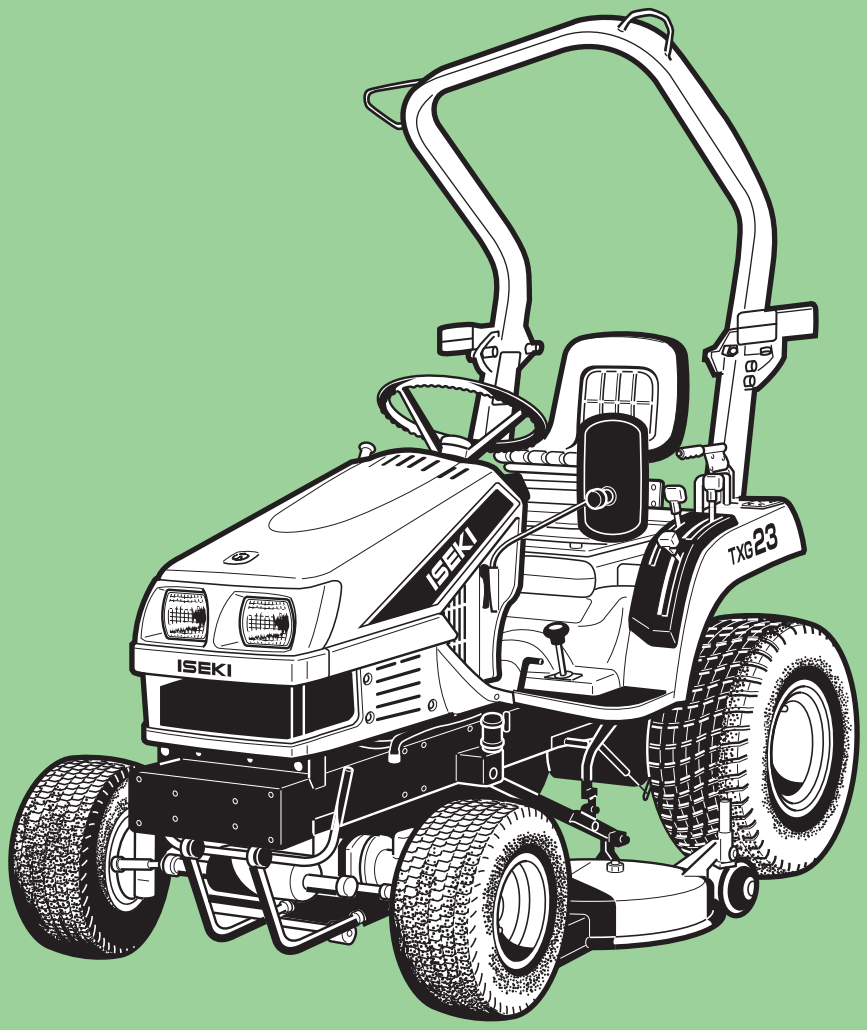
# ISEKI TRACTOR




# Operation Manual

**MODELS:**

# TXG23

ISEKI

# TO OUR CUSTOMER

Thank you very much for purchasing an ISEKI tractor.

This operator's manual provides the information necessary for operating and maintaining your tractor safely and properly. The contents are mainly composed of the following two items:

| | |
|---|---|
| Safety instructions : | Essential items which you should observe while operating the tractor |
| Technical instructions : | Items which are necessary to operate, adjust and service the tractor properly |

Before starting to operate the machine for the first time, you should read this operation manual thoroughly and carefully until you are sufficiently familiar with the operation of the machine to do jobs safely and properly. The manual should be kept in a handy place so you can refer to it when required. You are advised to refer to it from time to time to refresh your understanding of the machine.

Your dealer has performed the pre-delivery service on your new machine.
He will discuss with you the operating and maintenance instructions given in this manual, and instruct you in the proper and varied applications of this machine. Call on him at any time when you have a question, or need equipment related to the use of your machine.

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Paragraphs in the manual and labels on the machine which are accompanied by a caution mark contain particularly important information about safe operation to avoid accidents. You should always keep precautions in mind and follow them during operation.

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## *Be sure to wear personnel protective equipment during operation*

***In some of the illustrations used in this operation manual, panels or guards may have been removed for clarity. Never operate the tractor with these panels and guards removed. If the removal of a shield is necessary to make a repair, it must be replaced before operation.***

*All information, illustrations, and specifications contained in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.*

# TABLE OF CONTENTS

This manual explains about several types of the tractor listed below. Please confirm the type of yours by referring to the name plate.

| Model | TXG23 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | FH | | | | | | TH | | | | FH |
| Type | E4 | VE4 | GVE4 | RLE4 | VRLE4 | GVRLE4 | E4 | VE4 | GVE4 | GVRLE4 | RE6 |
| Area | Europe | | | | | | | | | | Oceania |
| Mid PTO | O | O | O | O | O | O | O | O | O | O | O |
| Single Air Cleaner | O | O | O | O | O | O | O | O | O | O | O |
| Hydrostatic Power Steering | O | O | O | O | O | O | O | O | O | O | O |
| HST(one pedal) | O | O | O | O | O | O | O | O | O | O | O |
| Independent PTO | O | O | O | O | O | O | O | O | O | O | O |
| 2-speed Range Gear | O | O | O | O | O | O | O | O | O | O | O |
| ISO Caution Label | O | O | O | O | O | O | O | O | O | O | O |
| 2WD | | | | | | | O | O | O | O | |
| 4WD | O | O | O | O | O | O | | | | | O |
| E3 ROPS (SF-2300A) | | | | | | | | | | | O |
| E4 ROPS (SF-188) | | | O | O | O | O | | | O | O | |
| Electrical System(USA type) | | | | | | | | | | | O |
| Electrical System(EC type) | O | O | O | O | O | O | O | O | O | O | |
| Hand Parking Brake(seat side) | O | O | O | O | O | O | O | O | O | O | |
| Head Light (EC type) | O | O | O | O | O | O | O | O | O | O | |
| Back Mirror(EC type LH) | O | O | O | O | O | O | O | O | O | O | |
| Battery(55B24R/S) | O | O | O | O | O | O | O | O | O | O | O |
| Seat & Seat Belt | | | | | | | | | | | O |
| Front Hitch | T | T | O | T | T | O | T | T | O | O | |
| Cup Holder | | | | | | | | | | | O |
| Cylinder case & Rear 3-Point Linkage | O | O | O | O | O | O | | | | | O |
| Mower Linkage(Mechanical) | O | O | O | O | O | O | | | | | O |
| Mower Linkage(Hydrostatic) | | | | | | | O | O | O | O | |
| Auxillary Hydraulic Valve(double) | T | O | O | T | O | O | T | O | O | O | |
| Muffler Tail Direction (front side) | | | | | | | | | | | O |
| Muffler Tail Direction (right side) | O | O | O | O | O | O | O | O | O | O | |
| Rear Hitch(EEC type) | T | T | O | T | T | O | T | T | O | O | |
| Homologation plate | | | O | | | O | | | O | O | |

O ; Standard
T ; Option

All information, illustrations, and specifications contained in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

# SAFETY

Understand thoroughly the following precautions, always keep them in mind before, during, and after operation, and never take chances.

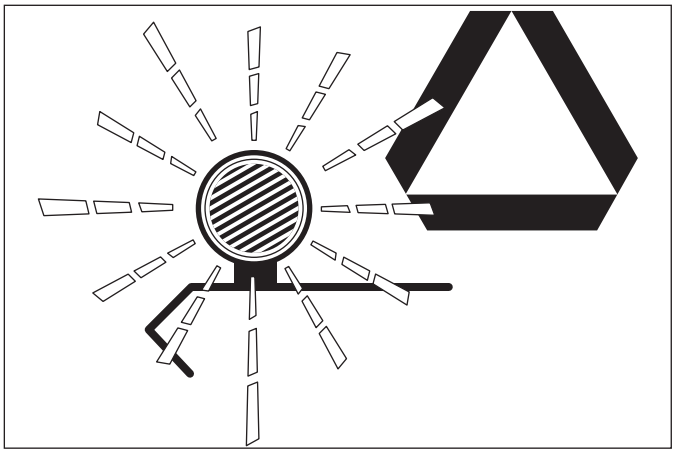
**MAKING YOUR TRACTOR A SAFE VEHICLE**

**■ HOW TO MAINTAIN SAFETY**

(1) Never attempt to do the following:
- Modification of the structure of the tractor
- Installation of other type of engine
- Installation of tyres of other than the original tyre size. Any malfunctions or failures of the tractor due to unauthorized modification are not covered by the warranty.

(2) This machine cannot be driven on a public road without authorization by a local government agency, etc.
When transporting an unauthorized machine on a public road, load it on a truck.
When travelling with an implement wider than the tractor, put red caution markers such as flags (red lamps at night) in the most visible locations on both sides of the implements, and place a "SLOW MOVING VEHICLE" sign in a place where it is easily seen by other drivers. Operate the machine carefully keeping in mind that the implement is wide and may roll easily. If the implement can be folded, fold it beforehand. If there are road or railway crossings where the visibility is poor, you should install on the machine a mirror to give a view ahead of you so that you need not move your machine too far into the intersection.

(3) When you travel on a road, you must turn work lights off if the law requires it.



## FOR SAFE OPERATION

### ■ HOW TO BE A SAFE OPERATOR

(1) Familiarize yourself fully with machine controls by studying the operation manual before using your machine.

(2) Never allow persons listed below to operate the machine.
- Persons with mental disease
- Persons who cannot operate the machine properly because of fatigue, illness, or drowsiness from medication, etc.
- Pregnant women
- Young persons or children too young to legally operate the machine

  Always be careful of your health by taking suitable rest breaks.

(3) Wear appropriate clothing and other protective devices during operation.
- Protection of your head

  Wear protective headgear such as a helmet, especially when travelling on roads or handling material above your head.
- Protection to avoid being caught in the machine.

  Wear tightfitting clothing and headgear, because loose clothing or hair can get caught in the moving parts of the machine.
- Protection from poisonous dust or gases

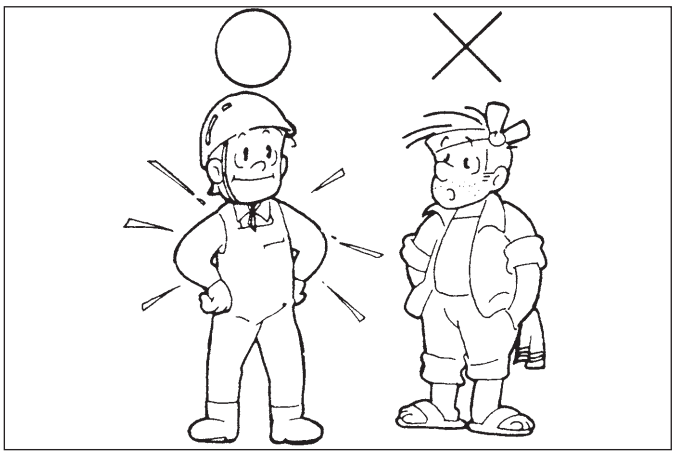
  Be sure to wear a protective device to protect the respiratory system, eyes, and skin when handling poisonous chemicals.
- Protection of the ears

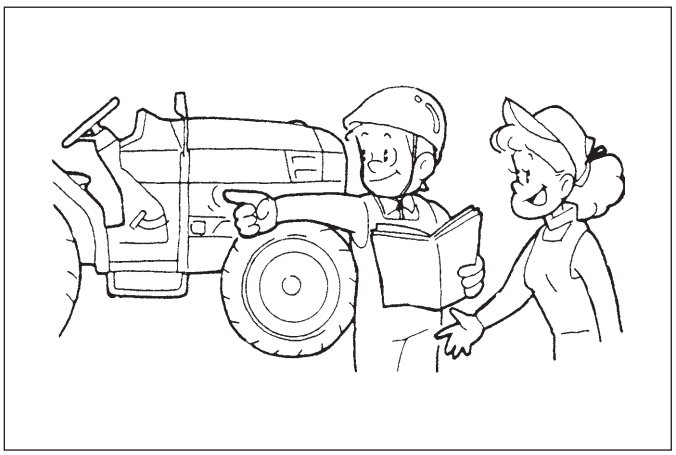
  Wear ear plugs or take suitable countermeasures to protect your ears when you must operate the machine under extremely noisy conditions.
- Maintenance of protective devices

  Periodically inspect protective devices to assure that they are functioning properly. Use them at all times.

### ■ WHEN ANOTHER PERSON OPERATES YOUR MACHINE

When another person operates your machine, you must explain how to operate and instruct him or her to read this manual fully to avoid unexpected accident.





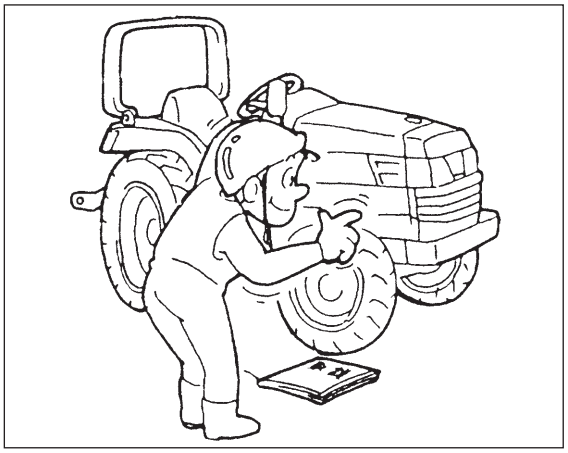
## ■ BEFORE OPERATION

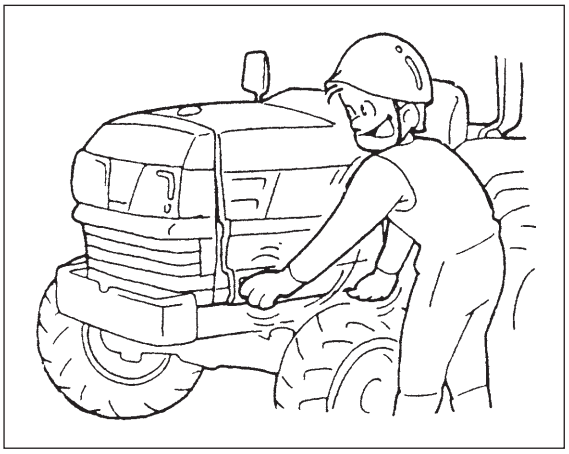
(1) Set up an operation plan with sufficient time allowance. A tight plan may result in unexpected accidents when work has to be rushed.

(2) Inspect and service the machine periodically in accordance with the instructions given in the operation manual to maintain the machine in best condition.
Pay special attention to the controls, especially to the brakes and clutch, and safety measures for the machine when servicing it. If the machine functions properly and performs normally, the chance of an accident will be reduced greatly.
If safety devices are damaged or do not work, please consult your Iseki dealer.

(3) Before removing a safety device, such as a safety cover, be sure that the machine has stopped completely. Never forget to replace the removed part after servicing.

(4) Never fill fuel while the engine is running or is still hot. Keep away from open fires an never smoke around a fuel tank or while fuelling into the machine. Never use open flames for illumination when fuelling the machine at night.



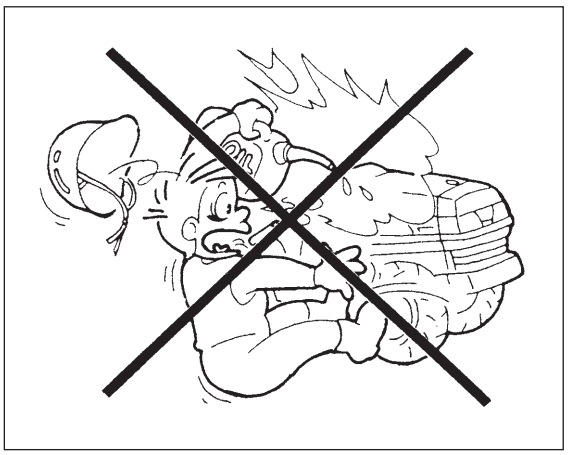


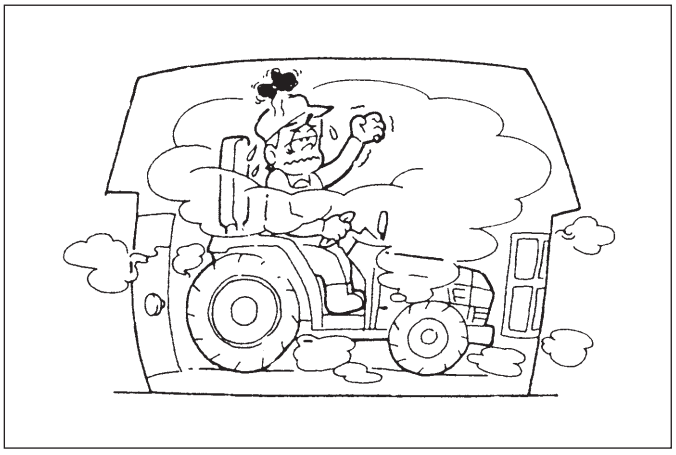
## ■ STARTING ENGINE AND MOVING TRACTOR

(1) Before starting the engine indoors, make sure that there is proper ventilation because exhaust fumes contain poisonous carbon monoxide, which cause lethal poisoning.

(2) Before starting the machine, confirm that the transmission gear has been shifted to the approchine, and that the implement is securely installed on the machine.
Always operate the machine from the operator's seat. Never leave the seat except in an emergency when operating the machine.

(3) Before starting to move, pay attention to safety conditions around the machine to avoid injury to bystanders or damage to property. Never move abruptly.





## ■ WHEN TRAVELLING

(1) When you travel on roads, ensure the differential lock is off, or the tractor may turn over.

(2) Do not make sharp turns when operating at high speed or for transportation as the tractor may turn over.

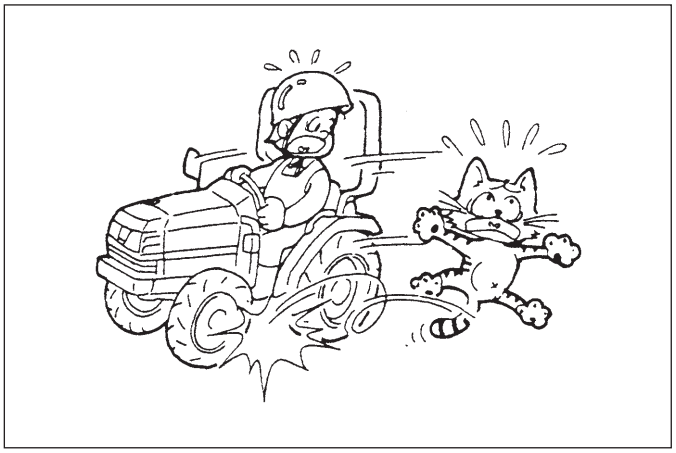
(3) When operating on poor footing such as a rough road, a slope, a road along a ditch or river, or undeveloped land, drive the tractor at low speeds and *operate it carefully.*

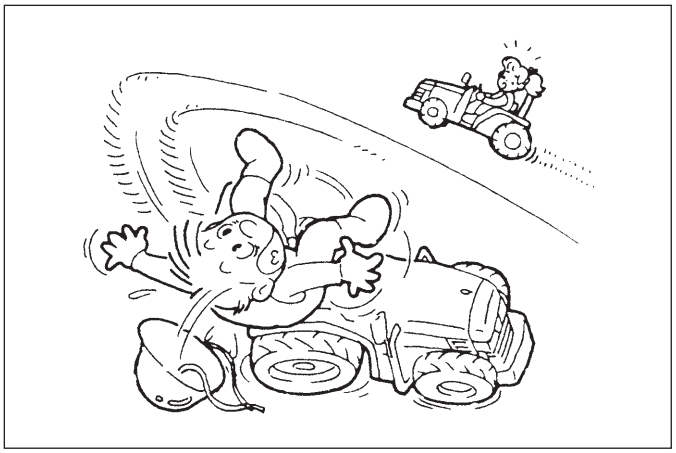
(4) Do not make sharp turns on a slope. It may cause turnover of the tractor.
When climbing up a hill, shift the speed change lever to the most suitable speed. Start moving the tractor as slowly as possible.
While climbing up a hill, never shift speeds along the way.
When starting to move the tractor on an up-hill slope, be sure that the front wheels do not lift up.
When going down a hill, drive the tractor at a slower speed than used to climb up the hill.
While going down a hill, never disengage the clutch or shift into neutral, and never try to control the speed only with the brakes; use the engine brake effectively.

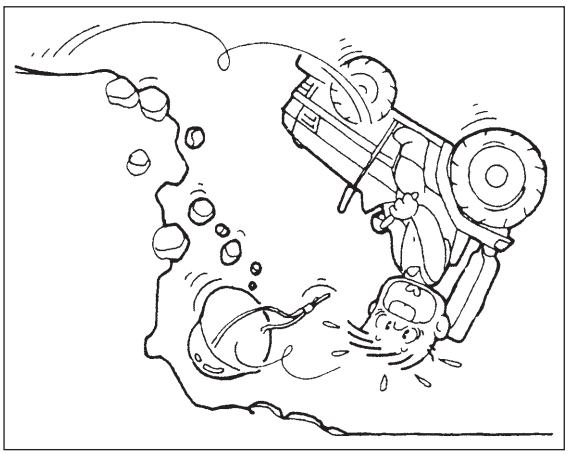
(5) When travelling on a road where one or both shoulders are slanted and which run along a ditch, look out for softened shoulders especially when the ditch is full of water and be careful not to let the machine slip sideways.

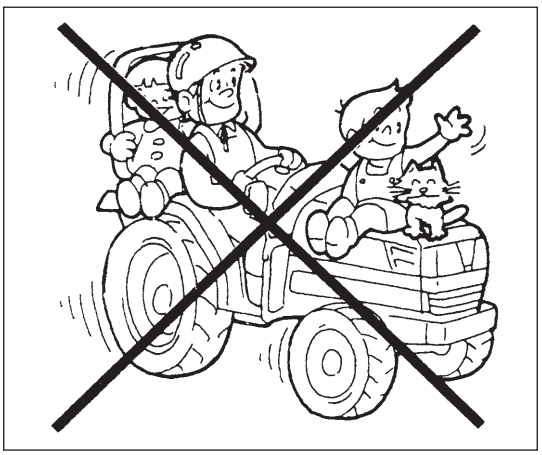
(6) Never allow other persons to get on the machine or the implement except when the machine or the implement is provided with a seat or a platform for persons to sit or stand on, and only within the capacity specified.
Never allow persons to get on the implement while travelling on roads.

(7) When parking the tractor, you have to park it on hard, level ground and provide sufficient safety measures by grounding the implement, removing the key, applying the parking brakes, and chocking the wheels securely.



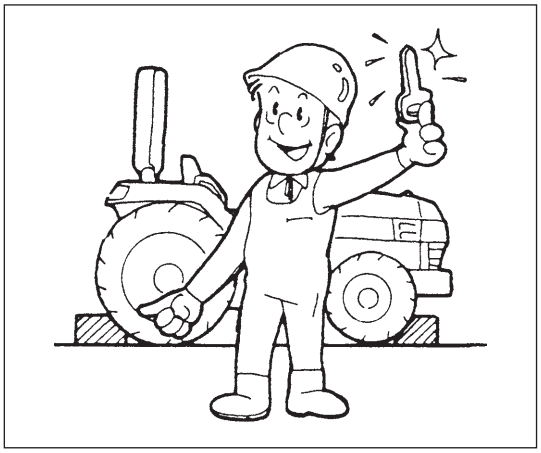






(8) Keep inflammables away from the engine during operation. Especially during stationary operation do not operate the engine at high speeds so as not to set fire to grass or straw with a heated exhaust pipe or exhaust fumes.

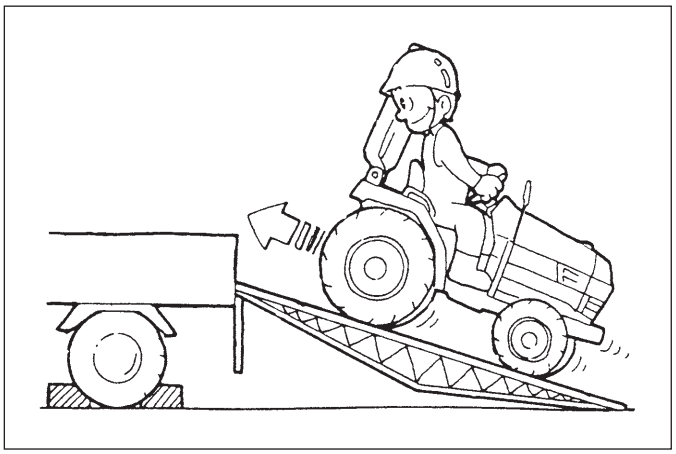
(9) When you have to operate the tractor at night, make sure of the location of the controls. If not, the tractor might work unexpectedly by mistake.



## ■ LOADING ONTO OR UNLOADING FROM A TRUCK

(1) When loading the tractor onto a truck or a trailer, turn off the truck's engine and apply the parking brakes to the truck or the trailer.
Otherwise, the truck could move and the tractor fall to the ground.

(2) Pay sufficient attention to the safety conditions around the tractor and have it guided by someone to assist the operation. Never allow other persons to approach the tractor, especially in front of or behind it.



(3) When loading or unloading the machine on/off a truck, set slip-proof ramps at the same angles and drive the tractor straight at sufficiently slow speeds. Loading the tractor in reverse travel and unloading it in forward travel.

(4) Never depress the brake pedals or clutch pedal during loading or unloading operation, or the tractor may shift sideways, which may cause it to fall off the ramps.

(5) If the engine stalls unexpectedly on the ramps, depress the brake pedals immediately and roll the tractor to the ground by manipulating the brake pedals. Start the engine on the ground and try again.

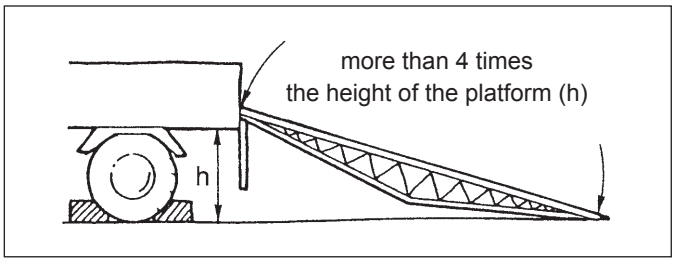
(6) When the machine is loaded on the truck, stop the engine, apply parking brakes, and withdraw the starter key, chock the wheels, and rope it securely to the truck. During transportation, do not make sharp turns needlessly so as not to shift the loaded tractor.

(7) Use ramps with the same or better specifications mentioned below. When the machine is equipped with attachments other than those included in the specifications mentioned below, ask your Iseki dealer for advice.

Specifications of the ramps

- Length:
  more than 4 times the height of the platform of the truck
- Width (effective width): more than 35 cm
- Capacity (one ramp): more than 1700 kg

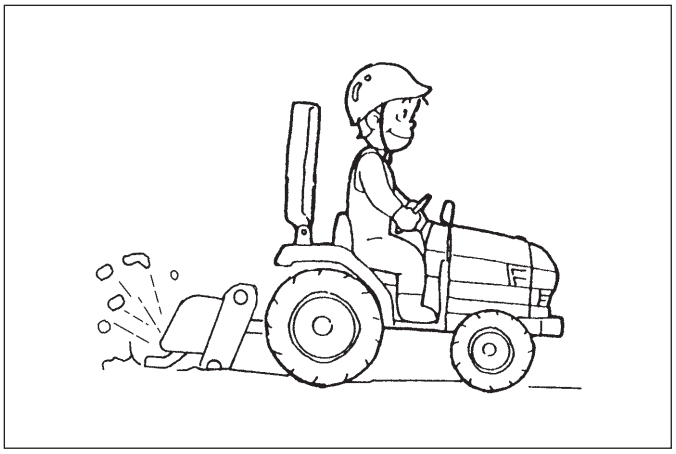
- Ramps should have anti-skid surfaces




(8) Hook the ramps securely on the platform of the tractor with the top of the ramp level with the platform.

(9) Always prepare for even the worst, by never allowing other persons near the tractor.

(10) Drive the tractor carefully at the moment the tractor moves from the ramps onto the platform, for it changes angle abruptly.



## ■ DURING OPERATION

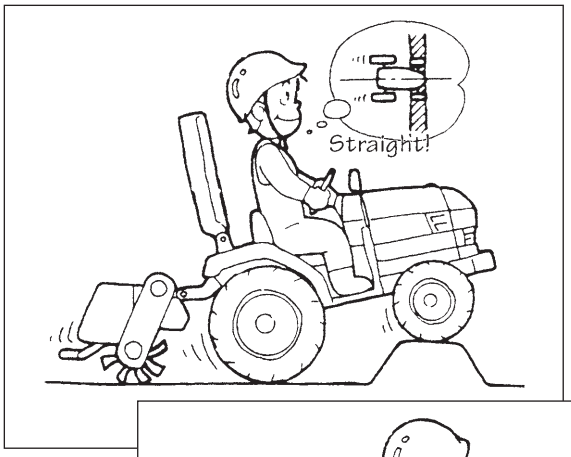
(1) During operation, never allow other persons in the vicinity of the tractor, because the tractor itself or flung pieces may cause injury.

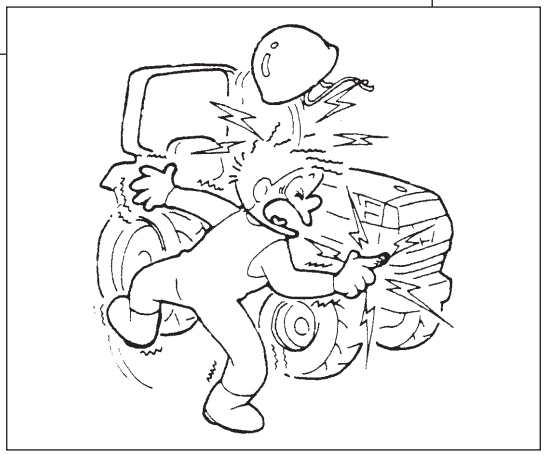
(2) Pay attention to safety around the tractor to avoid injury to bystanders or damage to property.
Especially when operating with other persons, use the horn to warn them.

(3) When crossing a ditch or a levee or when passing through soft land, drive the tractor slowly and straight so that it does not slip or turn over.

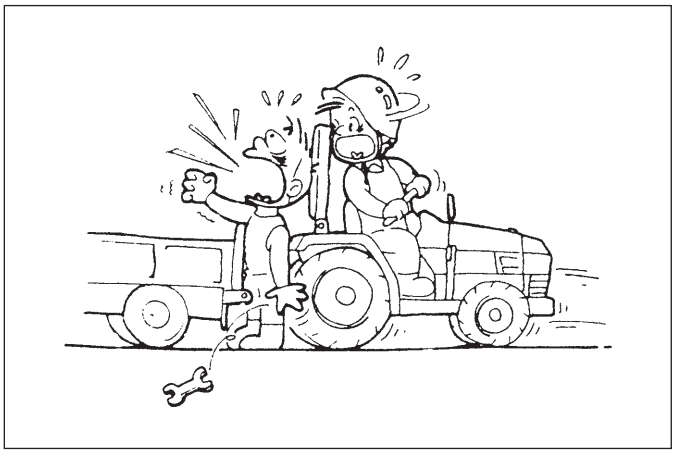
(4) Do not touch dangerous parts such as rotating parts, moving pars, hot parts (muffler, radiator, or engine, etc.), or electric parts (battery terminals and other live parts), or you may be injured seriously.

(5) If you use a trailer, use a proper one which suits your tractor. Using an improper trailer may cause serious accidents. Never attempt to haul beyond the tractor's capacity. If you have a question, please consult your Iseki dealer.



(6) When moving the machine toward an implement for the purpose of installing the implement, never allow any one to stand in between. When installing the implement on the machine, be prepare to move away promptly in the event of an emergency. The brakes should be applied securely during installation.



## ■ INSPECTION AND MAINTENANCE

(1) When servicing the tractor or mounting or dismounting an implement, place the tractor on level, hard ground which is sufficiently illuminated, or unexpected accidents may occur.

(2) When servicing the tractor, follow the instructions listed below:
- Stop the engine.
- Apply parking brakes.
- Disengage all PTO.
- Place all gear shift levers in neutral.
- Remove the starter key.
- Lower the implement fully, if equipped.
  If not, your hands or clothes may be caught or sandwiched between.

(3) When servicing the tractor, use proper tools.
Using makeshift tools may lead to injuries or poor service, which may result in unexpected accidents during operation.

