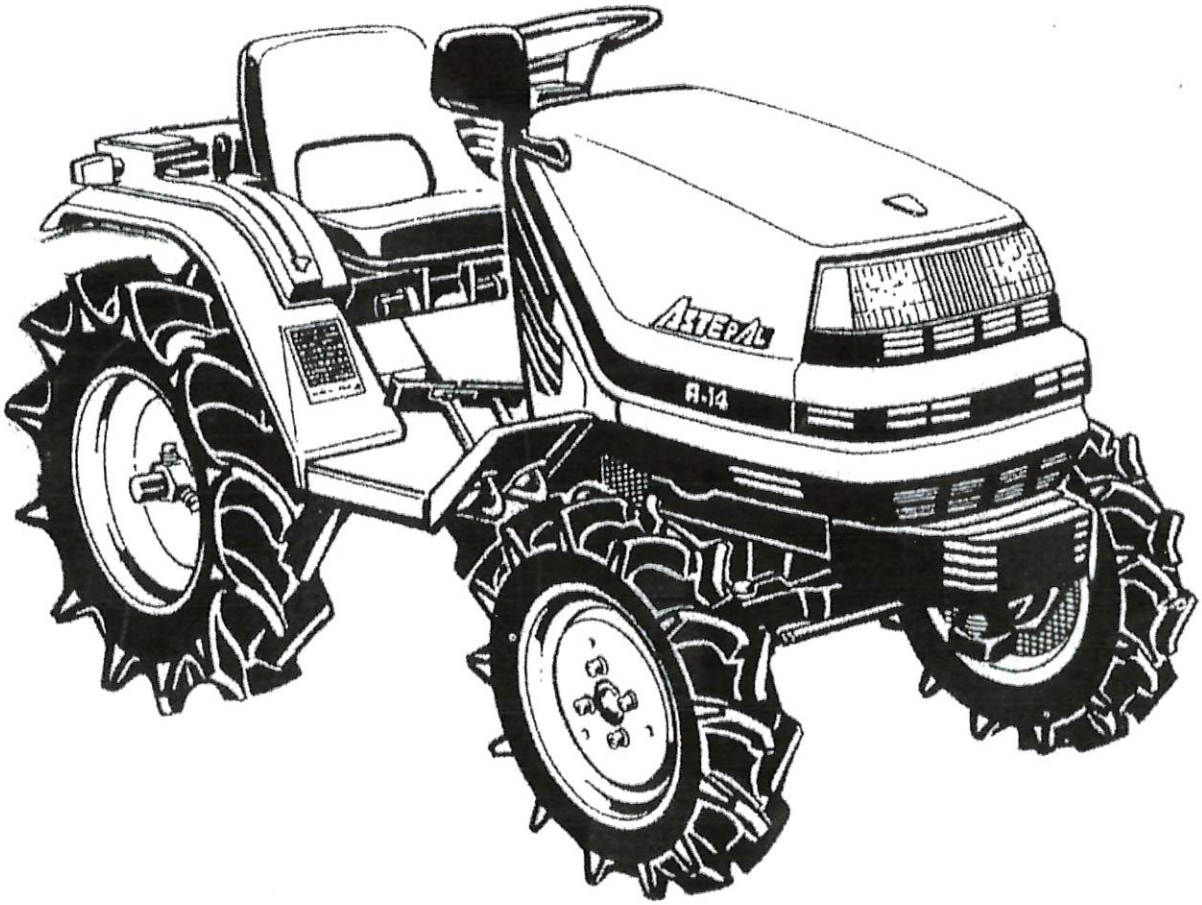
Operation Manual

Kubota ASTE



We ask you to follow the following pages about an '' European style '' kubota tractor.

May we remind you that your tractor was built for Japan only.

Your tractor was imported in Europa as used machine by non official importers.

That is why there is no literature in any European language.

We added some translation from the Japanese original book.

We hope that this book will help you use your tractor.

We wish you good luck with your tractor, and drive carefully.

Kompakttraktor.com

ATTENTION

No patent liability is assumed with respect to the use of the information contained in this manual.
The producer assumes no responsibility for errors or omissions.

Success and safety in working with tools depend to a great extent upon individual accuracy, skill and caution.

Therefore, no liability is assumed for damages to property or injury to persons resulting from use of the information contained in this manual.

Trade marks and trade names contained and used herein are those of others and are used here in a descriptive sense to refer to the products of others.

ABBREVIATION LIST

Abbreviations	Definitions
2WD	Two Wheel Drive
4WD	Four Wheel Drive
API	American Petroleum Institute
ASAE	American Society of Agricultural Engineers, USA
ASTM	American Society for Testing and Materials, USA
DIN	Deutsches Institut für Normung, GERMANY
DT	Dual Traction(4WD)
fpm	Feet Per Minute
GST	Glide Shift Transmission
Hi-Lo	High Speed-Low Speed
HST	Hydrostatic Transmission
m/s	Meters Per Second
PTO	Power Take Off
RH/LH	Right-hand and left-hand sides are determined by facing in the direction of forward travel
ROPS	Roll-Over Protective Structures
min^{-1} (rpm)	Revolutions Per Minute
S^{-1} (rps)	Revolutions Per Second
SAE	Society of Automotive Engineers, USA
SMV	Slow Moving Vehicle

UNIVERSAL SYMBOLS

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


Safety Alert Symbol


Diesel Fuel


Fuel-Level


Engine-Rotational Speed


Hourmeter/Elapsed Operating Hours


Engine Coolant-Temperature


Diesel Preheat/Glow Plugs(Low Temperature Start Aid)


Parking Brake


Engine Intake/Combustion Air-Filter


Battery Charging Condition


Engine Oil-Pressure


Turn Signal


Engine-Stop


Engine Shut-Off Control


Engine-Run


Starter Control


Power Take-Off Clutch Control-Off (Disengaged) Position


Power Take-Off Clutch Control-On (Engaged) Position


Differential Lock


Position Control-Raised Position


Position Control-Lowered Position


Draft Control-Shallow Position


Draft Control-Deep Position


3-Point Lowering Speed Control


Remote Cylinder-Retract


Remote Cylinder-Extend


Steering Wheel-Tilt Control


Hazard Warning Lights


Master Lighting Switch


Position Lamps


Headlight-Low Beam


Headlight-High Beam


Audible Warning Device


Four-Wheel Drive-On


Four-Wheel Drive-Off


Fast


Slow


Creep


Read Operator's Manual


Tractor-Forward Movement-Overhead View of Machine

Tractor-Rearward Movement-Overhead View of Machine

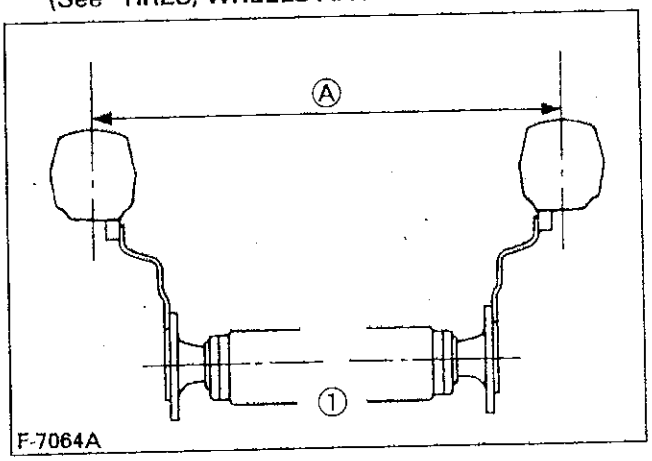
Engine Speed Control

⚠ SAFE OPERATION

Careful operation is your best insurance against an accident.
Read and understand this section carefully before operating the tractor.
All operators, no matter how much experience they may have had, should read this and other related manuals before operating the tractor or any implement attached to it. It is the owner's obligation to instruct all operators in safe operation.

1. BEFORE OPERATING THE TRACTOR

1. Know your equipment and its limitations. Read this entire manual before attempting to start and operate the tractor.
2. Pay special attention to the danger, warning and caution labels on the tractor itself.
3. KUBOTA recommends the use of a Roll Over Protective Structures (ROPS) in almost all applications. This ROPS will reduce the risk of serious injury or death, should the tractor be upset.
   If the ROPS is loosened or removed for any reason, make sure that all parts are reinstalled correctly before operating the tractor.
   Never modify or repair a ROPS because welding, bending, drilling, grinding, or cutting any portion may weaken the structure.
   A damaged ROPS structure must be replaced, not repaired or revised. If any structural member of the ROPS is damaged, replace the entire structure at your local KUBOTA Dealer.
4. Do not operate tractor or any implement attached to it while under the influence of alcohol, medication, or other substances or while fatigued.
5. Carefully check the vicinity before operating tractor or any implement attached to it. Check for overhead clearance which may interfere with a ROPS. Do not allow any bystanders around or near tractor during operation.
6. Before allowing other people to use your tractor, explain how to operate and have them read this manual before operation.
7. Never wear loose, torn, or bulky clothing around tractor. It may catch on moving parts or controls, leading to the risk of accident. Use additional safety items,e.g. hard hat, safety boots or shoes, eye and hearing protection, gloves, etc, as appropriate or required.
8. Do not allow passengers to ride on any part of the tractor at anytime. The operator must remain in the tractor seat throughout operation.
9. Check brakes, clutch, and other mechanical parts for improper adjustment and wear. Replace worn or damaged parts promptly. Check the tightness of all nuts and bolts regularly. (For further details, see Maintenance section.)
10. Keep your tractor clean. Dirt, grease, and trash accumulations contribute to fires and lead to personal injury.
11. Use proper weights to front or rear of tractor to reduce the risk of upsets. When using the front loader, put the implement or ballast on 3-point hitch to improve stability. Follow the safe operating procedures specified in the attached manual to the equipment.
12. The narrower the tread, the greater the risk of a tractor upsets. For maximum stability, adjust the wheels to the widest practical tread width.
    (See "TIRES, WHEELS AND BALLAST" Section)

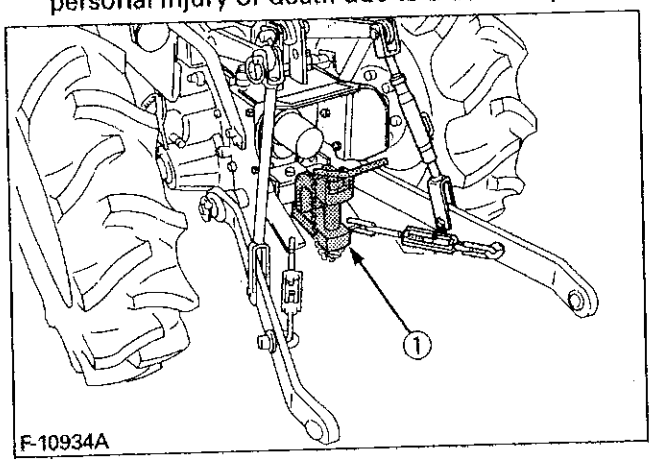


(1) Rear wheels *(A) Tread Width*

13. Do not modify the tractor. Unauthorized modification may affect the function of the tractor, which may result in personal injury.

2. OPERATING THE TRACTOR

1. Never start engine or operate levers from anywhere other than the seat.
2. Before starting the engine, make sure that all levers (including auxiliary control levers) are in their neutral positions, that the parking brake is engaged, and that both the clutch and the Power Take-Off (PTO) are disengaged.
3. Do not start engine by shorting across starter terminals or bypassing the safety start switch. Machine may start in gear and move if normal starting circuitry is bypassed.
4. Pull only from the drawbar. Never hitch to axle housing or any other point except drawbar; such arrangements only increase the risk of serious personal injury or death due to a tractor upset.

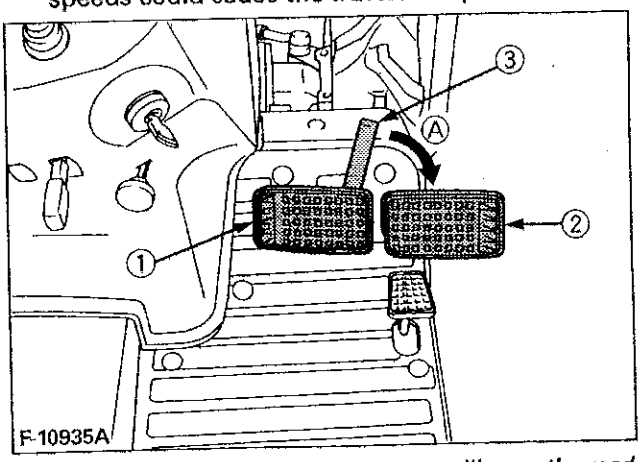


(1) Drawbar

5. Do not operate or idle engine in a non-ventilated area.
   Carbon monoxide gas is colorless, odorless, and deadly.
6. Keep all shields and guards in place. Replace any that are missing or damaged.
7. Avoid sudden starts. To avoid upsets, slow down when turning, on uneven terrain, and before stopping.
8. The tractor cannot turn with the differential locked and attempting to do so could be dangerous.
9. Do not operate near ditches, holes, embankments, or other terrain features which may collapse under the tractor's weight. The risk of tractor upset is even higher when the ground is loose or wet.
10. Driving forward out of a ditch or mired condition or up a steep slope risks a tractor to be upset backward. Always back out of these situations. Extra caution is required with four-wheel drive models because their higher traction can give the operator false confidence in the tractor's ability to climb slopes.
11. To avoid upsets, always back up steep slopes. Stay off hills and slopes too steep for safe operation.
12. Watch where you are going at all times. Watch for and avoid obstacles. Be alert at row ends, near trees, and other obstructions.
13. When working in groups, always let the others know what you are going to do before you do it.
14. Never "freewheel". Disengaging the clutch or shifting into neutral while descending a slope could lead to a loss of control.
15. Never try to get on or off a moving tractor.

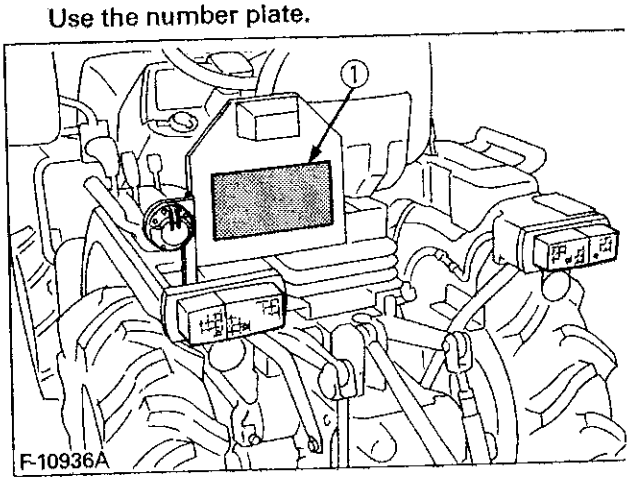
3. DRIVING THE TRACTOR ON THE ROAD

1. Lock the two brake pedals together to help assure straight-line stops. Uneven braking at road speeds could cause the tractor to tip over.



(1) Brake pedal (LH)
(2) Brake pedal (RH)
(3) Brake pedal lock
(A) Whenever travelling on the road

2. Always slow the tractor down before turning. Turning at high speed may tip the tractor over.
3. Observe all local traffic and safety regulations. Use the number plate.



(1) Number plate

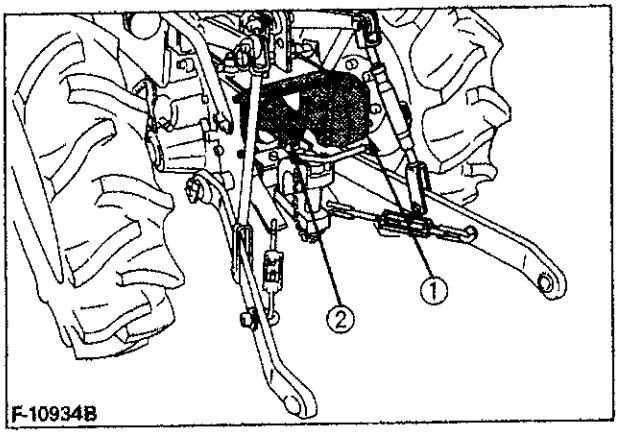
4. Turn the headlights on. Dim them when meeting another vehicle.
5. Drive at speeds that allow you to maintain control at all times.
6. Do not apply the differential lock while traveling at road speeds. The tractor may run out of control.
7. Avoid sudden motions of the steering wheel as they can lead to a dangerous loss of stability. The risk is especially great when the tractor is traveling at road speeds.
8. Do not operate an implement while the tractor is on the road. Lock the 3-point hitch in the raised position.

4. PARKING THE TRACTOR

1. Disengage the PTO, lower all implements, place all control levers in their neutral positions, set the parking brake, stop the engine, and remove the key.
2. Make sure that the tractor has come to a complete stop before dismounting.

5. OPERATING THE PTO

1. Wait until all moving components have completely stopped before getting off the tractor, connecting, disconnecting, adjusting, cleaning, or servicing any PTO driven equipment.
2. Keep the PTO shaft cover in place at all times. Replace the PTO shaft cap when the shaft is not in use.

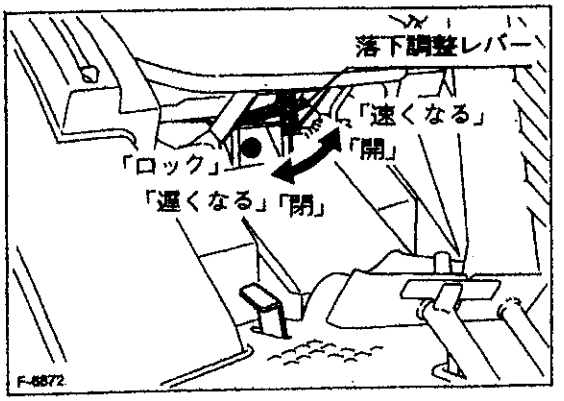


(1) PTO shaft cover
(2) PTO shaft cap

3. Before installing or using PTO driven equipment, read the manufacturer's manual and review the safety labels attached to the equipment.
4. To prevent overspeeding of PTO driven equipment, select the lower speed (540rpm) unless the higher one is specifically recommended as safe by the equipment manufacturer.
5. When operating stationary PTO driven equipment, always apply the tractor parking brake and place chocks behind and in front of the rear wheels. Stay clear of all rotating parts.

6. USING 3-POINT HITCH

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

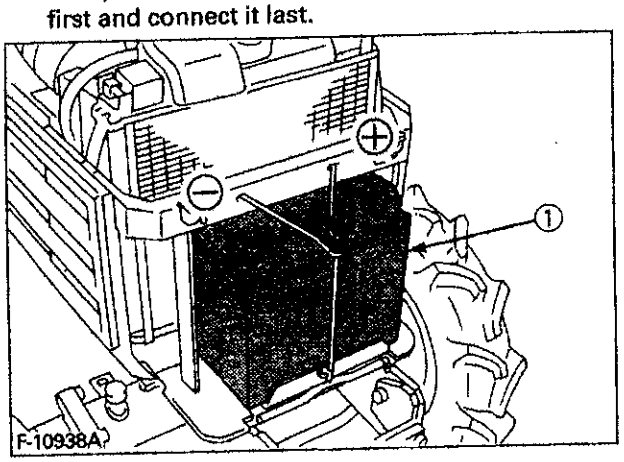


(1) 3-point hitch lowering speed knob
(A) "FAST"
(B) "SLOW"
(C) "LOCK"

7. SERVICING THE TRACTOR

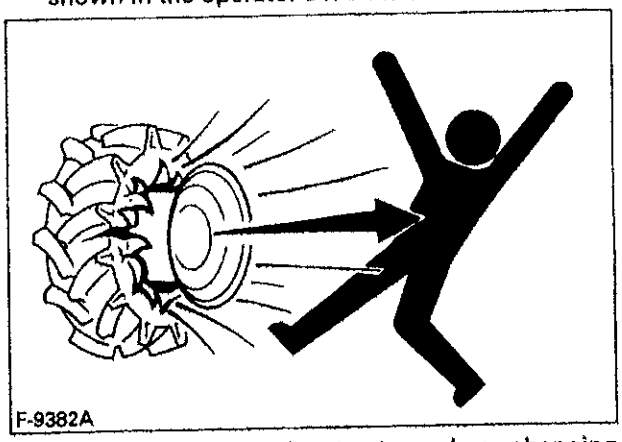
Before servicing the tractor, park it on a firm level surface, set the parking brake, place the gear shift lever in neutral and stop the engine.

1. Allow the tractor time to cool off before working on or near the engine, muffler, radiator, etc.
2. Always stop the engine before refueling. Avoid spills and overfilling.
3. Do not smoke when working around battery or when refueling. Keep all sparks and flames away from battery and fuel tank. The battery presents an explosive hazard because it gives off hydrogen and oxygen .... especially when recharging.
4. Before "jump starting" a dead battery, read and follow all of the instructions.
   (See "JUMP STARTING" in Operating the Engine Section)
5. Keep first aid kit and fire extinguisher handy at all times.
6. Do not remove radiator cap while coolant is hot. When cool, slowly rotate cap to the first stop and allow sufficient time for excess pressure to escape before removing the cap completely. If the tractor has a coolant recovery tank, add coolant there instead of to the radiator.
7. Disconnect the battery's ground cable before working on or near electric components.
8. To avoid sparks from an accidental short circuit, always disconnect the battery's ground cable ⊖ first and connect it last.

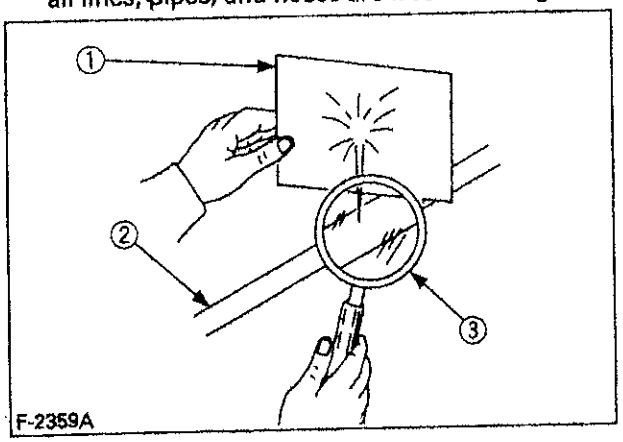


(1) Battery

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



11. Securely support the tractor when changing wheels or the wheel tread width.
12. Make sure that wheel bolts have been tightened to the specified torque.
13. Escaping hydraulic fluid under pressure has sufficient force to penetrate skin, causing serious personal injury. Before disconnecting hydraulic lines, be sure to release all residual pressure. Before applying pressure to the hydraulic system, make sure that all connections are tight and that all lines, pipes, and hoses are free of damage.



