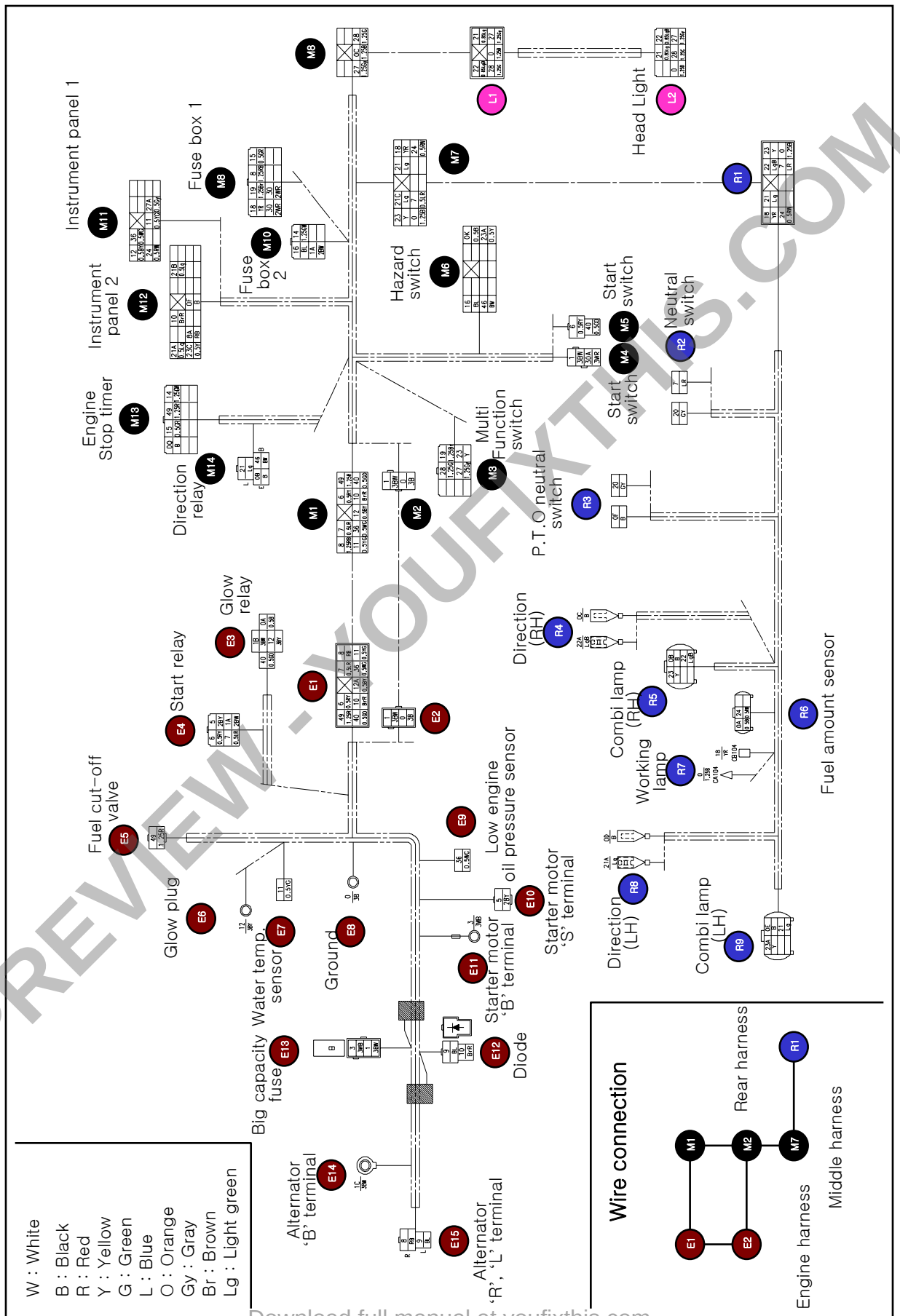
