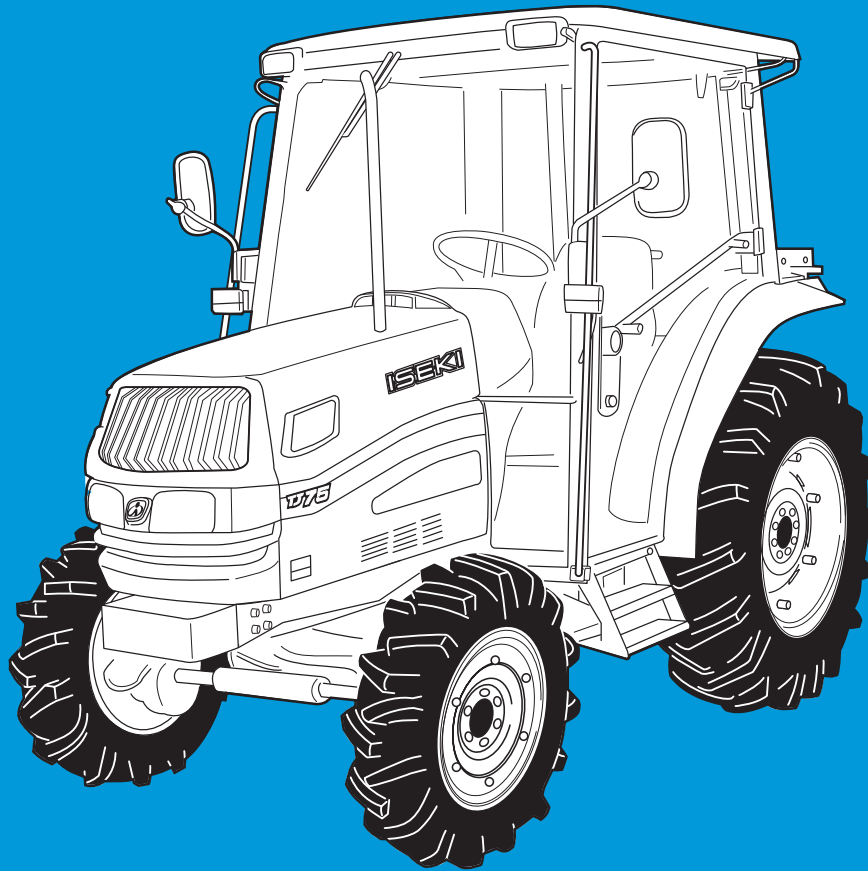


ISEKI TRACTORS



4WD

Operation Manual

MODEL:

TJ75



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: Essential items which you should observe while operating the tractor

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 gives 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 do the use of your machine.



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

***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 remove for clarify. 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

TO OUR CUSTMER.....	1	Light Turn Switch	27
TABLE OF CONTENTS	2	High - Low Beam Switch.....	27
1. SAFETY	5	Power Take-Off (PTO) Switch.....	28
PERSONAL SAFETY INSTRUCTIONS.....	5	MAIN CLUTCH PEDAL	29
MAKING YOUR TRACTOR A SAFE		BRAKES.....	29
VEHICLE.....	5	Brake Pedals & Parking Brakes.....	29
HOW TO MAINTAIN SAFETY	5	Parking Brake lever	29
HOW TO BE A SAFE OPERATOR.....	6	ENGINE SPEED CONTROLS	30
WHEN ANOTHER PERSON OPERATES		TRANSMISSION SHIFT LEVER AND BUTTON	30
YOUR MACHINE.....	6	Range Shift Lever and Gear Shift Button	31
BEFORE OPERATION.....	7	DIFFERENTIAL LOCK PEDAL	32
STARTING ENGINE AND MOVING		FOUR-WHEEL DRIVE SHIFT LEVER.....	32
TRACTOR	7	REAR PTO SELECTOR LEVER.....	33
WHEN TRAVELLING.....	8	THREE-POINT HITCH.....	34
LOADING ONTO OR UNLOADING FROM A		Control Lever	34
TRUCK	9	Lowering Rate Control Knob.....	34
SPECIFICATIONS OF THE RAMPS	10	COMFORT ADJUSTMENTS.....	35
DURING OPERATION.....	10	Steering Column Tilt	35
INSPECTION AND MAINTENANCE	11	Tool Box	35
STORAGE	12	5. OPERATION	36
MAINTENANCE OF THE ELECTRIC		BREAK-IN PERIOD	36
SYSTEM	13	STARTING	36
TO MAINTENACE ELECTRIC WIRING	13	Pre-Start Inspection	36
TO HANDLE THE BATTERY	13	Normal Starting.....	37
TO HANDLE BOOSTER CABLES	14	Restarting Warm Engine.....	38
SAFETY DECALS	14	Cold Weather Starting	38
SAFETY DECALS AND THEIR		Warm Up Period	38
LOCATIONS	15	Operator Observations	39
LOCATION OF SAFETY DECALS	18	Starting Circuit Operation	39
2. INTRODUCTION	19	GROUND SPEED SELECTION.....	40
3. TRACTOR IDENTIFICATION	20	STOPPING TRACTOR	42
MODEL/SERIAL NUMBER	20	DIFFERENTIAL LOCK.....	43
TRACTOR MODEL/TYPE.....	20	FOUR-WHEEL DRIVE	43
TRACTOR SERIAL NUMBER.....	20	POWER TAKE-OFF (PTO)	44
ENGINE MODEL NUMBER.....	21	Rear PTO Shaft	44
ENGINE SERIAL NUMBER.....	21	PTO Operating Control	45
CHASSIS NUMBER.....	21	PTO Operating Controls	46
4. INSTRUMENTS & CONTROLS.....	23	THREE-POINT HITCH.....	47
INSTRUMENT PANEL	24	Hitch Controls	47
Electric Fuel Shut-Off.....	24	External Lift Arm UP / DOWN Switch	47
Main Switch	24	Rear Linkage	48
Indicator Light Strip.....	25	Attaching Implements	50
Coolant Temperature Gauge	26	Using Position Control	51
Tachometer	26	Using Draft Control (accessory).....	52
Fuel Gauge	27	Detaching Implements	53
Horn Switch	27	EXTERNAL AUXILIARY HYDRAULICS.....	54
		DRAWBAR	55
		6. INSTRUMENTS & CONTROLS & OPERATION .	56
		OPENING/CLOSING DOORS	57

LOCK/UNLOCK DOORS	57	When there is dry dust.....	83
REAR WINDOW	58	When there is moist dirt or oil	83
ROOF HATCH.....	59	FUEL SYSTEM	84
CORNERWINDOWS	60	Fuel Filter.....	84
ROOMLAMP	60	Replacing Fuel Filter Cartridge	84
WORKLIGHTS	61	Inspecting Fuel Hose	84
WIPER AND WASHER SWITCH	62	Air-Bleeding Fuel System	84
WASHER RESERVOIR	63	Fuel Tank Filler Cap.....	84
POWER OUTLET SUPPLY.....	64	ELECTRICAL SYSTEM	85
CIGAR LIGHTER	65	Battery	85
ASHTRAY	65	Starting Switches	87
DRINK HOLDER.....	65	Safety Switches	87
SUN VISOR	66	Wiring / Fuse Arrangement.....	87
TOOL BOX.....	66	Fuse Location	88
FREE BOX.....	66	Slow-Blow Fuse.....	89
AIR CONDITIONER OPERATION	67	CLUTCH FREE-PLAY ADJUSTMENT	91
AIR VENT SWITCH	67	BRAKE ADJUSTMENT	91
TEMPERATURE ADJUSTMENT SWITCH	67	WHEELS & TIRES	92
AIR CONDITIONER SWITCH.....	67	Tire Inflation Pressures.....	92
FAN SPEED CONTROL SWITCH	68	Wheel Bolt Torque	92
VENTILATION CONTROL SWITCH	68	Front Wheel Alignment	92
AIR VENT.....	68	Steering Free-Play.....	93
AIR-CONDITIONING and		Front Axle End-Float.....	93
DEHUMIDIFICATION.....	68	TORQUE CHART.....	93
HEATER.....	69	STORAGE.....	94
HEATER and DEHUMIDIFICATION	69		
DEFROSTER.....	69	8. TROUBLESHOOTING.....	96
VENTILATION CONTROL SWITCH	70	ENGINE	96
WHEN NOT USING AIR CONDITIONER	70	CLUTCH.....	97
		BRAKES.....	97
7. LUBRICATION & PERIODIC MAINTENANCE ...	71	SHIFT LEVERS.....	98
SPECIFICATIONS & CAPACITIES.....	71	POWER TAKE-OFF (PTO)	98
Engine Oil	71	STEERING SYSTEM.....	98
Engine Coolant	71	HYDRAULIC SYSTEM.....	99
Fuel Tank	71	ELECTRICAL SYSTEM	100
Transmission & Differential Housing		CABIN	100
(Including Hydraulic System)	71	AIR CONDITIONER.....	101
Front Axle.....	71	INSTRUMENT PANEL	101
Grease Fittings	71	DIGITAL PANEL	102
LUBRICATION/FILL POINTS.....	72		
PERIODIC INSPECTION AND MAINTENANCE		9. DIGITAL PANEL CONTENTS.....	103
TABLE	73	Normal Display	103
Removing/Reinstalling Side Cover	75	Attention Display.....	104
Removing/Reinstalling Front Grille	75	Service Interval	104
LUBRICATION DETAILS	76	Gear Shift Error	104
Grease Fittings	76		
Engine Oil & Filter.....	76	10. SPECIFICATIONS.....	105
Transmission Oil & Filters.....	77	ENGINE	105
Checking/Replenishing Coolant.....	79	TRANSMISSION.....	105
Flushing Radiator / Replacing Coolant	80	POWER TAKE OFF (PTO).....	105
Use of Anti-Freeze	81	HYDRAULIC SYSTEM.....	105
Cleaning of Radiator	81	ELECTRICAL SYSTEM	106
Cleaning Air Cleaner / Vacuator Valve	83	CAPACITIES	106
Use the following procedure to clean the		TREAD WIDTH SETTING.....	106
filter element:	83		

TJ75

11. GENERAL DIMENSIONS	107
12. ASSEMBLY & PRE-DELIVERY INSPECTION ..	108
ASSEMBLY	108
PRE-DELIVERY INSPECTION	110
CHECK LIST	111
13. WIRING HARNESS CABLE	113
WIRING HARNESS(MAIN).....	113
WIRING HARNESS(ELC).....	113
WIRING HARNESS(CAB).....	113

SAFETY

PERSONAL SAFETY INSTRUCTIONS

Whenever you see the words and symbols below, used in this Operator's Instruction Book and on decals, you **MUST** take note of their instructions as they relate to personal safety.



DANGER: This symbol together with the word **DANGER** indicates an imminently hazardous situation that, if not avoided, will result in **DEATH OR VERY SERIOUS INJURY**.



WARNING: This symbol together with the word **WARNING** indicates a potentially hazardous situation that, if not avoided, could result in **DEATH OR VERY SERIOUS INJURY**.



CAUTION: This symbol together with the word **CAUTION** is used to indicate a potentially hazardous situation that, if not avoided, may result in **MINOR INJURY**.

IMPORTANT: The word **IMPORTANT** is used to identify special instruction or procedures which, if not strictly observed, could result in damage to, or destruction of the machine, process or its surrounding.

NOTE: The word **NOTE** is used to indicate points of particular interest for more efficient and convenient repair or operation.

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 engine. Installation of tires of other than the original tire 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 traveling 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 a where it is easily seen by other drivers. Operate the machine carefully keeping in mind that the implement is

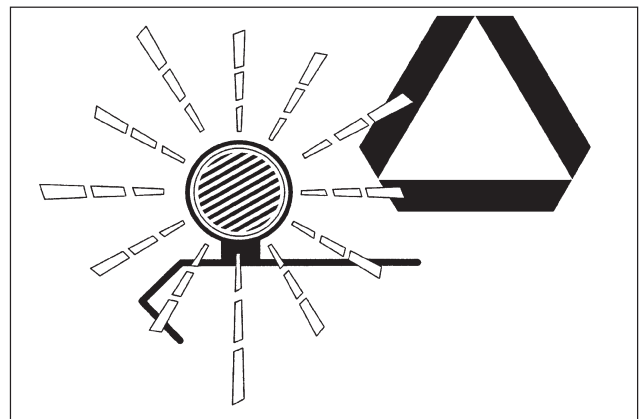


FIG. 1-1

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wider 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.

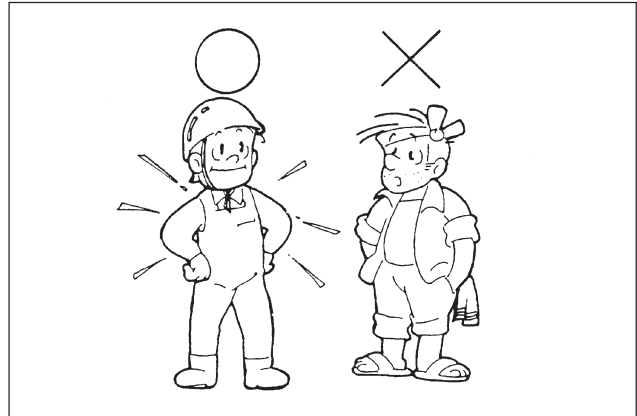
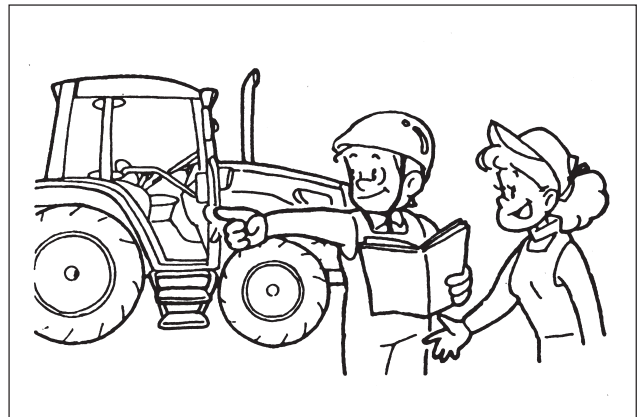
HOW TO BE A SAFE OPERATOR

- (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 traveling on roads or handling material above your head.
 - Protection to avoid being caught in the machine.
Wear tight fitting 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.

**FIG. 1-2****FIG. 1-3****FIG. 1-4****FIG. 1-5**

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 functions properly and performs normally, the chance of an accident will be reduced greatly. If safety devices are damaged or do no work, please consult your ISEKI dealer.

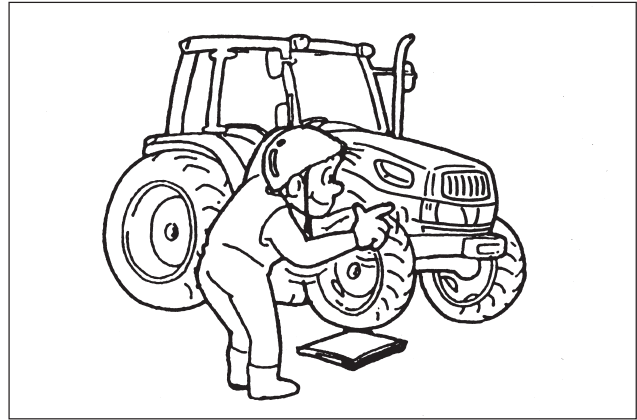
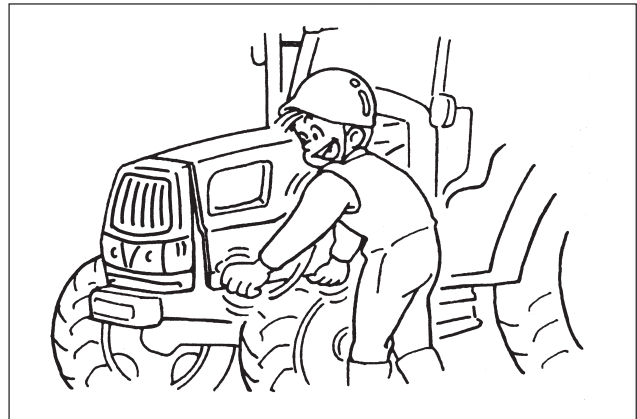
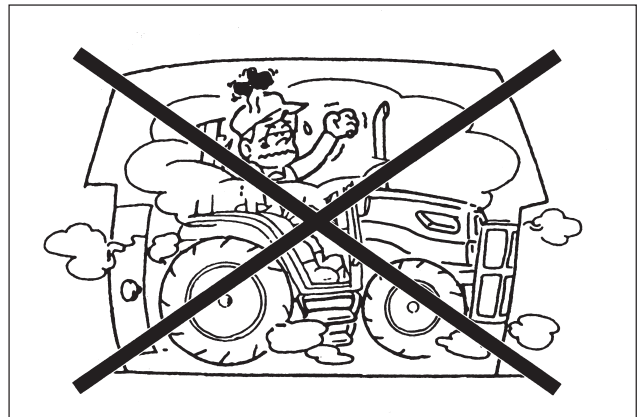
- (3) Before removing a safety devices, such as a safety cover, be sure that the machine has stopped completely. Never forget to replace the removed part after servicing.
- (4) Never inject fuel while the engine is running or is still hot. Keep away from open fires and never smoke around a fuel tank or while fueling into the machine. Never use open flames for illumination when fueling 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 appropriate speed, that there is no one near the machine, 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.

**FIG. 1-6****FIG. 1-7****FIG. 1-8****FIG. 1-9**

TJ75**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.

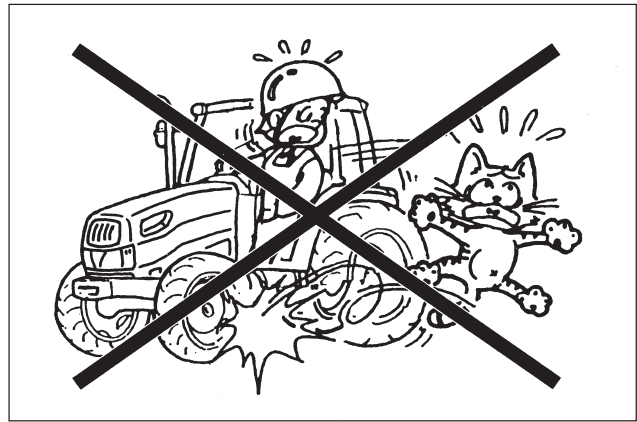
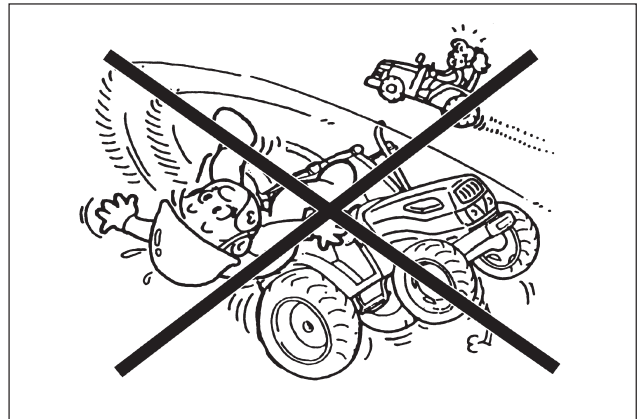
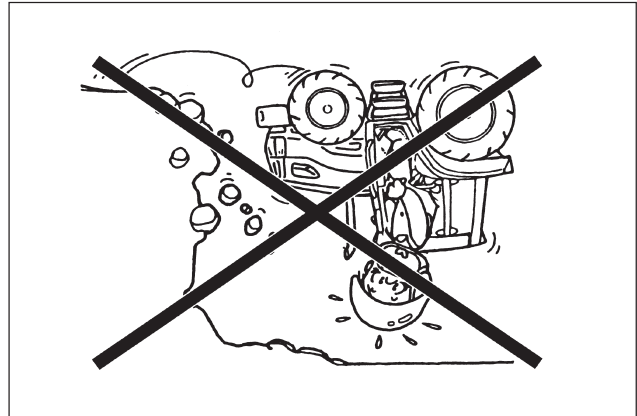
While climbing up a hill, never shift speeds along the way.

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 slower speed that used to climb up the hill.

While going down a hill, never shift into neutral, and never try to control the speed only with the brakes; use the engine brake effectively.

- (5) When traveling 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 traveling on roads.

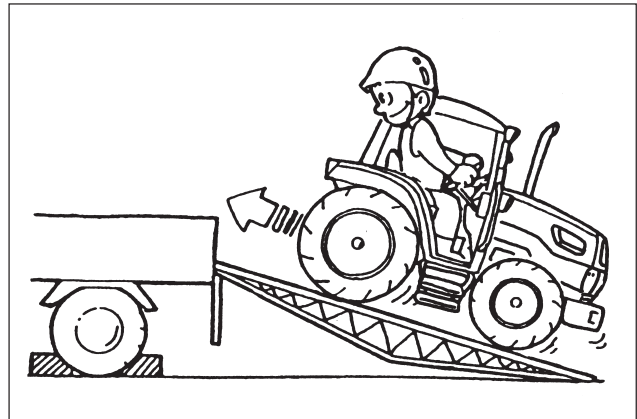
**FIG. 1-10****FIG. 1-11****FIG. 1-12****FIG. 1-13**

- (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 inflammable 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 control levers and pedals. If not, the tractor might work unexpectedly by mistake.

**FIG. 1-14**

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 falls 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 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 pedal immediately and roll the tractor to the ground by manipulating the brake pedal. 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 stator 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.

**FIG. 1-15**

TJ75

SPECIFICATIONS OF THE RAMPS

Length

More than 4 times the height of the platform of the truck

Width (effective width) more than 35cm

Capacity (one ramp) more than 2200kg

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 parts, 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 ISEKI dealer.

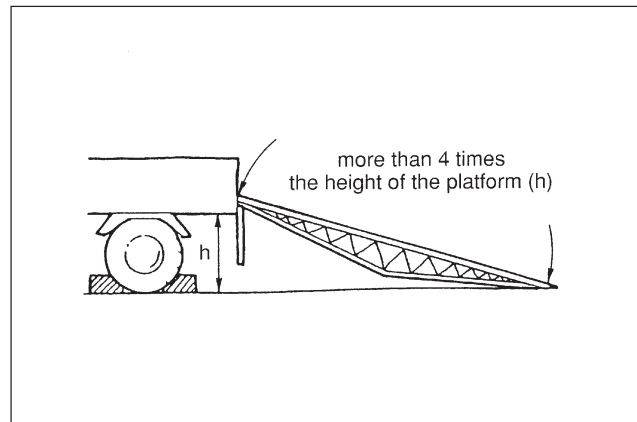


FIG. 1-16



FIG. 1-17

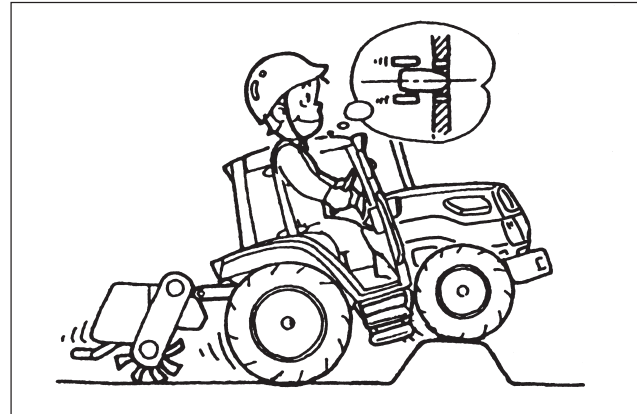


FIG. 1-18

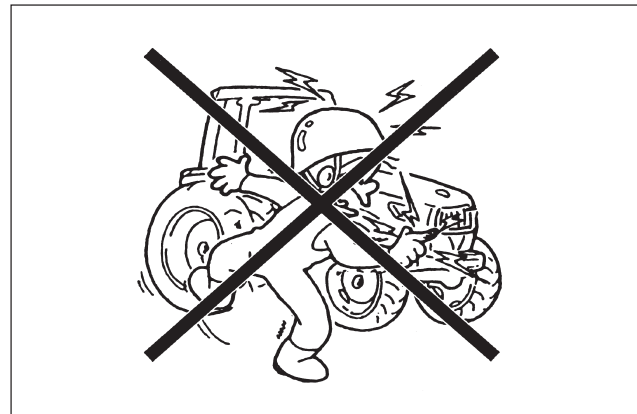
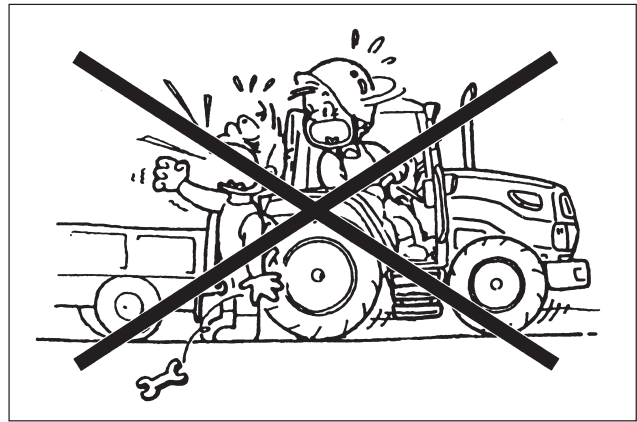


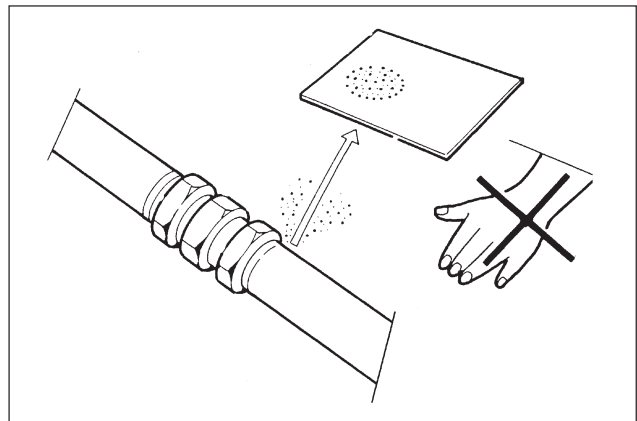
FIG. 1-19

- (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 prepared to move away promptly in the event of an emergency. The brakes should be applied securely during installation.

**FIG. 1-20**

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 servicing, 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.

**FIG. 1-21**

TJ75

- (9) When servicing wheels and tires, the tractor and/or implement must be supported on suitable blocks or stands. Not a hydraulic jack.

Do not attempt to service a tire 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 tire beads onto rims, never exceed the maximum inflation specifications specified on the tire. Inflation beyond this maximum pressure may brake the bead, or even the rim, with dangerous, explosive force.

If tire have deep scratches, cuts or punctures, the replaced by qualified personnel as soon as possible. Wear suitable protective clothing, gloves, eye/face protection.

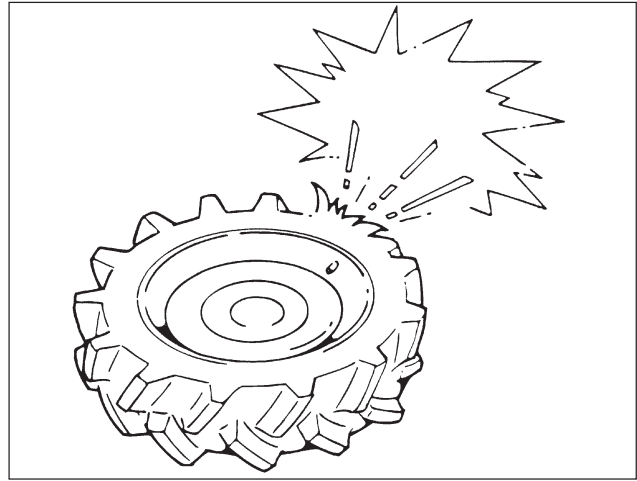


FIG. 1-22

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 inflammable must also be stored in a safe, fireresistant location.

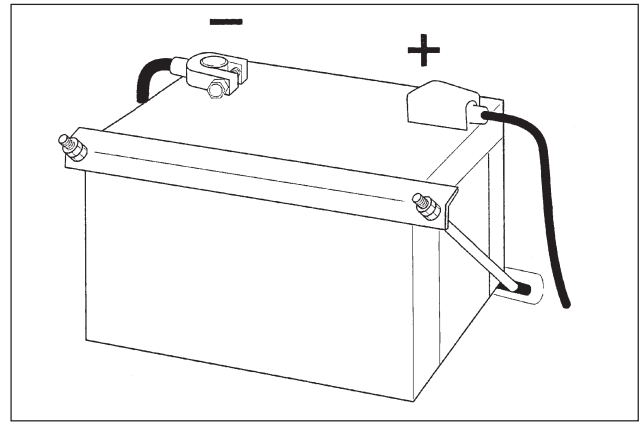
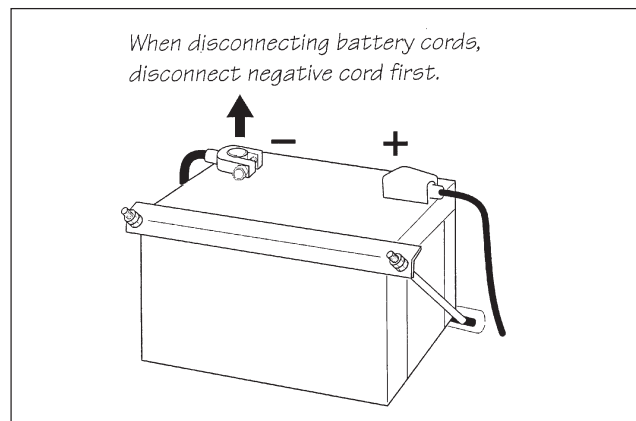
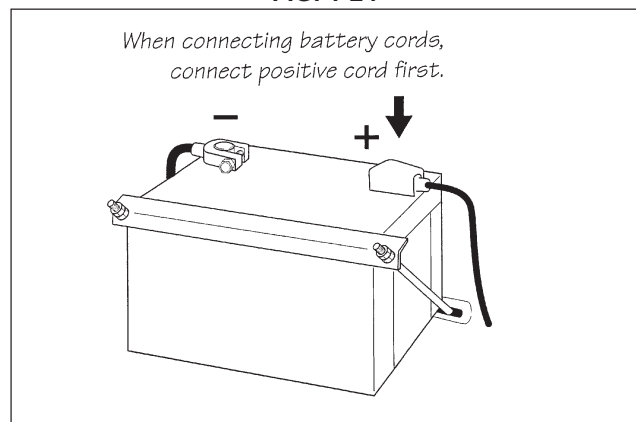
MAINTENANCE OF THE ELECTRIC SYSTEM**TO MAINTENACE ELECTRIC WIRING**

- (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 of 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 oxy gen 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.

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.

**FIG. 1-23****FIG. 1-24****FIG. 1-25**

TJ75

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.

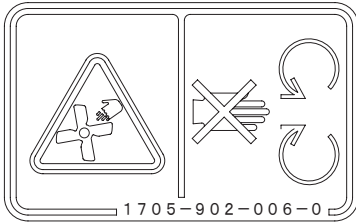
SAFETY DECALS

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, nothing should obscure them.
- 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 enable the label to stick and squeeze out all air bubbles trapped under it.

SAFETY DECALS AND THEIR LOCATIONS

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



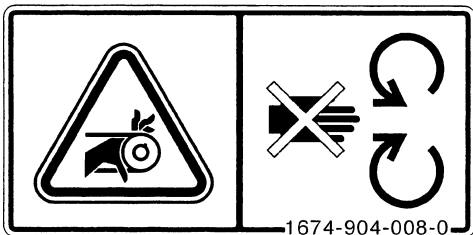
WARNING: RISK OF ENTANGLEMENT
Stay clear of the fan while it is running.

- (2) Battery disconnecting label
(Code No. 1636-901-022-0)



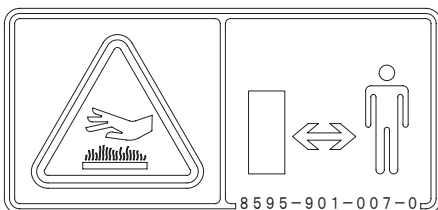
WARNING: RISK OF ELECTRIC SHOCK
When disconnecting the battery, detach the negative terminal first and attach the positive terminal first when connecting the battery.

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



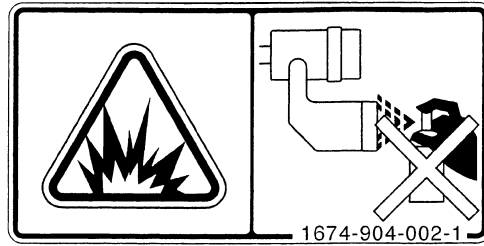
WARNING: RISK OF ENTANGLEMENT
Stay clear of the belt while it is running.

- (4) Hot part warning label
(Code No. 8595-901-007-0)



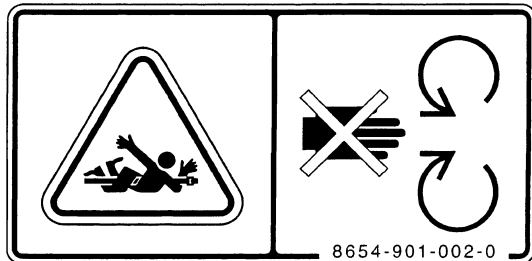
WARNING: HOT SURFACES, RISK OF BURNS ON HANDS AND FINGERS
Stay clear of the heated parts until they cool down sufficiently.

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



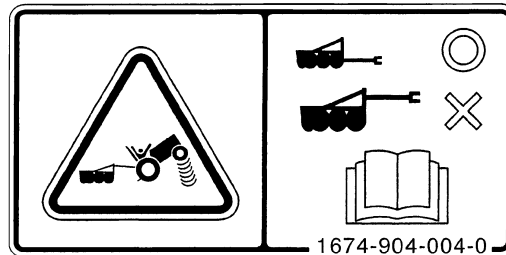
WARNING: RISK OF EXPLOSION
Ether or other starting fluid should never be used to start engines equipped with glow plugs.

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



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

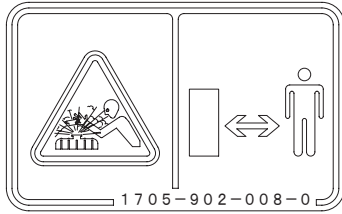
- (7) Trailer label
(Code No. 1674-904-004-0)



WARNING: RISK OF OVERHEATING
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 weight not exceeding the designed capability of the tractor.

TJ75

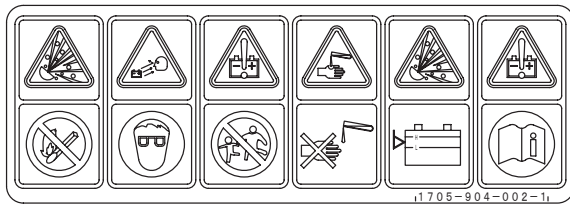
- (8) Radiator label
(Code No.1705-902-008-0)



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.1705-904-002-1)

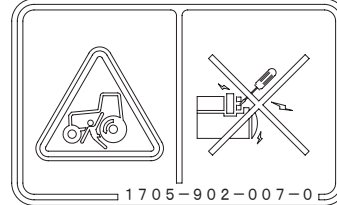


- A. WARNING: RISK OF EXPLOSION
Keep away from sparks or flames, which could cause explosion.
- B. WARNING: WEAR AN EYE PROTECTION DEVICE
Battery electrolyte (euphoric acid) may cause blindness. Wear an eye protector to prevent contact with the eyes.
- C. WARNING: KEEP OUT OF REACH OF CHILDREN
- D. WARNING: 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.

Maintenance free battery does not need to replenish distill water.
- 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.

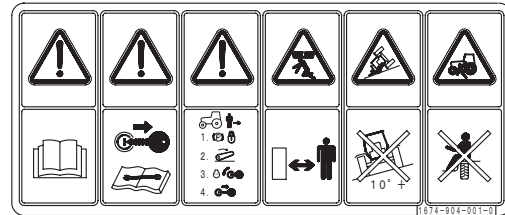
- (10) Starter warning label
(Code No.1705-902-007-0)



DANGER: RISK OF ELECTRIC SHOCK

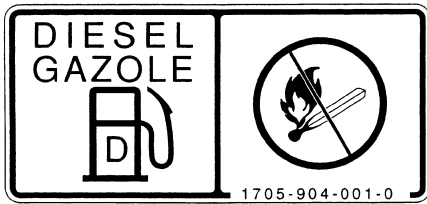
Start the engine only from the seat using the key.

- (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 unattached, 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.

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



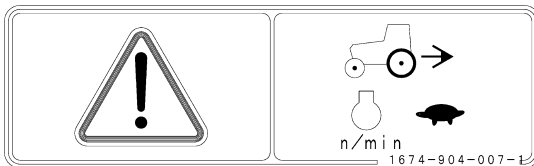
DANGER: RISK OF EXPLOSION AND BURNS

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.

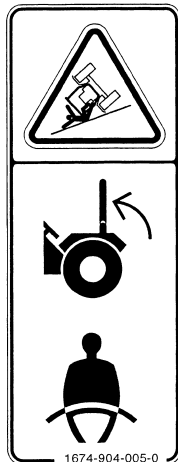
No smoking!

(13) Reverse label
(Code No.1674-904-007-1)



Before moving tractor to reverse direction, be sure to reduce engine speed.

(14) ROPS label
(Code No.1674-904-005-0)
(ROPS/CABIN type)

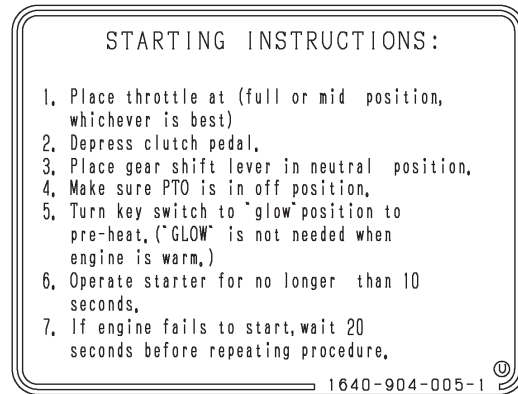


WARNING: RISK OF INJURY

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/CABIN.

(15) Starting engine caution label
(Code No.1640-904-005-1)



WARNING: RISK OF INJURY

"Before starting engine, be make sure to set throttle lever in full or mid position.

Depress clutch pedal and set shuttle and shift lever and PTO lever(switch) in neutral position.

