TOP" position.
If this is not done, damage of the mower rear link can result.

IMPORTANT:
For hydraulic outlet, be sure to use the control valve of the "Power beyond type" (with relief valve) and third line return to tank for the operation of hydraulic block.
### Hydraulic Control Unit Use Reference Chart

In order to handle the hydraulics properly, the operator must be familiar with the following. Though this information may not be applicable to all types of implements and soil conditions, it is useful for general conditions.

<table>
<thead>
<tr>
<th>Implement</th>
<th>Soil condition</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moldboard plow</td>
<td>Light soil, Medium soil, Heavy soil</td>
<td>Adjust the check chains so that the implement can move 5 to 6 cm (2.0 to 2.4 in.) laterally. Check chains should be tight enough to prevent excessive implement movement when implement is in raised position.</td>
</tr>
<tr>
<td>Disc plow</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Harrower (spike, springtooth, disc type)</td>
<td>---</td>
<td>YES/NO, Loose</td>
</tr>
<tr>
<td>Sub-soiler</td>
<td>---</td>
<td>YES</td>
</tr>
<tr>
<td>Weeder, ridger</td>
<td>---</td>
<td>YES</td>
</tr>
<tr>
<td>Earthmove, digger scraper, manure fork rear carrier</td>
<td>---</td>
<td>YES/NO, Tighten</td>
</tr>
<tr>
<td>Mower (mid-and rear-mount type) Hayrake, tedder</td>
<td>---</td>
<td>YES/NO</td>
</tr>
</tbody>
</table>

1. Hydraulic control lever
2. Gauge wheel
3. Check chains
AUXILIARY HYDRAULIC CONTROL VALVE (IF EQUIPPED)

CAUTION

To avoid serious personal injury:
- Escaping hydraulic fluid under pressure can have sufficient force to penetrate skin, causing serious personal injury.

Before disconnecting lines, be sure to relieve all pressure.

Before applying pressure to system, be sure all connections are tight and that lines, tubes and hoses are not damaged.

Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands to search for suspected leaks.

If injured by escaping fluid, see a doctor at once. Serious infection or allergic reaction will develop if proper medical treatment is not administered immediately.

Valve Lock

CAUTION

To avoid injury from crushing:
- Do not utilize the valve lock for machine maintenance or repair.
- The valve lock is to prevent accidental actuation when implement is not in use or during transport.

The control valve is equipped with a valve lock feature.

The control valve is locked in "NEUTRAL" position.
The lock is not intended and will not prevent a leak down of the implement during the period of storage.

Auxiliary Hydraulic Ports

Auxiliary hydraulic ports are equipped with quick couplers.

If you don't use the auxiliary hydraulic ports, place the dust plugs on the quick couplers ends.
Control Lever and Hydraulic Hose Connections

1. Connect the control lever in its specified direction and the hydraulic hoses to their specified ports.

2. Before moving the lever, make sure that the hydraulic hoses for attachments are connected.

3. Move the lever diagonally (a, b, c shown in the figure), and the first and second segments can be controlled at once.

**NOTE:**
- Move the lever to the "FLOAT" position, and it will be held there by the detent mechanism. To use the valve as a floating valve with detents, connect the hydraulic hoses to ports [A] and [D].
- When taking off hydraulic power from port [C], the flow rate can be adjusted in two stages with the lever. The flow rate is high at position (R1) and low at position (R2). Move the lever to position (R1) or (R2) depending on the attachment in use.

---

**Hydraulic outlet ports of first segment**

<table>
<thead>
<tr>
<th>Port</th>
<th>Lever</th>
<th>Pressure</th>
<th>Returning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[A]</td>
<td>DOWN</td>
<td>In</td>
<td>Out →</td>
</tr>
<tr>
<td>[D]</td>
<td>UP</td>
<td>Out</td>
<td>In ←</td>
</tr>
</tbody>
</table>

**Hydraulic outlet ports of second segment**

<table>
<thead>
<tr>
<th>Port</th>
<th>Lever</th>
<th>Pressure</th>
<th>Returning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[B]</td>
<td>RIGHT</td>
<td>In</td>
<td>Out →</td>
</tr>
<tr>
<td>[C]</td>
<td>LEFT</td>
<td>Out</td>
<td>In ←</td>
</tr>
</tbody>
</table>

**IMPORTANT:**
- To avoid damage of the attachments:
  - Do not connect attachments through the hydraulic motor to the [B] and [C] ports. If the control lever is moved to the Regeneration position (R1), the seals on the hydraulic motor will be damaged.
  - This control valve is provided with the Regeneration position. When the [B] and [C] ports are used to take off hydraulic power for the hydraulic cylinder, be sure to connect the [B] port to the "Head-End" side port of the hydraulic cylinder.
  - Make the following connections when using this valve to take off hydraulic power for the hydraulic cylinder.

<table>
<thead>
<tr>
<th>Colored Coupler</th>
<th>Hydraulic Cylinder port</th>
</tr>
</thead>
<tbody>
<tr>
<td>[B: Blue], [D: Yellow]</td>
<td>Head-End side</td>
</tr>
<tr>
<td>[A: White], [C: Red]</td>
<td>Rod-End side</td>
</tr>
</tbody>
</table>
Controlling Loader (Only if equipped with loader)

- When moving the lever up, the loader will go down.
- When moving the lever down, the loader will go up.
- When moving the lever to the left, the bucket will roll back.
- When moving the lever to the right, the bucket will dump.
- When moving the lever diagonally, the loader and bucket will work in the same time.

Dumping and bring down the loader have two stages that operate differently.

When shifting the lever to the right, the bucket will dump at a high speed. This lever position is the first dump stage (DUMP 1).

When shifting the lever further to the right until feeling the bump, the bucket will dump powerfully at a lower speed compared to the first stage. This lever position after the bump is the second stage (DUMP 2). When the operator lets the hand off from the lever, it will return to the normal position.

When shifting the lever up, the loader will go down with hydraulic pressure. This lever position is the first stage (DOWN) for lowering the loader.

When shifting the level further up until feeling the bump, pressure in the connector lines is released so the loader will go down by its own weight. This lever position after the bump is the second stage (RELEASE PRESSURE). When the operator lets the hand off from the lever, it will stay in the second stage position. Shift the lever down to place it to the normal position.
TIRES

WARNING
To avoid personal injury:

- Do not attempt to mount a tire on a rim. This should be done by a qualified person with the proper equipment.
- Always maintain the correct tire pressure. Do not inflate tires above the recommended pressure shown in the operator's manual.

IMPORTANT:

- Do not use tires other than those approved by KUBOTA.
- When you intend to mount different size of tires from equipped ones, consult your dealer about front drive gear ratio for details. Excessive wear of tires may occur due to improper gear ratio.

Inflation Pressure
Though the tire pressure is factory-set to the prescribed level, it naturally drops slowly in the course of time. Thus, check it everyday and inflate as necessary.

<table>
<thead>
<tr>
<th>Tire sizes</th>
<th>Inflation Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear 24x12.00-12 Turf</td>
<td>100kPa(1.0kgf/cm², 14psi)</td>
</tr>
<tr>
<td></td>
<td>24x12.00-12 Bar</td>
</tr>
<tr>
<td>Rear 26x12.00-12 Turf</td>
<td>100kPa(1.0kgf/cm², 14psi)</td>
</tr>
<tr>
<td></td>
<td>26x12.00-12 Bar</td>
</tr>
<tr>
<td></td>
<td>26x12.00-12 Ind.</td>
</tr>
<tr>
<td>Front 16x7.50-8 Turf</td>
<td>120kPa(1.2kgf/cm², 17psi)</td>
</tr>
<tr>
<td></td>
<td>16x7.50-8 Bar</td>
</tr>
<tr>
<td>Front 18x8.50-10 Turf</td>
<td>120kPa(1.2kgf/cm², 17psi)</td>
</tr>
<tr>
<td></td>
<td>18x8.50-10 Bar</td>
</tr>
<tr>
<td></td>
<td>18x8.50-10 Ind.</td>
</tr>
</tbody>
</table>

NOTE:

- Maintain the maximum pressure in front tires, if using a front loader or when equipped with a full load of front weight.

Dual Tires
Dual tires are not approved.
WHEEL TREAD

**CAUTION**

To avoid personal injury:
- Support tractor securely on stands before removing a wheel.
- Never operate tractor with a loose rim, wheel, or axle.

**Front Wheels**

Front tread can not be adjusted.