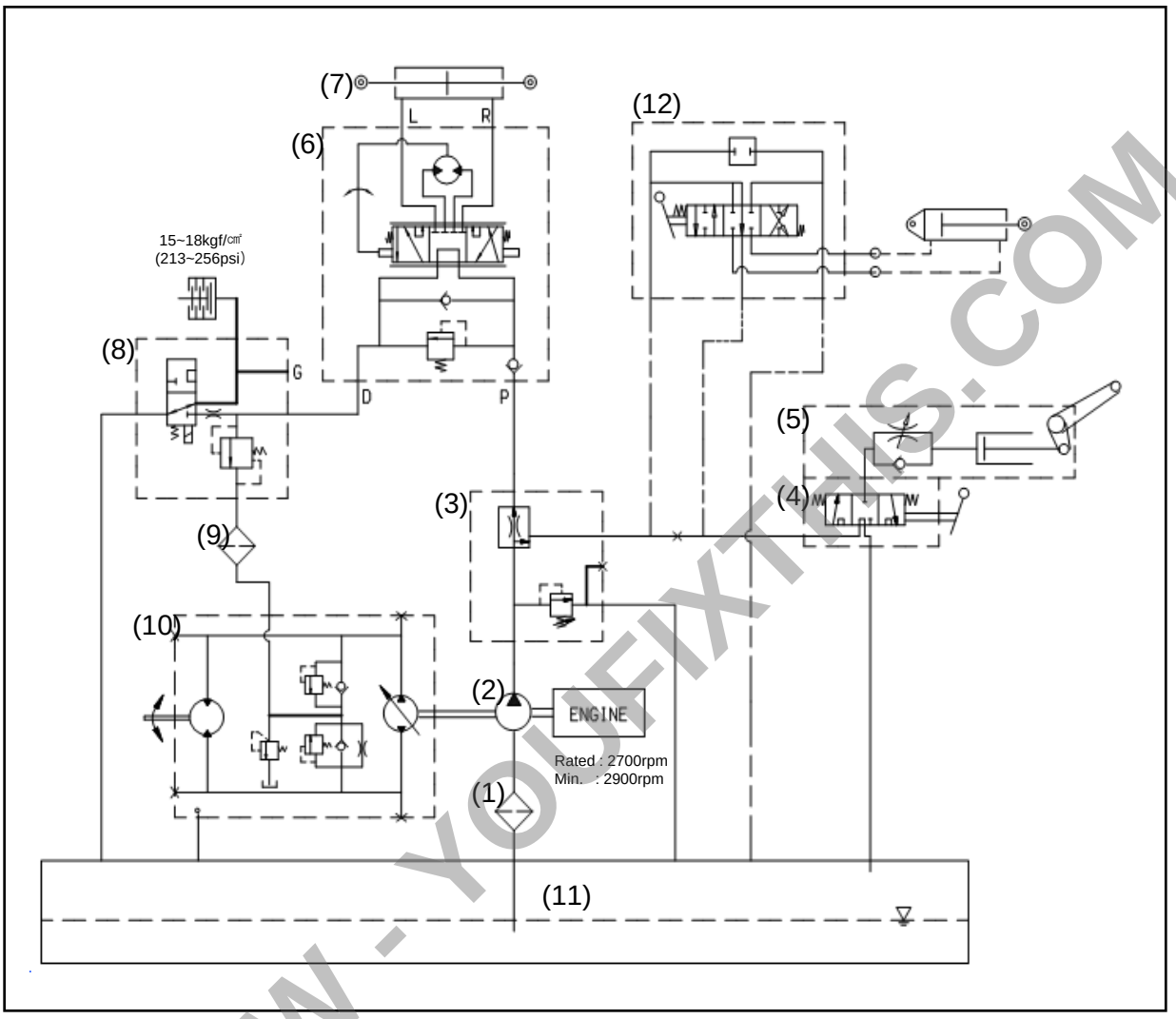


