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WORKSHOP MANUAL
UTILITY VEHICLE

RTV900

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GENERAL

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Symptom	Probable Cause	Solution	Reference Page
Oil Pressure Lamp Lights Up When Engine Is Running	Engine oil pressure too low	Repair engine	–
	Engine oil insufficient	Replenish	G-8
	Oil pressure switch defective	Replace	8-S19
	Short circuit between oil pressure switch lead and chassis	Repair	–
Oil Pressure Lamp Does Not Light When Main Switch Is Turned ON and Engine Is Not Running	Bulb blown	Replace	G-48
	Oil pressure switch defective	Replace	8-S19
	Wiring harness disconnected or improperly connected (between panel board and oil pressure switch)	Repair or Replace	–
Parking (Position) Light Does Not Light	Fuse blown (15 A)	Replace	G-47
	Bulb blown	Replace	8-S30
	Parking light switch defective	Repair or Replace	8-S20
	Wiring harness disconnected (between parking light switch and parking light)	Repair or Replace	–

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COOLING SYSTEM

Symptom	Probable Cause	Solution	Reference Page
Fan Motor Does Not Rotate When Engine Overheats	Coolant temperature gauge defective	Replace	8-S30
	Fuse blown (20 A)	Replace	G-47
	Fan motor relay defective	Replace	8-S22
	Wiring harness disconnected or improperly connected	Repair or Replace	–
	Fan motor defective	Replace	8-S22
	Battery discharged or defective	Recharge or Replace	G-35
Fan Motor Rotates Always (When Main Switch Is ON Position)	Coolant temperature gauge defective	Replace	8-S30
	Fan motor relay defective	Replace	8-S22

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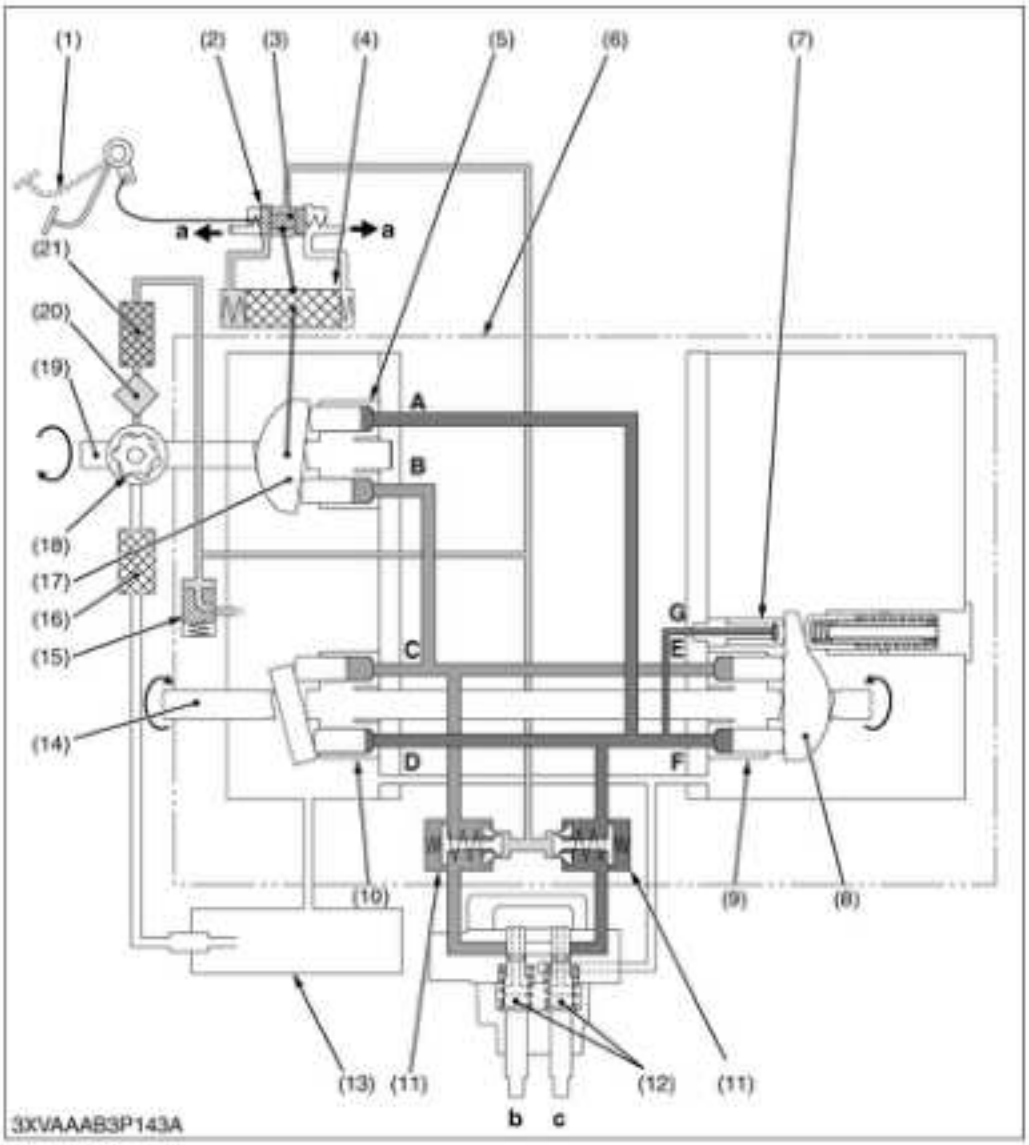
Model			Worksite	Turf
Dimensions	Overall length		3030 mm (119.3 in.)	
	Overall width		1520 mm (59.8 in.)	
	Overall height		2010 mm (79.1 in.)	2015 mm (79.3 in.)
	Front tread center		1150 mm (45.3 in.)	1180 mm (46.5 in.)
	Rear tread center		1180 mm (46.5 in.)	1210 mm (47.6 in.)
	Wheel base		1965 mm (77.4 in.)	
	Ground clearance	Front axle	205 mm (8.1 in.)	
		Rear axle	190 mm (7.5 in.)	
Weight			905 kg (1995 lbs)	910 kg (2006 lbs)
Max. rolling weight (Towing capacity)			590 kg (1300 lbs)	
Payload capacity			710 kg (1565 lbs)	
Cargo bed	Width		1320 mm (52.0 in.)	
	Length		1180 mm (46.7 in.)	
	Depth		290 mm (11.4 in.)	
	Volume		0.455 m^3 (16 cu.ft.)	
	Bed height (unload)		800 mm (31.5 in.)	
	Cargo bed load		500 kg (1102 lbs)	
Sound level (operator ear)			87 db (A)	
Front deluxe guard			Standard	
Body color			Orange	
Bed lift			Standard	
Auxiliary control valve			Standard	
Speedometer			Standard	

