FOREWORD

Your new ISEKI tractor has been designed by the ISEKI & CO., LTD., a manufacturer with long experience in the development and production of agricultural machinery and equipment. ISEKI is proud of its engineering skills and manufacturing processes, which place particular emphasis upon strict quality control, product durability, and safety of operation.

We are confident that your new ISEKI tractor will provide you with many years of outstanding performance. It is a modern machine, equipped with the latest devices, and designed for maximum operator safety and convenience. This Manual is intended to provide basic information and instructions concerning the new ISEKI tractor and its operation. By following the guide lines described in this Manual, you are assured of achieving top performance from your new ISEKI tractor.

Read this Manual carefully, and understand it thoroughly before you attempt to use the tractor or implements, to assure safe and productive operation and maintenance.
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1 OUTER VIEW AND NAME OF PART
1) 4-Wheel Drive Tractor

1. Engine hood
2. Light grill
3. Head light
4. Grill
5. Front hitch
6. Front wheel
7. Clutch pedal
8. Step
9. Rear wheel
10. PTO speed change lever
11. Lift arm
12. Main speed change lever
13. Instrument panel
14. Turn signal light
15. Arm-rest
16. Fender
17. Aux. speed change lever
18. Front wheel drive lever
19. Brake pedal
20. Axle housing
21. Bevel case
22. Front gear case
23. Muffler
24. Fuel tank cap
25. Rear-view mirror
26. Steering wheel
27. Throttle lever
28. Operator’s seat
29. Hydraulic control lever
30. Foot accelerator

https://www.tractormanualpdf.info/
2) 2-Wheel Drive Tractor

1. Engine hood
2. Light grill
3. Head light
4. Grill
5. Front hitch
6. Front wheel
7. Clutch pedal
8. Step
9. Rear wheel
10. PTO speed change lever
11. Lift arm
12. Main speed change lever
13. Instrument panel
14. Turn signal light
15. Arm-rest
16. Fender
17. Aux. speed change lever
18. Brake pedal
19. Front axle
20. Muffler
21. Fuel tank cap
22. Rear-view mirror
23. Steering wheel
24. Throttle lever
25. Operator's seat
26. Hydraulic control lever
27. Foot accelerator
2 
OPERATION OF THE NEW MACHINE
ISEKI continues to modernize and improve its products. Accordingly, it is possible that some of the specifications and instructions in this Manual may differ from those applicable to our latest models. When in doubt, refer to your nearest dealer.

Your new machine should be operated carefully to prolong its service life, and assure top performance. During the initial 50 hours of operation, the following cautions should be adhered to:

1. CAUTIONS CONCERNING OPERATION OF THE NEW MACHINE

- Read and thoroughly understand the caution plates attached to the appropriate parts of the machine.
- Warm up the engine at low speed, before starting daily activities.
- Avoid sudden starts, full acceleration and sudden braking.
- Change lubrication oil frequently. Always keep oil at the full level.
3 CONTROLS AND INDICATORS
1. WARNING LAMPS AND SWITCHES

• KEY SWITCH
The key switch is separated from the starter switch. The key can be removed and inserted only at the OFF position. At the three other positions it functions as follows:
- ON position:
  Electrical power is on.
- 30 position:
  Head lights on high beam.
- 30 Position
  Head lights on low beam.

CAUTION:
- Never set the key to OFF position during machine operation.
- Cover the key switch when the machine is not in operation.
- **STARTER SWITCH**

The starter switch has two operating positions: Start and Preheat.

- **"Start"**
  When turning the starter switch clockwise, the engine is started.
  By releasing the switch, it returns to its original position.

- **"Preheat"**
  When turning the switch counterclockwise, the preheating circuit is energized to preheat the combustion chamber.
  By releasing the switch, it returns to its original position.

- **HEATER SIGNAL**
  Indicates preheating condition of the engine glow plug.
  When the combustion chamber is warmed up after turning the switch to "Preheat", the signal becomes red.

- **TURN SIGNAL SWITCH**
  The turn signal is the flashing indicator type. When the switch is at horizontal position, the signal is not functioning.
  By turning the switch to \( L \) direction, the left turn signal flashes.
  By turning it to \( R \) direction, the right turn signal flashes.
- **HORN BUTTON**
  When this button is pushed to "ON,  或  " position on the key switch, the warning horn sounds.

- **CHARGING LAMP**
  The red colored oil lamp is ON at key switch positions of "ON,  " and  ". During engine operation, the lamp remains off, indicating proper charging of electricity.

- **OIL LAMP**
  The red colored oil lamp is ON at key switch positions of "ON,  " and  ". During engine operation, the lamp remains off, indicating proper lubrication of the engine.

- **WATER TEMPERATURE LAMP**
  When the engine is overheated, this lamp is lit for warning. If this lamp should glow during operation, immediately stop the machine, and run the engine at low speed to cool it off. When the water temperature goes down, the lamp goes off automatically.
2. CONTROL LEVERS AND PEDALS

- MAIN SPEED CHANGE LEVER
  The main speed change lever has three speeds in forward and one speed in reverse. Combined with the auxiliary speed change lever, the machine is capable of six forward speeds and two reverse speeds.

- AUXILIARY SPEED CHANGE LEVER
  This lever has two speeds. By pushing the lever forward, 'High' speed is selected. By bringing it to the operator's side, 'Low' speed is selected.

![Diagram of control levers and pedals]

- Auxiliary speed change lever
- PTO speed change lever
- Main speed change lever
- Throttle lever
- Hydraulic control lever
- Down speed control lever
- Diff. lock pedal
- Front wheel drive lever (4-wheel drive type only)
- Foot accelerator
- Clutch pedal
- Parking brake lever
- Lock plate
- LH brake pedal
- RH brake pedal

![Gear shift diagram]

- 2.5
- 3.6
- 1.4
- R
- High
- Low
• PTO SPEED CHANGE LEVER
  Three PTO shaft speeds can be selected by using this lever. If the rotary is mounted on the shaft, this lever changes the speeds of the tilling blades.

• FRONT WHEEL DRIVE LEVER (4-WHEEL DRIVE TYPE ONLY)
  When driving the machine on inclines, through swamps or other areas requiring extra tractions, operate this lever to drive the tractor using all four wheels. By pushing down on the lever, the front wheels are engaged and put into drive. By pulling up on the lever, the front wheel drive is disengaged.

CAUTION: When engaging front wheel drive, the clutch must be disengaged before operating the lever.

• THROTTLE LEVER
  By pulling the throttle lever to the operator’s side, engine speed is increased. By pushing the lever forward, the speed slows down. When the lever is pushed in as far as the notched part of the lever guide, the engine becomes idling speed.
  To stop the engine, push the lever forward further from this notched part.

• CLUTCH PEDAL
  The clutch is disengaged when the clutch pedal is fully depressed.

CAUTION:
  • When disengaging the clutch, depress the clutch pedal quickly and fully. When engaging the clutch, gradually release the pedal.
  • When changing speeds, disengage the clutch before operating the speed change lever.
  • Never rest your foot on the clutch pedal during operation.
**BRAKE PEDALS**

Each brake pedal provides separate control over left rear wheel and right rear wheel braking.

By depressing the LH brake pedal, the left rear wheel brake is activated.

By depressing the RH pedal, the right rear wheel is stopped.

When it is required to turn the machine sharply while moving at slow speed, use the pedals separately.

When traveling on the road or loading on a truck, however, interconnect both the pedals with the lock plate provided.

Inspect the brake system to brake equally. If the braking effect is unequal, dangerous operation may result.