(1) Cardboard
(2) Hydraulic line
(3) Magnifying glass

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

SPECIFICATIONS

SPECIFICATION TABLE

Model			A13	A14
PTO power		kW (PS)	8.1 (11.0)*	9.2 (12.5)*
Engine	Maker		KUBOTA	
	Model		D662-1B	D722-1B
	Type		Indirect Injection. Vertical, water-cooled, 4 cycle diesel	
	Number of cylinders		3	
	Bore and stroke	mm	φ64×68	φ67×68
	Total displacement	cm³	656	719
	Engine net power	DIN70020 kW (PS)	9.6 (13)	10.7 (14.5)
	Rated revolution	min⁻¹(rpm)	2800	
	Maximum torque	N·m(kgf·m)	37.0 (3.77)	40.7 (4.15)
	Battery		12V, RC: 71 min, CCA: 390A	
	Fuel		Diesel fuel No.2 [above −10°C], Diesel fuel No.1 [below −10°C]	
Capacities	Fuel tank	L	13	
	Engine crankcase (with filter)	L	2.4	
	Engine coolant	L	2.6	
	Transmission case	L	10.5	
Dimensions	Overall length (without 3P)	mm	2035	
	Overall width	mm	1925	1950
	Overall height (Top of steering wheel)	mm	1235 [**:1175]	1255 [**:1195]
	Wheel base	mm	1290	
	Min. ground clearance	mm	250	270
	Tread (front)	mm	778	767
	Tread (rear)	mm	711 to 1031	
Weight		kg	510	522
Clutch			Dry single plate	
Travelling system	Tires (front)		5-12 (4PR)	5-12 (4PR)
	Tires (rear)		7-14 (4PR)	8-16 (4PR)
	Steering		Manual steering	
	Transmission		Gear-shift, 6 forward and 2 reverse	
	Brake		Wet disk type	
	Min. turning radius (4WD with brake)	m	1.8	1.8
Hydraulic unit	Hydraulic control system		Up and down type control valve	
	Pump capacity	L/min	14.1	
	Three point hitch		SAE Category 1	
	Max. lift force (at lift point)	kgf	540	
	Max. lift force (24in. behind lift point)	kgf	410	
PTO	Rear-PTO		SAE 1-3/8, 6 splines	
	Rear-PTO / Engine speed	min⁻¹(rpm)	540/2773, 1000/2836	

NOTE: *Manufacturer's estimate
**Low profile type

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

TRAVELING SPEEDS

(At rated engine rpm)

Model				A13	A14
Tire size (Rear)				7-16	8-16
		Range gear shift lever	Main gear shift lever	km/h	km/h
Forward	1	Low	1	0.77	0.83
	2		2	1.40	1.49
	3		3	2.54	2.70
	4	High	1	4.32	4.61
	5		2	7.81	8.33
	6		3	14.14	15.08
		Max.Speed (at 3000 engine rpm)		15.15	16.15
Reverse	1	Low	R/AR	1.04	1.11
	2	High	R/AR	5.79	6.17
		Max.Speed (at 3000 engine rpm)		6.20	6.61

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

■仕様

形式		A−15	A−15K	A−17	A−17K	A−19	A−19K
駆動方式		四輪駆動					
機体寸法	全長(mm)	2230		2260	2250	2280	2250
		2535(ロアーリンク先端標準3P)					
	全幅(mm)	1050					
	全高(mm)	1245	1155	1260	1170	1270	1170
	軸距(mm)	1350					
	輪距 前輪(mm)	820	860	820	860	820	860
	輪距 後輪(mm)	810, 900	820, 910	810, 900	820, 910	810, 900	820, 910
	最低地上高(mm)	300	215	310	240	310	240
重量(kg)		650	690	660	700	670	700
エンジン	名称	クボタD905		クボタD1005		クボタD1105 M5700K	
	形式	水冷4サイクル3気筒立形ディーゼル(NewTVCS)					
	総排気量(cc)	898		1001		1123	
	出力/回転速度(PS/rpm)	15.5/2600		17.0/2600		18.5/2600	
	使用燃料	クボタディーゼル重油，又はディーゼル軽油					
	燃料タンク容量(ℓ)	17					
	始動方式	セルモータ式					
	バッテリ	50B24L−MF(12V・45Ah)					
タイヤ	前輪	5.00−12		6−12	5.00−12	6−12	5.00−12
	後輪	8−16		8−18		8.3−20	8−18
車体	クラッチ方式	乾式単板(シングル)					
	制動装置	一系統左右独立(連結装置付)，湿式ディスクブレーキ(機械式)					
	かじ取り方式	ボールスクリュ式					
	差動方式	4ピニオンかさ歯車式(デフロック付)					
	変速方式	選択かみ合式・常時かみ合式併用					
変速段数(段)		前進6，後進2					
走行速度(km/h)	前進	0.9〜12.0		1.0〜12.9	0.9〜12.0	1.1〜13.7	0.9〜12.0
	後進	1.3〜5.6		1.4〜6.0	1.3〜5.6	1.5〜6.4	1.3〜5.6
最小旋回半径(ブレーキ使用時)(m)		1.8					
PTO	回転速度/エンジン回転速度(rpm)	453, 799, 1194/2600					
	軸寸法(mm)	JIS 35					
作業機装置	制御方式	ポジションコントロール					
	装着方式	3点リンク JIS 0形					

■トラクタの主要諸元

形式		A−155	A−155K	A−175	A−175K	A−175F	A−175FK	A−195	A−195K	A−195F	A−195FK
駆動方式		四輪駆動									
機体寸法	全長(mm)	2250		2280				2300	2280	2300	2280
	全幅(mm)	1050（U仕様：1000）									
	全高(mm)	1800	1155（ステアリングホイール）	1825	1170（ステアリングホイール）	1825	1170（ステアリングホイール）	1850	1170（ステアリングホイール）	1850	1170（ステアリングホイール）
	軸距(mm)	1350									
	輪距 前輪(mm)	820	860	820	860	820	860	820	860	820	860
	輪距 後輪(mm)	810，900									
	最低地上高(mm)	300	215（デフギヤケース）	310	240（前車軸ケース）	310	240（前車軸ケース）	310	240（前車軸ケース）	310	240（前車軸ケース）
重量(kg)		665	690	685	700	705	720	695	700	715	720
エンジン	名称	クボタD905(-H)		クボタD1005(-H)				クボタD1105(-H) MOTOR			
	形式	水冷4サイクル3気筒立形ディーゼル(NewTVCS)									
	総排気量(c.c)	898		1001				1123			
	出力/回転速度(PS/rpm)	16/2650		17.5/2650				19/2650			
	使用燃料	クボタディーゼル重油，又はディーゼル軽油									
	燃料タンク容量(ℓ)	17									
	始動方式	セルモータ式									
	バッテリ	50B24L−MF(12V・45Ah)									
タイヤ	前輪	5.00−12	6−12	5.00−12	6−12	5.00−12	6−12	5.00−12	6−12（T仕様：22×8.50−12）	5.00−12	
	後輪	8−16	8−18（G仕様：8.3−22）	8−18				8.3−20	8−18	8.3−20（T仕様：31×13.5−15）	8−18
車体	クラッチ方式	乾式単板(シングル)									
	制動装置	一系統左右独立(連結装置付)，湿式ディスクブレーキ(機械式)									
	かじ取り方式	ボールスクリュ式	ボールスクリュ式(BS仕様　パワーステアリング)								
	差動方式	4ピニオンかさ歯車式(デフロック付)									
	変速方式	選択かみ合式・常時かみ合式併用(F仕様 油圧無段変速併用)									
変速段数		前進6段，後進2段			主変速無段副変速2段	前後進無段		前進6段，後進2段		主変速無段副変速2段	前後進無段
走行速度(km/h)	前進	0.9〜12.1		1.0〜13.0		0〜13.0		1.1〜13.9		0〜13.9	
	後進	1.3〜5.5		1.4〜6.0		0〜6.0		1.5〜6.4		0〜6.4	
最小旋回半径(ブレーキ使用時)(m)		1.8									
PTO	回転速度 エンジン回転速度(rpm)	450，795，1187，612(逆転)/2650　F仕様451，769，1171，564(逆転)/2650									
	軸寸法(mm)	JIS 35									
昇降作業装置	制御方式	ポジションコントロール									
	装着方式	3点リンク JIS O形									

注）全長はバンパ先端から後輪タイヤ後端までの寸法です。

■富山向けトラクタ主要諸元

形式		A—155KL	A—175KL	A—175C
駆動方式		四輪駆動		
機体寸法	全長(mm)	2280		
	全幅(mm)	1050		
	全高(mm)	1170(ステアリングホイール)		1825
	シート座面高さ(mm)	820		850
	軸距(mm)	1350		
	輪距 前輪(mm)	860		820
	輪距 後輪(mm)	810, 900		
	最低地上高(mm)	240(前車軸ケース)		310
重量(kg)		700		685
エンジン	名称	クボタD905(-H)	クボタD1005(-H) MOTOR	
	形式	水冷4サイクル3気筒立形ディーゼル(NewTVCS)		
	総排気量(cc)	898	1001	
	出力/回転速度(PS/rpm)	16/2650	17.5/2650	
	使用燃料	クボタディーゼル重油，又はディーゼル軽油		
	燃料タンク容量(l)	17		
	始動方式	セルモータ式		
	バッテリ	50B24L—MF(12V・45Ah)		
タイヤ	前輪	5.00—12		6—12
	後輪	8—18		
車体	クラッチ方式	乾式単板(シングル)		
	制動装置	一系統左右独立(連結装置付)，湿式ディスクブレーキ(機械式)		
	かじ取り方式	ボールスクリュ式		
	差動方式	4ピニオンかさ歯車式(デフロック付)		
	変速方式	選択かみ合式・常時かみ合式併用		
変速段数		前進6段，後進2段		
走行速度(km/h)	前進	1.0—14.9		
	後進	1.4—6.0		
最小旋回半径(ブレーキ使用時)(m)		1.8		
PTO	回転速度 エンジン回転速度 (rpm)	450，795，1359，612(逆転)/2650		
	軸寸法(mm)	JIS 35		
作業機装置	制御方式	ポジションコントロール		
	装着方式	3点リンク JIS O形		

注) 全長はバンパ先端から後輪タイヤ後端までの寸法です。

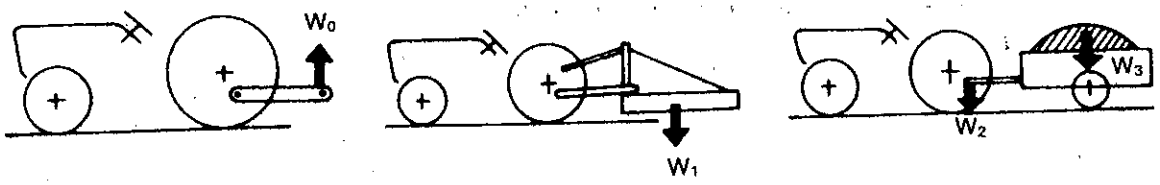
IMPLEMENT LIMITATIONS

The KUBOTA Tractor has been thoroughly tested for proper performance with implements sold or approved by KUBOTA. Use with implements which exceed the maximum specifications listed below, or which are otherwise unfit for use with the KUBOTA Tractor may result in malfunctions or failures of the tractor, damage to other property and injury to the operator or others. [Any malfunctions or failures of the tractor resulting from use with improper implements are not covered by the warranty.]

	Tread (max. width) with farm tires		Lower link end max. loading weight W_0
	Front	Rear	
	858mm	1031mm	300kg

	Actual figures		
	Implement weight W_1 and/or size	Max. Drawbar Load W_2	Trailer loading weight W_3 Max. capacity
	As in the following list (Shown on the next page)	330kg	1000kg

Lower link end max. loading weight ·····The max. allowable load which can be put on the lower link end: Wo
Implement weight ·····The implement's weight which can be put on the lower link: W_1
Max. drawbar load ·····W_2
Trailer loading weight·····The max. loading weight for trailer (with trailer's weight): W_3



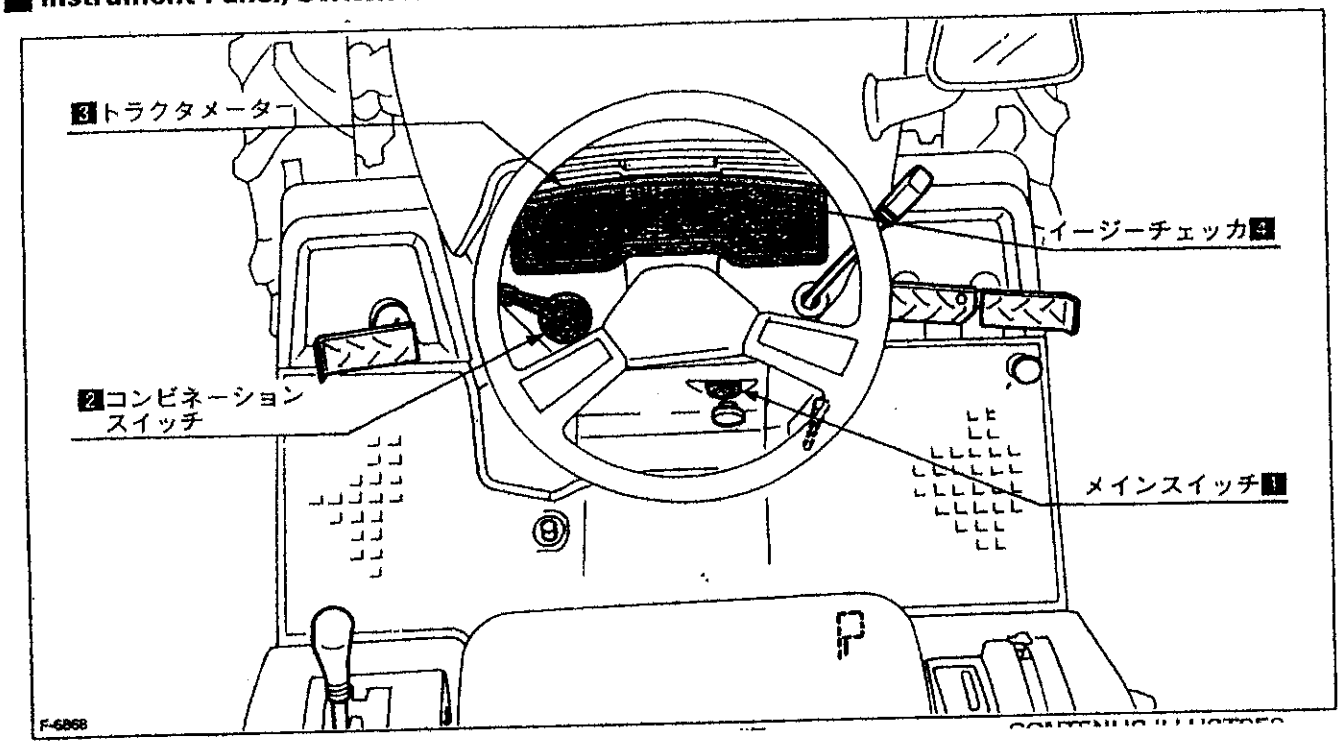
NOTE:
- Implement size may vary depending on soil operating conditions.

Implement		Remarks		A13 - A14
Mower	Mid-mount	Max. cutting width Max. weight	cm kg	122 140
	Rotary-cutter (1 Blade)	Max. cutting width Max. weight	cm kg	107 140
	Rear-mount (2 or 3 Blade)	Max. cutting width Max. weight	cm kg	122 140
	Flail-mower	Max. cutting width	cm	107
	Sickle bar	Max. cutting width	cm	122
Rotary tiller		Max. tilling width Max. weight	cm kg	107 170
Bottom plow		Max. size	cm	30×1
Disc plow		Max. size	cm	56×1
Cultivator		Max. size	cm	122 1 Row
Disc harrow		Max. harrowing width Max. weight	cm kg	122 120
Sprayer		Max. tank capacity	L	150
Front blade		Max. cutting width Sub frame	cm	122 Necessary
Rear blade		Max. cutting width Max. weight	cm kg	152 160
Front loader		Max. lifting capacity Max. width Sub frame	kg cm	200 110 Necessary
Box blade		Max. cutting width Max. weight	cm kg	107 170
Back hoe		Max. digging depth Max. weight Sub frame	cm kg	183 270 Necessary
Snow blower		Max. working width Max. weight Sub frame	cm kg	107 160 Necessary
Trailer		Max. load capacity	kg	1000

NOTE:
- Implement size may vary depending on soil operating conditions.

INSTRUMENT PANEL AND CONTROLS

Instrument Panel, Switches and Hand Controls



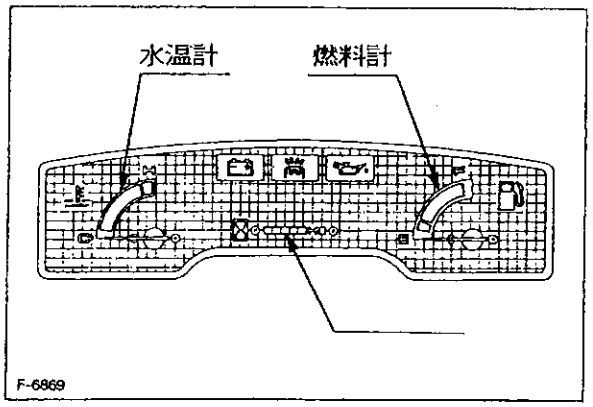
1 – Key switch

2 - Switch : horn , turn, head lights

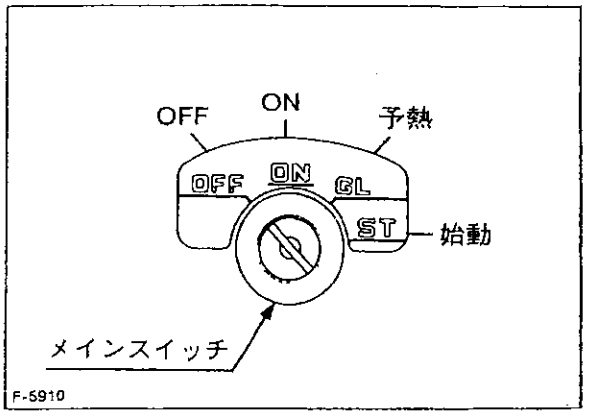
3-4- Control panel.

Control panel : details

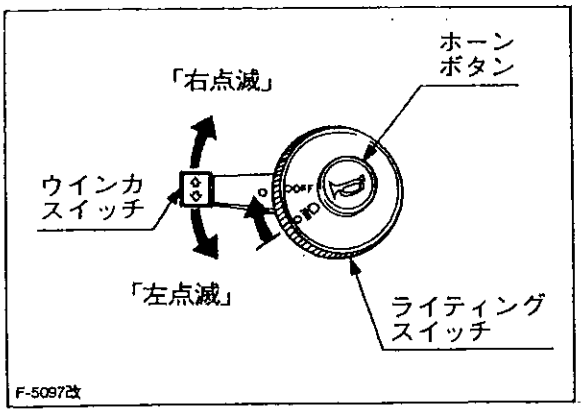
Left side : temperature gauge
Right side : fuel gauge



Starter switch : 4 positions
(Off –ON-Preheating/GL-Start/ST)



Switch: horn; head lights; turn

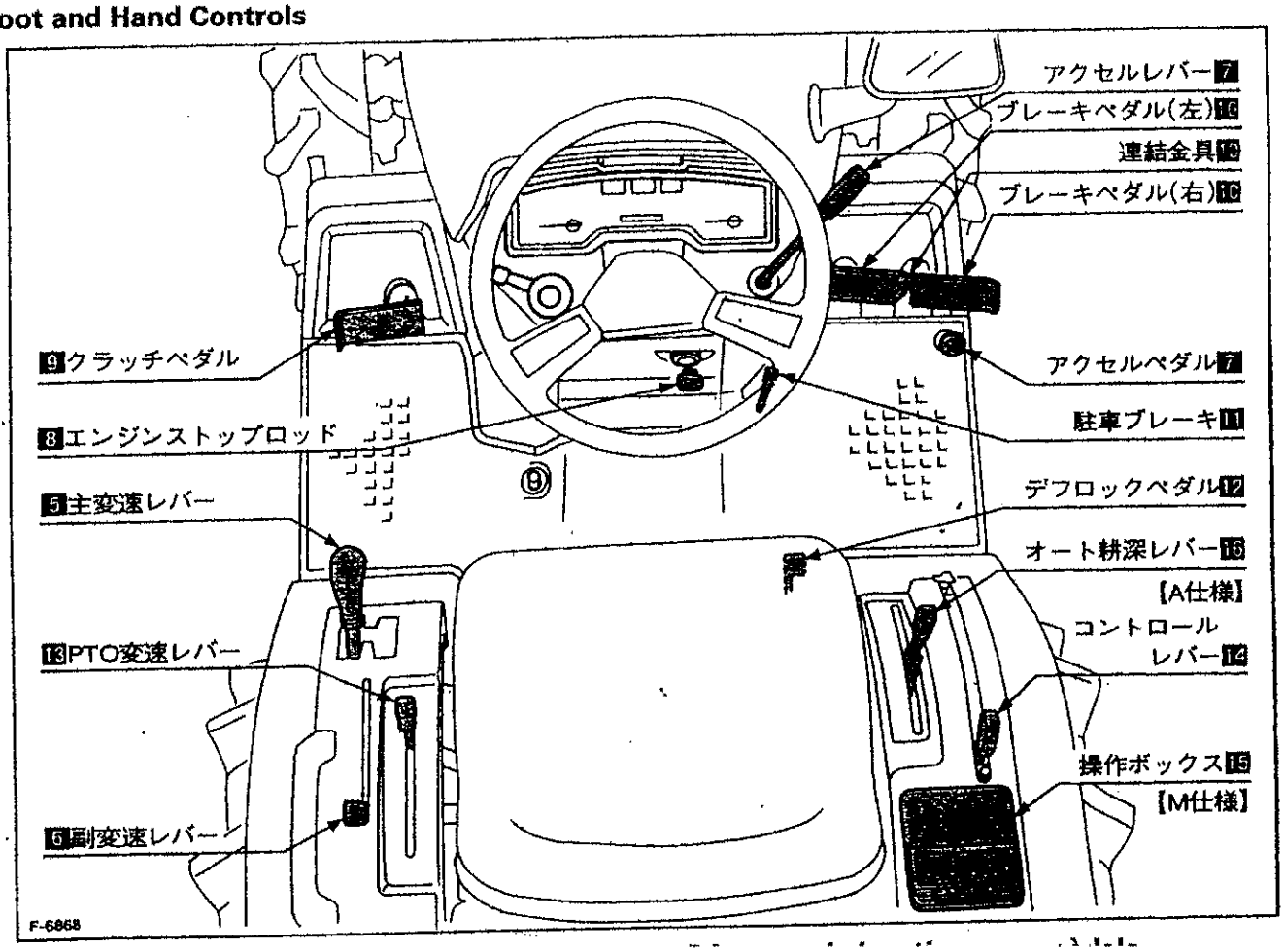


Battery control : light shows when the key is “on”

Oil pressure control

Pre-heat (glow) control

Foot and Hand Controls



5- Main gear shift lever
6- Range gear shift lever
7- Throttle : hand lever + foot pedal
8- Ignition key
9- Clutch pedal
10- 2 brake pedal with lock
11- Brake lock lever
12- Differential lock pedal
13- PTO gear shift lever
14- Hydraulic control lever
15- Secondary hydraulic system (Japan)
16- Lever for above

PRE-OPERATION CHECK

DAILY CHECK

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

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

Check item
- Walk around inspection
- Check engine oil level
- Check transmission oil level
- Check coolant level
- Clean grill and radiator screen
- Check air cleaner evacuator valve
  (When used in a dusty place)
- Check brake and clutch pedal
- Check indicators, gauges and meter
- Check lights
- Check ROPS (if equipped)
- Refuel
  (See "DAILY CHECK" in periodic service section.)
- Care of danger, warning and caution labels
  (See "DANGER, WARNING AND CAUTION LABELS" in safe operation section.)

OPERATING THE ENGINE

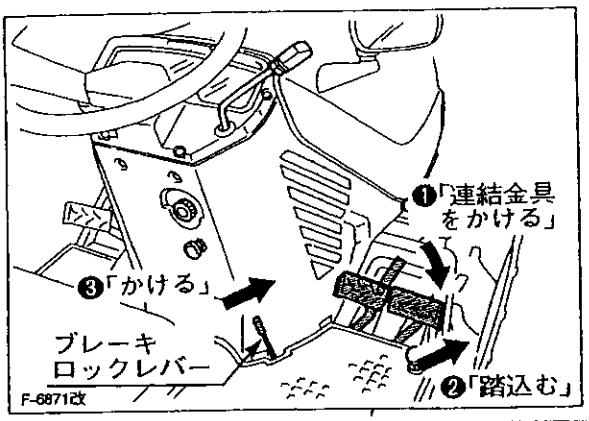
CAUTION
To avoid personal injury:
- **Read "Safe Operation" in the front of this manual.**
- **Read the danger, warning and caution labels located on the tractor.**
- **To avoid the danger of exhaust fume poisoning, do not operate the engine in a closed building without proper ventilation.**
- **Never start engine while standing on ground. Start engine only from operator's seat.**

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

STARTING THE ENGINE

1. Make sure the parking brake is set.

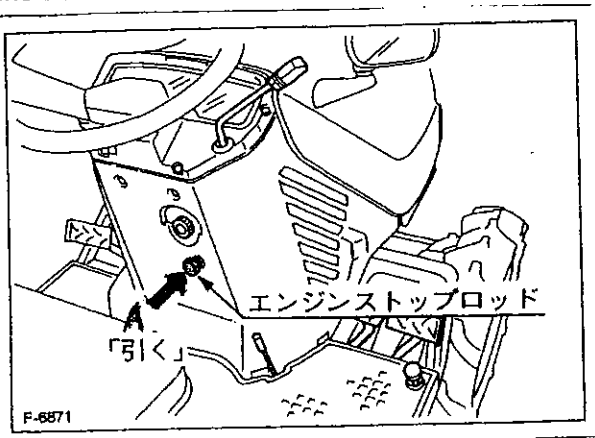
1. To set the parking brake;
   1) Interlock the brake pedals.
   2) Depress the brake pedals.
   3) Latch the brake pedals with the parking brake lever.
2. To release the parking brake, depress the brake pedals again.



(1) Parking brake lever (A) Interlock the brake pedals
(B) "DEPRESS"
(C) "PUSH-DOWN"

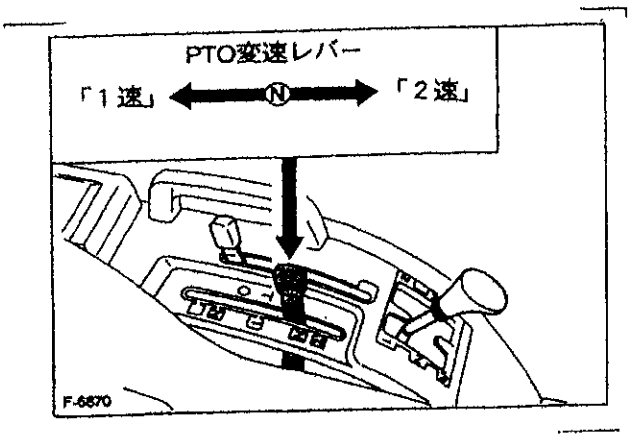
2. Make sure the engine stop knob is pushed in.

Push in the engine stop knob if it is pulled out, or the engine will not start.