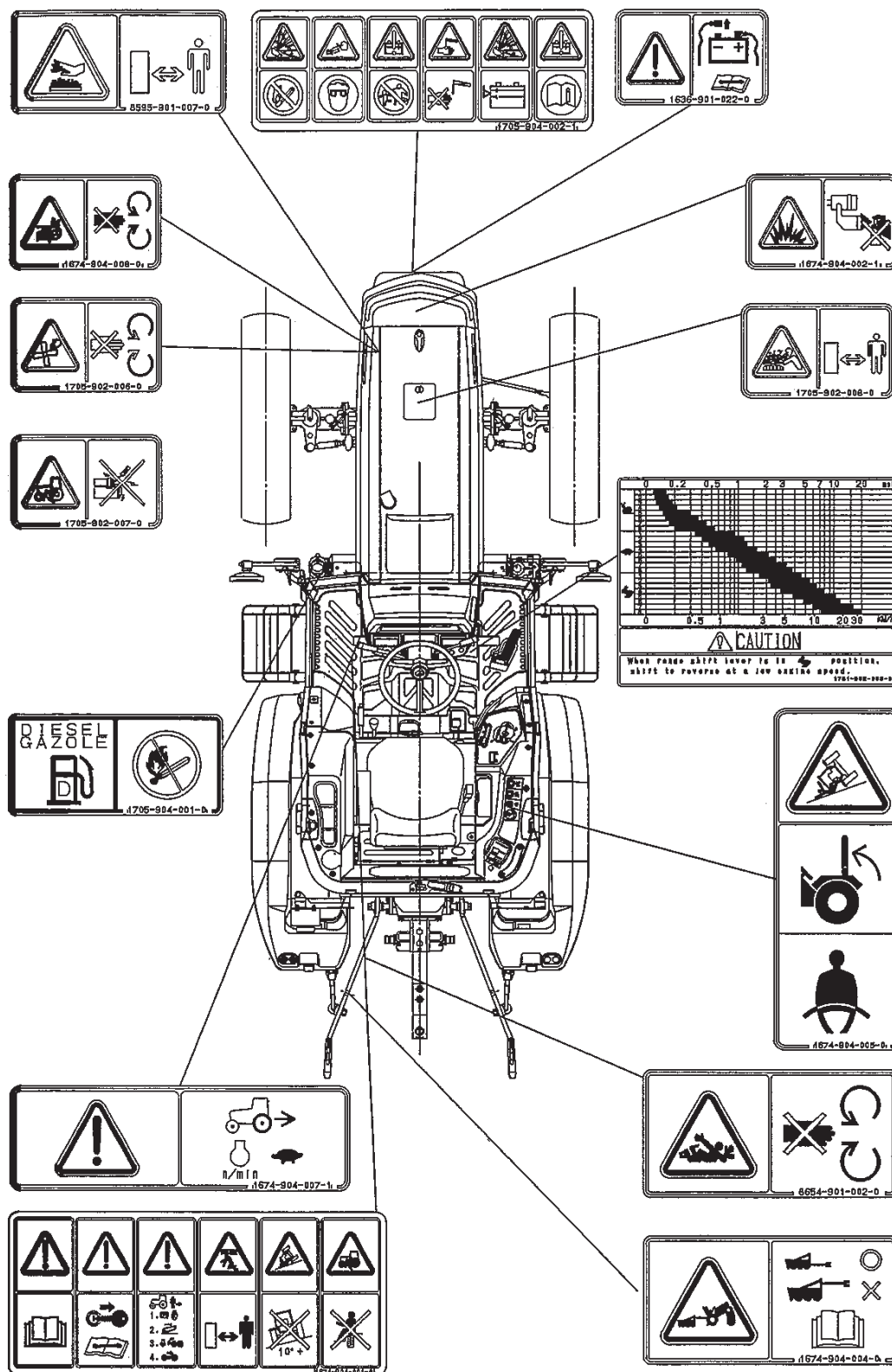
When engine is cold, turn key switch to glow position to pre-heat.

Operate starter within 10 seconds.

If engine does not start, repeat above procedure after 20 seconds."

TJ75

LOCATION OF SAFETY DECALS



Location of all instruction decals provided as a reference. Replace any decals that are damaged, missing or are not readable. Consult your dealer.

INTRODUCTION

The information in this publication describes the operation, maintenance and servicing of the TJ75 Tractor. Every effort has been made to provide correct and concise information to you, the operator, as available at date of book publication. Your ISEKI Dealer is available should items in this book or details of your machine not be understood.

This book is supplied with each machine to familiarize the operator with proper instructions needed for operation and maintenance. Studying and adhering to these instructions will insure optimum machine performance and longevity. A machine that is maintained properly and operated in the intended manner will provide greater dividends than one that is neglected and/or operated in manner other than as intended. Design and servicing of this machine has been kept as simple as possible to permit maintenance operations to be carried out with tools normally available.

This book should be thoroughly read and understood prior to operation of this machine. Inexperienced operators should study contents of this publication and receive instruction from an experienced operator when possible. Your ISEKI Dealer can also assist in areas concerning machine operation and provide details concerning safe operation. It is suggested that this booklet be kept readily accessible, preferably with the machine, for future reference if questions or concerns arise. If the original book should become damaged, consult your Dealer in regards to acquiring a replacement.

Customers are strongly advised to use an official ISEKI Dealer in connection with any service problems and adjustments that may occur. The ISEKI Dealer network is specially trained and equipped for all service work and to advise customers on specific applications of the Tractor in local conditions.



CAUTION: In some of the illustrations used in this Operator Instruction Book, 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.

CAUTION: READ THIS BOOK IN ITS ENTIRETY PRIOR TO OPERATING MACHINE.
Use only ISEKI parts for repairs and/or replacement.

TRACTOR IDENTIFICATION

MODEL/SERIAL NUMBER

Each Tractor is identified by means of Tractor model and serial numbers. As a further identification, engine and chassis are provided with identification numbers.

To ensure prompt, efficient service when ordering parts or requesting repairs from authorized Dealer, record these numbers in spaces provided.

TRACTOR MODEL/TYPE

--	--

TRACTOR SERIAL NUMBER

--

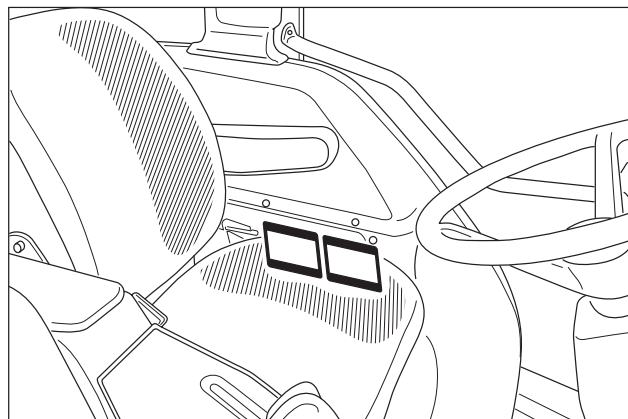


FIG. 3-1

FIGS. 3-1, 3-2, 3-3: Tractor identification plate, 1, located below operator's seat on right-hand side of fender. Contains model number in addition to Tractor serial number.



FIG. 3-2



FIG. 3-3

TRACTOR IDENTIFICATION

ENGINE MODEL NUMBER

ENGINE SERIAL NUMBER

FIG. 3-4: Engine model number, 1, is cast on right side of engine block, below the injection pump.

Engine serial number, 2, is stamped into cylinder block, below engine model number.

CHASSIS NUMBER

FIG. 3-5: Chassis number, 1, is stamped in right side of front frame.

NOTE: Reference to left-hand and right-hand, used throughout this book, refers to the position when seated in operator's seat and facing forward

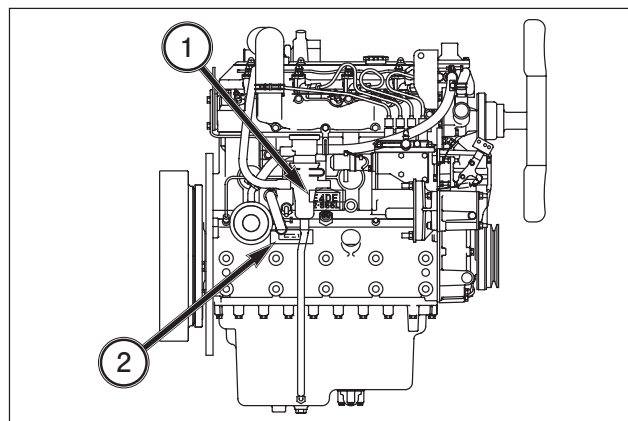


FIG. 3-4

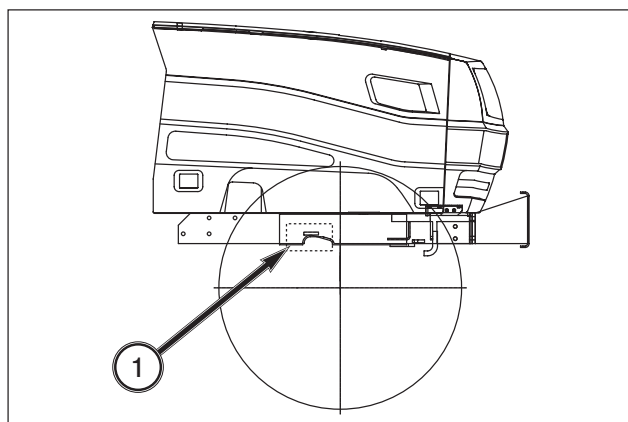


FIG. 3-5

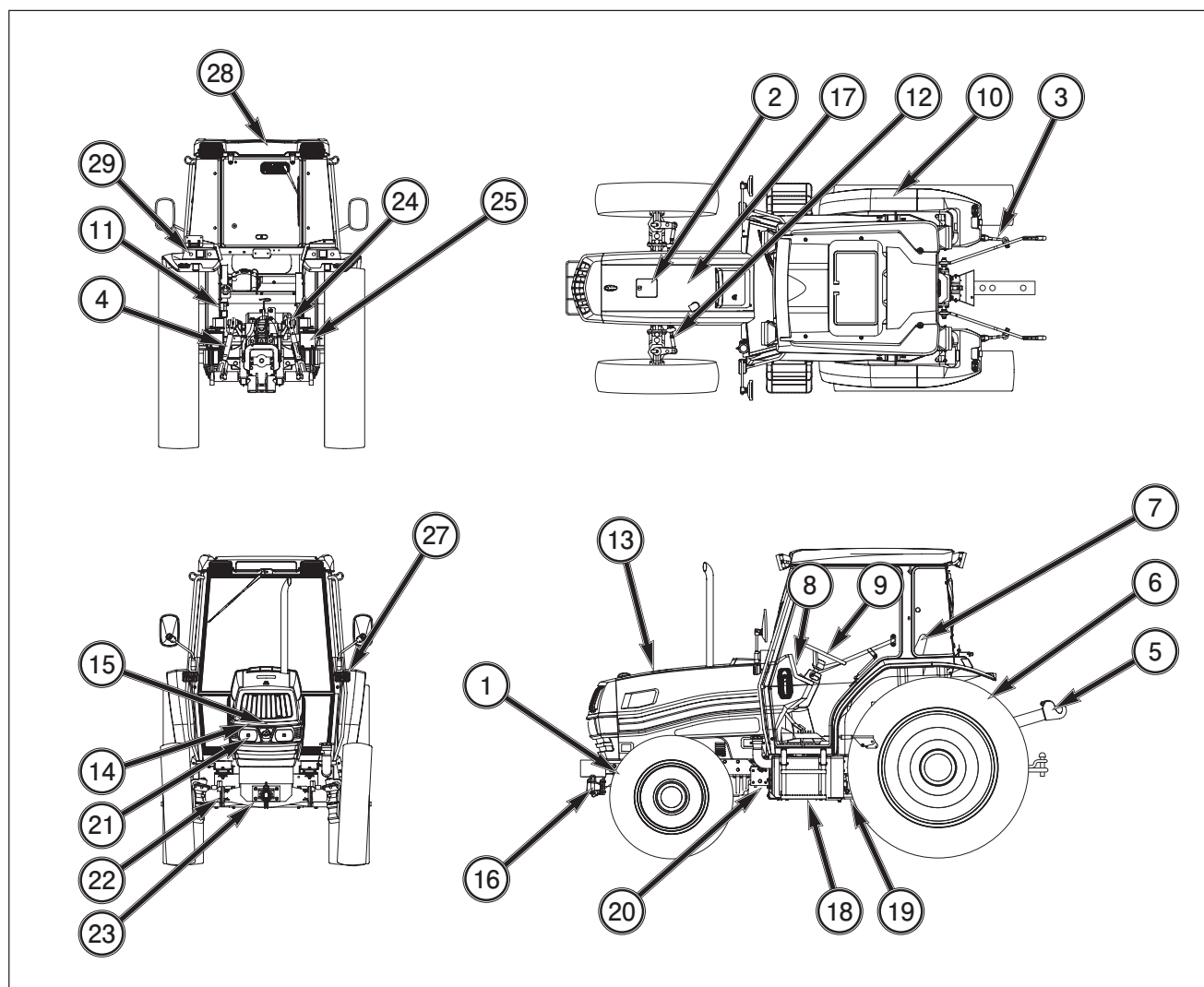


FIG. 3-6

FIG. 3-6: Identification and terminology of major components, as given in this book, are as follows:

- | | |
|-----------------------|--------------------------------|
| 1. Front Wheels | 16. Front Hitch |
| 2. Fuel Tank Filler | 17. Engine |
| 3. Check Chain | 18. Foot Step |
| 4. Lift Rod | 19. Transmission |
| 5. Lower Link | 20. Front Wheel-Drive Shaft |
| 6. Rear Wheels | 21. Headlight |
| 7. Operator's Seat | 22. Front Axle |
| 8. Instrument Panel | 23. Front Axle Pivot |
| 9. Steering Wheel | 24. Lift Arm |
| 10. Fender | 25. Rear Axle |
| 11. Reflector | 26. Drawbar |
| 12. Steering Cylinder | 27. Turn/Hazard position Light |
| 13. Hood | 28. Cabin |
| 14. Front Grille | 29. Turn/Reflector/Tail Light |
| 15. Battery | |

INSTRUMENTS & CONTROLS

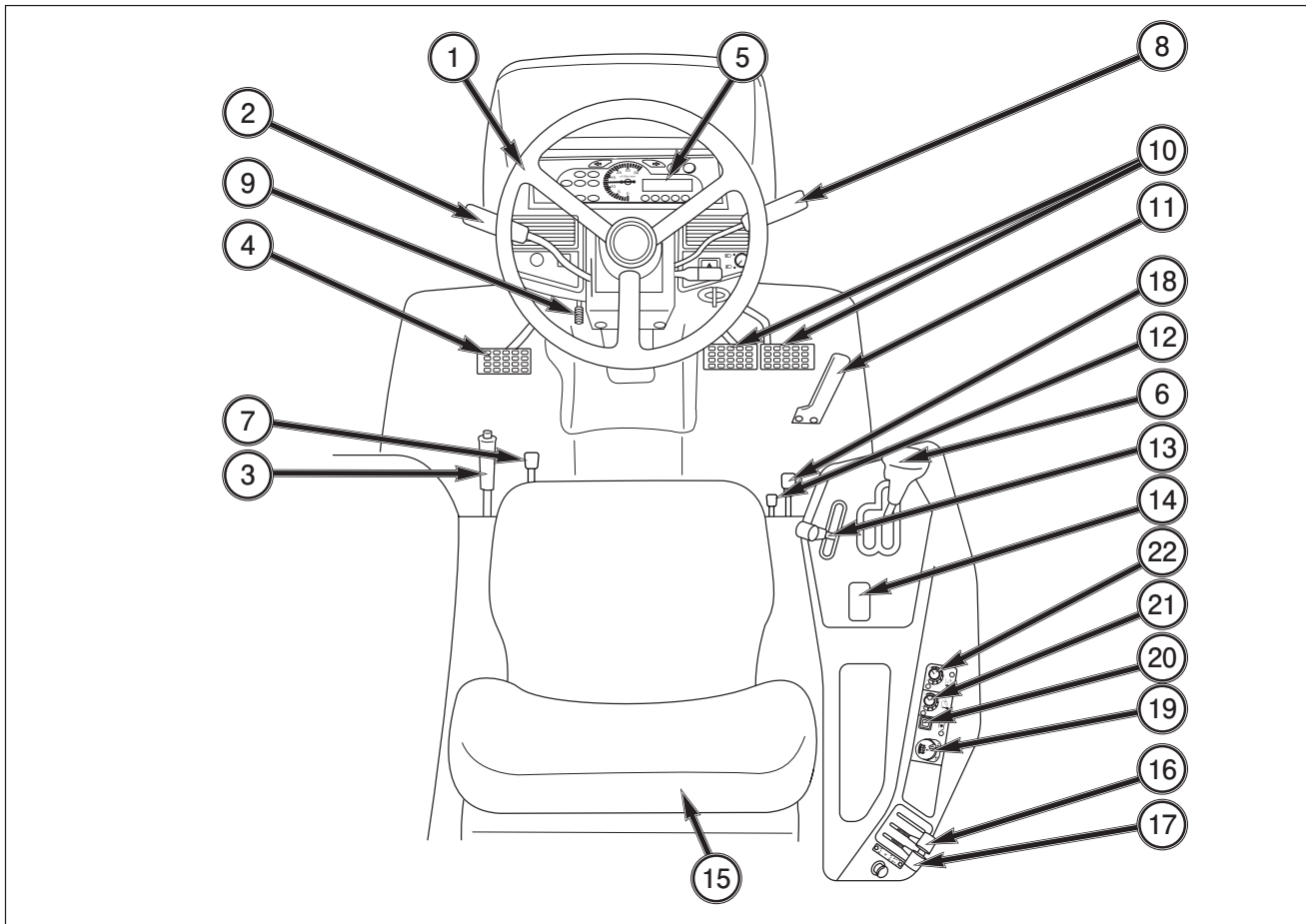


FIG. 4-1

FIG. 4-1: General layout and location of controls within operator's area on Tractor. Specific use of these controls is given later in this section and also in operation section of this book:

- | | |
|--|--|
| 1. Steering Wheel | 11. Foot Throttle Pedal |
| 2. Forward / Reverse Power Shuttle Lever | 12. Differential Lock Pedal |
| 3. Parking Brake Lever | 13. Three Point Hitch Position Control Lever |
| 4. Clutch Pedal | 14. Three Point Hitch Position Control Switch |
| 5. Instrument Panel | 15. Operator's Seat |
| 6. Range Shift Lever (with Gear Shift Button) | 16. External Auxiliary Hydraulics Lever |
| 7. Rear Power Take-Off (PTO) Selector Lever | 17. External Auxiliary Hydraulics Lever |
| 8. Hand Throttle Lever | 18. Four wheel Drive (4-WD) Shift lever |
| 9. Steering Column Tilt Pedal | 19. Power Take-Off (PTO) switch |
| 10. Brake Pedals | 20. Power Take-Off (PTO) Mode Switch |
| | 21. Highest Position Adjustment Dial |
| | 22. Lowest Position Adjustment Dial |



CAUTION: Become familiar with all operating controls prior to operating Tractor. Read this book in its entirety before starting.

TJ75

INSTRUMENT PANEL

FIG. 4-2: Arrangement of gauges. Control switches and indicators located in instrument panel. Items are detailed in the descriptions that follow:

Electric Fuel Shut-Off

Turning main switch to OFF position will stop engine.

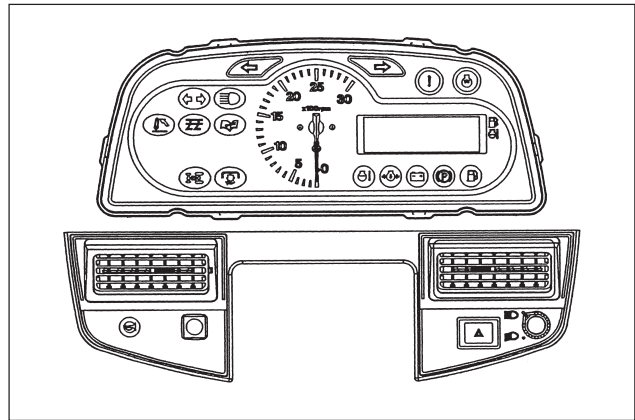


FIG. 4-2

Main Switch

FIG. 4-3: Main switch, 1, has the four following positions:

-  **OFF** - Tractor engine and all electrical circuits off.(except for head light, turn/hazard position light, tail light, working lamp) Key can be removed.
-  **ON** - Power supplied to all circuits. Normal operating position. Linkage on fuel injection pump moves (electrically) to the run position.
-  **START** - Starter activated. This position spring loaded to ON
-  **GLOW** - Energizes glow plugs to pre-heat combustion chambers and assist starting.

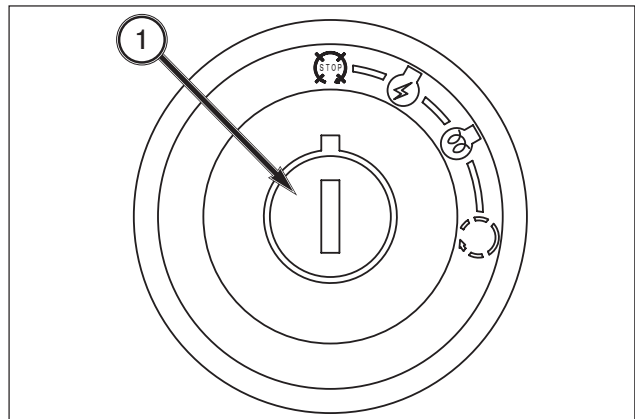


FIG. 4-3

NOTE: Main switch must be turned to ON before any circuits will operate. PTO switch must be off and gear shift lever in neutral before engine can be started.

This tractor is equipped with an electric fuel shut off. When main switch, 1, is turned to START, ON, or GLOW position and gear shift lever is placed in neutral, a solenoid moves the fuel linkage on injection pump to run position to start engine. When main switch is turned to OFF solenoid moves fuel linkage to OFF position to stop engine.

FIG. 4-4: When main switch, 1, is selected to GLOW position, glow indicator, 2, will illuminate after several seconds to indicate the engine combustion chambers are preheated and allow cold engine to be started.

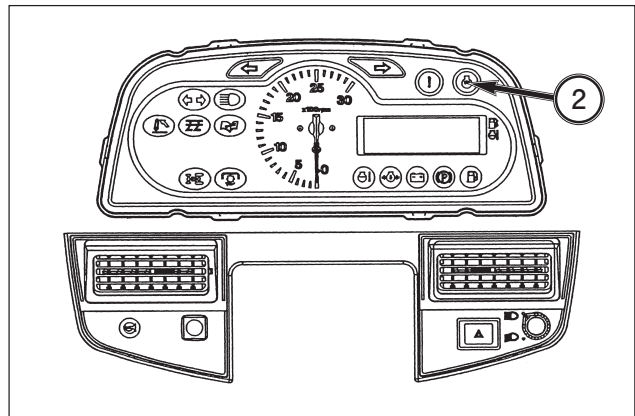


FIG. 4-4

Indicator Light Strip

FIG. 4-5: Indicator light strip, 3, contains several warning lights to monitor certain functions. Currently used positions (from left to right) are:

-  Main (High) Beam - Illuminates when headlamps in front grille are selected to high beam position by light switch.
-  Power Take-Off (PTO) - Illuminates when PTO control switch is moved to engage PTO clutch pack (PTO operating). Light will go out when PTO switch is moved to off.
-  Engine Oil Pressure - Illuminates if engine oil pressure is low. If light comes on while engine is running, shut off engine immediately and investigate cause.
-  Battery Charge - Illuminates when main switch is turned ON and will go out after engine starts, to indicate battery is being charged.
-  Coolant Temperature - Illuminates when engine is overheating. Reduce engine speed to idle, allow to run at no load several minutes and investigate cause(refer to "Troubleshooting").
-  Fuel - Illuminates when fuel is low level in the fuel tank.
-  Inspection - Illuminates when hourmeter indicates 50/100/200/300/400 • • • hour, please inspect your tractor.
-  Caution - Illuminates when it is not normal with starting engine or sensor of Power shift is not normal.
-  Parking Brake - Illuminates when parking brake lever is pulled up.
-  4WD - Illuminates when 4WD is engaged by shifting 4WD lever.
-  Trailer Indicator - Blink when turn switch is ON with connecting 7 pins socket to your trailer or when hazard light switch is ON.
-  Draft Monitor Lamp - Illuminates when draft control.(OPTION)
-  Lift Arm Upper Position - Illuminates when lift arm is staying at the highest position. Blink when hyd control is not ready and in waiting condition if operating aux switch just after starting engine.

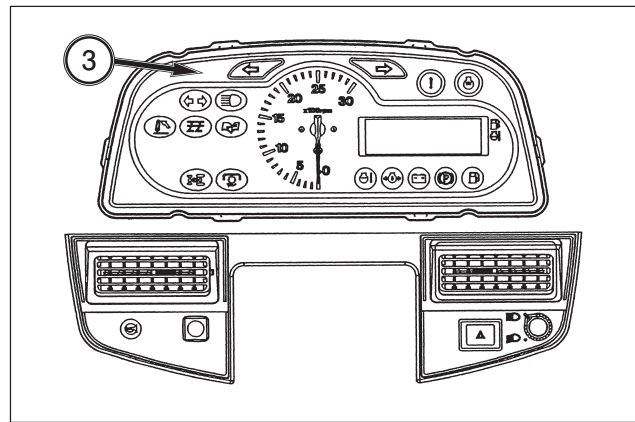


FIG. 4-5

TJ75

Coolant Temperature Gauge

FIG. 4-6: Gauge, 4, indicates engine coolant temperature when main switch is selected to ON

-  - Shows too cool temperature for severe work. Allow to warm before applying heavy load.
-  - Indicates overheating. Reduce engine speed to idle, allow to run at no load several minutes and investigate cause (refer to Troubleshooting).



CAUTION: Do not service hot engine. Allow to completely cool before servicing or removing radiator cap.

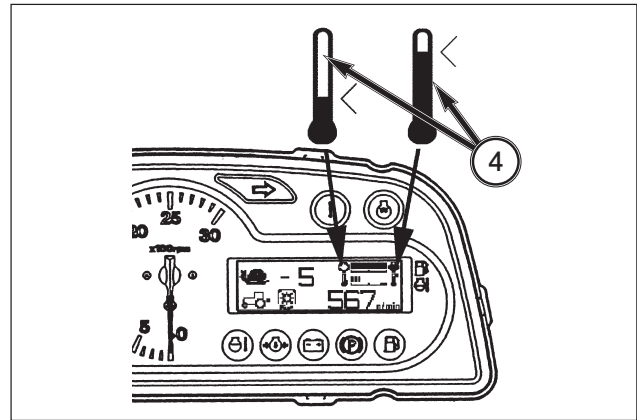


FIG. 4-6

Tachometer

FIG.4-7 & 4-8: Scale,5, indicates engine speed in crank shaft revolutions per minute(rpm). Digital panel indicates not only engine revolutions but also traveling speed, rear PTO speed, mid PTO speed, hourmeter, trip meter.

Indication of digital panel is changed by pushing the selectable switch,6.

When rear PTO speed is 540, engine revolutions is approximately 2430 rpm.

Normally, the PTO speed should be between 540 and 600. Operating the PTO at a speed above 600 is too fast, and may result in breakdown of the tractor or implement.

The engine hourmeter is used to assist in maintenance intervals of the tractor in 1 hour increments.

The tripmeter is used to assist in operation. The extreme right digit indicates 1/10 hour increments. To reset the tripmeter, push the selectable switch for two seconds.

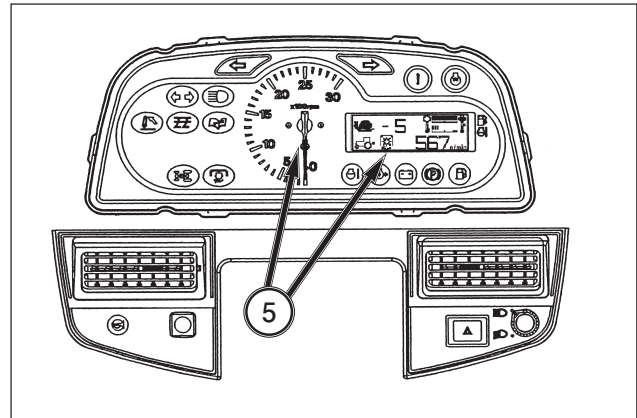


FIG. 4-7

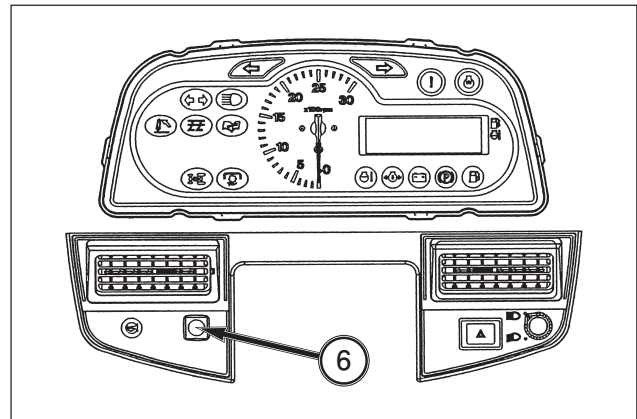


FIG. 4-8

Fuel Gauge

FIG. 4-9: Scale, 7, indicates level of diesel fuel in fuel tank when main switch is ON.

NOTE: Use only clean diesel fuel and clean area to pre-vent dirt/water entry into fuel tank when refilling. **DO NOT** run out of fuel as bleeding air from the system will be required. Keep fuel tank full to minimize condensation.



CAUTION: **DO NOT** refill fuel tank with engine running or hot. Allow cooling period. **DO NOT** smoke near fuel tank. Clean up any spilled fuel.

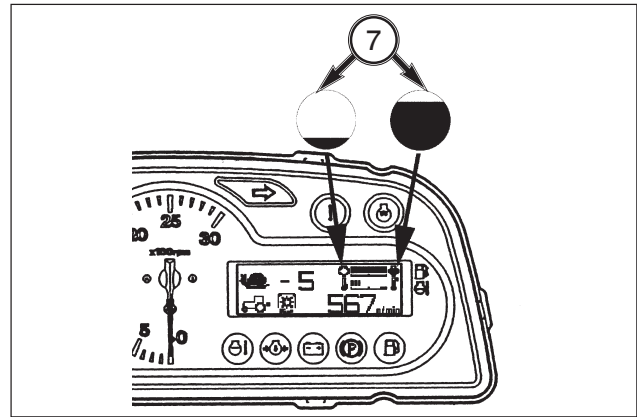


FIG. 4-9

Horn Switch

FIG. 4-10: Horn Switch.

Horn Switch, 8 - Horn will sound when switch button is depressed.

Light Turn Switch

FIG. 4-11: Light Turn Switch.

Light Switch, 9 - Is a select switch with three operating positions by turning a top part of switch:

- **OFF** - Fully counterclockwise. All lights off.
- **1st** - Front and rear position lamps.
- **2nd** - Headlamps and rear tail lights.

Turn Switch, 10 - Operate switch handle in direction Tractor is being turned.

NOTE: Turn lights will not self-cancel. Select turn/hazard light switch to center position after completing turn.

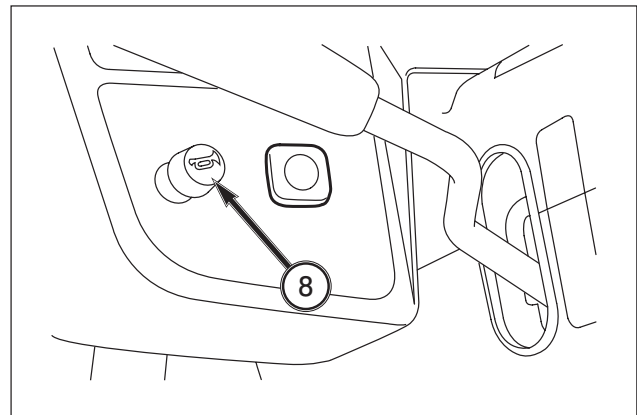


FIG. 4-10

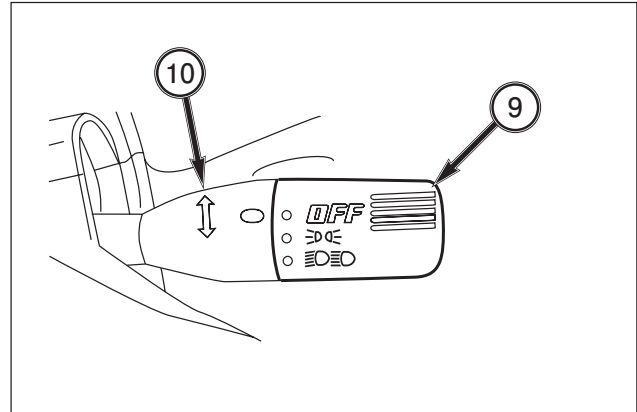


FIG. 4-11

High - Low Beam Switch

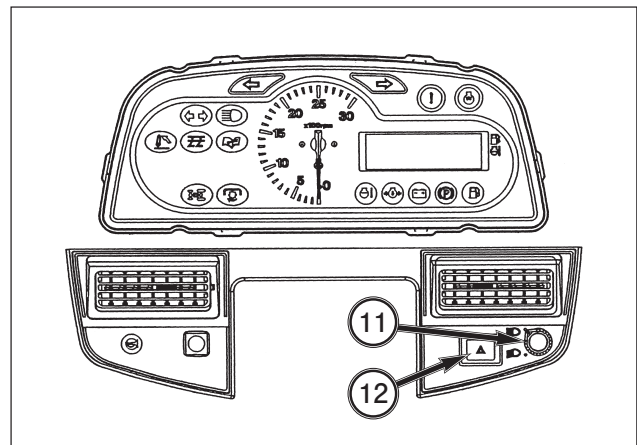
FIG. 4-12: Turn high-low beam switch, 11, to select high beam or low beam.

NOTE: When high beam is selected light in indicator light strip will come on.

Hazard Light Switch, - Press switch, 12, to turn on hazard lights.



CAUTION: Hazard lights must be used any time Tractor is driven on public roadway. Consult local agencies for other marking requirements.



TJ75

FIG. 4-13: Turn/hazard indicator lights, 13 and 14

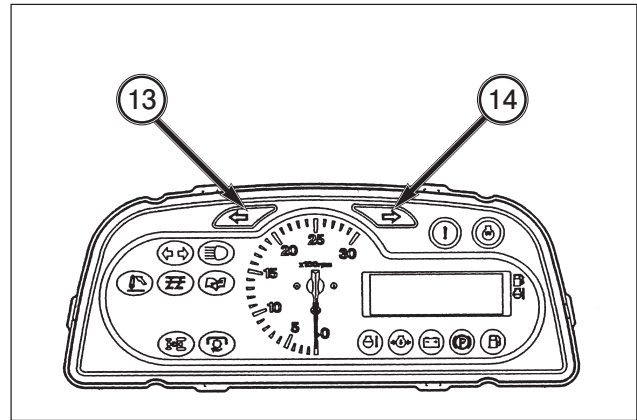


FIG. 4-13

Power Take-Off (PTO) Switch

FIG. 4-14 & 4-15: PTO switch, 1, is used to engage and disengage the PTO drive system.

The switch must first be turned to right and then pulled up to engage PTO. When engaged, the PTO indicator light in the indicator light strip will illuminate.

A PTO select switch, 2, is used to adjust PTO clutch modulation.

Push on: soft start (button depressed and illuminated)
- for high inertia loads

Push off: standard start (button out and not illuminated)

IMPORTANT: PTO switch is equipped with a lock-out to prevent accidental engagement of PTO system. To engage PTO, first turn switch clockwise and then pull up it. **DO NOT FORCE SWITCH.**

NOTE: PTO switch, 1, must be used in conjunction with rear PTO selector lever, to lower left of operator's seat, when rear PTO is used. Refer to operationsection for complete details.

When PTO switch is ON, the engine cannot be started. Always switch off PTO and depress main clutch pedal to start engine.



WARNING: 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.

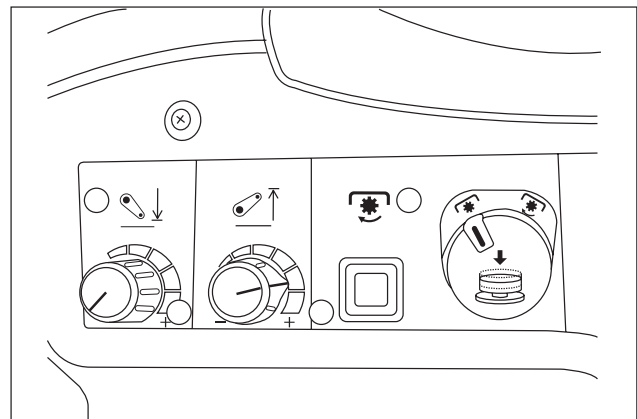


FIG. 4-14

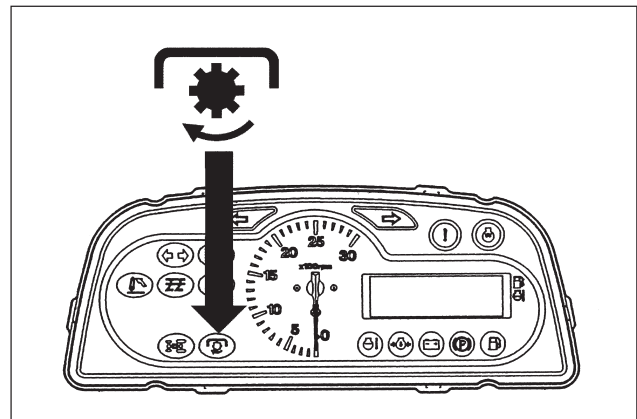


FIG. 4-15

MAIN CLUTCH PEDAL

FIG. 4-16: Foot pedal, 1, disengages engine from transmission when fully depressed, to permit engine starting, selecting/changing gears and stopping Tractor movement. Four-wheel drive selection also requires clutch disengagement.

Slowly raising the pedal will engage clutch and start Tractor moving in selected gear.

NOTE: *Clutch pedal should be depressed quickly to prevent abnormal wear. Clutch pedal should be raised smoothly to prevent sudden movement. DO NOT ride clutch pedal with your foot.*

IMPORTANT: *Clutch pedal free-play must be adjustment correctly. Refer to maintenancesction.*

BRAKES

Brake Pedals & Parking Brakes

FIG. 4-17: Inner brake pedal, 1, and outer brake pedal, 2, independently control the respective left and right wheel brakes, to assist in turning.

During Tractor transport or high speed operation, brake pedals must be latched together using interlocking plate, 3.



CAUTION: Do not use individual wheel brakes for transporting or operating at high speed. Always latch pedals together using interlocking, plate, 3. Make sure brakes are adjusted evenly.

Parking Brake lever



WARNING: ALWAYS apply the parking brake before dismounting from the tractor.

