

③Troubleshooting for SC2400 Electric System

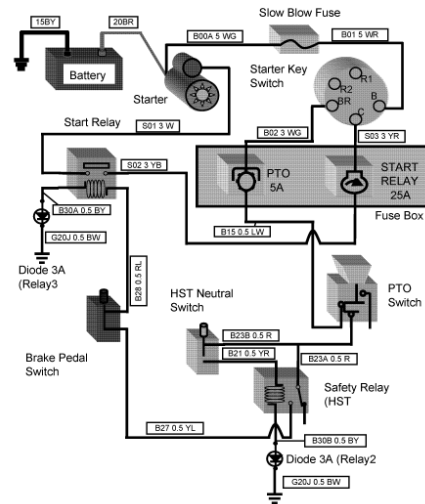
9-10 December, 2009

Technical Service Dept.

Global Customer Service Dept.



Electric System

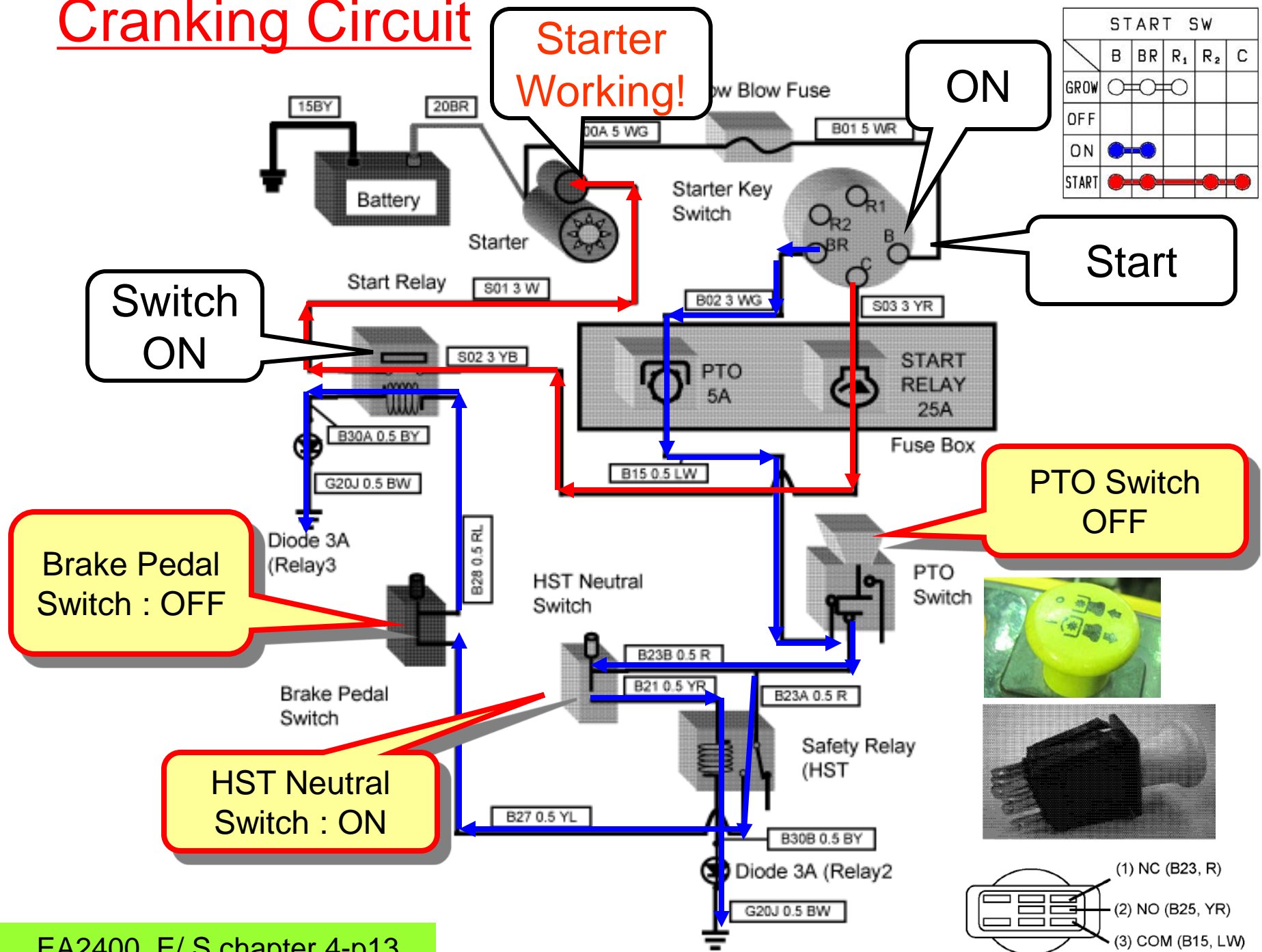




Electric Circuit

- 
- Cranking Circuit
 - Charging Circuit
 - Preheating Circuit
 - Fuel Supply and Stop Circuit
 - Instrument Panel Circuit
 - Light Circuit
 - PTO Stop Circuit
 - Other Circuit