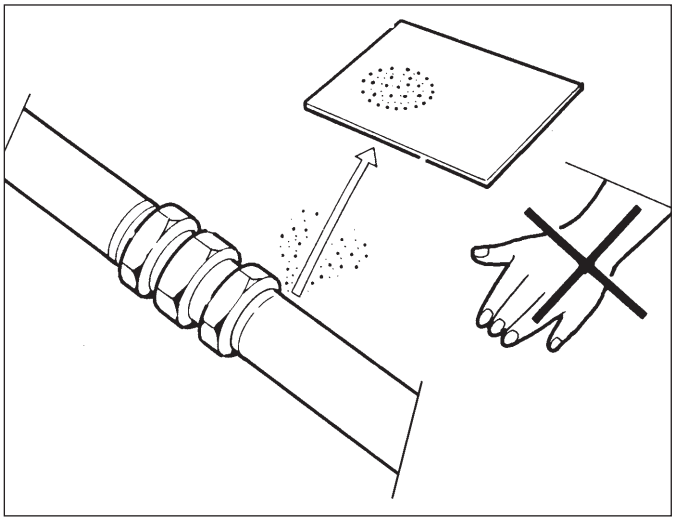
(4) The engine, muffler, radiator, etc. are very hot just after operation, so wait until they cool down sufficiently to avoid burns.

(5) Never remove the radiator cap while the engine is hot or running. Wait until the engine cools down and then relieve the radiator pressure by releasing the radiator cap. Carelessly pouring cooling water into the heated radiator can cause serious damage to the radiator and the engine.
Careless removal of the radiator cap can cause serious injury because of overheated water vapour.

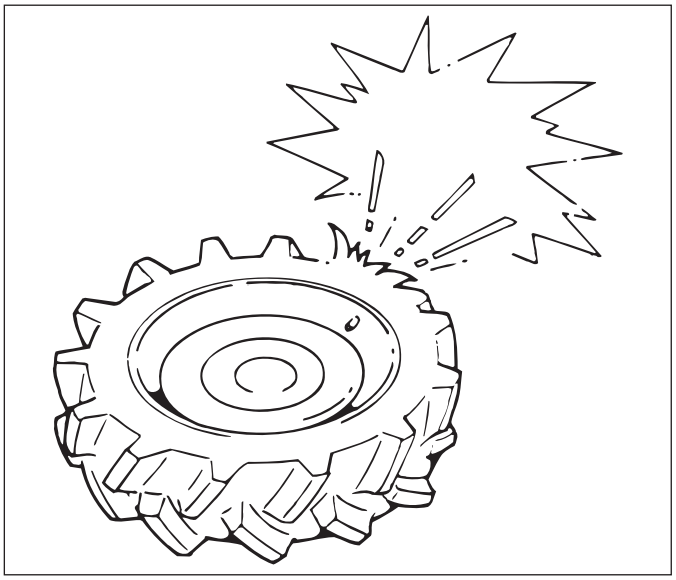
(6) Never fit unauthorized implements or attempt unauthorized modification.

(7) Be sure to reinstall the removed safety covers in place as exposed dangerous parts may cause serious injury.

(8) Avoid high-pressure fluids. Escaping fluid under pressure can penetrate the skin and cause serious injury, so keep hands and body away from pin holes and nozzles ejecting such fluids. Be sure to consult your dealer about the hydraulic and fuel injection system trouble.
When checking for leaks, use a piece of cardboard or wood without fail.
If any hydraulic fluid is injected accidentally into the skin, it must be removed within a few hours by a doctor familiar with this type of injury.



(9) When servicing wheels and tyres, the tractor and/or implement must be supported on suitable blocks or stands. Not a hydraulic jack.
Do not attempt to service a tyre unless you have the proper equipment and experience to perform the job. Have the work carried out by your Iseki dealer or a qualified repair service.
When seating tyre beads onto rims, never exceed the maximum inflation specifications specfied on the tyre. Inflation beyond this maximum pressure may brake the bead, or even the rim, with dangerous, explosive force.
If tyres have deep scratches, cuts or punctures, the respective tyre should be repaired or replaced by qualified personnel as soon as possible.
Wear suitable protective clothing, gloves, eye/face protection.



## ■ STORAGE

(1) Never cover a hot machine just after operation with a tarpaulin or the like, or the heated engine and related parts may cause a fire.

(2) Before storing the tractor for a long period of time, disconnect the battery cables to prevent them, in case they are gnawed by a rat, from causing a short circuit, which may lead to a fire.
When disconnecting the cables, disconnect the negative (-) cable first.

(3) Safe storage of dangerous objects

- When storing dangerous implements, take appropriate safety measures to prevent accidents by covering with tarpaulin.
- Store fuel in a safe place with caution signs such as "PREVENT FIRE" or "INFLAMMABLE."
- All inflammables must also be stored in a safe, fire-resistant location.

## MAINTENANCE OF THE ELECTRIC SYSTEM

### ■ TO MAINTAIN ELECTRIC WIRING

(1) When servicing the electric wiring, stop the engine without fail. Otherwise your hands or clothes may be caught in or sandwiched between rotating parts.

(2) Before manipulating electric parts, be *sure to disconnect the earth battery cable (-), or you may get an electric shock or be injured by sparks.*

(3) Loose electric terminals or connectors may not only lower electrical performance but also cause short circuit or leakage of electricity, which may lead to a fire. Promptly repair or replace damaged wiring.

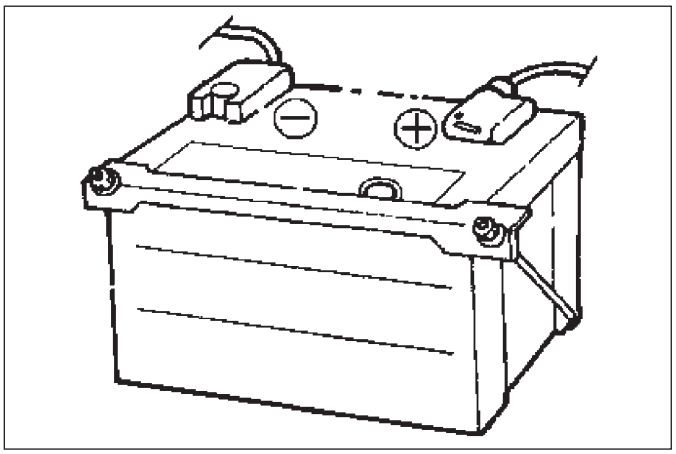
(4) Remove chaff or dust from the battery, wiring, muffler, or engine. Otherwise it could result a fire.

### ■ TO HANDLE THE BATTERY

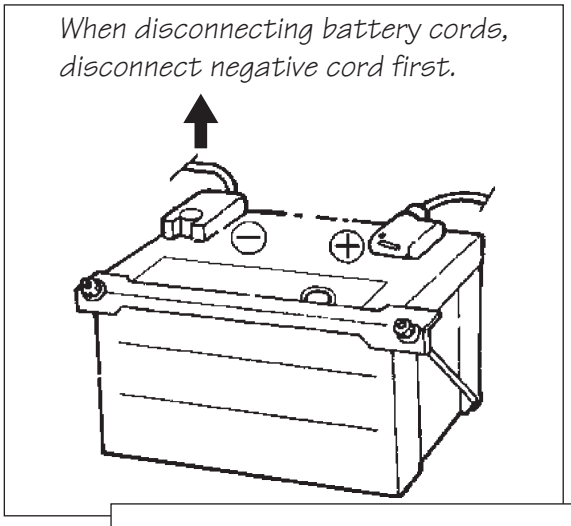
(1) When working around the battery, avoid smoking. The battery generates explosive hydrogen and oxygen gases when it is being charged.
Keep the battery away from sparks or open flames.

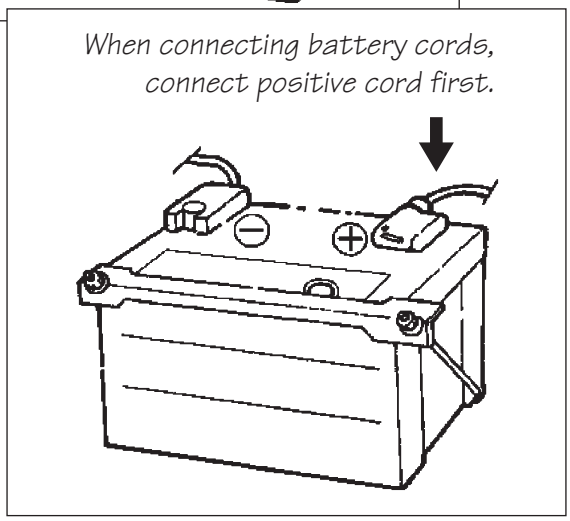
(2) The battery should be inspected before starting the engine. Be careful not to touch the electrolyte when removing the vent plugs. If the battery electrolyte makes contact with the skin or clothing, wash it off immediately with water and then consult a doctor.

(3) When replacing or inspecting the battery, stop the engine and turn the main switch off, or electrical parts may be damaged or unexpected accident may occur.



(4) When disconnecting the battery cables, disconnect the earth cable (-) first without fail. When connecting the battery cables, connect the positive cable (+) first. Disconnecting or connecting in wrong order may lead to a short circuit or sparks.




## ■ TO HANDLE BOOSTER CABLES

When using booster cables, pay attention to the following items for safe operation:

(1) Before connecting cables, remove the vent plugs. This will lower the force in case of explosion.

(2) Before connecting cables, be sure to stop the engine. Otherwise unexpected accidents may occur.

(3) Use booster cables with sufficient electrical capacity. A cable of inadequate capacity will cause generation of heat, which may lead to a fire.

## ■ SAFETY DECALS

The labels are stuck on the tractor. You should of course read the safety instructions in the manual. But never fail to read the labels on the machine as well.

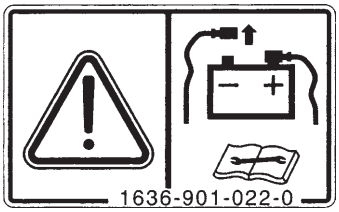
- The labels should always be clearly seen, that is,
- When they have become dirty, wash them with soap water and wipe off with soft cloth.
- If any of them are torn or lost, order new labels from your dealer. Their codes are mentioned in "SAFETY DECALS AND THEIR LOCATION."
- A new label should be placed in the same place where the old one was located.
- When sticking on a new label, clean the place to bubbles trapped under it.d.

## ■ SAFETY DECALS AND THEIR LOCATIONS

(1) Fan warning label (Code No.1705-902-006-0)

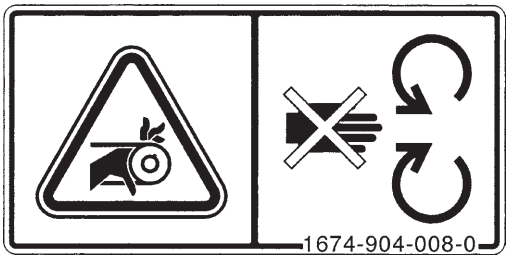

WARNING: RISK OF ENTANGLEMENT
Stay clear of the fan while it is turning

(2) Battery disconnecting label
(Code No. 1636-901-022-00)



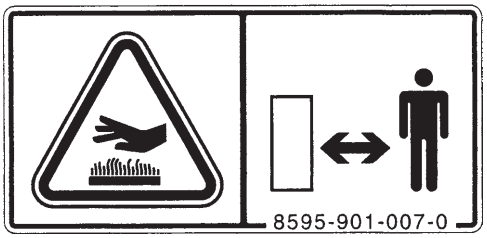

WARNING: RISK OF ELECTRIC SHOCK
When disconnecting the battery, detach the negative terminal first and attach the positive terminal first when connecting the battery.

(3) Belt warning label (Code No.1674-904-008-0)



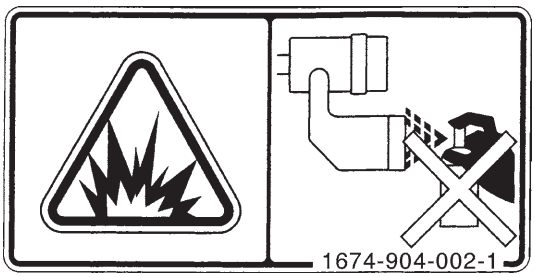

WARNING: RISK OF ENTANGLEMENT
Stay clear of the belt while it is running

(4) Hot part warning label
(Code No.8595-901-007-00)




WARNING: HOT SURFACES, RISK OF BURNS ON HANDS AND FINGRS
Stay clear of the heated parts until they cool down sufficiently.

(5) Ether label (Code No.1674-904-002-1)

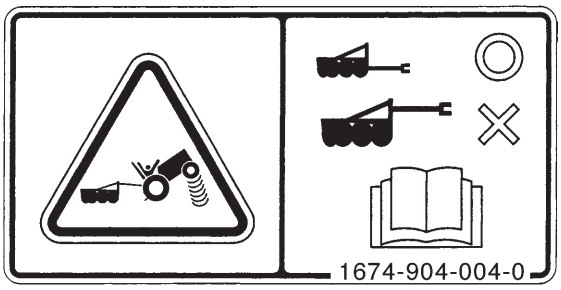



WARNING: RISK OF EXPLOSION
Ether or other starting fluid should never be used to start engines equipped with glow plugs.

(6) PTO label (Code No.8654-901-002-0)


WARNING: RISK OF ENTANGLEMENT
Stay clear of the PTO shaft while the engine is running.

(7) Trailer label (Code No.1674-904-004-0)

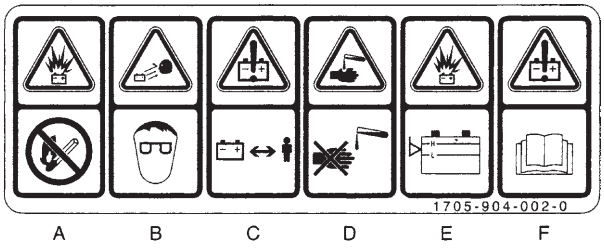



WARNING: RISK OF OVERTURNING
The rear implement should be installed on the tractor with an approved drawbar or by using the lower links of the three point hitch.
Use only an implement of proper loading capacity and weight not exceeding the designed capability of the tractor.

(8) Radiator label(Code No.1674-904-003-0)


WARNING:HIGH PRESSURE STEAM AND HOT WATER
Never remove the radiator cap during or just after operation. The water in the radiator is very hot and highly pressurized, which could cause burns.

(9) Battery label (Code No.1705-904-002-0)




A WARNING: RISK OF EXPLOSION
Keep away from sparks or flames, which could cause explosion.

B WARNING: WEAR AN EYE PROTECTION DEVICE
Battery electrolyte (euphoric acid) may cause blindness. Wear an eye protector to prevent contact with the eyes.

C WARNING: KEEP OUT OF REACH OF CHILDREN

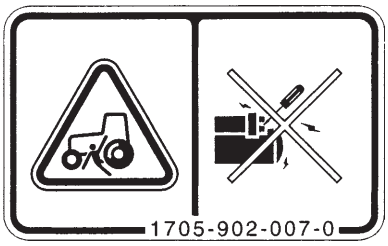
D WARNING: RISK OF BURNS
Battery electrolyte (sulphuric acid) may cause burns. Avoid contact with skin or clothing. In case of an accident, flush affected part immediately with plenty of water.

E WARNING: RISK OF EXPLOSION
Never use the battery with the electrolyte surface below the"LOWER"limit, or it may explode. Never replenish exceeding"UPPER" limit or electrolyte may leak out.

F WARNING: READ OPERATION MANUAL
Read the safety and operating instructions in the operation manual before operating the tractor.

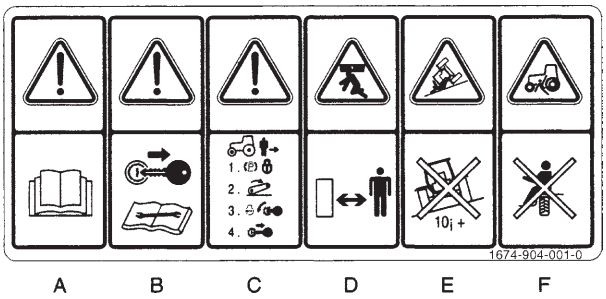
Take care of handling the battery.
Improper handling may lead to explosion.
Never short the poles.
Charge the battery in a well ventilated place.

(10) Starter warning label
(Code No.1705-902-007-0)




DANGER: RISK OF ELECTRIC SHOCK
Start the engine only from the seat using the key.

(11) Operation caution label
(Code No.1674-904-001-0)




A WARNING: BEFORE OPERATION
Read the safety and operating instructions in the operation manual before operating the tractor.

B WARNING: BEFORE OPERATION
Read the safety and operating instructions in the operation manual before operating the tractor.

C WARNING: RISK OF ABRUPT MOVING
Before leaving the tractor unattended, apply the parking brake, lower the implement, turn off the engine and remove the starter key to avoid unexpected moving of the tractor.

D WARNING:RISK OF INJURY OR DAMAGE
Pay attention to safety around the machine to avoid injury to bystanders or damage to property.

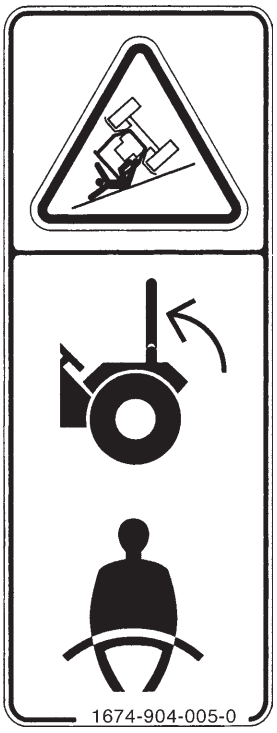
E WARNING:RISK OF OVERTURNING
Never operate the tractor on a slope of over 10 degrees, or it could overturn.

F WARNING: RISK OF INJURY OR DAMAGE
Never allow other persons to get on the tractor or the implement,or it could overturn.

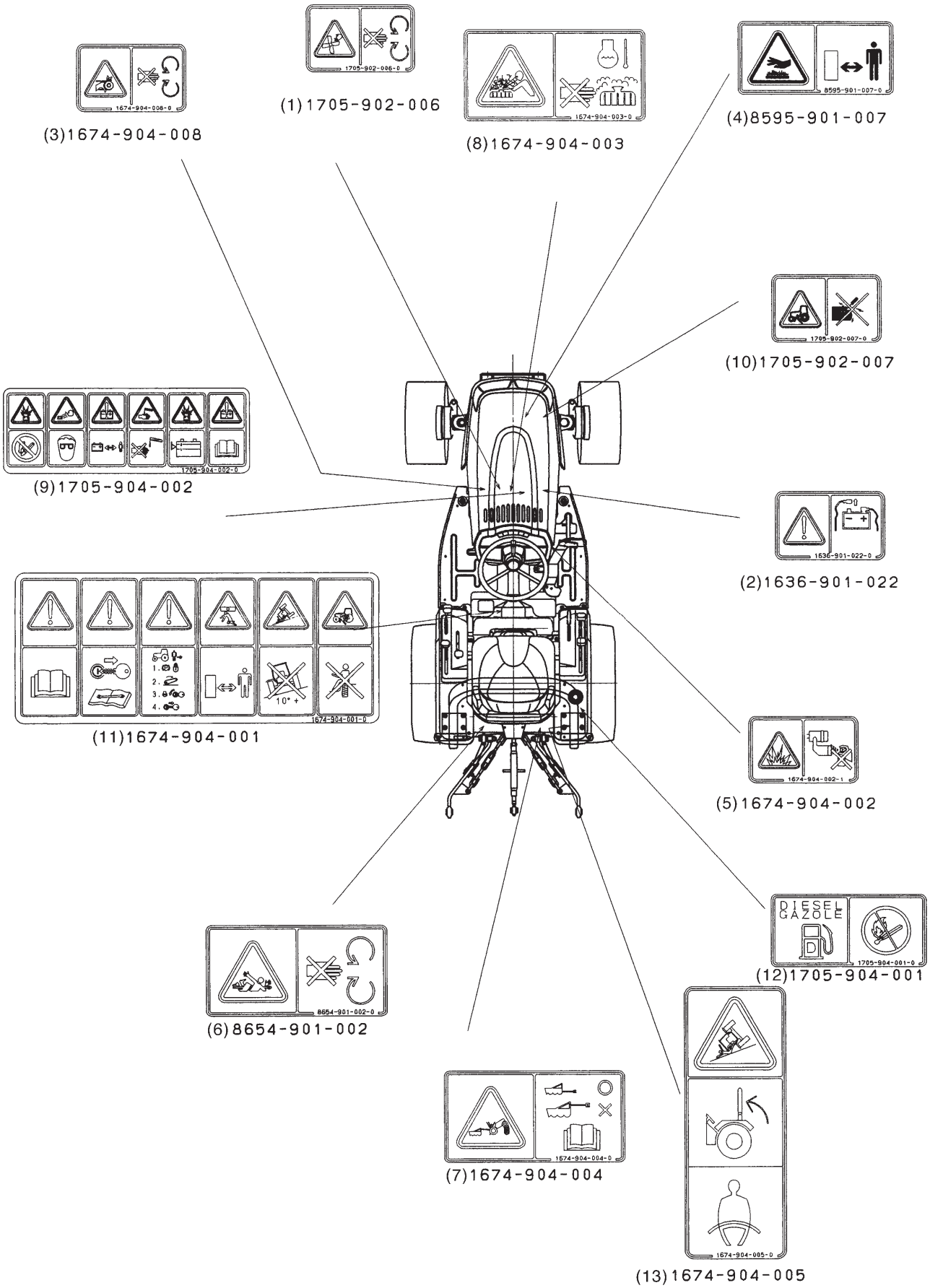
(12) Fuel label(Code No.1705-904-001-0)


DANGER:RISK OF EXPLOSION AND BURNS
Use only diesel fuel.
Before replenishing fuel, be sure to stop the engine and wait until the engine and heated parts cool down sufficiently. Keep sparks, open flames, etc. away from the fuel tank. No smoking!

(13) ROPS label(Code No.1674-904-005-0)




WARNING:RISK OF INJURY
Keep the ROPS in the upright position and fasten the seat belt at all times. Do not jump from the seat if the tractor starts to overturn, or you could be crushed under the tractor. The ROPS should usually be kept in the upright position during operation.
However, when the ROPS has to be lowered, do not wear the seat belt and operate the tractor with extreme caution.
Do not operate the tractor with a damaged or modified ROPS.


(3)1674-904-008
(1)1705-902-006
(8)1674-904-003
(4)8595-901-007
(10)1705-902-007
(9)1705-904-002
(2)1636-901-022
(11)1674-904-001
(5)1674-904-002
DIESEL
GAZOLE
(12)1705-904-001
(6)8654-901-002
(7)1674-904-004
(13)1674-904-005

# TRACTOR IDENTIFICATION

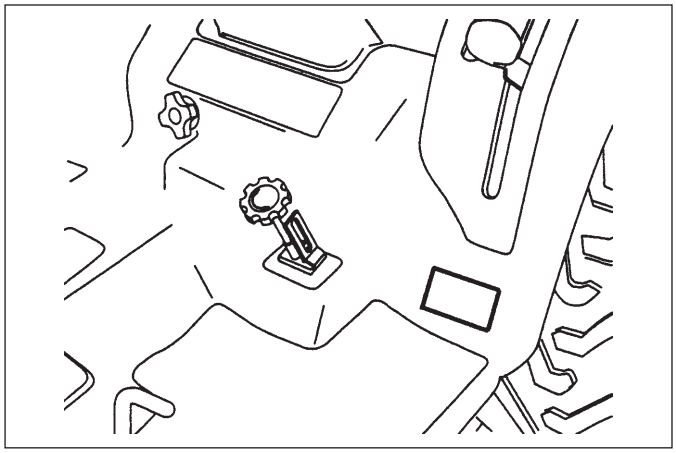


FIG. 1


FIG. 2

**SERIAL NUMBERS**

Note the serial numbers of your tractor. Always quote the serial numbers in any communication to your Iseki dealer.

TRACTOR SERIAL NUMBER (Fig.1 and Fig.2)
.....
.....
ENGINE MODEL NUMBER (Fig.3- ① ) .....
.....
ENGINE SERIAL NUMBER (Fig.3- ② ) .....
.....
CHASSIS NUMBER (Fig.4- ① ) .....
.....
MODEL.....
OWNER OR OPERATOR .....
.....
NEAREST ISEKI DEASER .....
.....
DATE OF INSTALLATION .....
EXPIRATION OF WARRANTY .....

*KEEP THIS BOOK SAFELY FOR REGULAR REFERENCE.*
*ENSURE THAT ALL OPERTORS HAVE ACCESS TO IT AND THAT THEY UNDERSTAND ITS CONTENTS.*

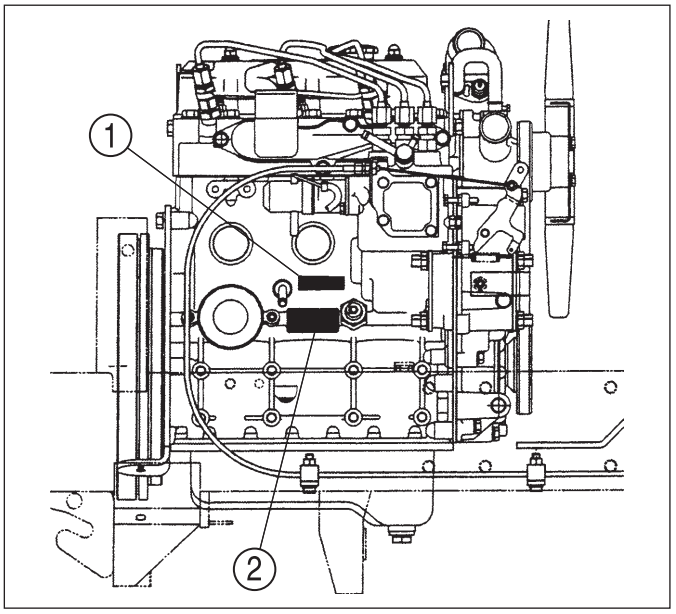



FIG. 3

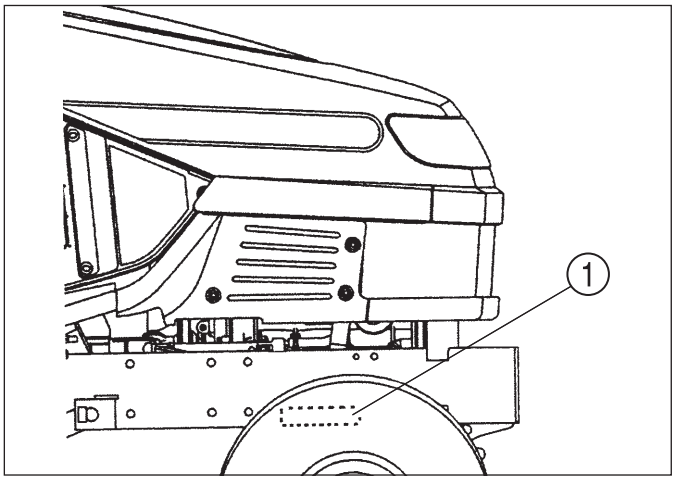



FIG. 4

**MAJOR COMPONENTS (E4 Type)**

**FIG. 5:** Identification and terminology of major components, as given in this book, are as follows:

1. Front Wheels
2. Fuel Tank Filler
3. Stabilizer
4. Lift Rod
5. Lower Link
6. Rear Wheels
7. Operator's Seat
8. Instrument Panel
9. Steering Wheel
10. Fender
11. Reflector
12. Hood
13. Front Grille
14. Battery
15. Front Bumper
16. Engine
17. Foot Step
18. Transmission
19. Front Wheel Drive Shaft (4-WD only)
20. Headlight
21. Front Axle
22. Front Axle Pivot
23. Lift Arm
24. Combination Lamp
25. Center Housing
26. Roll-Over Protective Structure (ROPS)
27. 7P Socket
28. Number Plate Lamp
29. Parking Brake Lever

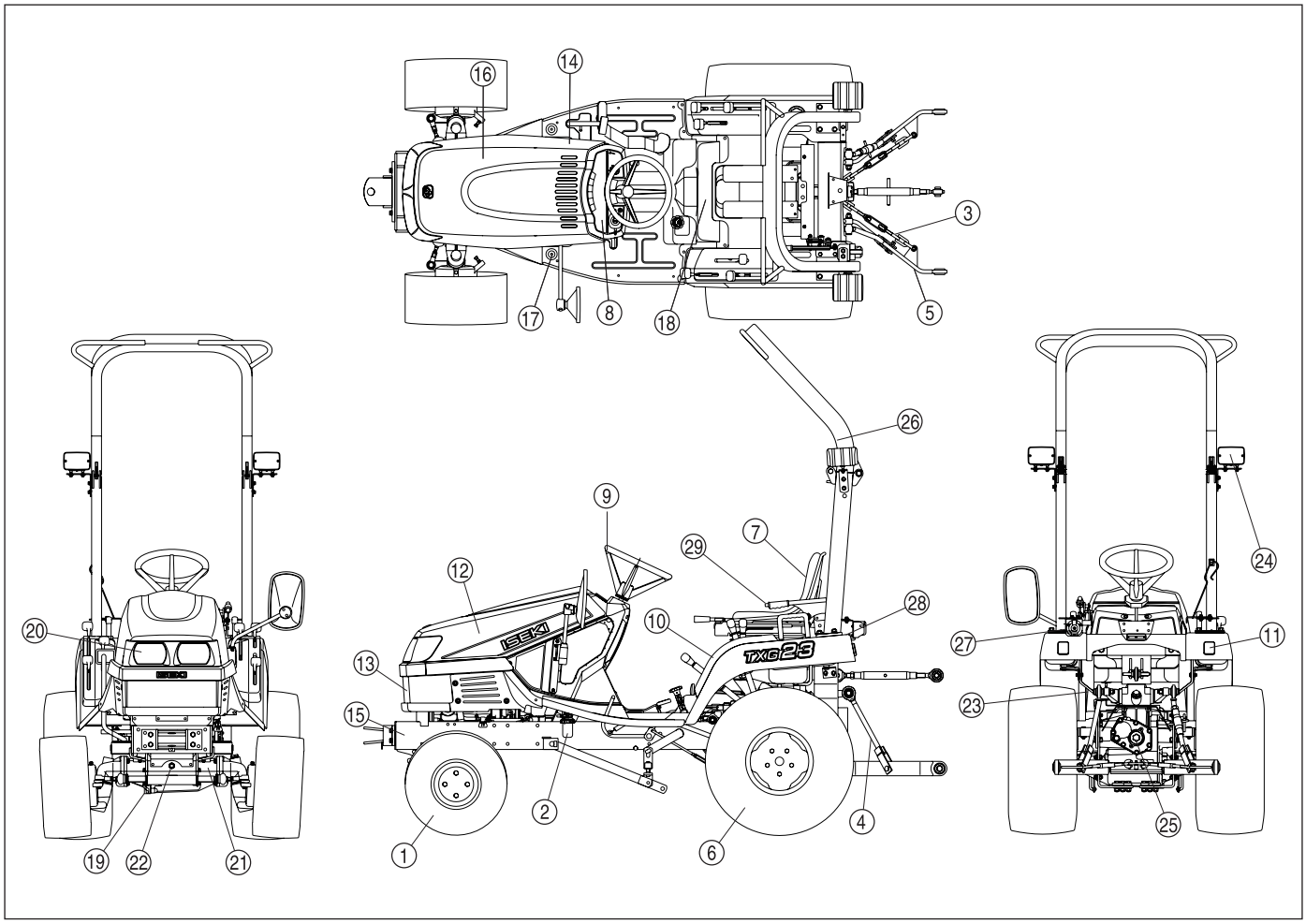



**FIG. 5**

**MAJOR COMPONENTS (E6 Type)**

**FIG. 6:** Identification and terminology of major components, as given in this book, are as follows:

1. Front Wheels
2. Fuel Tank Filler
3. Stabilizer
4. Lift Rod
5. Lower Link
6. Rear Wheels
7. Operator's Seat
8. Instrument Panel
9. Steering Wheel
10. Fender
11. Reflector/Tail Light
12. Hood
13. Front Grille
14. Battery
15. Front Bumper
16. Engine
17. Foot Step
18. Transmission
19. Front Wheel Drive Shaft (4-WD only)
20. Headlight
21. Front Axle
22. Front Axle Pivot
23. Lift Arm
24. Turn/Hazard Light
25. Center Housing
26. Roll-Over Protective Structure (ROPS)

