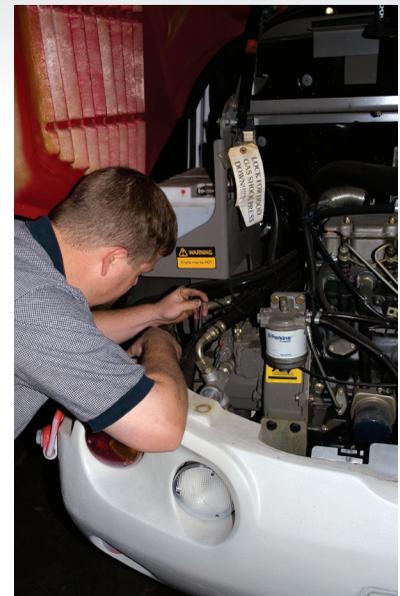


Product: 2009-2010 Takeuchi 100 Series Machines Service Training Manual
Full Download: <https://www.aresairmanual.com/downloads/2009-2010-takeuchi-100-series-machines-service-training-manual/>

TAKEUCHI

The Power of Product and Support



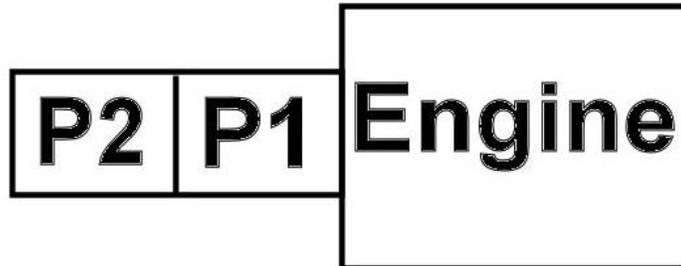
100 Series Service Training 2009-2010

Sample of manual. Download All 480 pages at:
<https://www.aresairmanual.com/downloads/2009-2010-takeuchi-100-series-machines-service-training-manual/>

100 SERIES MACHINES

<u>1</u>	<u>TB108</u>
<u>2</u>	<u>TB016</u>
<u>3</u>	<u>TB125</u>
<u>4</u>	<u>TB135</u>
<u>5</u>	<u>TB145</u>
<u>6</u>	<u>TB175</u>
<u>7</u>	<u>TB1140</u>
<u>8</u>	<u>TB138FR</u>
<u>9</u>	<u>TB53FR</u>
<u>10</u>	<u>TB153FR</u>
<u>11</u>	<u>TB180FR</u>
<u>12</u>	<u>TL120</u>
<u>13</u>	<u>TL130</u>
<u>14</u>	<u>TL140</u>
<u>15</u>	<u>TL150</u>
<u>16</u>	<u>TW50</u>
<u>17</u>	<u>TW60</u>
<u>18</u>	<u>TW65</u>
<u>19</u>	<u>TW80</u>
<u>20</u>	<u>A/C Section</u>
<u>21</u>	<u>Prior Models</u>

TB108



P1	Right Travel, Boom, Bucket, Swing and Auxiliary	2.80 GPM
P2	Left Travel, Arm, Auxiliary, Slew and Dozer Blade	2.80 GPM

Pump P1

Right Travel	2277 PSI	Test Port A
Boom	2277 PSI	Test Port A
Bucket	2277 PSI	Test Port A
Swing	2277 PSI	Test Port A
Auxiliary	2277 PSI	Test Port A

Pump P2

Left Travel	2277 PSI	Test Port B
Arm	2277 PSI	Test Port B
Auxiliary	2277 PSI	Test Port B
Slew	1421 PSI	Test Port B
Dozer Blade	2277 PSI	Test Port B

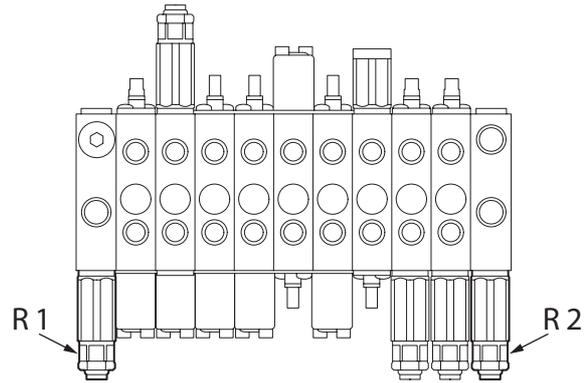
Hydraulic Oil Pressure (Main Relief Valve Set Pressure)
 Boom, Arm, Dozer Blade

WARNING

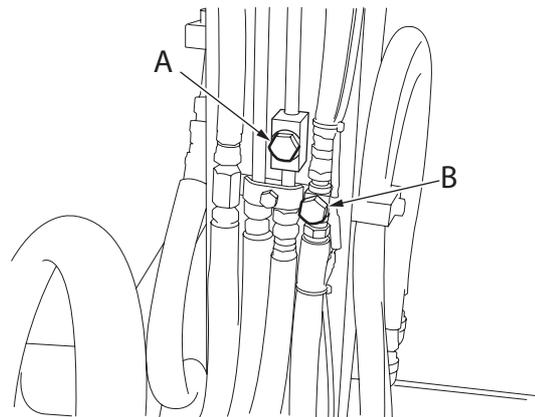
When inspecting the performance of the machine that has an extendible crawler, it should be done with the crawler fully extended.

Measuring Method

- Engine : Rated r.p.m.
- Hydraulic Oil Temp. : 50~60°C
- Mount the pressure gauge on the pressure detection port, operate the desired hydraulic circuit and measure the relief pressure.

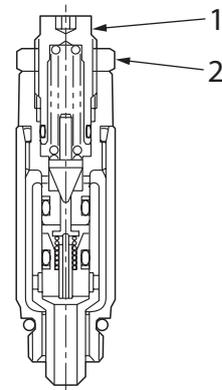


Circuit	Pressure Detection Port		Relief Valve
	Port Position	Size	
Boom	A	PF 1/4	R 1
Arm	B	PF 1/4	R 2
Dozer Blade	B	PF 1/4	R 2



Adjusting Method

1. Loosen locknut (2), then begin adjusting pressure by turning setting screw (1).
 Turning clockwise raises the set pressure.
 Turning counterclockwise lowers the set pressure.
2. In order to keep the setting screw from turning after pressure has been adjusted, tighten the locknut while at the same time holding the setting screw firmly in place.
3. Operate the relief valve once more to confirm that the pressure that has been set it stabilized.



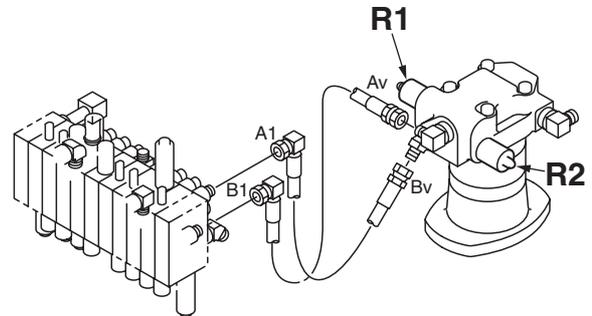
Hydraulic Oil Pressure (Slewing Relief Valve Set Pressure)

⚠ WARNING

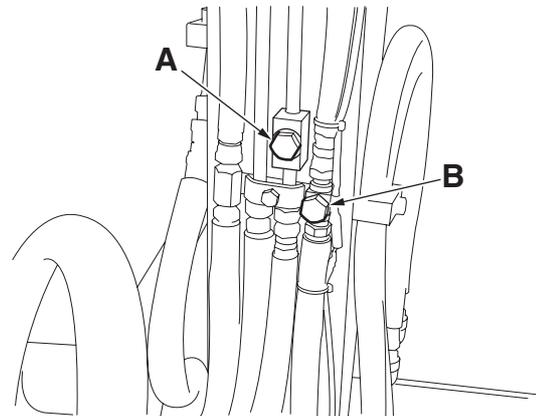
Make absolute sure that the slew lock pin is securely in place before relieving pressure.

Measuring Method

- Engine : Rated r.p.m.
- Hydraulic Oil Temp. : 50~60°C
- Connect the pressure gauge to the pressure detection port. Fully retract the arm cylinder and turn it to the right or left to measure the relief pressure. Before measurement, allow the relief pressure to become stable by the actuation of the slewing relief valve.

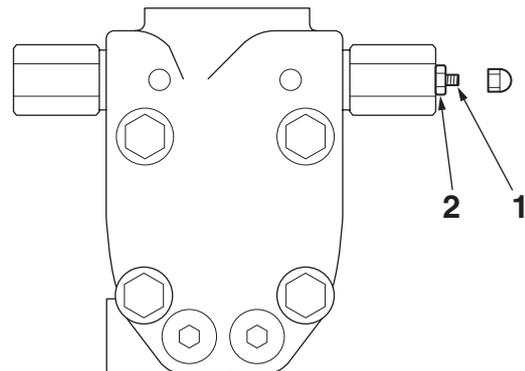


Circuit	Pressure Detection Port		Relief Valve
	Port Position	Size	
Right Slew	B	PF1/4	R1
Left Slew	B	PF1/4	R2