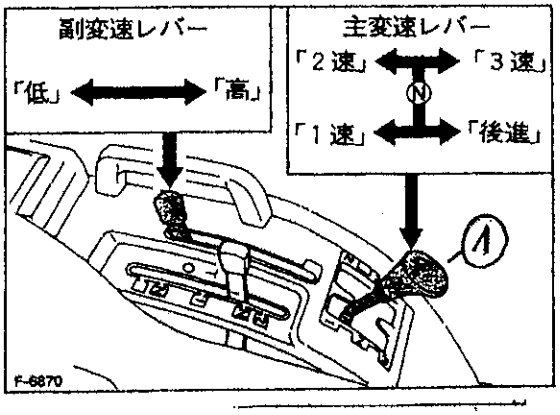
(1) Engine stop knob (A) "PUSH"

3. Place the PTO gear shift lever in "OFF" position.



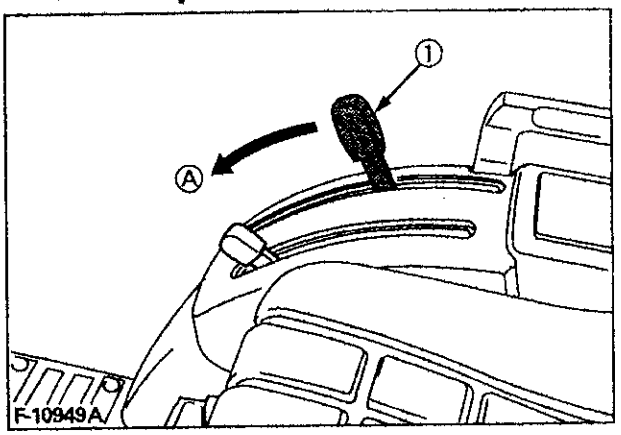
(1) PTO gear shift lever

4. Place the main gear shift lever in "NEUTRAL" position.



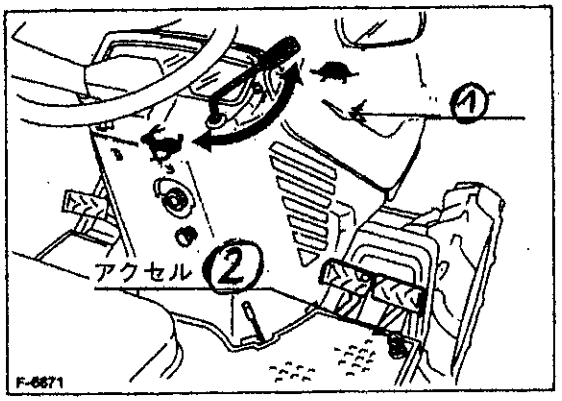
(1) Main gear shift lever (N) "NEUTRAL POSITION"

5. Place the hydraulic control lever in "DOWN" position.



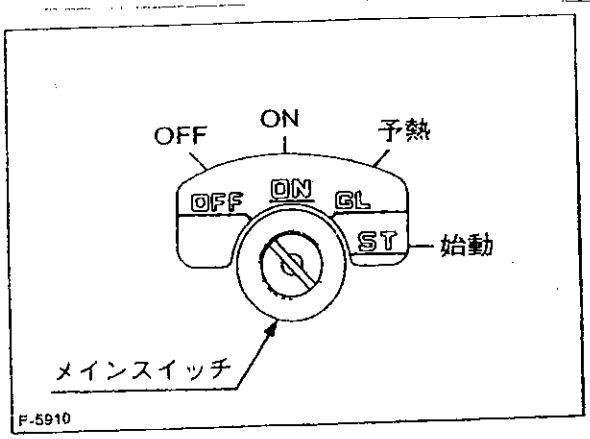
(1) Hydraulic control lever (A) "DOWN"

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



(1) Hand throttle lever
(2) Foot throttle
"INCREASE"
"DECREASE"

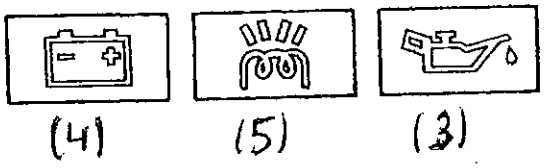
7. Insert the key into the key switch and turn it "ON".



○ "OFF"　　"PREHEAT" GL
"ON"　　"START" ST

◆ Check Easy Checker™ lamps:

1. When the key is turned "ON", lamps (3) (4) should come on. If trouble should occur at any location while the engine is running, the warning lamp corresponding to that location comes on.



(1) Easy checker™
(2) Key switch
(3) Engine oil pressure
(4) Electrical charge
(5) Glow plug indicator

IMPORTANT:

- Daily checks with the Easy Checker™ only, are not sufficient. Always check the tractor carefully before operation.
  (See "DAILY CHECK" in Periodic service section)

8. Fully depress the clutch pedal, turn the key to "PREHEAT" position and hold it for about 2 to 3 seconds.

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

Temperature	Preheating Time
Over 0℃	2 to 3 sec.
0 to –5℃	5 sec.
–5 to –15℃	10 sec.

NOTE:

- Glow plug indicator (5) comes "ON" while engine is being preheated.

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

◆Cold Weather Starting

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

IMPORTANT:

- The engine will not start unless the main gear shift lever is in the "neutral" position and PTO gear shift lever is the "OFF" position.

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

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

11. Release the clutch pedal.

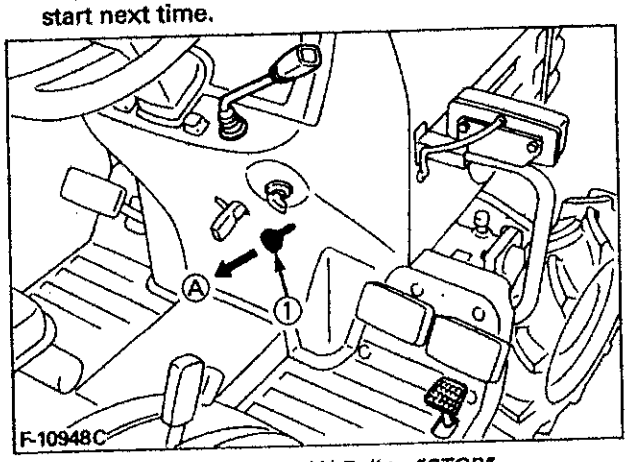
STOPPING THE ENGINE

1. After slowing the engine to idle, pull the engine stop knob back and hold it until the engine stops.

2. Remove the key.

NOTE:

- After the engine has stopped, be sure to push the engine stop knob back in, or the engine will not start next time.



(1) Engine stop knob *(A) Pull to "STOP"*

WARMING UP

CAUTION
To avoid personal injury:

- **Be sure to set the parking brake during warm-up.**

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

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

Hydraulic oil serves as transmission fluid. In cold weather, the oil may be cold with increased viscosity. This can cause delayed oil circulation or abnormally low hydraulic pressure for some time after engine start-up. This in turn can result in trouble in the hydraulic system. To prevent the above, observe the following instructions:
Warm up the engine at about 50 % of rated rpm according to the table below:

Ambient temperature	Warm-up time requirement
Above 0℃	At least 5 minutes
0 to –10℃	5 to 10 minutes
–10 to –20℃	10 to 15 minutes
Below –20℃	More than 15 minutes

IMPORTANT:

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

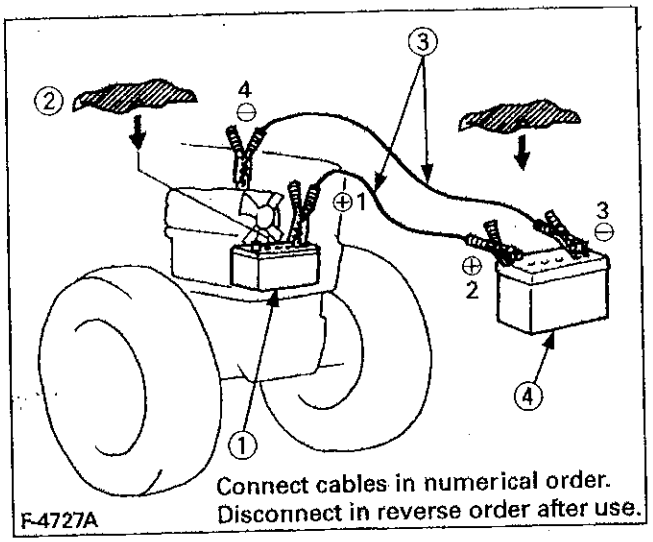
JUMP STARTING

CAUTION
To avoid personal injury:

- **Battery gases can explode. Keep cigarettes, sparks, and flames away from battery.**
- **If tractor battery is frozen, do not jump start engine.**
- **Do not connect other end of negative ⊖ jumper cable to negative ⊖ terminal of tractor battery.**

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

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



(1) Dead battery
(2) Lay a damp rag over the vent caps
(3) Jumper cables
(4) Helper battery

IMPORTANT:

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

OPERATING THE TRACTOR

OPERATING NEW TRACTOR

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

■ Do not Operate the Tractor at Full Speed for the First 50 Hours.

- Do not start quickly nor apply the brakes suddenly.
- In winter, operate the tractor after fully warming up the engine.
- Do not run the engine at speeds faster than necessary.
- On rough roads, slow down to suitable speeds. Do not operate the tractor at fast speed.

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

■ Changing Lubricating Oil for New Tractors

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

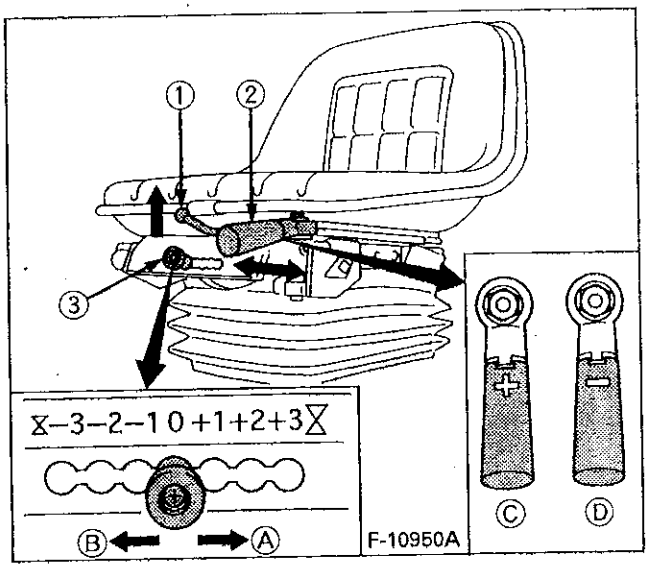
STARTING

1. Adjusting the Operator's Position.

■ Operator's Seat [A Type]

CAUTION
To avoid personal injury:

- **Make sure that the seat is completely secured after each adjustment.**
- **Do not allow any person other than the driver to ride on the tractor.**



(1) Travel adjust lever
(2) Suspension adjuster
(3) Height adjust lever
(A) "RAISE"
(B) "LOWER"
(C) "INCREASE"
(D) "DECREASE"

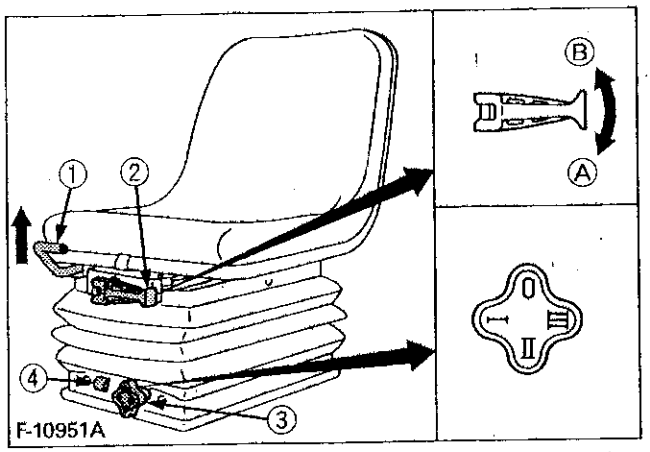
◆ Travel adjustment
Pull the travel adjust lever and slide the seat backward or forward, as required. The seat will lock in position when the lever is released.

◆ Suspension adjustment
To increase tension, with the "+" (plus) sign on the handle facing forward as shown, and cranking the ratchet handle.
To decrease tension, pull the grip out and rotate half a turn until the "−" (minus) sign is facing forward as shown, and cranking the ratchet handle.
The ratchet action is now reversed.

◆ Height adjustment
Pull and slide the height adjust knob to desired position while sitting in the seat.

■ Operator's Seat [B Type]

CAUTION
To avoid personal injury:
- **Make sure that the seat is completely secured after each adjustment.**
- **Do not allow any person other than the driver to ride on the tractor.**



(1) Travel adjust lever
(2) Suspension adjust lever
(3) Height adjust knob
(4) Indication of height
(A) To decrease tension
(B) To increase tension
(0) Highest position
(Ⅲ) Third position
(Ⅱ) Second position
(Ⅰ) Lowest position

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

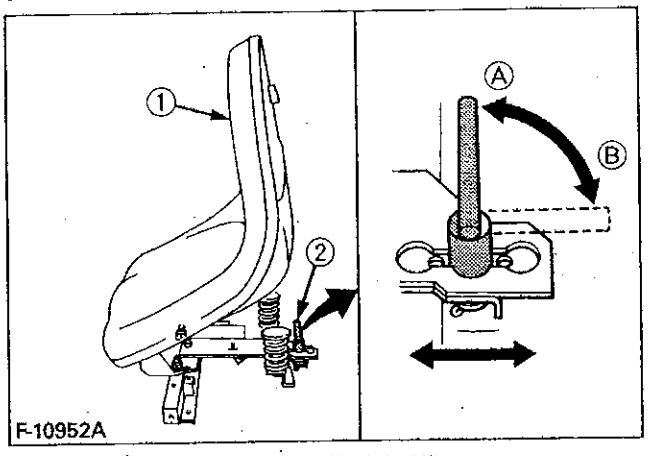
◆ Suspension adjustment
Turn the suspension adjust lever to achieve the optimum suspension setting.

◆ Height adjustment
Turn the height adjust knob to desired position while sitting in the seat.

■ Operator's Seat [C Type]

CAUTION
To avoid personal injury:
- **Make sure that the seat is completely secured after each adjustment.**
- **Do not allow any person other than the driver to ride on the tractor.**

◆Travel adjustment
The seat can be adjusted to three pre-set positions at the operator's convenience.
To adjust, unlock the travel adjust lever and slide the seat backward or forward, as required.



((1) Seat
(2) Travel adjust lever
(A) "LOCK"
(B) "UNLOCK"

NOTE:
- The seat can be tipped forward so that there would be no fear of the seat getting wet in the rain.

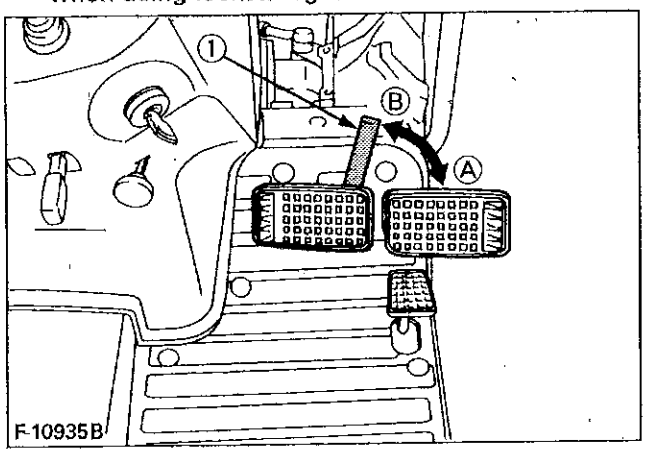
2. Lights (....)

3. Checking the Brake Pedal.

■ Brake Pedals (Right and Left)

WARNING
To avoid personal injury:
- **Applying only one rear wheel brake at high speeds could cause the tractor to swerve or roll-over.**

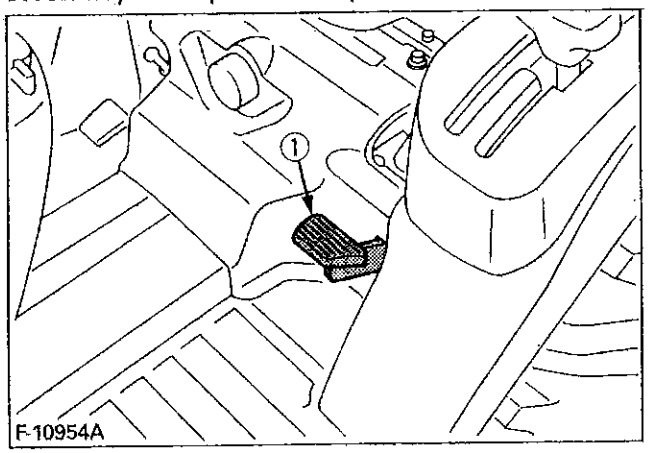
1. Before operating the tractor on the road or before applying the parking brake, be sure to interlock the right and left pedals as illustrated below.
2. Use individual brakes to assist in making sharp turns at slow speeds (Field Operation Only). Disengage the brake pedal lock and depress only one brake pedal.
3. Be sure brake pedals have equal adjustment when using locked together.



(1) Brake pedal lock *(A) "LOCK"* *(B) "RELEASE"*

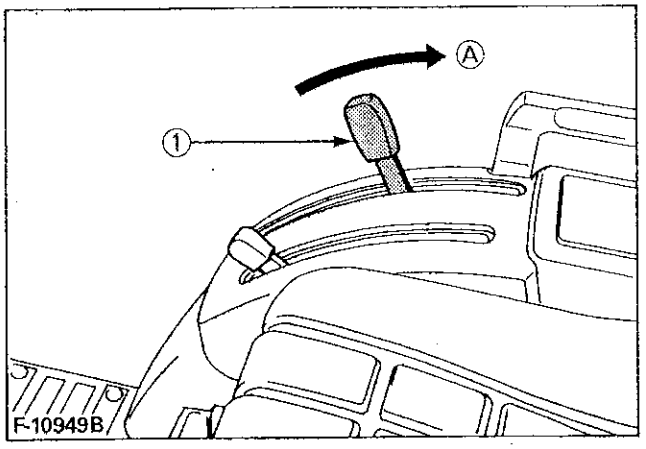
■ Secondary Brake Pedal (if equipped)

In case the main brake pedals don't function, use the secondary brake pedal to stop the tractor.



(1) Secondary brake pedal

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



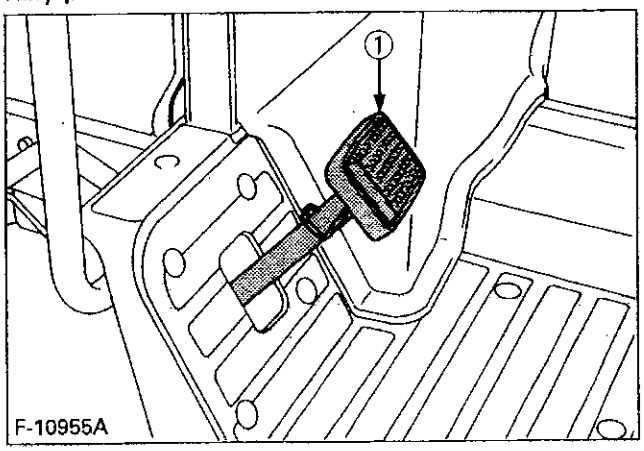
(1) Hydraulic control lever *(A) "UP"*

5. Depress the Clutch Pedal.

■ Clutch Pedal

CAUTION
To avoid personal injury:
- **Sudden release of the clutch may cause the tractor to lunge in an unexpected manner.**

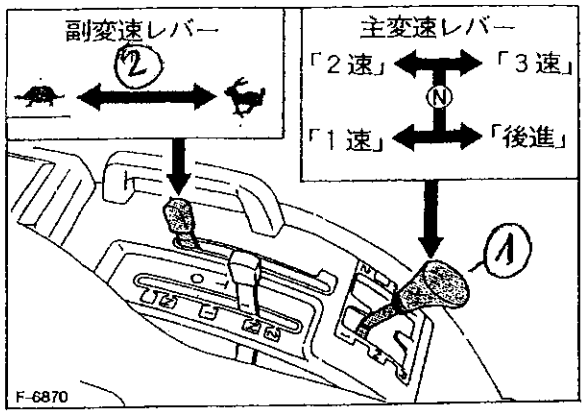
The clutch is disengaged when the clutch pedal is fully pressed down.



(1) Clutch pedal

IMPORTANT:
To help prevent premature clutch wear:
- The clutch pedal must be quickly disengaged and be slowly engaged.
- Avoid operating the tractor with your foot resting on the clutch pedal.
- Select proper gear and engine speed depending on the type of job.

6. Selecting the Travel Speed.



(1) Main gear shift lever
(2) Range gear shift lever (Hi-Lo)
"HIGH"
"LOW"
(N) "NEUTRAL POSITION"

■ Main Gear Shift Lever & Range Gear Shift Lever

The main gear shift lever pattern is in the form of a "H". The range gear shift lever moves in the form of a "I" in 2 stages, "HIGH" and "LOW". By combination of using the main gear shift lever and the range gear shift lever, 6 forward speeds and 2 reverse speeds are obtained.

IMPORTANT:

- To change speeds, press the clutch pedal completely down and stop the tractor before attempting to proceed with speed change.

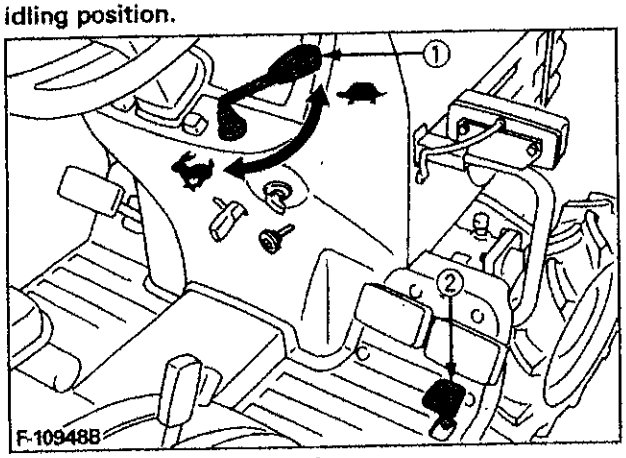
7. Accelerate the Engine.

■ Hand Throttle Lever

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

■ Foot Throttle

Use the foot throttle when traveling on the road. Press down on it for higher speed. The foot throttle is interlocked with the hand throttle lever; when using the foot throttle, keep the hand throttle lever in low idling position.

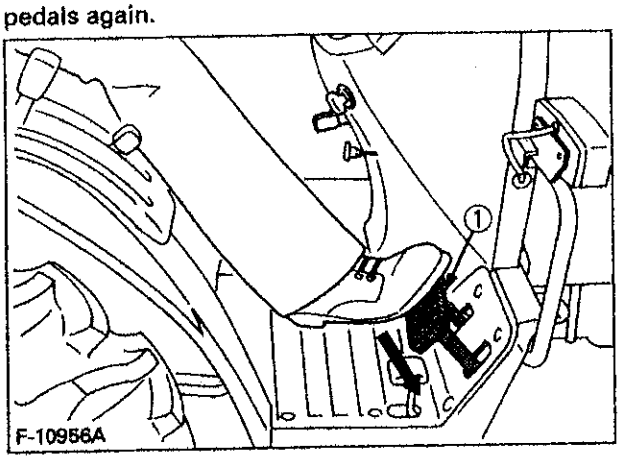


(1) Hand Throttle lever *"INCREASE"*
(2) Foot Throttle *"DECREASE"*

8. Unlock the Parking Brake and Slowly Release the Clutch.

■ Parking Brake Lever

To release the parking brake, depress the brake pedals again.



(1) Brake pedal

STOPPING

■ Stopping

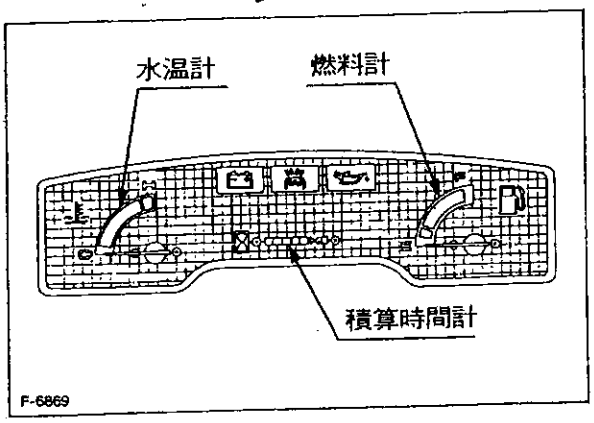
1. Slow the engine down.
2. Step on the clutch and brake pedal.
3. After the tractor has stopped, disengage the PTO, lower the implement, shift the transmission to neutral, release the clutch pedal, and set the parking brake.

CHECK DURING DRIVING

■ Immediately Stop the Engine if:

- The engine suddenly slows down or accelerates.
- Unusual noises are suddenly heard.
- Exhaust fumes suddenly become very dark.

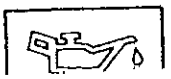
While driving, check the following items to see that all the parts are functioning normally.



(1) Easy checker™
(2) Fuel gauge
(3) Coolant temperature gauge

■ Easy Checker™

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



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

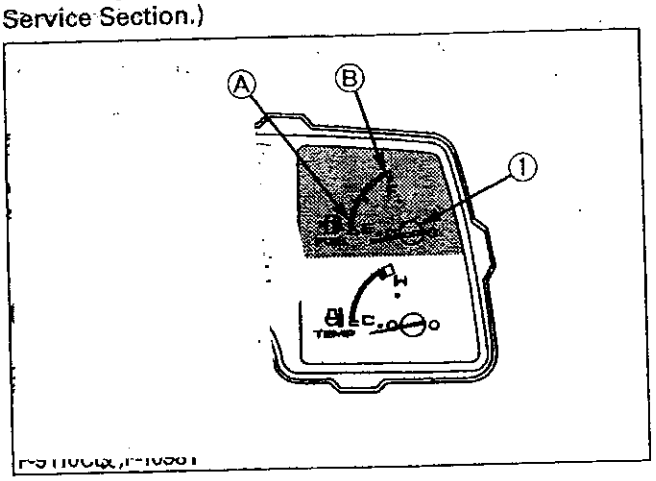
Electrical charge
If the alternator is not charging the battery, the warning lamp in the Easy Checker™ will come on.
If this should happen during operation, check the electrical charging system or consult your local KUBOTA Dealer.

NOTE:

- For checking and servicing of your tractor, consult your local KUBOTA Dealer for instructions.