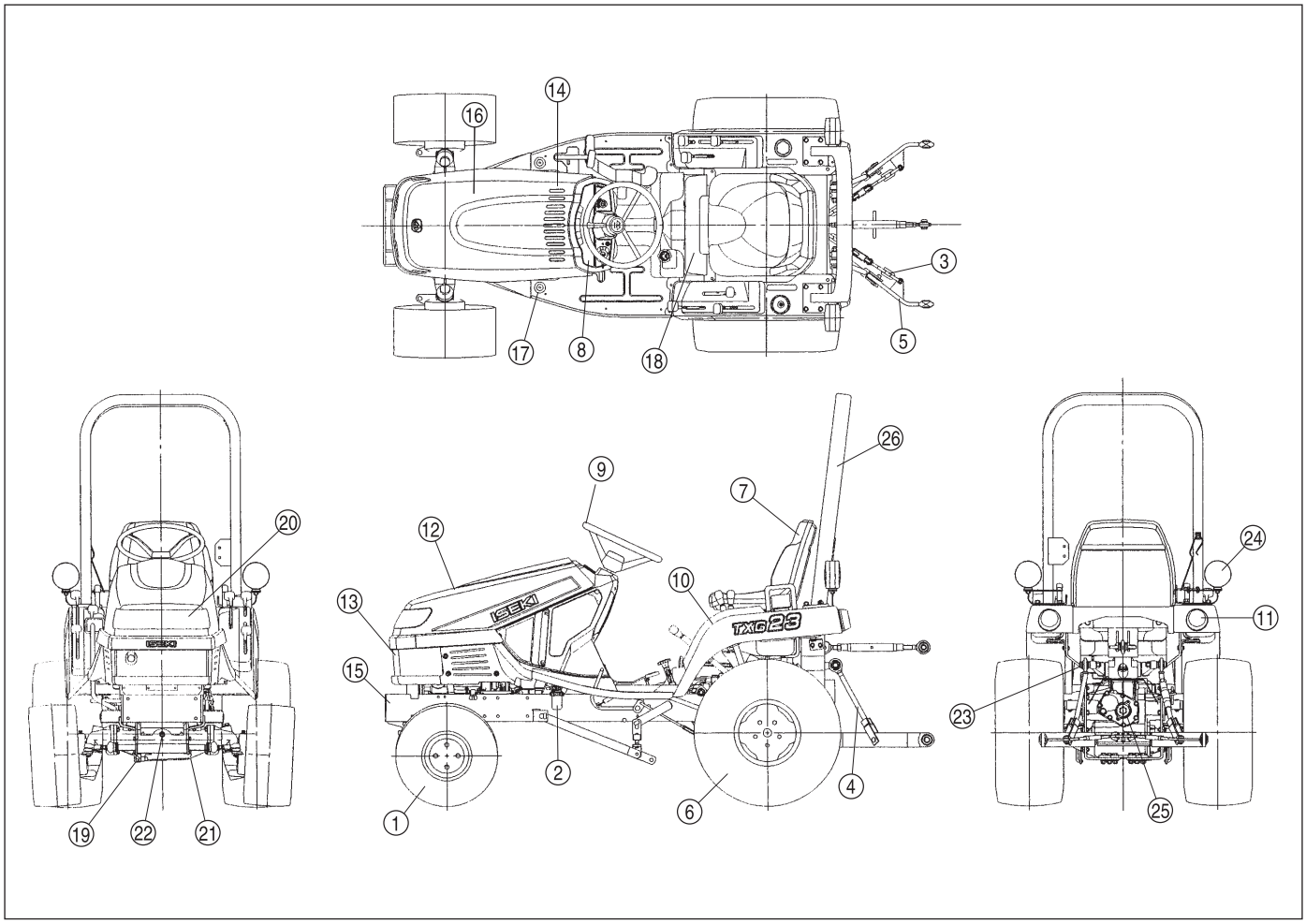



**FIG. 6**

# INSTRUMENTS & CONTROLS

**E4 Type**

1. Steering Wheel
2. Parking Brake Lock Lever
3. Instrument Panel
4. Range Shift Lever
5. Rear Power Take-Off (PTO) Selector Lever
6. Hand Throttle Lever
7. Brake Pedal
8. Hydro Forward Reverse Pedal
9. Differential Lock Pedal
10. Three-Point Hitch Position Control Lever
11. Mid Power Take-Off (PTO) Selector Lever
12. Power Take-Off (PTO) Clutch Lever
13. Four Wheel Drive (4WD) Shift Level
14. Cutting Height Control Knob

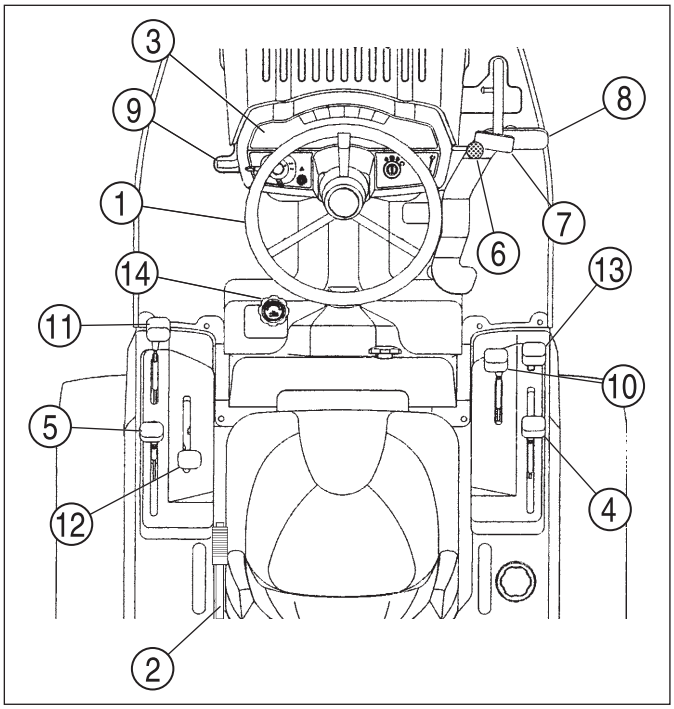



**FIG. 7 E4 Type**

**E6 Type**

1. Steering Wheel
2. Parking Brake Lock Lever
3. Instrument Panel
4. Range Shift Lever
5. Rear Power Take-Off (PTO) Selector Lever
6. Hand Throttle Lever
7. Brake Pedal
8. Hydro Forward Reverse Pedal
9. Differential Lock Pedal
10. Three-Point Hitch Position Control Lever
11. Mid Power Take-Off (PTO) Selector Lever
12. Power Take-Off (PTO) Clutch Lever
13. Four Wheel Drive (4WD) Shift Level
14. Cutting Height Control Knob

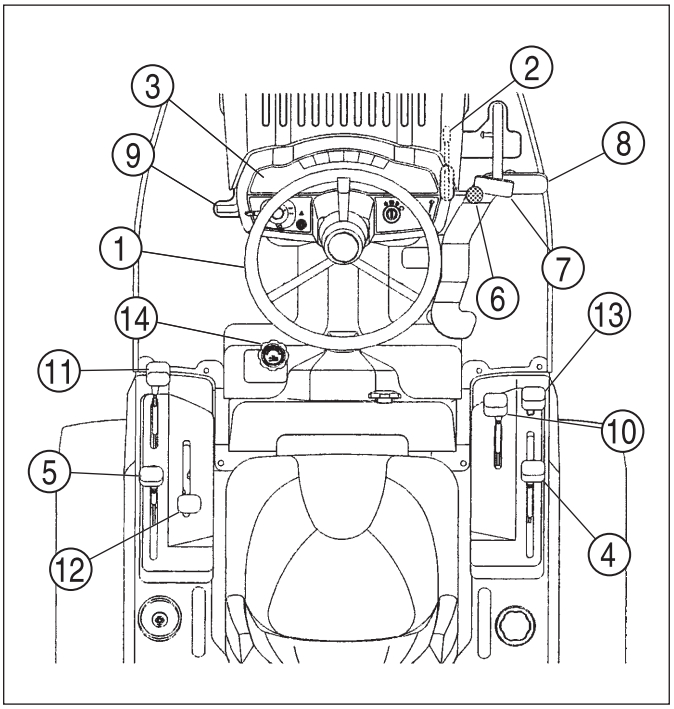



**FIG. 8 E6 Type**

**INSTRUMENT PANEL**

**FIG. 9 & 10:** Arrangement of gauges. Control switches and indicators located in instrument panel. Items are detailed in the descriptions that follow:

*NOTE: Instrumental panel and switches may vary slightly from those shown.*

1. Fuel Gauge
2. Combination Switch [Headlamp Switch, Turn Signal Switch]
3. Battery Charge Lamp
4. Engine Oil Pressure Warning Lamp
5. Coolant Temperature Warning Lamp
6. Turn Indicator Lamp
7. Hour Meter
8. Main Switch
9. Hazard Signal Switch
10. Small Lamp Switch
11. High Beam Light Monitor
12. Trailer Monitor
13. Horn Switch
14. Parking Brake warning lamp

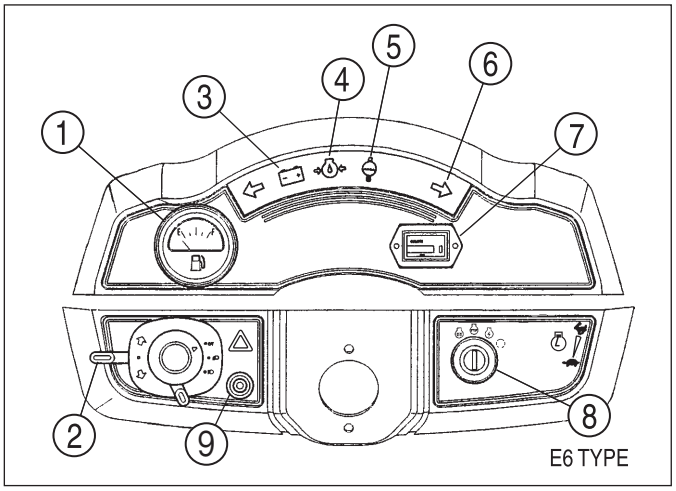



**FIG. 9**

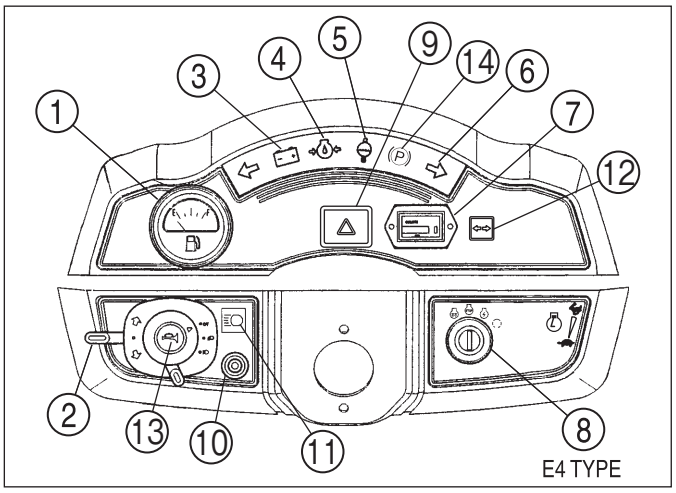



**FIG. 10**

**MAIN SWITCH**

**FIG. 11:** Main Switch, 1, has the four following positions:

**:OFF**..... Engine and all electrical circuits off Key can be removed.

**:ON**..... Power supplied to all circuits. Normal operating position.

**:START**..Starter activated. This position springreturn to "ON"

**:GLOW**.. (Turned to left)Energizes glow plugs to preheat the combustion chambers and ssist starting. Spring-return to "OFF".

*NOTE: The main switch must be turned to "ON" before any circuits will operate .The clutch pedal must be depressed before the engine is started.*

*IMPORTANT: When the main switch is selected to "GLOW" position, the engine combustion chambers will be preheated and allow a cold engine to be started after several seconds.*

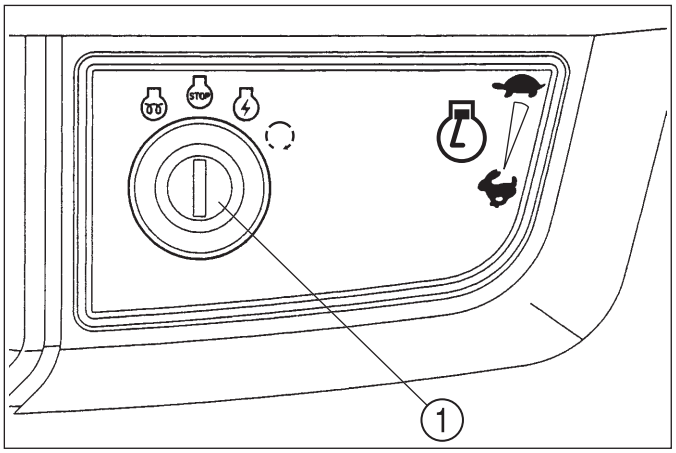



**FIG. 11**

**Indicator Light Strip**

**FIG. 12:** Indicator light strip contains several warning lights to monitor certain functions. Currently used positions (from left to right) are:

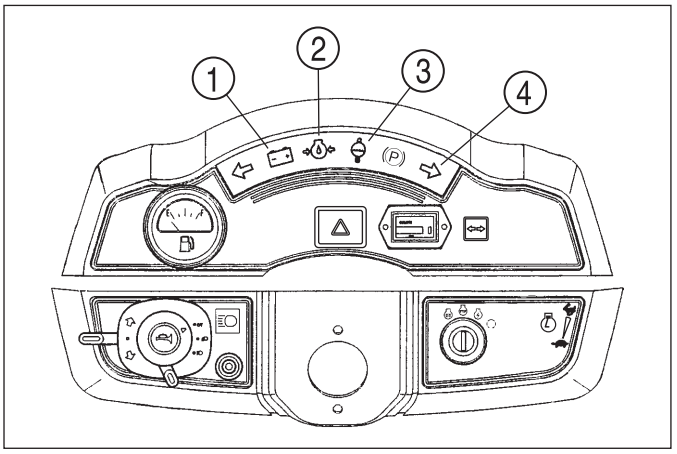



**FIG. 12**

**Battery Charge** (1) - Lights up when main switch is turned "ON" and will go out after engine starts, to indicate battery is being charged.

**Engine Oil Pressure** (2) - Lights up if engine oil pressure is low. If the light comes on while engine is running, shut off the engine immediately and investigate the cause.

**Coolant Temperature** (3) - Lights up when the engine is overheated.

*NOTE: When any of the indicator lights above stays lit, stop the engine immediately and consult your dealer.*

**Turn Indicator Lamps** (4) - Blinks when the turn signal is activated.

**Hour Meter**

**FIG. 13:** Hour meter indicates engine and tractor use to assist in maintenance intervals. The extreme right digit indicates 1/10 hour increments.

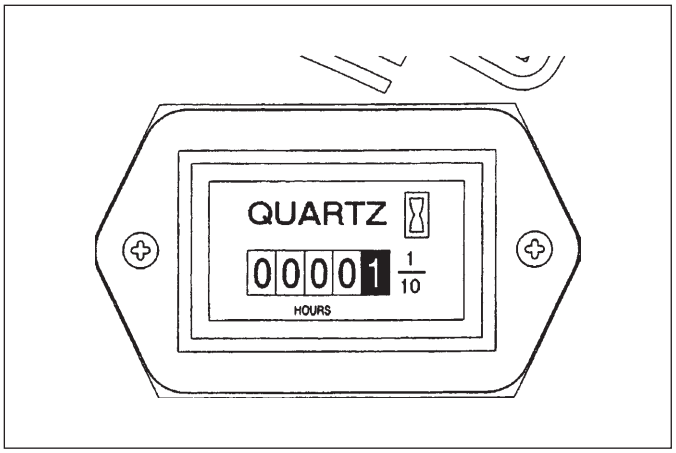



**FIG. 13**

**Combination Switch (E4 Type)**

**FIG. 14:** This is a combination switch, which incorporates the head lamp switch and turn signal switch. It works as illustrated.

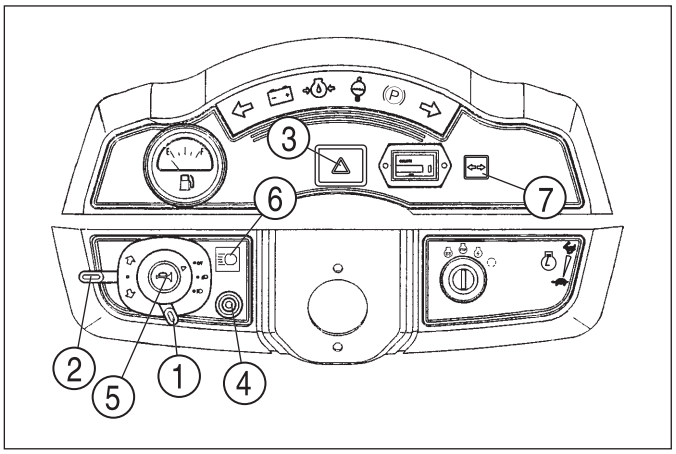



**FIG. 14**

**Head Lamp Switch (1)**
**Off**
**Low Beam**
**High Beam**

**Turn Signal Switch (2)**
**Right-hand turn signal**
**Off**
**Left-hand turn signal**

*NOTE: Turing indicator lamps will not self-cancel. Return the turn signal switch lever to the center position after completing turn.*

**Hazard Signal Switch (3)**

When the switch is flipped on, all position lamps starts blinking.

**Small Lamp Switch (4)**

When the switch is flipped on, small lamps are lit.

**Horn Switch (5)**

The horn is activated by pushing the horn mark with the main switch is in the ϟ position.

**Main (high) beam (6)**

Lights up when the headlamps in the front grille are selected to the high beam position by the lamp switch.

**Trailer Lamps (7)**

Lights up when the trailer is attached and the coupler is connected with the 7-pin socket.

**Combination switch (E6 Type)**

**FIG. 15:** This is a combination switch, which incorporates the head lamp switch and turn signal switch. It works as illustrated.

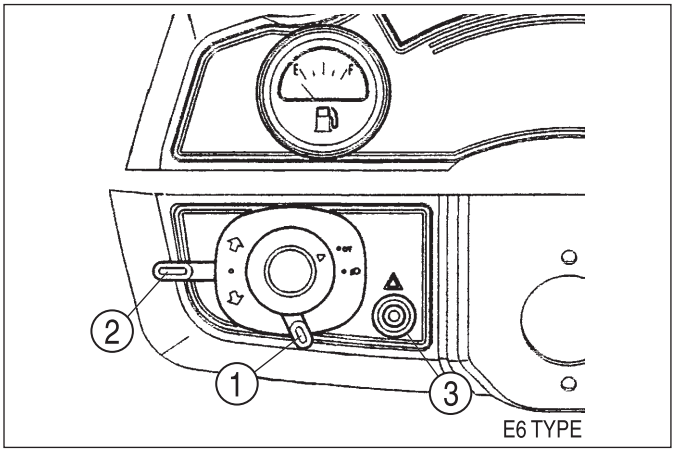



**FIG. 15**

**Head Lamp Switch (1)**
**Off**
**On**

**Turn Signal Switch (2)**
**Right-hand turn signal**
**Off**
**Left-hand turn signal**

*NOTE: Turing indicator lamps will not self-cancel. Return the turn signal switch lever to the center position after completing turn.*

**Hazard Signal Switch (3)**

When the switch is flipped on, all position lamps starts blinking.

**Fuel Gauge**

**FIG. 16:** The gauge indicates fuel level in the fuel tank when the main switch is in the "ON" position.

*NOTE: The gauge can not indicate an accurate fuel level when the tractor is on an incline. It takes a little time to indicate an accurate level after the tractor recovers its horizontal position.*

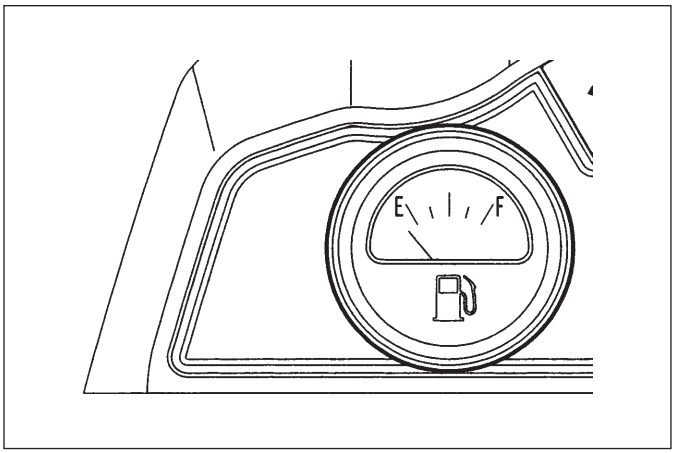



**FIG. 16**

## BRAKES

### Brake Pedal

**FIG. 17 & 18:** Brake pedal, 1, controls left and right wheel brakes at the same time.

### Parking Brake (E6 Type)

To apply parking brakes, depress brake pedal fully and move parking brake lock lever, 2, rearward till it locks.

To disengage parking brakes, firmly depress brake pedal to release locking mechanism.

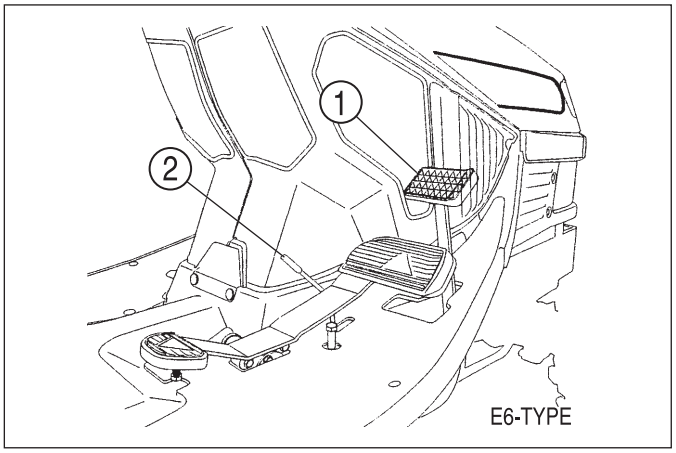



**FIG. 17**

### Parking Brake (E4 Type)

To apply parking brakes, pull upward on parking lever, 3, to lock brakes in applied position.

To disengage parking brakes, push in on release button, 4, and lower lever to the released position.

*IMPORTANT: Always disengage brake before driving tractor to prevent abnormal brake wear*

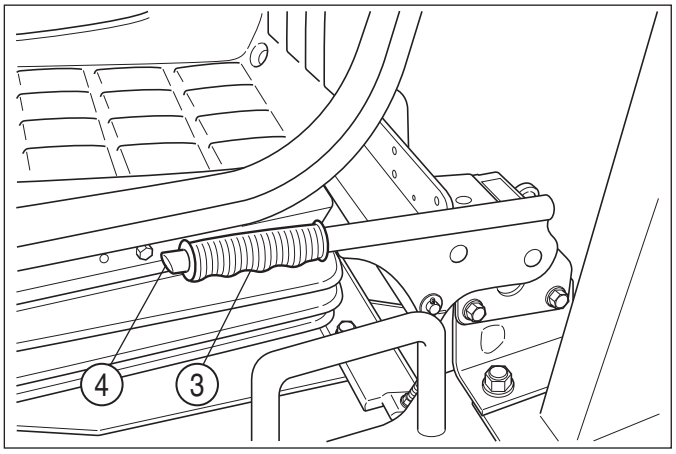



**FIG. 18**

## ENGINE SPEED CONTROLS

### Throttle Lever

**FIG. 19:** Throttle lever, 1, controls engine speed and will remain in position selected by the operator.

Idling speed: With hand lever is rearward, engine will idle.

High speed: Engine speed increases as lever is moved forwarded progressively.

**CAUTION: Always select engine speed to ensure safe operation. Reduce speed prior to turning or backing Tractor.**

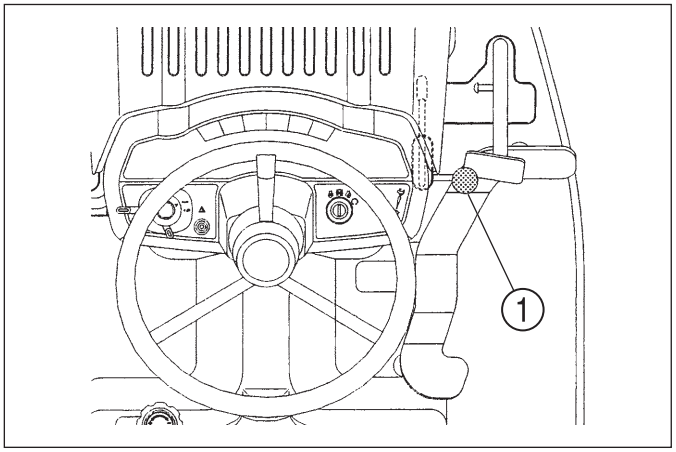



**FIG. 19**

## TRANSMISSION SHIFT LEVER AND CONTROLS

**FIG. 20:** One shift lever is used to select a range of ground travel speed through different gear reductions within the drive train. A hydrostatic control unit allows infinitely variable speeds, from zero to top speed, in each range.

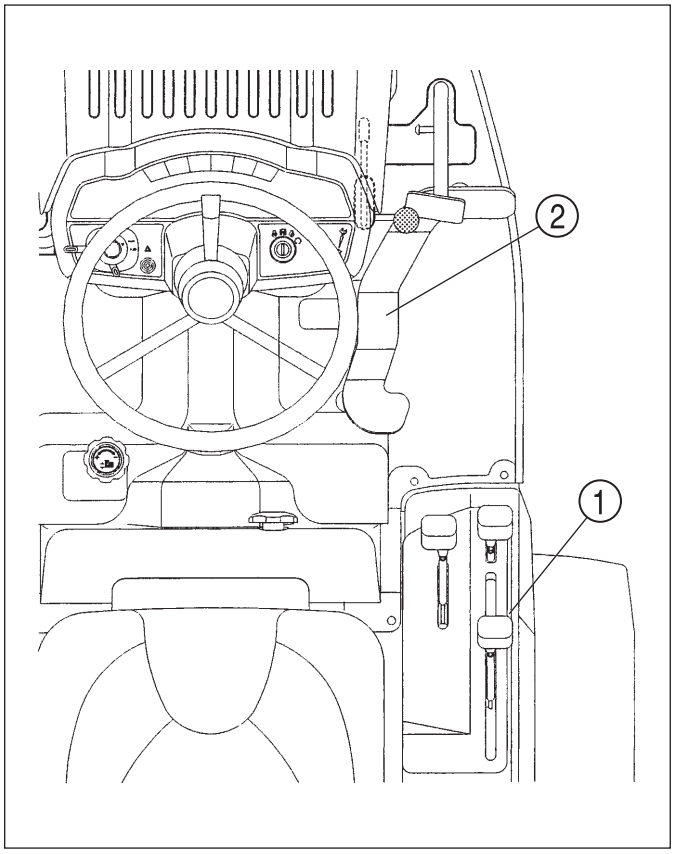


FIG. 20

**Range Gearshift Lever,** 1, is located to right of operator's seat, range lever provides two major speed changes. This lever has "tortoise" and "hare" positions with neutral at center.

*IMPORTANT: Tractor must be completely stopped when shifting.*

**Hydrostatic Control Pedal,** 2, Located on right side of platform and it actuates hydrostatic unit in forward or reverse travel direction.

Depressing forward portion of pedal moves Tractor forward, depressing rearward portion of pedal moves Tractor rearward. As each movement is progressively depressed, a corresponding increase in ground speed of Tractor will be noticed in appropriate direction.

Returning pedal towards spring-loaded center position, will slow Tractor and step it when neutral position is reached. When pedal is completely released, Tractor should remain stopped with pedal assembly in neutral position.

## DIFFERENTIAL LOCK PEDAL

**FIG. 21:** When differential lock pedal, 1, is depressed, both rear axles are locked together to provide equal traction to both rear wheels. This is especially important when operating in loose soil or slippery condition.

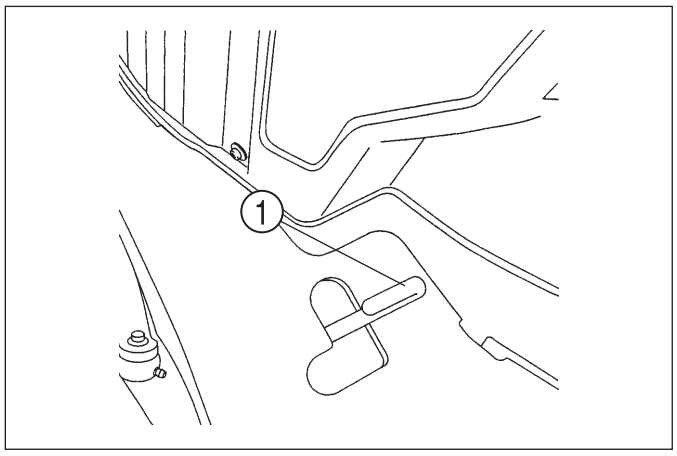


FIG. 21

Disengage differential lock, by releasing foot pedal.

*IMPORTANT: Stop Tractor before engaging differential lock.*

**CAUTION: When differential lock is engaged, steering ability of Tractor will be greatly reduced. Disengage before attempting a turn. Do not use during transport.**

**FOUR-WHEEL DRIVE SHIFT LEVER (4WD model)**

**FIG. 22:** Shift lever, 1, engages and disengages drive for the front axle. Lever forward, the front axle is engaged, and power is available to both front and rear axle. Lever rearward, the front axle (4-WD) is disengaged.

*IMPORTANT: Stop Tractor before engaging or disengaging four -wheel drive.*

Do not use 4-WD on hard surface. Rapid wear of front tires and possible drive line damage could occur if 4-WD is operated for prolonged periods on hard surface.

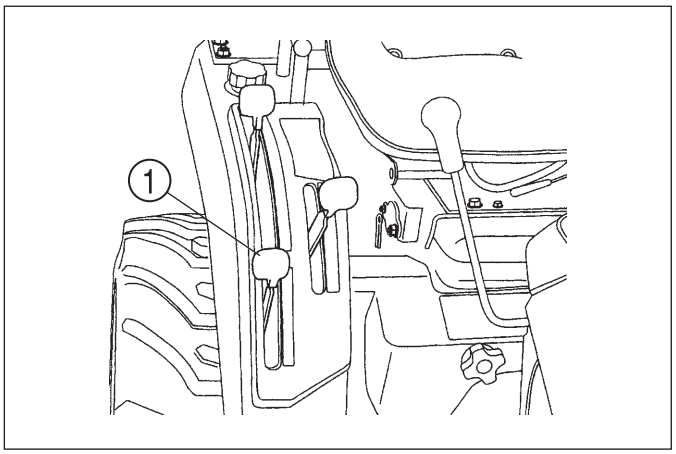



**FIG. 22**

**PTO CLUTCH LEVER**

**FIG. 23:** PTO (Power Take-Off) clutch lever, 1, engages and disengages both PTO's (Rear PTO, Mid PTO, or both at same time) on Tractor.

When lever is forward, PTO (Rear PTO and Mid PTO) is engaged.

When lever is returned to rear disengage position, the gear drive is disengaged.

**CAUTION: Always shut off PTO and shut off Tractor engine before servicing PTO-driven implement. Allow all movement and motion to stop before leaving operator's seat.**

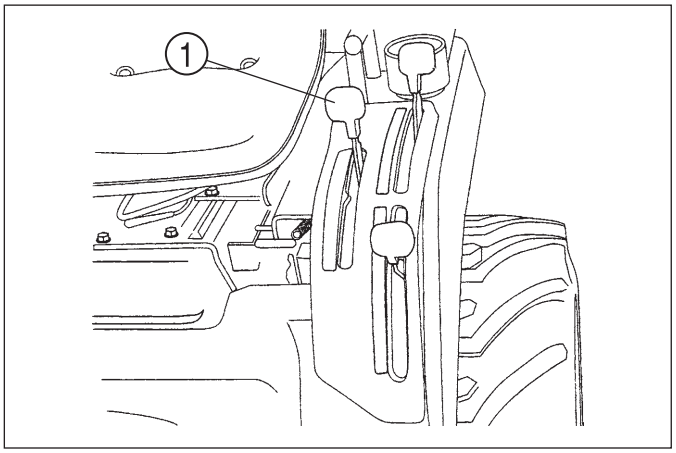



**FIG. 23**

**REAR & MID PTO SELECTOR LEVERS**

**FIG. 24:** Rear PTO (Power Take-Off) selector lever, 2, controls rear PTO on Tractor.

When lever is forward, neutral position, the gear drive is disengaged.

When lever is rearward, 540 rpm rear PTO is selected.