FIG. 4-18 & 4-19: The parking brake acts on the tractor rear wheels. To engage the brake, pull upward on the parking brake lever, 4 to lock brakes in applied position. To release the parking brake, press the button on the end of the lever and push the lever down.

When pulling upward on the parking brake lever, the parking brake indicator light will illuminate.

Ensure the parking brake is fully released before driving off.

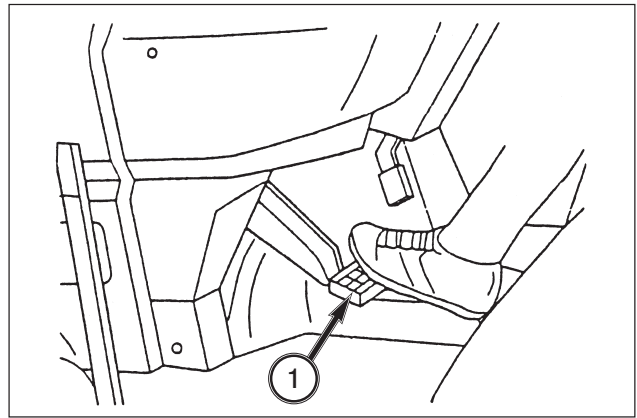


FIG. 4-16

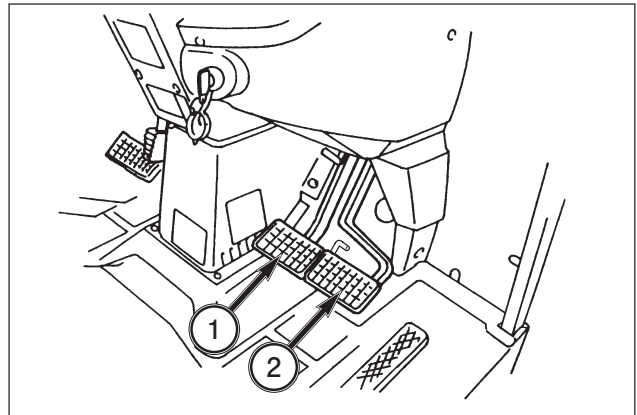


FIG. 4-17

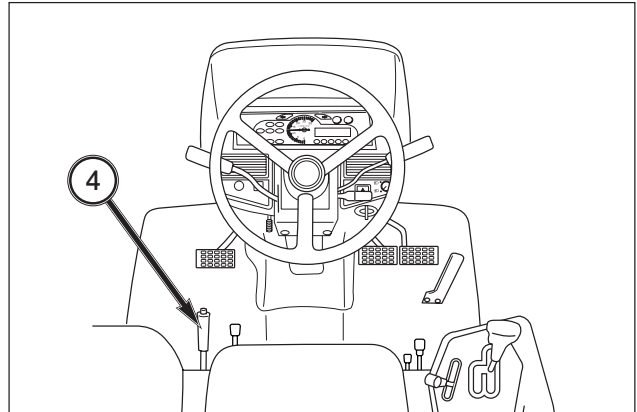


FIG. 4-18

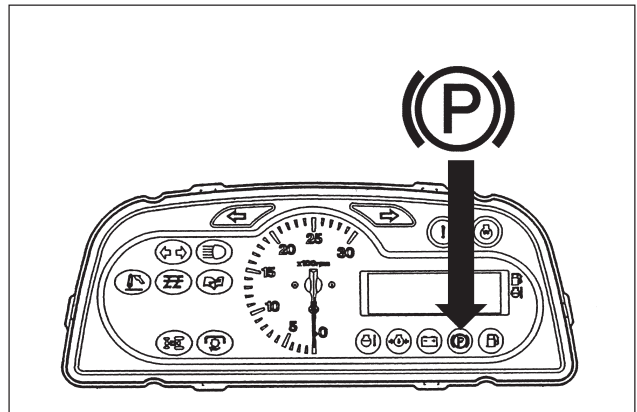


FIG. 4-19

TJ75

ENGINE SPEED CONTROLS



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

IMPORTANT: *DO NOT race or excessively load cold engine.*

FIG. 4-20: Hand Throttle Lever, 1 - Controls engine speed and will remain in position selected by the operator. Move hand lever upwards (rotate counterclockwise) to decrease engine speed. Move hand lever downwards (rotate clockwise) to increase engine speed.

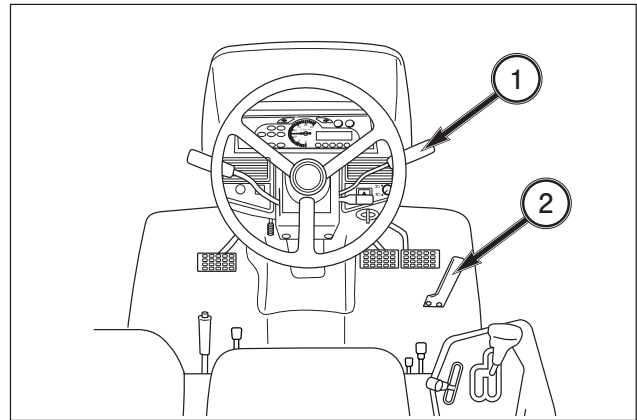


FIG. 4-20

Foot Throttle Pedal, 2 - Will override setting of hand throttle lever for increased engine speed. When pedal is released, engine speed returns to hand throttle lever setting.



CAUTION: Always set the hand throttle to the low idle position when using foot throttle pedal. This ensures maximum engine braking when pedal is released.

TRANSMISSION SHIFT LEVER AND BUTTON

Shift lever and gear shift button are used to select ground travel speed through different gear reductions within the drive train. Forward and reverse travel directions are also possible in all gear selections.

IMPORTANT: *Range change selection requires complete disengagement of main clutch (depressing pedal) and complete stop.*

Forward/Reverse Power Shuttle Lever

FIG. 4-21: With power shuttle lever, 1, forward or reverse direction changes are possible without depressing the main clutch pedal. Lift up and move lever forward to shift to the forward travel position, move lever rearward to shift to the reverse travel position.

NOTE: Make sure power shuttle lever is in neutral position before starting engine.



CAUTION: Forward/Reverse direction changes must not be made at high speed. Refer to operation section for complete details.

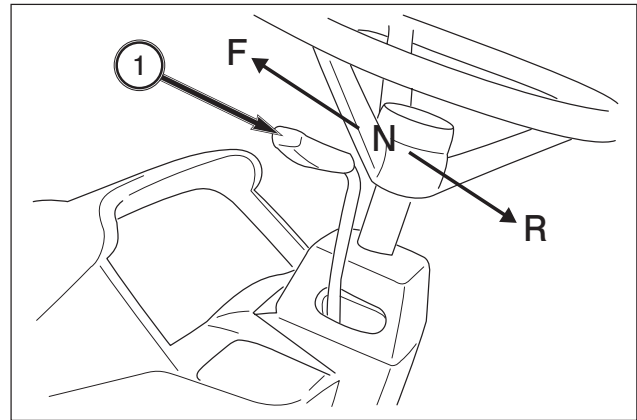


FIG. 4-21

Range Shift Lever and Gear Shift Button

FIG. 4-22: Range shift lever, 2 and Gear shift button, 3, are located to the left of the operator's seat.

Range Shift Lever, 2 - Provides three major speed changes from slowest speed range through second and highest speed range.

Gear Shift Button, 3 - Provides four smaller gear speed changes within each range, from first through fourth gear positions.

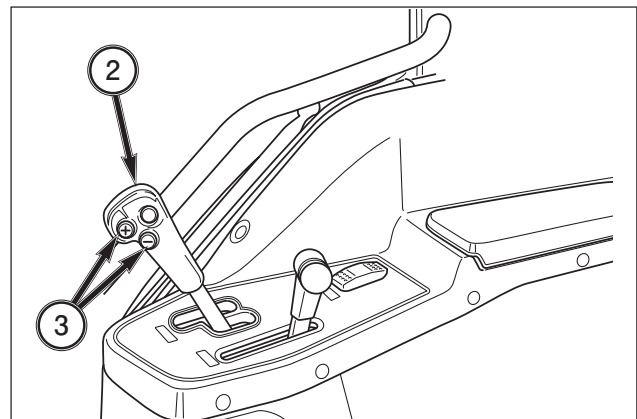


FIG. 4-22

FIG. 4-23: A total of twelve forward and twelve reverse gear speeds are possible. The synchronized shifting allows the gear shift to be changed with the Tractor in motion. The sliding mesh gears allow the range shift lever to be changed with the tractor stopped completely (with main clutch pedal and brake pedal depressed).



CAUTION: Make forward to reverse, and reverse to forward, direction changes with Tractor stopped or traveling at very slow ground speed.

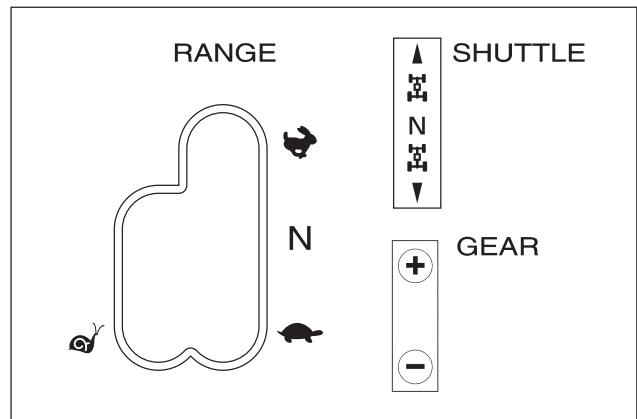


FIG. 4-23

TJ75

DIFFERENTIAL LOCK PEDAL

FIG. 4-24: 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 conditions.

IMPORTANT: *Depress main clutch pedal and stop before engaging differential lock.*

Disengage differential lock, by releasing foot pedal. If lock does not immediately disengage, tap right and left brake pedals alternatively until pedal is released.

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

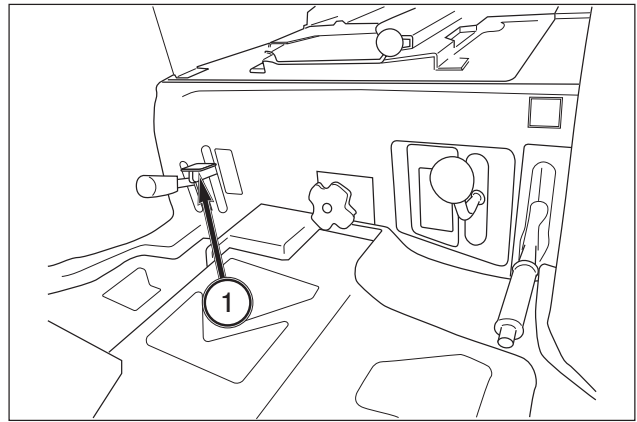


FIG. 4-24

FOUR-WHEEL DRIVE SHIFT LEVER

FIG. 4-25: Shift lever, 1, engages and disengages drive for the front axle. Lever forward, the front axle (4-WD) is disengaged. Lever rearward, the front axle is engaged, and power is available to both front and rear axle. When shift lever is pulled rearward, the 4-WD indicator light will illuminate.

IMPORTANT: *Depress main clutch pedal and 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.

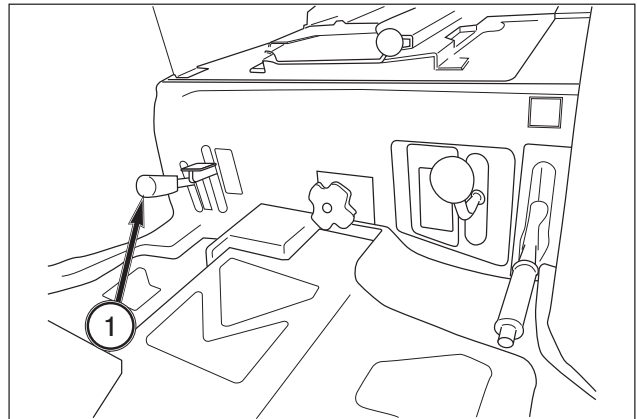


FIG. 4-25

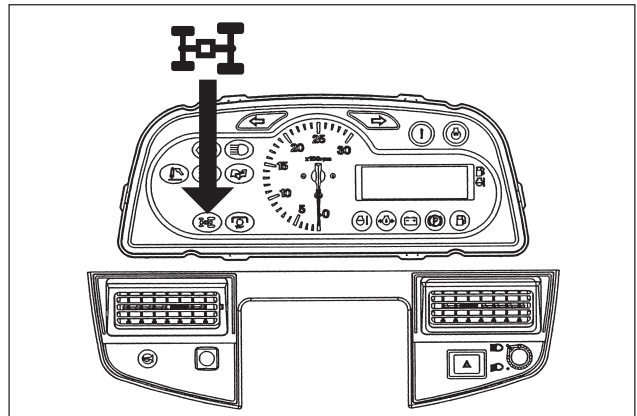


FIG. 4-26

REAR PTO SELECTOR LEVER

FIG. 4-27: Rear PTO (power takeoff) selector lever, 1, controls rear PTO on Tractor.

When pulling the lever up, 540 rpm rear PTO is selected. When pushing the lever down, 1000 rpm rear PTO is selected.

When the lever is returned to neutral (N) position, the gear drive is disengaged.

Rear PTO selector lever is used with PTO control switch on the right side of the seat. Refer to operation section for complete details.

IMPORTANT: Before moving rear PTO selector lever, PTO control switch on the right side of the seat must be off.



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.

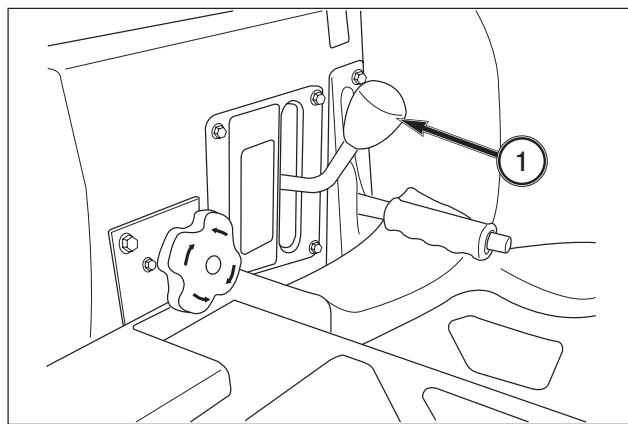


FIG. 4-27

TJ75

THREE-POINT HITCH

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

Control Lever

FIG. 4-28: Position control lever, 1, adjusts the height of three-point hitch on the 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 implements.

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

Lowering Rate Control Knob

FIG. 4-29: Lowering rate knob, 1, adjusts rate of drop of three-point hitch and implement. 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.

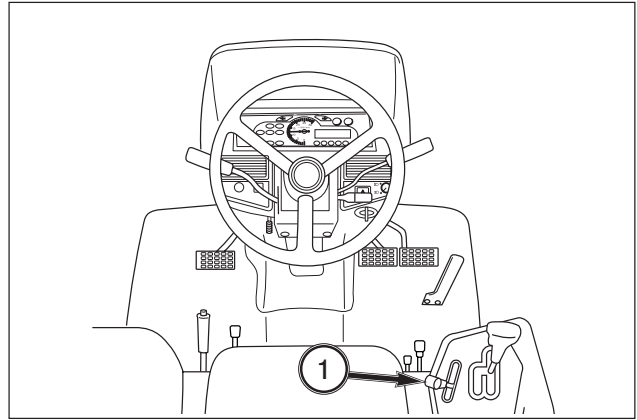


FIG. 4-28

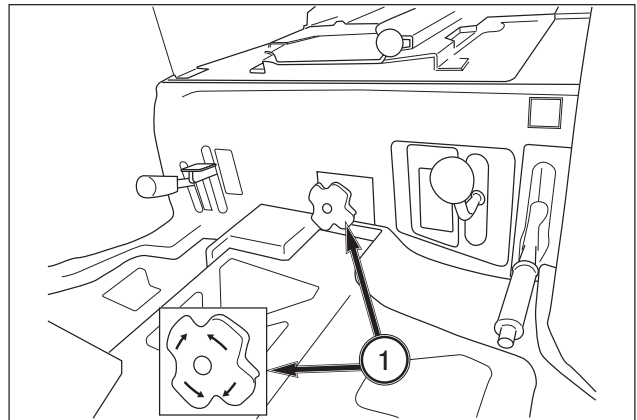


FIG. 4-29

COMFORT ADJUSTMENTS

Steering Column Tilt

FIG. 4-30: Steering column can be adjusted forward and rearward to any one of three positions, enabling operator to select best steering wheel position.

While holding steering wheel, 2, with both hands, depress tilt locking pedal, 1, and select desired position. Release pedal and make sure column is securely locked by pedal returning to original position.

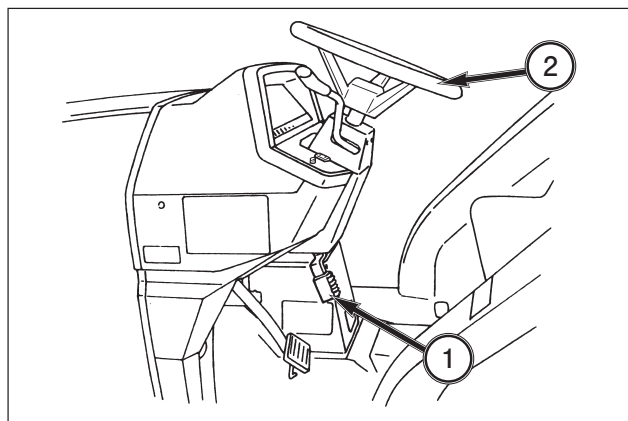


FIG. 4-30

Tool Box

FIG. 4-31: Tool box, 1, is provided behind the seat back for tools. Open the lid and insert tools as needed.

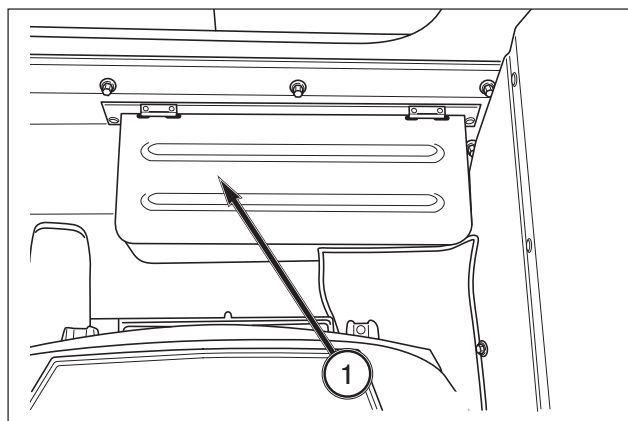


FIG. 4-31

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 engine speed.
- 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 tighten as necessary. This is especially true of wheel retaining bolts. **All fasteners on this Tractor are metric.**
- Be observant of clutch pedal free-play adjustment and brake adjustment and readjust as required. Lining materials used on clutch and brake discs 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 and make sure diesel fuel is 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 hours for engine oil and filter.



CAUTION: Proper maintenance practices cannot be over-emphasized. They are required for safe operation. Consult 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 life and dependability:

- Make sure all safety shields are in place and secured properly.
- Make sure operator is instructed on correct and safe operation 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 screens 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. It is recommended fuel tank be filled following each day's 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 manual. 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. ENGINE MODEL NUMBER

Normal Starting

CAUTION: Do not attempt to start the tractor unless seated in the operator's seat. Do not allow anyone on the tractor except for the operator.

FIGS. 5-1 & 5-2: To start the engine, proceed as follows:

1. Apply the parking brake, 1.
2. Make sure the forward/reverse lever, 2, is in the neutral position.
3. Make sure the range shift lever, 3, is in the neutral position.
4. Make sure the rear PTO selector lever, 4, are in the neutral position.
5. Make sure the PTO switch, 5, is in the OFF position.
6. Fully depress the main clutch pedal, 6, to disengage the clutch.

NOTE: "When turning main switch on to start engine with shift lever position "ON" or PTO switch "ON", digital panel will indicate error message. Please refer to trouble shooting."



CAUTION: The operator being seated in the operator's seat, the range shift lever must be in neutral and the PTO lever must be in neutral to actuate safety switches and permit operation of the starter motor.

7. Set the position control lever, 7, (three-point hitch) in the down position.
8. Turn the main switch, 8, to the "glow" position for 5-10 seconds.
9. Set the throttle lever, 9, at half to the fully open position.
10. Turn the main switch, 8, to the "ON" position for 1-2 seconds, then turn to the "start" position. Release the switch the moment engine starts.
11. Once the engine runs smoothly, set engine speed to approximately 1,500 rpm to allow the engine and hydraulic system to warm up for several minutes.

DO NOT LOAD A COLD ENGINE.

IMPORTANT: Do not crank engine for more than 10 seconds at a time. Allow starter to cool at least 20 seconds before repeating procedure. Never turn main switch to start with engine running. Severe damage will result.

FIGS. 5-3: Battery charge indicator lamp and engine oil pressure lamp in indicator light strip should go out when the engine starts. If either light remains lit, STOP ENGINE IMMEDIATELY and investigate source of problem.

IMPORTANT: 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.

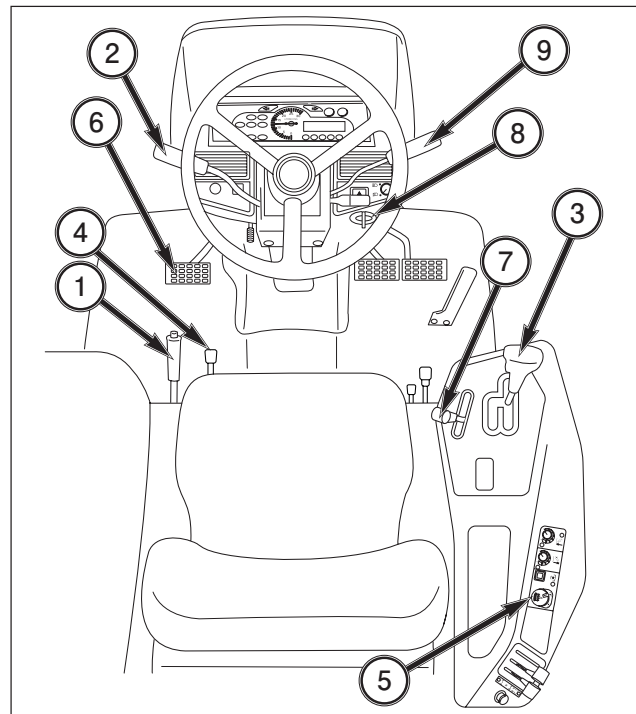


FIG. 5-1

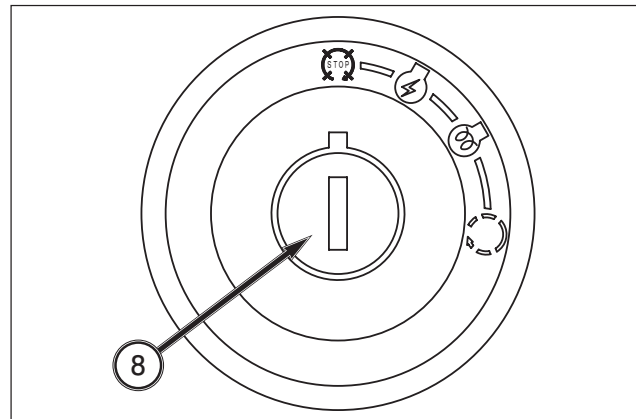


FIG. 5-2

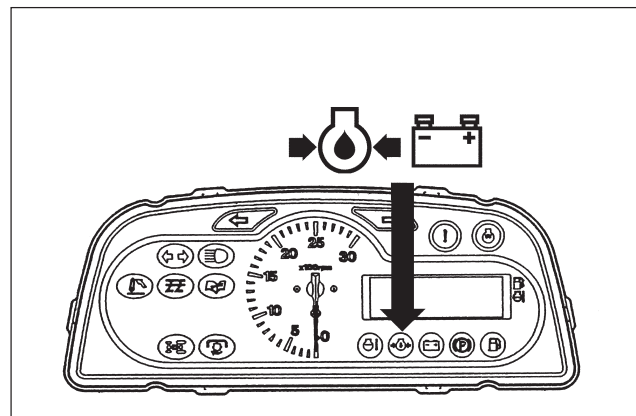


FIG. 5-3

TJ75**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. 8 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:

- 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.
- At temperatures below 39°F (4°C) 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.
- The central hydraulic reservoir, which provides supply of hydraulic fluid 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.
- Test all controls (steering, braking, etc.) prior to operating unit.

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

Suggested warm-up period:

Ambient Temp.		Warm-Up Time
°F	°C	Time
32 & up	0 & up	5 to 10 min.
32 to 14	0 to -10	10 to 20 min.
14 to -4	-10 to -20	20 to 30 min.
-4 & less	-20 & less	30 or more min.

IMPORTANT: *Improper warm-up can result in severe engine damage, hydraulic pump seizure, driveline bearing/gear damage and/or 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 (hot) in case of overheated engine. Stop engine, allow to cool and investigate cause.
- Fuel gauge should not be allowed to (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 starting system to protect the operator. To permit tractor to be started (start motor to operate), ALL the following is required:

- Forward / Reverse Power Shuttle Lever in Neutral
- Range Shift Lever in Neutral.
- Rear PTO Switch in OFF position.



WARNING: Safety switch system is installed for your protection. DO NOT bypass or modify the safety 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 is as follows:

1. Check that there are no bystanders around the tractor should it inadvertently start.
2. Depress clutch and brake pedals. Attempt to start the tractor with the range shift levers and PTO control switch OFF. The tractor should start.
3. Depress the clutch and brake pedals. Attempt to start the Tractor with the gears engaged and the PTO switch ON. The Tractor should NOT start.
4. Depress the clutch and brake pedals. Attempt to start the tractor with the gears in neutral and the PTO switch ON. The Tractor should NOT start.

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

The starter will rotate when not sitting in the seat, but the engine will not start.

The engine will automatically stop about three seconds after the operator leaves the seat. Do not leave the seat while operating the tractor.

TJ75

GROUND SPEED SELECTION

Tractor is equipped to provide twelve forward gear speeds and twelve reverse gear speeds.

FIG. 5-4: Gear shift button, 1, provides four gear selections. These gear selections are compounded by range shift lever, 2. The range shift lever provides three major changes in ground speed. Gear shift button provides smaller ground speed changes.

FIG. 5-5: Depress clutch pedal and position shift levers in desired positions. Depress brake pedals to release parking brake lock and then slowly release clutch pedal.

Should another transmission gear be desired:

Gear Shift Button-Push gear shift button to select the desired speed and continue with operation.

- + : Push gear shift button(+) to increase the traveling speed.
- : Push gear shift button(-) to reduce the traveling speed.

NOTE: Gear shift buttons are not available when shifting range gear in neutral position. When starting engine, set 1st gear in gear speed selection automatically.

IMPORTANT: Depress clutch and stop Tractor before all range lever shifts.



CAUTION: Do not use gear shift button when loading or unloading the tractor on/off a truck. Drive the tractor slowly and carefully at the moment the tractor moves from ramps onto the level platform. Do not use gear shift button when traveling on steep slope. Make engine speed low before pushing the gear shift button. Otherwise it may cause front-tire lift up or tractor turnover.

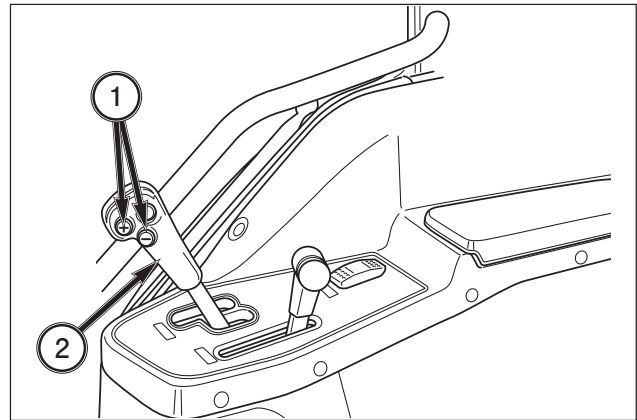


FIG. 5-4

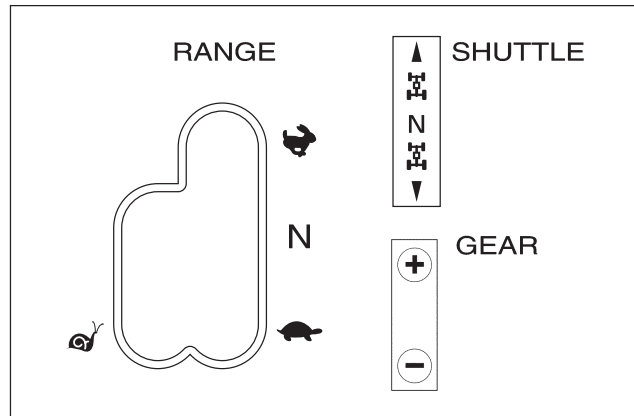


FIG. 5-5

FIG. 5-6: Arrangement of gears with appropriate ground speeds, in order from slow to fast, are shown in chart at right.

NOTE: Ground speed indicated at 2600 engine rpm with 12.4 - 36 agricultural type rear tires .

Engine Speed 2600rpm			Engine Speed 2600rpm		
Forward			Reverse		
Range	Gear	km/h	Range	Gear	km/h
	1	0.20		1	0.19
	2	0.24		2	0.23
	3	0.29		3	0.27
	4	0.35		4	0.32
	5	0.47		5	0.44
	6	0.57		6	0.53
	7	0.72		7	0.67
	8	0.86		8	0.80
	1	1.4		1	1.3
	2	1.7		2	1.6
	3	2.0		3	1.9
	4	2.5		4	2.3
	5	3.3		5	3.1
	6	4.0		6	3.8
	7	5.1		7	4.8
	8	6.2		8	5.7
	1	7.3		1	6.8
	2	8.8		2	8.2
	3	10.4		3	9.7
	4	12.5		4	11.7
	5	17.0		5	15.8
	6	20.6		6	19.1
	7	25.9		7	24.1
	8	31.3		8	29.2

Tire size	Front	9.5-22	Agri tire
	Rear	12.4-36	Agri tire

FIG. 5-6

FIG. 5-7: Forward/reverse power shuttle lever, 3, changes in travel direction in each gear/range combination. Direction change is possible without depressing the main clutch pedal. Lift up and move lever forward to shift to the forward travel position. Lift up and move lever rearward to shift to the reverse travel position. Reverse travel speed is slightly slower than forward travel in the same gear speed selection.

NOTE: Make sure power shuttle lever is in neutral position before starting engine.



CAUTION: Forward or reverse direction changes must not be made at high speed.

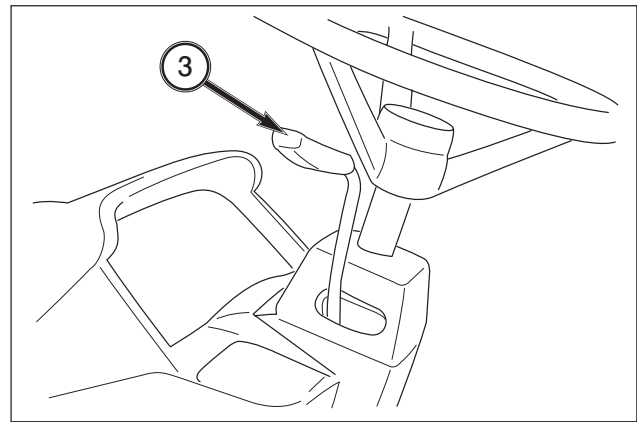


FIG. 5-7

TJ75**STOPPING TRACTOR**

FIG. 5-8: Brake pedals, 1 and 2, may be used independently to operate respective brake and assist turning at low speed operation. Unlatch brake pedals and use as required to assist turning.

When Tractor is being used at higher rate of speed, brake pedals must be latched together with interlocking plate, 3, so both brakes will apply at the same time.



CAUTION: Do not use one wheel braking at high speed. Always latch brake pedals together when Tractor is being transported. Make sure brakes are adjusted evenly.

To stop the tractor with regular gear transmission, move the throttle lever, 4, forward, to reduce engine speed and slow travel. Depress the clutch pedal, 5, and brake pedal, 1 and 2, to stop. Position the range shift lever, 6, and power shuttle lever, 7, in neutral position.

Be make sure to latch the brake pedals together, depress the brake pedals and pull parking brake lever, 8, up firmly.

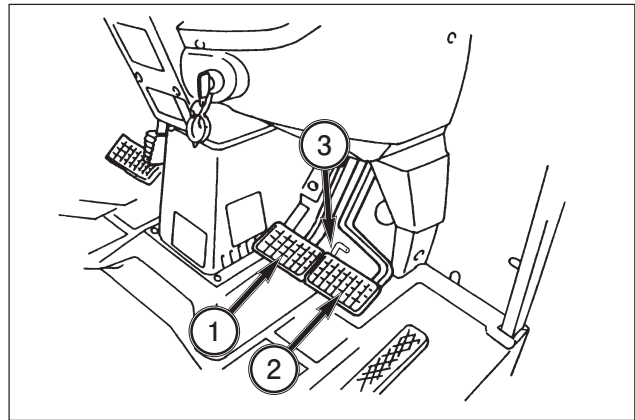
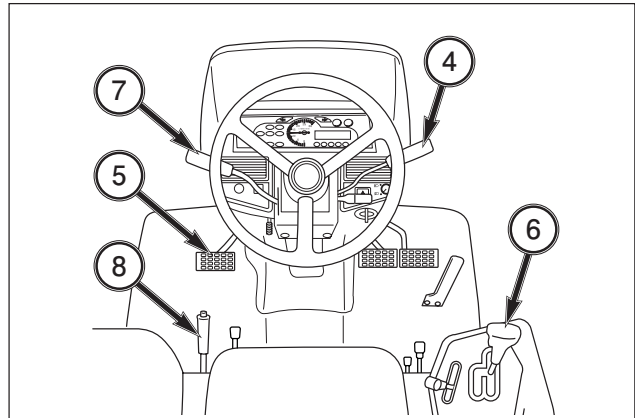
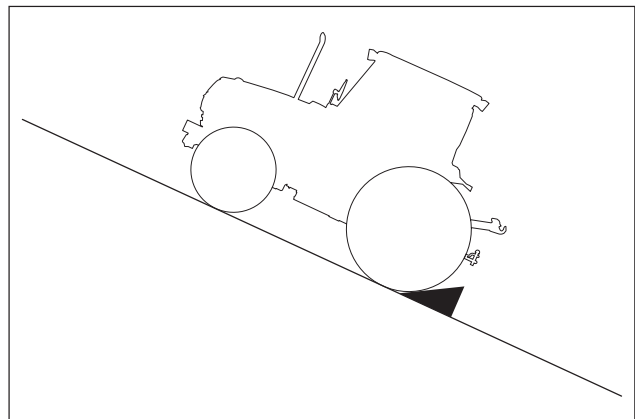
Allow engine speed to idle several minutes to allow even cooling. Then turn main switch to "off" shutting off engine. Lower three-point hitch and remove key from ignition.



CAUTION: Because gear shift is hydraulic system, gear position is not engagement in transmission system when stopping engine. So engine braking do not work when stopping engine. When stopping or parking Tractor , be make sure to apply the brake. Otherwise tractor may have a tendency to creep.

FIG. 5-10: 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 brakes are locked. With transmission of constant mesh design, Tractor may have a tendency to creep (particularly with cold oil).

**FIG. 5-8****FIG. 5-9****FIG. 5-10**

DIFFERENTIAL LOCK

FIG. 5-11: Differential lock pedal, 1, should only be depressed when required as steering ability is greatly reduced.

To engage differential lock, depress clutch pedal and allow all rear wheel movement to stop. Depress lock pedal and slowly engage the clutch.

To disengage differential lock, depress clutch pedal and 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, tap brake pedals alternately while Tractor is 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.

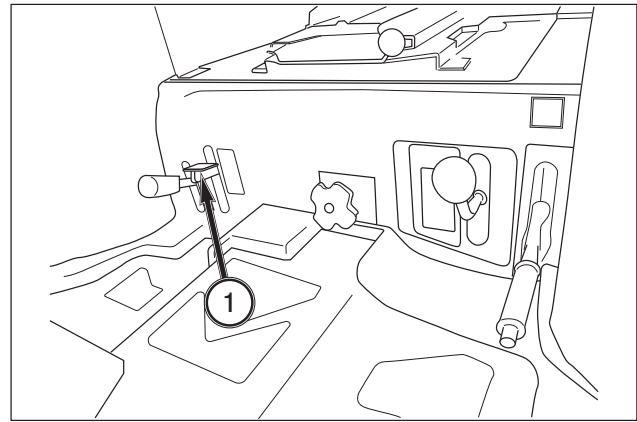
**FIG. 5-11****FOUR-WHEEL DRIVE**

FIG. 5-12: Four-wheel drive models have a mechanically driven front axle. Engagement and disengagement of front drive axle is controlled by lever, 1.

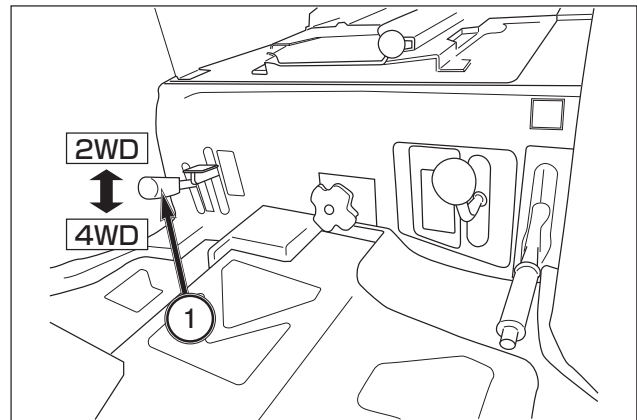
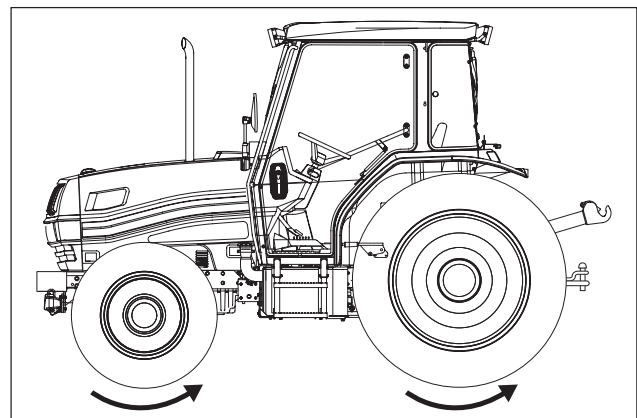
IMPORTANT: *Prior to engaging or disengaging 4WD, clutch pedal must be depressed and Tractor stopped.*

FIG. 5-13: When front axle is engaged, ground speed of front tires will vary from 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 or 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 necessary, identical replacements must be installed to maintain correct front/rear axle ratio.