NOTE: * Manufacture's estimate
The company reserves the right to change the specifications without notice.
The valves in "Ground clearance" and "Weight" are those of the machine equipped with the tires in the table above.

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■ Pedal pressed halfway and under light load



(1) Pedal
(2) Regulator Valve Assembly
(3) Regulator Spool
(4) Servo Piston
(5) Cylinder Block
(6) HST Housing
(7) Control Piston
(8) Variable Swashplate (Assist Motor)
(9) Cylinder Block (Assist Motor)
(10) Cylinder Block (Stationary Motor)
(11) Check and High Pressure Relief Valve
(12) Bypass Valve
(13) Transmission Case
(14) Output Shaft
(15) Charge Relief Valve
(16) Oil Filter Cartridge (Suction)
(17) Variable Swashplate (HST Pump)
(18) Charge Pump
(19) Input Shaft
(20) Oil Cooler
(21) Oil Filter Cartridge

a : To HST Housing
b : Connects with Cable for VHT Pressure Release Knob
c : Connects with Brake Cam Lever

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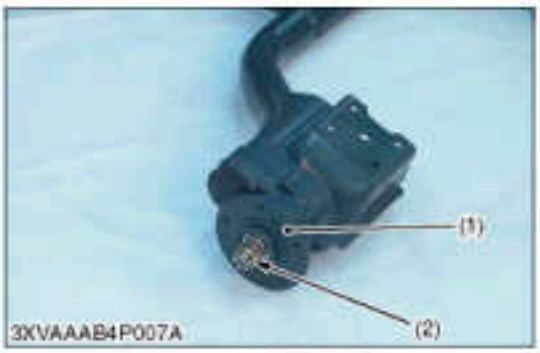
Let's suppose that the pedal is pressed halfway. The control lever is activated by the pedal to switch the regulator valve's hydraulic circuit. The servo piston (4) is then actuated to tilt the pump's variable swashplate (17) (see the above illustration).