**IMPORTANT:**
- Do not turn front discs to obtain wider tread.

<table>
<thead>
<tr>
<th>Models</th>
<th>BX1870D</th>
<th>BX2370D, BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire</td>
<td>16x7.50-8 Turf, 16x7.50-8 Bar</td>
<td>18x8.50-10 Turf, 18x8.50-10 Bar, 18x8.50-10 Ind.</td>
</tr>
<tr>
<td>Tread</td>
<td><img src="1AGAJADAP13OB" alt="Diagram" /></td>
<td><img src="1AGAJAXAP075A" alt="Diagram" /></td>
</tr>
</tbody>
</table>

880 mm 34.6 in.

910 mm 35.8 in.

**CAUTION**

To avoid personal injury:
- Before jacking up the tractor, park it on a firm and level ground and chock the rear wheels.
- Fix the front axle to keep it from swinging.
- Select jacks that withstand the machine weight and set them up as shown below.

1AGAJBAAP070A

(1) Front axle case
(2) Jack points
■ Rear Wheels
Rear tread width can not be adjusted.

**IMPORTANT:**
- Do not turn rear discs to obtain wider tread.

<table>
<thead>
<tr>
<th>Models</th>
<th>BX1870D</th>
<th>BX2370D, BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire</td>
<td>24x12.00-12 Turf, 24x12.00-12 Bar</td>
<td>26x12.00-12 Turf, 26x12.00-12 Bar, 26x12.00-12 Ind.</td>
</tr>
</tbody>
</table>

![Diagram of tire dimensions](image1)

**IMPORTANT:**
- Always attach tires as shown in the drawings.
- If not attached as illustrated, transmission parts may be damaged. When re-fitting or adjusting a wheel, tighten the bolts to the following torques then recheck after driving the tractor 200m (200yards), after one day (8hours) and thereafter every 50 hours (as per maintenance chart).

**NOTE:**
- Use the tapered bolts for wheels with beveled or tapered holes.

![Diagram of bolt specification](image2)

(1) Bolt
- Front 149.2 to 179.0 N-m
  - (15.2 to 18.3 kgf-m)
  - (110 to 132 lbf-ft)
- Rear 108.5 to 130.2 N-m
  - (11.1 to 13.3 kgf-m)
  - (80 to 96 lbf-ft)
CAUTION
To avoid personal injury:
- Before jacking up the tractor, park it on a firm and level ground and chock the front wheels.
- Fix the front axle to keep it from swinging.
- Select a jack that withstands the machine weight and set it up as shown below.

BALLAST
CAUTION
To avoid personal injury:
- Additional ballast will be needed for transporting heavy implements. When the implement is raised, drive slowly over rough ground, regardless of how much ballast is used.
- Do not fill the front wheels with liquid to maintain steering control.

Front Ballast
Add weights if needed for stability and improve traction. Heavy pulling and heavy rear mounted implements tend to lift front wheels. Add enough ballast to maintain steering control and prevent tip over. Remove weight when no longer needed.

Front End Weights (option)
The front end weights can be attached to the bumper. See your implement operator's manual for required number of weights or consult your local KUBOTA Dealer to use.

NOTE:
- Besides the weight, a front weight bracket and mounting bolt kit(s) are required for mounting the weight.

Maximum weight | 125 kg (275 lbs.)
### Rear Ballast

Add weight to rear wheels if needed to improve traction or for stability. The amount of rear ballast should be matched to the job and the ballast should be removed when it is not needed. The weight should be added to the tractor in the form of liquid ballast.

#### Liquid Ballast in Rear Tires

Water and calcium chloride solution provides safe economical ballast. Used properly, it will not damage tires, tubes, or rims. The addition of calcium chloride is recommended to prevent the water from freezing. Use of this method of weighting the wheels has the full approval of the tire companies. See your tire dealer for this service.

**Liquid weight per tire (75 percent filled)**

<table>
<thead>
<tr>
<th>Tire sizes</th>
<th>24x12.00-12 (BX1870D)</th>
<th>26x12.00-12 (BX2370D, BX2670D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slush free at -10°C (-14°F)</td>
<td>35 kg (77 lbs.)</td>
<td>45 kg (99 lbs.)</td>
</tr>
<tr>
<td>Solid at -30°C (-22°F)</td>
<td>[Approx. 1 kg (2 lbs.) CaCl₂ per 4 L (1 gal) of water]</td>
<td></td>
</tr>
<tr>
<td>Slush free at -24°C (-11°F)</td>
<td>38 kg (84 lbs.)</td>
<td>50 kg (110 lbs.)</td>
</tr>
<tr>
<td>Solid at -47°C (-52°F)</td>
<td>[Approx. 1.5 kg (3.5 lbs.) CaCl₂ per 4 L (1 gal) of water]</td>
<td></td>
</tr>
<tr>
<td>Slush free at -47°C (-52°F)</td>
<td>44 kg (97 lbs.)</td>
<td>56 kg (123 lbs.)</td>
</tr>
<tr>
<td>Solid at -52°C (-62°F)</td>
<td>[Approx. 2.25 kg (5 lbs.) CaCl₂ per 4 L (1 gal) of water]</td>
<td></td>
</tr>
</tbody>
</table>

**IMPORTANT:**

- Do not fill tires with water or solution more than 75% of full capacity (to the level of valve stem at 12 o’clock position).

- To avoid damage of transmission, do not use rear wheel weights and liquid ballast at the same time.
## MAINTENANCE