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Hydraulic circuit diagram



1. Filter 2. Pump 3. Priority valve 4. Lift control valve 5. Hydraulic housing 6. Steering unit 7. Steering cylinder 8. P T O v a l v e 9. PTO filter 10. HST Unit 11. Oil tank (Transmission case) 12. Remote c o n t r o l v a l v e

1.Hydraulic circuit

Hydraulic system is commonly using transmission oil.

When engine starts, it drives pump. Pump intake oil from the transmission case via suction filter. And it make a high pressure and supplies the pressurized oil to the priority valve through the steel pipe.

Priority valve operates both steering system and HST unit at the same time firstly. Then remote hydraulic and control valve can activate if the pressure comes enough high.

2.Construction of system

Double rod type cylinder is installed for steering.

Lift can raise by the hydraulic pressure but it drops by the weight when lower it.

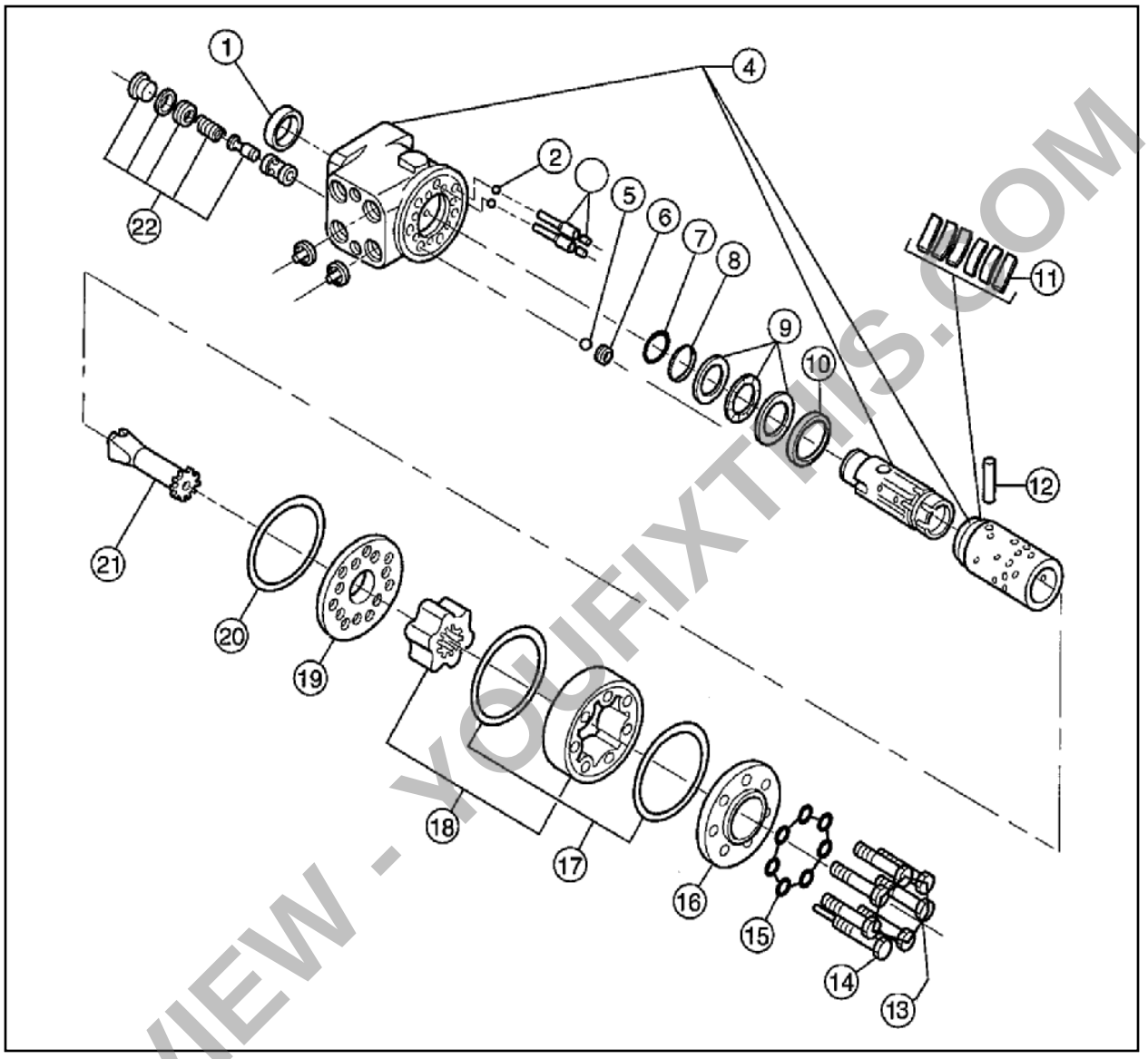
And down speed can be adjusted using a know under seat. Furthermore you can lock the hydraulic flow by this valve.