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**PARKING LEVER**

Interconnect both brake pedals, and keep them depressed.

Pulling up the parking brake lever, engage the round bar at the left lower part of the brake pedal with the notch on the parking brake lever. This locks the brake pedal to park the machine.

When releasing the parking lever, depress the brake pedal and lower the parking lever until it makes contact with the stopper.

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**DIF. LOCK PEDAL**

The dif. lock is used to lock the differential, equalizing the rotational speeds of the left and right tires.

Should the rear tire slip or one tire turn idly, use this device to drive out of a rough field.

By depressing the pedal, dif. lock is applied. By releasing it, lock is disengaged.

---

**CAUTION:**

- When traveling on the road, working with heavy load or working at high speed, never lock the differential, to avoid accident.
- When the difference in rotational speeds between both tires is extreme, operate the pedal after disengaging the clutch.
3. OPERATION OF HYDRAULIC SYSTEM

- HYDRAULIC CONTROL LEVER
  The hydraulic control lever is moved to the rear “Raise” position to elevate the implement by hydraulic power. The lever should be moved forward to achieve the “Lower” position. The implement is then lowered by its own weight. When the implement is raised to its maximum position, the lever automatically return to its neutral position. If the lever does not return to its neutral position automatically reset the lever by adjusting the lever set bolt.

  When it is required to stop the implement at its desired height, move this lever set bolt to obtain the desired implement position.
LOWERING SPEED ADJUSTMENT LEVER
Adjust the lowering speed to meet conditions and types of work done.
- Rotary work: Slow down the lowering speed.
  approx. 2 sec.
- Plowing: Quicken the lowering speed.
  approx. 1 sec.

By turning the adjustment lever clockwise, the lowering speed accelerates.
By turning it counterclockwise, the speed is reduced.
The implement is not locked even when turning the lever fully counterclockwise. The lift arm may be lowered gradually.

CAUTION:
- When traveling on the road, set the lowering speed adjustment lever to its 'slowest' position, and apply a lock stay on the rotary to fix it in place.
- When changing rotary blades, removing entwined straw or plants and inspecting the implement, the engine must be turned off with the lowering speed adjustment lever set at the 'slowest' position. Also, lock the implement, using a lock stay to prevent accidents.
OPERATING THE TRACTOR
CAUTION:  
Before starting each day's work, preliminary checks should be made (See Paragraph 1, Section 7).

1. STARTING THE ENGINE

(1) Confirm that the main speed change lever and PTO speed change lever are set to Neutral positions.
(2) Push back the stop lever to its original position.
(3) Pull the throttle lever half way.
(4) Depress the clutch pedal to disengage the clutch.

CAUTION:  
As a safety measure, the engine will not start unless the clutch pedal is depressed.

(5) Insert the key in the switch, and set it to the ON position. At this time, confirm that the oil charge lamp is lit.
(6) Preheat the engine by turning the starter switch counterclockwise. After the heater signal becomes red, release the key to return its original position. The heater signal becomes red in approx. 25 seconds. This operation is not necessary in hot weather or when the engine is already warm.

(7) Start the engine by turning the starter switch clockwise. Immediately after starting the engine, release the starter switch.
(8) After the engine starts, warm it up for 5 to 10 minutes at idling speed.

CAUTION:  
- Do not operate the starter motor more than 10 seconds continuously. If the engine fails to start, wait approx. 10 sec. before attempting to start it again.
- Never keep running the starter motor after the engine has started. Never run the motor during machine operation.
- When storing the machine in cold weather, remove the battery, and keep it in a warm place. This will help the engine to start easily the next time.
- The time required for preheating:
  - Outside temp. more than +5°C: Approx. 20 sec.
  - Outside temp. more than +5°C ~ −5°C: Approx. 30 sec.
  - Outside temp. less than −5°C: Approx. 60 sec.
2. STOPPING THE ENGINE
(1) Slow down the engine speed by pushing the throttle lever fully forward, exceeding the notched part of the lever guide.
(2) Set the key switch to the OFF position.

CAUTION:
- Do not stop the engine when the engine is running at high speed.
- After long continuous operation, idle the engine for approximately 5 minutes before turning it off.
- If the key is left in the "ON" position, the battery may be discharged.
Make it a practice to remove the key, after stopping the engine.

3. BASIC OPERATION OF STARTING THE TRACTOR
(1) Depress the clutch pedal to disengage the clutch.
(2) Set the speed change lever to desired position.
(3) Release the parking brake lever.
(4) Gradually pick up engine speed with the throttle lever.
(5) Slowly release the clutch pedal. This starts the tractor.
(6) Control tractor speed using the throttle lever.

CAUTION:
- When traveling on the road, do not forget to interconnect both brake pedals. Single-side braking when driving at high speed is very dangerous.
- When the machine is in motion, keep your foot off of the clutch pedal and the brake pedal.

- BRAKING AND STOPPING THE TRACTOR
(1) Slow down the engine speed using the throttle lever.
(2) Depress the clutch pedal to disengage the clutch, and at the same time depress the brake pedal to stop the tractor.
• PARKING
(1) Confirm that both brake pedals are interconnected, and depress the brake pedals and pull the parking brake lever.
(2) Set the main speed change lever to neutral position.

CAUTION:
• Never forget to apply the parking brake.
• When parking the tractor on a slope place blocks under the tires.

• TURNING THE TRACTOR
(1) Remove the lock plate connecting both brake pedals for easy turning in working fields.
(2) When turning the steering wheel, depress the brake pedals on the same side as the direction you are turning. This enables you to make a sharp turn.

• OPERATING ON A SLOPE
(1) Starting on steep slope:
1. Disengage the clutch by depressing the clutch pedal.
2. Shift the speed change lever to desired speed.
3. Depress the brake pedal.
4. Set engine speed to intermediate speed using the throttle lever.
5. Gradually release the clutch pedal until the clutch is in the half-engaged position.
6. At the same time, release the brake pedal slightly.
7. Pick up engine speed by pulling the throttle lever, release the brake pedal. At the same time, release the clutch pedal gradually. This starts the tractor.

(2) Operation on down slope:
Use engine brake as much as possible.

CAUTION:
• When turning the machine, slow down the engine speed and shift down the gear before beginning to turn the machine.
4. OPERATION CHECK DURING WORK

CAUTION:
- During operation, always observe warning lamps to confirm that each part is functioning correctly.

• WATER TEMPERATURE LAMP
  During operation, always pay attention to the water temperature lamp. If the temperature becomes abnormally high, the cooling system should be checked.

• OIL LAMP
  If the oil lamp goes on during operation, it may indicate trouble with the lubricating system. Immediately stop operation to check and make corrections.

• CHARGE LAMP
  If the charge lamp goes on during operation, electrical charging is not being made. There may be some problem in the charging system.
  Check and correct the trouble.
  If the cause of the trouble can not be located, have it looked at and repaired at service shop.
3 STORAGE
1. DAILY STORAGE
After each day’s work is done, follow this procedure:
• Clean the tractor. Especially, after puddling or the like wash the machine thoroughly.

CAUTION:
• When washing the machine, do not apply compressed water on the electrical parts.
• Fill the fuel tank to maximum level.
• Lower the implement to the ground.
• Store the machine indoors as much as possible. When storing the machine in an open space, cover it for protection.
• In cold weather, remove the battery and keep it in a warm place.
• Handle the engine coolant as follows:

CAUTION:
• If surrounding temperature is expected to go below 0°C (32°F), drain the coolant or add an anti-freeze solution. This will prevent a broken engine block.