### SERVICE INTERVALS

<table>
<thead>
<tr>
<th>No.</th>
<th>Items</th>
<th>Indication on hour meter</th>
<th>Since then</th>
<th>Ref. page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>50 100 150 200 250 300 350 400 450</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Engine oil Change</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 200 Hr</td>
<td>61</td>
</tr>
<tr>
<td>2</td>
<td>Engine oil filter Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 200 Hr</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Transmission oil filter Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 200 Hr</td>
<td>62</td>
</tr>
<tr>
<td>4</td>
<td>Transmission fluid Change</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 400 Hr</td>
<td>65</td>
</tr>
<tr>
<td>5</td>
<td>Transmission strainer Clean</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 400 Hr</td>
<td>65</td>
</tr>
<tr>
<td>6</td>
<td>Front axle case oil Change</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 400 Hr</td>
<td>66</td>
</tr>
<tr>
<td>7</td>
<td>Front axle pivot Adjust</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 400 Hr</td>
<td>64</td>
</tr>
<tr>
<td>8</td>
<td>Engine start system Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 50 Hr</td>
<td>54</td>
</tr>
<tr>
<td>9</td>
<td>OPC system Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 50 Hr</td>
<td>55</td>
</tr>
<tr>
<td>10</td>
<td>Greasing -- Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 50 Hr</td>
<td>54</td>
</tr>
<tr>
<td>11</td>
<td>Wheel bolt torque Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 50 Hr</td>
<td>55</td>
</tr>
<tr>
<td>12</td>
<td>Battery condition Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 100 Hr</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>each 100 Hr</td>
<td>56</td>
</tr>
<tr>
<td>13</td>
<td>Air cleaner element Clean</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 100 Hr</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 1 year</td>
</tr>
<tr>
<td>14</td>
<td>Fuel filter element Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 100 Hr</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 500 Hr</td>
</tr>
<tr>
<td>15</td>
<td>Fan belt Adjust</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 100 Hr</td>
<td>59</td>
</tr>
<tr>
<td>16</td>
<td>HST neutral spring Adjust</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 100 Hr</td>
<td>59</td>
</tr>
<tr>
<td>17</td>
<td>Brake pedal Adjust</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 100 Hr</td>
<td>59</td>
</tr>
<tr>
<td>18</td>
<td>Radiator hose and clamp Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 200 Hr</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
</tr>
<tr>
<td>19</td>
<td>Power steering oil line Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 200 Hr</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
</tr>
<tr>
<td>20</td>
<td>Fuel line Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 100 Hr</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
</tr>
<tr>
<td>21</td>
<td>Intake air line Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 200 Hr</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
</tr>
<tr>
<td>22</td>
<td>Engine breather hose Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
<td>68</td>
</tr>
<tr>
<td>23</td>
<td>Toe-in Adjust</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 200 Hr</td>
<td>63</td>
</tr>
<tr>
<td>24</td>
<td>Engine valve clearance Adjust</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 800 Hr</td>
<td>66</td>
</tr>
<tr>
<td>25</td>
<td>Fuel injection nozzle Inspection Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 1500 Hr</td>
<td>66</td>
</tr>
<tr>
<td>26</td>
<td>Injection pump Check</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 3000 Hr</td>
<td>66</td>
</tr>
<tr>
<td>27</td>
<td>Cooling system Flush</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
<td>66</td>
</tr>
<tr>
<td>28</td>
<td>Coolant Change</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
<td>66</td>
</tr>
<tr>
<td>29</td>
<td>Fuel system Bleed</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>Service as required</td>
<td>68</td>
</tr>
<tr>
<td>30</td>
<td>Fuse Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
<td>69</td>
</tr>
<tr>
<td>31</td>
<td>Light bulb Replace</td>
<td>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</td>
<td>every 2 years</td>
<td>69</td>
</tr>
<tr>
<td>No.</td>
<td>Items</td>
<td>Indication on hour meter</td>
<td>Since then</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------</td>
<td>--------------------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Engine oil</td>
<td>Change</td>
<td>every 200 Hr</td>
<td>61</td>
</tr>
<tr>
<td>2</td>
<td>Engine oil filter</td>
<td>Replace</td>
<td>every 200 Hr</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Transmission oil filter</td>
<td>Replace</td>
<td>every 200 Hr</td>
<td>62</td>
</tr>
<tr>
<td>4</td>
<td>Transmission fluid</td>
<td>Change</td>
<td>every 400 Hr</td>
<td>65</td>
</tr>
<tr>
<td>5</td>
<td>Transmission strainer</td>
<td>Clean</td>
<td>every 400 Hr</td>
<td>65</td>
</tr>
<tr>
<td>6</td>
<td>Front axle case oil</td>
<td>Change</td>
<td>every 400 Hr</td>
<td>66</td>
</tr>
<tr>
<td>7</td>
<td>Front axle pivot</td>
<td>Adjust</td>
<td>every 400 Hr</td>
<td>64</td>
</tr>
<tr>
<td>8</td>
<td>Engine start system</td>
<td>Check</td>
<td>every 50 Hr</td>
<td>54</td>
</tr>
<tr>
<td>9</td>
<td>OPC system</td>
<td>Check</td>
<td>every 50 Hr</td>
<td>55</td>
</tr>
<tr>
<td>10</td>
<td>Greasing</td>
<td>--</td>
<td>every 50 Hr</td>
<td>54</td>
</tr>
<tr>
<td>11</td>
<td>Wheel bolt torque</td>
<td>Check</td>
<td>every 50 Hr</td>
<td>55</td>
</tr>
<tr>
<td>12</td>
<td>Battery condition</td>
<td>Check</td>
<td>every 100 Hr</td>
<td>56 *5</td>
</tr>
<tr>
<td>13</td>
<td>Air cleaner element</td>
<td>Clean</td>
<td>every 100 Hr</td>
<td>57 *1 @</td>
</tr>
<tr>
<td>14</td>
<td>Fuel filter element</td>
<td>Check</td>
<td>every 100 Hr</td>
<td>58 *2 @</td>
</tr>
<tr>
<td>15</td>
<td>Fan belt</td>
<td>Adjust</td>
<td>every 100 Hr</td>
<td>59</td>
</tr>
<tr>
<td>16</td>
<td>HST neutral spring</td>
<td>Adjust</td>
<td>every 100 Hr</td>
<td>59 *4</td>
</tr>
<tr>
<td>17</td>
<td>Brake pedal</td>
<td>Adjust</td>
<td>every 100 Hr</td>
<td>59</td>
</tr>
<tr>
<td>18</td>
<td>Radiator hose and clamp</td>
<td>Check</td>
<td>every 200 Hr</td>
<td>62</td>
</tr>
<tr>
<td>19</td>
<td>Power steering oil line</td>
<td>Check</td>
<td>every 2 years</td>
<td>68</td>
</tr>
<tr>
<td>20</td>
<td>Fuel line</td>
<td>Check</td>
<td>every 100 Hr</td>
<td>58 *4 @</td>
</tr>
<tr>
<td>21</td>
<td>Intake air line</td>
<td>Check</td>
<td>every 200 Hr</td>
<td>63</td>
</tr>
<tr>
<td>22</td>
<td>Engine breather hose</td>
<td>Replace</td>
<td>every 2 years</td>
<td>68 *4</td>
</tr>
<tr>
<td>23</td>
<td>Toe-in</td>
<td>Adjust</td>
<td>every 200 Hr</td>
<td>63</td>
</tr>
<tr>
<td>24</td>
<td>Engine valve clearance</td>
<td>Adjust</td>
<td>every 800 Hr</td>
<td>66 *4</td>
</tr>
<tr>
<td>25</td>
<td>Fuel injection nozzle</td>
<td>Check</td>
<td>every 1500 Hr</td>
<td>66 *4 @</td>
</tr>
<tr>
<td>26</td>
<td>Injection pump</td>
<td>Check</td>
<td>every 3000 Hr</td>
<td>66 *4 @</td>
</tr>
<tr>
<td>27</td>
<td>Cooling system</td>
<td>Flush</td>
<td>every 2 years</td>
<td>66</td>
</tr>
<tr>
<td>28</td>
<td>Coolant</td>
<td>Change</td>
<td>every 2 years</td>
<td>66</td>
</tr>
<tr>
<td>29</td>
<td>Fuel system</td>
<td>Bleed</td>
<td>Service as required</td>
<td>68</td>
</tr>
<tr>
<td>30</td>
<td>Fuse</td>
<td>Replace</td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>31</td>
<td>Light bulb</td>
<td>Replace</td>
<td></td>
<td>69</td>
</tr>
</tbody>
</table>

**IMPORTANT:**
- The jobs indicated by ○ must be done after the first 50 hours of operation.
- *1 Air cleaner should be cleaned more often in dusty conditions than in normal conditions.
- *2 Every year or every 6 times of cleaning.
- *3 Replace only if necessary.
- *4 Consult your local KUBOTA Dealer for this service.
- *5 When the battery is used for less than 100 hours per year, check the battery condition by reading the indicator annually.
- The items listed above (@ marked) are registered as emission related critical parts by KUBOTA in the U.S.EPA nonroad emission regulation. As the engine owner, you are responsible for the performance of the required maintenance on the engine according to the above instruction.

Please see Warranty Statement in detail.
LUBRICANTS, FUEL AND COOLANT

<table>
<thead>
<tr>
<th>No.</th>
<th>Locations</th>
<th>Capacities</th>
<th>Lubricants</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX1870D</td>
<td>BX2370D</td>
<td>BX2670D</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Fuel</td>
<td>25 L (6.6 U.S.gals.)</td>
<td>No. 2-D diesel fuel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No. 1-D diesel fuel if temperature is below -10 °C (14 °F)</td>
</tr>
<tr>
<td>2</td>
<td>Coolant (with recovery tank)</td>
<td>2.9 L (3.06 U.S.qts.)</td>
<td>3.1 L (3.3 U.S.qts.)</td>
</tr>
<tr>
<td>3</td>
<td>Engine crankcase</td>
<td>2.9 L *1 (3.06 U.S.qts.)</td>
<td>3.1 L *1 (3.3 U.S.qts.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Above 25 °C (77 °F)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 to 25 °C (32 to 77 °F)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Below 0 °C (32 °F)</td>
</tr>
<tr>
<td>4</td>
<td>Transmission case</td>
<td>11.6 L (3.1 U.S.gals.)</td>
<td>KUBOTA SUPER UDT-2 fluid *2</td>
</tr>
<tr>
<td>5</td>
<td>Front axle case</td>
<td>2.3 L (2.4 U.S.qts.)</td>
<td>4.7 L (5.0 U.S.qts.)</td>
</tr>
<tr>
<td>6</td>
<td>Greasing</td>
<td>No. of greasing points</td>
<td>Capacity</td>
</tr>
<tr>
<td></td>
<td>Battery terminal</td>
<td>2</td>
<td>moderate amount</td>
</tr>
<tr>
<td></td>
<td>Speed control pedal</td>
<td>1</td>
<td>until grease overflow</td>
</tr>
</tbody>
</table>

Note *1 Oil amount when the oil level is at the upper level of the oil level gauge.

*2 The product name of KUBOTA genuine UDT fluid may be different from that in the Operator's Manual depending on countries or territories. Consult your local KUBOTA Dealer for further detail.

**IMPORTANT:**
- To prevent serious damage to hydraulic systems, use only KUBOTA genuine fluid or its equivalent.
**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.

<table>
<thead>
<tr>
<th>Fuel used</th>
<th>Engine oil classification (API classification)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra Low Sulfur Fuel [&lt;0.0015% (15 ppm)]</td>
<td>Oil class of engines except external EGR</td>
</tr>
<tr>
<td>CF, CF-4, CG-4, CH-4 or CI-4</td>
<td>CF or CI-4</td>
</tr>
</tbody>
</table>

*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.

