TO THE READER

This Workshop Manual has been prepared to provide servicing personnel with information on the mechanism, service and maintenance of KUBOTA Lawn Tractors T1400 and T1400H. It is divided into two parts, "Mechanism" and "Disassembling and Servicing".

■ **Mechanism**

Information on the construction and function of each lawn tractor are included in this section. This part should be understood before proceeding with troubleshooting, disassembling and servicing.

■ **Disassembling and Servicing**

The heading "General" includes general precautions, troubleshooting, servicing specification lists, check and maintenance and special tools. For each lawn tractor section, there are checking and adjusting, disassembling and assembling, and servicing which cover procedures, precautions, factory specifications and allowable limits.

All information, illustrations and specifications contained in this manual are based on the latest production information available at the time of publication.

KUBOTA reserves the right to make changes in information at any time without notice.

July '87

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SPECIFICATIONS

Engine

Model		GH400V-L
Type		Air-cooled, 4-cycle, OHV gasoline engine
Number of Cylinders		1
Bore x Stroke		84.2 x 70 mm (3.31 x 2.76 in.)
Total Displacement		389 cc (23.7 cu.in.)
Maximum Horsepower (SAE Gross)		10.1 kW, 13.5 HP
Maximum Torque		27.0 N·m / 2400 rpm (2.75 kgf·m / 2400 rpm, 19.9 ft-lbs / 2400 rpm)
Maximum Bare Speed		3350 rpm
Minimum Bare Idling Speed		1300 rpm
Compression Ratio		8.5
Cooling System		Forced air cooling
Ignition System		Non-contact magneto ignition (Transistor controlled)
Ignition Timing		0.40 rad. (23) B.T.D.C.
Spark Plug		NIPPON DENSO W14FPR-UL 10, NGK BPR4HS-10
Carburetor		Horizontal type, butterfly valves
Air Cleaner		Cyclone type
Governor		Centrifugal mechanical governor
Lubricating System		Forced lubrication with trochoid pump
Starting System		Electric starting with cell starter
Starting Motor		12 V, 0.6 kW
Recommended Battery Capacity		12 V, 30 Ah
Fuel	Type	Regular automobile gasoline
	Capacity	8.5 ℓ 9.0 U.S.qts. 7.48 Imp.qts.
Engine Oil	Type	Engine oil : API Service SC or SD Below 15°C (59°F) ..... SAE20 or 10W–30 Above 15°C (59°F) ..... SAE30 or 10W–30
	Capacity	1.4 ℓ 1.5 U.S.qts 1.23 Imp.qts.
Weight (Dry)		32 kg (71 lbs)

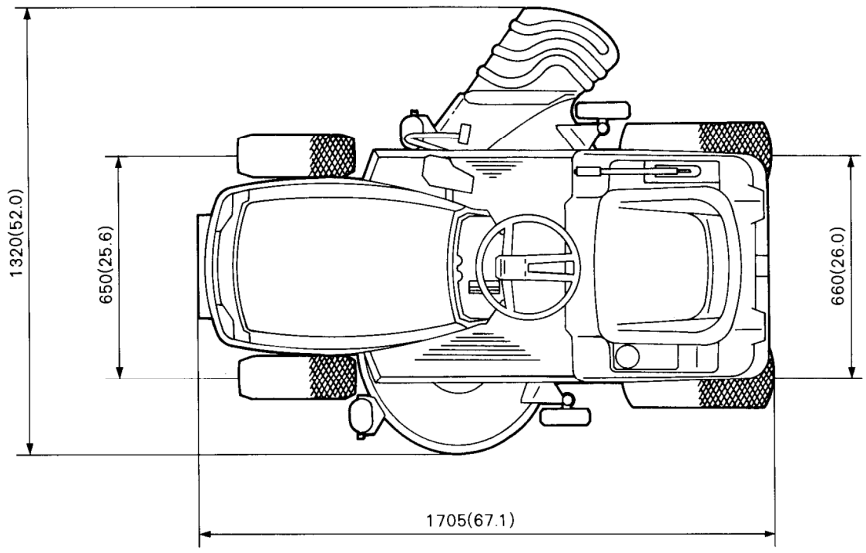
Lawn Tractor

Model		T1400	T1400H
Overall Length		1705 mm (67.1 in.)	
Overall Height		1040 mm (40.9 in.)	
Overall Width		1320 mm (52.0 in.)	
Transmission		Gear shift and speed variator	Hydrostatic transmission
Traveling Speed (with 18 x 8.50 - tires)	Forward	F1 : 1.7 to 4.2 km/h (1.1 to 2.6 mph) F2 : 3.6 to 9.0 km/h (2.2 to 5.6 mph)	0 to 9 0 km/h (0 to 5.6 mph)
	Reverse	R1 : 2.0 to 5.0 km/h (1.2 to 3.1 mph)	0 to 4 0 km/h (0 to 2 5 mph)
Main Clutch		Belt tension	—
PTO Clutch		Belt tension	
Steering System		Sector gear type	
Brake		Internal expanding type	
Wheel Base		1190 mm (46.9 in)	
Minimum Ground Clearance		105 mm (4.1 in.)	
Tread	Front	650 mm (25.6 in.)	
	Rear	660 mm (26.0 in.)	
Tire Size	Front	14 x 5.00 -6	
	Rear	18 x 8.50 -8	
Weight (Dry)		235 kg (518 lbs)	230 kg (507 lbs)

Mower

Overall Length	835 mm (32.9 in.)
Overall Height	260 mm (10.2 in.)
Overall Width	1320 mm (52.0 in.)
Mounting Method	Parallel linkage
Adjustment of Cutting Height	Gauge wheel
Cutting Width	1016 mm (40 in.)
Cutting Height	25 to 100 mm (1.0 to 3.9 in.)
Weight (Dry)	37 kg (82 lbs)
Number of Blades	2
Discharge	Right side

DIMENSIONS



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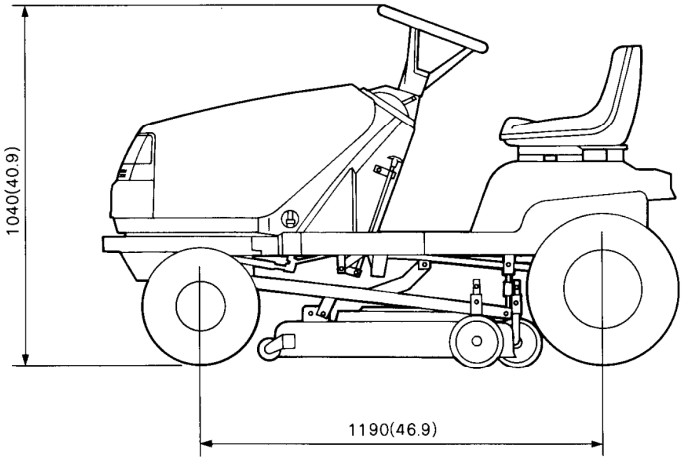

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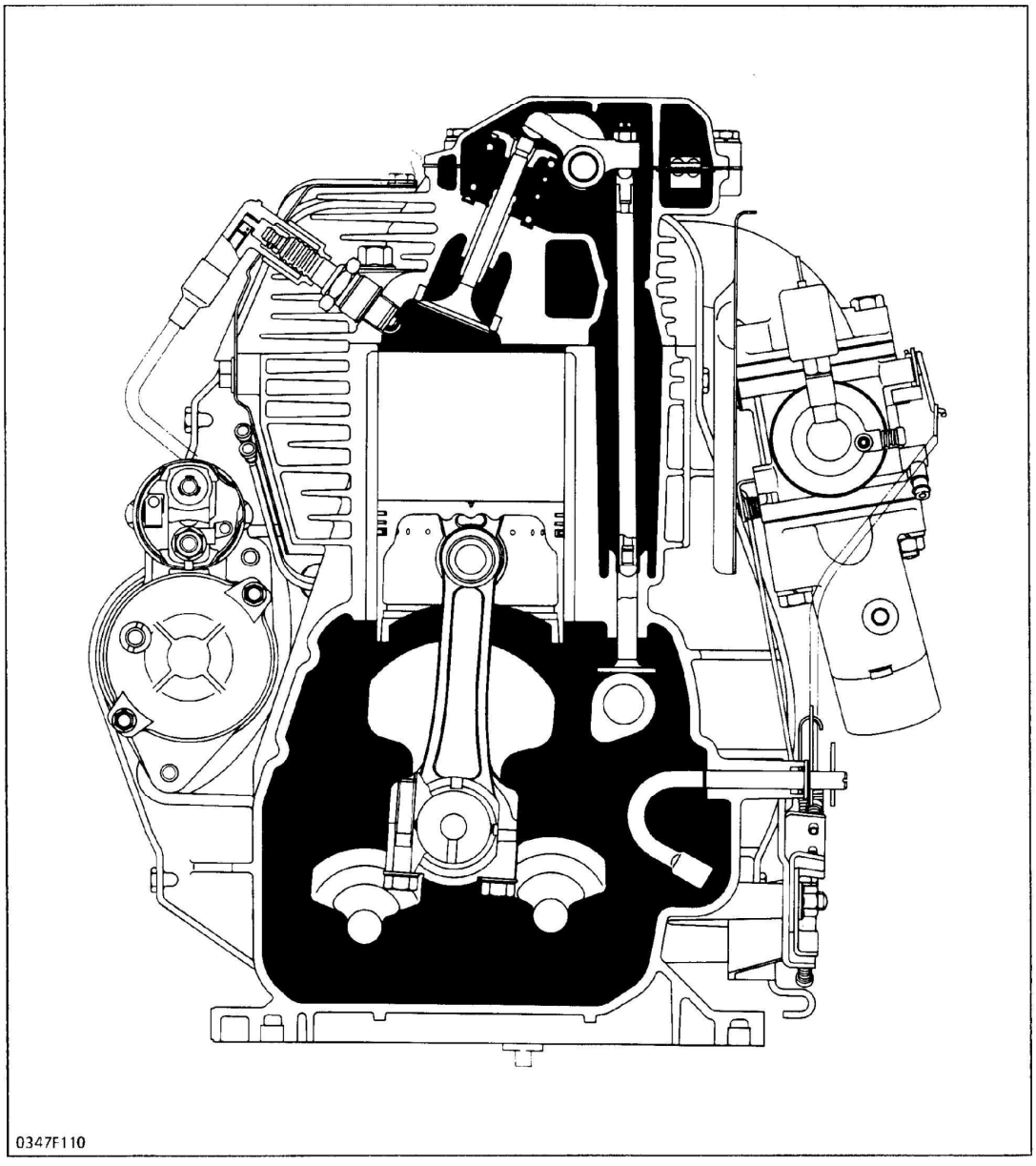
Unit: mm (in.)