**CAUTION: Always shut off PTO and shut off Tractor engine before servicing PTO-driven implement. Allow all movement and motion to stop before leaving operator's seat.**

Mid PTO (Power Take-Off) selector lever, 3, controls mid PTO on Tractor.

When lever is forward, neutral position, the gear drive is disengaged.

When lever is rearward, 2000 rpm rear PTO is selected.

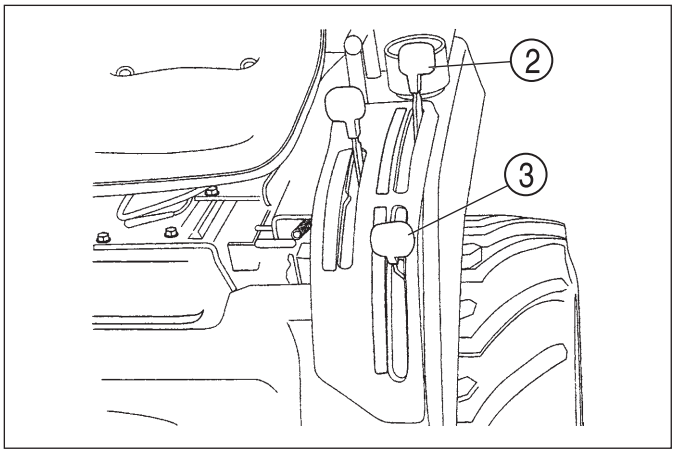



**FIG. 24**

**CAUTION: Always shut off PTO and shut off Tractor engine before servicing PTO-driven implement. Allow all movement and motion to stop before leaving operator's seat.**

**CAUTION: Always select engine speed to ensure safe operation. Reduce speed prior to turning or backing Tractor.**

**THREE-POINT HITCH**

Complete operating instructions for three-point hitch are given in "Operation" section of this book.

**Control Lever**

**FIG. 25:** Position control lever, 1, adjust height of three point hitch on rear of Tractor. Setting lever in a particular position will set the height respectively. Full up position is with lever fully rearward and full down position is with lever completely forward.

**CAUTION: Use position control lever, 1,when attaching or detaching implement.**

*NOTE: When starting engine, ensure implement is lowered to ground and position lever is fully forward.*
*This reduces load on starter due to hitch trying to raise when engine is cranked.*

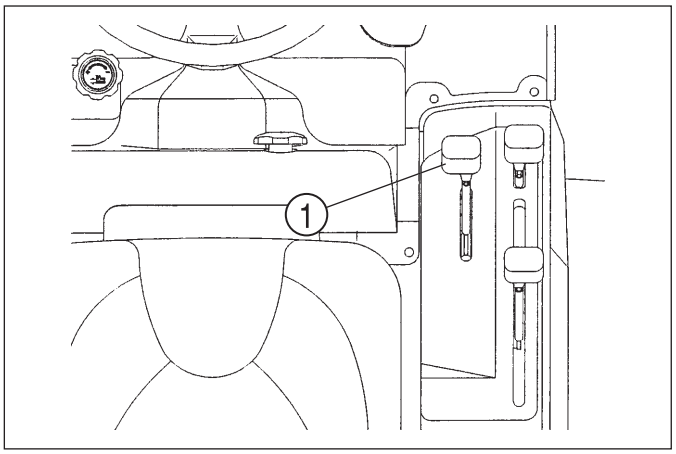



**FIG. 25**

**Lowering Rate Control Knob**

**FIG. 26:** Lowering rate knob, 1, adjusts "rate of drop" of three point implements. Turning knob clockwise will increase lowering time and counterclockwise will decrease lowering time. Turning knob fully clockwise will lock implement (or hitch) in raised position for transport.

**CAUTION: When working near or under mounted equipment, securely block in position and turn lowering rate clockwise to "stop".**

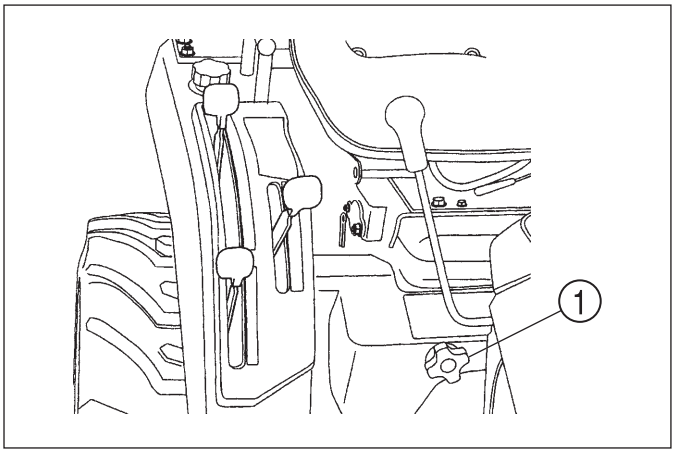



**FIG. 26**

**Cutting Height Control Knob**

**FIG. 27:** Cutting height control knob, 1, adjusts the cutting height for mid mount mower deck. Turning knob clockwise will drop the cutting height of mower deck and counterclockwise will raise the cutting height of mower deck.

**CAUTION: When operating without mid mount mower deck, the linkage for mower deck must be in fully up position by using position control lever. Also, Turn the cutting height control knob to counterclockwise and to set highest position.**

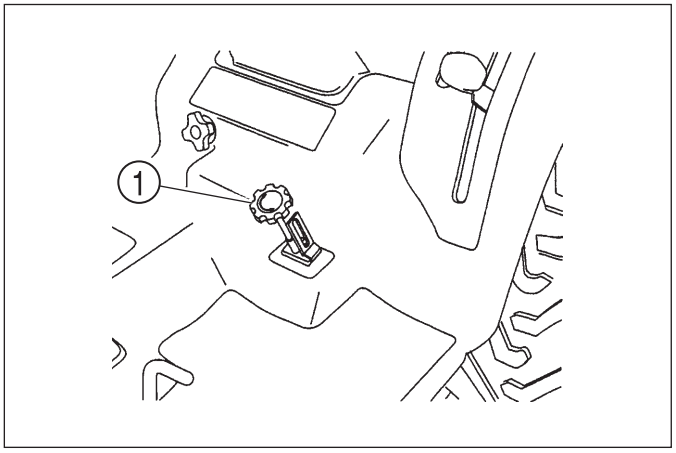



**FIG. 27**

**COMFORT ADJUSTMENT**

**CAUTION: Never make seat adjustment while Tractor is in motion. Make sure adjustment is "locked" prior to operation unit.**

**Seat Adjustment (E6 Type)**

**FIG. 28:** Lift seat latching lever, 1, to release seat latch and permit seat to be adjusted fore and aft.

*NOTE: E4 Type does not have a seat and seat belt. Consult your dealer.*

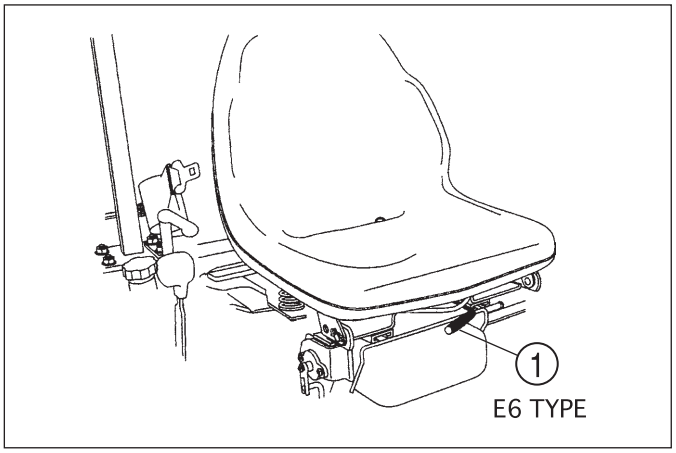



**FIG. 28**

**REAR VIEW MIRROR (E4 Type)**

There are holes for installing the rear view mirror both sides of panel. Install the mirror to right or left side according as your country regulation.

# OPERATION

## BREAK-IN PERIOD

Operation of tractor within the first fifty hours can be a major factor in determining the performance and life of the engine and Tractor:

- The engine may be operated at full rpm but excessive load should be avoided. If engine begins to "lug",operate in a lower gear to maintain higher enginespeed.

- Check coolant level and check engine, transmission and other oil levels frequently during break-in period.
  Watch for evidence of leakage of above fluids.
  Replenish levels as required and repair any leaks that may have formed.

- Tighten any nuts, bolts, or screws that may have loosened and retighten as necessary. This is espe cially true of wheel retaining bolts. All fasteners on this Tractor are metric.

- Be observant of clutch and brake pedal free-play adjustments and readjust as required. Lining materials used in clutch disc and brake shoes "bed in" the first few hours of operation and may necessitate the need for early and frequent readjustment.

- Keep area around fuel tank filler clean. Make sure diesel fuel is of correct grade and free of contamination.

- Initial engine oil and oil filter change is after first fifty hours of operation. Subsequent change interval is every one hundred fifty hours for engine oil and filter.

**CAUTION: Proper maintenance practices cannot be over-emphasized. They are required for safe operation. Consultant "Lubrication and Maintenance" section for full details.**

## STARTING

### Pre-Start Inspection

Prior to daily start-up of Tractor, a few basic procedures should be followed to ensure Tractor is in operating order to insure longer life and dependability:

- Make sure all safety shields are in place and secured properly.

- Make sure operator is instructed in correct and safe peration of Tractor and related attachments or implements.

- Check coolant, engine oil and transmission oil levels and replenish as necessary.

- Check fan belt tension and adjust as required.

- Make sure radiator, air intake screen, and radiator screen are clear of debris to provide maximum engine cooling.

- Check operation of clutch, brake and throttle controls.
  All controls must operate freely and be adjusted correctly.

- Conduct a general inspection of tires, tire pressure, and wheel bolt torque. Observe for external signs of leakage and correct before operating Tractor. Check steering for excessive looseness.

- Check for adequate fuel supply. If is recommended fuel tank be filled following each days use to; reduce condensation and provide full tank for next use.

- Check operation of lights and warning flashers. If Tractor is to be transported on public road, ensure slow moving vehicle emblem is in place.

*NOTE: Requirements may vary regarding use of warning flashers and slow moving vehicle emblem depending on locality. Check local safety codes.*

**WARNING: Carefully read and understand the SAFETY section of this book. Your life, and that of others, can be in danger during the starting of the Tractor.**

**Always start and operate the engine in a well ventilated area.**

**If in an enclosed area, vent the exhaust to the outside.**

**DO NOT modify or tamper with the exhaust system.**

**Normal Starting**

**FIGS. 29 & 30:** To start engine proceed as follows:

1. Depress brake pedal firmly and apply parking brake lock.
2. Place range shift lever in neutral position.
3. Make sure PTO clutch lever is disengage position.

**WARNING: Range shift lever must be placed in neutral position and PTO clutch lever must be in disengaged position.**

4. Do not move hydrostatic pedal, it must be in neutral position.
5. Set position control lever (three-position hitch) in the down position.
6. Turn main switch to the left to "glow" position for 5-10 seconds until indicator glows.
7. Set hand throttle lever at half to fully open position.
8. Turn main switch to "on" position for 1-2 seconds, then turn to "start" position. Release switch the moment engine starts.
9. Once engine runs smoothly, set engine speed to approximately 1,500 rpm to allow engine and hydraulic system to warm for several minutes. DO NOT LOAD COLD ENGINE.

**WARNING: Range shift lever must be placed in neutral position to actuate neutral switch and permit operation of the starter motor.**

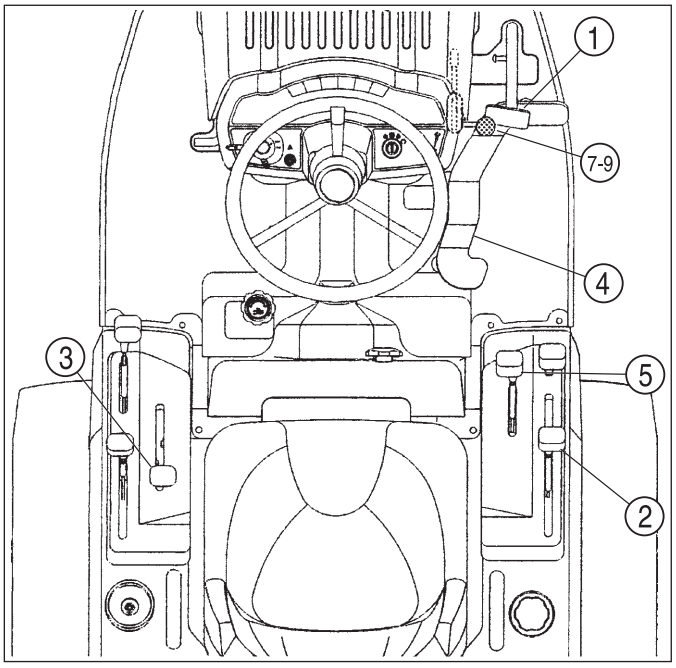



**FIG. 29**

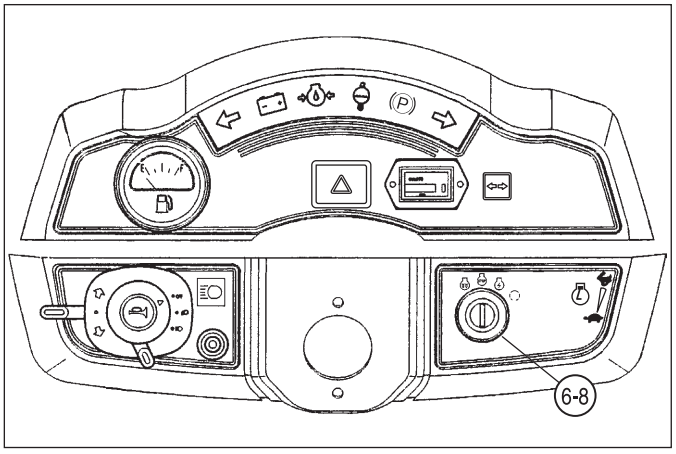



**FIG. 30**

**FIG. 31:** Battery charge indicator lamp, 1, and engine oil pressure lamp, 2, on indicator light strip should go out when the engine starts. If either light remains lit, STOP ENGINE IMMEDIEATELY and investigate source of problem.

*NOTE: If Engine will not start and run after several attempts, refer to "Maintenance" section in this book and bleed any air that may be present in the fuel system.*

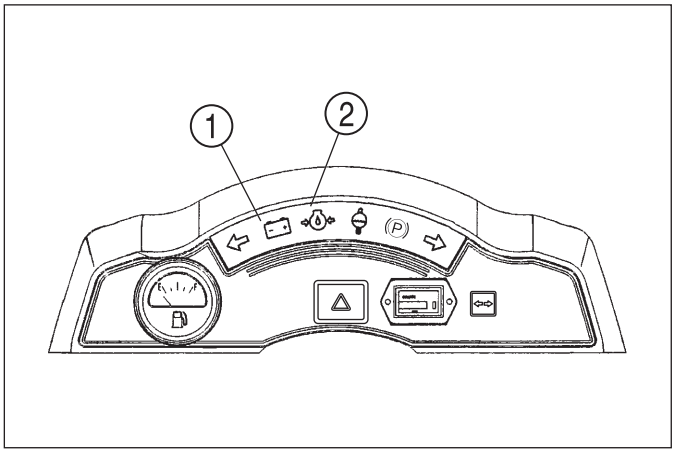



**FIG. 31**

**Restarting Warm Engine**

When restarting an engine that is still warm from previous use, the same procedure is used as with "normal Starting" except step No.6 may be omitted. Use of glow plugs is not necessary when starting a warm engine.

**Cold Weather Starting**

Procedure for starting an engine in colder ambient temperatures is identical to "Normal Starting" procedure except for the following:

1. Longer use of glow plugs may be required. Instead of the normal 5-10 seconds, main switch may need to be selected to "glow" for 10-20 seconds to adequately warm engine combustion chambers.

2. At temperatures below 39fIF(4fIC) use of No.1 (No.1-D) diesel fuel is recommended due to possible "fuel gelling" characteristics of No.2 (No.2-D) fuel at cold ambient temperature.

3. The central hydraulic reservoir in addition to transmission and center housing lubrication, will require additional warm-up time due to colder (thicker) oil. Refer to "Warm-Up Period" at right.

4. Test all controls (steering, braking, etc) prior to operating the tractor.

*NOTE: Installation of accessory engine block heater is recommended in cold weather conditions. Consult your ISEKI Dealer.*

*IMPORTANT: UNDER NO CIRCUMSTANCES SHOULD ETHER OR OTHER STARTING FLUID BE USED TO START ENGINES EQUIPPED WITH GLOW PLUGS. SEVERE ENGINE DAMAGE WILL RESULT SHOULD STARTING FLUID CONTACT A HOT GLOW PLUG.*

If, for some reason, a booster battery is required to start Tractor, ensure booster battery is connected in parallel. When using booster battery and booster cables always connect positive (+) terminals together first. Then install booster cable on booster battery negative (-) terminal and ground final booster cable end on Tractor away from Tractor battery.

**Warm-Up Period**

After starting a cold engine, let engine idle at slow speed to make sure all engine components are lubricated. In colder ambient temperatures, extended warm-up will be required to also warm hydraulic fluid and lubricate drive line components. Suggested warm-up period:

| Ambient Temp. | | Warm-Up Time |
|---|---|---|
| F° | C° | |
| 32° & up | 0° & up | 5 to 10 min. |
| 32° to 24° | 0° to -10° | 10 to 20min. |
| 24° to -2° | -10° to -20° | 20 to 30 min. |
| -2° & less | -20° & less | 30 or more |

*IMPORTANT: Improper warm-up can result in:*

- Severe engine damage
- Hydraulic pump seizure
- Drive line bearing /gear damage
- Sluggish steering /braking

**CAUTION: Make sure parking brake is securely applied and all controls are in neutral while warming unit. Do not leave unit unattended.**

**Operator Observations**

Constant attention should be paid to the following points during operation:

- Engine oil pressure lamp will come on in case of low engine oil pressure. Stop engine immediately.
- Battery charge lamp will come on if battery is not being charged properly. Stop engine and investigate cause.
- Coolant temperature gauge needle will indicate H(hot) in case of over-heated engine. Stop engine, allow to cool, and investigate cause.
- Fuel level should not be allowed to(E) empty as running out of fuel may result with need to bleed air from fuel system.

**CAUTION: DO NOT attempt to service Tractor with engine running or hot. Allow to cool.**

*NOTE: Refer to "Trouble-Shooting" when defect is indicated, to assist locating problem.*

**Starting Circuit Operation**

Tractor is equipped with a switch system to protect the operator.

To permit Tractor to be started (starter motor to operate), ALL the following is required:

- Range Gear Shift Lever in Neutral.
- PTO clutch lever in disengage position.

**WARNING: Neutral switch system is installed for your protection. DO NOT bypass or modify the neutral start switch system. If the neutral start switch system does not operate properly as detailed above, contact your Dealer immediately and have the system repaired.**

Periodically check that the starting circuit is functioning correctly. The procedure for this is check list as follows.

1. Check that there are no bystanders around the tractor should it inadvertently start.
2. Depress the brake pedal. Attempt to start the tractor with the range gear and PTO in neutral position. The Tractor should start.
3. Depress the brake pedal. Attempt to start the Tractor with the range gear engaged and the PTO in ON position. The Tractor should NOT start.
4. Depress the brake pedal. Attempt to start the Tractor with the range gear in neutral and the PTO engaged. The tractor should NOT start.

If starting system is not working correctly it must be repaired immediately by your Dealer.

## GROUND SPEED SELECTION

### Hydrostatic Transmission

**FIG. 32:** The hydrostatic transmission provides variable speed control in forward or reverse.

**Range shift lever, 1**, provides two major changes in ground speed.

*IMPORTANT: STOP tractor whenever shifting range shift lever 1.*

**Hydrostatic control pedal, 2**, controls forward travel speed. As pedal is progressively pushed down, a corresponding increase in ground speed will be noticed. When released, pedal will return to neutral position.

Reverse travel speed is obtained by pushing the rearward portion of the pedal downward. As pedal is progressively pushed down, a corresponding increase in ground speed will be noticed. When released, pedal will return to neutral position.

*IMPORTANT: For optimum operation, keep engine speed above 2600 rpm whenever operating the Hydrostatic control pedal.*

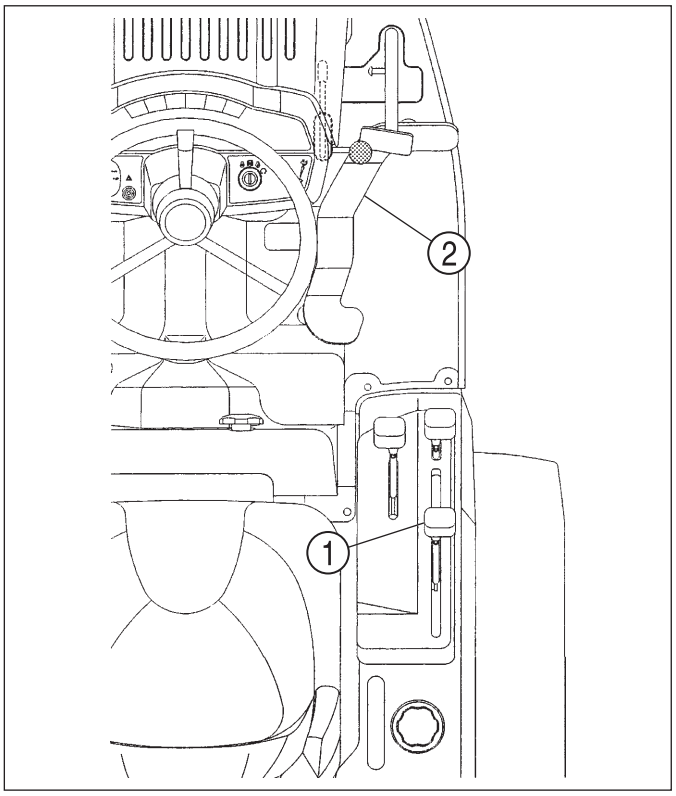



**FIG. 32**

**FIG. 33:** Arrangement of gear with appropriate ground speeds, in order from slow to fast, are shown in the chart at right.

*NOTE: Ground speed indicated at 2600 engine rpm with 26 x 12.00 - 12 agriculture type rear tires and with 26 x 12.00 - 12 turf type rear tires.*

| SHIFT POSITIONS | TXG23 | | | |
|---|---|---|---|---|
| Range | MPH | KPH | MPH | KPH |
| Tire | Agri | | Turf | |
| | Forward | | | |
| 🐢 | 0–4.29 | 0–6.90 | 0-4.18 | 0-6.72 |
| 🐇 | 0-9.13 | 0-14.70 | 0-8.90 | 0-14.33 |
| | Reverse | | | |
| 🐢 | 0-3.22 | 0-5.18 | 0-3.13 | 0-5.04 |
| 🐇 | 0-6.85 | 0-11.03 | 0-6.68 | 0-10.75 |

CHART

**FIG. 33**

## STOPPING TRACTOR

Reduce engine speed and apply brake pedal.

Position range shift lever in neutral position.

Depress brake pedal firmly and apply parking brake lock.

**CAUTION: Never start traveling with the parking brakes applied, brake performance will be effected as they heat up.**

Allow engine to idle several minutes to allow even cooling. Then turn main switch to "off" shutting off engine. Lower three-point hitch and remove key from ignition.

**FIG. 34:** If engine fails to stop when main switch is turned off, open left side cover and push inward on end of solenoid boot, 1, until engine stops. Consult your Dealer when manual operation of engine shut-off device is necessary.

**CAUTION: Before leaving Tractor unattended, make sure brake is locked, rear mounted implement is lowered to the ground and key is removed from the ignition.**

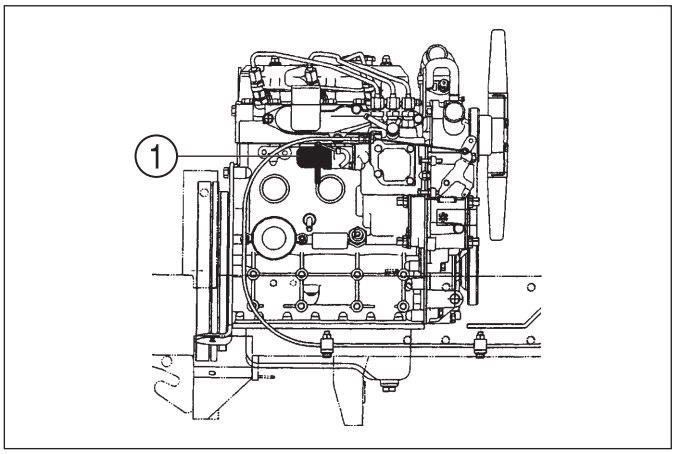



**FIG. 34**

**FIG. 35:** Always park Tractor on level area whenever possible. If hillside parking is necessary, securely block both rear wheels as shown.

*NOTE: When stopping or parking Tractor, be sure brake is locked.*

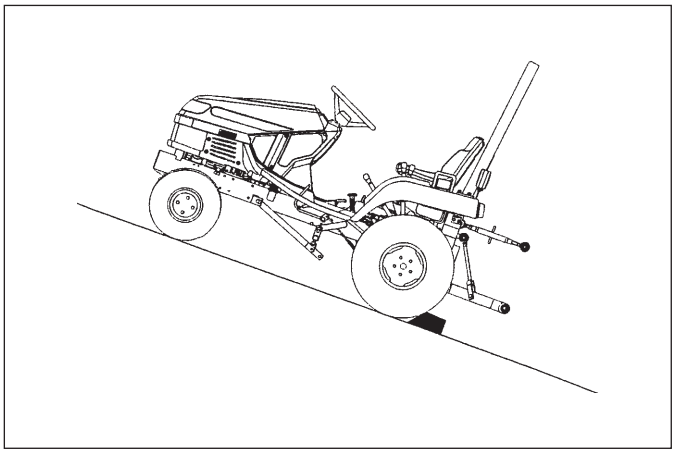


**FIG. 35**

**DIFFERENTIAL LOCK**

**FIG. 36:** Differential lock pedal, 1, should only be depressed when required as steering ability is greatly reduced.

To engage differential lock, allow rear wheel movement to stop. Depress lock pedal.

To disengage differential lock, release differential lock pedal. Lock pedal should normally return to the "off" position;

*NOTE: On occasion, differential lock pedal may remain, engaged due to torque difference exerted by rear wheels, in this case, depress the HST pedal while Tractor's slowly in motion to release the pedal.*

**CAUTION: DO NOT use differential lock on hard surfaces or when transporting unit. DO NOT, engage with rear wheel(s) spinning as severe damage may result. DO NOT attempt to steer with the defferential lock engaged.**

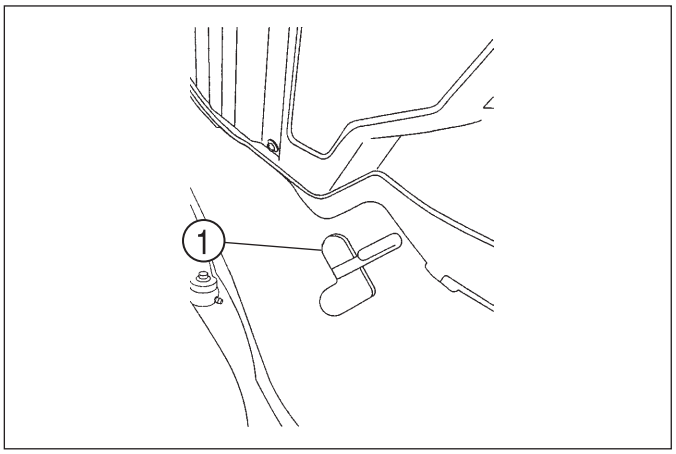



**FIG. 36**

**FOUR-WHEEL DRIVE (4WD model)**

**FIG. 37:** Four-wheel drive models have a mechanically driven front axle. Engagement and disengagement of front drive axle is controlled by lever, 1, on right side of tractor.

*IMPORTANT: Prior to engaging or disengaging 4WD, Tractor stopped.*

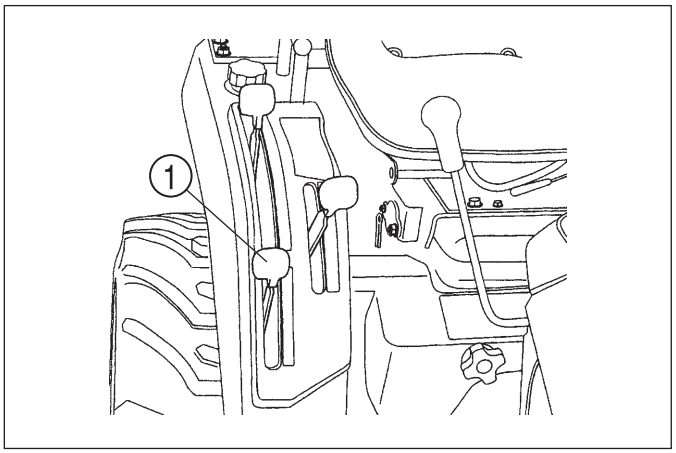



**FIG. 37**

**FIG. 38:** When front axle is engaged, ground speed of front tires is slightly faster than the ground speed of rear tires. This is to assist steering when four-wheel drive is selected.

For this reason, front axle must be disengaged when Tractor is transported of operated on a hard, dry surface. Failure to do so will result in rapid wear of front drive tires and possible driveline damage.

*IMPORTANT: Always disengage front drive axle when operating in, conditions with minimal wheel slippage (DRY OR HARD SURFACES). If tire replacement is neccessary, identical replacements must be installed to maintain correct front/rear axle ratio.*

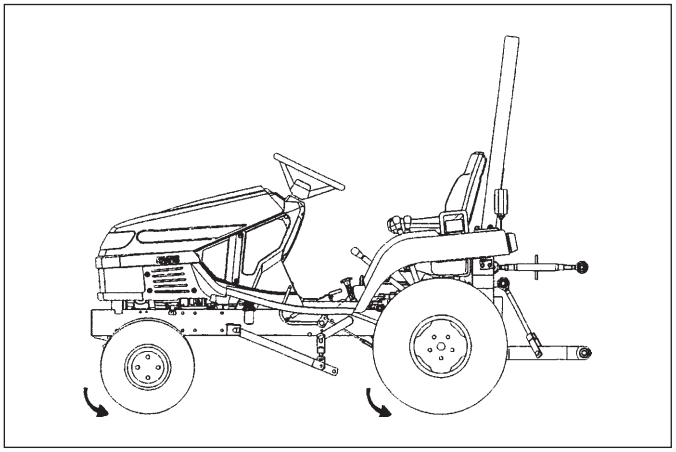


**FIG. 38**

## POWER TAKE OFF (PTO)

**WARNING: PTO shafts and PTO driven implements can be extremely dangerous. Observe the following important points:**

**DO NOT operate tractor without a PTO cap installed. The cap protects people from injury as well as the splines from damage.**

**Before attaching, adjusting or working on PTO driven Implements, disengage the PTO, stop the engine and remove the key. DO NOT work under raised equipment.**

**Before engaging a PTO-driven implement, ALWAYS carefully raise and lower the implement using Position Control. Check clearances, PTO shaft sliding range and articulation.**

**Ensure that all PTO safety shields are In place at all times.**

**Ensure all PTO driven implements are in good condition and conform to current standards.**

**NEVER step across any driveline.**

**DO NOT use the tractor drawbar or the implement drawbar as a step.**

**NEVER use the driveline as a step.**

**NEVER wear loose fitting clothes.**

**Keep at least your height away from a rotating driveline.**

**Rear PTO Shaft**

**FIG. 39:** A six-spline 1 3/81(35mm) PTO shaft, 1, is provided at rear of Tractor to provide power for mounted and other PTO driven equipment as required.

A protective cover is positioned over shaft splines when not in use.

Normal rear PTO shaft operating speed of 540 rpm is attained at 2532 engine rpm.