2. LONG-TERM STORAGE
Prior to storing the machine for more than a few months, thoroughly clean it. Then, carry out the following maintenance routine:
• Drain engine coolant from the radiator.
  Remove the drain cock at the left side of the radiator.
  Remove the radiator cap, and drain coolant completely. After draining, attach a caution tag indicating “NO WATER”.
• Drain dirty engine oil. Put in new engine oil, and warm up the engine for 5 minutes to circulate the oil to every part of the engine.
• Inflate the tires a little more than the normally specified air pressure.
• Do not forget to lubricate all necessary parts. Apply grease or oil on all parts subject to rust.
• Check for loose bolts and nuts. Retighten, if necessary.
• Remove the balance weight or the like.
• Lower the implement to the ground.
• Select a dry place for storage. Cover the machine with a sheet.
• Remove the battery from the tractor. Recharge the battery. After adjusting the electrolyte level correctly, store it in a dry place out of direct sunlight.
• To protect the engine from rusting, run the engine at 1000 to 1500 rpm for 5 to 10 minutes, once each month.
• Clutch should be disengaged completely as follows:
3. OPERATION AFTER LONG-TERM STORAGE

When operating the machine after long-term storage, observe the following precautions:

- Carry out preliminary checks.
- For correct machine service life and performance, practice the following warm up operation.

1. Pull the stop lever to shut the intake shutter.
2. Run the starter motor. Keep on running the starter motor after the oil lamp goes off.
3. Repeat the above operation above 2 to 3 times. Then start the engine. Warm up the engine at idling speed for half an hour.
6

OPERATION IN COLD WEATHER
In cold weather, the tractor should be maintained with special care.

1. ENGINE OIL
   As the temperature goes down, the engine oil tends to get hard. It is necessary to use SAE 10W oil in cold weather.
   Use correct viscosity diesel engine oil consistent with surrounding temperature.

<table>
<thead>
<tr>
<th>Surrounding Temp.</th>
<th>Type of Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 20°C</td>
<td>SAE 30</td>
</tr>
<tr>
<td>0°C to 20°C</td>
<td>SAE 20 or SAE 10W/30</td>
</tr>
<tr>
<td>Less than 0°C</td>
<td>SAE 10W</td>
</tr>
</tbody>
</table>

2. ANTI-FREEZE SOLUTION
   When it is expected that the surrounding temperature will drop below freezing, use anti-freeze solution.
   ● Before adding the anti-freeze solution, thoroughly clean the inside of the radiator.
   ● When preparing anti-freeze solution, follow the instructions on the label.
   ● Properly mix the anti-freeze solution with water, before adding to the cooling system.
   ● If the coolant level becomes low due to evaporation, add only water. If the coolant level becomes low due to leakage, add anti-freeze solution mixed with the same proportion of water used originally.
   ● Anti-freeze solution removes body paint. Take care not to spill it on the machine body.

3. BATTERY MAINTENANCE
   In cold weather, the battery capacity becomes low. When it is discharged, the specific gravity of battery electrolyte becomes low.
   ● Check and service the charging system to maintain top charging performance.
   ● In cold weather, remove the battery from the machine, and store it in a warm place to keep it in good condition.

4. OPERATION IN SNOW OR ON FROZEN ROADS
   When operating the tractor in snow or on frozen roads, never drive at high speeds; never accelerate quickly; never brake suddenly; never turn sharply ... to avoid accidents.
7

MAINTENANCE, INSPECTION AND ADJUSTMENT
1. MACHINE PRELIMINARY CHECKS
   Before starting day’s work, check the machine as follows:
   (Refer to Paragraph 4, in this Section, “Chart of Periodical
   Inspection and Service”.)

- AFTER OPENING THE ENGINE HOOD
  (1) Engine Coolant
      Removing the radiator cap, check the coolant level. If
      the level is lower than the filler mouth, replenish it with
      clean water.
      Tighten the cap securely.

CAUTION:
- Never use salty water or dirty water containing mud or
  grass.

(2) Fan belt tension
    When pushing the belt between pulleys, should be deflected by approx. 5 mm.
    not, adjust the belt.
FROM OUTSIDE OF THE TRACTOR

(1) Oil Level Checks
When checking oil levels, refer to the "Lubrication Chart in Paragraph 3, this Section.
• Engine oil
  The oil level gauge is at the right side of the engine. Remove the gauge, and check the engine oil level. Fully screw-in the gauge for checking.

• Transmission oil
• Hydraulic oil
• Lubrication of each part
  The above need not be checked daily. However, they should be checked periodically

(2) Fuel
Check the fuel level in the fuel tank. Add fuel, if found low.

(3) Looseness of Bolts, Nuts and Pins
Check bolts and nuts for looseness and check to see if any pins are missing. Pay special attention to the bolts and nuts in the steering system, and to the pins of the mounting system for the implement.

TIRES AND WHEELS

(1) Tire air pressure greatly affects tractor performance and tire service life. It is very important to maintain air pressure in the tires at the specified pressure.
At the same time you check pressure, also check the tires for abnormal wear, cracks and damage.

Specified air pressure (kg/cm²)

<table>
<thead>
<tr>
<th></th>
<th>4-wheel drive</th>
<th>2-wheel drive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Front</td>
<td>Rear</td>
</tr>
<tr>
<td>TX1000</td>
<td>1.2</td>
<td>1.0</td>
</tr>
<tr>
<td>TX1300</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>TX1500</td>
<td>1.2</td>
<td>1.2</td>
</tr>
</tbody>
</table>
(2) Wheel Setting Bolt
Confirm that all the wheel setting bolts for all 4 wheels are securely tightened.

- TIRES AND WHEELS
  (1) Steering Wheel
  Confirm that there is no excessive play or deflection in the steering system. The standard free play is approximately 30 mm around the steering wheel circumference.

  (2) Brake Pedals
  Confirm that both the left and right brakes display equal braking effects. Free play of the brake pedal should be 30 to 40 mm.

  (3) Electrical System
  - Pilot lamp
    Confirm that the oil lamp and charge lamp are functioning properly.
  - Head light and working light
    Confirm that the lights function properly. As for the head light, check if it is possible changes in the upper beam and lower beam.
  - Turn signal light and horn
    Confirm that the turn signal lights flash normally.
  - Confirm that the horn works.

2. LUBRICATION

- LUBRICATION POINTS
  (1) Engine oil
  Check engine oil level with the level gauge at right side of the engine.
  - Recommended oil
    - More than 20°C: SAE 30
    - 0°C to 20°C: SAE 20 or SAE 10W/30
    - Less than 0°C: SAE 10W
  - The drain plug is located at the lower part of the oil pan.

  * CAUTION:
  - Use recommended engine oil.
  - When replenishing the oil, use the same kind of oil as is in the engine.

  (2) Transmission oil
  Check transmission oil level by referring to the level gauge. When the oil level is low, add transmission oil through the filler hole below the operator's seat.
CAUTION:
- Use recommended gear oil SAE 80.
- The Transmission oil is commonly used for hydraulic oil. As precision-made parts are used in the hydraulic system, never allow dust to get into the oil.
- Three drain holes are provided. Open these three drain holes to drain the oil.

(3) Bevel Case and Front Gear Case Oil
(4-Wheel Drive Type Machines only)
- Add oil to the bevel case from the oil filler hold located at the front part of the bevel case.
- Add oil to the front gear case from the oil filler holes located on both sides of the front gear case.

CAUTION:
- Use recommended gear oil SAE 80 or 90. However, never mix SAE 80 with SAE 90 oil.

(4) Fuel
Fuel has a great effect on engine performance. Therefore high quality fuel should be used.