M. MECHANISM

1 ENGINE

[1] FEATURE



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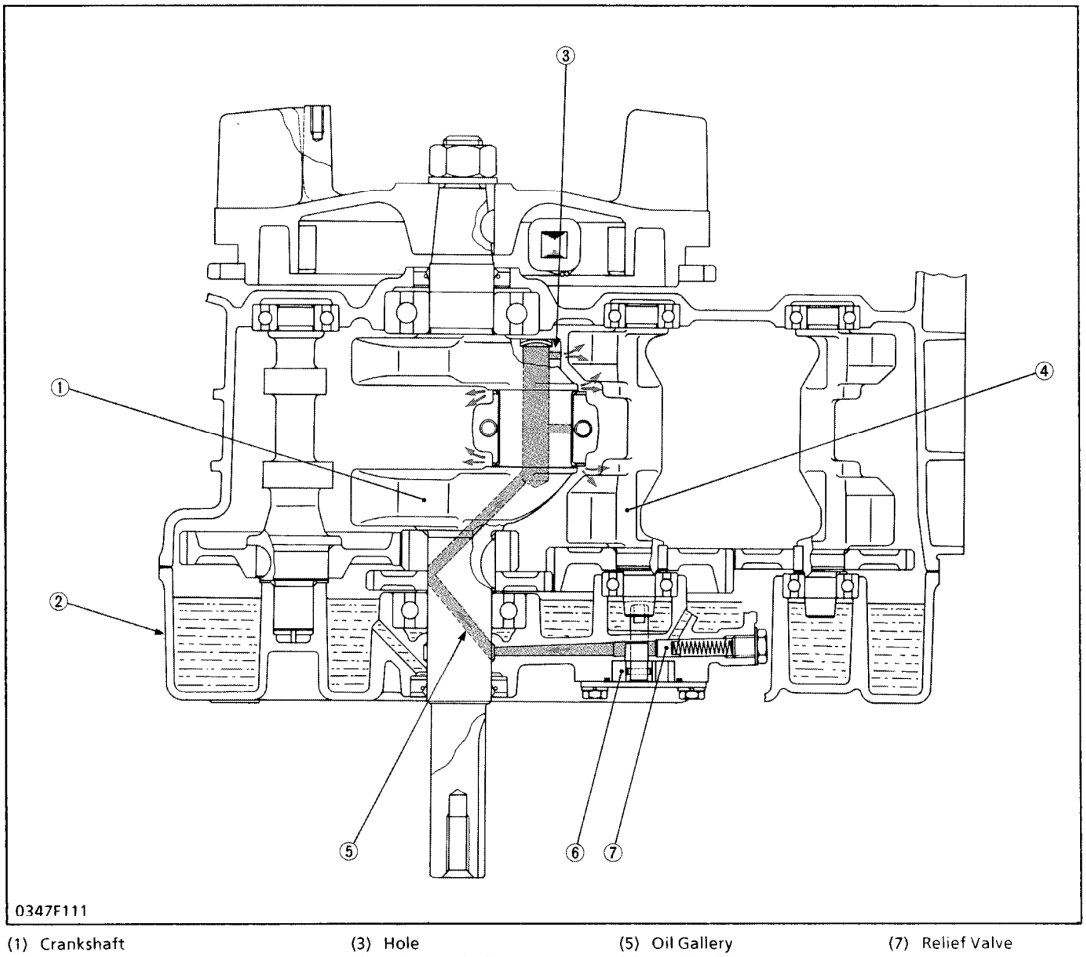
The GH400V-L is forced air-cooled, 4-cycle, single-cylinder, overhead valve gasoline engine

This incorporates KUBOTA's advanced technology.

The electronic engine incorporates a maintenance-free, transistor-controlled, pointless ignition system.

[2] LUBRICATING SYSTEM



(1) Crankshaft
(2) Oil Pan (Crankcase Cover)
(3) Hole
(4) Balancer Shaft 1
(5) Oil Gallery
(6) Trochoid Pump
(7) Relief Valve

The GH400V-L employs a combined force and splash lubrication by the balancer shaft 1 (4) driven trochoid pump (6)

Oil in the oil pan (crankcase cover) (2) is sucked up by the pump through the oil strainer, and flows into the oil gallery (5) in the crankshaft (1) and lubricates the crank pin portion.

The piston, cylinder liner wall and etc. are lubricated by the splashed oil coming down from a hole (3) and crank pin.

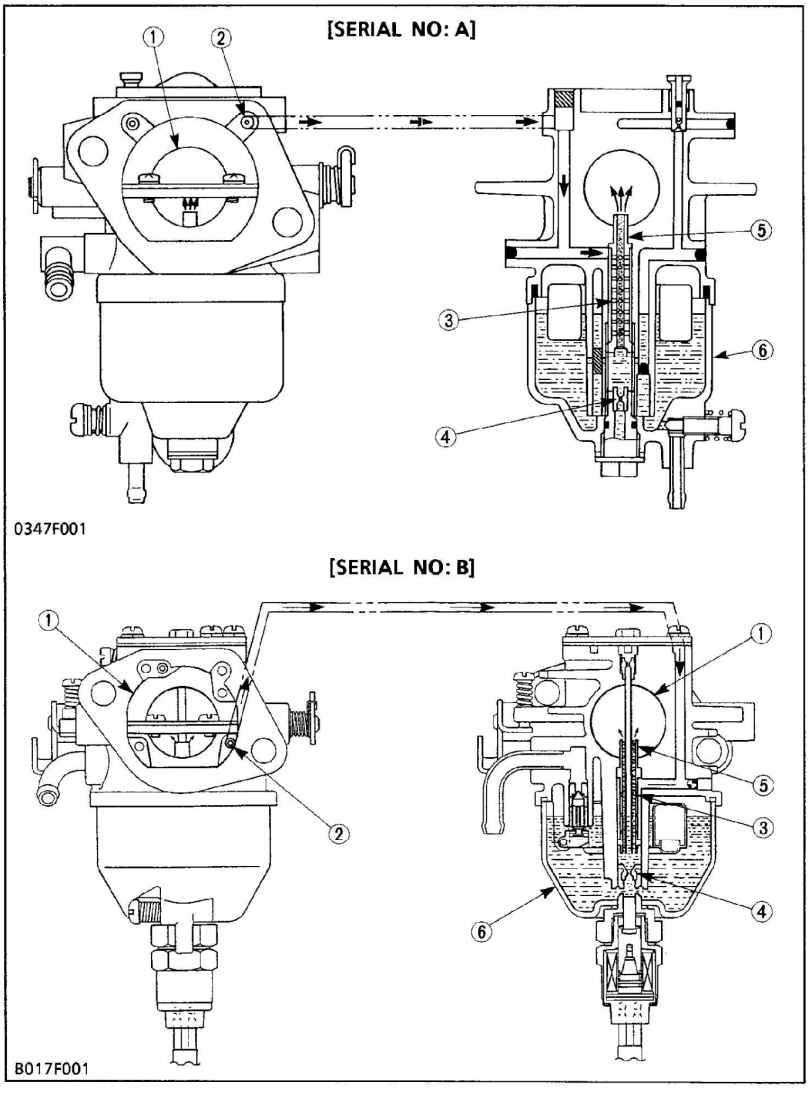
The pressure of lubricating oil discharged from the trochoid pump is regulated by a relief valve (7) to 98 to 147 kPa (1.0 to 1.5 kgf/cm^2, 14 to 21 psi) (at the rated speed of the engine).

The trochoid pump consists of an inner rotor, outer rotor and body. The inner rotor is connected to the balancer shaft 1 so that they turn together as a unit. The outer rotor is driven by the inner rotor which is free to move in the body.

[3] FUEL SYSTEM

(1) Carburetor

■ Main Circuit



[SERIAL NO: A]
T1400H : up to 41949
T1400H-EU: up to 41436
T1400H-G : up to 40139
T1400 : up to 40288
GH400V-L : up to 859458
[SERIAL NO: B]
T1400H : above 41949
T1400H-EU: above 41436
T1400H-G : above 40139
T1400 : above 40288
GH400V-L : above 859458

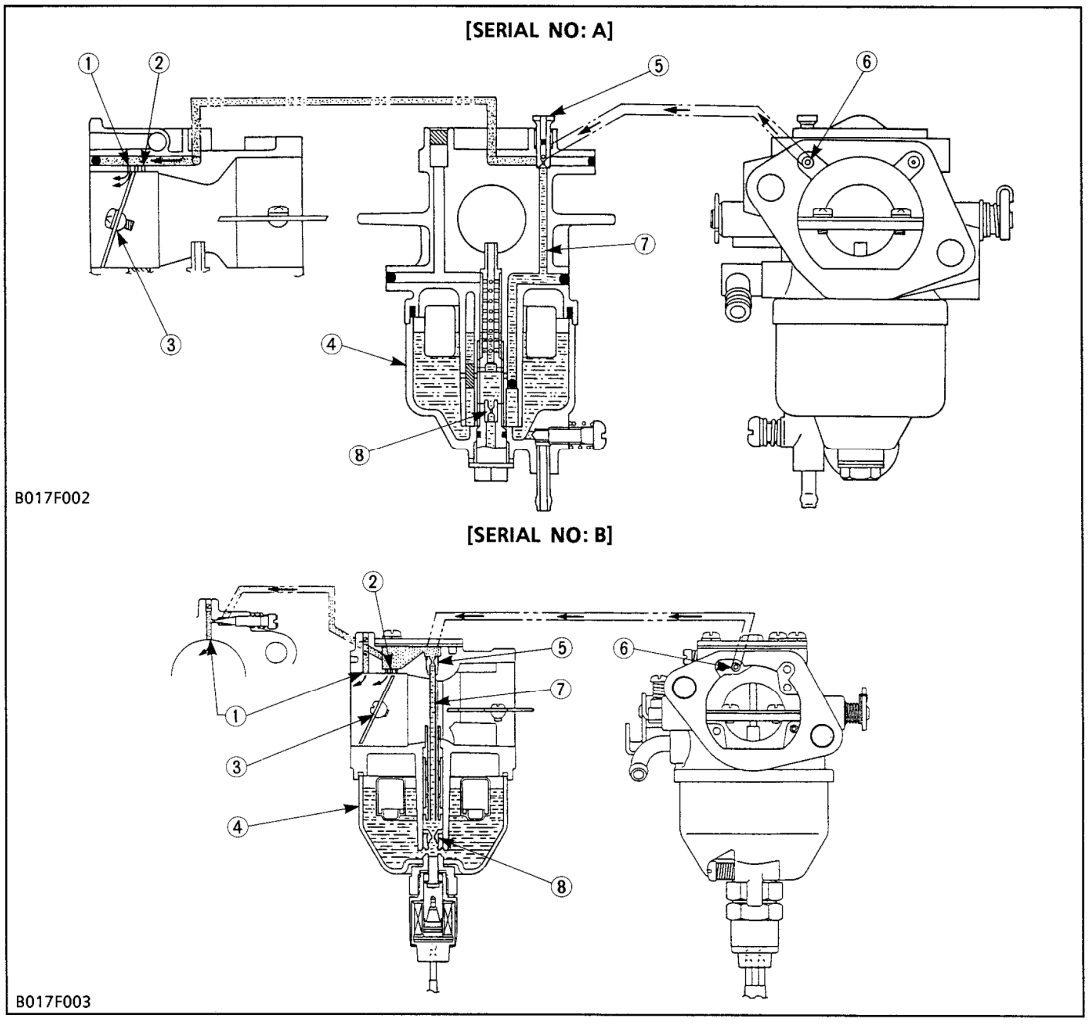
(1) Venturi
(2) Main Air Jet
(3) Bleeder Hole
(4) Main Jet
(5) Main Nozzle
(6) Float Chamber

When the engine starts and the throttle valve is opened, a sufficient quantity of air moves through the carburetor air horn to produce an appreciable vacuum in the venturi (1).

Atmospheric pressure pushes gasoline in the float chamber (6) out into the main nozzle (5) via the main jet (4).

As the air flows past the main air jet (2), it mixes with gasoline moving through the bleeder hole (3), and flows past the main nozzle. This mixture has a high proportion of gasoline. This proportion lowers as it mixes with other air flowing through the air horn to produce the final mixture.

■ Slow Circuit



[SERIAL NO: A] T1400H : up to 41949, T1400H-EU : up to 41436, T1400H-G : up to 40139, T1400 : up to 40288, GH400V-L : up to 859458
[SERIAL NO: B] T1400H : above 41949, T1400H-EU : above 41436, T1400H-G : above 40139, T1400 : above 40288, GH400V-L : above 859458

(1) Pilot Outlet
(2) Bypass
(3) Throttle Valve
(4) Float Chamber
(5) Pilot Jet
(6) Pilot Air Jet
(7) Passage
(8) Main Jet

When the throttle valve (3) is closed, a vacuum is produced in the pilot outlet (1) and the bypass (2).