■ Fuel Gauge

When the key switch is on, the fuel gauge indicates the fuel level.
Be careful not to empty the fuel tank. Otherwise air may enter the fuel system.
Should this happen, the system should be bled (See "Bleeding Fuel System" in as required in Periodic Service Section.)

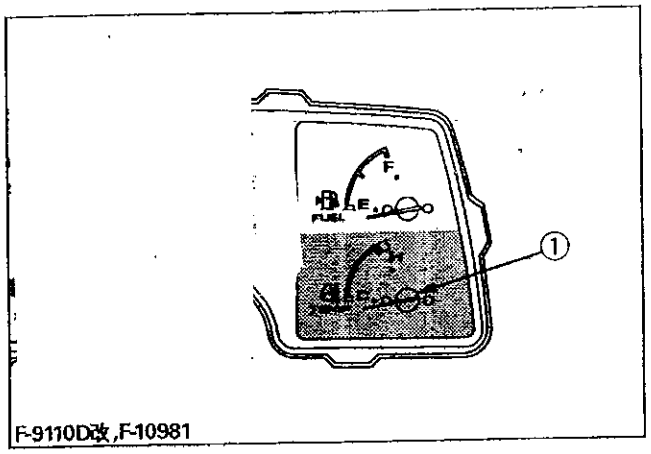


(1) Fuel gauge
(A) "EMPTY"
(B) "FULL"

■ Coolant Temperature Gauge

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

1. With the key switch at "ON", this gauge indicates the temperature of the coolant. "C" for "cold" and "H" for "hot".
2. If the indicator reaches the "H" position (red zone), engine coolant is overheated. Check the tractor by referring to "Troubleshooting" section.

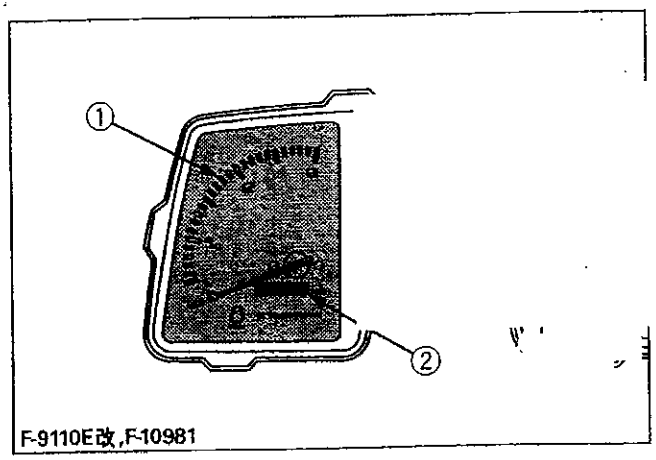


(1) Coolant temperature gauge

■ Hourmeter/Tachometer

This meter gives readings for engine speed and the hours the tracto has been operated.

1. The hourmeter indicates in five digits the hours the tractor has been used; the last digit indicates 1/10 of an hour.



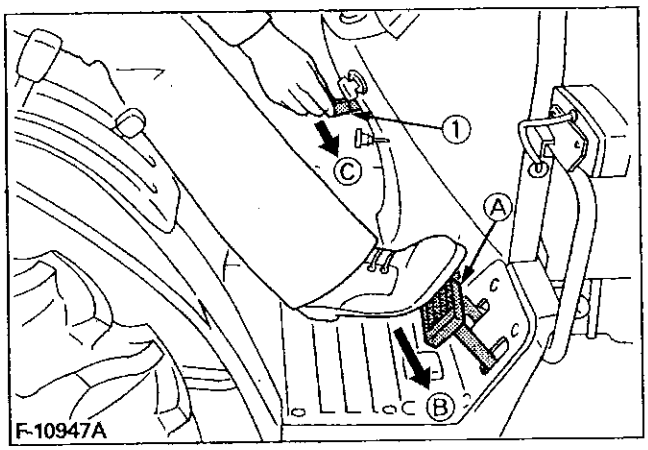
(1) Engine revolution
(2) Hours used

PARKING

■ Parking

CAUTION
To avoid personal injury:
- **Always set the parking brake and stop the engine before leaving the tractor seat.**

1. When parking, be sure to set the parking brake. To set the parking brake;
   1) Interlock the brake pedals.
   2) Depress the brake pedals.
   3) Latch the brake pedals with the parking brake lever.



(1) Parking brake lever
(A) Interlock the brake pedals
(B) "DEPRESS"
(C) "PUSH-DOWN"

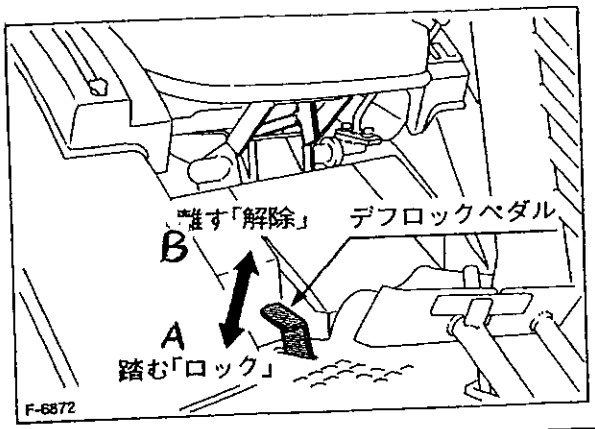
2. Before getting off the tractor, disengage the PTO, lower all implements, place all control levers in their neutral positions, set the parking brake, stop the engine and remove the key.
3. If it is necessary to park on an incline, be sure to chock the wheels to prevent accidental rolling of the machine.

OPERATING TECHNIQUES

■ Differential Lock

WARNING
To avoid personal injury:
- **It is extremely dangerous to operate tractor at high speed or attempt to turn the tractor in either direction with differential lock engaged. Be sure to release the lock before making such a turn.**

If one of the rear wheels should slip, step on the differential lock pedal. Both wheels will then turn together, reducing slippage.
Differential lock is maintained only while the pedal is depressed.



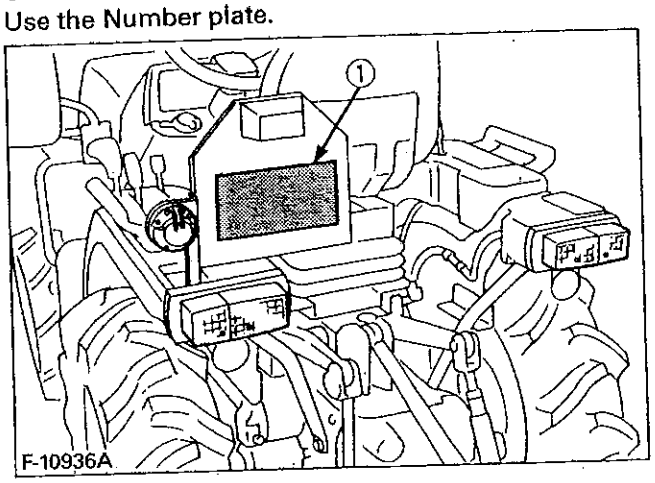
(1) Differential lock pedal *(A) Press to "ENGAGE"* *(B) Release to "DISENGAGE"*

IMPORTANT:
- When using the differential lock, always slow the engine down.
- To prevent damage to power train, do not engage differential lock when one wheel is spinning and the other is completely stopped.
- If the differential lock cannot be released in the above manner, step lightly on the brake pedals alternately.

■ Operating the Tractor on a Road

CAUTION
To avoid personal injury:
- **To help assure straight line stops when driving at transport speeds, lock the brake pedals together. Uneven braking at road speeds could cause the tractor to roll-over.**
- **When traveling on road with 3-point hitch mounted implement attached, be sure to have sufficient front weight on the tractor to maintain steering ability.**

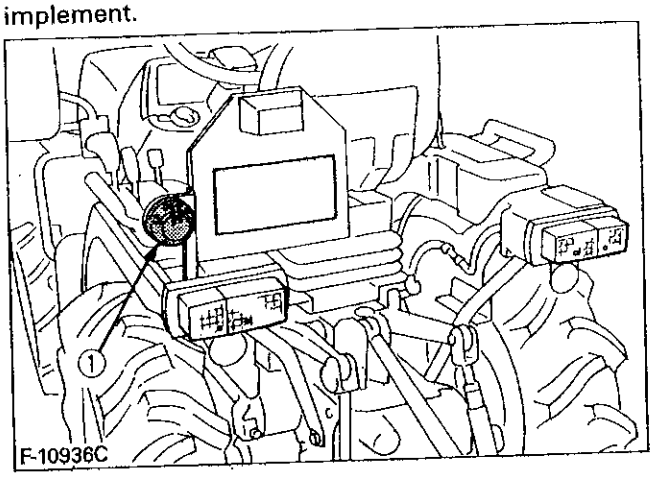
Observe all local traffic and safety regulations.
Use the Number plate.



(1) Number plate

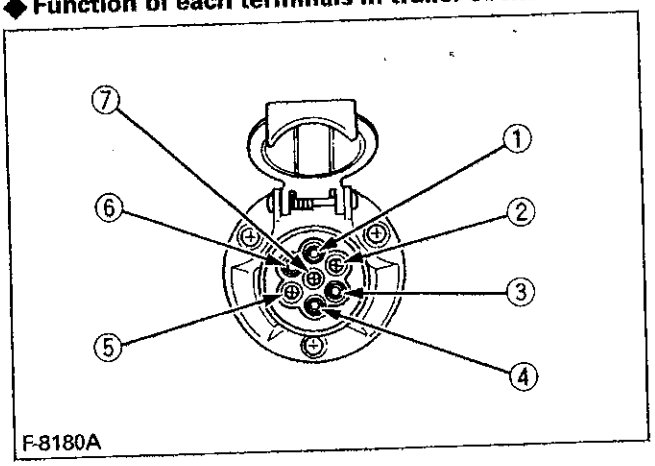
■ Trailer Socket (Only for European models)

A trailer socket is supplied for use with trailer or implement.



(1) Trailer socket

◆ Function of each terminals in trailer socket



Terminal	Function	Color of wire harness
①	Turn signal (LH)	Green / White
②	—	—
③	Ground	Black
④	Turn signal (RH)	Red / White
⑤	Tail (RH)	Yellow / Red
⑥	Brake Stop	Yellow
⑦	Tail (LH)	Yellow / White

■ Operating on Slopes or Rough Terrain

CAUTION

To avoid personal injury:

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

1. Be sure wheel tread is adjusted to provide maximum stability.
   (See "Wheel Adjustment" in Tires, Wheels and Ballast section.)
2. Slow down for slopes, rough ground, or sharp turns, especially when transporting heavy, rear mounted equipment.
3. Before descending a slope, shift to a gear low enough to control speed without using brakes.

PTO

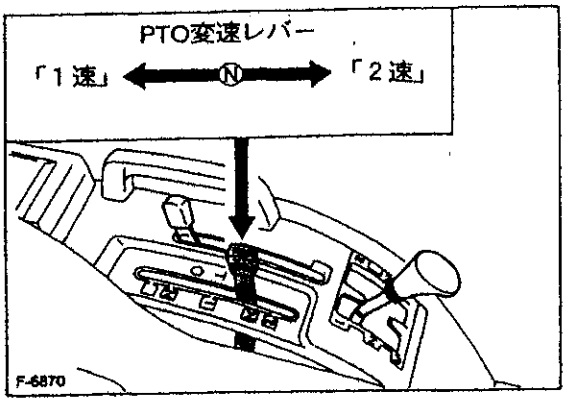
PTO OPERATION

WARNING
To avoid personal injury:
- **To prevent damage to PTO driven equipment and possibly causing personal injury, use the 2nd rear PTO speed and mid-PTO speed only when these higher rpms are specifically recommended by the implement manufacturer.**

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

■ PTO Gear Shift Lever

1. The tractor has two rear PTO speeds and one mid PTO speed.
2. PTO shifting needs clutch operation. Press the clutch pedal down completely to stop the tractor movement and any PTO driven equipment movement before shifting the PTO gear shift lever



IMPORTANT:

- To avoid shock loads to the PTO, reduce engine speed when engaging the PTO, then open the throttle to the recommended speed.
- To avoid damage of transmission, before shifting the PTO gear shift lever, fully disengage the main clutch.

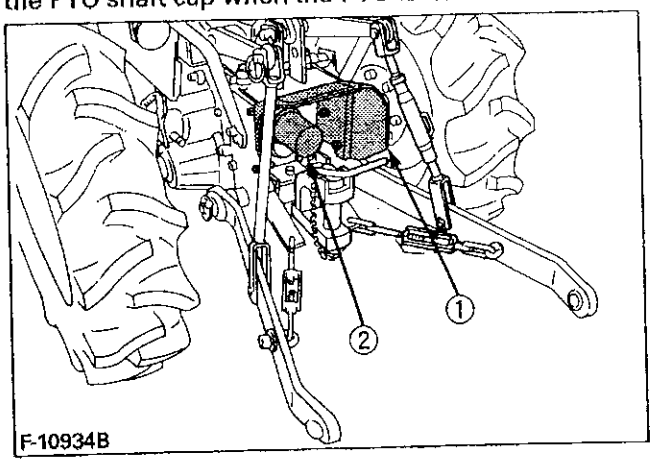
PTO	Engine Speed min^{-1}(rpm)	Shaft	PTO Speed min^{-1}(rpm)
Rear	2773	6-spline	540
	2836	6-spline	1000
		6	598

NOTE:

- Tractor engine will not start if PTO gear shift lever is in the engaged "ON" position.

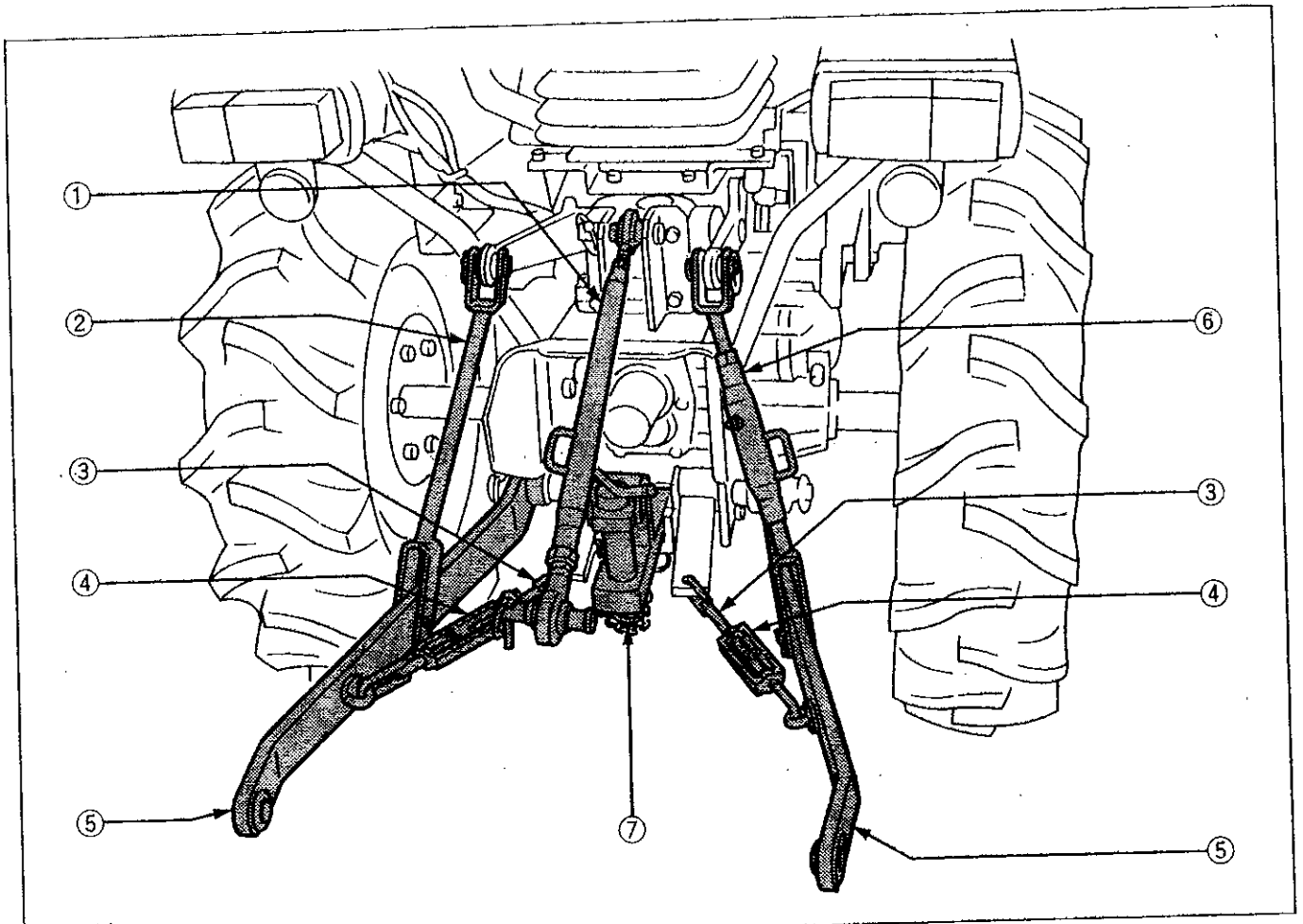
■ PTO Shaft Cover and Shaft Cap

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



(1) PTO shaft cover
(2) PTO shaft cap

THREE-POINT HITCH & DRAWBAR



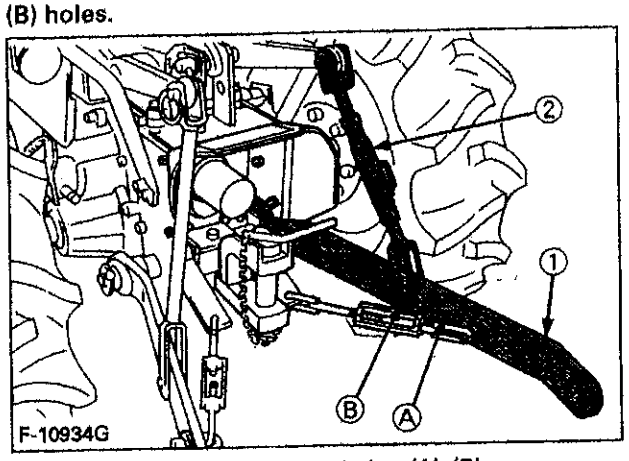
(1) Top link
(2) Lifting rod (Left)
(3) Check chains
(4) Turnbuckle
(5) Lower link
(6) Lifting rod (Right)
(7) Drawbar (if equipped)

3-POINT HITCH

1. Make preparations for attaching implement.

■ Selecting the holes of lower links

There are two holes in the lower links. For most operations the lifting rods should be attached to the (B) holes.



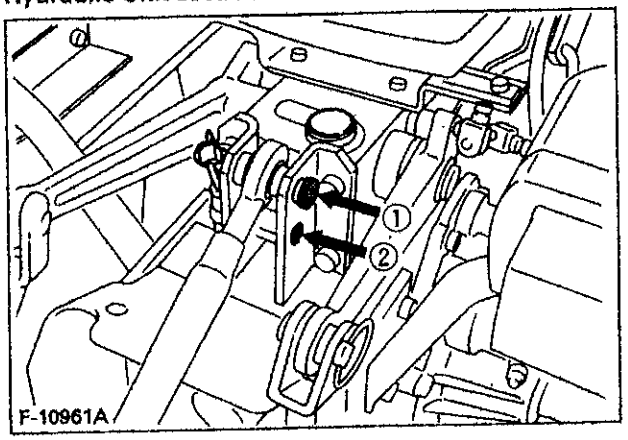
(1) Lower link *holes: (A), (B)*
(2) Lifting rods

NOTE:

- The lifting rods may be attached to Ⓐ for greater lifting force. (with reduced stroke)

■ Selecting the Top Link Mounting Holes

Select the proper set of holes by referring to the "Hydraulic Control Unit Use Reference Chart" in Hydraulic Unit section.



■ Drawbar (if equipped)

Remove the drawbar if close mounted implement is being attached.

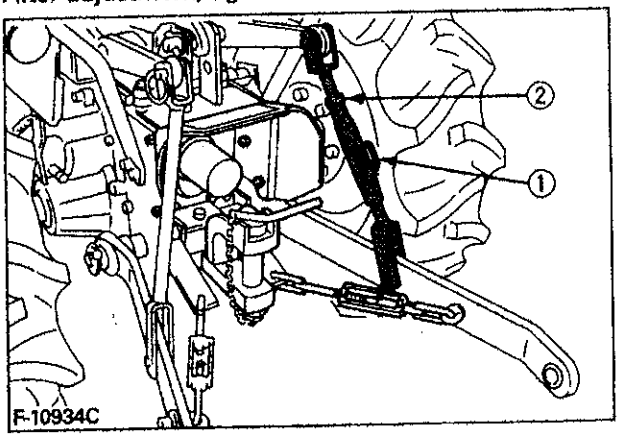
2. Attaching and detaching implements

CAUTION
To avoid personal injury:

- **Be sure to stop the engine.**
- **Do not stand between tractor and implement unless parking brake is applied.**
- **Before attaching or detaching implement, locate the tractor and implement on a firm level surface.**
- **Whenever an implement or other attachment is connected to the tractor 3-point hitch, check full range of operation for interference, binding or PTO separation.**

■ Lifting Rod (Right)

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



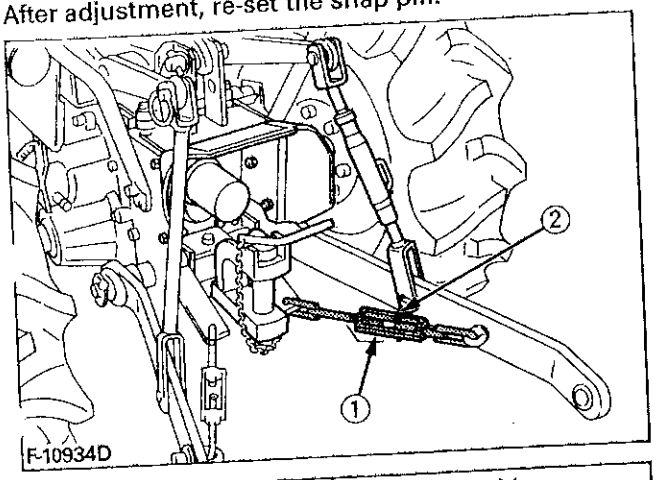
(1) Adjusting handle
(2) Lock nut

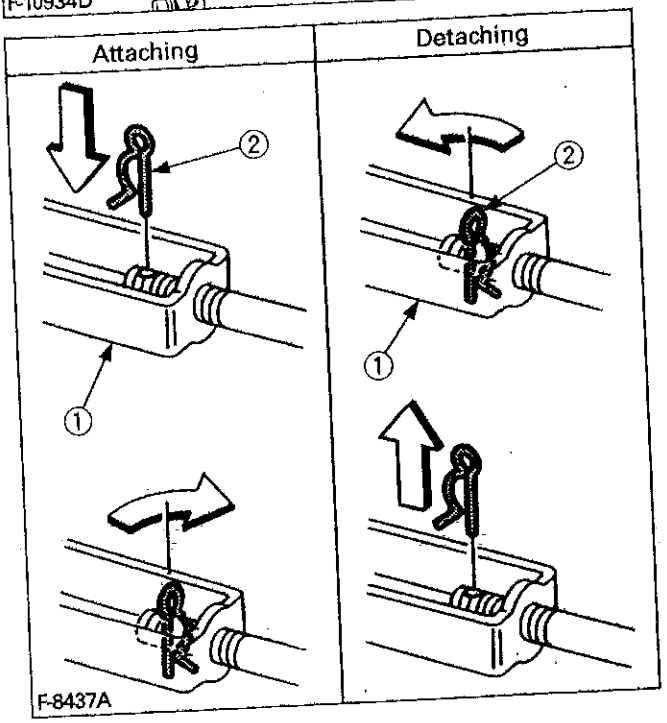
■ Top Link

1. Adjust the angle of the implement to the desired position by shortening or lengthening the top link.
2. The proper length of the top link varies according to the type of implement being used.

■ Check Chains

Remove the snap pin and adjust the turnbuckle to control horizontal sway of the implement.
After adjustment, re-set the snap pin.



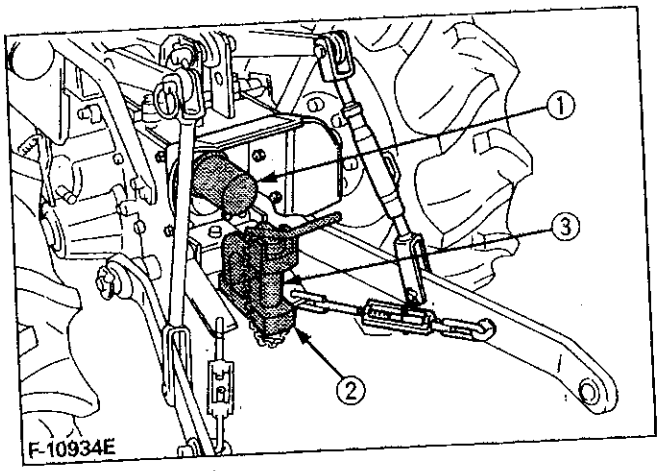


(1) Turnbuckle
(2) Snap pin

DRAWBAR (if equipped)

WARNING
To avoid personal injury:

- **Never pull from the top link, the rear axle or any point above the drawbar. Doing so could cause the tractor to tip over rearward causing personal injury or death.**



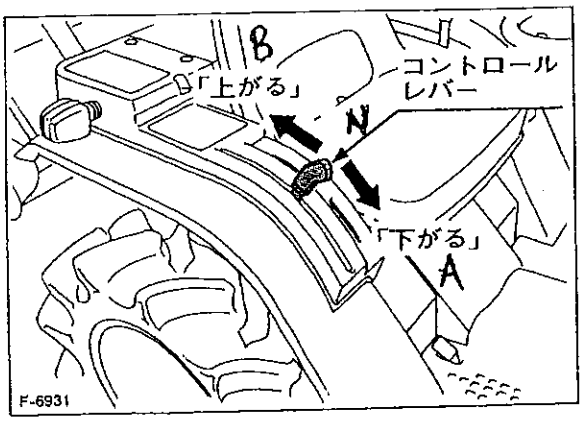
(1) Rear-PTO shaft
(2) Drawbar
(3) Drawbar pin

HYDRAULIC UNIT

3-POINT HITCH CONTROL SYSTEM

■ Hydraulic Control

Operating the hydraulic control lever actuates the hydraulic lift arm, which controls the elevation of 3-point hitch mounted implement.
To lower implement, push the lever forward; to raise it, pull the lever back.