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Steering unit exploded view

05.2 STEERING UNIT OVERHAUL

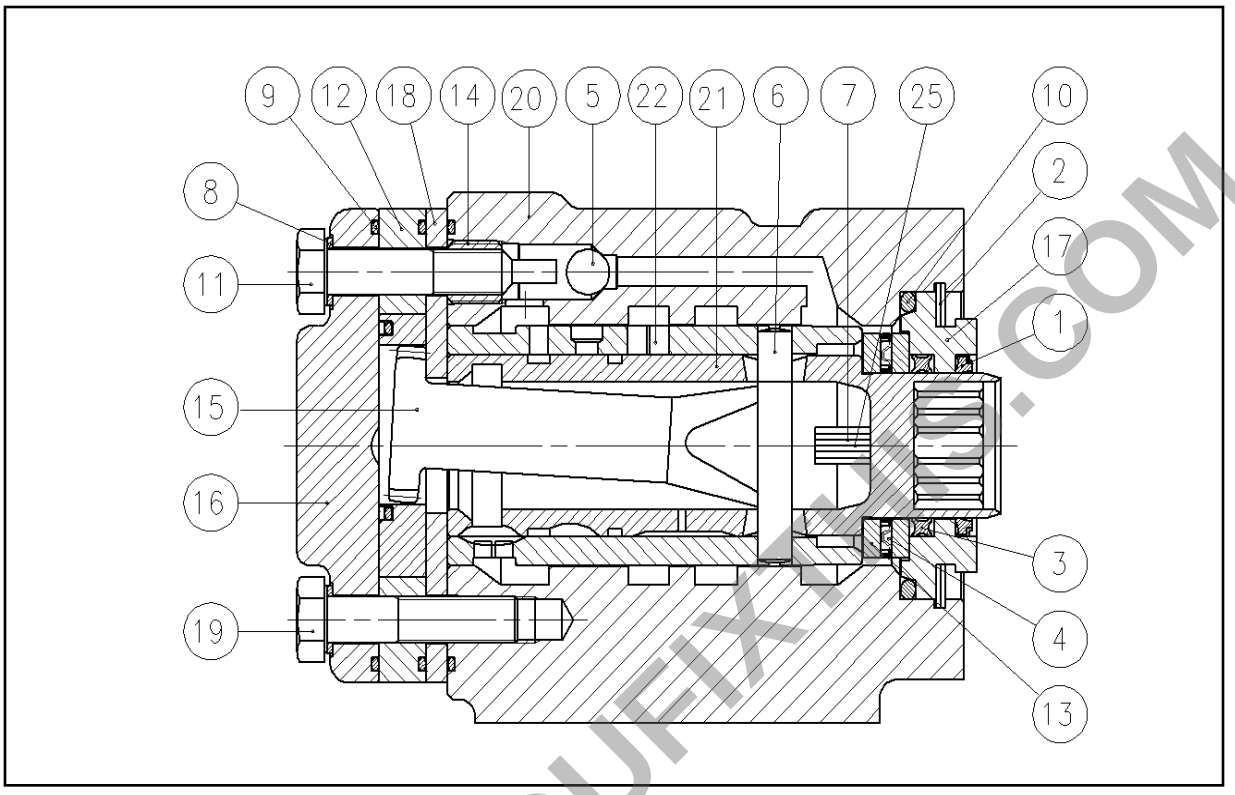


1. Dust seal
2. Ball
3. Pin
4. Spool valve assembly
5. Ball
6. Retainer
7. O-ring
8. Back up ring
9. Thrust bearing
10. Spacer
11. Centering spring
12. Pin
13. Retaining bolt
14. Dowel pin bolt (Check valve)
15. Washer
16. End plate
17. O-ring
18. Rotor and stator assembly
19. Thrust washer
20. O-ring
21. Rotor drive shaft
22. Relief valve

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Steering unit



No.	PART No.	PART NAME	MATERIAL	QT'Y	REMARK
1	405210	DUST SEAL	NBR	1	**
2	402330	RETAINING RING	HSWR	1	
3	QN4215A	QUAD RING		1	**
4	407211	THRUST BEARING	SUJ2	1	*
5	406212	BALL	SUJ2	1	SΦ7.94
6	408210	pin	SUJ2	1	
7	402322L	CENTERING SPRING	STS	4	
8	403211	WASHER	CU	7	*
9	ONA041B	O-RING	NBR	3	**AS568-041
10	ONA225B	O-RING	NBR	1	**AS568-225
11	421220	ROLLED SCREW	SCM440	1	
12	211434L	GEROTOR SET		1	
13	407212	BEARING RACE	SK-5	2	*
14	409210	BORE SCREW	S20C	1	
15	2072116	DRIVE	SCM415	1	
16	204211A	END CAP	SCM415	1	
17	206210C	GLAND BUSHING	S45C	1	
18	205211	PLATE	SK-5	1	
19	401212	CAP SCREW	SCM440	6	
20	202410	HOUSING	FC25	1	
21	S001204	SPOOL	SCM415	1	
22	S001101	SLEEVE	SCM415	1	

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Torque standard for major components



Hydraulic housing	Standard	Torque (kg-cm)
Bolts on hydraulic housing (1)	M10X1.25X70 (5 places) M10X1.25X60 (1 place) M10X1.25X45 (1 place) M10X1.25X85 (1 place)	850~950(61.82~69.09 lb・ft) 850~950(61.82~69.09 lb・ft) 850~950(61.82~69.09 lb・ft)
Quick coupler	3/8”	560(40.72 lb・ft)
Union bolt	PF ½ (1 place) PF 3/8 (4 place)	850(61.82 lb・ft)
Bolts on control valve (4)	M8X1.25X25 (2 place)	306(22.25 lb・ft)
Drop speed control valve (5)		
Bolts on remote hydraulic valve (6)	M8X1.25X16 (1 place)	300~350(21.81~25.45 lb・ft)

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04.2 SEPARATING ENGINE FROM TRACTOR