*IMPORTANT: When rear PTO is used with three-point mounted equipment, it may be necessary to remove drawbar, 2, at rear of Tractor.*
*Some types of mounted equipment, when lowered, may allow PTO shaft to contact drawbar.*

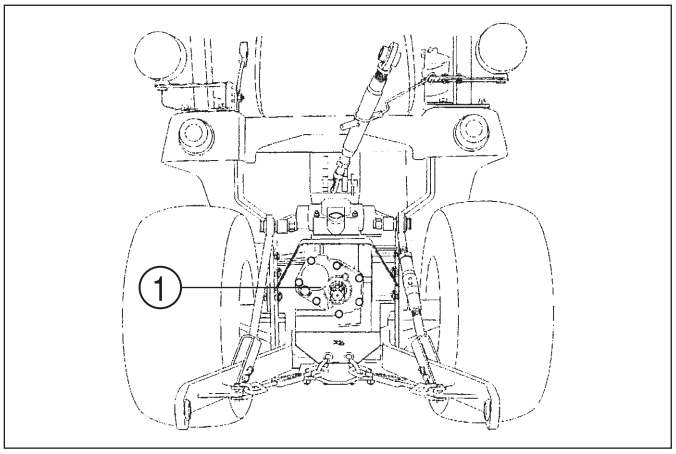



**FIG. 39**

**FIG. 40:** Implement drive shaft shown connected to Tractor rear PTO shaft.

**CAUTION: Make sure all PTO shields are installed on Tractor and equipment. Before cleaning or adjusting Tractor or PTO driven machine, SHUT OFF ENGINE AND DISENGAGE PTO.**

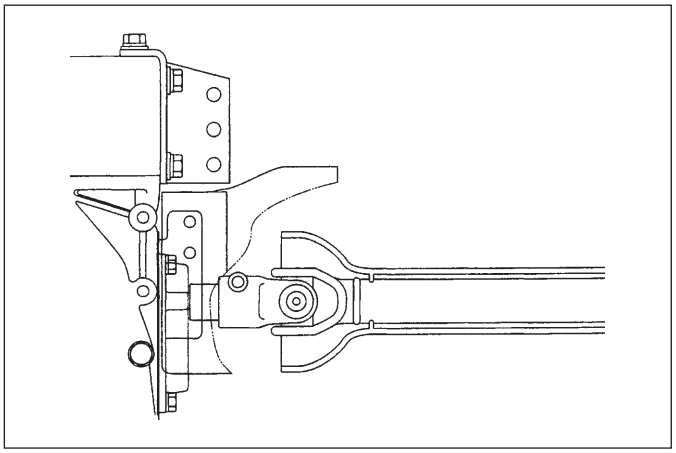


**FIG. 40**

**Mid PTO Shaft**

**FIG. 41:** Mid PTO, 1, is forward-facing shaft located at underside of Tractor. The mid PTO is used to operate certain mid or front-mounted implements. A1"(25.4mm) fifteen spline shaft is used.

Mid PTO cover must be installed when use of mid PTO is not required.

2000 rpm @ 2476 engine rpm

**CAUTION: Make sure all PTO shields are installed on Tractor and equipment. Before cleaning or adjusting Tractor or any PTO driven machine, SHUT OFF ENGINE AND DISENGAGE PTO.**

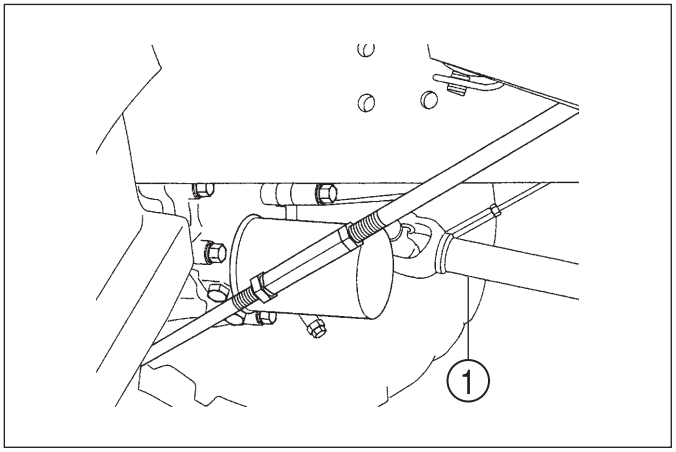



**FIG. 41**

**PTO Operating Controls**

**FIG. 42:** Rear PTO and mid PTO are both controlled by PTO clutch lever, 1.

Rear PTO selector lever, 2, is used to select position of rear PTO drive gears.

**To select rear PTO** - Make sure PTO clutch lever, 1, is OFF and then move rear PTO selector lever, 2, rearward to "540" position to engage gear.

**To engage PTO** - Move the PTO clutch lever forward.

*NOTE: When the PTO clutch is engaged, reduce engine speed.*

**To disengage PTO** - Move the PTO clutch lever backward.

Mid PTO selector lever, 3, is used to select position of mid PTO drive gears.

**To select mid PTO** - Make sure PTO clutch lever, 1, is OFF and then move mid PTO selector lever, 3, backward to "2000" position to engage gear.

**To engage PTO** - Move the PTO clutch lever forward.

*NOTE: When the PTO clutch is engaged, reduce engine speed.*

**To disengage PTO** - Move the PTO clutch lever rearward.

*NOTE: Rear and Mid PTO can be operated at the same time or independent of each other.*

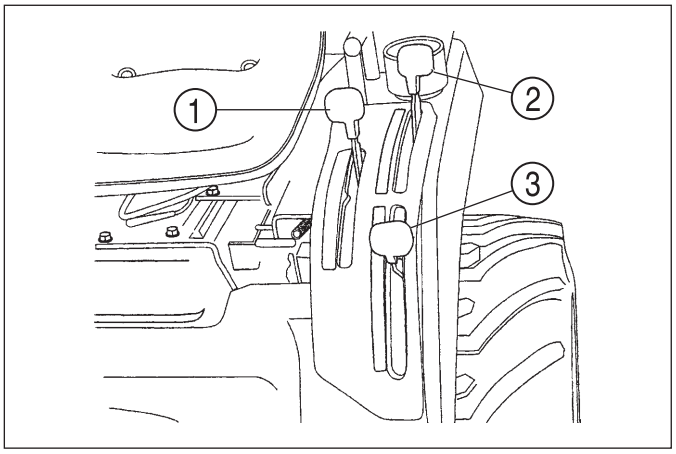



**FIG. 42**

**THREE-POINT HITCH (4WD model)**

Three-point hitch combines Tractor and implement into one working unit. Implement position and raising are controlled hydraulically. In addition, implement weight and loads impose downward pressure at Tractor rear wheels to increase traction.

**Hitch Controls**

**FIG. 43:** Control quadrant, to right of operator's seat, controls the system to provide the following hitch control functions:

Position Control - Maintains hitch position at constant height in relation to the Tractor. As position control lever, 1, is moved backward, hitch and implement are raised. Moving lever forward will lower hitch to selected position. Each lever setting provides a specific hitch and implement position.

**CAUTION: Use position control lever, 1,when attaching or detaching implements.**

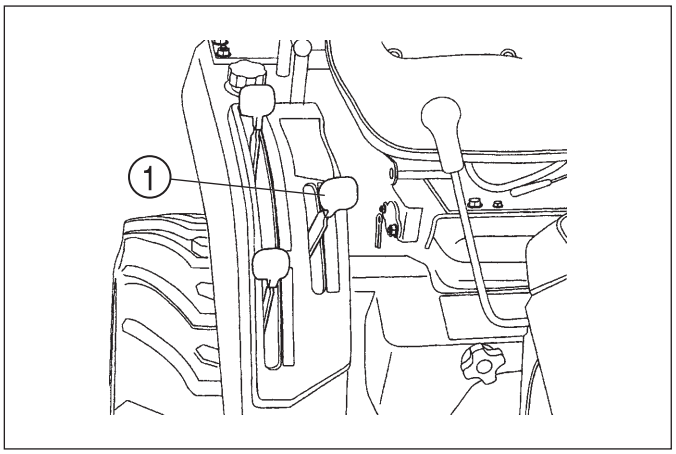



**FIG. 43**

**FIG. 44:** Lowering Rate Control - Knob, 1, controls "rate of drop" of three point linkage and implement. Turn knob clock wise to slow drop rate, counterclockwise to increase drop rate. Turning knob fully clockwise will lock implement in raised position.

**CAUTION: When working on or around mounted implements, always lower to ground prior to work. If implement must be raised, always block implement and lower links securely.**

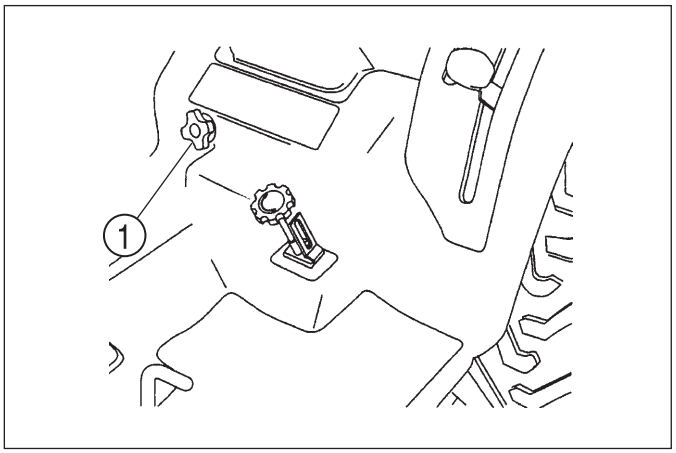



**FIG. 44**

**THREE - POINT HITCH (2WD model)**

The 2WD model is not equipped with the three-point hitch. As position control lever, 1, is moved rearward, mower deck linkage are raised by hydraulic cylinder. Moving lever forward will lower linkage to selected position.

**Rear Linkage (4WD model)**

**FIG. 45:** Linkage consists of several major components for implement attachment and operation:

**Lower Links, 1** - Primary attaching points to lower implement pins.

**Lift Rods, 2** - Connect lower links to hydraulic lift arms for raising/lowering of lower links. The lift rod connected to the right lower link has provisions for leveling the implement (side to side).

**Stabilizers, 3** - Reduce side sway of implement.

**Top Link, 4** - Adjustable, turnbuckle type to level implement (front to rear).

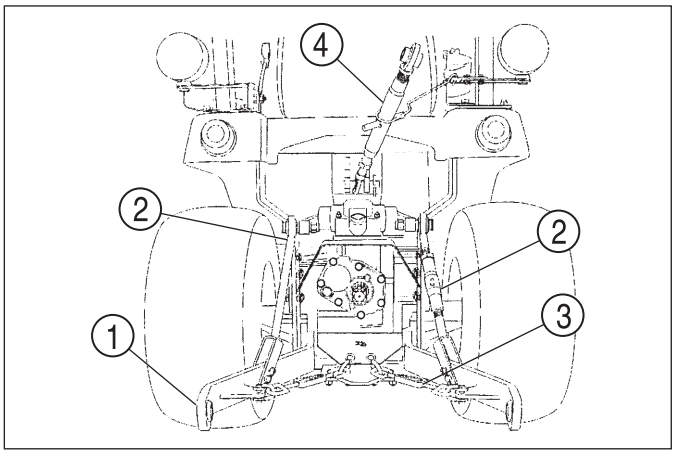



**FIG. 45**

**Attaching Implements (4WD model)**

**CAUTION: Always use POSITION CONTROL to attach/detach implements to provide precise control of hitch.**

**FIG. 46:** Back Tractor to implement, centering Tractor with implement hitch frame.

Raise or lower hitch using position control lever, 1, and align left lower link end with corresponding implement attaching pin.

Lock the brakes, shut off engine and remove key.

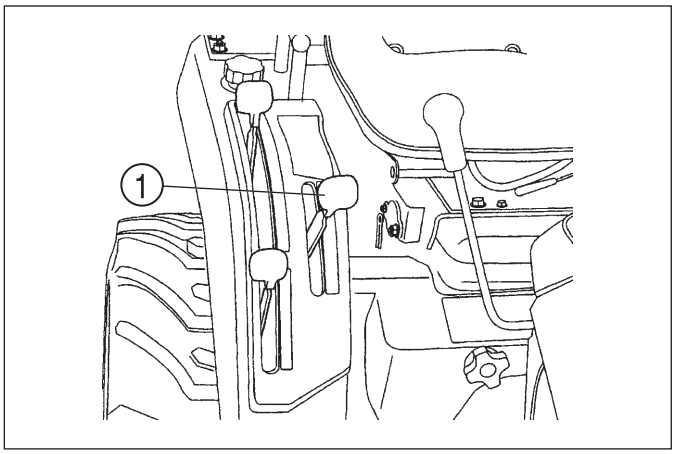



**FIG. 46**

**FIG. 47:** Side ball end of left lower link, 1, over implement pin and secure with linch-pin.

Adjust height of right lower link using leveling turnbuckle, 2. Attach and secure right lower link, 3, to implement with linch-pin.

Attach top link, 4, to top of implement hitch frame using pin supplied with Tractor. Rotate center barrel section of top link, to lengthen or shorten it, and level implement from front to rear.

After the implement is attached, it can be readjusted for level operation using leveling crank and top link. Secure all adjustments.

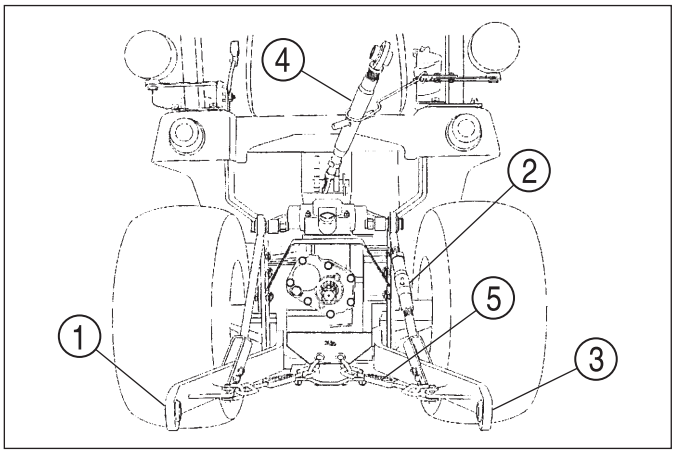



**FIG. 47**

*IMPORTANT: With some mounted implements, it will be necessary to remove drawbar at rear of Tractor to permit implement to be raised and lowered without obstruction.*

Certain implements require minimal side-play. Stabilizers, 5, at each lower link should be evenly adjusted to reduce side-play to desirable level. Do not remove all side-play as lower link damage may result.

*NOTE: The amount of side-play (stabilizer looseness) is dependent upon implement and type of operation.*
*Normally 2"(50mm) of total side movement is desired, 1"(25mm) to each side of Tractor centerline.*

**Using Position Control (4WD model)**

**FIG. 48:** Type of Work - Attaching/detaching implements and other operations requiring implement to be kept at constant height above ground. Also used with implements equipped with gauge (support) wheels.

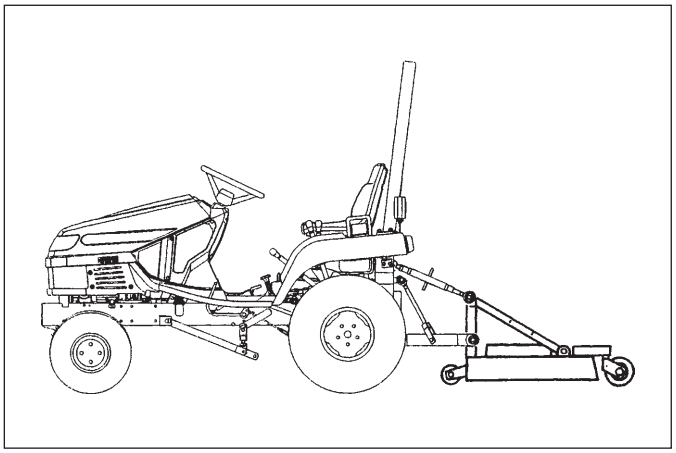


**FIG. 48**

**FIG. 49: Lever Positions** - Use position control lever, 1, to adjust hitch and implement position.

**To Begin Work** - Align Tractor and implement in field and move position control lever, 1, forward (toward DOWN). Adjust implement height using position control lever as desired. Note location of lever.

**When Turning** - Move position lever, 1, rearward (toward UP) to raise implement. Finish turning and return lever to previously set position to resume operation.

**To Finish Work and Transport** - Move position control lever, 1, fully rearward in quadrant.

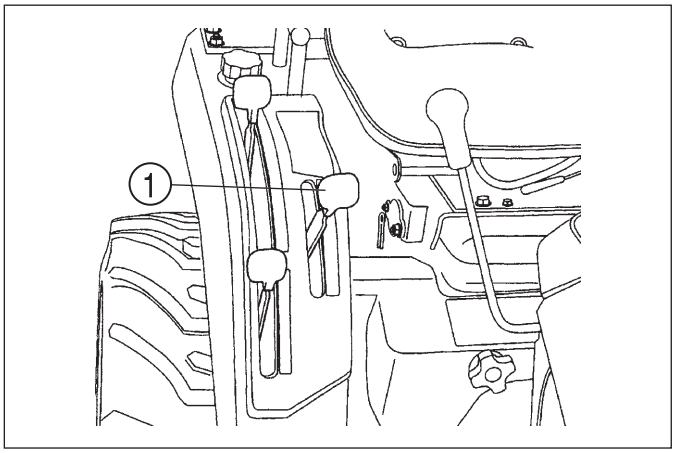



**FIG. 49**

**Fig. 50:** When using different weights of implements, "rate of drop" of three point linkage and implement can be controlled with the "Lowering Rate Control" Knob, 1.

Turn knob clock wise to slow drop rate, counterclockwise to increase drop rate. Turning knob fully clockwise will lock implement in raised position.

**CAUTION: When using mounted implements with the PTO driveline, make sure:**

**PTO drive shaft has minimum 51mm(2") engagement of telescoping sections, at all hitch/implement positions.**

**Hitch height during raising does not bind drive shaft universal joints due to extreme drive shaft length,**

**PTO drive is disengaged during transport.**

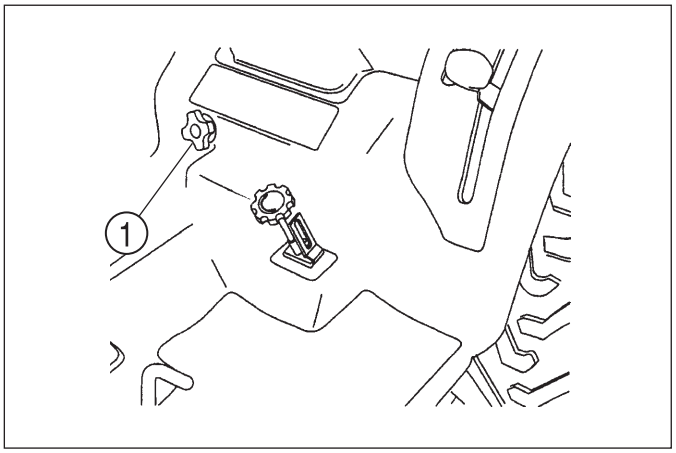



**FIG. 50**

**Detaching Implements (4WD model)**

**CAUTION: Always use POSITION CONTROL to attach/detach Implements to provide precise control of hitch.**

**FIG. 51:** Select a level area to detach and store the implement. Lower implement to ground by moving position control lever to DOWN. If necessary, adjust leveling turn buckle on right lift rod to level implement on ground.

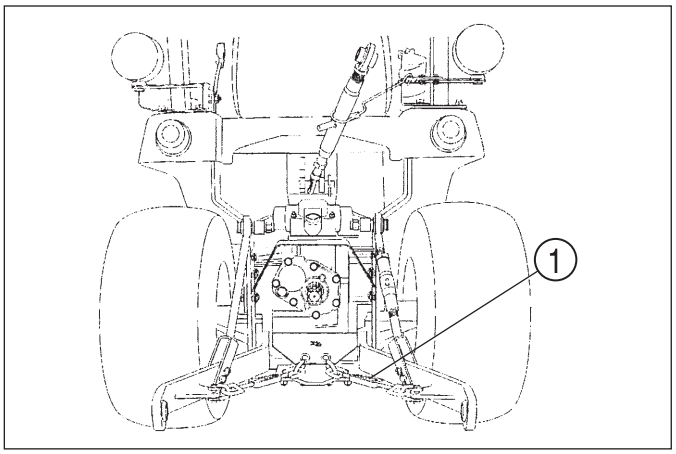



**FIG. 51**

Shut off engine, securely lock brakes and remove key from Tractor.

Disconnect implement PTO drive shaft (as applicable). Detach top link from implement and place in storage position on Tractor by engaging spring on top link in slot in rear center panel.

*NOTE: Lengthening or shortening of top link may be required to permit disconnection from implement.*

Disconnect lower links from implement pins.Make sure lower links stabilizers, 1, are readjusted to prevent tire interference.

Take position in operator's seat, start engine and drive tractor clear of implement.

**Cutting Height Control Knob**

**FIG. 52:** Cutting height control knob, 1, adjusts the cutting height for mid mount mower deck. Turning knob clockwise will drop the cutting height of mower deck and counterclockwise will raise the cutting height of mower deck.

**CAUTION: When operating without mid mount mower deck, the linkage for mower deck must be in fully up position by using position control lever. Also, Turn the cutting height control knob to counterclockwise and to set highest position.**

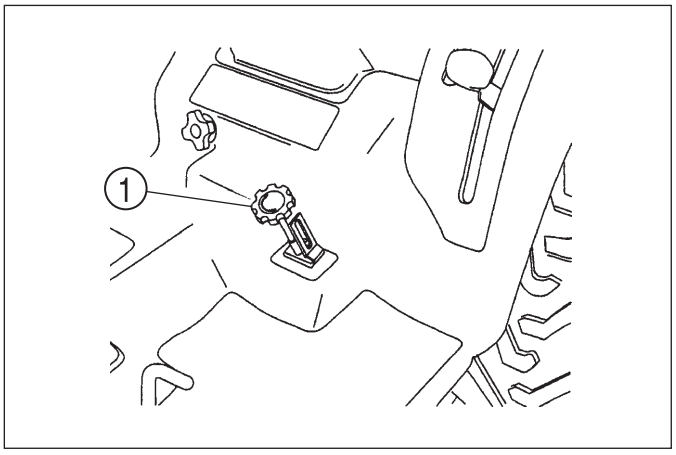



**FIG. 52**

## ROLL OVER PROTECTIVE STRUCTURE (ROPS)

**FIG. 53:** This tractor is equipped with a roll-over protective structure (ROPS). Seat belts must be worn.

**WARNING: If ROPS is damaged during operation, do not weld, bend or straighten. Make sure all components are in correct working order to provide the intended protection.**

Only original bolts, or equivalent replacements, must be used and torque to correct torque value.

*NOTE: E4 Type does not have a seat and seat belt. Consult your iseki dealer.*

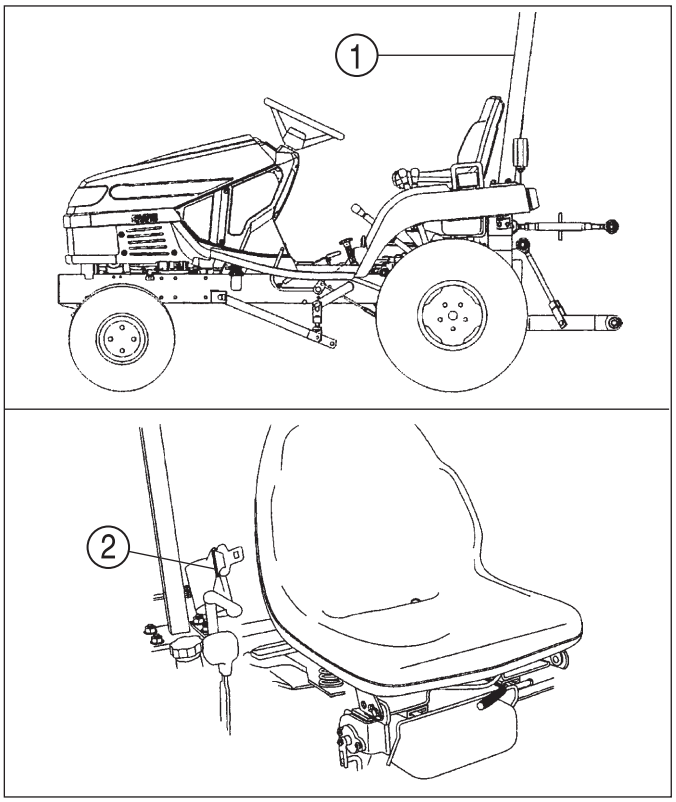



**FIG. 53**

Carefuly lift lower ROPS frame legs (3) into position on top of fenders (4).

Install eight M16 nuts (6) with spring washers to secure the lower ROPS frame to the fenders.

Tighten the ROPS securing hardware.

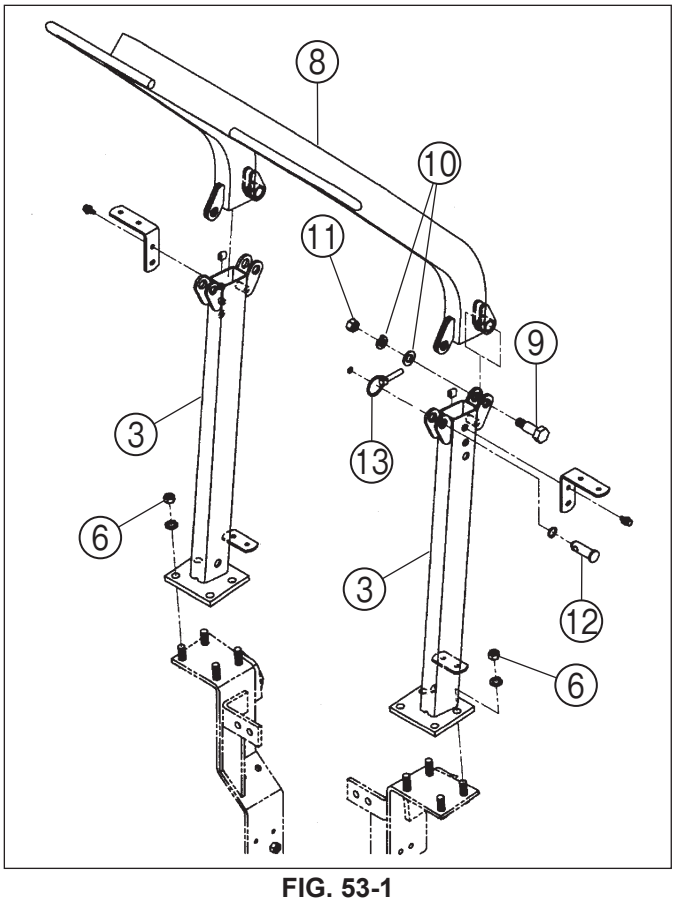



**FIG. 53-1**

**FIG. 53-2:** Position the upper frame (8) on top of lower ROPS frame. Install shoulder bolts (9) at the rear of the frame with washers (10) and nuts (11) to the inside. Install clevis pins (12) and lynch pins (13) at the front of the frame, with lynch pins to the inside.

*NOTE: Clevis pins and lynch pins are each fitted with O-ring to prevent rattling. In addition, a pushing bolt (14) is installed to reduce noise.*

Tighten all ROPS hardware at this time, using the following torque chart:

| Location | Bolt Diameter | Nm | lb ft |
|---|---|---|---|
| ROPS frame hinge bolts | 16mm | 98 to 118 | 72 to 87 |
| Bracket to upper frame | 12mm | 88 to 108 | 65 to 80 |
| Lower ROPS frame | 16mm | 196 to 230 | 145 to 170 |

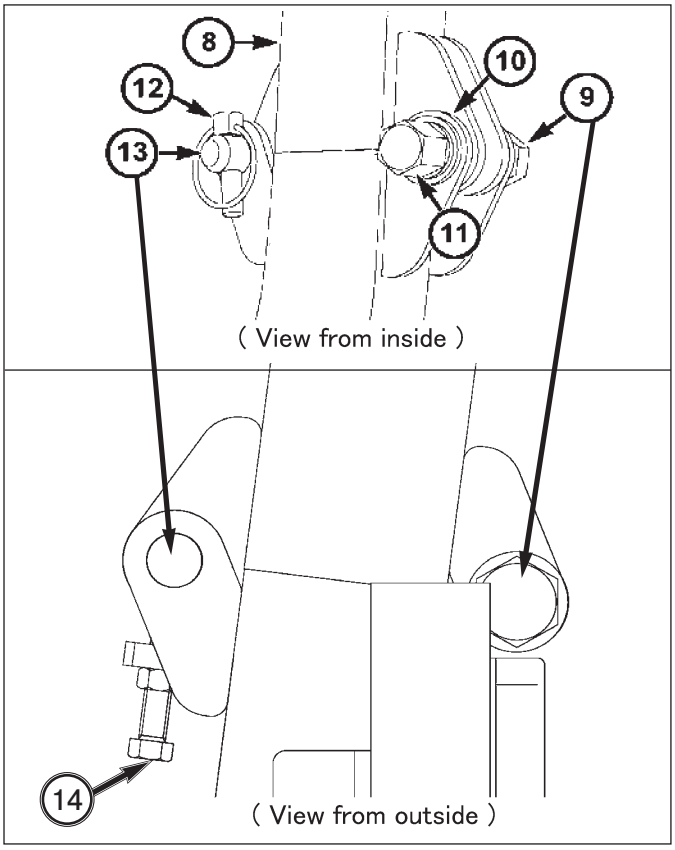



**FIG. 53-2**

**EXTERNAL AUXILIARY HYDRAULICS (Accessory)**

Auxiliary hydraulics can be Dealer installed to operate implement requiring external hydraulics source for operation. Kits are available two-spool (two hydraulic circuit)

**Fig. 54 & 55**: Control lever, 1, controls implement raising or lowering when first set of remote couplers are used. Control lever, 2, controls implement when second set of remote couplers are used (two-spool kit only).

Control lever s are spring-loaded to center neutral position from normal raise or lower positions.

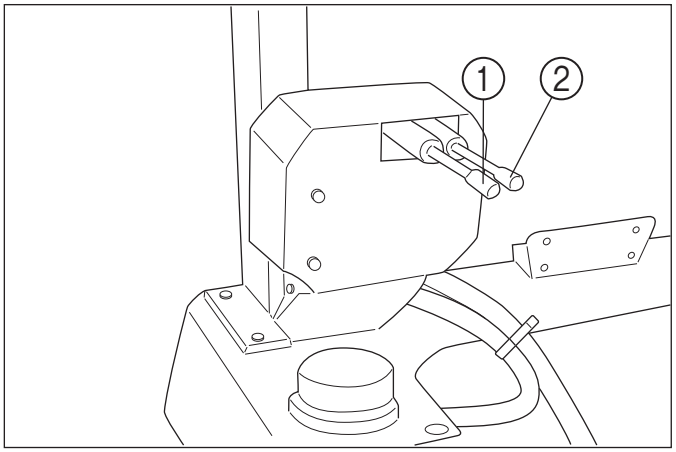



**FIG. 54**

Remote couplers are located at rear of the tractor, above three-point hitch. Coupler set, 3, corresponds with control lever, 1, coupler set, 4, with control lever, 2.

Implement hoses must be connected to each coupler set so when respective control lever is pulled rearward implement raises and when pushed forward implement lowers. Male coupler tips (on implement hoses) must be compatible with tractor couplers and must also be inserted fully and locked into tractor couplers to operate correctly.

**CAUTION: Always lower implement to ground, shut off engine and relieve system pressure (by operating control levers with engine off) before connecting or disconnecting implement hoses.**

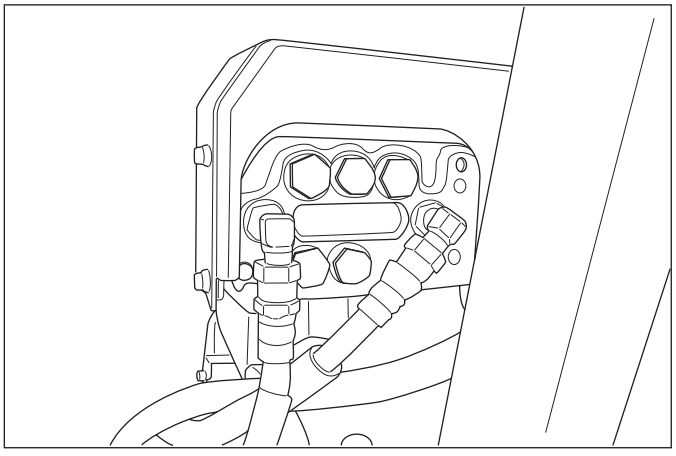


**FIG. 55**

# MAINTENANCE & ADJUSTMENT

**SPECIFICATIONS & CAPACITIES**

**Engine Oil**

Use ISEKI UTH (Shell DONAX TD), or equivalent in the appropriate SAE viscosity. Oil must meet of exceed; MILL-46152 requirements, API Service "CC".