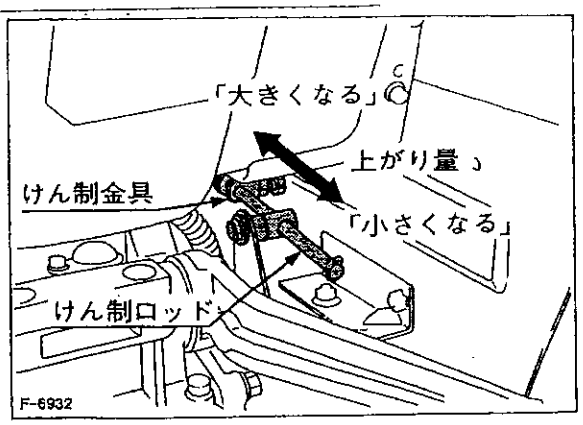
(1) Hydraulic control lever
(A) "DOWN"
(N) "NEUTRAL"
(B) "UP"

IMPORTANT:

- If the 3-point hitch can not be raised by setting the hydraulic control lever to the UP position after long term storage or when changing the transmission oil, follow these air bleeding procedures.
  1. Stop the engine.
  2. Set the hydraulic control lever to the down position, fully depress and hold the clutch pedal, start the engine.
  3. Operate the engine at low idle speed and continue to depress the clutch pedal for at least 30 seconds to bleed air from the system.
- Do not operate until the engine is warmed up. If operation is attempted when the engine is still cold, the hydraulic system may be damaged.
- If noises are heard when implement is lifting after the hydraulic control lever has been activated, the hydraulic mechanism is not adjusted properly. Unless corrected, the unit will be damaged. Contact your KUBOTA Dealer for adjustment.

■ Implement Lowering Limit

The implement lowering limit can be changed by shifting the locker (A).



(1) Interlock rod
(2) Locker (A)

1. Lower Limit

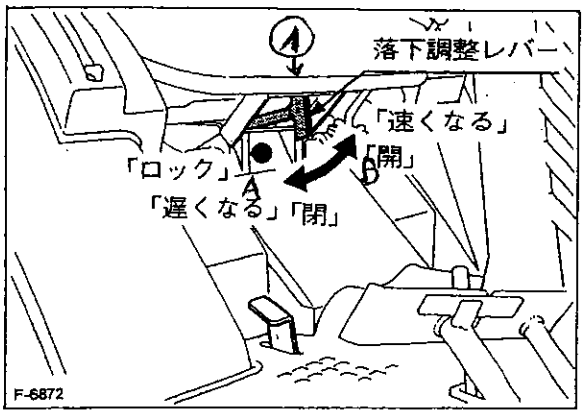
The lower limit can be changed by adjusting the position of locker (A). Shifting the locker (A) forward raises the lower limit and shifting it backward lowers the lower limit.

■ 3-point Hitch Lowering Speed

CAUTION
To avoid personal injury:

- **Fast lowering speed may cause damage or injury. Lowering speed of implement should be adjusted to two or more seconds.**

The lowering speed of the 3-point hitch can be controlled by adjusting the 3-point lowering speed knob.



(1) 3-Point lowering speed knob
(A) "FAST"
(B) "SLOW"
(C) "LOCK"

AUXILIARY HYDRAULICS

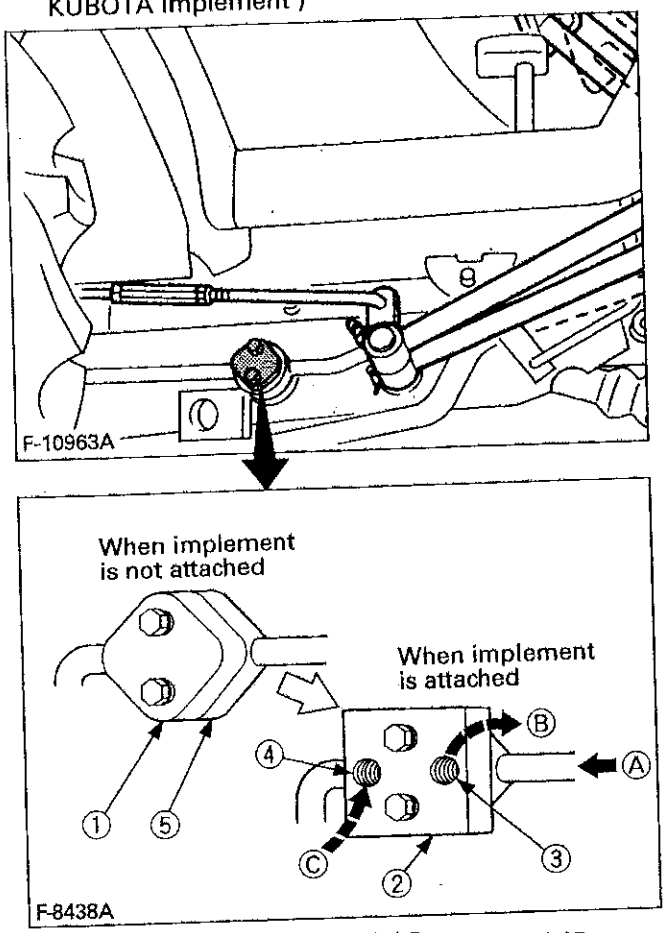
On the tractor, hydraulic outlet is provided.

■ Hydraulic Block Type Outlet

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

When implement is attached

1. Remove the block cover.
2. Attach the block outlet cover. (option)
   (The block outlet cover is standard part for KUBOTA Implement)



(1) Block cover
(2) Block outlet cover (option)
(3) Outlet
(4) Inlet
(5) Hydraulic block
(A) From gear pump
(B) To implement Inlet Max. flow 15 L/min No relief valve in the hydraulic block.
(C) From implement outlet

IMPORTANT:

- For hydraulic block type outlet, be sure to use the control valve of the "Power beyond type" (with relief valve).

NOTE:

- The tank port flow from implement should be connected to the port located on the right hand side of transmission case.

■ Rear outlet (if equipped)

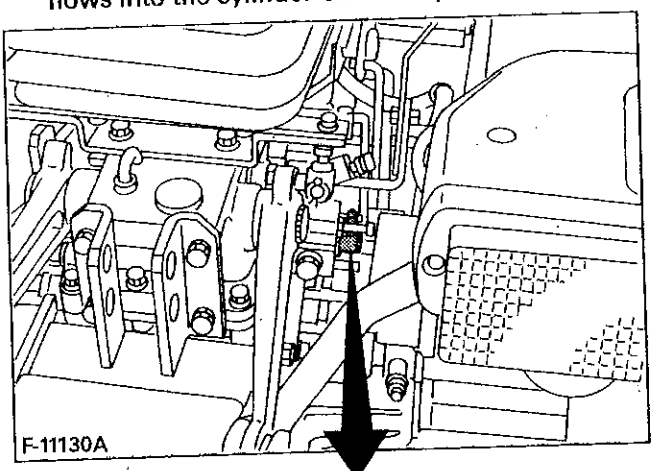
CAUTION
To avoid personal injury:

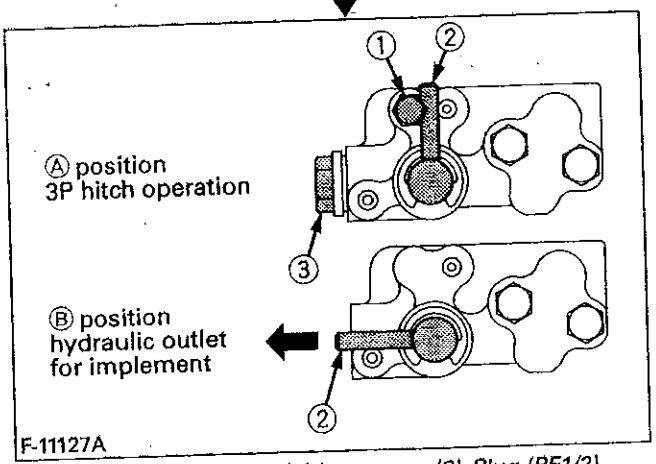
- **Stop the engine and place the hydraulic control lever of 3-point hitch at the "neutral" position before changing the oil flow.**

When a hydraulically operated implement is connected to the tractor, the oil flow to 3P hitch can be switched to the cylinder on the implement by means of the lever on the hydraulic outlet.

When implement is attached

1. Remove the plug ③ (screw: PF1/2) and restricting bolt ①.
2. When the lever is positioned at Ⓐ, the oil flows into the cylinder of tractor (3P hitch operation). When the lever is turned to the position Ⓑ, the oil flows into the cylinder on the implement.





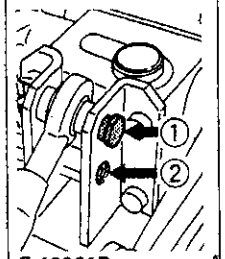
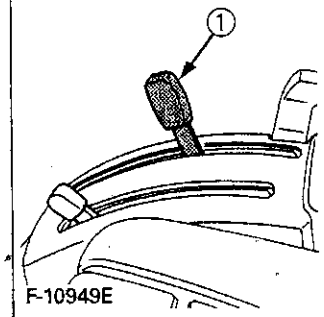
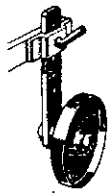
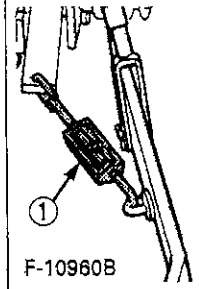
(1) Restricting bolt *(2) Lever* *(3) Plug (PF1/2)*

IMPORTANT:

- When implement is not attached, be sure the lever is turned back to Ⓐ position and restricting bolt is installed.
- Don't place the lever at the half-way, other than Ⓐ and Ⓑ positions. Or it may cause the technical problem on the machine.

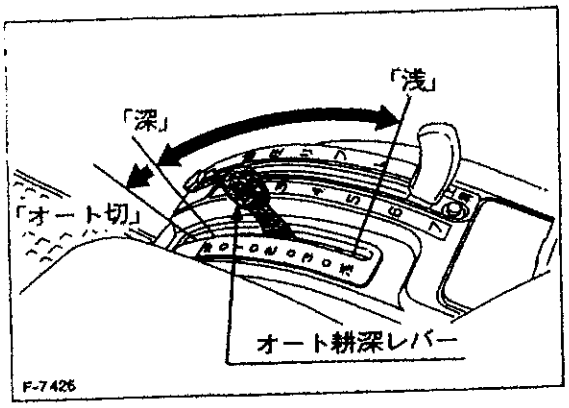
■ Hydraulic Control Unit Use Reference Chart

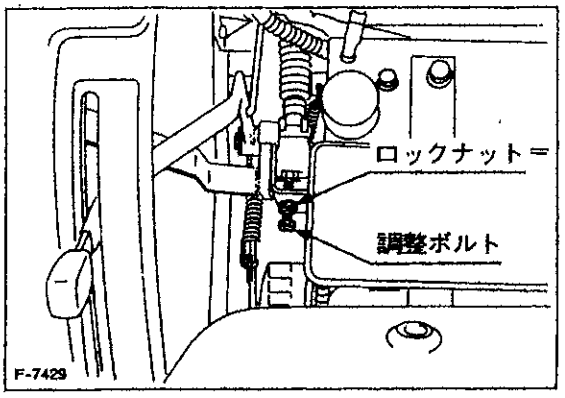
In order to handle the hydraulics properly, the operator must be familiar with the following.
Though this information may not be applicable to all types of implements and soil conditions, it is useful for general conditions.

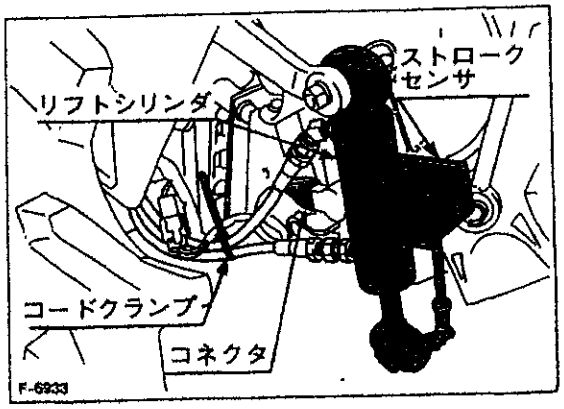
Implement	 Soil condition	 F-10961B Top link mounting holes	 F-10949E (1) Hydraulic control lever	 F-2016A Gauge Wheel	 F-10960B (1) Chack chains	Remarks
Moldboard plow	Light soil Medium soil heavy soil	(1) is standard. (2) is used only when there is some obstacle that prevents you from using the standard.	Hydraulic control	YES/NO	Loose	Adjust the check chains so that the implement can move 5 to 6 cm laterally. Check chains should be tight enough to prevent excessive implement movement when implement is in raised position.
Disc plow	—					
Harrower (spike, springtooth, disc type)	—					
Sub-soiler						
Weeder, ridger	—			YES	Tighten	
Earthmover, digger, scraper, manure fork, rear carrier				YES/NO		With implements with gauge wheels, lower the hydraulic control lever all way.
Mower (mid-and rear-mount type) Hayrake, tedder				NO		

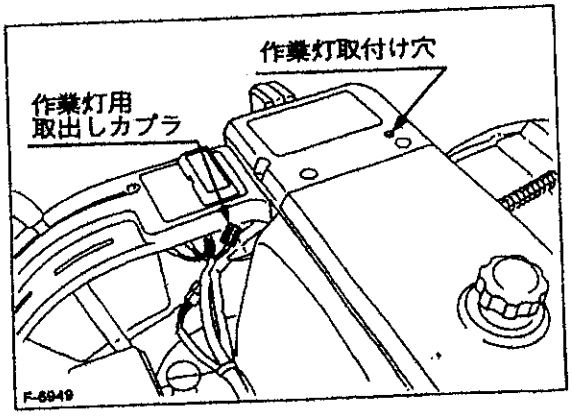
Secondary hydraulic system

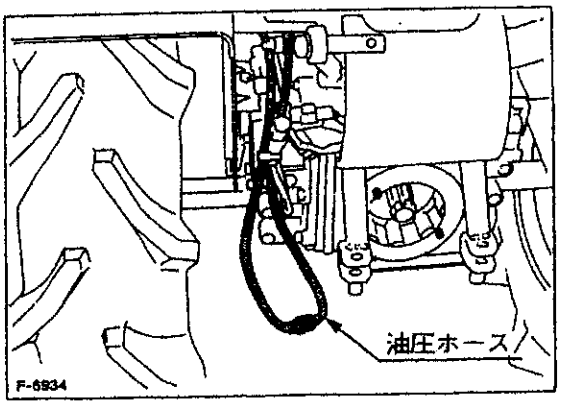
Used in Japan only.
For adjusting the height of the tiller,without the help of the wheels of the tiller.
The lever on the driver side is acting the cylinder of the hitch arm.
When not in use the system is by-passed: see picture below.











TIRES, WHEELS AND BALLAST

TIRES

WARNING
To avoid personal injury:
- **Do not attempt to mount a tire. This should be done by a qualified person with the proper equipment.**
- **Always maintain the correct tire pressure.**
  Do not inflate tires above the recommended pressure shown in the operator's manual.

IMPORTANT:
- Do not use tires larger than specified.
- When you intend to mount different size of tires from equipped ones, consult your dealer about front drive gear ratio for details.
  Excessive wear of tires may occur due to improper gear ratio.

■ Inflation Pressure

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

	Tire sizes	Inflation Pressure
Rear	7–16, 4PR	180 kPa (1.8 kgf/cm^2)
	8–16, 4PR	160 kPa (1.6 kgf/cm^2)
	212/80D–15, 4PR	160 kPa (1.6 kgf/cm^2)
Front	4.50–10, 4PR	220 kPa (2.2 kgf/cm^2)
	5–12, 4PR	240 kPa (2.4 kgf/cm^2)
	20×8.00–10, 4PR	160 kPa (1.6 kgf/cm^2)

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

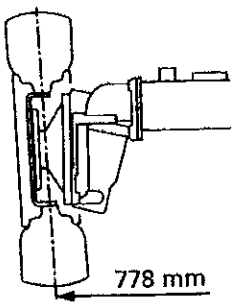
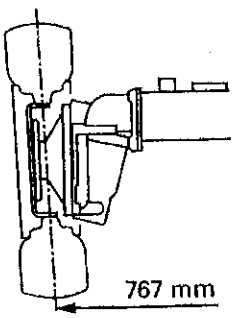
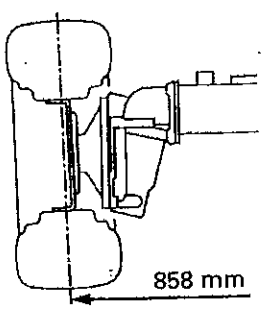
WHEEL ADJUSTMENT

CAUTION
To avoid personal injury:
- **When working on slopes or when working with trailer, set the wheel tread as wide as practical for maximum stability.**
- **Support tractor securely on stands before removing a wheel.**
- **Never operate tractor with a loose rim, wheel, or axle.**

■ Front Wheels

Front tread can not be adjusted.

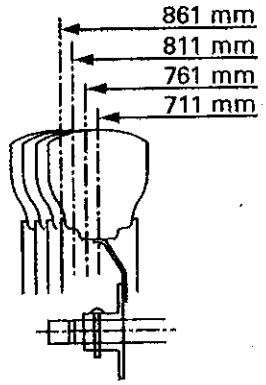
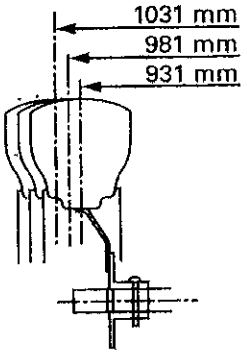
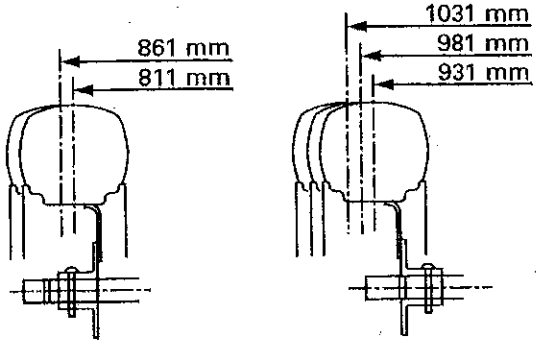
IMPORTANT:
- Do not turn front discs to obtain wider tread.

Models	Tires	Tread
B1410	4.5 – 10 Farm	
B1610	5 – 12 Farm	
B1410 B1610	20 × 8.00 – 10 Turf	

■ Rear Wheels

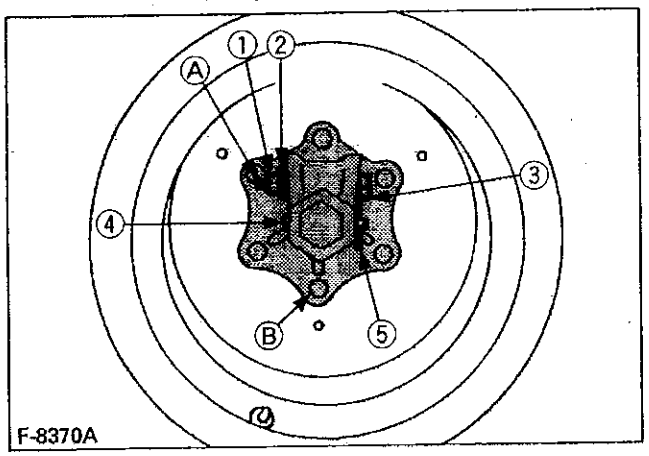
Rear tread width can be adjusted as shown with the standard equipped tires.
To change the tread width

1. Loosen the nut of cotter pin bolt.
2. Remove the snap pin and wheel hub pin.
3. Change the tread to the desired position.
4. Re-set the wheel hub pin, snap pin and cotter pin bolt.

Models	A 13	A 14	
Tires	7 – 16 Farm	8 – 16 Farm	212/80D – 15 Turf
	711 mm to 1031 mm	711 mm to 1031 mm	811 mm to 1031 mm
Tread			

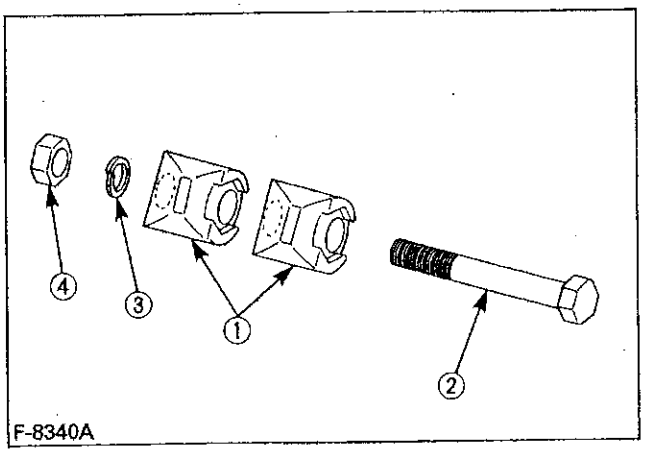
IMPORTANT:

- Always attach tires as shown in the drawings.
- If not attached as illustrated, transmission parts may be damaged.
- When re-fitting or adjusting a wheel, tighten the bolts to the following torques then recheck after driving the tractor 200m (200yards) and thereafter according to service interval. (See "MAINTENANCE" Section)



(1) Nut
(2) Spring washer
(3) Bolt
(4) Wheel hub pin
(5) Snap pin

(A) 123 to 147 N·m (12.6 to 15.0 kgf·m)
(B) 108 to 125 N·m (11.0 to 12.8 kgf·m)



(1) Cotter
(2) Bolt
(3) Spring washer
(4) Nut

IMPORTANT:

- Insert the bolt from the indented side of both cotter pins as shown.

BALLAST

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

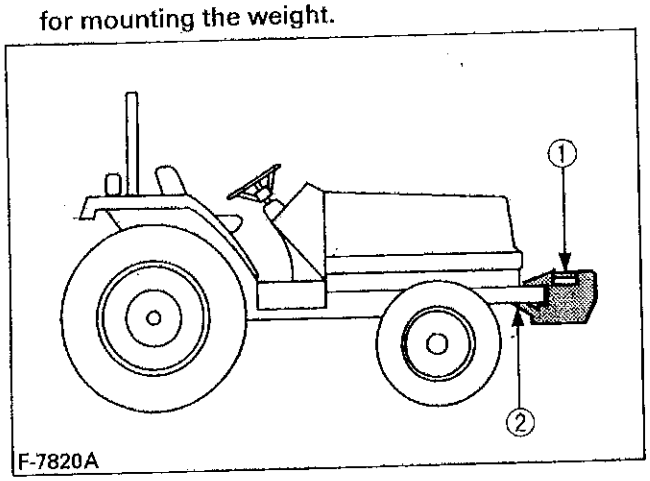
■ Front Ballast

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

◆ Front End Weights (option)

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

NOTE:
- Besides the weight, a mounting kit is also required for mounting the weight.



(1) Front end weights
(2) Bumper

IMPORTANT:
- Do not overload tires.
- Add no more weight than indicated in chart.

Maximum weight	25 kg × 3 pieces

■ Rear Ballast

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

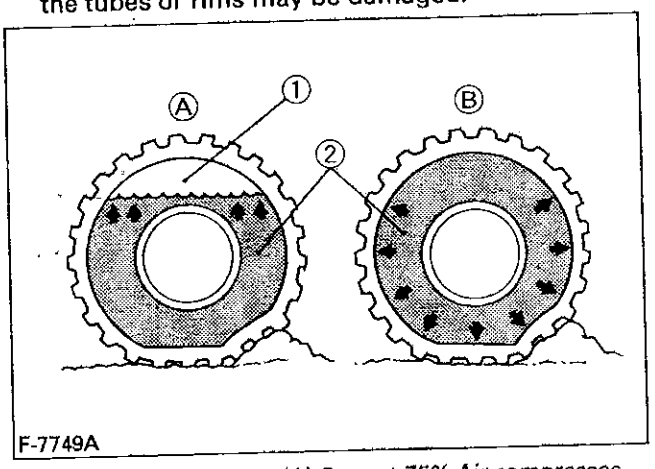
◆ Liquid Ballast in Rear Tires

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

Liquid weight per tire (75 Percent filled)

Tire sizes	
7-16	23 kg
8-16	31 kg

IMPORTANT:
- Do not fill tires with water and anti-freeze more than 75% of full capacity (to the valve stem level).
- Do not fill tires with calcium chloride solution, or the tubes or rims may be damaged.