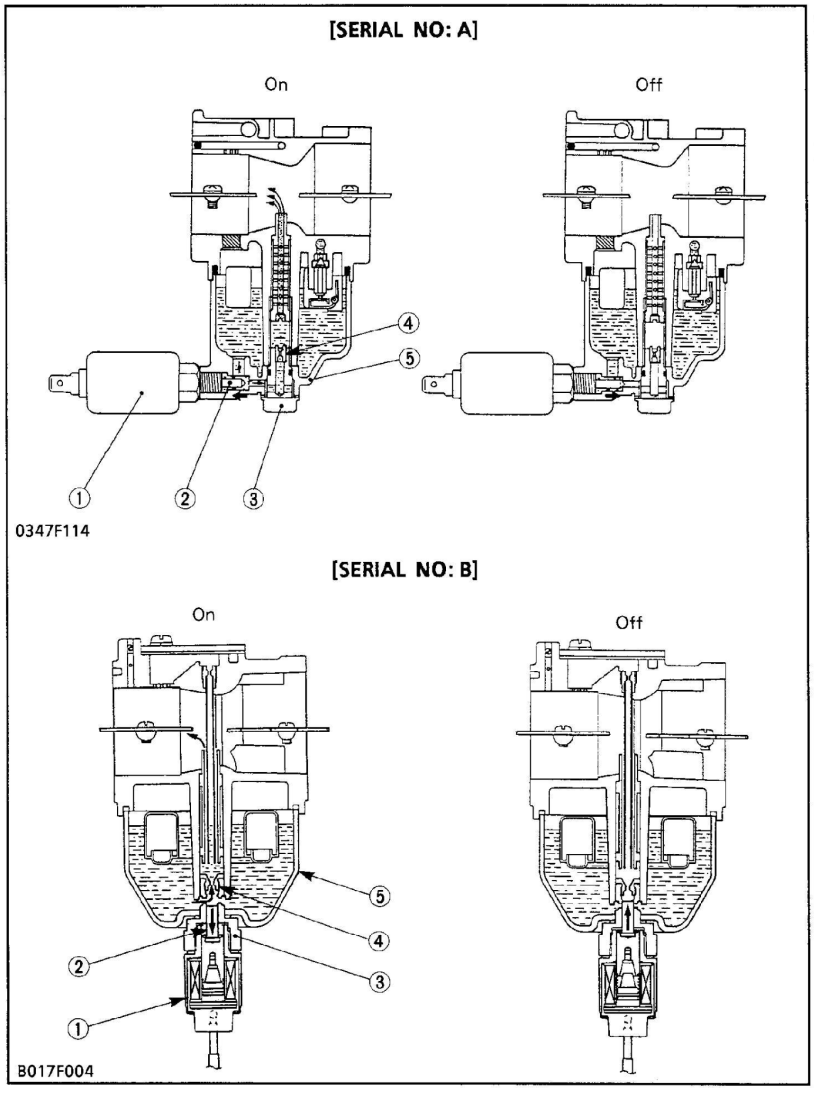
Under this condition, gasoline in the float chamber (4) is pushed out, flowing through the main jet (8) into the passage (7).

The pilot jet (5) meters the gasoline as it passes through it. The metered gasoline then mixes with air that enters via the pilot air jet (6), and flows past the bypass and pilot outlet into the carburetor air horn.

This mixture also has a high proportion of gasoline. As the mixture discharges into the air horn, it mixes with other air moving through the air horn, thereby producing the final mixture for slow speed operation.

The slow speed of the engine is controlled by changing the jet area with the pilot screw.

■ Fuel Cut Off Solenoid



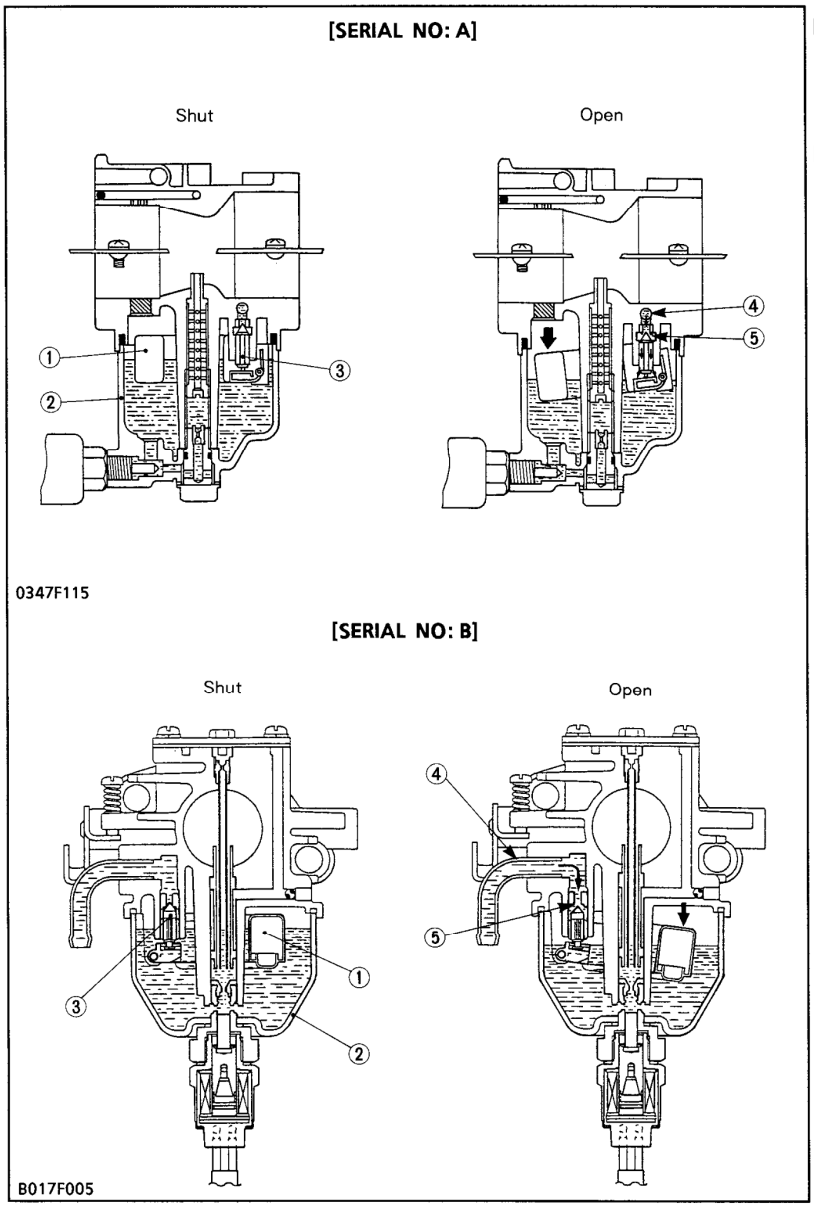
[SERIAL NO: A]
T1400H : up to 41949
T1400H-EU: up to 41436
T1400H-G : up to 40139
T1400 : up to 40288
GH400V-L : up to 859458
[SERIAL NO: B]
T1400H : above 41949
T1400H-EU: above 41436
T1400H-G : above 40139
T1400 : above 40288
GH400V-L : above 859458

(1) Fuel Cut Off Solenoid
(2) Plunger
(3) Jet Holder
(4) Main Jet
(5) Float Chamber

With the main switch in the **"ON"** position, current flows from the battery to the fuel cut off solenoid (1). Therefore, the plunger (2) is attracted and gasoline in the float chamber (5) flows to the main jet (4) via the jet holder (3).

When the main switch is turned to the **"OFF"** position, the battery current stops and the plunger is returned to the original position by the return spring. This shuts the fuel inlet so that gasoline can not enter.

■ Float Chamber



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T1400H : up to 41949
T1400H-EU: up to 41436
T1400H-G : up to 40139
T1400 : up to 40288
GH400V-L : up to 859458
[SERIAL NO: B]
T1400H : above 41949
T1400H-EU: above 41436
T1400H-G : above 40139
T1400 : above 40288
GH400V-L : above 859458

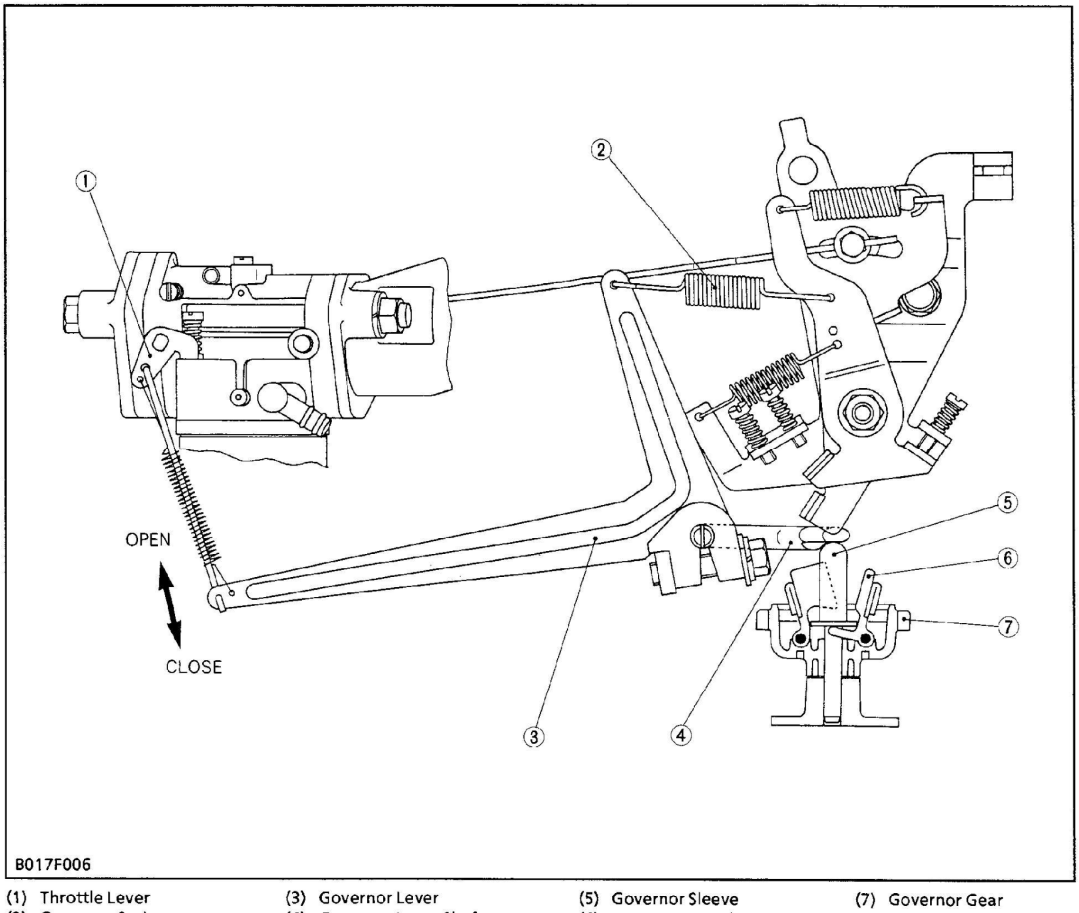
(1) Float
(2) Float Chamber
(3) Needle Valve
(4) Fuel Passage
(5) Fuel Inlet

The gasoline from the fuel tank flows past the fuel passage (4) and needle valve (3) into the float chamber (2). The float (1) then moves up and pushes up the needle valve. This shuts the fuel inlet (5) so that gasoline can not enter.

When the fuel level is lowered, the float (1) moves down, and the needle valve (3) moves down to open the fuel inlet (5).

Repetition of this sequence of events assures a constant level.

(2) Governor



(1) Throttle Lever
(2) Governor Spring
(3) Governor Lever
(4) Governor Lever Shaft
(5) Governor Sleeve
(6) Governor Weight
(7) Governor Gear

The engine is equipped with a centrifugal governor which activates the throttle in response to engine speed.

When the engine is carrying a load and running at rated speed, the speed will drop if the load is increased even slightly. If this occurs, the governor automatically opens the throttle valve of the carburetor to maintain the original speed.

Decreasing the load suddenly will cause a rapid increase in speed. If this occurs, the governor automatically closes the throttle valve to prevent the engine from increasing its speed.

■ When engine is carrying a load and running at rated speed

When there is no change in load, the centrifugal force of the governor weight (6) which is attached to the governor gear (7) balances with the tensile force of the governor spring (2) via governor sleeve (5), governor lever shaft (4) and governor lever (3). The engine speed and output are thus kept constant.

■ When load is applied to engine

When a load is applied to the engine running at rated speed, the speed of the governor gear (7) which is connected to the balancer gear 2 decreases. As a result, the centrifugal force of the governor weight (6) becomes smaller. The tensile force of the governor spring (2) overcomes the centrifugal force, and the governor lever (3) causes the throttle lever (1) to move in the open direction. The original engine speed is thus maintained.