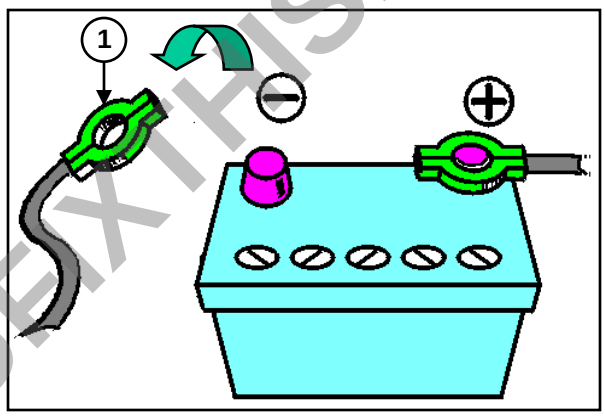
***DANGER** : Lift and handle all heavy components by using lifting equipment of appropriate lifting capacity. Ensure that units or parts are supported by suitable slings or hooks. Ensure that no-one is in the vicinity of the load to be lifted.*

***DANGER** : Never bring your head, body, arms, legs, feet, hands, fingers near fans or rotating belts.*

***DANGER** : Always wear suitable protection such as approved eye protection, helmets, special clothing, gloves and footwear when working around machines.*

***WARNING** : Always ensure transmission and other heavy components of the tractor are fully supported to prevent any movement when the transmission is removed.*

1. Open the hood and disconnect the negative (-) battery cable (1).

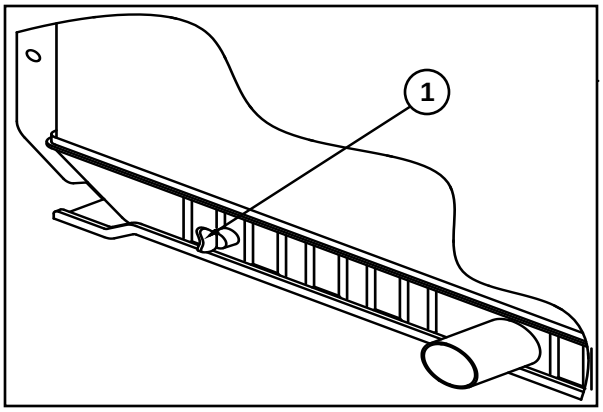


2. Position a clean container under the engine frame to drain the cooling water.



3. Remove the drain plug (1) under the left hand side of the radiator and drain the cooling water into a clean container if it is to be re-used.

Cooling water capacity	3.8 L(0.93 gal)



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5-9. Solutions for Disorder

⚠Notice	▶ Please set the gearshift at neutral after setting the parking break on in order to avoid any possible danger by sudden start of engine.

Type	Condition	Main Reason	Solution
Engine	The start-up motor would no revolve even by turning the key switch.	▲ Clutch Pedal is Not Pressed. ▲ Electric Discharge of the Storage ▲ Terminal is loose ▲ Key switch broken ▲ Start-up Motor broke down	▲ Press the Clutch Pedal As Much As Possible. ▲ Recharge or Replace ▲ Fasten ▲ Repair or Replace ▲ Repair or Replace
	The start-up motor starts, but does not revolve.	▲ Low Storage Battery ▲ Ground Defect ▲ Viscosity of Engine Oil is Not Right	▲ Recharge or Replace ▲ Fasten the Earth Ground ▲ Replace the Proper Viscosity Oil
	The start-up motor revolves, start the engine.	▲ Air in the Fuel System ▲ Fuel Filter clogged ▲ Engine broke down ▲ Fuel cock closed	▲ Bleed Fuel system ▲ Clean the Filter or Replace It. ▲ Repair ▲ Open the Cock.
	Engine RPM's is Irregular.	▲ Air-inflow in the Fuel System ▲ Fuel Filter clogged ▲ Injection Nozzle clogged ▲ Fuel Leakage ▲ Fuel Injection Amount is Not stable.	▲ Bleed Fuel system ▲ Clean the Filter or Replace It. ▲ Repair or Replace ▲ Tighten Clips, Replace Pipe/ Copper Washer ▲ Repair
	Engine stops in low-RPM	▲ Injection Pump defect ▲ Valve clearance does not Match. ▲ Nozzle defect	▲ Repair ▲ Adjust the Interspace. ▲ Repair
	Engine RPM's exceeding the max speed.	▲ Governor stick Contaminant	▲ Repair
	Tractor suddenly stops while	▲ Fuel shortage ▲ Nozzle defect ▲ Shortage in Engine Oil or Lubricat	▲ Deflate after fuel supplement. ▲ Repair or Replace ▲ Repair