CAUTION:
- If air enters the fuel system, power loss or difficulty in starting the engine may result.
When fuel is exhausted during operation, or when cleaning the fuel filter, air bleeding should be accomplished without delay. As for air bleeding, refer to page 31.
3. LUBRICATION CHART (AND COOLANT)  ■ FOUR WHEEL DRIVE TRACTORS

CAUTION:
- Change the oil while the oil is warm, just after operation.
  Oil is easily to drain when it is warm.
TWO WHEEL DRIVE TRACTORS
<table>
<thead>
<tr>
<th>No.</th>
<th>Supplying points</th>
<th>Kinds of oil or water</th>
<th>Quantity (l)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TX1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 wheel</td>
</tr>
<tr>
<td>1</td>
<td>Engine</td>
<td>Engine oil</td>
<td>2.0</td>
</tr>
<tr>
<td>2</td>
<td>Bevel case</td>
<td>Gear oil SAE 80 or 90</td>
<td>0.7</td>
</tr>
<tr>
<td>3</td>
<td>Front gear case</td>
<td></td>
<td>0.25</td>
</tr>
<tr>
<td>4</td>
<td>Steering gear box</td>
<td>Gear oil SAE 80 or 90</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Transmission gear case</td>
<td>Gear oil SAE 80</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>Radiator</td>
<td>Coolant</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Fuel tank</td>
<td>Diesel light oil C JIS No. 2~3</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Center pivot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Knuckle spindle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Tied rod end</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Drag rod end</td>
<td></td>
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<tr>
<td>12</td>
<td>King pin</td>
<td></td>
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<tr>
<td>13</td>
<td>Brake pedal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Brake shaft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Clutch pedal</td>
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> As required

https://www.tractormanualpdf.info/
## 4. PERIODICAL SERVICE TABLE

<table>
<thead>
<tr>
<th>Items</th>
<th>Preliminary check</th>
<th>Periodical inspection and Operation hour (hour meter counter)</th>
<th>Inspection thereafter</th>
<th>Check standard at preliminary check</th>
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<tbody>
<tr>
<td>Engine oil</td>
<td></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Small circle" /></td>
<td>Replace every 100 hours</td>
<td>Within level gauge</td>
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<tr>
<td>Air cleaner</td>
<td></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Small triangle" /></td>
<td>Clean every 100 hours</td>
<td>Filled up to pressure cap (not clogged)</td>
</tr>
<tr>
<td>Radiator coolant</td>
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<td>Change every 400 hours</td>
<td>Full level</td>
</tr>
<tr>
<td>Fuel</td>
<td></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Small triangle" /></td>
<td>Replace every year</td>
<td></td>
</tr>
<tr>
<td>Fuel filter</td>
<td></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Small triangle" /></td>
<td>Clean every 100 hours</td>
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</tr>
<tr>
<td>Cleaning inside the fuel tank</td>
<td></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Small star" /></td>
<td>Replace element every 300 hours</td>
<td>10mm can be pressed down with finger.</td>
</tr>
<tr>
<td>Fan belt</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Small star" /></td>
<td>Do every year</td>
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<td>Electrolyte level</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Small star" /></td>
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<td>Oil filter</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Small star" /></td>
<td>Inspect every 100 hours</td>
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<td>Tightening of bolts and nuts</td>
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<td>Replace every 100 hours</td>
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<td>Damage and leaks</td>
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<td>Change part</td>
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<td>Valve clearance adjustment</td>
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<td>Engine idling adjustment</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Small star" /></td>
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<td>Nozzle injection starting pressure</td>
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<td>Compression pressures</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Small star" /></td>
<td>Check broken wiring</td>
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<tr>
<td>Items</td>
<td>Periodical inspection and Operation hour (hour meter counter)</td>
<td>Inspection thereafter</td>
<td>Check standard at preliminary check</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
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<td>Transmission gear oil</td>
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<td>50 100 150 200 250 300 350 400 450 500 550 600</td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td>Inspect every 100 hours. Replace every 300 hours.</td>
</tr>
<tr>
<td>Play of clutch pedal</td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td>Both the brake work equally. Work securely.</td>
</tr>
<tr>
<td>Play of brake pedal</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td>Clean each 300 hours.</td>
</tr>
<tr>
<td>Efficiency of brake</td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td>Refer to page 20.</td>
</tr>
<tr>
<td>Working of levers</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
</tr>
<tr>
<td>Play of steering wheel</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
</tr>
<tr>
<td>TX1300 2-wheel drive</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
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<tr>
<td>Toe-in</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
</tr>
<tr>
<td>Greasing front wheel hub (2-wheel drive)</td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
</tr>
<tr>
<td>Retightening front wheel bearing (2-wheel drive)</td>
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<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
</tr>
<tr>
<td>Bevel case lubrication (4-wheel drive)</td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
</tr>
<tr>
<td>Gear case lubrication (4-wheel drive)</td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
<td><img src="https://www.tractormanualpdf.info/" alt="Image" /></td>
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</tbody>
</table>

* Do each 900 hours

2 ~ 4 m/m
<table>
<thead>
<tr>
<th>Items</th>
<th>Periodical Inspection and Operation hour (hour meter counter)</th>
<th>Inspection thereafter</th>
<th>Check standard at preliminary check</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50</td>
<td>100</td>
<td>150</td>
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<tr>
<td>Retightening steering ball joint</td>
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<td>Wheel clamping bolt</td>
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<td>☐</td>
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<tr>
<td>Electric apparatus</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Adjustment of throttle</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Clamping of bolts and nuts</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Oil leakage of clutch</td>
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<td>☐</td>
<td>☐</td>
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<tr>
<td>Grease-up</td>
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<tr>
<td>Check front gear case for entering of muddy water</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
5. INSPECTION AND ADJUSTMENT

- CLUTCH PEDAL
  Free play of the clutch pedal decreases after the machine has been broken in.
  Normal free play of the pedal is 15 to 20 mm.
  If free play is less than normal, adjust it by loosening the lock nut on the adjustment bolt.

- BRAKE PEDAL
  Specified free play of the brake pedal is 30 to 40 mm.
  Always maintain free play as specified, by adjusting the rod.

  CAUTION:
  If the left and right brake systems provide an uneven braking effect the machine cannot be stopped in a straight position when both pedals are interconnected. Adjust both rods correctly to obtain the same braking effect in each system.
• THROTTLE LEVER
If movement of the throttle lever becomes loose or heavy, adjust the grooved nut.

• TOE-IN ADJUSTMENT
Standard toe-in is specified to 2 – 4 mm. If not operating to this specification, loosen the lock nut to adjust.

• FREE PLAY OF STEERING WHEEL
The specified free play of the steering wheel is approximately 30 mm around the circumference of the steering wheel. If free play is found to be excessive, adjust the steering wheel to meet the specification.
The major cause of excessive play is loosening of the ball joint setting part. Retighten this part. If retightening does not correct excessive play, adjust with the adjustment bolt shown in the figure below. By screwing-in the bolt, free play is decreased.
- **AIR BLEEDING FROM THE FUEL SYSTEM**
  When screws or bolts of the fuel system are loosened, or fuel is exhausted during operation, air enters into the fuel system. This causes power loss or difficulty in starting the engine. Air bleeding should be accomplished to prevent this trouble.

  1. Loosen an air bleeding screw (1) on the fuel filter, and bleed air.
     After the air is bled which is indicated by when there are no bubbles coming out, tighten the screw securely.