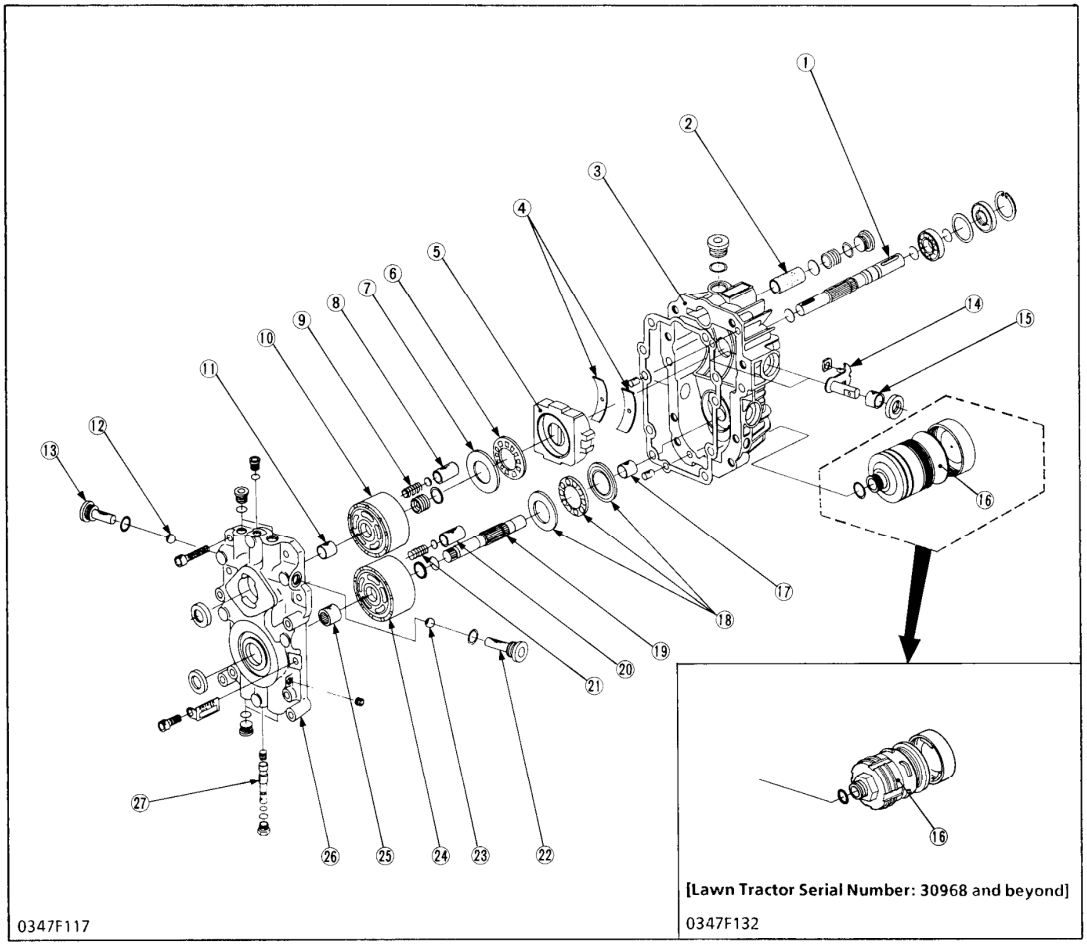
■ When load is decreased

When a load is decreased suddenly, the centrifugal force of the governor weight (6) overcomes the tensile force of the governor spring (2). As a result, the governor lever (3) causes the throttle lever (1) to move in the closed direction and prevents the engine from increasing its speed.

2 CLUTCH AND TRANSMISSION

[T1400H TYPE]

[1] HYDROSTATIC TRANSMISSION



(1) Pump Shaft
(2) Oil Filter
(3) Housing
(4) Cradle Bearing
(5) Swashplate
(6) Thrust Roller Bearing
(7) Thrust Plate
(8) Piston
(9) Piston Spring
(10) Cylinder Block (Pump)
(11) Journal Bearing
(12) Check Valve
(13) Plug
(14) Trunnion Arm
(15) Journal Bearing
(16) Oil Tank
(17) Journal Bearing
(18) Thrust Ball Bearing
(19) Motor Shaft
(20) Piston
(21) Piston Spring
(22) Plug
(23) Check Valve
(24) Cylinder Block (Motor)
(25) Needle Bearing
(26) Center Section
(27) By-pass Valve

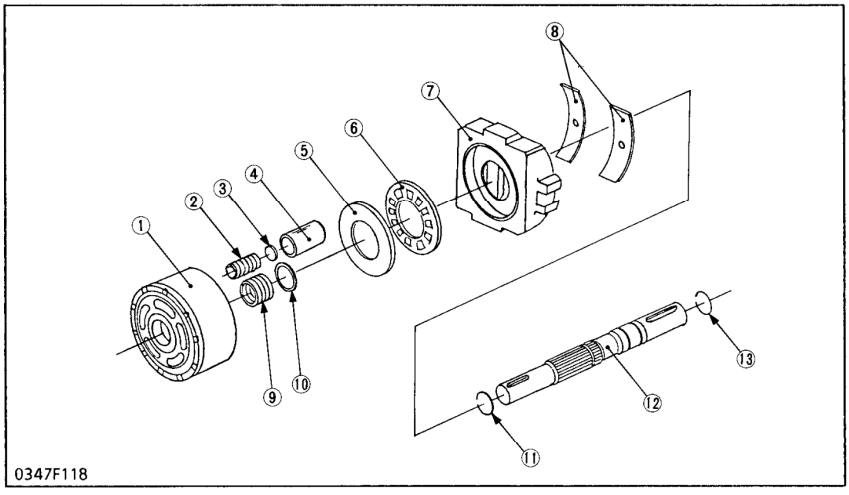
The Bantam Duty Hydrostatic Transmission consists of a 10 cc/rev. variable displacement piston pump and a 10 cc/rev. fixed displacement piston motor.

Since a hydraulic reservoir may be mounted on the housing, hydraulic plumbing is not necessary.

A fan is used to cool the hydrostatic transmission, eliminating the need for an oil cooler.

Convenient single lever control permits simple operation of the lawn tractor, starting, stopping, increasing or decreasing speeds, changing direction of travel, and even going up or down hills.

(1) Piston Pump



(1) Cylinder Block
(2) Piston Spring
(3) Thrust Washer
(4) Piston
(5) Thrust Plate
(6) Thrust Roller Bearing
(7) Swashplate
(8) Cradle Bearing
(9) Spring
(10) Washer
(11) Snap Ring
(12) Pump Shaft
(13) Snap Ring

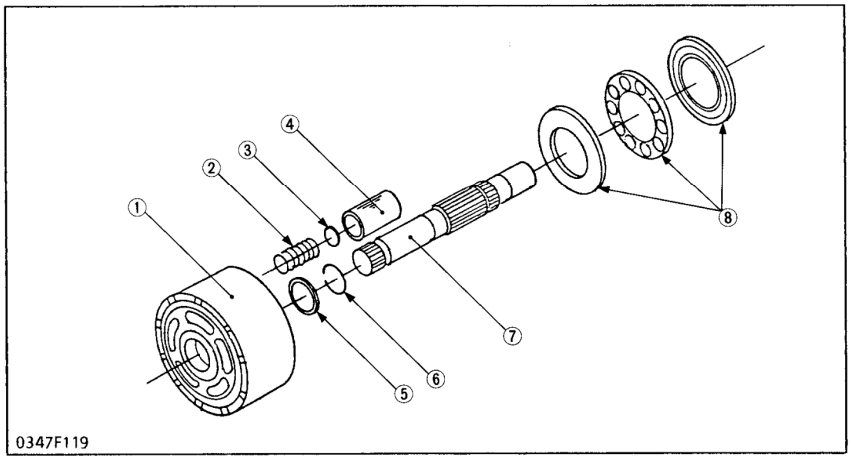
The piston pump consists of a cylinder block (1) having 5 pistons (4), a variable swashplate (7) to reciprocate the pistons, and a pump shaft (12) to rotate the cylinder block.

As the cylinder block rotates, the pistons follow the surface of the variable swashplate and reciprocate in their bores. Fluid is drawn from one of the closed loop ports in the center section. The fluid is then delivered to the opposite closed loop in the center section.

Delivery flow is directly proportional to the swashplate angle. The flow is zero when the swashplate is in the neutral position

The direction of the flow is reversed when the swashplate is tilted in the opposite position from the neutral position.

(2) Piston Motor



(1) Cylinder Block
(2) Piston Spring
(3) Thrust Washer
(4) Piston
(5) Washer
(6) Snap Ring
(7) Motor Shaft
(8) Thrust Bell Bearing

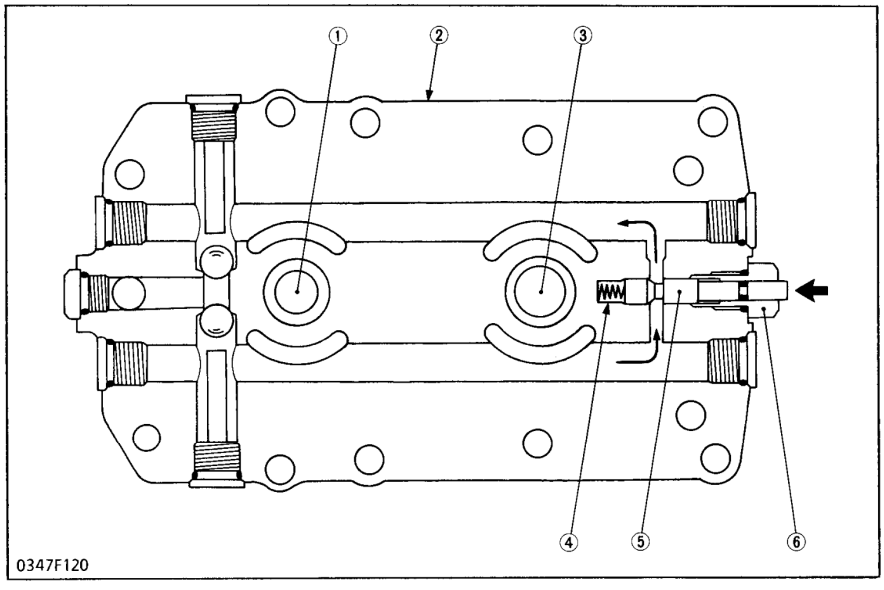
The piston motor also consists of a cylinder block (1) having 5 pistons (4), a fixed swashplate (thrust ball bearing) (8), and a motor shaft (7).

Oil from the pump flows to the motor through the closed loop passages in the center section. The pistons on the pressurized side of the cylinder block are pushed out by the flow from the pump. As the pistons are pushed out, the pistons slide down the motor swashplate, forcing the cylinder block to rotate the motor shaft.

The motor shaft speed increases when the fluid volume received from the pump increases Motor shaft speed decreases when the fluid volume from the pump decreases. The motor shaft stops when the fluid volume from the pump decreases to zero

The direction of the motor shaft rotation reverses when fluid flow is directed to the opposite port in the center section.

(3) By-pass Valve

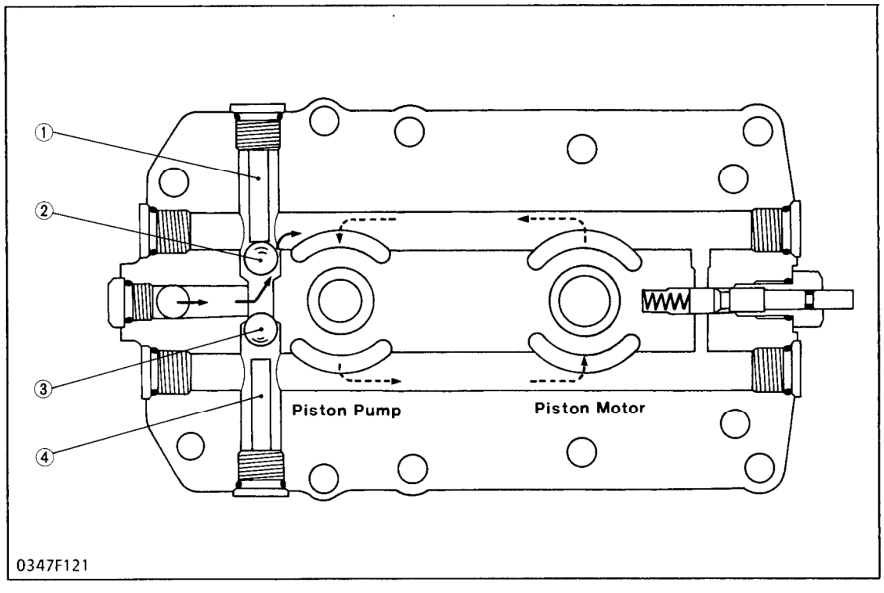


(1) Pump Shaft
(2) Center Section
(3) Motor Shaft
(4) By-pass Spring
(5) By-pass Valve
(6) Plug

The by-pass valve (5) is used to connect the two sides of the closed loop in the center section (2) The motor shaft (3) does not rotate when the engine is stopped or the pump is not driven. This means the lawn tractor usually can not be moved by pushing.