<table>
<thead>
<tr>
<th>Models</th>
<th>except external EGR</th>
<th>with external EGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX1870D, BX2370D, BX2670D</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>

**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.
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:
  ● With the emission control now in effect, the CF-4 and CG-4 lubricating oils have been developed for use of a low-sulfur fuel on on-road vehicle engines. When an off-road vehicle engine runs on a high-sulfur fuel, it is advisable to employ the "CF or better" lubricating oil with a high Total Base Number (TBN of 10 minimum).
  ● 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 (low-sulfur or high-sulfur fuel).

<table>
<thead>
<tr>
<th>Fuel used</th>
<th>Engine oil classification (API classification)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oil class of engines except external EGR</td>
</tr>
<tr>
<td>High Sulfur Fuel [≥ 0.05% (500 ppm)]</td>
<td>CF (If the &quot;CF-4, CG-4, CH-4 or CI-4&quot; lubricating oil is used with a high-sulfur fuel, change the lubricating oil at shorter intervals. (approximately half))</td>
</tr>
<tr>
<td>Low Sulfur Fuel [&lt;0.05% (500 ppm)] or Ultra Low Sulfur Fuel [&lt;0.0015% (15 ppm)]</td>
<td>CF, CF-4, CG-4, CH-4 or CI-4</td>
</tr>
</tbody>
</table>

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.

◆ Fuel:
  ● Cetane number of 45 is minimum. Cetane number greater than 50 is preferred, especially for temperatures below -20°C or elevations above 1500 m.
  ● If diesel fuel with sulfur content greater than 0.5% (5000 ppm) sulfur content is used, reduce the service interval for engine oil and filter by 50%.
  ● NEVER use diesel fuel with sulfur content greater than 0.05% (500 ppm) for EXTERNAL EGR type engine.
  ● DO NOT use diesel fuel with sulfur content greater than 1.0% (10000 ppm).
  ● 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:
The oil used to lubricate the transmission is also used as hydraulic fluid. To insure proper operation of the hydraulic system and to complete lubrication of the transmission, it is important that a multi-grade transmission fluid is used in this system. We recommend the use of KUBOTA UDT or SUPER UDT fluid for optimum protection and performance. (Consult your local KUBOTA Dealer for further detail.)
  Do not mix different brands together.
  ● Indicated capacities of water and oil are manufacturer's estimate.
CAUTION
To avoid personal injury:
- Do not work under any hydraulically supported devices. They can settle, suddenly leak down, or be accidentally lowered. If necessary to work under tractor or any machine elements for servicing or adjustment, securely support them with stands or suitable blocking beforehand.

HOW TO OPEN THE HOOD

CAUTION
To avoid personal injury from contact with moving parts;
- Never open the hood or engine side cover while the engine is running.
- Do not touch muffler or exhaust pipes while they are hot; Severe burns could result.

Hood
To open the hood, rotate the knob to release the latch and open the hood.

Engine Cover
To remove the engine cover, loosen the knob bolts. Close the hood half way and fix the band to the hood. Then, hold the hood with the band, and pull forward as shown in following figure.
In the above procedure, be careful not to hit the engine cover against the head lights.
It is not necessary to detach the engine cover for daily check.
When reinstall the engine cover, tighten the knob bolts.

**Daily Check**
For your own safety and maximum service life of the machine, make a thorough daily inspection before operating the machine to start the engine.

**CAUTION**
To avoid personal injury:
- Park the machine on firm and level ground.
- Set the parking brake.
- Lower the implement to the ground.
- All residual pressure of the hydraulic system released.
- Stop the engine and remove the key.

**Walk Around Inspection**
Look around and under the tractor for such items as loose bolts, trash build-up, oil or coolant leaks, broken or worn parts.

**Checking and Refueling**

**CAUTION**
To avoid personal injury:
- Do not smoke while refueling.
- Be sure to stop the engine and remove the key before refueling.

To avoid allergic skin reaction:
- Wash hands immediately after contact with diesel fuel.

1. Turn the key switch to "ON", check the amount of fuel by fuel gauge.
2. Fill fuel tank when fuel gauge shows 1/4 or less fuel in tank.
3. Use grade No.2-Diesel fuel at temperatures above -10°C (14°F).
   Use grade No.1-Diesel fuel at temperatures below -10°C (14°F).

- Do not permit dirt or trash to get into the fuel system.
- Be careful not to let the fuel tank become empty, otherwise air will enter the fuel system, necessitating bleeding before next engine start.
- Be careful not to spill during refueling. If should spill, wipe it off at once, or it may cause a fire.
- To prevent condensation (water) accumulation in the fuel tank, fill the tank before parking overnight.

### Fuel tank capacity
| 25 L (6.6 U.S.gals.) |
■Checking Engine Oil Level

**CAUTION**
To avoid personal injury:
- Be sure to stop the engine before checking the oil level.

1. Park the machine on a flat surface.
2. Check engine oil before starting the engine or 5 minutes or more after the engine has stopped.
3. To check the oil level, draw out the dipstick, wipe it clean, replace it, and draw it out again. Check to see that the oil level lies between the two notches. If the level is too low, add new oil to the prescribed level at the oil inlet.
   (See "LUBRICANTS" in "MAINTENANCE" section.)

**IMPORTANT:**
- If using an oil of different maker or viscosity from the previous one, remove all of the old oil and oil filter.
- Never mix two different types of oil.
- If oil level is low, do not run engine.

■Checking Transmission Fluid Level

1. Park the machine on a flat surface, lower the implement and shut off engine.
2. To check the oil level, draw out the dipstick, wipe it clean, replace it, and draw it out again. Check to see that the oil level lies between the two notches. If the level is too low, add new oil to the prescribed level at the oil inlet.
   (See "LUBRICANTS" in "MAINTENANCE" section.)

**IMPORTANT:**
- If oil level is low, do not run engine.
Checking Coolant Level

**CAUTION**

To avoid personal injury:
- Be sure to stop the engine and remove the key before checking coolant level.
- Do not remove the 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 cap completely.

1. Check to see that the coolant level is between the "H" and "L" marks of recovery tank.
2. When the coolant level drops due to evaporation, add soft water only. In case of leakage, add antifreeze and soft water in the specified mixing ratio up to the "H" level.

(See "Flushing Cooling System and Changing Coolant" in "EVERY 2 YEARS" in "PERIODIC SERVICE" section.)

**IMPORTANT:**
- If the radiator cap has to be removed, follow the caution above and securely retighten the cap.
- Use clean, fresh soft water and anti-freeze to fill the radiator.
- If water should leak, consult your local KUBOTA Dealer.

Cleaning Panel and Radiator Screen

**CAUTION**

To avoid personal injury:
- Be sure to stop the engine and remove the key before removing the screen.
- Before checking or cleaning it, wait long enough until it cools down.

1. Check panel screen to be sure they are clean from debris.
2. Detach the radiator screen, and then remove all the foreign material.

**NOTE:**
- If the dust or chaff is accumulated in the battery compartment, open the panel and clean completely.
IMPORTANT:
- Panel and radiator screen must be clean from debris to prevent engine from overheating and to allow good air intake for air cleaner.
- Be sure to reinstall the panel on the pillar completely to prevent the invasion of dust.
- Be sure to stop the engine to avoid personal injury and to allow good air intake for air cleaner.

Checking Brake Pedal
1. Inspect the brake pedals for free travel, and smooth operation.
2. Adjust if incorrect measurement is found:
   (See "Adjusting Brake Pedal" in "EVERY 100 HOURS"
   in "PERIODIC SERVICE" section.)

Checking Gauges, Meter and Easy Checker(TM)
1. Inspect the instrument panel for broken gauge(s),
   meter(s) and Easy Checker(TM).
2. Replace if broken.

Checking Head Light, Hazard Light etc.
1. Inspect the lights for broken bulbs and lenses.
2. Replace if broken.

Checking Seat Belt and ROPS
1. Always check condition of seat belt and ROPS
   attaching hardware before operating tractor.
2. Replace if damaged.

Checking and Cleaning of Electrical Wiring and Battery Cables

CAUTION
To avoid personal injury:
- A loosened terminal or connector, or damaged wire may affect the performance of electrical components or cause short circuits. Leakage of electricity could result in a fire hazard, a dead battery or damage to electrical components.
- Replace damaged wires or connections promptly.
- If a fuse blows soon after replacement, DO NOT USE A LARGER THAN RECOMMENDED FUSE OR BYPASS THE FUSE SYSTEM.
- Many wiring connections are protected by waterproof plugs, plug and unplug these connections carefully and make sure they are sealed correctly after assembly.
- Accumulation of dust, chaff and spilled fuel deposits around the battery, electrical wiring, engine or exhaust system are fire hazards. CLEAN THESE AREAS BEFORE STARTING WORK.
To avoid premature electrical malfunctions DO NOT APPLY high pressure water directly to battery, wiring, connectors, electrical components or instrument panel.