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Description			Maxxfarm 25	Maxxfarm30
Tire	Front		7-14 (4PR)	7-16 (4PR)
	Rear		11.2-24 (8PR)	12.4-24 (6PR)
Gross vehicle weight			1275kg	1295kg
Engine	Model		S3L	S3L2
	Type		4 stroke, water cooled in-line swirl chamber	
	# of cylinder		3	
	Bore x Stroke		78 x 78.5mm	78 x 92mm
	Displacement		1,125cc	1,318cc
	Rated rpm		2700 rev/min	2700 rev/min
	Max rpm		2900 rev/min	2900 rev/min
	Output		23PS / 2700 rev/min	27PS / 2700 rev/min
Injection pump	Type		IN-LINE	
	Governor		Centrifugal	
	Fuel filter		Cartridge	
	Air cleaner filter		Dry	
	Firing order		1-3-2	
Lubrication	Type		Compressed	
	Pump		Gear pump	
	Filter		Cartridge	
	Filtering type		Full oil	
Cooling	Type		Forced circulation	
	Pump		Centrifugal	
	Temperature control		Thermostat	
Clutch	Type (main, PTO)		Dry single, wet multi	
	Operating (main, PTO)		Pedal, electro-hydraulic	
	Return type		diaphragm	
Transmission	Gear	Main	HST	
		Range	Spur	
	Mesh	Main	-	
		Range	Constant	
	Speed	Main	HST	
		Range	2	
Differential lock	Gear type		Spiral bevel	
	Type		Mechanical	

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HST type

NO	Check point	Class	Capacity	Maintenance interval(hr)				
				Everyday	50	100	300	500
1	Fuel tank	Diesel	25 ℓ	▲			■	
2	Fuel filter	Element						●
3	Engine oil	CF-4, CG-4	4.2 ℓ	▲	★		●	
4	Engine oil filter	Element			★		●	
5	Coolant	Soft water	3.8 ℓ	▲				
6	Radiator net			■				
7	Air cleaner		Dry	■				
8	Battery			▲				
9	Fan belt tension		10~12 mm		▲			
10	Valve clearance		0.25 mm				▲	
11	Injection pressure		15.3 Mpa				▲	
12	Hydraulic filter				★		●	
13	Transmission oil (transmission)	oil	20 ℓ		★		▲	●
		HST filter			★		●	
14	Front axle oil	T/M oil	3 ℓ		★		▲	●
15	3p hitch				▲			
16	HST pedal neutral			▲				
17	Brake pedal free play			▲				
18	Lever operation			▲				
19	Instrument & electric parts			▲				
20	Bolt, nut			▲				
21	Tire inflation			▲				
22	Toe-in		0~8 mm			▲		
23	Harness	Short, cut					▲	

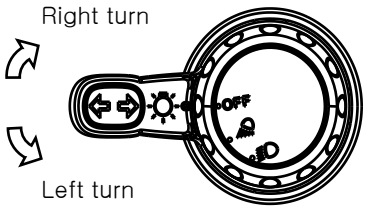
★ first change ● change ▲ check, adjust and filling ■ Cleaning

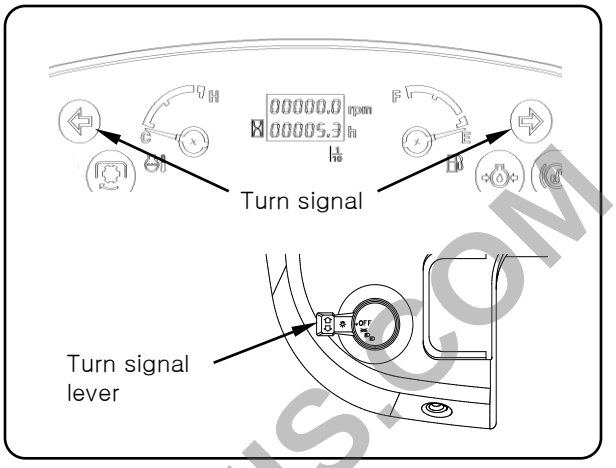
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(7) Signal Light Switch

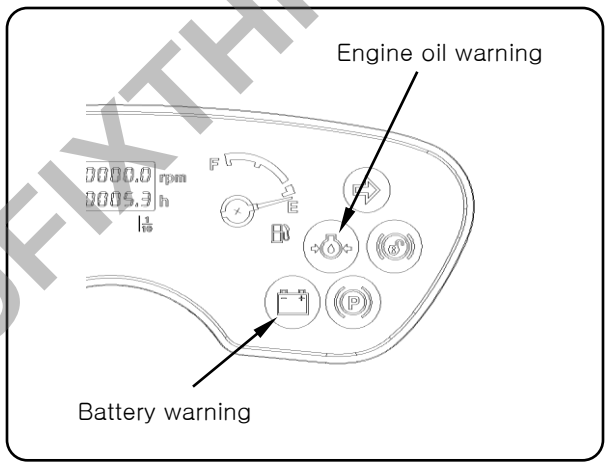
- Use it when making left or right turns.