**FIG. 5-12****FIG. 5-13**

TJ75

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. 5-14: A six-spline (35 mm) 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.

540 rpm @ 2600 engine rpm
1000 rpm @ 2600 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. 5-15: Implement driveshaft 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.**

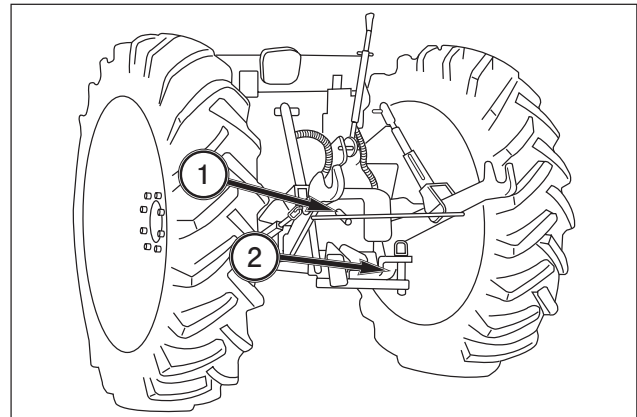


FIG. 5-14

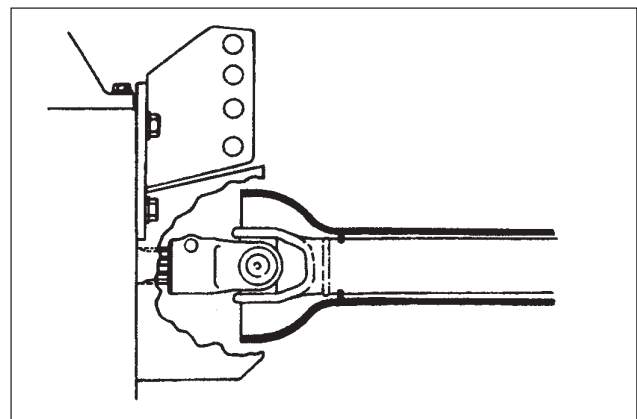


FIG. 5-15

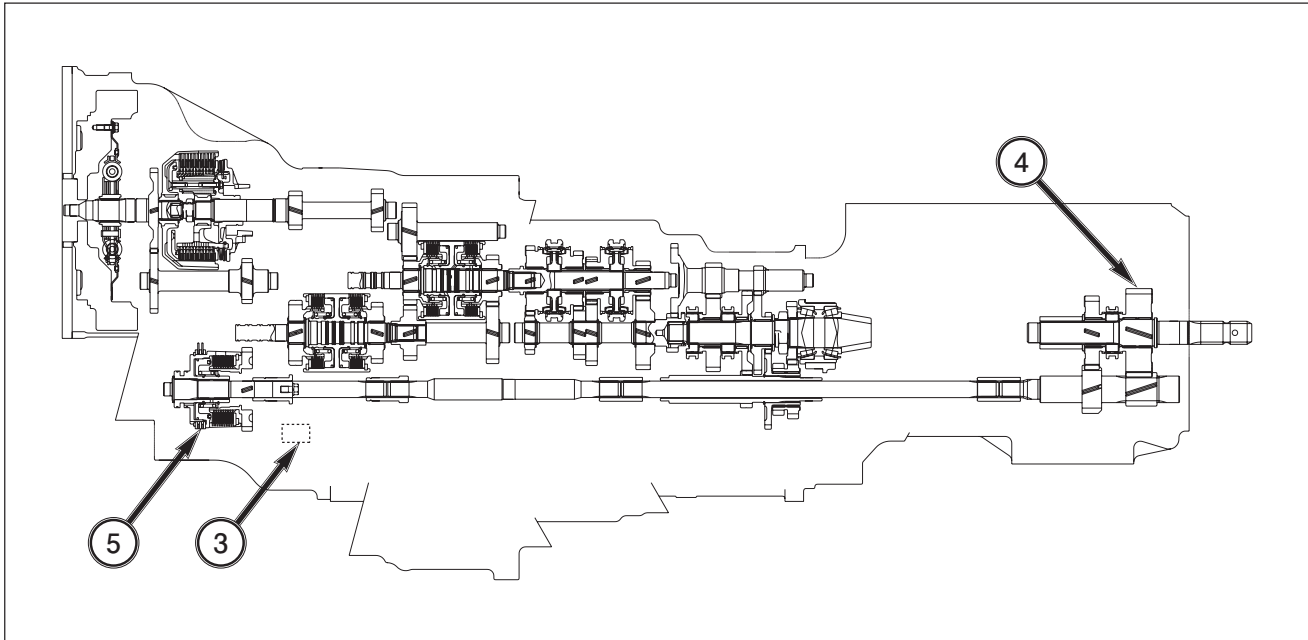
PTO Operating Control**FIG. 5-16**

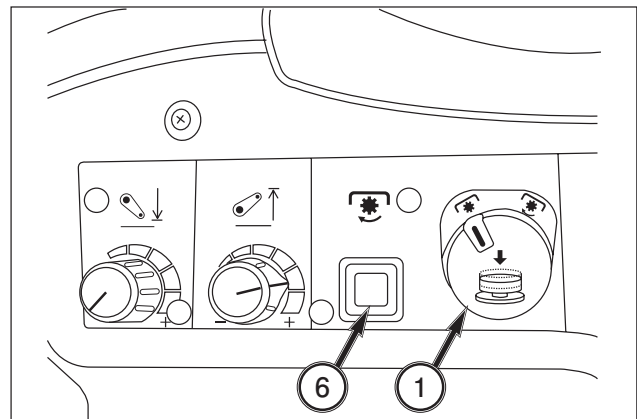
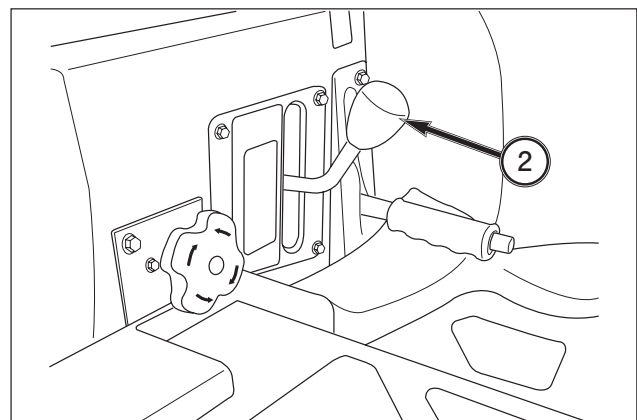
FIG. 5-17: To select rear PTO - Make sure PTO control switch is OFF and then move rear PTO selector lever, 2, engage gear set, 4, inside rear housing.

To engage PTO - Turn PTO switch, clockwise and then pull up to actuate hydraulic clutch, 5, and complete the drive. The indicator light in the warning light strip will come on, showing PTO clutch is engaged.

To disengage PTO - Push PTO switch, 1, to release hydraulic clutch, 5.

When further use of rear PTO is not required, depress clutch pedal and return rear PTO selector lever, 2, to neutral.

NOTE: PTO can be engaged/disengaged by PTO switch, 1, independently of main clutch. Reduce engine rpm prior to engaging (switching on) and disengaging (switching off) PTO. Always move PTO switch to OFF before shifting PTO selector lever.

**FIG. 5-17****FIG. 5-18**

TJ75

PTO Operating Controls

The pressure control valve, 3, operates when the PTO clutch, 5, begins to operate, enabling efficient engaging of the PTO with a minimum of shock. Setting the mode change switch, 6, facilitates optimum engagement of the PTO.

Push PTO mode switch, 6, to engage PTO more smoothly and slowly.

Push PTO mode switch, 6, again, to return to normal mode.

NOTE: Lower the engine speed when turning on PTO control switch if there is considerable shock.

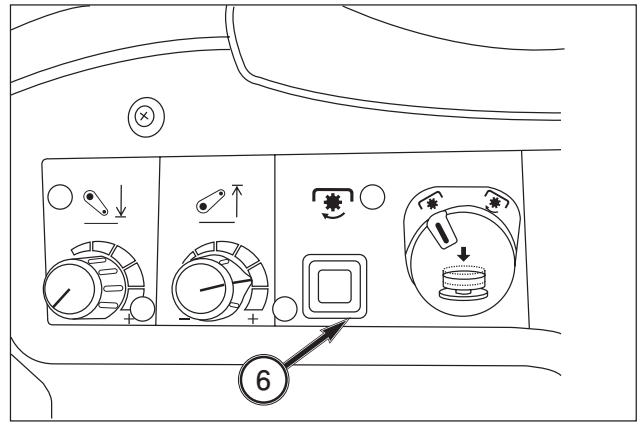


FIG. 5-19

Mode Switch	Switch lamp	Required torque	Initial pressure rise at engage	speed of pressure rise	Shock&noise at engage	Attachment
OFF	OFF	Big	High	Short	Nomal	Rotary, Cultivator
ON	ON	Small	Low	Long	Smaller	Mower, Hayer

FIG. 5-20

THREE-POINT HITCH

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. 5-21: 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 rearward, 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.

Position control can be operated by three point hitch position control switch, 2, too.

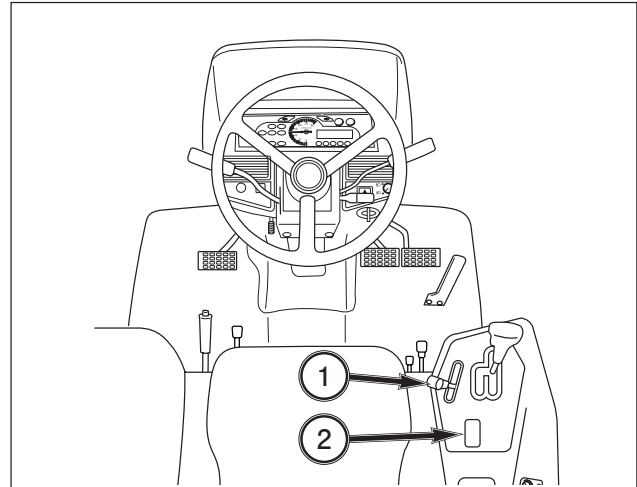


FIG. 5-21

FIG. 5-22: Lowering Rate Control - Knob, 3, controls discharge rate of hydraulic oil to adjust lowering speed of hitch and implement. Turn knob clockwise 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.

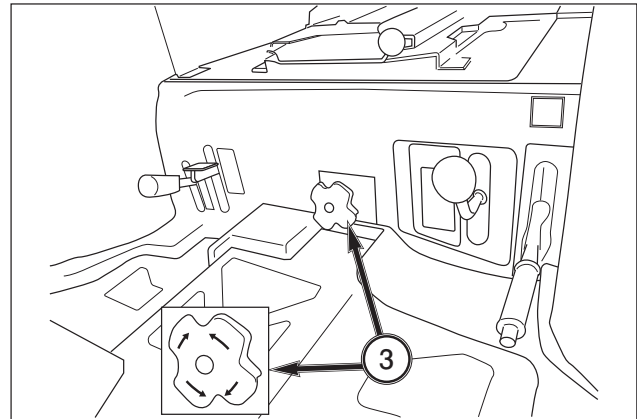


FIG. 5-22

External Lift Arm UP / DOWN Switch

FIG. 5-23: External Lift Arm UP / DOWN Switch, 4, is located on the rear side of the left fender. Position control can be operated by the external lift arm UP / DOWN switch too.

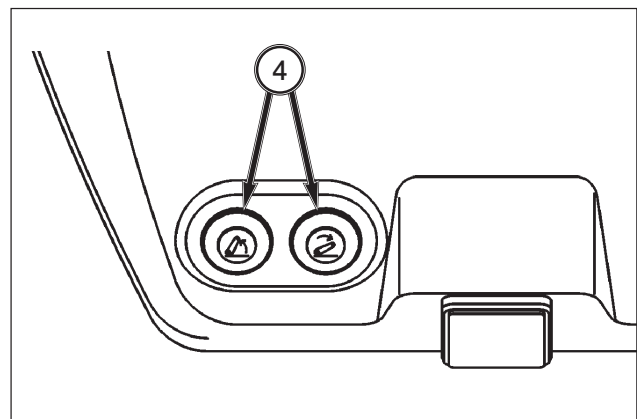


FIG. 5-23

TJ75

Rear Linkage

FIG. 5-24: 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).

Check Chain, 3 - Reduce side sway of implement.

Top Link, 4 - Adjustable, turn-buckle type to level implement (front to rear). Top link also provides draft load sensing for draft control.

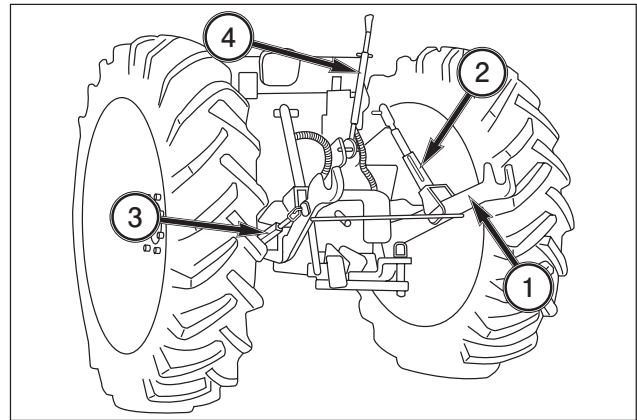


FIG. 5-24

FIG. 5-25: To match varying implements, rear linkage is standardized according to spacing, pin size, etc. This enables usage of alternate implements with minimal adjustments as long as matching size or Category is used.

This Tractor is equipped for Category I implements with following attaching point dimensions:

Ref.	Description	Dimension (Size)
A	Lower Link Width	32.5 (825mm)
B	Lower Link Pin Diameter	1.10 (28mm)
C	Top Link Height	20.1 (510mm)
D	Top Link Pin Diameter	0.98 (25mm)

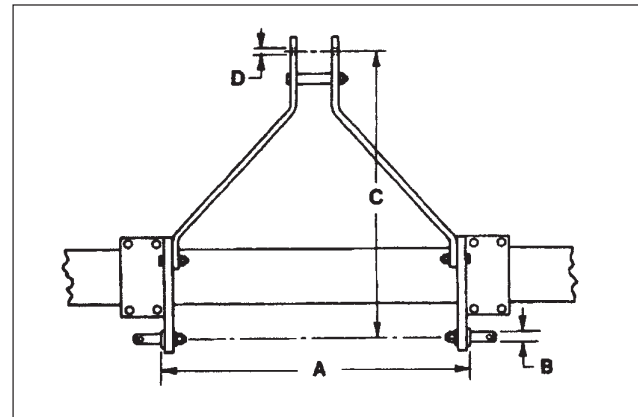


FIG. 5-25

FIG. 5-26: Linkage provides three positions of connecting top link, 1, to Tractor.

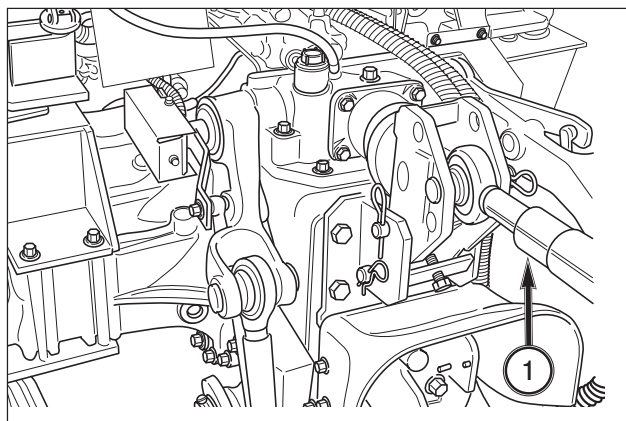


FIG. 5-26

FIG. 5-27: Top Link Position

- Position 1: Implements with wide angle universal joint or Rotary Cultivator
- Position 2: Implements with standard angle universal joint
- Position 3: No use

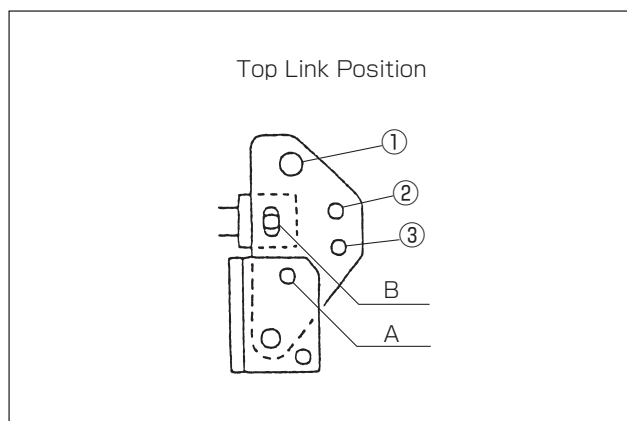


FIG. 5-27

FIG. 5-28: Lift rods, 1, and lower links, 2, also have multiple positions. Normally, lower hole, B, in each lift rod is attached to forward hole, X, in lower link.



CAUTION: Secure all pins after adjustment is made. Always use pins supplied with Tractor.

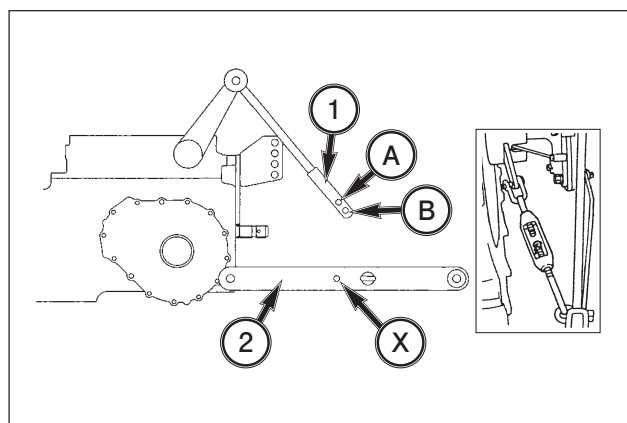


FIG. 5-28

TJ75

Attaching Implements



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

FIG. 5-29: 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. 5-30: Slide ball end of left lower link, 1, over implement pin and secure with linch pin.

Adjust height of right lower link using leveling crank, 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 turn buckle and top link. Secure all adjustments.

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.*

FIG. 5-31: Certain implements require minimal side-play. Check chain 1, 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.*

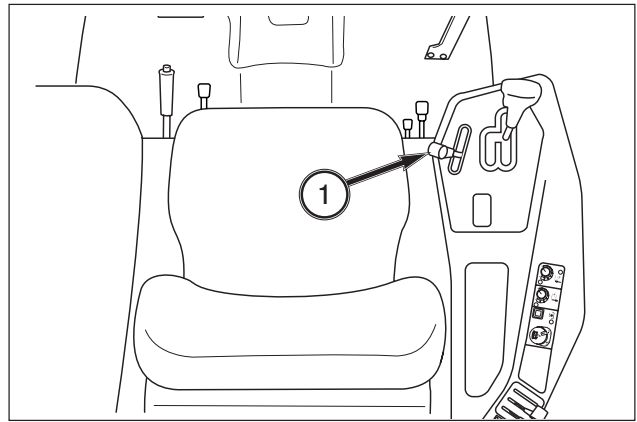


FIG. 5-29

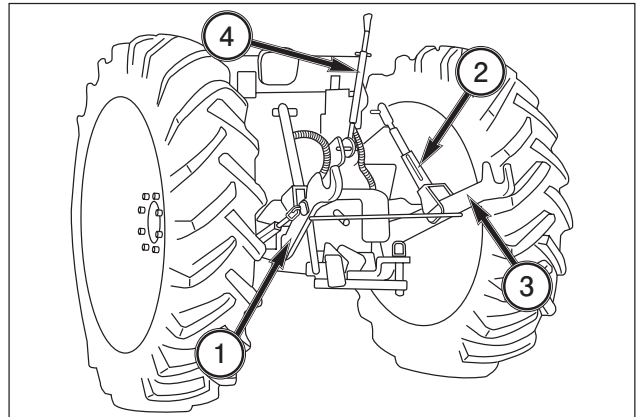


FIG. 5-30

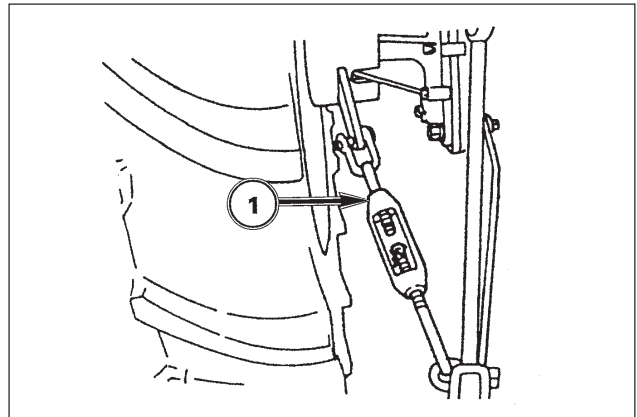


FIG. 5-31

Using Position Control

FIG. 5-32: Type of Work - Attaching/detaching implements and other operations requiring implement to be kept at constant height above ground. Also used with tool bars having flexible row units and implements equipped with gauge (support) wheels.

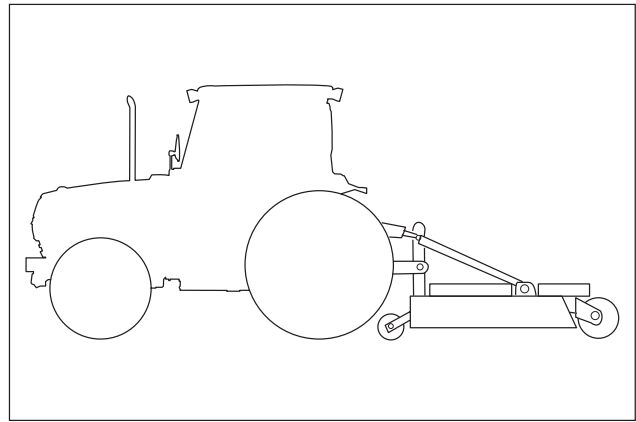


FIG. 5-32

FIG. 5-33: Lever Positions - Use position control lever, 1, to adjust hitch and implement position.

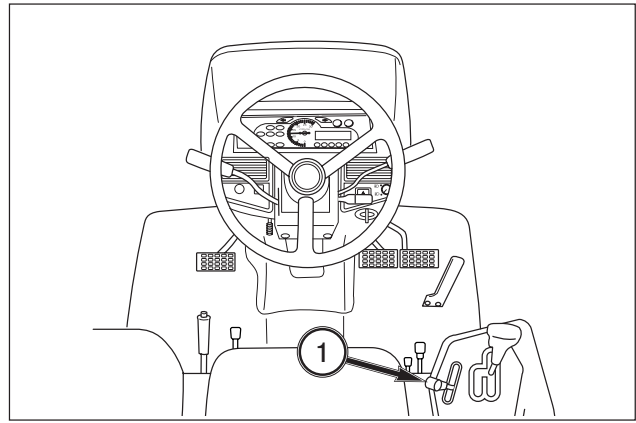


FIG. 5-33

FIG. 5-34: Highest and Lowest Position Adjustment
 Highest position adjustment dial, 2, sets highest position of hitch and implements. Lowest position adjustment dial, 3, sets lowest position of hitch and implements. Highest adjustment by position control lever, 1, limited to the position fixed by highest position adjustment dial, 2, and lowest position adjustment dial, 3.

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 and set adjustable dials, 2 and 3, as desired. When Turning - Move position lever, 1, rearward (toward UP) to raise implement. Finish turning and return lever against stop to resume operation.

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

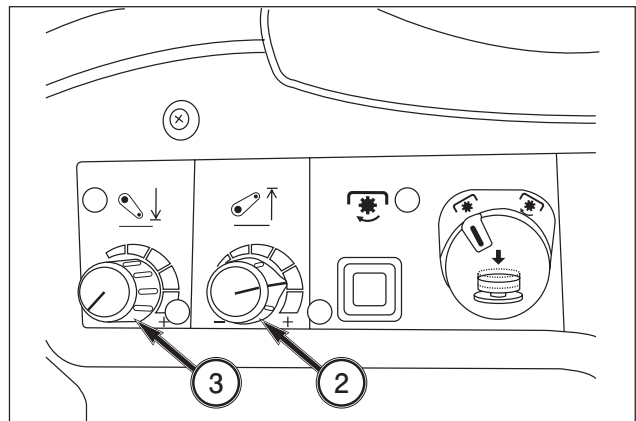


FIG. 5-34

TJ75

FIG. 5-35: Lowering speed can be readjusted as necessary using lowering rate control knob, 4.



CAUTION: When using mounted implements with PTO driveline, make sure: PTO drive shaft has minimum 51 mm (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 angles. Limiting raising height may be required.

PTO drive is disengaged during transport.

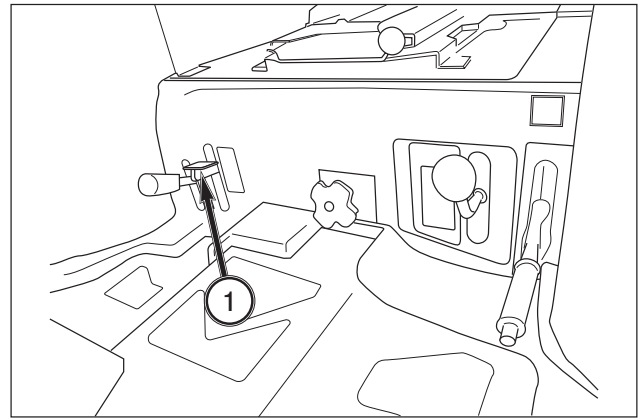


FIG. 5-35

Using Draft Control (accessory)

FIG. 5-36: Type of Work - When ground-engine implements such as plows, subsoilers, cultivators, etc. are used.

NOTE: Refer to Rear Linkage for locking pin details.



CAUTION: Do not use draft control when precise hitch positioning is required (attaching/detaching implements for example). Using draft control on non be attempted.

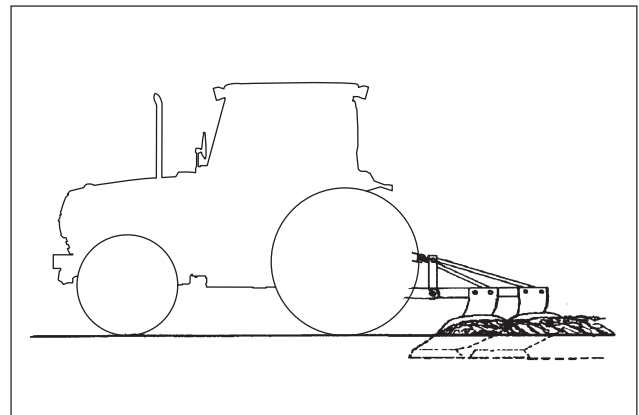


FIG. 5-36

FIG. 5-37: Lever Positions - Use position control lever, 1, to raise and lower implement.

Position control lever, 1, can also be used to prevent excessive lowering of hitch when low draft areas (sandy soil) are encountered.

NOTE: Adjustment dials, 2 and 3, set implement work or raised position. This enables implement to be returned to identical setting after hitch has been raised for turning at field ends.

To Begin Work - Align Tractor and implement in field and move position control lever, 1, forward (to DOWN). while driving Tractor forward, lowering implement.

When Turning - Move position control lever, 1, rearward to raise implement and permit completion of turn. Return implement to work position by selecting position control lever to previous position against stop.

To Finish Work and Transport - Pull position control lever rearward fully to up setting.

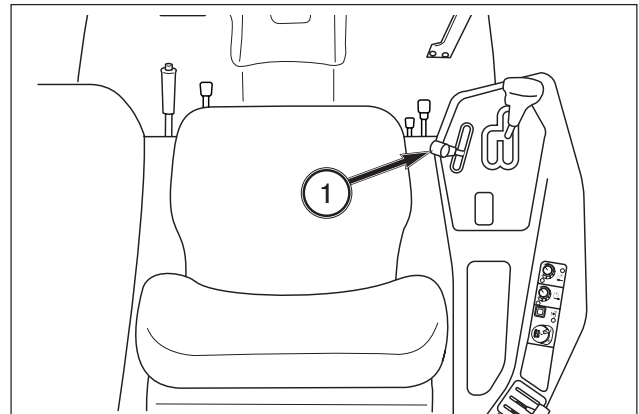


FIG. 5-37

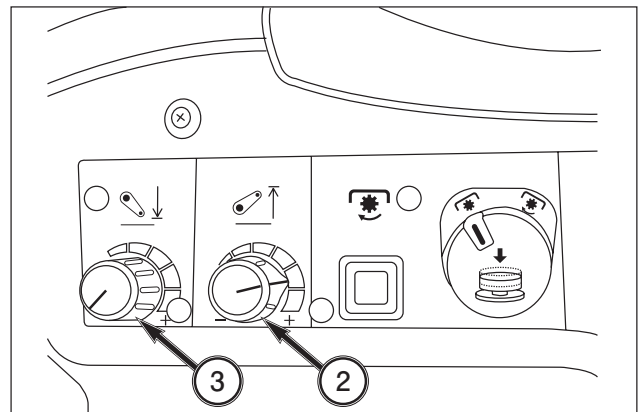


FIG. 5-38

FIG. 5-39: Lowering speed can be readjust as necessary with lowering rate control knob, 4.

NOTE: *Changes in soil texture or ground speed of unit may require slight readjustment of draft control lever to maintain consistent working depth as these can have a direct influence on implement draft load.*

If erratic operation is encountered, turn lowering rate control knob, 5, clockwise to slow. Lowering top link attaching location on Tractor will also decrease sensitivity.

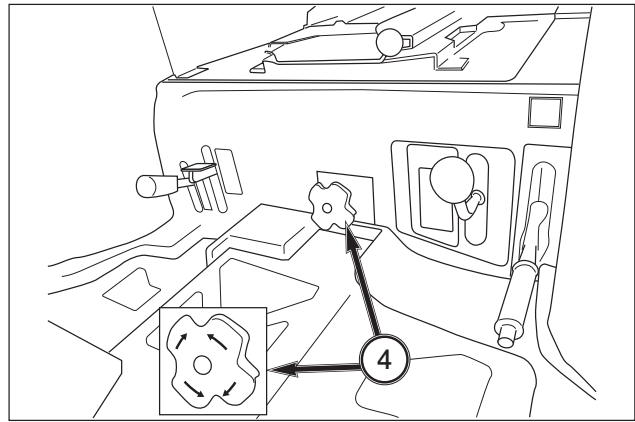


FIG. 5-39

Detaching Implements



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

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 crank on right lift link to level implement on ground.

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.*

TJ75**EXTERNAL AUXILIARY HYDRAULICS**

Auxiliary hydraulics are installed to operate implements requiring external hydraulic source for operation. Kits are available as two-spool (two hydraulic circuits).

FIG. 5-40: Control lever, 1, controls implement raising/lowering when first set of remote couplers are used. Control lever, 2, controls implement when second set of remote couplers are used.

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

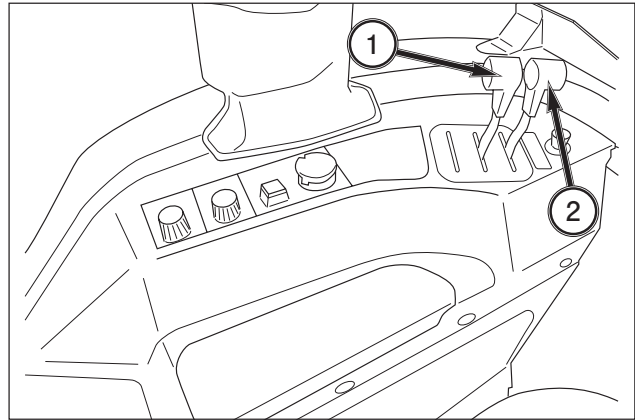
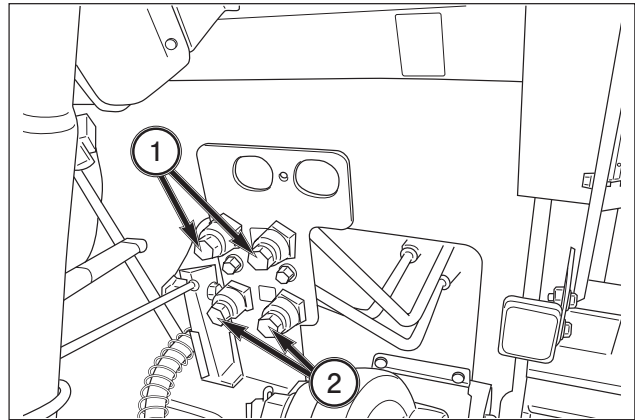
**FIG. 5-40**

FIG. 5-41: Remote couplers are located at rear of Tractor, above three-point hitch, or, under right step (depending on kit installed). Rear location shown.

Coupler set, 1, corresponds with control lever, 1, coupler set, 2, 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.

**FIG. 5-41**

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.

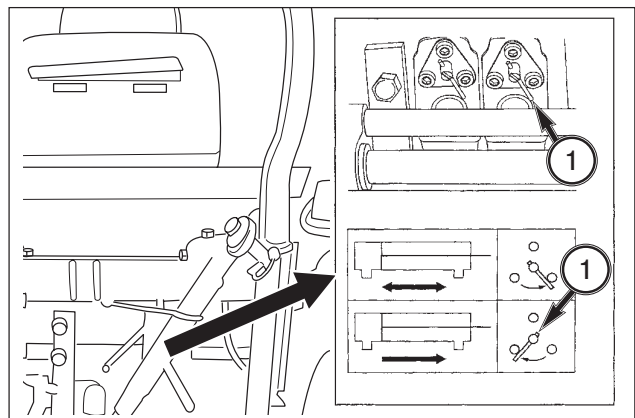


CAUTION: Make sure all hydraulic hoses, couplers and cylinders are in good condition before use. Damaged equipment is dangerous.

FIG. 5-42: Most implements require double-acting hydraulics. Each implement cylinder will have two hoses connected to it.

When single-acting service is required (cylinder with only one hose), the inner coupler will be used and selector function, 1, must be turned to the left.

NOTE: For normal double-acting operation selector function must be turned to the right.

**FIG. 5-42**

DRAWBAR

FIG. 5-43: Drawbar, 1, at rear of Tractor allows pull- type implements to be attached to Tractor. Maximum vertical load on drawbar must not exceed 880 lbs (400 kg).



CAUTION: Pulling heavy loads will require extended braking distances. Reduce travel speed.

Make sure attachment is properly secured and safety chain is used.

NOTE: When using three-point hitch, it may be necessary to remove drawbar by removing clips and pins, 2, and sliding drawbar from bracket to improve operating clearance. This is particularly true with mounted implements using PTO drive.

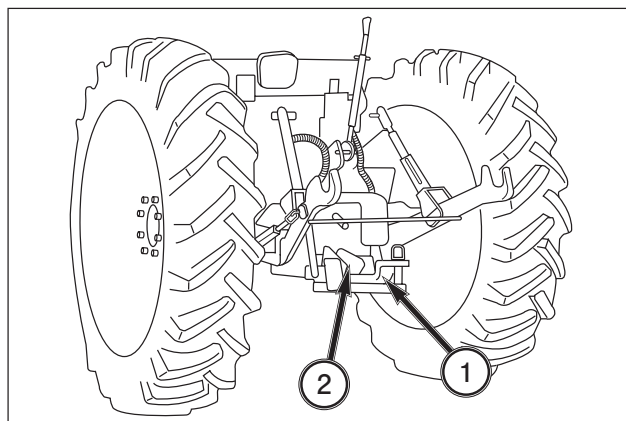


FIG. 5-43

INSTRUMENTS & CONTROLS & OPERATION

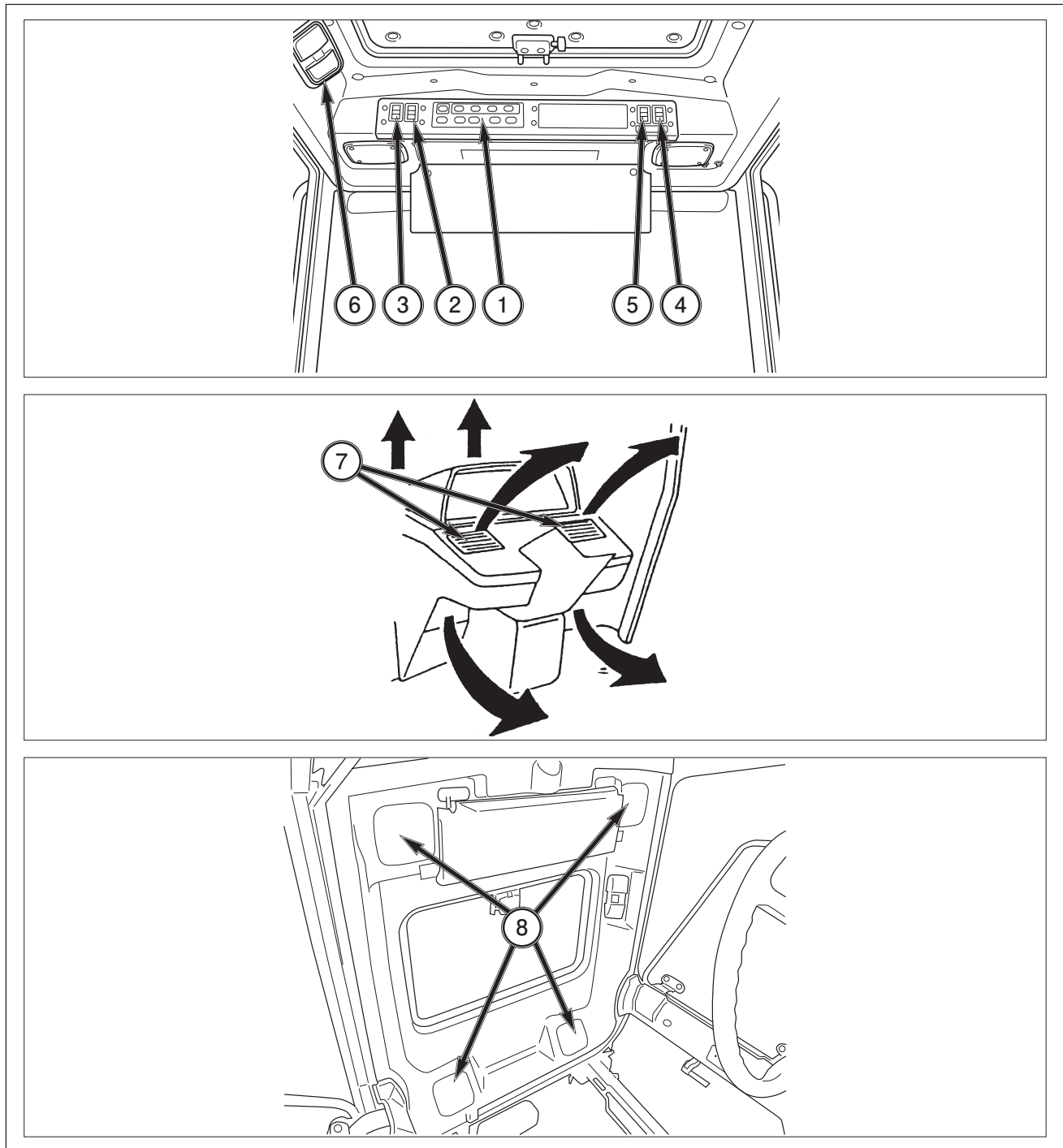


FIG. 5-44

FIG. 5-44: General layout and location on Cabin.