Inspect the following regularly:
1. Check wiring for chafed or cracked insulation.
2. Check wiring harness clamps. Replace if necessary.
3. Check connectors and terminals for looseness, contamination or overheated (discolored) connections.
4. Check instrument panel for correct operation of switches and gauges.
Consult your KUBOTA Dealer regarding maintenance, diagnosis and repair.

Checking Movable Parts
If any of the movable parts, such as levers and pedals, is not smoothly moved because of rust or anything sticky, do not attempt to force it into motion.
In the above case, remove the rust or the sticky thing, and apply oil or grease on the relevant spot.
Otherwise, the machine may get damaged.
EVERY 50 HOURS

**Lubricating Grease Fittings**

Apply a small amount of multipurpose grease to the following points every 50 hours:

If you operated the machine in extremely wet and muddy conditions, lubricate grease fittings more often.

---

**Checking Engine Start System**

⚠️ **CAUTION**

To avoid personal injury:

- Do not allow anyone near the tractor while testing.
- If the tractor does not pass the test, do not operate the tractor.

◆ **Preparation before testing.**
1. Sit on operator’s seat.
2. Set the parking brake and stop the engine.
3. Shift the range gear shift lever to "NEUTRAL" position.
4. Check the speed control pedal "NEUTRAL" position.
5. Shift the PTO clutch lever to "OFF" position.

◆ **Test 1: Switch for the speed control pedal**
1. Make sure that the range gear shift lever is set in "NEUTRAL" position.
2. Depress the speed control pedal.
3. Turn the key to "START" position.
4. The engine must not crank.
5. If it cranks, consult your local KUBOTA Dealer for this service.

◆ **Test 2: Switch for the PTO clutch lever**
1. Make sure that the range gear shift lever is set in "NEUTRAL" position.
2. Make sure that the speed control pedal is set in "NEUTRAL" position.
3. Shift the PTO clutch lever to "ON" position.
4. Turn the key to "START" position.
5. The engine must not crank.
6. If it cranks, consult your local KUBOTA Dealer for this service.
Checking OPC System

**CAUTION**
To avoid personal injury:
- Do not allow anyone near the tractor while testing.
- If the tractor does not pass the test, do not operate the tractor.

◆ Preparation before testing.
1. Sit on operator’s seat.
2. Set the parking brake and stop the engine.
3. Shift the range gear shift lever to "NEUTRAL" position.
4. Check the speed control pedal "NEUTRAL" position.
5. Shift the PTO clutch lever to "OFF" position.

◆ Test 1: Switches for the operator’s seat and the speed control pedal
1. Start the engine.
2. Depress the speed control pedal.
3. Stand up. (Do not get off the machine.)
4. The engine must shut off after approximately 1 second.
5. If it does not stop, consult your local KUBOTA Dealer for this service.

◆ Test 2: Switches for the operator’s seat and the PTO clutch lever.
1. Start the engine.
2. Engage the PTO clutch lever.
3. Stand up. (Do not get off the machine.)
4. The engine must shut off after approximately 1 second.
5. If it does not stop, consult your local KUBOTA Dealer for this service.

Checking Wheel Bolt Torque

**CAUTION**
To avoid personal injury:
- Never operate tractor with a loose rim, wheel, or axle.
- Any time bolts are loosened, retighten to specified torque.
- Check all bolts frequently and keep them tight.

Check wheel bolts regularly especially when new. If they are loose, tighten them as follows.

Front
149.2 to 179.0 N-m (15.2 to 18.3 kgf-m, 110 to 132 lbf-ft)

Rear
108.5 to 130.2 N-m (11.1 to 13.3 kgf-m, 80 to 96 lbf-ft)

(1) Range gear shift lever (Hi-Lo)
(2) PTO clutch lever
(3) Speed control pedal
EVERY 100 HOURS

Battery

⚠️ DANGER
To avoid the possibility of battery explosion:
For the refillable type battery, follow the instructions below.
- Do not use or charge the refillable type battery if the fluid level is below the LOWER (lower limit level) mark. Otherwise, the battery component parts may prematurely deteriorate, which may shorten the battery's service life or cause an explosion. Check the fluid level regularly and add distilled water as required so that the fluid level is between the UPPER and LOWER levels.

⚠️ CAUTION
To avoid personal injury:
- Never remove the battery cap while the engine is running.
- Keep electrolyte away from eyes, hands and clothes. If you are spattered with it, wash it away completely with water immediately and get medical attention.
- Keep open sparks and flames away from the battery at all times. Hydrogen gas mixed with oxygen becomes very explosive.
- Wear eye protection and rubber gloves when working around battery.

The factory-installed battery is of non-refillable type. If the battery is weak, charge the battery or replace it with new one.

IMPORTANT:
- Mishandling the battery shortens the service life and adds to maintenance costs.
- The original battery is maintenance free, but needs some servicing.
  If the battery is weak, the engine will be difficult to start and the lights will be dim. It is important to check the battery periodically.
- When exchanging an old battery for new one, use battery of equal specification in table below.

(For non-accessible maintenance-free type batteries.) Maintenance-free, non-accessible batteries are designed to eliminate the need to add water. Yet the volume of electrolyte above plates may eventually become depleted due to abnormal conditions such as high heat or improper regulator setting. Use a voltmeter to check the state of charge. (See reference chart below to determine if charging is necessary.)

<table>
<thead>
<tr>
<th>Battery voltage</th>
<th>Reference state of charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.6</td>
<td>100% (Full charge)</td>
</tr>
<tr>
<td>12.4</td>
<td>75%</td>
</tr>
<tr>
<td>12.2</td>
<td>50%</td>
</tr>
<tr>
<td>12.0</td>
<td>25%</td>
</tr>
<tr>
<td>11.8</td>
<td>0%</td>
</tr>
</tbody>
</table>

Battery Charging

⚠️ CAUTION
To avoid personal injury:
- When the battery is being activated, hydrogen and oxygen gases in the battery are extremely explosive. Keep open sparks and flames away from the battery at all times, especially when charging the battery.
- When disconnecting the cable from the battery, start with the negative terminal first. When connecting the cable to the battery, start with the positive terminal first.
- Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

<table>
<thead>
<tr>
<th>Tractor Type</th>
<th>Battery Type</th>
<th>Volts (V)</th>
<th>Reserve Capacity (min)</th>
<th>Cold Cranking Amps</th>
<th>Normal Charging Rate(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX1870D</td>
<td>426RMF</td>
<td>12</td>
<td>55</td>
<td>450</td>
<td>6.5</td>
</tr>
<tr>
<td>BX2370D</td>
<td>526RMF</td>
<td>12</td>
<td>80</td>
<td>540</td>
<td>6.5</td>
</tr>
<tr>
<td>BX2670D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. To slow charge the battery, connect the battery positive terminal to the charger positive terminal and the negative to the negative, then charge for at least 1 hour at 6.5 amperes.

2. A boost charge is only for emergencies. It will partially charge the battery at a high rate and in a short time. When using a boost-charged battery, it is necessary to recharge the battery as early as possible. Failure to do this will shorten the battery’s service life.

3. When the specific gravity of electrolyte is between 1.27 and 1.29 the charging is completed.

**Battery for storage**

1. When storing the tractor for a long period, remove the battery from tractor, adjust the electrolyte to the proper level and store in a dry place out of direct sunlight.

2. The battery self-discharges while it is stored. Recharge it once every three months in hot seasons and once every six months in cold seasons.

#### Cleaning Air Cleaner Element

**CAUTION**

*To avoid personal injury:*

- Be sure to stop the engine and remove the key before cleaning air cleaner element.

1. Remove the air cleaner cover and the element.
   (1) Undo the hook.
   (2) Turn the cover clockwise and detach it.

2. Clean the element:
   (1) When dry dust adheres to the element, blow compressed air from the inside, turning the element. Pressure of compressed air must be under 205kPa (2.1kgf/cm², 30psi).
   (2) When carbon or oil adheres to the element, soak the element in detergent for 15 minutes then wash it several times in water, rinse with clean water and dry it naturally. After element is fully dried, inspect inside of the element with a light and check if it is damaged or not. (referring to the instructions on the label attached to the case.)

3. Replace air cleaner element:
   Once yearly or after every sixth cleaning, whichever comes first.

**NOTE:**

- Checked to see if the evacuator valve is blocked with dust.

**IMPORTANT:**

- The air cleaner uses a dry element, never apply oil.
- Do not run the engine with filter element removed.
- Align the arrow marks when reinstalling the cover. If the cover is improperly fitted, dust passes by the baffle and directly adheres to the element.