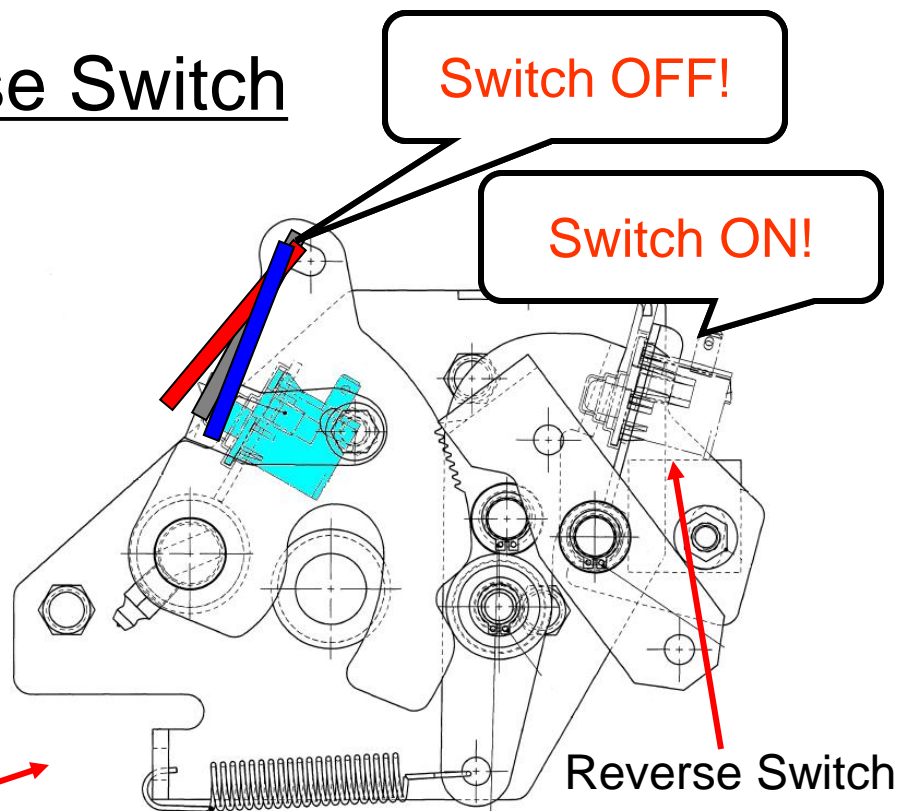
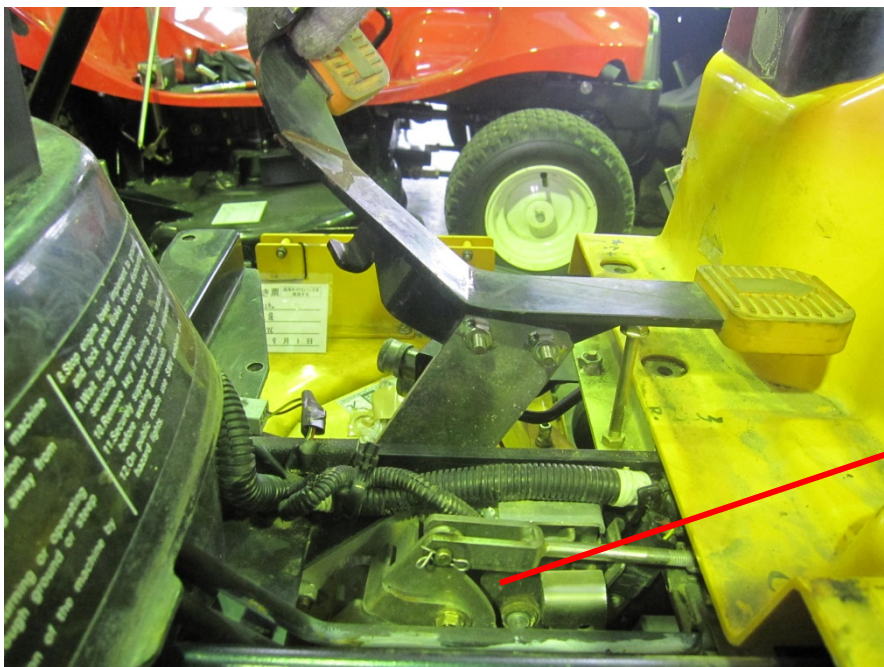
Cranking Circuit





HST Neutral Switch / Reverse Switch

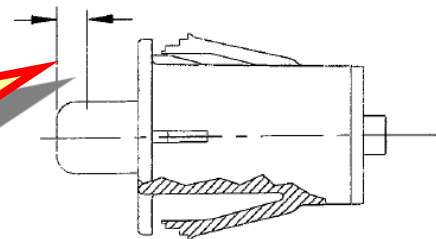
Reverse



HST Link Assy.

SWITCH TYPE:
HST Neutral Switch: NO
Reverse Switch: NC

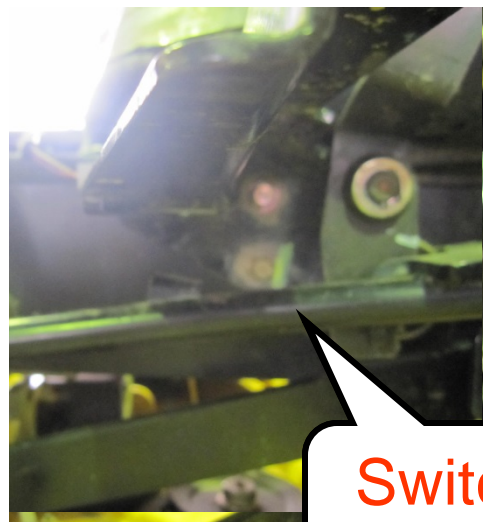
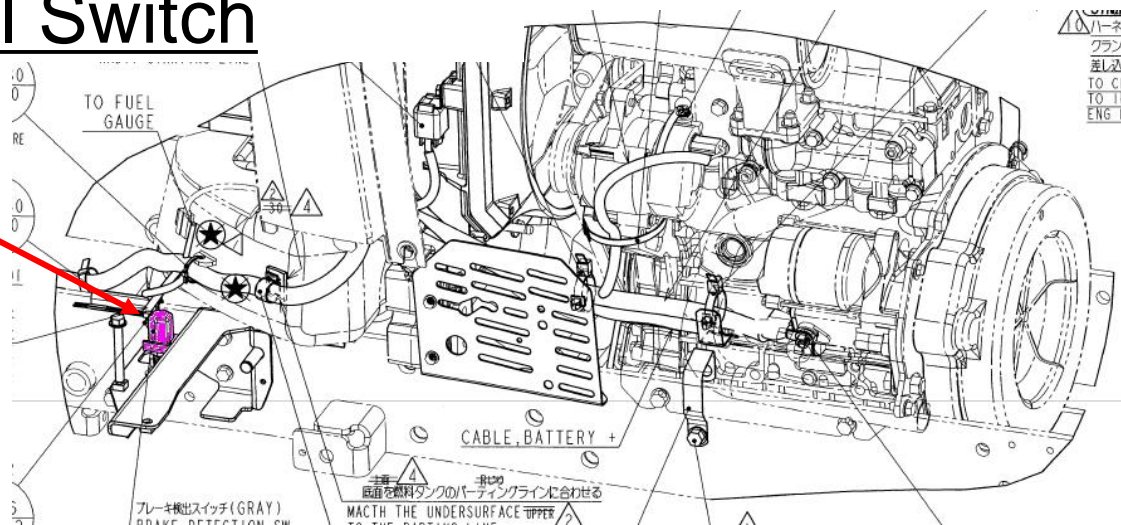
“ON” RANGE
1.0-3.8 mm