- | | |
|------------------------------------|------------------------------|
| 1. Air conditioner operation panel | 5. Rear working light switch |
| 2. Front wiper/washer switch | 6. Room lamp |
| 3. Rear wiper/washer switch | 7. Front fresh air vents |
| 4. front working light switch | 8. Speaker |

OPENING/CLOSING DOORS

FIG. 5-45: To open the door from outside, push the door lock button(1) and pull the handle(2).

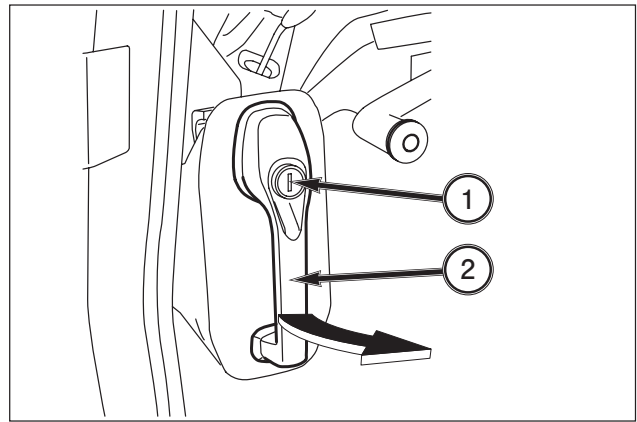


FIG. 5-45

FIG. 5-46: To open the door from inside the cabin, move the door lever(3) rearward and push door frame(4). To close the door, grasp the door handle(2) or door frame(4) and close slowly.



CAUTION: When closing the door, be sure to keep hands and fingers out of the way.



CAUTION: Do not operate tractor with the door fully or partially open.

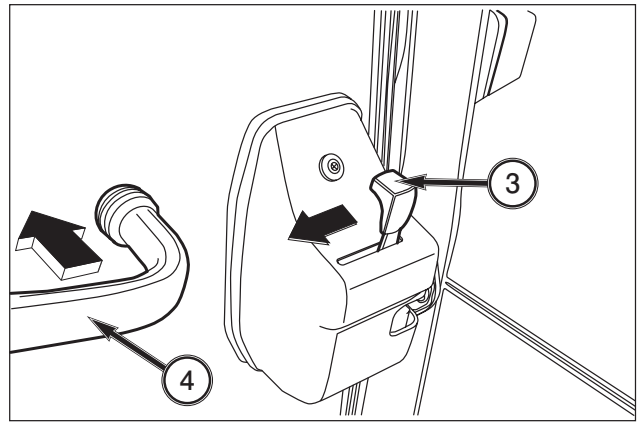


FIG. 5-46

LOCK/UNLOCK DOORS

FIG. 5-47: To lock the door, insert the key into the keyhole in the door lock button and turn 90 degrees counterclockwise(1). Pull the key out in the horizontal position." To unlock the door, insert the key and turn 90 degrees clockwise(2). Pull the key out in the vertical position.

NOTE: It is not possible to lock or unlock the door with the key, lock or unlock from inside the cab.

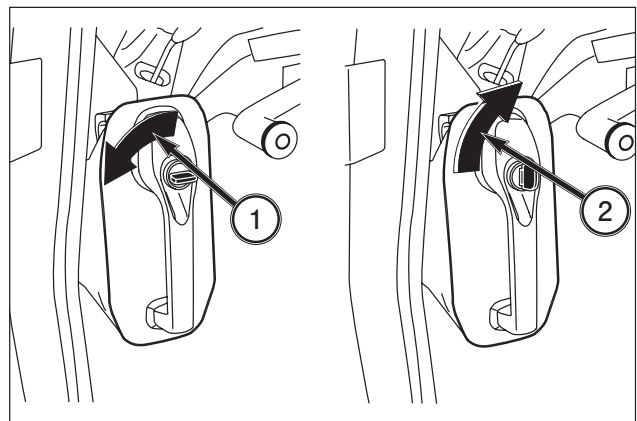


FIG. 5-47

TJ75

FIG. 5-48: When getting on or off the tractor, use the handle(1) and footstep(2).



CAUTION: Do not put your weight on the door spring(3) when getting on or off the tractor.

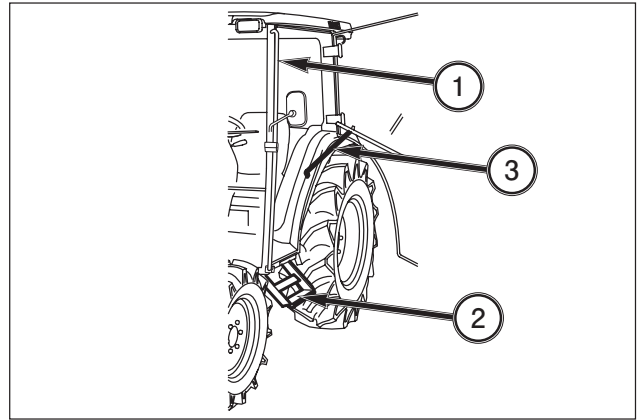


FIG. 5-48

REAR WINDOW

FIG. 5-49: Grasp the handle(1) and turn 90 degrees clockwise to unlock the window. To open, push the rear window out slightly. The window will open and is held in place by the damper.

IMPORTANT: Before opening the rear window, make sure of the situation at the rear of the tractor.

To close the rear window, pull toward you with the handle in the unlock position until the window can be locked securely. Then turn the handle 90 degrees counterclockwise(1) to lock the window.

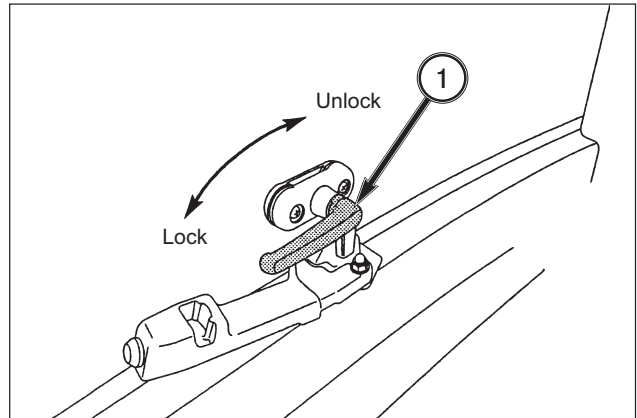


FIG. 5-49



CAUTION: When closing the rear window, be sure to keep hands and fingers out of the way.

IMPORTANT: Make sure the handle is in the unlock position when closing the rear window. Damage to the handle may result if the rear window is closed with the handle in the lock position.

FIG.5-50: Rear window is fixable with the position of half-opened. Lock the handle(1) after turning the half-opened stay 90 degrees clockwise.

IMPORTANT: When driving on the road, be sure to close and securely lock the rear window. If not, damage to the window may result. Make sure so as not to interfere the rear window with the rear implements when locking with the position of half-opened. The rear window or the implements may damage. Damage to the handle or the rear window may result if the rear window is closed with the handle in the lock position.

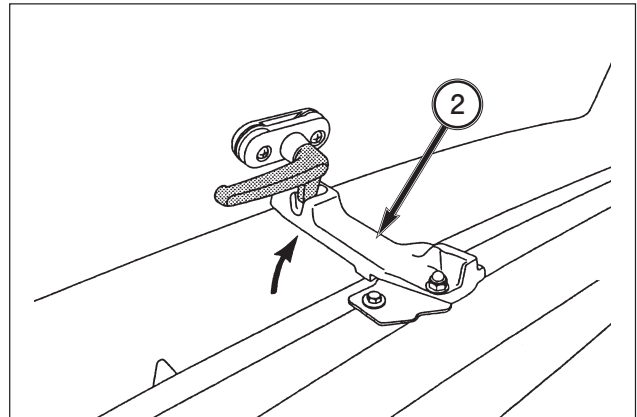


FIG. 5-50

ROOF HATCH

Roof hatch is located on the top of cabin.

FIG.5-51,52: To open the roof hatch(1), push the handle(2) up slightly and push the lock knob(3).

To close the roof hatch(1), push the handle(2) up slowly so as to be locked surely.



CAUTION: Do not run on the bad surface road with the half-opened roof hatch. It may damage or result in injury. Do not put your hand under the roof hatch when closing it. It pinches your finger and results in injury.

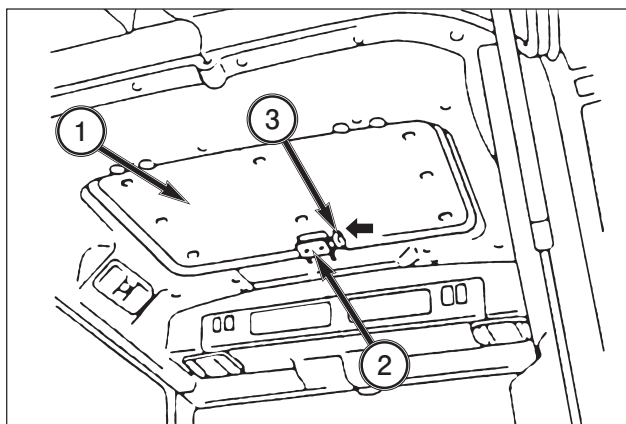


FIG. 5-51

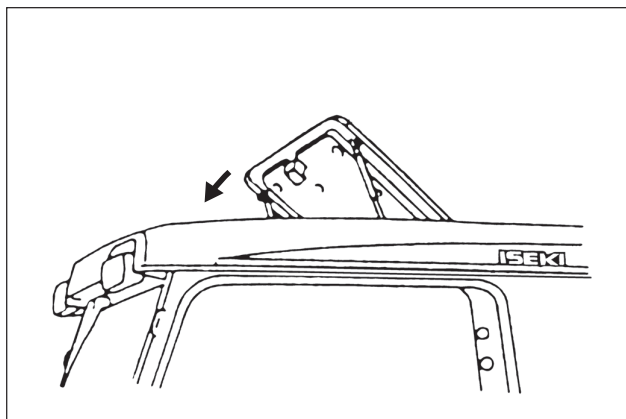


FIG. 5-52

TJ75

CORNERWINDOWS

The left and right corner windows can be opened and closed.

FIGS. 5-53,54: Pull the handle (1) to unlock the window (Position A). Push the handle away from you to secure the window in the open position (Position B).

To close the window, grasp the handle and pull the window toward you (Position C). Rotate the handle to securely lock the window (Position D).



CAUTION: When opening and closing the corner windows, make sure to use the handle to prevent fingers from getting caught in window linkage.

IMPORTANT: When driving on the road, be sure to close and securely lock the corner windows. Failure to do so may result in damage to the windows.

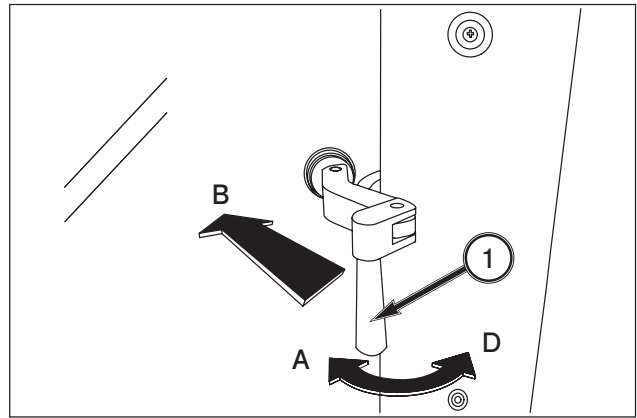


FIG. 5-53

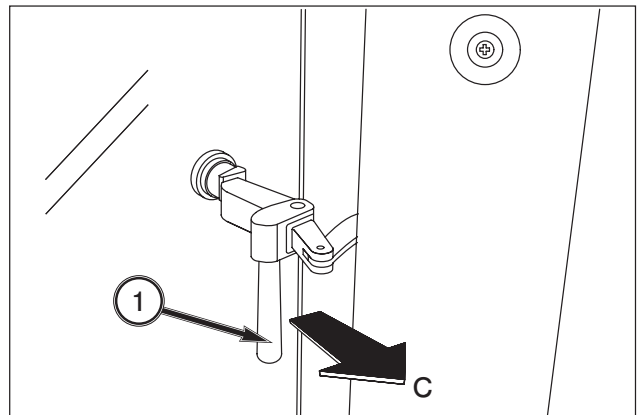


FIG. 5-54

ROOMLAMP

FIG. 5-55,56: The room lamp(1) is located at the upper left. The switch(2) turns the light on and off.

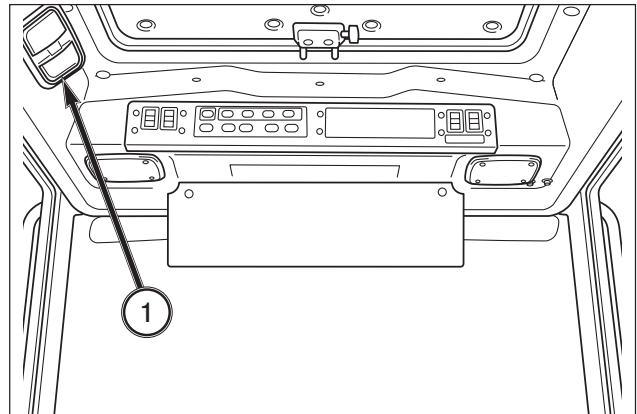


FIG. 5-55

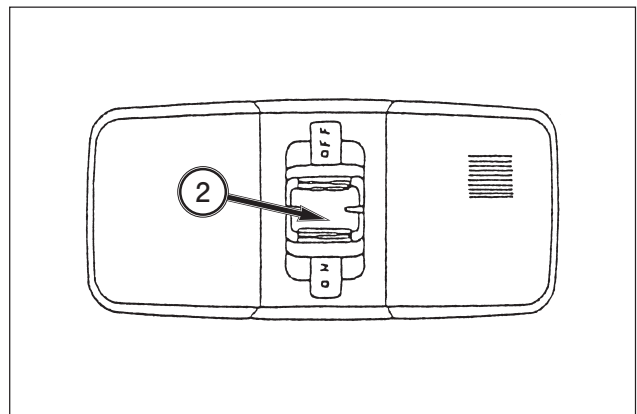


FIG. 5-56

WORKLIGHTS

The work lights will light up the working area in front and rear of the cab.

FIG.5-57,58: To turn on the work light, press the upper part of the switch(1) to ON. The switch LED will be on.

Press the lower part of the switch to OFF to turn off the work light.

NOTE: When stopping the engine, be sure to turn off the work lights to prevent the battery from being run down.

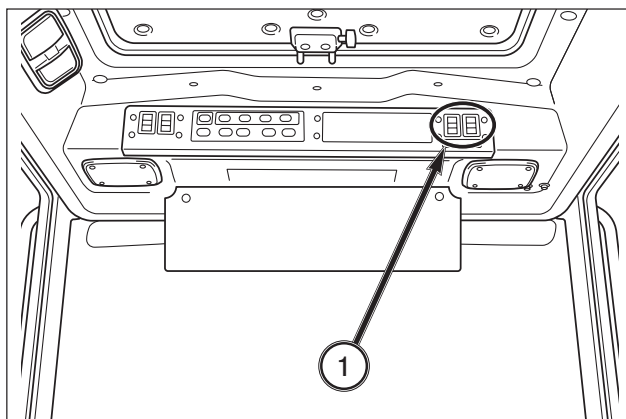


FIG. 5-57

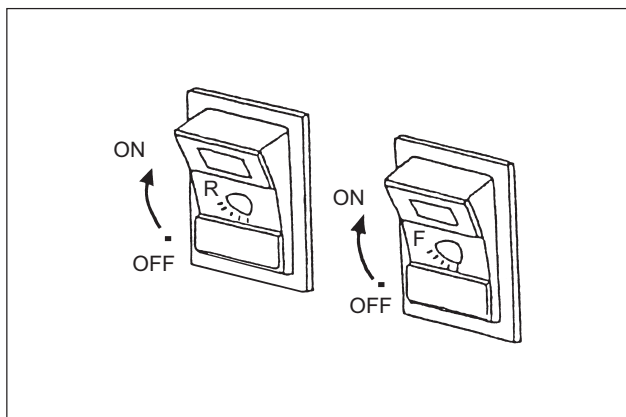


FIG. 5-58

FIGS. 5-59,60: Adjust the direction of the light beam as follows.

- Loosen the mounting bolts and move the light up and down .
- Tighten the mounting bolts after adjustment.

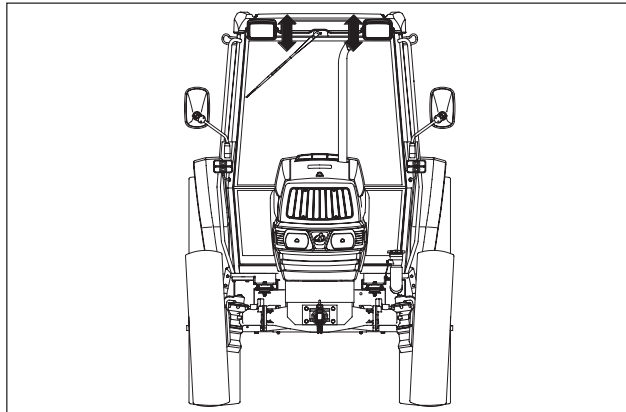


FIG. 5-59

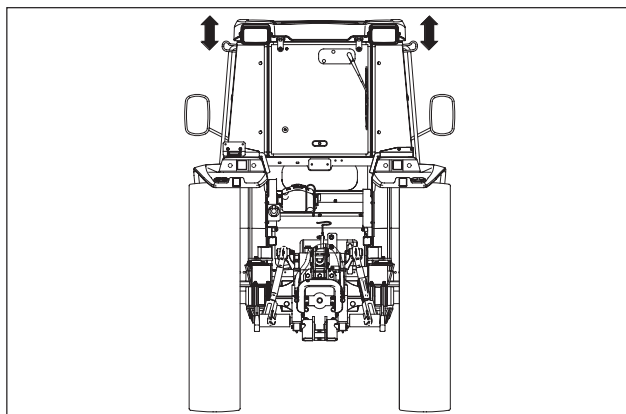


FIG. 5-60

TJ75

WIPER AND WASHER SWITCH

FIGS. 5-61,62,63: To operate the window wiper/washer switch(1), press the upper part of the switch to start the wiper blade. Press harder to release the washer fluid while the wiper blade is moving back and forth.

Press the lower part of the switch to stop the wiper blade. Press the lower part of the switch harder to release the washer fluid only.

IMPORTANT: Do not use the wiper for an extended time with the engine shut off.

IMPORTANT: If the wiper blade is frozen, remove ice before using.

IMPORTANT: Moving the wiper without the washer fluid may make a scratch on the cab glass. Release the washer fluid before moving the wiper.

IMPORTANT: Do not press the washer switch without the washer fluid.

- (2) Front wiper
- (3) Rear wiper

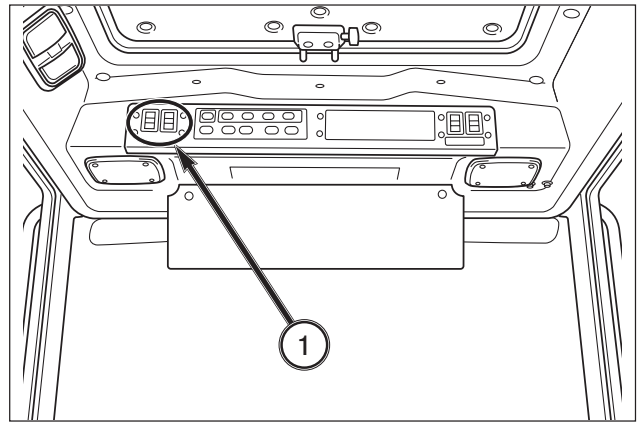


FIG. 5-61

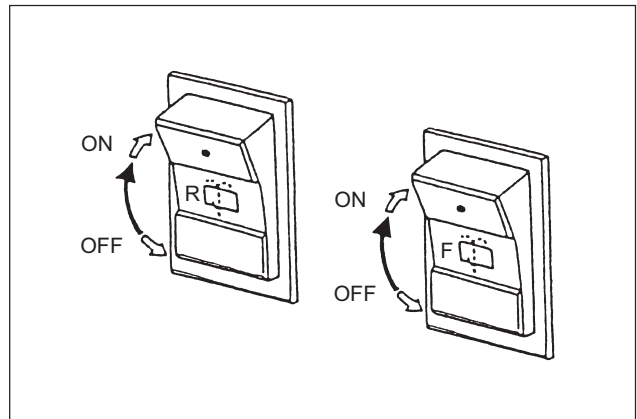


FIG. 5-62

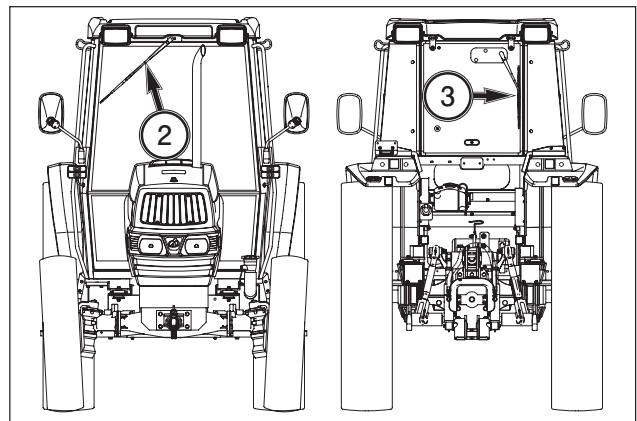


FIG. 5-63

WASHER RESERVOIR

FIGS. 5-64: The washer reservoir (1) is located on the rear side of the cabin. Use automobile washer fluid to replenish the washer fluid level.

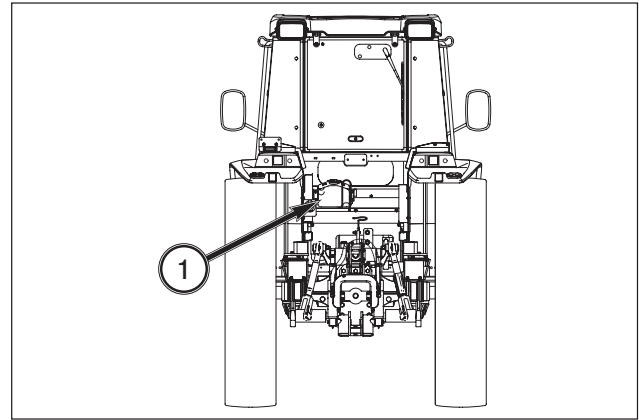
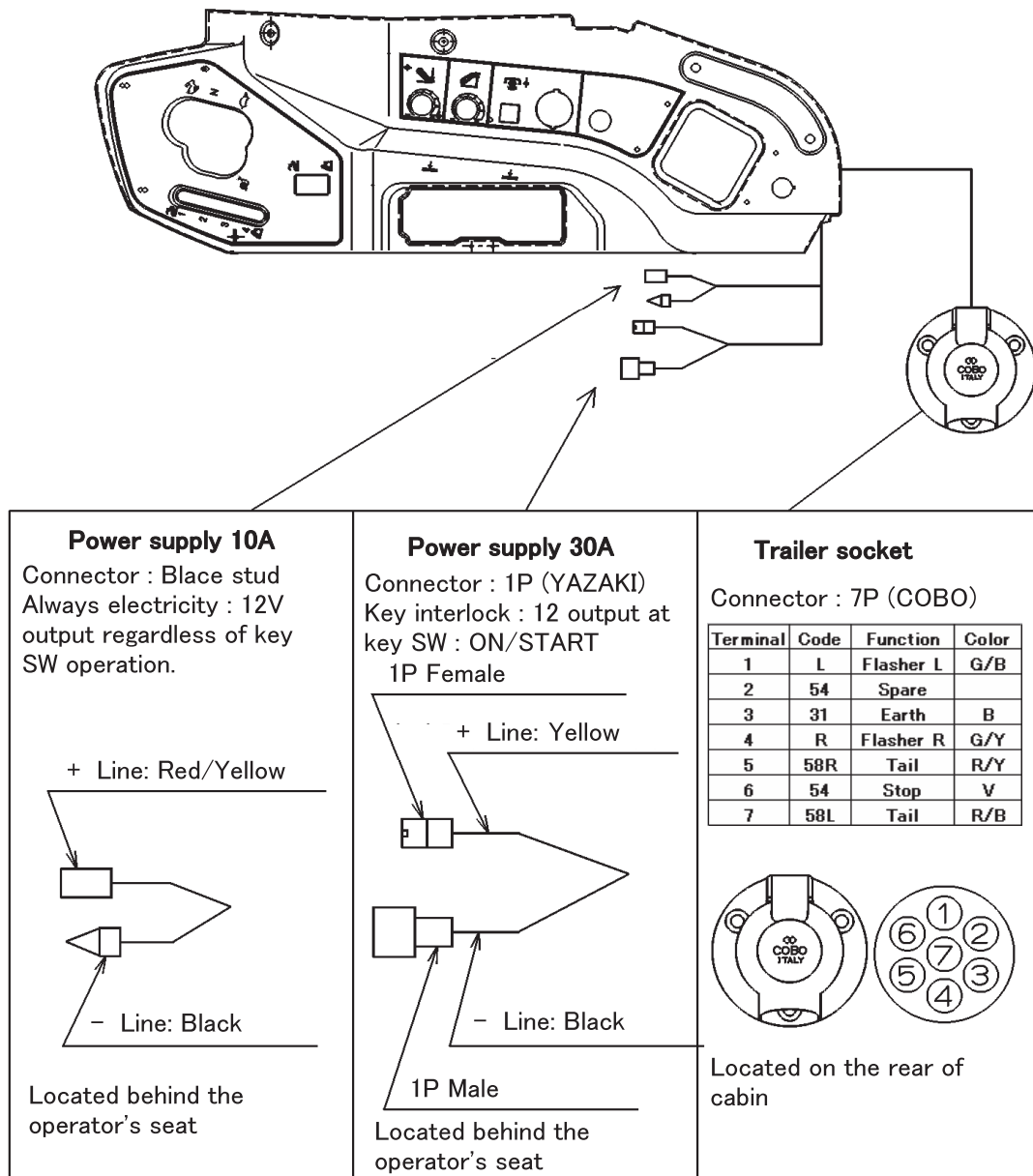


FIG. 5-64

TJ75

POWER OUTLET SUPPLY



CIGAR LIGHTER

FIG. 5-65: Use the cigar lighter (1) when the main switch is ON or GLOW. The cigar lighter is located on the rearward of right side pedal.

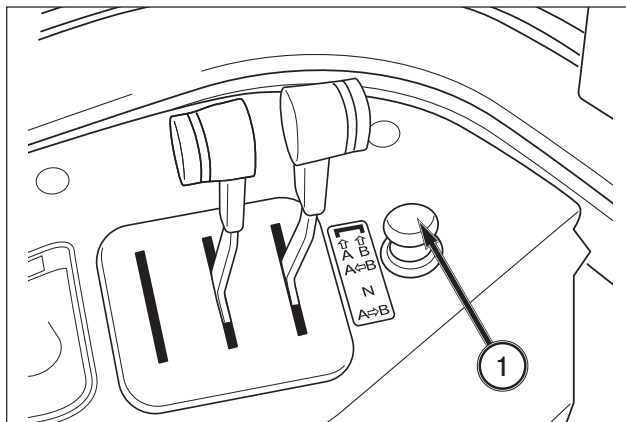


FIG. 5-65

ASHTRAY

FIG. 5-66: Ashtray(1) is located on the lower left of the steering wheel. Pull the upper part of ashtray(1) out when using. Take the ashtray(1) off after pushing down and pulling out when cleaning.

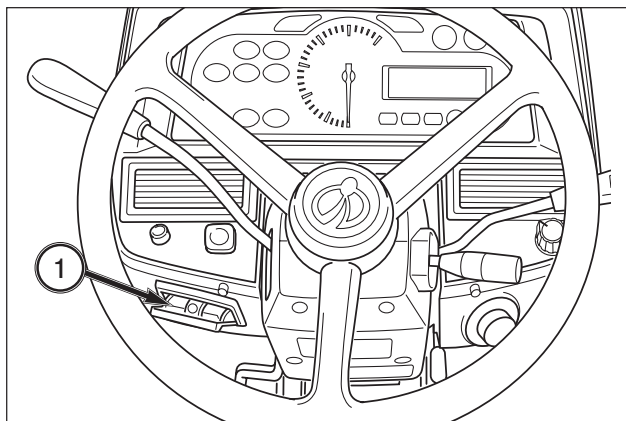


FIG. 5-66

DRINK HOLDER

FIG. 5-67: Place the can or the bottle.

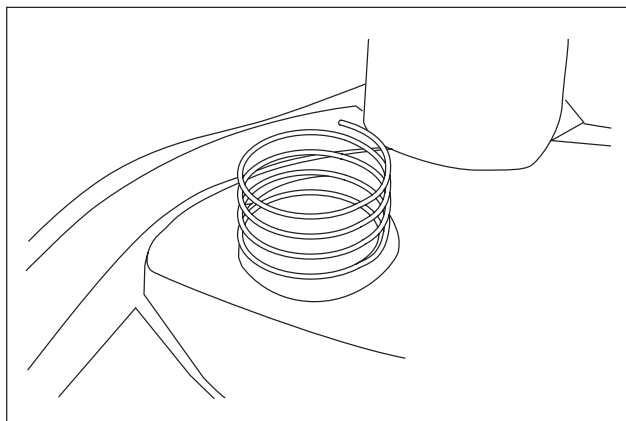


FIG. 5-67

TJ75

SUN VISOR

FIG. 5-68: Use as the right figure.

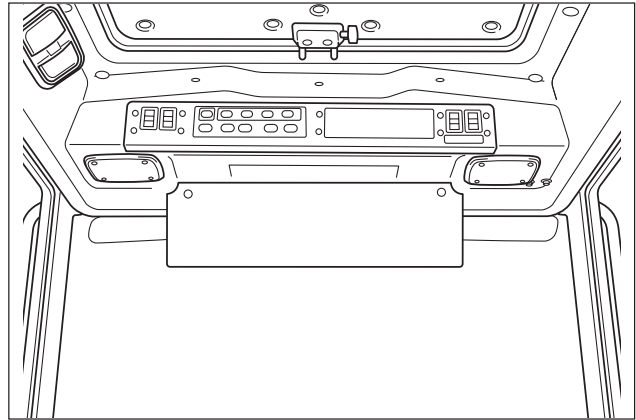


FIG. 5-68

TOOL BOX

FIG. 5-69: Tool box (1) is located behind the operator's seat.

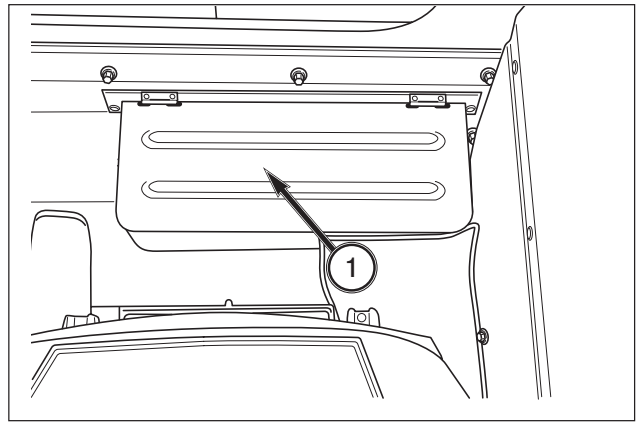


FIG. 5-69

FREE BOX

FIG. 5-70: Free box (1) is located on the right side panel.

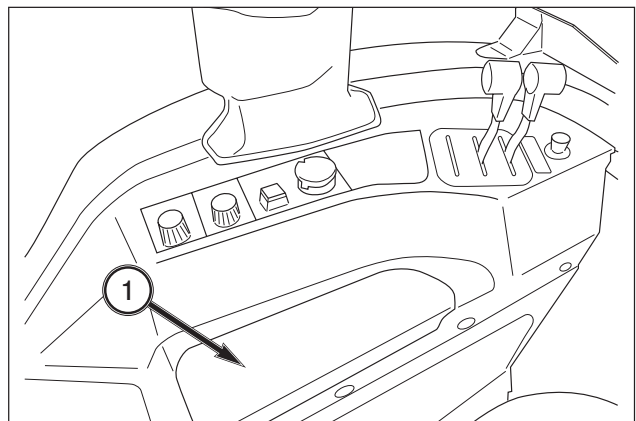


FIG. 5-70

AIR CONDITIONER OPERATION

FIGS. 5-71: To turn on the air conditioner, press the switch (1).

NOTE: The air conditioner will not operate with the fan speed control switch (4) set to OFF.

Press the button again to turn off the air conditioner.

- (1) Air vent switch.
- (2) Temperature adjustment switch.
- (3) Air conditioner switch.
- (4) Fan speed control switch.
- (5) Ventilation control switch.

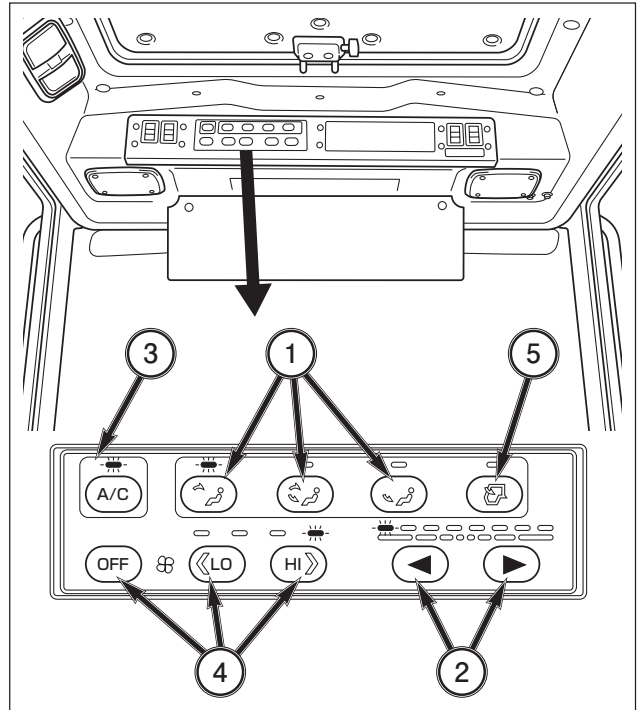


FIG. 5-71

AIR VENT SWITCH

FIGS. 5-72: Air vent can be changed at cooling / heating.

Air blows from meter panel with the monitor lamp turned on.

Air blows from meter panel and foot with the monitor lamp turned on.

Air blows from foot with the monitor lamp turned on.

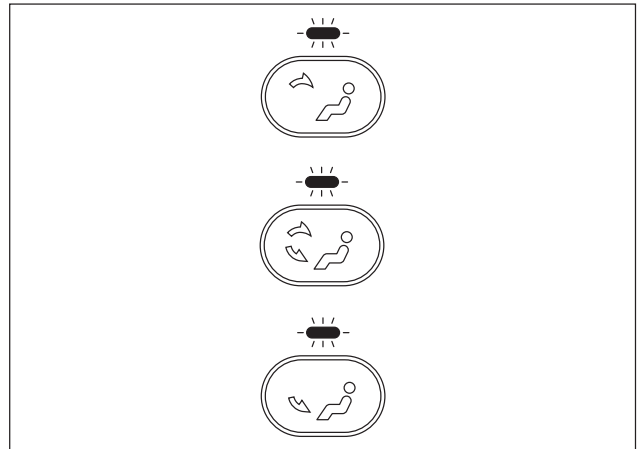


FIG. 5-72

TEMPERATURE ADJUSTMENT SWITCH

FIGS. 5-73: Temperature can be adjusted.

Cooler: Push LH switch to lit the left end monitor.
Heater: Push RH switch to lit the right end monitor.
Intermediate: Set intentionally to adjust temperature.

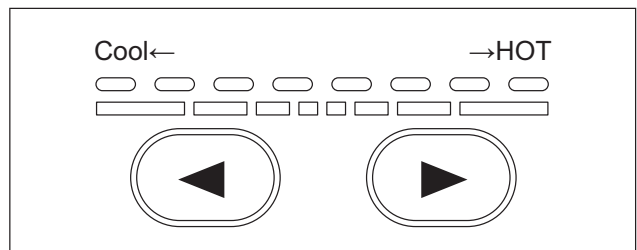


FIG. 5-73

AIR CONDITIONER SWITCH

Push switch to turn on air-con with the upper lamp lit.
Push again to turn off.

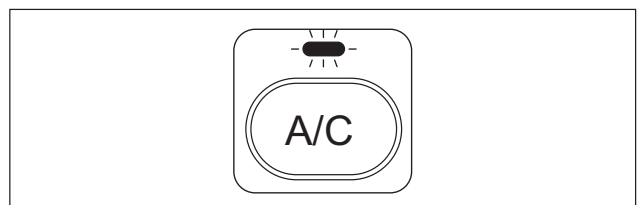


FIG. 5-74

TJ75

FAN SPEED CONTROL SWITCH

FIG. 5-75: 4 stages of fan speed is adjustable by pushing "LO" "HI" switch. Fan speed is shown on upper indicator.
 "LO" to lower the fan speed.
 "HI" to higher the fan speed.
 Push OFF switch to turn the air conditioner off.

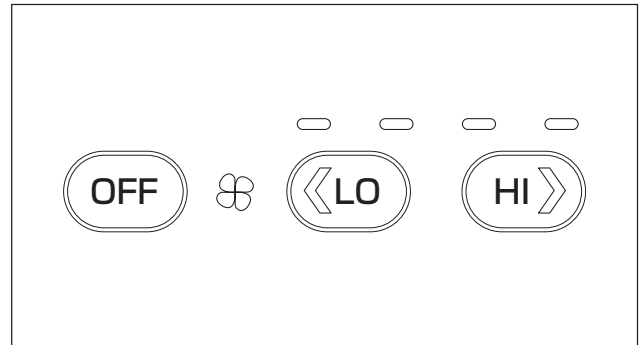


FIG. 5-75

VENTILATION CONTROL SWITCH

Push the ventilation control switch to introduce outside air with upper lamp turned on. Push again to cut off outside air with lamp turned off.