  ![Fuel filter](image)

  2. Loosen another air bleeding plug (2) on the fuel filter to bleed air. Then, loosen the air bleeding plug (3) to bleed air.
     After bleeding air, do not forget to retighten these plugs.

  3. Run the starter motor for several seconds by pulling back fully on the throttle lever. This bleeds air from the injection pipe and nozzle.

- **ADJUSTING FRONT AND REAR TREADS**
  Following is an explanation of adjustment of treads for each tractor model.

  **CAUTION:**
  - When adjusting the tread, always keep safety in mind.
  - All bolts and nuts should be securely tightened.
(1) FOUR WHEEL DRIVE TRACTOR

<table>
<thead>
<tr>
<th></th>
<th>TX1000F</th>
<th>TX1300F</th>
<th>TX1500F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>700</td>
<td>740</td>
<td>780</td>
</tr>
<tr>
<td>B</td>
<td>800</td>
<td>840</td>
<td>880</td>
</tr>
</tbody>
</table>

Unit: mm
(2) TWO WHEEL DRIVE TRACTOR

<table>
<thead>
<tr>
<th></th>
<th>TX1000</th>
<th>TX1300</th>
<th>TX1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>700</td>
<td>740</td>
<td>780</td>
</tr>
<tr>
<td>B</td>
<td>800</td>
<td>840</td>
<td>880</td>
</tr>
</tbody>
</table>

Unit: mm
• ADJUSTING OPERATOR’S SEAT
  The operator’s seat can be adjusted into two positions front-to-rear. Adjust the seat by removing the pin after removing the hair pin.

![Pin Image]

• BATTERY INSPECTION
  The battery is the only power source for starting the engine and electrical system of the tractor. Incorrect battery maintenance shortens its useful life. To prolong the service life with best performance, adequate maintenance is required.

Always maintain the battery in as fully charged condition as possible.
Battery electrolyte will evaporate naturally or during recharging. If the battery electrolyte is insufficient, the battery is damaged. If the electrolyte level is too high, it will spill out from the battery resulting in corrosion of the machine body. It is very important to maintain the specified electrolyte level.

![Battery Level Images]

When electrolyte level becomes low:
(1) By natural evaporation — Replenish with diluted water.
(2) By spilling out — add sulphuric acid. Have done at service station or battery shop.
When the battery is fully charged, specific gravity of the electrolyte should be 1.26 at 20°C.

CAUTION:
• If electrical energy in the battery is discharged beyond a certain point, the battery cannot start the engine.
Also, head lights will not light brightly.
When the battery is in this condition, it may be impossible to recover battery performance even by recharging it.
INSPECTING AND SERVICING THE AIR CLEANER
The following checking and servicing procedure should be accomplished periodically.
- Loosening the wing nut, remove the cover and take out the element for cleaning.

(a) When dry dust sticks:
Holding the element in your hand, tap it lightly to remove the dust.
(b) When wet dust or oil sticks:
Soak the element in a neutral cleaning solvent mixed with water. After soaking the element for half an hour, wash it gently. Then, air dry the element.

CAUTION:
Service the air cleaner in accordance with the instructions on the caution plate attached to the air cleaner.

RADIATOR
Before each day's activities, fill the radiator with coolant to the full level. It is very important to make it a habit to check the coolant level every day before work.

(1) Pressure cap
The pressure cap is completely sealed by spring force. If the cap is not closed correctly, or the washer is not mounted properly, the coolant may leak, thereby resulting in a rapid decrease of the coolant level.

CAUTION:
- When opening the pressure cap during high load operation or just after work, boiled water may flush out, resulting in scalding. Therefore, for your safety, wait more than 10 minutes after stopping the engine, before opening the cap.
- When draining the engine coolant, the pressure cap should also be removed.

(2) Grass, straw, dust, insects or the like may be stuck to the net in front of the radiator after tractor operation. This results in poor cooling performance. In this case, the water temperature rises abnormally high. Remove the net, and remove foreign materials periodically.