If moving the lawn tractor by pushing is desired, depress the by-pass valve to connect the two sides of the loop and defeat the dynamic braking feature.

(4) Charge Circuit



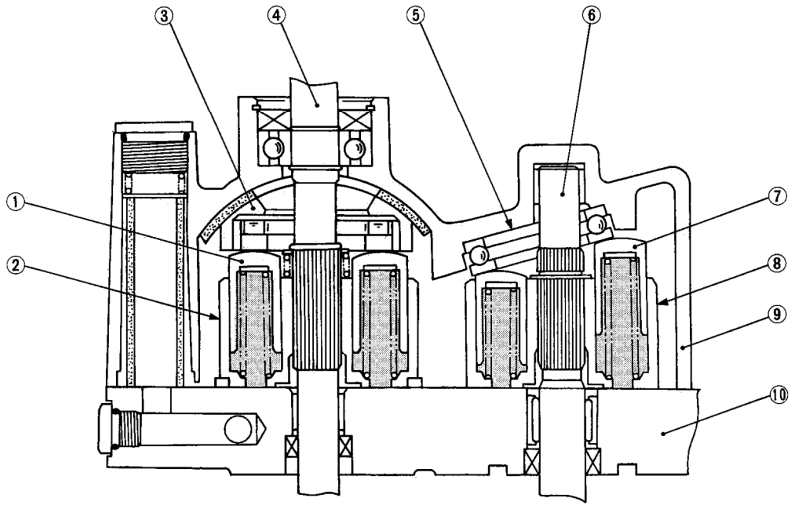
(1) Plug
(2) Check Valve
(3) Check Valve
(4) Plug

The charge circuit is necessary to make up for leakage from the pump and motor, preventing cavitation

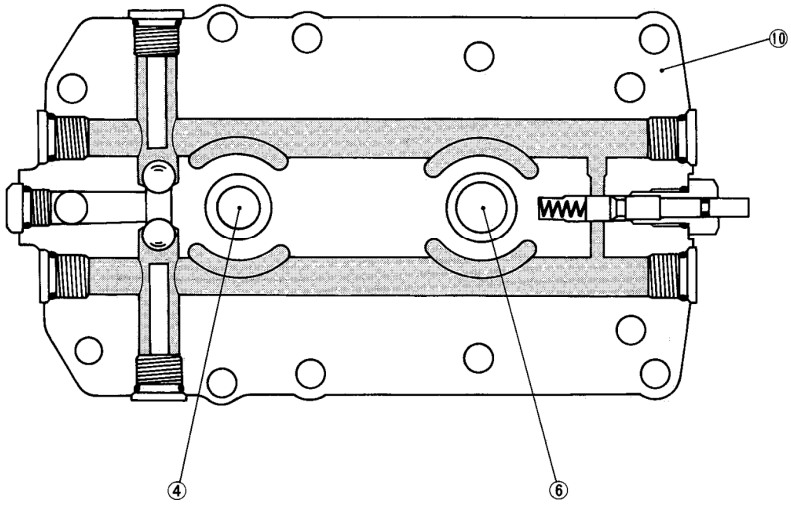
On this hydrostatic transmission, leakage is made up by allowing the pump to draw fluid through one of a pair of check valves and a filter.

(5) Oil Flow

■ Neutral



0347F122



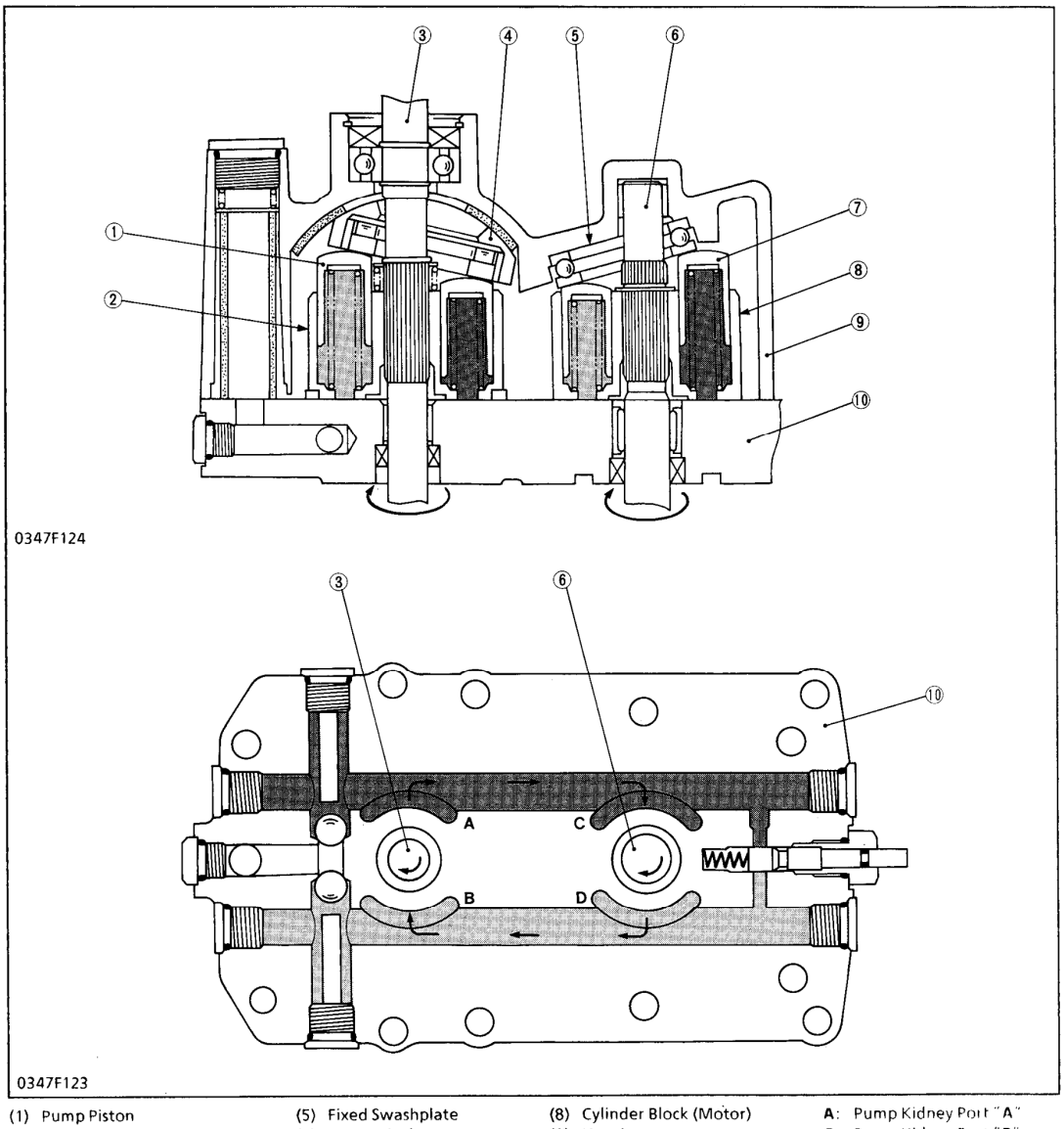
0347F123

(1) Pump Piston
(2) Cylinder Block (Pump)
(3) Variable Swashplate
(4) Pump Shaft
(5) Fixed Swashplate
(6) Motor Shaft
(7) Motor Piston
(8) Cylinder Block (Motor)
(9) Housing
(10) Center Section

When the speed control pedal is in neutral, the variable swashplate (3) is at right angles to the pump pistons (1) and they only rotate with cylinder block (Pump) (2) without reciprocating.

Since the oil is not being pumped to the piston motor, the cylinder block (Motor) (8) in the piston motor is stationary and the motor shaft (6) does not move.

■ Forward



(1) Pump Piston
(2) Cylinder Block (Pump)
(3) Pump Shaft
(4) Variable Swashplate
(5) Fixed Swashplate
(6) Motor Shaft
(7) Motor Piston
(8) Cylinder Block (Motor)
(9) Housing
(10) Center Section

A: Pump Kidney Port "**A**"
B: Pump Kidney Port "**B**"
C: Motor Kidney Port "**C**"
D: Motor Kidney Port "**D**"

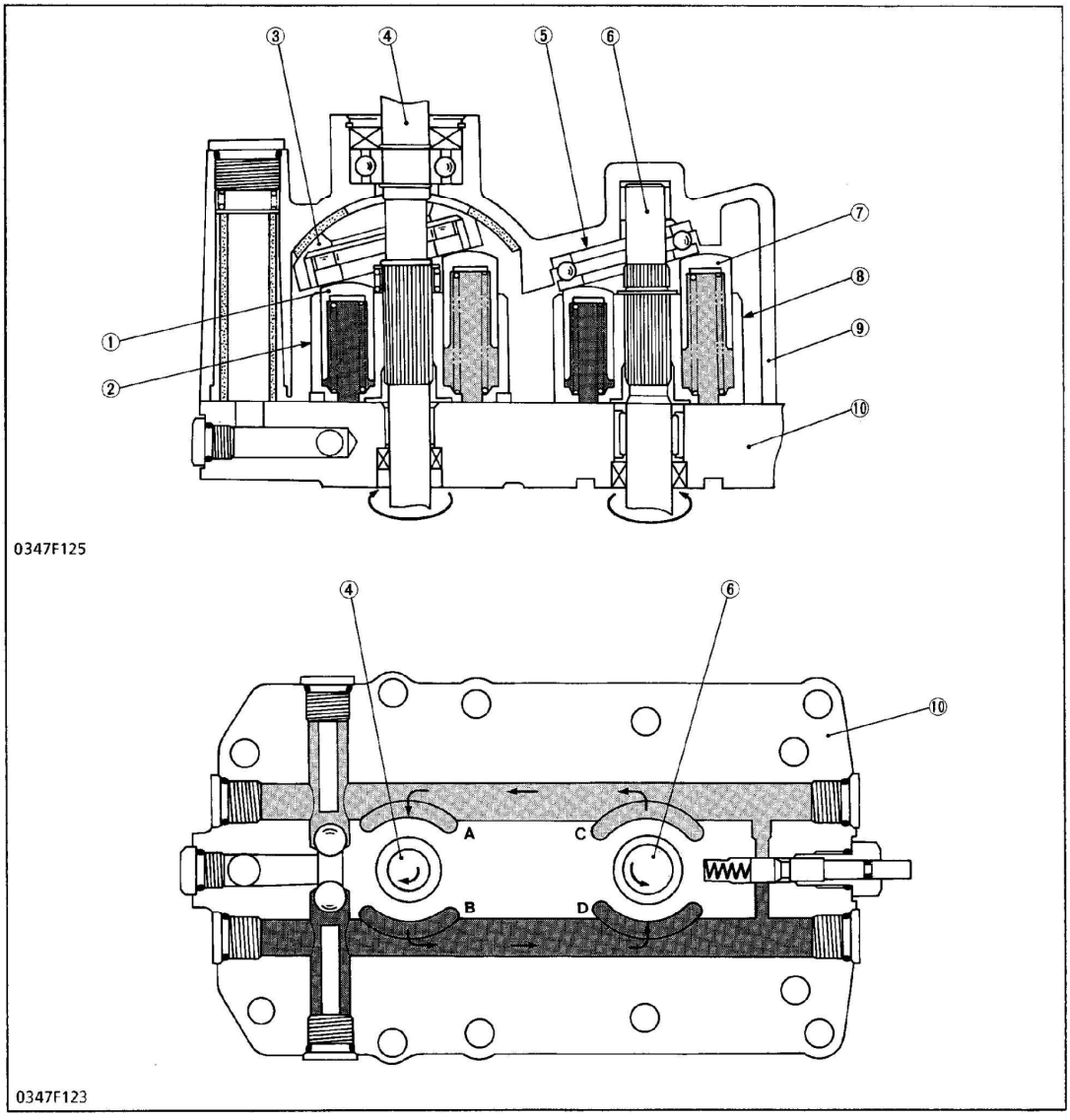
When the speed control pedal is stepped on and in forward, the variable swashplate (4) is tilted as shown in the figure above.