Capacity(Crankcase and filter) ..... 2.6 liters

Recommended Viscosity:

78F (25C) and Above ..... SAE 30 W, 10W - 30

32- 78 (0-25C) ..... SAE 20 W, 10W - 30

Below 32F (0C) ..... SAE 10 W, 10W - 30

15W-40 may be used in ambient temperatures above -10C

Recommended Change Intervals:

Initial Oil and Filter Change ..... 50 hours

Oil and Filter Change, Thereafter ..... Every 150 hours

**Engine Coolant**

Freezing Protection (Original Factory Fill) ..... -34C

Recommended Coolant ..... 50/50 mixture ethylene glycol and water

System Capacity ..... 4.6 liters

**Fuel Tank**

Capacity ..... 21 liters

Fuel recommended, Above 4C ..... No.2 or No.2-D

Fuel recommended, Below 4C ..... No.1 or No.1-D

**Transmission & Differential Housing (Including Hydraulic System)**

Capacity - liters: ..... 11.0 liters

Recommended Lubricant ..... Shell DONAX TD or equivalent

Recommended Change Interval: ..... First 50 hours, every 300 hours

**Front Axle (4-WD Only)**

Capacity 4.2 U.S. qts (4.0 liters)

Recommended Change Lubricant ..... SAE 80 GL-4

Recommended Change Interval: ..... First 50 hours, every 300 hours thereafter

**Grease Fittings**

Grease Interval (All Fittings) ..... Eveyr 50 hours

Recommended Grease ..... Lithium base grease No.2

*NOTE: Change intervals stated above are for normal usage. Due to adverse operating conditions that may be experienced (extremely dusty of muddy), change intervals may need to be more frequent.*

## PERIODIC MAINTENANCE SCHEDULE

| Recommended Interval, Each | | | | | | Item to Check | Action Required | Fig. No |
|---|---|---|---|---|---|---|---|---|
| Day | 50 hr. | 150 hr | 200 hr | 300 hr | Year | | | |
| ● | | | | | | All controls, switches | Inspect and repair | |
| ● | | | | | | All fasteners, hardware | Check and tighten | |
| ● | | | | | | Hoses, fan belt, wiring | Inspect and repair | |
| | ● | | | | | Grease fittings | Lubricate | 56 |
| ● | | | | | | Engine oil level | Check and replenish | 58 |
| | (*) | ● | | | | Engine oil & filter | Replace | 59 |
| ● | | | | | | Transmission oil level | Check and replenish | 60 |
| | (*) | | ● | | | Transmission oil & filter | Replace and clean | 61-62-63 |
| | ● | | | | | Front axle oil level | Check and replenish | 64 |
| | (*) | | | ● | | Front axle oil | Replace | 64 |
| ● | | | | | | Air screens & radiator | Clean off debris | 65 |
| ● | | | | | | Radiator coolant level | Check and replenish | 65 |
| | | | | | ● | Radiator coolant | Drain, flush & replace | 66 |
| ● | | | | | | Fan belt tension | Check and adjust | 67-68 |
| ● | | | | | | Air cleaner dust ejector | Clean | 69 |
| | ● | | | | | Air cleaner element | Inspect, clean or replace | 70 |
| ● | | | | | | Fuel tank level | Fill | |
| ● | | | | | | Fuel filter sediment bowl | Inspect and clean | 71 |
| | | | | ● | | Fuel filter element | Replace and bleed | 72 |
| | ● | | | | | Battery & cables | Check, clean & tighten | 76-77 |
| | ● | | | | | Battery electrolyte level | Check and replenish | 78 |
| ● | | | | | | Light, flashers | Check and repair | 79-82 |
| ● | | | | | | Brake adjustment | Check and adjust | 85-86 |
| ● | | | | | | Tire pressure & condition | Check and adjust | 87 |
| ● | | | | | | Wheel bolt torque | Check and tighten | 88 |
| | | | | ● | | Front wheel adjustment | Check and adjust | 89 |
| ● | | | | | | Steering free-play | Check and repair | 90 |
| | | | | ● | | Front axle end-float | Check and adjust | |

Items marked (*) indicate initial service interval only. Subsequent (later) intervals marked " ● ". Intervals above are for normal usage. Severe operating conditions (wet, dusty, etc.), or when previous servicing has indicated need for more frequent action, intervals may need to be more often.

## LUBRICATION/FILL POINTS

**FIG. 56:** General layout of lubrication, fill and drain locations on Tractor:

| Ref. | Description | Type |
|---|---|---|
| 1. | Crankcase | Engine Oil |
| 2. | Engine Radiator | Engine Coolant |
| 3. | Fuel Tank | Diesel Fuel |
| 4. | Rear Housing | Hydraulic Oil |
| 5. | 4WD Axle | Gear Oil |
| 6. | Brake Pivots | Grease |
| 7. | Leveling Turnbuckle | Grease |
| 8. | 2WD Axle | Grease |
| 9. | Linkage of Mower | Grease |
| 10. | HST pedal | Grease |

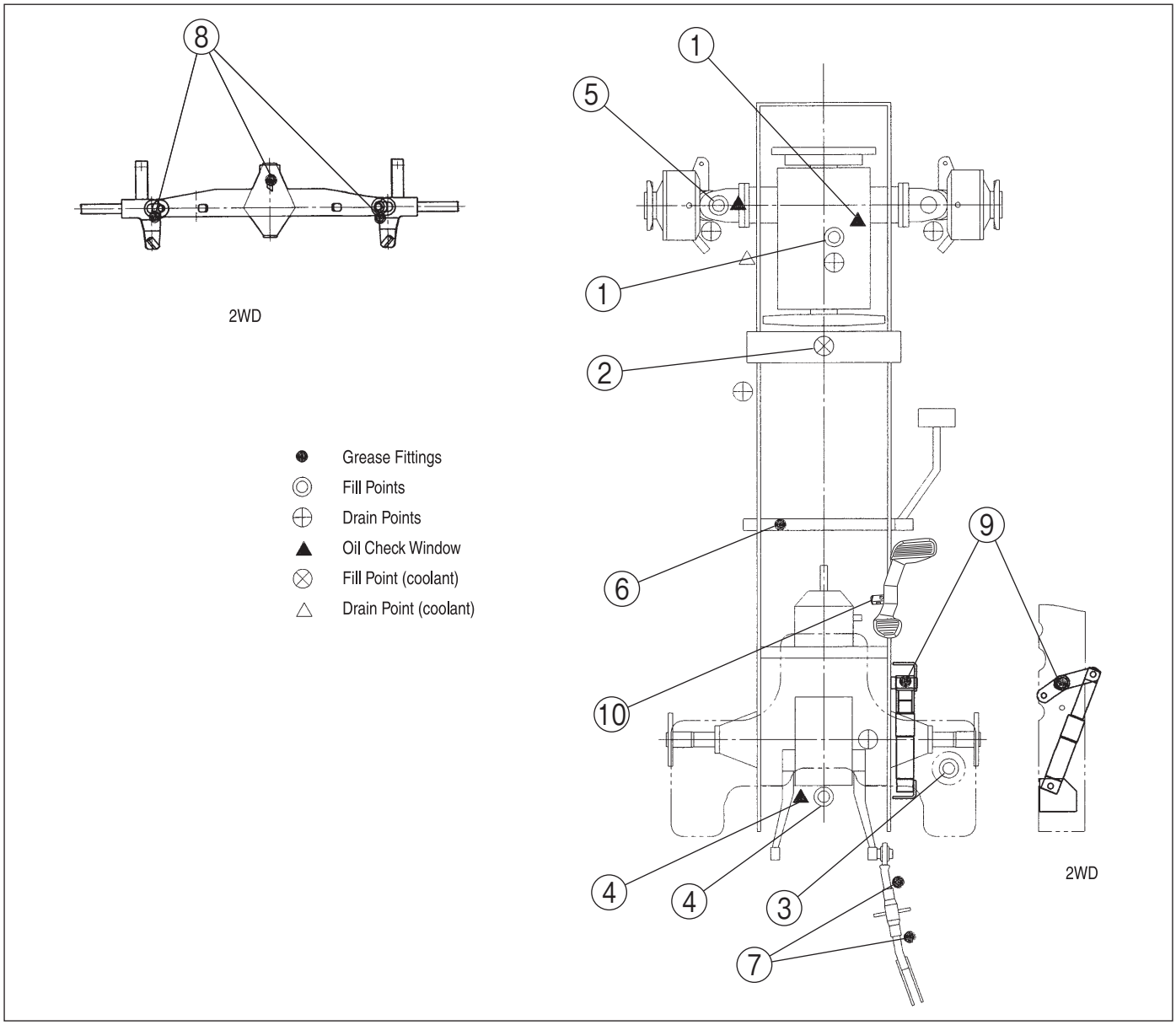



**FIG. 56**

**SERVICE ACCESS**

**CAUTION: Shut off engine before servicing Tractor. Engine hood must be installed and secure prior to operating unit.**

**FIG. 57:** To access radiator, battery and engine components, open the engine hood 1.
To open the hood: lift up the hood at the rear end (instrument panel side)

To close the hood: pull the hood down in reverse order of opening and push lightly on the rear end to lock.

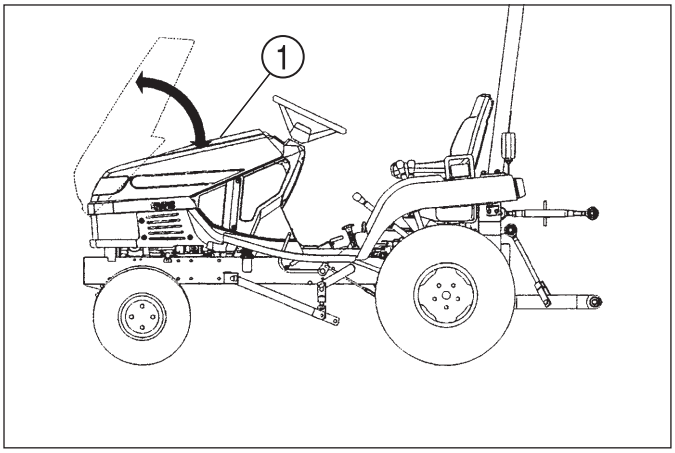



**FIG. 57**

## LUBRICATION DETAILS

### Grease Fittings

Lubricate all grease fittings (refer to fig. 56) every 50 hours of operation using multipurpose lithium base grease. Clean grease gun and fittings before and after greasing to prevent contamination from dirt.

*NOTE: When operating in muddy or extremely wet conditions, daily lubrication of fittings is recommended.*

### Engine Oil Filter

Engine oil and filter should be changed after first 50 hours of operation and then every 150 hours thereafter.

**FIG. 58: To Check Engine Oil Level** - Tractor must be parked on level ground with engine off. Pull out dipstick, 1, and check that oil level is between upper limit, F, and lower limit, L, on dipstick. Wipe off dip-stick, momentarily reinstall in engine and check oil level again.

Add oil through filler opening, 2, as required.

*NOTE: Add oil slowly to assist in venting air from crankcase.*

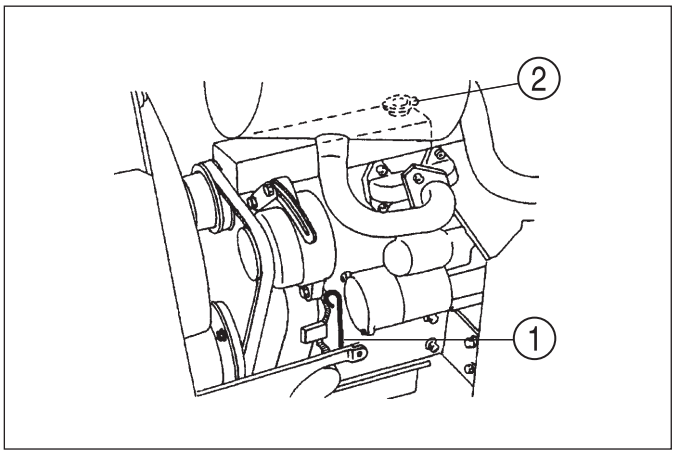



**FIG. 58**

**FIG. 59: To Change Engine Oil** - Operate Tractor until oil is adequately warmed. Remove drain plug, 1, from engine and allow all oil to drain. Reinstall drain plug and fill engine crankcase to upper limit on dipstick.

**To Replace Engine Oil Filter** - Unscrew element, 2, from engine and discard. Make sure original filter gasket has been removed. Lubricate new gasket on replacement element with clean engine oil. Screw on new element until gasket contacts adapter and then tighten element 1/2 turn more.

Clean spilled oil and refill crankcase. Start engine, check for leaks and replenish oil level as required.

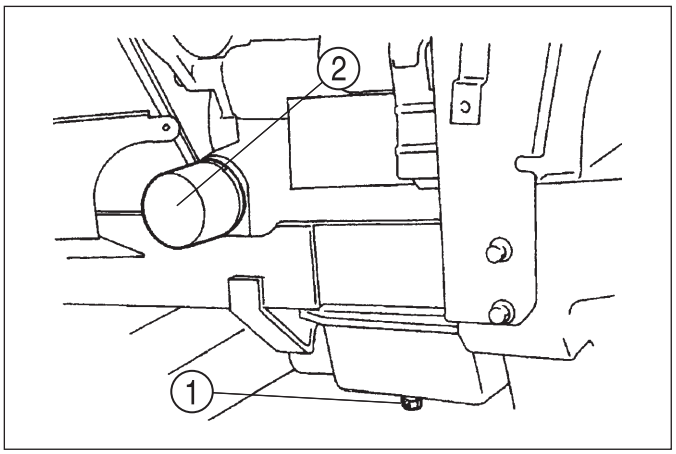



**FIG. 59**

**Transmission Oil & Filters**

Transmission oil lubricates transmission, center housing, and rear axles and also serves as hydraulic fluid.

Transmission oil and filter should be changed after first 50 hours of operation and then every 200 hours thereafter.

**FIG. 60: To Check Transmission Oil Level** - Park Tractor on level ground. Oil level should be indicated in oil level window, 1.

Oil level is replenished, as necessary, by removing filler plug, 2, and adding oil through filler opening.

*NOTE: Adding oil to transmission will also maintain correct oil level in center housing and rear axles.*

**FIG. 61: To Replace Transmission Oil** - Remove drain plug, 3, and completely drain oil from system.

*IMPORTANT: Completely lower three-point hitch prior to draining transmission oil.*

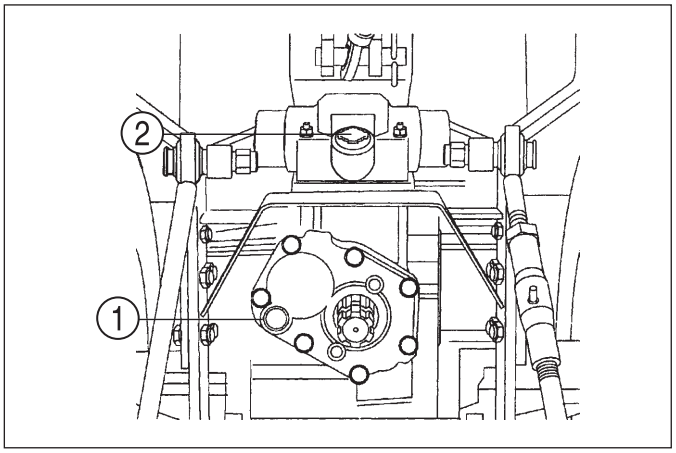



**FIG. 60**

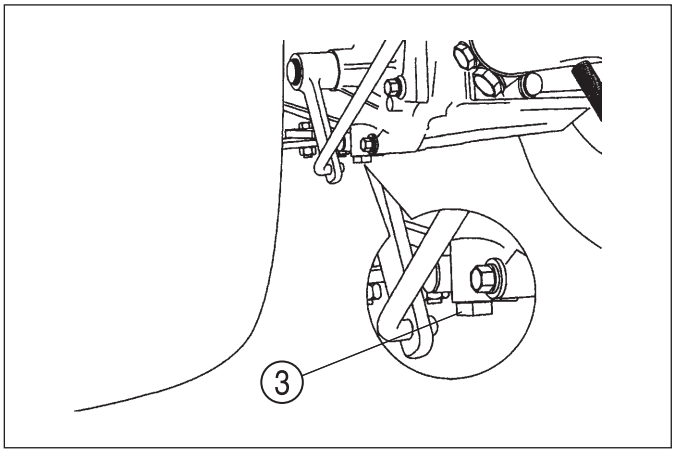



**FIG. 61**

**FIG. 62:** Always replace hydraulic oil filter while oil is removed. Carefully unscrew oil filter, 4, from its adapter, Use of a filter wrench may be necessary.

Clean filter adapter and lubricate gasket on replacement filter with clean hydraulic oil. Install new filter until gasket contacts adapter and tighten additional 2/3 turn, by hand. Do not use filter wrench to install filter.

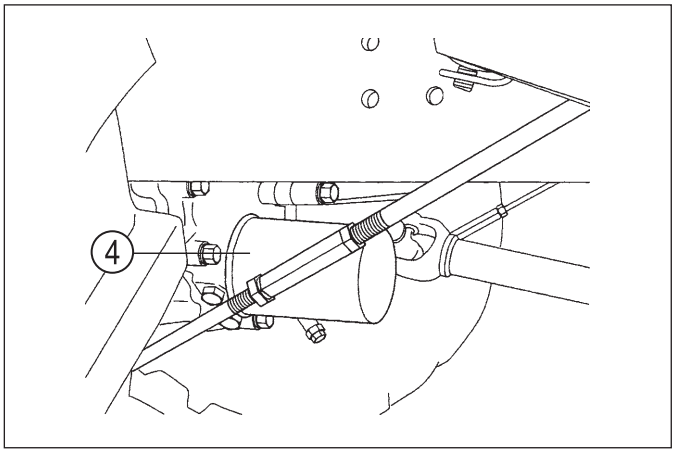



**FIG. 62**

**FIG. 63:** To clean transmission suction filter, 5, drain oil and remove left rear wheel. Unscrew filter and clean filter screen in solvent or kerosene, dry thoroughly and reinstall. Make sure "O" rings, 6, are not damaged.

Apply sealant to threads on drain plug (s) and reinstall. Refill system with clean oil to level as detailed.

Start Tractor and allow to idle several minutes while operating hydraulic controls, Shot engine off, lower the three-point hitch and recheck oil level. Replenish transmission oil as necessary. Check for leaks and correct as necessary.

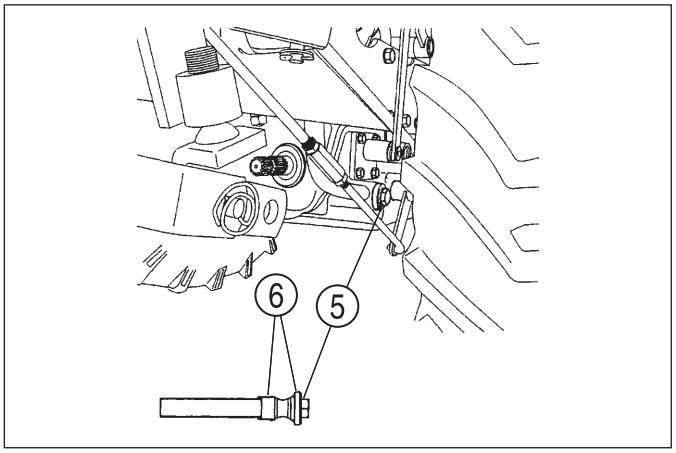



**FIG. 63**

**Front Axle Oil (4WD)**

The front drive axle has a common oil level for the front differential housing and each wheelreductionunit. The oil level should be checked every 50 hours of tractor opeation. The oil should be changed after first 50 hours of operation and every 300 hours of operation thereafter.

**Check Oil Level**

**FIG.64:** Park the tractor on level ground and shut off the engine. Remove oil filler,1, on the top of the left-hand front axle. Remove plug,3, on the top of final cause on both side to let the air inside the front axle go out. Check that the oil level is half of front axle houslng. When the oil level is lower, add oil until half level of front axle.

*Note*: *When the oil level is hard to be checked, insert a ruler to see the height to the oil level.*

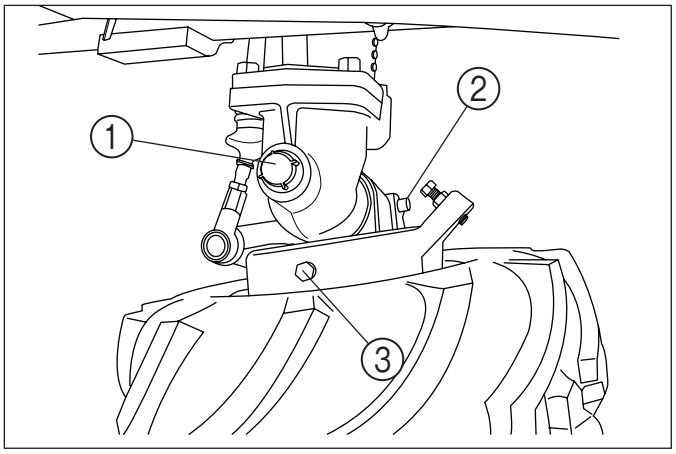



**FIG. 64**

**Change Oil**

Place a tray under the drain plug,2. Remove the drain plug and let all oil drain out from both wheel reduction units. Wrap the threads of the drain plug with sealing tape and screw it back in securely. Remove plug,3, on the top of final case on both side to let the air inside the front axle go out. Pour fresh gear oil through the oil filler,1.

**COOLING SYSTEM**

**CAUTION: DO NOT remove radiator cap when engine is hot.**

Rotate cap slowly to release pressure. Then cap can be safely removed.

**FIG. 65:** Cooling system is filled at factory with antifreeze solution to protect engine and radiator to -34°C. Coolant level should be maintained to 12mm below the filler neck opening, 1. Check coolant protection from freezing annually.

*NOTE: After adding coolant, start engine and operate until thoroughly warmed so coolant is mixed. Periodically check level of coolant in overflow reservoir to make sure level is located between marks when engine is cold.*

Periodically check condition of hoses, belt and clamps and tighten of replace as necessary.

Keep radiator, radiator screen and hood screens clean to permit maximum cooling.

*IMPORTANT: Use care when cleaning radiator to prevent cooing fin damage.*

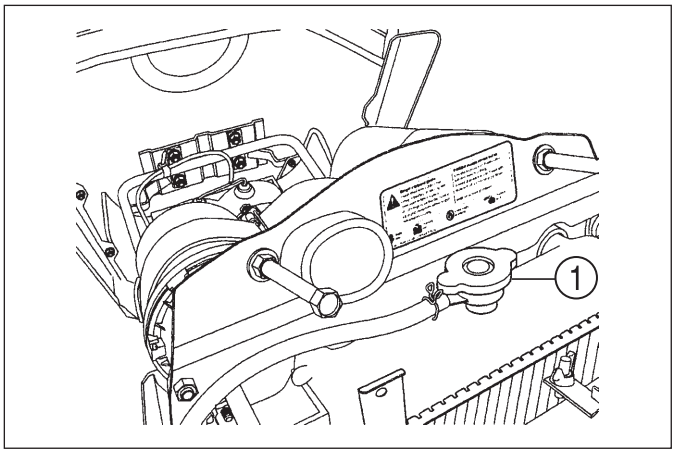



**FIG. 65**

**FIG. 66:** Drain cook, 2, will drain coolant from cylinder block and radiator. Drain cook is located on left side of engine. Coolant should be replaced if it becomes contaminated with rust or sludge. Loosening radiator cap will assist draining.

*NOTE: When coolant is replaced, flush inside of radiator and engine block with clean water.*

Radiator and engine must be drained if freezing temperatures are expected and cooling system is not filled with coolant having adequate protection from freezing.

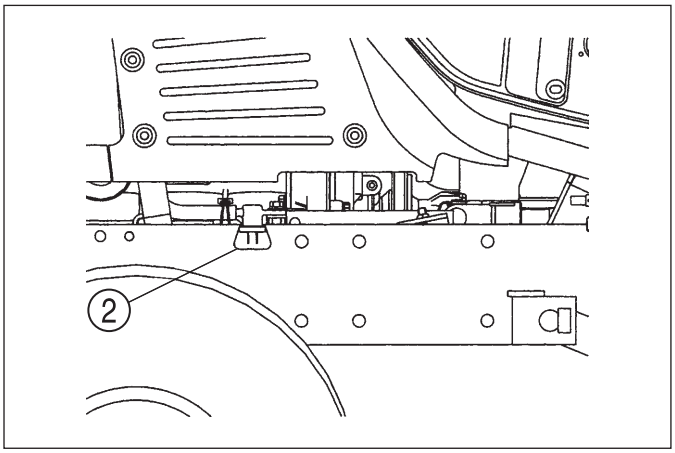



**FIG. 66**

**FIG. 67:** Correct fan belt tension helps to insure adequate coolant flow through cylinder block and radiator. Belt is correctly tensioned when belt deflection is approximately 13mm when thumb pressure is exerted at center of belt span.

**CAUTION: Due to muffler position, allow to cool before checking or adjusting fan belt tension.**

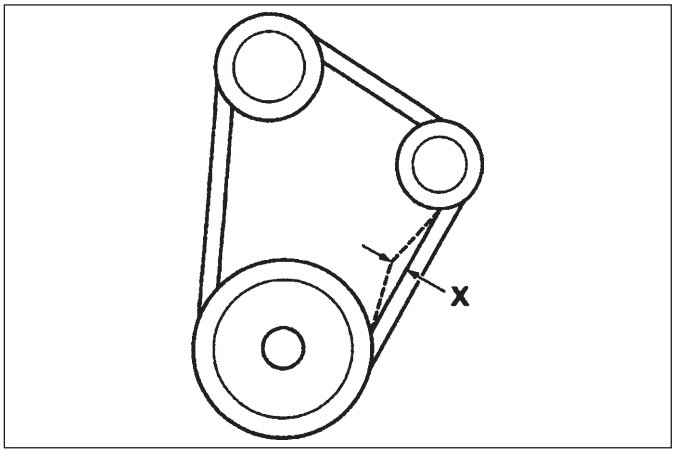



**FIG. 67**

**FIG. 68:** To adjust belt tension, loosen alternator pivot bolt, 1, and tensioning bracket bolt, 2. Pull outward on top of alternator to correctly tension belt and tighten bolt, 2, first and then tighten pivot bolt,1.

*IMPORTANT: Do not pry against alternator housing or pulley. Carefully pry against alternator mounting flange to prevent damage.*

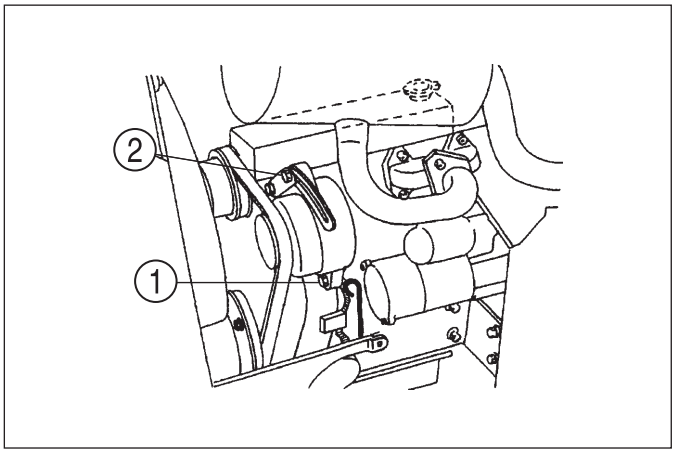



**FIG. 68**

**ENGINE AIR CLEANER**

*IMPORTANT: Never operate engine with air filters removed.*

**FIG. 69:** Lift up the engine hood to access air cleaner, 1. Air cleaner consists of an outer dry paper element to filter dust particles from intake air. Dust ejector, 2, traps dust accumulation that falls from outer element.

Periodically "pinch" dust ejector to release accumulated particles. If accumulation is damp, wipe ejector clean with a cloth.

*NOTE: Regular cleaning of dust ejector can reduce filter element maintenance.*

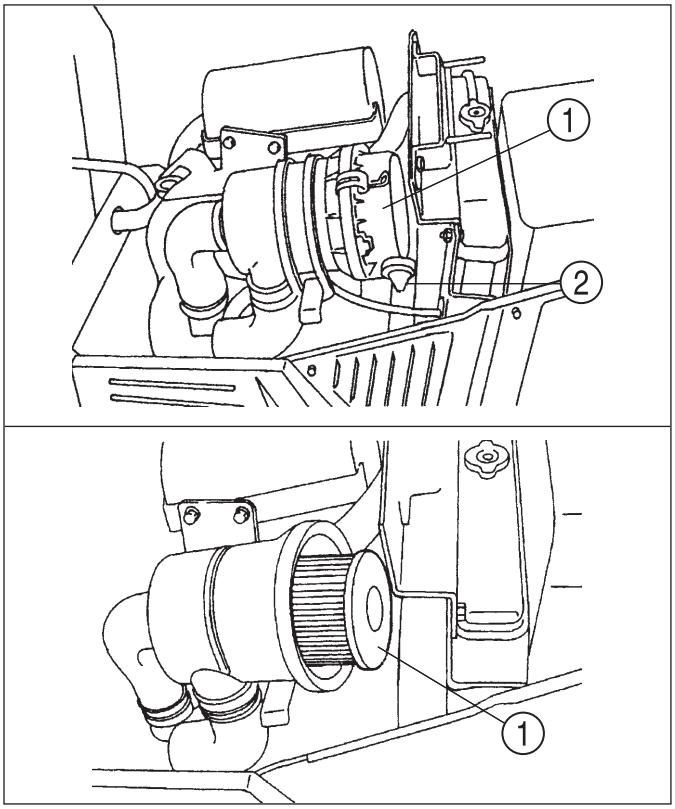



**FIG. 69**

**FIG. 70:** Outer element may be cleaned (if in serviceable condition) using following procedures:

Using compressed air not to exceed 200kPa from inside element, remove loose dirt, grass, chaff, etc. Be careful not to damage element pleats with air flow. If outer element is coated with oil or soot:

1. Prepare solution of warm water and non-foaming detergent.

2. Soak element for thirty minutes.

3. Agitate element in solution until oil and soot are loosened.

4. Rinse element until rinse water is clear.

5. Allow element to completely dry. Do not dry by using compressed air or heat.

After cleaning (of washing) element examine for pinholes, punctures, or tears. If element paper, canister or seal show any signs of physical damage, element must be replaced.

*NOTE: Replace outer element which has already been washed five times.*

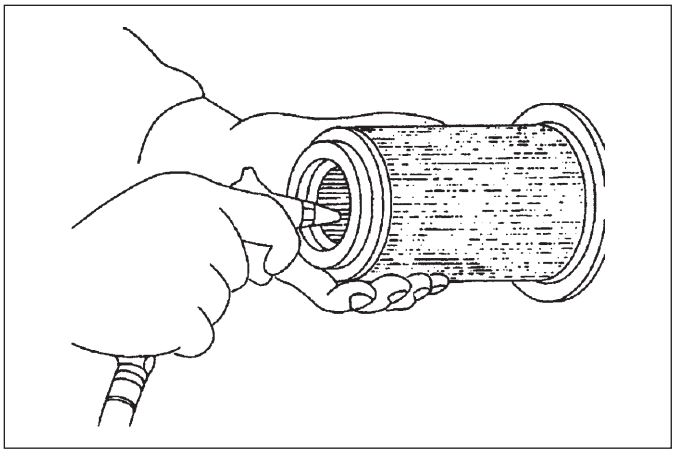


**FIG. 70**

## FUEL SYSTEM

Use only clean diesel fuel of correct grade. Introduction of water or dirt into fuel tank or other portion of fuel system can cause repeated plugging of fuel filter and possible injection pump and injector damage.

*IMPORTANT: Do not tamper with injection pump or injector adjustments as doing so may render engine and / or Tractor warranty void and may cause severe engine damage. Consult your ISEKI Dealer.*

### Fuel Filter

**FIG. 71:** Fuel filter assembly, 1, is located at left side of frame LH and is used to strain impurities from fuel before fuel reaches injection pump. Fuel filter incorporates valve, 2 to aid in filter servicing and air-bleeding of fuel system.

Check filter bowl for accumulation of sediment or water and clean as required.

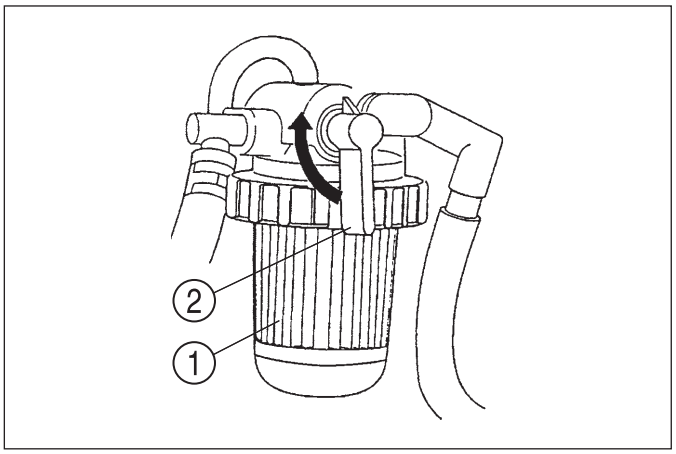



**FIG. 71**

**FIG. 72:** To replace fuel filter element or clean sediment bowl, turn fuel valve to OFF position (handle to rear).

Carefully loosen spanner nut, 1, and remove nut, sediment bowl, 3, and "O" -ring, 4. Sediment bowl can be cleaned at this time.