(8) Engine Oil warning lamp

- It is turned on when the key switch is at the driving mode, and once the engine starts, the caution light is turned off.
  Caution light can be turned on while the engine is stopped.
- If the light is on while engine is moving, please stop the engine, and check the amount of engine oil.
  -If the light is on even though the amount of oil is normal, contact the dealer right away.



(9) Battery warning

- It is turned on when the key switch is at the driving mode, and once the engine starts, the caution light is turned off.
- If the light is on while engine is moving, get it repaired as it has problem with charging device.

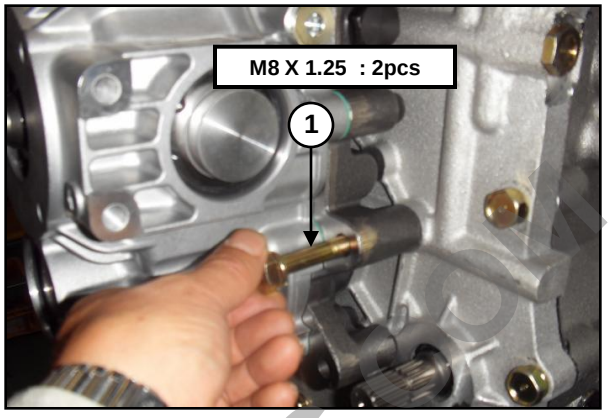
(10) Water in Fuel Filter warning

- If water is poured in the fuel filter, the caution light shall be on and the engine will be stopped.
- Please use the high quality fuel.

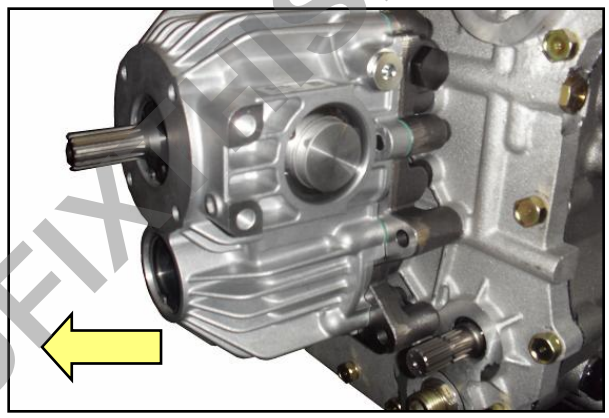
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6. Remove the HST unit adjusting bolts (1).



7. Using a sharp driver, remove the HST unit as a complete assembly.

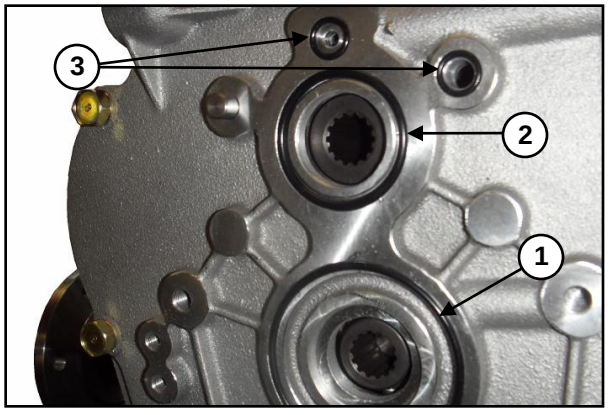


***ATTENTION** : Inspect the O-rings (1),(2),(3) for any damage, replace them if required.*

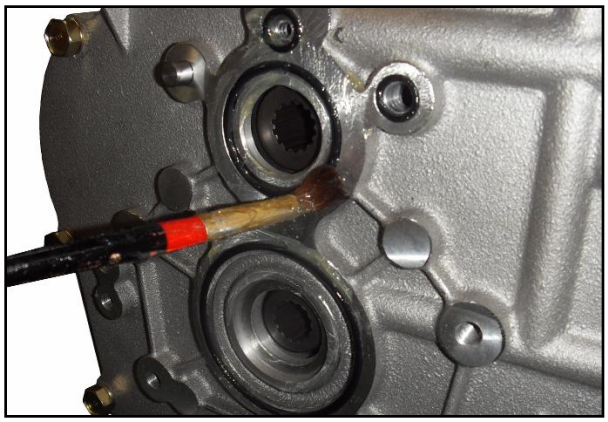
D74.7(2.94inch) x W3.1(0.122inch) : 1pc

D45.7(1.799inch) x W3.5(0.1378inch) : 1pc

D9.8(0.386inch) x W1.9(0.0748): 2pcs



***ATTENTION** : When re-assembling the HST unit, thoroughly clean and coat the fitting points with grease after installing the O-rings.*