(3) Anti-freeze solution
Refer to Section 6 in this Manual.
8 PROBLEM SOLVING
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Causes</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starter motor fails to run.</td>
<td>• Clutch pedal not depressed</td>
<td>• Depress clutch pedal.</td>
</tr>
<tr>
<td></td>
<td>• Discharged battery</td>
<td>• Recharge battery.</td>
</tr>
<tr>
<td></td>
<td>• Loose wire connections</td>
<td>• Correct.</td>
</tr>
<tr>
<td></td>
<td>• Defective starter switch</td>
<td>• Apply grease.</td>
</tr>
<tr>
<td></td>
<td>• Defective starter motor</td>
<td>• Repair or replace the switch.</td>
</tr>
<tr>
<td>Starter motor runs slowly.</td>
<td>• Discharged battery</td>
<td>• Repair or replace starter motor.</td>
</tr>
<tr>
<td>Engine runs irregularly</td>
<td>• Improper grounding</td>
<td></td>
</tr>
<tr>
<td>Engine stops at low speed.</td>
<td>• Improper viscosity engine oil used</td>
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</tr>
<tr>
<td>Engine over-runs.</td>
<td>• Air trapped in fuel system</td>
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</tr>
<tr>
<td></td>
<td>• Fuel filter clogged</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No fuel injection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Engine trouble</td>
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</tr>
<tr>
<td></td>
<td>• Uneven fuel injections</td>
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</tr>
<tr>
<td>Engine stops suddenly.</td>
<td>• Defective injection pump</td>
<td>• Repair at service station.</td>
</tr>
<tr>
<td></td>
<td>• Improper valve clearance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Defective injection nozzle</td>
<td></td>
</tr>
<tr>
<td>Engine overheats.</td>
<td>• Insufficient fuel</td>
<td>• Repair at service station.</td>
</tr>
<tr>
<td></td>
<td>• Clogged fuel filter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Defective injection nozzle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Engine seize due to poor lubrication</td>
<td></td>
</tr>
<tr>
<td>High fuel consumption</td>
<td>• Lack of engine coolant</td>
<td>• Add coolant. Check for coolant leaks.</td>
</tr>
<tr>
<td></td>
<td>• Loosened or damaged fan belt</td>
<td>• Adjust or replace the belt.</td>
</tr>
<tr>
<td></td>
<td>• Clogged radiator cores</td>
<td>• Clean.</td>
</tr>
<tr>
<td></td>
<td>• Lack of engine oil</td>
<td>• Check and replenish oil.</td>
</tr>
<tr>
<td></td>
<td>• Clogged air cleaner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Improper valve clearance</td>
<td>• Clean air cleaner element.</td>
</tr>
<tr>
<td></td>
<td>• Coolant temperature too low</td>
<td>• Correct.</td>
</tr>
<tr>
<td></td>
<td>• Improper fuel</td>
<td>• Apply cover on radiator.</td>
</tr>
<tr>
<td>Problems</td>
<td>Possible Causes</td>
<td>Corrective Action</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>High oil consumption</td>
<td>Low oil viscosity</td>
<td>Use oil to suit surrounding temperature.</td>
</tr>
<tr>
<td></td>
<td>High oil level</td>
<td>Adjust to specified level.</td>
</tr>
<tr>
<td></td>
<td>Oil leakage</td>
<td>Check and repair.</td>
</tr>
<tr>
<td>Low engine power</td>
<td>Clogged or burnt injection nozzle.</td>
<td>Repair at service station.</td>
</tr>
<tr>
<td></td>
<td>Carbon deposit on the nozzle</td>
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</tr>
<tr>
<td></td>
<td>Low compression pressure</td>
<td></td>
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<tr>
<td></td>
<td>Gas leakage from valve seat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improper valve clearance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improper injection timing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of fuel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clogged air cleaner</td>
<td></td>
</tr>
<tr>
<td>Oil lamp flashes during operation.</td>
<td>Lack of engine oil</td>
<td>Add oil.</td>
</tr>
<tr>
<td></td>
<td>Low viscosity of engine oil</td>
<td>Use specified viscosity oil.</td>
</tr>
<tr>
<td></td>
<td>Defective oil pressure switch</td>
<td>Replace the switch.</td>
</tr>
<tr>
<td></td>
<td>Defective oil pump</td>
<td>Repair at service station.</td>
</tr>
<tr>
<td></td>
<td>Clogged oil filter element</td>
<td>Replace the element.</td>
</tr>
<tr>
<td>Charge lamp flashes during operation.</td>
<td>Defective wiring</td>
<td>Check and correct loose terminals, shorts, etc.</td>
</tr>
<tr>
<td></td>
<td>Defective alternator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Defective regulator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Defective battery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of battery electrolyte</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loosened or damaged fan belt</td>
<td></td>
</tr>
<tr>
<td>Clutch slips.</td>
<td>Improper pedal adjustment</td>
<td>Adjust free play of pedal.</td>
</tr>
<tr>
<td></td>
<td>Worn or burnt clutch lining</td>
<td>Repair at service station.</td>
</tr>
<tr>
<td>Clutch does not disengage.</td>
<td>Seized clutch lining</td>
<td>Repair at service station.</td>
</tr>
<tr>
<td></td>
<td>Improper clutch pedal adjustment</td>
<td>Adjust free play of pedal.</td>
</tr>
<tr>
<td>Poor braking</td>
<td>Excessive brake pedal free play</td>
<td></td>
</tr>
<tr>
<td>Uneven braking</td>
<td>Oil leaks in brake chamber</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Worn or burnt brake lining</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Different brake distances in left and right pedals</td>
<td></td>
</tr>
<tr>
<td>Slow return of brake pedal</td>
<td>Damaged brake return spring</td>
<td>Replace the spring.</td>
</tr>
<tr>
<td></td>
<td>Lack of grease on sliding parts</td>
<td>Apply grease after removing rust.</td>
</tr>
<tr>
<td>Problems</td>
<td>Possible Causes</td>
<td>Corrective Actions</td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
<td>-------------------</td>
</tr>
</tbody>
</table>
| Hydraulic system does not raise. | - Lack of hydraulic oil  
- Air taken in from intake pipings  
- Clogged suction filter  
- Defective hydraulic pump  
- Defective control valve  
- Damaged cylinder | - Add to specified level.  
- Retighten joints.  
- Replace cracked pipe.  
- Replace damaged O-ring.  
- Clean the filter.  
- Repair at service station.  
- Replace at service station. |
| Oil leakage form piping | - Loosened pipe joints  
- Cracked pipe | - Retighten joints.  
- Replace pipe at service station. |
| Buzzer-sound is heard at relief valve when placing hydraulic lever to 'raise'. | - Dislocated stopper  
- Improper setting of auto-return device | - Adjust the position.  
- Adjust the position. |
| Hydraulic system does not lower. | - Lowering speed adjustment lever is locked.  
- Defective control valve  
- Damaged cylinder  
- Burnt lift shaft rotating part | - Set to "lower" position.  
- Repair at service station.  
- Replace at service station.  
- Repair at service station. |
| Heavy steering  
Difficult steering | - Improper toe-in  
- Improper tire inflation  
- Deflected rod ends | - Adjust toe-in.  
- Inflate tires evenly.  
- Retighten or replace parts. |
| Excessive steering wheel free play | - Worn steering shaft  
- Worn metal  
- Deflected rod ends | - Adjust by adjustment bolt.  
- Correct at service station.  
- Retighten. |
| Battery does not charge | - Defective wiring  
- Defective alternator  
- Defective regulator  
- Loose or damaged fan belt  
- Poor maintenance of battery | - Check and correct loosened or dirty terminal, shorts, etc.  
- Repair at service station.  
- Repair or replace at service station.  
- Adjust or replace belt.  
- Correct loose or rusted terminals.  
- Correct electrolyte level. |
| Weak head light  
Head light does not go on. | - Discharged battery  
- Improper wiring  
- Broken bulb  
- Melted fuse  
- Defective connection | - Recharge battery.  
- Check and correct.  
- Replace bulb.  
- Correct the wiring, and replace fuse.  
- Check and correct. |
<table>
<thead>
<tr>
<th>Problems</th>
<th>Possible Causes</th>
<th>Corrective Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horn does not sound.</td>
<td>• Defective horn button</td>
<td>• Replace button.</td>
</tr>
<tr>
<td></td>
<td>• Defective wiring</td>
<td>• Repair.</td>
</tr>
<tr>
<td></td>
<td>• Defective horn</td>
<td>• Repair or correct.</td>
</tr>
<tr>
<td>Turn indicator does not flash.</td>
<td>• Broken bulb</td>
<td>• Replace bulb.</td>
</tr>
<tr>
<td></td>
<td>• Defective flasher unit</td>
<td>• Replace the unit.</td>
</tr>
<tr>
<td></td>
<td>• Defective connection</td>
<td>• Check and correct terminal connection.</td>
</tr>
</tbody>
</table>
9 SAFETY PRECAUTIONS.
AS THE MANUFACTURER OF THIS TRACTOR, ISEKI HAS A RESPONSIBILITY TO DESIGN AND ASSURE SAFETY OF THE MACHINE. IN ACTUAL WORK, HOWEVER, ACCIDENTS CANNOT BE PREVENTED WITHOUT THE FULL CO-OPERATION OF THE OPERATOR.

TO PREVENT ACCIDENTS PLEASE READ THE FOLLOWING IMPORTANT PRECAUTIONS AND KEEP THEM IN MIND TO ASSURE SAFE MACHINE OPERATION. ISEKI ASKS YOU TO BE A SAFE OPERATOR. WE SAY THAT "THE BEST SAFETY DEVICE IS A CAREFUL OPERATOR."

1 GENERAL PRECAUTIONS

PERSONS LISTED BELOW MUST NOT OPERATE THE MACHINE:

- Persons suffering from mental disease
- Drunken persons
- Persons who cannot be expected to operate the machine properly because of fatigue, illness on the influence of medicines and drugs.
- Pregnant women
- Young persons prohibited from driving by law

PROTECTIVE DEVICES

- A helmet must be worn during work, especially when traveling on the road or handling materials near the operator's head.
- To protect against accidents from entwined cloth, hair or the like, suitable working clothes and a hat should be worn.
- When working in the fields with poisonous gas or dust, use a protective mask or similer covering.
- When spraying agricultural chemicals, use a mask and clothes to protect the respiratory organs.
- When working the machine under conditions of severe vibration, use suitable ear plugs.
- Periodically check and maintain these protective materials, and prepare them for effective use.
2. MAINTENANCE OF THE TRACTOR

(1) The tractor should be checked and serviced before and after each day's work. Furthermore, periodical checks and servicing should be accomplished to maintain the tractor and implement in best condition for safe work.

(2) When carrying out maintenance of the tractor and implements, special attention must be paid to the control devices and protective devices of the tractor and implements.

(3) When servicing the tractor and implements, select a place where there is no traffic, on level ground. If servicing indoors with the engine running, do not forget to assure proper ventilation.

(4) Before inspecting and adjusting the machine, stop the engine, apply the parking brake, and apply a block under the tires if needed. If it is necessary to work under the heavy implement in raised position, be sure that the hydraulic system is securely locked.