(1) Air
(2) Water
(A) Correct-75% Air compresses like a cushion
(B) Incorrect-100% Full Water can not be compressed

MAINTENANCE

SERVICE INTERVALS

No.	Items	Period	Indication on hour meter															Since then
			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
1	Engine start system	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr
2	Greasing	—	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr
3	Wheel bolt torque	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr
4	Battery condition	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr
5	Engine oil	Change	◎	○		○		○		○		○		○		○		○	every 100 Hr
6	Fan belt	Adjust		○		○		○		○		○		○		○		○	every 100 Hr
7	Clutch	Adjust		○		○		○		○		○		○		○		○	every 100 Hr
8	Brake	Adjust		○		○		○		○		○		○		○		○	every 100 Hr
9	Secondary brake (if equipped)	Check		○		○		○		○		○		○		○		○	every 100 Hr
10	Air cleaner element [Single Type]	Clean		○		○		○		○		○		○		○		○	every 100 Hr *
		Replace																	every 1 year
11	Air cleaner element [Double Type] Primary element	Clean		○		○		○		○		○		○		○		○	every 100 Hr *
		Replace																	every 1 year
	Secondary element	Replace																	every 1 year
12	Fuel line	Check		○		○		○		○		○		○		○		○	every 100 Hr
		Replace																	every 2 years
13	Fuel filter element	Clean		○		○		○		○		○		○		○		○	every 100 Hr
		Replace								○								○	every 400 Hr
14	Engine oil filter	Replace	◎			○				○				○				○	every 200 Hr
15	Toe-in	Check				○				○				○				○	every 200 Hr
16	Radiator hose and clamp	Check				○				○				○				○	every 200 Hr
		Replace																	every 2 years
17	Transmission oil filter	Replace	◎					○						○					every 300 Hr
18	Transmission fluid	Change	◎					○						○					every 300 Hr
19	Front axle case oil	Change						○						○					every 300 Hr
20	Front axle pivot	Adjust								○								○	every 400 Hr
21	Engine valve clearance	Adjust																○	every 800 Hr **
22	Cooling system	Flush																	every 2 years
23	Coolant	Change																	every 2 years
24	Fuel system	Bleed																	Service as required
25	Clutch housing water	Drain																	
26	Fuse	Replace																	
27	Light bulb	Replace																	

IMPORTANT:

- The jobs indicated by ◎must be done by all means 50 hours after the break-in respectively.

* Air cleaner should be cleaned more often in dusty conditions than in normal conditions.

** Consult your local KUBOTA Dealer for this service.

LUBRICANTS

<table>
<tr><th rowspan="2">No.</th><th rowspan="2">Locations</th><th>Capacities</th><th colspan="2" rowspan="2">Lubricants</th></tr>
<tr><th></th></tr>
<tr><td>1</td><td>Fuel</td><td>13 L</td><td colspan="2">No.2-D diesel fuel
No.1-D diesel fuel if temperature is below -10°C</td></tr>
<tr><td>2</td><td>Coolant</td><td>2.6 L</td><td colspan="2">Fresh clean water with anti-freeze</td></tr>
<tr><td>3</td><td>Engine crankcase
(with filter)</td><td>2.4 L</td><td colspan="2">Engine oil: API Service Classification CC or CD
<table><tr><td>Above 25°C</td><td>SAE30, SAE10W-30 or 10W-40</td></tr><tr><td>0 to 25°C</td><td>SAE20, SAE10W-30 or 10W-40</td></tr><tr><td>Below 0°C</td><td>SAE10W, SAE10W-30 or 10W-40</td></tr></table></td></tr>
<tr><td>4</td><td>Transmission case</td><td>10.5 L</td><td colspan="2">KUBOTA UDT or SUPER UDT fluid*</td></tr>
<tr><td>5</td><td>Front axle case</td><td>3.4 L</td><td colspan="2">KUBOTA UDT or SUPER UDT fluid* or
SAE 80-SAE 90 gear oil</td></tr>
<tr><td rowspan="7">6</td><td>Greasing</td><td>No. of greasing points</td><td>Capacity</td><td>Type of grease</td></tr>
<tr><td>Brake pedal</td><td>1</td><td rowspan="5">Until grease overflows.</td><td rowspan="6">Multipurpose type grease</td></tr>
<tr><td>Clutch pedal</td><td>1</td></tr>
<tr><td>Brake pedal shaft</td><td>1</td></tr>
<tr><td>Secondary brake pedal
(if equipped)</td><td>1</td></tr>
<tr><td>Lift rod</td><td>1</td></tr>
<tr><td>Battery terminal</td><td>2</td><td>Moderate amount</td></tr>
</table>

NOTE: * KUBOTA UDT or SUPER UDT fluid···KUBOTA Original Transmission hydraulic fluid

NOTE:

- Engine oil:
  Oil used in the engine should have an American Petroleum Institute (API) service classification and Proper SAE Engine Oil according to the ambient temperatures as shown above:

- Transmission oil:
  The oil used to lubricate the transmission is also used as hydraulic fluid. To insure proper operation of the hydraulic system and complete lubrication of the transmission, it is important that a multi-grade transmission fluid be used in this system. We recommend the use of **KUBOTA SUPER UDT fluid** for optimum protection and performance. (Consult your local KUBOTA Dealer for further detail.)
  Do not mix different brands or grades.

- Indicated capacity of water and oil are manufacturer's estimate.

PERIODIC SERVICE

DAILY CHECK

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

CAUTION
To avoid personal injury:
- **Be sure to check and service the tractor on a flat place with the engine shut off and the parking brake "ON".**

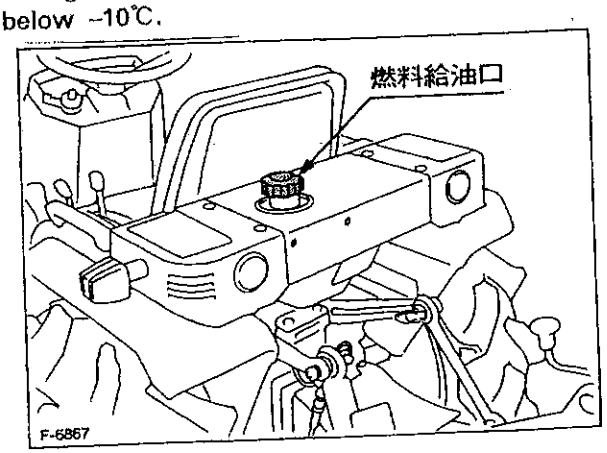
Walk Around Inspection

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

Checking and Refueling

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

1. Check the amount of fuel by fuel gauge.
2. Fill fuel tank when fuel gauge shows 1/4 or less fuel in tank.
3. Use grade No.2-Diesel fuel at temperatures above –10℃.
   Use grade No.1-Diesel fuel at temperatures below –10℃.



(2) Fuel tank cap

Fuel tank capacity	13 L

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

NOTE:
- No.2-D is a distillate fuel of lower volatility for engines in industrial and heavy mobile service.
- Grade of Diesel Fuel Oil According to ASTM D975 (SAE J313 JUN87).

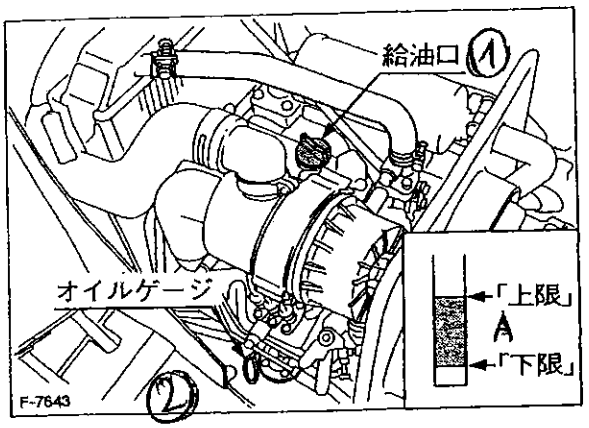
Flash Point °C	Water and Sediment, volume %	Carbon Residue on, 10 percent Residuum, %	Ash, weight %
Min	Max	Max	Max
52	0.05	0.35	0.01

Distillation Temperatures °C 90% Point		Viscosity Kinematic cSt or mm²/s at 40°C		Viscosity Saybolt, SUS at 100 °F		Sulfur, weight %	Copper Strip Corrosion	Cetane Number
Min	Max	Min	Max	Min	Max	Max	Max	Min
282	338	1.9	4.1	32.6	40.1	0.50	No. 3	40

■ Checking Engine Oil Level

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

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

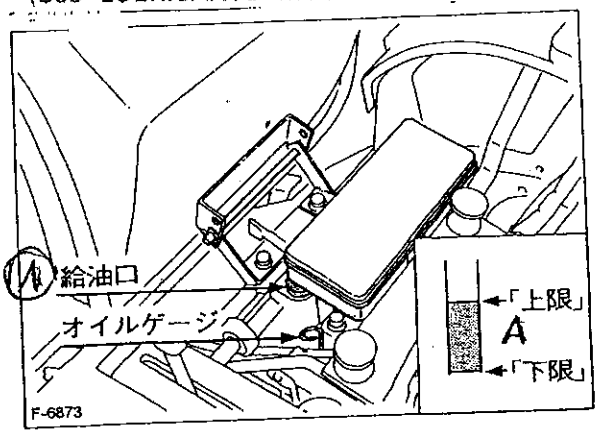


(1) Oil inlet (A) Oil level is acceptable within this range.
(2) Dipstick

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

■ Checking Transmission Fluid Level

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



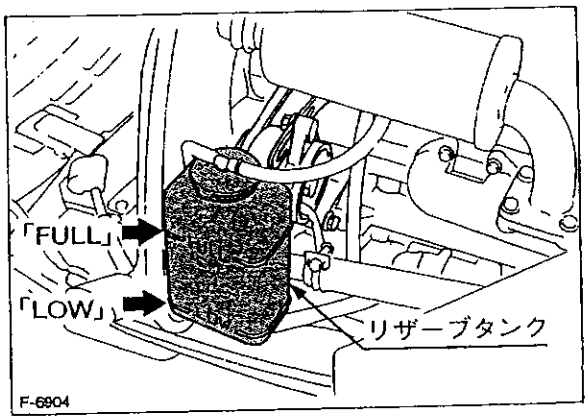
(1) Bouchon de remplissage

IMPORTANT:
- If oil level is low, do not run engine.

Checking Coolant Level

CAUTION
To avoid personal injury:
- **Do not remove the radiator cap while coolant is hot. When cool, slowly rotate cap to the first stop and allow sufficient time for excess pressure to escape before removing cap completely.**

1. Check to see that the coolant level is between the "FULL" and "LOW" marks of recovery tank.
2. When the coolant level drops due to evaporation, add water only up to the full level.
   In case of leakage, add anti-freeze and water in the specified mixing ratio up to the full level.
   (See "Flush Cooling System and Changing Coolant" in every 2 years maintenance.)



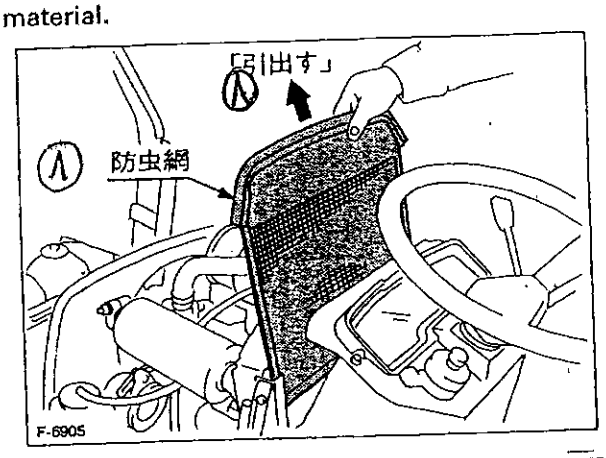
(1) Recovery tank *(A) "FULL"* *(B) "LOW"*

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

Cleaning Grill and Radiator Screen

CAUTION
To avoid personal injury:
- **Be sure to stop the engine before removing the screen.**

1. Check front grill and side screens to be sure they are clean from debris.
2. Detach the screen and remove all the foreign material.



(1) Radiator screen *(A) "DETACH"*

IMPORTANT:
- Grill and screen must be clean from debris to prevent engine from overheating and to allow good air intake for air cleaner.

■ Checking Brake Pedals and Clutch Pedal

1. Inspect the brake and clutch pedals for free travel, and smooth operation.
2. Adjust if incorrect measurement is found: (See "Adjusting Clutch and Brake Pedal" in every 100 hours maintenance.)

NOTE:
- Brake pedals should be equal when depressed.

■ Checking Gauges, Meter and Easy Checker™

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

■ Checking Head Light, Hazard Light etc.

1. Inspect the lights for broken bulbs and lenses.
2. Replace if broken.

■ Checking ROPS (if equipped)

1. Always check condition of ROPS attaching hardware before operating tractor.
2. Replace if damaged.

EVERY 50 HOURS

■ Checking Engine Start System

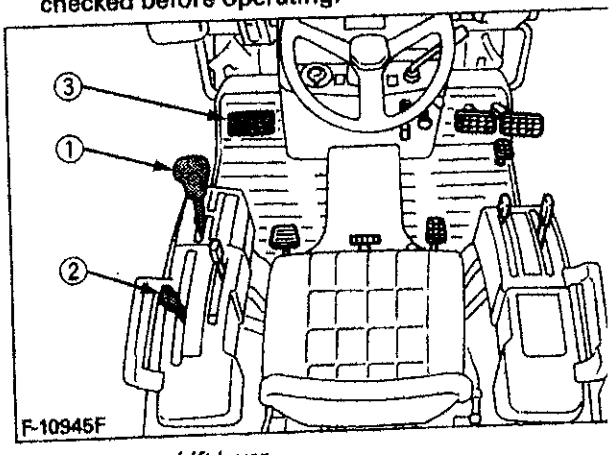
CAUTION
To avoid personal injury:
- **Do not allow anyone near the tractor while testing.**
- **If the tractor does not pass the test do not operate the tractor.**

◆ Preparation before testing
1. Sit on operator's seat.
2. Set the parking brake and stop the engine.
3. Shift the main gear shift lever to "NEUTRAL" position.
4. Shift the PTO gear shift lever to "OFF" position.
5. Fully depress the clutch pedal.

◆ Test 1:
1. Shift the main gear shift lever to "Desired" position.
2. Turn the key to "START" position.
3. The engine must not crank.

◆ Test 2:
1. Shift the main gear shift lever to "NEUTRAL" position.
2. Shift the PTO gear shift lever to "Desired" position.
3. Turn the key to "START" position.
4. The engine must not crank.

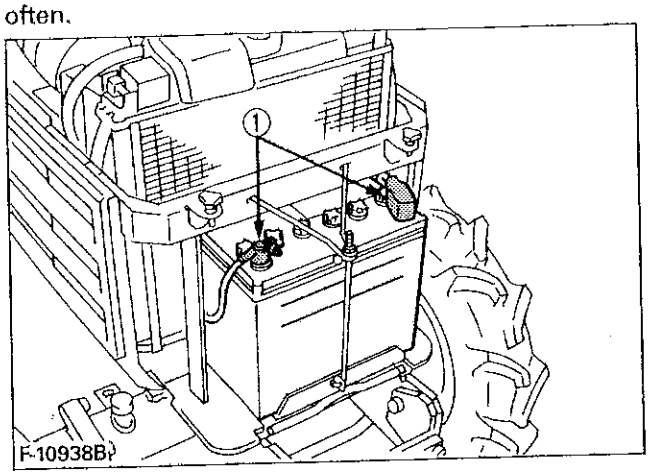
NOTE:
- If the engine cranks during any of these tests, consult your local KUBOTA Dealer to have unit checked before operating.



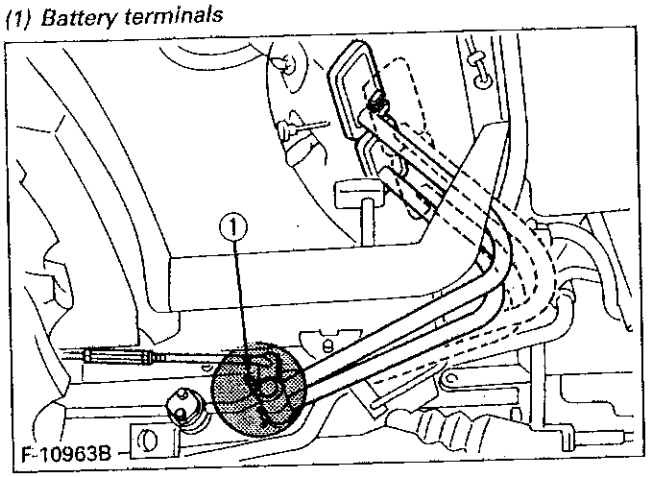
(1) Main gear shift lever
(2) PTO gear shift lever
(3) Clutch pedal

■ Lubricating Grease Fittings

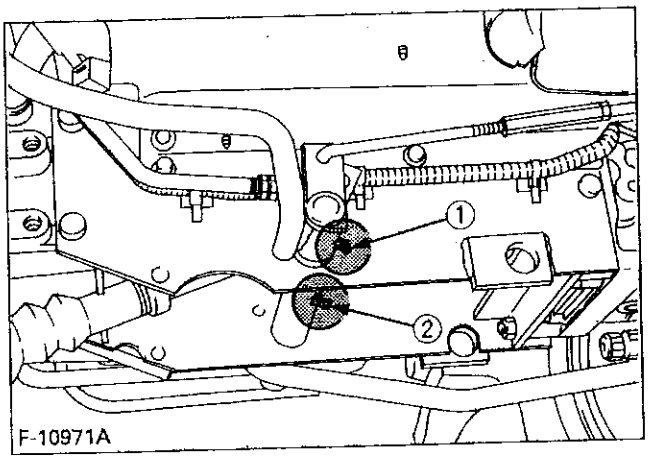
Apply a small amount of multipurpose grease to the following points every 50 hours:
If you operated the machine in extremely wet and muddy conditions, lubricate grease fittings more often.



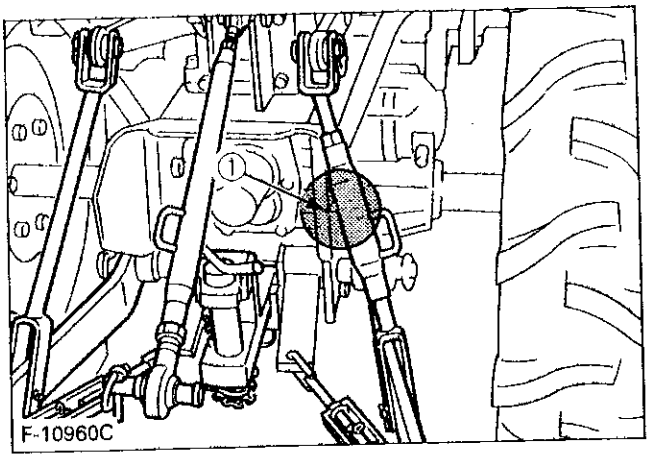
(1) Battery terminals



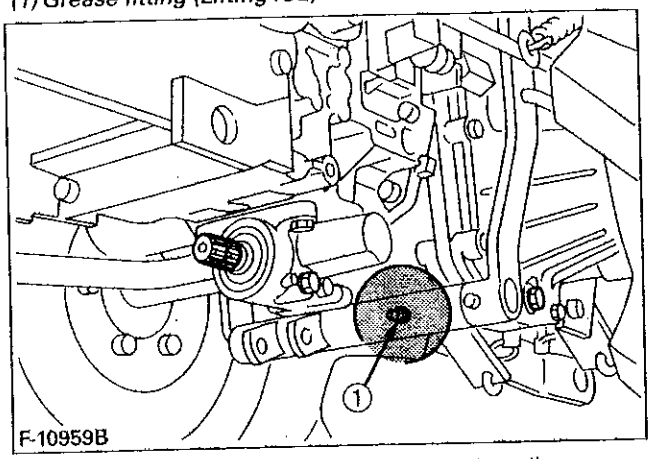
(1) Grease fitting (Brake pedal)



(1) Grease fitting (Clutch pedal)
(2) Grease fitting (Pedal shaft)



(1) Grease fitting (Lifting rod)

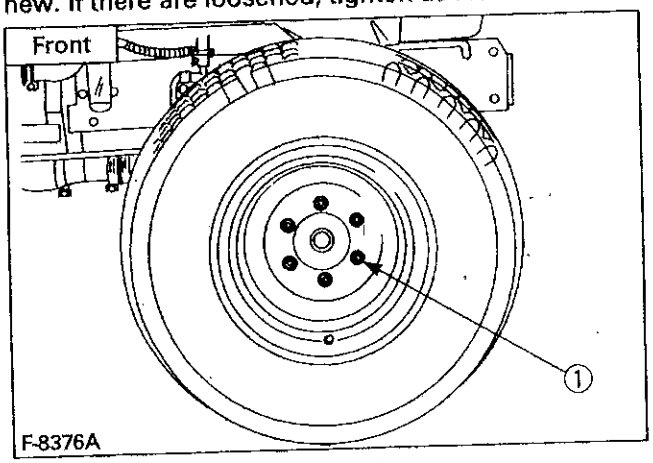


(1) Grease fitting (Secondary brake) (if equipped)

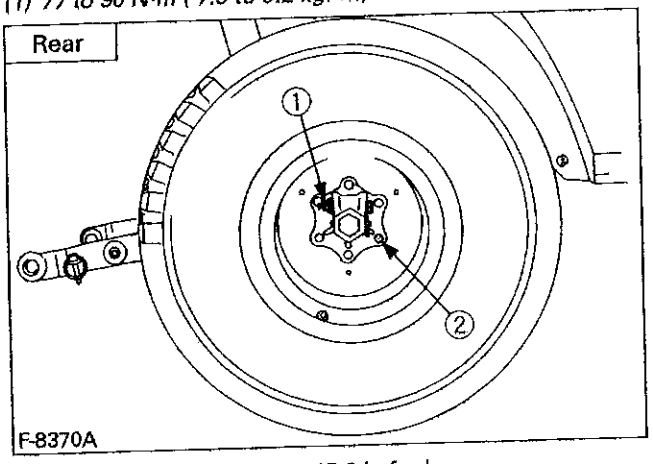
■ Checking Wheel Bolt Torque

CAUTION
To avoid personal injury:
- **Never operate tractor with a loose rim, wheel, or axle.**
- **Any time bolts and nuts are loosened, retighten to specified torque.**
- **Check wheel hub pin and snap pin for secure set.**

Check wheel bolts and nuts regularly especially when new. If there are loosened, tighten as follows.



(1) 77 to 90 N·m (7.9 to 9.2 kgf·m)

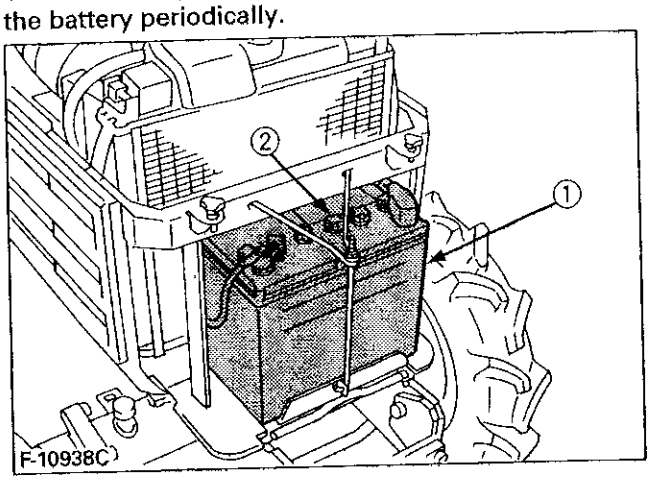


(1) 123 to 147 N·m (12.6 to 15.0 kgf·m)
(2) 108 to 125 N·m (11.0 to 12.8 kgf·m)

■ Battery

CAUTION
To avoid personal injury:
- **Never remove the vent caps while the engine is running.**
- **Keep electrolyte away from eyes, hands and clothes. If you are spattered with it, wash it away completely with water immediately and get medical attention.**
- **Wear eye protection and rubber gloves when working around the battery.**

Mishandling the battery shortens the service life and adds to maintenance costs.
The original battery is maintenance free, but needs some servicing.
If the battery is weak, the engine will be difficult to start and the lights will be dim. It is important to check the battery periodically.

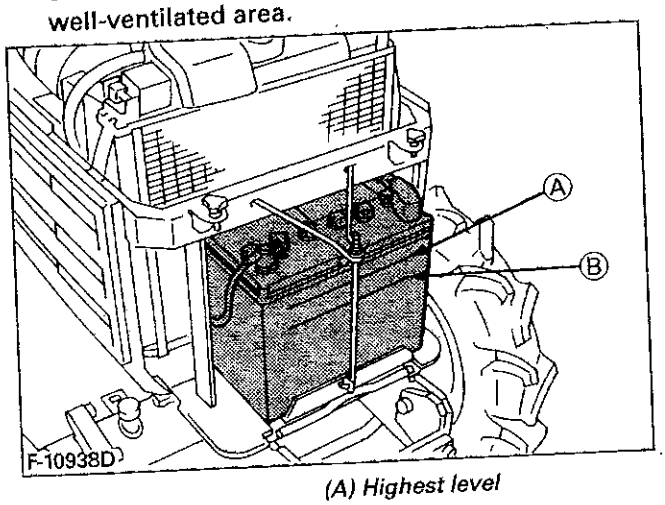


(1) Battery
(2) Vent cap

◆ **Battery Charging**

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

1. Make sure each electrolyte level is to the bottom of vent wells, if necessary add distilled water in a well-ventilated area.