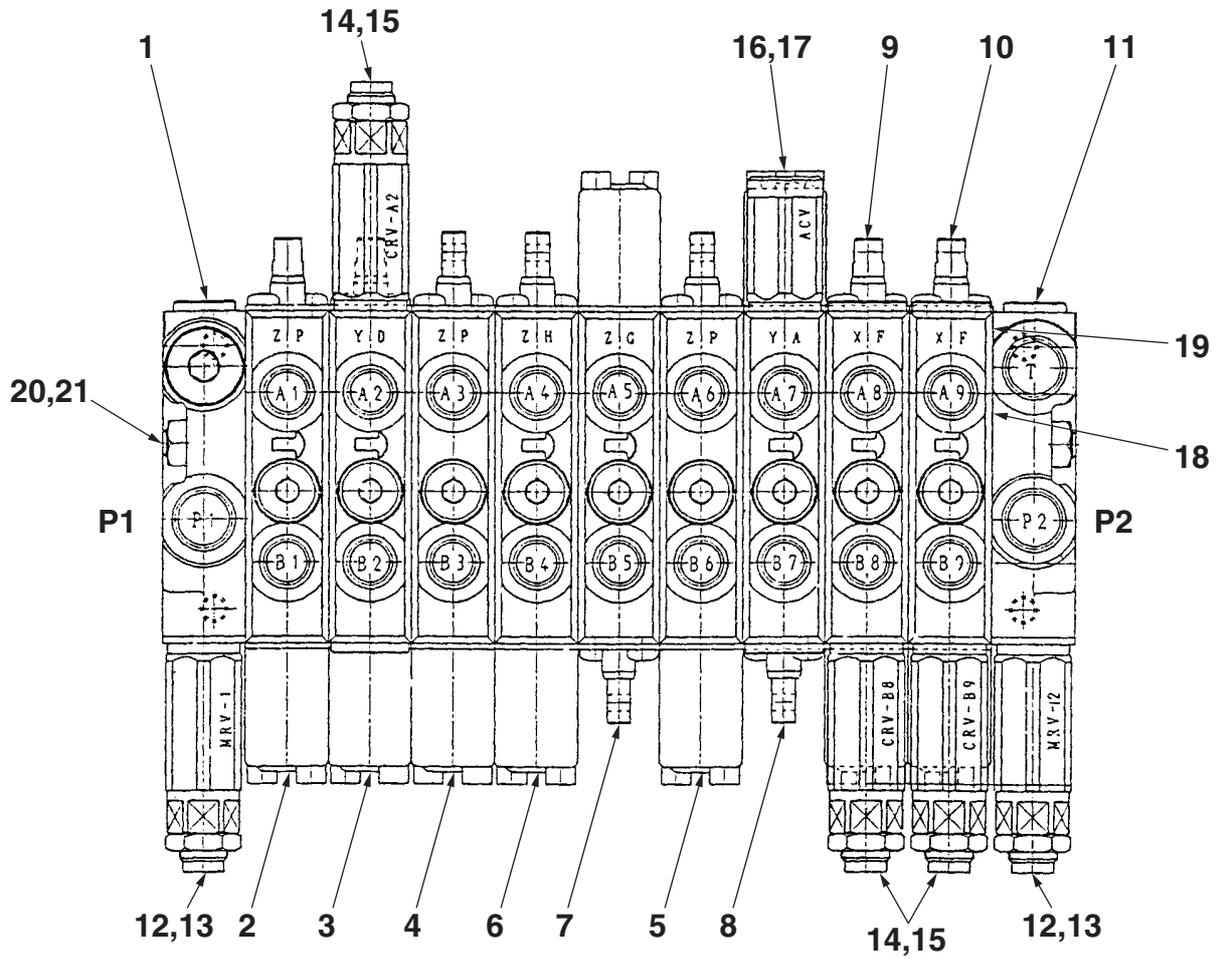
Adjusting Method

1. Loosen locknut (2), then begin adjusting pressure by turning setting screw (1).
Turning clockwise raises the set pressure.
Turning counterclockwise lowers the set pressure.
2. In order to keep the setting screw from turning after pressure has been adjusted, tighten the locknut while at the same time holding the setting screw firmly in place.
3. Operate the relief valve once more to confirm that the pressure that has been set it stabilized.



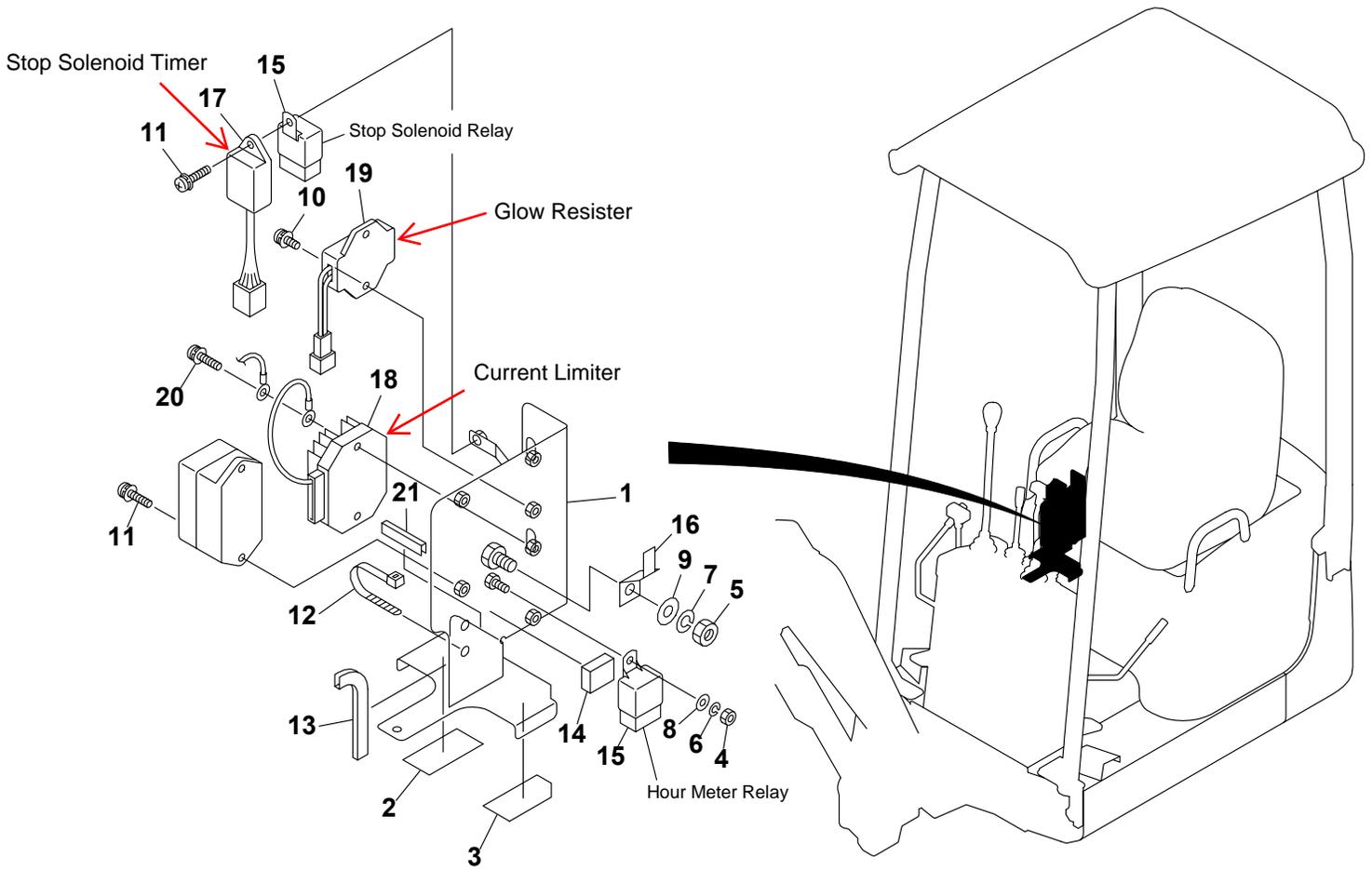
CONTROL VALVE

CONSTRUCTION

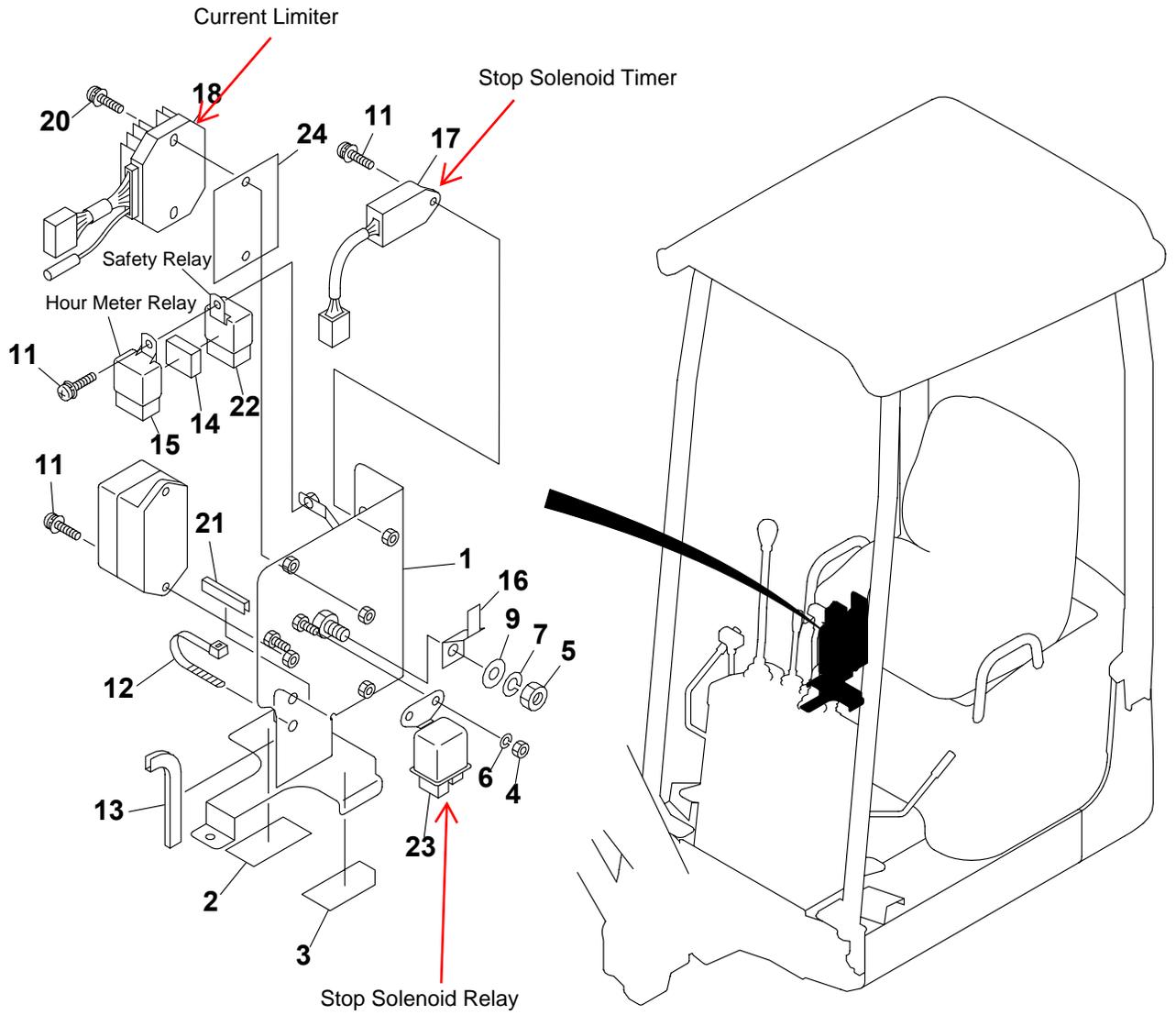


- | | |
|--------------------------------|---------------------------|
| 1. Inlet Housing | 12. Main Relief Valve |
| 2. Slew Block Assembly | 13. O-ring |
| 3. Arm Block Assembly | 14. Port Relief Valve |
| 4. Left Travel Block Assembly | 15. O-ring |
| 5. Right Travel Block Assembly | 16. Anti Cavitation Valve |
| 6. Dozer Blade Block Assembly | 17. O-ring |
| 7. Auxiliary Block Assembly | 18. O-ring |
| 8. Swing Block Assembly | 19. O-ring |
| 9. Boom Block Assembly | 20. Bolt |
| 10. Bucket Block Assembly | 21. Nut |
| 11. Housing | |

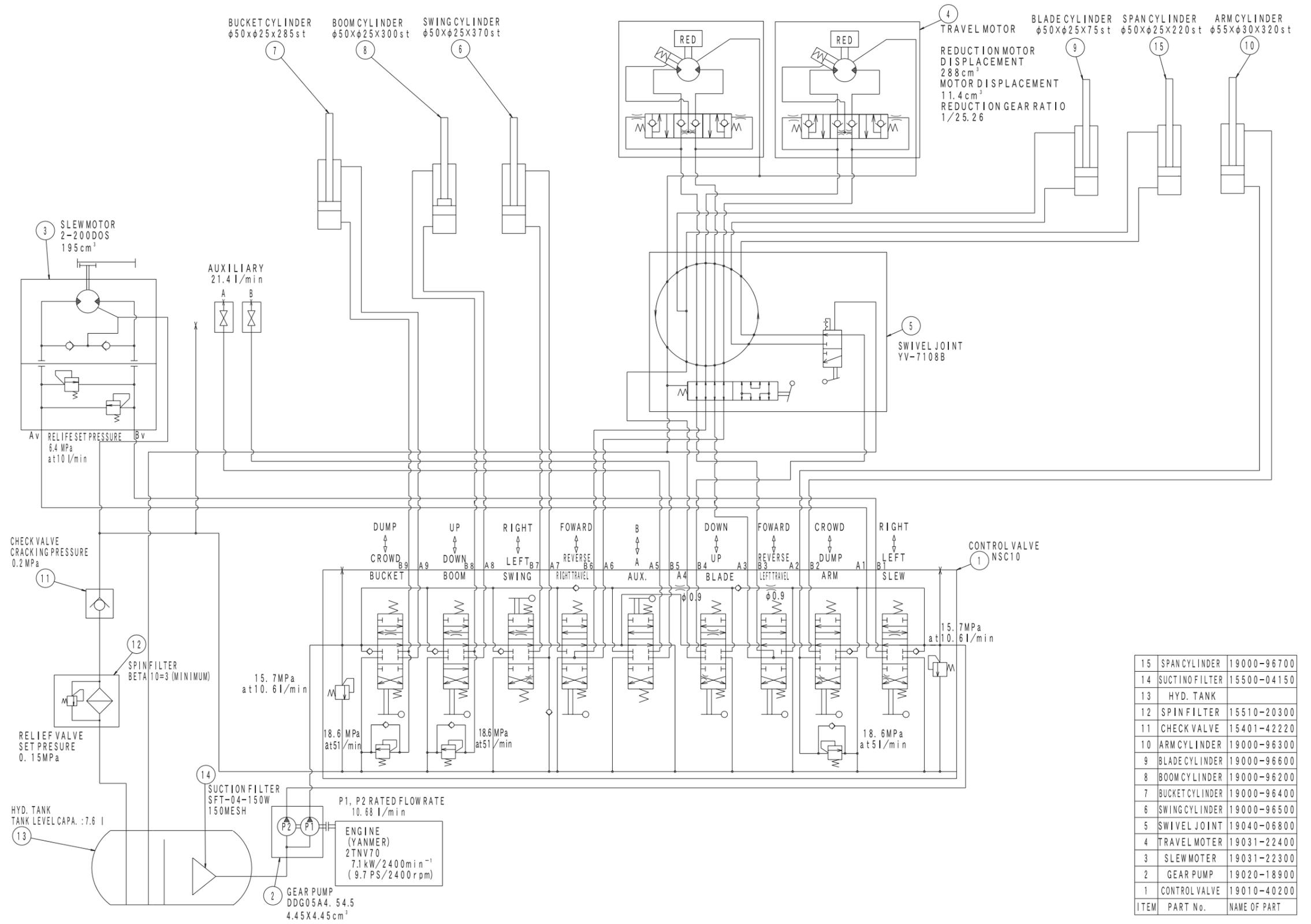
CONTROL BOX S/N 10810004 - 10819999



CONTROL BOX S/N 10820001-

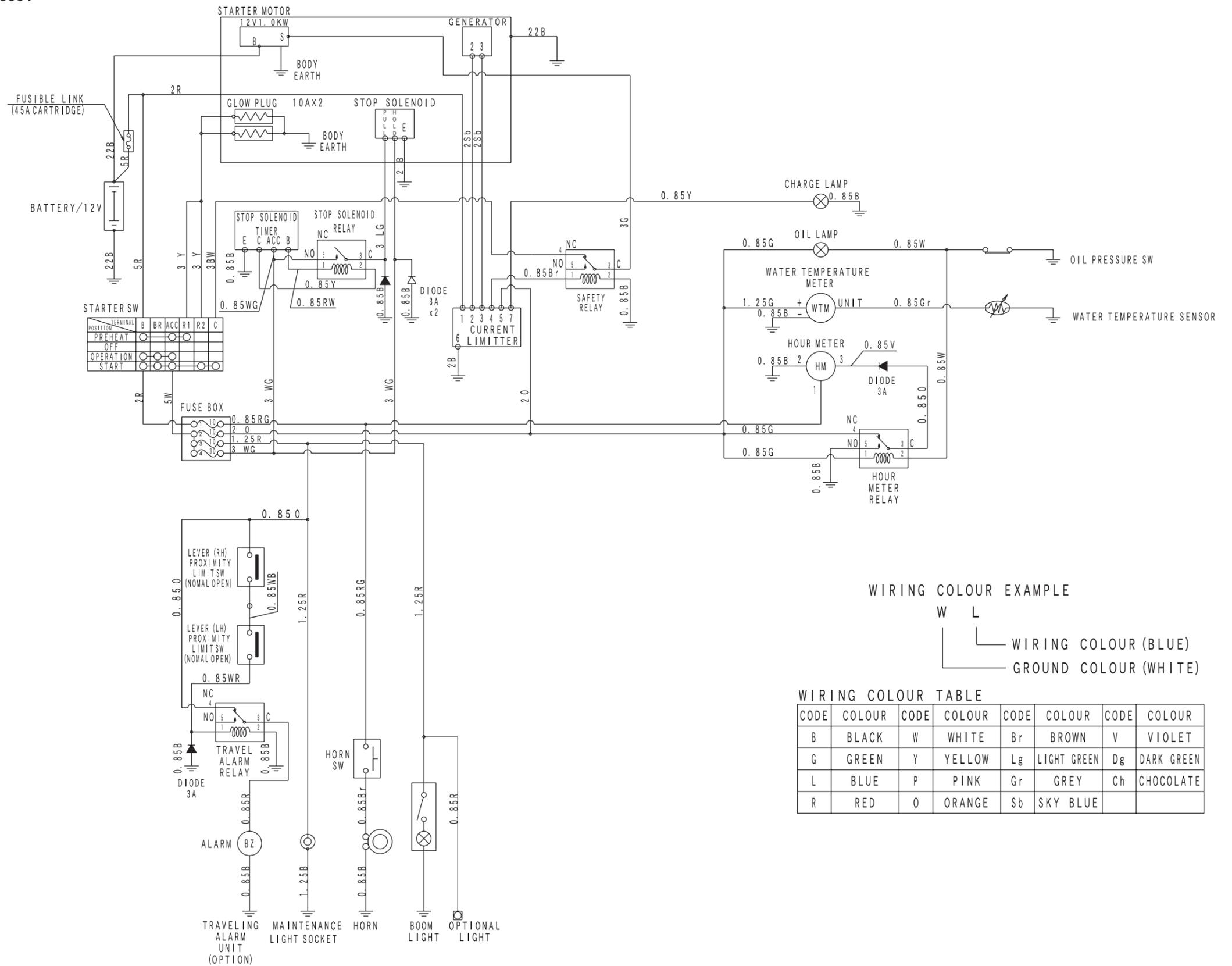


HYDRAULIC CIRCUIT DIAGRAM 10820001~



15	SPAN CYLINDER	19000-96700
14	SUCTION FILTER	15500-04150
13	HYD. TANK	
12	SPIN FILTER	15510-20300
11	CHECK VALVE	15401-42220
10	ARM CYLINDER	19000-96300
9	BLADE CYLINDER	19000-96600
8	BOOM CYLINDER	19000-96200
7	BUCKET CYLINDER	19000-96400
6	SWING CYLINDER	19000-96500
5	SWIVEL JOINT	19040-06800
4	TRAVEL MOTOR	19031-22400
3	SLEW MOTOR	19031-22300
2	GEAR PUMP	19020-18900
1	CONTROL VALVE	19010-40200
ITEM	PART No.	NAME OF PART

ELECTRICAL WIRING DIAGRAM 10820001 ~



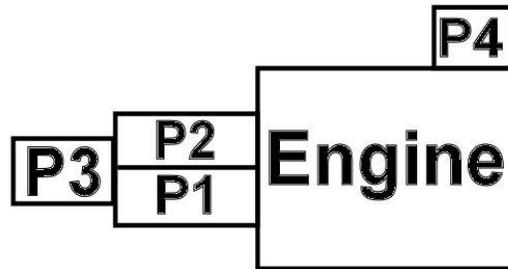
WIRING COLOUR EXAMPLE



WIRING COLOUR TABLE

CODE	COLOUR	CODE	COLOUR	CODE	COLOUR	CODE	COLOUR
B	BLACK	W	WHITE	Br	BROWN	V	VIOLET
G	GREEN	Y	YELLOW	Lg	LIGHT GREEN	Dg	DARK GREEN
L	BLUE	P	PINK	Gr	GREY	Ch	CHOCOLATE
R	RED	O	ORANGE	Sb	SKY BLUE		

TB016



P1	Left Travel, Boom, Bucker and Auxiliary	4.33 GPM
P2	Right Travel, Arm, swing and Auxiliary (8.70 GPM)	4.33 GPM
P3	Slew and Dozer Blade	2.67 GPM
P4	Pilot Pressure, High Speed Travel and Slew PB Release	1.80 GPM

Pump P1

Left Travel	2844 PSI	Test Port A
Boom	2844 PSI	Test Port A
Bucket	2844 PSI	Test Port A
Auxiliary	2844 PSI	Test Port A

Pump P2

Right Travel	2844 PSI	Test Port B
Arm	2844 PSI	Test Port B
Swing	2844 PSI	Test Port B
Auxiliary	2844 PSI	Test Port B

Pump P3

Slew	1635 PSI	Test Port C
Dozer Blade	2559 PSI	Test Port C
Track Adjuster	2559 PSI	Test Port C

Pump P4

Pilot Pressure	498 PSI	Test Port D
High Speed Travel	498 PSI	Test Port D
Slew PB Release	498 PSI	Test Port D

Hydraulic Oil Pressure (Main Relief Valve Set Pressure)

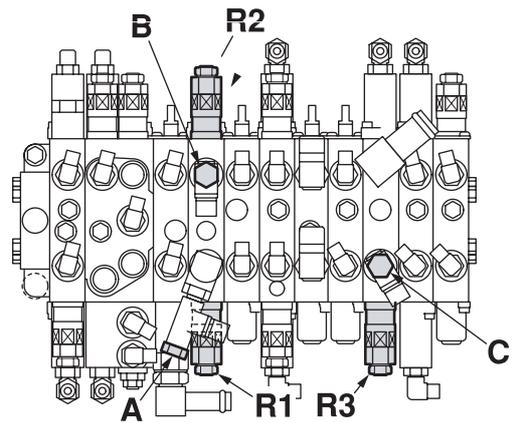
Boom, Arm, Dozer Blade

WARNING

When inspecting the performance of the machine that has an extendible crawler, it should be done with the crawler fully extended.

Measuring Method

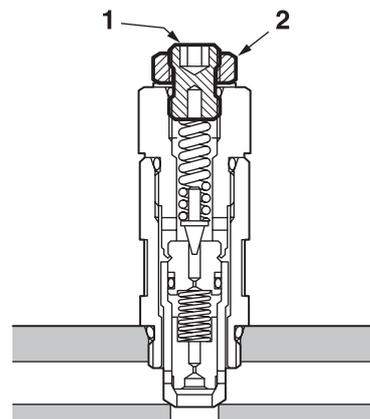
- Engine : Rated r.p.m.
- Hydraulic Oil Temp. : 50~60°C
- Mount the pressure gauge on the pressure detection port, operate the desired hydraulic circuit and measure the relief pressure.



Machine Model	TB014			TB016			
	Pressure Detection Port		Relief Valve	Circuit	Pressure Detection Port		Relief Valve
	Port Position	Size			Port Position	Size	
Boom	A	G1/4	R1	Boom	A	G1/4	R1
Arm	B	G1/4	R2	Arm	B	G1/4	R2
Dozer Blade	C	G1/4	R3	Dozer Blade	C	G1/4	R3

Adjusting Method

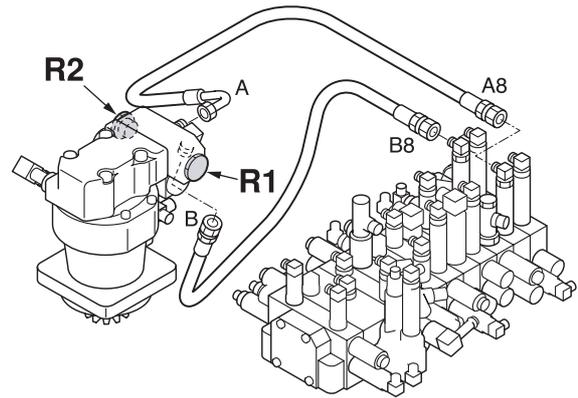
1. Loosen locknut (2), then begin adjusting pressure by turning setting screw (1).
Turning clockwise raises the set pressure.
Turning counterclockwise lowers the set pressure.
2. In order to keep the setting screw from turning after pressure has been adjusted, tighten the locknut while at the same time holding the setting screw firmly in place.
3. Operate the relief valve once more to confirm that the pressure that has been set it stabilized.



Hydraulic Oil Pressure (Slewing Relief Valve Set Pressure)

Measuring Method

- Engine : Rated r.p.m.
- Hydraulic Oil Temp. : 50~60°C
- Mount the pressure gauge on the pressure detection port, operate the desired hydraulic circuit and measure the relief pressure.

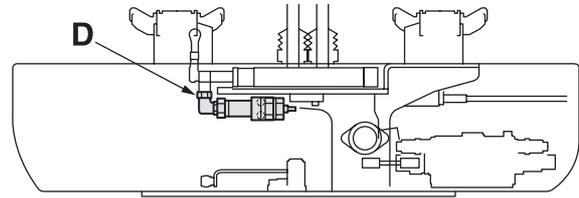


Machine Model	TB014			TB016			
	Pressure Detection Port		Relief Valve	Circuit	Pressure Detection Port		Relief Valve
	Port Position	Size			Port Position	Size	
Right Slew	C	G1/4	R1	Right Slew	C	G1/4	R1
Left Slew	C	G1/4	R2	Left Slew	C	G1/4	R2

Hydraulic Oil Pressure (Pilot Relief Valve Set Pressure)

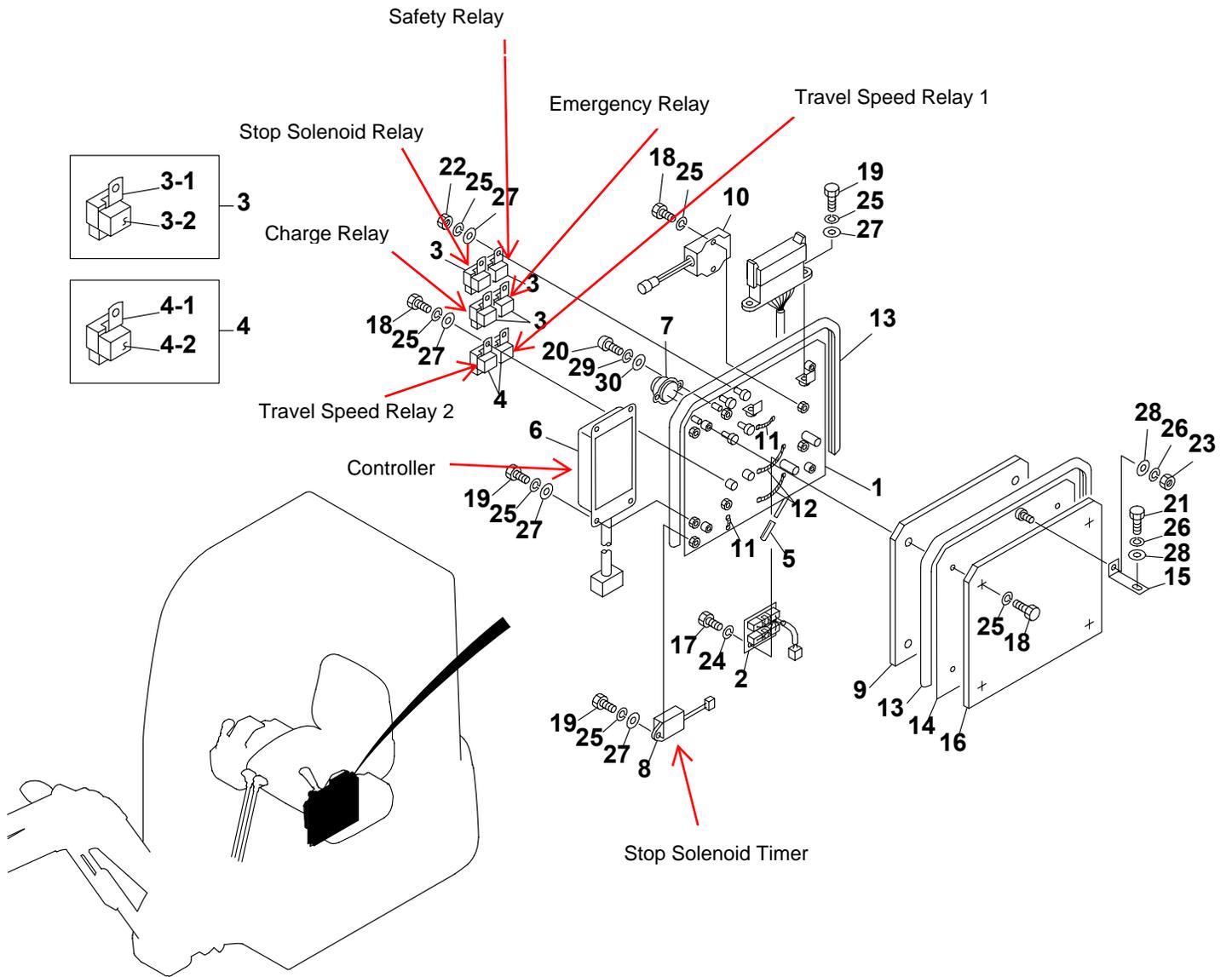
Measuring Method

- Engine : Rated r.p.m.
- Hydraulic Oil Temp. : 50~60°C
- Set the pressure gauge on the port (D) of the control valve. Fully move the arm control lever to the “ARM OUT” position and measure the pilot relief pressure.

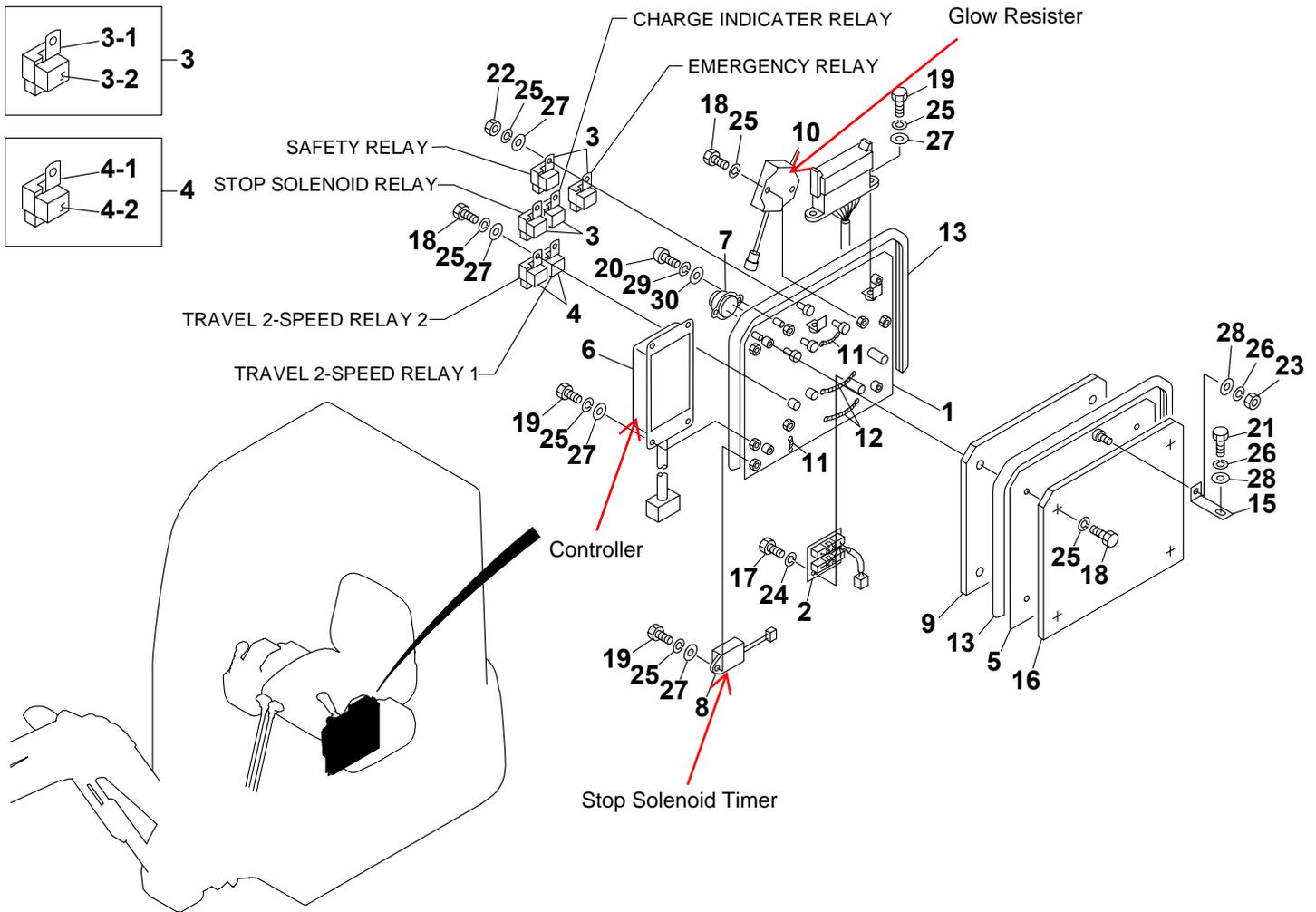


Pressure Detection Port	
Port Position	Size
D	G1/4

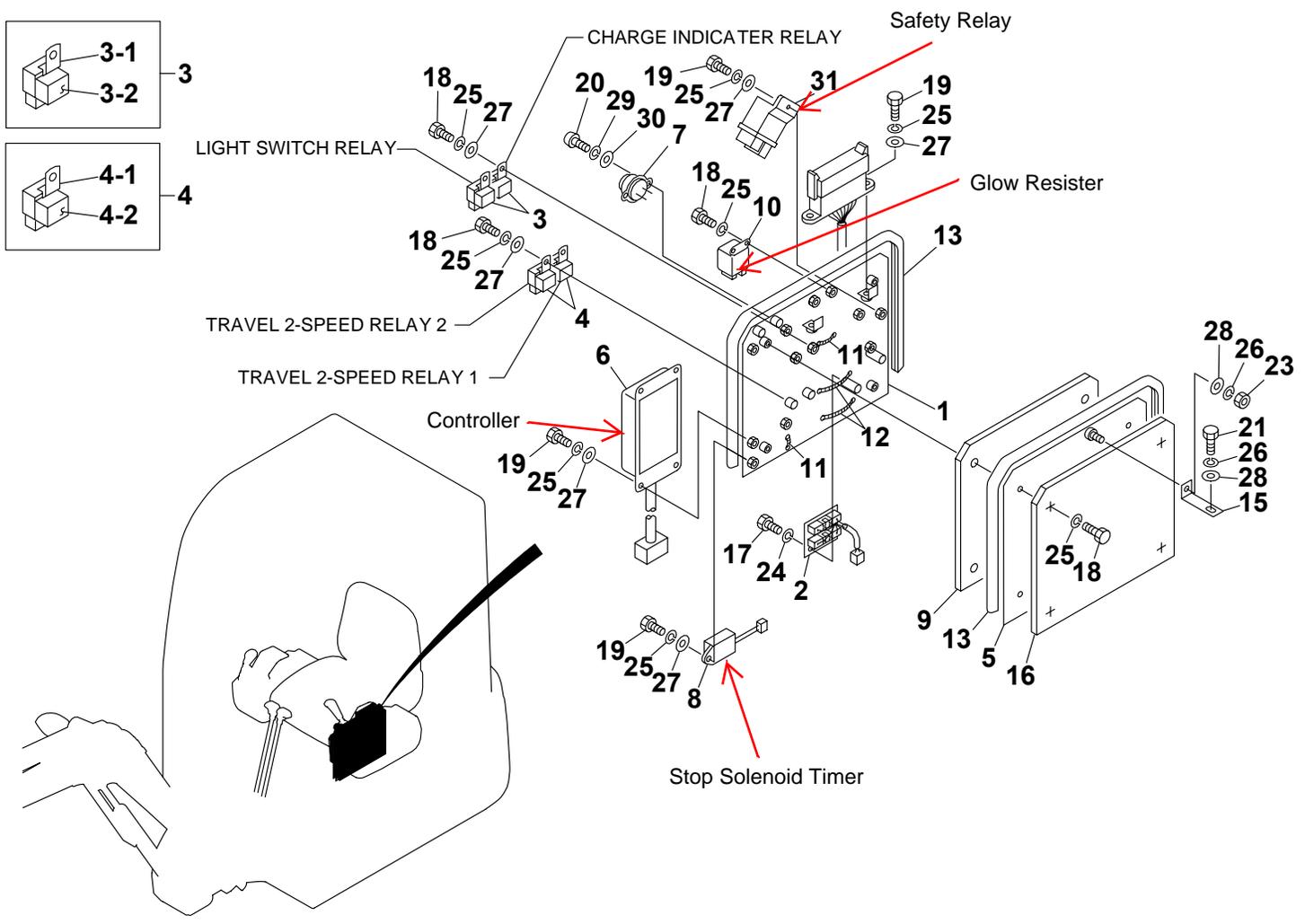
TB016 ELECTRICAL 11600003-11600013



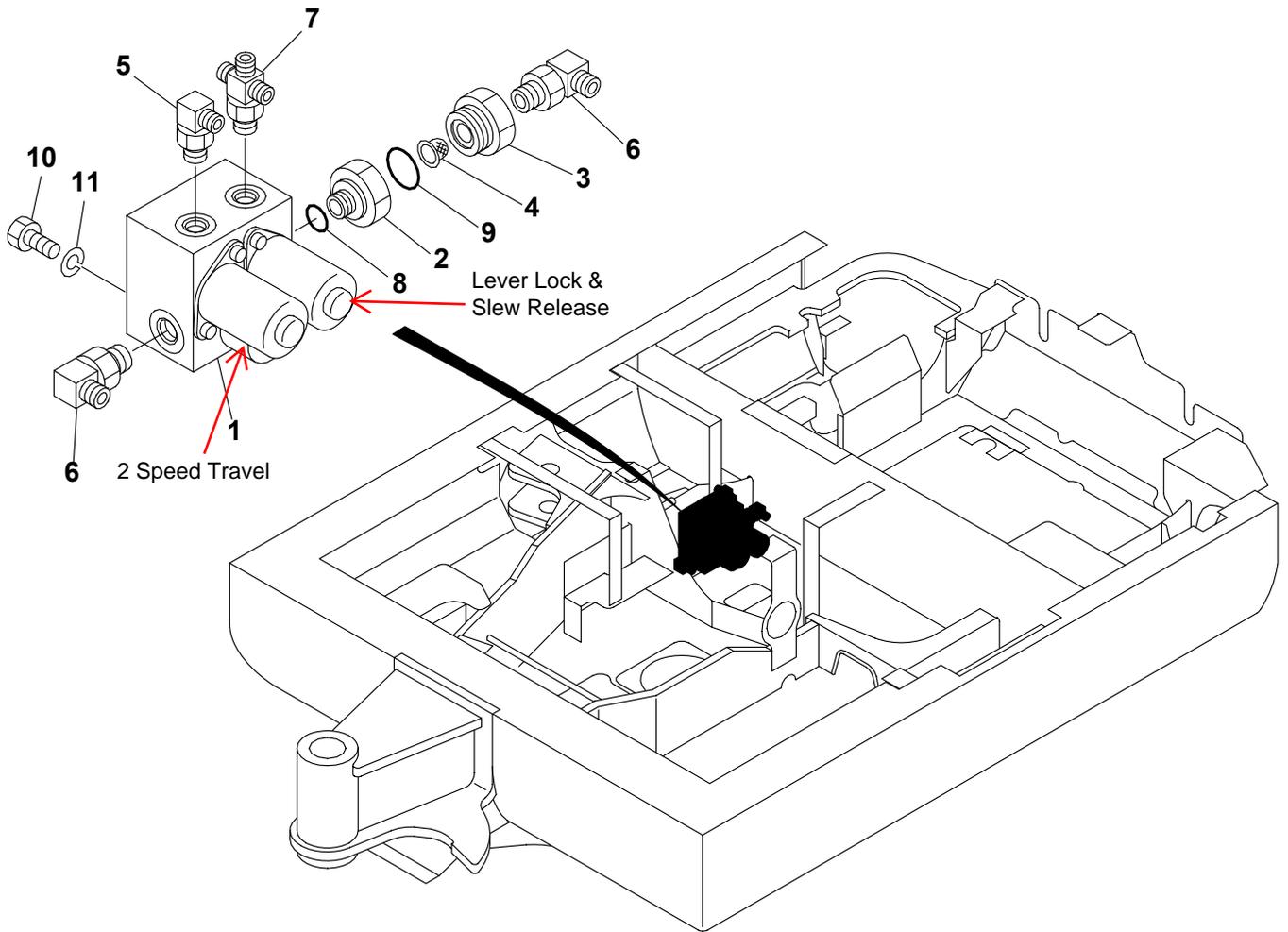
TB016 ELECTRICAL 11600014 - 11609631



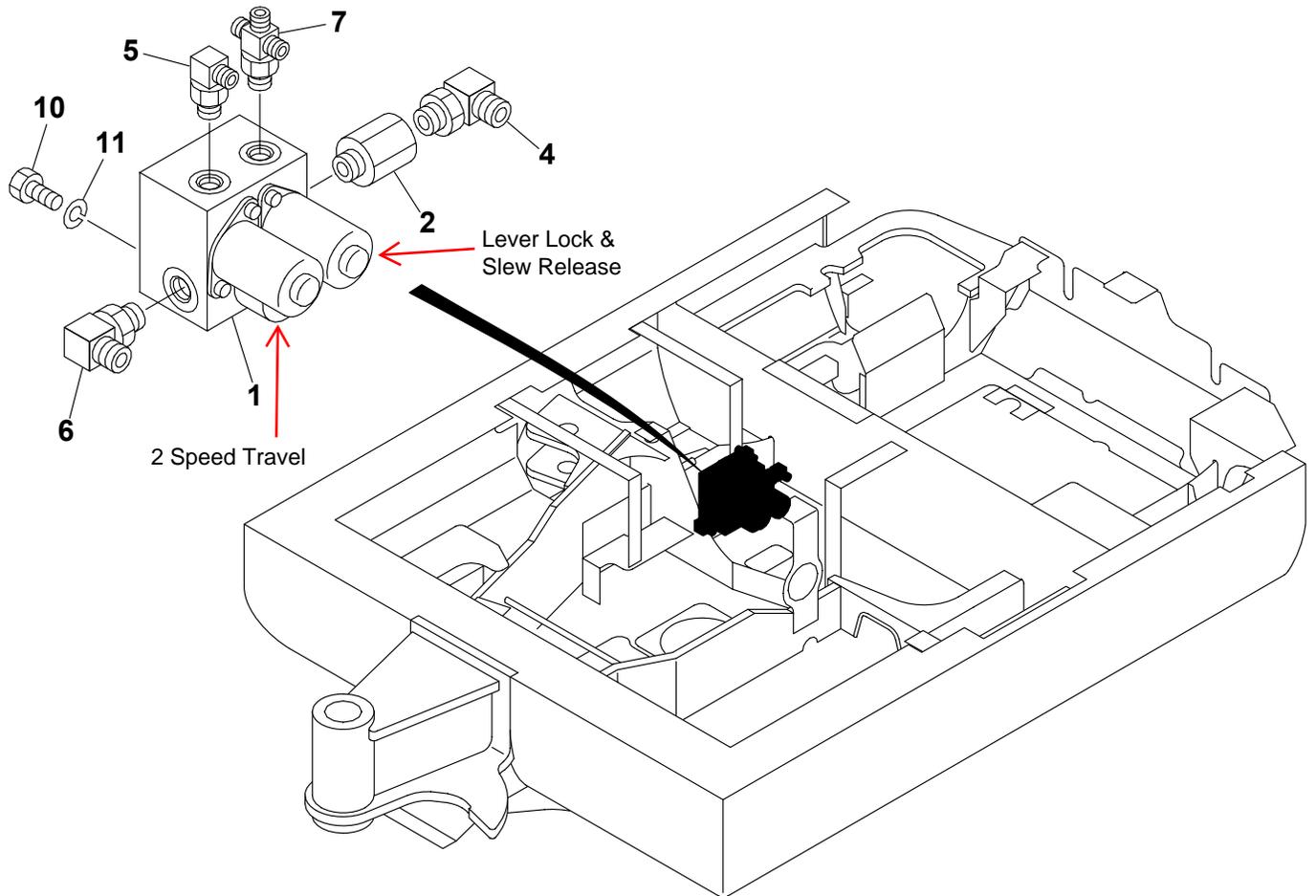
TB016A ELECTRICAL11610001~



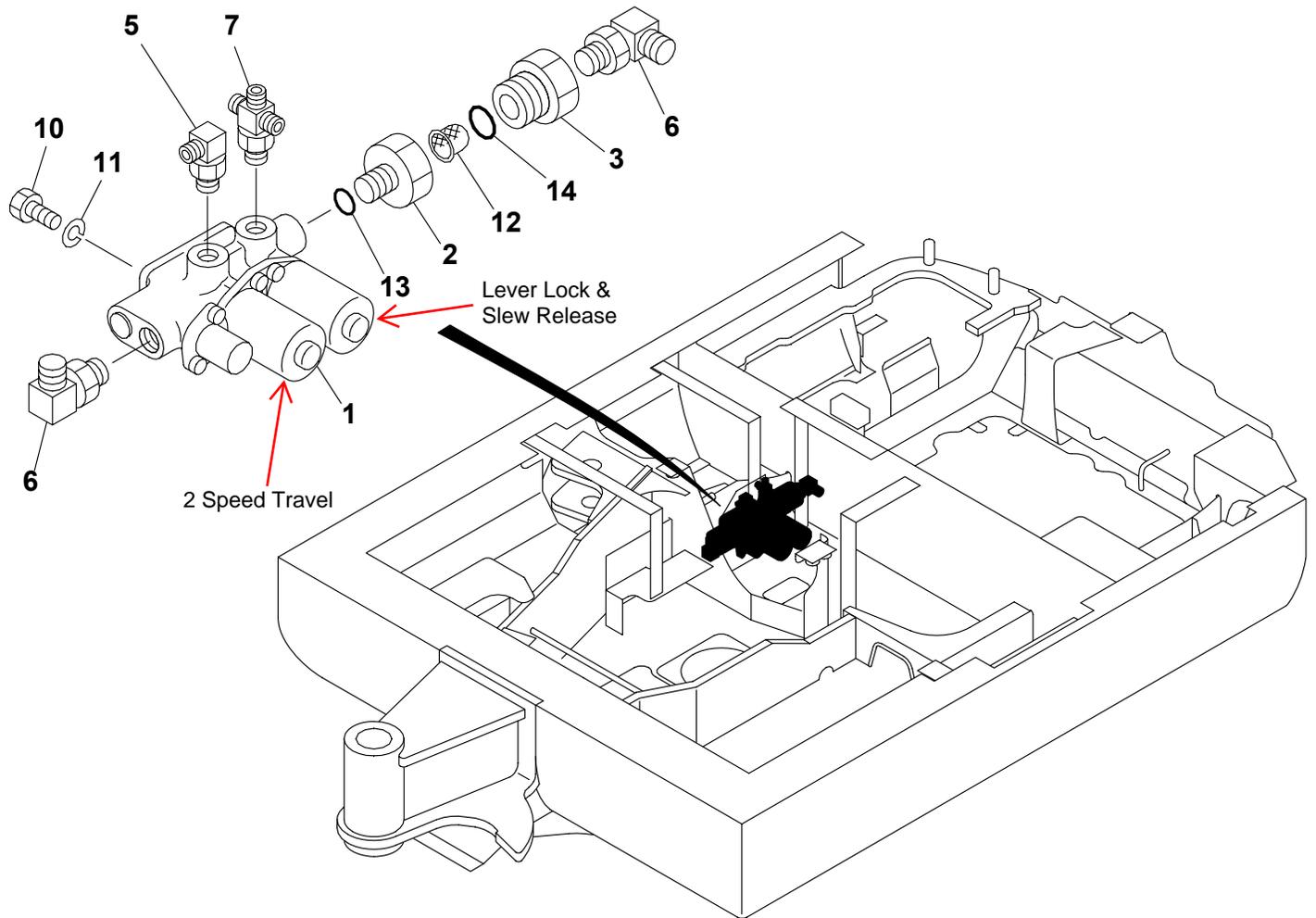
SOLENOID VALVE (11600003-11602239)



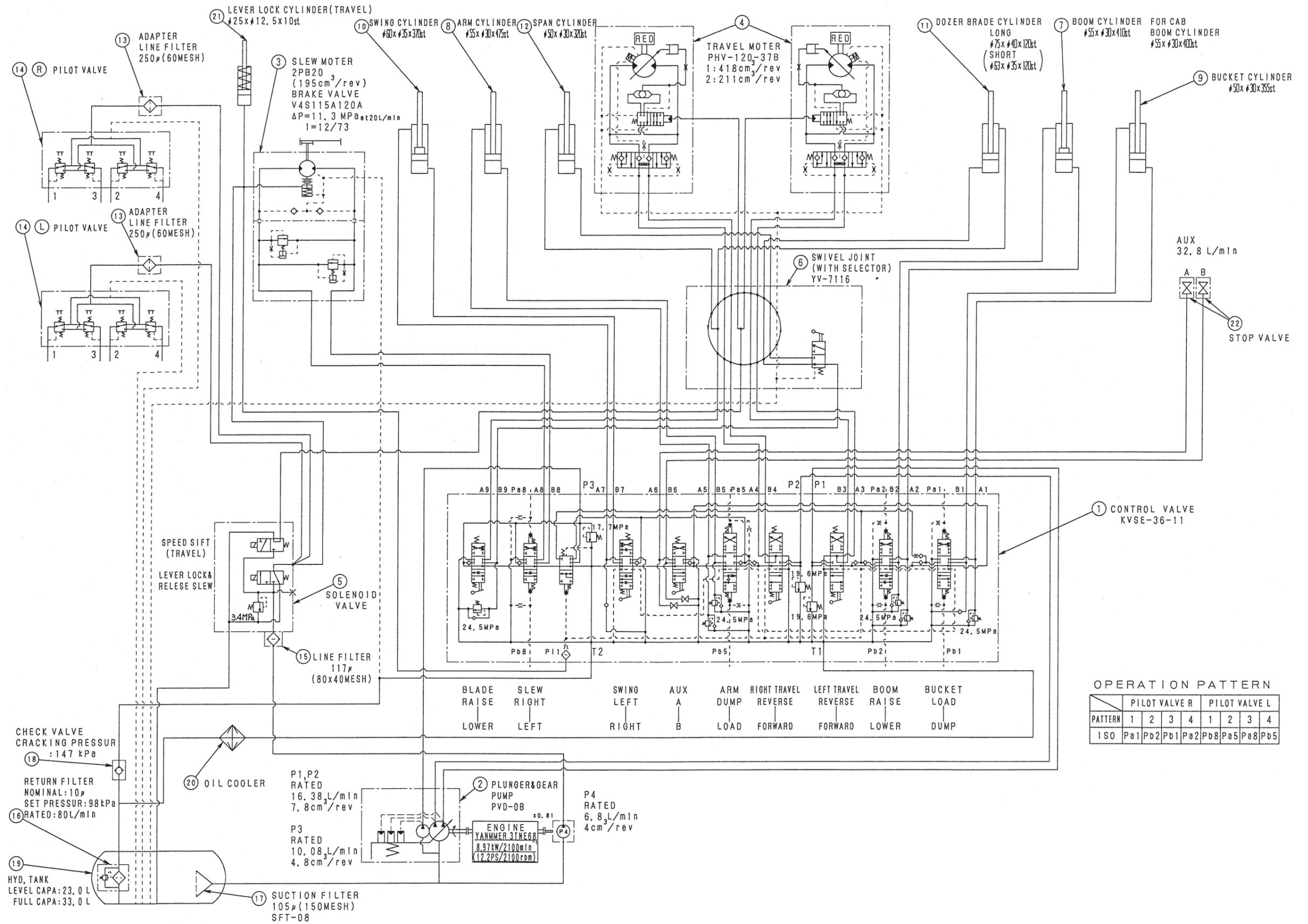
SOLENOID VALVE (11602240-)



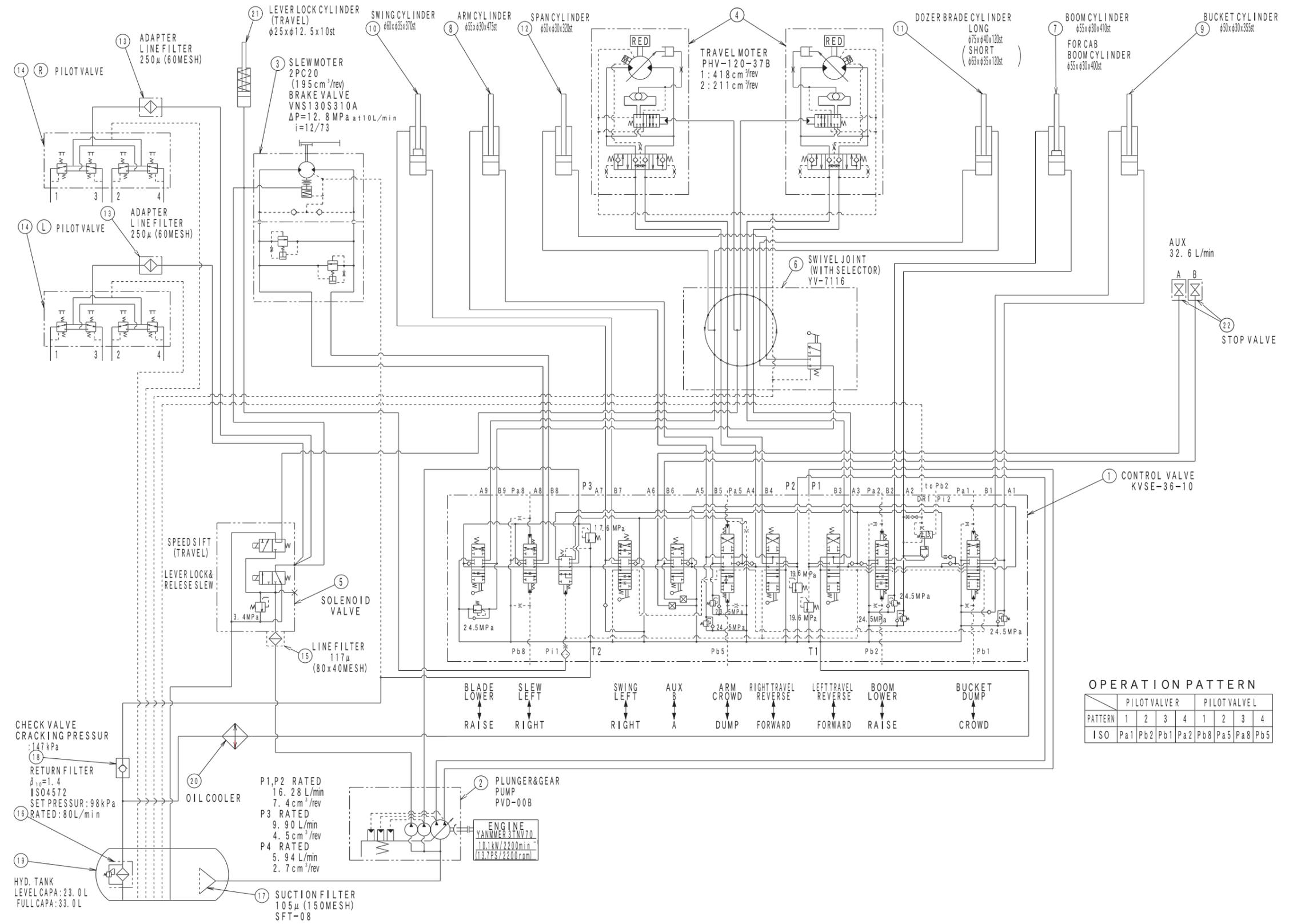
SOLENOID VALVE S/N 11610001-

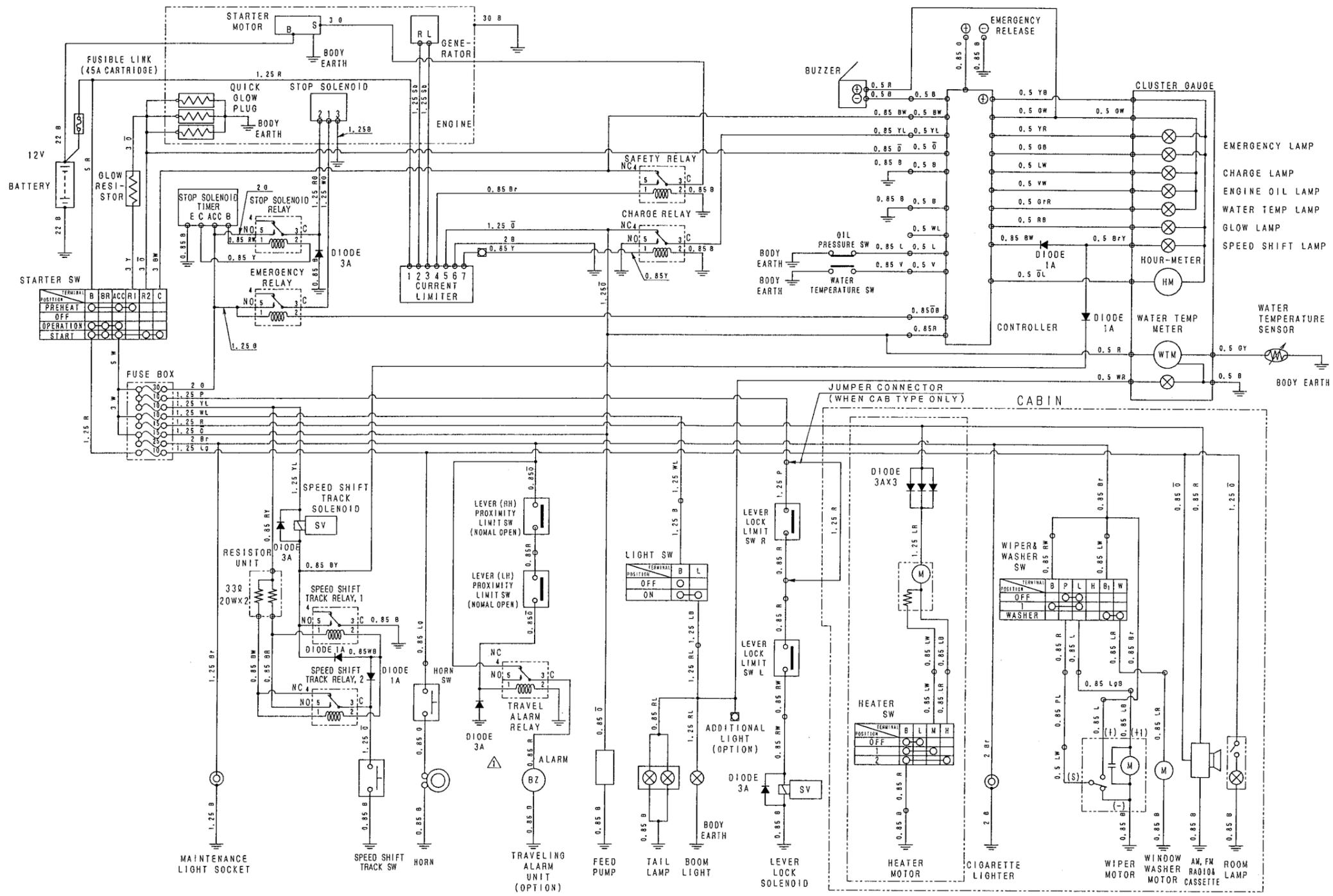


Hydraulic Schematic 11602090 - 11609361



Hydraulic Schematic 11610001 ~



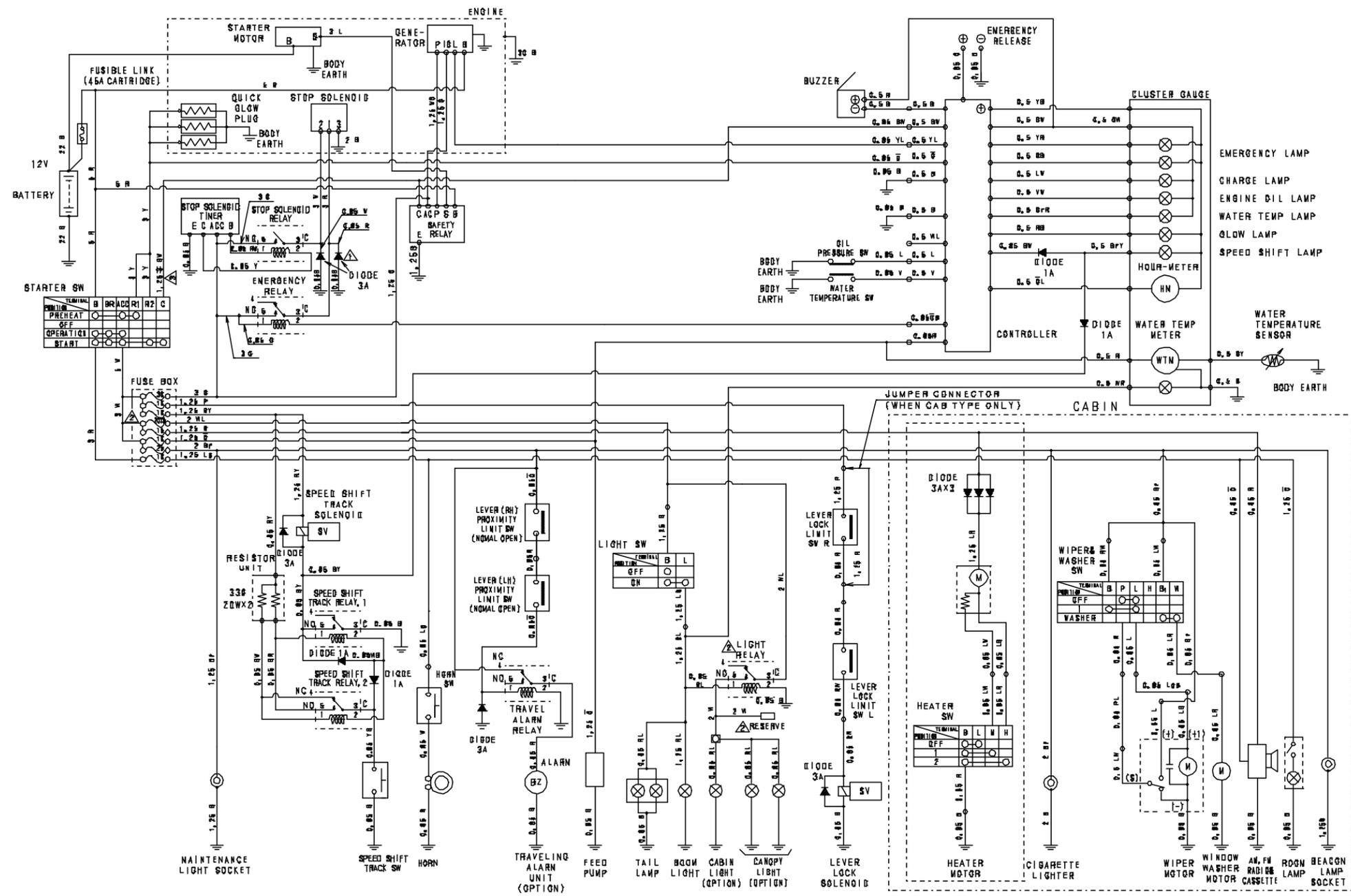


WIRING COLOUR EXAMPLE



WIRING COLOUR TABLE

CODE	COLOUR	CODE	COLOUR	CODE	COLOUR
B	BLACK	W	WHITE	Br	BROWN
G	GREEN	Y	YELLOW	LQ	LIGHT GREEN
L	BLUE	P	PINK	Gr	GREY
R	RED	O	ORANGE	Sb	SKY BLUE
V	VIOLET	Dg	DARK GREEN	Ch	CHOCOLATE



WIRING COLOUR EXAMPLE



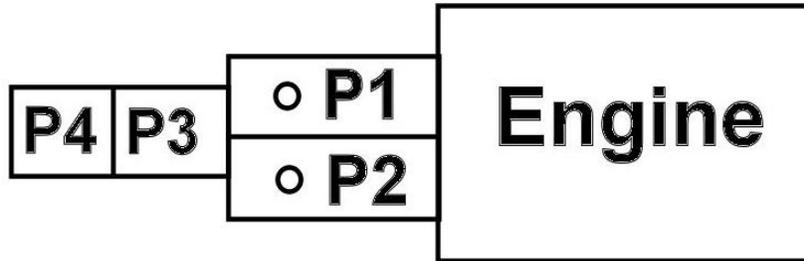
WIRING COLOUR TABLE

CODE	COLOUR	CODE	COLOUR	CODE	COLOUR
B	BLACK	W	WHITE	BF	BROWN
G	GREEN	Y	YELLOW	LG	LIGHT GREEN
L	BLUE	P	PINK	GF	GREY
R	RED	O	ORANGE	SB	SKY BLUE
V	VIOLET	DG	DARK GREEN	CH	CHOCOLATE

TB016 ELECTRICAL WIRING DIAGRAM
(FOR TNV ENGINE)

S/N 11610030~

TB125



P1	Right Travel, Boom and Bucket	7.70 GPM
P2	Left Travel, Arm, Swing and Auxiliary (12.9GPM)	7.70 GPM
P3	Slew, Dozer Blade and Auxiliary	5.20 GPM
P4	Pilot Pressure, High Speed Travel and Slew PB Release	2.70 GPM

Pump P1

Right Travel	2987 PSI	Test Port P1
Boom	2987 PSI	Test Port P1
Bucket	2987 PSI	Test Port P1

Pump P2

Left Travel	2987 PSI	Test Port P2
Arm	2987 PSI	Test Port P2
Swing	2987 PSI	Test Port P2
Auxiliary	2987 PSI	Test Port P2

Pump P3

Slew	2276 PSI	Test Port P3
Dozer Blade	2845 PSI	Test Port P3
Auxiliary	2276 - 2845 PSI	Test Port P3

Pump P4

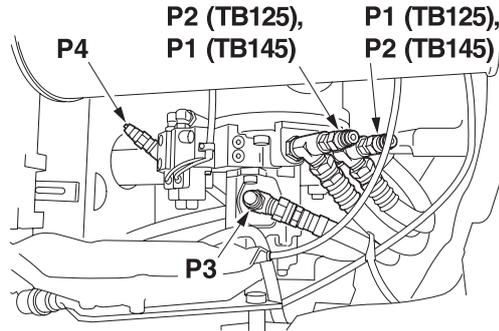
Pilot Pressure	493 PSI	Test Port P4
High Speed Travel	493 PSI	Test Port P4
Slew PB Release	493 PSI	Test Port P4

Hydraulic Oil Pressure (Main Relief Valve Set Pressure)
 Boom, Arm, Dozer Blade
 Measuring Method

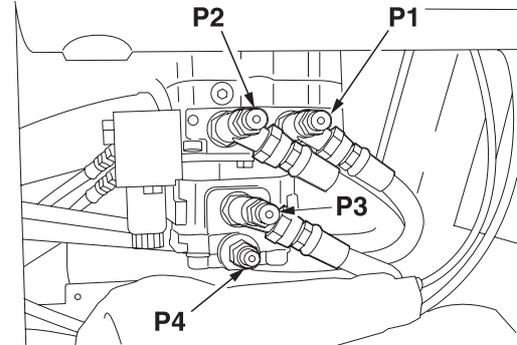
- Engine : Rated r.p.m.
- Hydraulic Oil Temp. : 50~60°C
- Mount the pressure gauge on the pressure detection port, operate the desired hydraulic circuit and measure the relief pressure.

Circuit	Pressure Detection Port		Relief Valve
	Port Position	Size	
Boom	P1	G 1/4	R1
Arm	P2	G 1/4	R2
Dozer Blade	P3	G 1/4	R3

<TB125 : S/N 12510003~12512125>
 <TB145>



<TB125 : S/N 12512126~>
 <TB135>



< TB125, TB135 >