**Evacuator Valve**

Open the evacuator valve once a week under ordinary conditions - or daily when used in a dusty place - to get rid of large particles of dust and dirt.
- Checking Fuel Lines and Fuel Filter

⚠️ CAUTION
To avoid personal injury:
- Stop the engine and remove the key before checking fuel lines and fuel filter.
- Check the fuel lines periodically. The fuel lines are subject to wear and aging. Fuel may leak out onto the running engine, causing a fire.

The fuel line connections should be checked annually or every 100 service hours, whichever occurs first.
1. The fuel line is made of rubber and ages regardless of service period.
2. After inspection, if the fuel line and clamps are found damaged or deteriorated, replace them.
3. Check fuel filter, if it is clogged by debris or contaminated by water, replace it.

IMPORTANT:
- When the fuel line is disconnected for maintenance or repair, plug both ends of the fuel line with a clean plug of suitable size to prevent dust and dirt from entering. Particular care must be taken in order to avoid dust and dirt getting into the fuel system. Entrance of dust and dirt causes malfunction of the fuel pump.

(1) Pipe clamps
(2) Fuel line
(3) Fuel filter

NOTE:
- If the fuel line is removed, be sure to properly bleed the fuel system.
(See "Bleeding Fuel System" in "SERVICE AS REQUIRED" in "PERIODIC SERVICE" section.)
Adjusting Fan Belt Tension

CAUTION
To avoid personal injury:
- Be sure to stop the engine and remove the key before checking belt tension.

| Proper fan belt tension | A deflection of between 7 to 9 mm (0.28 to 0.35 in.) when the belt is pressed in the middle of the span. |

1. Stop the engine and remove the key.
2. Apply moderate thumb pressure to belt between pulleys.
3. If tension is incorrect, loosen the alternator mounting bolts and, using a lever placed between the alternator and the engine block, pull the alternator out until the deflection of the belt falls within acceptable limits.
4. Replace fan belt if it is damaged.

Adjusting HST Neutral Spring (for Speed Control Pedal)

WARNING
To avoid personal injury:
- Do not operate if tractor moves on level ground with foot off speed control pedal.
- If tractor moves on level ground with foot off the pedal, or, if the pedal is too slow in returning to "NEUTRAL" position when removing the foot from the pedal, consult your local KUBOTA Dealer.

The HST neutral spring located under the front right side of the fender can adjust returning speed of speed control pedal.
Consult your local KUBOTA Dealer for service.

Adjusting Brake Pedal

CAUTION
To avoid personal injury:
- Stop the engine, remove the key, lower the implement to the ground, and chock the wheels before checking brake pedal.
- Even if the brake pedal free travel is within the limitation, adjust the brake pedal following the procedure below.
- If you are not able to adjust, consult your local KUBOTA Dealer.

| Proper brake pedal free travel | 25 to 35 mm (1.0 to 1.4 in.) on the pedal |

1. Release the parking brake.
2. Loosen the lock nut and turn the turnbuckle to adjust the rod length so that the brake pedal free travel is 10 mm (0.4 in.)
3. Extend the turnbuckle one additional turn.
4. Retighten the lock nut.
5. Depress the brake pedal several times and make sure the brake pedal free travel is from 25 to 35 mm (1.0 to 1.4 in.)

EVERY 200 HOURS

Replacing Engine Oil Filter

CAUTION

To avoid personal injury:
- Be sure to stop the engine before changing the oil filter cartridge.
- Allow engine to cool down sufficiently, oil can be hot and can burn.

1. Remove the oil filter.
2. Put a film of clean engine oil on the rubber seal of the new filter.
3. Tighten the filter quickly until it contacts the mounting surface. Tighten filter by hand an additional 1/2 turn only.
4. After the new filter has been replaced, the engine oil normally decreases a little. Make sure that the engine oil does not leak through the seal and be sure to check the oil level on the dipstick. Then, replenish the engine oil up to the prescribed level.
5. Properly dispose of used oil.

IMPORTANT:
- To prevent serious damage to the engine, use only a KUBOTA genuine filter.
Changing Engine Oil

**CAUTION**
To avoid personal injury:
- Be sure to stop the engine and remove the key before changing the oil.
- Allow engine to cool down sufficiently, oil can be hot and can burn.

1. To drain the used oil, remove the drain plug at the bottom of the engine and drain the oil completely into the oil pan. All the used oil can be drained out easily when the engine is still warm.
2. After draining reinstall the drain plug.
3. Fill with the new oil up to the upper notch on the dipstick. (See "LUBRICANTS" in "MAINTENANCE" section.)
4. Properly dispose of used oil.

<table>
<thead>
<tr>
<th>Oil capacity with filter</th>
<th>BX1870D</th>
<th>2.9 L (3.06 U.S.qts.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX2370D</td>
<td>3.1 L (3.3 U.S.qts.)</td>
<td></td>
</tr>
<tr>
<td>BX2670D</td>
<td>3.5 L (3.7 U.S.qts.)</td>
<td></td>
</tr>
</tbody>
</table>

(1) Oil inlet
(2) Dipstick
(A) Oil level is acceptable within this range
(1) Drain plug

1. Oil inlet
2. Dipstick

(1) Drain plug
Replacing Transmission Oil Filter

**CAUTION**

To avoid personal injury:
- Be sure to stop the engine before changing the oil filter cartridge.
- Allow engine to cool down sufficiently, oil can be hot and can burn.

1. Remove the oil filter.
2. Put a film of clean transmission oil on rubber seal of new filter.
3. Tighten the filter quickly until it contacts the mounting surface. Tighten filter by hand an additional 1/2 turn only.
4. After the new filter has been replaced, the transmission fluid level will decrease a little. Make sure that the transmission fluid does not leak through the seal, and check the fluid level.
5. Properly dispose of used oil.

**IMPORTANT**:
- To prevent serious damage to the hydraulic system, use only a KUBOTA genuine filter.

Checking Radiator Hoses and Clamps

**CAUTION**

To avoid personal injury:
- Be sure to stop the engine and remove the key before checking radiator hose and clamps.

Check to see if radiator hoses are properly secured every 200 hours of operation or six months, whichever comes first.
1. If hose clamps are loose or water leaks, tighten clamps securely.
2. Replace hoses and tighten hose clamps securely, if radiator hoses are swollen, hardened or cracked.
3. Properly dispose of used coolant.

Replace hoses and hose clamps every 2 years or earlier if checked and found that hoses are swollen, hardened or cracked.

Precaution at Overheating

Take the following actions in the event the coolant temperature be nearly or more than the boiling point, what is called "Overheating".
1. Stop the machine operation in a safe place and keep the engine unloaded idling.
2. Don’t stop the engine suddenly, but stop it after about 5 minutes of unloaded idling.
3. Keep yourself well away from the machine for further 10 minutes or while the steam blown out.
4. Checking that there is no danger such as burn, get rid of the causes of overheating according to the manual, see "TROUBLESHOOTING" section, and then, start again the engine.
**Checking Intake Air Line**
1. Check to see that hose and hose clamps are tight and not damaged.
2. If hose and clamps are found worn or damaged, replace or repair them at once.

**Adjusting Toe-in**
1. Park tractor on a firm, flat and level place.
2. Turn steering wheel so that front wheels are in the straight ahead position.
3. Lower the implement to the ground, lock the parking brake, stop the engine and remove the key.
4. Measure distance between tire beads at front of tire, hub height.
5. Measure distance between tire beads at rear of tire, hub height.
6. Front distance should be 0 to 5 mm (0 to 0.2 in.) less than rear distance. If not, adjust tie rod length.

**Adjusting procedure**
1. Loosen the lock nut and turn the tie rod to adjust the rod length until the proper toe-in measurement is obtained.
2. Retighten the lock nut.
Checking Power Steering Line

**CAUTION**

To avoid personal injury:
- Be sure to stop the engine and remove the key before checking power steering line.

1. Check to see that all lines are tight and not damaged.
2. If hoses are found to be worn or damaged, replace or repair them at once.

---

EVERY 400 HOURS

Adjusting Front Axle Pivot

If the front axle pivot pin adjustment is not correct, front wheel vibration can occur causing vibration in the steering wheel.

**Adjusting procedure**

Remove the split pin, tighten the adjusting nut (tightening torque 20 N-m, 2.0 kgf-m, 15 lbf-ft), then make sure that one of the nut slots aligns with the split pin hole, tighten the nut slightly if necessary to align. Replace the split pin.
■ Changing Transmission Fluid

**CAUTION**

To avoid personal injury:
- Allow engine to cool down sufficiently, oil can be hot and can burn.