As the cylinder block (Pump) (2) rotates with the pump shaft (3), oil is forced out of pump kidney port "**A**" at high pressure. As pressure oil enters motor kidney port "**C**", the pistons (7), which align with port "**C**", are pushed against the fixed swashplate (5) and slide down the inclined surface.

Then the motor shaft (6) rotates with the cylinder block (Motor) (8). This drives the lawn tractor forward and the angle of variable swashplate determines the motor shaft speed.

As the cylinder block (Motor) continues to rotate, oil is forced out of motor kidney port "**D**" at low pressure and returns to the pump through pump kidney port "**B**".

■ Reverse



(1) Pump Piston
(2) Cylinder Block (Pump)
(3) Variable Swashplate
(4) Pump Shaft
(5) Fixed Swashplate
(6) Motor Shaft
(7) Motor Piston
(8) Cylinder Block (Motor)
(9) Housing
(10) Center Section

A: Pump Kidney Port "**A**"
B: Pump Kidney Port "**B**"
C: Motor Kidney Port "**C**"
D: Motor Kidney Port "**D**"

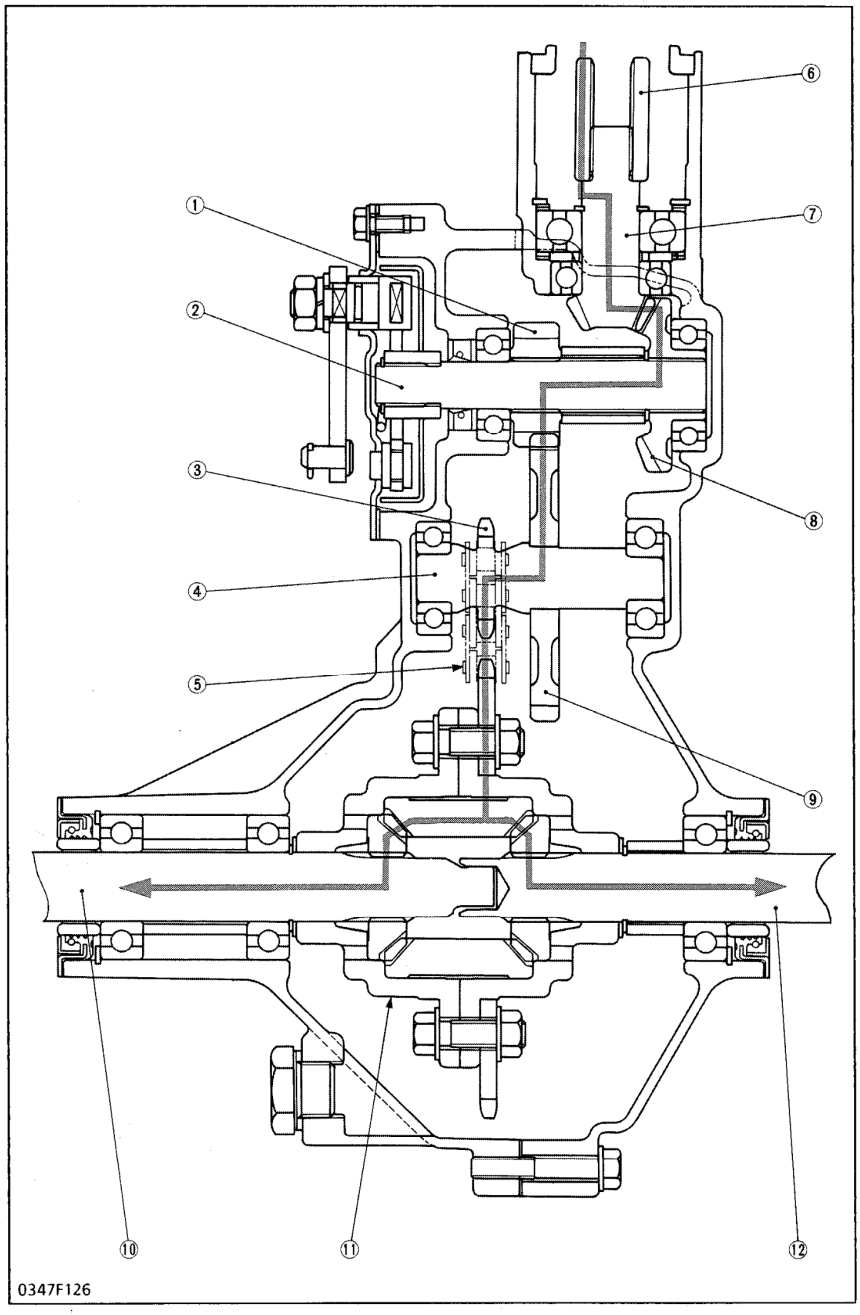
When the speed control pedal is stepped on and in reverse, the variable swashplate (3) is tilted as shown in the figure above.

As the cylinder block (Pump) (2) rotates with the pump shaft (4), oil is forced out of pump kidney port "**B**" at high pressure. As pressure oil enters motor kidney port "**D**" the pistons (7) which align with port "**D**", are pushed against the fixed swashplate (5) and slide down the inclined surface.

Then the motor shaft (6) rotates with the cylinder block (Motor) (8). This drives the lawn tractor and the angle of variable swashplate determines the motor shaft speed.

As the cylinder block (Motor) continues to rotate, oil is forced out of motor kidney port "**C**" at low pressure and returns to the pump through pump kidney port "**A**".

[2] POWER TRAIN



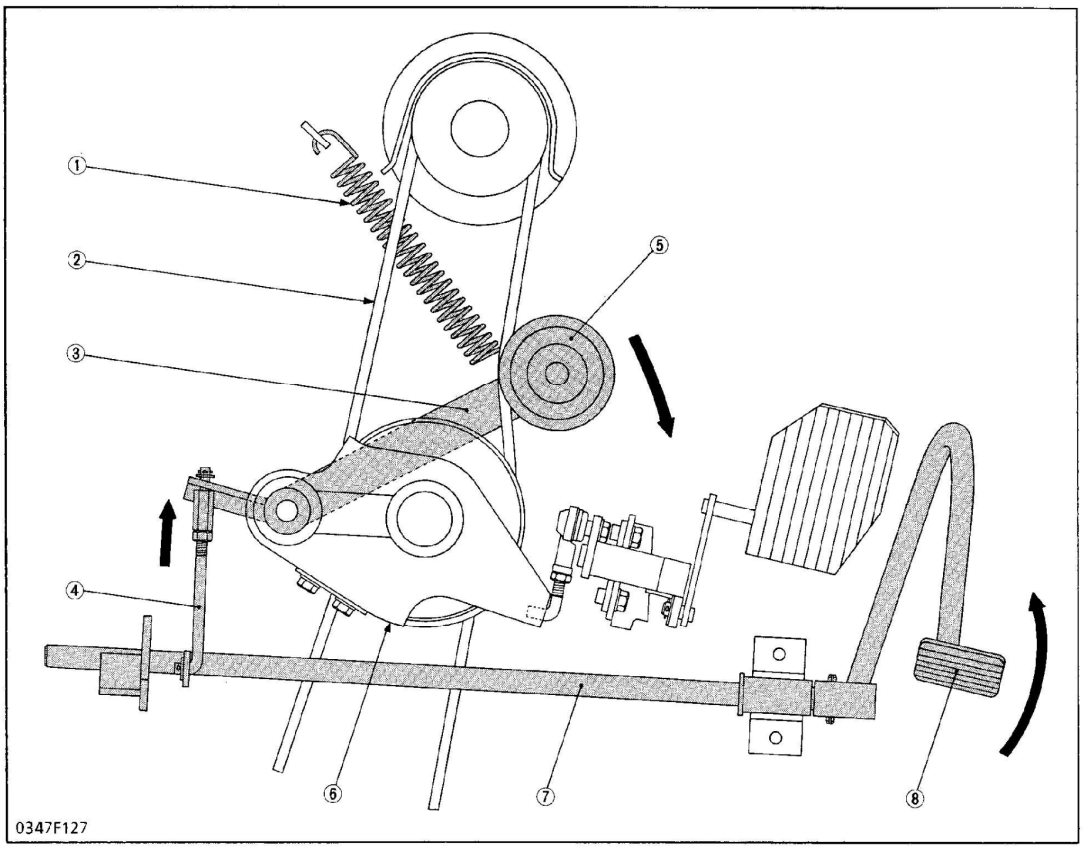
(1) 15T Gear
(2) 3rd Shaft
(3) 9T Sprocket
(4) 4th Shaft
(5) Chain
(6) Coupling
(7) 12T Bevel Pinion Shaft
(8) 27T Bevel Gear
(9) 38T Gear
(10) Rear Axle (Left)
(11) Differential Gear
(12) Rear Axle (Right)

The transmission consists of a series of gears as shown in the figure above, and power from the hydrostatic transmission is transmitted as follows.

Motor Shaft (HST) → Coupling (6) → 12T Bevel Pinion Shaft (7) → 27T Bevel Gear (8) → 3rd Shaft (2) → 15T Gear (1) → 38T Gear (9) · 4th Shaft (4) · 9T Sprocket (3) → Chain (5) → Differential Gear (11) → Rear Axle (10),(12)

[T1400 TYPE]

[1] CLUTCH

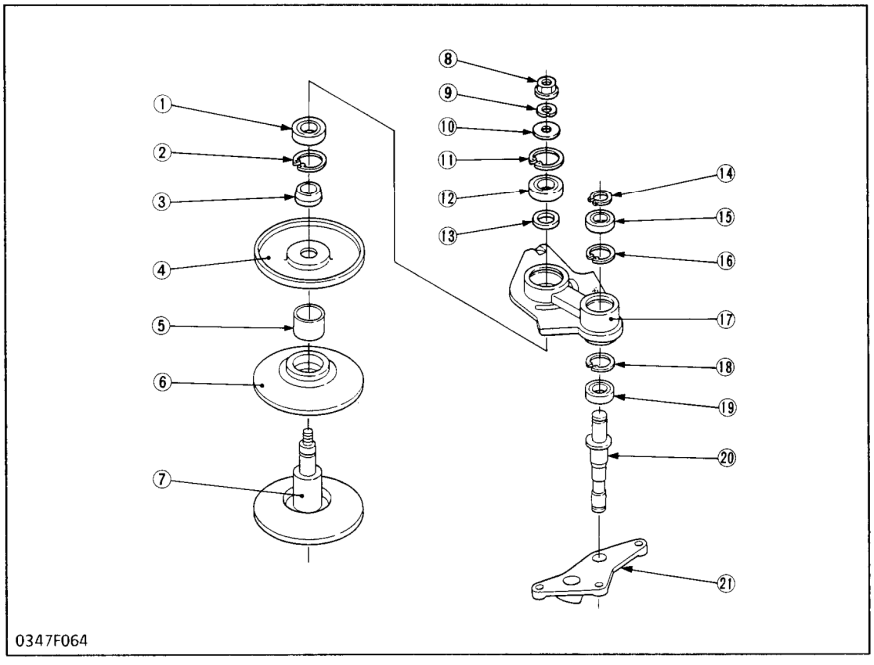


(1) Tension Spring
(2) Belt
(3) Tension Arm
(4) Clutch Rod
(5) Tension Pulley
(6) Speed Variator
(7) Brake Pedal Shaft
(8) Clutch-Brake Pedal

When the clutch-brake pedal (8) is not depressed, the tension pulley (5) is pressed against the belt (2) by the tension spring (1). Therefore, power from the engine is transmitted to the speed variator (6) while the engine is running.