(5) While servicing the machine with the engine stopped, take measures to assure that the engine does not start accidentally.

(6) When working under the tractor or with the machine raised, apply blocks under the tires which are on the ground. Confirm that the supporting device has sufficient strength and meets those specifications required to support the machine. When using a jack, apply it in a secure place, like under the gear box. The jack must be placed on firm and flat ground.

(7) Before removing protective devices from the tractor or implement for servicing, confirm that the function serviced by the device is turned off. Do not forget to reinstall the protective device serviced to its original position.

(8) Never add fuel when the engine is running or heated. Never smoke a cigarette or start fire around a fuel storing area when adding fuel. When adding fuel at night, never use an open fire for illumination.

(9) Do not open the radiator cap when the engine is hot. If it is necessary to supply coolant in the radiator when the engine is hot, special care is needed to protect against boiled water or vapor which can be coming out of the radiator. If cool water is added to an overheated radiator, the radiator may break. Special caution is required.

(10) Check the battery before starting the engine. Do not bring any fire near the battery. When removing the battery plugs, do not touch with battery electrolyte.

(11) Correctly store and use service tools. Necessary service tools should be stored in a handy place on the tractor.
3. PRECAUTIONS AGAINST FIRE

(1) During work
   a. Never bring inflammable materials near the engine.
   b. Pay careful attention to avoid fire.

(2) Storing of dangerous matter
   a. When storing devices suspected to be dangerous, put a cover on them.
      Take other necessary safety measures.
   b. Fuel must be stored in a safe place.
      'No Fire' signs should be posted in the area.
   c. Inflammable materials must be stored in a safe place.

4. PRECAUTIONS WHEN HANDLING IMPLEMENT

(1) The implement must be mounted and removed on level ground.
   Handle the implement safely and correctly.
   When working at night, handle the implement carefully, using suitable illumination.

(2) When mounting the implement by moving the tractor, do not stand between the tractor and the implement.
   When coupling the tractor with the implement, select a place to work where there is sufficient room to move away quickly in an emergency. Be sure the parking brake is applied during the coupling process.

(3) After installation, confirm that the mounting pin is securely locked.

(4) The universal joint must be installed as straight as possible.

(5) When the heavy implement is mounted, assure machine balance by using the balance weight.

6. RIDING ON THE TRACTOR

(1) Do not normally permit another person to ride on the tractor and implement.
   If seats for additional persons are provided, however, additional persons may get on the machine.
(2) Do not allow other persons on the implement when traveling on a public road.
(3) Do not leave the operator’s seat when driving the tractor.
(4) Do not get off or get on the tractor while it is moving, except in an emergency situation.

7. OPERATION PRECAUTIONS

(1) Persons too young to be granted a driver’s license must not operate the tractor.
(2) Do not stand near the machine while it is in operation.
(3) Operate the machine in accordance with instruction to prevent accidents.
    Do not allow other persons to stand near the working fields, especially during rotary tilling.
(4) Precautions concerning starting the machine and engine.
a. Before starting the engine, set the transmission lever to Neutral, and disconnect PTO power.
b. Before starting the engine indoors, confirm that there is sufficient ventilation.
c. Before starting the tractor, confirm that the transmission gear is set to the proper speed, and that no one is standing near the machine.
    Confirm that the implement is securely mounted.
(5) Precautions during operation
a. Operate the machine sitting in the operator’s seat. When leaving the tractor, park the machine on level ground, lowering the implement to the ground, and stopping the engine with the parking brake applied. If it is necessary to park the machine on a slope, do not forget to place a block under the tire.
b. Do not operate the machine roughly.

Avoid traveling at extremely high speeds. Sudden starting, full acceleration, sudden braking and sharp turns must be avoided.

Avoid traveling at extremely high speeds. Sudden starting, full acceleration, sudden braking and sharp turns must be avoided.
c. Always look in the direction you are heading to avoid accidents.
d. While traveling at high speed, avoid full braking to the extent possible. Sudden braking while the machine is turning a corner is very dangerous.
e. Do not carry a load on the tractor.
f. Do not touch the power train, rotating part and other dangerous parts.
g. Do not allow another person to stand near the machine, especially while the machine is turning.
h. When working at night, use sufficient illumination to assure safe operation.
i. When working with blades or sharp protruded parts, exercise extreme caution to prevent accidents.

(6) Precautions while traveling on the road
a. Abide by traffic laws.
b. Do not interfere with other traffic.
c. Remove any implements having blades or sharp protrusions.
    or, apply a suitable cover on them.
d. Slow down machine speed on rough or curved roads.
e. Interlock both left and right brake pedals.
f. When mounting an implement wider than the tractor width, put red caution flags (red lamps at night) on both rear sides of the implement.
    Attach a caution sign saying ‘GO SLOW’ on the rear of the machine to attract attention of other vehicle drivers.
    Operate the tractor carefully to prevent accidents. If
a foldable implement is mounted, it should be folded.
g. When passing an intersection or railway crossing, look both ways to confirm that it is safe to proceed.

(7) Under poor working conditions
a. Before starting work on rough terrain or in bad weather, plan your working schedule and method carefully.
b. On poor footing, slow down the machine speed as much as possible. Operate the tractor carefully.
c. When starting the tractor on an ascending slope, or when getting out of a deep groove, first set the transmission speed to the proper speed to attain required driving power.
d. Do not shift the transmission when ascending a slope.
e. When descending a decline, reduce speed. Do not run the tractor with the clutch disengaged or with the transmission in Neutral.
f. When going down a slope, use the engine brake as much as possible. When starting the tractor on an up-slope, do not allow the front tires to float.
g. When running on a steep slope, move the machine at an angle to decrease the inclination of the machine. Lower the position of the implement as much as possible to lower the center of gravity. Avoid driving into holes or grooves. Avoid turning the machine suddenly or sharply, to prevent the machine's turning over.
h. When driving on a road where there is a channel full of water, check hardness of the footing near the channel. When driving on a slanted road, operate the machine carefully to prevent side-slip.
i. When traversing a trench or furrow, or on soft hardpan, slow down machine speed to prevent tire slipping or turning over of the machine.
j. If the tractor is caught in a channel or soft hardpan, study the situation to determine the best way to get out. Never hurry to remove the implement and balance weight. When these parts are removed, operate the machine carefully to prevent its turning over.
k. When pulling a heavy load or removing a large root, move the tractor slowly until the pulling cable is fully extended. Then stop the machine and restart slowly. The pulling cable must be connected at a point lower than the center line of the rear axle.
l. When loading or unloading the tractor on a truck or truck trailer, select loading boards of sufficient strength and specification. Carry out the work carefully.