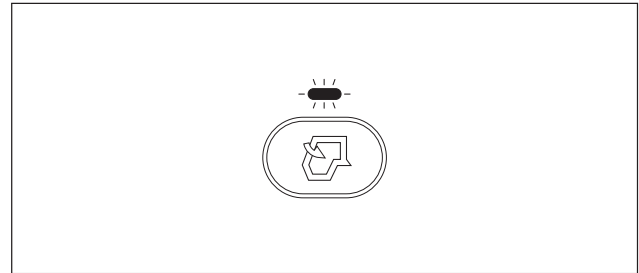


FIG. 5-76

AIR VENT

Cool or warm air blows from the right and left vents(1) on the meter panel, the right and left foot(2) and to the front glass(3).

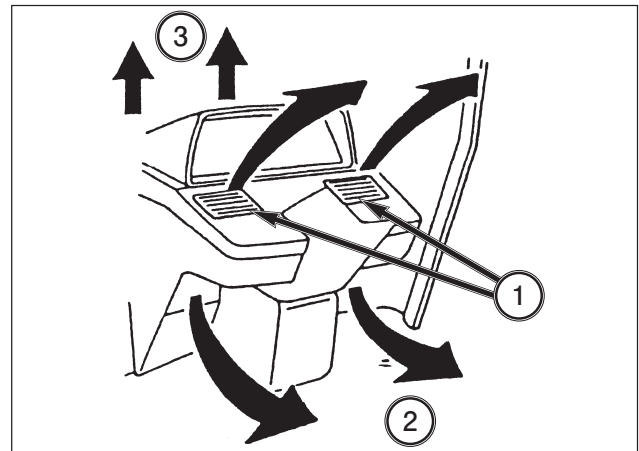


FIG. 5-77

AIR-CONDITIONING and DEHUMIDIFICATION

Set each switch as the **FIG. 5-78:** and turn the air conditioner switch on. Adjust by the fan speed control switch to the comfortable condition. Cool air will blow out from the air vents on the meter panel and inside cabin will be dehumidified with comfort.

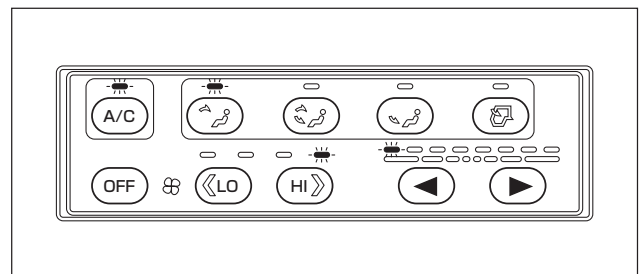


FIG. 5-78

HEATER

Set each switch as the **FIG. 5-79**: and turn the air conditioner switch off. Warm air will blow out from the air vents near the foot and inside cabin will warm.

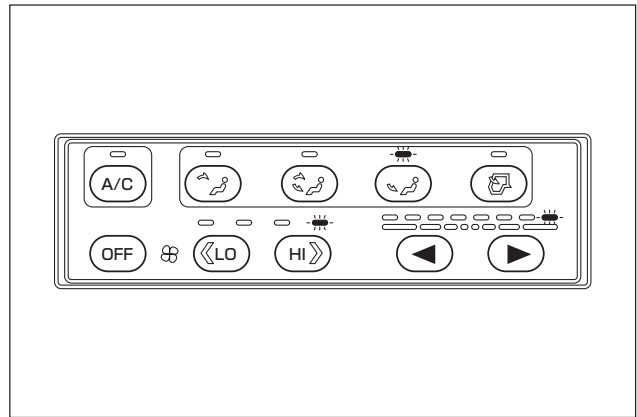


FIG. 5-79

HEATER and DEHUMIDIFICATION

Set each switch as the **FIG. 5-80**: Turn the air conditioner switch on when heater to work air conditioner. Adjust by the fan speed control switch to the comfortable condition. Use when the humidity is high.

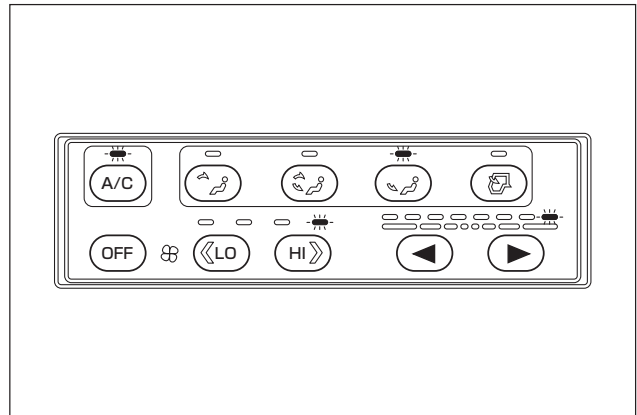


FIG. 5-80

DEFROSTER

Set each switch as the **FIG. 5-81**: Warm air blows to the front glass by closing the air vent on meter panel. When it is hard to remove mist at high humidity, push the air conditioner switch to activate cooler for faster defrost.

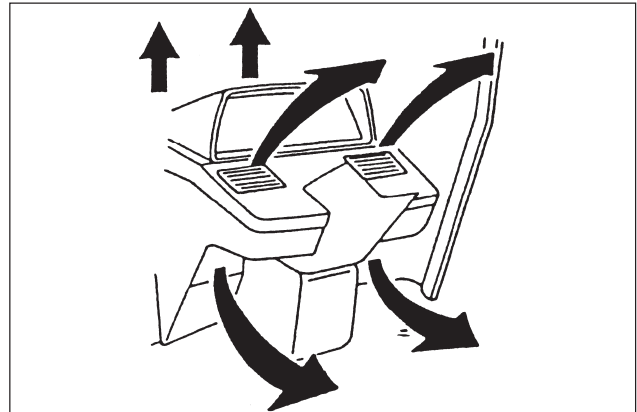


FIG. 5-81

IMPORTANT: Air conditioner sometimes does not work when the outside temperature is extremely low, it is not failure.

IMPORTANT: In case of long term storage, activate work when the outside temperature is the air conditioner for about 10 minutes at low engine speed every 1 month to prevent compressor from oil shortage.

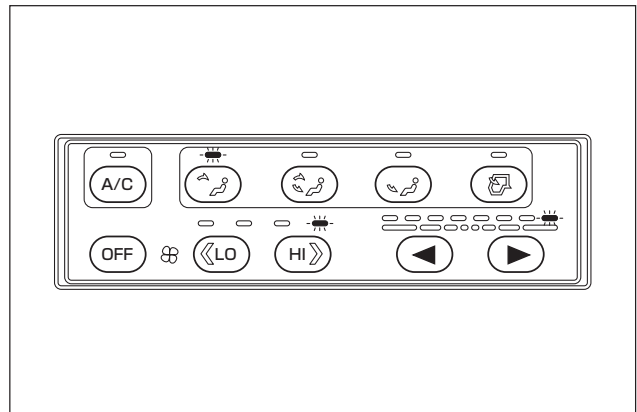


FIG. 5-82

TJ75

VENTILATION CONTROL SWITCH

In normal condition, push the ventilation control switch(1) to take in the outside air with upper lamp turned on.
At spraying work or dirty outside air, push the switch again to shut the outside air with upper lamp turned off.
At quick cooling or heating, shut outside air.

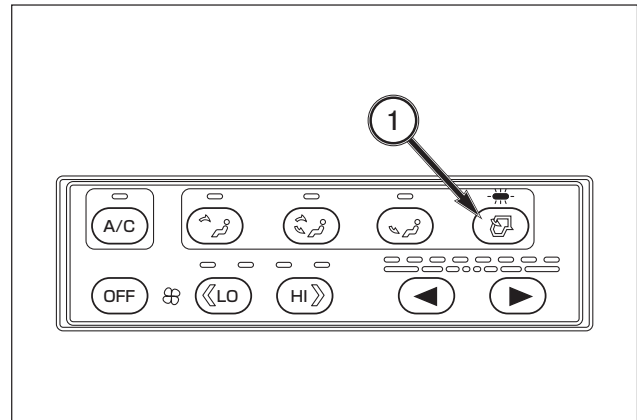


FIG. 5-83

WHEN NOT USING AIR CONDITIONER

When air conditioner is not used, push OFF of fan speed control switch. All function stops.

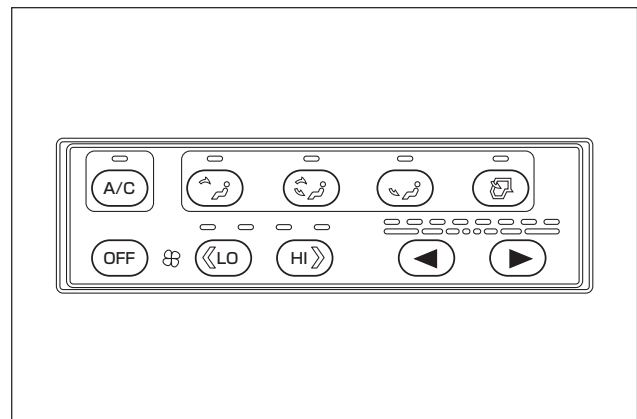


FIG. 5-84

LUBRICATION & PERIODIC MAINTENANCE

SPECIFICATIONS & CAPACITIES

Engine Oil

Use oil of the quality recommended by ISEKI. API Service CD (TJ75).

Capacity(Crankcase and Filter) 9.0liters

Recommended Viscosity:

25°C and Above SAE 30W, 10W-30

0°-25°C SAE 20W, 10W-30

0°C SAE 10W, 10W-30

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

Recommended Change Interval, Initial Oil and Filter Change 50 hours

Oil and Filter Change, Thereafter Engine oil Every 100 hours
..... filter Every 200 hours

Engine Coolant

Freezing Protection (Original Factory Fill) -34°C

Recommended Coolant 50/50 mixture ethylene glycol and water

System Capacity

Radiator 6.5liters

Reservoir 1.1liters

Fuel Tank

Capacity.....90.0liters

Fuel Recommended, Above 39°F (4°C) No. 2 or No. 2-D

Fuel Recommended, Below 39°F (4°C) No. 1 or No. 1-D

Transmission & Differential Housing (Including Hydraulic System)

Capacity.....52.0liters

Recommended Lubricant Shell DONAX TD or equivalent

Recommended Change Interval..... First 50 hours, every 200 hours thereafter

Front Axle

Capacity.....8.0liters

Recommended Lubricant SAE 80 GL-4

Recommended Change Interval..... Every 600 hours

Grease Fittings

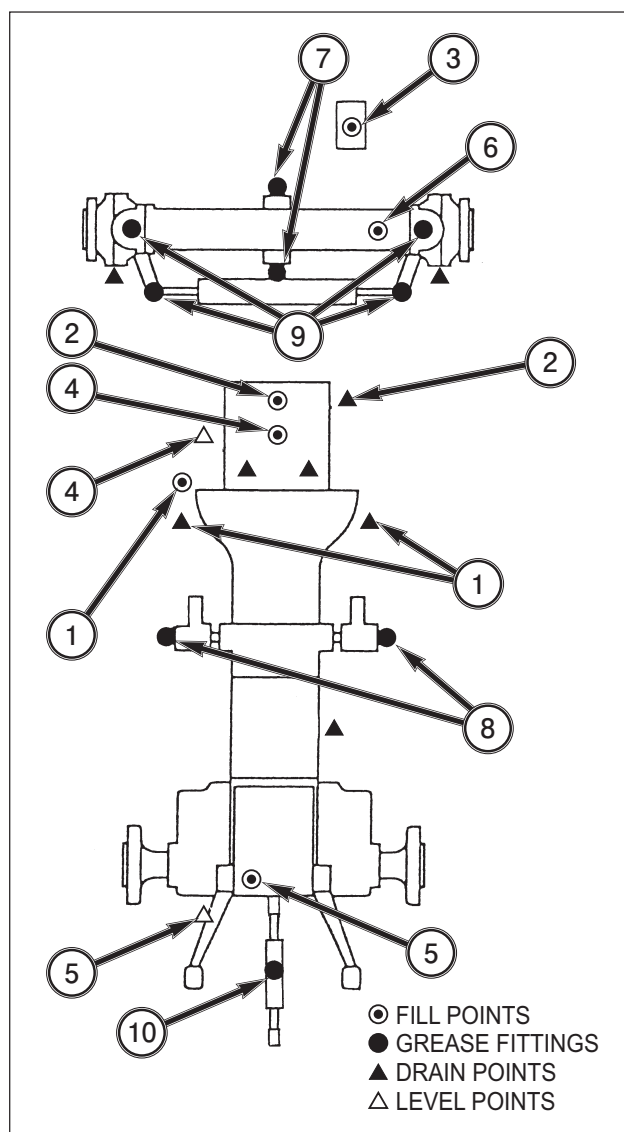
Grease Interval (All Fittings) Every 50 hours

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 or muddy), change intervals may need to be more frequent.*

TJ75**LUBRICATION/FILL POINTS****FIG. 6-1:** General layout of lubrication, fill and drain locations on Tractor:

Ref.	Description:	Type:
1	Fuel Tank	Diesel Fuel
2	Engine Radiator	Coolant
3	Radiator Overflow Reservoir	Coolant
4	Crankcase	Engine Oil
5	Rear Housing	Hydraulic Oil
6	Front Axle	Hydraulic Oil
7	Center Pivots	Grease
8	Brake Arms	Grease
9	Knuckle Arms	Grease
10	Top link	Grease

**FIG. 6-1**

PERIODIC INSPECTION AND MAINTENANCE TABLE

○: Inspect, replenish or adjust ● Replace △ Clean or wash
★: Replacement or servicing at authorized service facility recommended.

			Before ope.	First insp. ★	100 Hr	200 Hr ★	300 Hr	400 Hr ★	500 Hr	600 Hr ★	1 / Month	1 / Year ★	1 / 2 years ★	Remarks
Engine	1	Engine oil	○	●	●	●	●	●	●	●				Replace every 100 Hr.
	2	Engine oil filter		●		●		●		●				Replace every 200 Hr.
	3	Air cleaner element	○	△	△	△	△	△	△	●		●		Wash every 100 Hr. Replace every 600 Hr. or once/year.
	4	Reserve tank coolant/level	○	○	○	○	○	○	○	●		●		Wash every 100 Hr. Replace every 600 Hr. or once/2 years.
	5	Radiator		○									△	Flush once/2 years.
	6	Radiator hose	○	○		○		○		○			★	Inspect every 200 Hr. Replace once/2 years.
	7	Fuel filter	○	△	△	△	△	●	△	△				Wash every 100 Hr. Replace every 400 Hr.
	8	Fuel pipe / hose		○	○	○	○	○	○	○			★	Inspect every 100 Hr. Replace once/2 years.
	9	Fan belt	○	○	○	○	○	○	○	○				Inspect every 100 Hr.
	10	Battery fluid level	○	○	○	○	○	○	○	○		○		Check every 100 Hr. or once/1 year.
	11	Engine valve clearance								★				Inspect every 600 Hr.
Tractor	12	Transmission oil	○	●		●		●		●				Replace every 200 Hr.
	13	Transmission oil filter		●		●		●		●				Replace every 200 Hr.
	14	Front axle oil	○	○		○		○		●				Inspect every 200 Hr. Replace every 600 Hr.
	15	Draining of clutch chamber		○	○	○	○	○	○	○				Inspect every 100 Hr.
	16	Clutch pedal play	○	○	○	○	○	○	○	○				Inspect and adjust every 100 Hr.
	17	Brake pedal play	○	○		○		○		○				Inspect and adjust every 200 Hr.
	18	Steering joint		○		○		○		○				Inspect and adjust every 200 Hr. ★

TJ75

○: Inspect, replenish or adjust ● Replace △ Clean or wash
 ★: Replacement or servicing at authorized service facility recommended.

			Before ope.	First insp. ★	100 Hr	200 Hr ★	300 Hr	400 Hr ★	500 Hr	600 Hr ★	1 / Month	1 / Year ★	1 / 2 years ★	Remarks
Tractor	19	Toe-in adjustment		○		○		○		○				Inspect and adjust every 200 Hr. ★
	20	Tightening of tie-rod ends		○		○		○		○				Inspect and adjust every 200 Hr. ★
	21	Front axle front/rear play		○						○				Inspect every 600 Hr.
	22	Tire air pressure	○	○		○		○		○				Inspect/add air every 200 Hr.
	23	Tighten wheel bolts	○	○	○	○	○	○	○	○			★	Inspect every 100 Hr.
	24	Electrical wiring		○								○	★	Inspect once/year. Inspect once/2 years at authorized service facility recommended.
	25	Power steering hose		○	○	○	○	○	○	○			★	Inspect every 100 Hr. Inspect once/2 years at authorized service facility recommended.
	26	Delivery hose		○									★	Replace once/2 years.
	27	Assist cylinder hose		○									★	Replace once/2 years.
	28	Replenish grease	○	○	○	○	○	○	○	○				Grease before/after operation.
Cabin	29	Power steering cylinder bolt	○	○	○	○	○	○	○	○			★	Inspect every 100Hr.
	30	Air conditioner belt	○	○		○		○		○				Inspect every 200Hr.
	31	Air conditioner condenser		△		△		△		△				Clean every 200Hr.
	32	Air conditioner hose and pipe										○		Inspect once / year.
	33	Air conditioner filter	○								○			Inspect once / month.
	34	Window washer liquid	○											Check at any time
	35	Rubber bush										○		Inspect once / year.
	36	Wiring harness		○								○	★	Inspect once / year. Check once / 2 years.

Removing/Reinstalling Side Cover

FIG. 6-2: The side cover, 1, can be removed by pulling up the bottom of side cover for this side and lift up the side cover after pulling the knobs, 2, and unlocking the hooks.

When reinstalling the side cover, push the bottom of the side cover and lock the knobs, 2, surely after inserting the two hooks on the top of the side cover into the two holes of the hood.

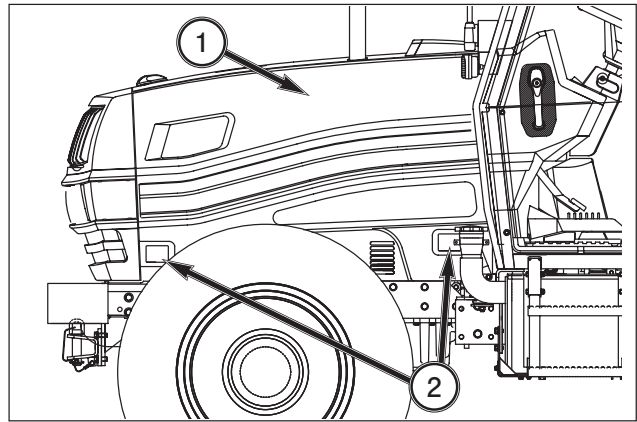


FIG. 6-2

Removing/Reinstalling Front Grille

FIG. 6-3: The front grille, 1, can be opened by pulling out the top of the front grille, 1, slightly with turning the knob, 2, clockwise on the hood.

Disconnect the two couplers of head lamps and the coupler of the horn.

Remove the wire, 3, from the pin of the front grille.

After lifting up the front grille, 1, slightly and pulling out the bottom of the front grille, 1, remove it to forward.

When reinstalling, do in the reverse way.

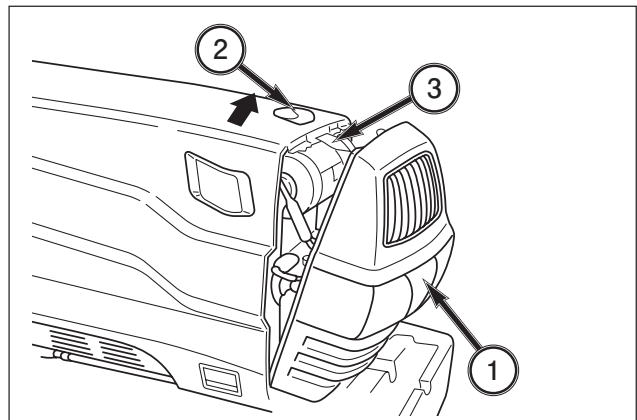


FIG. 6-3

TJ75

LUBRICATION DETAILS

Grease Fittings

Lubricate all grease fittings every 50 hours of operation. 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 100 hours thereafter.

FIG. 6-4, 5: 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, and lower limit, on dipstick. Wipe off dipstick, 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.*

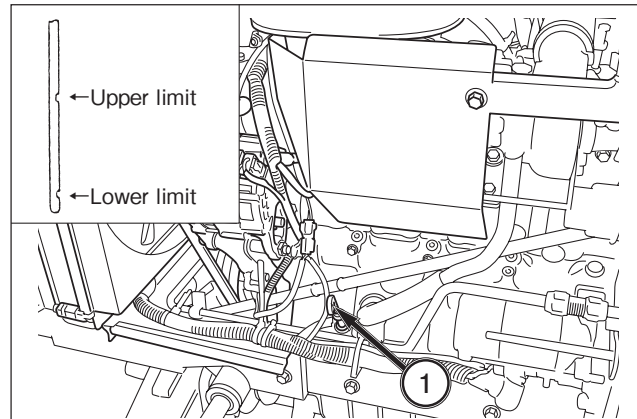


FIG. 6-4

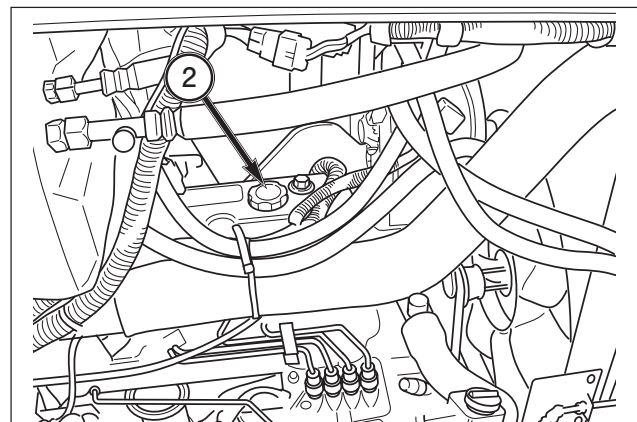


FIG. 6-5

FIG. 6-6: To Change Engine Oil - Operate Tractor until oil is adequately warmed. Remove drain plugs, 3, from engine and allow all oil to drain.

Reinstall drain plugs and fill engine crankcase to upper limit on dipstick.

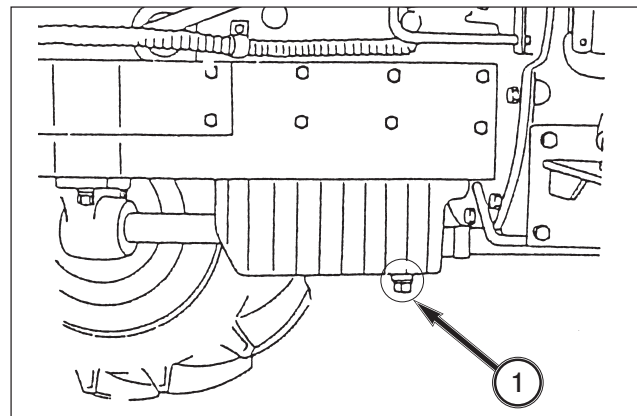


FIG. 6-6

FIG. 6-7: To Replace Engine Oil Filter - Unscrew element, 4, 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.

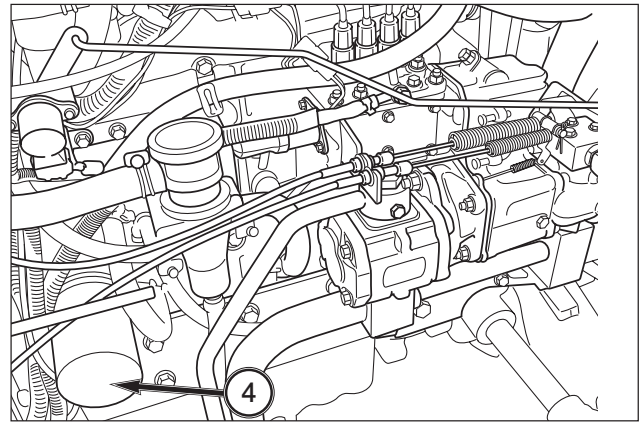


FIG. 6-7

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. 6-8: 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 filter plug, 2, and adding oil through filter opening.

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

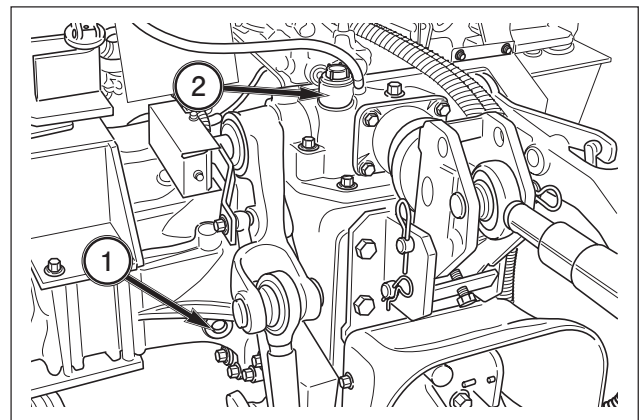


FIG. 6-8

FIG. 6-9: 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.

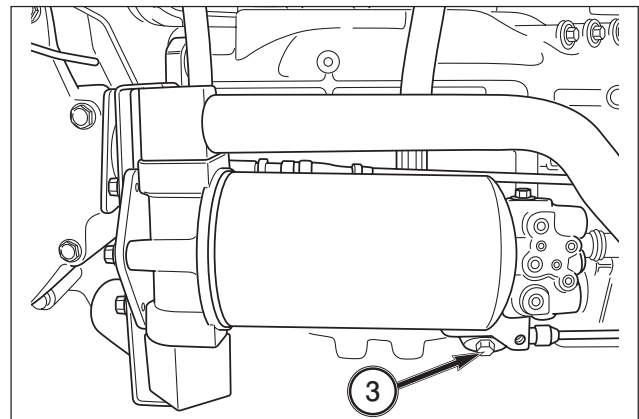


FIG. 6-9

TJ75

FIG. 6-10: To Bleed Air -When replenishing after draining transmission oil, always bleed air in the hydraulic pipes and hoses.

Start the engine after loosen the air bleeding plug, 4, and keep the engine revolution under 1,000rpm. When blowing out the oil, tighten the air bleeding plug immediately. After checking the oil level window, if insufficient, replenish the transmission oil.

IMPORTANT: If no air bleeding, sticking of the gear pump or malfunction of hydraulic equipments may result.

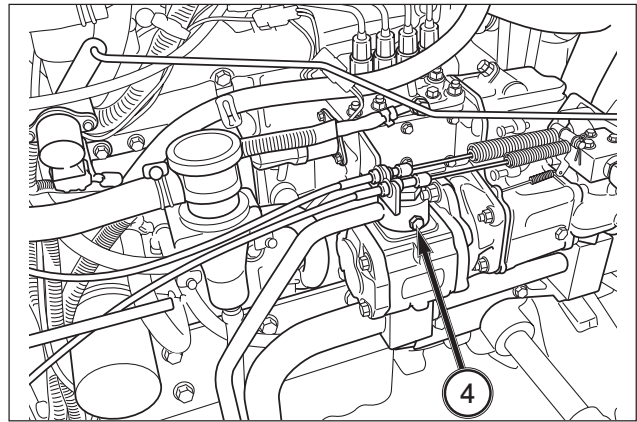


FIG. 6-10

FIG 6-11: To Replace Transmission Filter --With oil drained, unscrew the transmission filter, 5, from adapter (filter wrench may be required).

Clean adapter and lubricate seat on new filter. Install until filter gasket contacts adapter and tighten additional 2/3 turn, by hand. Do not use filter wrench to tighten.

Replenish the transmission oil and bleed the air.

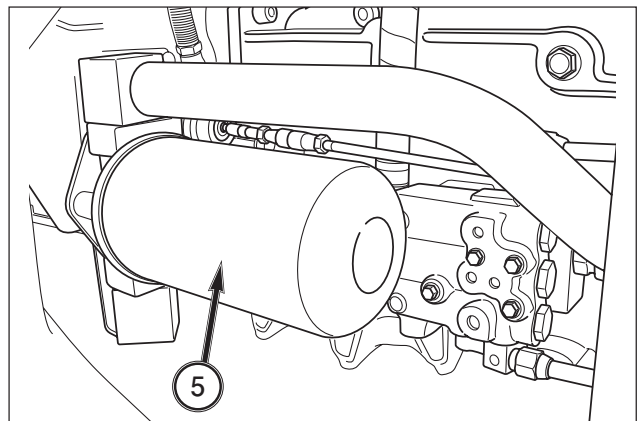


FIG. 6-11

FIG 6-12: To Clean Magnet -When removing the transmission filter, clean the contamination attached to the magnet, 6.

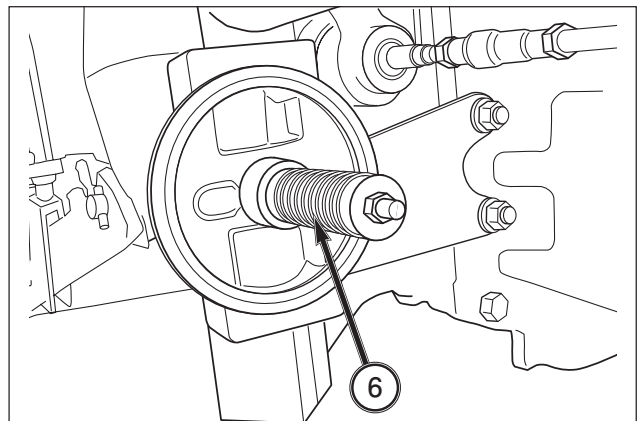


FIG. 6-12

FIG. 6-13: Front Axle Oil

Front drive axle has a common oil level for front differential housing and each wheel reduction unit. Oil level should be checked every 200 hours of Tractor operation. The oil should be changed every 600 hours of operation(indicated on Hourmeter).

To Check Oil Level - Park Tractor on level ground and then remove fill plug,1. Oil should be level to the center level of the front axle. If not, add oil to the center level.

To Change Oil - Remove drain plugs, 2, from both wheel reduction units and air bleeding plugs, 3, After all oil has drained, fill the oil to the oil capacity after tightening drain plugs. Tighten fill plug and air bleeding plugs finally.

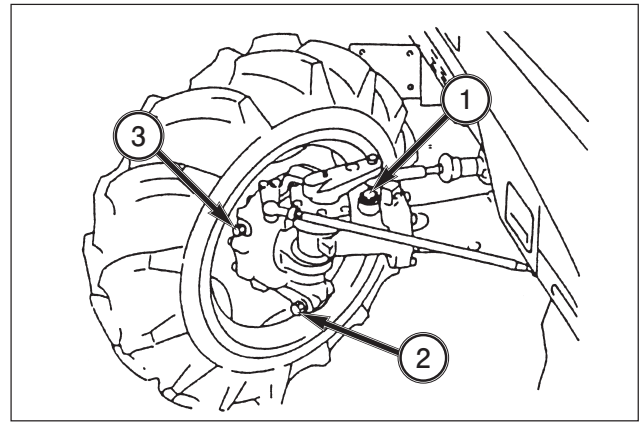


FIG. 6-13

Checking/Replenishing Coolant

Fig. 6-14: The radiator is provided with a reserve tank, 1, to maintain the coolant in the radiator at the proper level. Check the level in this reserve tank during the daily inspection.

Open the right side cover, and check that the coolant in the reserve tank is between FULL and LOW.

If the coolant level is low, add coolant to the reserve tank up the FULL level.

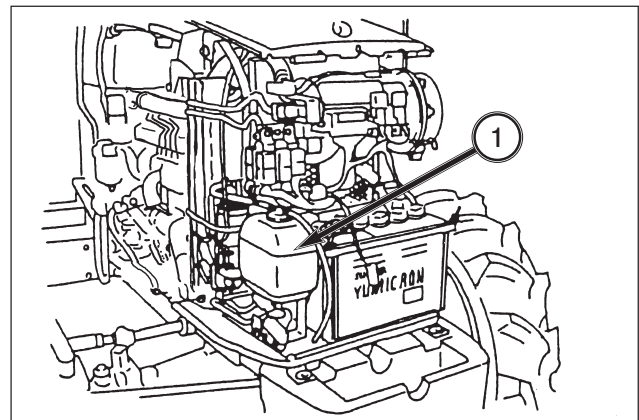


FIG. 6-14

TJ75

Fig. 6-15: When the coolant level is below the LOW level, remove the radiator cap, 2, and add coolant to the reserve tank up the FULL level after allowing the engine to cool sufficiently, and check that there is an adequate amount of coolant in the radiator. If not, add coolant to the radiator up the full level.



CAUTION: Do not open the radiator cap except when checking or replacing the coolant. Make sure to allow the engine to cool sufficiently before opening the cap. If the cap is opened while the engine is hot, coolant may be discharged, resulting in a burn or other injury.

IMPORTANT: Do not fill the reserve tank higher than the FULL level. This will prevent the radiator from functioning optimally, and may result in leakage of coolant.

Flushing Radiator / Replacing Coolant

FIG. 6-16: Open the drain cock, 1, at the right side of the engine to drain coolant. Open the radiator cap, 2, at the same time to help allow the coolant to drain. Remove the reserve tank, 3, to drain coolant from it.

Thoroughly flush out the inside of the radiator with tap water.

Close the drain cock, 1, and pour coolant into the reserve tank up to the FULL level to fill the radiator.

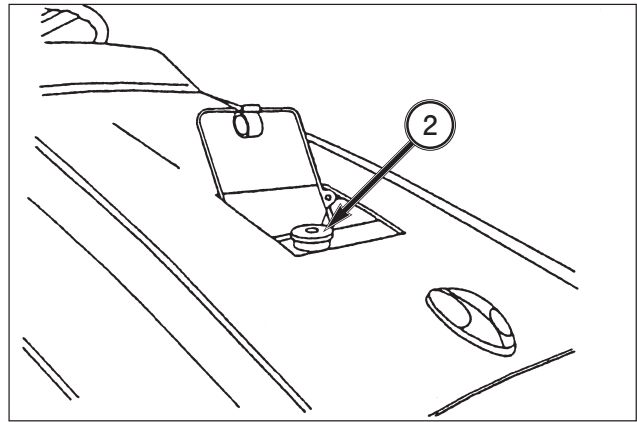


FIG. 6-15

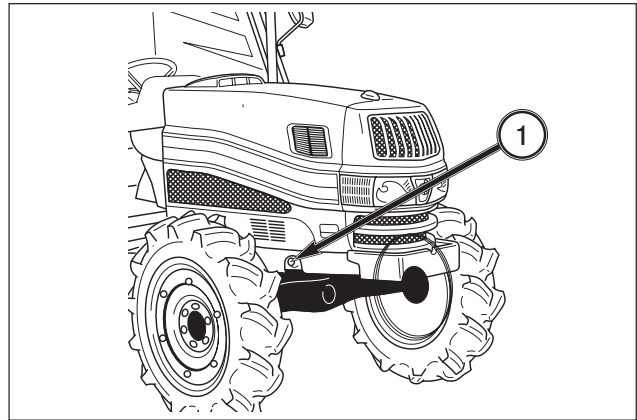


FIG. 6-16

FIG. 6-17, 18: Securely close the radiator cap, 2, and reserve tank cap, start the engine. Repeat 3 times to run for five minutes in 2000rpm and stop for three minutes.

At that time, operate the air conditioner operation panel as the right figure.

When the engine cools, the coolant in the reserve tank will be sucked into the radiator. Add coolant to the reserve tank up to the FULL level (Approx. 400cc required).

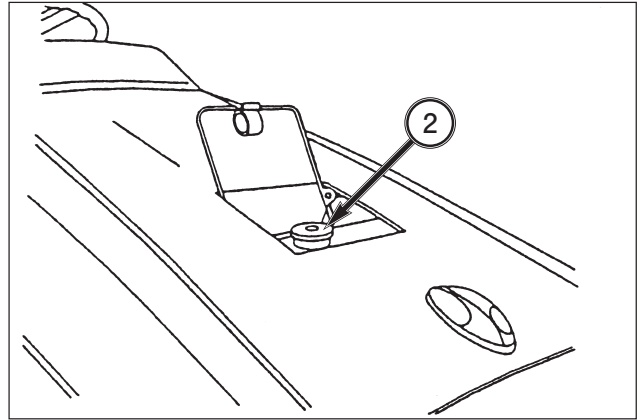


FIG. 6-17

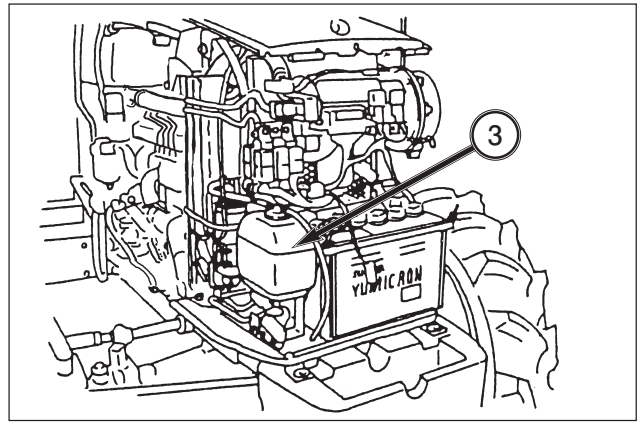


FIG. 6-18

Use of Anti-Freeze

Freezing of the coolant may result in damage to the engine. Mix in anti-freeze (Long Life Coolant) when the outside temperature will drop below 0°C (32°F) during the winter.

The mixture ratio of anti-freeze differs depending upon the anti-freeze manufacturer and temperature. Follow the instruction for the anti-freeze.

Cleaning of Radiator



WARNING: Make sure to stop the engine when cleaning the radiator. Placing your hands in this area while the engine is operating may result in serious injury.

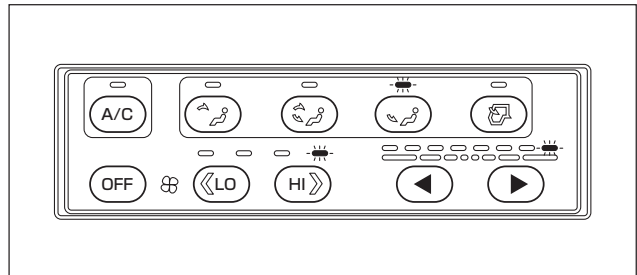


FIG. 6-19

TJ75

FIG. 6-20: Cleaning Insect Net ,1

When the tractor is operated in fields or at night, the insect net may become clogged with grass, straw, insects and other matter. Open the side cover, pull out the insect net and clean it.