The pump cylinder block (5) is driven by the input shaft (19) to put the oil under high pressure and to feed it out of the pump port **A**. The pressure-fed oil flows into the motor's port **D** along the circuit. The motor's piston is actuated by this pressurized oil to push down the stationary swashplate. Then together with the motor's cylinder block (10), the output shaft (14) starts turning.

The output shaft rpm is determined by the delivery rate of the HST pump, varying the rpm.

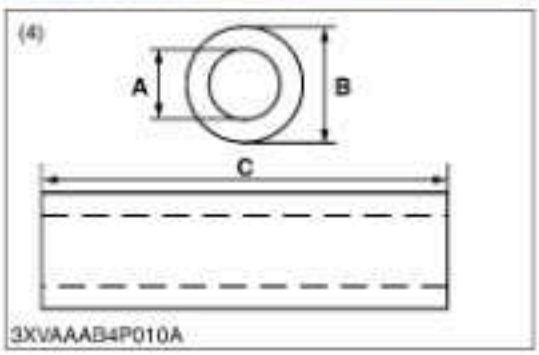
Then the motor's oil drops to a low pressure and returns through the motor port **C** to the pump port **B**.

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Rear Axle and Propeller Shaft

1. Remove the slotted nut (2) and draw out the rear axle (1).
2. Tap the outside of the propeller shaft (3) and remove the propeller shaft to the inside (**a**).

(When reassembling)

- Prepare the pipe (4) of the same diameter as bearing inner, and tap it while keeping the bearing when you tap the propeller shaft.
- Moreover, there is no problem if the bearing is inserted in the position in which a rear axle can be tightened.
- After that, the bearing and the collar can be fixed to a correct position by tightening the propeller shaft slotted nut.
- Apply grease to splines of propeller shaft.

	(4) Pipe Dimension
A	31 mm (1.22 in.)
B	51 mm (2.0 in.)
C	178 mm (7.0 in.)

(1) Rear Axle
(2) Slotted Nut
(3) Propeller Shaft
(4) Pipe

a : Inside

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Checking Neutral (Continued)

■ **IMPORTANT**

- **When the neutral position of the machine is checked, it is advisable to divide the checking procedure as follows : First check the HST unit alone, and then connect the HST unit to the link for checking.**

1. Remove the hex. socket head plug from **P1** port (3) and **P2** port (4).
2. Install the HST adaptor and low pressure gauge in **P1** port and **P2** port.
3. Remove the HST control rod (1) from the HST control lever (2) to make situation that HST control lever move freely.
4. Set the 4WD lever to 2WD position.
5. Start the engine and shift the range gear shift lever in **L** position for 5 seconds to make sure that the HST is in neutral position.
6. At this time, check both **P1** port (3)and **P2** port (4) pressure if the wheel rotates.
7. If the measurement is not within the factory specification, adjust with hex. socket head screw (5).

(Adjusting procedure)

- Adjust to loosen the lock nut (6) on a right side of servo piston and for the adjustment hex. socket head screw (5) to make both **P1** port (3) and **P2** port (4) pressure equal while seeing the pressure gauge.
- Retighten the lock nut (6) securely.

(Reference)

- The pressure of **P2** port (4) (reverse side) rises when turning the clockwise.
- The pressure **P1** port (3) (forward side) rises when turning the counterclockwise.

8. Reinstall the HST control rod (1) to HST control lever (2) after confirming neutrality in the HST unit.
9. Adjust the rod length and much a neutral position if the wheel rotates after is stalling the HST control rod (1).

Difference pressure **P1** - **P2**	Factory spec.	+0.5 to +2.0 MPa +0.05 to +0.20 kgf/cm^2 +7.1 to +28.4 psi

Condition

- Engine speed : Idle (1350 min^{-1} (rpm))
- Oil temperature : 45 to 55 °C
  113 to 131 °F

(1) HST Control Rod
(2) HST Control Lever
(3) **P1** Port (for Forward)
(4) **P2** Port (for Reverse)
(5) Hex. Socket Head Screw
(6) Lock Nut