Brake Pedal Switch

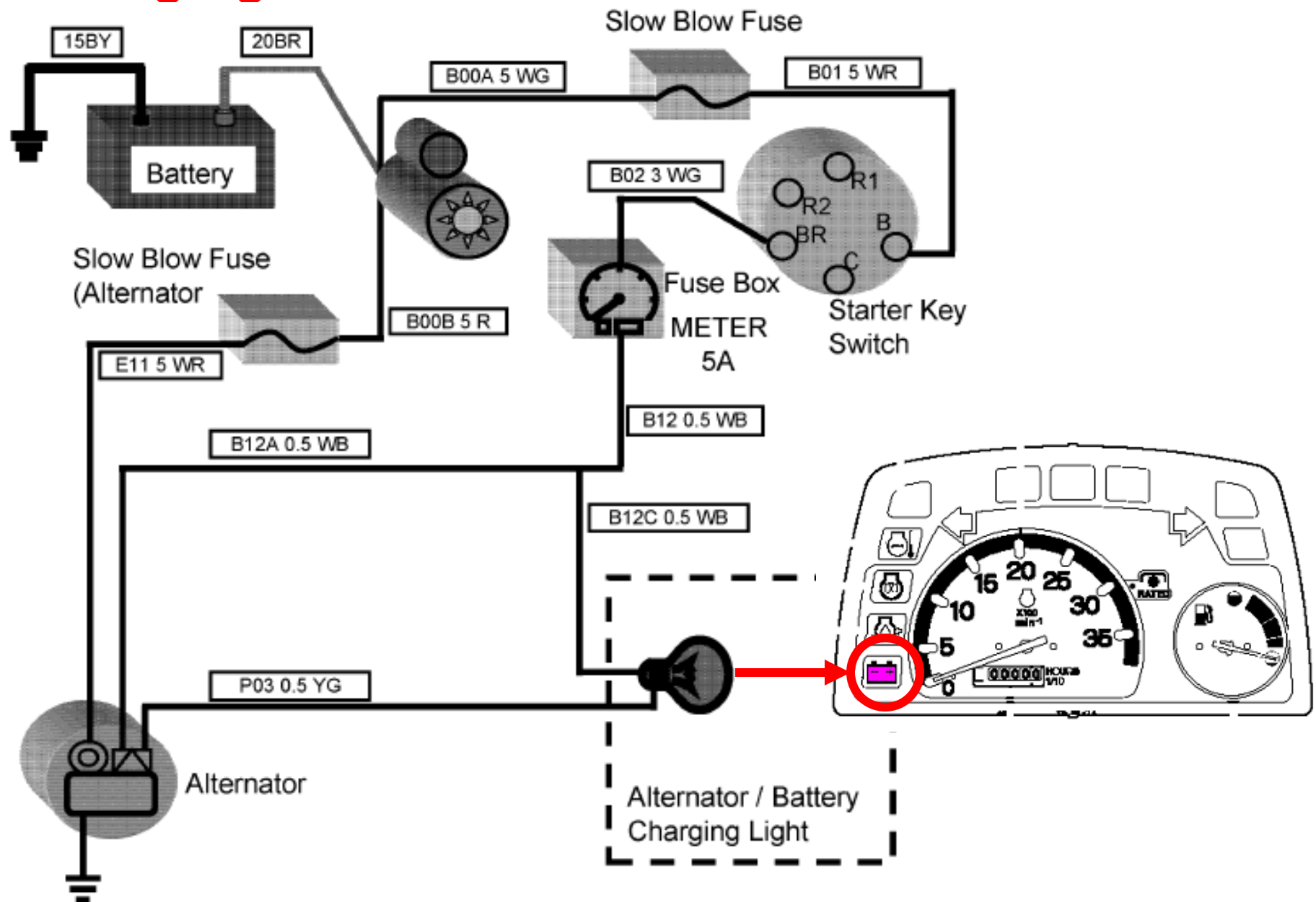
Applying Brake Pedal



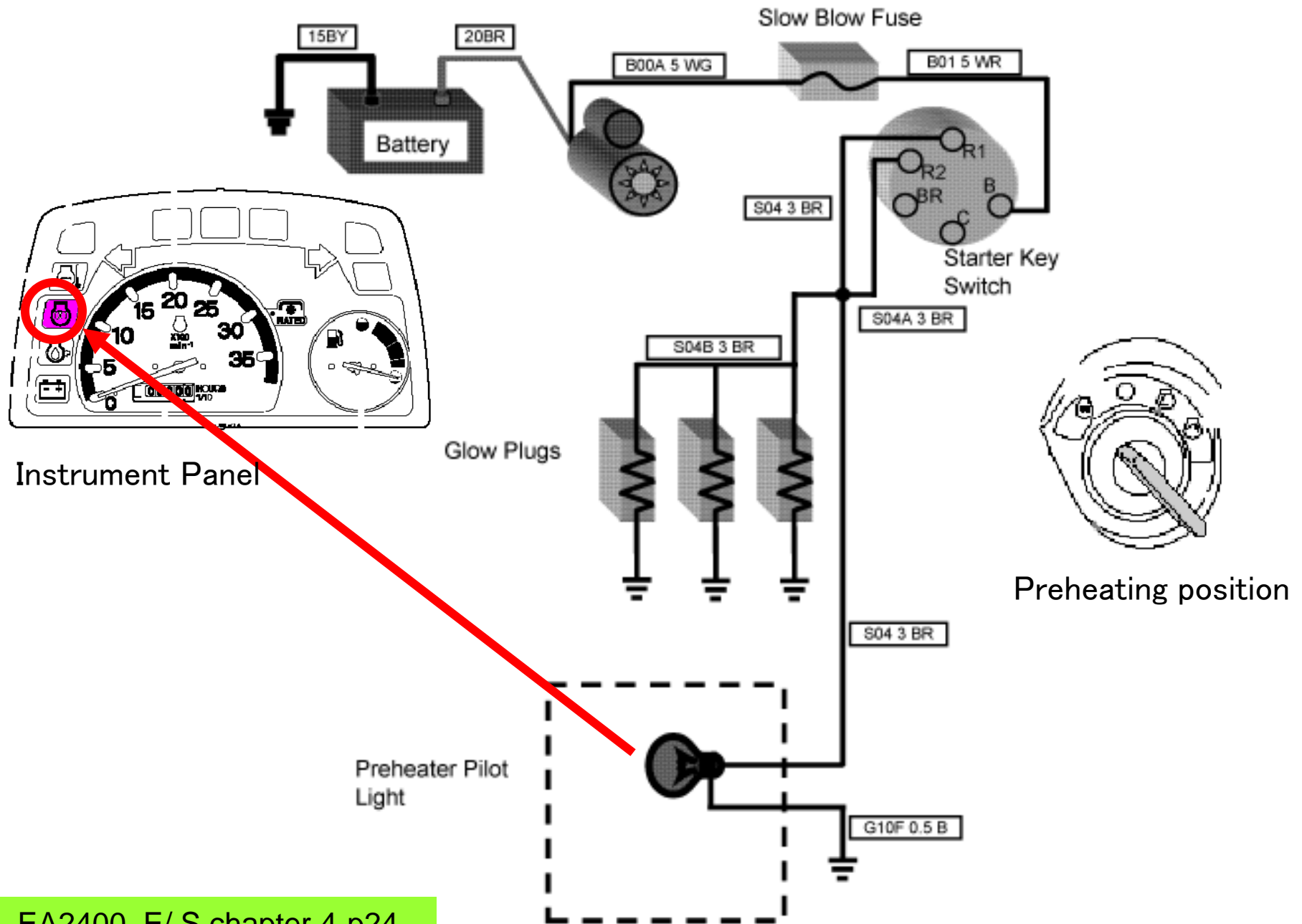
SWITCH TYPE:
NORMAL CLOSE

Switch
OFF!