1. To drain the used oil, remove the drain plug at the bottom of the transmission case and drain the oil completely into the oil pan.
2. After draining reinstall the drain plug. Clean the transmission strainer. Fill with new KUBOTA SUPER UDT fluid up to the upper notch on the dipstick. (See "LUBRICANTS" in "MAINTENANCE" section and "DAILY CHECK" in "PERIODIC SERVICE" section.) After running the engine for a few minutes, stop it and check the oil level again, add oil to prescribed level. Properly dispose of used oil.

**IMPORTANT:**
- Do not operate the tractor immediately after changing the transmission fluid. Run the engine at medium speed for a few minutes to prevent damage to the transmission.

■ Cleaning Transmission Strainer

When changing the transmission fluid, disassemble and rinse the strainer with nonflammable solvent to completely clean off filings.

When reassembling be careful not to damage the parts.

---

**NOTE:**
- Since the fine filings in the oil can damage the precision component parts of the hydraulic system, the end of the suction line is provided with an oil strainer.
■ Changing Front Axle Case Oil
1. Park the machine on a firm, flat and level surface.
2. To drain the used oil, remove the right and left drain plugs and oil gauge at the front axle case and drain the oil completely into the oil pan.
3. After draining reinstall the drain plugs.
4. Remove the right and left breather plugs.
5. Fill with new oil up to the upper notch on the dipstick. (See "LUBRICANTS" in "MAINTENANCE" section.)
6. After filling, reinstall the oil gauge and breather plugs.

EVERY 3000 HOURS
■ Checking Injection Pump
Consult your local KUBOTA Dealer for this service.

EVERY 1 YEAR
■ Replacing Air Cleaner Element
(See "Cleaning Air Cleaner Element" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)

EVERY 2 YEARS
■ Flushing Cooling System and Changing Coolant

CAUTION
To avoid personal injury:
• 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 cool down.
2. To drain the coolant, open the radiator drain plug and remove radiator cap. The radiator cap must be removed to completely drain the coolant.
3. After all coolant is drained, close the drain plug.
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 "H" mark on the recovery tank.
8. Start and operate the engine for few minutes.
9. Stop the engine and let cool.
10. Check coolant level of recovery tank and add coolant if necessary.

EVERY 500 HOURS
■ Replacing Fuel Filter Element
Consult your local KUBOTA Dealer for this service.

EVERY 800 HOURS
■ Adjusting Engine Valve Clearance
Consult your local KUBOTA Dealer for this service.

EVERY 1500 HOURS
■ Checking Fuel Injection Nozzle Injection Pressure
Consult your local KUBOTA Dealer for this service.

---

<table>
<thead>
<tr>
<th>Oil capacity</th>
<th>BX1870D 2.3 L (2.4 U.S.qts.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX2370D 4.7 L (5.0 U.S.qts.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coolant capacity (with recovery tank)</th>
<th>BX1870D 2.9 L (3.06 U.S.qts.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX2370D 3.1 L (3.3 U.S.qts.)</td>
<td></td>
</tr>
<tr>
<td>BX2670D 3.3 L (3.5 U.S.qts.)</td>
<td></td>
</tr>
</tbody>
</table>
Anti-Freeze

CAUTION
To avoid personal injury:

- When using antifreeze, put on some protection such as rubber gloves (Antifreeze contains poison.).
- If should drink antifreeze, throw up at once and take medical attention.
- When antifreeze comes in contact with the skin or clothing, wash it off immediately.
- Do not mix different types of Antifreeze. The mixture can produce chemical reaction causing harmful substances.
- Antifreeze is extremely flammable and explosive under certain conditions. Keep fire and children away from antifreeze.
- When draining fluids from the engine, place some container underneath the engine body.
- Do not pour waste onto the grounds, down a drain, or into any water source.
- Also, observe the relevant environmental protection regulations when disposing of antifreeze.

If it freezes, coolant can damage the cylinders and radiator. If the ambient temperature falls below 0°C (32°F) or before a long-term storage, let out cooling water completely, or mix fresh water with long-life coolant and fill the radiator and recovery tank with the mixture.

1. Long-life coolant (hereafter LLC) comes in several types. Use ethylene glycol (EG) type for this engine.
2. Before employing LLC-mixed cooling water, fill the radiator with fresh water and empty it again. Repeat this procedure 2 or 3 times to clean up the inside.
3. Mixing the LLC
   - Put the LLC in cooling water in the percentage (%) for a target temperature. When mixing, stir it up well, and then fill into the radiator.
4. The procedure for the mixing of water and antifreeze differs according to the make of the antifreeze and the ambient temperature. Refer to SAE J1034 standard, more specifically also to SAE J814c.

IMPORTANT:
- When mixing the antifreeze with water, the anti-freeze mixing ratio is 50%.

<table>
<thead>
<tr>
<th>Vol % Anti-freeze</th>
<th>Freezing Point</th>
<th>Boiling Point*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>40</td>
<td>-24</td>
<td>-12</td>
</tr>
<tr>
<td>50</td>
<td>-37</td>
<td>-34</td>
</tr>
</tbody>
</table>
PERIODIC SERVICE

* At 1.013 x 10^5 Pa (760mmHg) pressure (atmospheric). A higher boiling point is obtained by using a radiator pressure cap which permits the development of pressure within the cooling system.

5. Adding the LLC
   (1) Add only water if the mixture reduces in amount by evaporation.
   (2) If there is a mixture leak, add the LLC of the same manufacturer and type in the same mixture percentage.
   * Never add any long-life coolant of different manufacturer. (Different brands may have different additive components, and the engine may fail to perform as specified.)

6. When the LLC is mixed, do not employ any radiator cleaning agent. The LLC contains antiscorrosive agent. If mixed with the cleaning agent, sludge may build up, adversely affecting the engine parts.

7. Kubota’s genuine long-life coolant has a service life of 2 years. Be sure to change the coolant every 2 years.

NOTE:
- The above data represent industry standards that necessitate a minimum glycol content in the concentrated antifreeze.
- When the coolant level drops due to evaporation, add water only to keep the antifreeze mixing ratio less than 50%. In case of leakage, add antifreeze and water in the specified mixing ratio before filling in to the radiator.

**Replacing Radiator Hose (Water pipes)**
Replace the hoses and clamps.
(See "Checking Radiator Hose and Clamp" in "EVERY 200 HOURS" in "PERIODIC SERVICE" section.)

**Replacing Power Steering Hose**
Consult your local KUBOTA Dealer for this service.

**Replacing Fuel Lines**
Consult your local KUBOTA Dealer for this service.

**Replacing Engine Breather Hose**
Consult your local KUBOTA Dealer for this service.

**Replacing Intake Air Line**
Consult your local KUBOTA Dealer for this service.

---

**SERVICE AS REQUIRED**

**Bleeding Fuel System**
Air must be removed:
1. When the fuel filter or lines are removed.
2. When the tank is completely empty.
3. After the tractor has not been used for a long period of time.

◆ **Bleeding procedure is as follows:**
1. Fill the fuel tank with fuel.

   ![Diagram](image)
   
   (1) Fuel pump
   (2) Fuel filter

2. Turn the key switch to "ON" position for about 30 seconds. Doing so allows fuel pump to work and pump air out of the fuel system.
3. Start the engine and run for about 30 seconds, and then stop the engine.
Replacing Fuse
The tractor electrical system is protected from potential damage by fuses.
A blown fuse indicates that there is an overload or short somewhere in the electrical system.
If any of the fuses should blow, replace with a new one of the same capacity.

IMPORTANT:
- Before replacing a blown fuse, determine why the fuse blew and make any necessary repairs. Failure to follow this procedure may result in serious damage to the tractor electrical system. Refer to the "TROUBLESHOOTING" section of this manual or your local KUBOTA Dealer for specific information dealing with electrical problems.

Protected circuit
[Fuse box]

<table>
<thead>
<tr>
<th>FUSE No.</th>
<th>CAPACITY (A)</th>
<th>Protected circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>15</td>
<td>SOLENOID</td>
</tr>
<tr>
<td>(2)</td>
<td>15</td>
<td>HAZARD</td>
</tr>
<tr>
<td>(3)</td>
<td>15</td>
<td>ACC</td>
</tr>
<tr>
<td>(4)</td>
<td>20</td>
<td>WORKING LIGHT</td>
</tr>
<tr>
<td>(5)</td>
<td>10</td>
<td>DC OUTLET</td>
</tr>
<tr>
<td>(6)</td>
<td>10</td>
<td>TIMER RELAY</td>
</tr>
</tbody>
</table>

- Check circuit against wrong battery connection

Replacing Light Bulb
1. Head light
   Take the bulb out of the light body and replace with a new one.
2. Other lights
   Detach the lens and replace the bulb.

