OPERATOR'S MANUAL

KUBOTA TRACTOR

MODELS BX1870 · BX2370 · BX2670

AUX. valve equipped machine

READ AND SAVE THIS MANUAL
ABBREVIATION LIST

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<th>Definitions</th>
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<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/SEC</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>RPS</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:

- 🚙 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.

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SAFE OPERATION

Careful operation is your best insurance against an accident. Read and understand this manual carefully before operating the tractor.

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 any time. 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.
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 trolley vehicle unless parking brake is applied.
11. Do not operate or low 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.
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 lowering other equipment, use a safety chain and place an SMV emblem on it as well.
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 chocks behind and in front of the rear wheels. Stay clear of all rotating parts. Never step over rotating parts.

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 check the wheels.

4. OPERATING THE PTO

1. Wait until all moving components have completely stopped before getting off the tractor, connecting, disconnecting, adjusting, cleaning, or servicing any PTO driven equipment.

2. Keep the PTO shaft cover in place at all times. Replace the PTO shaft cap when the shaft is not in use.

3. Before installing or using PTO driven equipment, read the manufacturer's manual and review the safety labels attached to the equipment.

4. When operating stationary PTO driven equipment, always apply the tractor parking brake and place chocks behind and in front of the rear wheels. Stay clear of all rotating parts. Never step over rotating parts.

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.
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 protective eyewear is 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.
8. CARE OF DANGER, WARNING AND CAUTION LABELS

1. Keep danger, warning and caution labels clean and free from obstructing material.
2. Clean danger, warning and caution labels with soap and water, dry with a soft cloth.
3. Replace damaged or missing danger, warning and caution labels with new labels from your 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.
## SPECIFICATIONS