When the clutch-brake pedal (8) is depressed, the clutch rod (4) pushes the tension arm (3) and release the tension pulley (5). Therefore, power is not transmitted to the speed variator (6).

[2] SPEED VARIATOR



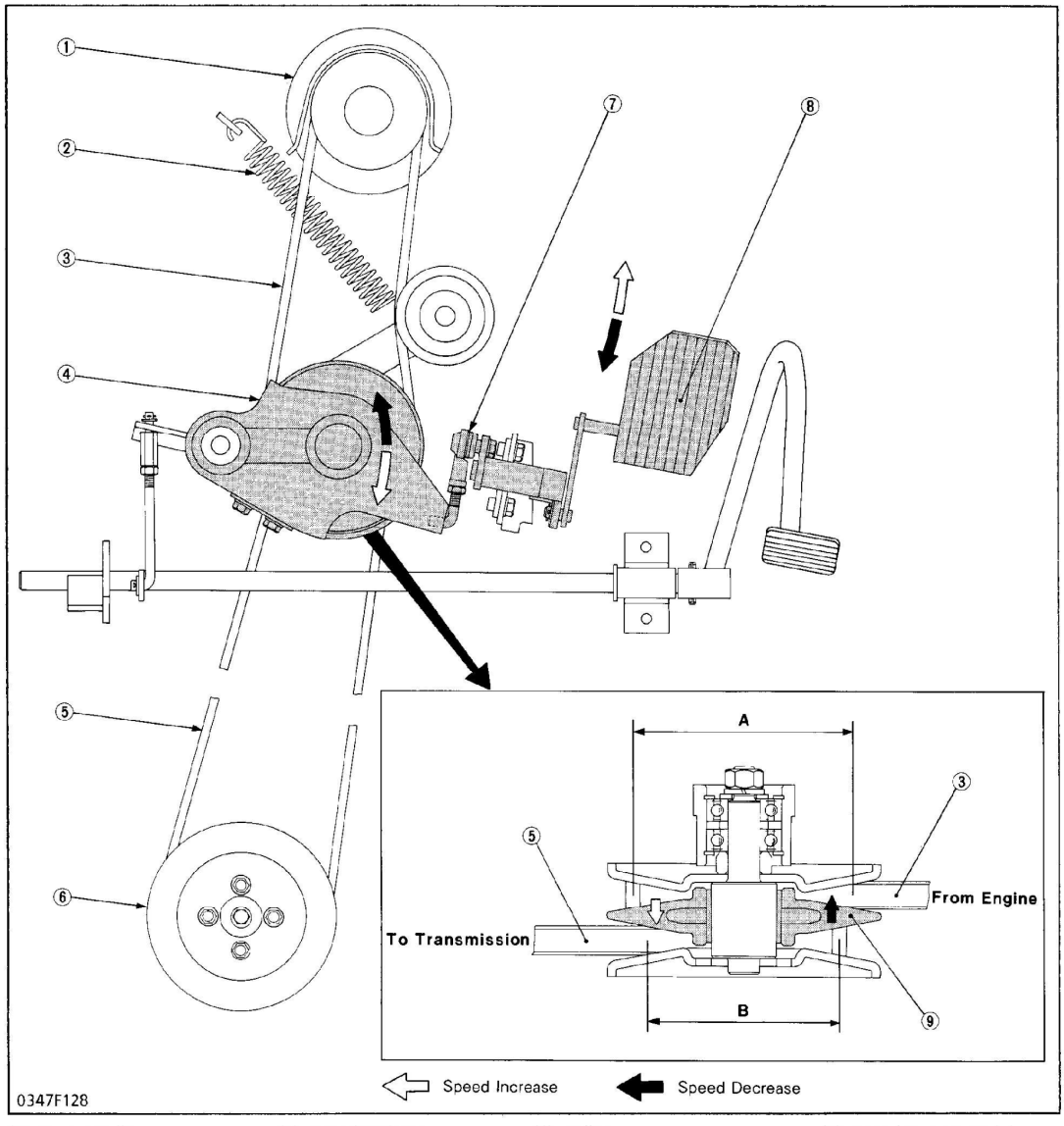
(1) Ball Bearing
(2) Internal Snap Ring
(3) Collar 2
(4) Sheave
(5) Mobile Sheave Bushing
(6) Mobile Sheave
(7) Sheave Shaft
(8) Sheave Shaft Mounting Nut
(9) Spring Washer
(10) Plain Washer
(11) Internal Snap Ring
(12) Ball Bearing
(13) Collar
(14) External Snap Ring
(15) Ball Bearing
(16) Internal Snap Ring
(17) Speed Change Arm
(18) Internal Snap Ring
(19) Ball Bearing
(20) Speed Change Arm Shaft
(21) Steering Gear Support

The main components of speed variator are shown in the figure above.

It is located between the engine and transmission, and power from the engine is transmitted to the transmission via the belts.

The operator controls the lawn tractor movement by depressing the speed variator pedal and shifting the transmission shift gears into the desired speed.

■ Speed Variator Operation



(1) Engine Pulley
(2) Tension Spring
(3) V Belt
(4) Speed Variator
(5) V Belt
(6) Pulley
(7) Speed Change Rod
(8) Speed Variator Pedal
(9) Mobile Sheave

When the speed variator pedal (8) is depressed, the speed variator (4) moves rearward via the speed change rod (7) and the mobile sheave (9) in the speed variator moves downward.

The effective diameter **A** of engine side pulley becomes small, and the effective diameter **B** of transmission side pulley becomes large.

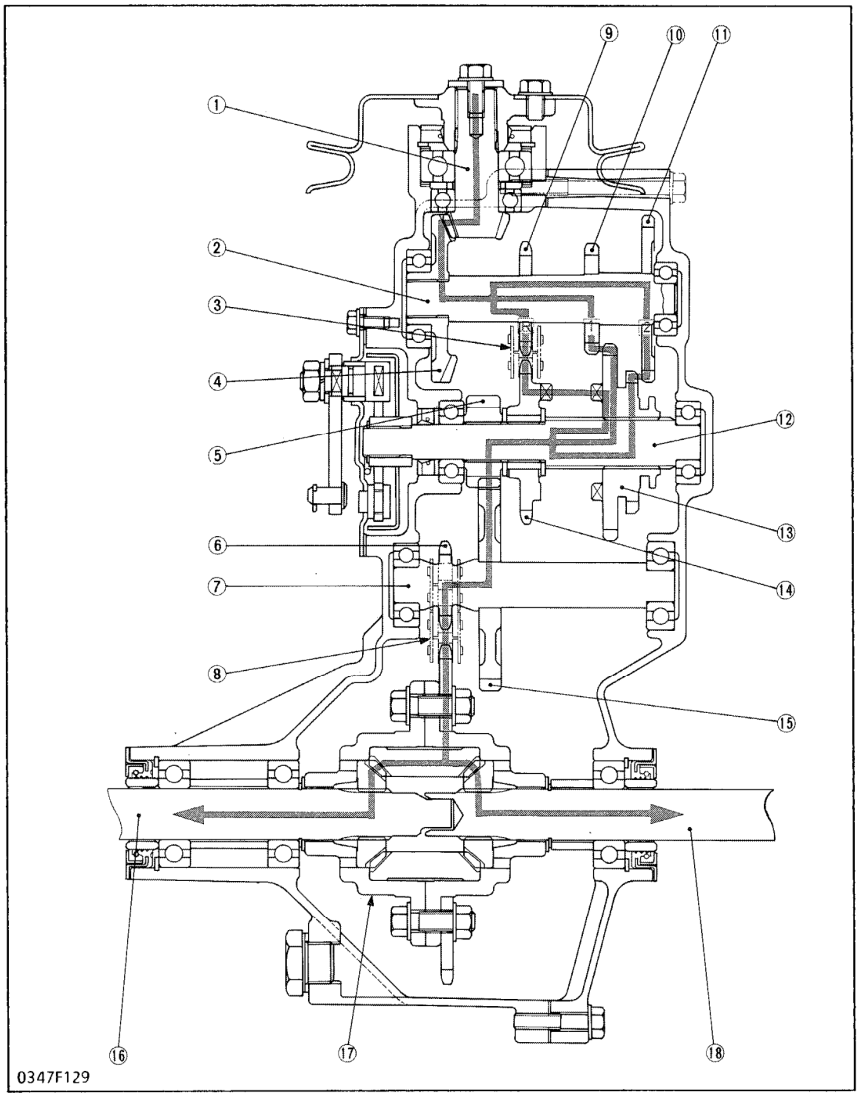
Therefore, the speed transmitted from the engine to the transmission increase.

When the speed variator pedal (8) is released, the speed variator (4) moves forward by tension spring (2) and the mobile sheave (9) in the speed variator moves upward.

The effective diameter **A** of engine side pulley becomes large, and the effective diameter **B** of transmission side pulley becomes small.

Therefore, the speed transmitted from the engine to the transmission decrease.

[3] POWER TRAIN



(1) 12T Bevel Pinion Shaft
(2) 2nd Shaft
(3) Chain
(4) 35T Bevel Gear
(5) 15T Gear
(6) 9T Sprocket
(7) 4th Shaft
(8) Chain
(9) 12T Sprocket
(10) 18T Gear
(11) 29T Gear
(12) 3rd Shaft
(13) 24T-35T Gear
(14) 18T Sprocket
(15) 38T Gear
(16) Rear Axle (Left)
(17) Differential Gear
(18) Rear Axle (Right)

The transmission consists of a series of gears as shown in the figure above.

Besides neutral, three kinds of power flow are available by operating the gear shift lever to shift the 24T-35T gear (13) on the 3rd shaft (12).

■ 1st Position

12T Bevel Pinion Shaft (1) →35T Bevel Gear (4) →2nd Shaft (2)·18T Gear (10) →35T Gear (24T-35T Gear) (13) →3rd Shaft (12) →15T Gear (5) →38T Gear (15) · 4th Shaft (7) · 9T Sprocket (6) →Chain (8) →Differential Gear (17) →Rear Axle (16), (18)

■ 2nd Position

12T Bevel Pinion Shaft (1) →35T Bevel Gear (4) →2nd Shaft (2) · 29T Gear (11) →24T Gear (24T-35T Gear) (13) →3rd Shaft (12) →15T Gear (5) →38T Gear (15) · 4th Shaft (7) · 9T Sprocket (6) →Chain (8) →Differential Gear (17) →Rear Axle (16), (18)

■ Reverse Position

12T Bevel Pinion Shaft (1) →35T Bevel Gear (4) →2nd Shaft (2) · 12T Sprocket (9) →Chain (3) →18T Sprocket (14) →24T-35T Gear (13) →3rd Shaft (12) →15T Gear (5) →38T Gear (15) · 4th Shaft (7) · 9T Sprocket (6) →Chain (8) →Differential Gear (17) →Rear Axle (16), (18)

3 ELECTRICAL SYSTEM

[1] WIRING DIAGRAM AND ELECTRICAL CIRCUIT

The electrical system includes these circuits written below.

- Engine starting circuit (starter motor, etc.)
- Engine key switch shut-off circuit (relay box, fuel cut off solenoid, etc.)
- Power generating and charging circuit (charging coil, rectifier, etc.)
- Lighting circuit (head light, head light switch, etc.)

The voltage applied to the each circuit is 12 volts.