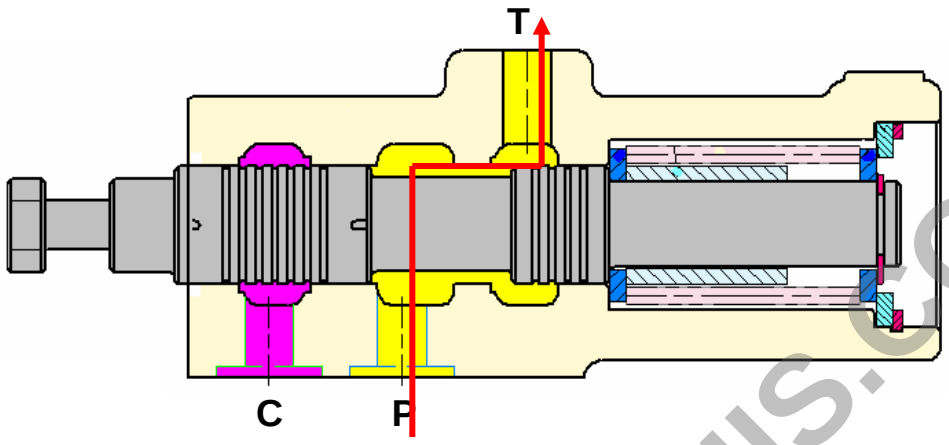


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Operation of control valve

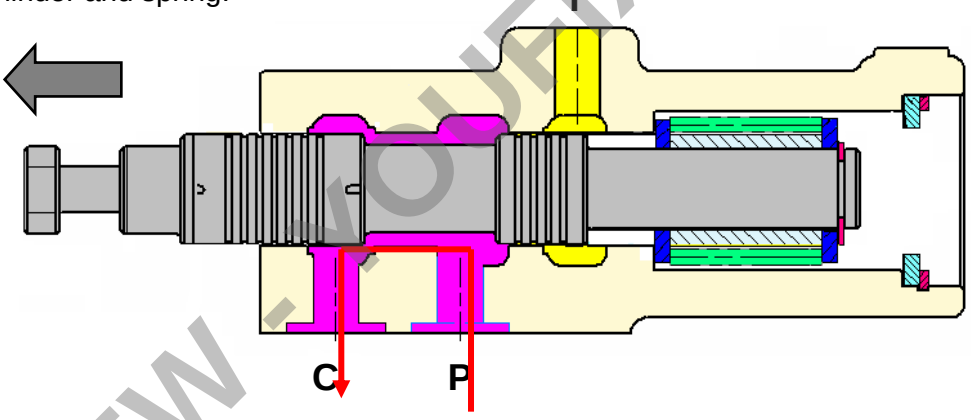
Neutral



* Neutral position requires no lever operation. Without any lever operation, the spool keeps in balanced.

The oil coming from Pump flows to drain directly. And they have balanced between cylinder and spring.

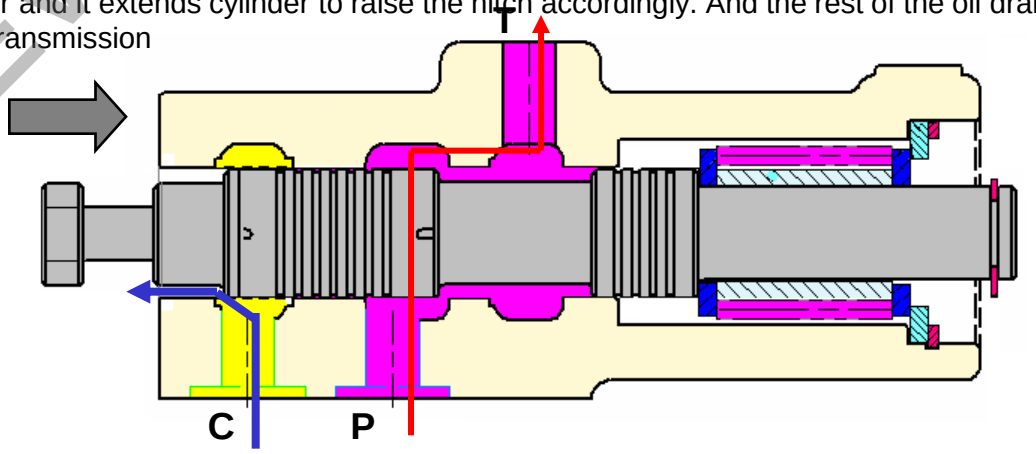
Up



* By moving a lever to raise the hitch, spool moves like an arrow. And oil coming from the pump goes into the

cylinder and it extends cylinder to raise the hitch accordingly. And the rest of the oil drain to transmission

Down



* By moving a lever to down the hitch, spool moves like an arrow. And oil coming from the pump drains to

transmission. And the oil in the cylinder drains too. Then lift down by weight of the implement.

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