*NOTE: Do not lose spring, 5, between bowl and filter element.*

Pull downward on filter element, 6, and discard. Examine small "O"-ring, 7, in filter head and replace as necessary. Install new element, pushing upward until seated.

Install sediment bowl with spring, "O"-ring, and nut. Tighten nut and wipe up spilled fuel. Proceed to "Air-bleeding Fuel System" on following page.

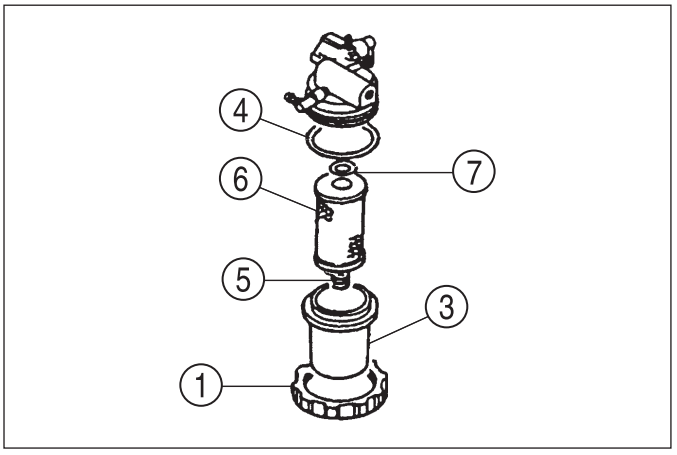



**FIG. 72**

**Air-Bleeding Fuel System**

If any of the following conditions have occurred, the system should be bled:

- Fuel tank has been permitted to run dry.
- Fuel lines, filter element(s) and other components within system have been disconnected or removed.
- Engine has not been operated for a considerable periood of time.
- Engine fails to start, or starts but stops again after a few minutes of operation.

**FIG. 73 & 74:** Fuel system components:

| | Description | Location |
|---|---|---|
| (1) | Fuel tank | seat,under |
| (2) | Filter valve | on filter |

To bleed air from the fuel system:

- Fill fuel tank,1, until full.
- Turn fuel filter valve,2, to “OPEN” (or ON) position.
- Loosen filter air-bleeding screw,3, and let air bubbles out.
- Loosen air bleeding screw,4, for fuel injection pump and let air bubbles out of the pump

*NOTE: Normally, further air-bleeding is not required due to electric fuel pump operating when main switch in, instrument panel is ON.*
*If engine will not start after several attempts, check fuel pump fuses (see "Electrical System").*

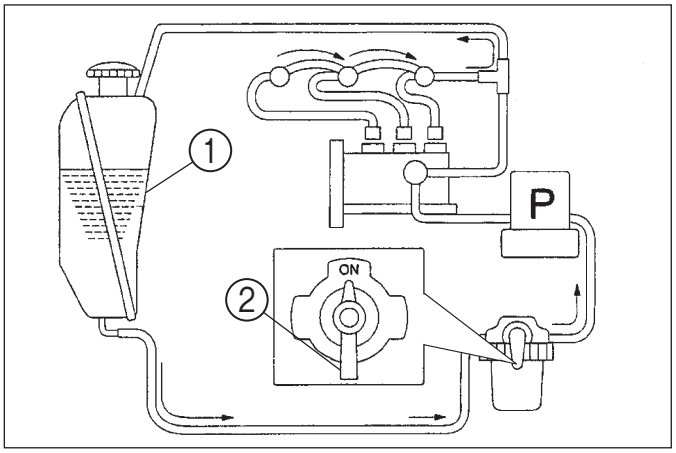


**FIG. 73**

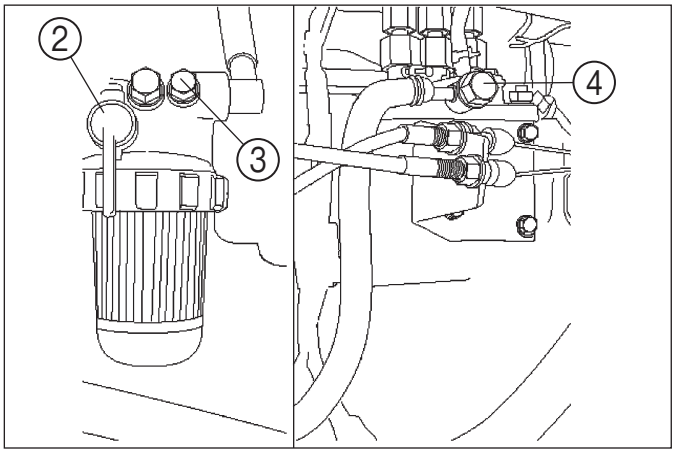


**FIG. 74**

**Fuel Tank Filler Cap**

When fuel tank filler cap is removed, a hissing or popping noise may be noticed. This is due to cap design and is a normal condition. Do not alter cap or use unapproved replacement as fuel leakage may occur in event of Tractor upset.

**Throttle Lever**

**FIG. 75:** Hand throttle lever should remain in position selected by operator. Through normal use, friction against lever may decrease, causing lever to move out of selected position. Turn adjusting nut, 1, as required to retain throttle lever in position selected.

*NOTE: Throttle lever friction adjustment is reached by removing the steering column cover, and instrument panel.*

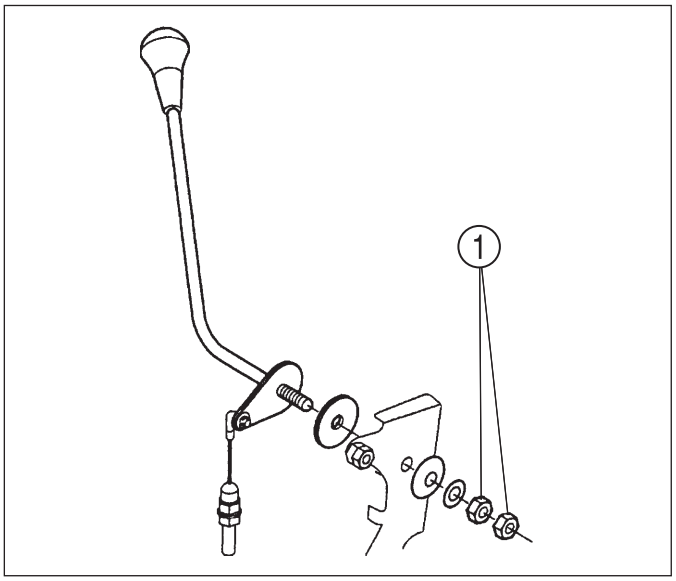


**FIG. 75**

## ELECTRICAL SYSTEM

### Battery

**FIG. 76:** Battery, 1, is located under engine hood in front of instrument panel. When battery removal, electrolyte inspection or cable cleaning is necessary, open the engine hood.

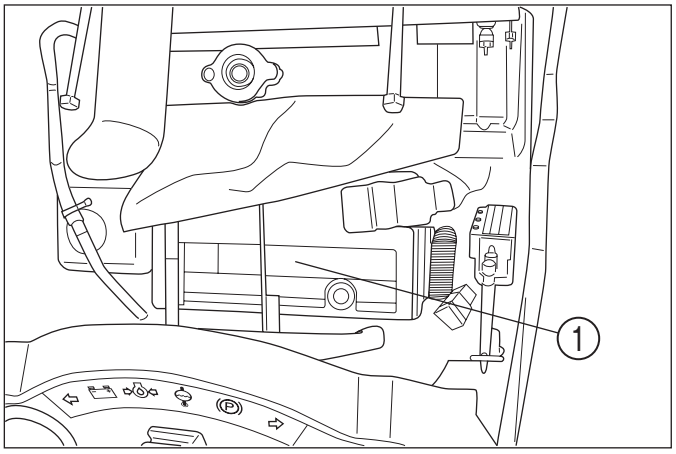



FIG. 76

Keep top of battery clean and ensure cable connections are clean and tight. Debris on battery can cause discharge of battery and possible source of fire.

**DANGER: Batteries produce explosive hydrogen gas when charged. Keep all sparks and open flame away from battery.**

When necessary to disconnect battery cables, always disconnect the grounded (-) cable first to prevent short circuits.

Batteries contain sulfuric acid electrolyte (fluid). Wear eye and face protection. If electrolyte comes in contact with skin or clothes, wash immediately. Contact a doctor if electrolyte is ingested or gets in eyes.

**FIG. 77:** Tractors are shipped with the battery installed. If battery replacement should become necessary, disconnect negative (-) cable (1) first and then remove positive (+) cable (2). Loosen and remove battery securing clamp and carefully remove battery from tractor.

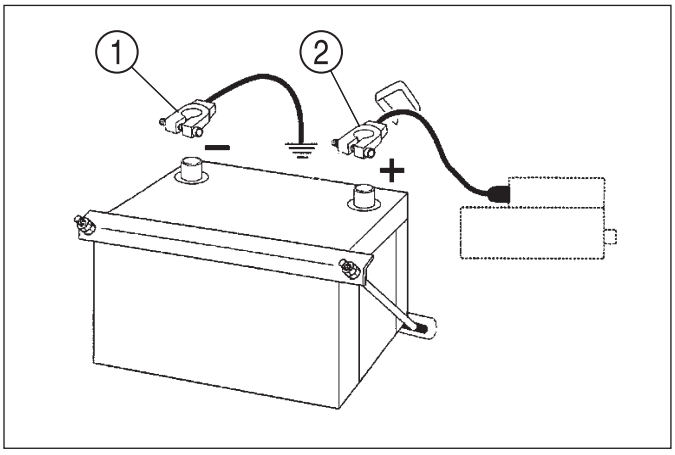



FIG. 77

When installing battery, cable (2) connected to starter solenoid should be connected to positive (+) battery terminal first then cable (1) grounded to tractor frame can be connected to negative (-) battery terminal.

*IMPORTANT: Do not reverse battery cable connections as severe electrical system damage will result.*

*NOTE: Make sure replacement battery is of identical size and equal capacity.*

*NOTE: Water does not need to be added to battery. The battery is a maintenance-free type battery.*

Never close or cover vent of battery.

**FIG. 78:** Battery indicator (1) with colors shows battely condition. When checking battery, park machine in a horizontal place and check the indicator at top of battery .

If indicator shows clear or light green color, tap battery body to remove bubble inside indicator.

| Indicator Color | | Condition | Countermeasure |
|---|---|---|---|
| | Green | Charged | Usable |
| | Black | Discharged | Need to charge |
| | Clear | Low Electrolyte | Need to replace |

**WARNING: NEVER disassemble battery. Batteries contains sulfuric acid electrolyte (fuild). Keep away from sparks or flames, which could cause explosion.**

**When charging battery from an external source, set charging ampere below 1/10 (one tenth) of battery capacity.**

**When connecting and disconnecting battely cables, turn off power of battely charger. If you have any questions about the battely, consult your dealer.**

If the battery performance become poor, the battery should be removed and recharged from an external source following battery charger instructions. Repeated battery charging may be due to a defect in tractor charging system and/or a defective battery.

*NOTE: When charging battery from an external source, battery temperature must not exceed 54 degrees C if overheating occurs, charge rate must be reduced or halted.*

**Starting Switches**

This Tractor is equipped with a neutral-start system consisting of neutral switches and a relay. To start Tractor, ALL the following is required:

Range shift lever must be in neutral position PTO clutch lever must be OFF.

**WARNING: DO NOT bypass or modify the neutral switch system. If the neutral start system does not operate properly, consult your Dealer immediately.**

**Wiring/Fuse Arrangement**

**CAUTION: Keep all wiring connections clean and tight. Make sure wiring is correctly secured to prevent damage.**

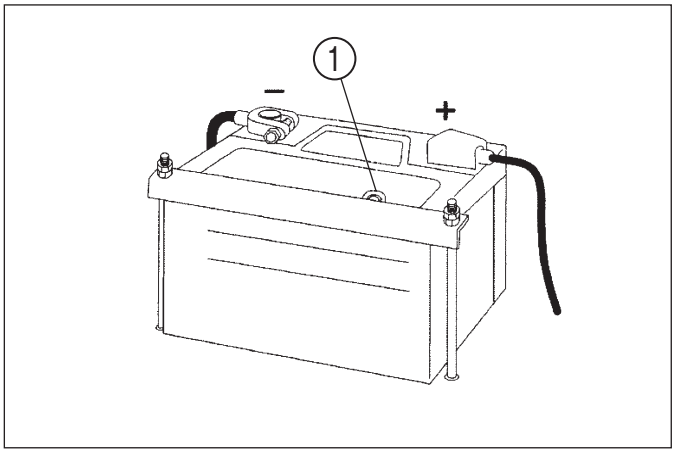



**FIG. 78**

**CAUTION: DO NOT alter wiring by adding "homemade" extensions or replacements. Doing so can eliminate fuse protection and/ or eliminate safety features of the system.**

**CAUTION: Tractor is equipped with negative (-) ground system. Tractor metal parts provide many electrical connections. For this reason, all positive (+) circuits must be insulated to prevent "grounding" or short circuits and prevent possible fire.**

**CAUTION: DO NOT replace any fuse with a fuse of higher amperage rating. DO NOT use wire (or foil) to bypass fuse protection. Fire can result.**

If fuses blow repeatedly, examine electrical system for "grounded" or "shorted" circuits.

**FUSE (E4 Type)/Head Light**

**FIG. 79:** Main Fuse Box, A-Located on right side, to rear of engine.

| Ref. | Amp. | Function |
|---|---|---|
| 1 | 20A | Head light, Horn |
| 2 | 20A | Winker |
| 3 | 30A | Stop lamp, Engine solenoid, Battery power for cab. |
| 4 | 10A | Safety system, Fuel pump |
| 5 | 30A | Meter panel acc. Power |
| 6 | 10A | Position lamp (LH) |
| 7 | 10A | Position lamp (RH) |
| 8 | 10A | Other illumination |

**Slow-Blow Fuses, B & C** - In-line fuses protect relevant circuit by melting when sustained heavy electrical load or short circuit is encountered. Feature a delayed action to prevent current disruption when brief surges are encountered.

One (40A) slow-blow fuse, B, for main circuit is green in color. Fuse is located on right side of battery.

One 40A slow-blow fuse, C, for alternator circuit is green in color. Fuse is located on right side of engine below alternator.

*NOTE: Failure of fuse, C, is usually caused from incorrect polarity (such as reversed cables when using a booster battery). Failed fuse will not allow battery to be charged during normal operation.*

*IMPORTANT: Fuses are of specific amperage capacity for the circuit in which they are located. Do not replace fuses with unauthorized parts.*

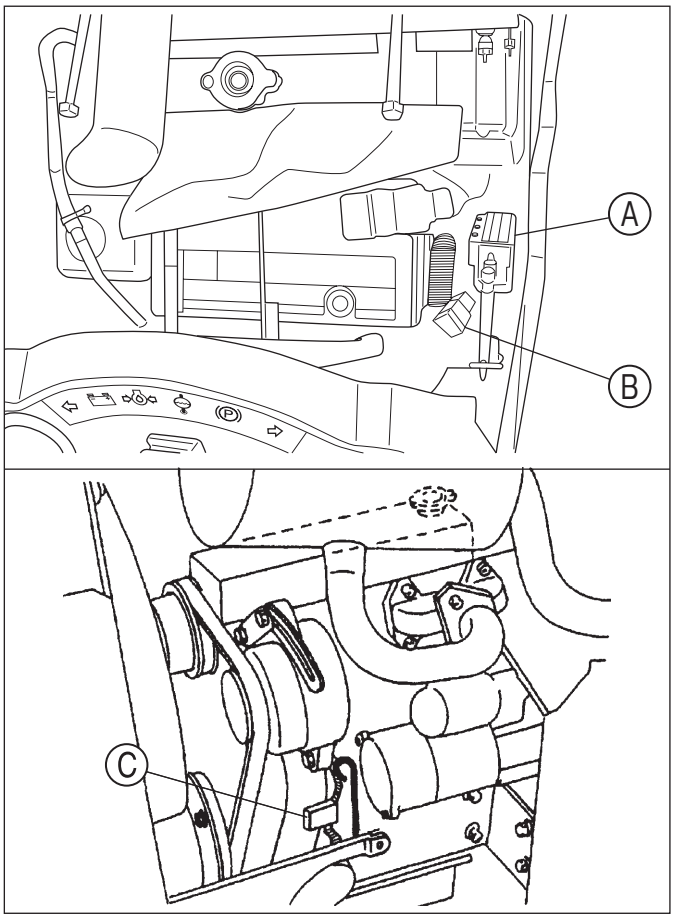



**FIG. 79**

# ELECTRICAL WIRING DIAGRAM FOR TXG23 (E4 Type)

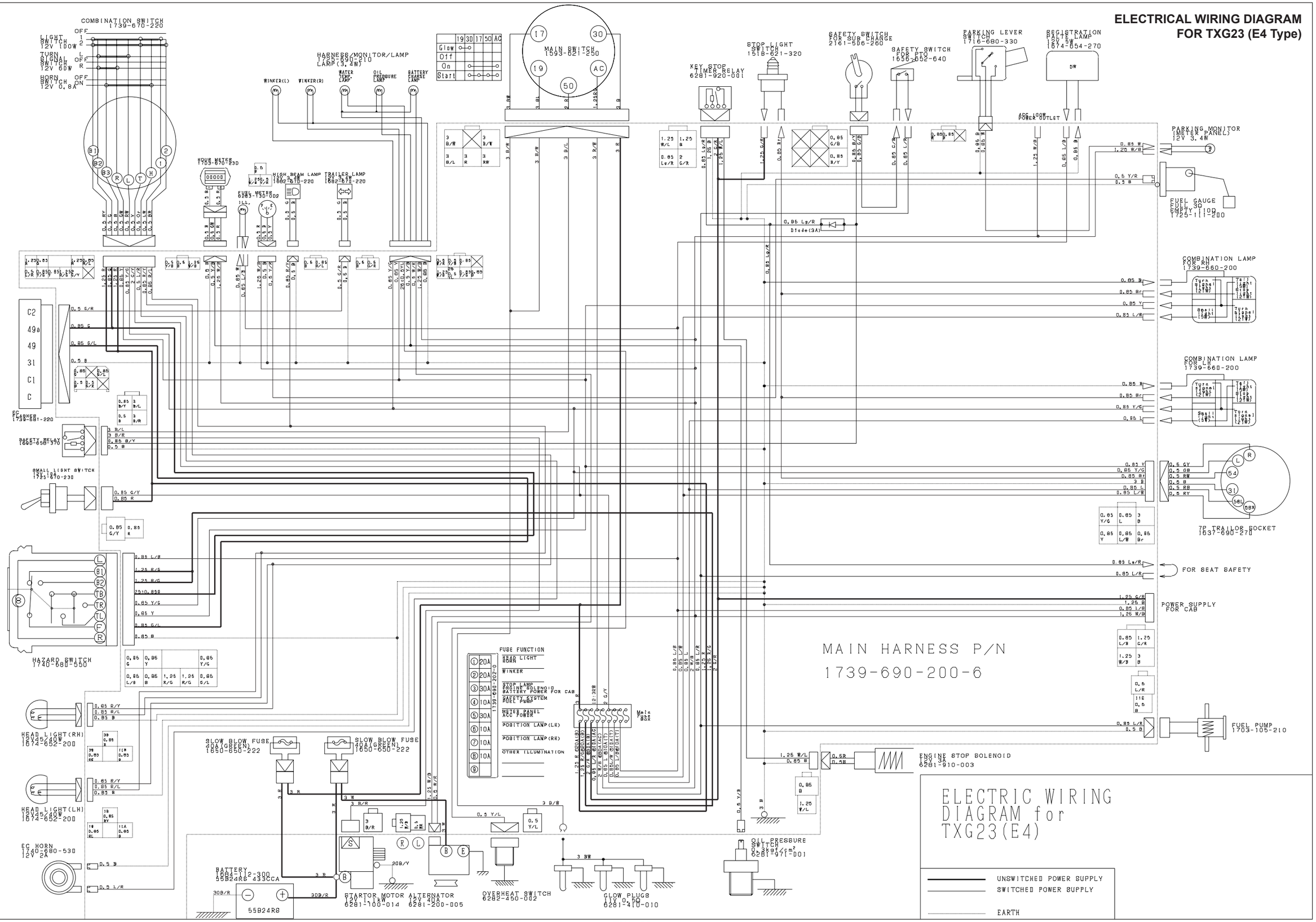



**FIG. 80**

**Trailer Socket (E4 Type)**

A standard seven-pin trailer can be provided and is mounted at the rear or the tractor, the connectors (Fig. 81) are as follows.

L: Left-hand rear direction indicator (1)
54G: Not used (2)
31: Earth (-) (3)
R: Right-hand rear direction indicator (4)
58R: Right-hand rear light (5)
54: Right-and left-hand brake stop lights (6)
58L: Left-hand rear light & number plate light (7)

*NOTE: The letters and numbers in the reference column are marked on the rear of the socket and plug, next each terminal.*

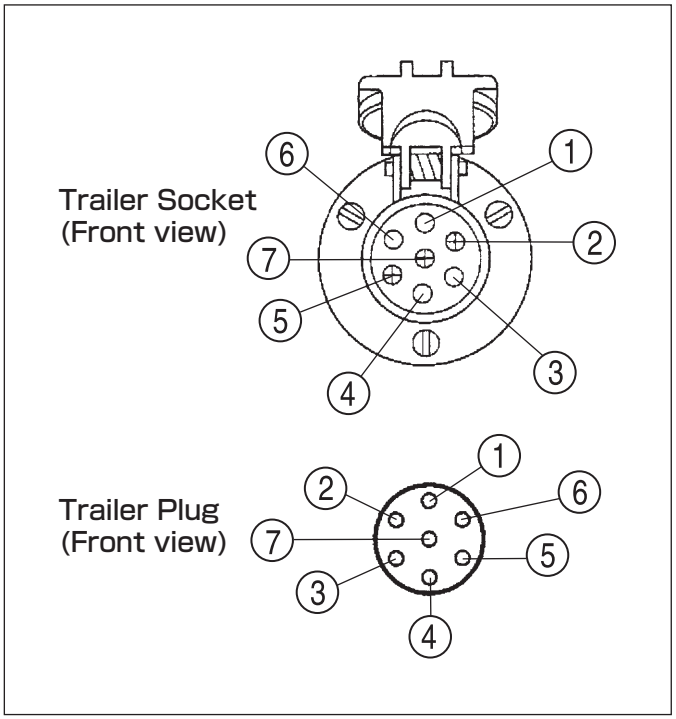



**FIG. 81**

**Lamps (E4 Type)**

| | | | |
|---|---|---|---|
| (a) | Head lamps | 12V | 45/40W |
| (b) | Front turn signal lamps | 12V | 21W |
| (c) | Front small lamps | 12V | 5W |
| (d) | Stop lamps | 12V | 21W |
| (e) | Tail lamps | 12V | 5W |
| (f) | Rear turn signal lamps | 12V | 21W |
| (g) | License plate lamp | 12V | 5W |

*NOTE: A special fuse is used - use only genuine ISEKI parts.*

**FUSE (E6 Type)**

**FIG. 82:** Main Fuse Box, A-Located on right side, to rear of engine.

| Ref. | Amp | Function |
|---|---|---|
| 1 | 5A | Keystop solenoid |
| 2 | 15A | Flasher |
| 3 | 15A | Headlight |
| 4 | 10A | Instrument Panel Fuel Pump |

**Slow-Blow Fuses, B & C** - In-line fuses protect relevant circuit by melting when sustained heavy electrical load or short circuit is encountered. Feature a delayed action to prevent current disruption when brief surges are encountered.

One (40A) slow-blow fuse, B, for main circuit is green in color. Fuse is located on right side of battery.

One (60A) slow-blow fuse, C, for alternator circuit is yellow in color. Fuse is located on right side of engine below alternator.

*NOTE: Failure of fuse, C, is usually caused from incorrect polarity (such as reversed cables when using a booster battery). Failed fuse will not allow battery to be charged during normal operation.*

*IMPORTANT: Fuses are of specific amperage capacity for the circuit in which they are located. Do not replace fuses with unauthorized parts.*

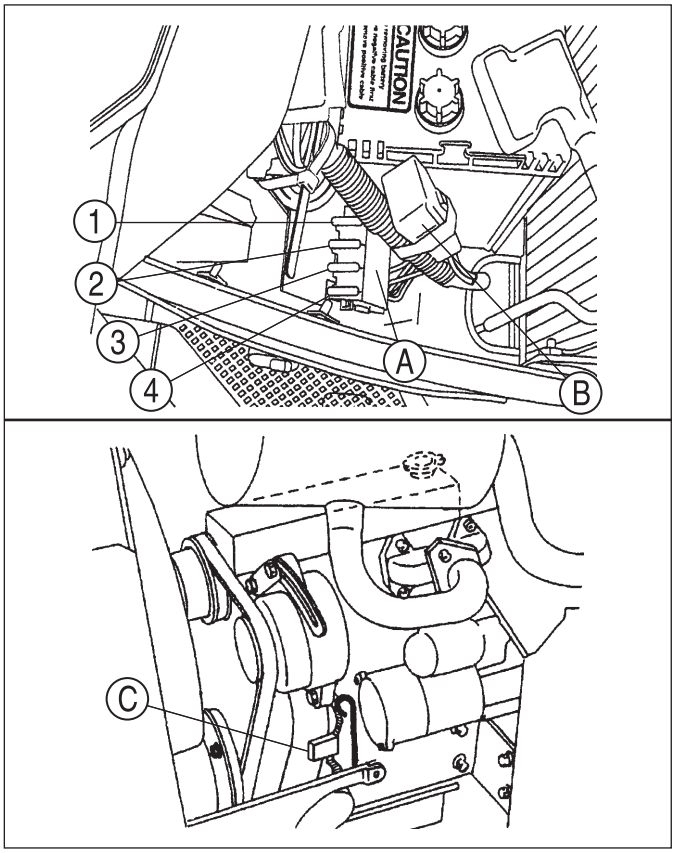
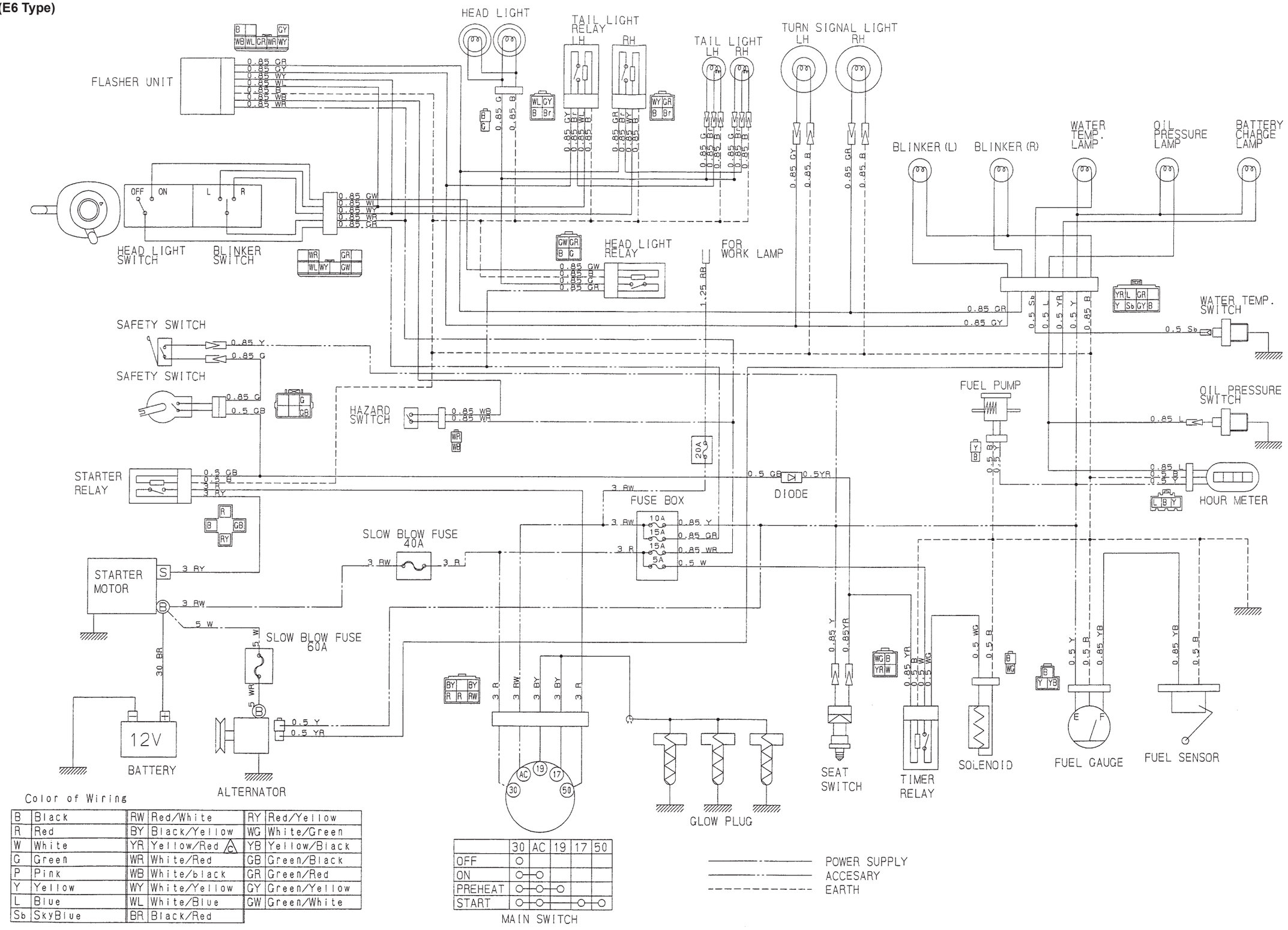



**FIG. 82**

**ELECTRICAL WIRING DIAGRAM**
**FOR TXG23 (E6 Type)**




Color of Wiring

| | | | | | |
|---|---|---|---|---|---|
| B | Black | RW | Red/White | RY | Red/Yellow |
| R | Red | BY | Black/Yellow | WG | White/Green |
| W | White | YR | Yellow/Red | YB | Yellow/Black |
| G | Green | WR | White/Red | GB | Green/Black |
| P | Pink | WB | White/black | GR | Green/Red |
| Y | Yellow | WY | White/Yellow | GY | Green/Yellow |
| L | Blue | WL | White/Blue | GW | Green/White |
| Sb | SkyBlue | BR | Black/Red | | |

| | 30 | AC | 19 | 17 | 50 |
|---|---|---|---|---|---|
| OFF | ○ | | | | |
| ON | ○ | ○ | | | |
| PREHEAT | ○ | ○ | ○ | | |
| START | ○ | ○ | | ○ | ○ |

**FIG. 83**

## BRAKE ADJUSTMENT

**FIG. 84:** Correct free-play, A, is 20 to 30 mm.

*NOTE: Through use, free-play will increase and brake balance will be affected. Adjust and balance brakes before free-play is excessive.*

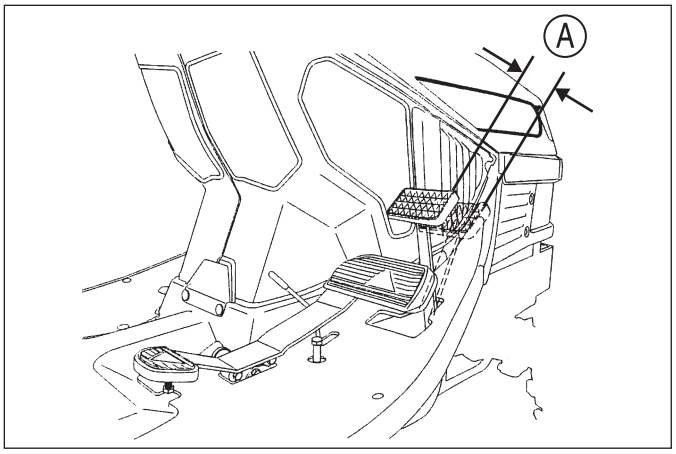



**FIG. 84**

**FIG. 85:**

1. Remove and free the brake rod on right side.
2. Adjust brake rod on left side.
3. Loosen lock nut, 1(right-hand thread), and lock nut,2(left-hand thread). Adjust turnbuckle, 3; so free-play is correct for brake pedal.
4. Secure lock nuts against turnbuckles.
5. Adjust brake rod of other side in same manner.