Charging Circuit



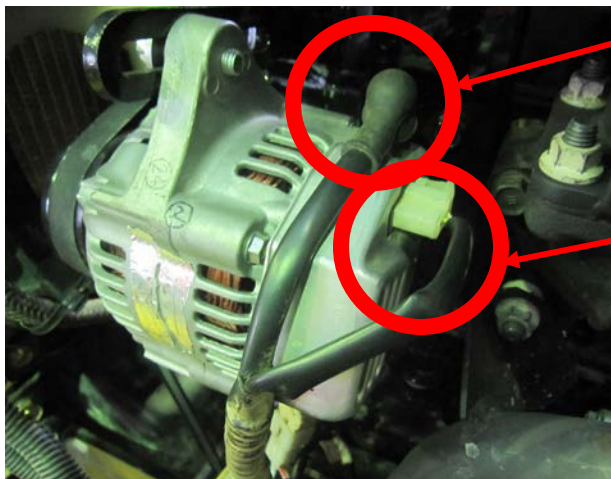
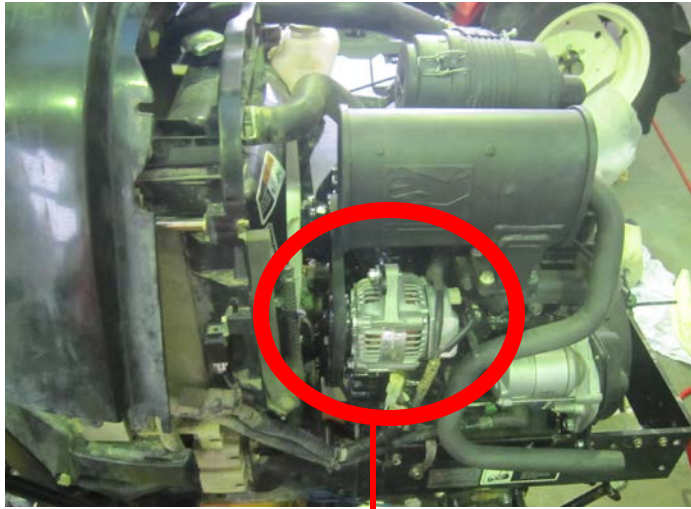
Preheating Circuit





Electric Components

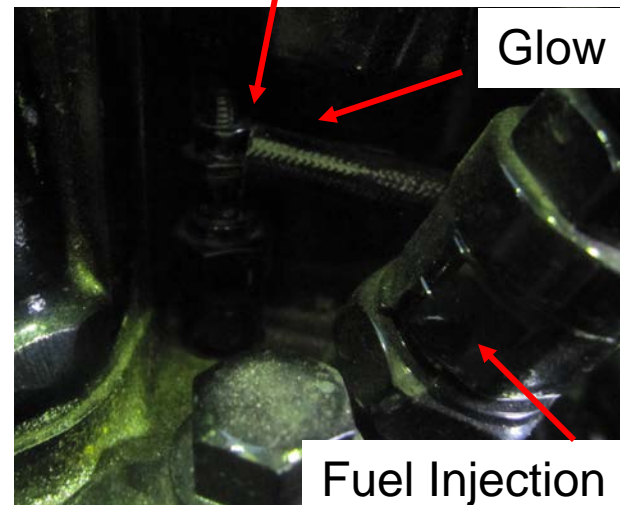
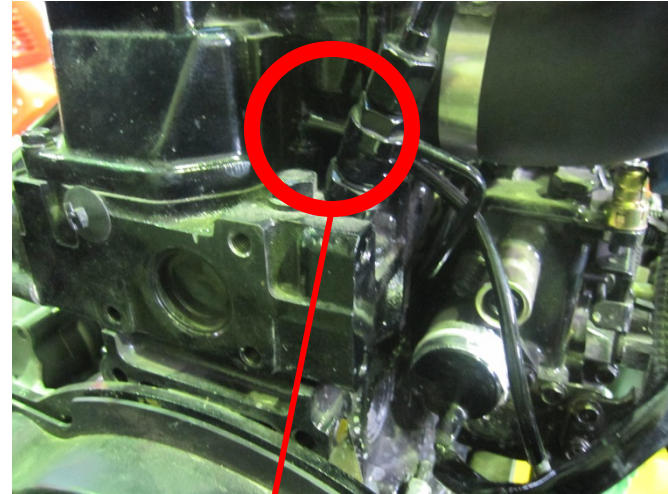
Alternator



B terminal

IG/L terminal

Glow Plugs (3 pieces)



Glow plug

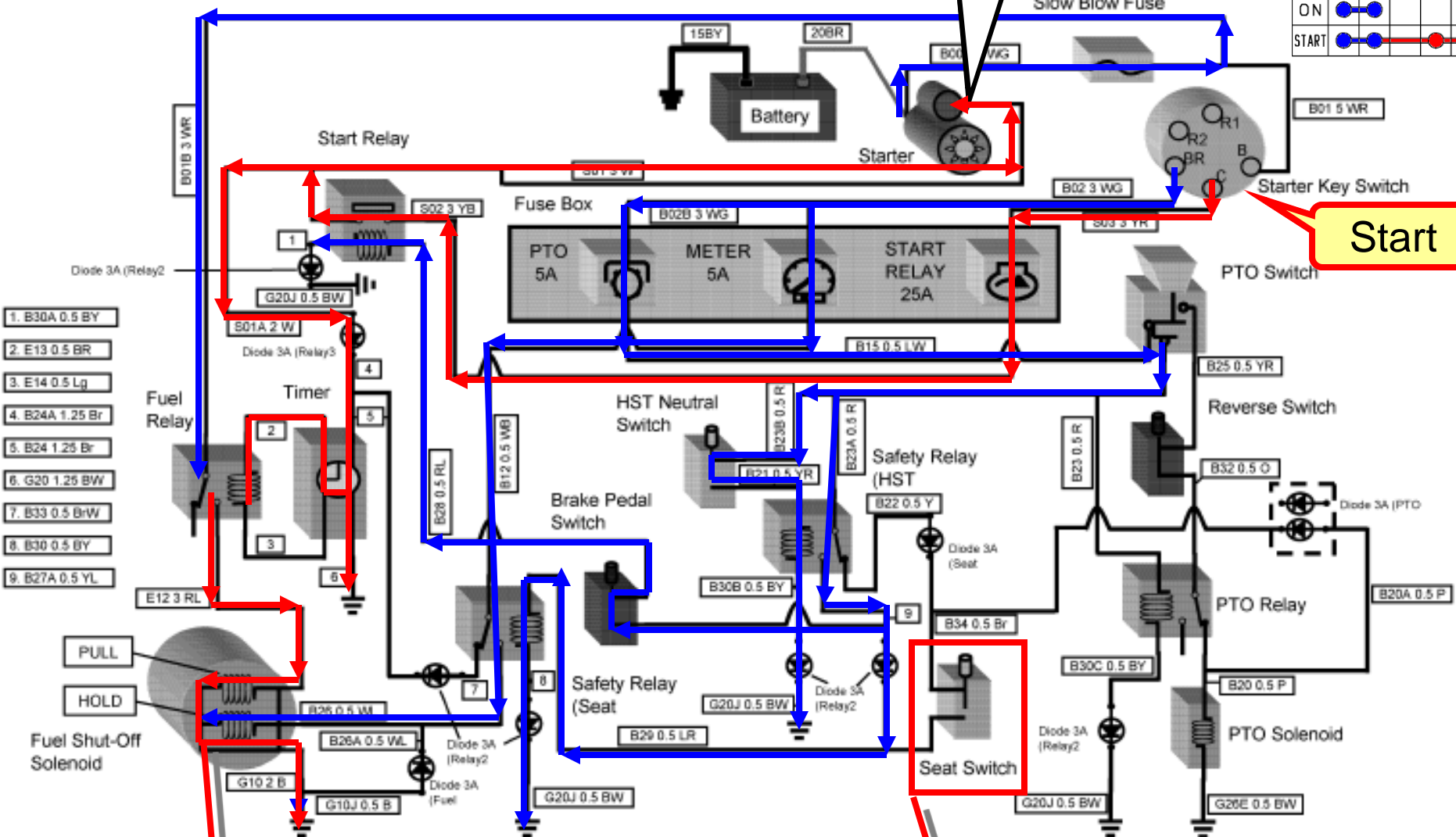
Fuel Injection Nozzle

Fuel Supply and Stop Circuit

Engine
Start!

	B	BR	R ₁	R ₂	C
GROW					
OFF					
ON					
START					

Start



Pull coil and hold coil
are magnetized.

Fuel
Supply

Engine can be started whether
seat switch is ON/OFF.

Engine Stop!

**Timer gives 12V
to stop solenoid
for 1 second.**

Timer Stop

ON

PTO ON

The return spring makes the plunger to move back.

Fuel
Cut-off

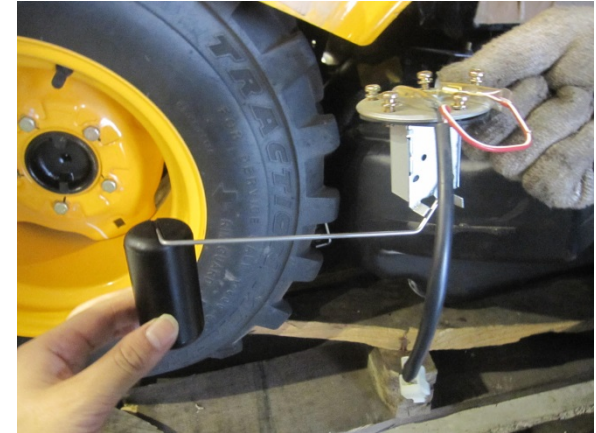
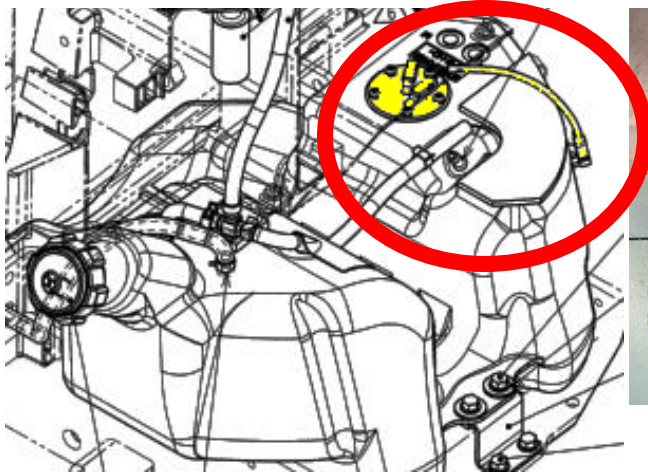
Seat switch is OFF.



Electric Components

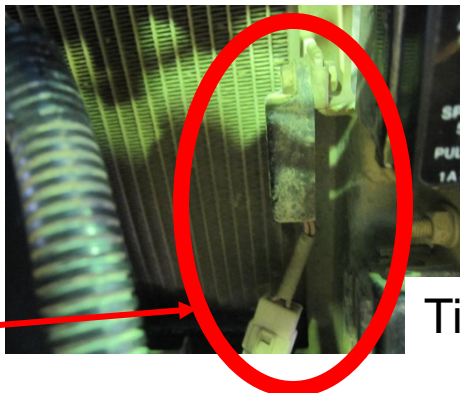
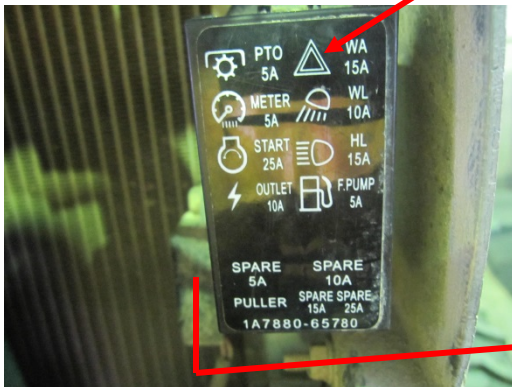
Fuel gage Sensor

↓ Variable resistance type



Timer

Fuse Box



Timer

It gives 12V to Fuel Shut-off (stop) solenoid for 1 second.

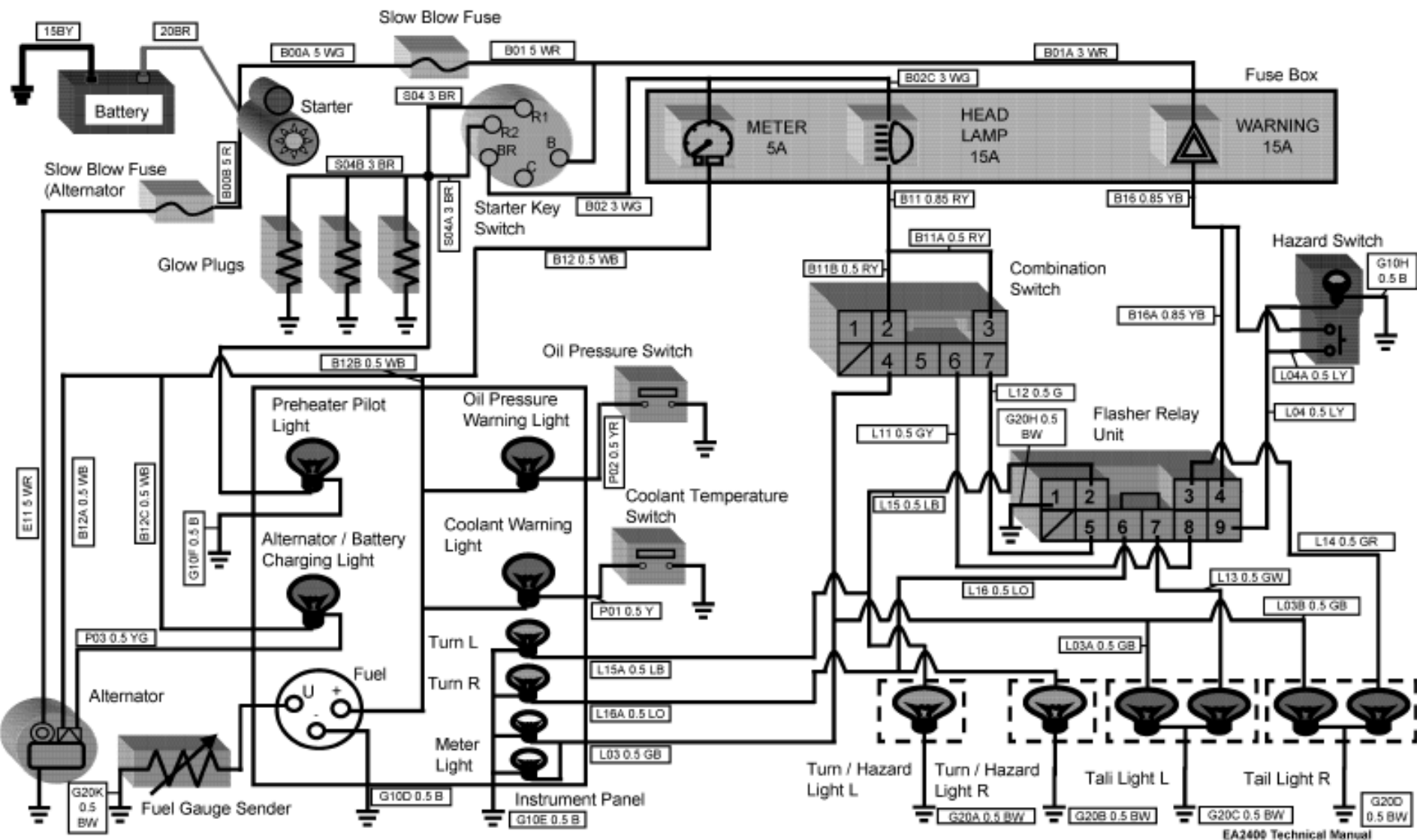
Conditions are shown below.

PTO switch: OFF

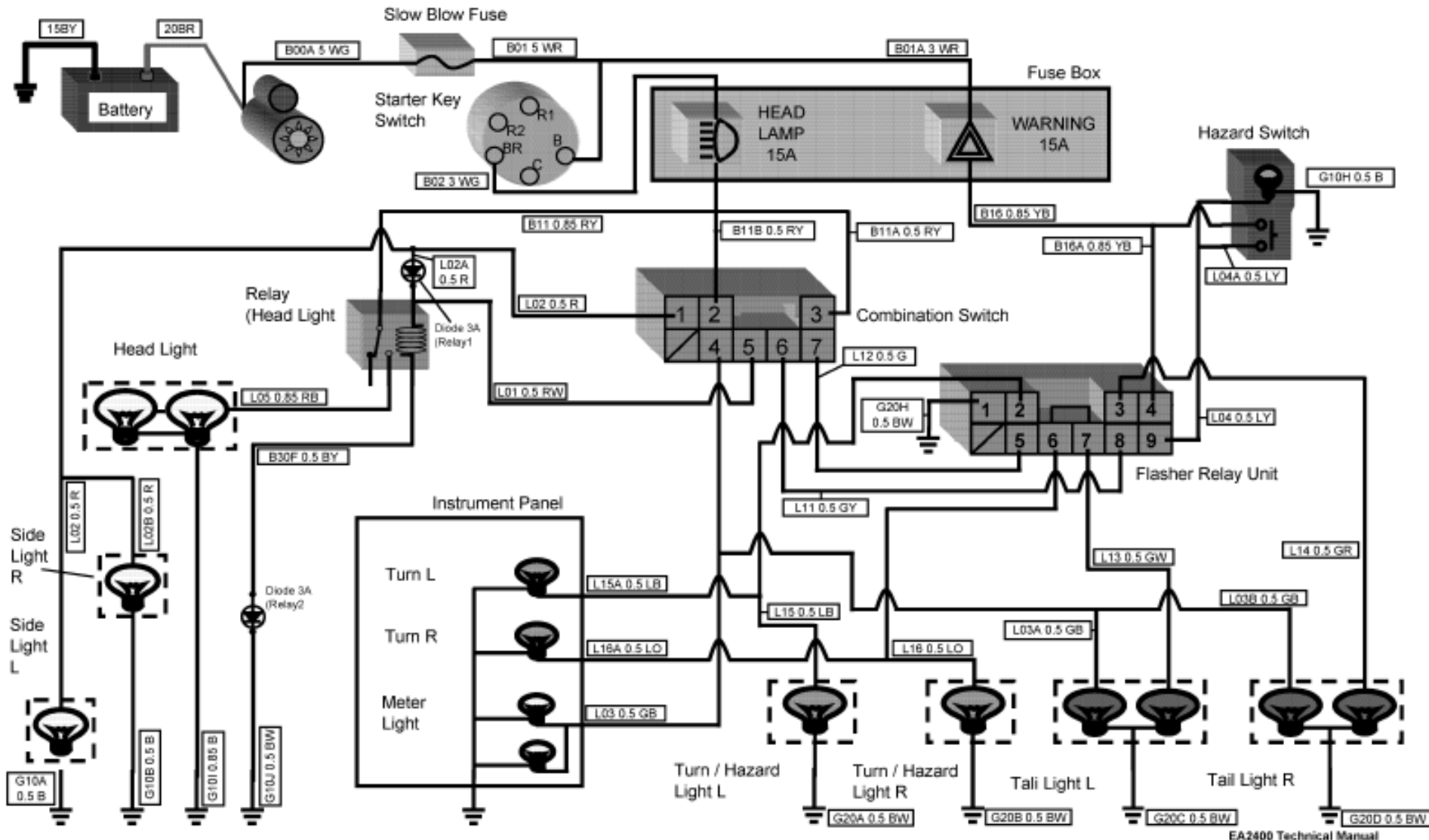
HST Neutral switch: OFF

Brake switch: OFF

Instrument Panel Circuit



Light Circuit



EA2400 Technical Manual



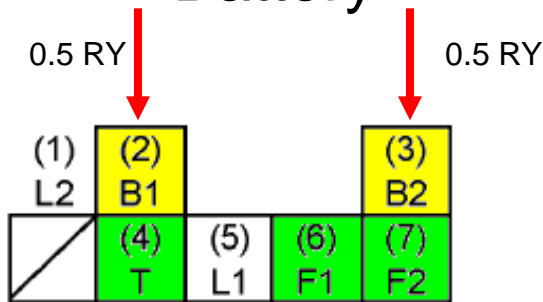
Light Circuit

Combination Switch

COMBINATION SW									
LAMP SW					TURN SW				
	B ₁	T	L ₁	L ₂		B ₂	F ₁	F ₂	
OFF									
	●	●	●		↑	○	○		
	○	○	○	○	↓	●		●	

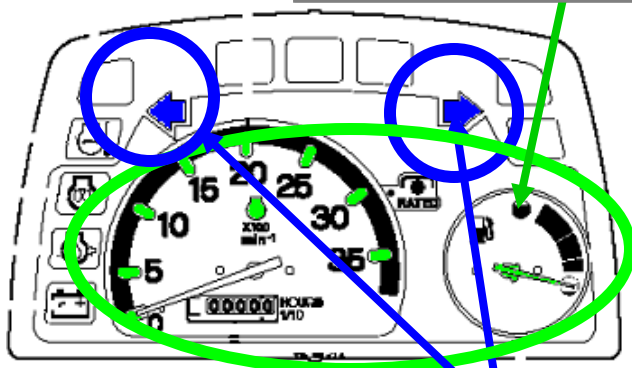


Battery



Flasher Relay Unit

Meter Light



Turn Light L

Turn Light R

Turn/Hazard Light L

Turn/Hazard Light R

Tail Light L

Tail Light R

0.5 GB

0.5 GB

0.5 GY

0.5 G

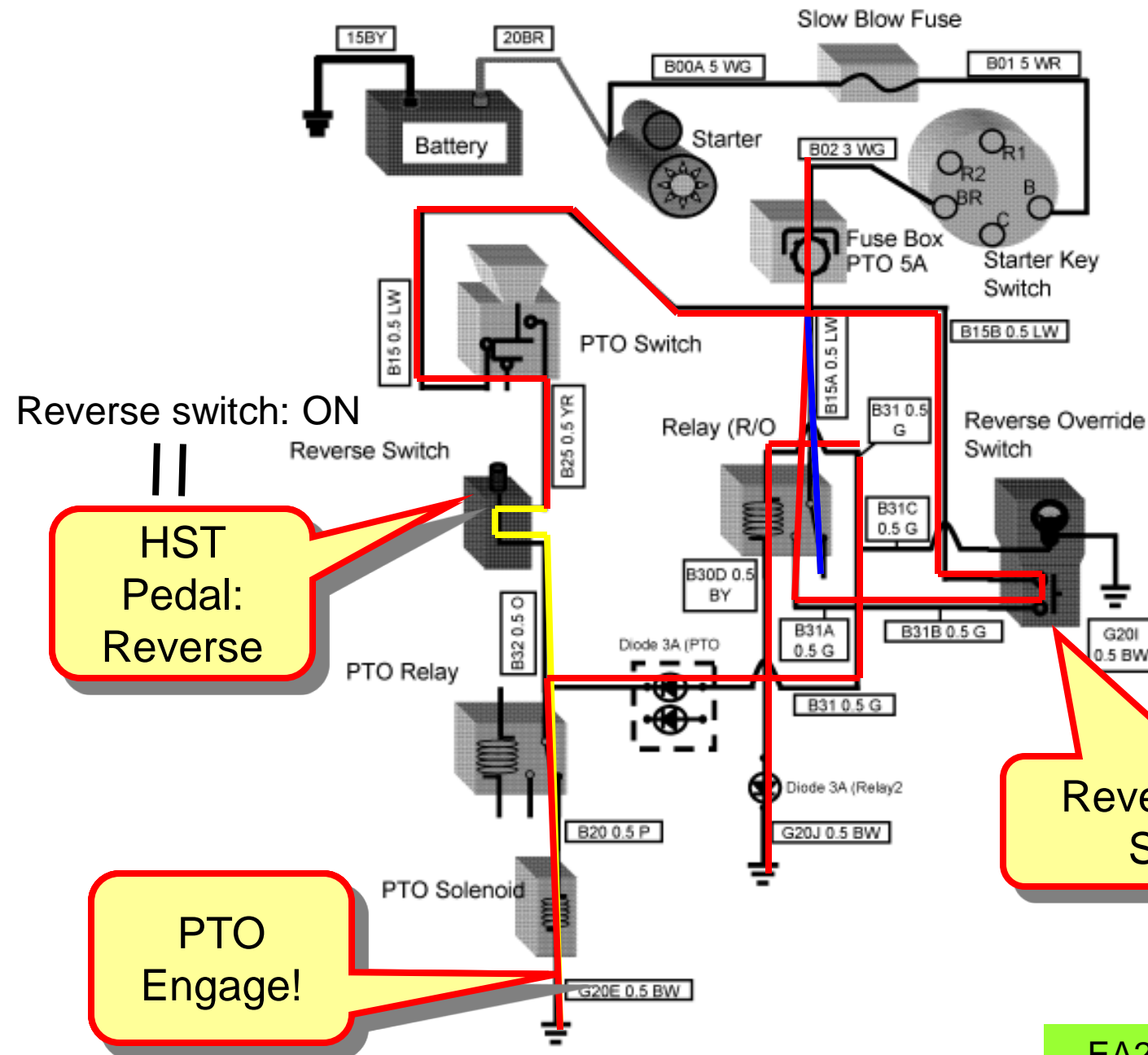
0.5 GR

0.5 LB

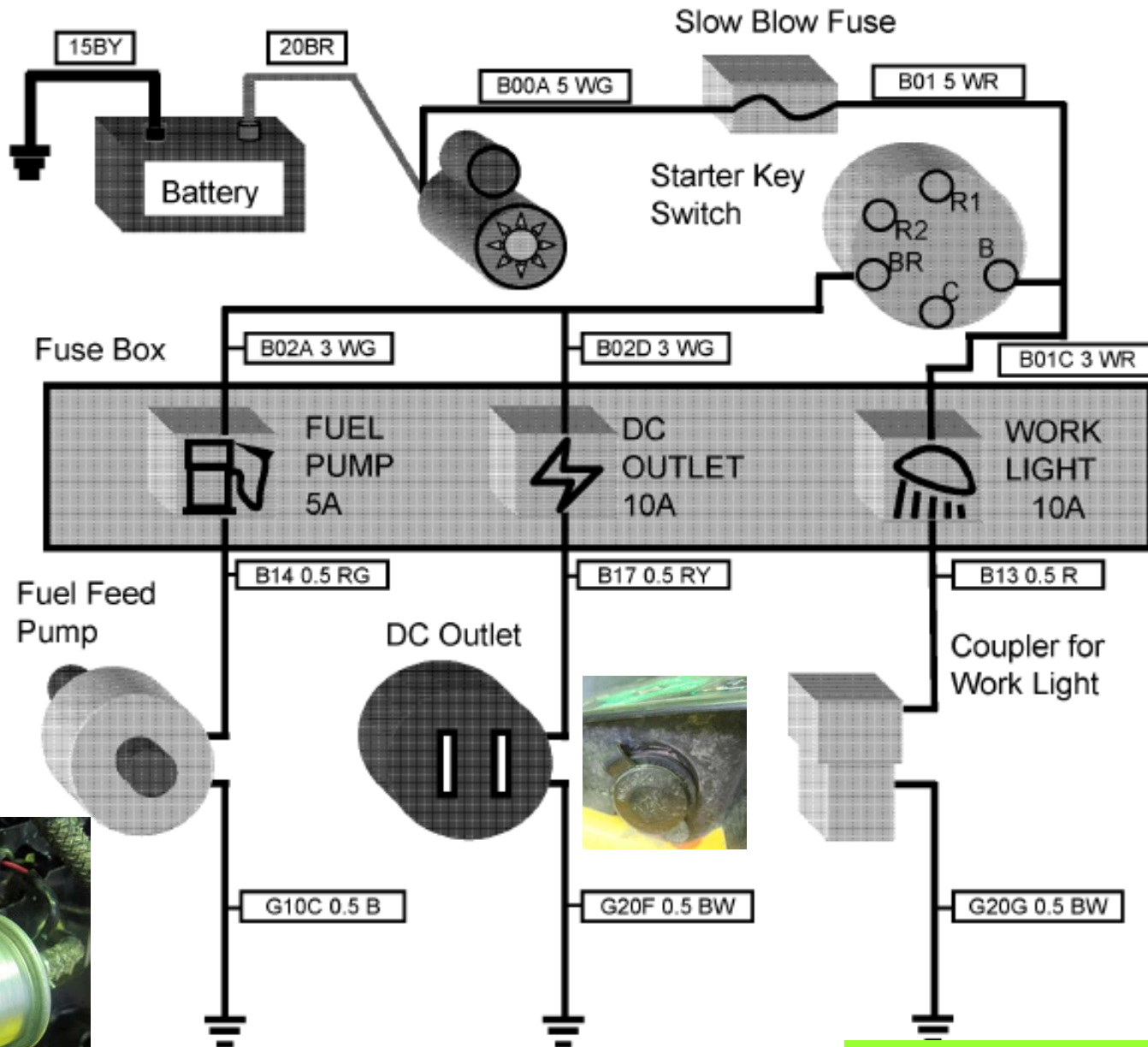
0.5 LO

0.5 GW

PTO Stop Circuit



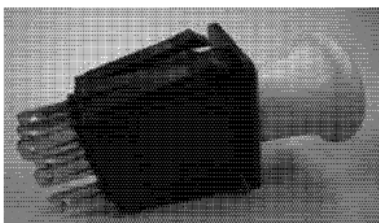
Other Circuit





Safety Interlock System (Starting Engine)

HST Switch	PTO Switch	Brake Switch	Seat Switch	Starter	Engine
NO	NO/NC	NC	NO		
ON	OFF	OFF	ON	Engage	Start
ON	OFF	OFF	OFF	Engage	Start
OFF	OFF	OFF	ON	Disengage	Not start
ON	ON	OFF	ON	Disengage	Not start
ON	OFF	ON	ON	Disengage	Not start

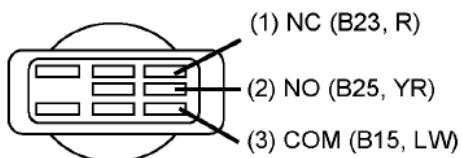


ON

Push (Pull) the Button

OFF

Release the Button



PTO Switch has 3 ports. (NO/NC/COM)



Safety Interlock System (Emergency Stop)

PTO will disengage when the reverse drive pedal is depressed.

(When reverse override switch is ON, PTO still engage.)

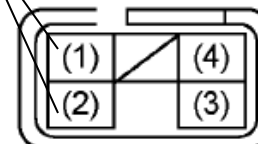
PTO Switch	Seat Switch	Reverse Switch	Reverse Override Switch	PTO	Engine
NO/NC	NO	NC	NO		
ON	ON	ON	OFF	Engage	Not stop
ON	ON	OFF	ON	Engage(R)	Not stop
ON	ON	OFF	OFF	Disengage	Not stop
ON	OFF	ON	OFF	Disengage	Stop

ON

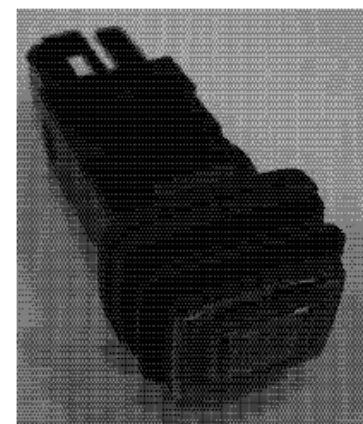
Push (Pull) the Button (1)-(2) Normal Open

OFF

Release the Button

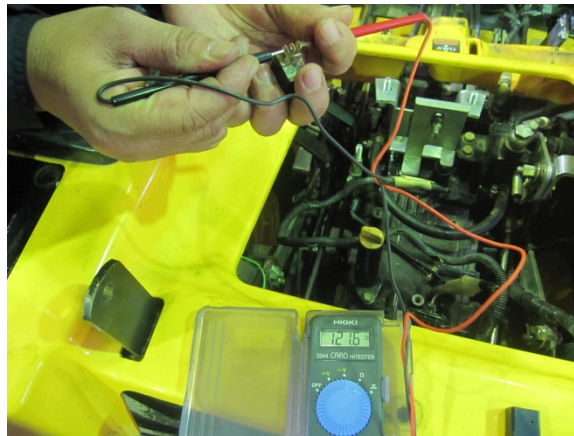


Reverse Override Switch





Hands-on training Trouble Shooting





Check Points:

- ☐ Does Starter Motor engage?
- ☐ Does Engine start?
- ☐ Machine can move? (Forward/Reverse)
- ☐ Are Meter Lamps/Lights all illuminated?
- ☐ Does PTO engage?
- ☐ Does Reverse Override Switch work?