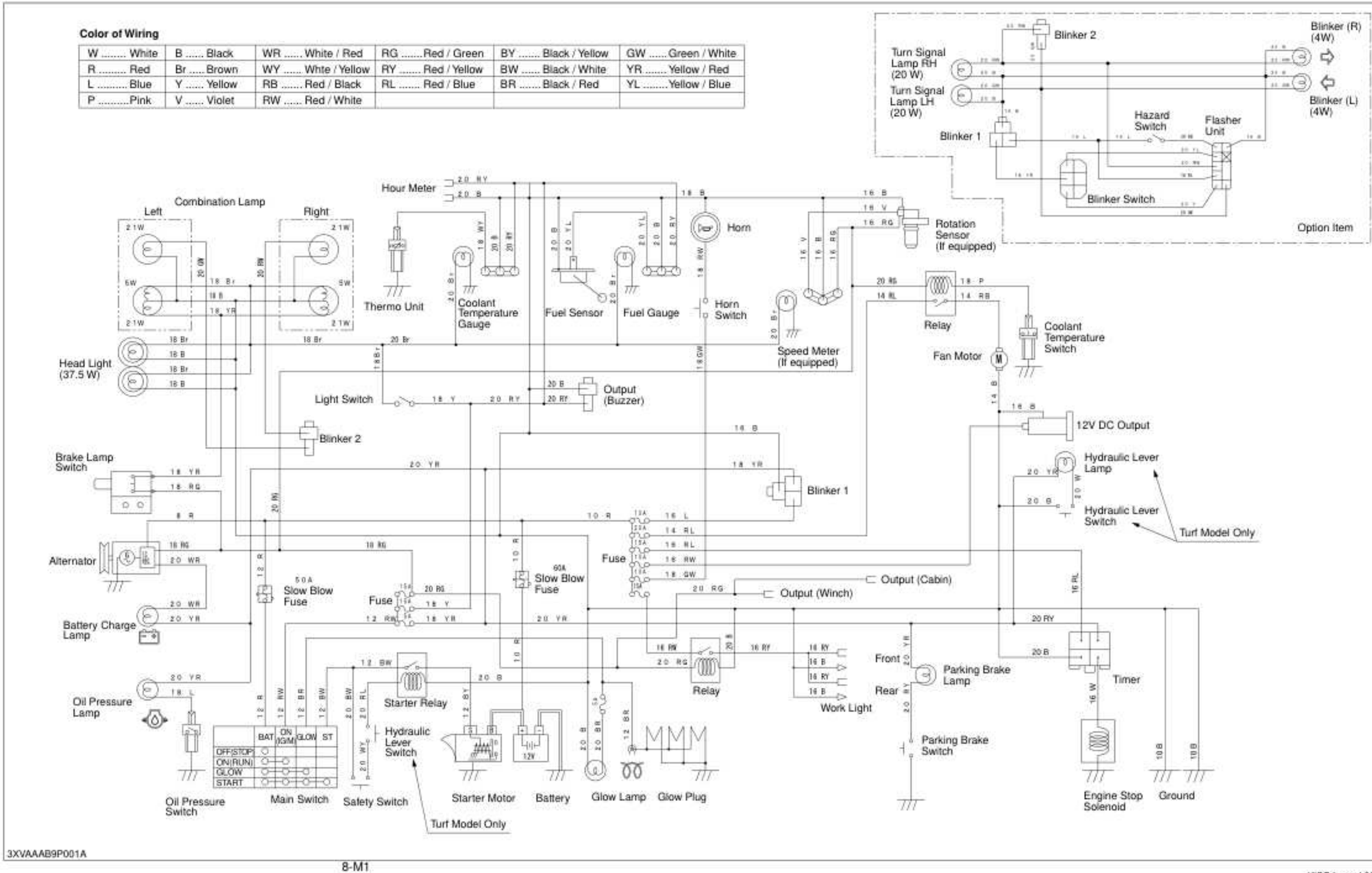
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1. WIRING DIAGRAM

Color of Wiring

W ..... White	B ..... Black	WR ..... White / Red	RG .....Red / Green	BY ..... Black / Yellow	GW .....Green / White
R ..... Red	Br .....Brown	WY ..... White / Yellow	RY ..... Red / Yellow	BW ..... Black / White	YR ..... Yellow / Red
L ..... Blue	Y ..... Yellow	RB ..... Red / Black	RL ..... Red / Blue	BR ..... Black / Red	YL .....Yellow / Blue
P .....Pink	V ..... Violet	RW ..... Red / White			



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