Make sure lock nuts are secured when brake adjustment is complete. Check operation of parking brakes after adjustment is made.

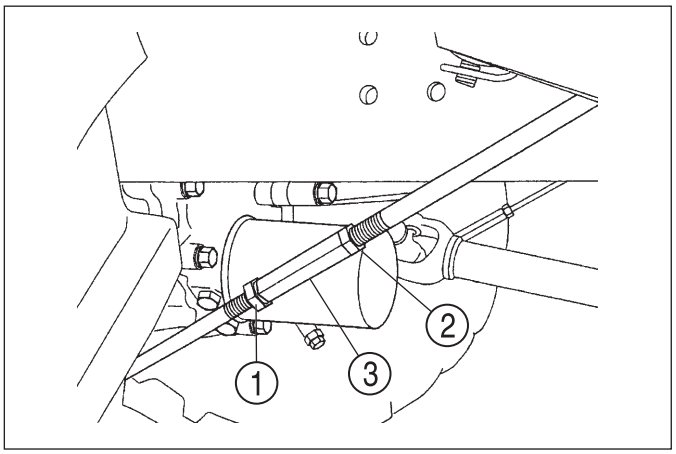



**FIG. 85**

### Parking Brake Lever Adjustment (E4 Type)

**FIG. 86:**

1. After above broke rod is adjusted.
   Adjust parking brake wire on left side.
2. Loosen lock nut, 1, and lock nut, 2.
   Adjust wire, 3, so free play is correct for parking brake lever.
3. Secure lock nuts.
   Make sure lock nuts are secured when brake adjustment is complete.

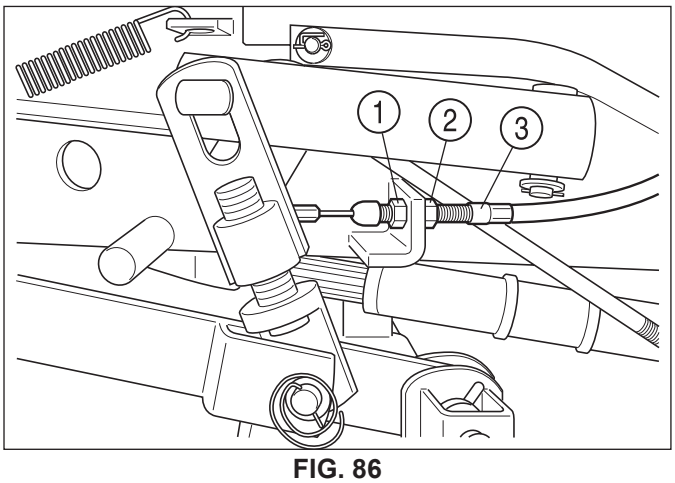



**FIG. 86**

## HYDROSTATIC ADJUSTMENTS

For adjustments of the hydrostatic linkage, consult your iseki dealer.

## WHEELS & TIRES

Examine wheels and tires periodically for correct inflation pressures, tight wheel bolts, and any physical damage that may be a detriment to Tractor operation and operator safety. Correct condition prior to Tractor operation.

### Tire Inflation Pressures

**FIG. 87:** Maintaining correct tire pressure will help insure tire long life. If tires have deep scratches, cuts or punctures, the respective tire should be repaired or replaced by qualified personnel as soon as possible.

*IMPORTANT: If necessary to replace any tire(s), ensure original tire size is used. This is particularly true on 4-WD models to ensure correct amount of front axle over speed (or lead) is maintained.*

| Type Tires | Tire Location/Size | Pressure (PSI) KPA |
|---|---|---|
| AG | Front 18x8.50-10<br>Rear 26x12.0-12 | 23 PSI (155 KPA)<br>20 PSI (140 KPA) |
| Turf | Front 18x8.50-10<br>Rear 26x12.0-12 | 22 PSI (150 KPA)<br>20 PSI (140 KPA) |

**FIG. 87**

### Wheel Bolt Torque

**FIG. 88:** Periodically check all wheel bolt torques.

Correct bolt torques:

4WD
Front Wheel Bolts, 1 101.2 ～ 115.6 ft. -lbs (137.2 ～ 156.8 N. m)

Rear Wheel Bolts, 2 64.3 ～ 75.9 ft. -lbs (87.2 ～ 102.9 N. m)

2WD
Front wheel nuts, 316. ～ 45.1 ft. -lbs (42.9 ～ 61.2 N. m)

**CAUTION: Correct wheel bolt torque must be maintained. Installation of front mounted implements (ex; loaders) impose increased loads and require frequent checking of wheel bolts.**

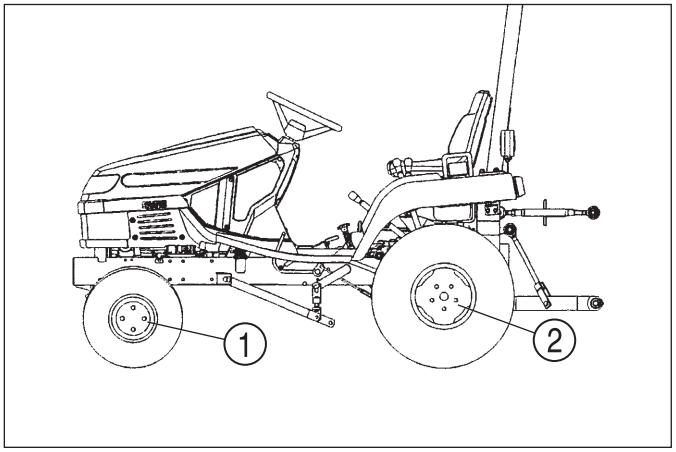



**FIG. 88**

**FIG. 89:** Correct "toe-in" dimension of front wheels (A minus B) is 2 to 6mm.

*NOTE: Measure toe-in, from tire center to tire center at a point halfway up on face of each tire.*

To adjust, remove clip securing rubber boot to tie rod. Loosen lock nut and rotate the tie rod to adjust. Tie rod ball joints should freely rotate in cylinder ends. Adjust each side evenly. Ball joints must move freely after lock nuts are tightened.

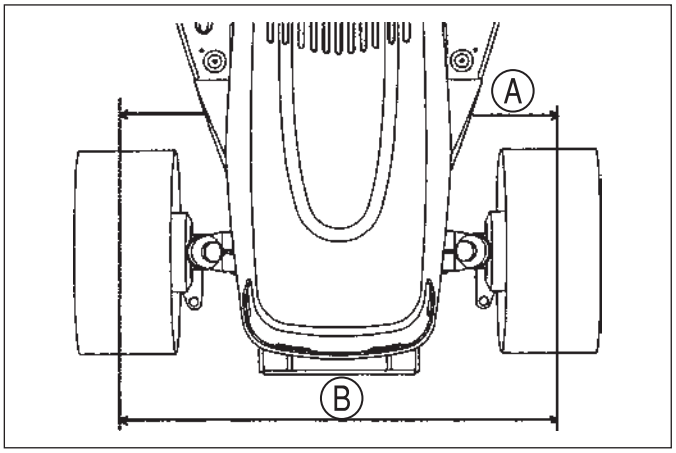



**FIG. 89**

### Steering Free-Play

**FIG. 90:** Steering should be checked for excessive looseness, as indicated by steering wheel free-play. Maximum free-play is approximately 30mm when measured at outside of steering wheel rim, "X". Excessive free-play can be caused by:

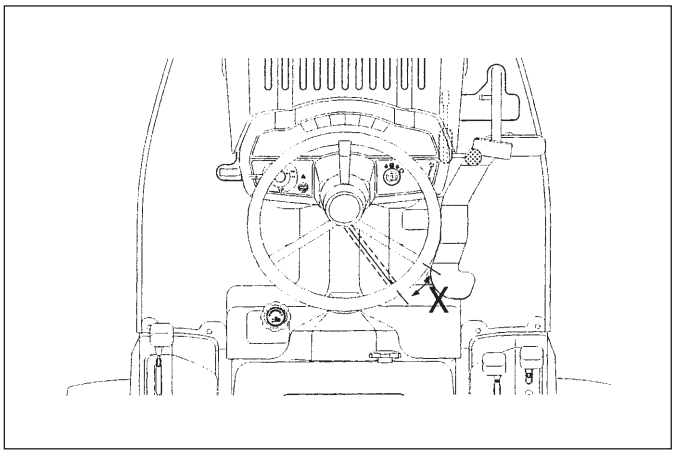



FIG. 90

Loose or worn ball joints.

- Worn or damaged steering column shaft/universal joints.
- Air in steering system.
- Worn or damaged power steering unit.

**CAUTION: Excessive steering free play must be corrected before use. Contact your ISEKI Dealer.**

### TORQE CHART

**FIG. 91:** All fasteners should be tightened in accordance with torque chart unless a specific torque value is called out in relevant maintenance information.

| | 4T | | 7T | |
|---|---|---|---|---|
| | Nm | lb ft | Nm | lb ft |
| M6 | 4.9–7.4 | 3.6–5.5 | 9.8–11.8 | 7.2–8.7 |
| M8 | 11.8–17.2 | 8.7–12.7 | 23.5–30.4 | 17.3–22.4 |
| M10 | 21.6–30.4 | 15.9–22.4 | 45.1–57.9 | 33.3–42.7 |
| M12 | 41.2–58.8 | 30.4–43.4 | 79.4–93.1 | 58.6–68.7 |
| M14 | 54.9–78.4 | 40.5–57.8 | 122.5–147.0 | 90.3–108.4 |
| M16 | 82.3–117.6 | 60.7–86.7 | 196.0–230.3 | 144.6–169.9 |
| M20 | 132.3–186.2 | 97.6–137.3 | 333.2–447.9 | 245.7–330.3 |

FIG. 91

## STORAGE

**FIG. 92:** If Tractor is to be stored for extended periods, such as off-season nonuse, certain measures should be taken for its preservation during such periods. These measures will vary according to geographical area and storage season.

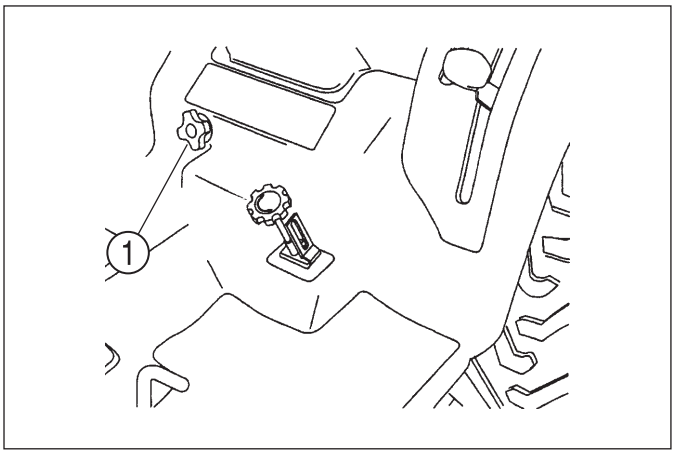



**FIG. 92**

1. Replace engine oil and filter. Operate at low idle five minutes to lubricate parts.

2. Lubricate all grease fittings and lightly oil control linkage pivots.

3. Detach implements.

4. Store Tractor in enclosed area, if possible, for protection from weather.

5. Block up Tractor to remove weight from tires and to protect tires from oily or damp floor.

6. Raise and lock three-point lift linkage in up position by turning lowering rate control knob, 1, fully clockwise.

**FIG. 93:** Step 7 - Fill fuel tank to prevent condensation from forming on inside of tank. Turn filter valve, 7, to OFF position.

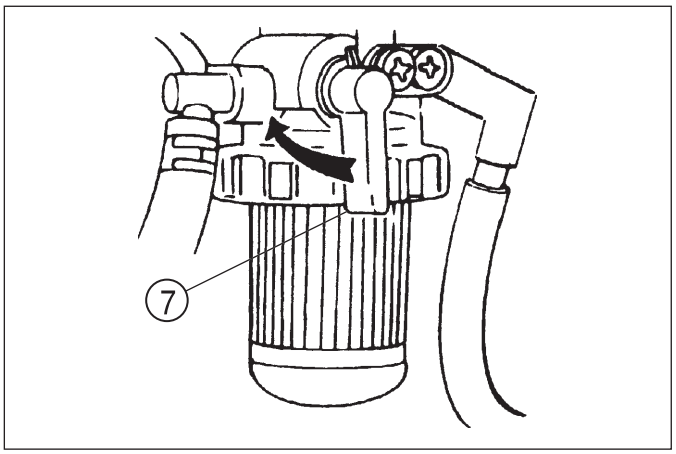



**FIG. 93**

8. Remove battery and store in cool dry place. Maintain charge during storage period.

9. If Tractor is stored during cold weather season insure that antifreeze is adequate. Alternatively, radiator and engine block may be drained.

10. Check with your diesel fuel supplier on the availability of a diesel fuel additive to place in the fuel system during storage period.

11. If Tractor cannot be placed in an enclosed area, place it under some sort of cover and cover exhaust pipe to prevent entrance of rain or snow.

# TROUBLESHOOTING

**ENGINE**

| Problem | Possible Cause | Remedy |
|---|---|---|
| Starter motor does not operate with key turned to START | Range shift lever not in neutral. | Place range shift lever in neutral. |
| | PTO clutch engaged. | Disengage PTO clutch. |
| | Broken safety switch. | Consult your dealer. |
| | Discharged battery. | Charge battery. |
| | Loose or dirty terminals. | Clean and retighten securely. |
| | Broken main switch. | Consult your dealer. |
| | Broken starter. | Consult your dealer. |
| Starter motor operates but not at full speed | Discharged battery. | Charge battery. |
| | Loose or dirty terminals. | Clean and retighten securely. |
| | Defective ground. | Clean and tighten starter mounting. |
| | Improper oil viscosity. | Replace with oil of proper viscosity. |
| | Defective engine. | Consult your dealer. |
| Starter motor operates but engine does not start. | Electric fuel control not operating. | Consult your dealer. |
| | Air in fuel system. | Air-bleed fuel system. |
| | Clogged fuel filter. | Clean filter. |
| | Fuel is not being supplied. | Check fuel level, open fuel valve. |
| | Incorrect preheating procedure. | Longer use of glow plugs. |
| | Defective engine. | Consult your dealer. |
| Irregular engine running | Air in fuel system. | Air-bleed fuel system. |
| | Clogged fuel filter. | Clean filter. |
| | Clogged fuel injectors. | Consult your dealer. |
| | Fuel line is leaking air. | Retighten clamps, replace defective pipes. |
| | Fuel injection pump timing. | Consult your dealer. |
| | Defective engine. | Consult your dealer. |
| When decelerated, engine stops | Incorrect low idle setting. | Consult your dealer. |
| | Malfunctioning fuel injection pump. | Consult your dealer. |
| | Improper valve clearance. | Consult your dealer. |
| Engine over-speeds | Defective fuel injectors. | Consult your dealer. |
| | Defective governor. | Consult your dealer. |
| | Incorrect high speed setting. | Consult your dealer. |
| | Engine oil is getting into combustion chambers. | Consult your dealer. |
| Engine stops unexpectedly during operation | Insufficient fuel supply. | Top up fuel and air-bleed fuel system. |
| | Defective fuel injectors. | Consult your dealer. |
| | Defective fuel injection pump. | Consult your dealer. |
| | Engine seizure due to low or poor oil. | Consult your dealer. |

**ENGINE (CONT)**

| Problem | Possible Cause | Remedy |
|---|---|---|
| Engine overheats | Insufficient coolant. | Top up coolant. |
| | Broken or loose fan belt. | Adjust belt tension or replace. |
| | Clogged grille, radiator screens. | Clean. |
| | Clogged radiator fins. | Clean. |
| | Defective thermostat. | Replace. |
| | Insufficient engine oil. | Inspect oil level and replenish if necessary. |
| Exhaust fumes are white | Clogged air cleaner. | Clean or replace elements. |
| | High engine oil level. | Inspect oil level and correct. |
| | Insufficient fuel delivery. | Consult your dealer. |
| | Cold-running engine. | Check clean or replace air filter. |
| Exhaust fumes are too black | Poor fuel. | Replace with better grade. |
| | Excessive fuel delivery. | Consult your dealer. |
| | Insufficient fuel injector pressure. | Consult your dealer. |
| | Insufficient combustion air. | Consult your dealer. |
| Poor engine output | Seizure fuel injectors and /or carbon deposit. | Consult your dealer. |
| | Insufficient compression or leaking valves. | Consult your dealer. |
| | Incorrect valve clearances. | Consult your dealer. |
| | Incorrect fuel injection timing. | Consult your dealer. |
| | Insufficient fuel supply. | Check fuel system. |
| | Clogged air cleaner. | Clean or replace elements. |
| Oil pressure monitor is lit during operation | Insufficient engine oil. | Replenish |
| | Too low oil viscosity. | Replace with oil of proper viscosity. |
| | Defective pressure switch. | Replace. |
| | Clogged oil filter. | Replace element cartridge. |
| | Defective oil pump. | Consult your dealer. |
| Charging monitor is lit during operation | Defective wiring. | Correct loose or dirty terminals, short circuit, poor etc. |
| | Defective alternator. | Consult your dealer. |
| | Defective regulator. | Consult your dealer. |
| | Low electrolyte level or defective battery. | Correct electrolyte level or replace battery. |
| | Loose or damaged fan belt. | Adjust belt tension or replace. |

## BRAKES

| Problem | Possible Cause | Remedy |
|---|---|---|
| Brake do not work well | Too much free play of pedal. | Adjust free play. |
| | Worn of seized lining. | Consult your dealer. |
| Brake pedal do not return smoothly | Broken return springs. | Replace broken spring. |
| | Pool lubrication. | Remove rust, then lubricate. |

## HYDRAULIC SYSTEM

| Problem | Possible Cause | Remedy |
|---|---|---|
| Insufficient oil pressure | Low engine speed. | Increase speed. |
| | Low transmission oil. | Fill to specific level. |
| | Intake piping is sucking air. | Retighten clamps or replace cracked pipes and defective o-rings. |
| | Clogged oil filter. | Clean or replace. |
| | Defective hydraulic oil pump. | Consult your dealer. |
| | Defective control valve. | Consult your dealer. |
| | Broken cylinder. | Consult your dealer. |
| Leaking piping | Loose joints. | Retighten. |
| | Cracked pipes. | Replace pipes, o-rings. |
| With control lever in RAISE position, relief valve blows | Poorly adjusted rod on position control lever. | Correct rod adjustment. |
| Three- point hitch does not lower | Locked lowering speed control knob. | Turn counterclockwise to LOWERING position. |
| | Defective control valve. | Consult your dealer. |
| | Broken cylinder. | Consult your dealer. |
| | Seized lift shaft bearing. | Consult your dealer. |

## STEERING SYSTEM

| Problem | Possible Cause | Remedy |
|---|---|---|
| Steering wheel is hard to turn or turns in one direction | Poorly installed steering column. | Correct. |
| | Air in steering hydraulic system. | Air-bleed steering system. |
| | Clogged suction filter. | Remove and clean. |
| | Improper toe-in. | Correct. |
| | Different front tire inflation. | Inflate both tires to same pressure. |
| | Loose steering or ball joints. | Retighten or replace defective parts. |
| | Defective steering unit, pump. | Consult your dealer. |
| Steering wheel has too much free-play | Worn steering column. | Consult your Dealer. |
| | Loose ball joints. | Retighten. |
| | Defective steering unit. | Consult your Dealer. |

## ELECTRICAL SYSTEM

| Problem | Possible Cause | Remedy |
|---|---|---|
| Battery cannot be charged | Blown fuse. | Check fuse and replace. |
| | Defective wiring. | Correct loose, dirty terminals, short circuit, poor ground, etc. |
| | Loose or damaged fan belt. | Give belt proper tension or replace. |
| | Defective battery. | Correct loose terminal connection, corrosion, or electrolyte level. |
| | Defective alternator. | Consult your dealer. |
| | Defective regulator. | Consult your dealer. |
| Head lamps are dim | Discharged battery. | Charge battery, check charging system. |
| | Poor connections. | Check ground points and terminals, clean if necessary. |
| Particular function will not operate | Burnt bulb (as applicable). | Replace. |
| | Blown fuse. | Check fuse and replace. |
| | Poor contact. | Inspect ground points and terminals, clean if necessary. |
| | Defective switch. | Replace as required. |

# SPECIFICATIONS

| **ENGINE:** | **TXG23** |
|---|---|
| Make | Iseki Diesel |
| Model | E3112-B12 |
| Type | Indirect injection, overhead valve |
| Aspiration | Natural |
| Displacement | 1123 cc |
| Number of Cylinders | 3 |
| Bore | 78.2 mm |
| Stroke | 78.0 mm |
| Engine Horsepower (Gross) | 22.5 HP (16.8 kW) @ 2600 rpm |
| (Net) | 22.0 PS (16.1 kW) @ 2600 rpm |
| PTO Horsepower (Estimate) | 17.5 @ 555 PTO rpm |
| Firing Order | 1-3-2 |
| Compression Ratio | 22.5 to 1 |
| Low Idle Speed | 1250 to 1300 rpm |
| High Idle Speed | 2760 to 2860 rpm |
| Valve Clearance (Cold);Intake | 0.25 mm |
| Exhaust | 0.25 mm |
| Air Cleaner | Single stage, dry element |
| Engine Cooling | Liquid, forced circulation |
| Cold Starting Aid | Glow plugs (3) |
| **TRANSMISSION:** | |
| Type; Primary | Infinite |
| Range | 2-speed constant mesh |
| Gear Speeds | 2-gear forward, 2 reverse |
| Clutch | None |
| Brakes | Mechanically actuated sealed wet disk |
| **POWER TAKE-OFF (PTO):** | |
| Type | Independent, engine drive |
| Control | Hydraulic control |
| Clutch | Mechanically engaged, multi-plate wet disk |
| Rear PTO; Shaft | 35 mm diameter, six spline |
| Output | Clockwise rotation |
| Engine Speed @ 540 PTO rpm | 2532 rpm |
| Mid PTO; Shaft | 25.4 mm diameter, fifteen spline |
| Output | Clockwise rotation |
| Engine Speed @ 2000 PTO rpm | 2476 rpm |

## SPECIFICATIONS

| | TXG23 |
|---|---|
| **HYDRAULICS:** | |
| Steering System; Type | Hydrostatic (power) |
| Pump | Transmission-mounted gear pump with flowdivider |
| Maximum Output | 7.5 l/min. |
| Pressure | 1209 psi (8339 rPa) |
| Main Hydraulic System; Pump | Transmission-mounted gear pump |
| Maximum Output | 23.1 l/min. |
| Pressure | Relief valve setting 1920 psi (13244 kPa) |
| Rear Linkage; Type (4WD model) | Three-point hitch |
| Size | Category 1 |
| Control | Direct control |
| Lift Capacity (4WD model) | 540 kg measured at ball ends |
| **ELECTRIAL SYSTEM:** | |
| System Voltage | 12 volt, negative (-) ground |
| Battery cca @ 0 F (-18) | 433 CCA |
| Charging | 40 amp alternator with internal regulator / rectifier |
| **CAPACITIES:** | |
| Engine Crankcase with Filter | 2.6 liters |
| Transmission | 11.0 liters |
| Fuel Tank | 21.0 liters |
| Cooling system | 4.6 liters |
| Front Drive Axle (4WD model) | 4.0 liters |
| **TREAD WIDTH SETTINGS:** | |
| Front 4WD | |
| Ag. Tires | 930 mm |
| Turf Tires | 930 mm |
| Rear 4WD | |
| Ag. Tires | 840 mm |
| Turf Tires | 840 mm |
| Front 2WD | |
| Ag. Tires | 930 mm |
| Turf Tires | 930 mm |
| Rear 2WD | |
| Ag. Tires | 840 mm |
| Turf Tires | 840 mm |
| **MAXIMUM AXLE LOADING:** | |
| Front 4WD | 650 kg |
| Front 2WD | 500 kg |
| Rear Axle | 750 kg |

## ■ DIMENSIONAL LIMITS OF IMPLEMENTS

| Implement | | Items | TXG23 |
|---|---|---|---|
| **Rotary mower** | Front-mount | Max. cutting width | 1,300 mm |
| | (2, 3 blades) | Max. weight | 100 kg |
| | Mid-mount | Max. cutting width | 1,370 mm |
| | (2, 3 blades) | Max. weight | 150 kg |
| | Rear-mount | Max. cutting width | 1,070 mm |
| | (1 blade) | Max. weight | 150 kg |
| | Mid-mount | Max. cutting width | 1,520 mm |
| | (2, 3 blades) | Max. weight | 150 kg |
| **Rotary tiller** | | Max. tilling width | 1,070 mm |
| | | Max. weight | 150 kg |
| **Bottom plough** | | Max. size | 360 mm × 1 |
| **Disk plough** | | Max. size | 560 mm × 1 |
| **Cultivator** | | Max. size | 1,370 mm |
| | | Max. weight | 150 kg |
| **Disk harrow** | | Max. harrowing width | 1,400 mm |
| | | Max. weight | 150 kg |
| **Sprayer** | | Max. tank capacity | 120 litres |
| **Broad caster** | | Max. tank capacity | 120 litres |
| **Sand spreader** | | Max. tank capacity | --- |
| **Front blade with sub-frame** | | Max cutting width | 1,250 mm |
| **Rear blade** | | Max. cutting width | 1,520 mm |
| | | Max. weight | 150 kg |
| **Box blade** | | Max. cutting width | 1,070 mm |
| | | Max. weight | 150 kg |
| **Snow blower with sub-frame** | | Max. cutting width | 1,220 mm |
| | | Max. weight | 130 kg |
| **Trailer** | without brake | Max. load capacity | 300 kg |
| **3-point lift** | Front | Max. load capacity | 150 kg |
| | Rear | Max. load capacity | 200 kg |
| **Weight** | Front wheel | Max. load capacity | 0 kg |
| | Rear wheel | load capacity | 80 kg |
| | Bumper | load capacity | 90 kg (6 weights) |
| **Cabin** | | Max. weight | 150 kg |

# ASSEMBLY & PRE-DELIVERY INSPECTION

**ASSEMBLY**

*IMPORTANT: Do not commence assembly of this Tractor until reading these instructions completely and carefully.*

*NOTE: For certain lubrication, adjustments, etc., refer to appropriate section of this booklet. All nuts, bolts, etc., on these Tractors are in METRIC dimensions.*

Tractor is shipped in individual container. The Tractor will be partially disassembled to make container as compact as possible. Wheels, fenders, ROPS, steering wheel, lift linkage, drawbar, and some attaching hardware will be removed.

Larger items will be fastened in container and remainder of items will be shipped in sundry boxes also in container.

Certain areas of Tractor may be covered with thin film of protective wax. It may be removed by steam cleaner and detergent solution during assembly.

Tractors will arrive with battery installed.

To assemble and pre-deliver the Tractor, proceed as follows:

**CAUTION: Be observant of components (wheels, fenders, ROPS, etc.) that may be attached to, or held in position by container panels.**

1. Remove ROPS frame, steering wheel, seat, and sundry boxes from container.
2. Disassemble container.
3. Inspect Tractor for damage and any evidence of coolant, fuel or lubricant leaks.

**FIG. 94:**

4. Installation of lower links, lift rod and top link. Open sundry boxes, install lower link with shaft, 1, and in stall retainer plates, 2, on outside with bolts, 3. Install lift rod, 4, and top link, 5.
5. Wheel assembly (separate with container)

**Front**

Install the front wheel with four bolts (M14).

Tightening torque is 100 to 115 ft. lbs. (137 to 156Nm)

**Rear**

Install the front wheel with five bolts (M12).

Tightening torque is 65 to 75 ft. lbs. (87 to 102 Nm)

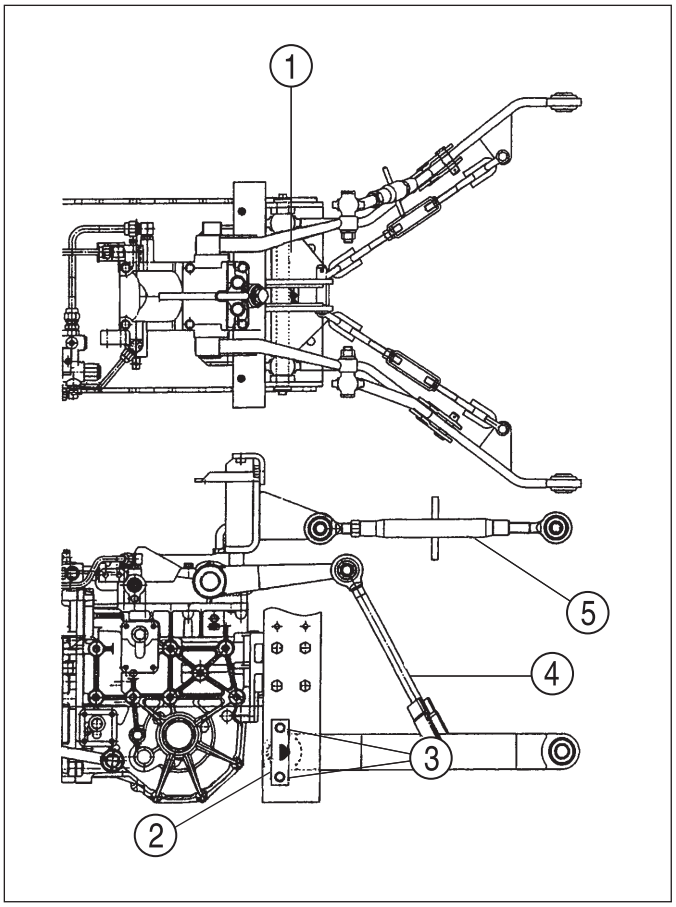



**FIG. 94**

**PRE-DELIVERY**

- Check that engine oil level is correct.
- Check that coolant level is correct.
- Check fan belt tension, 10mm deflection, when subjected to a force of thumb pressure.
- Check that transmission oil level is correct.
- Install a sufficient amount of No. 2 diesel fuel to complete pre-delivery service.
- Ensure clean and tight cable connections at battery. Battery must be securely mounted.
- Check air cleaner, element, hoses and clamps for correct installation.
- Check brake and clutch pedal linkage for correct freetravel.
- Check steering, brake and clutch linkage cotter pins and lock nuts for secure installation.
- Check filter element and, all connections and clamps for hydraulic pump and filter.
- On 4-WD models, check oil level in front drive axle. Place fuel filter shutoff valve in the "ON" position. Take up position in operator's seat and engage parking brake.
- Place all shift levers in neutral and then depress clutch pedal.
- Place rear PTO and mid PTO selector levers in neutral.

*NOTE: Engine will not start unless range shift lever is selected to neutral, rear PTO, and mid PTO selector levers are in neutral.*

- Set throttle lever at half to full throttle and turn main switch counterclockwise 5-10 seconds.
- Turn main switch clockwise to "ON. " Oil pressure and alternator warning lights will illuminate. Hold in "on" position 1-2 seconds.
- Turn main switch to "Start" to crank the engine. Release key to "ON" position the moment engine starts. Check that warning lights go out.
- Allow engine to warm up to operating temperature at about 1500rpm.
- Operate Tractor to confirm it operates smoothly at all speeds including four-wheel drive (if it is equipped).
- Operate PTO to see that it functions properly.
- Check that all lights and instruments operate properly.
- Check brakes for balanced operation.
- Check warm engine low idle speed, 1250-1300 rpm.
- Check warm engine high idle speed, 2760-2860 rpm.
- Set throttle lever at idle, shut off engine and check Tractor for coolant, lubricating oil or fuel leaks.
- Check that safety start system functions correctly.
- Lubricate all fittings.
- Check tire inflation pressures.
- Check front wheel toe-in.
- Test anti-freeze to see that it is adequate for local climate conditions.

*NOTE: Factory fill is set to -34° C .*

- Check to see that all safety decals and safety switches are in place.
- Clean and polish sheet metal as necessary.
- Fill fuel tank to prevent moisture accumulation.
- Review this Operator's Manual with the customer when delivering or demonstrating Tractor.

# ACCESSORIES

**Canopy** - Sunshade that attaches to ROPS to improve operator comfort. NOT to be used for protection from falling objects.

**Implements and Attachments** - Your ISEKI Dealer offers a complete line of implements and attachments, such as; mowers, loaders, tillers and numerous ground-engaging tools, to fulfull your needs. Please check with him on your requirements and he will be happy to show you his full line of "matched" equipment.

TXG23

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