(A) Highest level
(B) Lowest level

2. The water in the electrolyte evaporates during recharging. Liquid shortage damages the battery. Excessive liquid spills over and damages the tractor body.
3. To slow charge the battery, connect the battery positive terminal to the charger positive terminal and the negative to the negative, then recharge in the standard fashion.
4. A boost charge is only for emergencies. It will partially charge the battery at a high rate and in a short time.
   When using a boost-charged battery, it is necessary to recharge the battery as early as possible.
   Failure to do this will shorten the battery's service life.
5. When the specific gravity of electrolyte is between 1.27 and 1.29 , the charging is completed.
6. When exchanging an old battery for a new one, use battery of equal specification shown in **table 1.**

Table 1

Battery Type	Volts (V)	Capacity at 5H.R (A.H)
50B24L(S)-MF	12	36

Reserve Capacity (min)	Cold Cranking Amps	Normal Charging Rate (A)
71	390	4.5

◆ **Direction for Storage**
1. When storing the tractor for a long period, remove the battery from tractor, adjust the electrolyte to the proper level and store in a dry place out of direct sunlight.
2. The battery self-discharges while it is stored. Recharge it once every three months in hot seasons and once every six months in cold seasons.

■ Safety Label

A safety label which consists of six colored pictorial symbols is attached on the top of the original battery. The meaning of the symbols are:


NO smoking, no naked flames, no sparks


Shield eyes


Keep away from children


Battery acid


Note operator's manual


Explosive gas

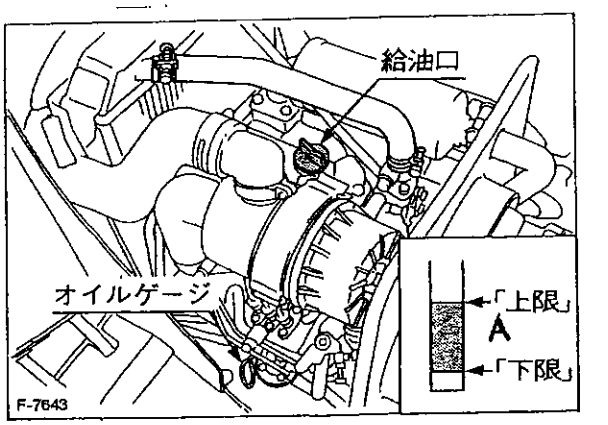
EVERY 100 HOURS

■ Changing Engine Oil

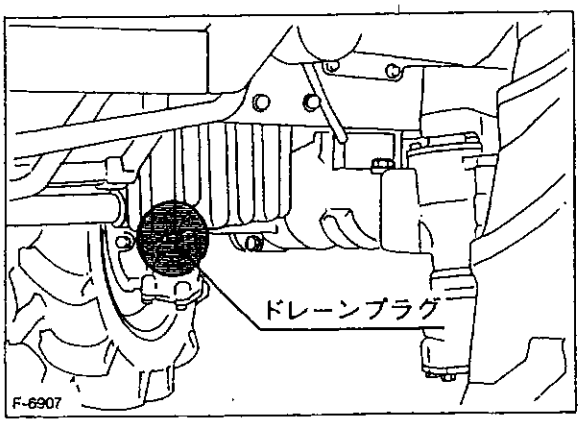
CAUTION
To avoid personal injury:
- **Be sure to stop the engine before changing the oil.**
- **Allow engine to cool down sufficiently, oil can be hot and can burn.**

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

Oil capacity with filter	2.4 L



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

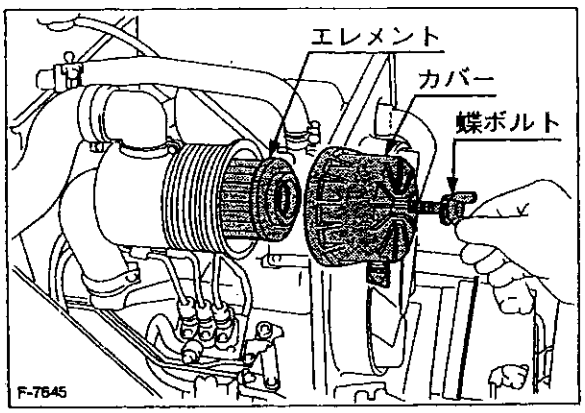


(1) Drain plug

■ Cleaning Air Cleaner Element [Single Element Type]

1. Remove the element.
2. Clean the element:
   1) When dry dust adheres to the element, blow compressed air from the inside, turning the element. Pressure of compressed air must be under 686kPa (7kgf/cm², 99psi).
   2) When carbon or oil adheres to the element soak the element in detergent for 15 minutes then wash it several times in water, rinse with clean water and dry it naturally. After element is fully dried, inspect inside of the element with a light and check if it is damaged or not (refering to the instructions on the label attached to the case.)
3. Replace air cleaner element:
   Once yearly or after every sixth cleaning whichever comes first.

NOTE:
- Check to see if the evacuator valve is blocked with dust.



(1) Element
(2) Cover
(3) Evacuator valve

IMPORTANT:
- The air cleaner uses a dry element, never apply oil
- Do not run the engine with filter element removed
- Be sure to refit the dust cup with the arrow ⬆ (or the rear) upright. If the dust cup is improperly fitted, dust passes by the baffle and directly adhere to the element.

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

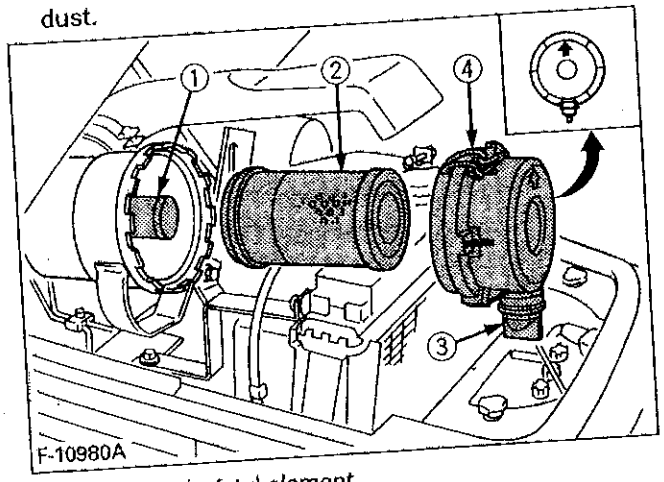
MODEL - B1610 -

■ Cleaning Air Cleaner Primary Element [Double Element Type]

1. Remove the air cleaner cover and primary element.
2. Clean the primary element :
   1) When dry dust adheres to the element, blow compressed air from the inside, turning the element. Pressure of compressed air must be under 686kPa (7kgf/cm², 99 psi).
   2) When carbon or oil adheres to the element, soak the element in detergent for 15 minutes then wash it several times in water, rinse with clean water and dry it naturally. After element is fully dried, inspect inside of the element with a light and check if it is damaged or not.
3. Replace air cleaner primary element:
   Once yearly or after every sixth cleaning, whichever comes first.

NOTE:

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



(1) Secondary (safety) element
(2) Primary element
(3) Evacuator valve
(4) Cover

IMPORTANT:

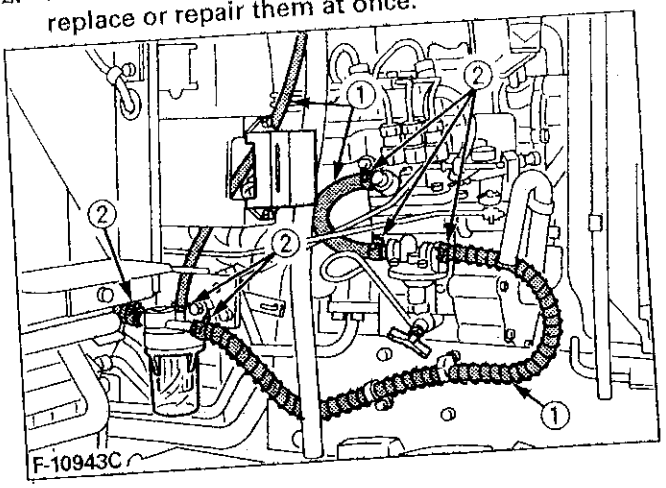
- The air cleaner uses a dry element, never apply oil.
- Do not run the engine with filter element removed.
- Be sure to refit the dust cup with the arrow ⬆ (on the rear of cup) upright. If the dust cup is improperly fitted, evacuator valve will not function and dust will adhere to the element.
- Do not touch the secondary element except in cases where replacing is required.
  (See "EVERY 1 YEAR" in Periodic service section.)

◆ Evacuator Valve

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

■ Checking Fuel Line

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



(1) Fuel lines
(2) Clamp bands

NOTE:

- If the fuel line is removed, be sure to properly bleed the fuel system.
  (See "SERVICE AS REQUIRED" in Periodic service section.)

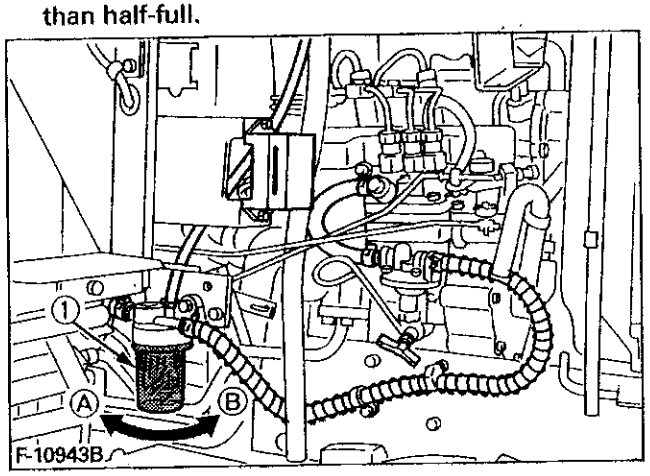
■ Cleaning Fuel Filter

This job should not be done in the field, but in a clean place.

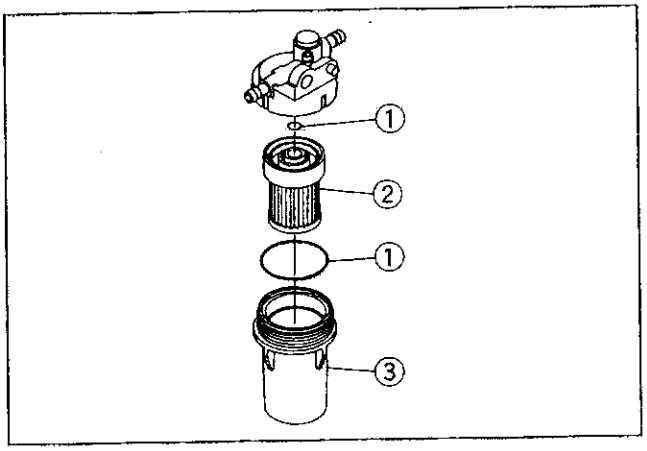
1. Loosen and remove the filter bowl, and rinse the inside with kerosene.
2. Take out the element and dip it in the kerosene to rinse.
3. After cleaning, reassemble the fuel filter, keeping out dust and dirt.
4. Bleed the fuel system.
   (See "SERVICE AS REQUIRED" in Periodic service section.)

NOTE:

- When the fuel filter bowl has been removed, fuel stops flowing from the fuel tank. If the fuel tank is almost full, however, the fuel will flow back from the fuel return pipe to the fuel filter. Before the above checking, make sure the fuel tank is less than half-full.



(1) Fuel filter bowl *(A) "LOOSEN"* *(B) "TIGHTEN"*



(1) O ring
(2) Filter element
(3) Filter bowl

IMPORTANT:

- If dust and dirt enters the fuel system, the fuel pump and injection nozzles are subject to premature wear. To prevent this, be sure to clean the fuel filter bowl periodically.

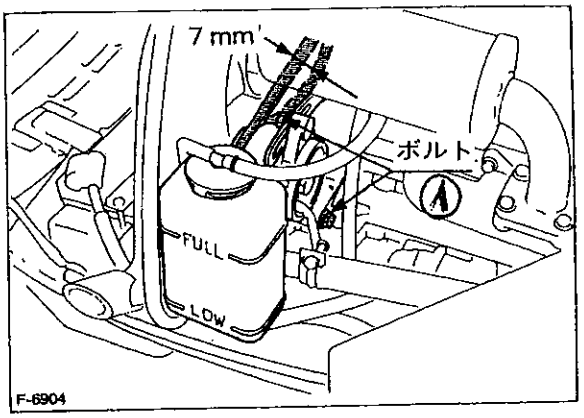
■ Adjusting Fanbelt Tension

CAUTION
To avoid personal injury:

- **Be sure to stop the engine before checking belt tension.**

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

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

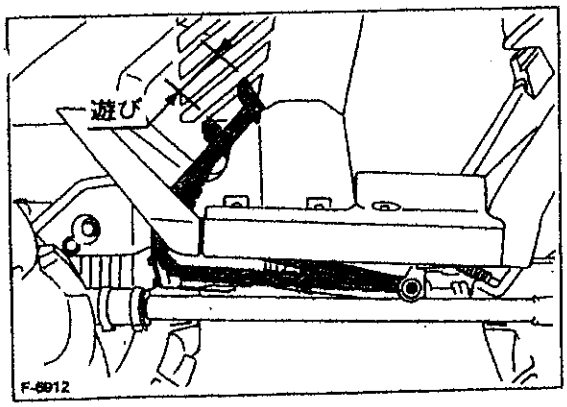


(1) Bolt *(A) Check the belt tension* *(B) To tighten*

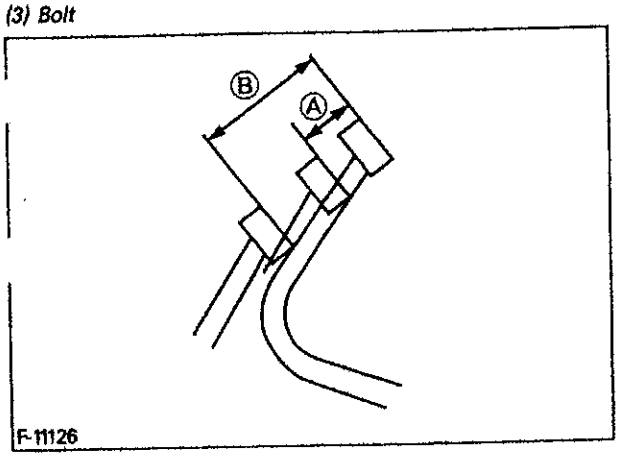
■ Adjusting Clutch Pedal

Proper clutch pedal free travel	15 to 25 mm on the pedal (Pedal stroke: 105 to 120mm)

1. Stop the engine and remove the key.
2. Slightly depress the clutch pedal and measure free travel (A) at the top of pedal stroke.
3. If adjustment is needed, loosen the lock nut and turn the turnbuckle to adjust the rod length within acceptable limits.
   Retighten the lock nut.
4. After adjusting, check the clutch pedal stroke (B). If adjustment is needed, adjust the stroke (B) with bolt (3).



(1) Turnbuckle
(2) Lock nut
(3) Bolt
(A) Free travel



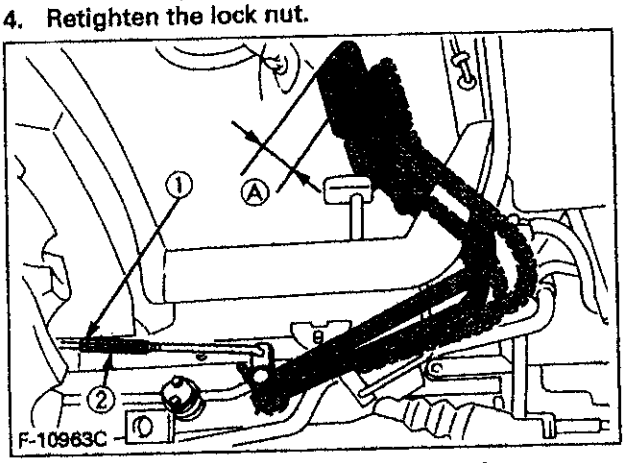
(A) "FREE TRAVEL"
(B) "CLUTCH PEDAL STROKE"

■ Adjusting Brake Pedal

CAUTION
To avoid personal injury:
- **Stop the engine and chock the wheels before checking brake pedal.**

Proper brake pedal free travel	30 to 40 mm on the pedal
	Keep the free travel in the right and left brake pedals equal.

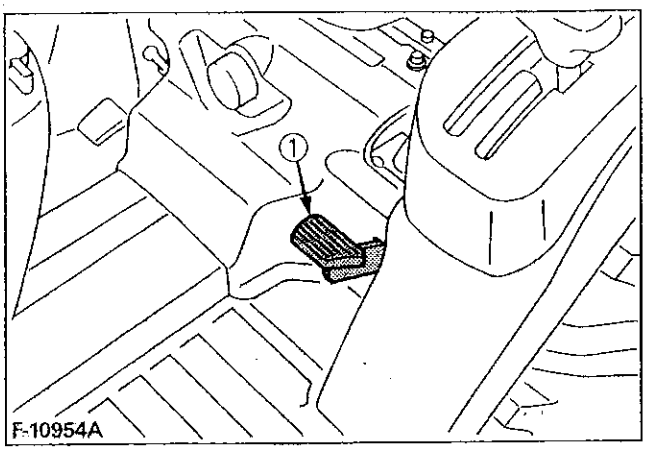
1. Release the parking brake.
2. Slightly depress the brake pedals and measure free travel (A) at the top of pedal stroke.
3. If adjustment is needed, loosen the lock nut and turn the turnbuckle to adjust the rod length within acceptable limits.
4. Retighten the lock nut.



(1) Lock nut
(2) Turnbuckle
(A) Free travel

■ Checking Secondary Brake Pedal (if equipped)

Check if the tractor stops on a steep hill by depressing the secondary brake pedal only.
If not, consult your local KUBOTA Dealer for this service.

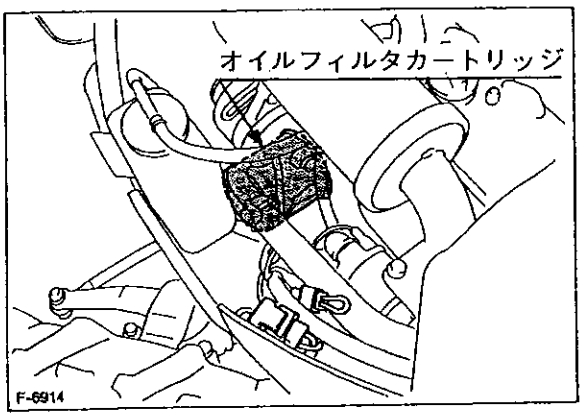


EVERY 200 HOURS

■ Replacing Engine Oil Filter

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

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



(1) Engine oil filter

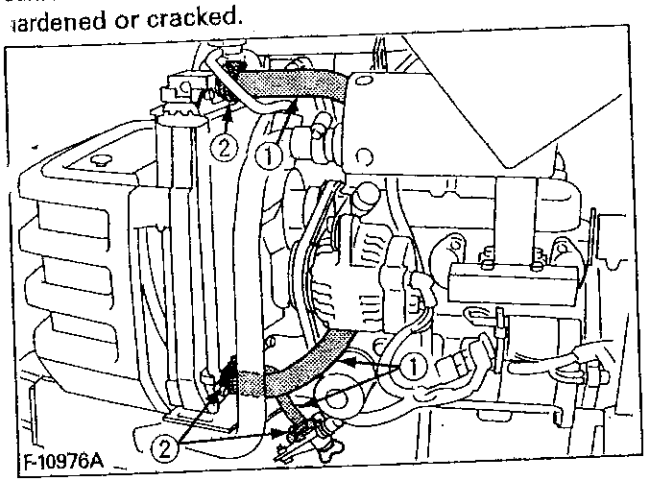
IMPORTANT:
- To prevent serious damage to the engine, use only a genuine KUBOTA filter.

■ Checking Radiator Hose and Clamp

Check to see if radiator hoses are properly fixed every 200 hours of operation or six months, whichever comes first.

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

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



(1) Radiator hose (5 hoses)
(2) Clamp band (10 bands)

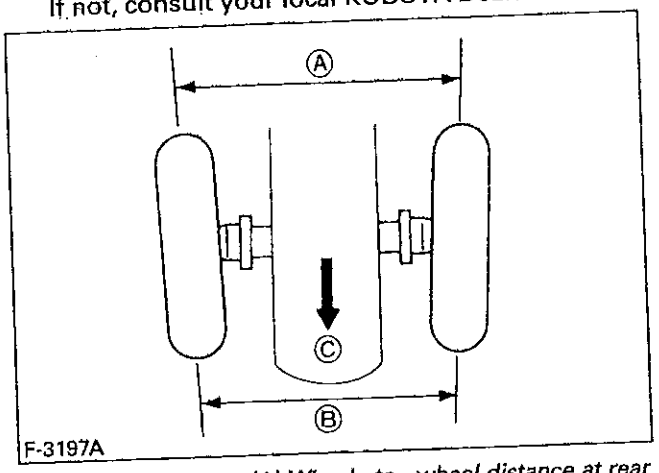
◆ Precaution at Overheating

Take the following actions in the event the coolant temperature be nearly or more than the boiling point, what is called "Overheating".

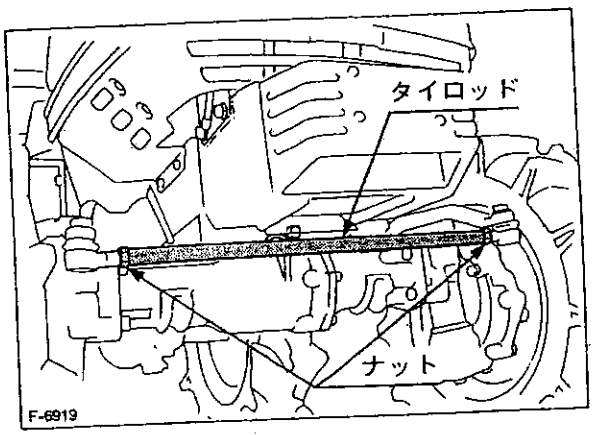
1. Stop the machine operation in a safe place and keep the engine unloaded idling.
2. Don't stop the engine suddenly, but stop it after about 5 minutes of unloaded idling.
3. Keep yourself well away from the machine for further 10 minutes or while the steam blown out.
4. Checking that there gets no danger such as burn, get rid of the causes of overheating according to the manual, see "Troubleshooting" section, and then, start again the engine.

■ Checking Toe-in

1. Park tractor on a flat place.
2. Turn steering wheel so front wheels are in the straight ahead position.
3. Lower the implement, lock the parking brake and stop the engine.
4. Measure distance between tire beads at front of tire, hub height.
5. Measure distance between tire beads at rear of tire, hub height.
6. Front distance should be 0 to 20mm less than rear distance.
   If not, consult your local KUBOTA Dealer.



(A) Wheel - to - wheel distance at rear
(B) Wheel - to - wheel distance at front
(C) "FRONT"



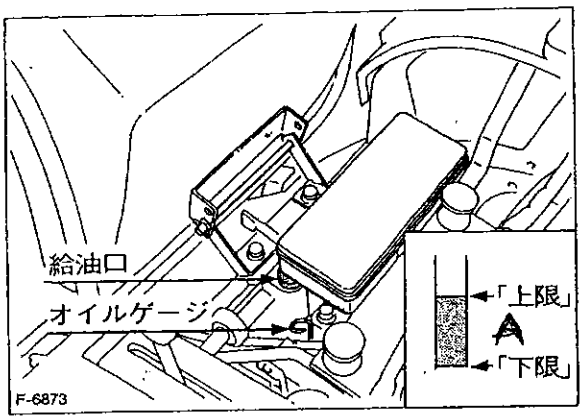
EVERY 300 HOURS

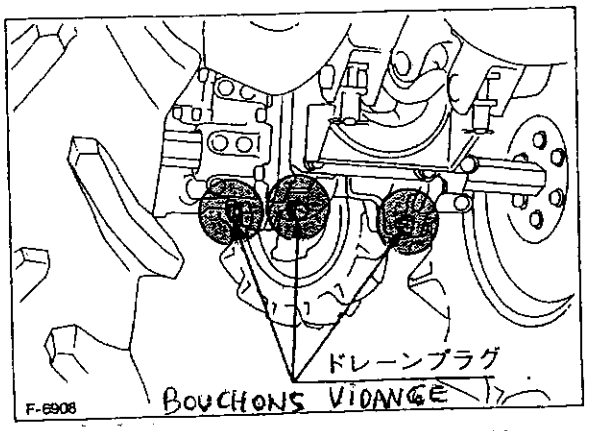
■ Changing Transmission Fluid

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

1. To drain the used oil, remove the drain plug at the bottom of the transmission case and drain the oil completely into the oil pan.
2. After draining reinstall the drain plug.
3. Fill with the new KUBOTA UDT or SUPER UDT fluid up to the upper notch on the dipstick. (See "LUBRICANTS" in Maintenance Section)
4. After running the engine for a few minutes, stop it and check the oil level again; add oil to prescribed level.