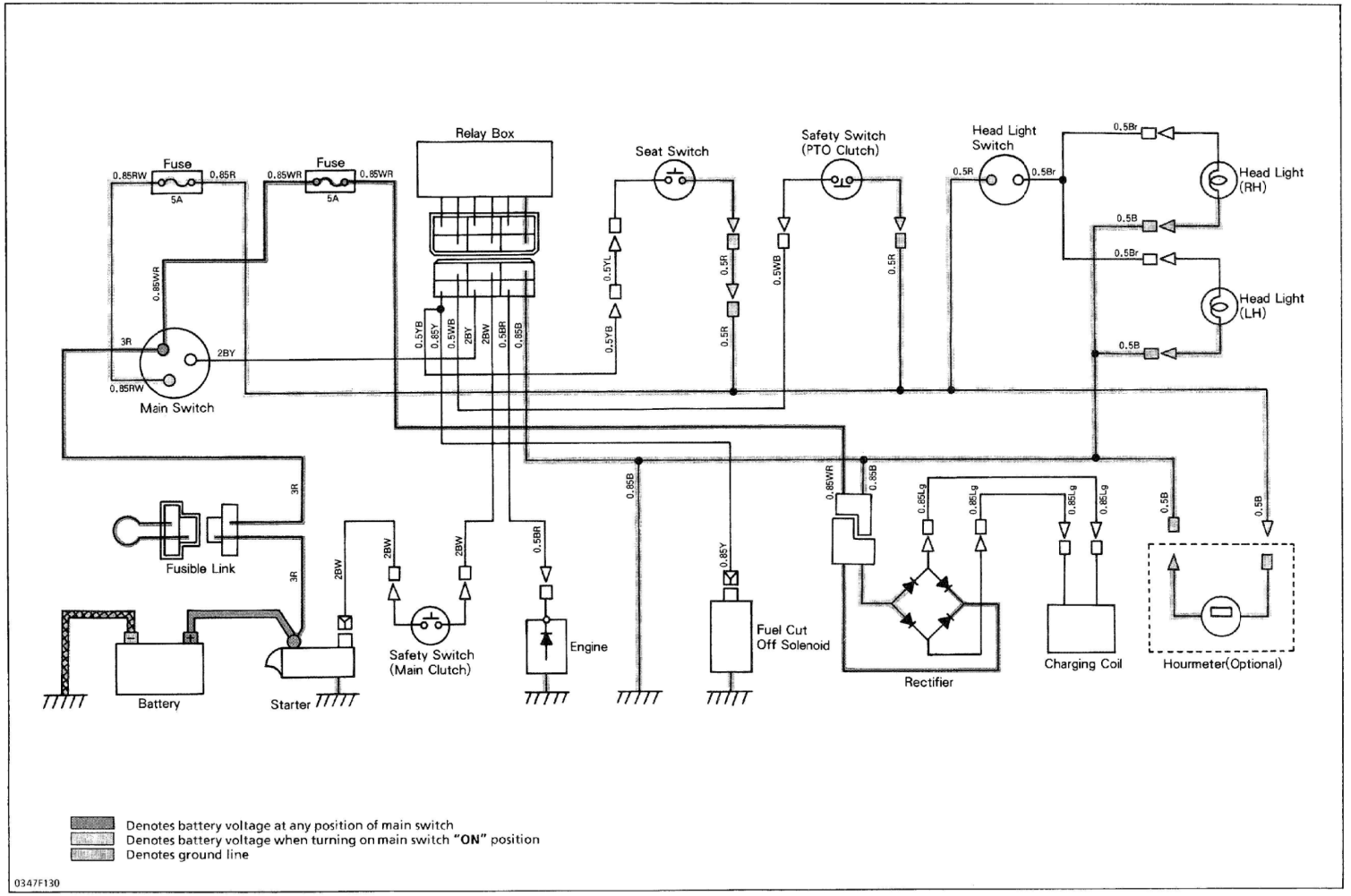
(1) Wiring Diagram

- **Color of Wiring**

B ---------- Black	BR ---------- Black / Red	WR ---------- White / Red
R ---------- Red	BW ---------- Black / White	YB ---------- Yellow / Black
Y ---------- Yellow	RW ---------- Red / White	BY ---------- Black / Yellow
Br ---------- Brown	WB ---------- White / Black	YL ---------- Yellow / Blue
Lg ---------- Light green		

- **Main Switch Table**

Terminal / Key Position	BAT	IG	ST
OFF	●		
ON	●	●	
START	●	●	●


Relay Box
Seat Switch
Safety Switch (PTO Clutch)
Head Light Switch
Head Light (RH)
Head Light (LH)
Fuse
Fuse
5A
5A
0.85RW
0.85R
0.85WR
0.85WR
0.85WR
0.85WR
0.5Br
0.5B
0.5Br
0.5B
0.5R
0.5Br
0.5YL
0.5YB
0.5R
0.5R
0.5WB
0.5R
0.5YB
0.85Y
0.5WR
2BY
2BW
0.5BR
0.85B
3R
2BY
0.85RW
Main Switch
3R
3R
Fusible Link
2BW
2BW
2BW
0.5BR
0.85B
0.85Y
0.85WR
0.85B
0.85L-g
0.85L-g
0.85L-g
0.85L-g
0.5B
0.5B
Battery
Starter
Safety Switch (Main Clutch)
Engine
Fuel Cut Off Solenoid
Rectifier
Charging Coil
Hourmeter(Optional)
Denotes battery voltage at any position of main switch
Denotes battery voltage when turning on main switch "ON" position
Denotes ground line
0347F130

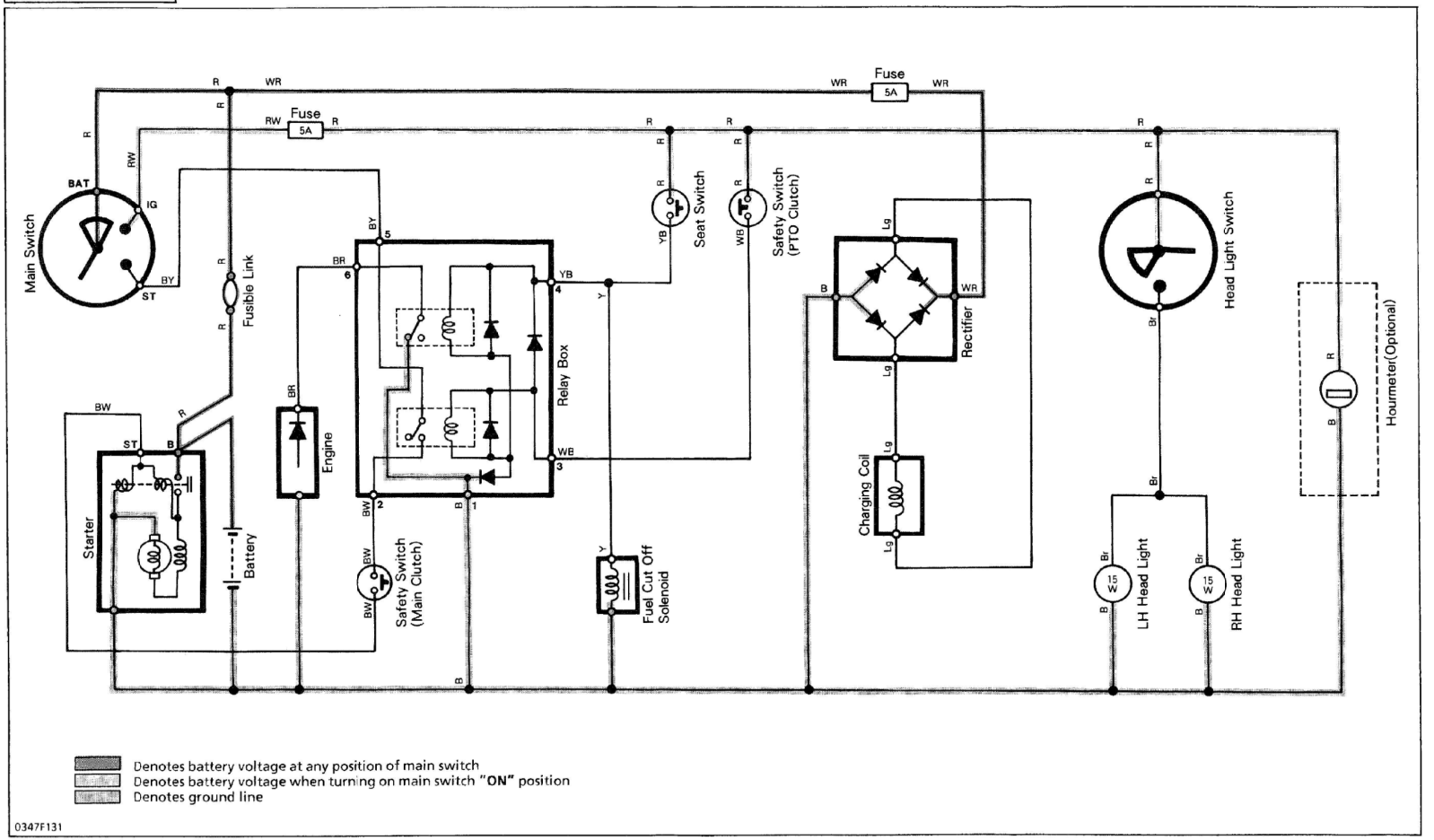
(2) Electrical Circuit

- **Color of Wiring**

B ---------- Black	Lg ---------- Light green	RW ---------- Red / White	YB ---------- Yellow / Black
R ---------- Red	BR ---------- Black / Red	WB ---------- White / Black	BY ---------- Black / Yellow
Y ---------- Yellow	BW ---------- Black / White	WR ---------- White / Red	YL ---------- Yellow / Blue
Br ---------- Brown			

- **Main Switch Table**

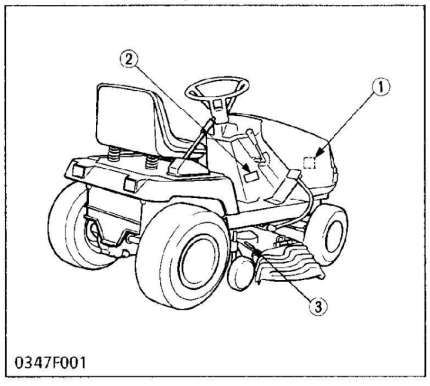
Terminal / Key Position	BAT	IG	ST
OFF	●		
ON	●	●	
START	●	●	●



S. DISASSEMBLING AND SERVICING

G GENERAL

[1] LAWN TRACTOR IDENTIFICATION



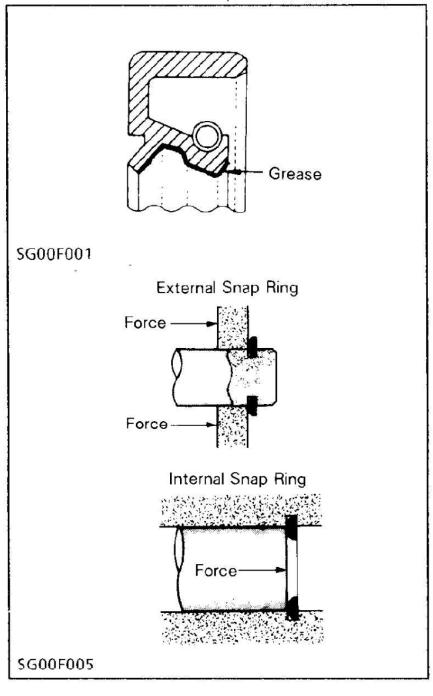
When contacting your local KUBOTA distributor, always specify engine serial number, lawn tractor serial number and mower serial number.

(1) Engine Serial Number
(2) Lawn Tractor Serial Number
(3) Mower Serial Number

[2] GENERAL SAFETY

- Stop the engine, remove the spark plug cap and ignition key before servicing the lawn tractor.
- If the engine must be running to do same work, make sure the area is well ventilated. Never run the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.
- Gasoline is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.
- Keep away from rotating or hot parts and high voltage cord when the engine is run with the hood open.

[3] GENERAL PRECAUTION



- During disassembly, carefully arrange removed parts in a clean area to prevent confusion later. Screws and nuts should be installed in their original position to prevent reassembly errors.
- When special tools are required, use KUBOTA genuine special tools. Special tools which are not frequently used should be made according to the drawings provided.
- Before disassembling or servicing electrical wires, always disconnect the ground cable from the battery first.
- Remove oil and dirt from parts before measuring.
- Use only KUBOTA genuine parts for parts replacement to maintain tractor performance and to assure safety.
- Gaskets and O-rings must be replaced during reassembly. Apply grease to new O-rings or oil seals before assembling. See the figure.
- When reassembling external snap rings or internal snap rings, they must be positioned so that sharp edge faces against the direction from which a force is applied. See the figure.