<table>
<thead>
<tr>
<th>Light</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head light</td>
<td>37.5W</td>
</tr>
<tr>
<td>Tail light</td>
<td>12.8W</td>
</tr>
<tr>
<td>Hazard light</td>
<td>23W</td>
</tr>
</tbody>
</table>
STORAGE

CAUTION
To avoid personal injury:
- Do not clean the machine while the engine is running.
- To avoid the danger of exhaust fume poisoning, do not operate the engine in a closed building without proper ventilation.
- When storing, remove the key from the key switch to avoid unauthorized persons from operating the tractor and getting injured.

TRACTOR STORAGE
If you intend to store your tractor for an extended period of time, follow the procedures outlined below. These procedures will insure that the tractor is ready to operate with minimum preparation when it is removed from storage.

1. Check the bolts and nuts for looseness, and tighten if necessary.
2. Apply grease to tractor areas where bare metal will rust also to pivot areas.
3. Detach the weights from the tractor body.
4. Inflate the tires to a pressure a little higher than usual.
5. Change the engine oil and run the engine to circulate oil throughout the engine block and internal moving parts for about five minutes.
6. With all implements lowered to the ground, coat any exposed hydraulic cylinder piston rods with grease.
7. Remove the battery from the tractor. Store the battery following the battery storage procedures. (See "Battery" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)
8. Keep the tractor in a dry place where the tractor is sheltered from the elements. Cover the tractor.
9. Store the tractor indoors in a dry area that is protected from sunlight and excessive heat. If the tractor must be stored outdoors, cover it with a waterproof tarpaulin. Jack the tractor up and place blocks under the front and rear axles so that all four tires are off the ground. Keep the tires out of direct sunlight and extreme heat.

IMPORTANT:
- When washing the tractor, be sure to stop the engine. Allow sufficient time for the engine to cool before washing.
- Cover the tractor after the muffler and the engine have cooled down.

REMOVING THE TRACTOR FROM STORAGE
1. Check the tire air pressure and inflate the tires if they are low.
2. Jack the tractor up and remove the support blocks from under the front and rear axles.
3. Install the battery. Before installing the battery, be sure it is fully charged.
4. Check the fan belt tension.
5. Check all fluid levels (engine oil, transmission/hydraulic oil, engine coolant and any attached implements).
6. Start the engine. Observe all gauges. If all gauges are functioning properly and reading normal, move the tractor outside. Once outside, park the tractor and let the engine idle for at least five minutes. Shut the engine off and walk around tractor and make a visual inspection looking for evidence of oil or water leaks.
7. With the engine fully warmed up, release the parking brake and test the brakes for proper adjustment as you move forward. Adjust the brakes as necessary.
ENGINE TROUBLESHOOTING
If something is wrong with the engine, refer to the table below for the cause and its corrective measure.

<table>
<thead>
<tr>
<th>Trouble</th>
<th>Cause</th>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine is difficult to start or won’t start.</td>
<td>● No fuel flow.</td>
<td>● Check the fuel tank and the fuel filter. Replace filter if necessary.</td>
</tr>
<tr>
<td></td>
<td>● Air or water is in the fuel system.</td>
<td>● Check to see if the fuel line coupler bolt and nut are tight. ● Bleed the fuel system. (See &quot;Bleeding Fuel System&quot; in &quot;SERVICE AS REQUIRED&quot; in &quot;PERIODIC SERVICE&quot; section.) ● Remove water from the system and replace the fuel filter.</td>
</tr>
<tr>
<td></td>
<td>● In winter, oil viscosity increases, and engine revolution is slow.</td>
<td>● Use oils of different viscosities, depending on ambient temperatures. ● Use engine block heater. (Option)</td>
</tr>
<tr>
<td></td>
<td>● Battery becomes weak and the engine does not turn over quick enough.</td>
<td>● Clean battery cables and terminals. ● Charge the battery. ● In cold weather, always remove the battery from the engine, charge and store it indoors. Install it on the tractor only when the tractor is going to be used.</td>
</tr>
<tr>
<td>Insufficient engine power.</td>
<td>● Insufficient or dirty fuel. ● The air cleaner is clogged.</td>
<td>● Check the fuel system. ● Clean or replace the element.</td>
</tr>
<tr>
<td>Engine stops suddenly.</td>
<td>● Insufficient fuel.</td>
<td>● Refuel. ● Bleed the fuel system if necessary.</td>
</tr>
<tr>
<td>Exhaust fumes are colored.</td>
<td>Black</td>
<td>● Fuel quality is poor. ● Too much oil. ● The air cleaner is clogged. ● Change the fuel and fuel filter. ● Check the proper amount of oil. ● Clean or replace the element.</td>
</tr>
<tr>
<td></td>
<td>Blue white</td>
<td>● The inside of exhaust muffler is dumped with fuel. ● Injection nozzle trouble. ● Fuel quality is poor. ● Heat the muffler by applying load to the engine. ● Check the injection nozzle. ● Change the fuel and fuel filter.</td>
</tr>
<tr>
<td>Engine overheats.</td>
<td>● Engine overloaded.</td>
<td>● Shift to lower gear or reduce load.</td>
</tr>
<tr>
<td></td>
<td>● Low coolant level.</td>
<td>● Fill cooling system to the correct level; check radiator and hoses for loose connections or leaks.</td>
</tr>
<tr>
<td></td>
<td>● Loose or defective fan belt.</td>
<td>● Adjust or replace fan belt.</td>
</tr>
<tr>
<td></td>
<td>● Dirty radiator core or grille screens.</td>
<td>● Remove all trash.</td>
</tr>
<tr>
<td></td>
<td>● Coolant flow route corroded.</td>
<td>● Flush cooling system.</td>
</tr>
</tbody>
</table>

If you have any questions, consult your local KUBOTA Dealer.
Consult your local KUBOTA Dealer for further detail.

- 16 x 7.5-8  Bar Tire [BX1870D]
- 24 x 12.0-12 Bar Tire [BX1870D]
- 18 x 8.5-10  Bar Tire [BX2370D, BX2670D]
- 26 x 12.0-12 Bar Tire [BX2370D, BX2670D]
- 18 x 8.5-10  Ind. Tire [BX2370D, BX2670D]
- 26 x 12.0-12 Ind. Tire [BX2370D, BX2670D]
- Arm rest [BX1870D]
- Speed set device (cruise control) [BX1870D]
- Grille guard
  For facilitating starting and reducing warm up period in cold weather.
- Rear Work Light
  For high visibility for night work
- Front end weights
  For front ballast
- Rear wheel weight
- Sunshade for ROPS
- Dual-Double Acting Remote Valve
- Ballast Box
- Male Quick Hitch
- Mid PTO Driveline
  Chute Rotator
  Chute Deflector
  Sweeper
- Tool Box
Rear Ballast..................................................43
Rear Wheels..................................................41
Refueling .....................................................50
Seat Belt.......................................................19
Seat Belt and ROPS.........................................53
Speed Control Pedal .......................................21
Speed Set Device (BX2370D, BX2670D)...........22
Stationary PTO ...............................................30
Stopping ......................................................22
To Fold the ROPS ..........................................15
To Raise the ROPS to Upright Position ..........16
Toe-in ..........................................................63
Top Link.........................................................32
Transmission Fluid ........................................65
Transmission Fluid Level ...................................51
Transmission Oil Filter ....................................62
Transmission Strainer .....................................65
Transport the Tractor Safely............................27
Turn Signal Light Switch .................................19
Valve Lock ....................................................36
Walk Around Inspection ..................................50
Warm-up and Transmission Oil in the Low
  Temperature Range ...................................14
Wheel Bolt Torque .........................................55
KUBOTA Corporation is ...

Since its inception in 1890, KUBOTA Corporation has grown to rank as one of the major firms in Japan.

To achieve this status, the company has through the years diversified the range of its products and services to a remarkable extent. Nineteen plants and 16,000 employees produce over 1,000 different items, large and small.

All these products and all the services which accompany them, however, are unified by one central commitment. KUBOTA makes products which, taken on a national scale, are basic necessities. Products which are indispensable. Products which are intended to help individuals and nations fulfill the potential inherent in their environment. KUBOTA is the Basic Necessities Giant.

This potential includes water supply, food from the soil and from the sea, industrial development, architecture and construction, and transportation.

Thousands of people depend on KUBOTA’s know-how, technology, experience and customer service. You too can depend on KUBOTA.