### SPECIFICATION TABLE

<table>
<thead>
<tr>
<th>Model</th>
<th>BX1870D</th>
<th>BX2270D</th>
<th>BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PTO power</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>kW (hp)</td>
<td>10.2 (13.7)</td>
<td>13.2 (17.7)</td>
</tr>
<tr>
<td><strong>Maker</strong></td>
<td></td>
<td>KUBOTA</td>
<td></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td></td>
<td>D732</td>
<td>D902</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td></td>
<td>Injected injection, vertical, water-cooled, 4-cycle diesel</td>
<td></td>
</tr>
<tr>
<td><strong>Number of cylinders</strong></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Bore and stroke</strong> mm (in.)</td>
<td></td>
<td>67x68 (2.64x2.64)</td>
<td>7x73.6 (2.83x2.90)</td>
</tr>
<tr>
<td><strong>Total displacement</strong> cm³ (cu. in.)</td>
<td></td>
<td>719 (43.9)</td>
<td>986 (60.8)</td>
</tr>
<tr>
<td><strong>Engine gross power</strong>&lt;sup&gt;2&lt;/sup&gt; kW</td>
<td></td>
<td>13.4 (18.6)</td>
<td>17.1 (23.0)</td>
</tr>
<tr>
<td><strong>Rated revolution</strong> rpm</td>
<td></td>
<td></td>
<td>2300</td>
</tr>
<tr>
<td><strong>Low idle revolution</strong> rpm</td>
<td></td>
<td></td>
<td>1350 to 1550</td>
</tr>
<tr>
<td><strong>Maximum torque</strong> N·m (ft·lb)</td>
<td></td>
<td>44.9 (33.1)</td>
<td>50.1 (37.1)</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td></td>
<td>12V RC, 55min, CCA 450A</td>
<td>12V RC, 60min, CCA 540A</td>
</tr>
<tr>
<td><strong>Fuel</strong></td>
<td></td>
<td>Diesel fuel No 2 (above -10 °C) (14 °F)</td>
<td>Diesel fuel No 1 (below -10 °C) (14 °F)</td>
</tr>
<tr>
<td><strong>Capacities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fuel tank</strong> L (U.S. gals)</td>
<td></td>
<td>25 (6.6)</td>
<td></td>
</tr>
<tr>
<td><strong>Engine crankcase (with filter)</strong> L (U.S. gals)</td>
<td></td>
<td>2.9 (0.66)</td>
<td>3.1 (0.8)</td>
</tr>
<tr>
<td><strong>Engine coolant</strong> L (U.S. gals)</td>
<td></td>
<td>2.5 (0.62)</td>
<td>2.7 (0.65)</td>
</tr>
<tr>
<td><strong>Transmission case</strong> L (U.S. gals)</td>
<td></td>
<td></td>
<td>0.4 (0.4)</td>
</tr>
<tr>
<td><strong>Overall length (without 3p)</strong> mm (in.)</td>
<td>2035 (80.1)</td>
<td></td>
<td>2120 (83.5)</td>
</tr>
<tr>
<td><strong>Overall length (with 3p)</strong> mm (in.)</td>
<td>2340 (92.1)</td>
<td></td>
<td>2420 (95.5)</td>
</tr>
<tr>
<td><strong>Overall width (incl. tread)</strong> mm (in.)</td>
<td></td>
<td>1145 (45.1)</td>
<td></td>
</tr>
<tr>
<td><strong>Overall height (with ROPS)</strong> mm (in.)</td>
<td>2190 (86.2)</td>
<td></td>
<td>2215 (87.2)</td>
</tr>
<tr>
<td><strong>Wheel base</strong> mm (in.)</td>
<td>1340 (52.8)</td>
<td>1400 (55.1)</td>
<td></td>
</tr>
<tr>
<td><strong>Min. ground clearance</strong> mm (in.)</td>
<td>150 (5.9)</td>
<td>175 (6.9)</td>
<td></td>
</tr>
<tr>
<td><strong>Weight (with ROPS)</strong> kg (lbs)</td>
<td>610 (1345)</td>
<td>640 (1415)</td>
<td>665 (1465)</td>
</tr>
<tr>
<td><strong>Clutch</strong></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Traveling system</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tire</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Front</strong></td>
<td>16x7.50-8</td>
<td>16x8.50-10</td>
<td></td>
</tr>
<tr>
<td><strong>Rear</strong></td>
<td>24x12.00-12</td>
<td>26x12.00-12</td>
<td></td>
</tr>
<tr>
<td><strong>Steering</strong></td>
<td></td>
<td>Hydrostatic type power steering</td>
<td></td>
</tr>
<tr>
<td><strong>Transmission</strong></td>
<td></td>
<td>Main Hydrostatic transmission, High/Low gear shift (2 forward, 2 reverse)</td>
<td></td>
</tr>
<tr>
<td><strong>Brake</strong></td>
<td></td>
<td>Wet drum type</td>
<td></td>
</tr>
<tr>
<td><strong>Min. turning radius</strong> m (feet)</td>
<td>2.18 (7.15)</td>
<td>2.3 (7.5)</td>
<td></td>
</tr>
</tbody>
</table>
### IMPLEMENT LIMITATIONS

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>Model</th>
<th>Tread (max width)</th>
<th>Lower link end max. lifting weight W₁</th>
<th>Actual figures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Front</td>
<td>Rear</td>
<td></td>
</tr>
<tr>
<td>BX1870D</td>
<td>800 mm (34.6 in.)</td>
<td>820 mm (32.2 in.)</td>
<td>550 kg (1210 lbs)</td>
</tr>
<tr>
<td>BX2370D, BX2670D</td>
<td>910 mm (35.8 in.)</td>
<td></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) topping 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 equipment 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.

#### TRAVELING SPEEDS

<table>
<thead>
<tr>
<th>Model</th>
<th>BX1870D</th>
<th>BX2370D, BX2670D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire size (Rear)</td>
<td>24 x 12.00 - 12</td>
<td>26 x 12.00 - 12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speed control pedal</th>
<th>Range gear shift lever</th>
<th>km / h</th>
<th>mph</th>
<th>km / h</th>
<th>mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>Low</td>
<td>0 to 6.0</td>
<td>3.7</td>
<td>0 to 6.5</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>0 to 12.5</td>
<td>7.8</td>
<td>0 to 13.5</td>
<td>8.4</td>
</tr>
<tr>
<td>Reverse</td>
<td>Low</td>
<td>0 to 4.5</td>
<td>2.8</td>
<td>0 to 5.0</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>0 to 9.5</td>
<td>5.9</td>
<td>0 to 10.5</td>
<td>6.5</td>
</tr>
</tbody>
</table>