Cleaning Radiator Core ,2

Wash away any dirt or other foreign matter in between the fins with tap water.

IMPORTANT: When the radiator becomes clogged, it will overheat, resulting in increased oil consumption.

Be careful not to apply high pressure water directly to the radiator as this may result in deformation of the fins.

Do not directly spray water on the electrical wiring or electrical parts around the engine.

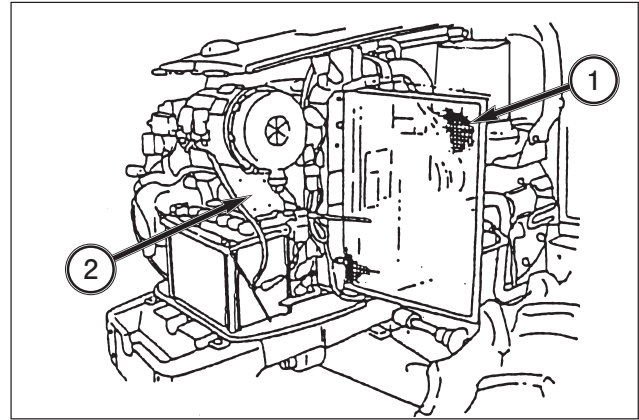


FIG. 6-20

FIG. 6-21: Correct fan belt tension helps to insure adequate coolant flow through cylinder block and radiator. Belt is correctly tensioned when belt deflection is approximately 10 mm when thumb pressure (5kgf) is exerted at center of belt span.



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

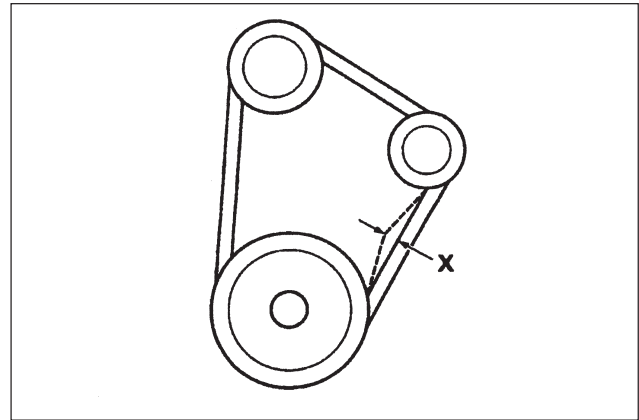


FIG. 6-21

FIG. 6-22: 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.

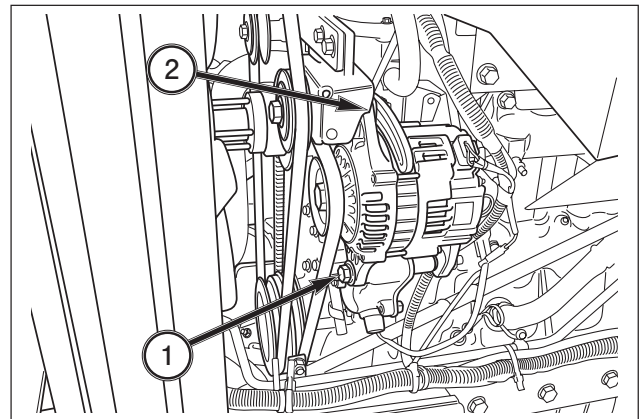


FIG. 6-22

Cleaning Air Cleaner / Vacuator Valve

FIG. 6-23: Open the hood, and remove the left side cover and front grill.

Press the vacuator valve, 2 , to discharge any dirt inside. If there is moisture, wipe the inside of the air cleaner, 1 , with a rag.

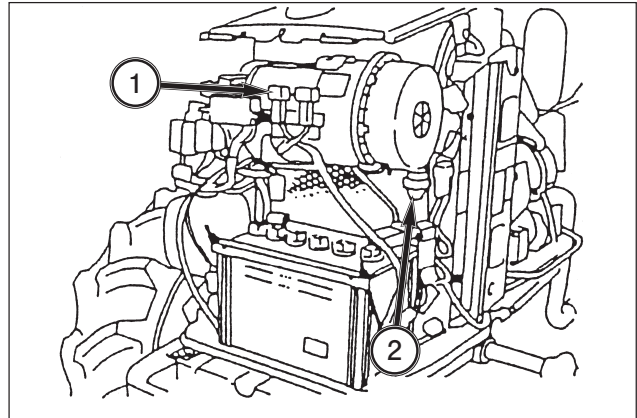


FIG. 6-23

FIG. 6-24: Cleaning/Replacing Air Cleaner Filter Element
Remove the clip, 3, and take the filter element, 4, out of the air cleaner.

Use the following procedure to clean the filter element:

When there is dry dust

Blow air from the inside of the filter element, or lightly tap the filter element with your hand to discharge the dust.

When there is moist dirt or oil

Dilute a neutral household detergent in water, and soak the filter element for about 30 minutes. Then rinse the filter element and allow it to naturally dry.

After cleaning the filter element, push it straight back into the air cleaner to securely assemble it. When installing the air cleaner cover, install in order for the letter of "TOP" to be present in front side.

IMPORTANT: *Do not hit the filter element against a rock, concrete or other hard item when cleaning it. This may result in damage or deformation of the filter element, inhibiting engine performance.*

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

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

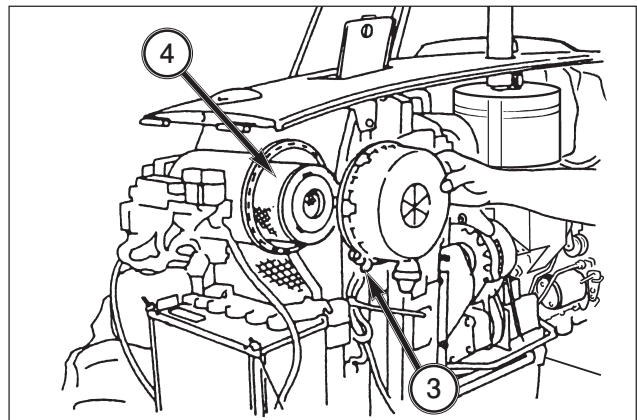


FIG. 6-24

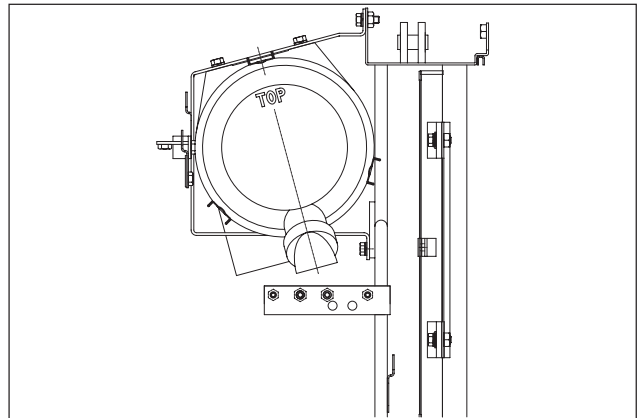


FIG. 6-25

TJ75

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. Contact your Dealer.

Fuel Filter

FIG. 6-26: Fuel filter assembly, 1, is located at the right side of engine and is used to strain impurities from fuel before fuel reaches injection pump.

Replacing Fuel Filter Cartridge

Remove the fuel filter cartridge by using set tool. Apply thin the fuel on the packing before installing cartridge. Bleed air from the fuel system.

Inspecting Fuel Hose

Inspect the fuel hoses every 100 hours. When finding cracks or leaking the fuel, replace it.

Air-Bleeding Fuel System

To bleed air from the fuel system:

- Fill the fuel tank.
- Loosen the air-bleeding screw, 2, on the upper of the fuel filter. Bleed air from the screw completely with the handy pump, 3.
- After bleeding air completely, tighten the air-bleeding screw.
- Work the fuel pump for several seconds after setting the main switch to ON or GLOW. Particle remained air will discharge.

Fuel Tank Filler Cap

When fuel tank filler cap, 1, 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.

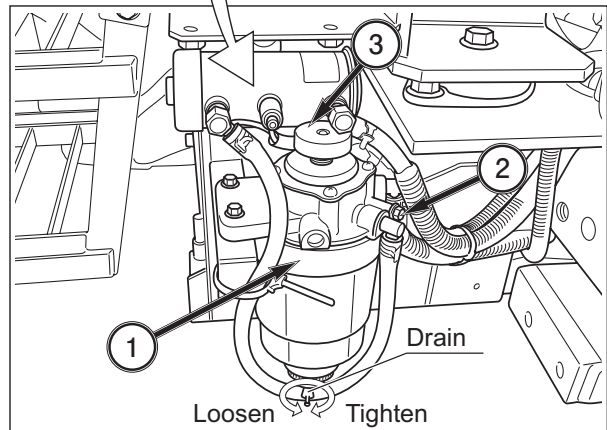
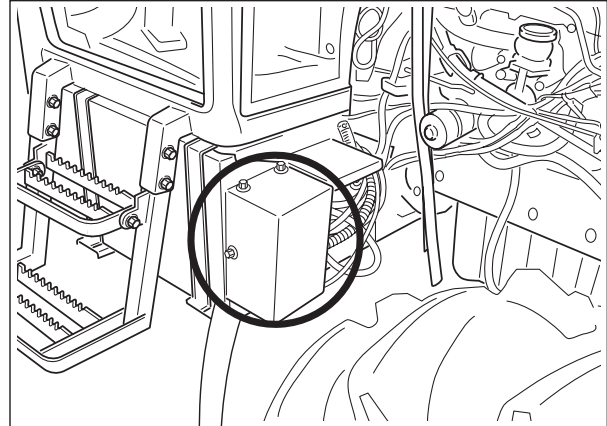


FIG. 6-26

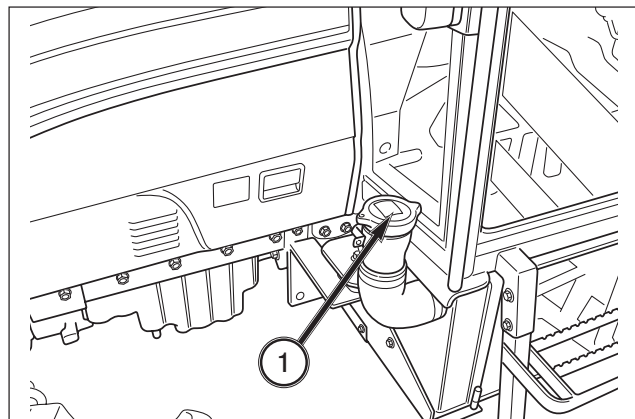


FIG. 6-27

ELECTRICAL SYSTEM

Battery

FIG. 6-28: Battery, 1, is located under engine hood in front of radiator. If battery requires only minor servicing or charging, it is recommended to remove the front grille and the side cover to access battery.

When battery removal, electrolyte inspection or cable cleaning is necessary, front grille must be removed from Tractor.

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.



CAUTION: 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 physician if electrolyte is ingested or gets in eyes.

FIG. 6-29,30: Tractors are shipped with 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.

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.

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

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

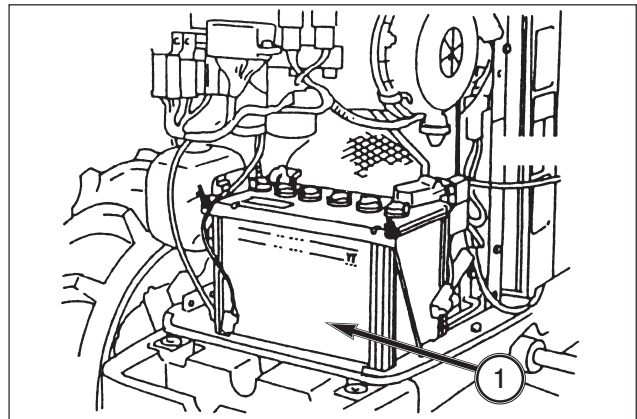


FIG. 6-28

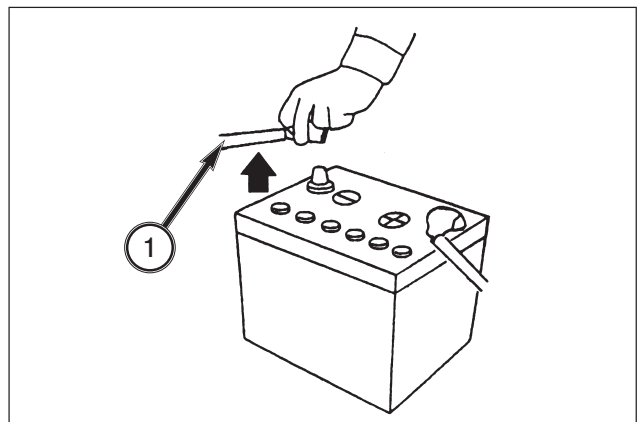


FIG. 6-29

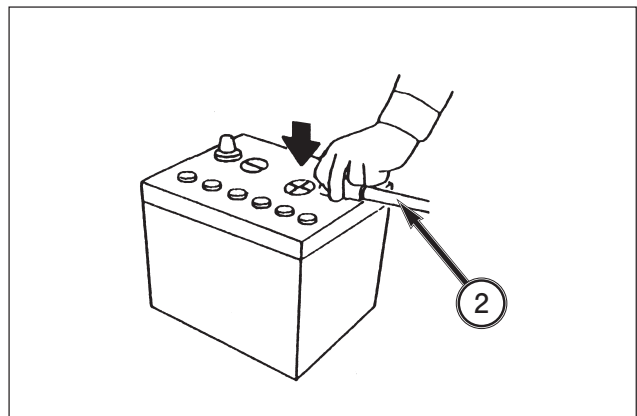


FIG. 6-30

TJ75



WARNING:

Never disassemble battery.

Batteries contains sulfuric acid electrolyte (fluid).

Keep away from sparks or flames, which could cause explosion.

When charging battery from an external source;

Set charging voltage below 16V.

Set charging ampere below 1/10 (one tenth) of battery capacity.

When connecting and disconnecting battery cables, turn off power of battery charger.

If you have any question about battery, consult your dealer.

FIG. 6-31: Electrolyte level should be inspected and must be maintained between upper limit, A, and lower limit, B. **DO NOT** overfill as electrolyte will spoil and cause corrosion. Add only distilled water to individual cells, when required.

IMPORTANT: *To mix electrolyte and distilled water, Tractor must be operated or battery charged. Failure to mix will result in frozen battery in low temperatures.*

Should battery performance be questioned, 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 125°F (54°C) if overheating occurs, charge rate must be reduced or halted.*

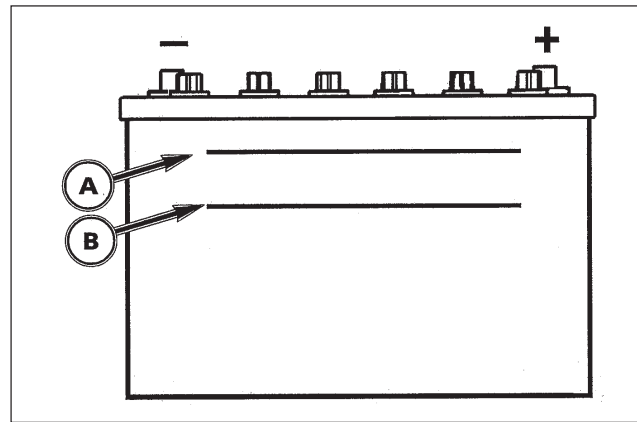


FIG. 6-31

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 control switch must be in OFF position

NOTE: A seat safety switch is incorporated into system. The engine stops when operator leaves seat when either PTO is engaged and / or range shift lever is not in neutral.



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

Safety Switches

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

- Gearshift lever must be in neutral position
- PTO control switch must be OFF

Wiring / Fuse Arrangement



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



CAUTION: DO NOT alter wiring by adding home-made 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 by-pass fuse protection. Fire can result.

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

TJ75

Fuse Location

FIG. 6-32, 33: Fuse Box, A- Located on upper side of the clutch pedal.

Ref	Amp	Function
1	10A	Instrument Panel
2	15A	Stop Lights
3	15A	Turn Lights
4	20A	Horn / Head Lights
5	5A	Starter Relay
6	5A	Radio Cassette
7	10A	Pump
8	15A	ECU and Control System
9	5A	Glow monitor
10	5A	Tail Light(Right)
11	5A	Tail Light(Left)
12	5A	Position Light(Right)
13	5A	Position Light(Left)
14	5A	License Plate Light
15	5A	Check Mode Fuse

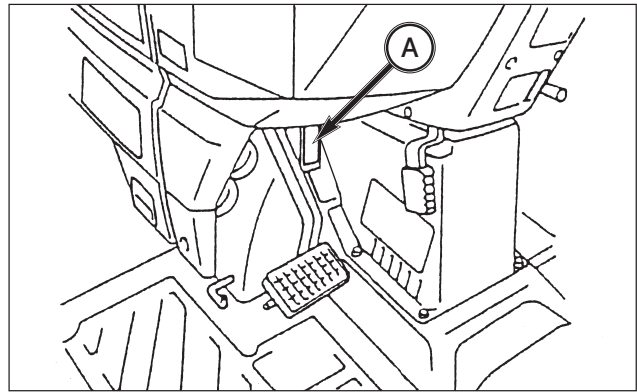


FIG. 6-32

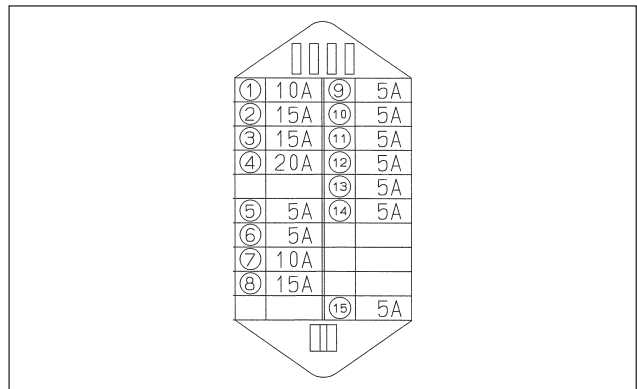


FIG. 6-33

FIG. 6-34, 35: Fuse Box, B- Located on front side of the air cleaner.

Ref	Amp	Function
1	10A	Front Wiper
2	10A	Rear Wiper
3	10A	Head Light-Low beam(Left)
4	10A	Head Light-Low beam(Right)
5	10A	Head Light-High beam(Left)
6	10A	Head Light-High beam(Right)
7	10A	Horn
8	5A	Regulator
9	15A	Work Light(Front)
10	15A	Work Light(Rear)
11	10A	Compressor
12	20A	Air Conditioner(High)
13	5A	Room Light / Air Conditioner
14	15A	Cigar Lighter
15	15A	Assistant Power / Served with 10A
16	30A	Assistant Power / 30A (with key switch ON)

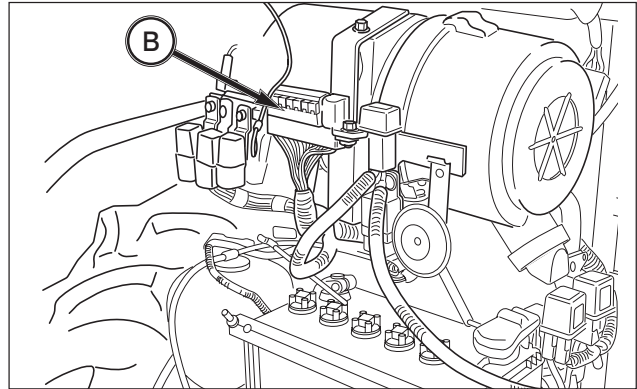


FIG. 6-34

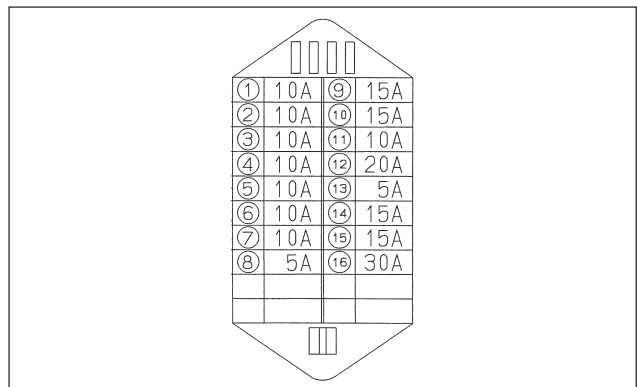


FIG. 6-35

Slow-Blow Fuse

In-line fuses protect relevant circuit by melting when sustained heavy electrical load or short circuit is encountered.

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

FIG. 6-36: Cabin Circuit Fuse (50A)
When the electrical equipments(air conditioner, etc.) in cabin does not work, replace the fuse.

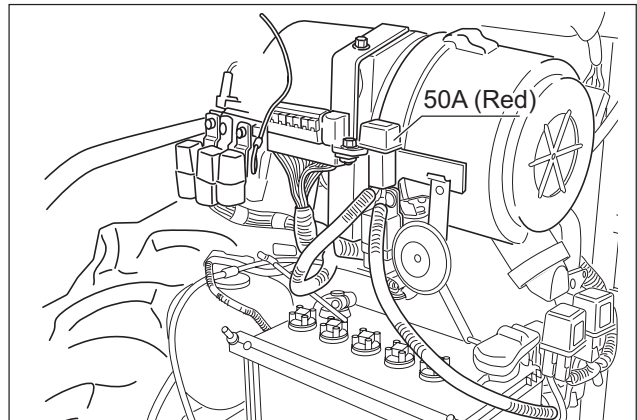
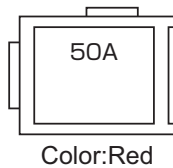


FIG. 6-36

FIG. 6-37: Alternator Circuit Fuse (60A)
Failure of fuse 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. Replace the fuse.

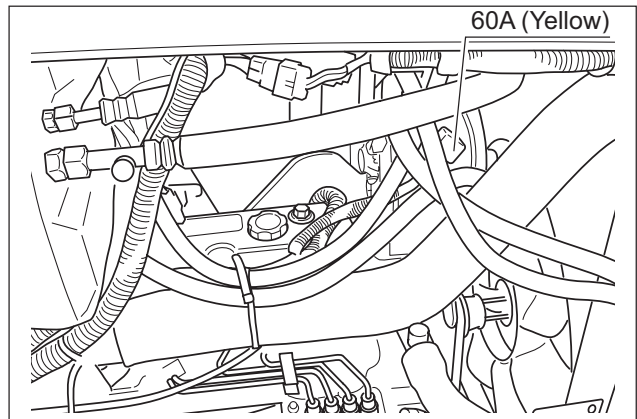
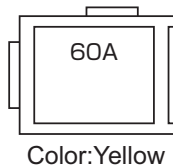


FIG. 6-37

FIG. 6-38: Engine Stop Circuit Fuse (50A)

When engine does not start with rotating starter, replace the fuse.

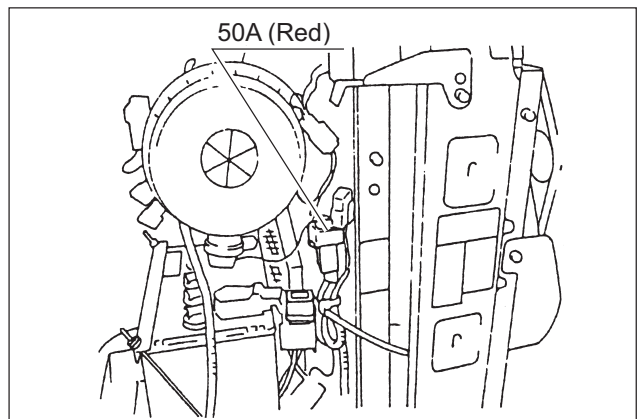
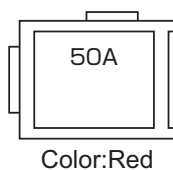


FIG. 6-38

TJ75

FIG. 6-39: Main Circuit Fuse (50A)

When the power is not supplied with turning the main switch, replace the fuse.

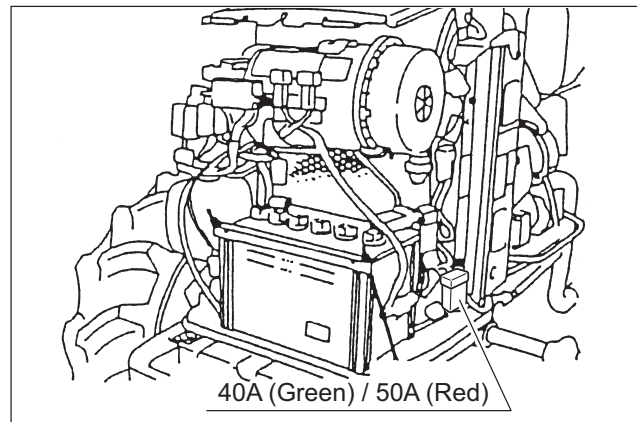
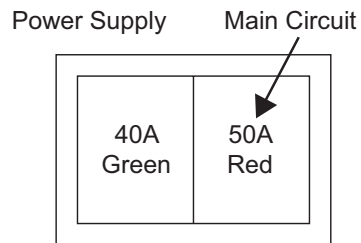


FIG. 6-39

FIG. 6-40: Power Supply Fuse (40A)

When the power is not supplied from the trailer socket, replace the fuse.

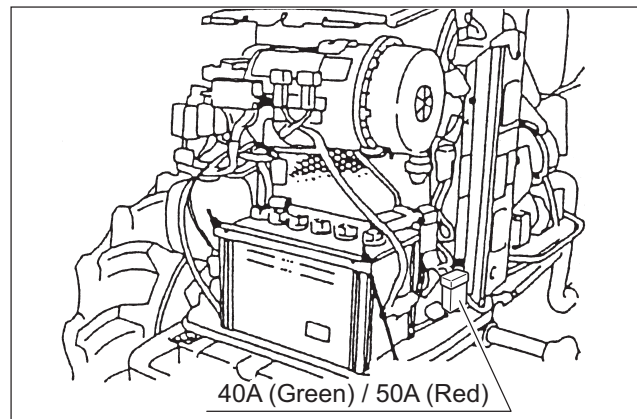
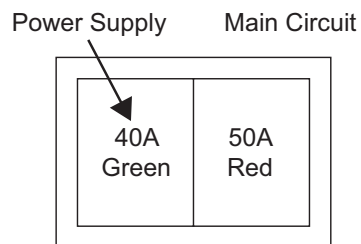


FIG. 6-40

CLUTCH FREE-PLAY ADJUSTMENT

FIG. 6-41: Check clutch pedal free-play regularly and adjust as necessary. Correct clutch pedal free-play, A, is 1" to 1-3/8" (25 to 35 mm) when measured at the end of the pedal as shown.

NOTE: Through use, clutch free-play will be reduced.

IMPORTANT: Correct free-play must be maintained to; reduce wear on clutch and release bearing, and allow complete disengagement when pedal is depressed.

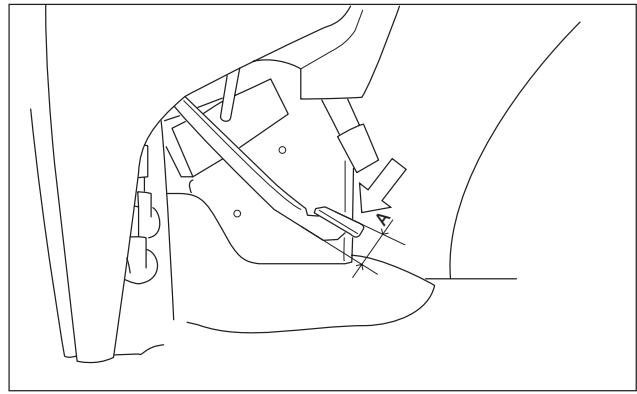


FIG. 6-41

FIG. 6-42: To adjust clutch pedal free-play, loosen lock nut, 1 (right-hand thread), and lock nut, 2 (left-hand thread). Adjust turnbuckle, 3, on linkage until free-play is correct. Lengthening linkage will increase free-play, shortening linkage will reduce free-play.

Secure by retightening lock nuts.

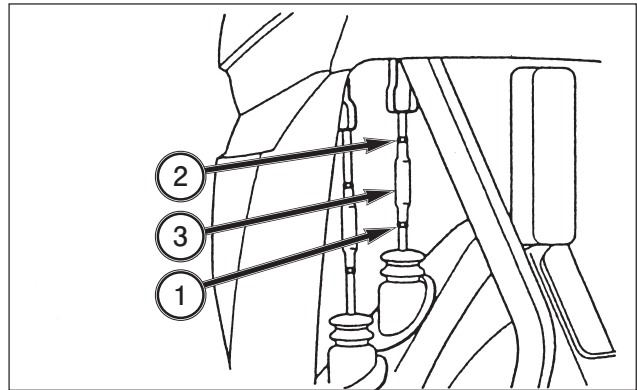


FIG. 6-42

BRAKE ADJUSTMENT

FIG. 6-43: Unlatch pedals and check free-play of each brake pedal. Correct free-play, A, of each individual brake pedal is 1-1/8" to 1-9/16" (30 to 40 mm).

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

FIG. 6-44: Loosen lock nut, 1, and lock nut, 2. Adjust turnbuckle, 3, so free-play is correct for respective brake pedal. Repeat procedure for other brake so free-play in pedals is equal. Secure lock nuts against turnbuckles. Turnbuckles are located by the right and left of transmission case.

When adjustment is complete, latch pedals together and operate Tractor at low speed. Depress pedals. If Tractor has tendency to pull to one side, slight readjustment of one brake is required.

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



CAUTION: Brakes must be adjusted evenly to permit equal braking action at both rear wheels when brake pedals are latched together.

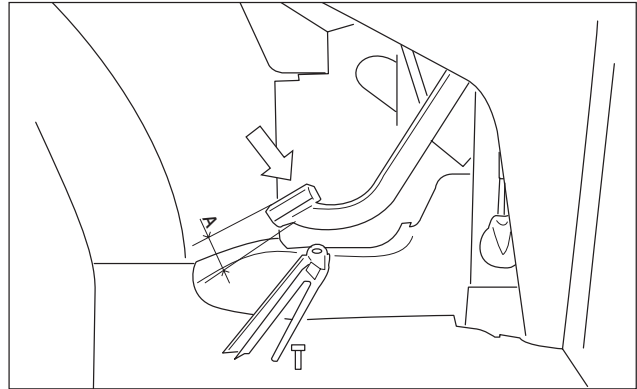


FIG. 6-43

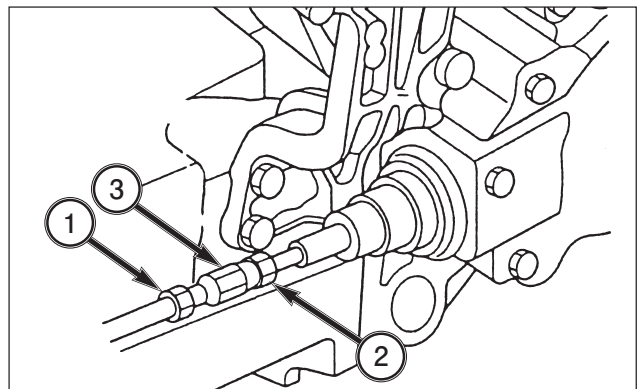


FIG. 6-44

TJ75**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. 6-45: 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 overspeed (or lead) is maintained.*

Tractor	TYPE TIRES	TIRE LOCATION / SIZE		PRESSURE PSI (kPa)
		Front	9.5-22	
TJ75	AG	Rear	12.4-36	23 (157)

FIG. 6-45**Wheel Bolt Torque**

FIG. 6-46: Periodically check all wheel bolt torques. Correct bolt torques:

Front Wheel Bolts, 1 155 ft.-lbs. (210 N · m)

Rear Wheel Nuts, 2 275 ft.-lbs. (373 N · m)

Front Wheel Center to Rim Nuts, 3 155 ft.-lbs. (210 N · m)

Rear Wheel Center to Rim Nuts, 4 155 ft.-lbs. (210 N · m)



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

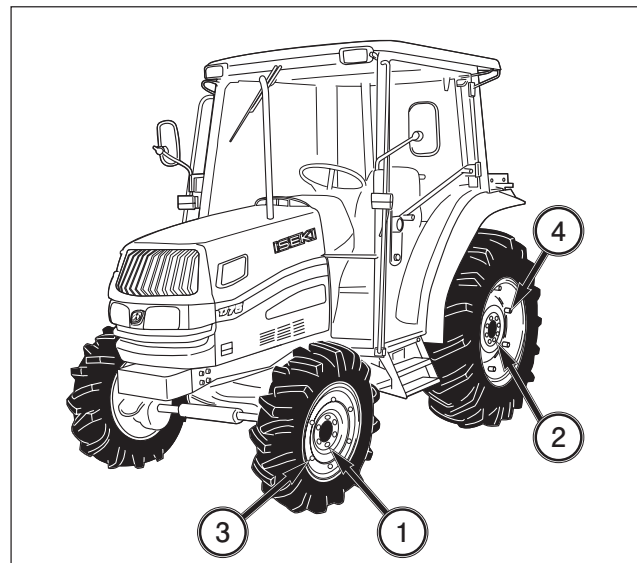
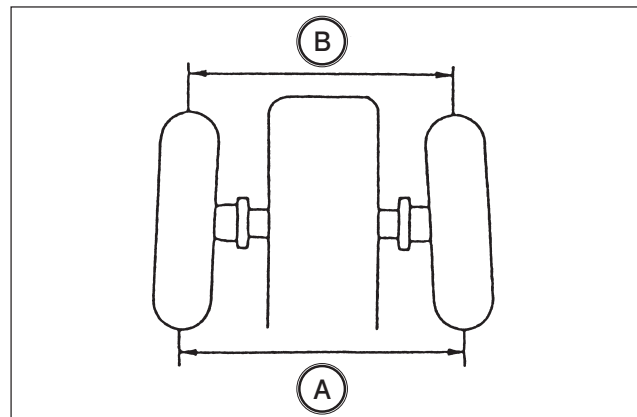
**FIG. 6-46****Front Wheel Alignment**

FIG. 6-47: Correct toe-in dimensions of front wheels (A minus B) are as follows:

4-WD 0.08 to 0.24" (2-6 mm)

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

**FIG. 6-47**

Steering Free-Play

FIG. 6-48: Steering should be checked for excessive looseness, as indicated by steering wheel free-play. Maximum free-play is approximately 1.25-2.50" (30-60 mm) when measured at outside of steering wheel rim.

Excessive free-play can be caused by:

- Loose or worn ball joints
- Worn or damaged steering column shaft/universal joints
- Worn or damaged power steering unit



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

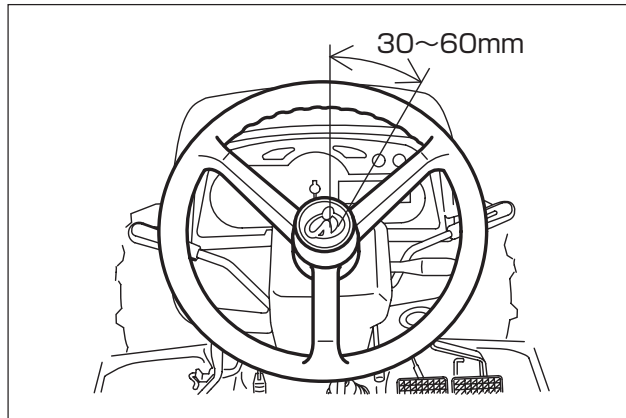
**FIG. 6-48****Front Axle End-Float**

FIG. 6-49: Fore and aft play of front drive axle, 1, in its supports should be 0.004-0.012" (0.1-0.3 mm). End-float is measured with axle raised off ground.

Loosen lock nut, 2, and turn adjusting bolt, 3, as needed to achieve correct measurement. Tighten lock nut.

NOTE: Excessive end-float will cause noise. This noise will be more pronounced when using 4-WD.

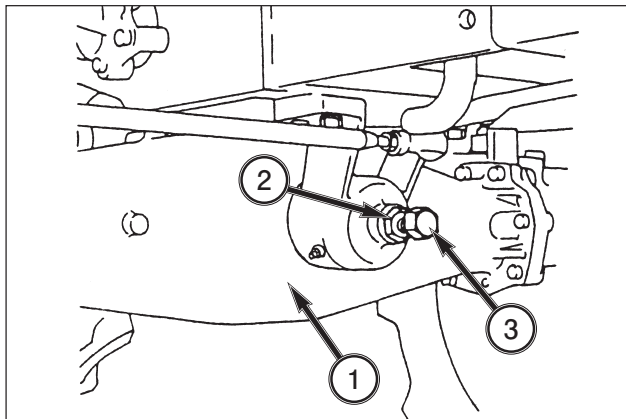
**FIG. 6-49****TORQUE CHART**

FIG. 6-50: All fasteners should be tightened in accordance with torque chart unless a specific torque value is called out in relevant maintenance information.

	4T		7T	
	ft.-lbs.	N.m	ft.-lbs.	N.m
M6	4.3-5.7	5.8-7.7	7.2- 9.3	9.8-12.6
M8	9.3-13.0	12.6-17.6	18.0-25.2	24.4-34.2
M10	14.4-21.6	19.5-29.3	39.7-50.5	53.8-68.5
M12	36.1-43.3	48.9-58.7	65.0-79.4	88.1-107.7
M14	50.5-57.8	68.5-78.4	93.9- 108.4	127.3-147.0
M16	72.2-86.7	97.9-117.5	115.6-130.0	156.7-176.3
M18	86.7-101.1	117.5-137.0	144.5-173.4	195.9-235.0
M20	108.4-122.8	146.0-166.5	173.4-187.8	235.0-254.6

CHART

FIG. 6-50

TJ75

STORAGE

FIG. 6-51: If Tractor is to be stored for extended periods, such as off-season non-use, certain measures should be taken for its preservation during such periods. These measures will vary according to geographical area and storage season.

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.
7. Fill fuel tank to prevent condensation from forming on inside of tank.
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.

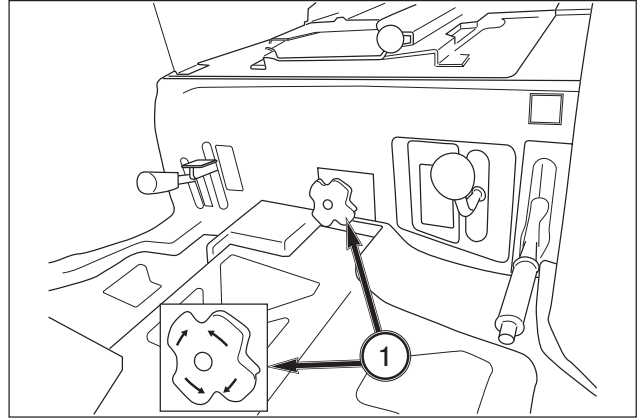


FIG. 6-51

FIG. 6-52: Step 12 - Depress clutch pedal and secure in the disengaged position with hook, 3.

NOTE: *This is to prevent clutch seizure during long periods of Tractor storage.*

13. Touch up scratches with paint.

At the end of storage period;

Perform appropriate lubrication and maintenance before placing Tractor back in service. See Lubrication and Maintenance section.

- Conduct full pre-start inspection. Make sure all controls operate correctly.

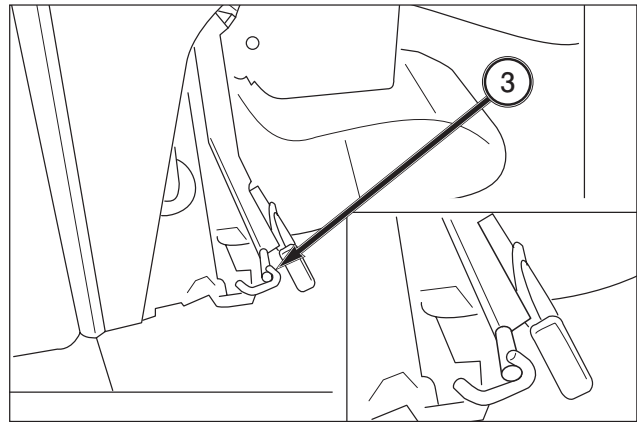


FIG. 6-52

TROUBLESHOOTING

ENGINE

Problem	Possible Cause	Remedy
Starter motor does not operate with key turned to START	No step on the clutch pedal Gear shift lever not in neutral PTO clutch engaged Broken safety switch Discharged battery Loose or dirty terminals Broken main switch Broken starter	Step on the clutch pedal. Place gear shift lever in neutral. Switch off PTO. Consult your Dealer. Charge battery. Clean and retighten securely. Consult your Dealer. Consult your Dealer.
Starter motor operates but not at full speed	Discharged battery Loose or dirty terminals Malfunctioning fuel pump Improper oil viscosity Defective engine	Charge battery. Clean and retighten securely. Check fuse. Replace with oil of proper viscosity. Consult your Dealer.
Starter motor operates but engine doesn't start	Air in fuel system Clogged fuel filter Defective engine	Air-bleed fuel system. Clean filter. Consult your Dealer
Irregular engine running	Air in fuel system Clogged fuel filter Clogged fuel injectors Fuel line is leaking air Fuel injection pump timing Malfunctioning fuel pump	Air-bleed fuel system. Clean filter. Consult your Dealer. Retighten clamps, replace defective pipes. Consult your Dealer. Check fuse.
When decelerated, engine stops	Defective fuel injectors Malfunctioning fuel injection pump Improper valve clearance	Consult your Dealer. Consult your Dealer. Consult your Dealer.
Engine over-speeds	Defective governor Engine oil is getting into combustion chambers	Consult your Dealer. Consult your Dealer.
Engine stops unexpectedly during operation	Insufficient fuel supply Defective fuel injectors Insufficient engine oil Engine seizure due to low or poor oil	Top up fuel and-bleed fuel system. Consult your Dealer. Consult your Dealer. Consult your Dealer.
Engine overheats	Insufficient coolant Broken or loose fan belt Clogged grille, radiator screens Clogged radiator fins Defective thermostat Insufficient engine oil	Top up coolant. Adjust belt tension or replace. Clean. Clean. Replace. Inspect oil level and replenish if necessary.

ENGINE

Problem	Possible Cause	Remedy
Exhaust fumes are white	Clogged air cleaner High engine oil level Insufficient fuel delivery Cold-running engine	Clean or replace element (s). Inspect oil level and correct. Consult your Dealer. Allow to warm, check thermostat.
Exhaust fumes are too black	Poor fuel Excessive fuel delivery Insufficient fuel injector pressure Insufficient combustion air	Replace with better grade. Consult you Dealer. Consult you Dealer. Check clean or replace air filter.
Poor engine output	Seized fuel injectors and/or carbon deposit Insufficient compression or leaking valves Incorrect valve clearances Incorrect fuel injection timing Insufficient fuel supply Clogged air cleaner	Consult your Dealer. Consult your Dealer. Consult your Dealer. Consult your Dealer. Check fuel system. Clean or replace elements (s).

CLUTCH

Problem	Possible Cause	Remedy
Clutch slips	Poor clutch pedal adjustment Worn or burnt clutch lining	Adjust free-play. Consult your Dealer.
Clutch won't disengage	Poor pedal adjustment	Adjust free-play.

BRAKES

Problem	Possible Cause	Remedy
Brakes do not work well or not balanced with each other when applied	Too much free play of pedals Worn or seized linings Different pedal strokes	Adjust free-play. Consult your Dealer. Correct so both pedals are equal.
Brake pedals do not return smoothly	Broken return springs Poor lubrication	Replace broken springs. Remove rust, then lubricate.
Poor parking brake	Poor parking brake rod adjustment	Adjust parking brake rod

TJ75

SHIFT LEVERS

Problem	Possible Cause	Remedy
When operating power shuttle lever, tractor does not move to forward or reverse	Start the engine when operating the power shuttle lever to forward or reverse Blown fuse Defective wiring Defective hydraulic system Defective power shuttle lever switch	Operate the power shuttle lever to forward or reverse after setting it in neutral position. Replace. Consult your dealer. Consult your dealer. Consult your dealer.
When pushing gear shift button, gear change does not do	Blown fuse Defective wiring Defective gear shift button Defective hydraulic system	Replace. Consult your dealer. Consult your dealer. Consult your dealer.

POWER TAKE-OFF (PTO)

Problem	Possible Cause	Remedy
No rotating PTO shaft	Defective PTO solenoid valve or poor connection of electric coupler Defective hydraulic clutch	Consult your dealer. Consult your dealer.
When turning PTO switch off, PTO shaft does not stop	Defective PTO switch Defective hydraulic valve Defective hydraulic clutch	Consult your dealer. Consult your dealer. Consult your dealer.

STEERING SYSTEM

Problem	Possible Cause	Remedy
Steering wheel is hard to turn or turns in one directions	Poorly installed steering column Improper toe-in Different front tire inflation Loose steering or ball joints Defective steering unit, pump	Correct. Correct. Inflate both tires to same pressure. Retighten or replace defective parts. Consult your Dealer.
Steering wheel has too much free-play	Worn steering column Loose ball joints Defective steering unit	Consult your Dealer. Retighten. Consult your Dealer.

HYDRAULIC SYSTEM

Problem	Possible Cause	Remedy
Three - point hitch dose not raise	Low engine speed Low transmission oil Intake piping is sucking air Clogged oil filter (s) Defective hydraulic oil pump Defective control valve Broken cylinder	Increase speed. Fill to specified level. Retighten clamps or replace cracked pipes and defective o-rings. Clean or replace. Consult your Dealer. Consult your Dealer. Consult your Dealer.
Leaking piping	Loose joints Cracked pipes	Retighten. 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 dose not lower	Locked lowering speed control knob Defective control valve Broken cylinder Seized lift shaft bearing	Turn counterclockwise to LOWERING position. Consult your Dealer. Consult your Dealer. Consult your Dealer.
With control lever in RAISE position, three-point hitch does not raise in spite of blinking lift arm upper position lamp	Poor connection of control lever sensor Defective control lever sensor Poor connection of lift arm sensor Defective lift arm sensor Defective wiring Defective controller	Connect. Consult your dealer. Connect. Consult your dealer. Consult your dealer. Consult your dealer.
With control lever in highest position, three-point hitch does not raise in spite of turning on lift arm upper position lamp	Improper highest position Defective highest position adjustment dial Poor connection of valve wiring Defective wiring Defective hydraulic system	Adjust highest position adjustment dial. Consult your dealer. Connect. Consult your dealer. Consult your dealer.
With control lever in lowest position, three-point hitch does not lower in spite of turning off lift arm upper position lamp	Locked lowering rate control knob Improper lowest position Poor connection of valve wiring Defective wiring Defective hydraulic system	Turn the lowering rate control knob counterclockwise. Adjust lowest position adjustment dial low. Connect. Consult your dealer. Consult your dealer.
Electronic hydraulic system never operate	Poor connection of electronic hydraulic controller Defective electronic hydraulic controller Poor connection of check coupler	Connect. Consult your dealer. Connect.

TJ75

ELECTRICAL SYSTEM

Problem	Possible Cause	Remedy
Head lamps do not turn on	Defective light bulb Blown fuse Poor connection	Replace. Check wiring and replace fuse. Inspect ground points and terminals, clean if necessary.
When pushing gear shift button, gear change does not do	Blown fuse Defective wiring Defective gear shift button Defective hydraulic system	Replace. Consult your dealer. Consult your dealer. Consult your dealer.
Horn does not sound	Defective horn button Defective wiring Defective horn	Consult your dealer. Consult your dealer. Consult your dealer.
Turn lights does not blink	Defective flasher unit Poor connection	Consult your dealer. Inspect ground points and terminals, clean if necessary.
Blinking of turn lights is extremely quick	Defective turn light bulb	Replace.

CABIN

Problem	Possible Cause	Remedy
Work lights do not turn on	Defective light bulb Blown fuse Poor connection	Replace. Check wiring and replace fuse. Inspect ground points and terminals, clean if necessary.
Wiper does not work	Discharged battery Blown fuse Defective wiper motor	Charge. Check wiring and replace fuse. Consult your dealer.
Washer fluid does not come out	Insufficient washer fluid Poor connection Defective motor	Replenish. Inspect ground points and terminals, clean if necessary. Consult your dealer.
Door does not open smoothly Door opens of itself while travelling"	Defective door damper Maladjusted door lock and striker Defective door lock	Consult your dealer. Consult your dealer. Consult your dealer.
Rear window opens of itself Rear window does not open smoothly"	Maladjusted window lock and striker Defective damper window	Consult your dealer. Consult your dealer.

AIR CONDITIONER

Problem	Possible Cause	Remedy
Insufficient cool	No or slow revolution of compressor Too much or insufficient gas for refrigerant	Adjust compressor belt tension or replace. Recharge proper volume.

INSTRUMENT PANEL

Problem	Possible Cause	Remedy
 turns on	Insufficient coolant Loose or broken fan belt Clogged radiator fins or radiator screen Insufficient engine oil	Top up coolant. Adjust belt tension or replace. Clean. Inspect oil level and replenish if necessary.
 turns on	Insufficient engine oil Defective oil pump Defective engine oil pressure switch Clogged engine oil filter	Inspect oil level and replenish if necessary. Consult your dealer. Consult your dealer. Replace.
 turns on	Defective alternator Loose or broken fan belt Blown slow-blow fuse	Consult your dealer. Adjust belt tension or replace. eplace.

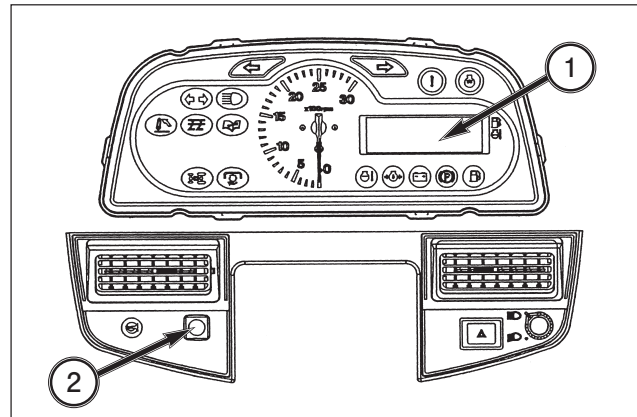
TJ75

DIGITAL PANEL

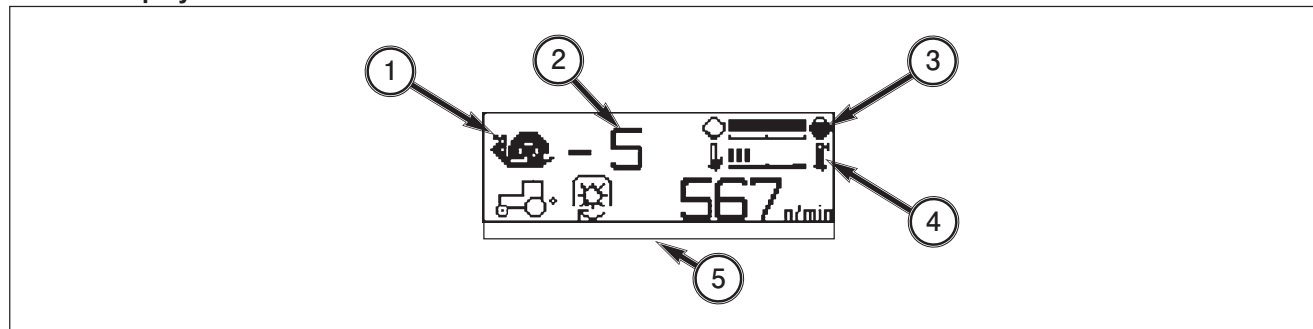
Indication	Possible Cause	Remedy
Water level in fuel filter high (Warning)	Water accumulates in fuel filter	Drain water.
Clutch Pressure Abnormal	Defective valve Defective clutch	Consult your dealer. Consult your dealer.
Pressure Sensor Malfunction	Defective pressure sensor or wiring	In case of defective pressure sensor, it's possible to continue to work. But consult your dealer.
Lift Arm Sensor Malfunction	Defective lift arm sensor or wiring	Consult your dealer. Operate three-point hitch by pushing external lift arm switch.
Position Control Lever Malfunction	Defective control lever sensor or wiring	Consult your dealer. Operate three-point hitch by pushing external lift arm switch.
Lift Arm Sensor Setting fault	Maladjusted lift arm sensor	Consult your dealer.
Position control Lever Setting fault	Maladjusted control lever sensor	Consult your dealer.
Electric Power Supply for Sensor Malfunction	Defective sensor wiring	Consult your dealer.
Draft Control Lever Malfunction	Maladjusted draft sensor	Consult your dealer.
Power Shuttle Switch Malfunction	Defective power shuttle sensor or wiring	Consult your dealer.
Shift button / Main Change Malfunction	Defective gear shift button	Consult your dealer.
Shift Position Sensor Malfunction	Defective shift position sensor (1st-4th) or wiring	Consult your dealer.
Shift Position Setting fault	Maladjusted shift position sensor (1st-4th)	Consult your dealer.
Shift sensor / Sub Change Malfunction	Defective range shift sensor or wiring	Consult your dealer.
Shift Position 1 Malfunction	Gear shift sensor problem	Shifting gear(1st) is not normal. Consult your dealer.
Shift Position 2 Malfunction	Gear shift sensor problem	Shifting gear(2nd) is not normal. Consult your dealer.
Shift Position 3 Malfunction	Gear shift sensor problem	Shifting gear(3rd) is not normal. Consult your dealer.
Shift Position 4 Malfunction	Gear shift sensor problem	Shifting gear(4th) is not normal. Consult your dealer.

DIGITAL PANEL CONTENTS

Digital panel display is used to assist in your operation. Indication of digital panel, 1, is changed by pushing selectable switch, 2, Digital panel indicates not only engine revolutions but also traveling speed, rear PTO speed, hourmeter, tripmeter, etc.



Normal Display



- 1 Range Shift Lever Position
- 2 Select Gear Shift Position
- 3 Fuel Gauge
- 4 Coolant Temp Gauge

- 5 Information
 - Traveling speed
 - PTO speed
 - Hourmeter
 - Tripmeter
 - Traveling speed/Rear PTO speed

No	Item	Display Indication	Note
1	Travelling Speed		Digital panel can indicate mph and km/h (Interchanged by check mode)
			When traveling speed is below 0.5km/h(0.3 mph). Power Shift Rated speed will be indicated blinking.
2	Rear PTO Speed		PTO switch is ON Rear PTO lever is ON
			PTO switch is OFF or N
3	Hour Meter		Hour meter counts when engine is rotating. Hour meter can not be reset.

TJ75

No	Item	Display Indication	Note
4	Trip Meter		Trip meter counts when engine is rotating. Hour meter can be reset.
			· Push the selectable switch for 2 seconds to reset (0).
5	Travelling Speed & Rear PTO Speed Auto-interchange every 5 seconds		Push the selectable switch for 2 seconds and the digital panel will indicate travelling speed and rear PTO speed alternatively every 5 seconds.

Attention Display

Digital display shows the following indication, when starting engine with power shuttle lever 'forward/reverse position' or PTO switch 'ON' position. Before starting engine, confirm that forward/reverse power shuttle lever in neutral position and PTO switch is OFF position.

No	Item	Display Indication	Note
1	Power Shuttle Lever		Power shuttle lever is forward position. Shift power shuttle lever in neutral position.
			Power shuttle lever is reverse position. Shift power shuttle lever in neutral position.
2	PTO Switch		PTO switch is ON position. Turn PTO switch OFF.

Service Interval

Service Interval Lamp would illuminate when hourmeter indicates 50/100/200/300/400 ... hour.

Digital panel also would inform 'Service inspection' when hourmeter indicates 50/100/200/300/400 ... hour.

Please inspect your tractor.

No	Item	Display Indication	Note
1	Periodic Maintenance		Digital panel would return to normal mode by pushing selectable switch.

Gear Shift Error

Digital display shows the following indication, when gear shift is problem.

Please consult your dealer.

No	Item	Display Indication	Note
1	Gear shift sensor problem		Shift position sensor is not normal, or wiring harness of Shift position sensor is not normal. Consult your Dealer.
2	Gear shift sensor problem		Adjustment of shift position sensor is not normal. Consult your Dealer.
3	Gear shift sensor problem		Shifting gear(1st) is not normal. Consult your Dealer.
4	Gear shift sensor problem		Shifting gear(2nd) is not normal. Consult your Dealer.
5	Gear shift sensor problem		Shifting gear(3rd) is not normal. Consult your Dealer.
6	Gear shift sensor problem		Shifting gear(4th) is not normal. Consult your Dealer.

SPECIFICATIONS

ENGINE**TJ75**

Make	Iseki Diesel
Model	E4DE-VTDB
Type Indirect Injection, ...	Direct Injection
.....	Overhead Valve
Aspiration	Exhaust-turbo charger
Displacement	2955 cm ³
Number of Cylinders	4
Bore	97 mm
Stroke	100 mm
Engine Horsepower (Net)	60.5kw @ 2600 min-1
PTO Horsepower (Estimate)	48.4kw @ 540 or 1000 PTO min-1
Firing Order	1-3-4-2
Compression Ratio	17.5±0.5
Low Idle Speed	975±25 min-1
High Idle Speed	2850±50 min-1
Valve Clearance (Cold); Intake	0.35 mm
Air Cleaner	Dry element
Engine Cooling	Liquid, forced circulation
Cold Starting Aid	Glow plugs (4)

TRANSMISSION

Type: Primary	8-speed synchronized mesh
Gear control	Electrohydraulic control
Range	3-speed sliding mesh
Power Shuttle	Hydraulically engaged, multi-plate wet disc
Gear Speeds	24 gears forward, 24 reverse

POWER TAKE OFF (PTO)

Type	Independent, engine driven
Control	Electrohydraulic control
Clutch	Hydraulically engaged, multi-plate wet disc
Rear PTO Shaft	35 mm diameter, six spline
Output	Clockwise rotation
Engine Speed @ 540 PTO rpm	2600 min-1
@ 1000 PTO rpm	2600 min-1

HYDRAULIC SYSTEM

Steering System	
Type	Hydrostatic
Pump	Separate engine-mounted gear pump
Maximum Output	18.0 litre/min
Pressure	Relief valve setting 14210 kPa
Main Hydraulic System; Pump	Engine-mounted pump
Maximum Output	36.0 litre/min
Pressure	Relief valve setting 17650 kPa
Rear Linkage	
Type	Three-point hitch
Size	Category II
Control	Operated by single position and control lever external button
Lift Capacity measured at ball ends	3000 kg
measured at 24 inches	1700 kg

TJ75

ELECTRICAL SYSTEM

TJ75

System Voltage.....12 volt, negative (-) ground
Battery cca @ 18 degreesC (0 degreesF).....710 cca (115D31R)
Charging 65 amp alternator with internal regulator / rectifier

CAPACITIES

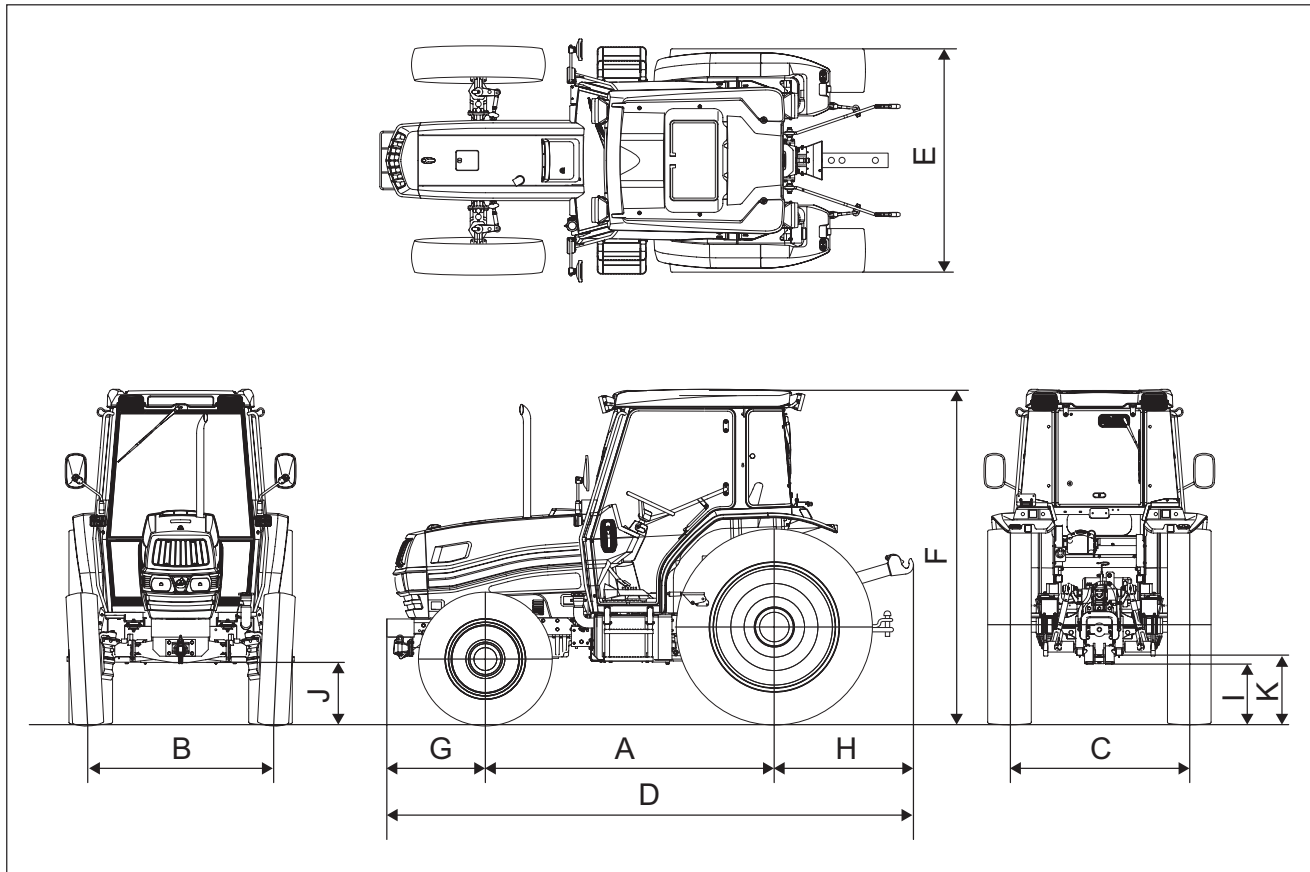
Engine Crankcase with Filter 9.0 litres
Transmission..... 52.0 litres
Fuel Tank 90.0 litres
Cooling system 7.6 litres
Front Drive Axle (4WD Only)..... 8.0 litres

TREAD WIDTH SETTING

	tyre	type	location	size	Setting(mm)
Front tyre.....	AG	9.5-22			1320

	tyre	type	location	size	Setting(mm)
Rear tyre	AG	12.4-36			1335

GENERAL DIMENSIONS



(unit: mm)

	Tire	AG
	Front	9.5-22
	Rear	12.4-36
A	Wheel base	2150
B	Front tire track	1320
C	Rear tire track	1335
D	Length	3870
E	Width	1690
F	Height	2475
G	Forward overhang	735
H	Rear overhang	985
I	Ground clearance	430
J	Under the front axle	445
K	Under the rear axle	500

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 METRIC dimensions.*

Tractor is shipped in individual container. The Tractor will be partially disassembled to make container as compact as possible. Wheels, fenders, 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.

Tractor will arrive with battery installed.

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



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

1. Remove wheels, fenders, and sundry boxes from container.
2. Disassemble container.
3. Inspect Tractor for damage and any evidence of coolant, fuel or lubricant leaks.
4. Inspect and remove all hardware securing Tractor to lower crate panel.
5. Left Fender:
 - a. Remove tie strap holding control levers.
 - b. Install and secure fender to floor pan and rear upright supports.
 - c. Secure PTO lever bracket and transmission control lever guide (quadrant) to inside fender surface. Install with three bolts with lock washers and flat washers. Install one extra washer on each of the rear inside bolts.
 - d. Install knobs on control lever(s).
6. Right Fender:
 - a. Remove tie strap holding control lever(s) for shipping.
 - b. Install and secure fender to floor pan and rear upright.
 - c. Secure hydraulic control lever guide, (quadrant) to inside fender surface. Install using three bolts with lock washers and flat washers. Install one extra washer on each of the rear inside bolts.
 - d. Install knobs on control lever(s).

ASSEMBLY & PRE-DELIVERY INSPECTION

7. Front Bumper - Install front bumper and secure with four bolts supplied in sundry box.

8. Rear Lights - Install red lights at rear of fenders. The hardware and wiring retainer straps are installed on the light for shipment.

After attaching light, attach electrical connectors to connectors located at fender and ROPS support.

Green wire with white stripe will attach to red wire with black stripe. Black ground wire will attach to orange wire with black stripe.

9. Warning Flashers - Install amber turn / warning lights to fenders as follows:

- a. Remove nut, internal lock washer and ground wire from light.
- b. Insert bolt with center wire down through hole in ROPS bracket and reinstall ground wire, internal lock washer and nut. Tighten nut.
- c. There are three wires, with single connectors, coming out at top rear of ROPS, support. Two wires are the same length. They attach to wires from warning / flasher light. Male and female couplers prevent improper installation.
- d. The remaining connector is used if a work light or radio is installed.

10. Seat - Remove bolts from seat frame and install seat using same hardware.

11. Three-Point Hitch - Three-point hitch is partially assembled, with lift links attached at the top to the lift shaft, and away chains attached to the lower links.

- a. Attach lower links to Tractor attaching points and secure with lynch pins. Lower links will flare out ward t rear and retaining rings for spring will locate at underside.
- b. Connect clevis end of check chains to axle brackets and secure with clevis pin and cotter pin.
- c. Remove bolts at lower end of lift links and attach lift links to identical positions on lower links using bolts, lock washers and nuts removed. Lift link with turnbuckle adjustment is located on right side.

IMPORTANT: *Bolts should be installed with heads to out-side (nuts on inside) of lift link, to prevent tire interference during operation.*

- d. Connect top link to anchor point on Tractor using 19 mm x 220 mm pin and lynch pin. Lock nut on top link barrel will locate to rear. Store top link implement pin (19 mm x 86 mm) and clip in rear end of top link.
- e. Connect spring to retaining rings at underside of lower links.

12. Drawbar - Install drawbar fully into bracket at rear of Tractor and secure with pin and clip provided.

13. Front Wheels -

- a. Carefully raise and block front of Tractor.
- b. Install wheel / tire assemblies and secure using bolts and lock washers. Tighten to 75 ft-lbs. (102 Nm).
- c. Remove blocking and lower front of Tractor.

14. Rear Wheels -

- a. Carefully raise and block rear of Tractor at each side to prevent pivoting of front axle.
- b. Install wheel / tire assemblies and secure using lock washers and bolts. Tighten to 80 ft-lbs. (120 Nm).

15. Steering Wheel - After wheels have been installed, place front wheels in a straight forward position.

- a. Remove cotter pin, nut and flat washer from steering wheel shaft.
- b. Use a screw driver or flat blade to pry between steering wheel and cap to remove cap.

IMPORTANT: *Don't use a punch through hole in steering wheel to remove cap. It will separate the emblem from cap.*

TJ75

PRE-DELIVERY INSPECTION

- 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.(5kgf)
- 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 pedal linkage for correct free-travel.
- Check steering and brake linkage cotter pins and lock nuts for secure installation.
- Check filter element and, all connections and clamps for hydraulic pump and filter.
- 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.
- Place rear PTO selector lever in neutral.
- 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 1500 rpm.
- Operate Tractor to confirm it operates smoothly at all speeds including four-wheel drive (if so 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, 950-1000 rpm.
- Check warm engine high idle speed, 2800-2900 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 condition.

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

- Set throttle lever at half to full throttle and turn main switch counterclockwise 5-10.
- Turn main switch clockwise to ON. Oil pressure and alternator warning lights will illuminate. Hold in ON position 1-2 seconds.

NOTE: *Factory fill is set to 30F (-34 cent-degrees).*

- 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.

**FACTORY RECOMMENDED
NEW TRACTOR PRE-DELIVERY INSPECTION CHECK LIST
ISEKI**

USER'S NAME _____	AREA _____ DATE _____
DEALER _____	ADDRESS _____
TRACTOR MODEL _____	SERIAL NO. _____
ENGINE SERIAL NO. _____	COUNTRY _____

THIS PRE-DELIVERY INSPECTION CHECK LIST IS PROVIDED TO IDENTIFY THE CHECKED AND NECESSARY
ADJUST BY THE DEALER PRIOR TO DELIVERY OF THIS MACHINE.

Inspected the following and adjusted if necessary.

ENGINE

- | | |
|---|--|
| ☐ Radiator filled with solution
☐ Cooling system connections
☐ Fan and alternator belt tension
☐ Engine oil
☐ All oil drain plugs
☐ Oil pressure
☐ Engine RPM (idle) | ☐ Engine RPM (full throttle)
☐ Governor performance
☐ Electrical connections
☐ Service air cleaner
☐ All cleaner connections
☐ Fuel line connections
☐ Injection pump oil |
|---|--|

CHASSIS

- | | |
|--|--|
| ☐ Tyre inflation
☐ Front wheel hub bolts
☐ Rear wheel hub bolts
☐ Torque all chassis bolts
☐ Transmission oil
☐ Front reduction case
☐ Break pedal free-play
☐ Clutch pedal free-play | ☐ Hydraulic system performance
☐ Drive test
☐ Lubricate all grease fittings
☐ Power-assisted steering operation (if equipped)
☐ Front axle oil (4-WD)
☐ Front axle operation (4-WD)
☐ Operation manual with tractor |
|--|--|

Explained the following to the owner.

- | | |
|---|---|
| ☐ Operation manual
☐ Safety and safety start system
☐ Instruments and controls
☐ Breaking in the new tractor
☐ Power take-off operation
☐ Lubrication and maintenance schedule
☐ Explain use of Rollover Protective Structure (ROPS) | ☐ Fuel system servicing and cleanliness
☐ Draining of engine and radiator
☐ Air cleaner service
☐ Tyre care
☐ Wheel tread adjustment
☐ Storage |
|---|---|

TJ75

**FACTORY RECOMENDED
NEW TRACTOR PRE-DELIVERY INSPECTION CHECK LIST
ISEKI**

USER'S NAME_____	AREA_____DATE_____
DEALER_____	ADDRESS_____
TRACTOR MODEL_____	SERIAL NO._____
ENGINE SERIAL NO._____	COUNTRY_____

THIS PRE-DELIVERY INSPECTION CHECK LIST IS PROVIDED TO IDENTIFY THE CHECKED AND NECESSARY
ADJUST BY THE DEALER PRIOR TO DELIVERY OF THIS MACHINE.

Inspected the following and adjusted if necessary.

ENGINE

- | | |
|---|--|
| ☐ Radiator filled with solution
☐ Cooling system connections
☐ Fan and alternator belt tension
☐ Engine oil
☐ All oil drain plugs
☐ Oil pressure
☐ Engine RPM (idle) | ☐ Engine RPM (full throttle)
☐ Governor performance
☐ Electrical connections
☐ Service air cleaner
☐ All cleaner connections
☐ Fuel line connections
☐ Injection pump oil |
|---|--|

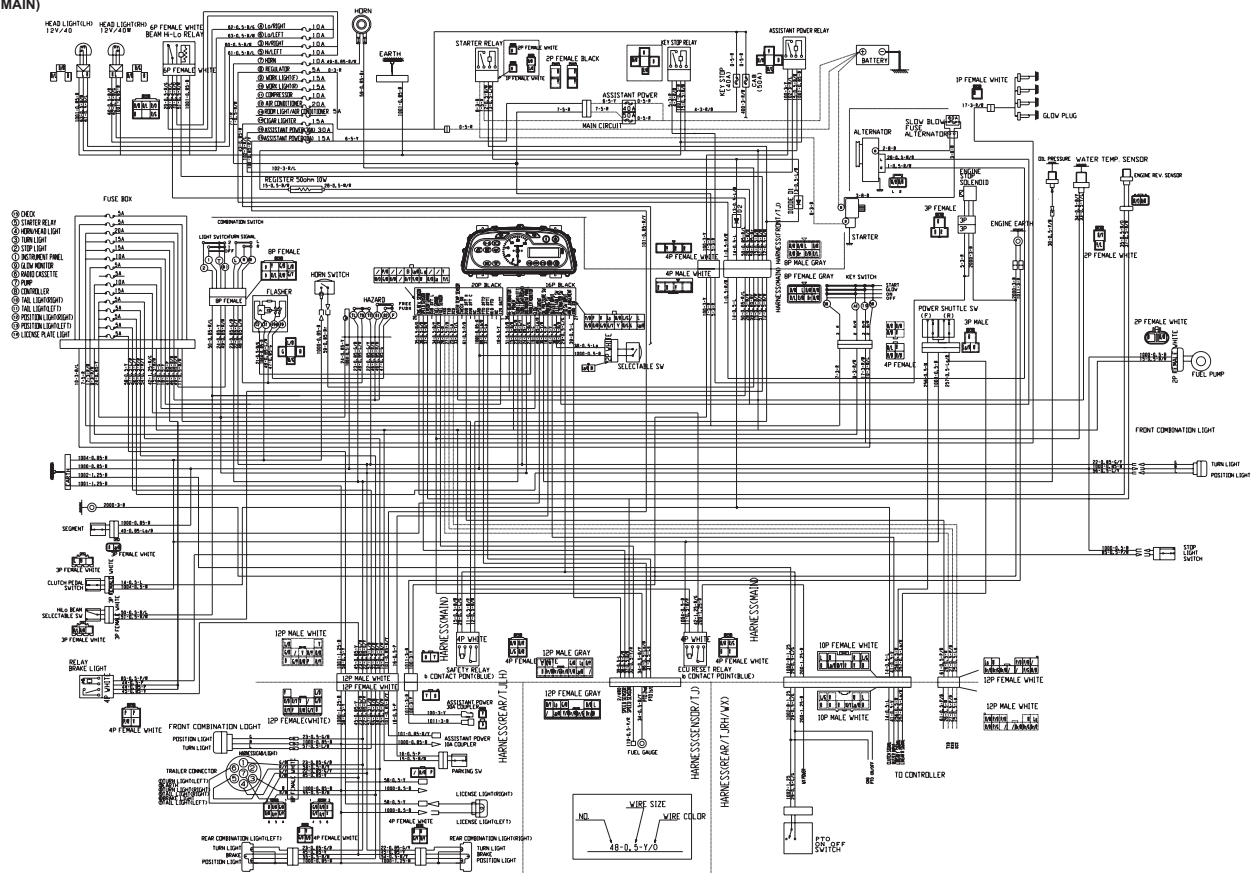
CHASSIS

- | | |
|--|--|
| ☐ Tyre inflation
☐ Front wheel hub bolts
☐ Rear wheel hub bolts
☐ Torque all chassis bolts
☐ Transmission oil
☐ Front reduction case
☐ Break pedal free-play
☐ Clutch pedal free-play | ☐ Hydraulic system performance
☐ Drive test
☐ Lubricate all grease fittings
☐ Power-assisted steering operation (if equipped)
☐ Front axle oil (4-WD)
☐ Front axle operation (4-WD)
☐ Operation manual with tractor |
|--|--|

Explained the following to the owner.

- | | |
|---|---|
| ☐ Operation manual
☐ Safety and safety start system
☐ Instruments and controls
☐ Breaking in the new tractor
☐ Power take-off operation
☐ Lubrication and maintenance schedule
☐ Explain use of Rollover Protective Structure (ROPS) | ☐ Fuel system servicing and cleanliness
☐ Draining of engine and radiator
☐ Air cleaner service
☐ Tyre care
☐ Wheel tread adjustment
☐ Storage |
|---|---|

WIRING HARNESS(MAIN)



The diagram illustrates the electrical architecture of a vehicle, organized into several main sections:

- Power Source (Top Left):** Includes the BATTERY, MAIN CIRCUIT, and ASSISTANT POWER. It shows the flow of power from the battery through various fuses and relays to the main circuit.
- Engine and Ignition (Top Center):** Details the wiring for the IGNITION COIL, CONTROL LEVER, and various sensors like the PTO SW and PTO SENSITIVITY SV.
- Sensors and Actuators (Middle and Right):** Shows connections for numerous sensors (e.g., 3P FEMALE WHITE, 10P FEMALE WHITE) and actuators (e.g., 3P MALE GRAY, 10P MALE GRAY) connected to different harnesses.
- Wiring Harnesses (Bottom):** Labels for various harnesses such as HARNESS (GEAR/TURN), HARNESS (MAIN/T/J), HARNESS (SENSOR/T/J), and HARNESS (GEAR/TURN/VAL) are provided, along with their respective pin configurations.
- Legend (Bottom Left):** A key for the symbols used in the diagram, including:
 - WIRE: Different colored lines representing different wire types.
 - RELAY: Symbols for various relays.
 - SENSOR: Symbols for different types of sensors.
 - ACTUATOR: Symbols for different types of actuators.
 - SWITCH: Symbols for various switches.
 - DIODE: Symbols for diodes.
 - GROUND: Symbols for ground connections.

[illegible]

TJ75

ISEKI & CO., LTD.

Overseas Business Department

3-14, Nishi-Nippori, 5-chome, Arakawa-ku,
Tokyo 116-8541, Japan

Phone: (03) 5604-7658

Fax: (03) 5604-7703