8. PARKING AND STORING THE TRACTOR
(1) When parking the tractor, select level and stable ground. Lower the implement to the ground. Remove the starter key. Apply the parking brake.
(2) After each day's work, check and service the machine to assure trouble-free work on the next day. When a device using fire is required for work, inspect the device carefully.
(3) When storing the tractor, set every functional part at the Stop position. Store the tractor indoors, or put on a cover for protection. When putting on a cover, wait until hot part, such as the muffler, have cooled down.
10

ADDITIONAL INFORMATION
1. RECOMMENDED LUBRICATION OIL CHART

DIESEL ENGINE OIL (Better than CB grade)
ESSO LUBE HDX
MOBIL DELVAC 1100 Series, 1200 Series
SHELL ROTELLA S, SX, TX OIL

GEAR OIL
ESSO GEAR OIL GP90
MOBILUBE HD90
SHELL SPIRAX HD90

HYDRAULIC OIL
TERESSO 43
MOBIL DTE OIL LIGHT
SHELL TELLUS OIL 25

LUBRICATING GREASE (Lithium based multi-purpose grease)
ESSO MULTI PURPOSE GREASE
MOBIL GREASE MP
SHEEL ALVANIA GREASE 2

ANTI-FREEZE SOLUTION
ESSO LONGLIFE COOLANT
MOBIL PERMAZONE
GLYCOSHELL PLUS

FUEL
Diesel light oil of good quality

NOTE: Necessary lubricant is filled at the factory.
Use the above recommended lubricant or equivalent.
### 2. IMPLEMENT LIST (Option)

<table>
<thead>
<tr>
<th>TRACTOR ACCESSORY</th>
<th>TRACTOR ACCESSORY</th>
<th>TRACTOR ACCESSORY</th>
<th>TRACTOR ACCESSORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Implement</td>
<td>Specifications</td>
<td>Application</td>
<td>Remarks</td>
</tr>
<tr>
<td>Trailer hitch</td>
<td>JIS-0</td>
<td>Towing a trailer</td>
<td>2P bracket</td>
</tr>
<tr>
<td>3-point link</td>
<td>15kg x 3</td>
<td>Mounting the implement for 3P-link</td>
<td></td>
</tr>
<tr>
<td>Bumper weight</td>
<td>17kg x 2</td>
<td>Balancing the tractor</td>
<td></td>
</tr>
<tr>
<td>Front wheel weight</td>
<td>35kg x 2 (TX1500)</td>
<td></td>
<td>Common with TS series tractors</td>
</tr>
<tr>
<td></td>
<td>19kg x 2 (TX1000)</td>
<td></td>
<td>For 4-wheel drive</td>
</tr>
<tr>
<td></td>
<td>(TX1300)</td>
<td></td>
<td>For 2-wheel drive</td>
</tr>
<tr>
<td>Rear wheel weight</td>
<td>19kg x 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>22kg x 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulic power take out unit</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUPER-FERTILIZING</th>
<th>SUPER-FERTILIZING</th>
<th>SUPER-FERTILIZING</th>
<th>SUPER-FERTILIZING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime sower (DTN-100T)</td>
<td>1000mm x 165 lit.</td>
<td>Spreading lime</td>
<td>Towed</td>
</tr>
<tr>
<td>Manure spreader (D-125T)</td>
<td>0.7 m³, with engine</td>
<td>Spreading manure</td>
<td>3P</td>
</tr>
<tr>
<td>Vacuum car (DK-500T)</td>
<td>500 lit.</td>
<td>Spreading urine</td>
<td></td>
</tr>
<tr>
<td>Broadcaster (BC-150, GH-150)</td>
<td>100 lit., 150 lit.</td>
<td>Spreading fertilizer, lime, and seeds</td>
<td></td>
</tr>
<tr>
<td>Dry-field suppressor (X101)</td>
<td>120cm +30W</td>
<td>Supressing in upland field</td>
<td>Mount on the totary removing gauge wheel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHEEL</th>
<th>WHEEL</th>
<th>WHEEL</th>
<th>WHEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front supplemental wheel</td>
<td>500-12 (TX1300F, TX1500F)</td>
<td>When tilling swampy fields</td>
<td></td>
</tr>
<tr>
<td>Supplemental wheel</td>
<td>7-14 (TX1000)</td>
<td>Fixed type (Nos. of lug - 5)</td>
<td></td>
</tr>
<tr>
<td>LK type wheel</td>
<td>8-16 (TX-1300)</td>
<td>Sliding type (Nos. of lug - 5)</td>
<td></td>
</tr>
<tr>
<td>Float wheel</td>
<td>8-18 (TX1500)</td>
<td></td>
<td></td>
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<tr>
<td>Dia. wheel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name of Implement</td>
<td>Specifications</td>
<td>Application</td>
<td>Remarks</td>
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</tr>
<tr>
<td><strong>TILLING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slick plow (YS)</td>
<td>10” ~ 12” x 1</td>
<td>Plowing in upland field or paddy.</td>
<td>3P</td>
</tr>
<tr>
<td></td>
<td>12” ~ 14” x 1</td>
<td>(TX1300 and TX1500 only)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12” ~ 12” x 1</td>
<td>(TX1300 and TX1500 F only)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 cm x 2 (4-wheel drive only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12” x 1 (4-wheel drive tractor only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel plow (S)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reversible 2-gang plow (TR-150F, TR150N)</td>
<td></td>
<td></td>
<td>2P &amp; channel hitch</td>
</tr>
<tr>
<td>Volcanics plow (434V)</td>
<td></td>
<td></td>
<td>3P</td>
</tr>
<tr>
<td><strong>PUDDLING/HARROWING</strong></td>
<td>95cm x 340mm dia. (TX1000)</td>
<td></td>
<td>For side drive type</td>
</tr>
<tr>
<td>Puddling rotor (X301-C)</td>
<td>105cm x 340mm dia. (TX1300)</td>
<td></td>
<td>For center drive type</td>
</tr>
<tr>
<td>Aux. puddling rotor</td>
<td>120cm x 340mm dia. (TX1500)</td>
<td></td>
<td>Mounted on rotary</td>
</tr>
<tr>
<td>Puddling/leveller mounting stay</td>
<td>30cm x 340mm dia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name of Implement</td>
<td>Specifications</td>
<td>Application</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------------------</td>
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<td>-------------</td>
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</tr>
<tr>
<td><strong>RIDGING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridger (X501)</td>
<td>Bottom width: 12cm, 13.5cm, 18cm, 21cm, 12cm</td>
<td>Preparation of drainage, Ridging for second crop in paddy fields</td>
<td>Mount on the rotary, Change rotary shaft (center drive)</td>
</tr>
<tr>
<td>One-side hiller (X501-R)</td>
<td></td>
<td>Riding for vegetable, Multiple riding, Ridging, Preparing drainage, Ridging</td>
<td>Mount on rotary blade shaft (center drive)</td>
</tr>
<tr>
<td>Rotary plow</td>
<td>390 mm dia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple rotary plows</td>
<td>390 mm dia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hilling blade (SPR-1)</td>
<td>450 mm dia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridge-side rotor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DISINFECTION/TRANSPORTING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil disinfector</td>
<td></td>
<td>Disinfection of soil</td>
<td>3P</td>
</tr>
<tr>
<td>Rotary mulcher (LM-1500-H)</td>
<td></td>
<td>Mulching ridge with vinyl sheet (at the same time as rotary tilling)</td>
<td>Mount on rotary blade shaft (center drive)</td>
</tr>
<tr>
<td>Frail mower (NFZ-100)</td>
<td>110 cm</td>
<td>Removing grass, Spreading grass removing solution</td>
<td>3P, Towed</td>
</tr>
<tr>
<td><strong>HARVESTING</strong></td>
<td></td>
<td>For bulbs and devil's tongue</td>
<td>3P, Towed</td>
</tr>
<tr>
<td>Digger (6-65)</td>
<td>Digging width - 65 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSPORTING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trailer (DK-7A)</td>
<td>500 kg (TX1300 and TX1500)</td>
<td>Transportation</td>
<td>Towed</td>
</tr>
<tr>
<td>Dump trailer (DK-70)</td>
<td></td>
<td></td>
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3. SPECIFICATIONS

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<th>TX1300F 4 wheel drive</th>
<th>TX1300 2 wheel drive</th>
<th>TX1500F 4 wheel drive</th>
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* Specifications are subject to change without notice.
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<th>TX1300F 4 wheel drive</th>
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