*NOTE:* The company reserves the right to change the specification without notice.
## IMPLEMENT LIMITATIONS

### Mower

<table>
<thead>
<tr>
<th>Implement</th>
<th>Remarks</th>
<th>BX1870D</th>
<th>BX2370D, BX2670D</th>
</tr>
</thead>
<tbody>
<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 (1 Blade)</td>
<td>Max cutting width cm (in)</td>
<td>107 (42)</td>
<td>107 (42)</td>
</tr>
<tr>
<td></td>
<td>Max weight kg (lbs)</td>
<td>140 (309)</td>
<td>140 (309)</td>
</tr>
<tr>
<td>Rear-mount (2 or 3 Blade)</td>
<td>Max cutting width cm (in)</td>
<td>122 (48)</td>
<td>152 (60)</td>
</tr>
<tr>
<td></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 weight kg (lbs)</td>
<td>122 (48)</td>
<td>122 (48)</td>
</tr>
<tr>
<td>Rotary tiller</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>Bottom plow</td>
<td>Max size in</td>
<td>12 x 1</td>
<td>14 x 1</td>
</tr>
<tr>
<td>Disc plow</td>
<td>Max size in</td>
<td>22 x 1</td>
<td>22 x 1</td>
</tr>
<tr>
<td>Cultivator</td>
<td>Max size cm (in)</td>
<td>122 (48)</td>
<td>122 (48)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Row</td>
<td>1 Row</td>
</tr>
<tr>
<td>Disc harrow</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>Sprayer</td>
<td>Max tank capacity L (U.S. gal)</td>
<td>150 (40)</td>
<td>150 (40)</td>
</tr>
<tr>
<td>Front blade</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>Rear blade</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>Front loader</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>Box blade</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>Snow blower (Front)</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>Post hole digger</td>
<td>Digging depth cm (in)</td>
<td>114 (45)</td>
<td>114 (45)</td>
</tr>
<tr>
<td>Rotary broom</td>
<td>Cleaning width cm (in)</td>
<td>119 (47)</td>
<td>119 (47)</td>
</tr>
<tr>
<td>Trailer</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>

### Front Loader

**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/Nail</th>
<th>Required Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main frames</td>
<td>M14 bolts or nuts</td>
<td>147 N·m (15.0 kgf·m, 108 lbf·ft)</td>
</tr>
</tbody>
</table>

### Rear Ballast

**CAUTION**

- **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.

**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.

---

**NOTE:**

- Backhoes cannot be attached.
- Implement size may vary depending on soil operating conditions.
- *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.
INSTRUMENT PANEL AND CONTROLS

Instrument Panel, Switches and Hand Controls

ILLAUSRTATED 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) Hour meter .............................................................. 24
(9) Key switch ............................................................... 11

Foot and Hand Controls

ILLAUSRTATED 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

1AGAJIAPI007A
**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:
      - Depress the brake pedal
      - 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.

4. **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)

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

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

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

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

   - 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.

   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).

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

   - Check Easy Checker(TM) Lamps:
   1. 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.

---

**TABLE: Preheating Time**

<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.
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 chart 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 lever 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.

OPERATING THE TRACTOR

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 feet 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.

![Diagram](image)
2. Remove both set pins.

3. Fold the ROPS.

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.

---

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.

---

**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.

---

4. Tighten the holding knob bolts.

**CAUTION**

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

---

*NOTE:*
- Take care not to bump the ROPS against the rod of backhoe cylinder when folding the ROPS.

---

*To Raise the ROPS to Upright Position*

1. Remove both hair pins and set pins.

2. Raise ROPS to the upright position.
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.

- 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.

- Brake Pedal

- 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.
  - 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.

7. Accelerate the Engine.

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

IMPORT:
- 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 pull the tractor forward.
  4. Additional braking at reduced 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.
CHECK DURING DRIVING

|| Immediately Stop the Engine if:
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The engine suddenly slows down or accelerates.</td>
<td></td>
</tr>
<tr>
<td>2. Unusual noises suddenly are heard.</td>
<td></td>
</tr>
<tr>
<td>3. Exhaust fumes suddenly become very dark.</td>
<td></td>
</tr>
</tbody>
</table>

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

**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.)

**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".

  - Engine oil pressure
    - If the oil pressure in the engine goes below the prescribed level, the indicator in the Easy Checker(TM) will come on.
    - If this should happen during operation, and it does not go off when the engine is accelerated to more than 1000 rpm, check level of engine oil.
    - See "Checking Engine Oil Level" in "DAILY CHECK" in "PERIODIC SERVICE" section.

  - Electrical charge
    - If the alternator is not charging the battery, the indicator in the Easy Checker(TM) will come on.
    - If this should happen during operation, check the electrical charging system or consult your local KUBOTA Dealer.

**Coolant Temperature Gauge**

- **CAUTION**
  - 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.

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.

**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.

**NOTE:**

- 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.

**IMPORTANT:**

- To prevent the damage of speed set device, do not depress the reverse pedal when the speed set device is engaged.
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.**

**HOURMETER/TACHOMETER**

The hourmeter indicates in six digits the hours the tractor has been used, the last digit indicates 1/10 of an hour.
When the key is turned "ON", the tachometer should indicate 4000 engine revolutions per minute (rpm) for just a moment.
When the key switch is "ON" and the engine is "ON", the tachometer indicates the engine revolution per minute.

**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)**

(1) 12V electric outlet

(1) Glove box

(1) Holder

(2) Bag
OPERATING THE TRACTOR

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.

![Diagram showing Differential Lock](image)

**IMPORTANT:**
- When using the differential lock, always slow the engine down.
- To prevent damage to power train, do not engage differential lock when one wheel is spinning and the other is completely stopped.
- If the differential lock cannot be released in the above manner, alternately press speed control pedal forward and backward slightly.

**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.

![Diagram showing SMV emblem](image)

**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 "2WD" 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.

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

- Mid-rear PTO
  To use mid 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.

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".

NOTE:
- 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 till up
5. Move the lever behind the seat frame the arrow direction to release the seat lock, and till the seat forward.

PTO Drive Shaft

1. When using a PTO drive shaft, read the operator's manual of the implement before operating the implement.
2. PTO drive shafts are designed for specific machines and power requirement.
3. 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

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

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, reighten the lock nut.

**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.

**HYDRAULIC UNIT**

**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 cannot 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.
**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**

- (1) Cutting height control dial
- (2) Hydraulic control lever

**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.

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.

**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>
</tr>
</thead>
<tbody>
<tr>
<td>Moldboard plow</td>
<td>Light soil</td>
</tr>
<tr>
<td>Disc plow</td>
<td>Heavy soil</td>
</tr>
<tr>
<td>Harrower (spike, springtooth, disc type)</td>
<td>—</td>
</tr>
<tr>
<td>Sub-soiler</td>
<td>—</td>
</tr>
<tr>
<td>Weeder, ridger</td>
<td>—</td>
</tr>
<tr>
<td>Earthmove, digger scraper, manure fork rear carrier</td>
<td>—</td>
</tr>
<tr>
<td>Mower (mid-and rear-mount type)</td>
<td>—</td>
</tr>
<tr>
<td>Hayrake, tedder</td>
<td>—</td>
</tr>
</tbody>
</table>

Remarks

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 light enough to prevent excessive implement movement when implement is in raised position.
**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.

**Control Lever and Hydraulic Hose Connections**

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

**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.

**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.

**Hydraulic outlet ports of first segment**

<table>
<thead>
<tr>
<th>Lever</th>
<th>Down</th>
<th>Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>[A]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[D]</td>
<td>Out</td>
<td>In</td>
</tr>
</tbody>
</table>

**Hydraulic outlet ports of second segment**

<table>
<thead>
<tr>
<th>Lever</th>
<th>Right</th>
<th>Left</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>[B]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[C]</td>
<td>Out</td>
<td>In</td>
</tr>
</tbody>
</table>

**IMPORTANT:**

- 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)**

1. When moving the lever up, the loader will go down.
2. When moving the lever down, the loader will go up.
3. When moving the lever to the left, the bucket will roll back.
4. When moving the lever to the right, the bucket will dump.
5. 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 lever 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, Wheels and Ballast**

**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.

**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.

**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:**

<table>
<thead>
<tr>
<th>Tire sizes</th>
<th>Inflation Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear</td>
<td></td>
</tr>
<tr>
<td>26x12.00-12 Turf</td>
<td>100kPa(1.0kgf/cm², 14psi)</td>
</tr>
<tr>
<td>26x12.00-12 Bar</td>
<td>120kPa(1.2kgf/cm², 17psi)</td>
</tr>
<tr>
<td>26x12.00-12 Ind</td>
<td>150kPa(1.5kgf/cm², 22psi)</td>
</tr>
<tr>
<td>Front</td>
<td></td>
</tr>
<tr>
<td>16x8.5-10 Turf</td>
<td>120kPa(1.2kgf/cm², 17psi)</td>
</tr>
<tr>
<td>16x8.5-10 Bar</td>
<td>150kPa(1.5kgf/cm², 22psi)</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="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
</tr>
<tr>
<td>880 mm</td>
<td>910 mm</td>
<td></td>
</tr>
<tr>
<td>34.6 in</td>
<td>35.8 in</td>
<td></td>
</tr>
</tbody>
</table>

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 swaying.
- Select jacks that withstand the machine weight and set them up as shown below.

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>
<tr>
<td>Tread</td>
<td><img src="image3" alt="Image" /></td>
<td><img src="image4" alt="Image" /></td>
</tr>
<tr>
<td>820 mm</td>
<td>820 mm</td>
<td></td>
</tr>
<tr>
<td>32.2 in</td>
<td>32.2 in</td>
<td></td>
</tr>
</tbody>
</table>

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 torque 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.

![Image](image5)
To avoid personal injury:
- Before jacking up the tractor, park it on a firm and level ground and check 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**

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.

---

**Rear Ballast**

Add weight to rear wheels if needed to improve traction or for stability. The amount of rear ballast should be matched to 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 and 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 0.0-12 (BX1870D)</th>
<th>26x12 0.0-12 (BX2310D, BX2670D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slush free at -10°C (14°F) Solid at -30°C (22°F) [Approx. 1 kg (2 lbs.) Cad. per 4 L (1 gal.) of water]</td>
<td>35 kg (77 lbs.)</td>
<td>45 kg (99 lbs.)</td>
</tr>
<tr>
<td>Slush free at -24°C (-11°F) Solid at -47°C (-52°F) [Approx. 1.5 kg (3.5 lbs.) Cad. per 4 L (1 gal.) of water]</td>
<td>39 kg (84 lbs.)</td>
<td>50 kg (110 lbs.)</td>
</tr>
<tr>
<td>Slush free at -47°C (-52°F) Solid at -92°C (-13°F) [Approx. 2.25 kg (5 lbs.) Cad. per 4 L (1 gal.) of water]</td>
<td>44 kg (97 lbs.)</td>
<td>56 kg (123 lbs.)</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).

---

**Maximum weight**

| 125 kg (275 lbs.) |

---

(A) Correct - 75% Full  
(B) Incorrect - 100% Full

Water can not be compressed

- 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>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 oil filter</td>
<td>Change</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>54</td>
</tr>
<tr>
<td>10</td>
<td>Greasing</td>
<td>Replace</td>
<td>every 50 hr</td>
<td>54</td>
</tr>
<tr>
<td>11</td>
<td>Wheel belt torque</td>
<td>Replace</td>
<td>every 50 hr</td>
<td>55</td>
</tr>
<tr>
<td>12</td>
<td>Battery condition</td>
<td>Replace</td>
<td>every 100 hr</td>
<td>56</td>
</tr>
<tr>
<td>13</td>
<td>Air cleaner element</td>
<td>Replace</td>
<td>every 1 year</td>
<td>57</td>
</tr>
<tr>
<td>14</td>
<td>Fuel filter element</td>
<td>Replace</td>
<td>every 500 hr</td>
<td>58</td>
</tr>
<tr>
<td>15</td>
<td>Fan belt</td>
<td>Replace</td>
<td>every 100 hr</td>
<td>59</td>
</tr>
<tr>
<td>16</td>
<td>HST neutral spring</td>
<td>Replace</td>
<td>every 100 hr</td>
<td>59</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>Replace</td>
<td>every 2 years</td>
<td>68</td>
</tr>
<tr>
<td>20</td>
<td>Fuel line</td>
<td>Replace</td>
<td>every 200 hr</td>
<td>64</td>
</tr>
<tr>
<td>21</td>
<td>Intake air line</td>
<td>Replace</td>
<td>every 200 hr</td>
<td>64</td>
</tr>
<tr>
<td>22</td>
<td>Engine breather hose</td>
<td>Replace</td>
<td>every 2 years</td>
<td>68</td>
</tr>
<tr>
<td>23</td>
<td>Toe-in</td>
<td>Adjust</td>
<td>every 2 years</td>
<td>63</td>
</tr>
<tr>
<td>24</td>
<td>Engine valve clearance</td>
<td>Replace</td>
<td>every 2 years</td>
<td>63</td>
</tr>
<tr>
<td>25</td>
<td>Fuel injection nozzle injection pressure</td>
<td>Check</td>
<td>every 1000 hr</td>
<td>66</td>
</tr>
<tr>
<td>26</td>
<td>Injection pump</td>
<td>Check</td>
<td>every 3000 hr</td>
<td>66</td>
</tr>
<tr>
<td>27</td>
<td>Coolant system</td>
<td>Check</td>
<td>every 600 hr</td>
<td>66</td>
</tr>
<tr>
<td>28</td>
<td>Coolant</td>
<td>Replace</td>
<td>every 2 years</td>
<td>66</td>
</tr>
<tr>
<td>29</td>
<td>Fuel system</td>
<td>Bleed</td>
<td>every 100 hr</td>
<td>66</td>
</tr>
<tr>
<td>30</td>
<td>Fuse</td>
<td>Replace</td>
<td>Service as required</td>
<td>69</td>
</tr>
<tr>
<td>31</td>
<td>Light bulb</td>
<td>Replace</td>
<td>every 2 years</td>
<td>66</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.
- *6 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.

Indication on hour meter: 50 100 150 200 250 300 350 400 450
Since then: every 200 hr every 500 hr every 1000 hr every 2000 hr every 3000 hr every 6000 hr every 15000 hr every 30000 hr
Ref. page: 61 60 62 65 65 66 66 66
**LUBRICANTS, FUEL AND COOLANT**

<table>
<thead>
<tr>
<th>No.</th>
<th>Locations</th>
<th>BX1870D</th>
<th>BX2370D</th>
<th>BX2670D</th>
<th>Lubricants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fuel</td>
<td>25 L</td>
<td>(6.6 U.S. gal.)</td>
<td>No. 2-D diesel fuel</td>
<td>No. 2-D diesel fuel if temperature is below 10 °C (50 °F)</td>
</tr>
<tr>
<td>2</td>
<td>Coolant (with recovery tank)</td>
<td>2.9 L</td>
<td>(3.0 U.S. qts.)</td>
<td>3.1 L</td>
<td>(3.3 U.S. qts.)</td>
</tr>
<tr>
<td>3</td>
<td>Engine crankcase</td>
<td>2.9 L*1</td>
<td>(3.0 U.S. qts.)</td>
<td>3.1 L*1</td>
<td>(3.3 U.S. qts.)</td>
</tr>
<tr>
<td>4</td>
<td>Transmission case</td>
<td>11.6 L</td>
<td>(3.1 U.S. gal.)</td>
<td>KUBOTA SUPER UDT-2 Fluid *2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Front axle case</td>
<td>2.3 L</td>
<td>(2.4 U.S. qts.)</td>
<td>4.7 L</td>
<td>(5.0 U.S. qts.)</td>
</tr>
<tr>
<td>6</td>
<td>Greasing</td>
<td></td>
<td></td>
<td></td>
<td>Greasing points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No. of greasing points</td>
</tr>
<tr>
<td></td>
<td>Battery terminal</td>
<td>2</td>
<td></td>
<td></td>
<td>Unit grease overflow</td>
</tr>
<tr>
<td></td>
<td>Speed control pedal</td>
<td>1</td>
<td></td>
<td></td>
<td>Unit grease overflow</td>
</tr>
</tbody>
</table>

**Note:**
- *OIL: 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.

**Fuel used**

<table>
<thead>
<tr>
<th>Engine oil classification (API classification)</th>
<th>Oil class of engines except external EGR</th>
<th>Oil class of engines with external EGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra Low Sulfur Fuel <strong>(-0.0015% (18 ppm))</strong></td>
<td>CF, CF-4, CG-4, CH-4 or CI-4</td>
<td>CF or CI-4 (Class CF-4, CG-4 and CH-4 engine oils cannot be used on EGR type engines)</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 (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/oil 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.
### PERIODIC SERVICE

#### 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 OIL

- **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 (TSBN 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>
<th>Oil class of engines with external EGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Sulfur Fuel</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>
<td>CF or CI-4 (Class CF-4, CG-4 and CH-4 engine oils cannot be used on EGR type engines)</td>
</tr>
<tr>
<td>[ ≥ 0.005% (500 ppm) ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Sulfur Fuel</td>
<td>CF, CG-4, CH-4, CI-4</td>
<td></td>
</tr>
<tr>
<td>[ ≤ 0.005% (500 ppm) ]</td>
<td>CF or CI-4</td>
<td></td>
</tr>
<tr>
<td>models</td>
<td>except external EGR</td>
<td>with external EGR</td>
</tr>
</tbody>
</table>

- **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.
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).
4. Use grade No 1-Diesel fuel at temperatures below -10°C (14°F).

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 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.)

Checking Transmission Fluid Level

1. Park the machine on a flat surface.
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.
[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 close the engine to avoid personal injury and to allow good air intake for air cleaner.

**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.)

**NOTE:**

If the dust or chaff is accumulated in the battery compartment, open the panel and clean completely.

**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 the screen, 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.

**IMPORTANT:**

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

**Checking Brake Pedal**

1. Check the brake pedal 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 gage(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 chaffed 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, contact 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, contact your local KUBOTA Dealer for this service.

Checking OPC System

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.

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

- Preparation before testing.
  1. Set the parking brake and stop the engine.
  2. Shift the range gear shift lever to "NEUTRAL" position.
  3. Check the speed control pedal "NEUTRAL" position.
  4. 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.

Wheel Bolt Torque

- Front:
  1. 149.2 to 179.0 N-m (15.2 to 18.3 kbf·ft, 110 to 132 lb·ft)

- Rear:
  1. 108.5 to 130.2 N-m (11.1 to 13.3 kbf·ft, 80 to 96 lb·ft)
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 splattered 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.

**Battery Charging**

<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>

(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.)

**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 bar gauge: 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:**

- Check to see if the evaporator valve is blocked with dust.

---

**Tractor Type**

<table>
<thead>
<tr>
<th>Battery Type</th>
<th>Battery Voltage (V)</th>
<th>Reserve Capacity (Ah)</th>
<th>Cold Cranking Amps</th>
<th>Normal Charging Rate (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX187D0</td>
<td>42/6RMF</td>
<td>12</td>
<td>55</td>
<td>450</td>
</tr>
<tr>
<td>BX227D0</td>
<td>52/6RMF</td>
<td>12</td>
<td>60</td>
<td>540</td>
</tr>
</tbody>
</table>
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.

Adjusting Fan Belt Tension

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

<table>
<thead>
<tr>
<th>Proper fan belt tension</th>
<th>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</th>
</tr>
</thead>
</table>

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 check 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.

<table>
<thead>
<tr>
<th>Proper brake pedal free travel</th>
<th>25 to 35 mm (1.0 to 1.4 in.)</th>
</tr>
</thead>
</table>

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.)
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.
4. Tighten filter by hand an additional 1/2 turn only.
5. 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.
6. 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.
2. All the used oil can be drained out easily when the engine is still warm.
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) Engine oil filter
(2) Dipstick
(3) Drain plug
(4) Lock nut
(5) Turnbuckle
(6) Right rear tire

(A) Oil level is acceptable within this range

(B) Free travel
**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. Check the dipstick and refill with oil to prescribed level.
5. Properly dispose of used oil.

**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.
- If hose clamps are loose or water leaks, tighten clamps securely.
- Replace hoses and tighten hose clamps securely, if radiator hoses are swollen, hardened or cracked.
- 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.

**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 toe 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.

---

![Image](image-url)
■ 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.

■ 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.

Oil capacity 11.6 L (3.1 U.S. gal.)

■ 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.

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.

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.
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:
1. 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.
2. Stop the engine and let cool down.
3. To drain the coolant, open the radiator drain plug and remove radiator cap. The radiator cap must be removed to completely drain the coolant.
4. After all coolant is drained, close the drain plug.
5. Fill with clean soft water and cooling system cleaner.
6. Follow directions of the cleaner instruction.
7. 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.
8. Fill with coolant up to the "H" mark on the recovery tank.
9. Start and operate the engine for few minutes.
10. Stop the engine and let cool.
11. Check coolant level of recovery tank and add coolant if necessary.

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

■ Anti-Freeze
CAUTION
To avoid personal injury:
1. When using antifreeze, put on some protection such as rubber gloves (Antifreeze contains poison).
2. If should drink antifreeze, throw up at once and take medical attention.
3. When antifreeze comes in contact with the skin or clothing, wash it off immediately.
4. Do not mix different types of Antifreeze.
5. The mixture can produce chemical reaction causing harmful substances.
6. Antifreeze is extremely flammable and explosive under certain conditions. Keep fire and children away from antifreeze.
7. When draining fluids from the engine, place some container underneath the engine body.
8. Do not pour waste onto the ground, down a drain, or into any water source.
9. 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) for 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 J831A.

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

Vol % Anti-Freeze | Freezing Point | Boiling Point
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>-24</td>
<td>106</td>
</tr>
<tr>
<td>50</td>
<td>-37</td>
<td>108</td>
</tr>
</tbody>
</table>

SELECTED COMPONENTS
1. (A) Oil gauge level is acceptable within this range
2. (B) Oil level is acceptable within this range
3. (1) Breather plug
4. (2) Oil gauge with dipstick
5. (3) Drain plug
6. (4) Radiator cap
7. (5) Radiator cap
8. (1) Drain plug
9. (2) Drain plug
10. (3) Drain plug
11. (4) Drain plug
12. (5) Drain plug
13. (6) Drain plug
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78. (71) Drain plug
79. (72) Drain plug
80. (73) Drain plug
81. (74) Drain plug
82. (75) Drain plug
83. (76) Drain plug
84. (77) Drain plug
85. (78) Drain plug
86. (79) Drain plug
87. (80) Drain plug
88. (81) Drain plug
89. (82) Drain plug
90. (83) Drain plug
91. (84) Drain plug
**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.

**Replacing Fuse**
The tractor electrical system is protected from potential damage by fuses. A broken 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 if 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 if your local KUBOTA Dealer has 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>

**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>
**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. Inflated 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.

**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>Insufficient engine power</td>
<td>Insufficient or dirty fuel</td>
<td>Check the fuel system</td>
</tr>
<tr>
<td></td>
<td>The air cleaner is clogged</td>
<td>Clean the fuel system; replace 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</td>
<td>Black</td>
<td>Change the fuel and fuel filter</td>
</tr>
<tr>
<td>colored</td>
<td>Too much oil.</td>
<td>Check the proper amount of oil</td>
</tr>
<tr>
<td></td>
<td>The air cleaner is clogged</td>
<td>Clean or replace the element</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.
OPTIONS

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 (cruse control) [BX1870D]
- Grille guard
- Engine Block heater
  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

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