Oil capacity	10.5 L





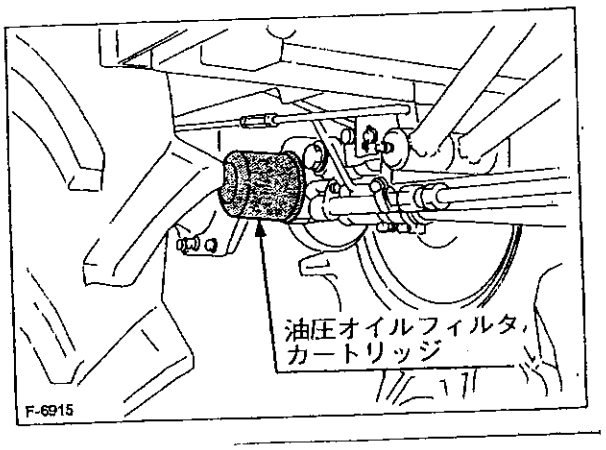
(1) Dipstick (A) Oil level is acceptable within this range.

IMPORTANT:
- Do not operate the tractor immediately after changing the transmission fluid.
  Follow these air bleeding procedures.
  1. Set the hydraulic control lever to the down position, fully depress and hold the clutch pedal, start the engine.
  2. Operate the engine at low idle speed and continue to depress the clutch pedal for at least 30 seconds to bleed air from the system.
     This is important to prevent the hydraulic pump from getting seized.
  3. Run the engine at medium speed for a few minutes to prevent damage to the transmission.

■ Replacing Transmission Oil Filter

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

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



(1) Filter

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

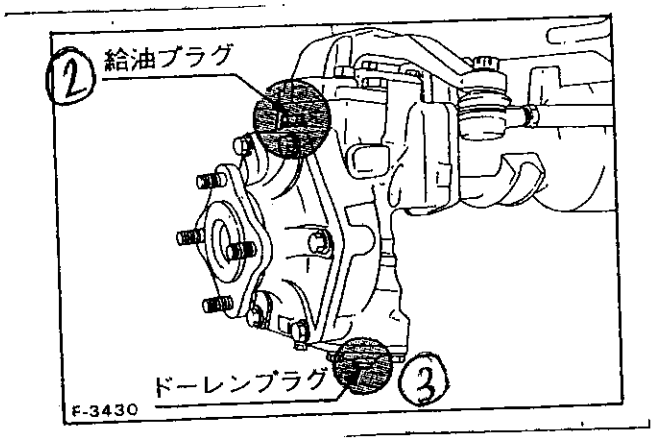
■ Changing Front Axle Case Oil

1. To drain the used oil, remove the right and left drain plugs and filling plug at the front axle case and drain the oil completely into the oil pan.
2. After draining reinstall the drain plugs.
3. Remove the right and left breather plugs.
4. Fill with new oil up to the upper notch on the dipstick.
   (See "LUBRICANTS" in Maintenance Section)

IMPORTANT:
- After ten minutes, check the oil level again; add oil to prescribed level.

5. After filling reinstall the filling plug and breather plug.

Oil capacity	3.4 L



(1) Breather plug
(2) Filling plug with dipstick
(3) Drain plug
(A) Oil level is acceptable within this range

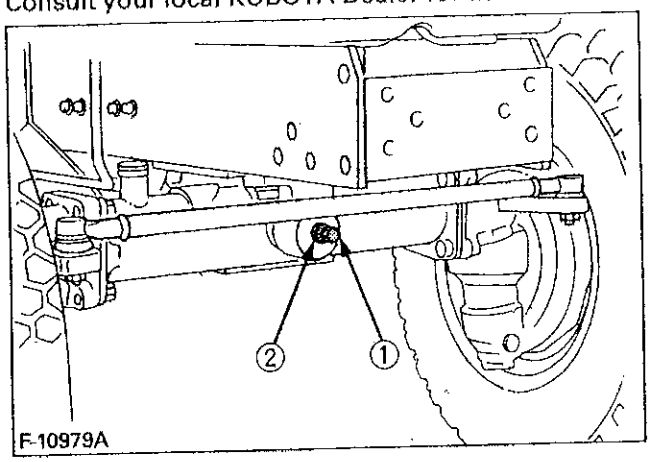
EVERY 400 HOURS

■ Adjusting Front Axle Pivot

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

◆ **Adjusting procedure**

Consult your local KUBOTA Dealer for this service.



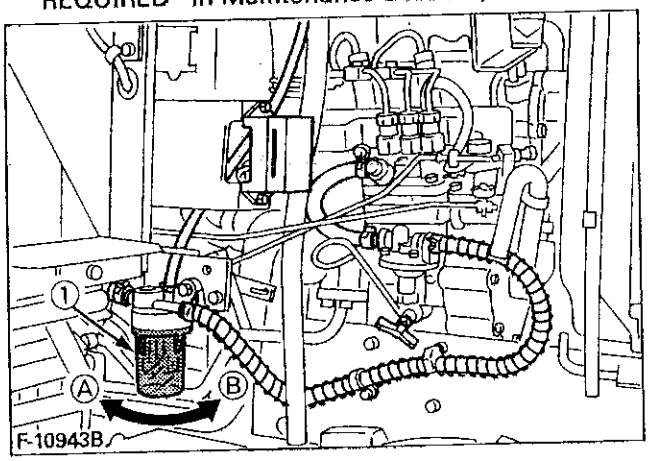
(1) Adjusting screw
(2) Lock nut

■ Replacing Fuel Filter Element

(See "EVERY 100 HOURS" in periodic service section.)

IMPORTANT:

- Once the fuel filter element has been replaced, be sure to bleed the fuel system. (See "SERVICE AS REQUIRED" in Maintenance Section.)



(1) fuel filter cup
(A) "LOOSEN"
(B) "TIGHTEN"

EVERY 800 HOURS

■ Adjusting Engine Valve Clearance

Consult your local KUBOTA Dealer for this service.

EVERY 1 YEAR

■ Replacing Air Cleaner Element [Single type]

(See "EVERY 100 HOURS" in periodic service section.)

■ Replacing Air Cleaner Primary Element and Secondary Element [Double type]

(See "EVERY 100 HOURS" in periodic service section.)

EVERY 2 YEAR

■ Flush Cooling System and Changing Coolant

CAUTION
To avoid personal injury:
- **Do not remove the radiator cap when the engine is hot. Then loosen cap slightly to the stop to relieve any excess pressure before removing cap completely.**

1. Stop the engine and let cool down.
2. To drain the coolant, open the radiator drain cock and remove the radiator drain plug and remove radiator cap. The radiator cap must be removed to completely drain the coolant.
3. After all coolant is drained, close the drain cock and install the drain plug.
4. Fill with clean water and cooling system cleaner.
5. Follow directions of the cleaner instruction.
6. After flushing, fill with clean water and anti-freeze until the coolant level is just below the port. Install the radiator cap securely.
7. Fill with coolant up to the "FULL" mark on the recovery tank.
8. Start and operate the engine for few minutes.
9. Stop the engine and let cool.
10. Check coolant level of recovery tank and add coolant if necessary.

Coolant capacity	2.6 L

IMPORTANT:
- Do not start engine without coolant.
- Use clean, fresh water and anti-freeze to fill the radiator and recovery tank.
- When the anti-freeze is mixed with water, the anti-freeze mixing ratio must be less than 50%.
- Securely tighten radiator cap. If the cap is loose or improperly fitted, water may leak out and the engine could overheat.

■ Anti-Freeze

If cooling water freezes, it can damage the cylinders and radiator. It is necessary, if the ambient temperature falls below 0℃, to remove cooling water after operating or to add anti-freeze to it.

1. There are two types of anti-freeze available; use the permanent type (PT) for this engine.
2. Before adding anti-freeze for the first time, clean the radiator interior by pouring fresh water and draining it a few times.
3. The procedure for mixing of water and anti-freeze differs according to the make of the anti-freeze and the ambient temperature, basically it should be referred to SAE J1034 standard, more specifically also to SAE J814c.
4. Mix the anti-freeze with water, and then fill into the radiator.

Vol % Anti-freeze	Freezing Point	Boiling Point*
	°C	°C
40	−24	106
50	−37	108

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

NOTE:

- The above data represents industry standards that necessitate a minimum glycol content in the concentrated anti-freeze.
- When the cooling water level drops due to evaporation, add water only. In case of leakage, add anti-freeze and water in the specified mixing ratio.
- Anti-freeze absorbs moisture. Keep unused anti-freeze in a tightly sealed container.
- Do not use radiator cleaning agents when anti-freeze has been added to the cooling water. (Anti-freeze contains an anti-corrosive agent, which will react with the radiator cleaning agent forming sludge which will affect the engine parts.)

■ Replacing Radiator Hose (Water pipes)

Replace the hoses and clamps.
(See "Checking Radiator Hose and Clamp" in every 200 hours maintenance.)

■ Replacing Fuel Hose

Replace the hoses and clamps.
(See "Checking Fuel Line" in every 100 hours maintenance.)

SERVICE AS REQUIRED

■ Bleeding Fuel System

Air must be removed:

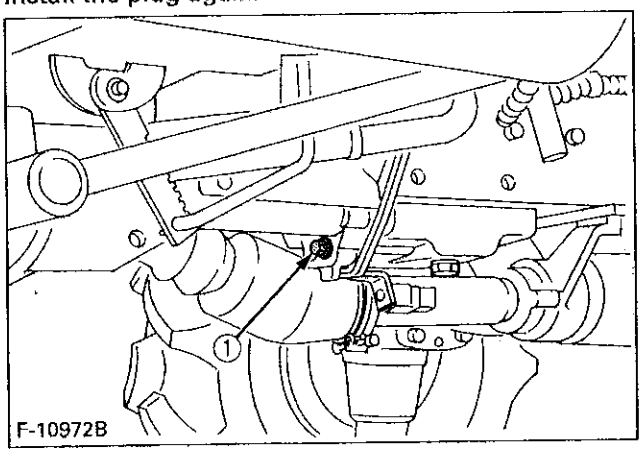
1. When the fuel filter or lines are removed.
2. When tank is completely empty.
3. After the tractor has not been used for a long period of time.

◆ **Bleeding procedure is as follows:**

1. Fill the fuel tank with fuel.
2. Start the engine and run for about 30 seconds, and then stop the engine.

■ Draining Clutch Housing Water

The tractor is equipped with drain plug under the clutch housing.
After operating in rain, snow or tractor has been washed, water may get into the clutch housing. Remove the drain plug and drain the water, then install the plug again.



(1) Water drain plug

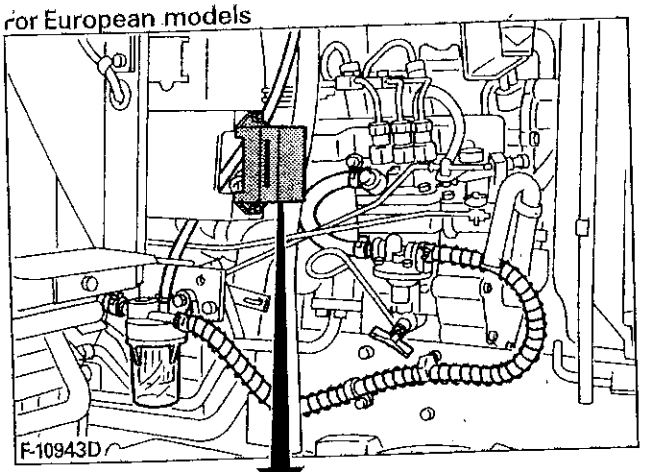
■ Replacing Fuse

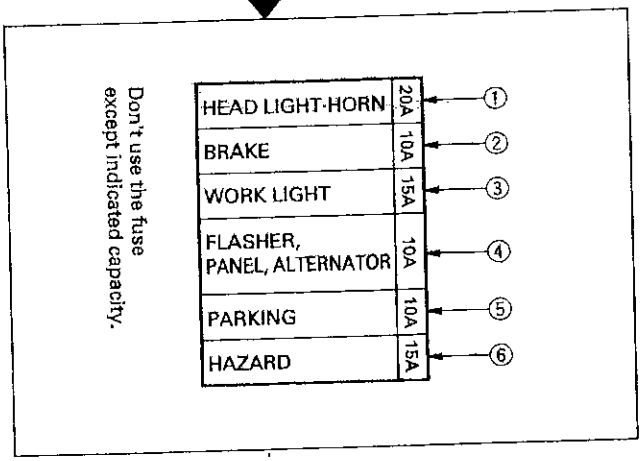
The tractor electrical system is protected from potential damage by fuses.
A blown fuse indicates that there is an overload or short somewhere in the electrical system.
If any of the fuses should blow, replace with a new one of the same capacity.

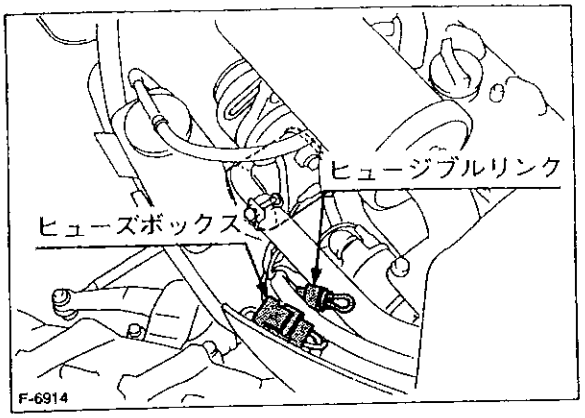
IMPORTANT:

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

For European models







◆ Protected circuit

For European models

FUSE No.	CAPACITY (A)	Protected circuit
①	20	Head light, Horn
②	10	Brake
③	15	Work light
④	10	Flasher, Panel, Alternator
⑤	10	Parking
⑥	15	Hazard
⑦	Slow blow fuse (50A)	Check circuit against wrong battery connection

■ Replacing Light Bulb

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

For European models

Light	Capacity
Head light	40W/45W
Tail light	10W
Position light	5W
Turn signal / Hazard light	21W
Brake stop light	21W
Number plate light	10W

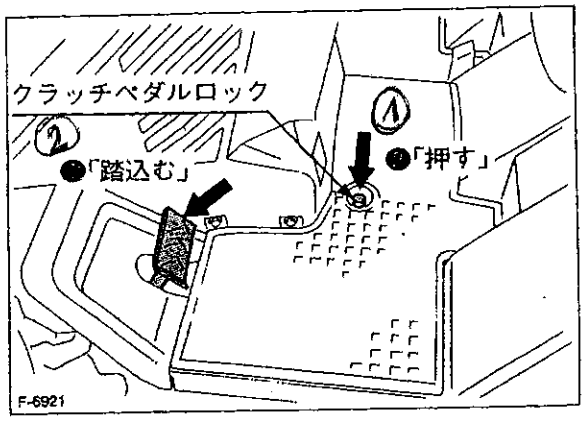
STORAGE

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

TRACTOR STORAGE

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

1. Check the bolts and nuts for looseness, and tighten if necessary.
2. Apply grease to tractor areas where bare metal will rust also to pivot areas.
3. Detach the weights from the tractor body.
4. Inflate the tires to a pressure a little higher than usual.
5. Change the engine oil and run the engine to circulate oil throughout the engine block and internal moving parts for about five minutes.
6. Pull the engine stop knob all the way out.
7. Keep the clutch disengaged. If the clutch is left engaged for a long period of time, the clutch plate may rust, making clutch disengagement impossible at the next operation.



(1) Clutch pedal latch
(2) Clutch pedal
(A) "PULL"
(B) "DEPRESS"
(C) "LATCH"

8. With all implements lowered to the ground, coat any exposed hydraulic cylinder piston rods with grease.
9. Remove the battery from the tractor. Store the battery following the battery storage procedures. (See "Battery condition" in every 50 hours in periodic service section.)
10. Keep the tractor in a dry place where the tractor is sheltered from rain. Cover the tractor.
11. Store the tractor indoors in a dry area that is protected from sunlight and excessive heat. If the tractor must be stored outdoors, cover it with a waterproof tarpaulin.
    Jack the tractor up and place blocks under the front and rear axles so that all four tires are off the ground. Keep the tires out of direct sunlight and extreme heat.

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

REMOVING THE TRACTOR FROM STORAGE

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

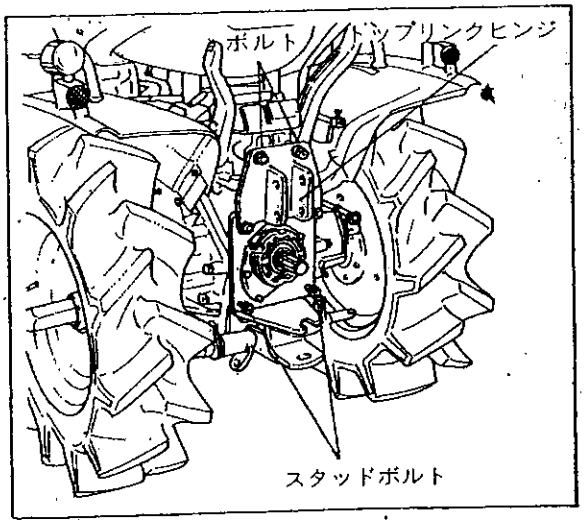
TROUBLESHOOTING

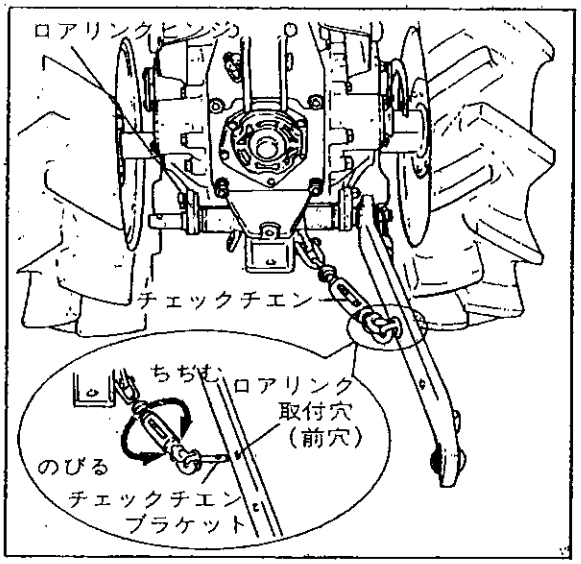
ENGINE TROUBLESHOOTING

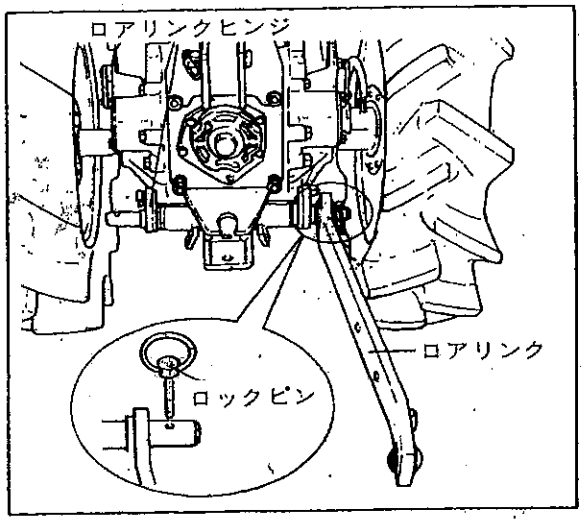
If something is wrong with the engine, refer to the table below for the cause and its corrective measure.

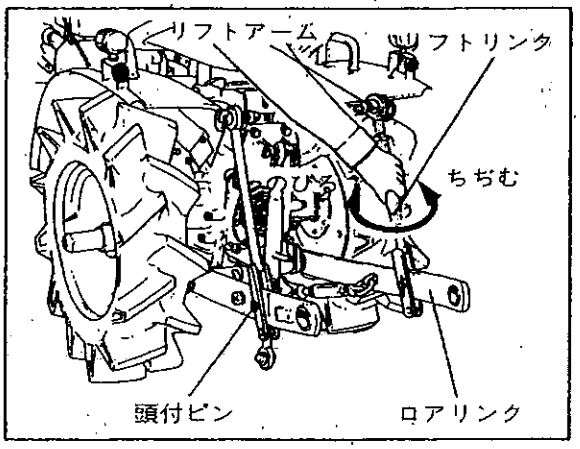
Trouble		Cause	Countermeasure
;ine is difficult to start or ..on't start.		• No fuel flow.	• Check the fuel tank and the fuel filter. Replace filter if necessary.
		• Air or water is in the fuel system.	• Check to see if the fuel line coupler bolt and nut are tight. • Bleed the fuel system (See "Bleeding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

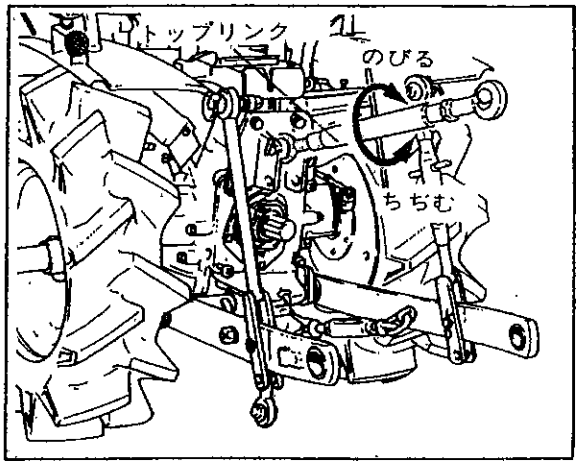
If you have any questions, contact your local KUBOTA Dealer.


ボルト
トップリンクヒンジ
スタッドボルト


ロアリンクヒンジ
チェックチエン
ちぢむ
ロアリンク
取付穴
(前穴)
のびる
チェックチエン
ブラケット


ロアリンクヒンジ
ロアリンク
ロックピン


リフトアーム
フトリンク
ちぢむ
頭付ピン
ロアリンク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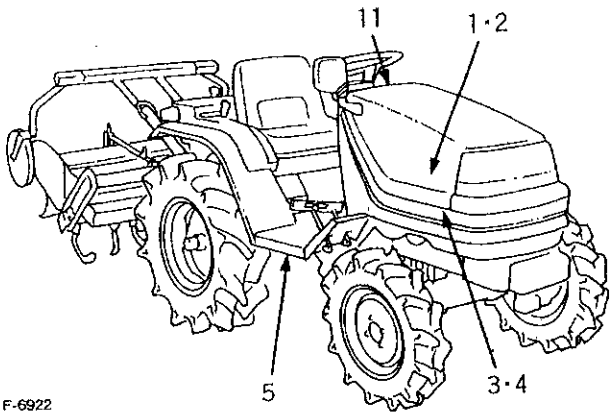

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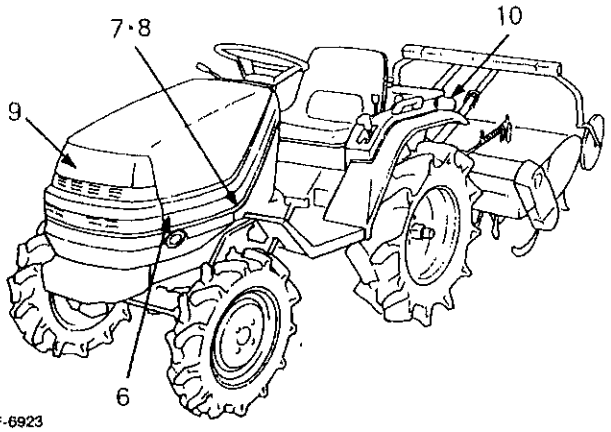

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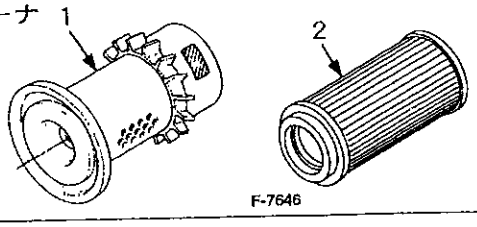
エアークリーナ エレメント



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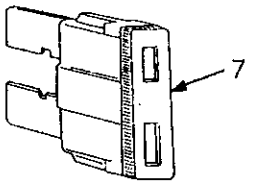
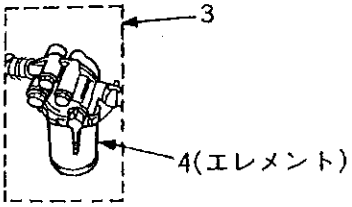
ヒューズ



F-4757

燃料フィルタ



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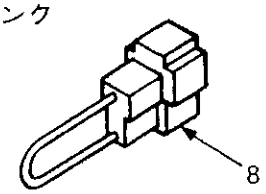
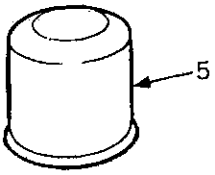
ヒュージブルリンク



F-6013

油圧オイルフィルタ カートリッジ 【M仕様】



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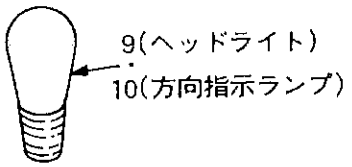
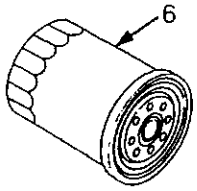
電球



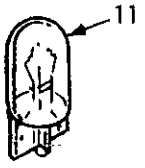
F-4759

エンジンオイルフィルタ カートリッジ



F-4756

イージーチェッカ用ランプ
バッテリチャージランプ
エンジンオイルランプ
グローランプ
一共通



F-5086

図番	品　　名	品　番	図番	品　　名	品　番
1	エレメントアッシ	52300-2578-0	7	ヒューズ10A	36730-7555-0
2	エレメントアッシ	67980-8263-0	8	ヒュージブルリンク	67111-5519-0
3	フューエルフィルタアッシ	15231-4301-0	9	デンキュウ	66071-5535-0
4	フィルタエレメント	15231-4356-3	10	デンキュウ	37410-5272-0
5	油圧オイルフィルタカートリッジ	67980-3712-0	11	ランプ	66101-5577-0
6	エンジンオイルフィルタカートリッジ	15852-3243-0			