Genie®
A TEREX COMPANY

Service Manual

Serial Number Range

GS-2668 DC
from introduction

GS-3268 DC
from introduction

Part No. 65248
Rev D
June 2007

Introduction

Important

Read, understand and obey the safety rules and operating instructions in the *Genie GS-2668 DC and GS-3268 DC Operator's Manual* before attempting any maintenance or repair procedure.

This manual provides detailed scheduled maintenance information for the machine owner and user. It also provides troubleshooting and repair procedures for qualified service professionals.

Basic mechanical, hydraulic and electrical skills are required to perform most procedures. However, several procedures require specialized skills, tools, lifting equipment and a suitable workshop. In these instances, we strongly recommend that maintenance and repair be performed at an authorized Genie dealer service center.

Technical Publications

Genie Industries has endeavored to deliver the highest degree of accuracy possible. However, continuous improvement of our products is a Genie policy. Therefore, product specifications are subject to change without notice.

Readers are encouraged to notify Genie of errors and send in suggestions for improvement. All communications will be carefully considered for future printings of this and all other manuals.

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65248 Rev D June 2007
First Edition, Fourth Printing

Serial Number Legend

Model: GS-3268 DC
Serial number: GS6806-12345
Model year: 2005 **Manufacture date:** 04/12/06
Electrical schematic number: Es7150
Machine unladen weight: 8,010 lb / 3,633 kg

Rated work load (including occupants): 1000 lb / 454 kg

Maximum allowable inclination of the chassis:

N/A

Gradeability: N/A

Maximum allowable side force : 200 lb / 90 N
Maximum number of platform occupants: 4

Country of manufacture: USA
This machine complies with:

ANSI A92.6-1999
B354.2-01

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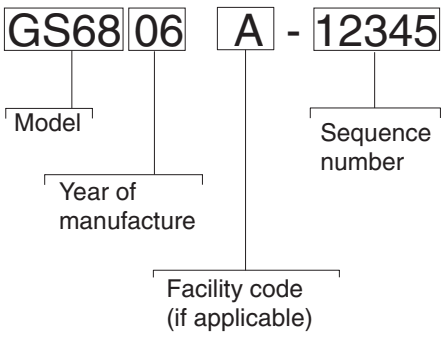
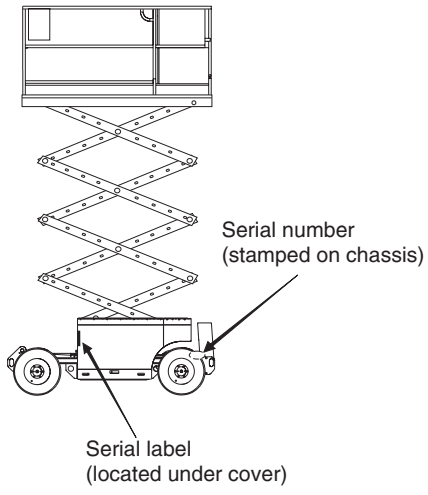
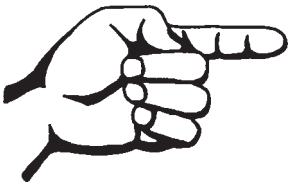
PN - 77055







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Safety Rules

Danger

Failure to obey the instructions and safety rules in this manual and the *Genie GS-2668 DC and GS-3268 DC Operator's Manual* will result in death or serious injury.

Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- ☑ You are trained and qualified to perform maintenance on this machine.
- ☑ You read, understand and obey:
  - manufacturer's instructions and safety rules
  - employer's safety rules and worksite regulations
  - applicable governmental regulations
- ☑ You have the appropriate tools, lifting equipment and a suitable workshop.

SAFETY RULES

Personal Safety

Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.

Read each procedure thoroughly. This manual and the decals on the machine, use signal words to identify the following:

Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

NOTICE Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Be sure to wear protective eye wear and other protective clothing if the situation warrants it.

Be aware of potential crushing hazards such as moving parts, free swinging or unsecured components when lifting or placing loads. Always wear approved steel-toed shoes.

Workplace Safety

Be sure to keep sparks, flames and lighted tobacco away from flammable and combustible materials like battery gases and engine fuels. Always have an approved fire extinguisher within easy reach.

Be sure that all tools and working areas are properly maintained and ready for use. Keep work surfaces clean and free of debris that could get into machine components and cause damage.

Be sure any forklift, overhead crane or other lifting or supporting device is fully capable of supporting and stabilizing the weight to be lifted. Use only chains or straps that are in good condition and of ample capacity.

Be sure that fasteners intended for one time use (i.e., cotter pins and self-locking nuts) are not reused. These components may fail if they are used a second time.

Be sure to properly dispose of old oil or other fluids. Use an approved container. Please be environmentally safe.

Be sure that your workshop or work area is properly ventilated and well lit.

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Specifications

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Machine Specifications

Batteries	
Type	6V DC
Group	T-105
Quantity	8
Battery capacity, maximum	225AH
Reserve capacity @ 25A rate	447 minutes
Fluid capacities (before serial number 41200)	
Hydraulic tank	21.5 gallons 81.4 liters
Hydraulic system (including tank)	25 gallons 94.6 liters
Fluid capacities (after serial number 41199)	
Hydraulic tank	8 gallons 30.3 liters
Hydraulic system, GS-2668 DC (including tank)	7.25 gallons 27.4 liters
Hydraulic system, GS-3268 DC (including tank)	7.75 gallons 29.3 liters

For operational specifications, refer to the Operators Manual.

ires and wheels	
Rough Terrain	
Tire size (before serial number 41200)	26-12.00 x 12 (foam-filled)
Turf, Low-profile	
Tire size (before serial number 41200)	24-12.00 x 12 (foam-filled)
Tire size (after serial number 41199)	23 x 10.5 (foam-filled)
Non-marking	
Tire size	22 x 9 x 16 (solid rubber)
Tire contact area	10 sq in 64.5 cm^2
Torque specification	
Castle nut torque, dry (drive and brake motors)	300 ft-lbs 406.7 Nm
Castle nut torque, lubricated (drive and brake motors)	225 ft-lbs 305 Nm
Castle nut torque (spindles)	8 ft-lbs 11 Nm
Lug bolt torque, dry	90 ft-lbs 122 Nm
Lug bolt torque, lubricated	68 ft-lbs 92 Nm

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice.

SPECIFICATIONS REV D

Performance Specifications

Drive speed, maximum	
Platform stowed (before serial number 41318)	3.3 mph 40 ft / 8.3 sec 5.3 km/h 12.2 m / 8.3 sec
Platform stowed (after serial number 41317)	3.0 mph 40 ft / 9 sec 4.8 km/h 12.2 m / 9 sec
Platform raised	0.5 mph 40 ft / 54.5 sec 0.8 km/h 12.2 m / 54.5 sec

Function speed, maximum from platform controls (with maximum rated load in platform)	
GS-2668 DC	
Platform up	25 to 35 seconds
Platform down	30 to 40 seconds
GS-3268 DC	
Platform up	30 to 45 seconds
Platform down	33 to 48 seconds
Gradeability	
See Operators Manual	
Braking distance, maximum	
High range on paved surface	3 to 5 ft 0.9 to 1.5 m

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Hydraulic Specifications

Hydraulic Oil Specifications	
Before serial number 41709	
Hydraulic oil type	Shell Donax TG (Dexron III)
After serial number 41708	
Hydraulic oil type	Chevron Rykon MV equivalent
ISO viscosity grade	Multi-viscosity
Viscosity index	200
Cleanliness level, minimum	15/13
Water content, maximum	200 ppm

Chevron Rykon MV oil is fully compatible and mixable with Shell Donax TG (Dexron III) oils.
Genie specifications require hydraulic oils which are designed to give maximum protection to hydraulic systems, have the ability to perform over a wide temperature range, and the viscosity index should exceed 140. They should provide excellent antiwear, oxidation, corrosion inhibition, seal conditioning, and foam and aeration suppression properties.

Optional fluids	
Biodegradable	Petro Canada Environ MV 46 Statoil Hydra Way Bio Pa 32 BP Biohyd SE-S
Fire resistant	UCON Hydrolube HP-5046 Quintolubric 822
Mineral based	Shell Tellus T32 Shell Tellus T46 Chevron Aviation A

NOTICE Continued use of Chevron Aviation A hydraulic fluid when ambient temperatures are consistently above 32°F / 0°C may result in component damage.

Note: Use Chevron Aviation A hydraulic fluid when ambient temperatures are consistently below 0°F / -17°C.

Note: Use Shell Tellus T46 hydraulic oil when oil temperatures consistently exceed 205°F / 96°C.

Note: Genie specifications require additional equipment and special installation instructions for the approved optional fluids. Consult the Genie Industries Service Department before use.

SPECIFICATIONS REV D

Hydraulic Components Specifications

Function pump (before serial number 41200)	
Type:	2 section pressure balanced gear pump
Displacement per revolution	0.488 cu in 8 cc
Flow rate @ 2500 psi / 172 bar	6.5 gpm 24.6 L/min
Hydraulic tank return line filter	10 micron with 25 psi / 1.7 bar bypass

Function pump (after serial number 41199)	
Type:	single section gear pump
Displacement per revolution	0.67 cu in 11 cc
Flow rate @ 2500 psi / 172 bar	8.3 gpm 31.4 L/min
Hydraulic tank return line filter	10 micron with 25 psi / 1.7 bar bypass

Function manifold (before serial number 41200)	
System relief valve pressure (pump #1)	3500 psi 241 bar
System relief valve pressure (pump #2)	3500 psi 241 bar
Steer relief valve pressure	1500 psi 103 bar
Platform up relief valve pressure	3500 psi 241 bar

Function manifold (after serial number 41199)	
System relief valve pressure	3500 psi 241 bar
Steer relief valve pressure	1500 psi 103 bar
Platform up relief valve pressure (GS-2668 DC)	3600 psi 248.2 bar
Platform up relief valve pressure (GS-3268 DC)	2800 psi 193.1 bar
Drive relief valve pressure	4000 psi 275.8 bar

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice.

Manifold Component Specifications

Plug torque	
SAE No. 2	36 in-lbs / 4 Nm
SAE No. 4	10 ft-lbs / 13 Nm
SAE No. 6	14 ft-lbs / 19 Nm
SAE No. 8	38 ft-lbs / 51 Nm
SAE No. 10	41 ft-lbs / 55 Nm
SAE No. 12	56 ft-lbs / 76 Nm

Valve Coil Resistance Specifications

Note: The following coil resistance specifications are at an ambient temperature of 68°F / 20°C. As valve coil resistance is sensitive to changes in air temperature, the coil resistance will typically increase or decrease by 4% for each 18°F / 20°C that your air temperature increases or decreases from 68°F / 20°C.

Description	Specification
DO3 valve, 3 position 4 way 12V DC (schematic items A and B)	7Ω
Solenoid valve, 2 position 2 way 10V DC (schematic item S)	7Ω
Solenoid valve, 2 position 2 way 10V DC (schematic items U, V and W)	5Ω
Solenoid valve, 2 position 4 way 10V DC (schematic item O)	5Ω
Solenoid valve, 3 position 4 way 10V DC (schematic item Q)	5Ω
Solenoid valve, 2 position 2 way 24V DC (schematic item AB)	34Ω
Solenoid valve, 3 position 4 way 24V DC (schematic item AC)	34Ω
Solenoid valve, 2 position 2 way 24V DC (schematic item AJ)	29Ω
DO3 valve, 2 position 4 way 24V DC (schematic items AP and AS)	22Ω
DO3 valve, 3 position 4 way 24V DC (schematic item AR)	22Ω
Solenoid valve, 2 position 2 way 20V DC (schematic item BA)	12Ω

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice.

SPECIFICATIONS REV D

Hydraulic Hose and Fitting Torque Specifications

Your machine is equipped with either 37° flared fittings and hose ends OR Parker Seal-Lok® fittings and hose ends. Genie specifications require that fittings and hose ends be torqued to specification when they are removed and installed or when new hoses or fittings are installed.

SAE O-ring Boss Port
(tube fitting - installed into Aluminum)

SAE Dash size	Torque
-4	11 ft-lbs / 14.9 Nm
-6	23 ft-lbs / 31.2 Nm
-8	40 ft-lbs / 54.2 Nm
-10	69 ft-lbs / 93.6 Nm
-12	93 ft-lbs / 126.1 Nm
-16	139 ft-lbs / 188.5 Nm
-20	172 ft-lbs / 233.2 Nm
-24	208 ft-lbs / 282 Nm

SAE O-ring Boss Port
(tube fitting - installed into Steel)

SAE Dash size	Torque
-4	16 ft-lbs / 21.7 Nm
-6	35 ft-lbs / 47.5 Nm
-8	60 ft-lbs / 81.3 Nm
-10	105 ft-lbs / 142.4 Nm
-12	140 ft-lbs / 190 Nm
-16	210 ft-lbs / 284.7 Nm
-20	260 ft-lbs / 352.5 Nm
-24	315 ft-lbs / 427.1 Nm

Seal-Lok® Fittings
(hose end)

SAE Dash size	Torque
-4	18 ft-lbs / 24.4 Nm
-6	27 ft-lbs / 36.6 Nm
-8	40 ft-lbs / 54.2 Nm
-10	63 ft-lbs / 85.4 Nm
-12	90 ft-lbs / 122 Nm
-16	120 ft-lbs / 162.7 Nm
-20	140 ft-lbs / 190 Nm
-24	165 ft-lbs / 223.7 Nm

JIC 37° Fittings
(swivel nut or hose connection)

SAE Dash size	Thread Size	Flats
-4	7/16-20	2
-6	9/16-18	1 1/4
-8	3/4-16	1
-10	7/8-14	1
-12	1 1/16-12	1
-16	1 5/16-12	1
-20	1 5/8-12	1
-24	1 7/8-12	1

Torque Procedure

JIC 37° fittings

1 Align the tube flare (hex nut) against the nose of the fitting body (body hex fitting) and tighten the hex nut to the body hex fitting to hand-tight, approximately 30 in-lbs / 3.4 Nm.

2 Make a reference mark on one of the flats of the hex nut, and continue it on to the body hex fitting with a permanent ink marker. Refer to Figure 1.

3 Working clockwise on the body hex fitting, make a second mark with a permanent ink marker to indicate the proper tightening position. Refer to Figure 2.

Note: Use the *JIC 37° Fittings* table on the previous page to determine the correct number of flats for the proper tightening position.

Note: The marks indicate that the correct tightening positions have been determined. Use the second mark on the body hex fitting to properly tighten the joint after it has been loosened.

4 Tighten the hex nut until the mark on the hex nut is aligned with the second mark on the body hex fitting.

5 Operate all machine functions and inspect the hoses and fittings and related components to confirm that there are no leaks.

Seal-Lok® fittings

1 Replace the O-ring. The O-ring must be replaced anytime the seal has been broken. The O-ring cannot be re-used if the fitting or hose end has been tightened beyond finger tight.

Note: The O-rings used in the Parker Seal Lok® fittings and hose ends are custom-size O-rings. They are not standard SAE size O-rings. They are available in the O-ring field service kit.

2 Lubricate the O-ring before installation.

3 Be sure that the face seal O-ring is seated and retained properly.

4 Position the tube and nut squarely on the face seal end of the fitting and tighten the nut finger tight.

5 Tighten the nut or fitting to the appropriate torque per given size as shown in the table.

6 Operate all machine functions and inspect the hoses and fittings and related components to confirm that there are no leaks.

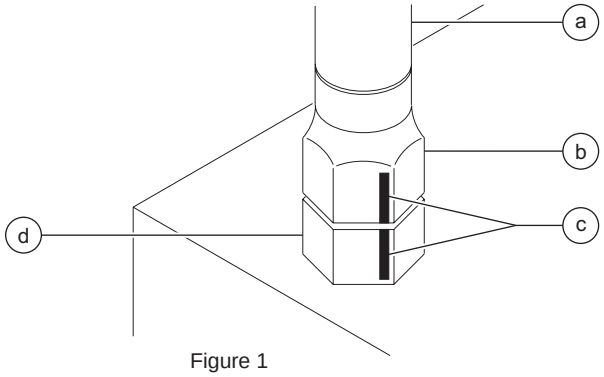

Figure 1
a hydraulic hose
b hex nut
c reference mark
d body hex fitting

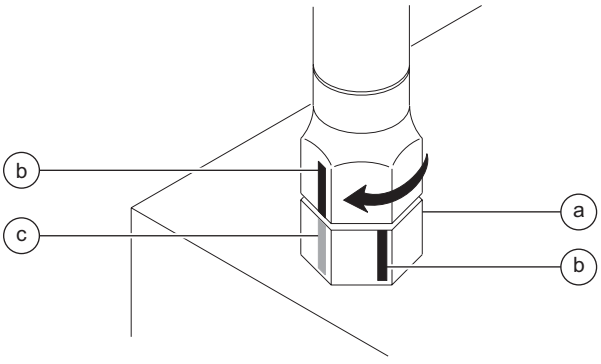

Figure 2
a body hex fitting
b reference mark
c second mark

SPECIFICATIONS REV D

SAE FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

SIZE	THREAD	Grade 5				Grade 8				A574 High Strength Black Oxide Bolts	
		LUBED		DRY		LUBED		DRY		LUBED	
		in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
1/4	20	100	11.3	80	9	140	15.8	110	12.4	130	14.7
	28	90	10.1	120	13.5	120	13.5	160	18	140	15.8
		LUBED		DRY		LUBED		DRY		LUBED	
		ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
5/16	18	13	17.6	17	23	18	24	25	33.9	21	28.4
	24	14	19	19	25.7	20	27.1	27	36.6	24	32.5
3/8	16	23	31.2	31	42	33	44.7	44	59.6	38	51.5
	24	26	35.2	35	47.4	37	50.1	49	66.4	43	58.3
7/16	14	37	50.1	49	66.4	50	67.8	70	94.7	61	82.7
	20	41	55.5	55	74.5	60	81.3	80	108.4	68	92.1
1/2	13	57	77.3	75	101.6	80	108.4	110	149	93	126
	20	64	86.7	85	115	90	122	120	162	105	142
9/16	12	80	108.4	110	149	120	162	150	203	130	176
	18	90	122	120	162	130	176	170	230	140	189
5/8	11	110	149	150	203	160	217	210	284	180	244
	18	130	176	170	230	180	244	240	325	200	271
3/4	10	200	271	270	366	280	379	380	515	320	433
	16	220	298	300	406	310	420	420	569	350	474
7/8	9	320	433	430	583	450	610	610	827	510	691
	14	350	474	470	637	500	678	670	908	560	759
1	8	480	650	640	867	680	922	910	1233	770	1044
	12	530	718	710	962	750	1016	990	1342	840	1139
1 1/8	7	590	800	790	1071	970	1315	1290	1749	1090	1477
	12	670	908	890	1206	1080	1464	1440	1952	1220	1654
1 1/4	7	840	1138	1120	1518	1360	1844	1820	2467	1530	2074
	12	930	1260	1240	1681	1510	2047	2010	2725	1700	2304
1 1/2	6	1460	1979	1950	2643	2370	3213	3160	4284	2670	3620
	12	1640	2223	2190	2969	2670	3620	3560	4826	3000	4067

METRIC FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

Size (mm)	Class 4.6				Class 8.8				Class 10.9				Class 12.9			
	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
5	16	1.8	21	2.4	41	4.63	54	6.18	58	6.63	78	8.84	68	7.75	91	10.3
6	19	3.05	36	4.07	69	7.87	93	10.5	100	11.3	132	15	116	13.2	155	17.6
7	45	5.12	60	6.83	116	13.2	155	17.6	167	18.9	223	25.2	1.95	22.1	260	29.4
	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
8	5.4	7.41	7.2	9.88	14	19.1	18.8	25.5	20.1	27.3	26.9	36.5	23.6	32	31.4	42.6
10	10.8	14.7	14.4	19.6	27.9	37.8	37.2	50.5	39.9	54.1	53.2	72.2	46.7	63.3	62.3	84.4
12	18.9	25.6	25.1	34.1	48.6	66	64.9	88	69.7	94.5	92.2	125	81	110	108	147
14	30.1	40.8	40	54.3	77.4	105	103	140	110	150	147	200	129	175	172	234
16	46.9	63.6	62.5	84.8	125	170	166	226	173	235	230	313	202	274	269	365
18	64.5	87.5	86.2	117	171	233	229	311	238	323	317	430	278	377	371	503
20	91	124	121	165	243	330	325	441	337	458	450	610	394	535	525	713
22	124	169	166	225	331	450	442	600	458	622	612	830	536	727	715	970
24	157	214	210	285	420	570	562	762	583	791	778	1055	682	925	909	1233

Scheduled Maintenance Procedures

Observe and Obey:

- ☑ Maintenance inspections shall be completed by a person trained and qualified on the maintenance of this machine.
- ☑ Scheduled maintenance inspections shall be completed daily, quarterly, semi-annually, annually and every 2 years as specified on the *Maintenance Inspection Report.*
- ☑ **⚠WARNING** Failure to perform each procedure as presented and scheduled could result in death, serious injury or substantial damage.
- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating the machine.
- ☑ Use only Genie approved replacement parts.
- ☑ Machines that have been out of service for a period longer than 3 months must complete the quarterly inspection.
- ☑ Unless otherwise specified, perform each maintenance procedure with the machine in the following configuration:
  - Machine parked on a firm, level surface
  - Platform in the stowed position
  - Key switch in the off position with the key removed
  - The red Emergency Stop button in the off position at both ground and platform controls
  - Wheels chocked
  - All external AC power supply disconnected from the machine

About This Section

This section contains detailed procedures for each scheduled maintenance inspection.

Each procedure includes a description, safety warnings and step-by-step instructions.

Symbols Legend

Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

NOTICE Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

⊙ Indicates that a specific result is expected after performing a series of steps.

⊠ Indicates that an incorrect result has occurred after performing a series of steps.

SCHEDULED MAINTENANCE PROCEDURES

Maintenance Symbols Legend

Note: The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.

Indicates that tools will be required to perform this procedure.

Indicates that new parts will be required to perform this procedure.

Indicates that a cold motor or pump will be required to perform this procedure.

Indicates that dealer service will be required to perform this procedure.

Pre-delivery Preparation Report

The pre-delivery preparation report contains checklists for each type of scheduled inspection.

Make copies of the *Pre-delivery Preparation* report to use for each inspection. Store completed forms as required.

Maintenance Schedule

There are five types of maintenance inspections that must be performed according to a schedule—daily, quarterly, semi-annually, annually, and two year. The *Scheduled Maintenance Procedures Section* and the *Maintenance Inspection Report* have been divided into five subsections—A, B, C, D and E. Use the following chart to determine which group(s) of procedures are required to perform a scheduled inspection.

Inspection	Checklist
Daily or every 8 hours	A
Quarterly or every 250 hours	A + B
Semi-annually or every 500 hours	A + B + C
Annually or every 1000 hours	A + B + C + D
Two year or every 2000 hours	A + B + C + D + E

Maintenance Inspection Report

The maintenance inspection report contains checklists for each type of scheduled inspection.

Make copies of the *Maintenance Inspection Report* to use for each inspection. Store completed forms for three years.

Pre-Delivery Preparation

Fundamentals

It is the responsibility of the dealer to perform the Pre-delivery Preparation.

The Pre-delivery Preparation is performed prior to each delivery. The inspection is designed to discover if anything is apparently wrong with a machine before it is put into service.

A damaged or modified machine must never be used. If damage or any variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Instructions

Use the operator's manual on your machine.

The Pre-delivery Preparation consists of completing the Pre-operation Inspection, the Maintenance items and the Function Tests.

Use this form to record the results. Place a check in the appropriate box after each part is completed. Follow the instructions in the operator's manual.

If any inspection receives an N, remove the machine from service, repair and re-inspect it. After repair, place a check in the R box.

Legend

Y = yes, completed
N = no, unable to complete
R = repaired

Comments

Pre-Delivery Preparation	Y	N	R
Pre-operation inspection completed			
Maintenance items completed			
Function tests completed			

Model

Serial number

Date

Machine owner

Inspected by (print)

Inspector signature

Inspector title

Inspector company

Genie®
A TEREX COMPANY

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Maintenance Inspection Report

Model

Serial number

Date

Hour meter

Machine owner

Inspected by (print)

Inspector signature

Inspector title

Inspector company

Instructions

· Make copies of this report to use for each inspection.

· Select the appropriate checklist(s) for the type of inspection to be performed.

☐	**Daily or 8 hour Inspection:**	**A**
☐	**Quarterly or 250 hour Inspection:**	**A+B**
☐	**Semi-annually or 500 hour Inspection:**	**A+B+C**
☐	**Annually or 1000 hour Inspection:**	**A+B+C+D**
☐	**2 Year or 2000 hour Inspection:**	**A+B+C+D+E**

· Place a check in the appropriate box after each inspection procedure is completed.

· Use the step-by-step procedures in this section to learn how to perform these inspections.

· If any inspection receives an “N”, tag and remove the machine from service, repair and re-inspect it. After repair, place a check in the “R” box.

Legend

Y = yes, acceptable

N = no, remove from service

R = repaired

Checklist A - Rev E		**Y**	**N**	**R**
A-1	Manuals and decals			
A-2	Pre-operation inspection			
A-3	Function tests			
Perform after 40 hours:				
A-4	30 day service			

Checklist B - Rev F		**Y**	**N**	**R**
B-1	Batteries			
B-2	Electrical wiring			
B-3	Tires and wheels			
B-4	Emergency stop			
B-5	Key switch			
B-6	Horn (if equipped)			
B-7	Drive brakes			
B-8	Drive speed - stowed			
B-9	Drive speed - raised			
B-10	Module tray latch			
B-11	Hydraulic oil analysis			

Checklist C - Rev A		**Y**	**N**	**R**
C-1	Platform overload			

Checklist D - Rev D		**Y**	**N**	**R**
D-1	Scissor arm wear pads			
D-2	Hydraulic tank return filter			

Checklist E - Rev C		**Y**	**N**	**R**
E-1	Hydraulic oil			
E-2	Steer axle			

Comments

Checklist A Procedures

REV E

A-1
Inspect the Manuals and Decals

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Maintaining the operator's and safety manuals in good condition is essential to safe machine operation. Manuals are included with each machine and should be stored in the container provided in the platform. An illegible or missing manual will not provide safety and operational information necessary for a safe operating condition.

In addition, maintaining all of the safety and instructional decals in good condition is mandatory for safe machine operation. Decals alert operators and personnel to the many possible hazards associated with using this machine. They also provide users with operation and maintenance information. An illegible decal will fail to alert personnel of a procedure or hazard and could result in unsafe operating conditions.

1 Check to make sure that the operator's and safety manuals are present and complete in the storage container on the platform.

2 Examine the pages of each manual to be sure that they are legible and in good condition.

⊙ Result: The operator's manual is appropriate for the machine and all manuals are legible and in good condition.

⊠ Result: The operator's manual is not appropriate for the machine or all manuals are not in good condition or is illegible. Remove the machine from service until the manual is replaced.

3 Open the operator's manual to the decals inspection section. Carefully and thoroughly inspect all decals on the machine for legibility and damage.

⊙ Result: The machine is equipped with all required decals, and all decals are legible and in good condition.

⊠ Result: The machine is not equipped with all required decals, or one or more decals are illegible or in poor condition. Remove the machine from service until the decals are replaced.

4 Always return the manuals to the storage container after use.

Note: Contact your authorized Genie distributor or Genie Industries if replacement manuals or decals are needed.

REV E CHECKLIST A PROCEDURES

A-2
Perform Pre-operation Inspection

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Completing a Pre-operation Inspection is essential to safe machine operation. The Pre-operation Inspection is a visual inspection performed by the operator prior to each work shift. The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests. The Pre-operation Inspection also serves to determine if routine maintenance procedures are required.

Complete information to perform this procedure is available in the appropriate *Operator's Manual*. Refer to the Operator's Manual on your machine.

A-3
Perform Function Tests

Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Completing the function tests is essential to safe machine operation. Function tests are designed to discover any malfunctions before the machine is put into service. A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service.

Complete information to perform this procedure is available in the appropriate *Operator's Manual*. Refer to the Operator's Manual on your machine.

A-4
Perform 30 Day Service

The 30 day maintenance procedure is a one-time sequence of procedures to be performed after the first 30 days or 40 hours of use. After this interval, refer to the maintenance checklists for continued scheduled maintenance.

1 Perform the following maintenance procedures:
- B-3 Inspect the Tires, Wheels and Castle Nut Torque
- D-2 Replace the Hydraulic Tank Return Filter

Checklist B Procedures

REV F

B-1
Inspect the Batteries

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Proper battery condition is essential to good machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in component damage and hazardous conditions.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

⚠WARNING Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

1 Put on protective clothing and eye wear.

2 Be sure that the battery cable connections are free of corrosion.

Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate corrosion on the battery terminals and cables.

3 **Models without maintenance-free or sealed batteries:** Be sure that the battery hold downs and cable connections are tight. Proceed to step 4.
Models with maintenance-free or sealed batteries: Be sure that the battery hold downs and cable connections are tight. Proceed to step 12.

4 Fully charge the batteries and allow the batteries to rest at least 6 hours.

5 Remove the battery vent caps and check the specific gravity of each battery cell with a hydrometer. Note the results.

6 Check the ambient air temperature and adjust the specific gravity reading for each cell as follows:

- Add 0.004 to the reading of each cell for every 10° / 5.5° C above 80° F / 26.7° C.
- Subtract 0.004 from the reading of each cell for every 10° / 5.5° C below 80° F / 26.7° C.

⊙ Result: All battery cells display an adjusted specific gravity of 1.277 or higher. The battery is fully charged. Proceed to step 11.

⊗ Result: One or more battery cells display a specific gravity of 1.217 or below. Proceed to step 8.

7 Perform an equalizing charge OR fully charge the batteries and allow the batteries to rest at least 6 hours.

REV F CHECKLIST B PROCEDURES

8 Remove the battery vent caps and check the specific gravity of each battery cell with a hydrometer. Note the results.

9 Check the ambient air temperature and adjust the specific gravity reading for each cell as follows:

- Add 0.004 to the reading of each cell for every 10° / 5.5° C above 80° F / 26.7° C.
- Subtract 0.004 from the reading of each cell for every 10° / 5.5° C below 80° F / 26.7° C.

⊙ Result: All battery cells display a specific gravity of 1.277 or greater. The battery is fully charged. Proceed to step 13.

⊠ Result: The difference in specific gravity readings between cells is greater than 0.1 OR the specific gravity of one or more cells is less than 1.177. Replace the battery.

10 Check the battery acid level. If needed, replenish with distilled water to 1/8 inch / 3 mm below the bottom of the battery fill tube. Do not overfill.

11 Install the vent caps and neutralize any electrolyte that may have spilled.

All models:

12 Check each battery pack and confirm that the batteries are wired correctly. Refer to the *Battery Connection Diagram* decal on the machine.

13 Inspect the battery charger plug and pigtail for damage or excessive insulation wear. Replace as required.

14 Thoroughly clean the exterior of the battery charger. Inspect and tighten, if necessary, all wire connections at the charger.

15 Connect the battery charger to a properly grounded 115V or 230V single phase AC power supply.

⊙ Result: The charger, after a short delay, should start as indicated by the transformer hum, and begin charging the batteries.

Note: For best results, always use a three-conductor, number 14 AWG / 1.5 mm heavy duty with ground extension cord, in as short a length as possible. Refer to the operating instructions for the battery charger.

Note: If you have any further questions regarding the battery charger operation, please contact the Genie Industries Scissor Service Department.

CHECKLIST B PROCEDURES REV F

B-2
Inspect the Electrical Wiring

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Maintaining electrical wiring in good condition is essential to safe operation and good machine performance. Failure to find and replace burnt, chafed, corroded or pinched wires could result in unsafe operating conditions and may cause component damage.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

1 Inspect the underside of the chassis for damaged or missing ground strap(s).

2 Inspect the following areas for burnt, chafed, corroded and loose wires:

- Ground control panel
- Hydraulic power unit module tray
- Battery pack module tray
- Scissor arms
- Platform controls

3 Inspect for a liberal coating of dielectric grease in the following locations:

- Between the ECM and platform controls
- All wire harness connectors
- Level sensor

4 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

5 Raise the platform approximately 10 feet / 3 m from the ground.

6 Rotate the safety arm away from the machine and let it hang down.

7 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

8 Inspect the center chassis area and scissor arms for burnt, chafed and pinched cables.

9 Inspect the following areas for burnt, chafed, corroded, pinched and loose wires:

- ECM to platform controls
- Power to platform wiring

10 Inspect for a liberal coating of dielectric grease in all connections between the ECM and the platform controls.

11 Raise the platform and return the safety arm to the stowed position.

12 Lower the platform to the stowed position and turn the machine off.

B-3
Inspect the Tires, Wheels and Castle Nut Torque

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Maintaining the tires and wheels in good condition, including proper wheel fastener torque, is essential to safe operation and good performance. Tire and/or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

1 Check the tire surface and sidewalls for cuts, cracks, punctures and unusual wear.

2 Check each wheel for damage, bends and cracks.

3 Remove the castle nut lock plate or cotter pin and check each castle nut for proper torque. Refer to Maintenance Procedure E-2, *Grease the Steer Axle and Wheel Bearings*.

Note: Always replace the cotter pin with a new one when removing the castle nut or when checking the torque of the castle nut.

4 Check each lug bolt for proper torque. Refer to Section 2, *Specifications*.

5 Install the castle nut lock plate using a new lock washer OR install a new cotter pin and secure.

B-4
Test the Emergency Stop

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

A properly functioning Emergency Stop is essential for safe machine operation. An improperly operating red Emergency Stop button will fail to shut off power and stop all machine functions, resulting in a hazardous situation.

Note: As a safety feature, selecting and operating the ground controls will override the platform controls, except the platform red Emergency Stop button.

1 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

2 Push in the red Emergency Stop button at the ground controls to the off position.

⊙ Result: No machine functions should operate.

3 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

4 Push down the red Emergency Stop button at the platform controls to the off position.

⊙ Result: No machine functions should operate.

Note: The red Emergency Stop button at the ground controls will stop all machine operation, even if the key switch is turned to platform control.

CHECKLIST B PROCEDURES REV F

B-5
Test the Key Switch

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Proper key switch action and response is essential to safe machine operation. The machine can be operated from the ground or platform controls and the activation of one or the other is accomplished with the key switch. Failure of the key switch to activate the appropriate control panel could cause a hazardous operating situation.

Note: Perform this procedure from the ground using the platform controls. Do not stand in the platform.

1 Pull out the red Emergency Stop button to the on position at both the ground and platform controls.

2 Turn the key switch to **platform control**.

3 Check the platform up/down function from the **ground controls**.

⊙ Result: The machine functions should **not** operate.

4 Turn the key switch to **ground control**.

5 Check the machine functions from the **platform controls**.

⊙ Result: The machine functions should **not** operate.

6 Turn the key switch to the off position.

⊙ Result: No function should operate.

B-6
Test the Automotive-style Horn (if equipped)

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

A functioning horn is essential to safe machine operation. The horn is activated at the platform controls and sounds at the ground as a warning to ground personnel. An improperly functioning horn will prevent the operator from alerting ground personnel of hazards or unsafe conditions.

1 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

2 Push down the horn button at the platform controls.

⊙ Result: The horn should sound.

REV F CHECKLIST B PROCEDURES

B-7
Test the Drive Brakes

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Proper brake action is essential to safe machine operation. The drive brake function should operate smoothly, free of hesitation and unusual noise. Hydraulically-released individual wheel brakes can appear to operate normally when not fully operational.

Note: Perform this procedure with the machine on incline button at the platform controls in the off position (LED light should be off) and the platform extension deck fully retracted.

1 Mark a test line on the ground for reference.

2 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

3 **After serial number 41199:** Press the drive function select button.

4 Press and hold the function enable switch on the joystick.

5 Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the test line.

6 Bring the machine to top drive speed before reaching the test line. Release the function enable switch or the joystick when your reference point on the machine crosses the test line.

7 Measure the distance between the test line and your machine reference point. Refer to Section 2, *Specifications*.

Note: The brakes must be able to hold the machine on any slope it is able to climb.

B-8
Test the Drive Speed - Stowed Position

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Proper drive functions are essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation and unusual noise over the entire proportionally controlled speed range.

1 Create start and finish lines by marking two lines on the ground 40 feet / 12.2 m apart.

2 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

3 **After serial number 41199:** Press the drive function select button.

4 Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the start and finish lines.

5 Bring the machine to top drive speed before reaching the start line. Begin timing when your reference point on the machine crosses the start line.

6 Continue at full speed and note the time when your reference point on the machine passes over the finish line. Refer to Section 2, *Specifications*.

CHECKLIST B PROCEDURES REV F

B-9
Test the Drive Speed - Raised Position

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Proper drive functions are essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation and unusual noise over the entire proportionally controlled speed range.

1 Create start and finish lines by marking two lines on the ground 40 feet / 12.2 m apart.

2 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

3 **After serial number 41199:** Press the drive function select button.

4 Raise the platform approximately 6 ft / 2 m.

5 Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the start and finish lines.

6 Bring the machine to top drive speed before reaching the start line. Begin timing when your reference point on the machine crosses the start line.

7 Continue at full speed and note the time when your reference point on the machine passes over the finish line. Refer to Section 2, *Specifications*.

B-10
Check the Module Tray Latch Components

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Maintaining the module tray latch components in good condition is essential to good performance and service life. Failure to detect worn out latch components may result in module trays opening unexpectedly, creating an unsafe operating condition.

1 Open both module trays and lubricate each module tray latch. Using light oil, apply a few drops to the side of the latch mechanism.

2 Inspect for and tighten any loose fasteners.

REV F CHECKLIST B PROCEDURES

B-11
Perform Hydraulic Oil Analysis

Genie specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Replacement or testing of the hydraulic oil is essential for good machine performance and service life. Dirty oil and a clogged suction strainer may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require oil changes to be performed more often.

Note: Before replacing the hydraulic oil, the oil may be tested by an oil distributor for specific levels of contamination to verify that changing the oil is necessary. **If the hydraulic oil is not replaced at the two year inspection, test the oil quarterly. Replace the oil when it fails the test.** See E-1, *Test or Replace the Hydraulic Oil.*

Checklist C Procedure

REV A

C-1 Test the Platform Overload System (if equipped)

Note: Genie specifications require that this procedure be performed every 500 hours or six months, whichever comes first OR when the machine fails to lift the maximum rated load.

Testing the platform overload system regularly is essential to safe machine operation. Continued use of an improperly operating platform overload system could result in the system not sensing an overloaded platform condition. Machine stability could be compromised resulting in the machine tipping over.

The platform overload system is designed to prevent machine operation in the event the machine is overloaded. Models equipped with the platform overload option are provided with two additional machine control components: the overload pressure switch and a maximum height limit switch.

The overload pressure switch, which is adjustable and located at the barrel-end of the lift cylinder, is used to determine when the hydraulic lift cylinder requires too much pressure to support the load inside the platform. When this occurs, the pressure switch will send a signal to the ECM, which will not allow the machine to function until the extra weight is removed from the platform.

The maximum height limit switch, located in the center of the drive chassis under the scissor arms at the steer end of the machine, is used to disable the lift valve coil when the platform is near maximum height. When activated, the limit switch keeps the lift cylinder from going over lift relief which would cause the pressure switch to falsely indicate an overload condition.

1 Disconnect the platform controls from the machine at the platform.

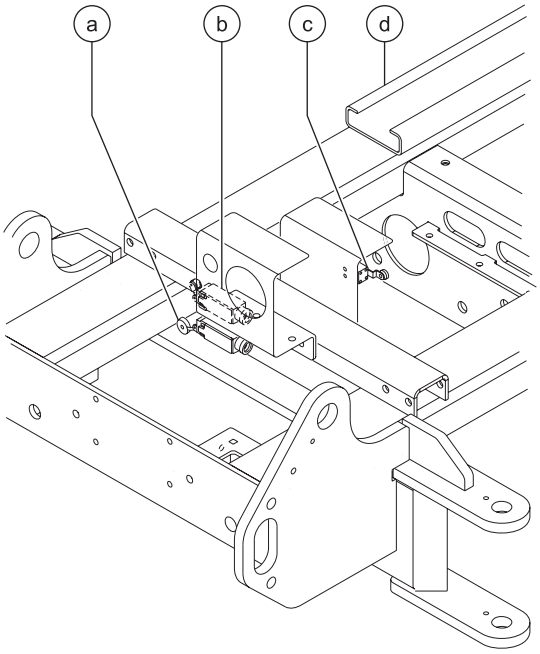
2 Open the hydraulic tray door and locate the platform controls wire harness to Electronic Control Module (ECM) wire harness quick disconnect.

3 Tag and disconnect the platform controls wire harness from the ECM wire harness.

4 Securely connect the platform controls to the ECM wire harness.

REV A CHECKLIST C PROCEDURE

5 Tag and disconnect the black and white wires of the maximum height limit switch from the red and green wires of the maximum height limit switch wire harness at the limit switch.



a maximum height limit switch
b down limit switch
c load sense delay limit switch
d slide block track

6 Securely connect together the terminals of the red and green wires of the maximum height limit switch wire harness.

7 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

8 Fully raise the platform. Release the joystick.

⊙ Result: The platform should stop raising at maximum height. The alarm should sound and fault code 01 will be present in the ECM diagnostic display window at the ground controls. The machine is operating correctly.

9 Activate the auxiliary lowering function and lower the platform approximately 15 ft / 4.5 m.

10 Turn the key switch to the off position.

11 Disconnect the red and green wires of the maximum height limit switch wire harness.

12 Securely connect the black and white wires of the maximum height limit switch to the red and green wires of the maximum height limit switch wire harness.

13 Turn the key switch to platform control.

14 Fully raise the platform. Release the joystick.

⊙ Result: The platform should stop raising at maximum height. The alarm should not sound and no fault code should be present in the ECM diagnostic display window at the ground controls. The machine is operating correctly.

15 Lower the platform to the stowed position.

16 Disconnect the platform controls from the ECM wire harness.

17 Securely connect the platform controls wire harness to the ECM wire harness.

18 Securely connect the platform controls to the platform controls wire harness at the platform.

Checklist D Procedures

REV D

D-1
Check the Scissor Arm Wear Pads

Genie requires that this procedure be performed every 1000 hours or annually, whichever comes first.

Maintaining the scissor arm wear pads in good condition is essential to safe machine operation. Continued use of worn out wear pads may result in component damage and unsafe operating conditions.

1 Measure the thickness of each chassis wear pad at the steer end of the machine.

⊙ Result: The measurement is 5/16 inch / 8 mm or more. Proceed to step 2.

⊠ Result: The measurement is less than 5/16 inch / 8 mm. Replace both wear pads.

2 Measure the thickness of each chassis wear pad at the non-steer end of the machine.

⊙ Result: The measurement is 5/16 inch / 8 mm or more. Proceed to step 3.

⊠ Result: The measurement is less than 5/16 inch / 8 mm. Replace both wear pads.

3 Measure the thickness of each platform scissor arm wear pad at the steer end of the machine.

⊙ Result: The measurement is 5/16 inch / 8 mm or more. Proceed to step 4.

⊠ Result: The measurement is less than 5/16 inch / 8 mm. Replace both wear pads.

4 Measure the thickness of each platform scissor arm wear pad at the non-steer end of the machine.

⊙ Result: The measurement is 5/16 inch / 8 mm or more.

⊠ Result: The measurement is less than 5/16 inch / 8 mm. Replace both wear pads.

REV D CHECKLIST D PROCEDURE

D-2
Replace the Hydraulic Tank Return Filter

Genie requires that this procedure be performed every 1000 hours or annually, whichever comes first.

Replacement of the hydraulic tank return filter is essential for good machine performance and service life. A dirty or clogged filter may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require that the filter be replaced more often.

⚠CAUTION Beware of hot oil. Contact with hot oil may cause severe burns.

Note: The hydraulic tank return filter is mounted on the function manifold next to the hydraulic power unit.

1 Clean the area around the oil filter. Remove the filter with an oil filter wrench.

2 Apply a thin layer of fresh oil to the new oil filter gasket.

3 Install the new filter and tighten it securely by hand.

4 Use a permanent ink marker to write the date and number of hours from the hour meter (if equipped) on the filter.

5 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

6 Raise the platform approximately 6 ft / 2 m.

7 Inspect the filter and related components to be sure that there are no leaks.

8 Clean up any oil that may have spilled.

Checklist E Procedures

REV C

E-1
Test or Replace the Hydraulic Oil

Genie requires that this procedure be performed every 2000 hours or two years, whichever comes first.

Replacement or testing of the hydraulic oil is essential for good machine performance and service life. Dirty oil and a clogged suction strainer may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require oil changes to be performed more often.

Note: Before replacing the hydraulic oil, the oil may be tested by an oil distributor for specific levels of contamination to verify that changing the oil is necessary. **If the hydraulic oil is not replaced at the two year inspection, test the oil quarterly. Replace the oil when it fails the test.**

1 Raise the platform 9 to 10 feet / 3 m.

2 Lift the safety arm, move to the center of the scissor arm and rotate down to a vertical position.

3 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

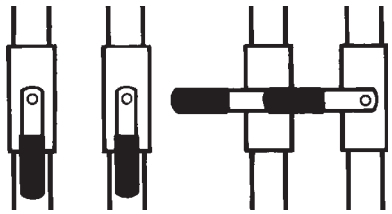
4 Disconnect the battery packs from the machine.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

5 If equipped, locate the hose cover plate in the center of the drive chassis. Remove the hose cover plate mounting fasteners and remove the cover.

6 If equipped, close the two hydraulic shutoff valves located at the hydraulic tank.

NOTICE Component damage hazard. The machine must not be operated with the hydraulic tank shutoff valves in the CLOSED position or component damage will occur. If the tank valves are closed, remove the key from the key switch and tag the machine to inform personnel of the condition.



Open Closed

7 Remove the drain plug from the hydraulic tank and allow all of the oil to drain into a suitable container. Refer to Section 2, *Specifications*, for capacity information.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

8 Tag, disconnect and plug the suction hose(s) and hydraulic shutoff valves (if equipped) from the hydraulic tank.

REV C CHECKLIST E PROCEDURE

9 Tag, disconnect and plug the hydraulic hose at the return filter. Cap the fitting on the filter.

10 Remove the tank strap fasteners. Remove the tank strap and hydraulic tank from the machine.

11 Remove the suction strainers and clean them using a mild solvent.

12 Clean out the tank using a mild solvent.

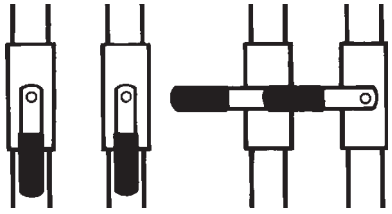
13 Install the suction strainers using thread sealer on the threads.

14 Install and securely tighten the hydraulic tank drain plug using thread sealer on the threads. Do not over tighten.

15 Install the hydraulic tank and install and tighten the hydraulic tank retaining fasteners. Torque to specification.

Torque specifications	
Hydraulic tank retaining fasteners, dry	60 in-lbs 6.8 Nm
Hydraulic tank retaining fasteners, lubricated	45 in-lbs 5 Nm

16 If equipped, install the two hydraulic shutoff valves onto the machine. Open the valves.



Open Closed

17 Install the suction hose(s) onto the hydraulic tank.

18 Install the hose onto the return filter.

19 Connect the battery packs to the machine.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

20 Fill the tank with hydraulic oil until the fluid is within the top 2 inches / 5 cm of the sight gauge. Do not overfill.

21 Activate the pump to fill the hydraulic system with oil and bleed the system of air and check for leaks.

NOTICE Component damage hazard. The pump can be damaged if operated without oil. Be careful not to empty the hydraulic tank while in the process of filling the hydraulic system.

22 Lower the platform to the stowed position and check the fluid level in the hydraulic tank. Repeat step 21 through 22 until the hydraulic system is free of air and the hydraulic fluid level is within the top 2 inches / 5 cm of the sight gauge.

23 Clean up any oil that may have spilled. Properly discard the used oil and filter.

24 If equipped, install the hose cover plate and plate retaining fasteners.

CHECKLIST E PROCEDURE REV C

E-2
Grease the Steer Axle Wheel Bearings

Genie requires that this procedure be performed every 2000 hours or two years, whichever comes first.

Maintaining the steer axle wheel bearings is essential for safe machine operation and service life. Operating the machine with loose or worn wheel bearings may cause an unsafe operating condition and continued use may result in component damage. Extremely wet or dirty conditions or regular steam cleaning and pressure washing of the machine may require that this procedure be performed more often.

1 Loosen the wheel lug nuts. Do not remove them.

2 Block the non-steer wheels, then center a lifting jack under the steer axle.

3 Raise the machine 6 inches / 15 cm and place blocks under the drive chassis for support.

4 Remove the lug nuts. Remove the tire and wheel assembly.

5 Check for wheel bearing wear by attempting to move the wheel hub side to side, then up and down.

⊙ Result: There is no side to side or up and down movement. Proceed to step 10.

⊠ Result: There is side to side or up and down movement Proceed to step 6.

6 Remove the dust cap from the hub. Remove the cotter pin from the castle nut.

7 Tighten the castle nut to 35 ft-lbs / 47 Nm to seat the bearings.

8 Fully loosen the castle nut and re-tighten to 8 ft-lbs / 11 Nm.

9 Check for wheel bearing wear by attempting to move the wheel hub side to side, then up and down.

⊙ Result: There is no side to side or up and down movement. Proceed to step 11.

⊠ Result: There is side to side or up and down movement. Proceed to step 11 and replace the wheel bearings with new ones.

Note: When replacing a wheel bearing, both the inner and outer bearings, including the pressed-in races, must be replaced.

10 Remove the dust cap from the hub. Remove the cotter pin from the castle nut.

11 Remove the castle nut.

12 Pull the hub off of the spindle. The spindle washer, thrust washer and outer bearing should fall loose from the hub.

REV C CHECKLIST E PROCEDURE

13 Place the hub on a flat surface and gently pry the bearing seal out of the hub. Remove the rear bearing.

14 Pack both bearings with clean, fresh grease.

15 Place the large inner bearing into the rear of the hub.

16 Install a new bearing grease seal into the hub by pressing it evenly into the hub until it is flush.

17 Slide the hub onto the yoke spindle.

NOTICE Component damage hazard. Do not apply excessive force or damage to the lip of the seal may occur.

18 Place the outer bearing into the hub.

19 Install the spindle washer, thrust washer and castle nut.

20 Tighten the slotted nut to 35 ft-lbs / 47 Nm to seat the bearings.

21 Fully loosen the castle nut and re-tighten to 8 ft-lbs / 11 Nm.

22 Install a new cotter pin. Bend the cotter pin to lock it in place.

Note: Always use a new cotter pin when installing a castle nut.

23 Install the dust cap.

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Repair Procedures

Observe and Obey:

- ☑ Repair procedures shall be completed by a person trained and qualified on the repair of this machine.
- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating the machine.

Before Repairs Start:

- ☑ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.
- ☑ Be sure that all necessary tools and parts are available and ready for use.
- ☑ Use only Genie approved replacement parts.
- ☑ Read each procedure completely and adhere to the instructions. Attempting shortcuts may produce hazardous conditions.
- ☑ Unless otherwise specified, perform each repair procedure with the machine in the following configuration:
  - Machine parked on a firm, level surface
  - Platform in the stowed position
  - Key switch in the off position with the key removed
  - The red Emergency Stop button in the off position at both ground and platform controls
  - Wheels chocked
  - All external AC power supply disconnected from the machine

About This Section

Most of the procedures in this section should only be performed by a trained service professional in a suitably equipped workshop. Select the appropriate repair procedure after troubleshooting the problem.

Perform disassembly procedures to the point where repairs can be completed. Then to re-assemble, perform the disassembly steps in reverse order.

Symbols Legend

Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

NOTICE Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

⊙ Indicates that a specific result is expected after performing a series of steps.

⊠ Indicates that an incorrect result has occurred after performing a series of steps.

Platform Controls

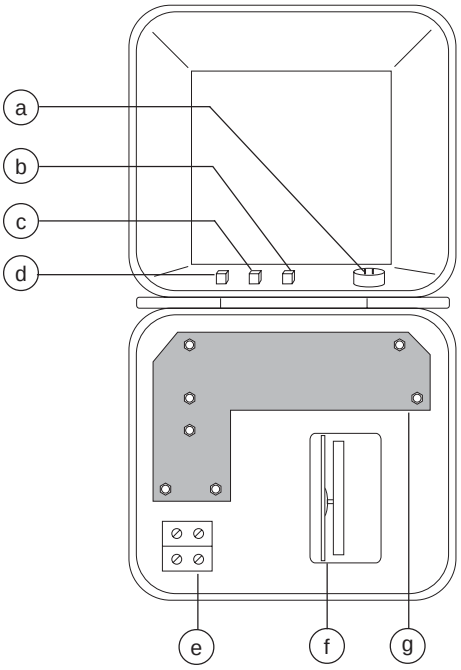
REV E

The platform controls, used to operate the machine from the platform or while standing on the ground, can also be used to tune the performance of the machine.

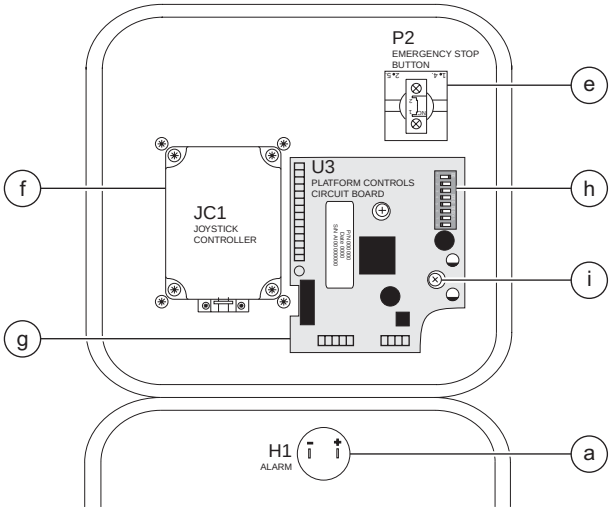
Moving the joystick or activating a button or toggle switch sends a signal to the Electronic Control Module (ECM). When the ECM is in the function mode, the platform controls are used to operate the various machine functions. When the ECM is in the programming mode (PS is shown in the diagnostic display window), the platform controls are used to adjust the function speed parameters.

The platform controls contains an electronic circuit board, joystick, membrane decal, buttons, switches and LEDs. Potentiometer-equipped joysticks can be adjusted to maintain performance.

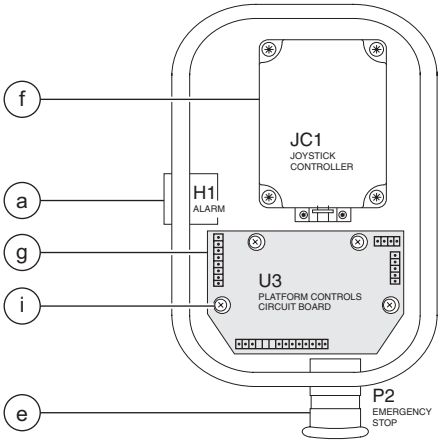
For further information or assistance, consult the Genie Industries Service Department.



Before serial number 41804
(potentiometer-equipped joystick)



From serial number 41804 to 44698
(hall effect joystick)



After serial number 44698
(hall effect joystick)

a alarm H1
b function enable/high speed select button for platform up/down function BN12
c function enable/low speed select button for platform up/down function BN13
d platform up/down select toggle switch TS20 OR platform up/down and outrigger up/down toggle switch TS21
e red Emergency Stop button P2
f joystick controller JC1
g printed circuit boards U3
h DIP switch SW25
i circuit board retaining fastener

1-1 Circuit Boards

How to Remove the Platform Controls Circuit Board

1 Turn the key switch to the off position and push in the red Emergency Stop button to the off position at both the ground and platform controls.

2 Loosen or remove the fasteners securing the platform control box together. Open the control box.

3 Locate the circuit board mounted to the top half of the platform control box.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

NOTICE Component damage hazard. Electrostatic discharge (ESD) can damage printed circuit board components. Maintain firm contact with a metal part of the machine that is grounded at all times when handling printed circuit boards OR use a grounded wrist strap.

4 Carefully disconnect the wire harness connectors from the circuit board.

5 **Models with Generation 5 platform controls:** Remove the alarm and the red Emergency Stop button.

6 Carefully remove the circuit board retaining fasteners and remove the circuit board from the control box.

1-2 Joystick Controller

Maintaining the joystick at the proper setting is essential to safe machine operation. The joystick should operate smoothly over its entire range of motion.

A Hall-effect joystick controller was incorporated into the platform controls after serial number 41803. It does not require any calibration.

How to Calibrate the Joystick Controller

Note: This procedure applies only to models with a potentiometer-equipped joystick.

Note: If the joystick is out of calibration on models before serial number 41200, code 30 will be present on the diagnostic display and the error indicator light will be on at the platform controls. If the joystick is out of calibration on models after serial number 41199, code 47 will be present on the diagnostic display and the error indicator light will be on at the platform controls.

Before serial number 41804:

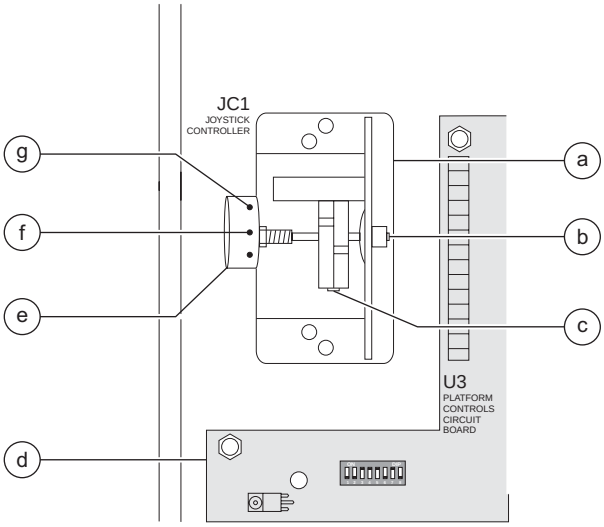
1 Turn the key switch to platform control and pull out the red Emergency Stop button to the ON position at both the ground and platform controls.

2 Remove the platform control box lid retaining fasteners. Open the control box lid.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

PLATFORM CONTROLS REV E

3 Locate the potentiometer on the base of the joystick.



a joystick controller JC1
b potentiometer shaft slot
c potentiometer shaft set screw
d platform controls circuit board U3
e potentiometer R15
f brown wire
g purple wire

4 Using a volt meter set to read DC voltage, place the volt meter negative lead on the purple wire. Place the volt meter positive lead on the brown wire.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

5 Loosen the set screw on the potentiometer shaft just enough to allow the shaft to rotate.

6 With the joystick in the center position, adjust the potentiometer shaft until 2.05V DC is displayed on the volt meter. Tighten the set screw.

7 Do not hold the function enable switch.

8 Move the joystick full stroke in both directions several times. Return the joystick to the center position.

⊙ Result: The volt meter should read 2.05V DC.

⊠ Result: If the volt meter does not read 2.05V DC, repeat steps 5 through 8.

9 Turn the key switch to the off position and wait a few seconds.

10 Turn the key switch to platform control.

⊙ Result: The error indicator light on the top of the platform control box should go out and code 30 should not be present on the diagnostic display.

⊠ Result: If the error indicator light is still on or if code 30 is present on the diagnostic display, repeat steps 5 through 8.

11 Turn the key switch to the off position.

12 Close the lid and tighten the fasteners.

1-3 Controller Adjustments

Platform lift speed, stowed drive speed, raised drive speed and high torque drive speed are adjustable to compensate for wear in the hydraulic pump and drive motors.

The function speeds are determined by the percentage of total controller output.

For further information or assistance, consult the Genie Industries Service Department.

⚠DANGER Tip-over hazard. Do not adjust the lift and/or drive speed higher than specified in this procedure. Setting the function speeds greater than specifications could cause the machine to tip over resulting in death or serious injury.

⚠DANGER Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

Note: Select a test area that is firm, level and free of obstructions.

How to Determine the Revision Level

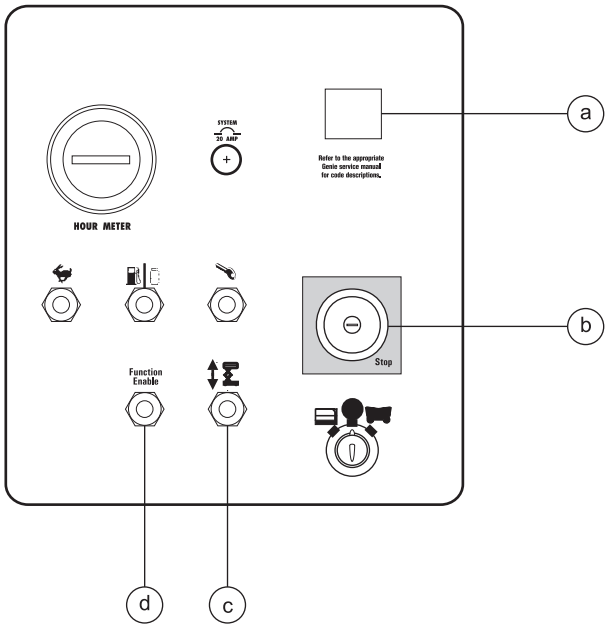
Note: Models before serial number 13154 were not adjustable when they were shipped from the factory. If the ECM has been updated to software revision "BO" or later, or if the machine serial number is after 13153, you can access the revision level of the ECM by using the following procedure.

Before serial number 41804:

1 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both platform and ground controls.

2 Move and hold the function enable toggle switch and the platform up/down toggle switch in the down direction.

⊙ Result: The revision level of the ECM will appear in the diagnostic display window.



a diagnostic display window
b red Emergency Stop Button P1
c platform up/down toggle switch TS66
d function enable toggle switch TS67

PLATFORM CONTROLS REV E

After serial number 41803:

1 Remove the platform controls from the platform.

2 Place the platform controls close to the diagnostic display on the power unit side of the machine.

3 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

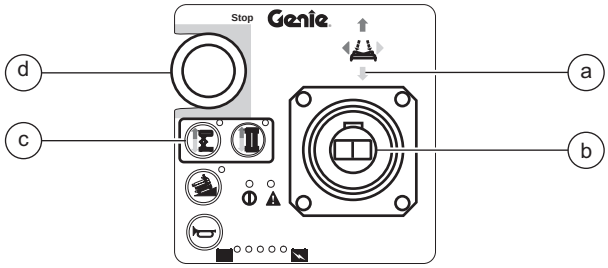
4 Press the lift function select button.

5 Slowly move the joystick in the direction indicated by the yellow arrow.

⊙ Result: The software revision level will appear in the diagnostic display.

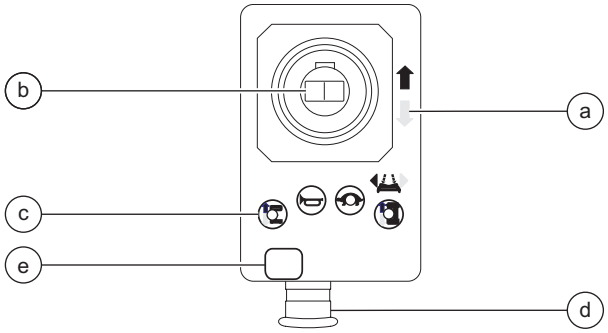
⊙ Result: If the software revision level does not appear in the diagnostic display, turn the key switch to ground control and move the platform lift switch in the down direction. The software revision level will appear in the diagnostic display.

6 Push in the red Emergency Stop button to the off position at both the ground and platform controls and turn the key switch to the off position.



Gen 4 platform controller

a yellow arrow
b joystick controller JC1
c lift function select button BN9
d red Emergency Stop button P2
e platform controls diagnostic display



Gen 5 platform controller

How to Adjust the Fast Lift Speed (before serial number 41200)

1 Remove the platform controls from the platform and place the controls near the diagnostic display at the ground control panel.

2 Turn the key switch to the off position.

3 Press and hold the platform extend/retract enable button or outrigger enable button and turn the key switch to platform controls.

⊙ Result: The diagnostic display will show "PS."

4 Release the horn button and the platform extend/retract enable button or outrigger enable button.

⊙ Result: The diagnostic display will show the maximum lift speed percentage.

5 Press and hold the function enable/high speed select button to show the fast platform lift speed percentage in the diagnostic display window.

6 To increase or decrease the fast platform lift speed, press and hold the function enable/high speed select button while using the steering rocker switch to adjust the percentage. The percentage will be seen in the diagnostic display window.

7 Release the function enable/high speed select button.

8 Turn the key switch to the off position to save the settings.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

9 Confirm the lift speed of the machine. Refer to Section 2, *Specifications.*

How to Adjust the Slow Lift Speed (before serial number 41200)

1 Remove the platform controls from the platform and place the controls near the diagnostic display at the ground control panel.

2 Turn the key switch to the off position.

3 Press and hold the platform extend/retract enable button or outrigger enable button and turn the key switch to platform controls.

⊙ Result: The diagnostic display will show "PS."

4 Release the horn button and the platform extend/retract enable button or outrigger enable button.

⊙ Result: The diagnostic display will show the maximum lift speed percentage.

5 Press and hold the function enable/low speed select button to show the slow platform lift speed percentage in the diagnostic display window.

6 To increase or decrease the platform lift speed, press and hold the function enable/low speed select button while using the steering rocker switch to adjust the percentage. The percentage will be seen in the diagnostic display window.

7 Release the function enable/low speed select button.

8 Turn the key switch to the off position to save the settings.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

9 Confirm the lift speed of the machine. Refer to Section 2, *Specifications.*

How to Adjust the Lift Speed (after serial number 41199)

⚠DANGER Tip-over hazard. Do not adjust the lift and/or drive speed higher than specified in this procedure. Setting the function speeds greater than specifications could cause the machine to tip over resulting in death or serious injury.

⚠DANGER Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

1 Pull out the red Emergency Stop button to the on position at the ground controls.

2 Push in the red Emergency Stop button to the off position at the platform controls.

3 Turn the key switch to platform control.

4 At the platform controls, press and hold the lift function select and the horn buttons. Pull out the red Emergency Stop button to the on position.

⊙ Result: The diagnostic display will show "PS."

5 Release the lift function select and horn buttons.

⊙ Result: The diagnostic display will show the maximum lift speed percentage.

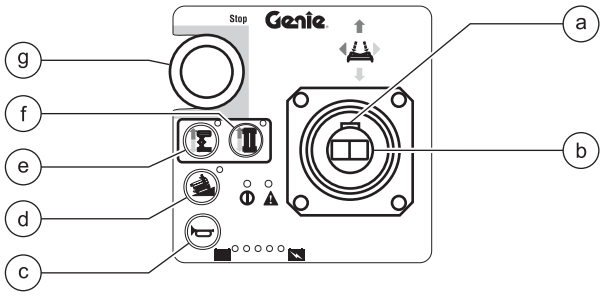
6 Press the lift function select button.

7 Use the steering thumb rocker switch on the joystick to increase or decrease the maximum lift speed. Refer to Section 2, *Specifications*, for function speeds.

8 Turn the key switch to the off position.

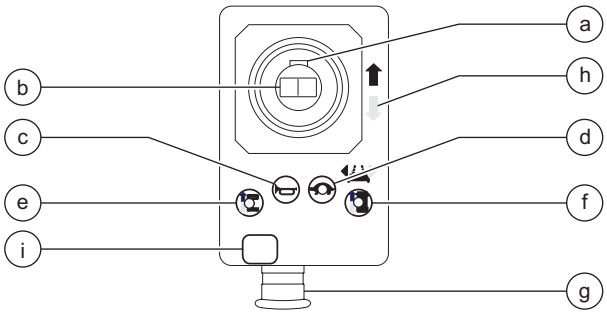
Note: Any change in software settings will not take effect until the key switch is turned to the off position.

9 Confirm the lift speed of the machine. Refer to Section 2, *Specifications.*



Generation 4 platform controller

a function enable switch SW5
b joystick controller JC1 with thumb steering rocker SW6
c horn button BN5
d machine on incline / turtle button BN6
e lift function select button BN9
f drive function select BN8
g red Emergency Stop button P2
h yellow arrow
i platform controls diagnostic display



Generation 5 platform controller

How to Adjust the Stowed Drive Speed

The stowed drive speed function is adjustable on models with Generation 4 and Generation 5 controls, incorporated into the machines after serial number 41803. Stowed drive speed is not adjustable on models before serial number 41804.

⚠ DANGER Tip-over hazard. Setting drive speed greater than specifications will cause the machine to tip over resulting in death or serious injury. Do not adjust the drive speed higher than specified in this procedure.

⚠ DANGER Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will cause the machine to tip over resulting in death or serious injury.

1 Pull out the red Emergency Stop button to the on position at the ground controls.

2 Push in the red Emergency Stop button to the off position at the platform controls.

3 Turn the key switch to platform control.

4 At the platform controls, press and hold the lift function select and the horn buttons. Pull out the red Emergency Stop button to the on position.

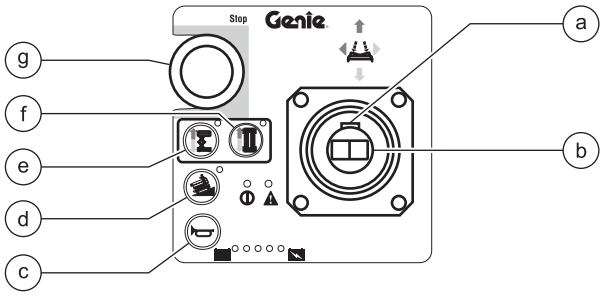
⊙ Result: The diagnostic display will show "PS."

5 Release the lift function select and horn buttons.

⊙ Result: The diagnostic display will show the maximum lift speed percentage.

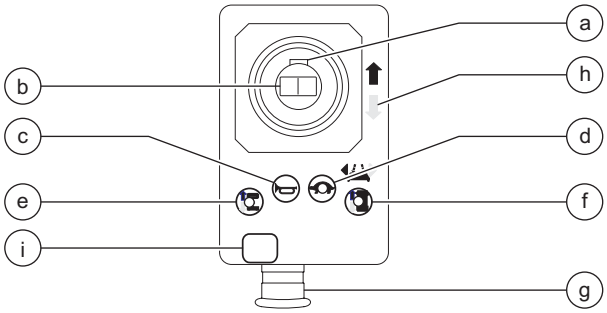
6 Press the drive function select button.

⊙ Result: The diagnostic display will show the stowed drive speed percentage.



Generation 4 platform controller

a function enable switch SW5
b joystick controller JC1 with thumb steering rocker SW6
c horn button BN5
d machine on incline / turtle button BN6
e lift function select button BN9
f drive function select BN8
g red Emergency Stop button P2
h yellow arrow
i platform controls diagnostic display



Generation 5 platform controller

7 Use the steering thumb rocker switch on the joystick to increase or decrease the stowed drive speed percentage.

8 Turn the key switch to the off position.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

9 Confirm the stowed drive speed of the machine. Refer to Maintenance Procedure B-8, *Test the Drive Speed - Stowed Position.*

How to Adjust the Raised Drive Speed

⚠DANGER Tip-over hazard. Setting drive speed greater than specifications will cause the machine to tip over resulting in death or serious injury. Do not adjust the drive speed higher than specified in this procedure.

⚠DANGER Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

Note: The drive function of the GS-2668 DC before serial number 26563 is disabled when the platform is 20 feet / 6.1 m or higher while the platform is extended. The GS-2668 DC after serial number 26562 is able to drive at full height due to additional counterweight being added to the machine.

Note: The drive function of the GS-3268 DC before serial number 41200 is disabled when the platform is 26 feet / 7.9 m or higher while the platform is extended. The GS-3268 DC after serial number 41199 is able to drive at full height due to additional counterweight being added to the machine.

Before serial number 41200:

1 Remove the platform controls from the platform and place the controls near the diagnostic display window at the ground control panel.

2 Turn the key switch to the off position.

3 Press and hold the platform extend/retract enable button or outrigger enable button and turn the key switch to platform controls.

⊙ Result: The diagnostic display will show "PS."

4 Release the horn button and the platform extend/retract enable button or outrigger enable button.

⊙ Result: The diagnostic display will show the maximum lift speed percentage.

5 Press the horn button to show the maximum raised drive speed percentage.

6 To increase or decrease the raised drive speed, press and hold the horn button while using the steering rocker switch to adjust the percentage. The percentage will be seen in the diagnostic display window.

7 Release the horn button.

8 Turn the key switch to the off position to save the settings.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

9 Confirm the raised drive speed of the machine. Refer to Maintenance Procedure B-9, *Test the Drive Speed - Raised Position.*

REV E PLATFORM CONTROLS

After serial number 41199:

1 Pull out the red Emergency Stop button to the on position at the ground controls.

2 Push in the red Emergency Stop button to the off position at the platform controls.

3 Turn the key switch to platform control.

4 At the platform controls, press and hold the lift function select and the horn buttons. Pull out the red Emergency Stop button to the on position.

⊙ Result: The diagnostic display will show "PS."

5 Release the lift function select and horn buttons.

⊙ Result: The diagnostic display will show the maximum lift speed percentage.

6 Press the drive function select button.

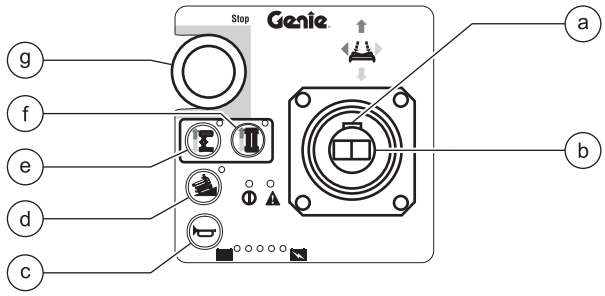
7 Press and hold the horn button.

⊙ Result: The diagnostic display will show the raised drive speed percentage.

8 Turn the key switch to the off position.

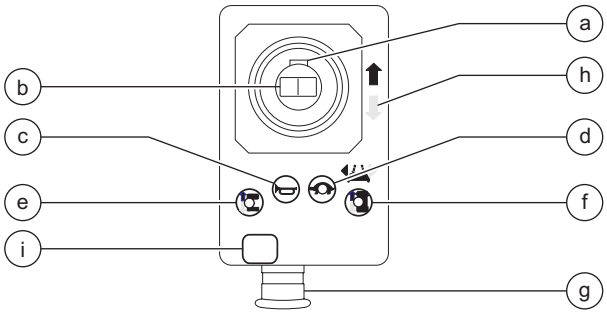
Note: Any change in software settings will not take effect until the key switch is turned to the off position.

9 Confirm the raised drive speed of the machine. Refer to Maintenance Procedure B-9, *Test the Drive Speed - Raised Position.*



Generation 4 platform controller

a function enable switch SW5
b joystick controller JC1 with thumb steering rocker SW6
c horn button BN5
d machine on incline / turtle button BN6
e lift function select button BN9
f drive function select BN8
g red Emergency Stop button P2
h yellow arrow
i platform controls diagnostic display



Generation 5 platform controller

PLATFORM CONTROLS REV E

How to Adjust the High Torque Drive Speed

⚠DANGER Tip-over hazard. Do not adjust the lift and/or drive speed higher than specified in this procedure. Setting the function speeds greater than specifications could cause the machine to tip over resulting in death or serious injury.

⚠DANGER Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

Note: This procedure does not apply to models before serial number 41200, as they are not equipped with the high torque drive speed function.

After serial number 41199:

1 Pull out the red Emergency Stop button to the on position at the ground controls.

2 Push in the red Emergency Stop button to the off position at the platform controls.

3 Turn the key switch to platform control.

4 At the platform controls, press and hold the lift function select and the horn buttons. Pull out the red Emergency Stop button to the on position.

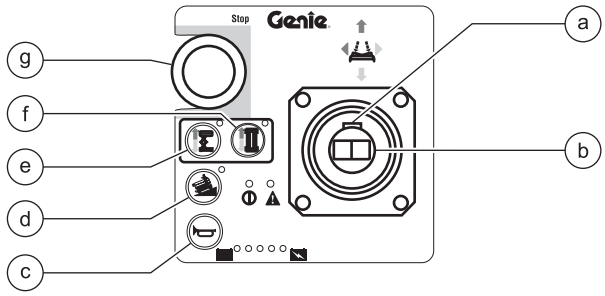
⊙ Result: The diagnostic display will show "PS."

5 Release the lift function select and horn buttons.

⊙ Result: The diagnostic display will show the maximum lift speed percentage.

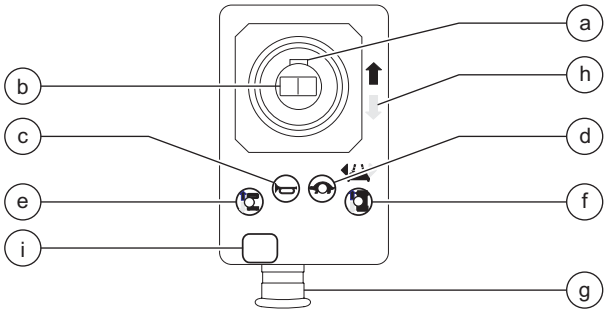
6 Press the drive function select button.

⊙ Result: The diagnostic display will show the stowed drive speed percentage.



Generation 4 platform controller

a function enable switch SW5
b joystick controller JC1 with thumb steering rocker SW6
c horn button BN5
d machine on incline / turtle button BN6
e lift function select button BN9
f drive function select BN8
g red Emergency Stop button P2
h yellow arrow
i platform controls diagnostic display



Generation 5 platform controller

7 Press and hold the machine on incline button.

⊙ Result: The diagnostic display will show the stowed high torque drive speed percentage.

8 Use the steering thumb rocker switch on the joystick to increase or decrease the stowed high torque drive speed percentage.

9 Turn the key switch to the off position.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

1-4 Software Configuration (before serial number GS6805-44699)

The ECM (Electronic Control Module) contains programming for all configurations of the Genie GS-2668 DC and GS-3268 DC. The platform controls can be adjusted to a different configuration by changing the combination of the DIP switch settings. The DIP switch is located on the circuit board inside the platform control box.

Each of the eight toggles of the DIP switch have two positions: ON or OFF. When reading the DIP switch code in the *DIP Switch Code Chart*, the ON and OFF are represented by the numbers 1 (ON) and 0 (OFF).

How to Determine the DIP Switch Configuration

Before serial number 41200:

1 Turn the key switch to ground control and pull out the red Emergency Stop buttons to the on position at both the ground and platform controls.

2 Move and hold the platform up/down toggle switch in the up direction and activate the function enable toggle switch from the ground controls. Refer to Illustration 1.

⊙ Result: The DIP switch configuration will appear in the diagnostic display. See 1-4, *DIP Switch Code Chart (before serial number 41200).*

After serial number 41199:

1 Remove the platform controls from the platform.

2 Place the platform controls close to the diagnostic display on the power unit side of the machine.

3 Turn the key switch to platform control and pull out the red Emergency Stop buttons to the on position at both the ground and platform controls.

4 Press and hold the lift function enable button OR press the lift function select button. Refer to Illustration 2.

5 Slowly move the joystick in the direction indicated by the blue arrow.

⊙ Result: The DIP switch configuration will appear in the diagnostic display. See 1-4, *DIP Switch Code Chart (after serial number 41199).*

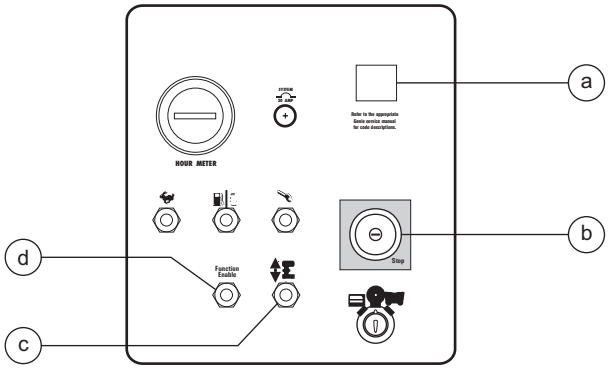


Illustration 1

a diagnostic display window
b red Emergency Stop Button P1
c platform up/down toggle switch TS66
d function enable toggle switch TS67

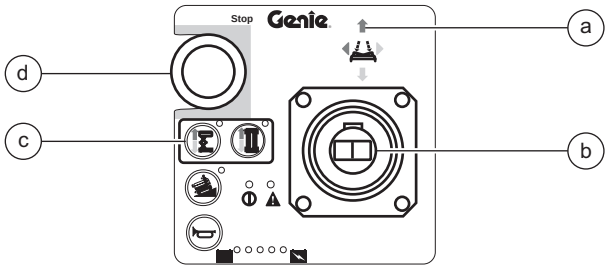


Illustration 2 - Generation 4 platform controls

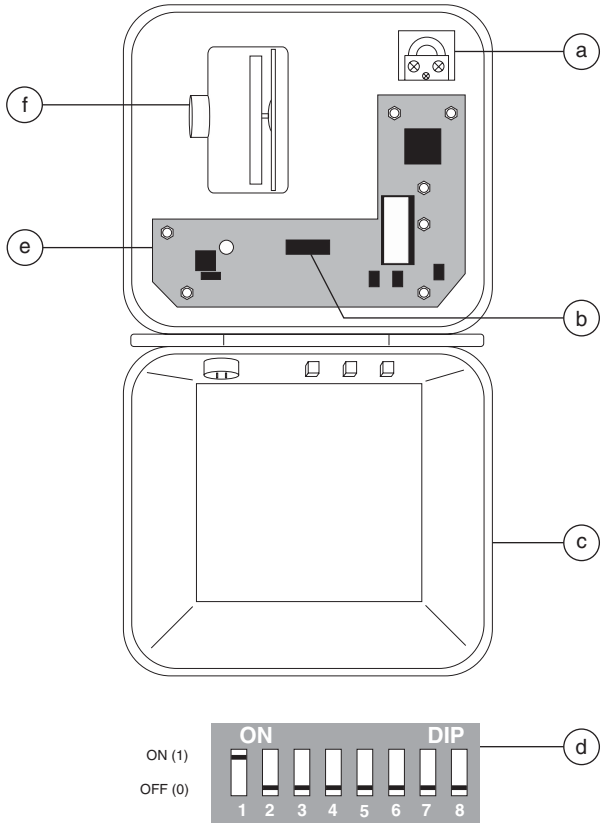
a blue arrow
b joystick controller JC1
c lift function select button BN9
d red Emergency Stop button P2

PLATFORM CONTROLS REV E

How to Set the DIP Switch Codes

⚠DANGER Tip-over hazard. Do not adjust the DIP switch settings to other than what is specified in this procedure. Exceeding specifications could cause the machine to tip over resulting in death or serious injury.

nOTE: If replacing the circuit board, note the toggle positions on the DIP switch. Set the DIP switch on the new circuit board to the same configuration as the old board.



a red Emergency Stop button P2
b DIP switch SW25
c control box
d enlarged view of DIP switch SW25
e circuit board U3
f joystick controller JC1

Before serial number 41200:

1 Push in the red Emergency Stop button to the off position at both the ground and platform controls. Turn the key switch to the off position.

2 Remove the fasteners securing the lid of the platform controls and open the platform control box.

3 Rotate the platform control box in the position shown to correctly identify the configuration of the DIP switch settings.

4 Locate the DIP switch on the circuit board. Move the DIP switch settings to correspond with the configuration of the machine options, indicated in the chart. See 1-4, *DIP Switch Code Chart (before serial number 41200) .*

5 Apply dielectric grease to the DIP switch after setting the configuration.

6 Close the lid and install the fasteners.

7 To confirm the settings. See 1-4, *How to Determine the DIP Switch Configuration*.

8 Push in the red Emergency Stop button to the off position at both the ground and platform controls and turn the key switch to the off position.

Note: Any change in DIP settings will not take effect until the key switch is turned to the off position.

REV E PLATFORM CONTROLS

After serial number 41199:

1 Push in the red Emergency Stop button to the off position at the ground and platform controls. Turn the key switch to the off position.

2 Remove the fasteners securing the top of the platform controls and open the platform control box.

3 Rotate the platform control box to the position shown to correctly identify the configuration of the DIP switch settings.

4 Locate the DIP switch on the circuit board. Move the DIP switch settings to correspond with the configuration of the machine options, indicated in the chart. See 1-4, *DIP Switch Code Chart (after serial number 41199).*

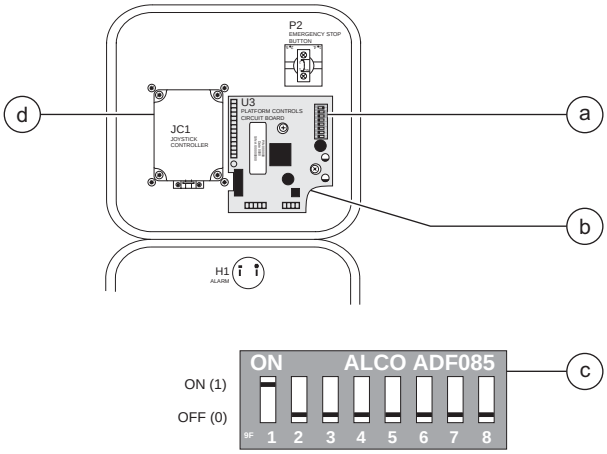
5 Apply dielectric grease to the DIP switch after setting the configuration.

6 Close the lid and install the fasteners.

7 To confirm the settings. See 1-4, *How to Determine the DIP Switch Configuration*.

8 Push in the red Emergency Stop button to the off position at both the ground and platform controls and turn the key switch to the off position.

Note: Any change in DIP settings will not take effect until the key switch is turned to the off position.



a DIP switch SW25
b platform controls circuit board U3
c enlarged view of DIP switch SW25
d joystick controller JC1

DIP Switch Code Chart (before serial number 41200)

A mark in the column indicates that the machine configuration includes this option.

Diagnostic Display Code	Dip Switch Code	Motion Alarm	Lift/Drive Cut Out	Motion Beacon	Platform Overload	Descent Delay
03	11001010					
06	01101011	•				
09	11001011		•			
12	01101010	•	•			
15	11000000			•		
18	01100100	•		•		
21	11001000		•	•		
24	01101100	•	•	•		
27	11000011				•	
30	01100101	•			•	
33	11000111		•		•	
36	01101001			•	•	
39	11001100	•	•		•	
42	01101101	•		•	•	
45	11001111		•	•	•	
48	01101111	•	•	•	•	
51	10010000					•
54	10010001	•				•
57	10010010		•			•
60	10001111			•		•
63	01111001				•	•
66	10011010	•	•			•
69	10000011	•		•		•
72	10010101	•			•	•
75	10010111		•	•		•
78	10011101		•		•	•
81	01111110			•	•	•
84	10010110	•		•	•	•
87	10010100	•	•		•	•
90	01111101	•	•	•		•
93	10001010		•	•	•	•
96	10001110	•	•	•	•	•

DIP Switch Code Chart (after serial number 41199)

A mark in the column indicates that the machine configuration includes this option.

Diagnostic Display Code	Dip Switch Code	Motion Beacon	Motion Alarm	Lift/Drive Cut Out	Platform Overload	Descent Delay
32	10000000					
33	10000100					•
34	10001000				•	
35	10010000			•		
36	10100000		•			
37	11000000	•				
38	10001100				•	•
39	10010100			•		•
40	10100100		•			•
41	11000100	•				•
42	10011100			•	•	•
43	10101100		•		•	•
44	11001100	•			•	•
45	10110100		•	•		•
46	11010100	•		•		•
47	11100100	•	•			•
48	10111100		•	•	•	•
49	11011100	•		•	•	•
50	11101100	•	•		•	•
51	11110100	•	•	•		•
52	11111100	•	•	•	•	•
53	10011000			•	•	
54	10101000		•		•	
55	11001000	•			•	
56	10111000		•	•	•	
57	11011000	•		•	•	
58	11101000	•	•		•	
59	11111000	•	•	•	•	
60	10110000		•	•		
61	11010000	•		•		
62	11110000	•	•	•		
63	11100000	•	•			

DIP Switch Function Definitions

Note: If replacing the circuit board, note the toggle positions on the DIP switches. Set the DIP switches on the new circuit board to the same configuration of the old board.

Motion Beacon: The motion beacon option flashes only when operating a function.

Motion Alarm: The motion alarm will sound when operating any function.

Lift/Drive Cut Out: This cuts out lift and drive functions when the machine exceeds the rating on the serial plate. Required for Europe and Australia before serial number 41126. Installed on all machines after serial number 41125.

Platform Overload: This cuts out all functions when the pressure sensor is overloaded. The red Emergency Stop button must be cycled before any function can be resumed. Required for CE models.

Descent Delay: This option halts descent at approximately 7 feet / 2.1 m. All controls must be released for 4 to 6 seconds before descent is re-enabled. Required for CE models.

Battery Drain Alarm: When the machine is turned on and no function is activated for 10 minutes, the alarm will sound once every 3 seconds. This option can be activated by moving DIP switch 7 to position 1.

PLATFORM CONTROLS REV E

1-5 Software Configuration (after serial number GS6805-44698)

The Electronic Control Module (ECM) contains programming for all configurations of the Genie GS-2668 and GS-3268. The machine can be adjusted to a different configuration using the buttons at the platform controls.

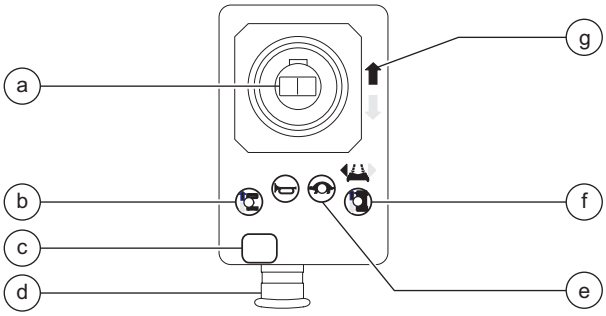
How to Determine the Software Configuration

1 Remove the platform controls from the platform.

2 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

⊙ Result: The diagnostic display at the platform controls will show the battery condition. See 1-5, *How to Determine the Battery Voltage*.

3 Press the lift function select button.



a joystick controller JC1 with thumb steering rocker SW6
b lift function select button BN9
c diagnostic display
d red Emergency Stop button P2
e speed select button BN6
f drive function select button BN8
g blue arrow

4 Slowly move the joystick in the direction indicated by the blue arrow.

⊙ Result: The machine configuration code will appear in the diagnostic display.

5 Push in the red Emergency Stop button to the off position at both the ground and platform controls and turn the key switch to the off position.

Machine Option Definitions

Motion Alarm: The motion alarm will sound when operating any function.

Lift/Drive Cut Out: In addition to an alarm sounding, lift and drive functions are disabled when the platform is raised above the down limit switch and the incline of the chassis exceeds the rating on the serial plate. Configured on all machines.

Platform Overload: When the platform overload limit switch is tripped, signaling an overload condition in the platform, all machine functions are disabled. The additional weight must be removed from the platform and the power cycled from off to on before any function can be resumed. Required for CE models.

Descent Delay: This option halts descent at approximately 7 feet / 2.1 m. All controls must be released for 4 to 6 seconds before descent is re-enabled. Required for CE models.

Battery Drain Alarm: When the machine is turned on and in the stowed position, and no function is activated for 2 minutes, an alarm will sound once every 3 seconds.
When this option is configured, a dot in the diagnostic display window will remain continuously illuminated when the ECM is in the 'SC' mode OR when the platform up function is activated.

How to Change the Software Configuration

1 Pull out the red Emergency Stop button to the on position at the ground controls.

2 Push in the red Emergency Stop button to the off position at the platform controls.

3 Turn the key switch to platform control.

4 At the platform controls, press and hold the lift function select and speed select buttons, and pull out the red Emergency Stop button to the on position.

⊙ Result: The diagnostic display, at the platform controls and the ECM, will show "SC."

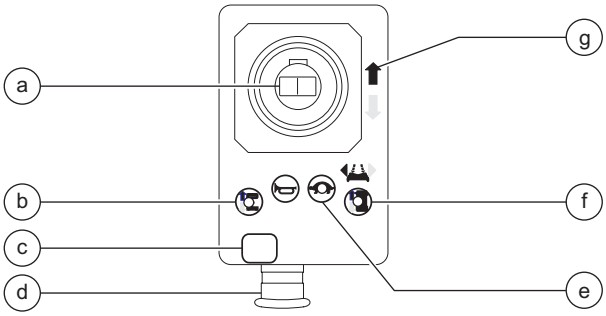
5 Release the lift function select and speed select buttons.

⊙ Result: The diagnostic display will show the current configuration.

6 Press the lift function select button.

⊙ Result: The 'tens' digit setting will be activated and the current 'tens' setting will flash in the diagnostic display. Use the steering thumb rocker switch on the joystick to increase or decrease the value. See 1-5, *Machine Configuration Code Chart* for configuration settings.

7 Press and hold the lift function select button for a minimum of 3 seconds to set the 'tens' value.



a joystick controller JC1 with thumb steering rocker SW6
b lift function select button BN9
c diagnostic display
d red Emergency Stop button P2
e speed select button BN6
f drive function select button BN8
g blue arrow

8 Press the speed select button.

⊙ Result: The 'ones' digit setting will be activated and the current 'ones' setting will flash in the diagnostic display. Use the steering thumb rocker switch on the joystick to increase or decrease the value. See 1-5, *Machine Configuration Code Chart* for configuration settings.

9 Press and hold the speed select button for a minimum of 3 seconds to set the 'ones' value.

10 Turn the key switch to the off position.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

Machine Configuration Code Chart (before serial number GS6807-48779)

A mark in the four right columns indicates that the machine configuration, at left, includes this option.

MACHINE CONFIGURATION CODE GS-2668 DC • GS-3268 DC (ECMs with software revisions A0 to A4)				
Machine Function Code at Diagnostic Display	Motion Alarm	Lift/Drive Cut Out	Platform Overload	Descent Delay
37				
41				•
44			•	•
46		•		•
47	•			•
49		•	•	•
50	•		•	•
51	•	•		•
52	•	•	•	•
55			•	
57		•	•	
58	•		•	
59	•	•	•	
61		•		
62	•	•		
63	•			

Machine Configuration Code Chart (after serial number GS6807-48778)

A mark in the four right columns indicates that the machine configuration, at left, includes this option.

MACHINE CONFIGURATION CODE GS-2668 DC • GS-3268 DC (ECMs with software revisions A5 and higher)				
Machine Function Code at Diagnostic Display	Motion Alarm	Lift/Drive Cut Out	Platform Overload	Descent Delay
37		•		
41		•		•
44		•	•	•
46		•		•
47	•	•		•
49		•	•	•
50	•	•	•	•
51	•	•		•
52	•	•	•	•
55		•	•	
57		•	•	
58	•	•	•	
59	•	•	•	
61		•		
62	•	•		
63	•	•		

How to Activate the Battery Drain Alarm Option

1 Pull out the red Emergency Stop button to the on position at the ground controls.

2 Push in the red Emergency Stop button to the off position at the platform controls.

3 Turn the key switch to platform control.

4 At the platform controls, press and hold the lift function select and speed select buttons, and pull out the red Emergency Stop button to the on position.

⊙ Result: The diagnostic display, at the platform controls and the ECM, will show "SC."

5 Release the lift function select and speed select buttons.

⊙ Result: The diagnostic display will show the current configuration.

6 Press the speed select button.

⊙ Result: The 'ones' digit setting will be activated and the current 'ones' setting will flash in the diagnostic display.

7 Press the horn button.

⊙ Result: A dot, located at the lower right of the diagnostic display window, will become illuminated. This indicates that the battery drain alarm option has been activated.

8 Press and hold the speed select button for a minimum of 3 seconds or until the 'ones' setting stops flashing.

9 Turn the key switch to the off position.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

Note: To deactivate the battery drain alarm option on a machine which has the option activated, repeat this procedure. When the ECM is in the 'SC' mode and the option is deactivated, there will not be an illuminated dot in the diagnostic display window.

How to Determine the Battery Voltage

The diagnostic display on the platform controls is used to indicate the battery voltage at all times when the machine is in normal operation.

Limp Mode: If the battery level falls to less than 17.8V DC, the single bar in the diagnostic display will be flashing and machine drive speed is limited to that of the raised drive speed. Refer to Section 2, *Specifications*.


the battery level is 22.6V DC or higher


the battery level is 21.6 to 22.5V DC


the battery level is 20.7 to 21.5V DC


the battery level is 19.7 to 20.6V DC


the battery level is 17.8 to 19.6V DC


the battery level is less than 17.8V DC

1-6 Toggle Switches

Toggle switches used for single function switching are single pole double throw (SPDT) switches. Dual function switching requires a double pole double throw (DPDT) switch.

How to Test a Toggle Switch

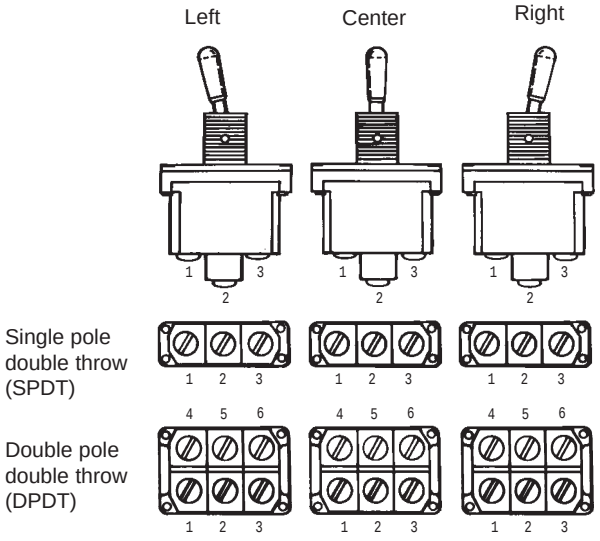
Note: Continuity is the equivalent of 0 to 3 ohms. A simple continuity tester may not accurately test the switch.

This procedure covers fundamental switch testing and does not specifically apply to all varieties of toggle switches.

1 Turn the key switch to the off position. Tag and disconnect all wiring from the toggle switch to be tested.

Note: The toggle switch at the platform controls requires that the wires are unplugged from the main circuit board before testing.

2 Connect the leads of an ohmmeter to the switch terminals in the following combinations listed below to check for continuity.



Test	Desired result
Left position	
terminal 1 to 2, 3, 4, 5 & 6	no continuity (infinite Ω)
terminal 2 to 3	continuity (zero Ω)
terminal 2 to 4, 5 & 6	no continuity
terminal 3 to 4, 5 & 6	no continuity
terminal 4 to 5 & 6	no continuity
terminal 5 to 6	continuity
Center position	There are no terminal combinations that will produce continuity (infinite Ω)
Right position	
terminal 1 to 2	continuity (zero Ω)
terminal 1 to 3, 4, 5 & 6	no continuity (infinite Ω)
terminal 2 to 3, 4, 5 & 6	no continuity
terminal 3 to 4, 5 & 6	no continuity
terminal 4 to 5	continuity
terminal 4 to 6	no continuity
terminal 5 to 6	no continuity

Platform Components

REV B

2-1 Platform

How to Remove the Platform

⚠WARNING Bodily injury hazard. This procedure requires specific repair skills, lifting equipment and a suitable workshop. Attempting this procedure without these skills and tools could result in death or serious injury and significant component damage. Dealer service is required.

Note: Perform this procedure with the platform in the stowed position and the platform extension deck fully retracted and locked in position.

1 Start the engine from the ground controls and raise the platform 9 to 10 feet / 2.7 to 3 m.

2 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

3 Lower the platform onto the safety arm. Turn the machine off.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

4 Remove the hose clamps or zip ties that secure the power to platform wiring to the bottom of the platform.

NOTICE Component damage hazard. Be sure not to cut the power to platform wiring.

5 **GS-2668 DC before serial number 26563 and GS-3268 DC before serial number 41200:** Remove the platform extension limit switch mounting fasteners and remove the limit switch. Do not disconnect the wiring.

6 Raise the platform and return the safety arm to the stowed position.

7 Lower the platform to the stowed position and turn the machine off.

8 Remove the mounting fasteners that secure the platform controls quick disconnect plug to the platform.

9 Twist the connector to disconnect the platform controls from the plug.

10 Remove the platform control box from the platform and lay it off to the side.

NOTICE Component damage hazard. The platform controls wiring can be damaged if it is kinked or pinched.

11 Remove the cover to the AC power to platform outlet. Tag and disconnect the wiring from the outlet.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

12 Pull the wiring down through the platform tube.

NOTICE Component damage hazard. The AC power to platform wiring can be damaged if it is kinked or pinched.

Note: If your machine is equipped with an air line to platform option, the air line must be disconnected from the platform before removal.

13 Support the platform with a forklift at the steer end of the machine. Do not apply any lifting pressure.

14 Attach a strap from the platform railings to the carriage on the forklift to support the platform.

15 Remove the retaining fasteners from the platform pivot pins at the steer end of the machine.

16 Use a slide hammer to remove the pins.

⚠WARNING Crushing hazard. The platform will fall when the pivot pins are removed if not properly supported by the forklift.

17 Remove the retaining fasteners from the platform pivot pins at the non-steer end of the machine.

18 Use a slide hammer to remove the pins.

⚠WARNING Crushing hazard. The platform will fall when the pivot pins are removed if not properly supported by the forklift.

19 Carefully lift the platform off of the machine and place it on a structure capable of supporting it.

⚠WARNING Crushing hazard. The platform will become unbalanced and fall when removed from the machine if not properly supported and secured to the forklift.

Note: Note the position of the wear pads before the platform is removed so that when the platform is installed they will be in the correct position.

2-2 Platform Extension

How to Remove the Platform Extension Deck

Note: Perform this procedure with the platform in the stowed position and the platform extension deck fully retracted and locked in position.

1 Remove the fasteners from the access cover on the side of the platform at the non-steer end of the machine.

2 Remove the fasteners from the roller wheel mount.

3 Remove the wheel roller bolt and remove the roller wheel from the platform.

4 Repeat steps 1 through 3 for the other side of the platform.

5 Lift the platform extension lock handle.

6 Remove the two bolts that attach the platform extension lock handle assembly to the platform extension railing.

7 Remove the two bolts that attach the extension lock pin bracket to the railing. Lay the lock handle assembly off to the side.

8 **GS-2668 DC before serial number 26563 and GS-3268 DC before serial number 41200:** Remove the platform extension limit switch mounting fasteners and remove the limit switch. Do not disconnect the wiring.

9 Remove the platform controls from the platform and lay them off to the side.

10 Position a forklift at the steer end of the machine with the forks even with the bottom of the platform extension.

11 Carefully slide the platform extension out until the platform extension makes contact with the carriage on the forklift.

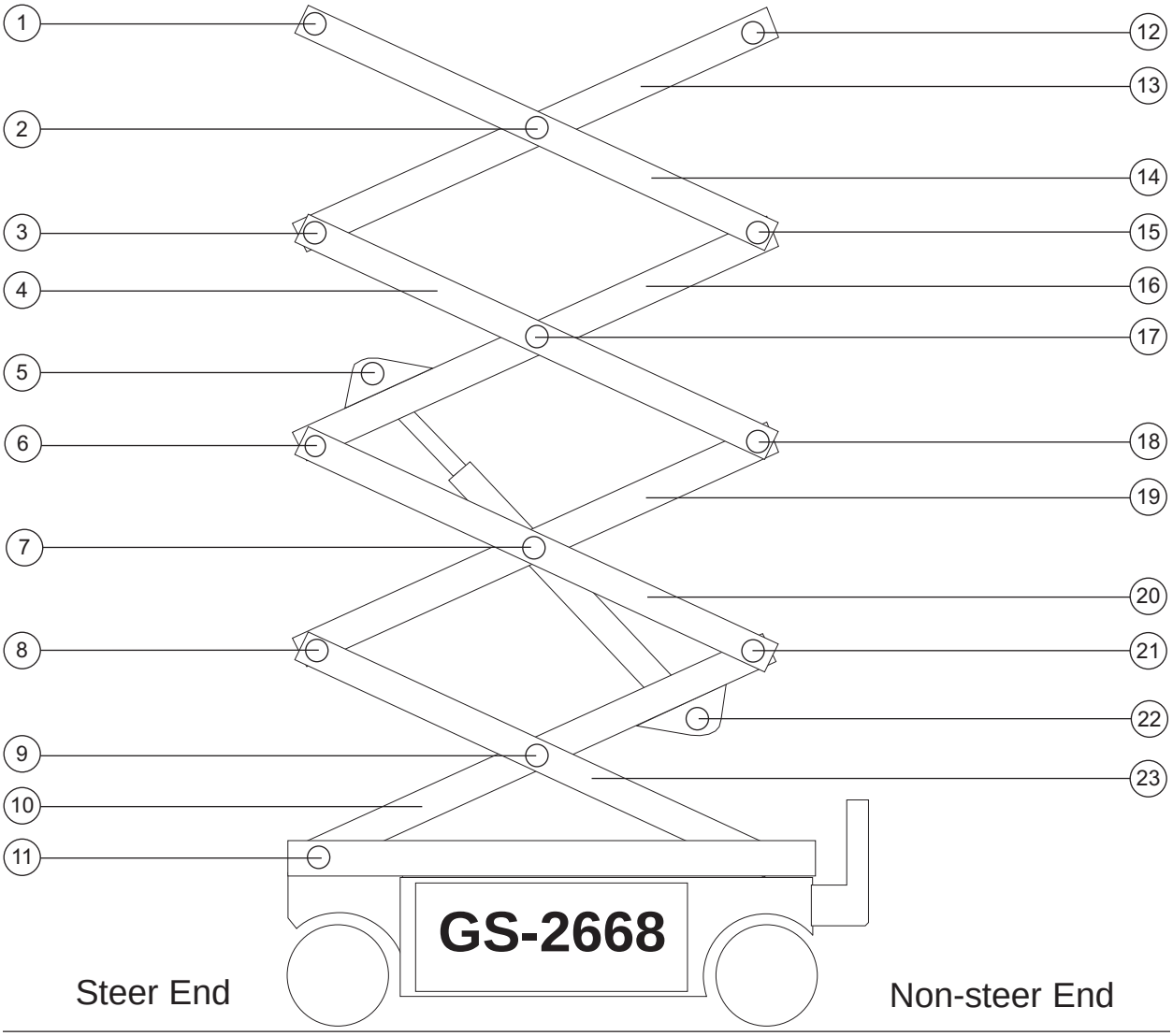
12 Attach a lifting strap from the platform extension railings to the carriage on the forklift to support the platform extension.

13 Carefully slide the platform extension out and away from the platform and place it on a structure capable of supporting it.

⚠WARNING Crushing hazard. The platform extension will become unbalanced and fall when removed from the machine if not properly supported and secured to the forklift.

Scissor Components

REV B



1 Number 5 pivot pin (steer end)
2 Number 4 center pivot pin
3 Number 4 pivot pin (steer end)
4 Number 3 outer arm
5 Lift cylinder rod-end pivot pin
6 Number 3 pivot pin (steer end)
7 Number 2 center pivot pins (2 each)
8 Number 2 pivot pin (steer end)
9 Number 1 center pivot pin
10 Number 1 inner arm
11 Number 1 pivot pin(s) (steer end)
12 Number 5 pivot pin (non-steer end)
13 Number 4 inner arm
14 Number 4 outer arm
15 Number 4 pivot pin (non-steer end)
16 Number 3 inner arm
17 Number 3 center pivot pin
18 Number 3 pivot pin (non-steer end)
19 Number 2 inner arm
20 Number 2 outer arm
21 Number 2 pivot pin (non-steer end)
22 Lift cylinder barrel-end pivot pin
23 Number 1 outer arm

3-1
Scissor Assembly, GS-2668 DC

How to Disassemble the Scissor Assembly, GS-2668 DC

⚠WARNING Bodily injury hazard. This procedure requires specific repair skills, lifting equipment and a suitable workshop. Attempting this procedure without these skills and tools could result in death or serious injury and significant component damage. Dealer service is required.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

1 Remove the platform. See 2-1, *How to Remove the Platform.*

2 Remove the cables from the number 4 outer arm (index #14).

3 Remove the cables from the upper cable tray support.

4 Remove the cables from the number 3 inner arm (index #16) and lay the cables off to the side.

NOTICE Component damage hazard. Cables can be damaged if they are kinked or pinched.

5 Remove the mounting fasteners from the upper cable tray supports.

6 Remove the upper cable tray from the scissor assembly.

NOTICE Component damage hazard. Cables can be damaged if they are kinked or pinched.

7 Connect the platform controls to the quick disconnect plug to allow the machine to operate.

8 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls. Start the engine.

9 Raise the platform 9 to 10 feet / 2.7 to 3 m.

10 Remove the safety arm from the number 3 inner arm (index #16).

11 Install the safety arm on the number 2 inner arm (index #19) at the steer end of the machine.

12 Lift the safety arm, move to the center of the scissor arm and rotate down to a vertical position.

13 Lower the scissor assembly onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

14 Turn the key switch to the off position and push in the red Emergency Stop button to the off position at both the ground and platform controls.

15 Attach a lifting strap from an overhead crane to the number 4 outer arm (index #14).

16 Support the number 4 inner arm (index #13) with a second overhead crane at the non-steer end.

SCISSOR COMPONENTS REV B

17 Remove the external snap rings from the number 4 center pivot pin (index #2).

18 Use a soft metal drift to remove the number 4 center pivot pin (index #2).

⚠WARNING Crushing hazard. The number 4 outer arm (index #14) could become unbalanced and fall if not properly supported when the pivot pin is removed.

19 Remove the external snap rings from the number 4 pivot pin (index #15) at the non-steer end of the machine.

20 Use a soft metal drift to remove the number 4 pivot pin (index #15) from the non-steer end. Remove the number 4 outer arm (index #14) from the machine.

⚠WARNING Crushing hazard. The number 4 outer arm (index #14) could become unbalanced and fall if not properly supported when removed from the machine.

21 Remove the external snap rings from the number 4 pivot pin (index #3).

22 Use a soft metal drift to remove the number 4 pivot pin (index #3). Remove the number 4 inner arm (index #13) from the machine.

⚠WARNING Crushing hazard. The number 4 inner arm (index #13) could become unbalanced and fall if not properly supported when removed from the machine.

23 Attach a lifting strap from an overhead crane to the number 3 outer arm (index #4) at the ground controls side.

24 Remove the external snap rings from the number 3 center pivot pin (index #17) at the ground controls side.

25 Use a soft metal drift to tap the number 3 center pivot pin (index #17) halfway out at the ground controls side.

26 Remove the external snap rings from the number 3 pivot pin (index #18) at the non-steer end.

27 Use a soft metal drift to tap the number 3 pivot pin (index #18) halfway out at the non-steer end of the machine. Remove the number 3 outer arm (index #4) at the ground controls side from the machine.

⚠WARNING Crushing hazard. The number 3 outer arm (index #4) at the ground controls side could become unbalanced and fall if not properly supported when removed from the machine.

28 Attach a lifting strap from an overhead crane to the number 3 outer arm (index #4) at the battery pack side of the machine.

29 Remove the external snap rings from the number 3 center pivot pin (index #17) at the battery pack side of the machine.

30 Use a soft metal drift to tap the number 3 center pivot pin (index #17) at the battery pack side of the machine in the other direction.

31 Use a soft metal drift to tap the number 3 pivot pin (index #18) at the non-steer end in the other direction. Remove the number 3 outer arm (index #4) from the battery pack side of the machine.

⚠WARNING Crushing hazard. The number 3 outer arm (index #4) at the battery pack side could become unbalanced and fall if not properly supported when removed from the machine.

32 Remove the cables from the lower cable tray. Lay the cables off to the side of the machine.

33 Remove the mounting fasteners from the lower cable tray mounting bracket on the number 2 center pivot pin (index #7) at the battery pack side of the machine.

34 Remove the mounting fasteners from the lower cable tray supports at both ends of the lower cable tray.

35 Remove the lower cable tray from the machine.

NOTICE Component damage hazard. Cables can be damaged if they are kinked or pinched.

36 Attach a lifting strap from an overhead crane to the lug on the rod end of the lift cylinder.

37 Support the number 3 inner arm (index #16) with a second overhead crane at the non-steer end of the machine.

38 Remove the pin retaining fasteners from the cylinder rod-end pivot pin (index #5). Use a soft metal drift to remove the pin.

⚠WARNING Crushing hazard. The cylinder could fall if not properly supported when the pin is removed.

39 Tag, disconnect and plug the hydraulic hose on the lift cylinder. Cap the fitting on the cylinder.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

40 Tag and disconnect the wiring from the solenoid valve on the lift cylinder.

41 Remove the pin retaining fasteners from the cylinder barrel-end pivot pin (index #22). Use a soft metal drift to remove the pin. Remove the cylinder from the scissor assembly.

⚠WARNING Crushing hazard. The cylinder could become unbalanced and fall if not properly supported when removed from the assembly.

42 Remove the external snap rings from the number 3 pivot pin (index #6) at the steer end.

43 Use a soft metal drift to remove the number 3 pivot pin (index #6) at the steer end. Remove the number 3 inner arm (index #16) from the machine.

⚠WARNING Crushing hazard. The number 3 inner arm (index #16) could become unbalanced and fall if not properly supported when removed from the machine.

44 Attach a lifting strap from an overhead crane to the number 2 outer arm (index #20) at the ground controls side.

45 Support the number 2 inner arm (index #19) at the non-steer end with a second overhead crane.

46 Remove the external snap rings from the number 2 center pivot pin (index #7) at the ground controls side.

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47 Use a soft metal drift to remove the number 2 center pivot pin (index #7) at the ground controls side.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) could become unbalanced and fall if not properly supported when the pivot pin is removed.

48 Remove the external snap rings from the number 2 pivot pin (index #21) at the non-steer end.

49 Use a soft metal drift to tap the number 2 pivot pin (index #21) halfway out at the non-steer end of the machine. Remove the number 2 outer arm (index #20) at the ground controls side from the machine.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) at the ground controls side could become unbalanced and fall if not properly supported when removed from the machine.

50 Attach a lifting strap from an overhead crane to the number 2 outer arm (index #20) at the battery pack side.

51 Remove the external snap rings from the number 2 center pivot pin (index #7) at the battery pack side.

52 Use a soft metal drift to remove the number 2 center pivot pin (index #7) at the battery pack side.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) could become unbalanced and fall if not properly supported when the pivot pin is removed.

53 Use a soft metal drift to tap the number 2 pivot pin (index #21) at the non steer end in the other direction. Remove the number 2 outer arm (index #20) from the battery pack side of the machine.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) at the battery pack side could become unbalanced and fall if not properly supported when removed from the machine.

54 Support the number 1 outer arm (index #23) with a second overhead crane at the steer end.

55 Remove the external snap rings from the number 2 pivot pin (index #8) at the steer end.

56 Use a soft metal drift to remove the number 2 pivot pin (index #8) at the steer end. Remove the number 2 inner arm (index #19) from the machine.

⚠WARNING Crushing hazard. The number 2 inner arm (index #19) could become unbalanced and fall if not properly supported when removed from the machine.

57 Remove the cables from the number 1 inner arm (index #10). Lay the cables off to the side of the machine.

CAUTION Component damage hazard. Cables can be damaged if they are kinked or pinched.

58 Support and secure the entry ladder to an appropriate lifting device. Remove the entry ladder mounting fasteners. Remove the entry ladder from the machine.

⚠WARNING Crushing hazard. The entry ladder could become unbalanced and fall if not properly supported and secured to the lifting device.

59 Secure both ends of the scissor arms together with a strap or other suitable device.

60 Attach each end of a lifting strap to each end of the scissor assembly.

61 Attach an overhead crane to the center of the strap.

62 Remove the pin retaining fasteners from the number 1 pivot pin(s) (index #11). Use a soft metal drift to remove the pin(s).

63 Lift the scissor assembly slightly and slide the scissor assembly towards the non-steer end of the machine to allow the wear pads to slide out of the channel.

⚠WARNING Crushing hazard. The scissor assembly could fall if not properly supported by the overhead crane.

64 Remove the scissor assembly from the machine and place it on a structure capable of supporting it.

⚠WARNING Crushing hazard. The scissor assembly could become unbalanced and fall if not properly supported and secured to the overhead crane.

Note: During removal, the lifting strap connected to the overhead crane will need to be carefully adjusted for proper balancing.

65 Remove the straps securing the scissor arms together.

66 Attach a lifting strap from an overhead crane to the number 1 outer arm (index #23).

67 Support the number 1 inner arm (index #10) with a second overhead crane.

68 Remove the external snap rings from the number 1 center pivot pin (index #9).

69 Use a soft metal drift to remove the number 1 center pivot pin (index #9).

⚠WARNING Crushing hazard. The scissor assembly could become unbalanced and fall if not properly supported when the center pivot pin is removed.

70 Remove the number 1 outer arm (index #23) from the assembly.

⚠WARNING Crushing hazard. The number 1 inner arm (index #10) could become unbalanced and fall if not properly supported when removed from the machine.

How to Replace the Scissor Arm Wear Pads

1 Remove the platform. See 2-1, *How to Remove the Platform.*

2 Remove the mounting fasteners from the stationary wear pads on the platform.

Note: Note the position of the wear pads before they are removed so when the new ones are installed they will be in the correct position.

3 Connect the platform controls to the quick disconnect plug to allow the machine to operate.

4 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls. Start the engine.

5 Raise the scissor assembly 9 to 10 feet / 2.7 to 3 m.

6 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

7 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of moving parts when lowering the scissor arms onto the safety arm.

8 Turn the key switch to the off position and push in the red Emergency Stop buttons to the off position at both the ground and platform controls.

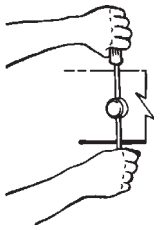
9 Secure both ends of the scissor arms together with a strap or other suitable device.

10 Attach a strap from an overhead crane to the non-steer end of the scissor arms.

11 Raise the scissor arms slightly at the non-steer end with the overhead crane just enough to take the pressure off of the non-steer end slide blocks.

12 Remove the pin retaining fasteners from the slide block pivot pin.

13 Place a rod through the pin and twist to remove the pin.

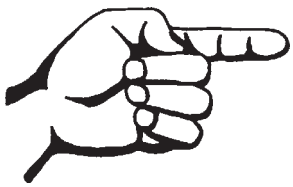


14 Remove the slide block and remove the wear pad mounting fasteners.

15 Install the new wear pad.

16 Repeat steps 12 through 15 for the other wear pad slide block.

17 Install the wear pad slide blocks into the drive chassis and install the slide block pivot pins and pin retaining fasteners.



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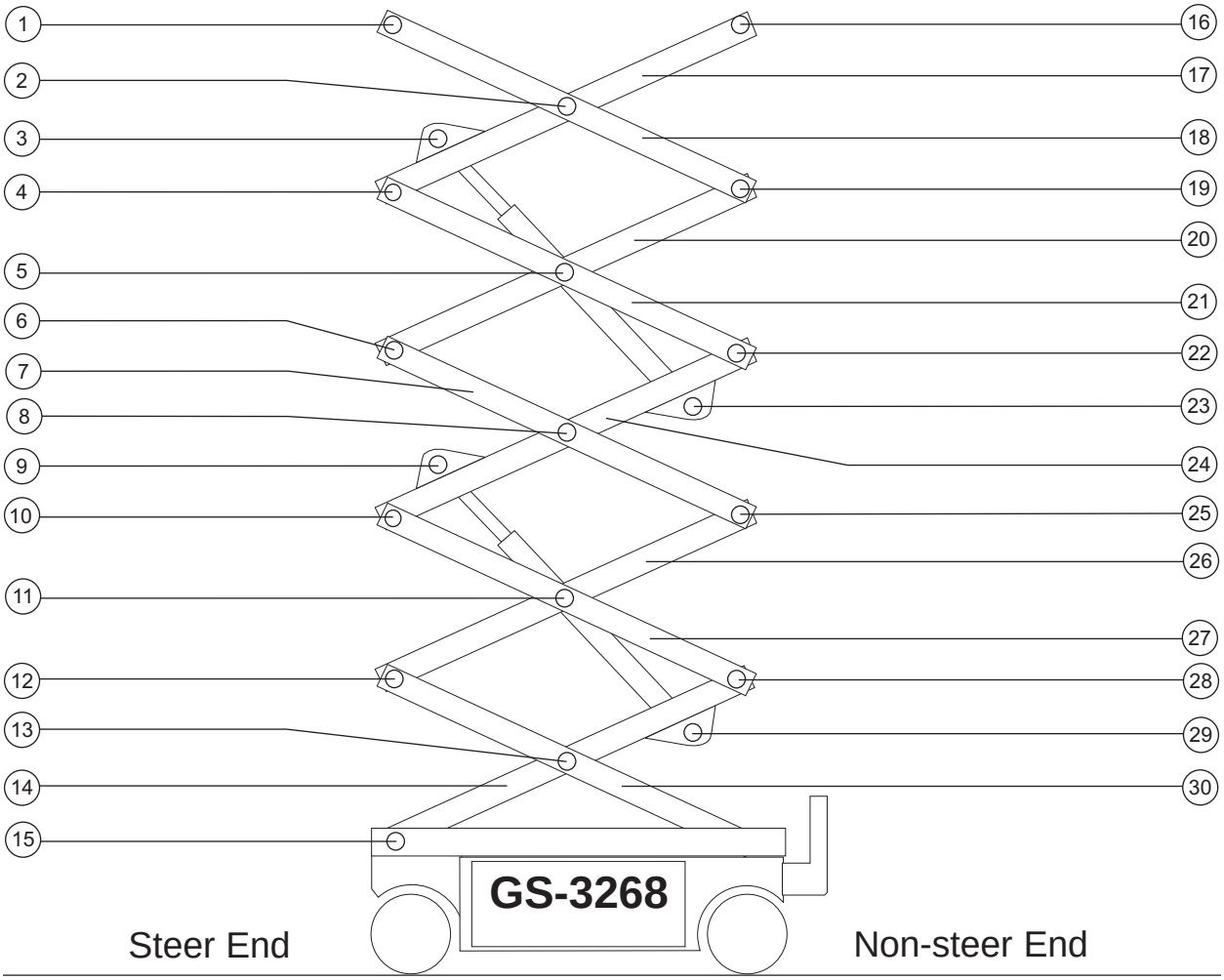

1 Number 6 pivot pin (steer end)
2 Number 5 center pivot pin
3 Upper lift cylinder rod-end pivot pin
4 Number 5 pivot pin (steer end)
5 Number 4 center pivot pins (2 each)
6 Number 4 pivot pin (steer end)
7 Number 3 outer arm
8 Number 3 center pivot pin
9 Lower lift cylinder rod-end pivot pin
10 Number 3 pivot pin (steer end)
11 Number 2 center pivot pins (2 each)
12 Number 2 pivot pin (steer end)
13 Number 1 center pivot pin
14 Number 1 inner arm
15 Number 1 pivot pin(s) (steer end)
16 Number 6 pivot pin (non-steer end)
17 Number 5 inner arm
18 Number 5 outer arm
19 Number 5 pivot pin (non-steer end)
20 Number 4 inner arm
21 Number 4 outer arm
22 Number 4 pivot pin (non-steer end)
23 Upper lift cylinder barrel-end pivot pin
24 Number 3 inner arm
25 Number 3 pivot pin (non-steer end)
26 Number 2 inner arm
27 Number 2 outer arm
28 Number 2 pivot pin (non-steer end)
29 Lower lift cylinder barrel-end pivot pin
30 Number 1 outer arm

3-2
Scissor Assembly, GS-3268 DC

How to Disassemble the Scissor Assembly, GS-3268 DC

⚠WARNING Bodily injury hazard. This procedure requires specific repair skills, lifting equipment and a suitable workshop. Attempting this procedure without these skills and tools could result in death or serious injury and significant component damage. Dealer service is required.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

1 Remove the platform. See 2-1, *How to Remove the Platform.*

2 Remove the cables from the side of the number 5 outer arm (index #18) at the battery pack side.

NOTICE Component damage hazard. Cables can be damaged if they are kinked or pinched.

3 Attach a lifting strap from an overhead crane to the number 5 outer arm (index #18).

4 Remove the external snap rings from the number 5 center pivot pin (index #2).

5 Use a soft metal drift to remove the number 5 center pivot pin (index #2).

6 Remove the external snap rings from the number 5 pivot pin (index #19) at the non-steer end of the machine.

7 Use a soft metal drift to remove the number 5 pivot pin (index #19) from the non-steer end of the machine. Remove the number 5 outer arm (index #18) from the machine.

⚠WARNING Crushing hazard. The number 5 outer arm (index #18) could become unbalanced and fall if not properly supported when removed from the machine.

8 Remove the cable clamps from the number 5 inner arm (index #17) and the upper cable tray. Lay the cables off to the side of the machine.

NOTICE Component damage hazard. Cables can be damaged if they are kinked or pinched.

9 Tag, disconnect and plug the hydraulic hose on the upper lift cylinder. Cap the fitting on the cylinder.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

10 Attach a lifting strap from an overhead crane to the lug on the rod end of the upper lift cylinder.

11 Remove the pin retaining fasteners from the upper cylinder rod-end pivot pin (index #3). Use a soft metal drift to remove the pin.

⚠WARNING Crushing hazard. The cylinder could fall if not properly supported when the pin is removed.

12 Lower the cylinder onto the number 3 center pivot pin (index #8).

13 Attach a lifting strap from an overhead crane to the number 5 inner arm (index #17).

14 Remove the external snap rings from the number 5 pivot pin (index #4).

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15 Use a soft metal drift to remove the number 5 pivot pin (index #4). Remove the number 5 inner arm (index #17) from the machine.

⚠WARNING Crushing hazard. The number 5 inner arm (index #17) could become unbalanced and fall if not properly supported when removed from the machine.

16 Remove the mounting fasteners from the upper cable tray mounting bracket on the number 4 center pivot pin (index #5) at the battery pack side of the machine.

17 Remove the mounting fasteners from the upper cable tray supports at both ends of the upper cable tray.

18 Remove the upper cable tray.

19 Tag and disconnect the wiring from the solenoid valve on the lift cylinder.

20 Remove the safety arm from the number 4 inner arm (index #20).

21 Install the safety arm on the number 2 inner arm (index #26) at the steer end of the machine.

22 Attach a lifting strap from an overhead crane to the number 4 outer arm (index #21) at the ground controls side.

23 Support the number 4 inner arm (index #20) with a second overhead crane at the non-steer end of the machine.

24 Remove the external snap rings from the number 4 center pivot pin (index #5) at the ground controls side.

25 Use a soft metal drift to remove the number 4 center pivot pin (index #5) at the ground controls side.

26 Remove the external snap rings from the number 4 pivot pin (index #22) at the non-steer end of the machine.

27 Use a soft metal drift to tap the number 4 pivot pin (index #22) halfway out at the non-steer end of the machine. Remove the number 4 outer arm (index #21) at the ground controls side from the machine.

⚠WARNING Crushing hazard. The number 4 outer arm (index #21) at the ground controls side could become unbalanced and fall if not properly supported when removed from the machine.

28 Attach a lifting strap from an overhead crane to the number 4 outer arm (index #21) at the battery pack side of the machine.

29 Remove the external snap rings from the number 4 center pivot pin (index #5) at the battery pack side of the machine.

30 Use a soft metal drift to remove the number 4 center pivot pin (index #5) at the battery pack side of the machine.

31 Use a soft metal drift to tap the number 4 pivot pin (index #22) in the other direction. Remove the number 4 outer arm (index #21) from the battery pack side of the machine.

⚠WARNING Crushing hazard. The number 4 outer arm at the battery pack side (index #21) could become unbalanced and fall if not properly supported when removed from the machine.

32 Remove the external snap rings from the number 4 pivot pin (index #6) at the steer end of the machine.

33 Use a soft metal drift to remove the number 4 pivot pin (index #6) at the steer end. Remove the number 4 inner arm (index #20) from the machine.

⚠WARNING Crushing hazard. The number 4 inner arm (index #20) could become unbalanced and fall if not properly supported when removed from the machine.

34 Connect the platform controls to the quick disconnect plug to allow the machine to operate.

35 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

36 Raise the scissor assembly 9 to 10 feet / 2.7 to 3 m.

37 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position. Lower the scissor assembly onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

38 Turn the key switch to the off position and push in the red Emergency Stop button to the off position at both the ground and platform controls.

39 Attach a lifting strap from an overhead crane to the lug on the rod end of the upper lift cylinder. Raise the rod end of the cylinder to a vertical position.

40 Remove the pin retaining fasteners from the upper cylinder barrel-end pivot pin (index #23). Use a soft metal drift to remove the pin. Remove the cylinder from the machine.

⚠WARNING Crushing hazard. The cylinder could become unbalanced and fall when removed from the machine if not properly supported.

NOTICE Component damage hazard. Be careful not to damage the valve or fittings on the cylinder while removing it from the machine.

41 Attach a lifting strap from an overhead crane to the number 3 outer arm (index #7) at the ground controls side of the machine.

42 Attach a lifting strap from an overhead crane to the lug on the rod end of the lift cylinder.

43 Support the number 3 inner arm (index #16) with a second overhead crane at the non-steer end of the machine.

44 Remove the pin retaining fasteners from the cylinder rod-end pivot pin (index #5). Use a soft metal drift to remove the pin.

⚠WARNING Crushing hazard. The cylinder could fall if not properly supported when the pin is removed.

45 Tag, disconnect and plug the hydraulic hose on the lift cylinder. Cap the fitting on the cylinder.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

46 Tag and disconnect the wiring from the solenoid valve on the lift cylinder.

47 Remove the pin retaining fasteners from the cylinder barrel-end pivot pin (index #22). Use a soft metal drift to remove the pin. Remove the cylinder from the scissor assembly.

⚠WARNING Crushing hazard. The cylinder could become unbalanced and fall if not properly supported when removed from the assembly.

48 Remove the external snap rings from the number 3 pivot pin (index #6) at the steer end.

49 Use a soft metal drift to remove the number 3 pivot pin (index #6) at the steer end. Remove the number 3 inner arm (index #16) from the machine.

⚠WARNING Crushing hazard. The number 3 inner arm (index #16) could become unbalanced and fall if not properly supported when removed from the machine.

50 Attach a lifting strap from an overhead crane to the number 2 outer arm (index #20) at the ground controls side.

51 Support the number 2 inner arm (index #19) at the non-steer end with a second overhead crane.

52 Remove the external snap rings from the number 2 center pivot pin (index #7) at the ground controls side.

53 Use a soft metal drift to remove the number 2 center pivot pin (index #7) at the ground controls side.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) could become unbalanced and fall if not properly supported when the pivot pin is removed.

54 Remove the external snap rings from the number 2 pivot pin (index #21) at the non-steer end.

55 Use a soft metal drift to tap the number 2 pivot pin (index #21) halfway out at the non-steer end of the machine. Remove the number 2 outer arm (index #20) at the ground controls side from the machine.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) at the ground controls side could become unbalanced and fall if not properly supported when removed from the machine.

56 Attach a lifting strap from an overhead crane to the number 2 outer arm (index #20) at the battery pack side.

57 Remove the external snap rings from the number 2 center pivot pin (index #7) at the battery pack side.

58 Use a soft metal drift to remove the number 2 center pivot pin (index #7) at the battery pack side.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) could become unbalanced and fall if not properly supported when the pivot pin is removed.

59 Use a soft metal drift to tap the number 2 pivot pin (index #21) at the non steer end in the other direction. Remove the number 2 outer arm (index #20) from the battery pack side of the machine.

⚠WARNING Crushing hazard. The number 2 outer arm (index #20) at the battery pack side could become unbalanced and fall if not properly supported when removed from the machine.

60 Support the number 1 outer arm (index #23) with a second overhead crane at the steer end.

61 Remove the external snap rings from the number 2 pivot pin (index #8) at the steer end.

62 Use a soft metal drift to remove the number 2 pivot pin (index #8) at the steer end. Remove the number 2 inner arm (index #19) from the machine.

⚠WARNING Crushing hazard. The number 2 inner arm (index #19) could become unbalanced and fall if not properly supported when removed from the machine.

63 Remove the cables from the number 1 inner arm (index #10). Lay the cables off to the side of the machine.

NOTICE Component damage hazard. Cables can be damaged if they are kinked or pinched.

64 Support and secure the entry ladder to an appropriate lifting device. Remove the entry ladder mounting fasteners. Remove the entry ladder from the machine.

⚠WARNING Crushing hazard. The entry ladder could become unbalanced and fall if not properly supported and secured to the lifting device.

65 Secure both ends of the scissor arms together with a strap or other suitable device.

66 Attach each end of a lifting strap to each end of the scissor assembly.

67 Attach an overhead crane to the center of the strap.

68 Remove the pin retaining fasteners from the number 1 pivot pin(s) (index #11). Use a soft metal drift to remove the pin(s).

69 Lift the scissor assembly slightly and slide the scissor assembly towards the non-steer end of the machine to allow the wear pads to slide out of the channel.

⚠WARNING Crushing hazard. The scissor assembly could fall if not properly supported by the overhead crane.

70 Remove the scissor assembly from the machine and place it on a structure capable of supporting it.

⚠WARNING Crushing hazard. The scissor assembly could become unbalanced and fall if not properly supported and secured to the overhead crane.

Note: During removal, the lifting strap connected to the overhead crane will need to be carefully adjusted for proper balancing.

71 Remove the straps securing the scissor arms together.

72 Attach a lifting strap from an overhead crane to the number 1 outer arm (index #23).

73 Support the number 1 inner arm (index #10) with a second overhead crane.

74 Remove the external snap rings from the number 1 center pivot pin (index #9).

75 Use a soft metal drift to remove the number 1 center pivot pin (index #9).

⚠WARNING Crushing hazard. The scissor assembly could become unbalanced and fall if not properly supported when the center pivot pin is removed.

76 Remove the number 1 outer arm (index #23) from the assembly.

⚠WARNING Crushing hazard. The number 1 inner arm (index #10) could become unbalanced and fall if not properly supported when removed from the machine.

How to Replace the Scissor Arm Wear Pads

1 Remove the platform. See 2-1, *How to Remove the Platform.*

2 Remove the mounting fasteners from the stationary wear pads on the platform.

Note: Note the position of the wear pads before they are removed so when the new ones are installed they will be in the correct position.

3 Connect the platform controls to the quick disconnect plug to allow the machine to operate.

4 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls. Start the engine.

5 Raise the scissor assembly 9 to 10 feet / 2.7 to 3 m.

6 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

7 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of moving parts when lowering the scissor arms onto the safety arm.

8 Turn the key switch to the off position and push in the red Emergency Stop buttons to the off position at both the ground and platform controls.

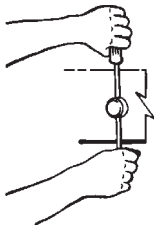
9 Secure both ends of the scissor arms together with a strap or other suitable device.

10 Attach a strap from an overhead crane to the non-steer end of the scissor arms.

11 Raise the scissor arms slightly at the non-steer end with the overhead crane just enough to take the pressure off of the non-steer end slide blocks.

12 Remove the pin retaining fasteners from the slide block pivot pin.

13 Place a rod through the pin and twist to remove the pin.



14 Remove the slide block and remove the wear pad mounting fasteners.

15 Install the new wear pad.

16 Repeat steps 12 through 15 for the other wear pad slide block.

17 Install the wear pad slide blocks into the drive chassis and install the slide block pivot pins and pin retaining fasteners.

3-3
Lift Cylinder

How to Remove a Lift Cylinder, GS-2668 DC

⚠WARNING Bodily injury hazard. This procedure requires specific repair skills, lifting equipment and a suitable workshop. Attempting this procedure without these skills and tools could result in death or serious injury and significant component damage. Dealer service is strongly recommended.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

1 Raise the platform 9 to 10 feet / 2.7 to 3 m.

2 Lift the safety arm, move to the center of the scissor arm and rotate down to a vertical position.

3 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

4 Tag and disconnect the wiring from the solenoid valve at the barrel end of the lift cylinder.

5 **Before serial number 41200:** Tag and disconnect the manual lowering cable from the solenoid.

Note: During assembly, the manual platform lowering cable needs to be properly adjusted. See 4-1, *How to Adjust the Manual Platform Lowering Cable*.

6 Tag, disconnect and plug the hydraulic hose from the lift cylinder. Cap the fitting on the cylinder.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

7 Attach a strap from an overhead crane or similar lifting device to the rod end of the lift cylinder for support.

8 Remove the lift cylinder rod-end pivot pin retaining fastener. Use a soft metal drift to remove the pin.

⚠WARNING Crushing hazard. The lift cylinder will fall if not properly supported.

9 Lower the cylinder onto the number 1 center pivot pin.

10 Support and secure the entry ladder to an appropriate lifting device. Remove the entry ladder mounting fasteners. Remove the entry ladder from the machine.

⚠WARNING Crushing hazard. The entry ladder could become unbalanced and fall if not properly supported and secured to the lifting device when removed from the machine.

11 Remove the lift cylinder barrel-end pivot pin retaining fastener. Use a soft metal drift to remove the pin.

⚠WARNING Crushing hazard. The lift cylinder will fall if not properly supported.

12 Carefully pull the lift cylinder out the non-steer end of the machine through the scissor arms.

⚠WARNING Crushing hazard. The lift cylinder could become unbalanced and fall if not properly supported when removed from the machine.

Note: Component damage hazard. Be careful not to damage the valve or fittings on the cylinder while removing it from the machine.

How to Remove a Lift Cylinder, GS-3268 DC

⚠WARNING Bodily injury hazard. This procedure requires specific repair skills, lifting equipment and a suitable workshop. Attempting this procedure without these skills and tools could result in death or serious injury and significant component damage. Dealer service is strongly recommended.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

1 Start the engine and raise the platform approximately 10 feet / 3 m.

2 Lift the safety arm, move to the center of the scissor arm and rotate down to a vertical position.

3 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

4 Tag and disconnect the wiring from the solenoid valve at the barrel end of the lift cylinder.

5 Tag, disconnect and plug the hydraulic hose from the lift cylinder. Cap the fitting on the cylinder.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

6 Attach a lifting strap from an overhead crane or similar lifting device to the rod end of the lift cylinder for support.

7 Remove the external snap ring from the lift cylinder rod-end pivot pin. Use a soft metal drift to remove the pin.

⚠WARNING Crushing hazard. The lift cylinder will fall if not properly supported.

8 Lower the cylinder to a horizontal position.

If removing the upper lift cylinder, disregard step 9.

9 To remove the lower cylinder, support and secure the entry ladder to an appropriate lifting device. Remove the entry ladder mounting fasteners. Remove the entry ladder from the machine.

⚠WARNING Crushing hazard. The entry ladder could become unbalanced and fall if not properly supported and secured to the lifting device when removed from the machine.

10 Support and secure the lift cylinder to an appropriate lifting device.

11 Remove the external snap ring from the lift cylinder barrel-end pivot pin. Use a soft metal drift to remove the pin.

⚠WARNING Crushing hazard. The lift cylinder will fall if not properly supported when the pin is removed.

12 Carefully pull the lift cylinder out the non-steer end of the machine through the scissor arms.

⚠WARNING Crushing hazard. The lift cylinder could become unbalanced and fall if not properly supported when removed from the machine.

NOTICE Component damage hazard. Be careful not to damage the valve or fittings on the cylinder while removing it from the machine.

3-4
Platform Overload System

How to Calibrate the Platform Overload System (if equipped)

On machines with platform overload systems, it is essential to safe machine operation that the system is properly calibrated. An improperly calibrated platform overload system could result in the system failing to sense an overloaded platform. The stability of the machine is compromised and it could tip over.

There are five basic parts to the platform overload system calibration procedure, as follows:

- Calibrate the maximum height limit switch
- Calibrate the pressure switch
- Calibrate the load sense delay limit switch
- Confirm the pressure switch setting
- Confirm the load sense delay limit switch height

⚠DANGER Tip-over hazard. When calibrating the platform overload system on a GS-2668 DC or GS-3268 DC, it is critical that the following procedure is followed. Failure to follow the calibration procedure could compromise machine stability causing the machine to tip over, resulting in death or serious injury.

Note: Be sure the hydraulic oil level is between the MIN and MAX on the hydraulic tank.

Note: Perform this procedure with the machine on a firm, level surface that is free of obstructions.

Calibrate the maximum height limit switch

1 Disconnect the platform controls from the machine at the platform.

2 Open the hydraulic tray door and locate the platform controls wire harness to Electronic Control Module (ECM) wire harness quick disconnect.

3 Tag and disconnect the platform controls wire harness from the ECM wire harness.

4 Securely connect the platform controls to the ECM wire harness.

5 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

6 Raise the platform approximately 10 ft / 3 m from the ground.

7 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

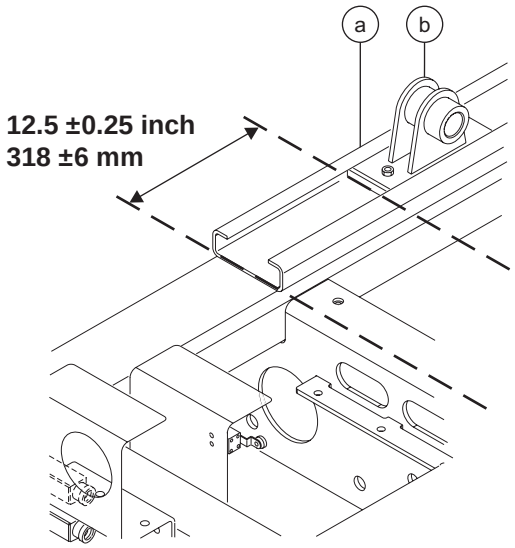
8 Fully raise the platform. Release the controls.

9 Working at the steer end of the machine, measure the distance between the front edge of the scissor arm slider track to the front edge of the slider foot.

⊙ Result: The distance from the front edge of the scissor arm slider track to the front edge of the slider foot measures within specification. Proceed to step 13.

⊠ Result: The distance from the front edge of the scissor arm slider track to the front edge of the slider foot does not measure within specification. Proceed to step 10.

Foot-to-track edge specification	12.5 ±0.25 inches 318 ±6 mm

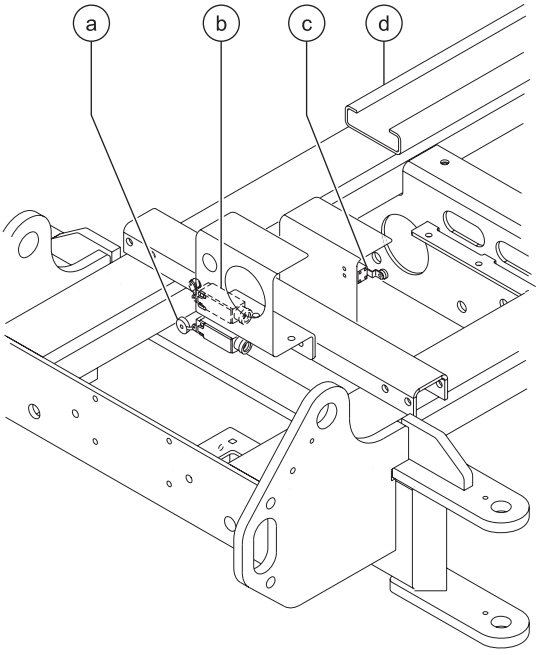


a slider track
b slider foot

10 Lower the scissor arms onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

11 Adjust the maximum height limit switch to just deactivate from the scissor arm cam plate when the distance from the front edge of the scissor arm slider track to the front edge of the slider foot measures 12.5 ±0.25 inches / 318 ± 6 mm.



a maximum height limit switch
b down limit switch
c load sense delay limit switch
d slide block track

12 Repeat this procedure beginning with step 8.

Calibrate the pressure switch

13 Return the safety arm to the stowed position.

14 Lower the platform to the stowed position.

15 Using a suitable lifting device, place a test weight in the center of the platform floor. Refer to the chart below.

GS-2668 DC	1250 lbs 567 kg
GS-3268 DC	1000 lbs 454 kg

SCISSOR COMPONENTS REV B

16 Secure the weight to the platform.

17 Fully raise the platform. Release the controls.

⊙ Result: The platform should stop raising at maximum height. An alarm sounds. The machine is functioning properly. Proceed to step 26.

☒ Result: The platform should stop raising at maximum height. An alarm does not sound. The machine is not functioning properly. Proceed to step 18.

18 Lower the platform to approximately 10 ft / 3 m from the ground.

19 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

20 Lower the scissor arms until the safety arm is nearly in contact with the scissor arms at both ends. Do not rest the scissor arms on the safety arm.

NOTICE Component damage hazard. Scissor arms can be damaged if loaded unequally. Do not lower the scissor arms onto the safety arm with test weight in the platform.

21 Remove the cover from the platform overload sensor box.

Note: The platform overload sensor box is located on the lift cylinder.

22 Turn the platform overload pressure switch 1/12 turn (half-flat) in a counter-clockwise direction.

23 Return the safety arm to the stowed position.

24 Lower the platform to the stowed position.

25 Repeat this procedure beginning with step 17.

Calibrate the load sense delay limit switch

26 Activate the auxiliary lowering function and lower the platform approximately 5 ft / 1.5 m.

27 Push in the red Emergency Stop button to the off position at the ground controls.

28 Pull out the red Emergency Stop button to the on position at the ground controls.

29 Lower the platform to the stowed position.

⊙ Result: The platform stops lowering **one time** at approximately 7 ft / 2 m. After releasing the controls for 4 to 6 seconds, the platform should lower to the stowed position. The machine is functioning properly. Proceed to step 36.

☒ Result: The platform stops lowering **two times** at approximately 7 ft / 2 m. After stopping for the second time, the platform should lower to the stowed position. The machine is not functioning properly. Proceed to step 30.

30 Raise the platform approximately 10 ft / 3 m from the ground.

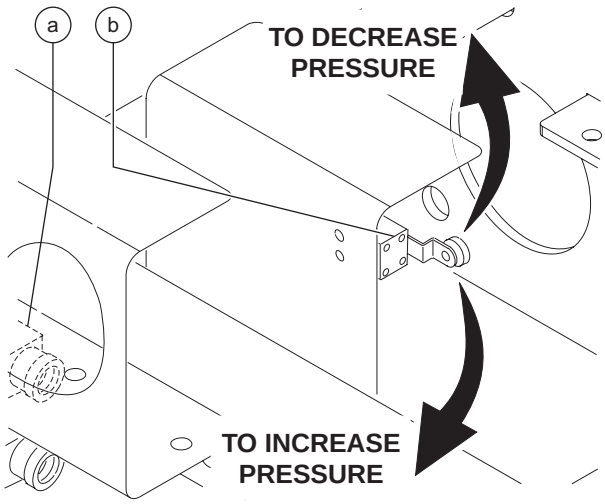
31 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

32 Lower the scissor arms until the safety arm is nearly in contact with the scissor arms at both ends of the safety arm. Do not rest the scissor arms on the safety arm.

NOTICE Component damage hazard. Scissor arms can be damaged if loaded unequally. Do not lower the scissor arms onto the safety arm with test weight in the platform.

33 For a point of reference, mark the outline of the load sense delay limit switch onto the side of the limit switch mount.

34 Adjust the load sense delay limit switch. Loosen the limit switch fasteners just enough to move the limit switch downwards 1/16 inch / 1.5 mm. Tighten the fasteners. Do not overtighten.



a down limit switch
b load sense delay limit switch

35 Return the safety arm to the stowed position.

36 Repeat this procedure beginning with step 17.

Confirm the pressure switch setting

37 Activate the auxiliary lowering function and lower the platform to the stowed position.

38 Push in the red Emergency Stop button to the off position at the ground controls.

39 Using a suitable lifting device, remove the weight from the platform.

40 Using a suitable lifting device, place a test weight in the center of the platform floor. Refer to the chart below.

GS-2668 DC	1150 lbs 522 kg
GS-3268 DC	900 lbs 408 kg

41 Secure the weight to the platform.

42 Pull out the red Emergency Stop button to the on position at the ground controls.

43 Fully raise the platform. Release the controls.

⊙ Result: The platform stops raising at maximum height. An alarm does not sound. The machine is functioning properly. Proceed to step 53.

⊠ Result: The platform stops raising at maximum height. An alarm should sound. The machine is not functioning properly. Proceed to step 44.

44 Activate the auxiliary lowering function and lower the platform approximately 5 ft / 1.5 m.

45 Push in the red Emergency Stop button to the off position at the ground controls.

46 Pull out the red Emergency Stop button to the on position at the ground controls.

47 Lower the platform to approximately 10 ft / 3 m from the ground.

48 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

49 Lower the scissor arms until the safety arm is nearly in contact with the scissor arms at both ends. Do not rest the scissor arms on the safety arm.

NOTICE Component damage hazard. Scissor arms can be damaged if loaded unequally. