

MCI 102D SERIES SCHEMATIC MANUAL

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SCHEMATICS

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GENERAL DESCRIPTION

This electrical schematics section contains basic and optional wiring diagrams used on the D series coaches. The section also contains circuit identification and stud location information of the various electrical junction boxes. An "Electrical Schematic Symbols Key" and "Schematic Index" are provided for reference and convenience.

Wiring diagrams and schematics for a specific electrical systems should be careful study to determine the source and flow of current through each electrical circuit. When a circuit is thoroughly understood, a point-to-point check can be made with the aid of the applicable wiring diagram. Any circuit may be tested for continuity or shorts with a suitable volt-ohmmeter.

NOTE: All stud locations and diagrams found in this section are based on the latest available information at the time of publication. Electrical schematics are subject to revision without notice.

COMPONENTS

SCHEMATIC INDEX

The schematic index is divided into separate groups to quickly and easily find the desired wiring diagram. Each group has its individual schematics alphabetically listed under the group header. Each schematic has a brief title that should appropriately describe that schematic and list the page on which it can be found. Additional notations in parenthesis following each schematic title provides specific information to that diagram.

NOTE: The individual schematic title block will give a more detailed description. The schematics index also contains junction box decals and cable run diagrams.

The schematic index should be used to locate the appropriate wiring diagram. The eleven schematic group index headers and a brief description of what would be included are as follows:

Electro-Mechanical Systems – Engines; Transmissions; Starting & Charging; Road Speed Generator; Engine Hourmeter, etc.

Air Operated Systems – Entrance Door; Retractable Step; Kneeling; Unloading; Retracting; Self-Steer Trailing Axle, etc.

Heating & Air Conditioning Systems – A/C Hourmeter; Auxiliary Heater; A/C Compressor Interlock, etc.

Audio & Video Systems – Speakers; Public Address; Audio & Video, etc.

Instrument Panel & Gauges – Speedometers; Voltmeters; Dash Illumination, etc.

Junction Box Decals – Front Junction; Rear Junction; A/C & ATEC/DDEC Junction, etc.

Coach Lighting – Exterior Headlamps; Taillamps, etc. Interior In-station Lighting; Lavatory; Parcel Racks, etc.

Master Wiring Diagrams – U.S.; Canadian, etc.

Miscellaneous Wiring Diagrams – Anti-Theft; Keyed Ignition; Motorized Blinds, etc.

Signals & Alarms – Coolant; Fire; Air, etc.

JUNCTION BOX CONNECTIONS

Stud location and circuit identifiers are divided into four groups, which represent the four junction or remote boxes. Stud numbers listed below each junction or remote box header corresponds to the number shown on that stud board. Several stud locations will show as "SPARE" or not in use.

The front, rear and A/C junction boxes have decals affixed to their inside covers that show component and

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stud locations. Junction box stud numbers and circuit listings are shown later in this section. The four junction and remote box descriptions and locations are as follows:

Front Junction Box

The front junction box is the largest of the three main boxes. This box is located below the driver's window and contains either an 80 or 100 stud terminal block. It also contains a number of circuit breakers, relays and solenoids associated with engine function, HVAC, lights, horn, speed switch, etc. The front junction box contains all audible warning buzzers or alarms, and the audio equipment for public address and entertainment systems. All instrument panel functions are routed through this junction box.

A/C DDEC & ATEC Junction Box

The A/C DDEC & ATEC junction box is located on the ceiling on the #1 LH baggage compartment. This box contains a number of main circuit breakers and relays associated with HVAC systems. The ATEC and DDEC diagnostic plugs are routed through this junction box and the ATEC ECU is mounted here also.

NOTE: Early model 102DL3 coaches had this junction box located in the #3 RH baggage bay.

Rear Junction Box

The rear junction box is the smallest of the three main boxes. This box is located at the front LH rear side service door opening and contains a 65 stud terminal block, a number of circuit breakers and relays associated with engine function, starting and charging circuit, air system, remote box etc. All ATEC and DDEC circuits are routed through this junction box.

NOTE: Some studs locations used with DDEC II may no longer be used with DDEC III engine installations.

Remote Engine Control Box

This box is located on the LH front ceiling in the engine compartment. The box contains remote engine start controls and coolant recovery controls.

MAINTENANCE

TROUBLESHOOTING PROCEDURES

For an accurate diagnosis of any electrical problem, it is necessary to follow a step-by-step troubleshooting procedure. First, verify the problem by operating the suspected circuit. Once the problem area is verified, then refer to the wiring schematic of the problem circuit.

Next, trace the circuit and redraw it if necessary. This will help to identify the connections, splices, grounds and components in the troubled circuit. After tracing the

circuit, systematically test for faulty components, connections, or grounds to isolate the problem.

When the problem is isolated and a particular element of the circuit is determined to be the cause of the problem, make the necessary repair and operate the circuit to verify the repair.

Open Circuits

Many electrical system failures are caused by an open circuit. An open circuit is one in which power flow stops because of an interrupted or incomplete circuit path. An open circuit is caused by an improper ground, a broken connector, poor terminal contact, a loose or broken wire, an open or faulty component, or a circuit breaker or fuse opened by a short or overload.

Testing to isolate an open circuit can be accomplished by using a jumper wire to bypass a suspected open element. If the circuit operates with the jumper in place when power is applied, then the open is in the segment of the circuit bypassed.

Another procedure to pinpoint an open in a circuit is to test for power along the circuit, using a test light. If the test light indicates power at one point, then is moved to another where it does not indicate power, the circuit is open between the two points.

Short Circuits

Many electrical system problems are caused by short circuits. A short circuit is a power circuit that has been grounded before it completes the intended operating circuit.

To diagnose a short to ground, use a self-powered test light to test for continuity to ground. First, disconnect the circuit from power and ground. Next, connect the test light between the circuit and ground; the test light will glow if the circuit is shorted to ground. To isolate the short, open elements of the circuit one at a time until the light goes out. The short is in the last element opened or in the segment of the circuit beyond the last element opened. To pinpoint the short, test each element of the isolated segment.

A tripped circuit breaker or a blown fuse usually indicates a short to ground or overloaded circuit. Use a test light to isolate the short. First, turn "OFF" all elements of the circuit receiving power through the circuit breaker or fuse and disconnect all loads. Turn "ON" the power to the fuse, then connect one lead of the test light to the power supply side of the circuit protector and the other lead to ground; the light should indicate power. Disconnect the ground lead of the test light and connect it to the load side of the fuse. If the light is "OFF", the short is in the equipment. If the light is "ON", the short is in the wiring. To pinpoint the short, disconnect circuit elements one at a time until the test light goes "OFF". The short will be in the segment connecting the last element.

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ELECTRICAL SCHEMATIC SYMBOLS KEY

36 - WH - 16 CIRCUIT COLOR GAUGE			
	FRONT JUNCTION BOX STUD BLOCK		SWITCH-SPST
	FRONT JUNCTION BOX STUD		SWITCH-SPST
	FRONT JUNCTION BOX-ENT STUD BLOCK		SWITCH-DPST MOM
	REAR JUNCTION BOX STUD BLOCK		SWITCH-SPDT
	REAR JUNCTION BOX STUD		SWITCH-SPDT MOM
	AIR CONDITIONING JUNC BOX-STUD BLOCK		SWITCH-FOOT OPERATED-SPST MOM
	PARCEL RACK-STUD BLOCK		SWITCH-PUSH BUTTON -SPST
	REMOTE CONTROL JUNC BOX-HORIZ STUD BLK		SWITCH-PRESSURE-SPST
	REMOTE CONTROL JUNC BOX-VERT STUD BLK		SWITCH-PRESSURE-SPST
	ENGINE CRADLE-STUD BLOCK		SWITCH-PRESSURE-SPST
	ENGINE CRADLE-STUD		RELAY-HEADLAMPS
	BEHIND DASH-ILLUMINATION STUD		LINE CONTACTOR
	BEHIND DASH-B+ STUD		LINE CONTACTOR
	BEHIND DASH-GROUND STUD		COIL
	DESTINATION SIGN-STUD BLOCK		SOLENOID
	RELAY		
	RELAY-MASTER CONTROL		

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ELECTRICAL SCHEMATIC SYMBOLS KEY (CONTD.)

	FLASHER		FUSE
	SWITCH - PRESSURE - SPDT		GROUND
	SWITCH - DPDT		SEMICONDUCTOR DIODE
	SWITCH - DPDT		ZENER DIODE
	SWITCH - DPTT		FULL WAVE BRIDGE RECTIFIER
	FIELD WINDING		SEPARABLE CONNECTOR
	RESISTOR		INCANDESCENT LAMP - SINGLE FILAMENT
	RHEOSTAT		INCANDESCENT LAMP - DOUBLE FILAMENT
	POTENTIOMETER		BALLAST
	SENDING UNIT		FLUORESCENT LAMP
	SENDING UNIT		SPEAKER
	SENSOR		HORN
	DDL CONNECTOR		DC MOTOR
	BATTERY		OPTIONAL COMPONENT TARGET SYMBOL
	CIRCUIT BREAKER		OHM
			DISK CAPACITOR
			ELECTROLYTIC CAPACITOR
			SENSING ELEMENT PLUG
			ROOF HARNESS BLK STUD
			OPTION
		WH - WHITE	RD - RED
		GY - GREY	BR - BROWN
		VO - VIOLET	BK - BLACK
		BL - BLUE	YL - YELLOW
		GR - GREEN	OR - ORANGE

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FRONT JUNCTION BOX CONNECTIONS

Stud	Circuit Number	Color* Codes	Gauge	Volt	Color** Codes	Description
1	26	Orange-Black	16	24	-	Oil Pressure Gauge (Sender)
1	26	-	18	24	White-Black-Orange	Oil Pressure Gauge (Dash)
2	27	Brown	18	24	-	Water Temperature Gauge (Dash)
2	27	-	16	24	Brown	Water Temperature Gauge (Sender)
3	-	-	-	24	-	Spare
4	29	Red-Black	14	24	-	Engine Start Switch Rear
	29	-	18	24	Red-Black	Engine Start Switch (Dash)
5	-	-	-	-	-	Spare
6	807	Blue	16	12	-	Turn Lamp - Left Front
	807	Blue	18	12	Yellow	Left Turn Signal Telltale
7	807	Blue	14	12	-	Turn Lamp - Left Rear and Side
	807	Blue	16	12	-	Turn Signal Relay
8	808	Blue	16	12	-	Turn Lamp - Right Front
	808	Blue	18	12	Red-Yellow	Right Turn Signal Telltale
9	808	Blue	14	12	-	Turn Lamp - Right Rear and Side
	808	Blue	16	12	-	Turn Signal Relay
10	25	Gray	14	-	-	Not Used
10	25	-	18	-	White-Violet	Not Used
10	25	Black	16	-	-	Not Used
11	5	White-Red	18	24	-	(Dash)
11	5	White-Red	18	24	-	(Rear)
12	OR	Black	18	24	-	Starter Alert Telltale Light
12	OR	-	18	24	Pink	Starter Alert Telltale Light
13	38	White-Green	18	24	-	Low Air Telltale Light (Press) Switch Front
13	38	-	18	24	White-Green	Low Air Telltale Light (Dash)
13	38	Green	18	24	-	Low Air Telltale Lamp Press Switch Rear
13	38	White-Green	18	24	-	Low Air Telltale Lamp Buzzer
14	3	Black	10	24	-	Load Side of Master Control Relay
14	3	Black	10	24	-	Bus Bar Circuit Breaker Feeder (Front)
14	3	Black	10	24	-	Bus Bar Circuit Breaker Feeder (Rear)
14	29P	-	18	24	Brown	Engine Switch
15	806	Blue	14	12	-	Side Marker Lamps (LH and RH Frontside and Intermediate)
15	806	Blue	16	12	-	Front LH and RH Marker Lamp
16	806	Blue	10	12	-	Load Side of Road Lights Relay
16	806	Blue	14	12	-	Front and Center Clearance and I.D. Lamps
16	806	Blue	10	12	-	Road Lamp Relay Bus Bar (Rear)
17	69	Red-Blue	16	24	-	Not Used
18	47	Red-Yellow	14	24	-	Evaporative Motor Relay Coil
18	47	-	18	24	Red-Yellow	Passenger A/C-Heat Switch
18	47	Red-Yellow	-	24	-	Passenger A/C On Relay
19	812	Blue	16	12	-	Stop Lamp Switch (Primary Service Brake)
19	814	Blue	16	12	-	Backup Lamp Feeder
19	822	Blue	18	12	-	Bulb Test Switch
19	812	Blue	16	12	-	Fast Idle Safety Switch
19	812	Blue	14	12	-	Master Control Relay
20	809	Blue	14	12	-	Stop Lamps
20	809	Blue	18	12	Red-Green	Stop Lamp Telltale Light
20	809	Blue	16	12	-	Primary Service Brake Stop Lamp Switch
20	809	Blue	16	12	-	Secondary Service Brake Stop Lamp Switch
21	28	Brown-Yellow	16	24	-	Lavatory Alarm
21	28	-	18	24	Tan	Lavatory Emergency Telltale Light
21	28	Brown-Yellow	16	24	-	Lavatory Emergency Switch
22	36C	White	18	24	-	Spare
23	22	Black-Yellow	16	24	-	Driver's Lamp
	22	18	-	24	White-Yellow	Driver's Light Switch
24	-	-	-	-	-	Not Used
25	31P	Green-Black	14	24	-	Baggage Compartment Lamps Feeder
25	31	Green-Black	14	24	-	Baggage Compartment Lamp Switch
26	9P	Black-Green	18	24	-	Door Latch Solenoid Valve
26	3	Black	16	24	-	Voltmeter
26	3	-	18	24	Red	B+ Stud (Back of Dash)
26	18P	-	18	24	White-Black-Black	Trailing Axle Unload Switch Feeder
26	3B	Black	16	24	-	Alarm Buzzer
26	3	Black	16	24	-	Fast Idle Relay
27	35	White-Black	18	24	-	Hi-Beam Telltale Lamp
27	35P	White-Black	16	24	-	Headlight-Dimmer Switch Relay
27	35P	-	16	24	White-Black	Headlamp (Hi-Low) Relay
28	33	Red-Black	16	24	-	Feeder-Headlight to Dimmer Switch
28	4B	Black	18	24	-	Road Lamp Relay Coil
28	33R	White-Orange	18	24	-	Headlamp Switch

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FRONT JUNCTION BOX CONNECTIONS (Contd.)

Stud	Circuit Number	Color* Codes	Gauge	Volt	Color** Codes	Description
28	33	Red-Black	16	24	-	Headlamp (On) Relay
28	33	Red-Black	16	24	-	Surge Protection
29	63A	Violet	14	-	-	Spare
30	54	Yellow	18	24	-	Heating-A/C Feeder
30	54	-	16	24	Yellow	Passenger A/C (On) Relay
30	54D	-	18	24	Orange	Driver's A/C Switch Feeder
31	55	Orange	16	24	-	Clock in Dash
32	50	-	16	24	Gray	Fire Alarm Telltale Light
33	7R	Black-White	14	24	-	Right-Hand Reading Lights
33	7R	Black-White	14	24	-	Road Lamp Relay
34	14P	Green-Yellow	16	24	-	A/C Malfunction Telltale
34	14P	-	18	24	Brown	A/C Malfunction Telltale Light
35	53	Black-Blue	16	24	-	Fuel Gauge Sender
35	53A	-	18	24	White-Black-Blue	Low Fuel Level Warning Telltale Light (Optional)
36	36A	White	16	24	-	Additional Lavatory OCCUPIED Light
36	36A	White	18	24	-	Lavatory Door Switch
37	76	White-Green	18	24	-	Driver's A/C Solenoid
37	76	White-Green	18	24	White-Black-Green	Driver's A/C Switch
38	30	Brown-White	16	24	-	Alarmstat-Hot Engine Sensor
38	30	Brown-White	16	24	-	Hot Engine Buzzer
38	30	Brown-White	18	24	White-Brown	Hot Engine Telltale Light
39	32	Orange-Green	16	24	-	Jacobs Engine Brake Solenoid DDEC II
39	32	-	18	24	Pink	Jacobs Engine Brake Switch
39	583	Black	18	24	-	Jacobs Engine Brake Solenoid DDEC III / IV
40	18	Black-White	16	24	-	Low Air Trailing Axle Solenoid Valve Feeder
40	18	Black-White	18	24	-	Sonalert Beeper
40	18	-	18	24	White-Red-Black	Trailing Axle Unload Switch
41	815	Blue	16	12	-	Back-Up Lamp Ground Return
41	815	Blue	18	12	White	Back-Up Telltale Light
42	16	Black	16	24	-	2-Speed Evaporator Motor Relay
42	16	Black	18	24	-	Driver's Hi-Low Switch
43	56	Green	16	-	-	Spare
44	37	White-Red	18	24	-	Step Lamp Feeder and Chime Switch
44	37P	-	16	24	White-Red	Step Lamp (Switch)
44	19P	Maroon	16	24	-	Chime Feeder
45	7L	Purple	14	24	-	Left-Hand Reading Lamps
45	7L	Violet	14	24	-	Road Lamp Relay
46	40	Gray	16	24	-	Neutral Relay
46	40	-	18	24	White-Gray	Fast Idle Switch
47	813	Blue	16	12	-	Fast Idle Park Brake Switch
47	813	Blue	18	12	-	Fast Idle Relay
47	813	Blue	18	12	-	Emergency Brake Telltale Light
48	59	-	18	24	White-Black-Red	Jacobs Engine Brake Switch
49	66P	-	18	24	Tan	Heated Mirror Switch (Option)
50	60	Yellow	18	24	-	Alarm Buzzer
50	60	Yellow	18	24	-	Low Oil Pressure Switch
50	60	-	18	24	White-Black-Yellow	Low Oil Telltale Light
51	10	Black-Red	18	24	-	Low Water Level Sensor
51	10	Black	18	24	White-Black-Red	Low Water Telltale Light
52	43SP	-	18	24	Red-Green	Switch Panel Illumination Feeder
52	43P	-	18	24	White-Black-Green	Gauge Illumination Rheostat
52	49	Black	18	24	-	Temperature Controller
52	1	White-Black-Brown	18	24	-	Coach Lamp Switch
52	16	Black	16	24	-	Circuit Breaker #65
53	9	Black-Green	18	24	-	Door Latch Solenoid Valve
53	9G	Black-Green	18	24	-	Door Latching Relay
54	58	Blue	16	24	-	Ether Start
55	804	Blue	10	12	-	12V Power Source
56	979	Black	18	24	-	Jacobs Engine Brake Solenoid
56	61	-	18	24	White-Black-Gray	Jacobs Engine Brake Switch
57	57PR	-	18	24	-	Parcel Rack A/C Switch
57	57	Yellow-Green	16	24	-	Passenger A/C Relay
57	57	Yellow-Green	16	24	-	Hi-Press Cut Out Switch
57	57	Yellow-Green	16	24	-	A/C Malfunction Telltale
58	-	-	-	-	-	Not Used
59	-	-	-	-	-	Not Used
60	51L	Yellow	14	24	-	Master Control Relay
60	51L	Black	14	24	-	Driver's Defrost Switch
60	51L	-	14	24	Yellow	Defroster B+ Stud
61	43	White-Green	18	24	-	Gear Shift Illumination
61	43	-	18	24	White-Green	Gauge Illumination Lights

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FRONT JUNCTION BOX CONNECTIONS (Contd.)

Stud	Circuit Number	Color* Codes	Gauge	Volt	Color** Codes	Description
61	43	-	18	24	White-Green	Gauge Illumination Rheostat
62	A	Black	18	24	-	Retract Step
63	A	Black	18	24	-	Kneeler
63	5A	Black	16	24	-	Retractable Step
64	E	Red	18	24	-	Retractable Step/Kneeler
65	18A	White-Gray	18	24	-	Retractable Step Relay
66	C	Yellow	18	24	-	Retractable Step Relay (or Kneel Option)
67	-	-	-	-	-	-
68	817	Blue	18	12	-	Hazard Telltale Light
68	817	Blue	18	12	Green	Hazard Switch
68	817	Blue	18	12	-	Turn Signal Switch/Relay
68	817	Blue	18	12	-	Turn Signal Switch/Relay
69	816	Blue	18	12	-	Turn Signal Flasher
69	816	Blue	18	12	Blue	Hazard Switch
69	816	Blue	18	12	-	Turn Signal Relays
70	43S	-	18	24	White-Green	Right-Hand Upper Switch Panel Illumination Lights
70	43S	-	18	24	Green	Left-Hand Upper Switch Panel Illumination Lights
70	43S	-	18	24	White-Green	Dash Illumination Rheostat
71	33RB	Black	18	24	-	Daytime Running Lights
72	14H	White-Green	16	24	-	Compressor Clutch
72	14H	-	18	24	White-Black-Green	A/C Malfunction Telltale Light
73	2P	-	18	24	White-Black-Orange	Not Used
74	2S	-	18	24	Orange	Not Used
75	2R	-	18	24	White-Orange	Not Used
76	36B	White	18	24	-	Spare
77	-	-	-	-	-	Spare
78	12V	Yellow	16	12	-	?
79	18A	White	-	-	-	Transmission Temperature Gauge
80	B	White-Black-Violet	18	24	-	Tag Axle Unload Switch
80	B	White-Black-Brown	18	24	-	Tag Axle Telltale
80	B	Black	18	24	-	Tag Axle Pressure Switch
81	R1	Red-Black	18	24	-	Tachometer
81	Tach	White-Black	18	24	-	Tachometer Signal From A
82	-	-	-	-	-	Spare
83	-	-	-	-	-	Spare
84	-	-	-	-	-	Spare
85	29B	White-Brown	18	24	-	Spare
86	79	Black	18	24	-	Spare
87	103	Orange-White	16	24	-	Right-Hand Speaker (+)
87	RD	Red	18	24	-	Right-Hand Speaker (+)
88	107	Orange-Green	16	24	-	Right-Hand Speaker (-)
88	BK	Black	18	24	-	Right-Hand Speaker (-)
89	104	White-Black	16	24	-	Left-Hand Speaker (+)
89	WH	White	18	24	-	Left-Hand Speaker (+)
90	106	Green-Red	16	24	-	Left-Hand Speaker (-)
90	GR	Green	18	24	-	Left-Hand Speaker (-)
91	HTR4	Black	18	24	-	Heater On Telltale
91	HTR4	Black	16	24	-	Webasto Heater Plug C
92	-	-	-	-	-	Spare
93	-	-	-	-	-	Spare
94	57AC	White-Green	18	24	-	Parcel Rack A/C Switch
94	57AC	White-Green	16	24	-	Parcel Rack A/C Relay
95	77HI	Red-Black	18	24	-	Parcel Rack Blower Switch
95	77HI	Red-Black	18	24	-	Left-Hand Parcel Rack Blower Relay
95	77HI	Red-Black	18	24	-	Right-Hand Parcel Rack Blower Relay
95	77	Red-Black	18	24	-	Parcel Rack A/C Relay (Front Junction Box)
96	77LO	Red-Black	18	24	-	Parcel Rack Blower Switch
96	77LO	Red-Black	18	24	-	Parcel Rack A/C Relay (Front Junction Box)
97	SPEEDO	Black	18	24	-	Speedometer Signal
98	-	-	-	-	-	Spare
99	-	-	-	-	-	Spare
100	-	-	-	-	-	Spare

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REAR JUNCTION BOX CONNECTIONS

Stud	Circuit Number	Color* Codes	Gauge	Volt	Description
1	56A	Green	16	24	Spare
2	54	Yellow	14	24	Discharge and Blower Cut-In Relay
2	54	Yellow	14	24	Passenger A/C On Relay
3	810	Blue	16	12	Feeder Left-Hand and Right-Hand Rear Tail Lamps
3	810	Blue	14	12	Marker and Tail Lamps
3	810	Blue	16	12	Roof Clearance I.D. and Marker Lamps
4	809	Blue	14	12	Stop Lamps
4	809	Blue	16	12	Rear Stop Lamps
5	815	White	16	12	Back-Up Lamps
5	815	Blue	16	12	Ground Signal Back-Up Lamps
6	808	Blue	14	12	Rear Right-Hand Turn Lamps
6	808	Blue	16	12	Right-Hand Rear Side and Right-Hand Rear Turn Lamp
7	807	Blue	14	12	Left-Hand Turn Lamps
7	807	Blue	16	12	Left-Hand Rear Side and Left-Hand Rear Turn Lamp
8	45B	Yellow-Red	16	24	Daytime Running Lamps
9	-	-	-	-	Spare
10	27	Brown	16	24	Spare
11	-	-	-	-	Spare
12	29	Red-Black	14	24	Starter Switch
12	29	Red-Black	14	24	Remote Starter Switch
13	12V	Yellow	16	12	?
14	18	Black-White	16	24	Trailing Axle Switch
14	18	Black-White	16	24	Trailing Axle Solenoid Valve
15	29S	Black-White	14	24	Starter Solenoid Relay
15	29S	Green	18	24	Triple Function Protective Device
16	814	Blue	16	12	Back-Up Lamp
16	814	Blue	16	12	Back-Up Lamp Feeder
17	69	Red-Blue	16	24	Reverse Throttle Interlock
18	62P	Green-Black	14	24	Lavatory Dome Lamp and Lavatory OCCUPIED
18	31	Green-Black	16	24	Circuit Breaker #31 (RJB)
18	31P	Green-Black	16	24	Engine Compartment Lamp Switch
19	32	Orange-Green	16	24	Jacobs Engine Brake (Option)
20	5	White-Red	18	24	Not Gen Telltale Front
20	5	White-Red	18	24	Discharge and Blower Cut-In Relay
20	5	White-Red	16	24	Not Gen Light Rear
21	30	Brown-White	16	24	Spare
22	40	Gray	16	24	DDEC Fast Idle Relay
23	25	Gray	14	24	Spare
24	3	Red	18	24	3N124 Protection Device
24	3	Black	10	24	Load Side Master Circuit
24	3	Red	10	24	Rear Master Ckt. Bus Bar
25	3	Black	16	24	Field Relay Coil
25	3	Black	16	24	Neutral Relay Coil
25	4	Green-Red	14	24	Rear Stop and Start Switch Feeder
26	OR	Black	18	24	Starter Alert Telltale
26	OR	Pink	18	24	3N124 Protection Device
27	-	-	-	-	Spare
28	36A	White	16	24	Additional Lavatory OCCUPIED Light
29	HTR3	Black	16	24	Heater On relay
29	HTR3	Black	16	24	Heater Plug B
30	-	-	-	-	Spare
31	10	Black-Red	18	24	Low Water Telltale Lamp
31	10	Black	18	24	Low Coolant Level Relay
32	50	Green-Red	16	24	Fire Detectors (Option)
33	R1	Black-Red	18	24	24V Discharge Relay Feeder & Blower Cut-In Coil
33	TACH	White-Black	18	24	Sigmanetics Tachometer
33	R1	Yellow-Orange	16	24	Alternator
33	R1	Yellow-Orange	18	24	Triple Function Protective Device
34	26	Orange-Black	16	24	Spare
35	-	-	-	-	Spare
36	57	Yellow-Green	16	24	Passenger A/C On Relay
36	57	Yellow-Green	16	24	Hi Pressure Switch
36	57	Yellow-Green	16	24	Condenser Relay
36	57	Yellow-Green	16	24	A/C Malfunction Telltale
37	28P	Brown-Yellow	16	24	Lavatory Emergency Switch
37	28P	Brown-Yellow	16	24	Lavatory Emergency Feeder
38	28	Brown-Yellow	16	24	Lavatory Emergency Switch
38	28	Brown-Yellow	16	24	Lavatory Alarm
39	HTR4	Black	16	24	Plug "C"
39	HTR4	Black	16	24	Heater On Telltale

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REAR JUNCTION BOX CONNECTIONS (Contd.)

Stud	Circuit Number	Color* Codes	Gauge	Volt	Description
40	14P	Green-Yellow	16	24	A/C Malfunction Telltale
40	14P	Green-Yellow	16	24	A/C Safety Switches
41	HTR1	Black	16	24	Water Valve Relay
41	58	Blue	16	24	By Pass Valve
42	58	Blue	16	24	Ether Start
43	63A	Violet	14	24	Spare
44	60	Yellow	18	24	Spare
45	-	-	-	-	-
46	29S	Yellow	18	24	Triple Function Protective Device (Option)
46	29S	Yellow	16	24	Neutral Relay
47	36F	Blue	18	12	Triple Function Protective Device
47	36F	Blue	16	24	Field Relay
48	F1	Yellow	12	24	Alternator Field "F1"
48	F1	Yellow	12	24	Regulator
49	A1	Yellow-Black	12	24	Alternator
49	A1	Yellow-Black	12	24	Field Relay
50	70	Black	16	24	Fuel Priming Pump Switch
50	70	Black	16	24	Fuel Priming Pump
51	60	Yellow	18	24	Spare
52	15B	Red-Black	16	24	Daytime Running Lamps
53	6	Blue-Yellow	16	24	Engine Run Switch Feeder
53	6	Blue-Yellow	16	24	Engine Run Switch
54	6A	Blue-Yellow	16	24	Engine Run Switch
54	6A	Blue-Yellow	16	24	DDEC Ignition Relay
55	-	-	-	-	Spare
56	-	-	-	-	Spare
57	557	Red	18	24	Road Speed Generator
A	18A	Black-White	18	24	Transmission Temperature Gauge
B	B	Black	18	24	Low Air Trailing Axle Telltale Light
B	B	Black	16	24	Tag Axle Pressure Switch
C	-	-	-	-	Spare
D	556B	Yellow	18	24	Cruise Control Signal (Road Speed Generator)
WH	-	-	-	-	Spare
BR	14H	White-Brown	16	24	Compressor Clutch
BR	14H	White-Brown	16	24	Liquid Line Solenoid
GR	38	White-Green	18	24	Low Air Telltale Light
GR	38	White-Green	18	24	Low Air Switch
BK	-	-	-	-	Spare

AIR CONDITIONING JUNCTION BOX CONNECTORS

Stud	Circuit Number	Color* Codes	Gauge	Volt	Description
1	70	White-Green	18	24	Fuel Priming Pump
2	16	Black	16	24	2-Speed Evaporator Motor Assembly
2	16	Black	16	24	Hi-Low Switch
3	31	Green-Black	14	24	Baggage Compartment Lamps
3	31	Green-Black	14	24	Baggage Lamp Switch
4	807	Blue	14	12	Left-Hand Turn Signal Feeder
4	807	Blue	14	12	Left-Hand Side Front Turn Lamp
4	807	Blue	14	12	Left-Hand Side Intermediate Turn Lamps
4	807	Blue	14	12	Left-Hand Side Rear and Rear Turn Lamps
5	808	Blue	14	12	Right-Hand Turn Signal Feeder
5	808	Blue	14	12	Right-Hand Side Front Turn Lamp
5	808	Blue	14	12	Right-Hand Side Intermediate Turn Lamps
5	808	Blue	14	12	Right-Hand Side Rear and Rear Turn Lamps
6	-	-	-	-	Spare
7	56	Green	16	24	Spare
7	56A	Green	16	24	Spare
8	55	Orange	16	24	Clock On Dash
9	806	Blue	14	12	Side Marker Lamp Feeder
9	806	Blue	14	12	Right-Hand Side Intermediate Marker Lamp
9	806	Blue	14	12	Right-Hand Side Front Marker Lamp
9	806	Blue	14	12	Left-Hand Side Intermediate Marker Lamp
9	806	Blue	14	12	Right-Hand Side Front Marker Lamp
10	-	-	-	-	Spare
11	14H	White-Green	16	24	A/C Telltale
11	14H	White-Green	16	24	Liquid Line Solenoid

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AIR CONDITIONING JUNCTION BOX CONNECTORS (Contd.)

Stud	Circuit Number	Color* Codes	Gauge	Volt	Description
11	14H	White-Green	16	24	Compressor Clutch
12	70P	Red	16	24	Spare
13	53	Black-Blue	16	24	Fuel Gauge
13	53	Black-Blue	16	24	Fuel Sending Unit
14	47	Red-Yellow	16	24	Evaporator Motor Relay
14	47	Red-Yellow	14	24	Passenger A/C and Heat Switch
15	57	Yellow-Green	16	24	Condenser Motor Relay Coil
15	57	Yellow-Green	16	24	Passenger A/C On Relay
15	57	Yellow-Green	16	24	Condenser Motor Relay

REMOTE CONTROL BOX

(HORIZONTAL BAR)

Stud	Circuit Number	Color* Codes	Gauge	Volt	Description
1	57	Yellow-Green	16	24	Hi-Lo Pressure Switch Feeder
1	57	Yellow-Green	16	24	Passenger A/C On Relay
2	14H	White-Green	16	24	A/C Clutch
2	14H	White-Green	16	24	Liquid Line Solenoid
2	BL	Black	16	24	Hi Pressure Switch
3	14P	Green-Yellow	16	24	Spare
4	814	Blue	16	12	Back-Up Lamp Feeder
4	814	Blue	16	12	Right-Hand Back-Up Lamp
4	814	Blue	16	12	Left-Hand Back-Up Lamp
5	807	Blue	16	12	Left-Hand Turn Lamp
5	807	Blue	16	12	Left-Hand Rear Turn Lamp Feeder
6	815	White	16	12	Back-Up Lamp Ground Signal
6	815	Blue	16	12	Right-Hand Rear Back-Up Lamp
6	815	White	16	12	Left-Hand Rear Back-Up Lamp
7	-	-	-	-	Spare
8	54	Yellow	16	24	Spare
9	6A	Blue-Yellow	16	24	Engine Run Switch
9	6A	Blue-Yellow	16	24	DDEC Ignition Relay
10	SP	Yellow	16	24	Spare

(VERTICAL BAR)

Stud	Circuit Number	Color* Codes	Gauge	Volt	Description
1	811	Blue	16	12	License Plate Lamps
1	811	Blue	16	12	License Plate Lamp Feeder
2	810	Blue	16	12	Right-Hand and Left-Hand Tail Lamp Feeder
2	810	Blue	16	12	Right-Hand Tail Lamp
2	810	Blue	16	12	Left-Hand Tail Lamp
3	809	Blue	16	12	Right-Hand Stop Lamps
3	809	Blue	16	12	Stop Lamp Feeder
3	809	Blue	16	12	Left-Hand Stop Lamp
3	809	Blue	16	12	High Mounted, Stop Lamp
4	31	Green-Black	16	24	Motor Compartment Service Lamps
4	31A	Green-Black	16	24	Surge Tank lamp
4	31	Green-Black	16	24	Rear Junction Box Lamp
4	31	Green-Black	16	24	Service Lamp Switch
5	808	Blue	16	12	Right-Hand Turn Lamps
5	808	Blue	16	12	Right-Hand Turn Lamp Feeder
6	57	Yellow-Green	16	24	Spare
7	63	Blue	16	24	Lavatory Blower Motor
8	63A	Red-Black	16	24	Spare

* All harnesses except driver's instrument panel

** Driver's instrument panel (All 18 gauge)

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Vanner Monitor Circuit 7L-13-1986 (A)

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Cummins Installation w/Diagnostic Switch 7L-13-2715 (B)
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Retractable Step 7L-13-1336 (B)
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Antilock Brake System 7L-13-3340 (C)
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Parcel Rack AC Power Source 7L-13-1771 (A)
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Keyed Ignition 7L-13-1229 (A)
Exterior Mirror Installation - Heated and Remote 7L-13-391 (A)

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Alarms & Tell-Tale Wiring 7L-13-1659 (A)
Baggage Door Tell-Tale 7L-13-3226 (B)
Fire Alarm w/Bell 7L-13-2283(A)
Stop Request 7L-13-2376(B)
Backup Alarm 7L-13-2156 (A)
Low Coolant Level Warning & Engine Shutdown 7L-13-1807 (A)

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Fuel Gauge - w/Sensor 7L-13-70 (C)
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w/DDEC & ATEC Diagnostic Ports 7L-13-1607 (B)

Front Junction Box

100 Stud Panel w/DDEC Installation 7L-13-1975(B)
100 Stud Panel w/Caterpillar Installation 7L-13-1890 (B)

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65 Stud Panel w/DDEC Installation 7L-13-998 (C)
65 Stud Panel w/Caterpillar Installation 7L-13-1687 (B)

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Exterior

Headlamps, Side Marker/Turn Signal & Clearance/I.D. Lamps 7L-13-1991 (C)
Headlamps, Side Marker/Turn Signal & Clearance/I.D. Lamps w/Conversion Coaches 7L-13-1246 (C)
Headlamps, Side Marker/Turn Signal & Clearance/I.D. Lamps w/Daytime Running Light Circuit 7L-13-2386 (A)
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In-station Lighting 7L-13-2322 / 2229 (A)
Parcel Rack Overhead Lighting w/30 Watt Aisle & 40 Watt Window Lamps (Options 3.1.5.1 & 3.1.5.2.) 7L-13-2513(A)

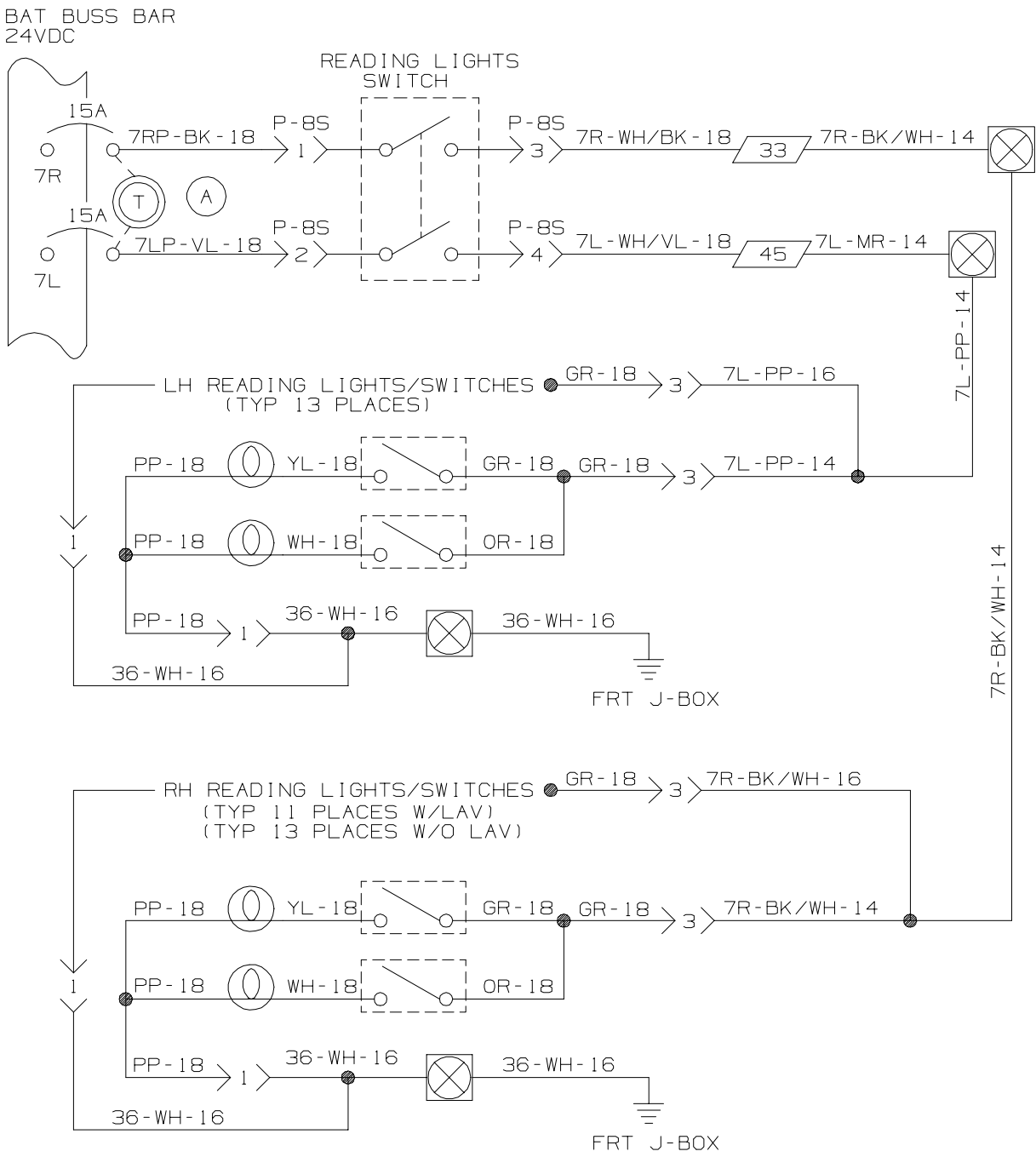
MASTER ELECTRICAL WIRING DIAGRAM

United States

Master Electrical Wiring Diagram 7L-13-2015 (A)

Canada

Master Electrical Wiring Diagram Canadian 7L-13-1889 (A)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

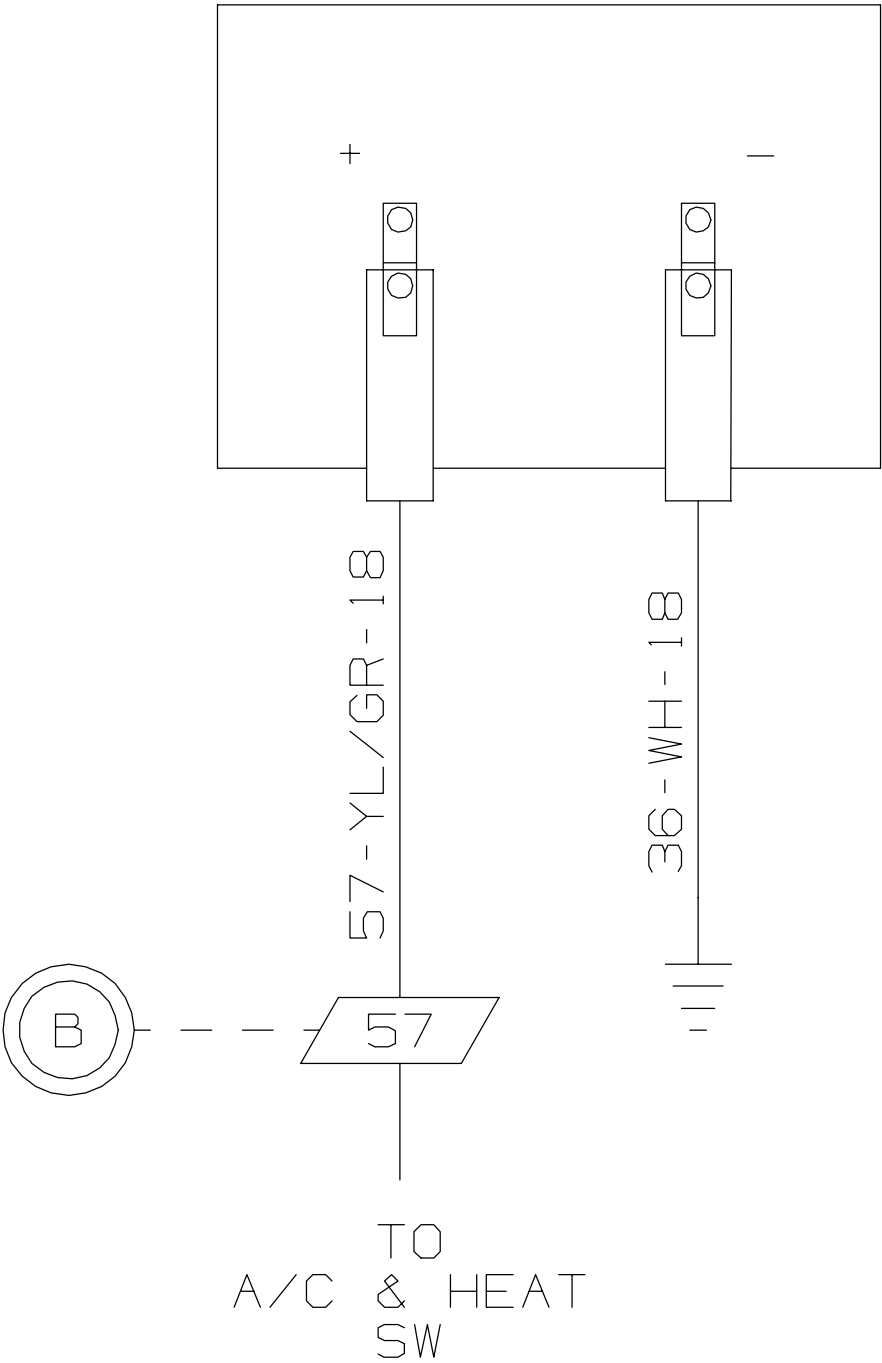
GR-GREEN
YL-YELLOW
OR-ORANGE

RD-RED
BR-BROWN
BK-BLACK

LEGEND

DRIVER'S SEPERATE SWITCH
FOR PASSENGER READING LIGHTS
ALL MODELS
7J-13-178 (REV A)

HOURLMETER
(7J-8-28)

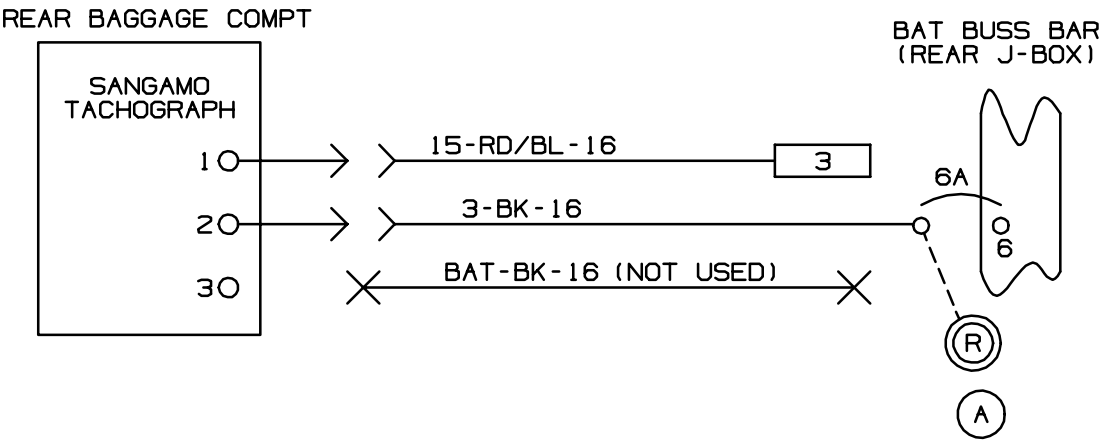


	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	BK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

LEGEND

A/C HOURLMETER
102D3 & 102DL3
7J-13-355 (REV A)



▱	FRT J-BOX STUD BLOCK	○	ENG CRADLE STUD BLK
▱●	FRONT J-BOX STUD	●	ENGINE CRADLE STUD
▱○	FRT J-BOX ENT STUD BLK	Ⓜ	BEHIND DASH ILLUM STUD
▱	REAR J-BOX STUD BLOCK	Ⓜ+	BEHIND DASH B+ STUD
▱●	REAR J-BOX STUD	Ⓜ-	BEHIND DASH GND STUD
△	A/C J-BOX STUD BLOCK	Ⓜ	DEST SIGN STUD BLOCK
⊠	PARCEL RACK STUD BLOCK	▽	SENSING ELEMENT PLUG
□	REM CONT J-BOX HORIZ STUD BLK	⊗	ROOF HARNESS BLK STUD
◇	REM CONT J-BOX VERT STUD BLK	---	OPTION

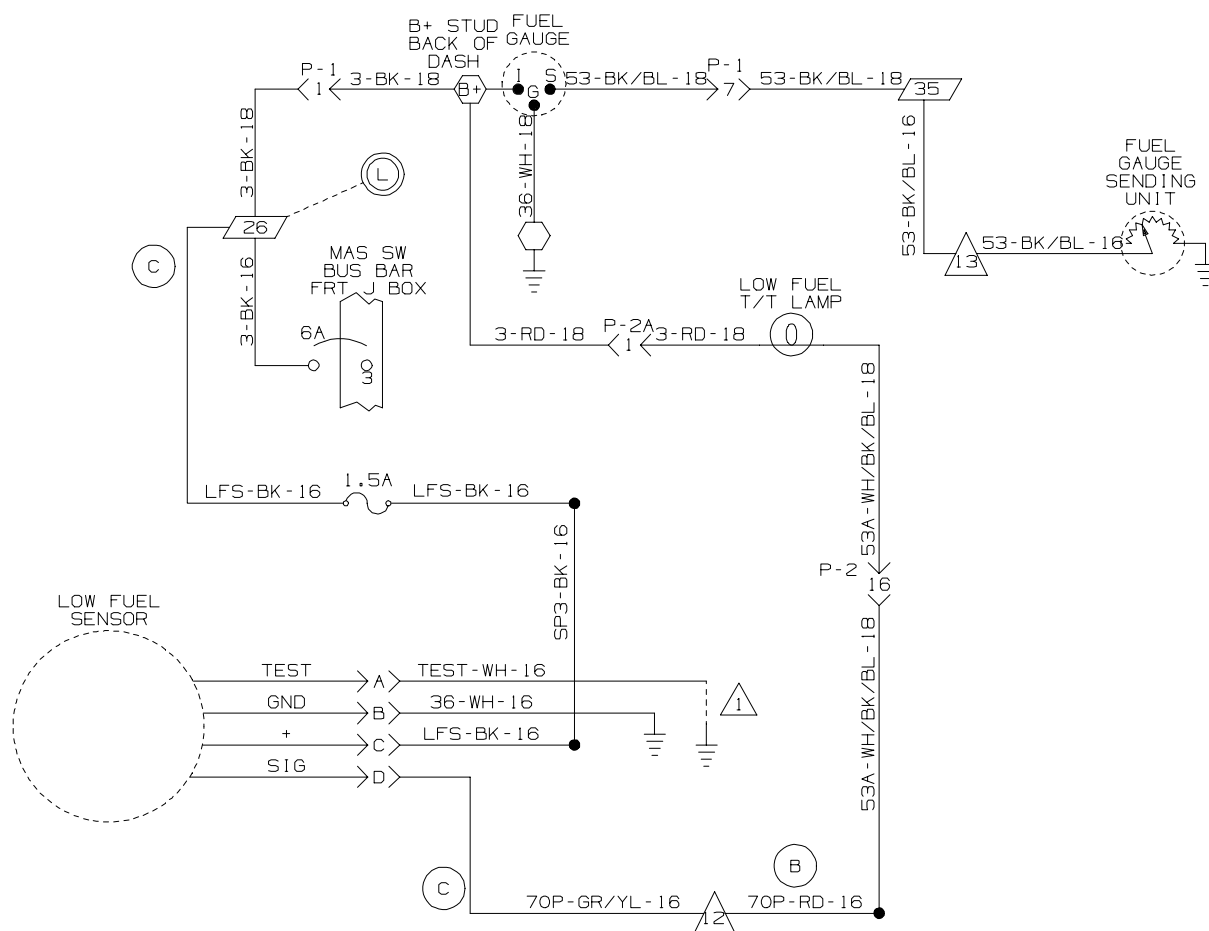
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

GR-GREEN
YL-YELLOW
OR-ORANGE

RD-RED
BR-BROWN
BK-BLACK

LEGEND

WIRING DIAGRAM
SAGAMO MECHANICAL TACHOGRAPH
7J-8-173 (REV A)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

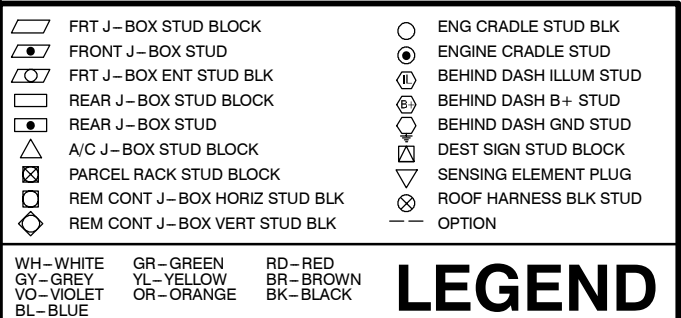
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

GR-GREEN
YL-YELLOW
OR-ORANGE

RD-RED
BR-BROWN
BK-BLACK

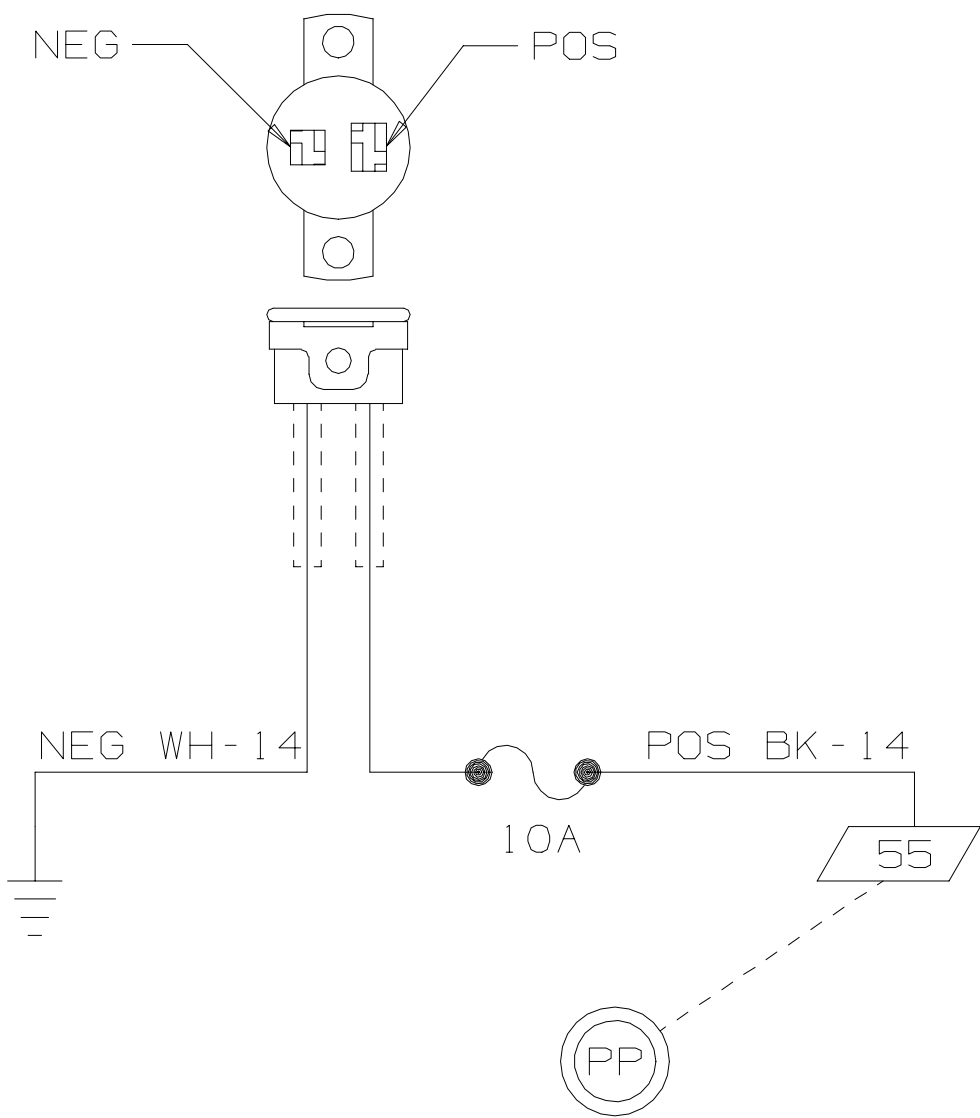
LEGEND

FUEL GAUGE (W/ SENSOR)
102D3 & 102DL3
7L-13-70 (REV C)



102DL3

7L-13-81 (REV A)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

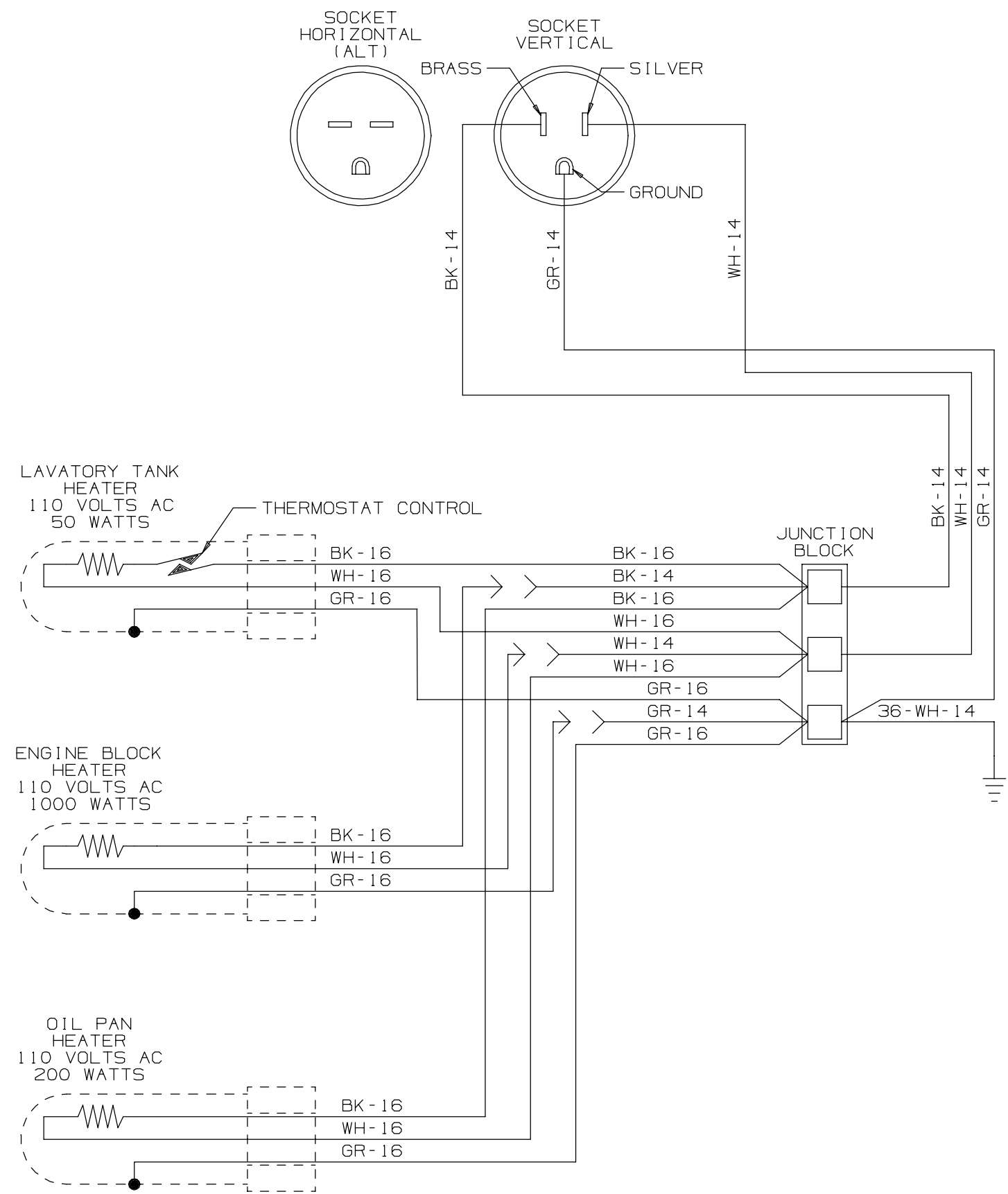
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

GR-GREEN
YL-YELLOW
OR-ORANGE

RD-RED
BR-BROWN
BK-BLACK

LEGEND

RADIO 12 VOLT POWER SOURCE
ALL MODELS
7L-13-83 (REV B)



	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH-WHITE	RD-RED
GY-GREY	BR-BROWN
VO-VIOLET	BK-BLACK
BL-BLUE	YL-YELLOW
GR-GREEN	OR-ORANGE

LEGEND

ENGINE EMERSION HEATER
102D3 & 102DL3
7L-13-86 (REV B)

FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

BR-BROWN

VO-VIOLET

BK-BLACK

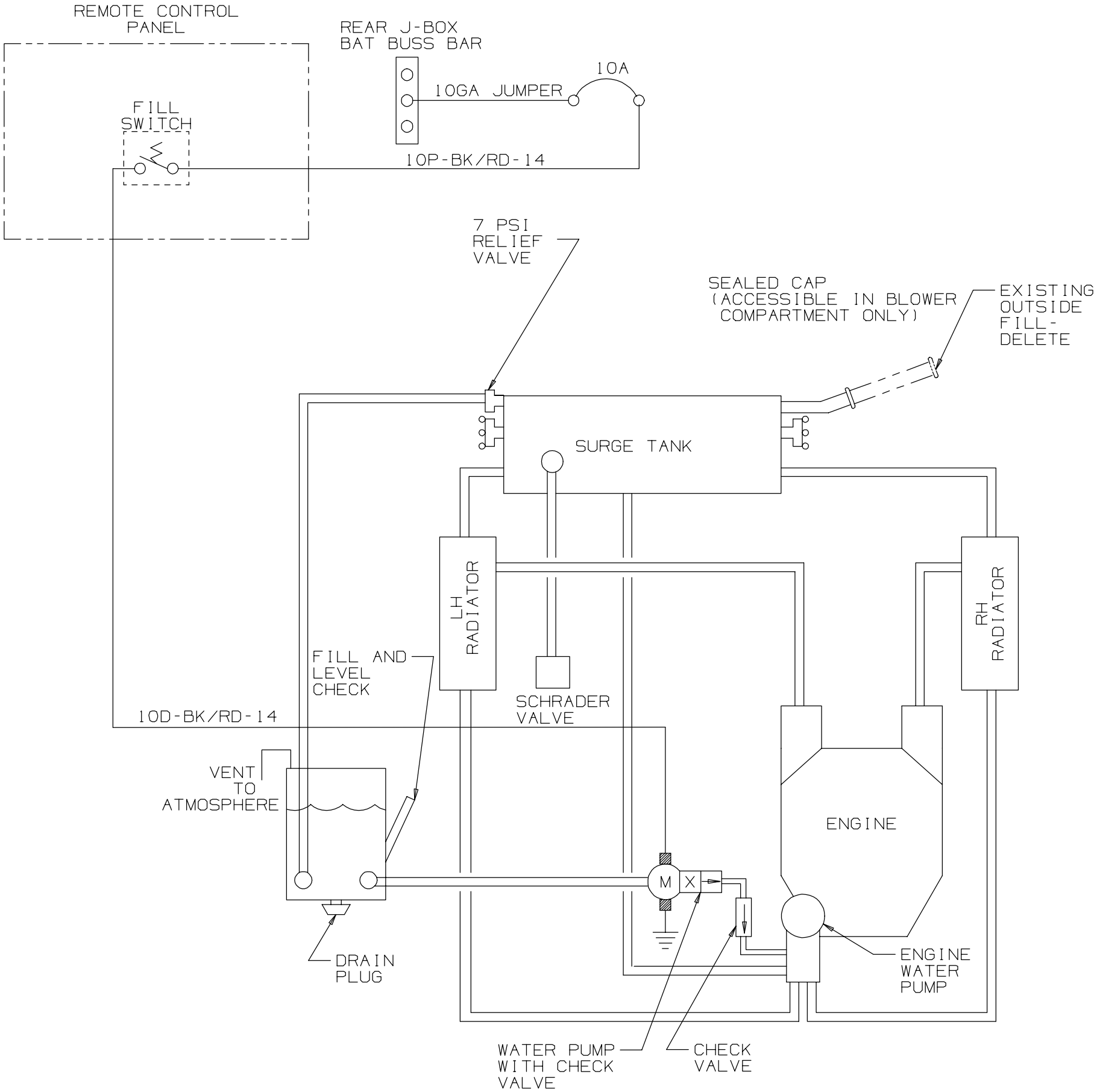
BL-BLUE

YL-YELLOW

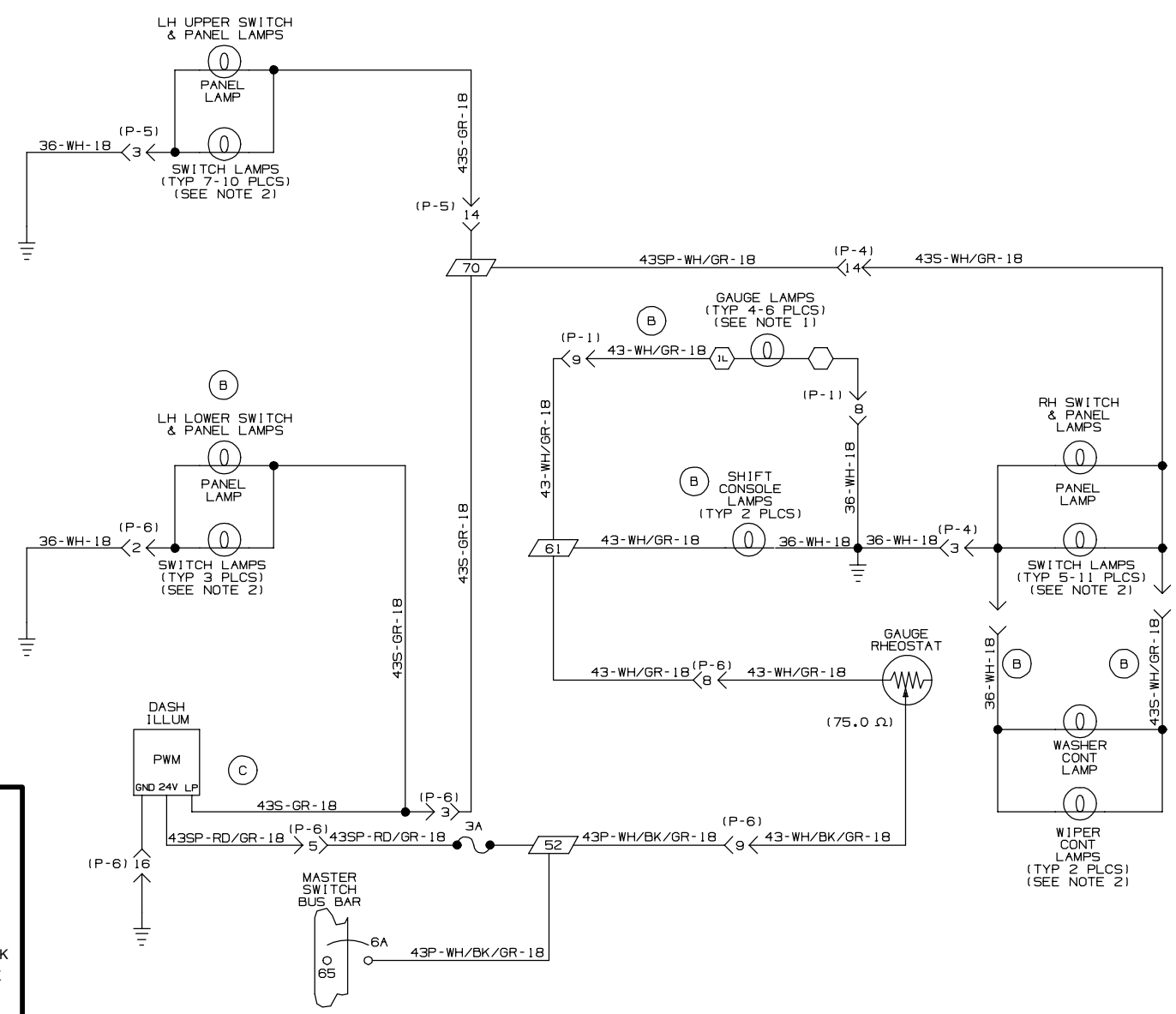
GR-GREEN

OR-ORANGE

LEGEND



COOLANT RECOVERY SYSTEM – MANUAL
102D3 & 102DL3
7L-13-253 (REV A)



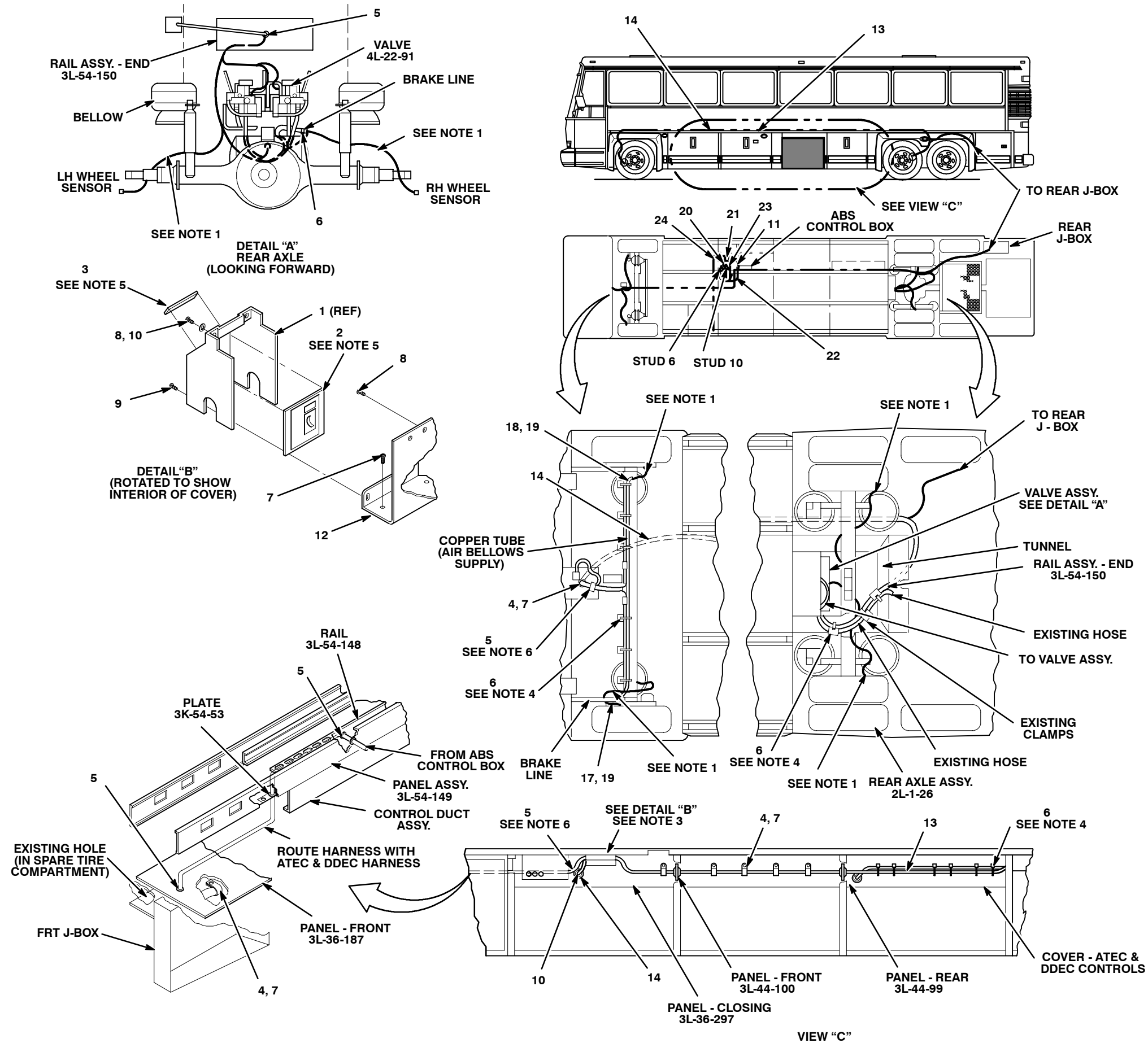
	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	BK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

LAMP BREAKDOWN	TYPE
MESSAGE STRIPS-ALL LAMPS	GE 85
MICRO SWITCHES-ALL LAMPS	GE 85
W/S WIPER & WASHER RH & LH	GE 85
GEAR SHIFT ILLUM	GE 265
GAUGES	
OIL	GE 1829
FUEL	GE 1829
VOLTMETER	GE 1829
WATER TEMP	GE 1829
TRANS TEMP	GE 1829
LRG AIR/TACH	GE 456
SPEEDOMETER	GE 1864

LEGEND

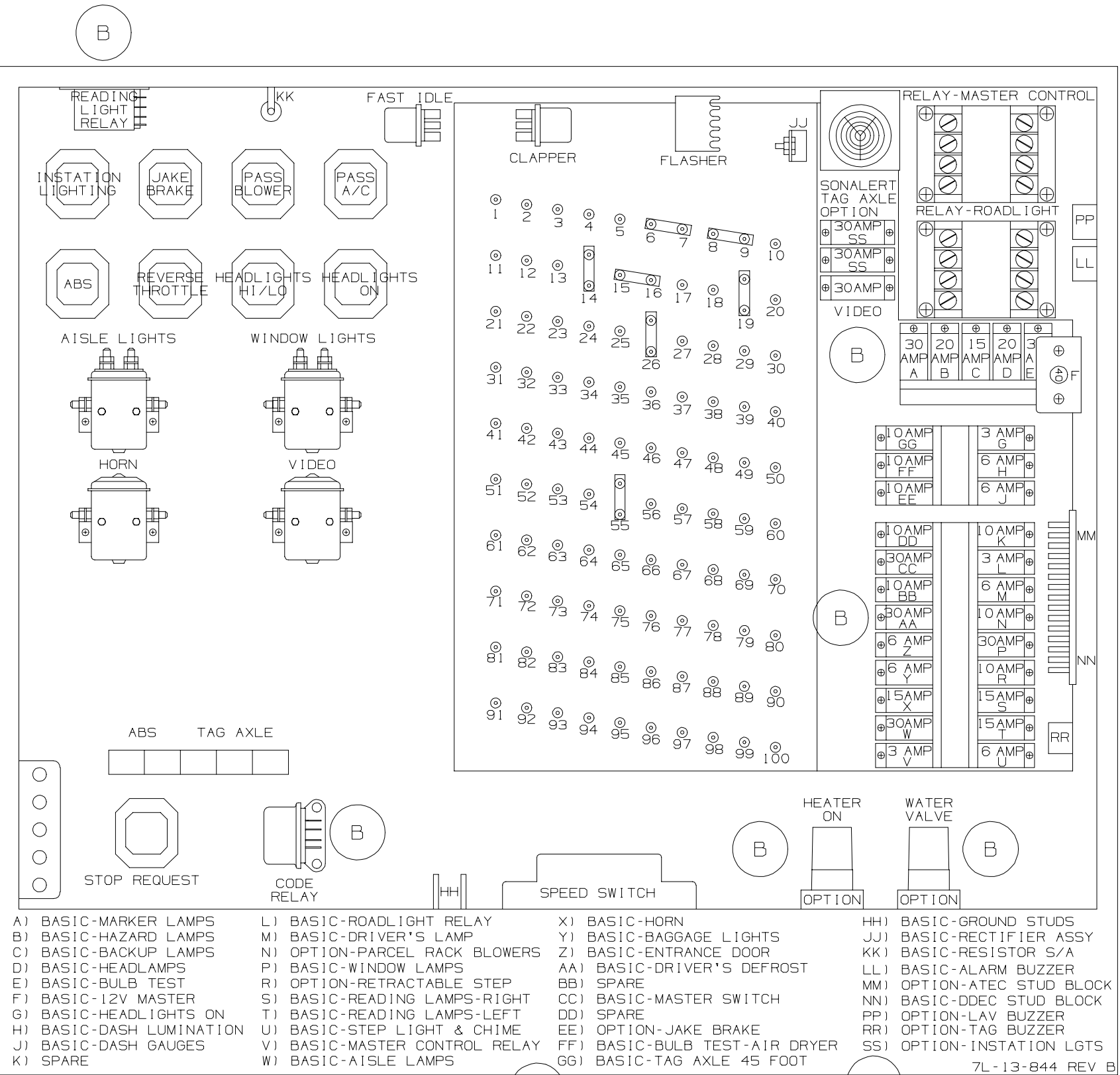
CONTROL PANEL ILLUMINATION
102D3 & 102DL3
7L-13-337 (REV C)



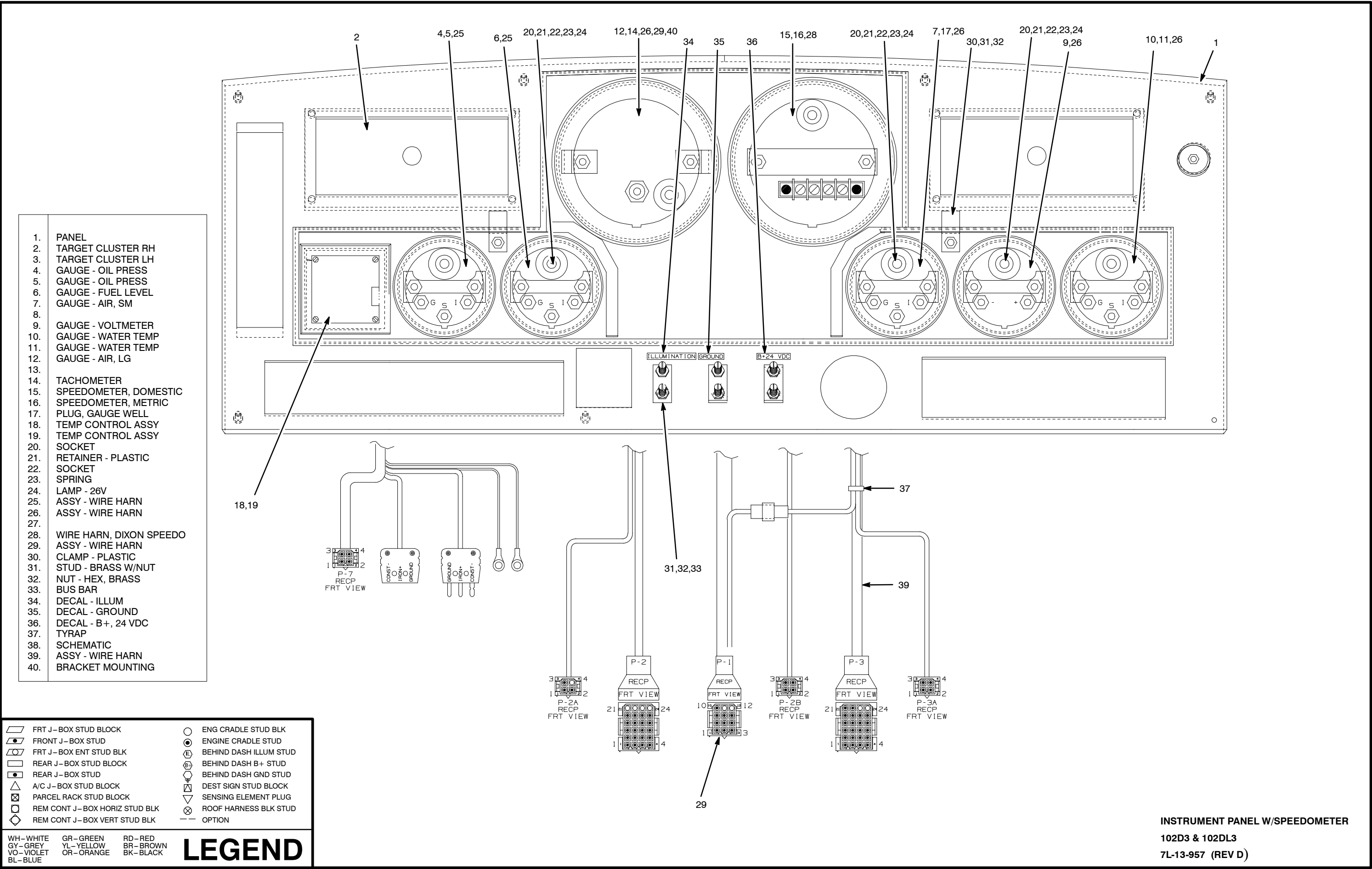
ITEM	DESCRIPTION
1	COVER, BENDIX ABS UNIT
2	DECAL, ABS
3	DECAL
4	CLAMP
5	GROMMET
6	TYRAP
7	SCREW
8	SCREW
9	SCREW
10	WASHER
11	WIRE HARNESS - RELAY, ECU
12	BRACKET ASSY. - ABS
13	WIRE HARNESS - BRAKE, ABS, REAR
14	WIRE HARNESS - BRAKE, ABS, FRONT
15	WIRE HARNESS - POWER, ABS
16	SCHEMATIC - ABS
17	WIRE HARNESS - SENSOR, RF
18	WIRE HARNESS - SENSOR, LF
19	LOCK BUSHING
20	JUMPER
21	RELAY
22	JUMPER - RELAY, ABS
23	JUMPER - RELAY, ABS
24	WIRE LEAD - RELAY, ABS

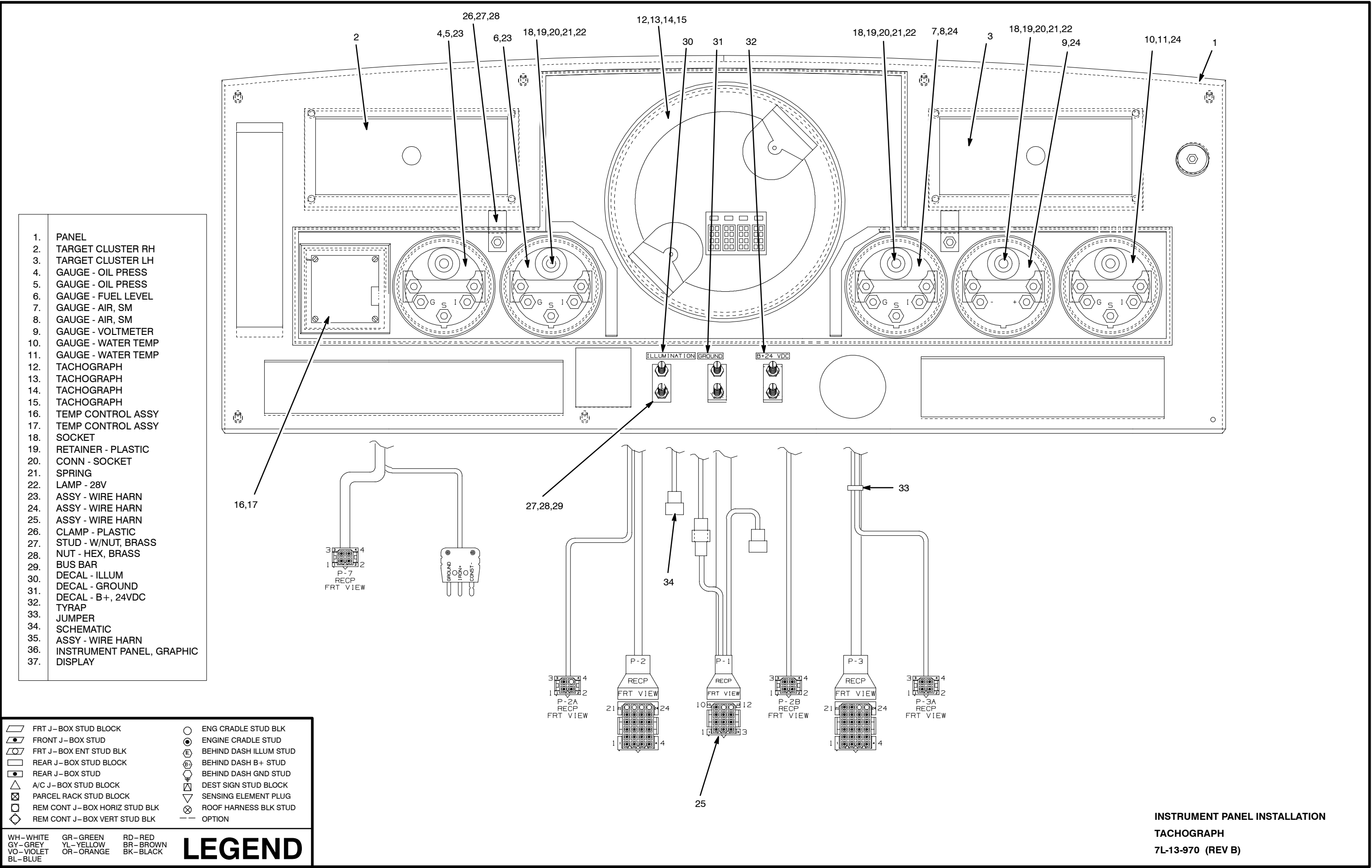
- NOTES:**
- 1 SENSOR LEADS FOLLOW BRAKE HOSE, USING ITEM 6. ATTACH WHERE NECESSARY TO KEEP FROM BECOMING DAMAGED.
 - 2 ROUTE HARNESS THROUGH EXISTING SQUARE TUBE.
 - 3 LOCATE ITEM 12 21.00 INCHES FROM PANEL - FRONT (3L-44-100) AND MOUNT TO THE OUTSIDE OF TUNNEL ASSY. USING ITEMS 8 & 12. COVER WITH ITEM 1 USING ITEMS 8 & 10. APPLY DECALS, ITEMS 2 & 3, PER NOTE 5 BEFORE INSTALLING COVER.
 - 4 LOCATE ITEM 6 APPROXIMATELY AS SHOWN.
 - 5 CENTER ITEMS 2 & 3 AS SHOWN.
 - 6 DISCARD PLUGS USED IN HOLES WHEN ROUTING HARNESS.

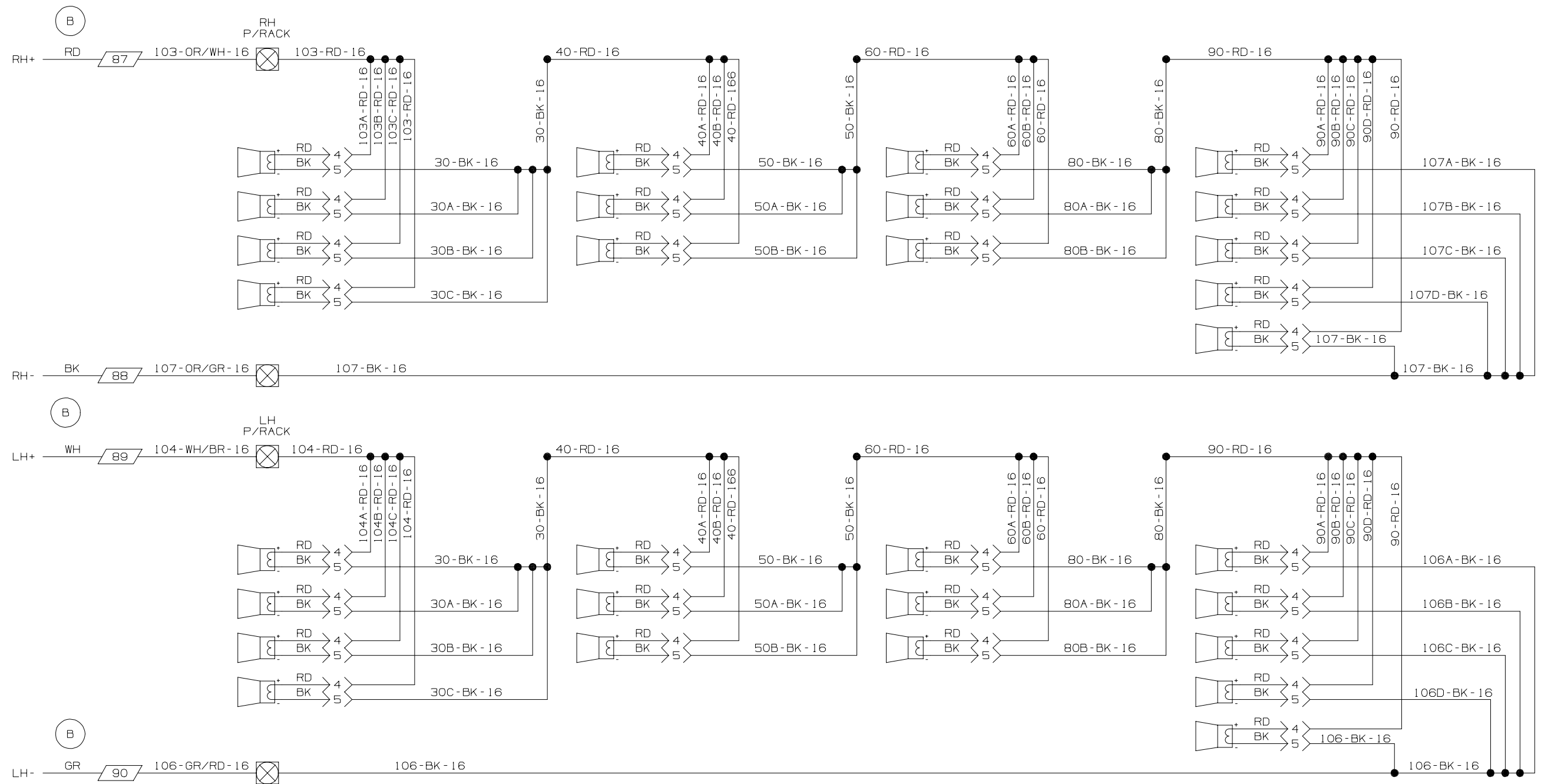
ANTILOCK BRAKE SYSTEM
 102A3/B3/C3/DL3 MODELS ONLY
 7L-13-773 (REV C)



DECAL INSTALLATION
FRONT JUNCTION BOX W/DDEC
102D3 & 102DL3
7L-13-844 (REV B)







PARCEL RACK SPEAKERS

102D & 102DL3

7L-13-993 (REV B)

FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

GY-GREY

VO-VIOLET

BL-BLUE

GR-GREEN

YL-YELLOW

OR-ORANGE

RD-RED

BR-BROWN

BK-BLACK

LEGEND

3N 124

FIELD RELAY

STARTER SOLENOID RELAY

LOW AIR SWITCH

S

R

LOW COOLANT WARNING OR LOW RECOVERY OPTION

12V DISCHARGE RELAY

FAST IDLE RELAY

IGNITION RELAY

65 STUD TERMINAL BLOCK

10 AMP

CIRCUIT BREAKER PANEL

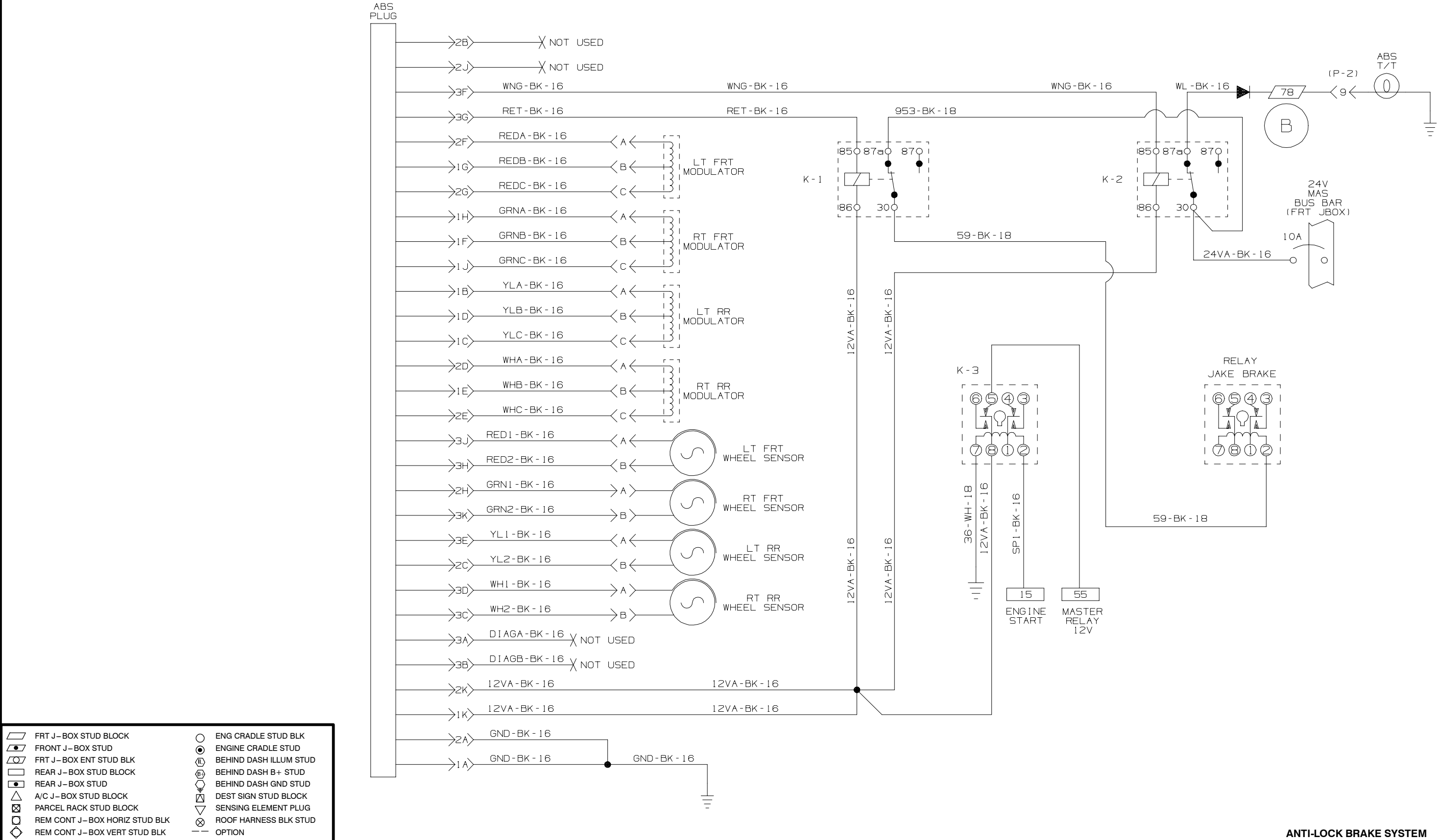
Terminal	Rating	Label
A	6 AMP	A
B	6 AMP	B
C	10 AMP	C
D	15AMP	D
E	15AMP	E
F	20 AMP	F
G	3 AMP	G
H	6 AMP	H
I	6 AMP	I
J	6 AMP	J
K	15 AMP	K
L	3 AMP	L
M	6 AMP	M
N	6 AMP	N
O	3 AMP	O
P	3 AMP	P
Q	10 AMP	Q
R	20 AMP	R
S	20 AMP	S
T	20 AMP	T

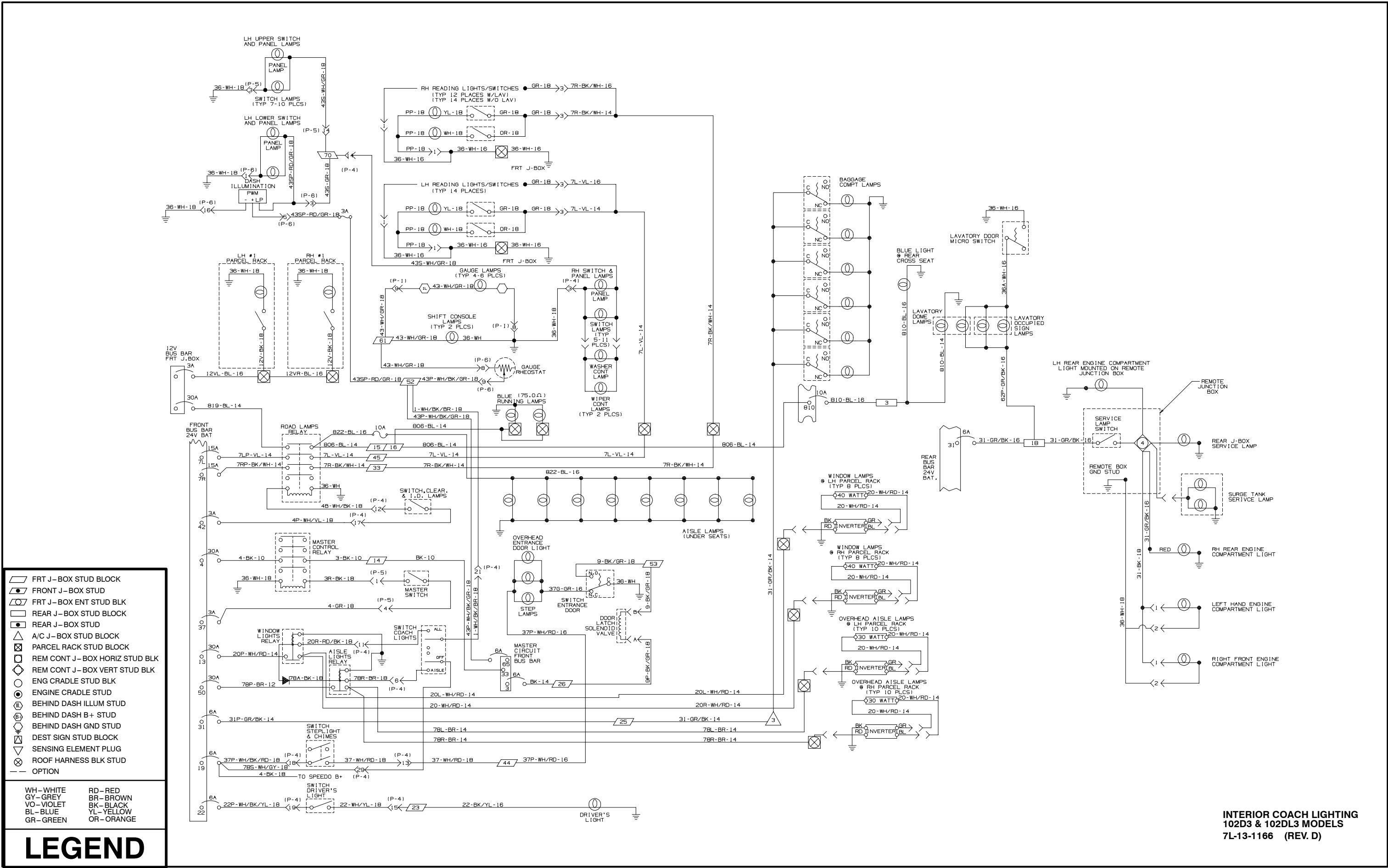
A) OPTION-TACH AND CLOCK F) BASIC-TAIL LAMPS L) BASIC-A/C CONTROL R) OPT-WATER LEVEL DETECTOR
B) OPTION-LAVATORY BUZZER G) BASIC-LIC PLT LPS M) OPTION-SPARE S) OPT-TIME DELAY RELAY
C) BASIC-LAV AND ENG COMPT H) OPTION-GALLEY POWER N) SPARE T) OPTION-GALLEY POWER
D) OPTION-GALLEY POWER J) BASIC-DDEC POWER P) BASIC-COOLANT SENSORS
E) BASIC-ALT CT K) BASIC-ENG STOP/FANS Q) OPTION-COOLANT RECOVERY

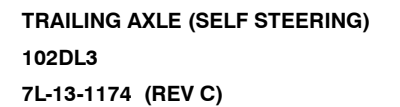
7L-13-998 REV C

REAR JUNCTION BOX DECAL
102DL3 MODELS ONLY
7L-13-998 (REV C)

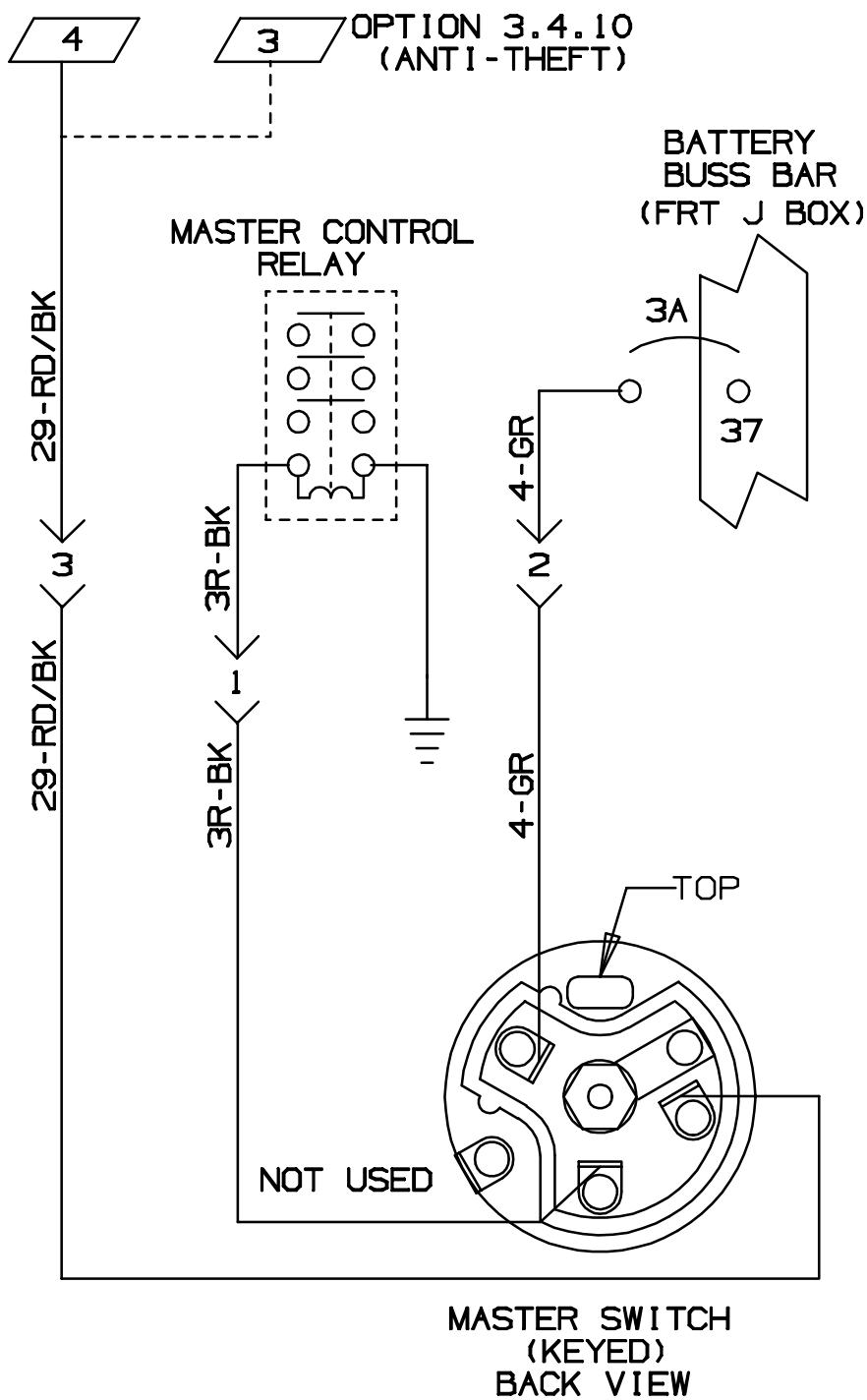
JANUARY 2000







	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION
WH - WHITE GY - GREY VO - VIOLET BL - BLUE GR - GREEN YL - YELLOW OR - ORANGE RD - RED BR - BROWN BK - BLACK			
LEGEND			

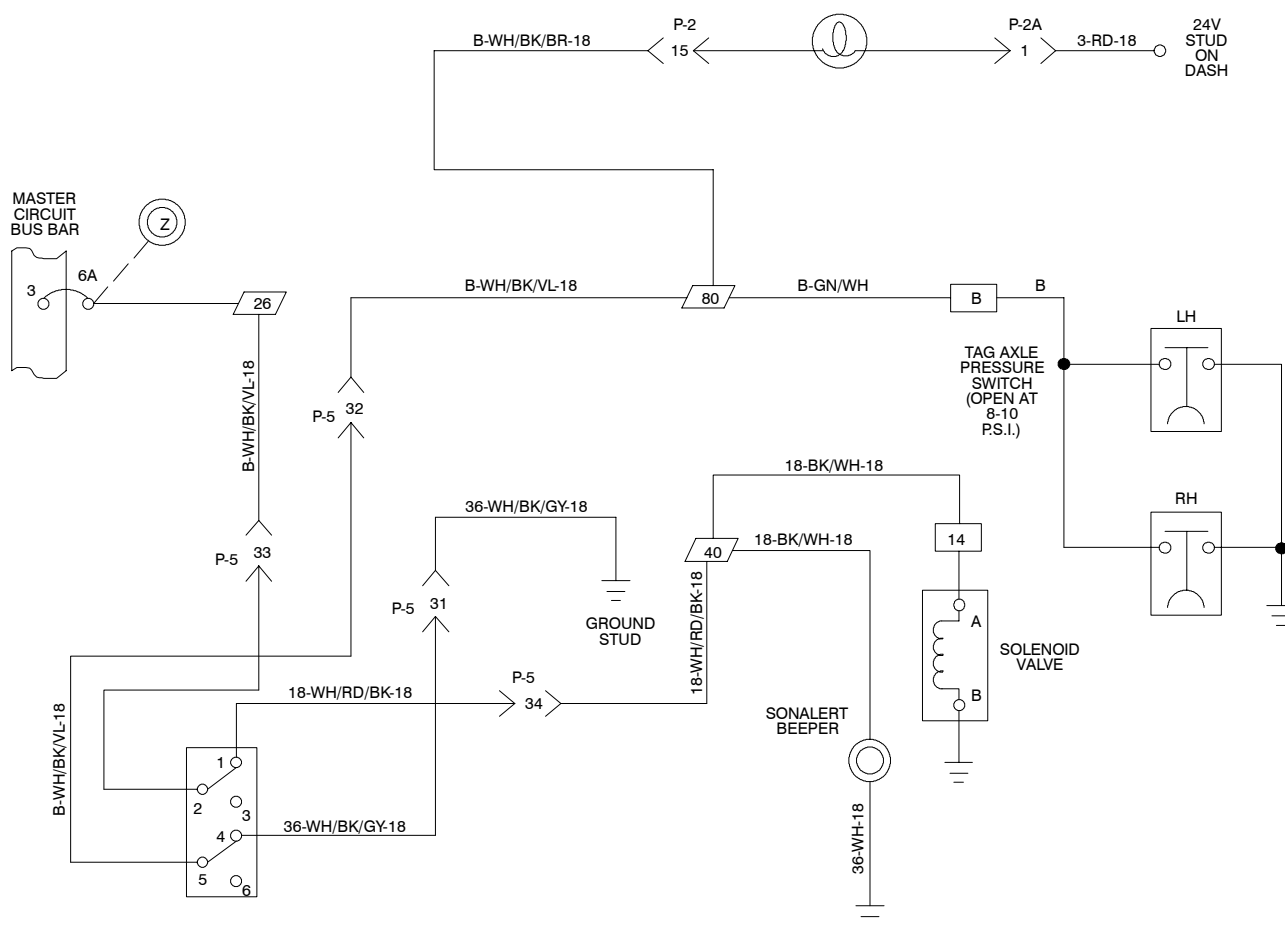


	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

WH-WHITE	GR-GREEN	RD-RED
GY-GREY	YL-YELLOW	BR-BROWN
VO-VIOLET	OR-ORANGE	BK-BLACK
BL-BLUE		

LEGEND

KEYED IGNITION
102D3/102DL3
7L-13-1229 (REV A)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

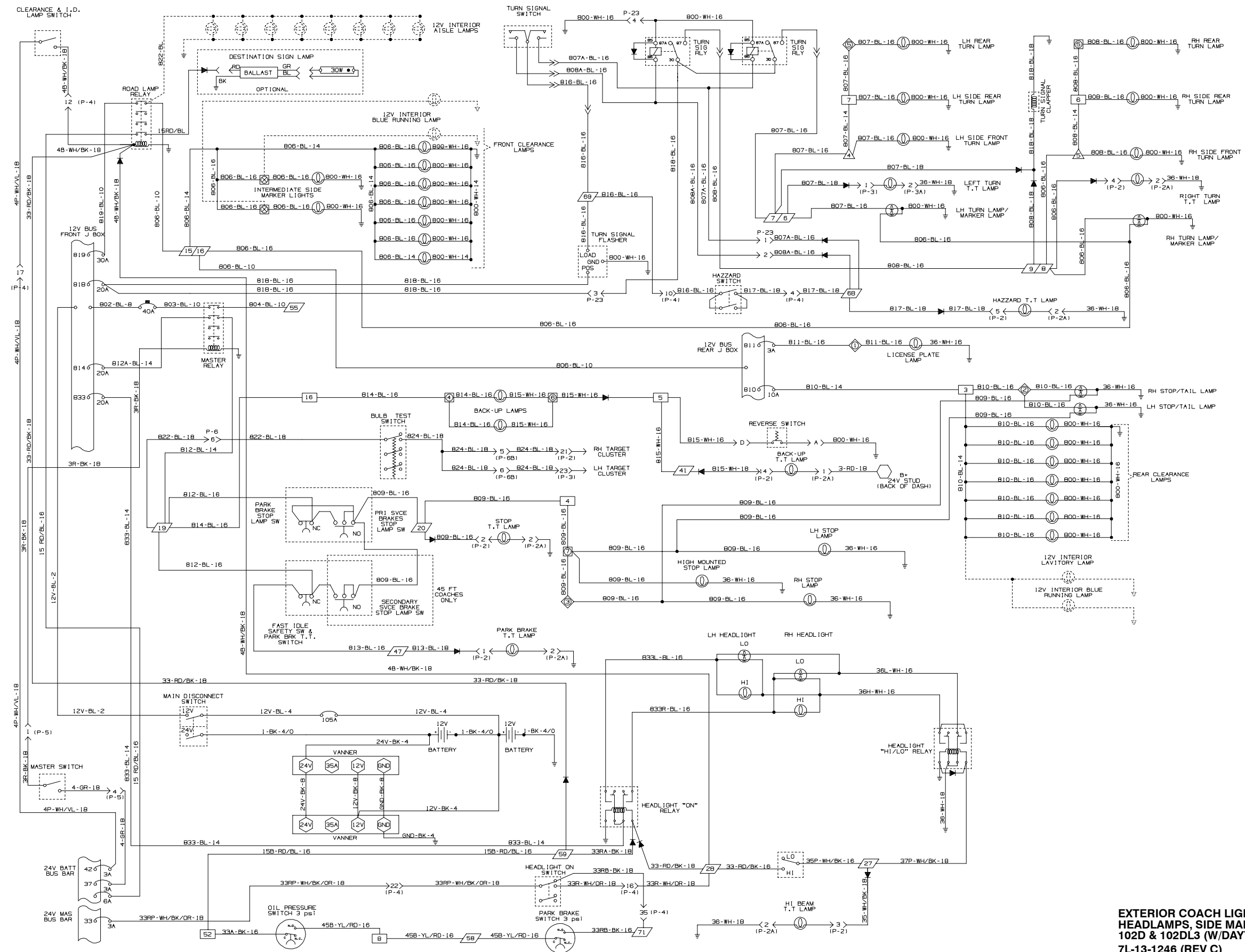
WH-WHITE	GR-GREEN	RD-RED
GY-GREY	YL-YELLOW	BR-BROWN
VO-VIOLET	OR-ORANGE	BK-BLACK
BL-BLUE		

LEGEND

TAG AXLE UNLOADING CIRCUIT

102D3 & 102DL3 MODELS

7L-13-1233 (REV A)



FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

BR-BROWN

VO-VIOLET

BK-BLACK

BL-BLUE

YL-YELLOW

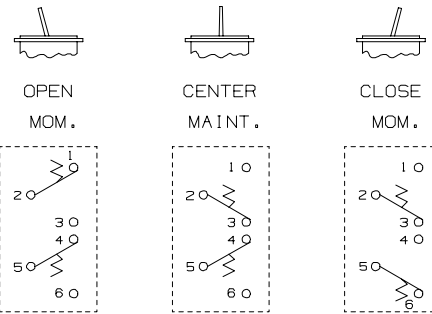
GR-GREEN

OR-ORANGE

LEGEND

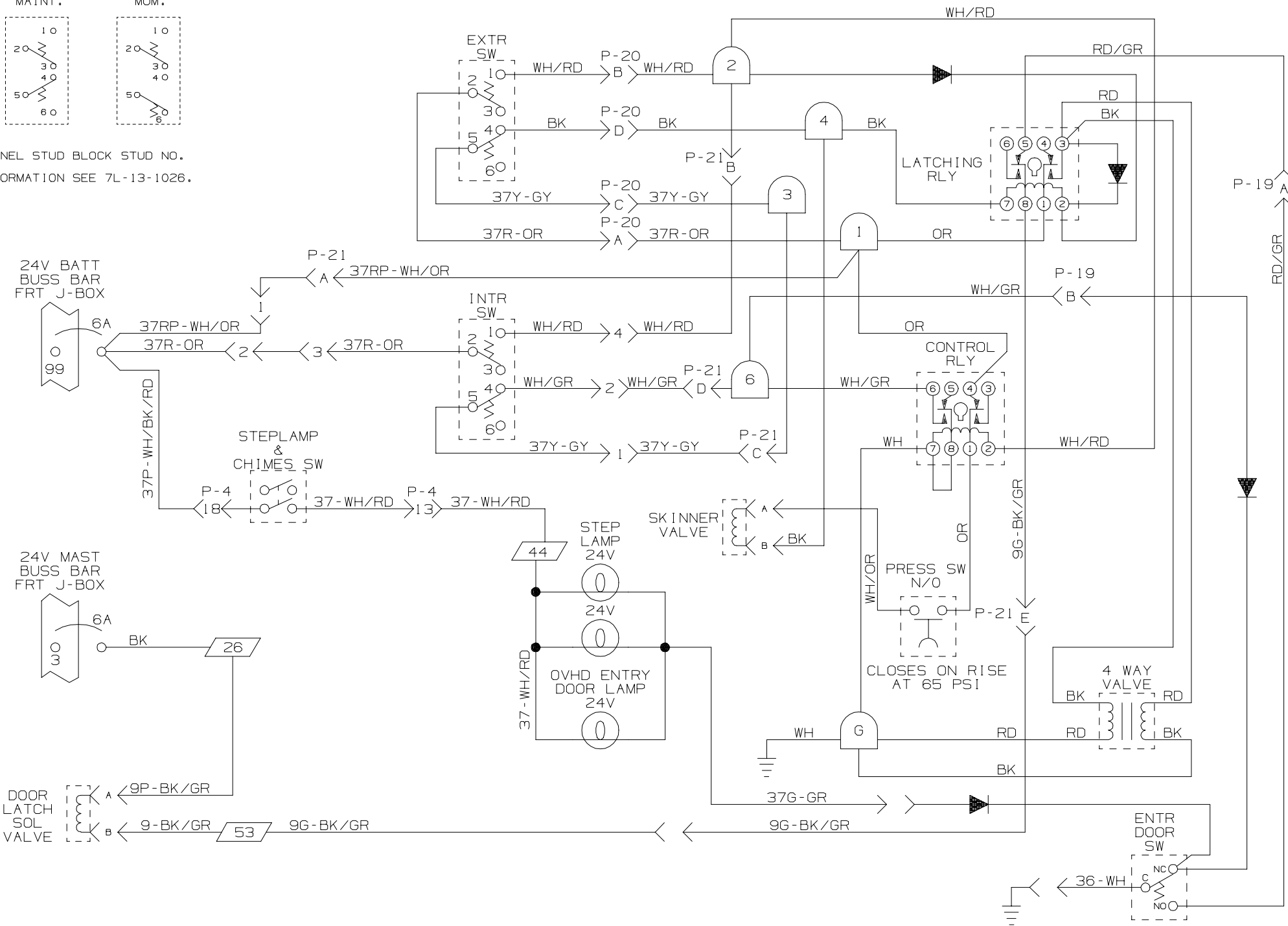
EXTERIOR COACH LIGHTING
HEADLAMPS, SIDE MARKER/TURN SIGNAL
102D & 102DL3 (W/DAYTIME RUNNING LIGHTS)
7L-13-1246 (REV C)

AML23EBA2CA05



NOTE:

- 1) # - CONTROL PANEL STUD BLOCK STUD NO.
- 2) FOR ADDITIONAL INFORMATION SEE 7L-13-1026.



	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

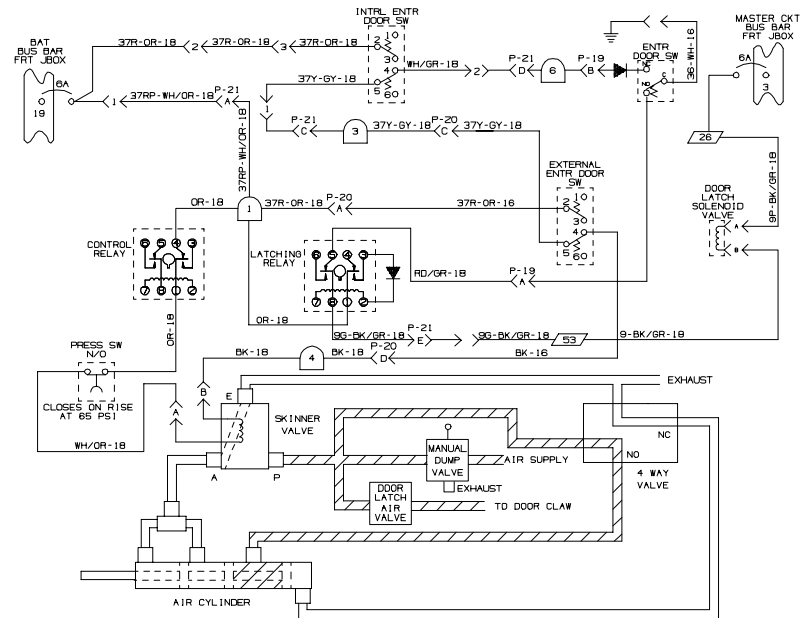
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE
GR-GREEN
RD-RED
BR-BROWN
BK-BLACK
YL-YELLOW
OR-ORANGE

LEGEND

AIR OPERATED ENTRANCE DOOR
ELECTRICAL CIRCUIT
102D3 & 102DL3 MODELS
7L-13-1281 (REV B)

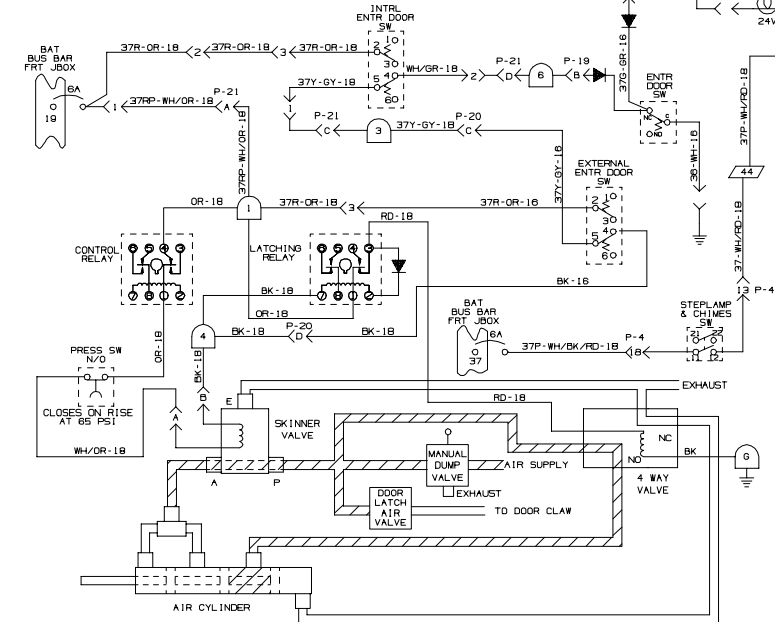
DOOR CLOSED - FUNCTION

NOTE: BOTH SWITCHES IN CENTER POSITION, DOOR IS CLOSED.



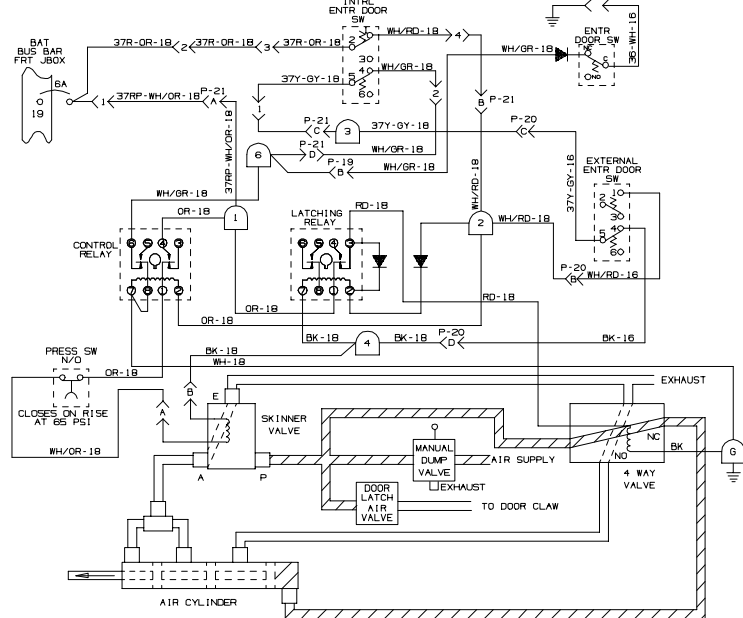
DOOR OPEN - FUNCTION

NOTE: BOTH SWITCHES IN CENTER POSITION, DOOR IS OPEN.



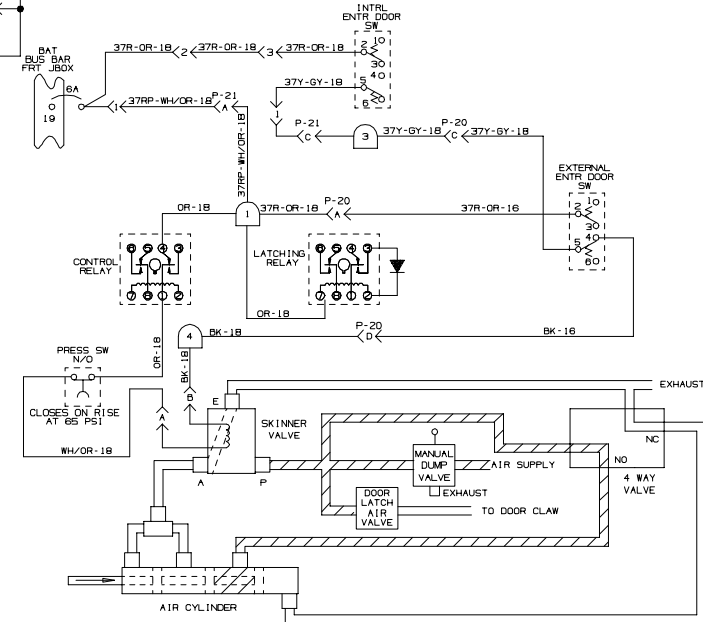
DOOR OPENING - FUNCTION

NOTE: INTERNAL SWITCH IN OPEN POSITION & EXTERNAL SWITCH IN CENTER POSITION, DOOR IS OPENING - IN MOTION.



DOOR CLOSING - FUNCTION

NOTE: INTERNAL SWITCH IN CLOSED POSITION & EXTERNAL SWITCH IN CENTER POSITION, DOOR IS CLOSING - IN MOTION.



OPERATION

1) THE SEDAN DOOR CYLINDER IS A UNIQUE TWO PART CYLINDER. ONE HALF OF THE CYLINDER IS PNEUMATIC WHILE THE OTHER HALF IS HYDRAULIC. THE HYDRAULIC HALF HAS TWO FUNCTIONS.

- A. PROVIDES A HYDRAULIC LOCK.
- B. DAMPENS THE CYLINDER ROD MOVEMENT.

THE PNEUMATIC HALF MOVES THE CYLINDER ROD. THE HYDRAULIC HALF IS CONTROLLED BY THE SKINNER VALVE AND THE PNEUMATIC HALF IS CONTROLLED BY THE 4 WAY VALVE.

2) TO OPEN THE DOOR EITHER THE INTERNAL OR EXTERNAL SWITCH IS MOVED TO THE OPEN POSITION. THIS ENERGIZES BOTH THE CONTROL AND LATCHING RELAYS. THE LATCHING RELAY SUPPLIES POWER TO THE 4-WAY VALVE PRESSURIZING THE PISTON END OF THE DOOR CYLINDER AND EXHAUSTING THE ROD END OF THE DOOR CYLINDER. THE DOOR LATCH SOLENOID IS INTERRUPTED WHEN THE LATCHING RELAY IS ENERGIZED. THIS EXHAUSTS THE PISTON SIDE OF THE DOOR LATCH CYLINDER RELEASING THE DOOR LATCH. THE SKINNER VALVE REMAINS DE-ENERGIZED DURING THE OPENING SEQUENCE. WITH THE SKINNER VALVE IN THE DE-ENERGIZED STATE THE HYDRAULIC HALF OF THE DOOR CYLINDER ACTS IN THE DAMPING FUNCTION AS THE PILOT OPERATED HYDRAULIC VALVE IS N.O. THE DOOR CONTINUES TO OPEN UNTIL THE SWITCH IS RELEASED OR THE CYLINDER RUNS OUT OF TRAVEL.

3) WHEN THE DOOR IS IN THE OPEN POSITION AND THE DOOR OPEN SWITCH IS RELEASED, THE CONTROL RELAY IS DE-ENERGIZED. THIS ENERGIZES THE SKINNER VALVE PRESSURIZING THE PILOT PORT OF THE HYDRAULIC VALVE ENABLING THE HYDRAULIC LOCK. THE LATCHING RELAY REMAINS LATCHED WHILE THE DOOR IS OPEN.

4) TO CLOSE THE DOOR EITHER THE INTERNAL OR EXTERNAL SWITCH IS MOVED TO THE CLOSE POSITION. THIS RESETS THE LATCHING RELAY, DE-ENERGIZING THE 4-WAY VALVE WHICH PRESSURIZES THE ROD END AND EXHAUSTS THE PISTON END OF THE DOOR CYLINDER. THE GROUND CIRCUIT FOR THE SKINNER VALVE IS INTERRUPTED WHEN EITHER THE INTERNAL OR EXTERNAL SWITCH IS IN THE CLOSED POSITION. THIS RELEASES THE HYDRAULIC LOCK AND RETURNS THE HYDRAULIC PART OF THE CYLINDER TO THE DAMPENING MODE. THE DOOR WILL CONTINUE TO CLOSE UNTIL THE SWITCH IS RELEASED OR THE DOOR COMES IN CONTACT WITH THE DOOR JAM. WHEN THE DOOR POSITION SENSING SWITCH SENSES THE DOOR IS CLOSED THE DOOR LATCH SOLENOID IS GROUND, PRESSURIZING THE PISTON END OF THE DOOR LATCH CYLINDER WHICH LATCHES THE DOOR CLOSED.

5) IF THE DOOR OPEN/CLOSE SWITCH IS RELEASED DURING EITHER THE OPENING OR CLOSING FUNCTION THE SKINNER VALVE IS GROUND PRESSURIZING THE PILOT PORT OF THE HYDRAULIC VALVE WHICH ENABLES THE HYDRAULIC LOCK.

SEDAN DOOR - OPERATION

SWITCHING

- 1) INSIDE- DRIVER HOLDS SW FOR DOOR TO OPEN
OUTSIDE SW CAN OVERRIDE DRIVER AND CLOSE DOOR WHILE DRIVER HOLDS HIS SW FOR OPEN
- 2) INSIDE- DRIVER HOLDS SW FOR CLOSING
OUTSIDE CANNOT OVERRIDE TO OPEN

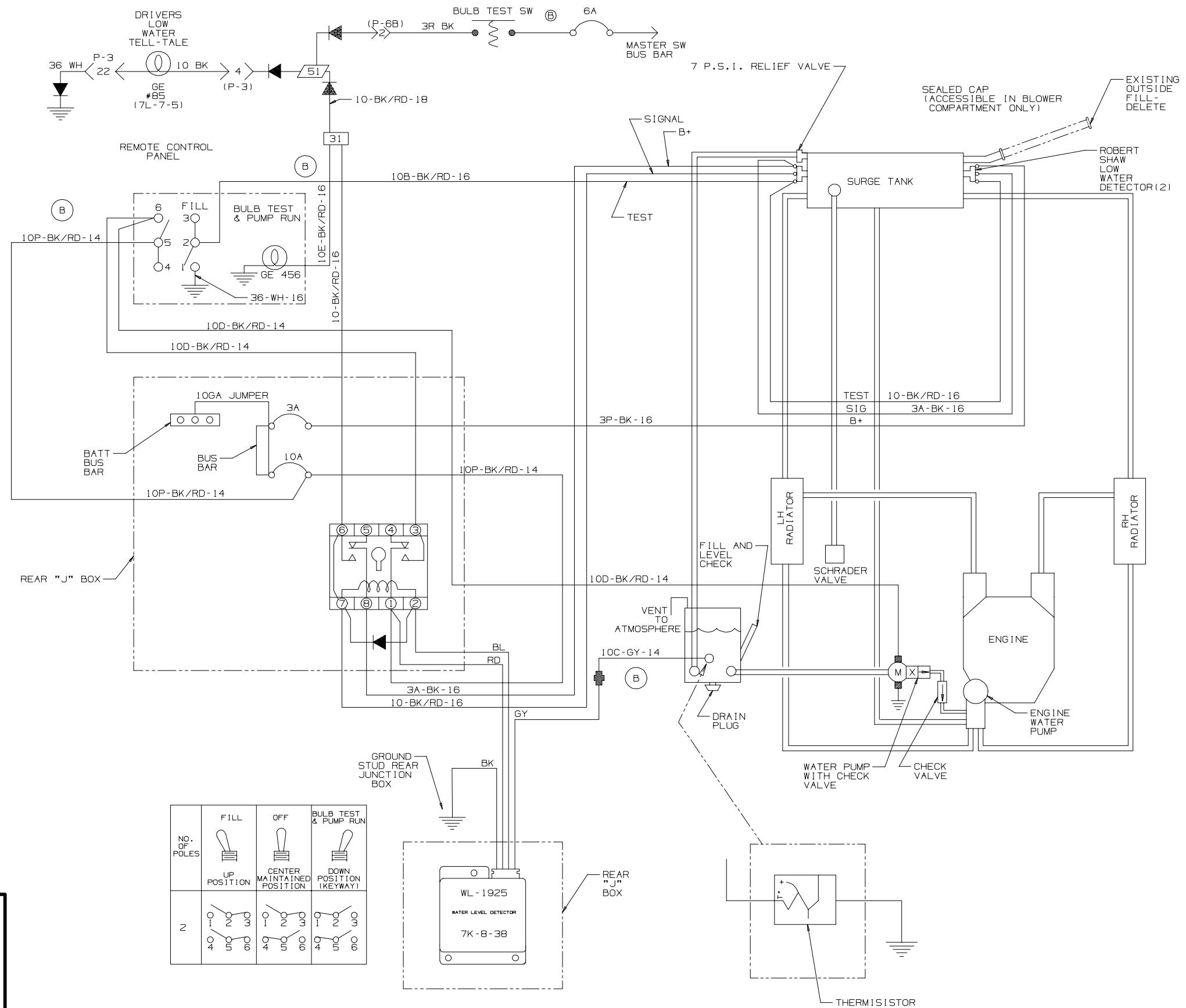
- 1) # - CONTROL PANEL STUD BLOCK STUD NO.
- 2) [Hatched Box] - AIR PRESSURE

	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

WH-WHITE	GR-GREEN	RD-RED
GY-GREY	YL-YELLOW	BR-BROWN
VO-VIOLET	OR-ORANGE	BK-BLACK
BL-BLUE		

LEGEND

AIR OPERATED ENTRANCE DOOR
W/PNEUMATIC CIRCUIT (OPEN/CLOSED)
102D3 & 102DL3 MODELS
7L-13-1282 (REV A)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

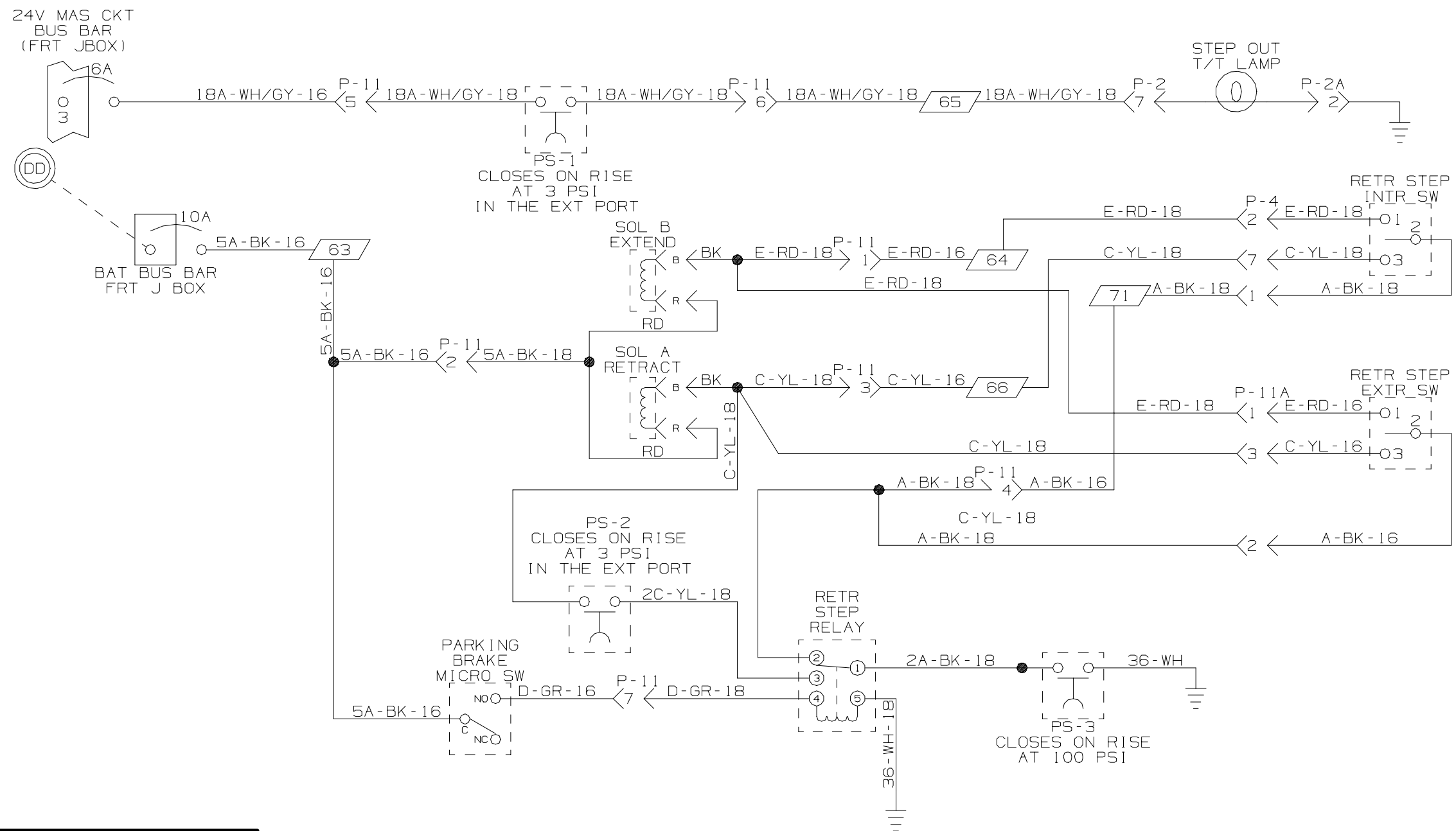
WH-WHITE	GR-GREEN	RD-RED
GY-GREY	YL-YELLOW	BR-BROWN
VO-VIOLET	OR-ORANGE	BK-BLACK
BL-BLUE		

LEGEND

ENGINE COOLANT RECOVERY

102D3 & 102DL3

7L-13-1286 (REV C)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

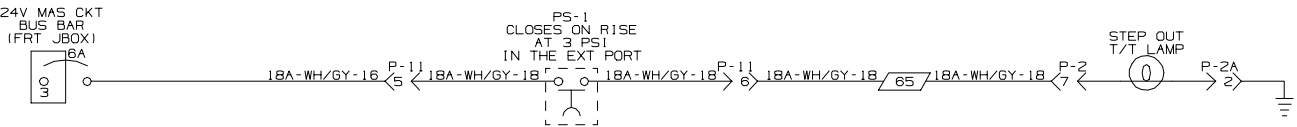
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

GR-GREEN
YL-YELLOW
OR-ORANGE

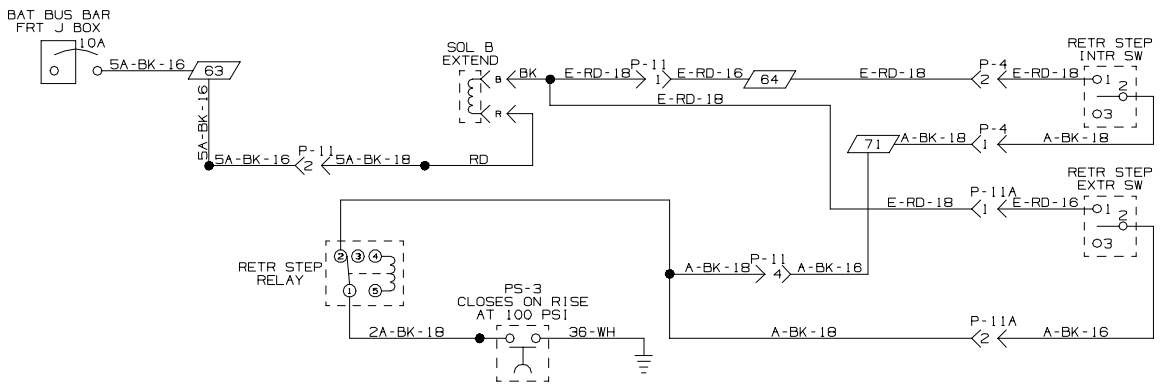
RD-RED
BR-BROWN
BK-BLACK

LEGEND

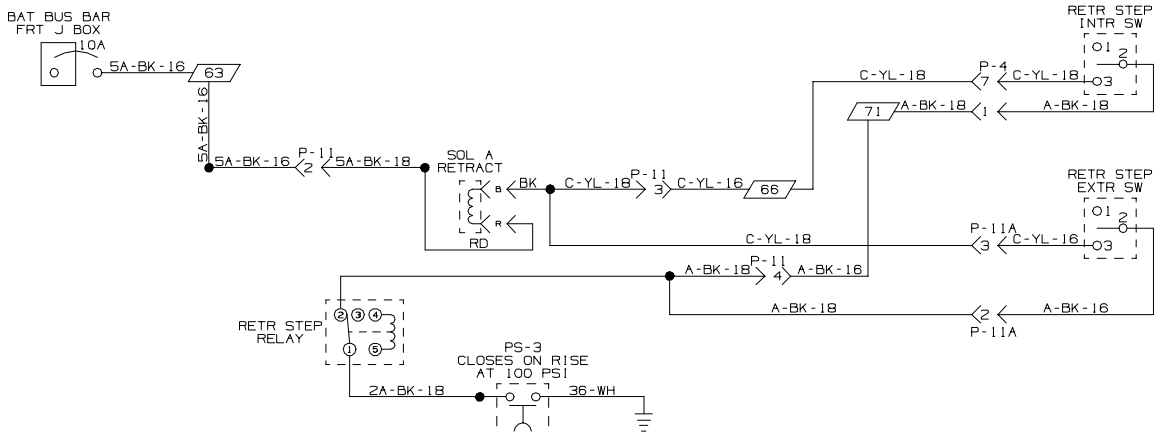
RETRACTABLE STEP
102D3 & 102DL3
7L-13-1336 (REV B)



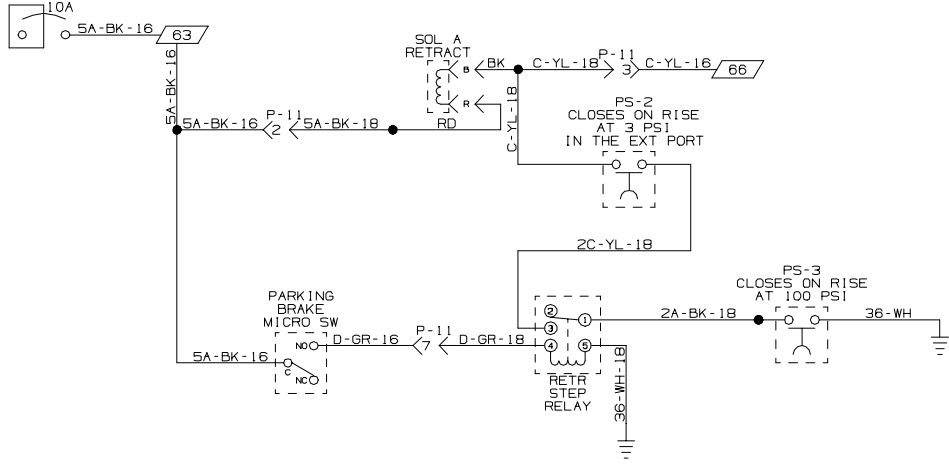
INDICATOR LIGHT CIRCUIT



STEP EXTEND CIRCUIT



NORMAL STEP RETRACT CIRCUIT



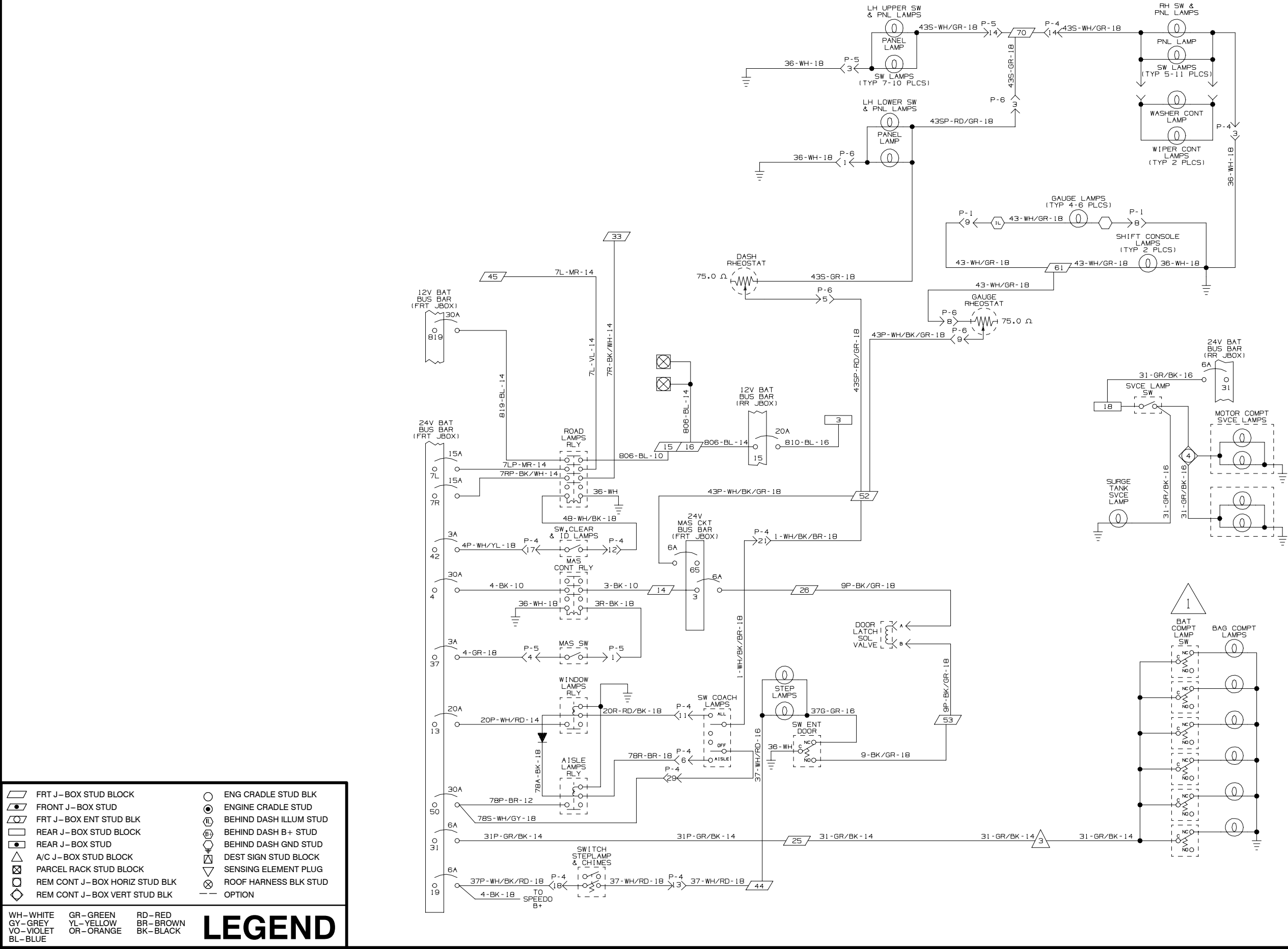
RELEASE PARKING BRAKE RETRACTING STEP

	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

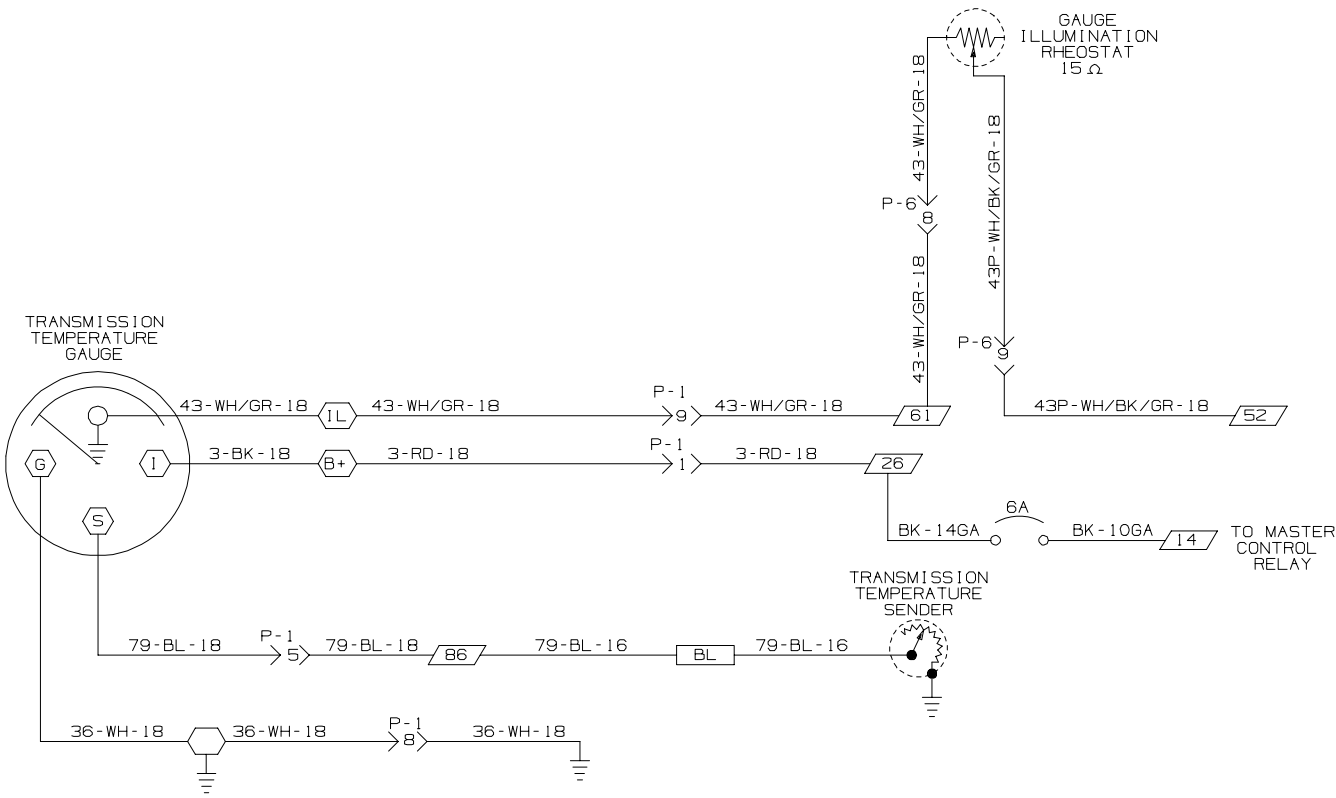
WH-WHITE GR-GREEN RD-RED
GY-GREY YL-YELLOW BR-BROWN
VO-VIOLET OR-ORANGE BK-BLACK
BL-BLUE

LEGEND

RETRACTABLE STEP
102D3 & 102DL3
7L-13-1337 (REV B)



LIGHTING - INTERIOR
102DL3 CONVERSION COACH
7L-13-1387 (REV A)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

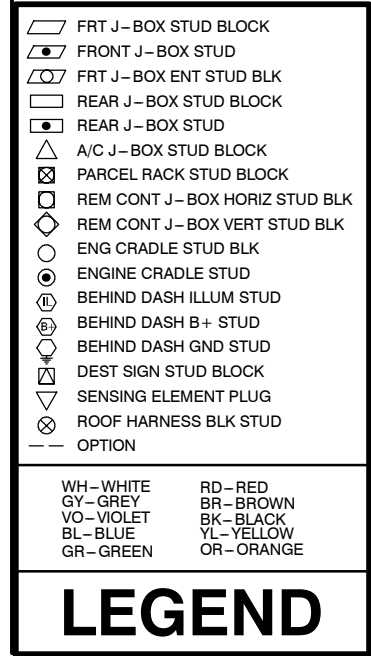
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

GR-GREEN
YL-YELLOW
OR-ORANGE

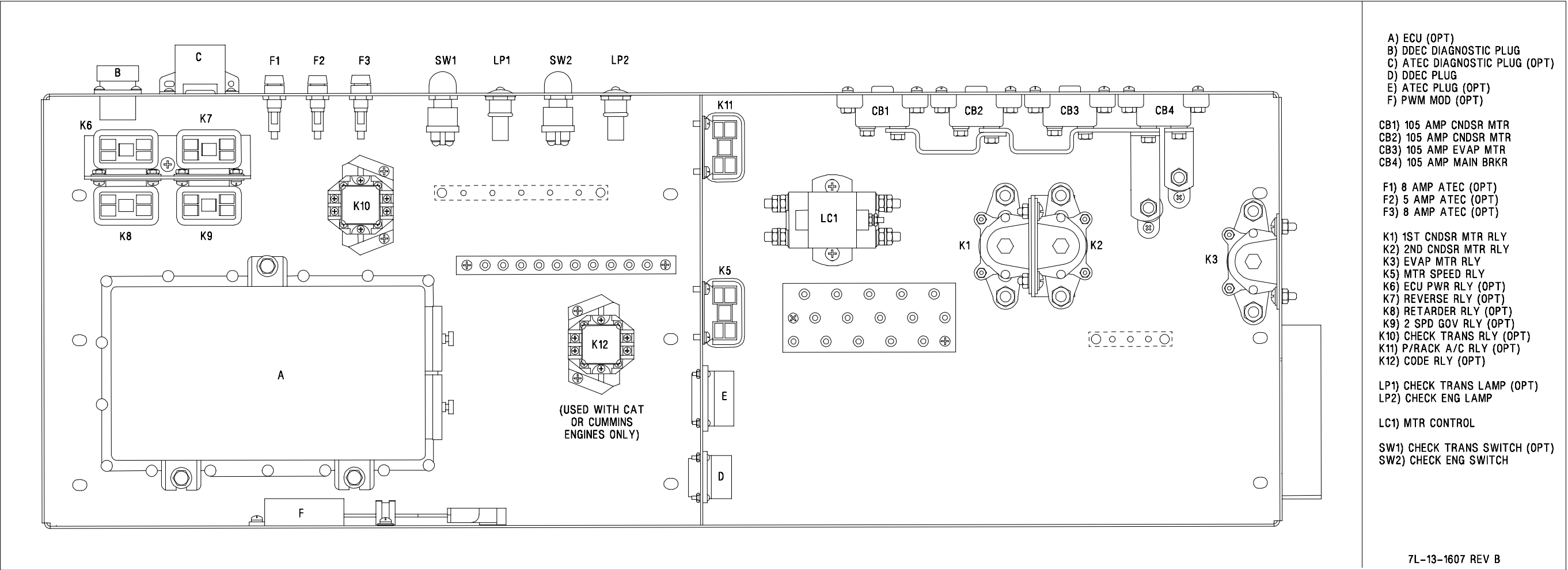
RD-RED
BR-BROWN
BK-BLACK

LEGEND

TRANSMISSION OIL TEMPERATURE
102D3/102DL3
7L-13-1446 (REV A)



INSTALLATION OF ELECTRONICALLY CONTROLLED DETROIT DIESEL (DDEC) ENGINE

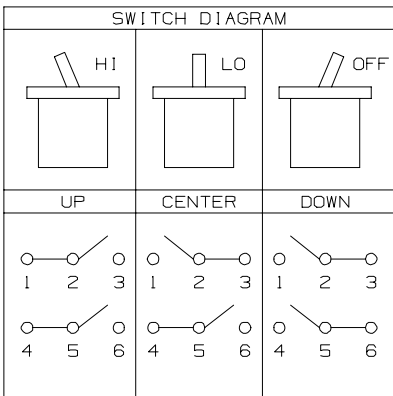
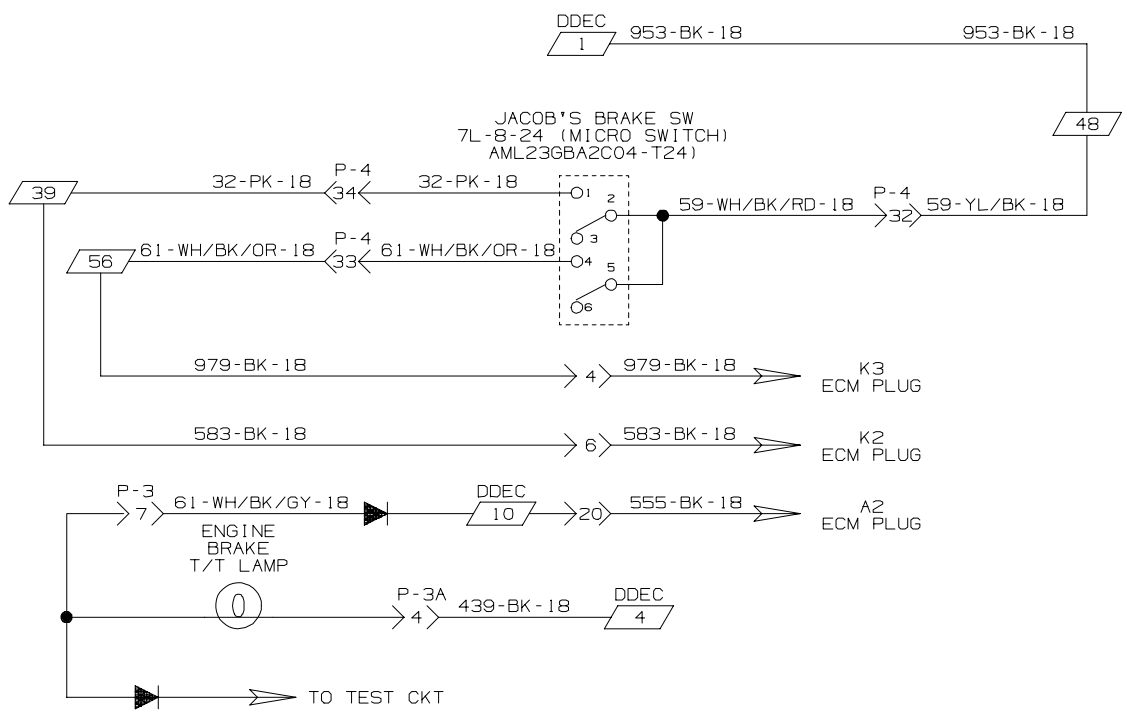


	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

WH-WHITE GR-GREEN RD-RED
GY-GREY YL-YELLOW BR-BROWN
VO-VIOLET OR-ORANGE BK-BLACK
BL-BLUE

LEGEND

DECAL INSTALLATION
A/C JUNCTION BOX W/DDEC/ATEC DIAGNOSTIC PORT
102D & 102DL3
7L-13-1607 (REV B)



FRT J-BOX STUD BLOCK	ENG CRADLE STUD BLK
FRONT J-BOX STUD	ENGINE CRADLE STUD
FRT J-BOX ENT STUD BLK	BEHIND DASH ILLUM STUD
REAR J-BOX STUD BLOCK	BEHIND DASH B+ STUD
REAR J-BOX STUD	BEHIND DASH GND STUD
A/C J-BOX STUD BLOCK	DEST SIGN STUD BLOCK
PARCEL RACK STUD BLOCK	SENSING ELEMENT PLUG
REM CONT J-BOX HORIZ STUD BLK	ROOF HARNESS BLK STUD
REM CONT J-BOX VERT STUD BLK	OPTION

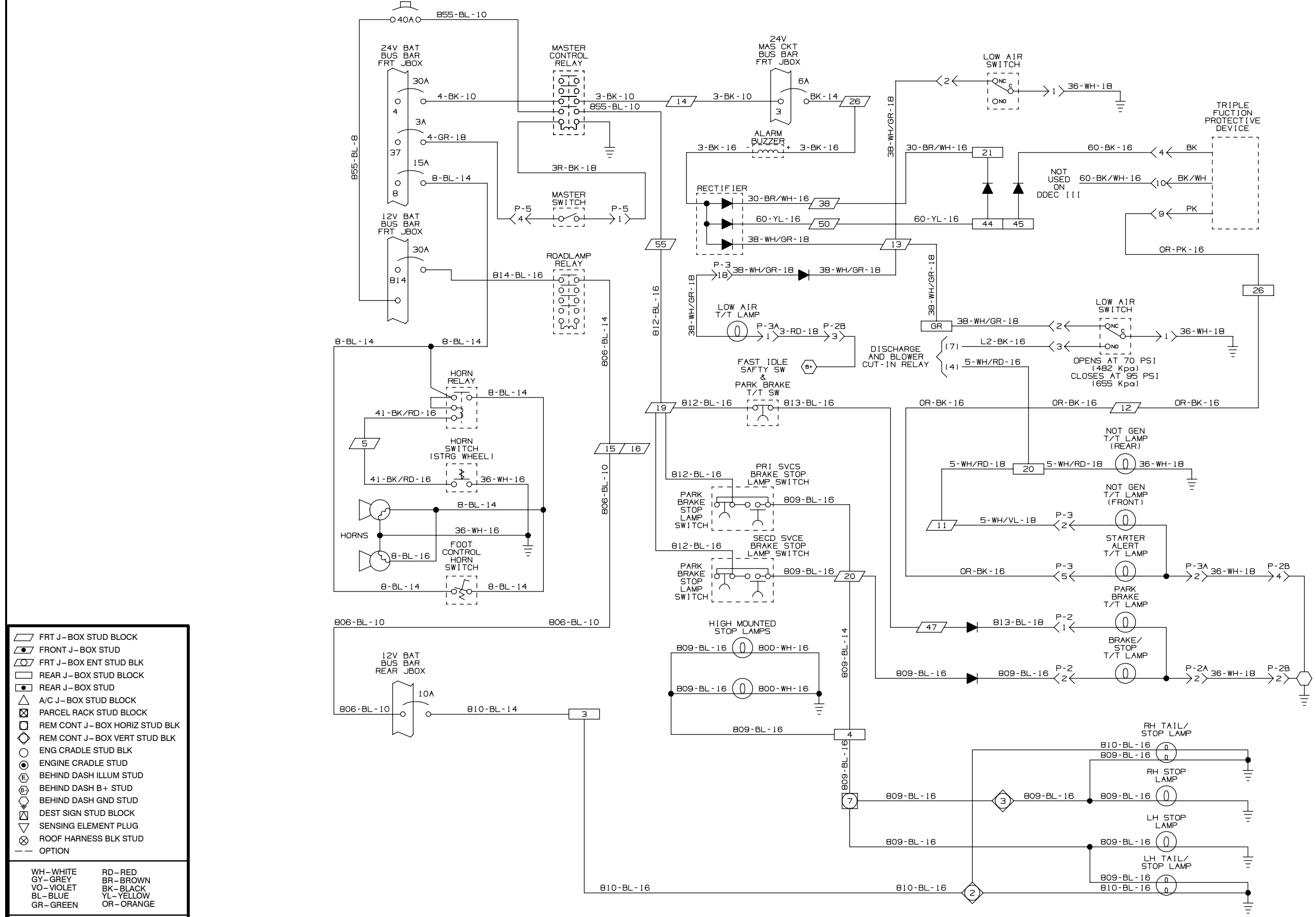
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

GR-GREEN
YL-YELLOW
OR-ORANGE

RD-RED
BR-BROWN
BK-BLACK

LEGEND

JACOBS ENGINE BRAKE (DDEC IV)
102D3/102DL3
7L-13-1619 (REV B)



ALARMS & TELL-TALE WIRING
102D & 102DL3
7L-13-1659 (REV A)

FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

BR-BROWN

VO-VIOLET

BK-BLACK

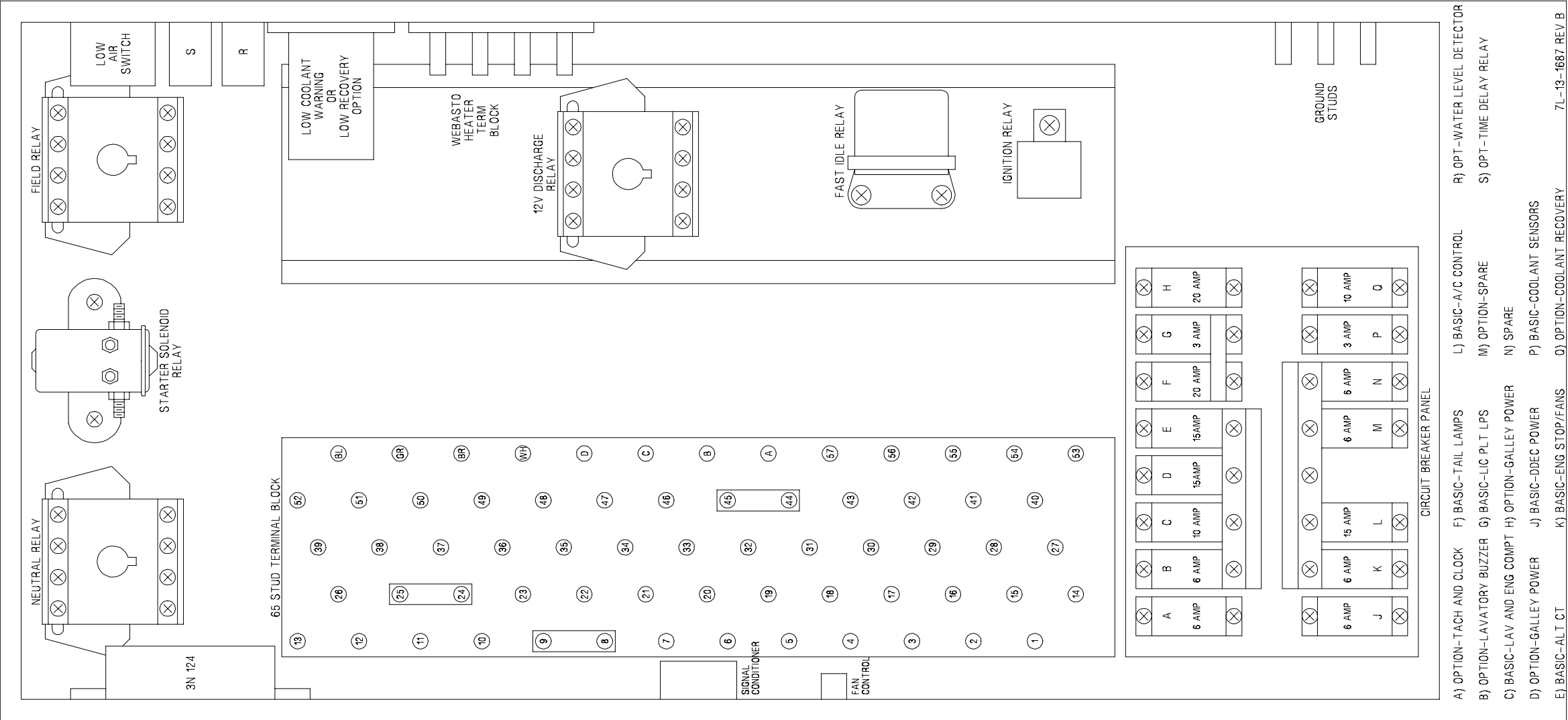
BL-BLUE

YL-YELLOW

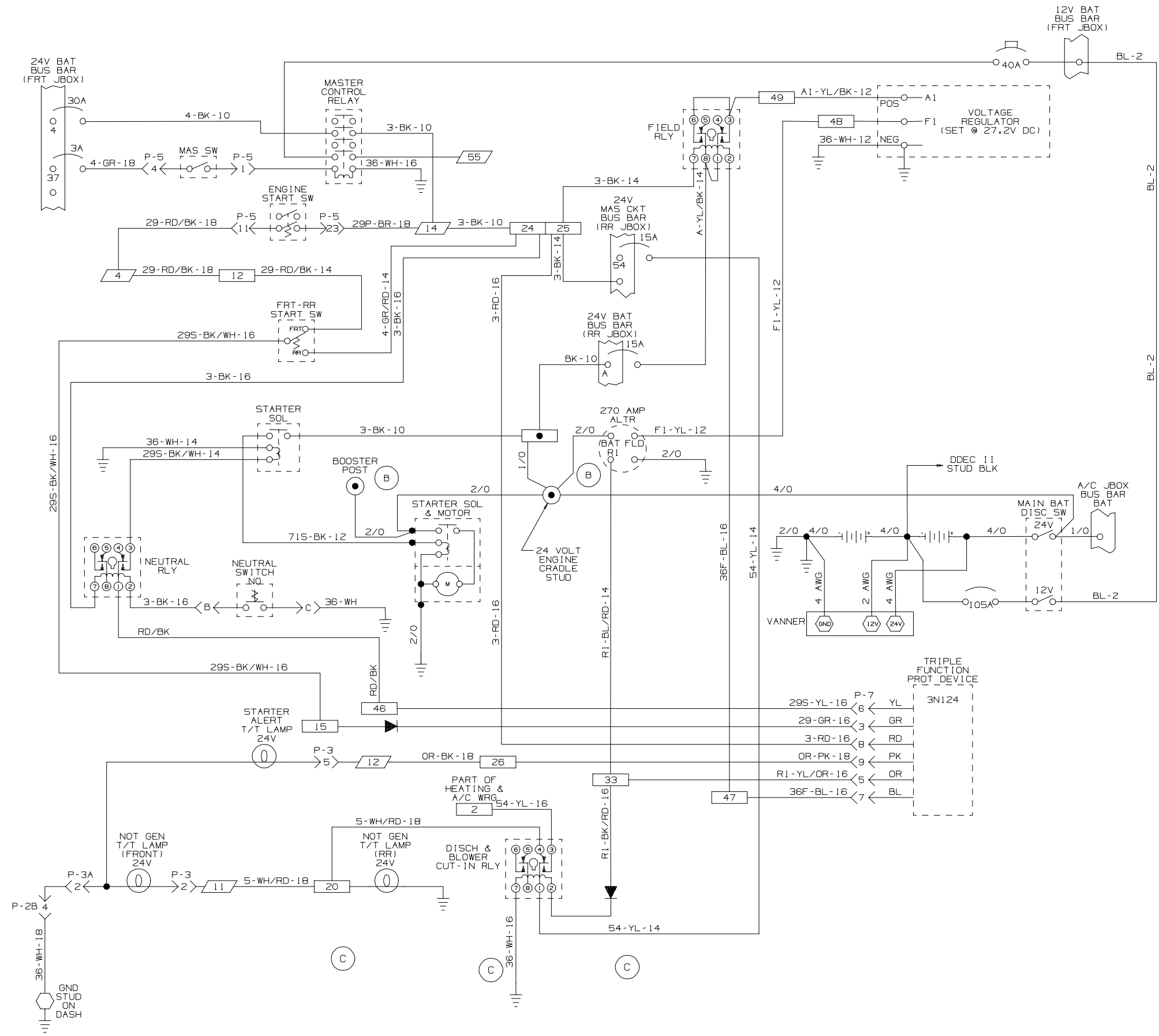
GR-GREEN

OR-ORANGE

LEGEND



DECAL INSTALLATION
REAR JUNCTION BOX W/CATERPILLAR
102D3 & 102DL3
7L-13-1687 (REV B)



LEGEND

CHARGING & STARTING SYSTEM
102D3 & 102DL3
7L-13-1708 (REV C)

FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

BR-BROWN

VO-VIOLET

BK-BLACK

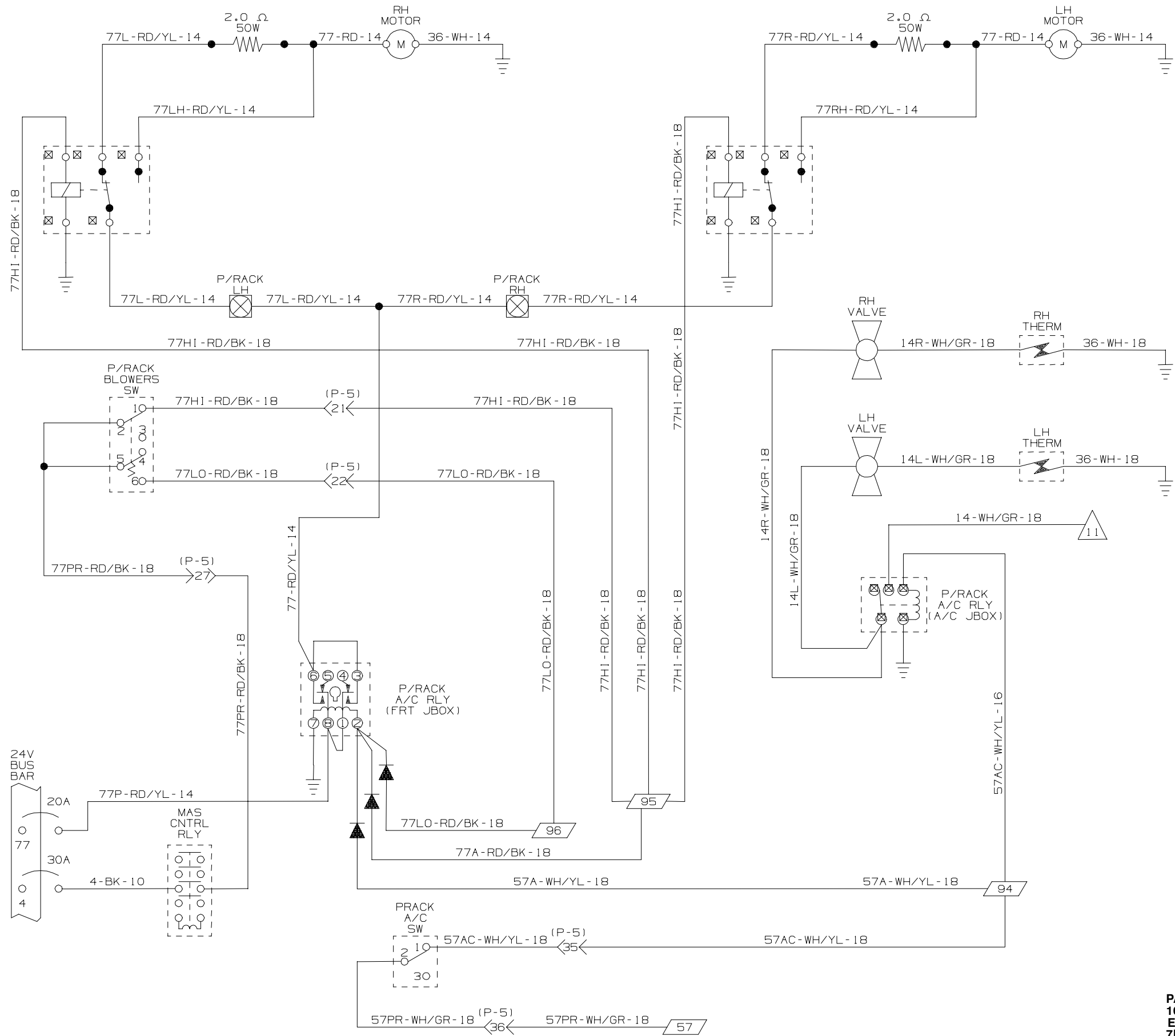
BL-BLUE

YL-YELLOW

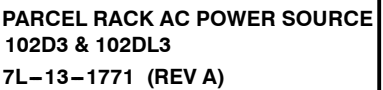
GR-GREEN

OR-ORANGE

LEGEND



PARCEL RACK AIR CONDITIONING
102D3 & 102DL3 MODELS
EFFECTIVE WITH APRIL 1993 PRODUCTION
7L-13-1771 (REV. A)



LEGEND

FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

BR-BROWN

VO-VIOLET

BK-BLACK

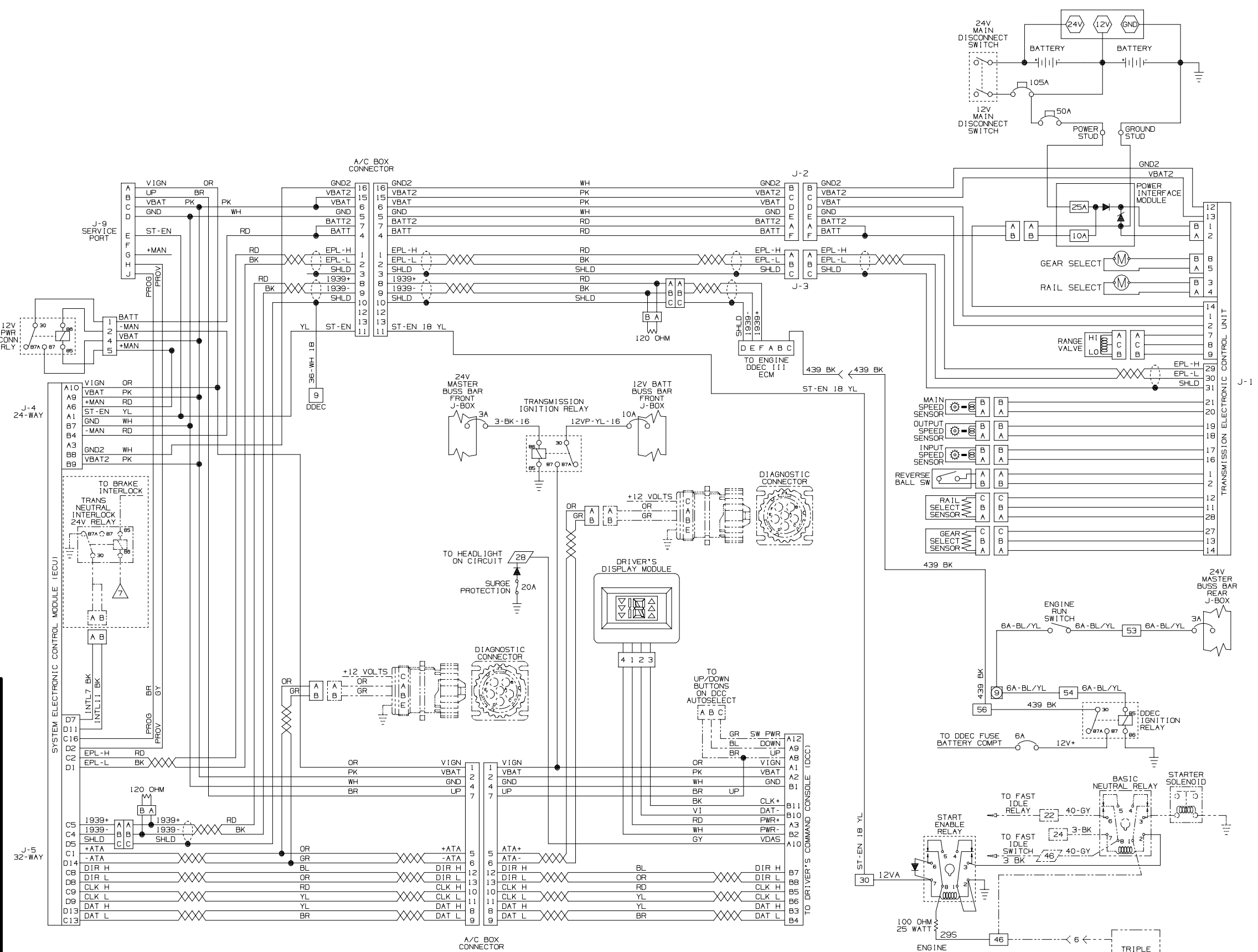
BL-BLUE

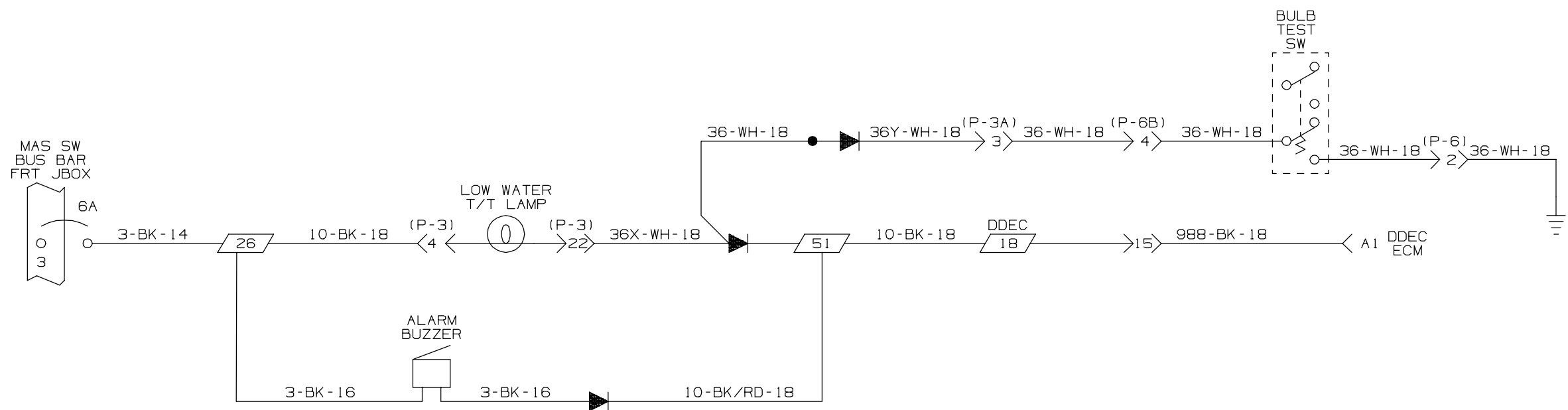
YL-YELLOW

GR-GREEN

OR-ORANGE

LEGEND



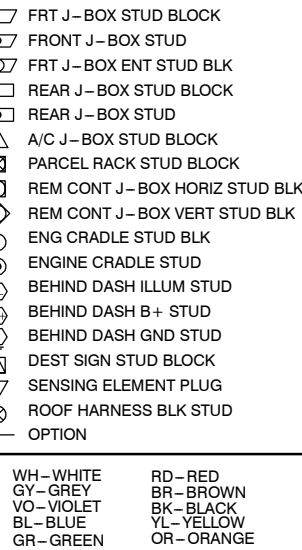


	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

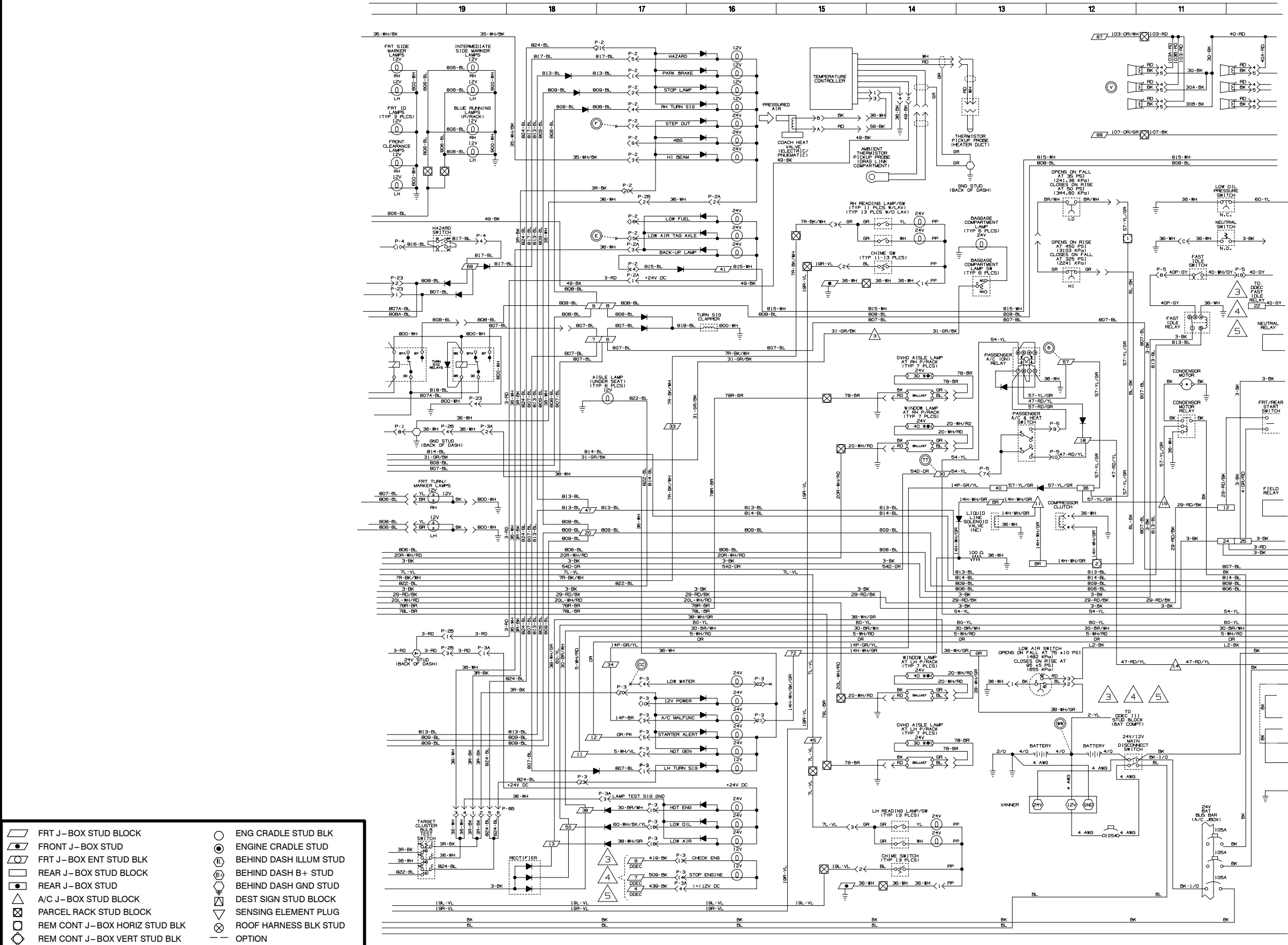
WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	BK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

LEGEND

LOW COOLANT LEVEL WARNING
& ENGINE SHUTDOWN
102D3 & 102DL3
7L-13-1807 (REV A)



ELECTRONICALLY CONTROLLED ENGINE CATERPILLAR INSTALLATION 102D3 & 102DL3 MODELS 7L-13-1818 (REV H)

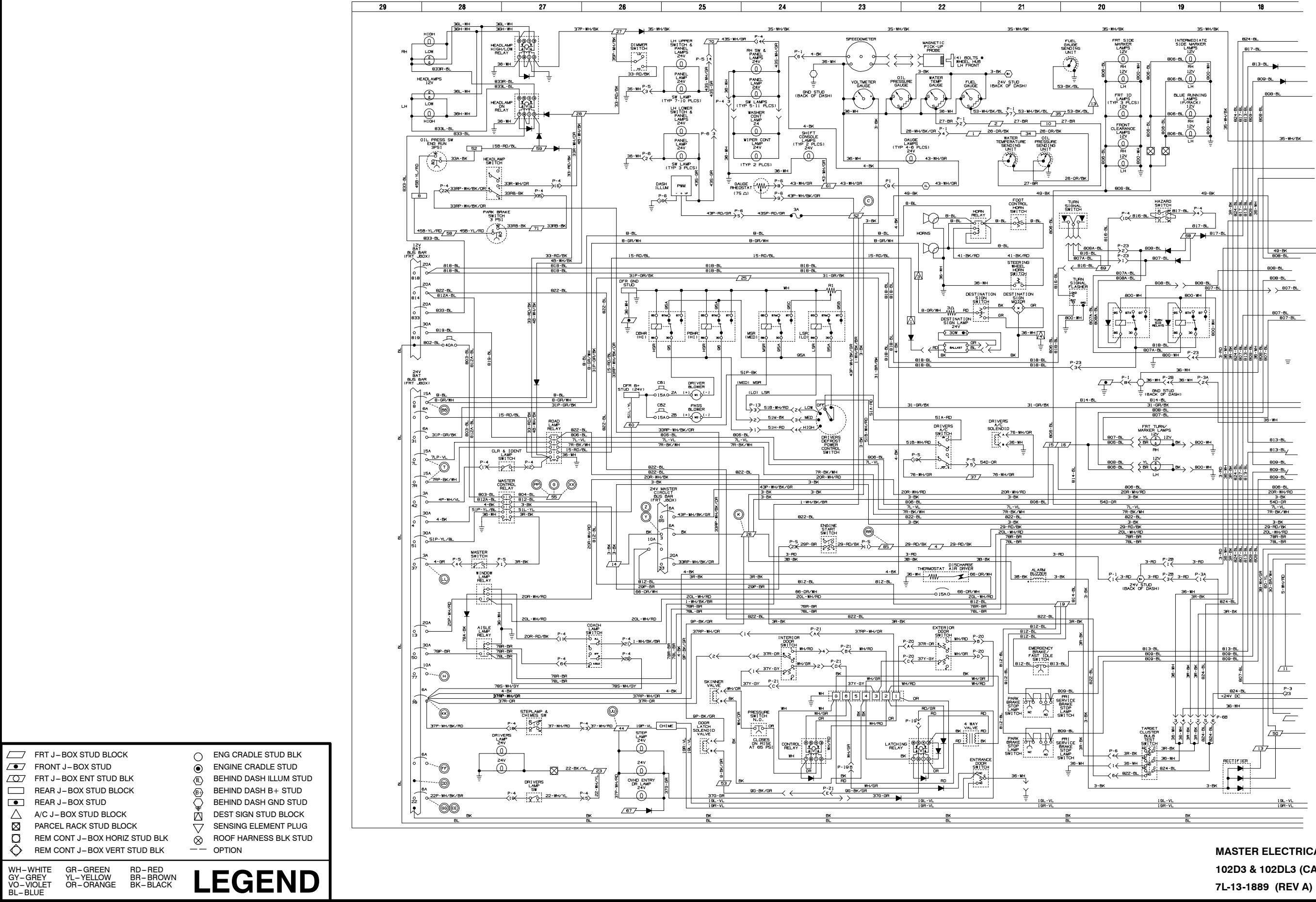


MASTER ELECTRICAL WIRING DIAGRAM

102D3 & 102DL3 (CANADA)

7L-13-1889 (REV A)

SHEET 2 OF 3

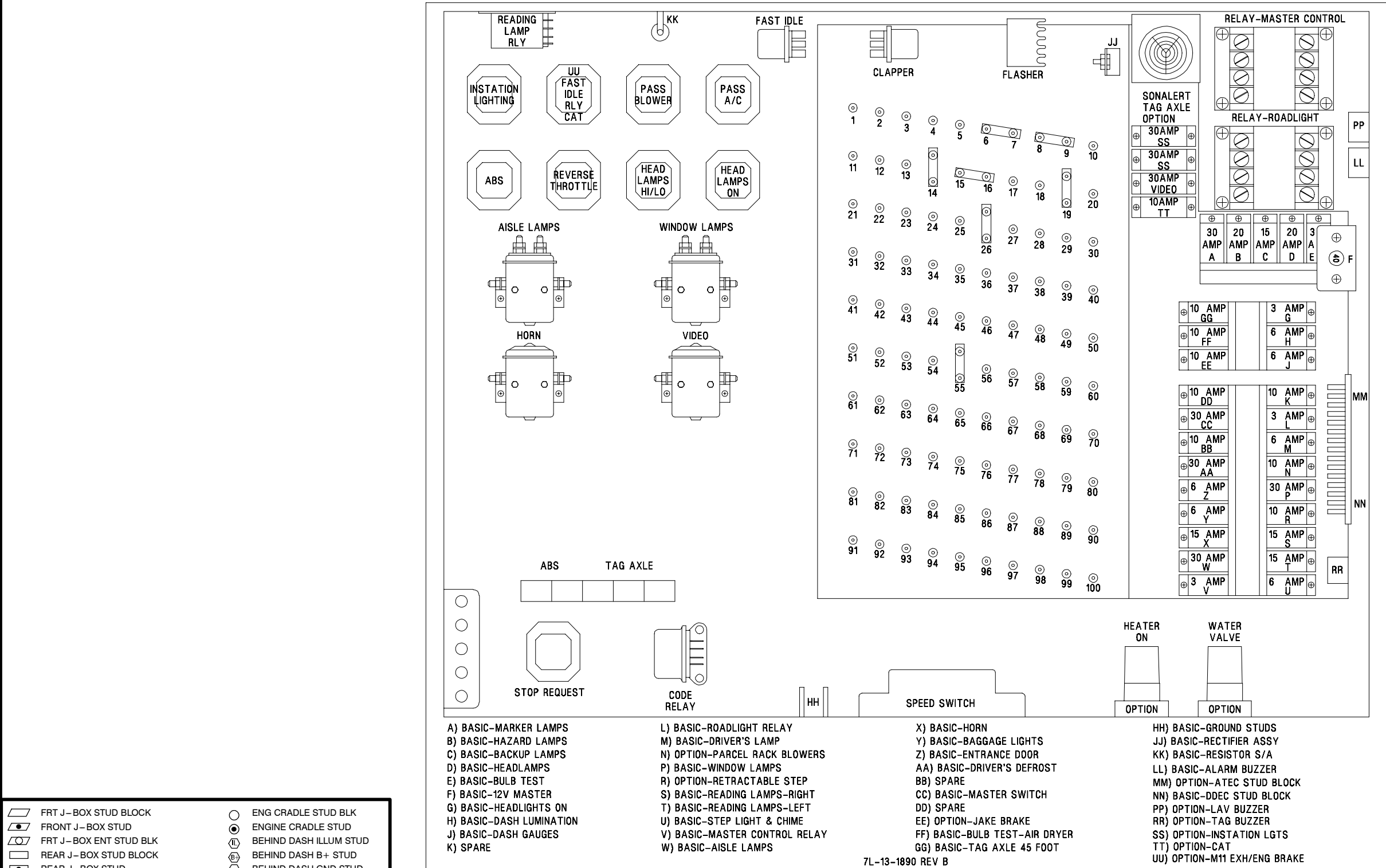


MASTER ELECTRICAL WIRING DIAGRAM

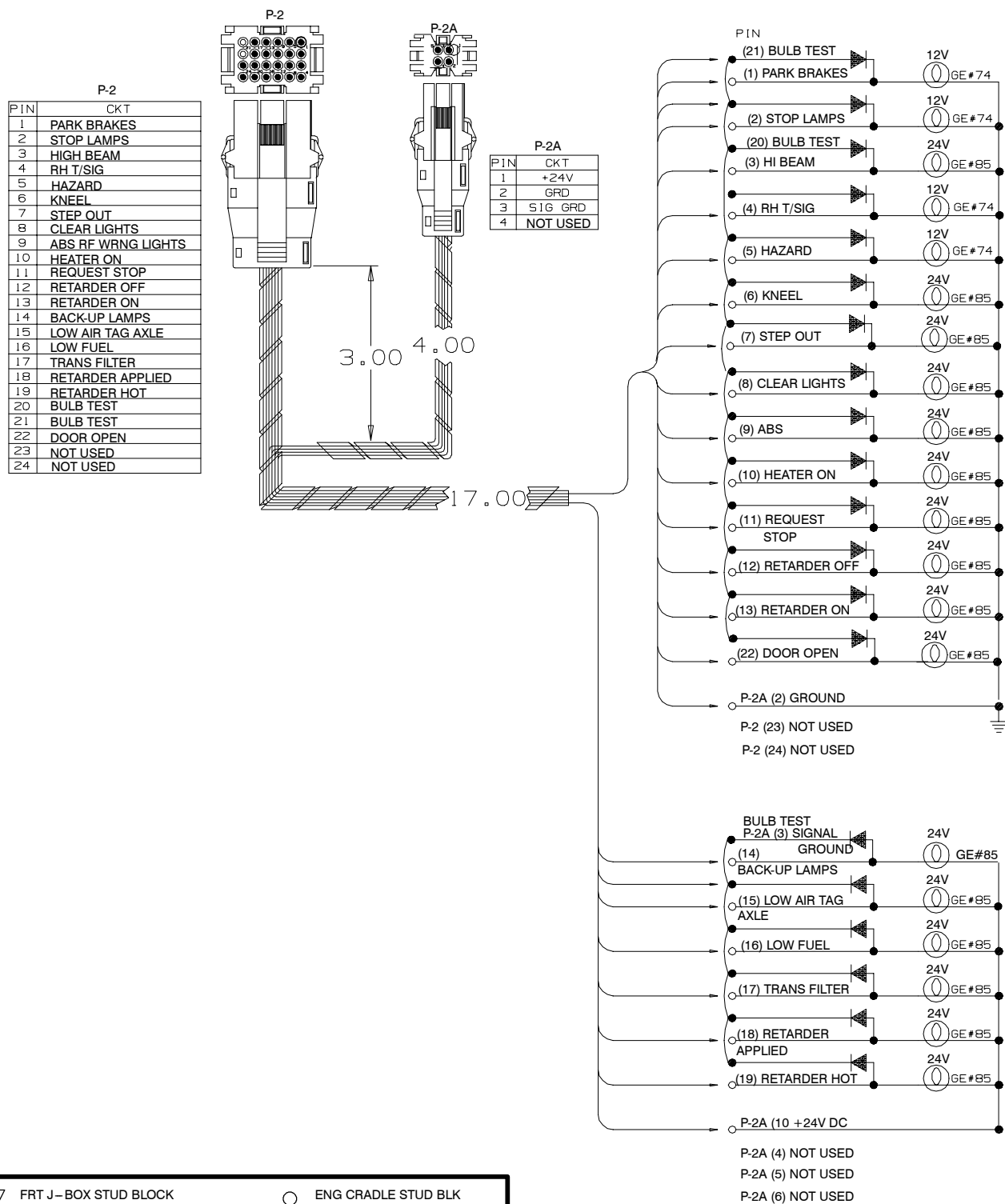
102D3 & 102DL3 (CANADA)

7L-13-1889 (REV A)

SHEET 3 OF 3



DECAL INSTALLATION
FRONT JUNCTION BOX W/CATERPILLAR
102D3 & 102DL3
7L-13-1890 (REV B)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

WH—WHITE	GR—GREEN	RD—RED
GY—GREY	YL—YELLOW	BR—BROWN
VO—VIOLET	OR—ORANGE	BK—BLACK
BL—BLUE		

LEGEND

**TARGET CLUSTER – RIGHT-HAND
102D3 & 102DL3 MODELS
7L-13-1949 (REV A)**

FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

BR-BROWN

VO-VIOLET

BK-BLACK

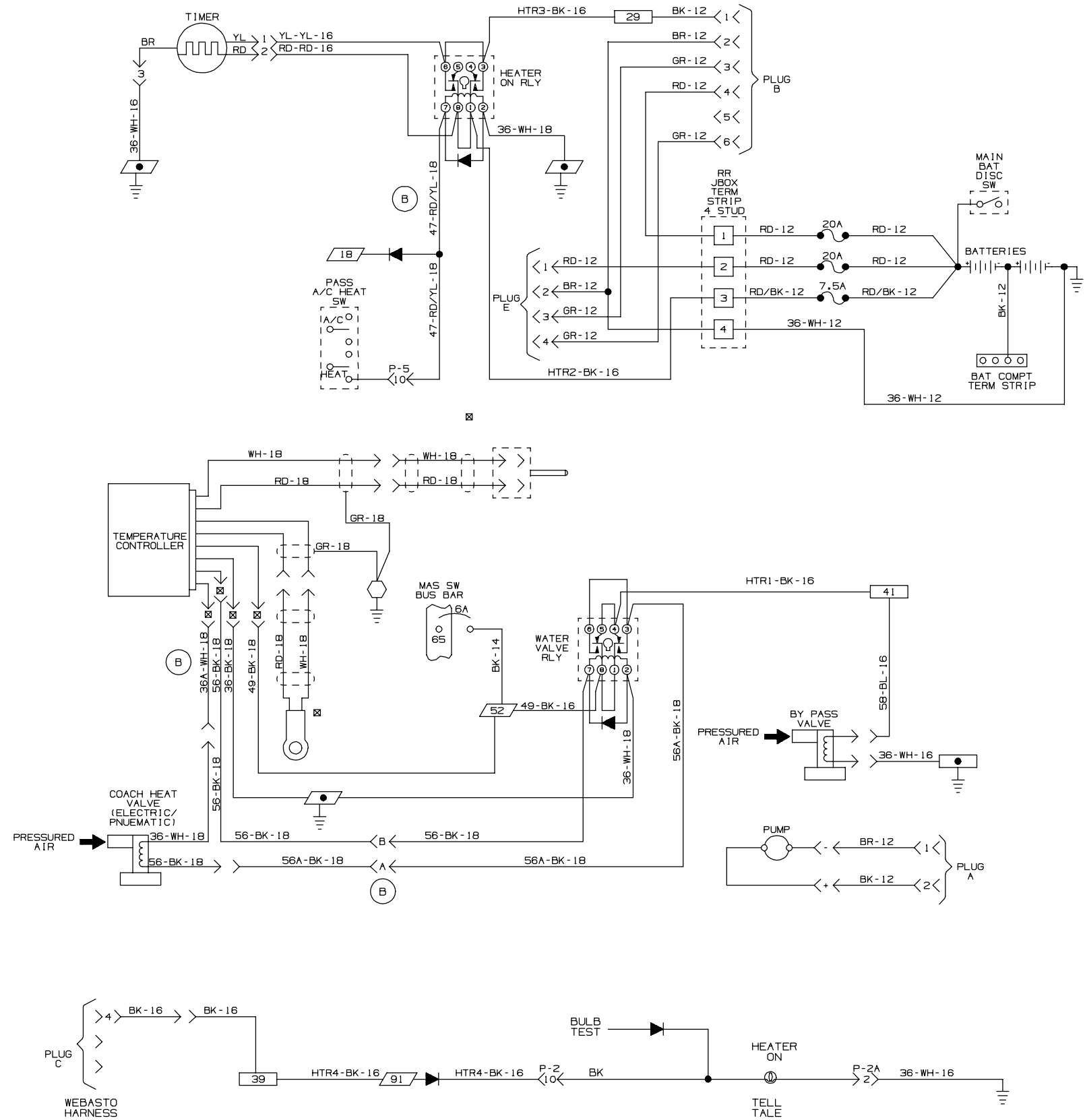
BL-BLUE

YL-YELLOW

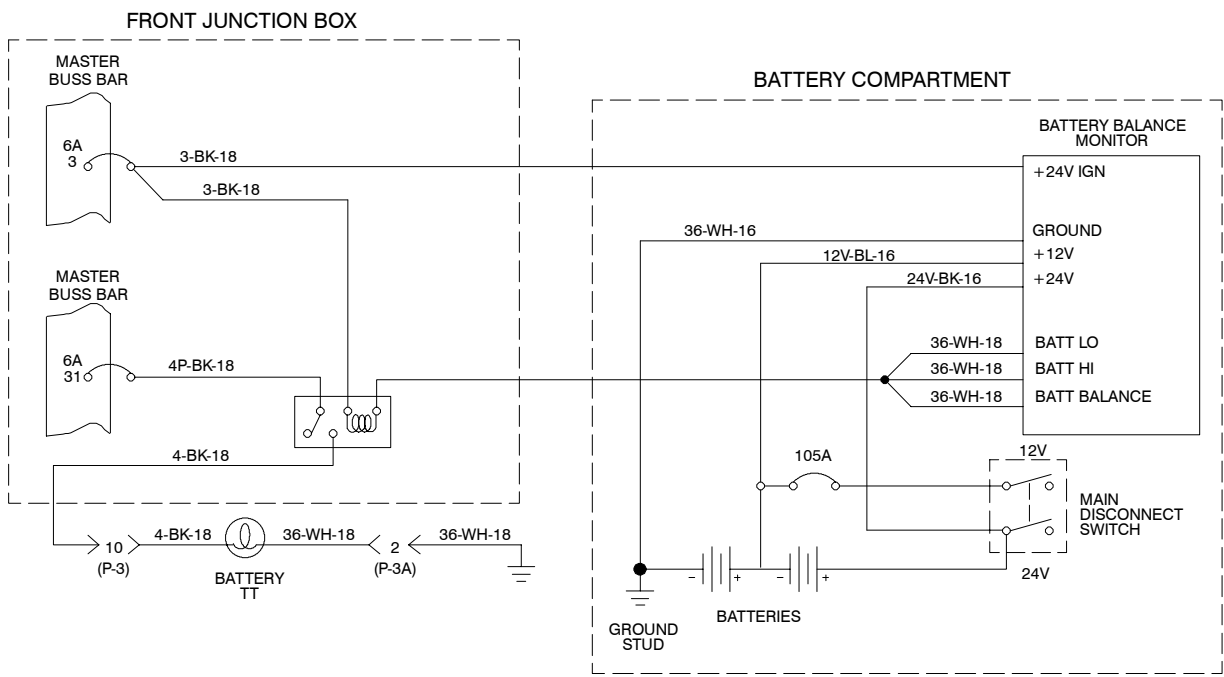
GR-GREEN

OR-ORANGE

LEGEND



AUXILIARY HEATER
102D3 & 102DL3
7L-13-1965 (REV C)



	FRT J - BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J - BOX STUD		ENGINE CRADLE STUD
	FRT J - BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J - BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J - BOX STUD		BEHIND DASH GND STUD
	A/C J - BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J - BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J - BOX VERT STUD BLK		OPTION

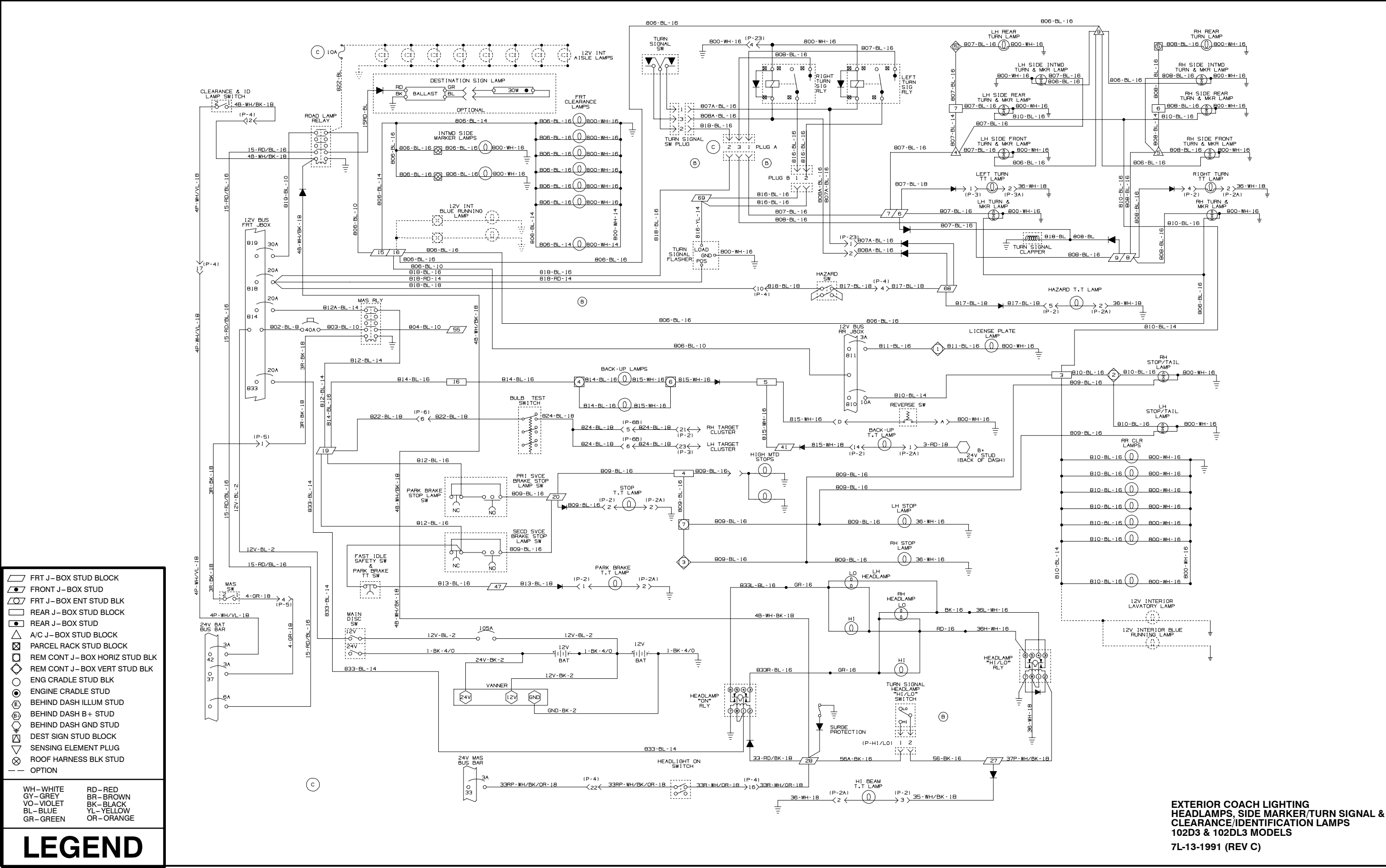
WH - WHITE
GY - GREY
VO - VIOLET
BL - BLUE

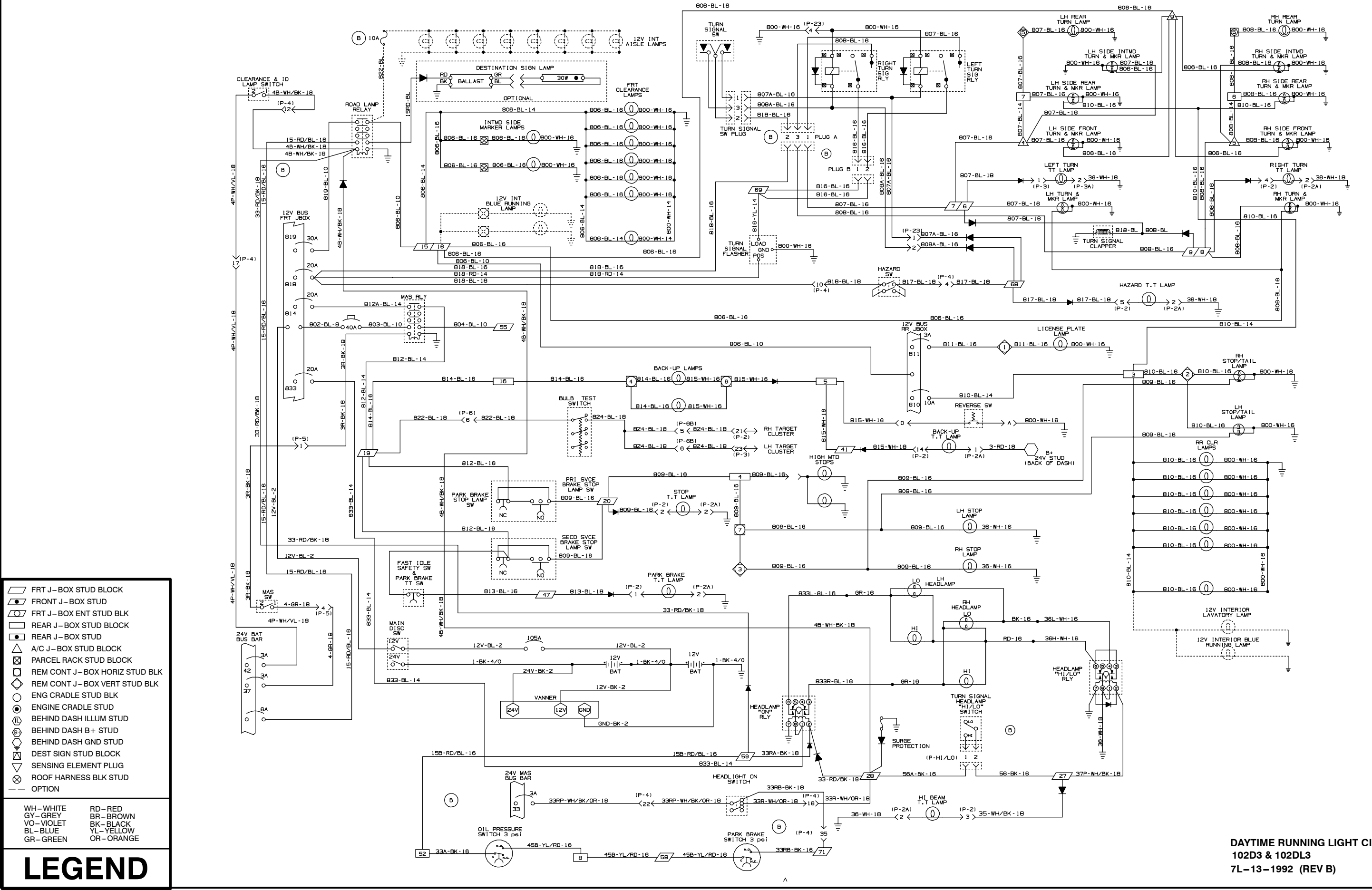
GR - GREEN
YL - YELLOW
OR - ORANGE

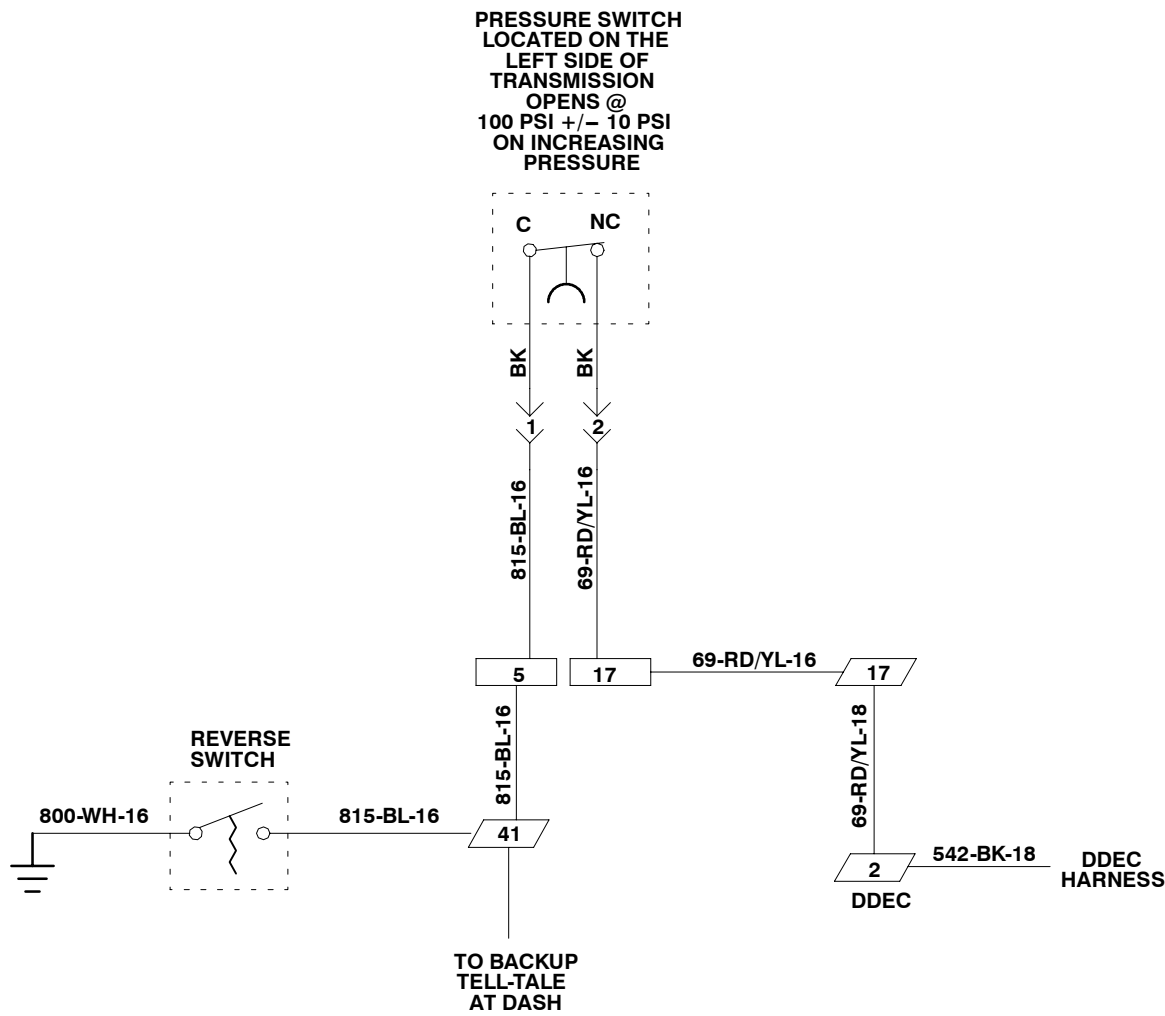
RD - RED
BR - BROWN
BK - BLACK

LEGEND

VANNER MONITOR CIRCUIT
102D3 & 102DL3 MODELS
7L-13-1986 (REV A)





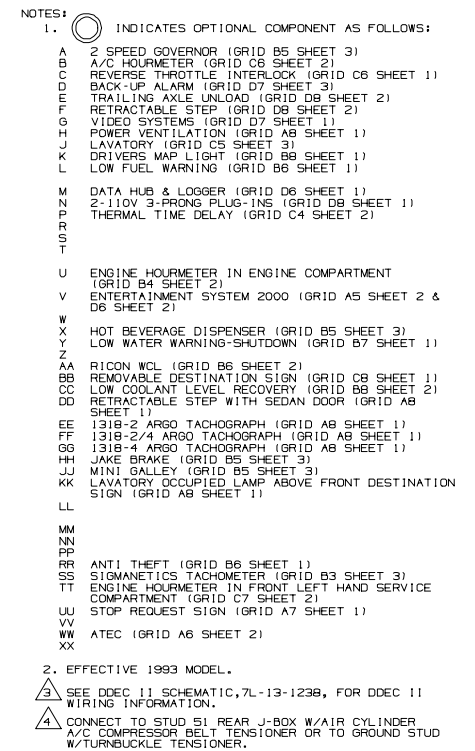


	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

WH-WHITE GR-GREEN RD-RED
GY-GREY YL-YELLOW BR-BROWN
VO-VIOLET OR-ORANGE BK-BLACK
BL-BLUE

LEGEND

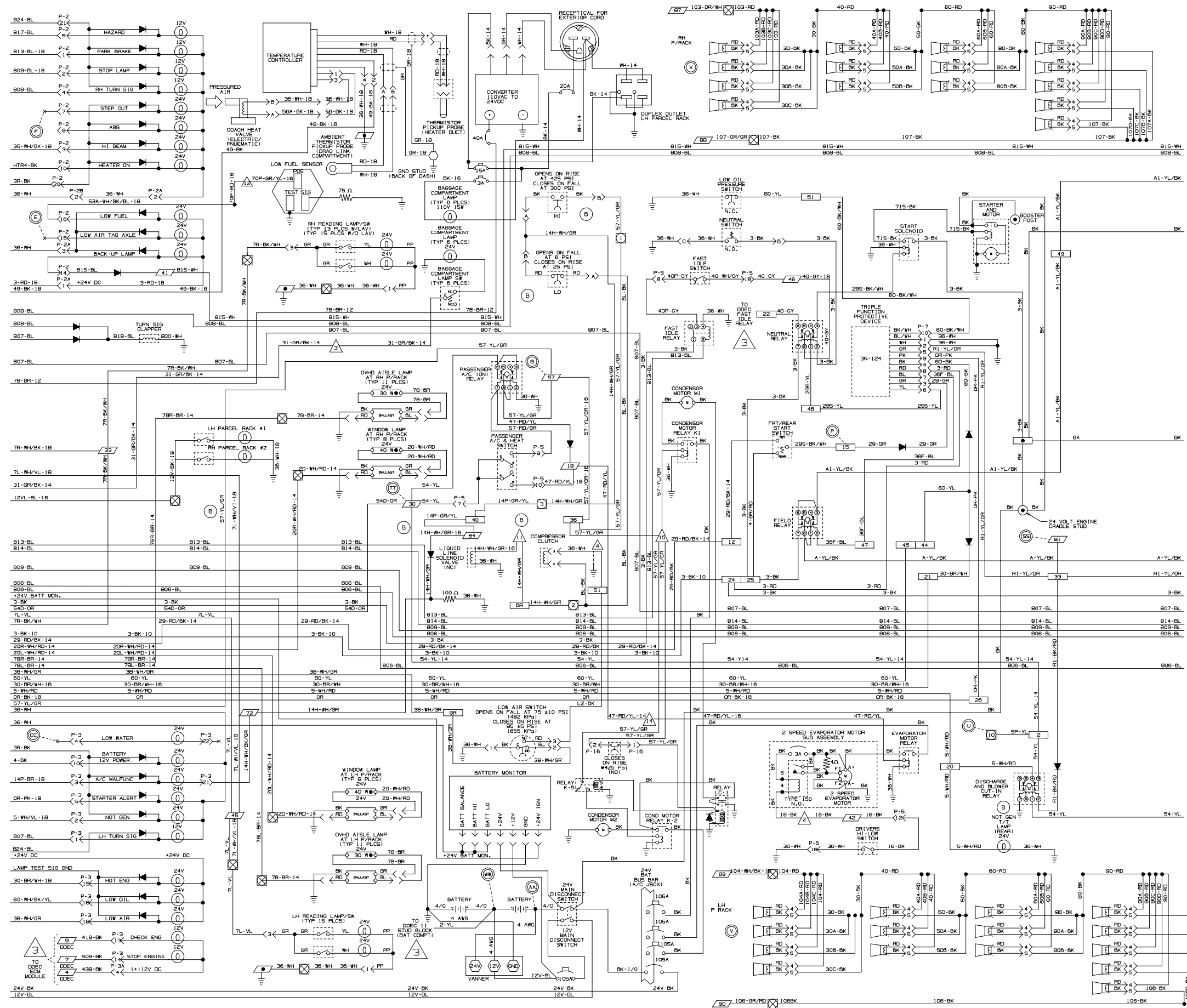
REVERSE THROTTLE INTERLOCK
102D3 & 102DL3 MODELS
7L-13-2013 (REV A)



	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	KK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

LEGEND



FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

OPTION

WH-WHITE

RD-RED

GY-GRAY

VO-VIOLET

BL-BLUE

GR-GREEN

BR-BROWN

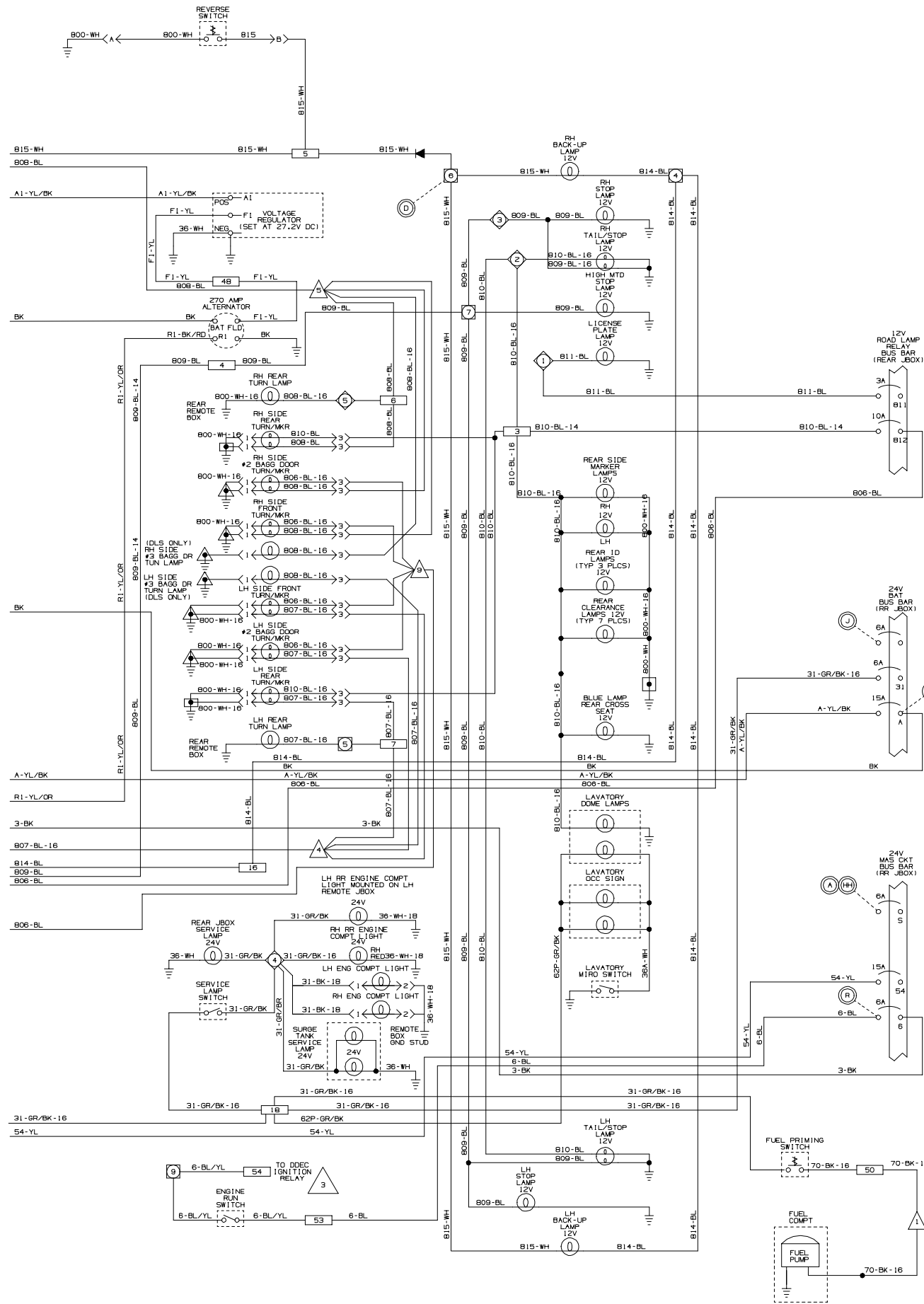
BK-BLACK

YL-YELLOW

OR-ORANGE

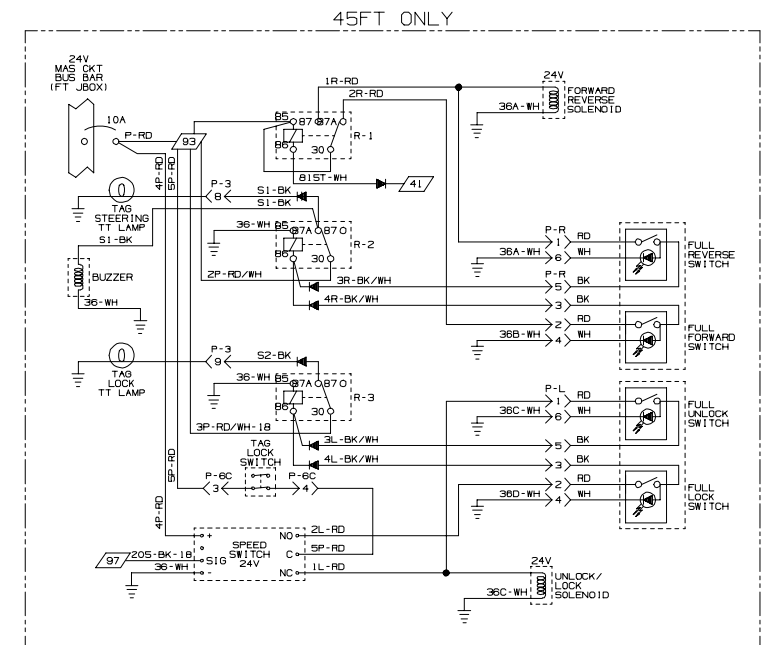
LEGEND

MASTER ELECTRICAL WIRING
DIAGRAM (U. S.)
102D3 & 102DL3 MODELS
7L-13-2015 (REV A) SHEET 2 OF 3

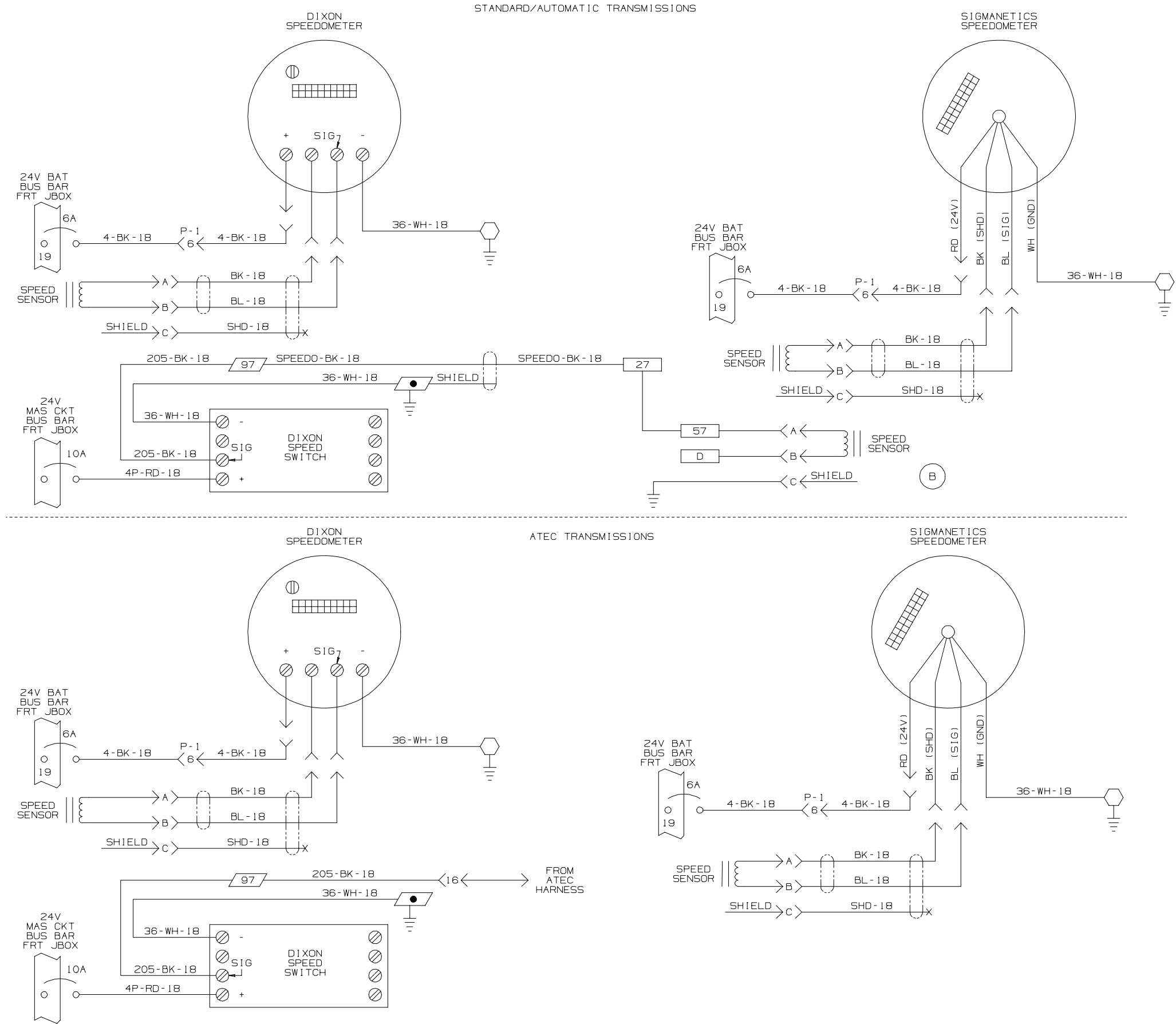


- FRT J-BOX STUD BLOCK
 - FRONT J-BOX STUD
 - FRT J-BOX ENT STUD BLK
 - REAR J-BOX STUD BLOCK
 - REAR J-BOX STUD
 - A/C J-BOX STUD BLOCK
 - PARCEL RACK STUD BLOCK
 - REM CONT J-BOX HORIZ STUD BLK
 - REM CONT J-BOX VERT STUD BLK
 - ENG CRADLE STUD BLK
 - ENGINE CRADLE STUD
 - BEHIND DASH ILLUM STUD
 - BEHIND DASH B+ STUD
 - BEHIND DASH GND STUD
 - DEST SIGN STUD BLOCK
 - SENSING ELEMENT PLUG
 - ROOF HARNESS BLK STUD
 - OPTION
- | | |
|-----------|-----------|
| WH-WHITE | RD-RED |
| GY-GREY | BR-BROWN |
| VO-VIOLET | BK-BLACK |
| BL-BLUE | YL-YELLOW |
| GR-GREEN | OR-ORANGE |

LEGEND

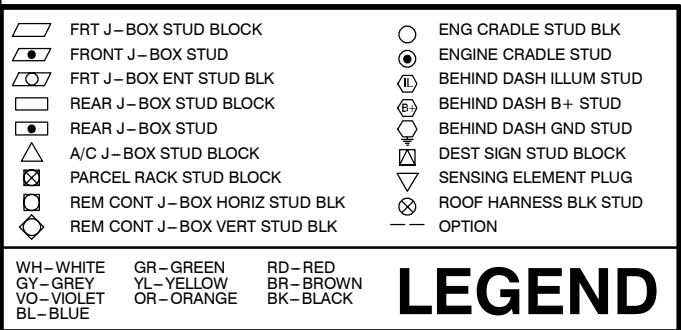


MASTER ELECTRICAL WIRING
DIAGRAM (U. S.)
102D3 & 102DL3 MODELS
7L-13-2015 (REV A) SHEET 3 OF 3

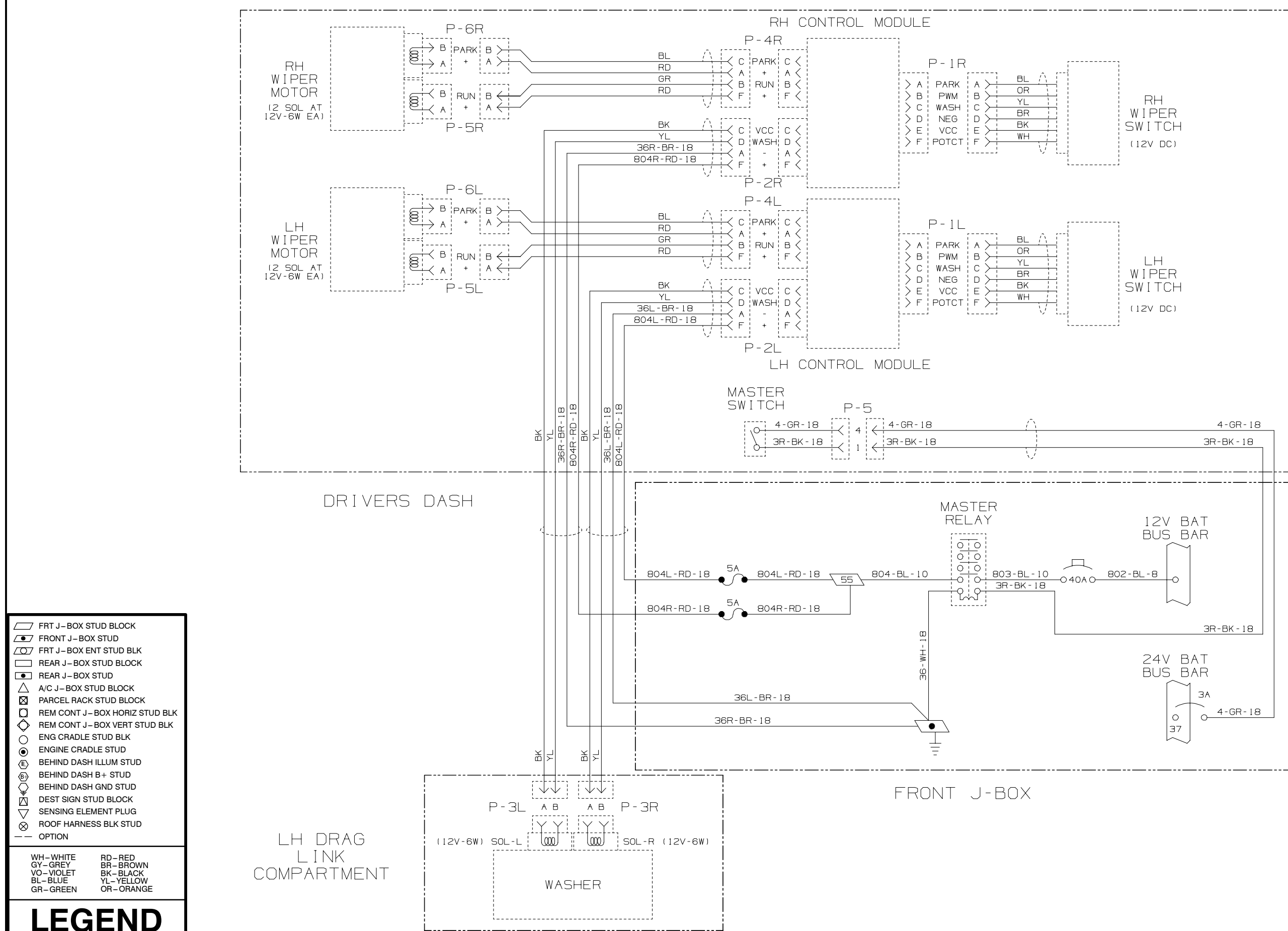


LEGEND

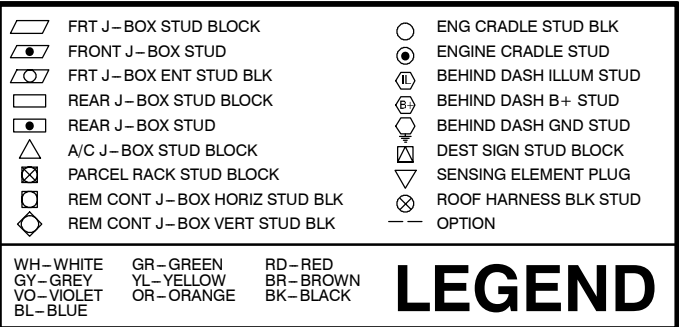
SPEEDOMETER INSTALLATION
DIXSON & SIGMANETICS
102D3 & 102DL3 MODELS
7L-13-2064 (REV. B)



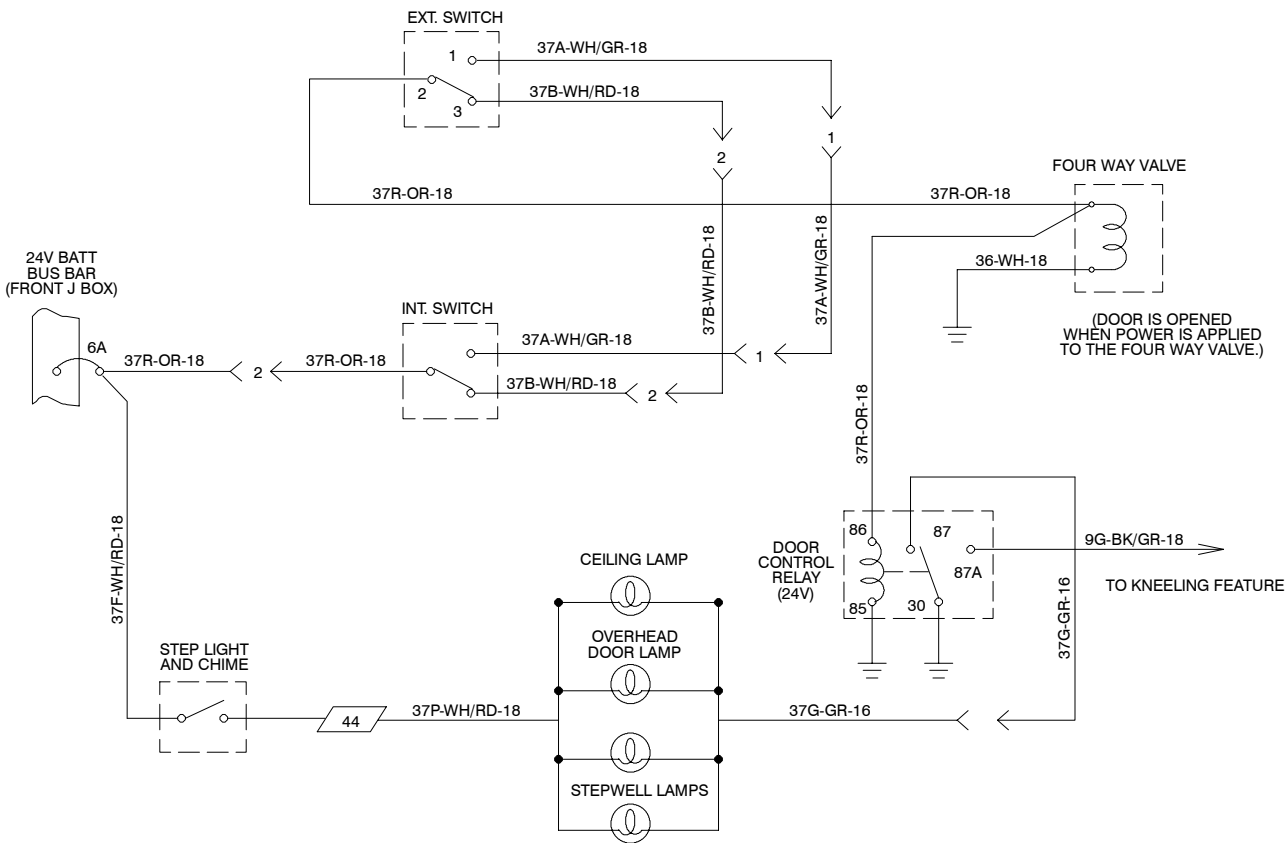
LEGEND



INTERMITTENT WIPER SYSTEM
102D3 & 102DL3 MODELS
7L-13-2146 (REV C)



**BACKUP ALARM
102D3 & 102DL3 MODELS
7L-13-2156 (REV A)**



	FRT J - BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J - BOX STUD		ENGINE CRADLE STUD
	FRT J - BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J - BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J - BOX STUD		BEHIND DASH GND STUD
	A/C J - BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J - BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J - BOX VERT STUD BLK		OPTION

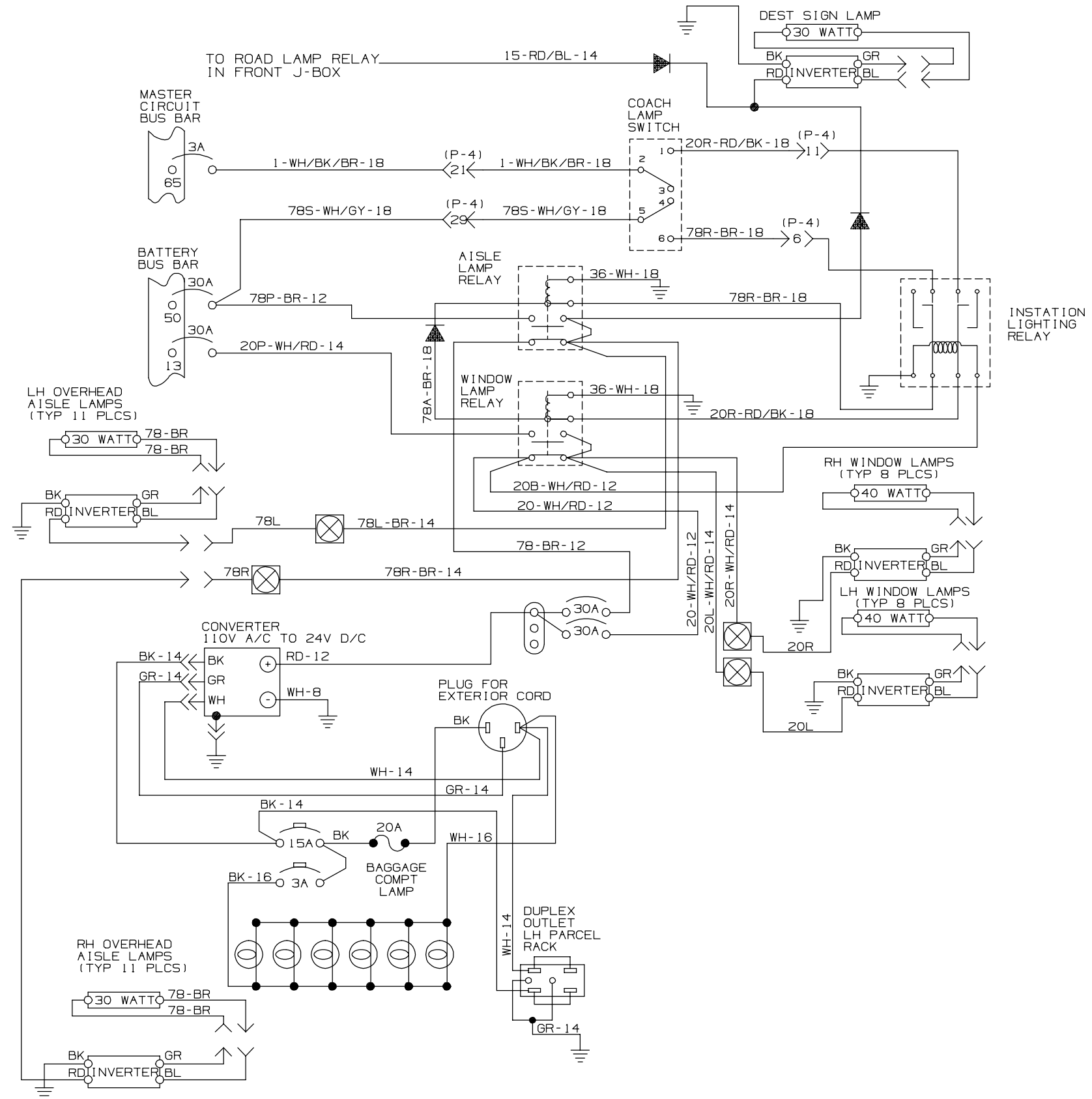
WH - WHITE
GY - GREY
VO - VIOLET
BL - BLUE

GR - GREEN
YL - YELLOW
OR - ORANGE

RD - RED
BR - BROWN
BK - BLACK

LEGEND

AIR OPERATED ENTRANCE DOOR (BI-PART DOOR)
102D3 & 102DL3 MODELS
7L-13-2208 (REV A)



	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE
GR-GREEN
RD-RED
BR-BROWN
BK-BLACK
YL-YELLOW
OR-ORANGE

LEGEND

IN-STATION LIGHTING
102D3 & 102DL3
7L-13-2229 (REV A)

12V BAT
BUSS BAR
(FRT J-BOX)



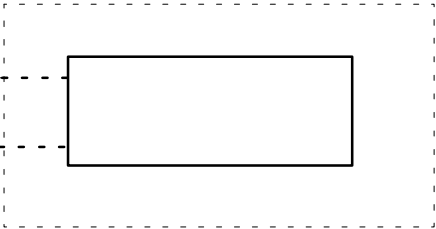
8 AMP



ACC-BK

36-WH

12V ACCESSORY OUTLET

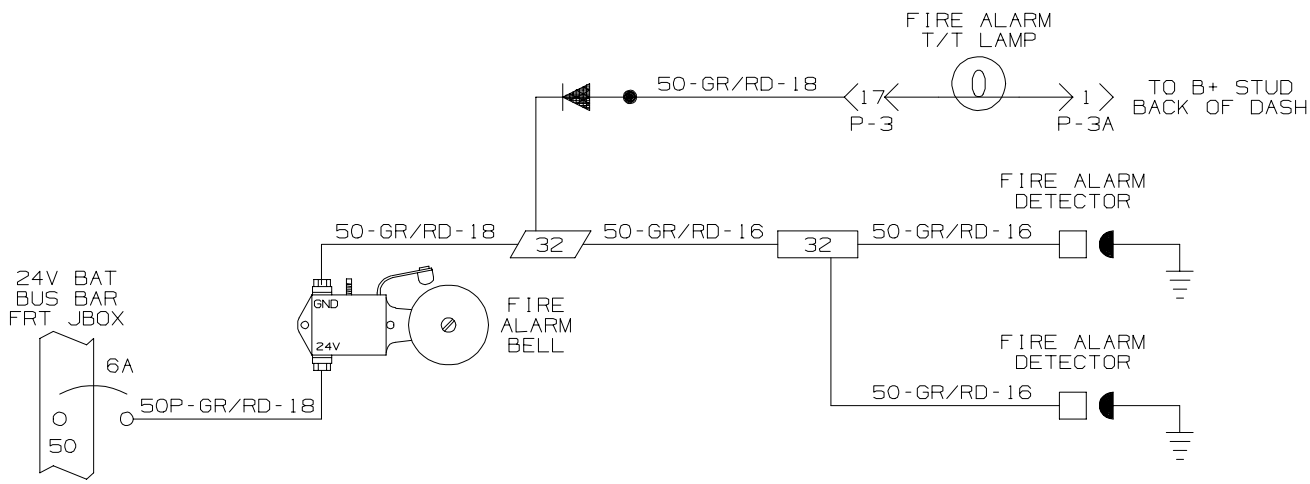


- | | | | |
|--|-------------------------------|--|------------------------|
| | FRT J-BOX STUD BLOCK | | ENG CRADLE STUD BLK |
| | FRONT J-BOX STUD | | ENGINE CRADLE STUD |
| | FRT J-BOX ENT STUD BLK | | BEHIND DASH ILLUM STUD |
| | REAR J-BOX STUD BLOCK | | BEHIND DASH B+ STUD |
| | REAR J-BOX STUD | | BEHIND DASH GND STUD |
| | A/C J-BOX STUD BLOCK | | DEST SIGN STUD BLOCK |
| | PARCEL RACK STUD BLOCK | | SENSING ELEMENT PLUG |
| | REM CONT J-BOX HORIZ STUD BLK | | ROOF HARNESS BLK STUD |
| | REM CONT J-BOX VERT STUD BLK | | OPTION |

WH-WHITE GR-GREEN RD-RED
GY-GREY YL-YELLOW BR-BROWN
VO-VIOLET OR-ORANGE BK-BLACK
BL-BLUE

LEGEND

RADIO 12 VOLT POWER SOURCE
ALL MODELS
7L-13-2252 (REV A)



	FRT J-BOX STUD BLOCK		ENG CRADLE STUD BLK
	FRONT J-BOX STUD		ENGINE CRADLE STUD
	FRT J-BOX ENT STUD BLK		BEHIND DASH ILLUM STUD
	REAR J-BOX STUD BLOCK		BEHIND DASH B+ STUD
	REAR J-BOX STUD		BEHIND DASH GND STUD
	A/C J-BOX STUD BLOCK		DEST SIGN STUD BLOCK
	PARCEL RACK STUD BLOCK		SENSING ELEMENT PLUG
	REM CONT J-BOX HORIZ STUD BLK		ROOF HARNESS BLK STUD
	REM CONT J-BOX VERT STUD BLK		OPTION

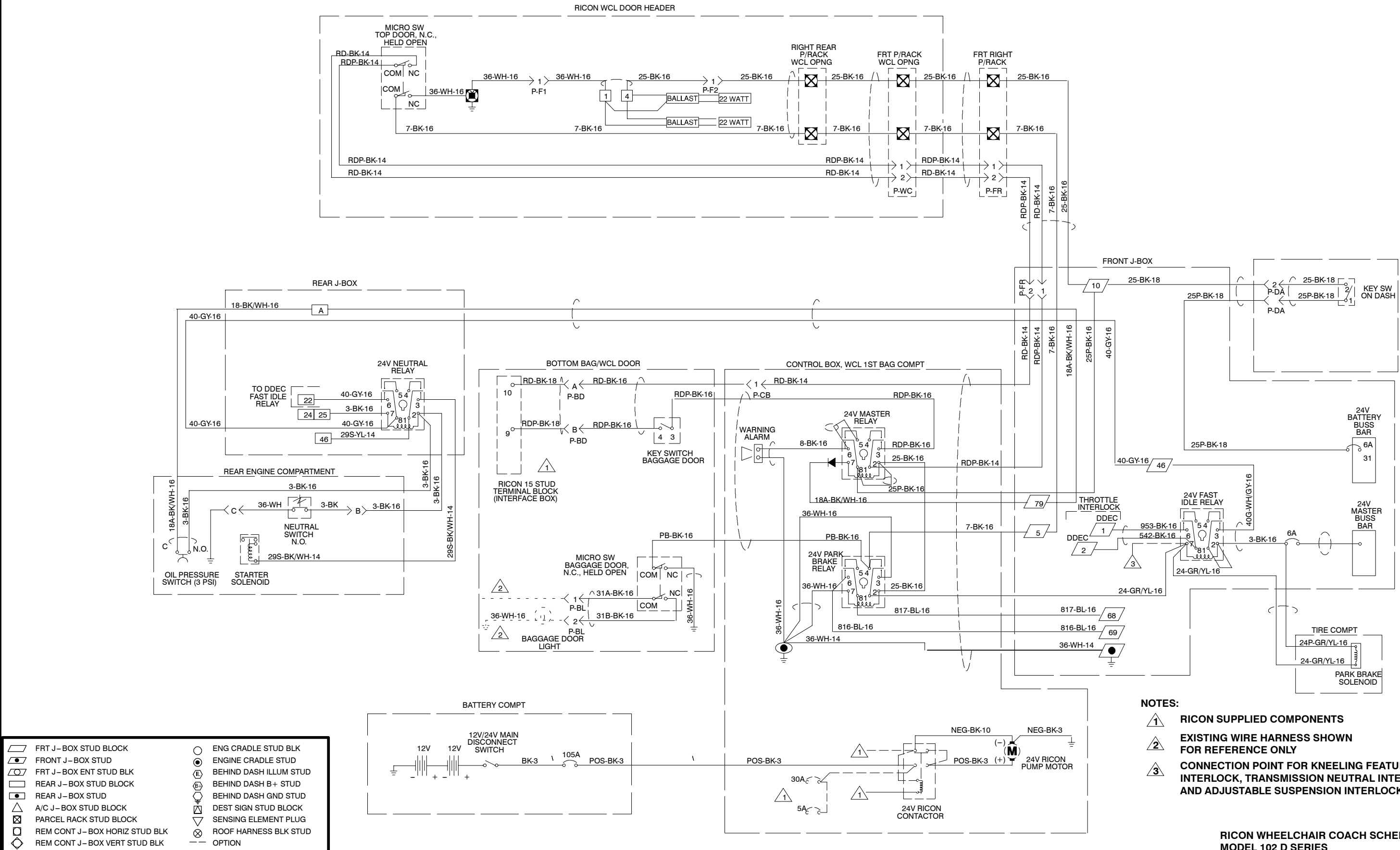
WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE

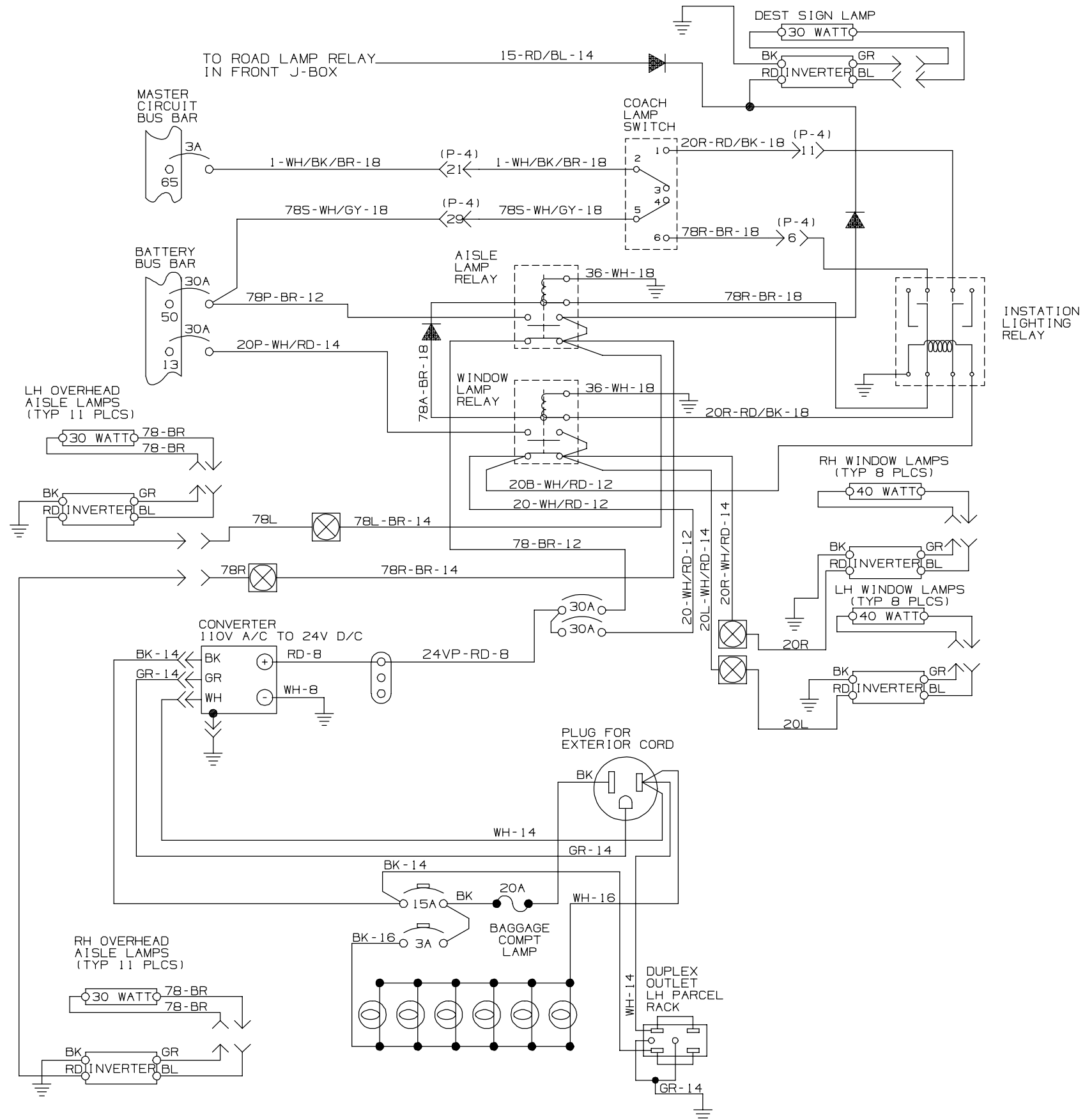
GR-GREEN
YL-YELLOW
OR-ORANGE

RD-RED
BR-BROWN
BK-BLACK

LEGEND

FIRE ALARM CIRCUIT W/BELL
102D3 & 102DL3 MODELS
7L-13-2283 (REV. A)



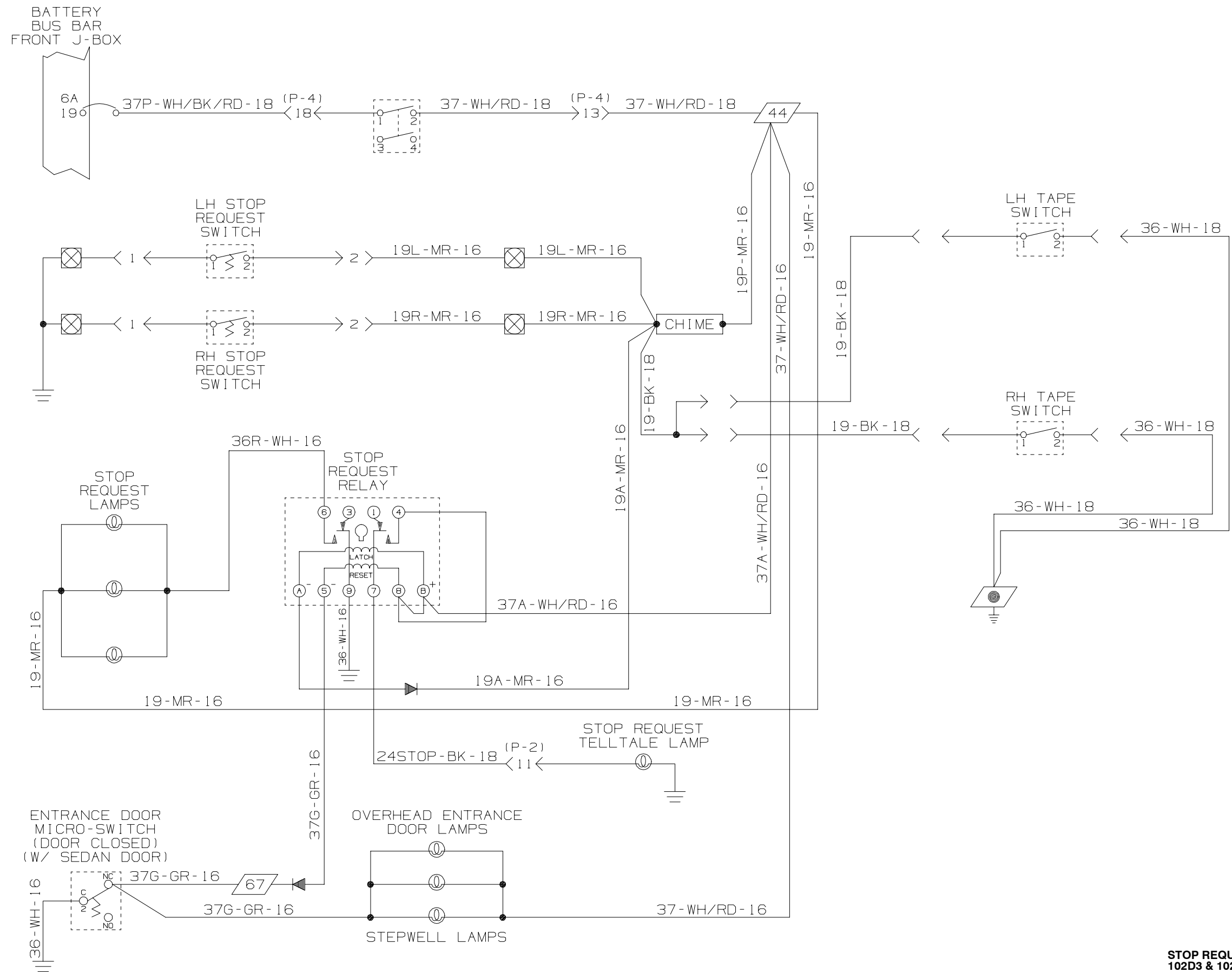


	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	BK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

LEGEND

IN-STATION LIGHTING
102D3 & 102DL3
7L-13-2322 (REV A)

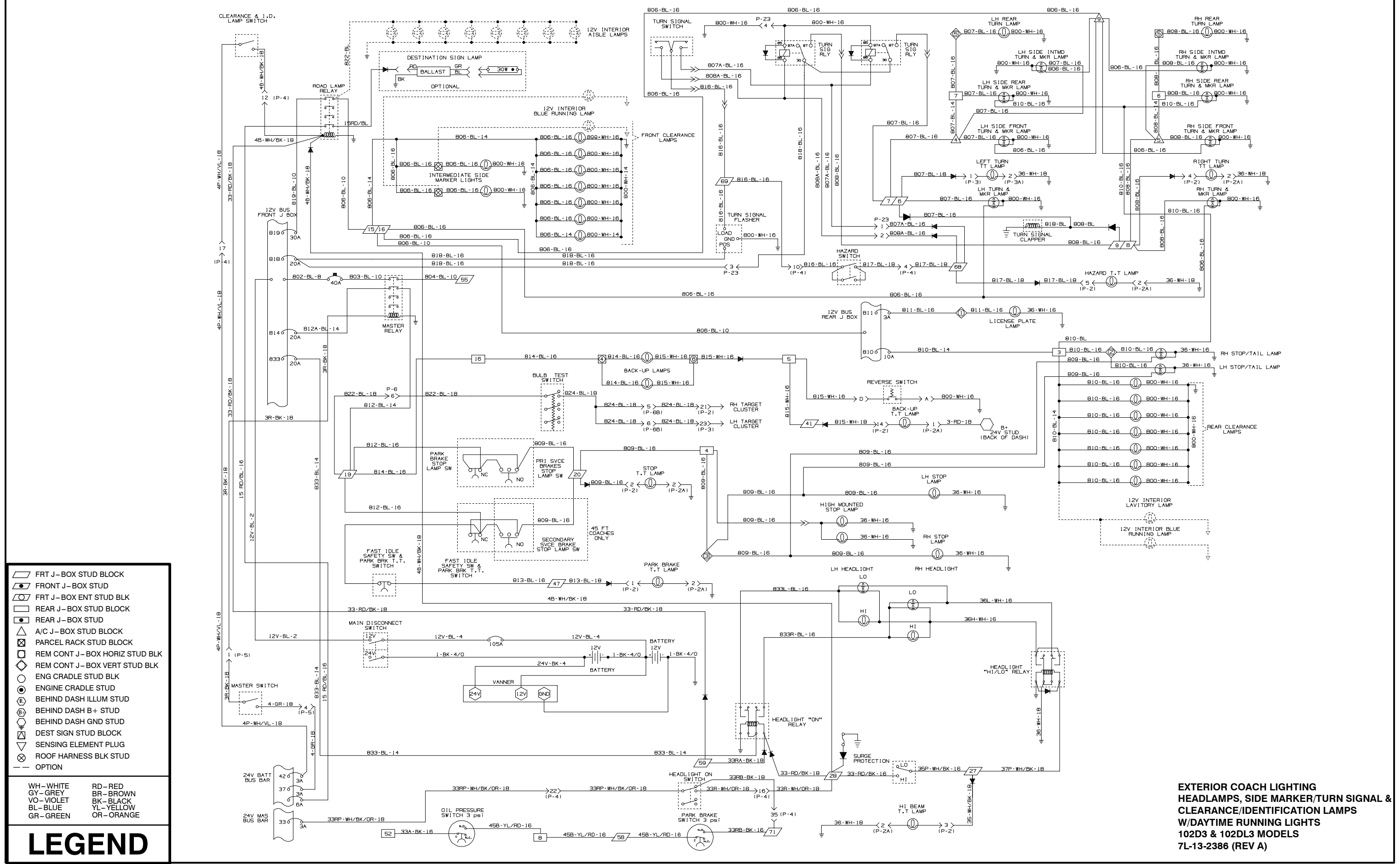


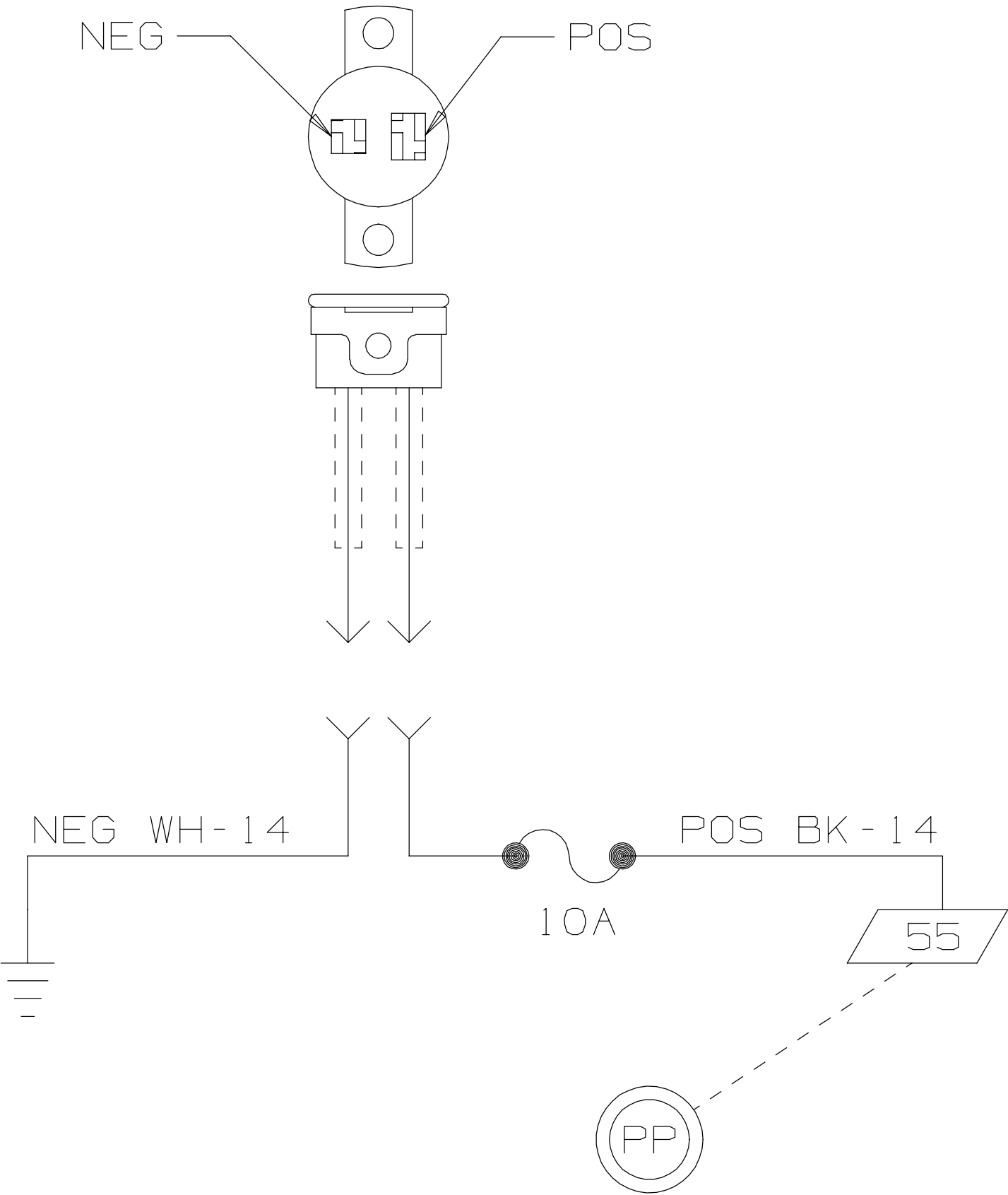
	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	BK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

LEGEND

STOP REQUEST SIGN INSTALLATION
102D3 & 102DL3 MODELS
7L-13-2376 (REV. C)



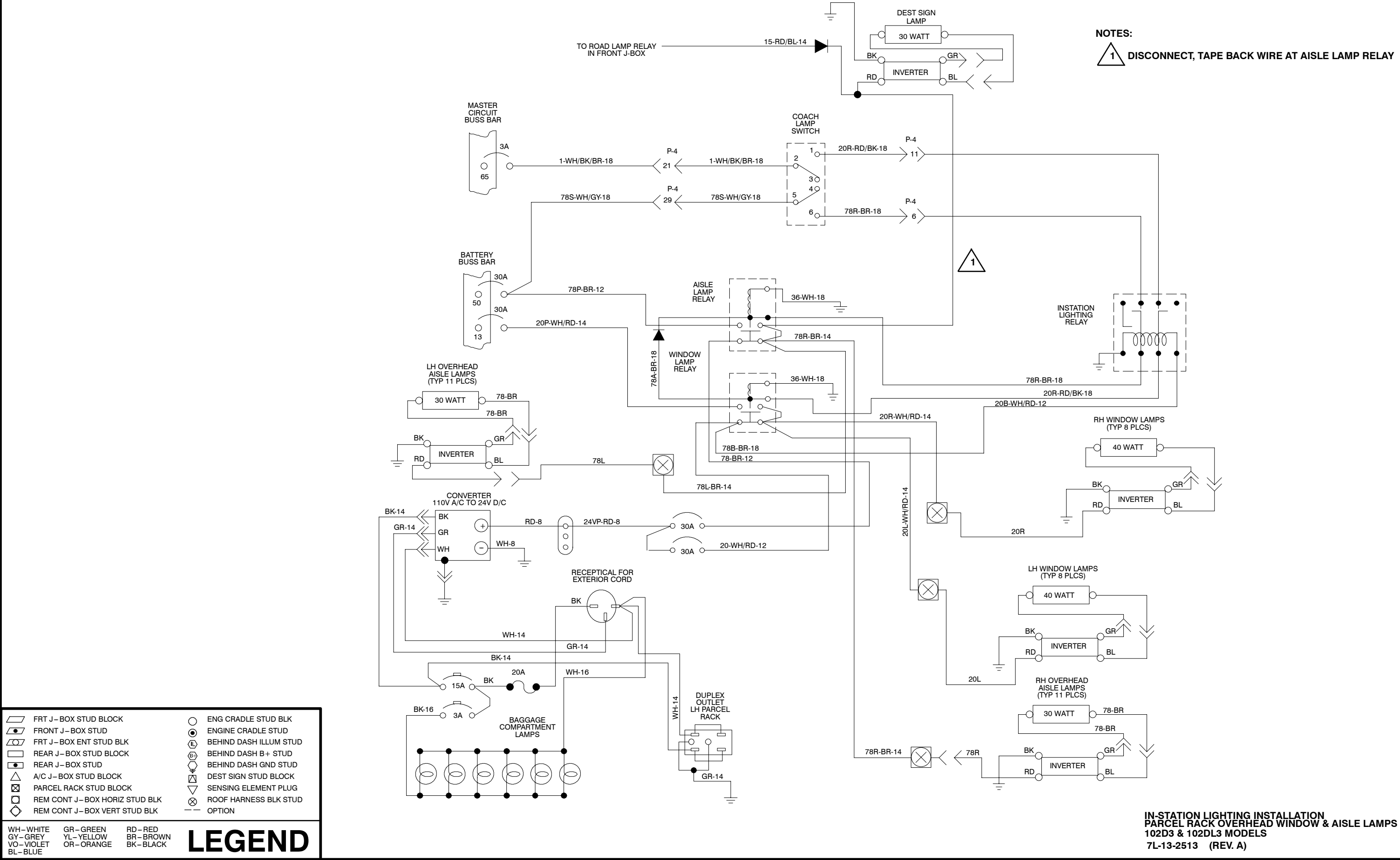


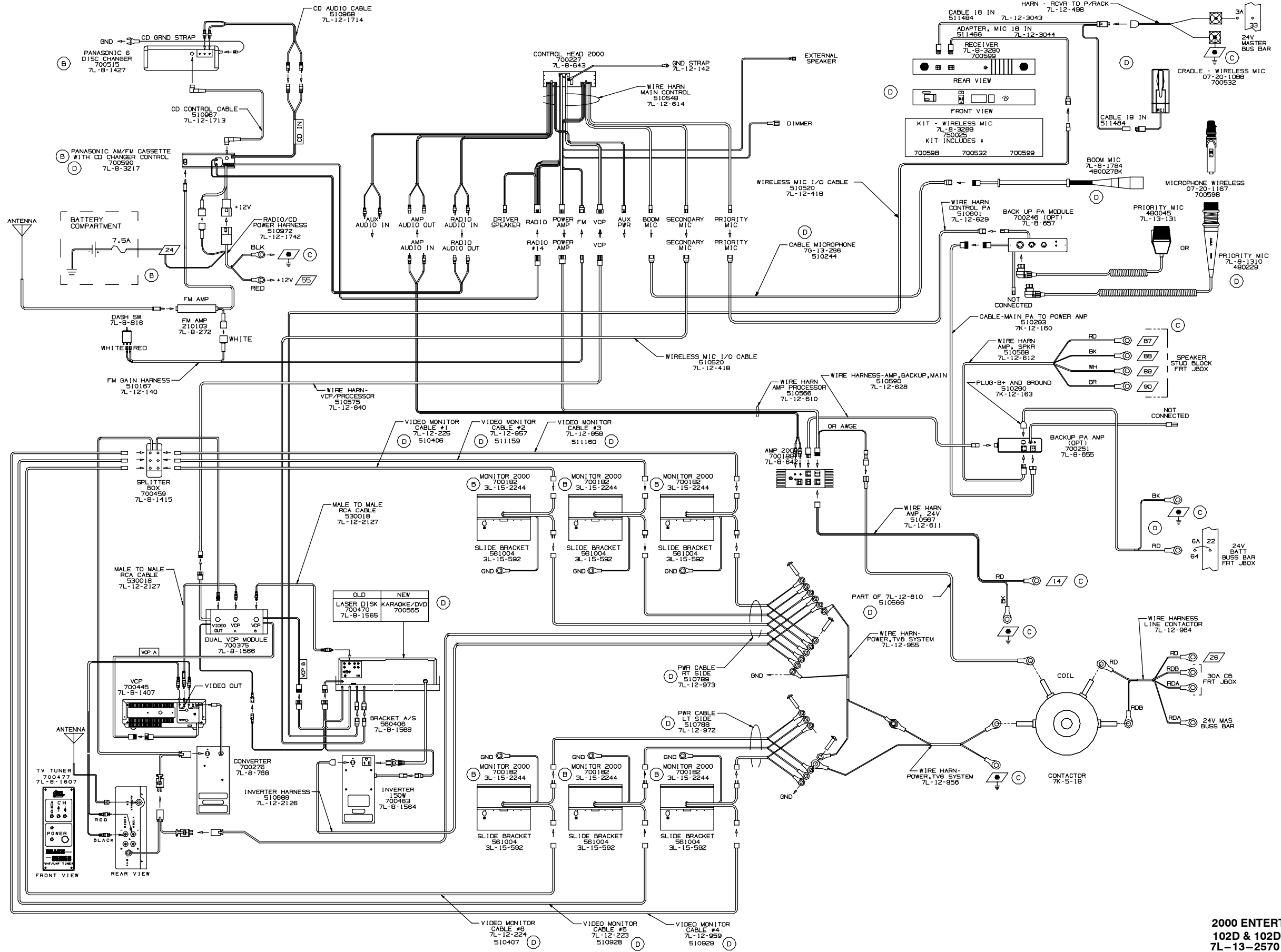
	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	BK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

LEGEND

12V POWER SOURCE
102D3 & 102DL3
7L-13-2447 (REV A)





- FRT J-BOX STUD BLOCK
 - FRONT J-BOX STUD
 - FRT J-BOX ENT STUD BLK
 - REAR J-BOX STUD BLOCK
 - REAR J-BOX STUD
 - A/C J-BOX STUD BLOCK
 - PARCEL RACK STUD BLOCK
 - REM CONT J-BOX HORIZ STUD BLK
 - REM CONT J-BOX VERT STUD BLK
 - ENG CRADLE STUD BLK
 - ENGINE CRADLE STUD
 - BEHIND DASH ILLUM STUD
 - BEHIND DASH B+ STUD
 - BEHIND DASH GND STUD
 - DEST SIGN STUD BLOCK
 - SENSING ELEMENT PLUG
 - ROOF HARNESS BLK STUD
 - OPTION
- | | |
|-----------|-----------|
| WH-WHITE | RD-RED |
| GY-GRAY | BR-BROWN |
| VO-VIOLET | BK-BLACK |
| BL-BLUE | YL-YELLOW |
| GR-GREEN | OR-ORANGE |

LEGEND

2000 ENTERTAINMENT SYSTEM
102D & 102DL3
7L-13-2570 (REV D)

FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

BR-BROWN

VO-VIOLET

BK-BLACK

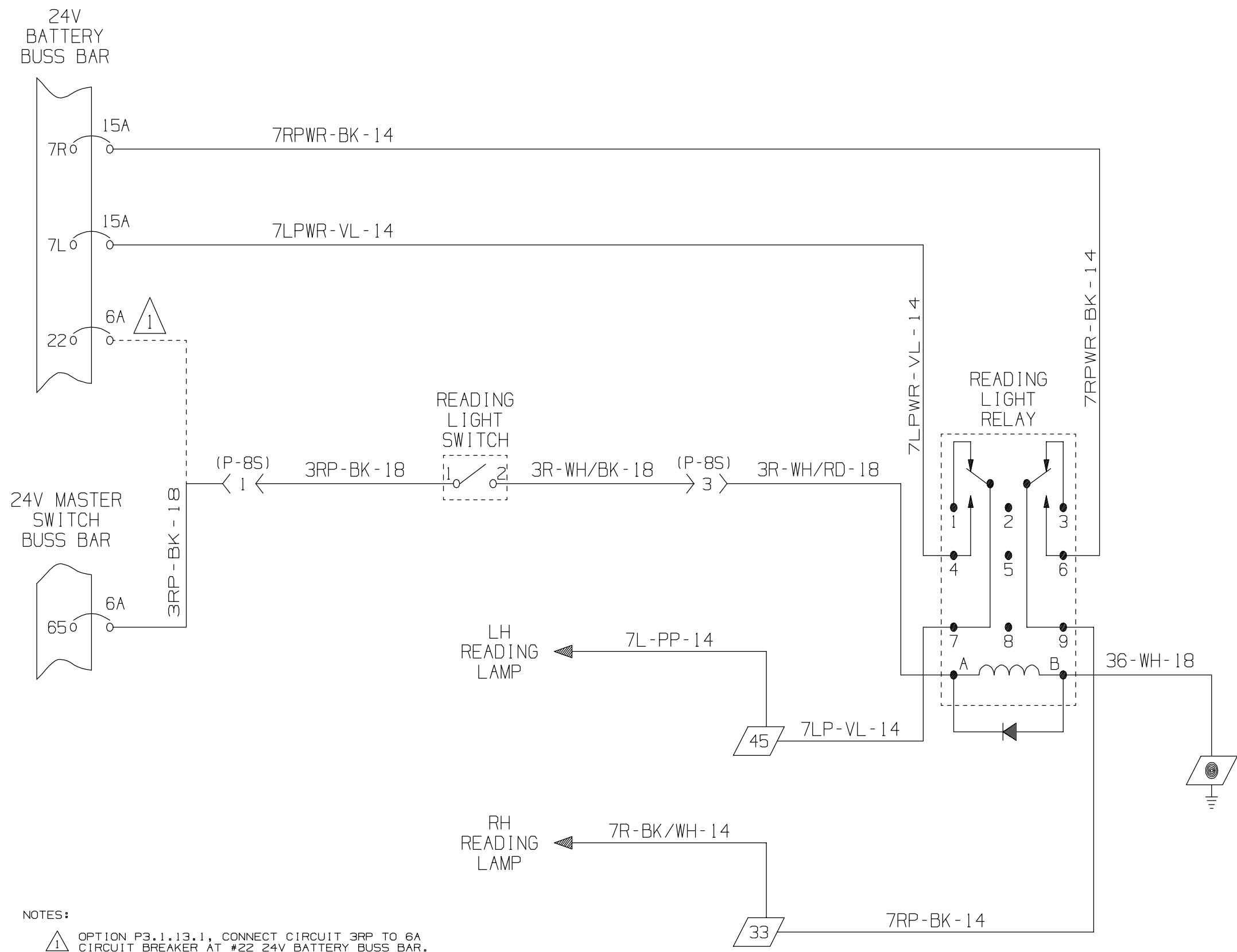
BL-BLUE

YL-YELLOW

GR-GREEN

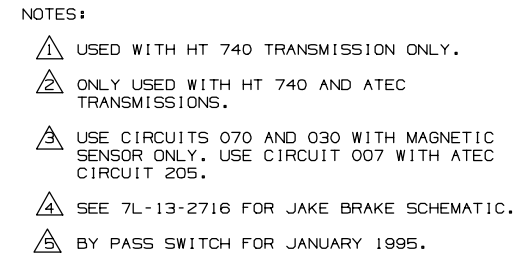
OR-ORANGE

LEGEND



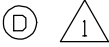
NOTES:

1 OPTION P3.1.13.1, CONNECT CIRCUIT 3RP TO 6A CIRCUIT BREAKER AT #22 24V BATTERY BUSS BAR.

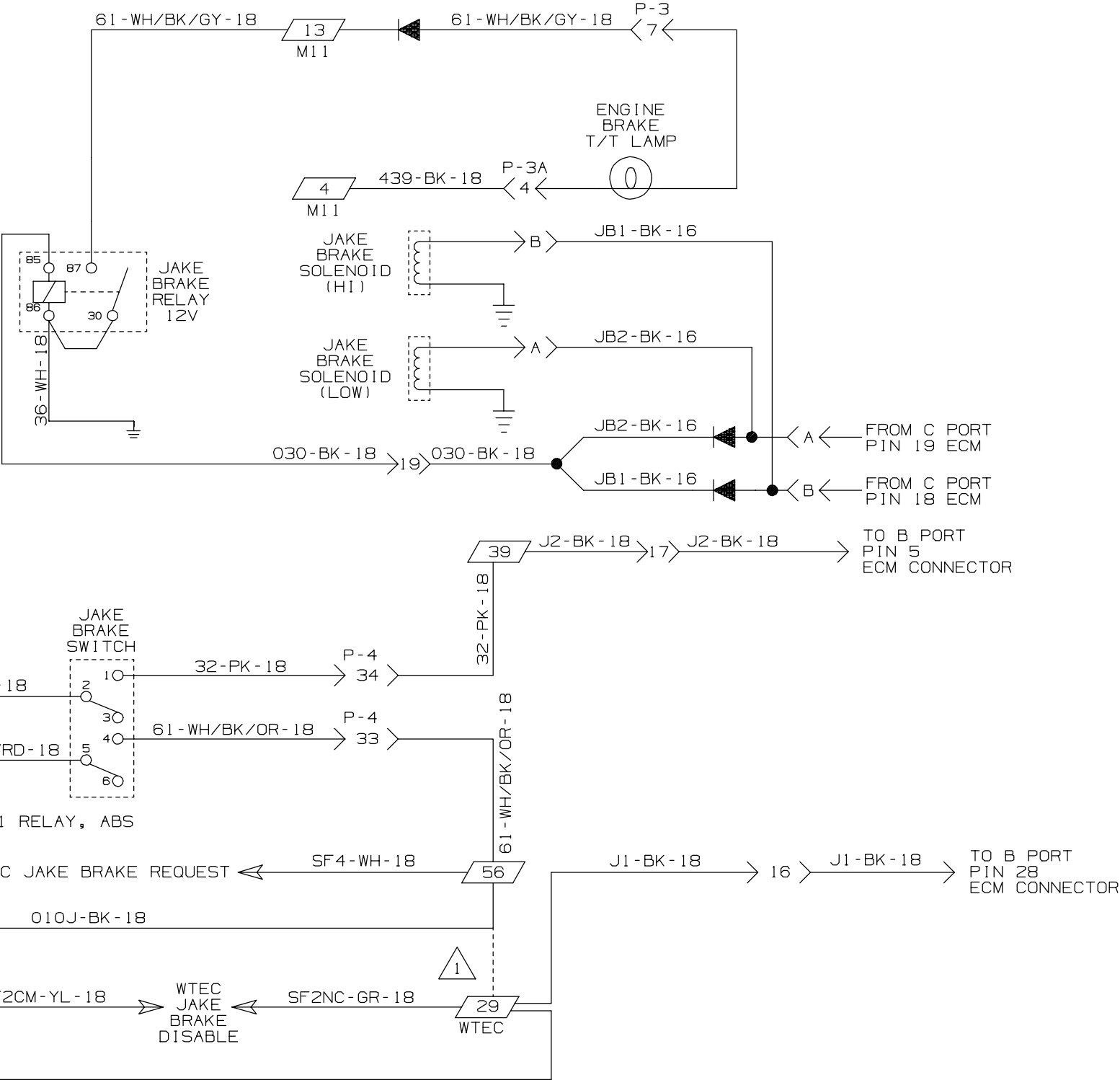


**CUMMINS INSTALLATION W/DIAGNOSTIC
SWITCH
102D3 & 102DL3
7L-13-2715 (REV B)**

NOTES:



FOR COACHES EQUIPPED WITHOUT B500 TRANSMISSIONS,
CONNECT 010J TO WTEC STUD 29.

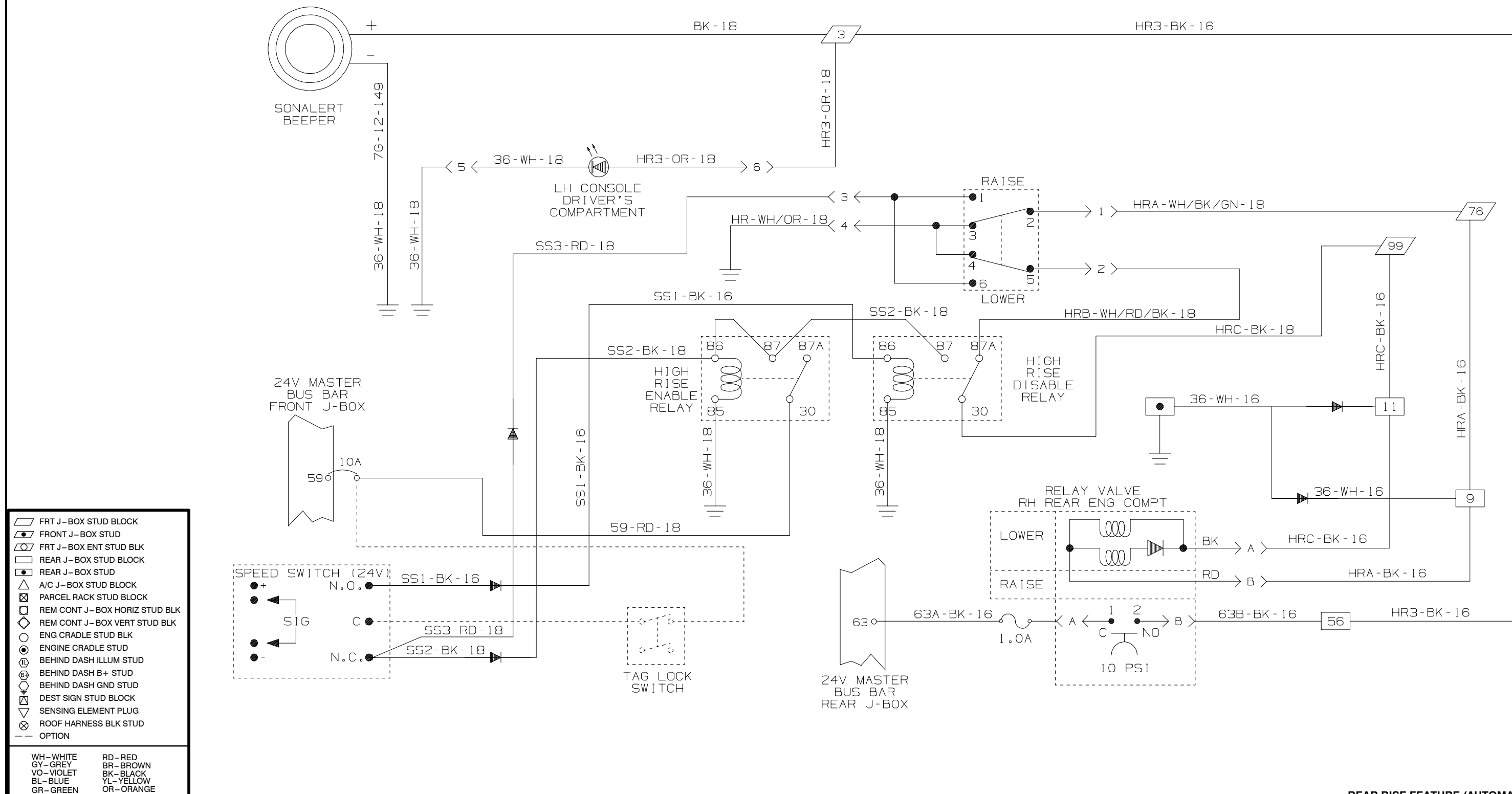


	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

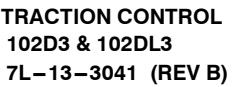
WH-WHITE	RD-RED
GY-GREY	BR-BROWN
VO-VIOLET	BK-BLACK
BL-BLUE	YL-YELLOW
GR-GREEN	OR-ORANGE

LEGEND

JACOBS ENGINE BRAKE (CUMMINS)
102D3 & 102DL3
7L-13-2716 (REV D)

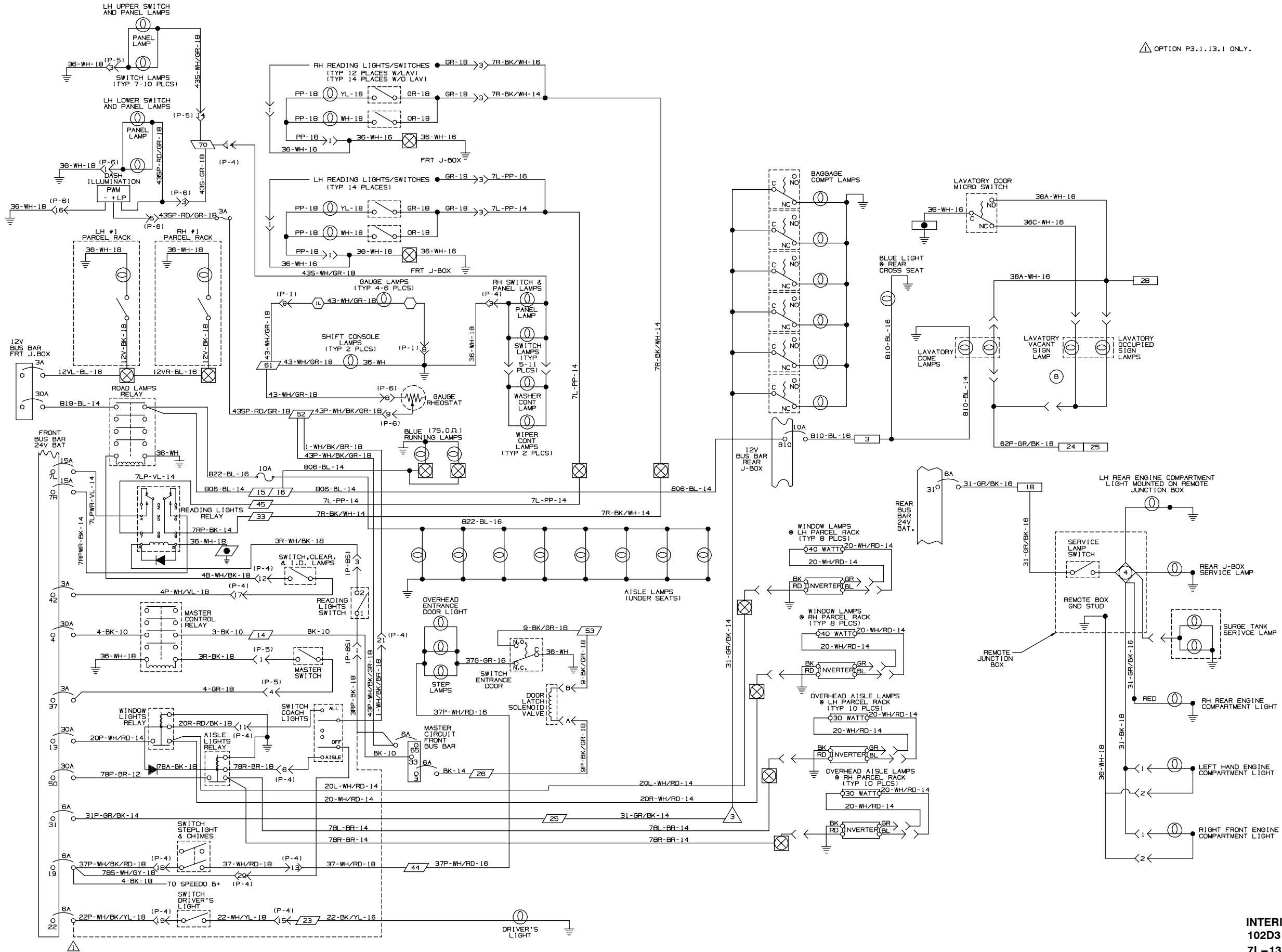


REAR RISE FEATURE (AUTOMATIC)
102D3 & 102DL3 MODELS
7L-13-2858 (REV. C)



WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE
GR-GREEN
RD-RED
BR-BROWN
BK-BLACK
YL-YELLOW
OR-ORANGE

△ OPTION P3.1.13.1 ONLY.



FRT J-BOX STUD BLOCK

FRONT J-BOX STUD

FRT J-BOX ENT STUD BLK

REAR J-BOX STUD BLOCK

REAR J-BOX STUD

A/C J-BOX STUD BLOCK

PARCEL RACK STUD BLOCK

REM CONT J-BOX HORIZ STUD BLK

REM CONT J-BOX VERT STUD BLK

ENG CRADLE STUD BLK

ENGINE CRADLE STUD

BEHIND DASH ILLUM STUD

BEHIND DASH B+ STUD

BEHIND DASH GND STUD

DEST SIGN STUD BLOCK

SENSING ELEMENT PLUG

ROOF HARNESS BLK STUD

OPTION

WH-WHITE

RD-RED

GY-GREY

VO-VIOLET

BL-BLUE

GR-GREEN

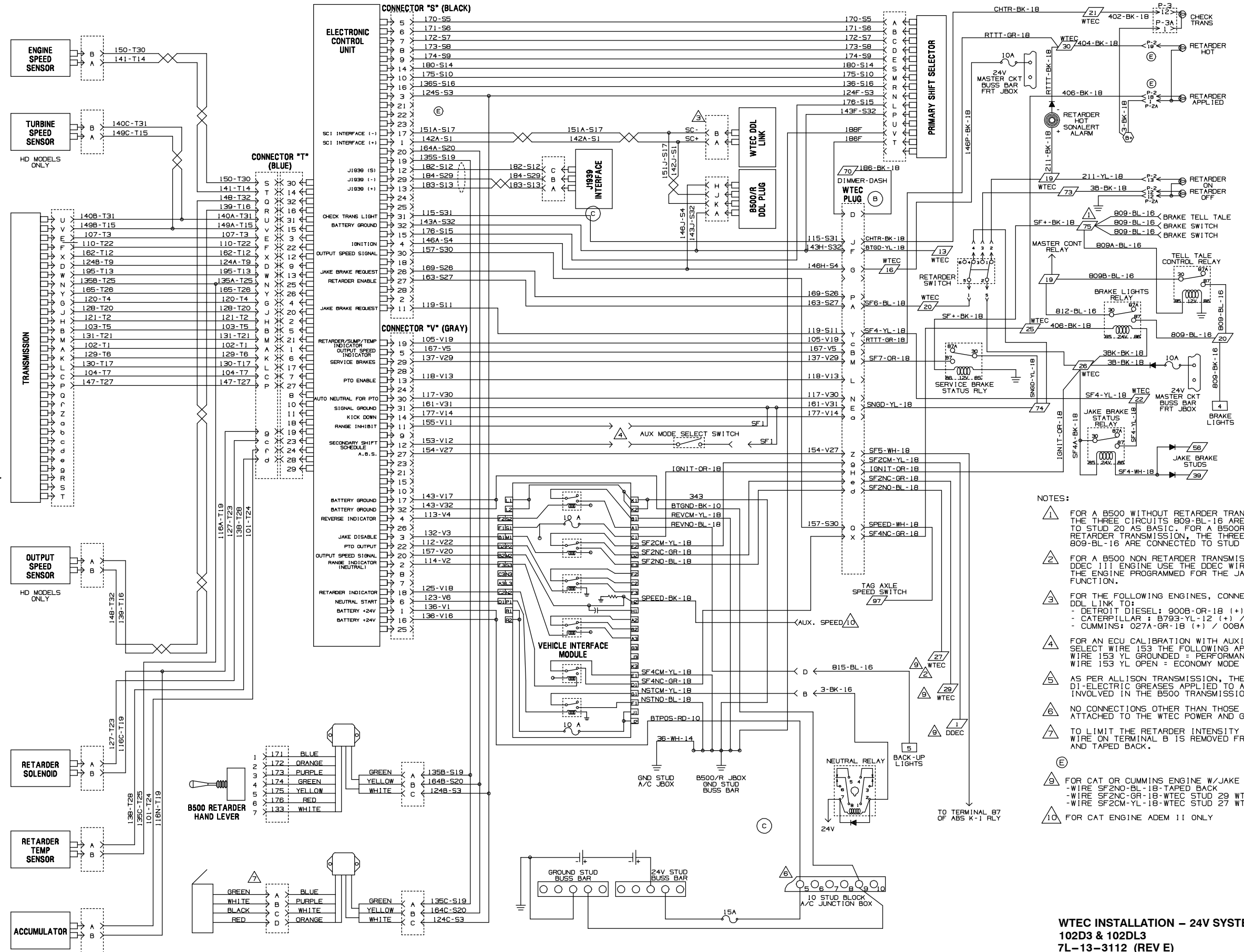
BR-BROWN

BK-BLACK

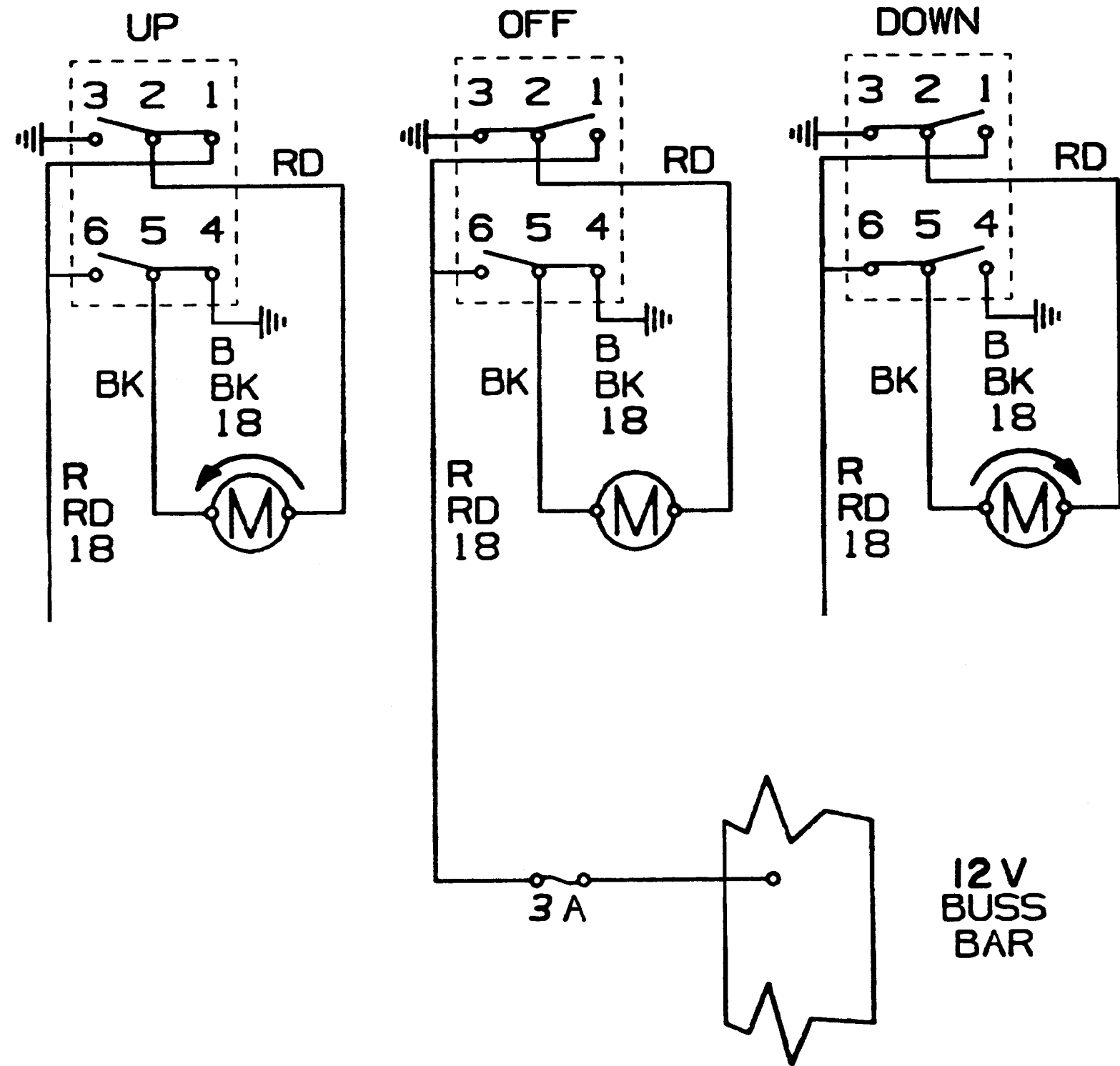
YL-YELLOW

OR-ORANGE

LEGEND



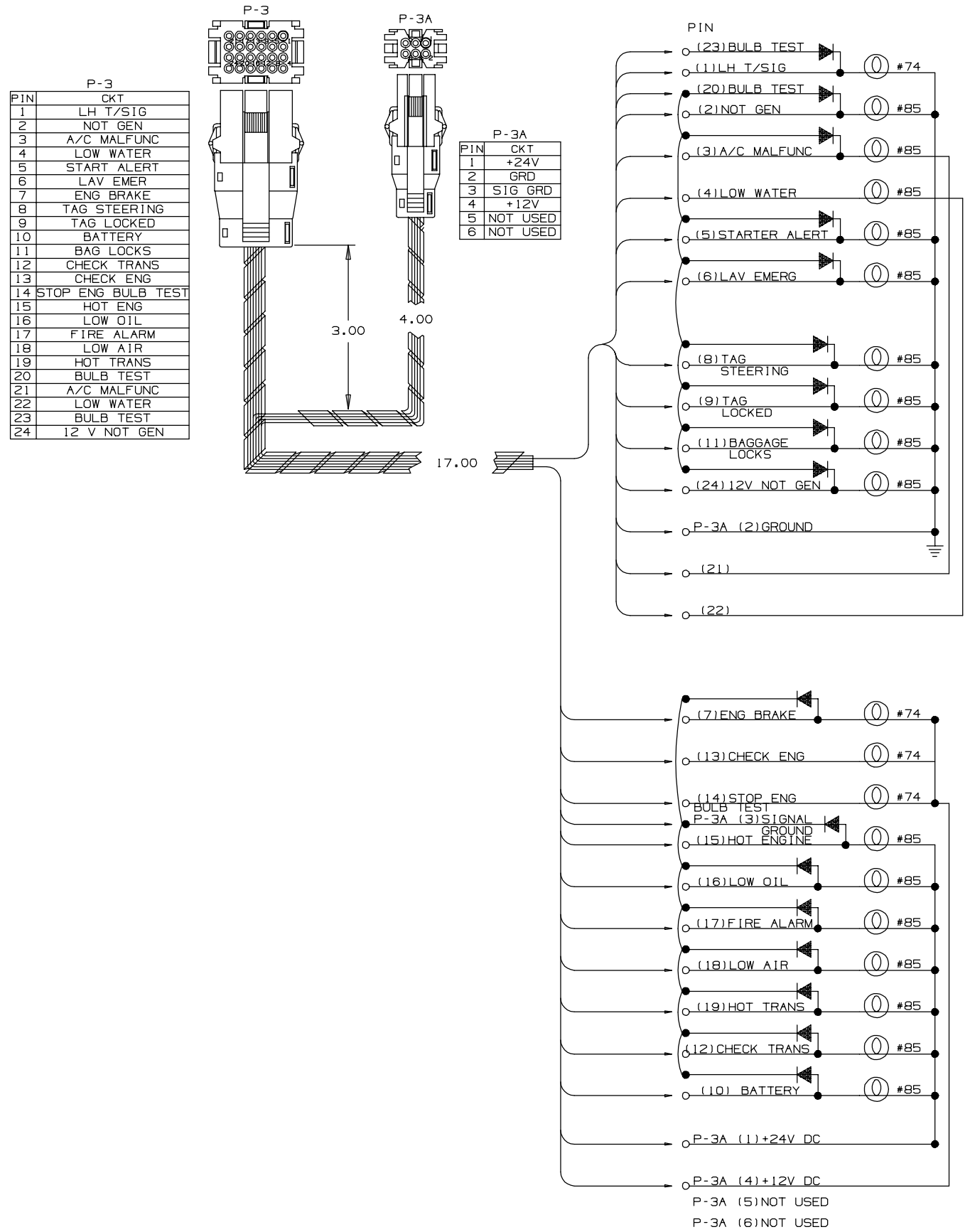
WTEC INSTALLATION - 24V SYSTEM (B500 & B5500R)
102D3 & 102DL3
7L-13-3112 (REV E)



	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

LEGEND

WH - WHITE	RD - RED
GY - GREY	BR - BROWN
VO - VIOLET	BK - BLACK
BL - BLUE	YL - YELLOW
GR - GREEN	OR - ORANGE

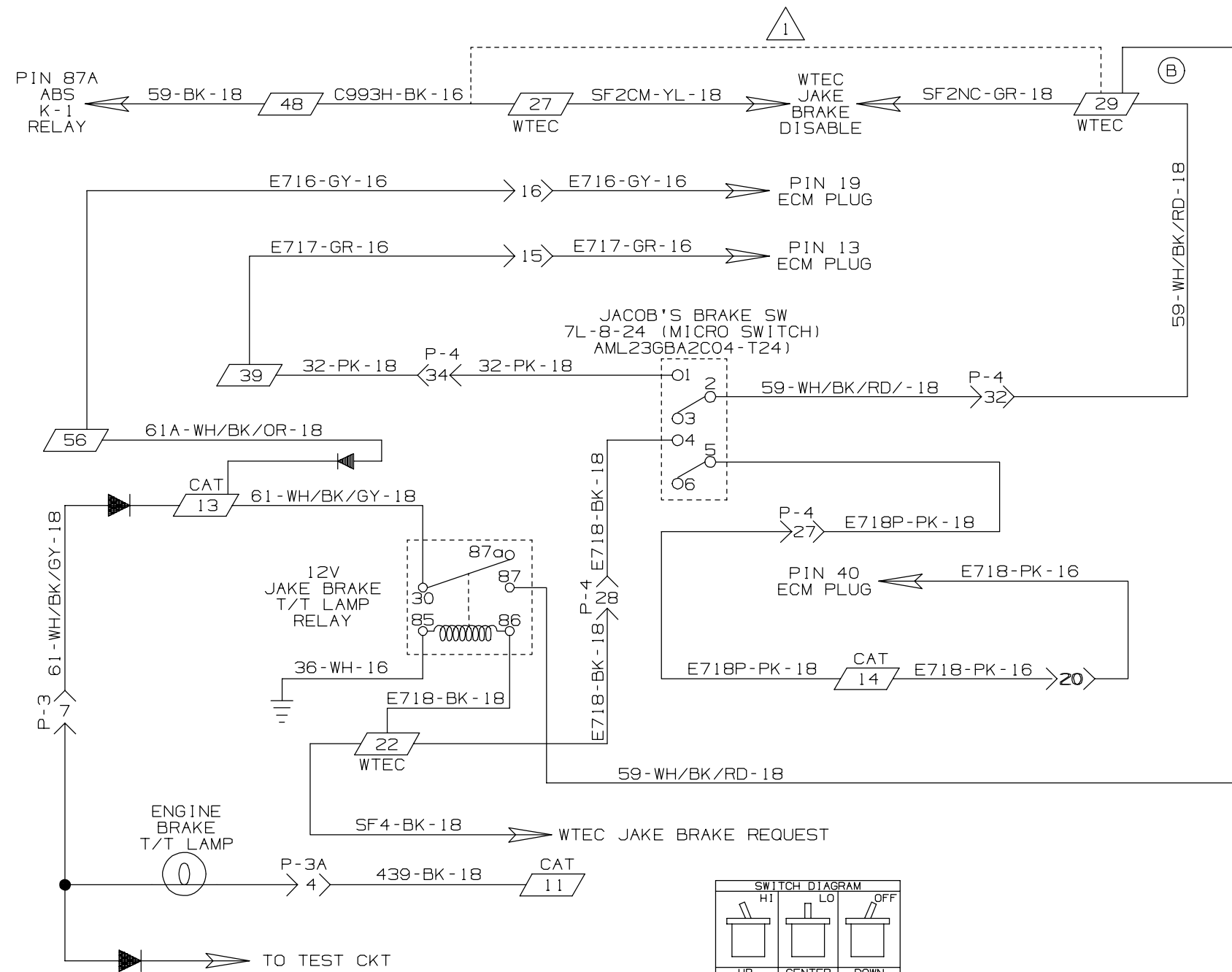


	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH-WHITE	RD-RED
GY-GREY	BR-BROWN
VO-VIOLET	BK-BLACK
BL-BLUE	YL-YELLOW
GR-GREEN	OR-ORANGE

LEGEND

LH TARGET CLUSTER W/TEST CIRCUIT
102D3 & 102DL3
7L-13-3146 (REV A)



NOTES :



FOR COACHES WITHOUT B500
TRANSMISSIONS, CONNECT
C993H JUMPER TO WTEC STUD 29.

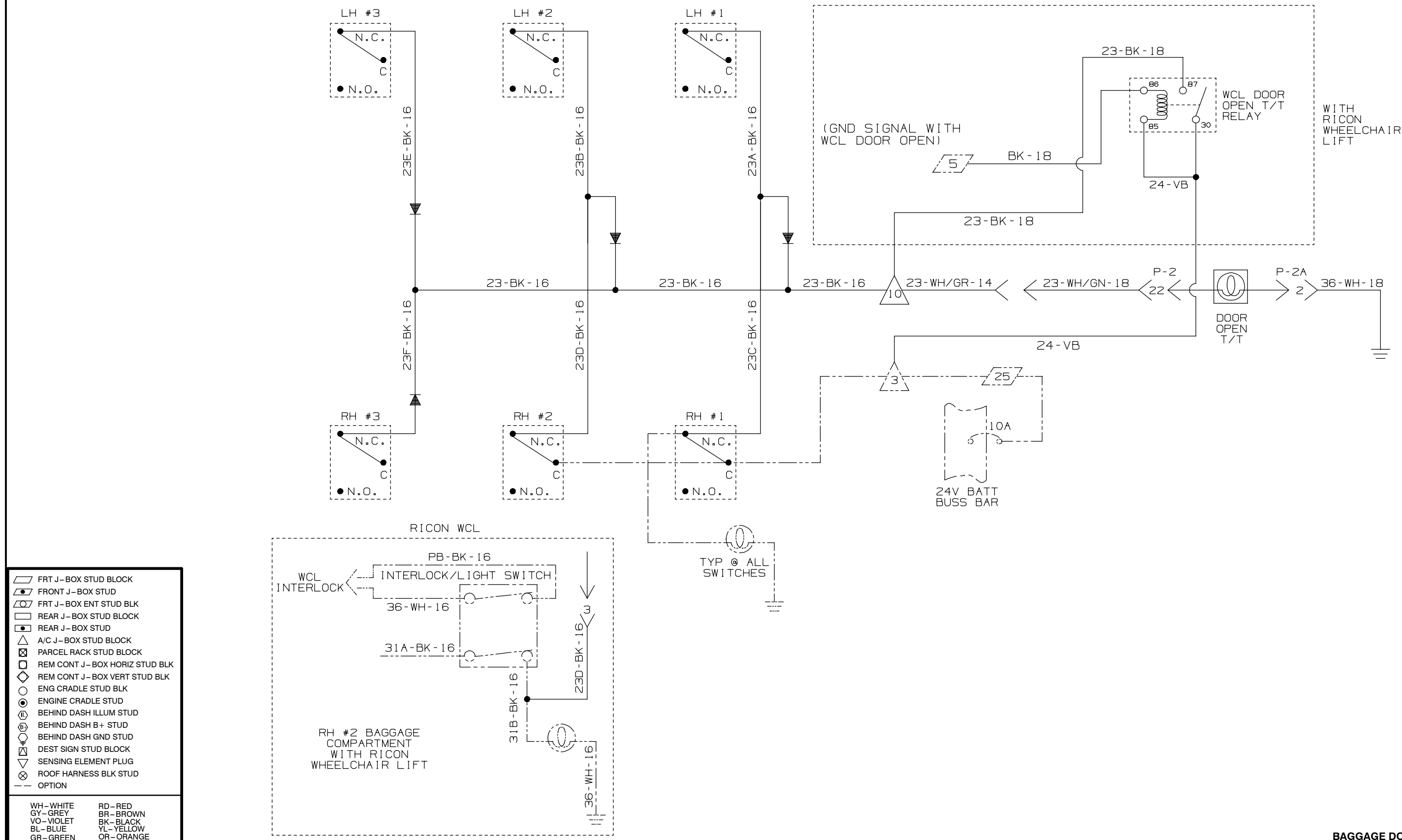
- | | |
|---|-------------------------------|
|  | FRT J-BOX STUD BLOCK |
|  | FRONT J-BOX STUD |
|  | FRT J-BOX ENT STUD BLK |
|  | REAR J-BOX STUD BLOCK |
|  | REAR J-BOX STUD |
|  | A/C J-BOX STUD BLOCK |
|  | PARCEL RACK STUD BLOCK |
|  | REM CONT J-BOX HORIZ STUD BLK |
|  | REM CONT J-BOX VERT STUD BLK |
|  | ENG CRADLE STUD BLK |
|  | ENGINE CRADLE STUD |
|  | BEHIND DASH ILLUM STUD |
|  | BEHIND DASH B+ STUD |
|  | BEHIND DASH GND STUD |
|  | DEST SIGN STUD BLOCK |
|  | SENSING ELEMENT PLUG |
|  | ROOF HARNESS BLK STUD |
|  | OPTION |

WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE
GR-GREEN
RD-RED
BR-BROWN
BK-BLACK
YL-YELLOW
OR-ORANGE

LEGEND

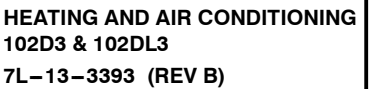
SWITCH DIAGRAM		
H1	LO	OF
UP	CENTER	DOWN

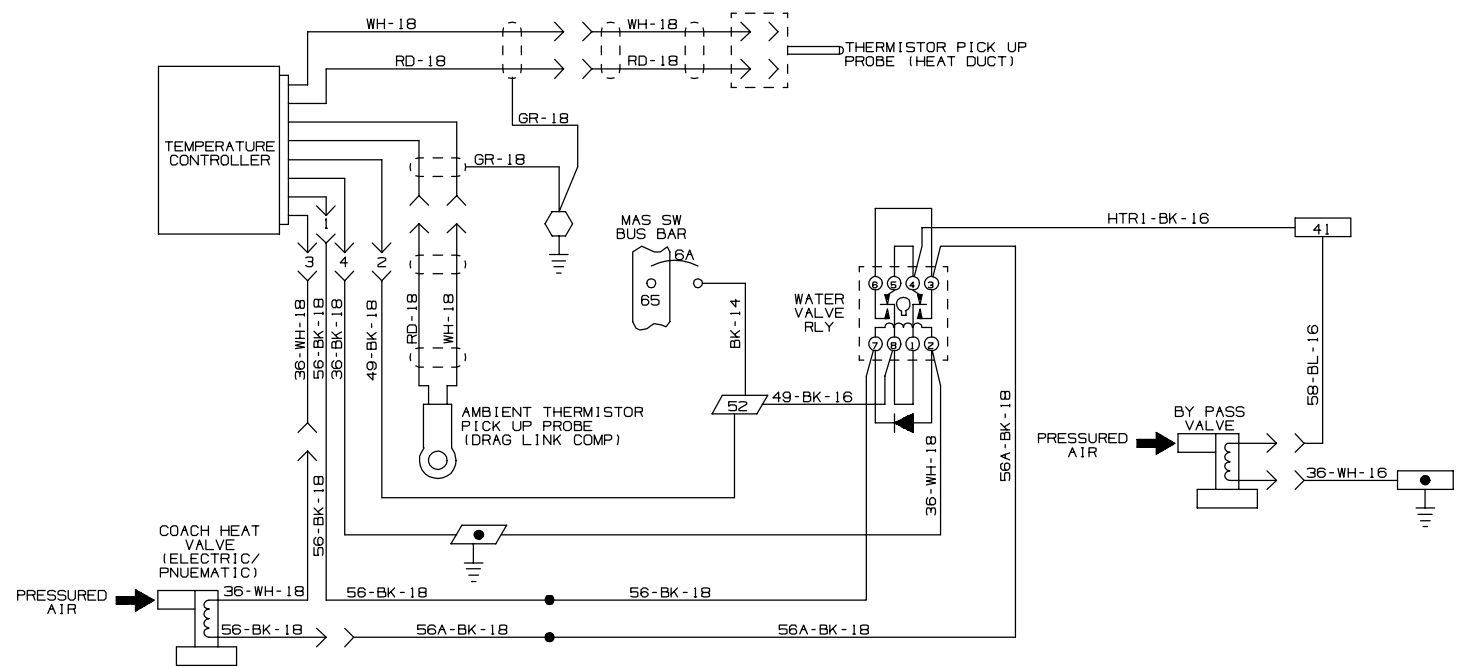
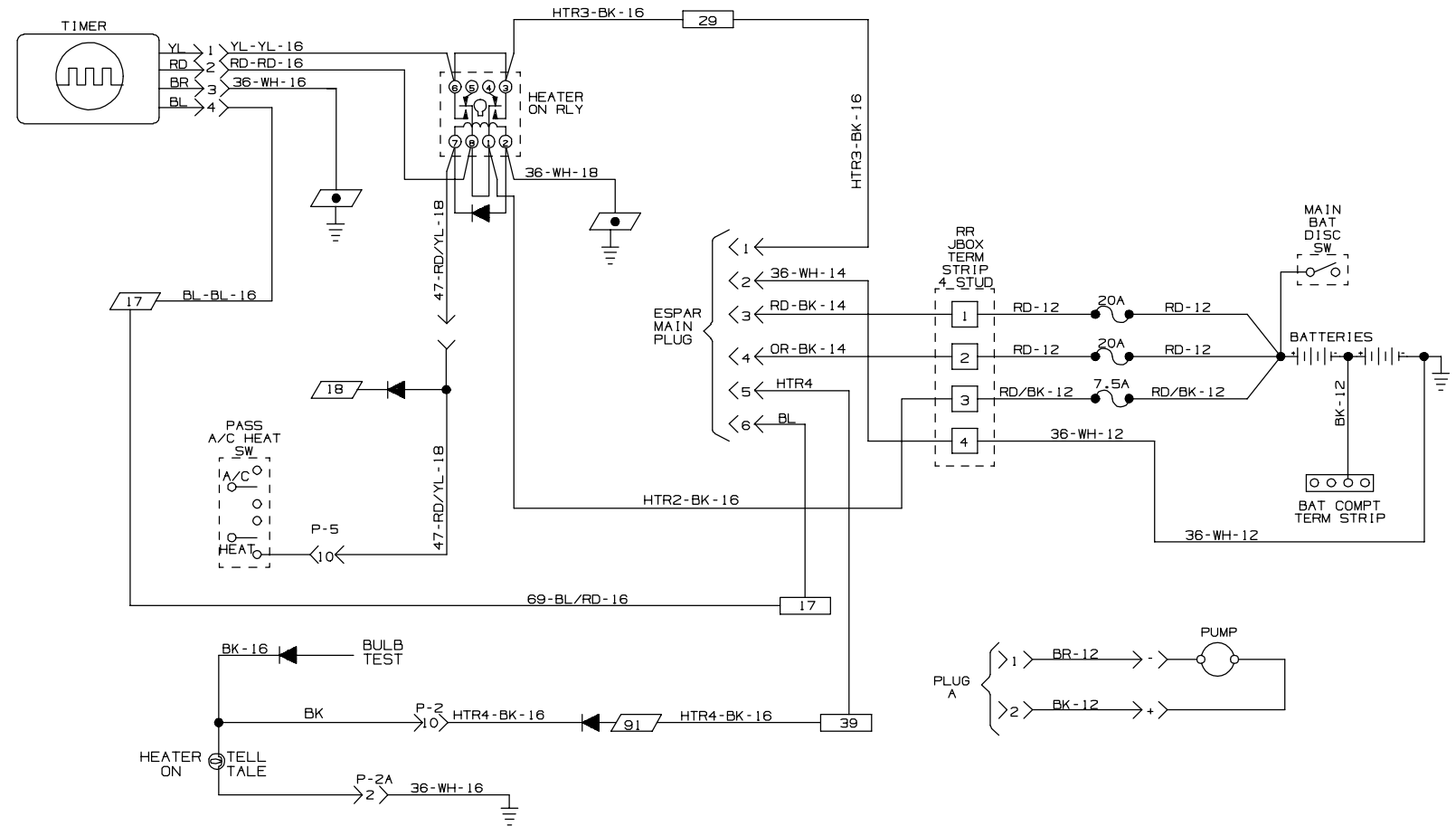
JACOBS ENGINE BRAKE (CATERPILLAR)
102D3 & 102DL3
7L-13-3219 (REV C)



LEGEND

BAGGAGE DOOR TELL-TALE
102D3 & 102DL3
7L-13-3226 (REV B)

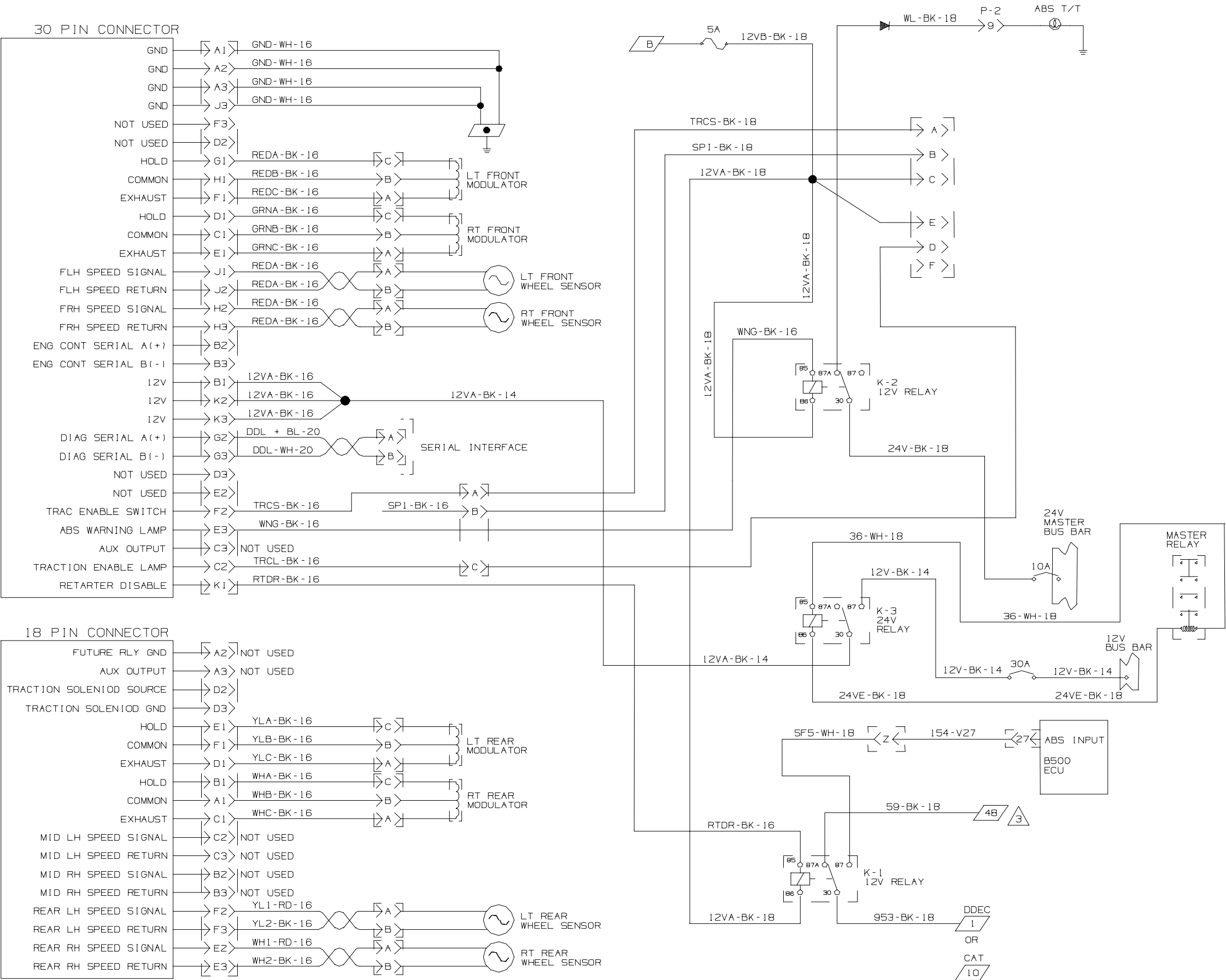




- FRT J-BOX STUD BLOCK
 - FRONT J-BOX STUD
 - FRT J-BOX ENT STUD BLK
 - REAR J-BOX STUD BLOCK
 - REAR J-BOX STUD
 - A/C J-BOX STUD BLOCK
 - PARCEL RACK STUD BLOCK
 - REM CONT J-BOX HORIZ STUD BLK
 - REM CONT J-BOX VERT STUD BLK
 - ENG CRADLE STUD BLK
 - ENGINE CRADLE STUD
 - BEHIND DASH ILLUM STUD
 - BEHIND DASH B+ STUD
 - BEHIND DASH GND STUD
 - DEST SIGN STUD BLOCK
 - SENSING ELEMENT PLUG
 - ROOF HARNESS BLK STUD
 - OPTION
- | | |
|-----------|-----------|
| WH-WHITE | RD-RED |
| GY-GREY | BR-BROWN |
| VO-VIOLET | BK-BLACK |
| BL-BLUE | YL-YELLOW |
| GR-GREEN | OR-ORANGE |

LEGEND

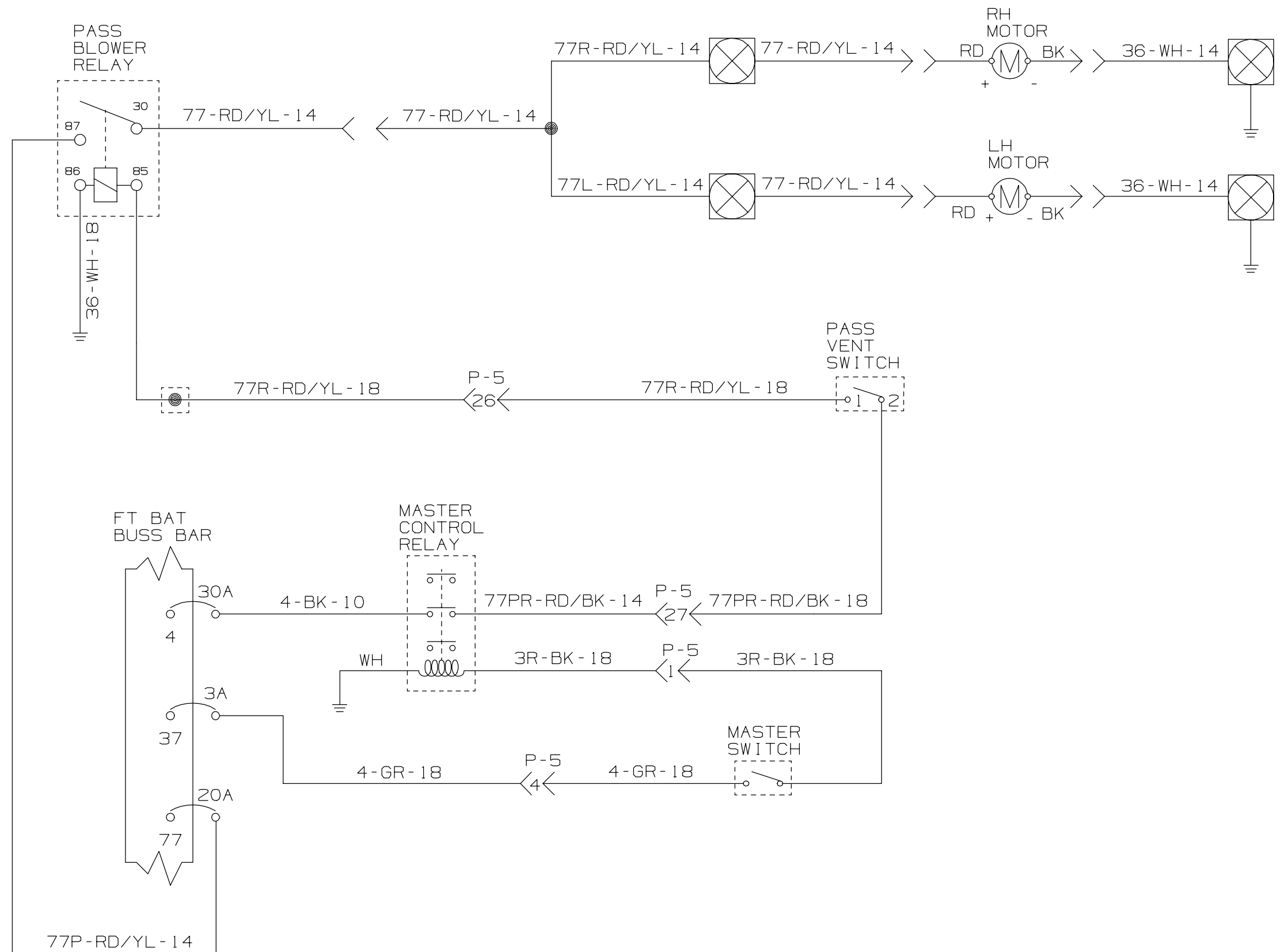
ESPAR HEATER
102D3 & 102DL3
7L-13-3323 (REV A)



	FRT J-BOX STUD BLOCK
	FRONT J-BOX STUD
	FRT J-BOX ENT STUD BLK
	REAR J-BOX STUD BLOCK
	REAR J-BOX STUD
	A/C J-BOX STUD BLOCK
	PARCEL RACK STUD BLOCK
	REM CONT J-BOX HORIZ STUD BLK
	REM CONT J-BOX VERT STUD BLK
	ENG CRADLE STUD BLK
	ENGINE CRADLE STUD
	BEHIND DASH ILLUM STUD
	BEHIND DASH B+ STUD
	BEHIND DASH GND STUD
	DEST SIGN STUD BLOCK
	SENSING ELEMENT PLUG
	ROOF HARNESS BLK STUD
	OPTION

WH-WHITE	RD-RED
GY-GREY	BR-BROWN
VO-VIOLET	BK-BLACK
BL-BLUE	YL-YELLOW
GR-GREEN	OR-ORANGE

LEGEND

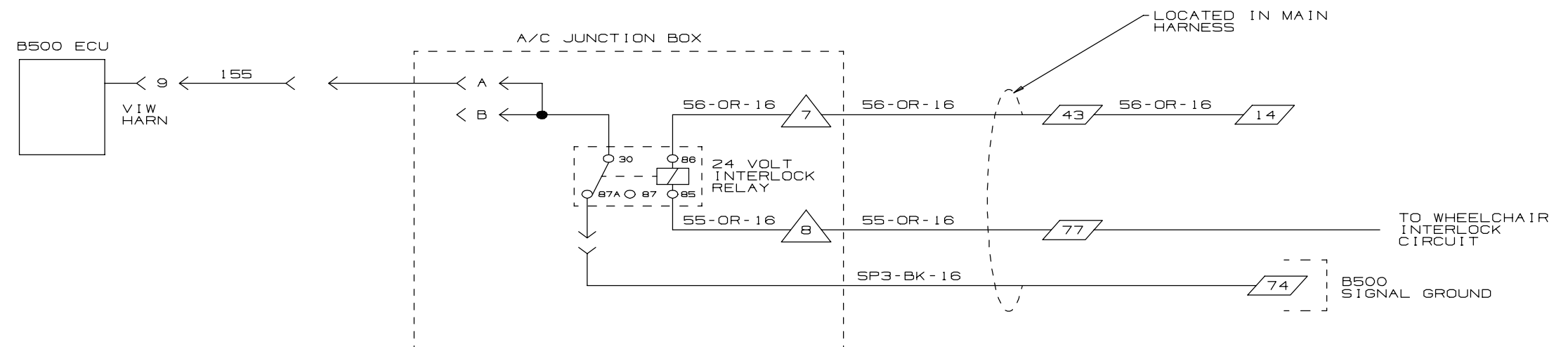
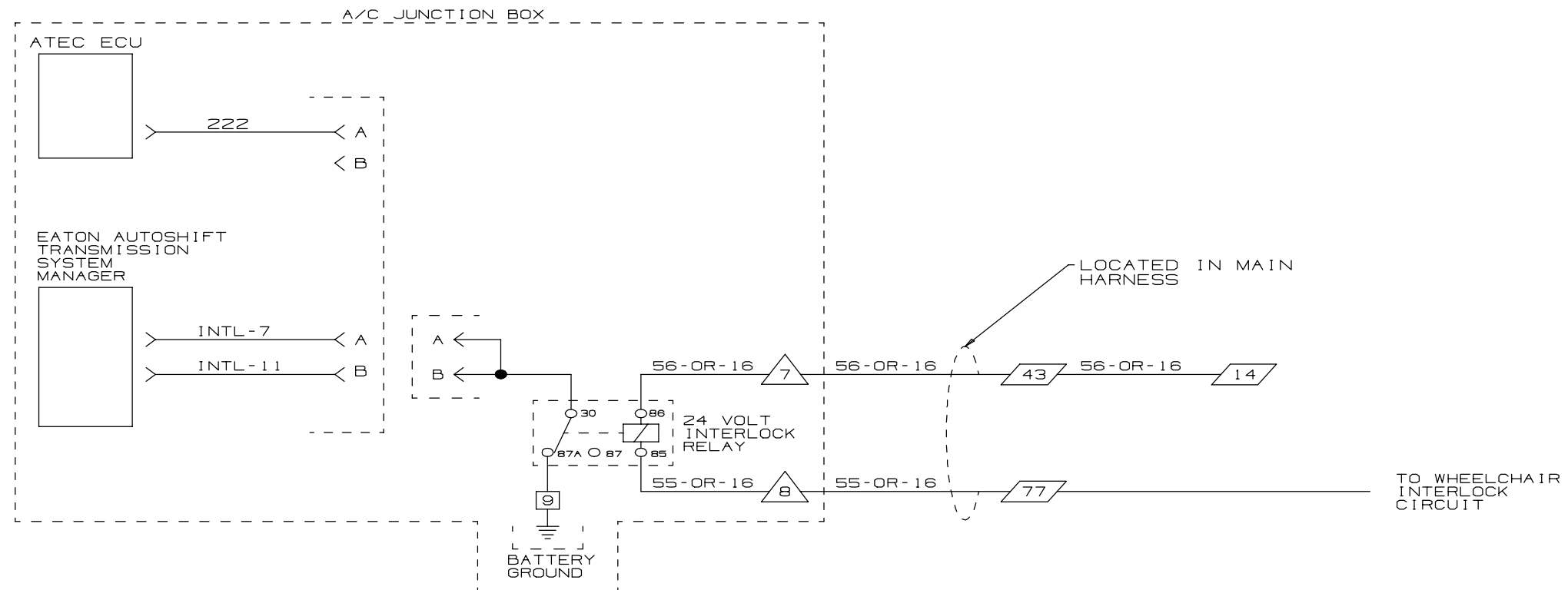


- FRT J-BOX STUD BLOCK
- FRONT J-BOX STUD
- FRT J-BOX ENT STUD BLK
- REAR J-BOX STUD BLOCK
- REAR J-BOX STUD
- A/C J-BOX STUD BLOCK
- PARCEL RACK STUD BLOCK
- REM CONT J-BOX HORIZ STUD BLK
- REM CONT J-BOX VERT STUD BLK
- ENG CRADLE STUD BLK
- ENGINE CRADLE STUD
- BEHIND DASH ILLUM STUD
- BEHIND DASH B+ STUD
- BEHIND DASH GND STUD
- DEST SIGN STUD BLOCK
- SENSING ELEMENT PLUG
- ROOF HARNESS BLK STUD
- OPTION

WH-WHITE RD-RED
 GY-GREY BR-BROWN
 VO-VIOLET BK-BLACK
 BL-BLUE YL-YELLOW
 GR-GREEN OR-ORANGE

LEGEND

Parcel Rack Blowers Schematic
 102D3 & 102DL3 MODELS
 7L-13-3391

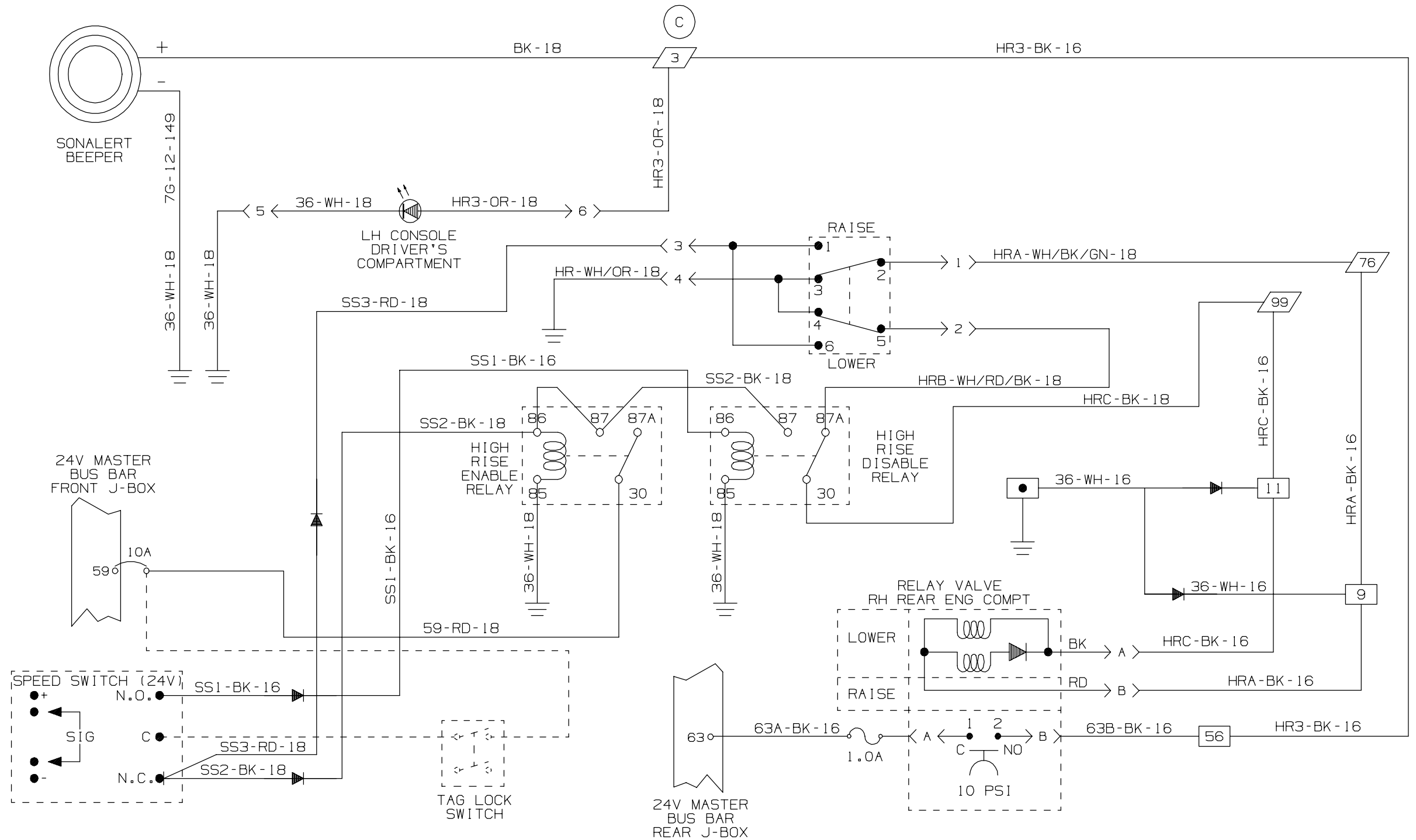


- | | |
|---|---------------------------------|
|  | FRT J - BOX STUD BLOCK |
|  | FRONT J - BOX STUD |
|  | FRT J - BOX ENT STUD BLK |
|  | REAR J - BOX STUD BLOCK |
|  | REAR J - BOX STUD |
|  | A/C J - BOX STUD BLOCK |
|  | PARCEL RACK STUD BLOCK |
|  | REM CONT J - BOX HORIZ STUD BLK |
|  | REM CONT J - BOX VERT STUD BLK |
|  | ENG CRADLE STUD BLK |
|  | ENGINE CRADLE STUD |
|  | BEHIND DASH ILLUM STUD |
|  | BEHIND DASH B+ STUD |
|  | BEHIND DASH GND STUD |
|  | DEST SIGN STUD BLOCK |
|  | SENSING ELEMENT PLUG |
|  | ROOF HARNESS BLK STUD |
|  | OPTION |

WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE
GR-GREEN
RD-RED
BR-BROWN
BK-BLACK
YL-YELLOW
OR-ORANGE

LEGEND

**NEUTRAL INTERLOCK
102D3 & 102DL3
7L-13-2127 (REV C)**

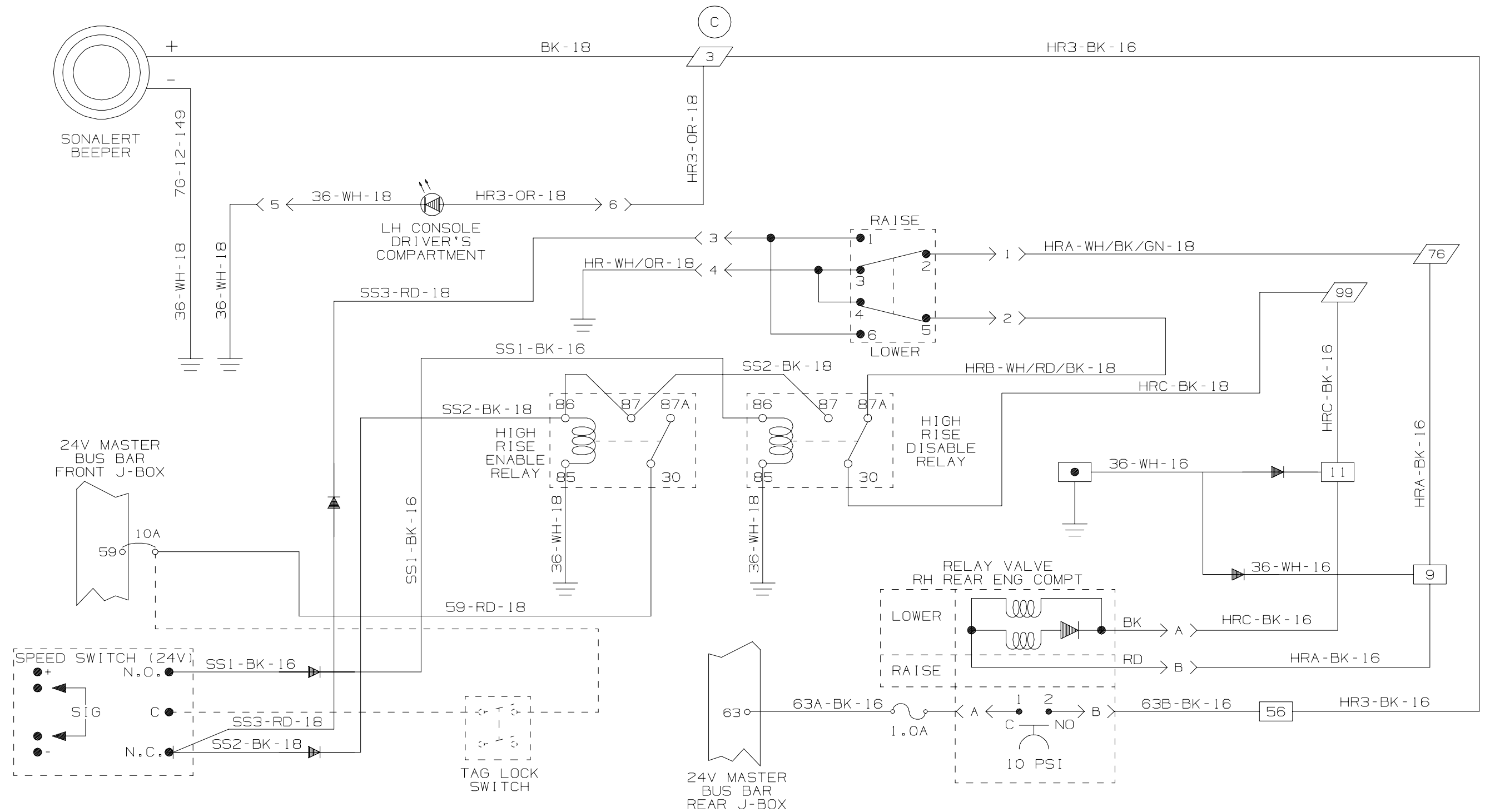


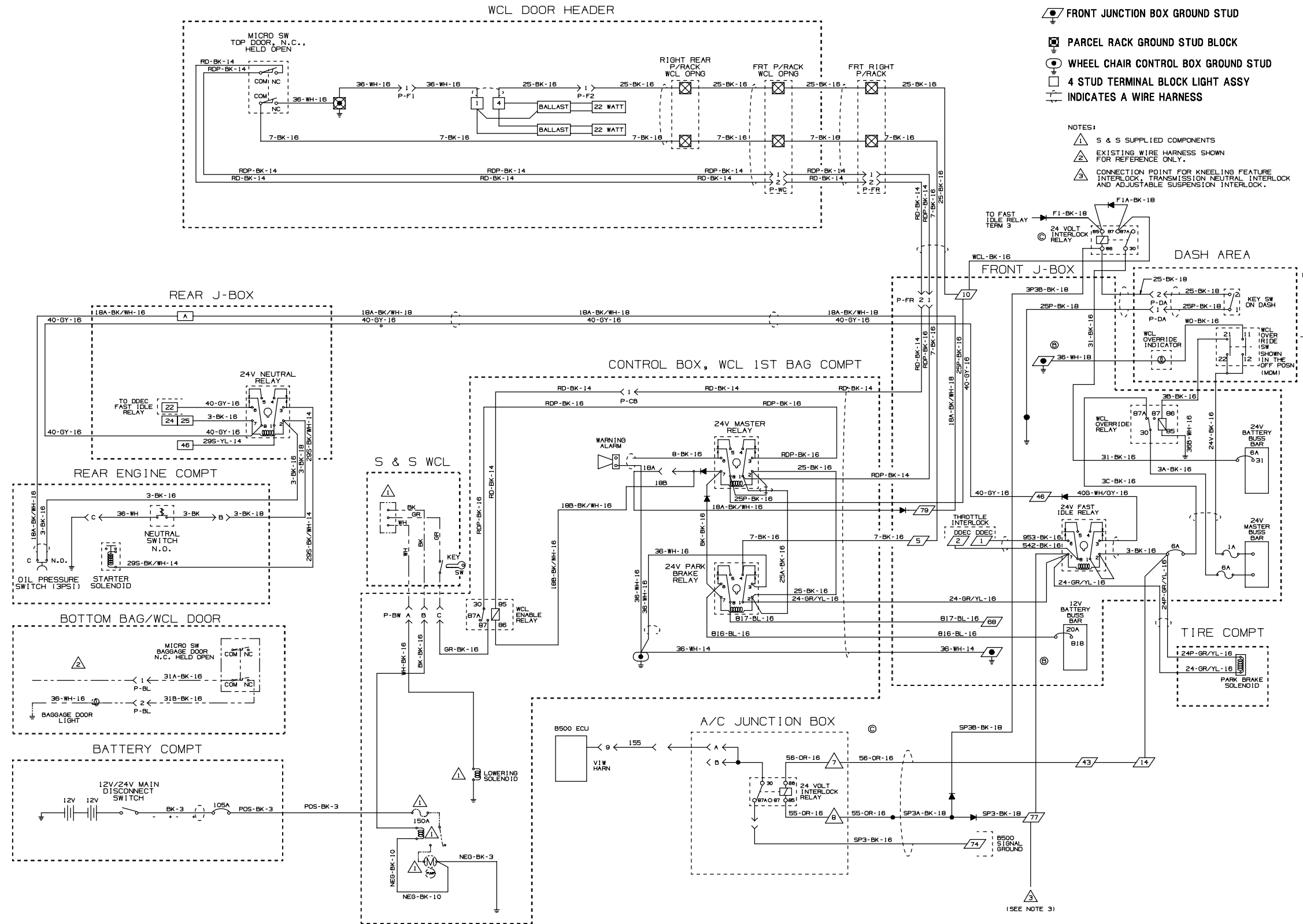
- FRT J-BOX STUD BLOCK
- FRONT J-BOX STUD
- FRT J-BOX ENT STUD BLK
- REAR J-BOX STUD BLOCK
- REAR J-BOX STUD
- A/C J-BOX STUD BLOCK
- PARCEL RACK STUD BLOCK
- REM CONT J-BOX HORIZ STUD BLK
- REM CONT J-BOX VERT STUD BLK
- ENG CRADLE STUD BLK
- ENGINE CRADLE STUD
- BEHIND DASH ILLUM STUD
- BEHIND DASH B+ STUD
- BEHIND DASH GND STUD
- DEST SIGN STUD BLOCK
- SENSING ELEMENT PLUG
- ROOF HARNESS BLK STUD
- OPTION

WH-WHITE
GY-GREY
VO-VIOLET
BL-BLUE
GR-GREEN
RD-RED
BR-BROWN
BK-BLACK
YL-YELLOW
OR-ORANGE

LEGEND

HIGH RISE SYSTEM
102DL3
7L-13-2858 (REV C)





- FRONT JUNCTION BOX GROUND STUD
- PARCEL RACK GROUND STUD BLOCK
- WHEEL CHAIR CONTROL BOX GROUND STUD
- 4 STUD TERMINAL BLOCK LIGHT ASSY
- INDICATES A WIRE HARNESS

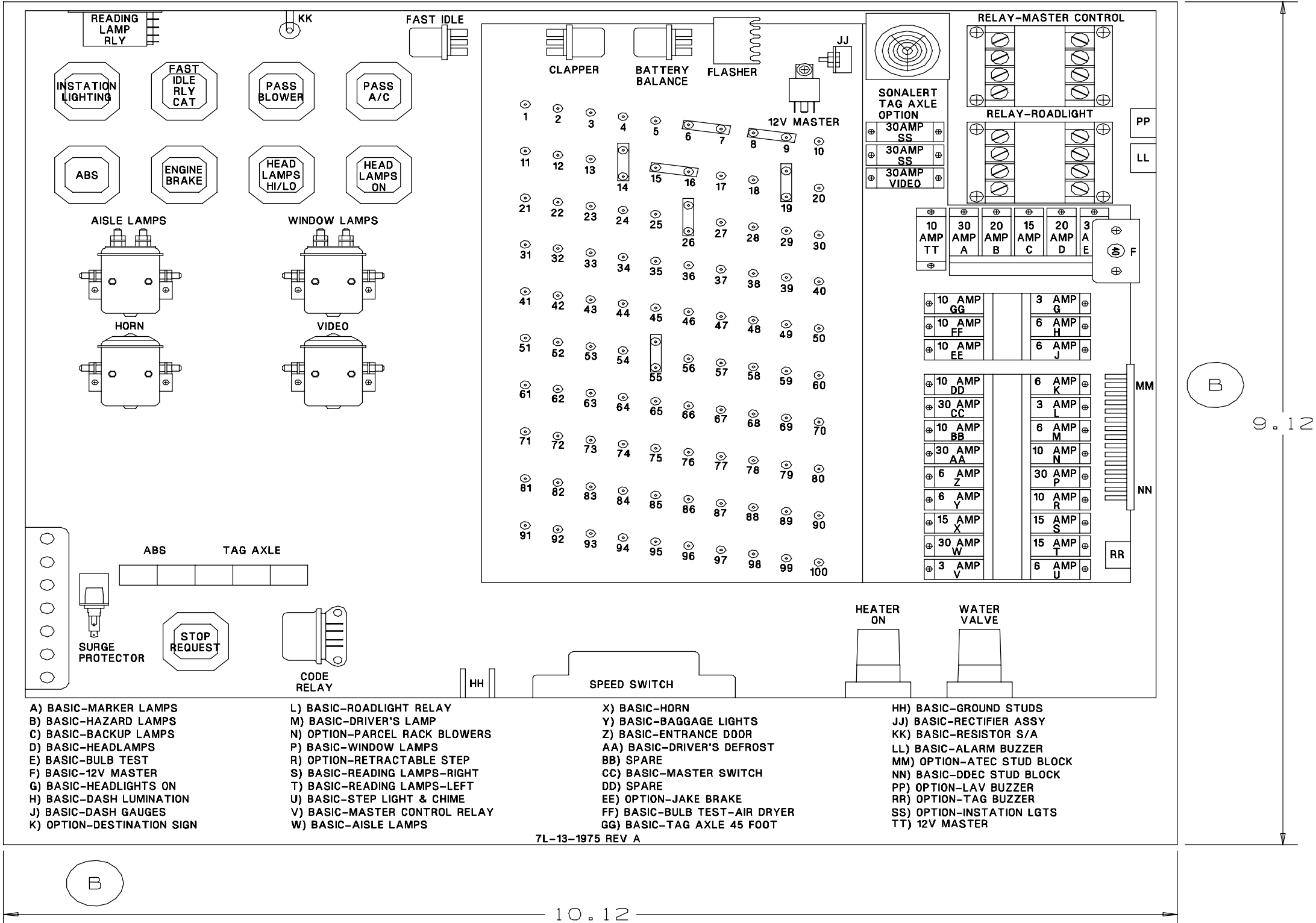
NOTES:

- S & S SUPPLIED COMPONENTS
- EXISTING WIRE HARNESS SHOWN FOR REFERENCE ONLY.
- CONNECTION POINT FOR KNEELING FEATURE INTERLOCK, TRANSMISSION NEUTRAL INTERLOCK AND ADJUSTABLE SUSPENSION INTERLOCK.

- FRONT J-BOX STUD BLOCK
 - FRONT J-BOX STUD
 - FRONT J-BOX ENT STUD BLK
 - REAR J-BOX STUD BLOCK
 - REAR J-BOX STUD
 - A/C J-BOX STUD BLOCK
 - PARCEL RACK STUD BLOCK
 - REM CONT J-BOX HORIZ STUD BLK
 - REM CONT J-BOX VERT STUD BLK
 - ENG CRADLE STUD BLK
 - ENGINE CRADLE STUD
 - BEHIND DASH ILLUM STUD
 - BEHIND DASH B+ STUD
 - BEHIND DASH GND STUD
 - DEST SIGN STUD BLOCK
 - SENSING ELEMENT PLUG
 - ROOF HARNESS BLK STUD
 - OPTION
- WH-WHITE RD-RED
GY-GREY BR-BROWN
VO-VIOLET BK-BLACK
BL-BLUE YL-YELLOW
GR-GREEN OR-ORANGE

LEGEND

S&S WHEELCHAIR LIFT
102D3
7L-13-3060 (REV C)



DECAL INSTALLATION
FRONT JUNCTION BOX
102D3 & 102DL3
7L-13-1975 (REV B)

PART NO.	DESCRIPTION	REV.
4L-20-201 SHEET 1 OF 7	AIR SYSTEM LEGEND	
4L-20-201 SHEET 2 OF 7	AIR SYSTEM BASIC LAYOUT	
4L-20-201 SHEET 3 OF 7	AIR SYSTEM PRIMARY BRAKE APPLICATION	
4L-20-201 SHEET 4 OF 7	AIR SYSTEM SECONDARY BRAKE APPLICATION	
4L-20-201 SHEET 5 OF 7	AIR SYSTEM PARK BRAKE APPLIED	
4L-20-201 SHEET 6 OF 7	AIR SYSTEM PARK BRAKE RELEASED	
4L-20-201 SHEET 7 OF 7	AIR SYSTEM EMERGENCY BRAKE ACTIVATED	

PART NO.	DESCRIPTION	REV.
4L-20-201	AIR SYSTEM	

SHEET 1 OF 7 LEGEND

LEGEND	
A - Auxiliary Port	L - Lock Port
C - Control	R - Reservoir Port
CP - Control, Primary	Sr - Service Port
CS - Control, Secondary	S - Supply
D - Delivery	U - Unload
E - Exhaust	

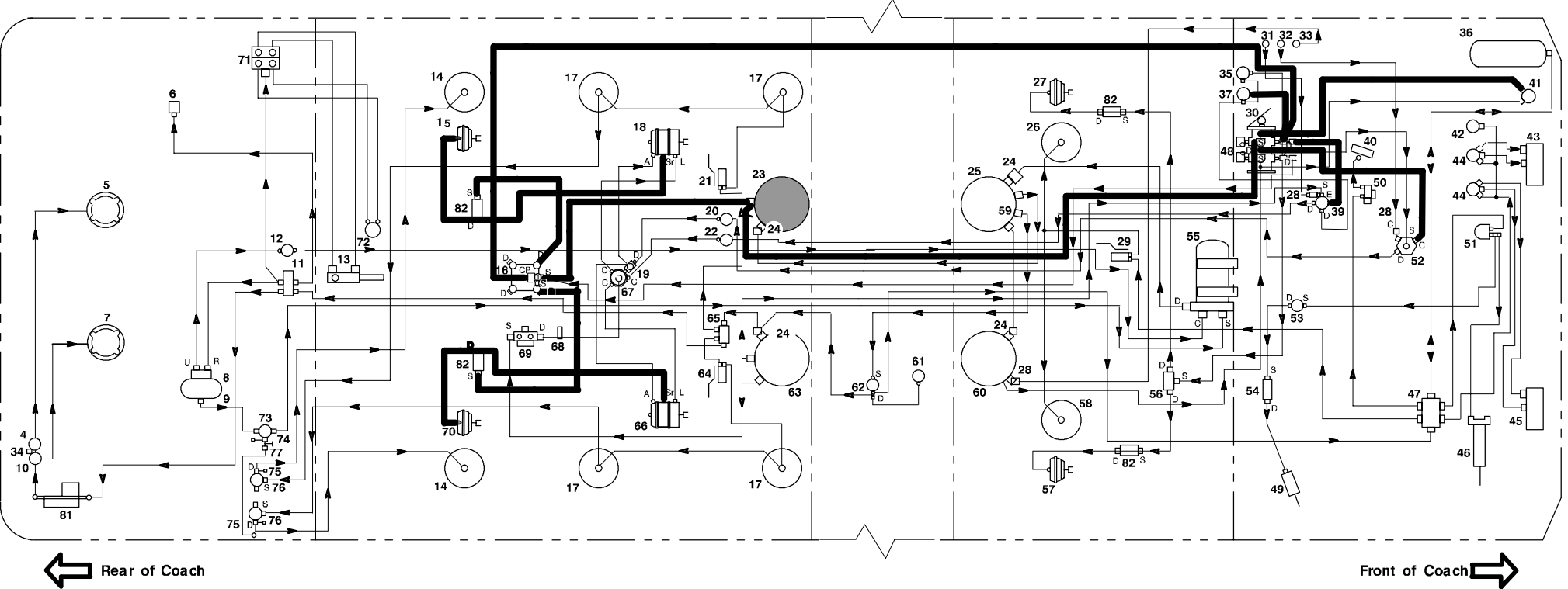
ITEM	DESCRIPTION
4	LH SKINNER VALVE
5	LH ENGINE FAN CLUTCH
6	LOW AIR/ALTERNATOR CUTOUT SWITCH
7	RH ENGINE FAN CLUTCH
8	GOVERNOR
9	AIR COMPRESSOR
10	RH SKINNER VALVE
11	REAR ACCESSORY JUNCTION BLOCK
12	DRYER UNLOAD DROP ELBOW
13	TAG AXLE LATCH CYLINDER
14	TAG AXLE AIR SPRING
15	LH TAG AXLE BRAKE CHAMBER
16	R-12 DC RELAY VALVE
17	DRIVE AXLE AIR SPRING
18	LH DRIVE AXLE BRAKE CHAMBER
19	DOUBLE CHECK VALVE
20	EMERGENCY STANDBY DROP ELBOW
21	LH DRIVE LEVEL VALVE
22	EMERGENCY CONTROL DROP ELBOW
23	REAR SERVICE RESERVOIR
24	MAIN AIR CHECK VALVE
25	WET RESERVOIR
26	LH FRONT AXLE AIR SPRING
27	FRONT AXLE BRAKE CHAMBER LH
28	SMALL AIR CHECK VALVE
29	FRONT AXLE LEVEL VALVE
30	E-10 BRAKE VALVE
31	PARK EMERGENCY FILL VALVE
32	REAR SERVICE EMERGENCY FILL VALVE
33	FRONT SERVICE EMERGENCY FILL VALVE
34	FAN TEST SWITCH
35	SECONDARY PARK/STOP LAMP SWITCH
36	ACCESSORY RESERVOIR
37	PRIMARY PARK/STOP LAMP SWITCH
39	PARK VALVE
40	RAM AIR CYLINDER
41	DUAL AIR GAUGE
42	WINDSHIELD WASHER CONTROL

ITEM	DESCRIPTION
43	LH WIPER MOTOR/WASHER
44	WINDSHIELD WIPER CONTROL
45	RH WIPER MOTOR/WASHER
46	ENTRANCE DOOR CYLINDER/SOLENOID ASSEMBLY
47	FRONT ACCESSORY JUNCTION BLOCK
48	LOW AIR PRESSURE WARNING SWITCH
49	DOOR CLAW CYLINDER
50	RAM AIR SWITCH
51	DOOR MANUAL VALVE
52	EMERGENCY STANDBY VALVE
53	DOOR CLAW SOLENOID VALVE
54	DOOR CONTROL QUICK RELEASE VALVE
55	AD9 AIR DRYER
56	QUICK RELEASE VALVE
57	RH FRONT AXLE BRAKE CHAMBER
58	RH FRONT AXLE AIR SPRING
59	INLINE FILTER
60	FRONT SERVICE RESERVOIR
61	WATER VALVE
62	PRESSURE PROTECTION VALVE
63	PARK RESERVOIR
64	RH REAR LEVEL VALVE
65	SUSPENSION/ACCESSORY JUNCTION BLOCK
66	RH DRIVE AXLE BRAKE CHAMBER
67	INVERSION VALVE
68	PRESSURE TEST FITTING
69	PARK PRESSURE REGULATOR
70	RH TAG AXLE BRAKE CHAMBER
71	TAG AXLE SOLENOID VALVE ASSEMBLY
72	TAG AXLE LOCK CYLINDER
73	PING TANK
74	SYSTEM FILL VALVE
75	TAG AXLE LOW AIR PRESSURE SWITCH
76	TAG AXLE AIR SPRING DUMP VALVE
77	PING TANK DRAIN VALVE
81	SHUTTERSTAT FILTER
82	ABS MODULATOR VALVE

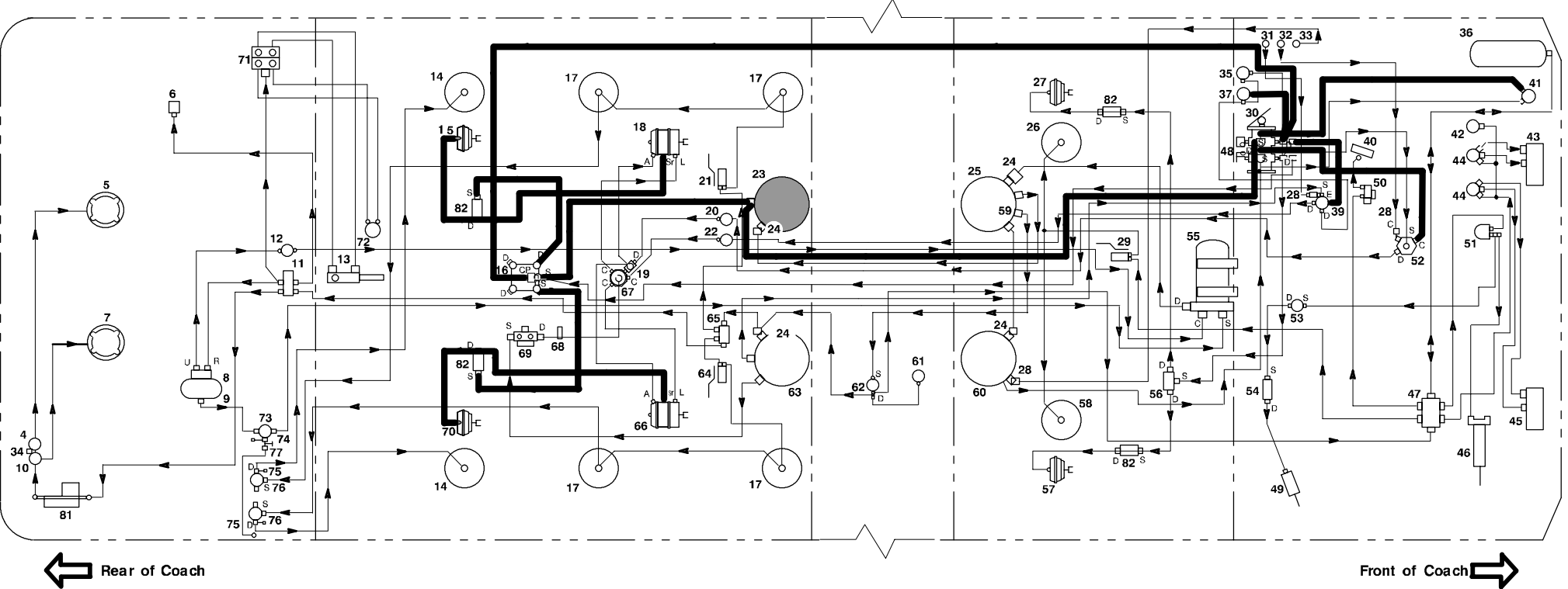
AIR SYSTEM SCHEMATIC
(with ABS-Antilock Brake System)
4L-20-201

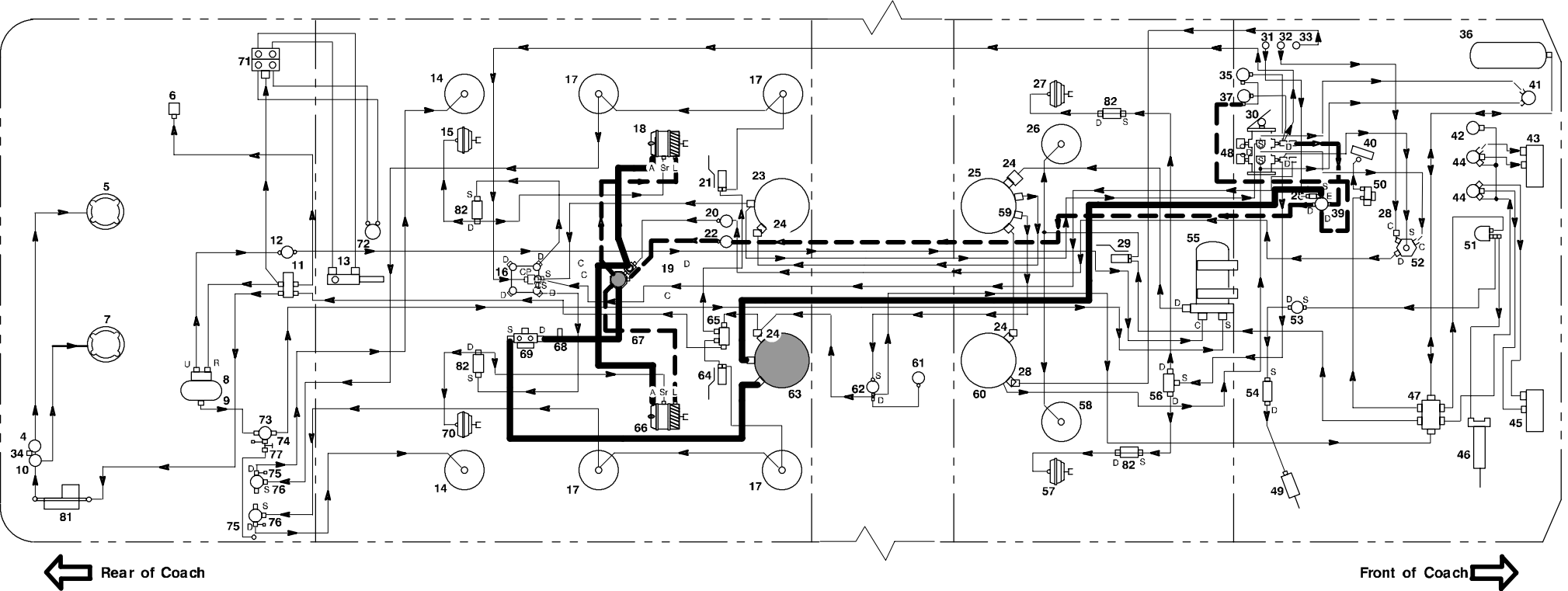


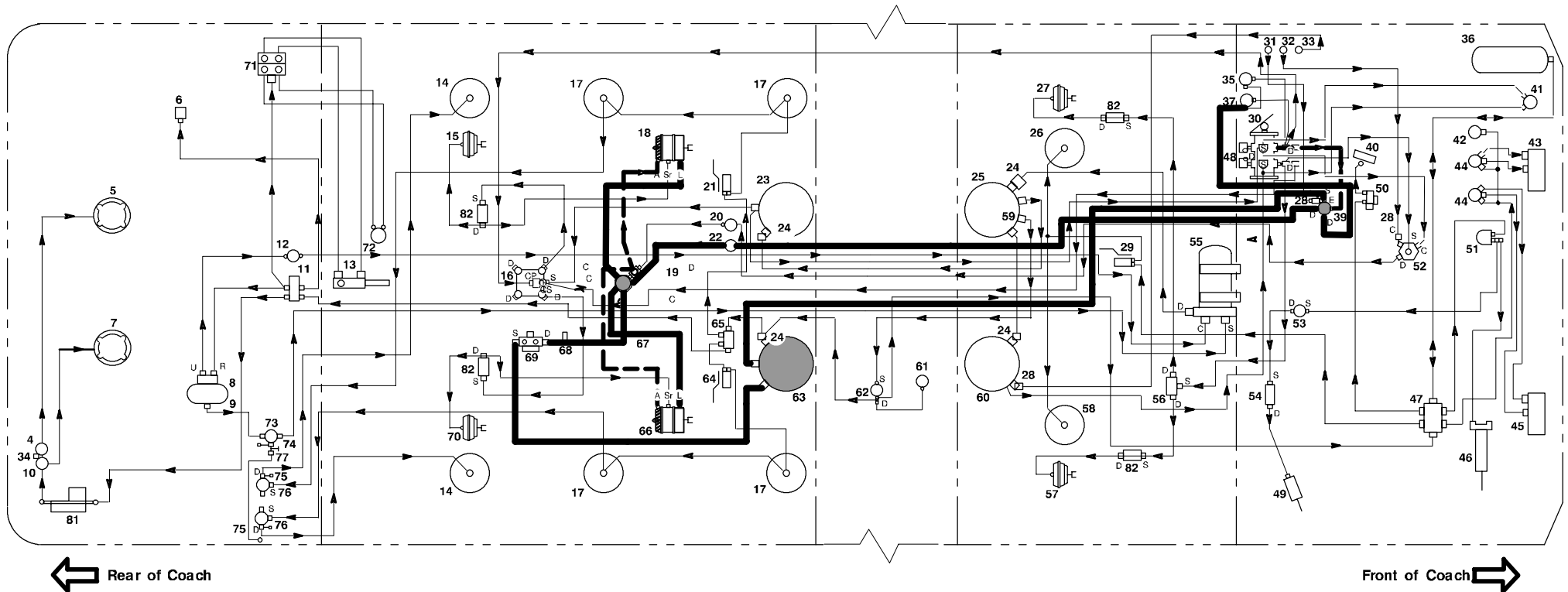
SHEET 3 OF 7 PRIMARY BRAKE APPLICATION



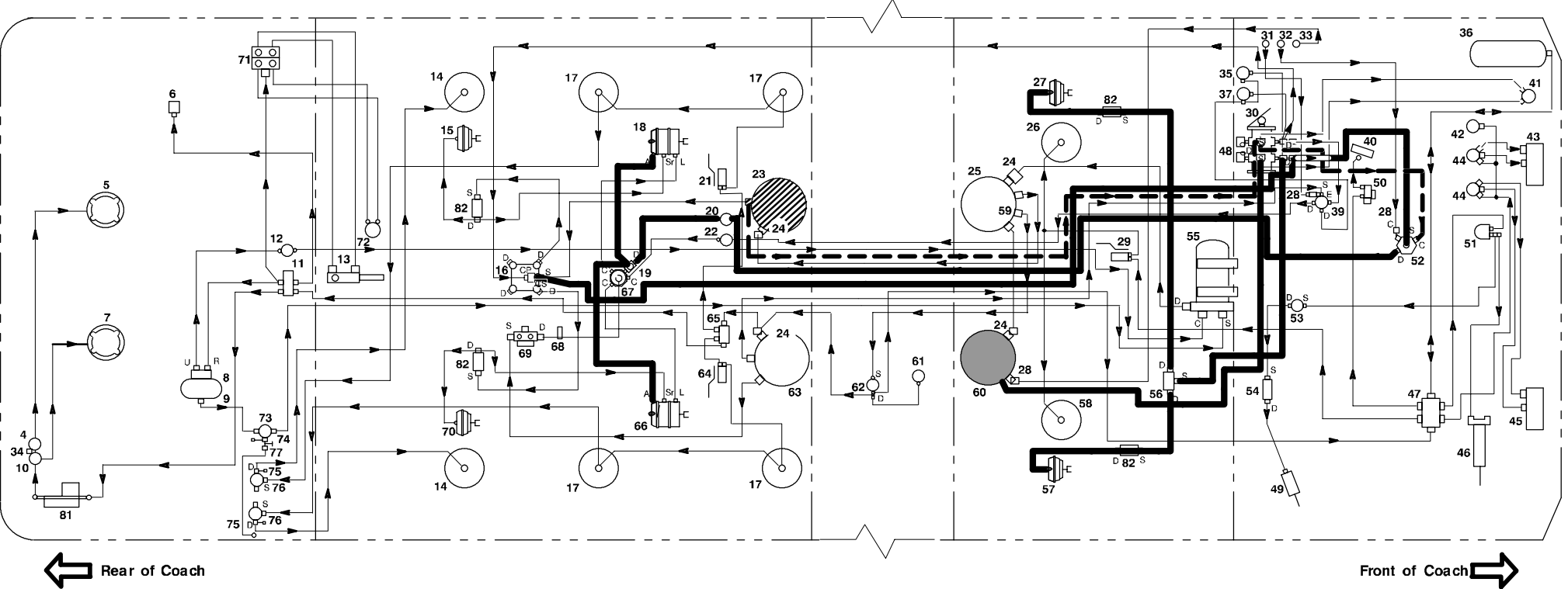
SHEET 4 OF 7 SECONDARY BRAKE APPLICATION

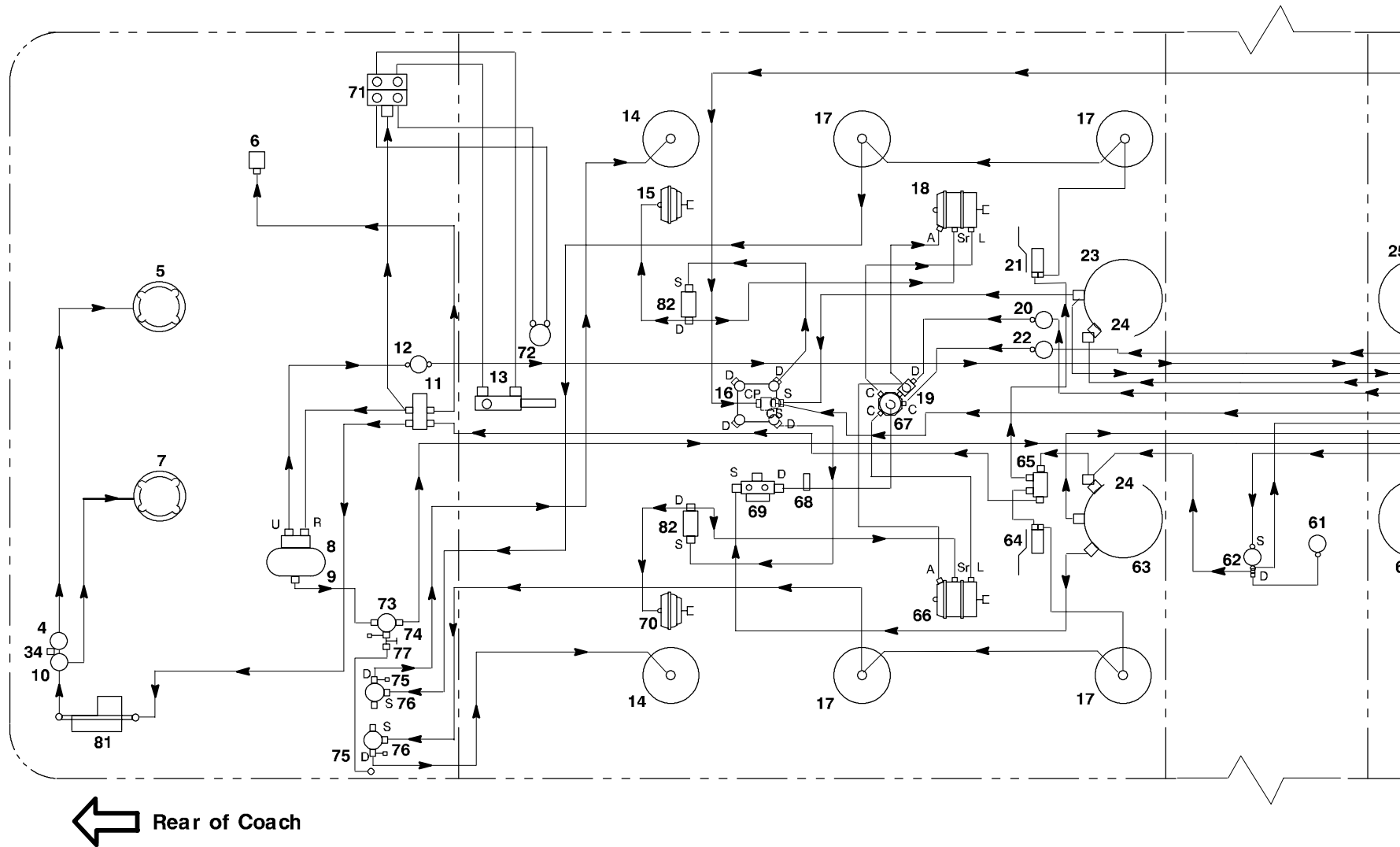






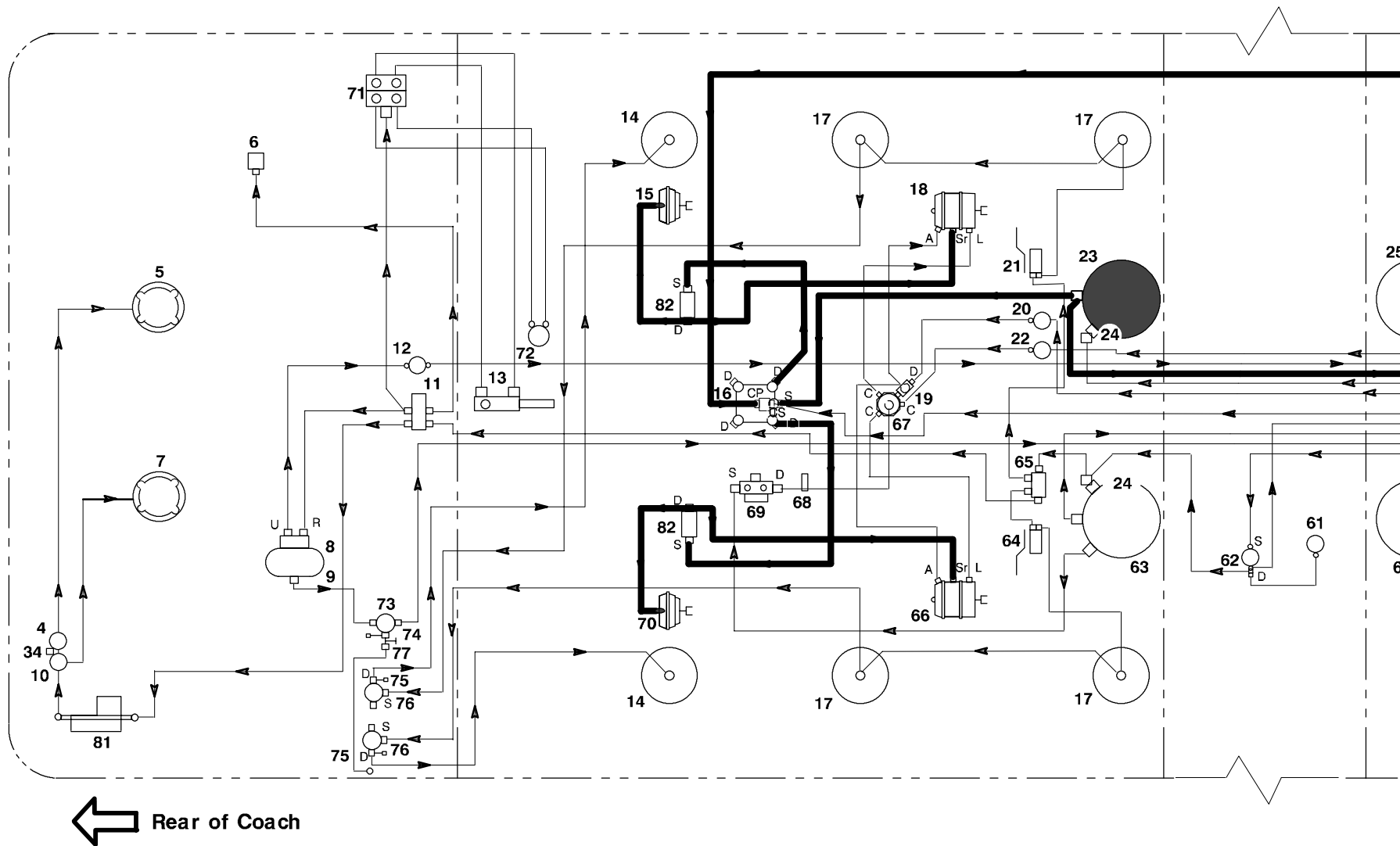
SHEET 7 OF 7 EMERGENCY BRAKE ACTIVATED





ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
4	LH SKINNER VALVE	23	REAR SERVICE RESERVOIR	43	LH WIPER MOTOR/WASHE
5	LH ENGINE FAN CLUTCH	24	MAIN AIR CHECK VALVE	44	WINDSHIELD WIPER CON1
6	LOW AIR/ALTERNATOR CUTOFF SWITCH	25	WET RESERVOIR	45	RH WIPER MOTOR/WASHE
7	RH ENGINE FAN CLUTCH	26	LH FRONT AXLE AIR SPRING	46	ENTRANCE DOOR CYLIND
8	GOVERNOR	27	FRONT AXLE BRAKE CHAMBER LH	47	FRONT ACCESSORY JUNC
9	AIR COMPRESSOR	28	SMALL AIR CHECK VALVE	48	LOW AIR PRESSURE WARI
10	RH SKINNER VALVE	29	FRONT AXLE LEVEL VALVE	49	DOOR CLAW CYLINDER
11	REAR ACCESSORY JUNCTION BLOCK	30	E-10 BRAKE VALVE	50	RAM AIR SWITCH
12	DRYER UNLOAD DROP ELBOW	31	PARK EMERGENCY FILL VALVE	51	DOOR MANUAL VALVE
13	TAG AXLE LATCH CYLINDER	32	REAR SERVICE EMERGENCY FILL VALVE	52	EMERGENCY STANDBY VA
14	TAG AXLE AIR SPRING	33	FRONT SERVICE EMERGENCY FILL VALVE	53	DOOR CLAW SOLENOID V/

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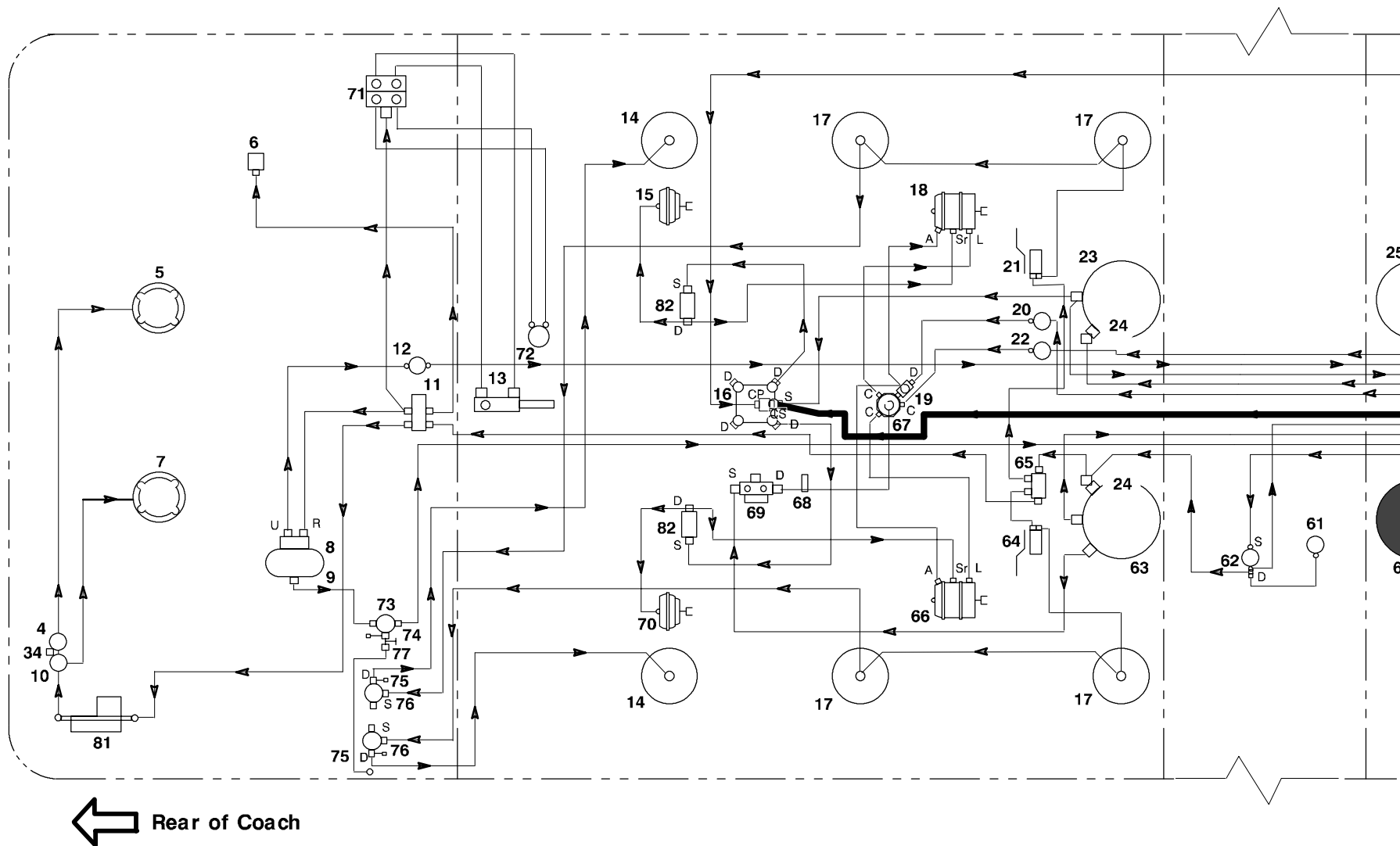


ITEM	DESCRIPTION
4	LH SKINNER VALVE
5	LH ENGINE FAN CLUTCH
6	LOW AIR/ALTERNATOR CUTOUT SWITCH
7	RH ENGINE FAN CLUTCH
8	GOVERNOR
9	AIR COMPRESSOR
10	RH SKINNER VALVE
11	REAR ACCESSORY JUNCTION BLOCK
12	DRYER UNLOAD DROP ELBOW
13	TAG AXLE LATCH CYLINDER
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ITEM	DESCRIPTION
23	REAR SERVICE RESERVOIR
24	MAIN AIR CHECK VALVE
25	WET RESERVOIR
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27	FRONT AXLE BRAKE CHAMBER LH
28	SMALL AIR CHECK VALVE
29	FRONT AXLE LEVEL VALVE
30	E-10 BRAKE VALVE
31	PARK EMERGENCY FILL VALVE
32	REAR SERVICE EMERGENCY FILL VALVE
33	FRONT SERVICE EMERGENCY FILL VALVE

ITEM	DESCRIPTION
43	LH WIPER MOTOR/WASHER
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45	RH WIPER MOTOR/WASHER
46	ENTRANCE DOOR CYLINDER
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48	LOW AIR PRESSURE WARNING
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50	RAM AIR SWITCH
51	DOOR MANUAL VALVE
52	EMERGENCY STANDBY VALVE
53	DOOR CLAW SOLENOID VALVE

MCI 102D SERIES MAINTENANCE MANUAL

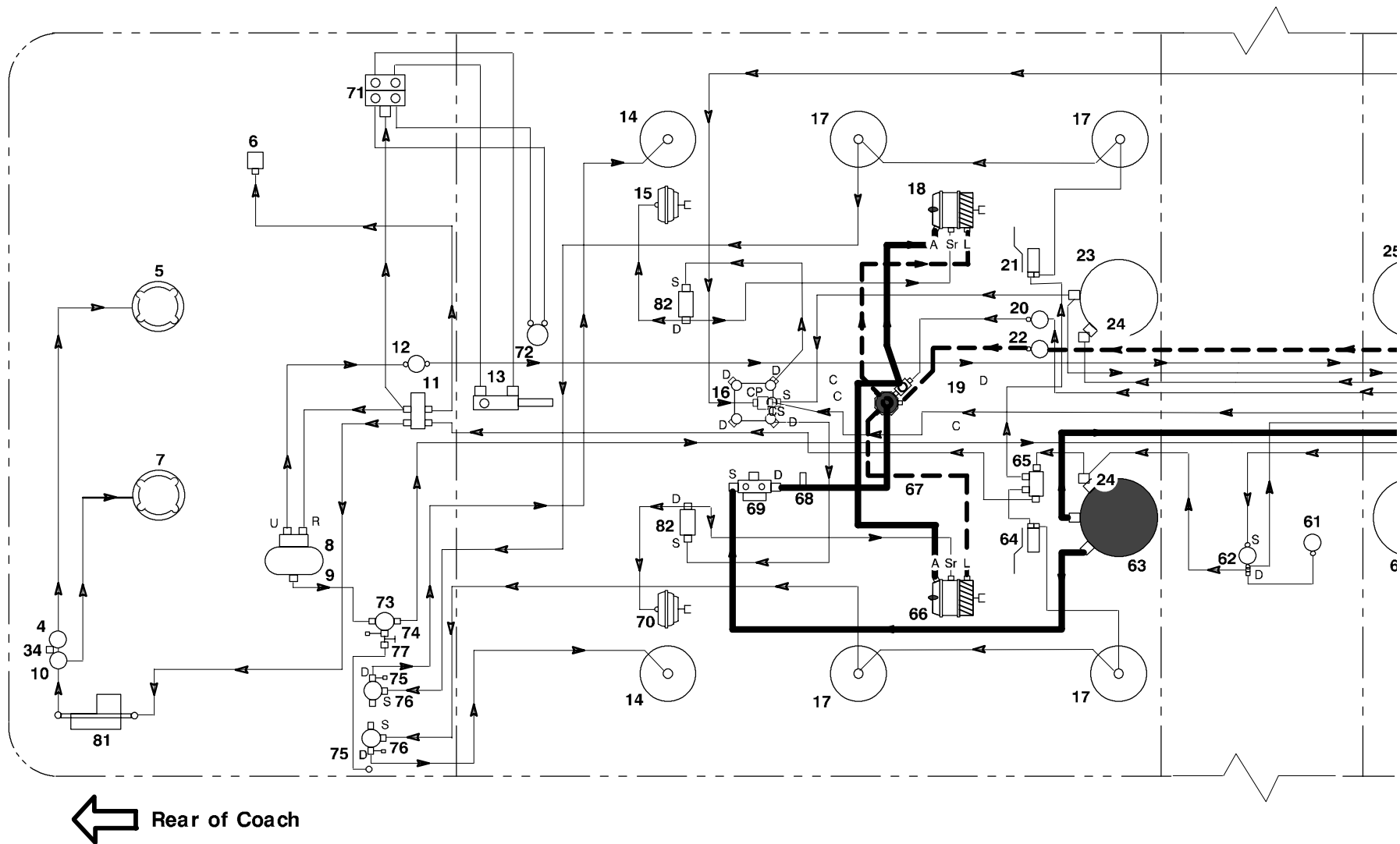


ITEM	DESCRIPTION
4	LH SKINNER VALVE
5	LH ENGINE FAN CLUTCH
6	LOW AIR/ALTERNATOR CUTOUT SWITCH
7	RH ENGINE FAN CLUTCH
8	GOVERNOR
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52	EMERGENCY STANDBY VALVE
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MCI 102D SERIES MAINTENANCE MANUAL

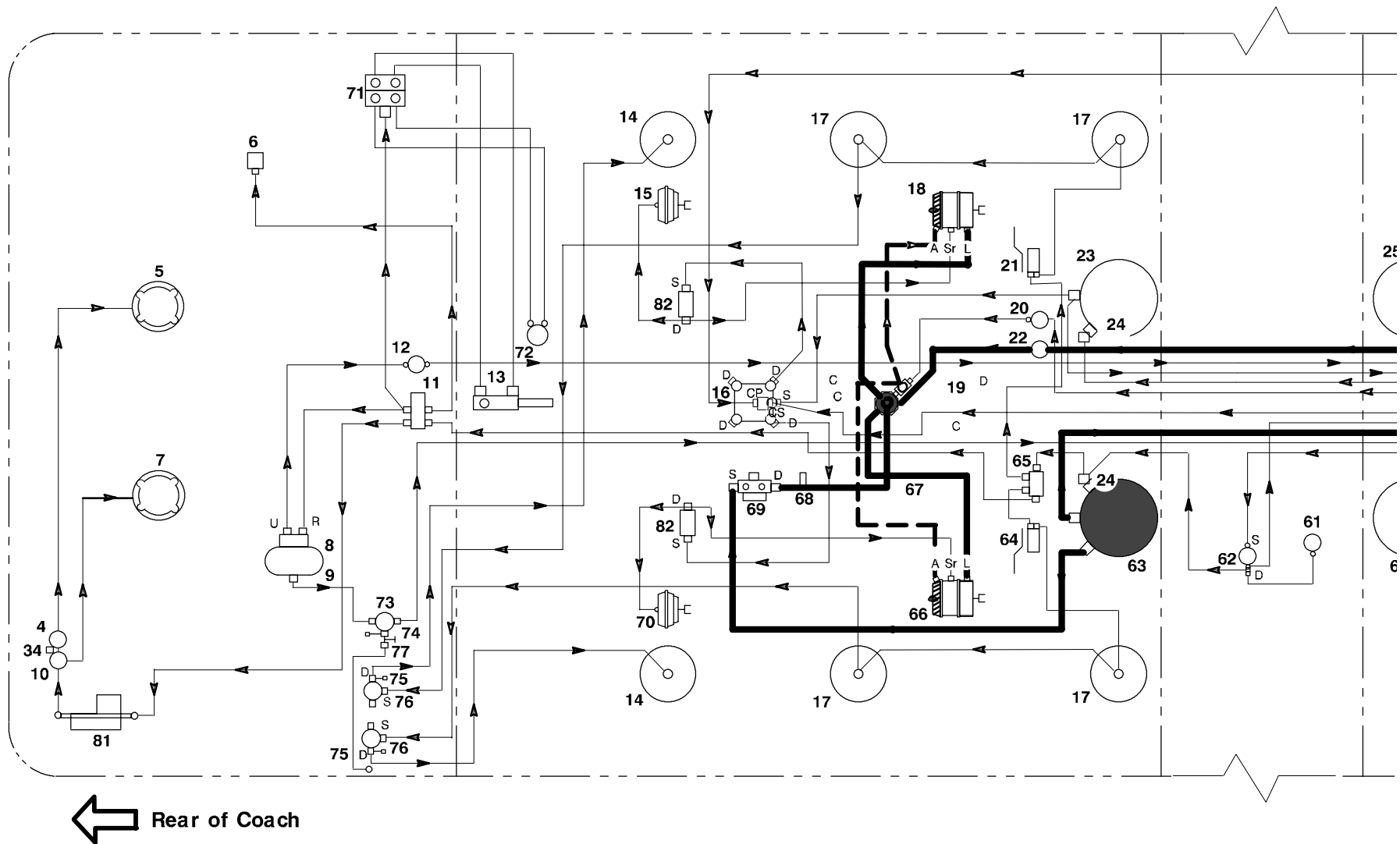


ITEM	DESCRIPTION
4	LH SKINNER VALVE
5	LH ENGINE FAN CLUTCH
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7	RH ENGINE FAN CLUTCH
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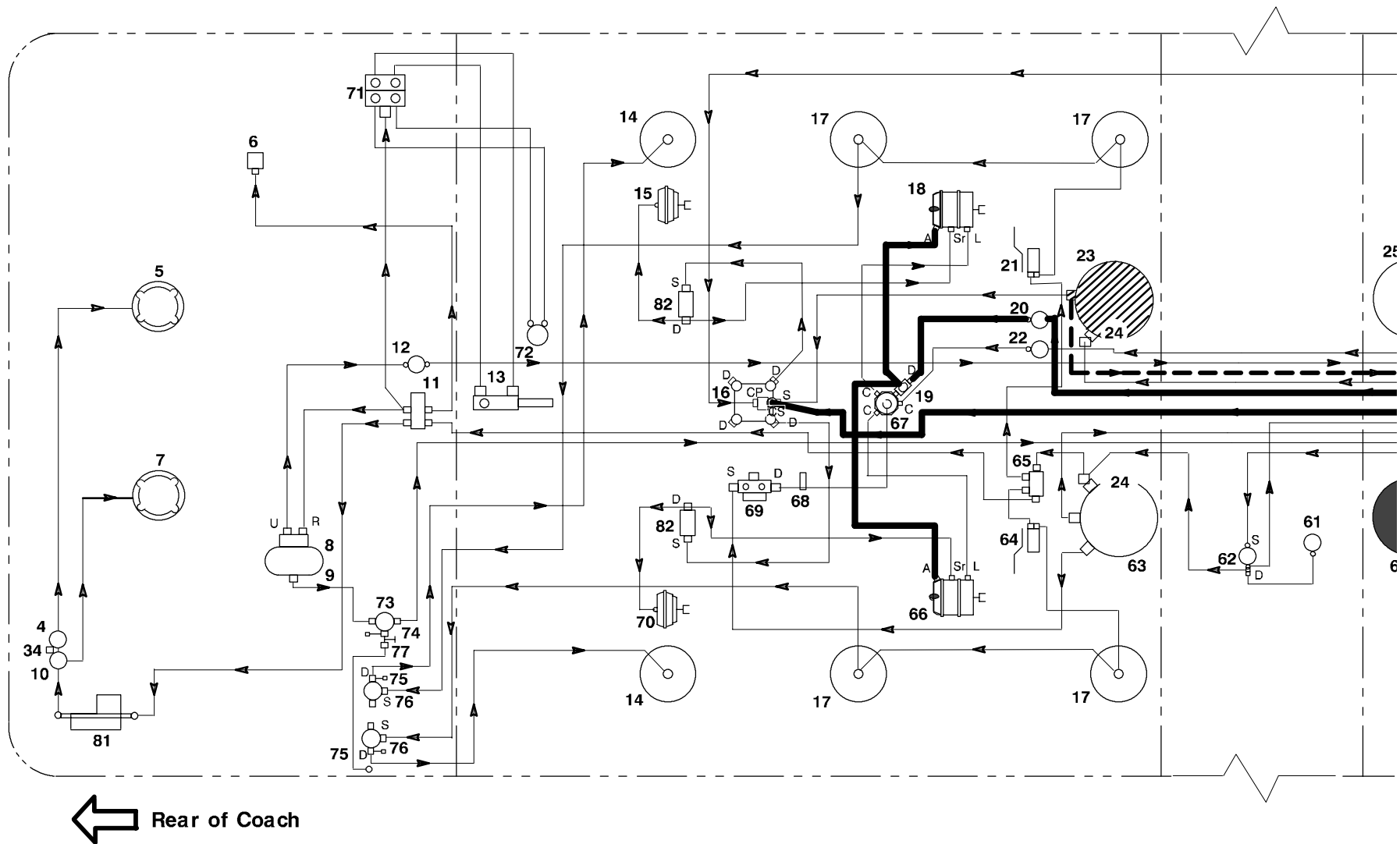


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MCI 102D SERIES MAINTENANCE MANUAL



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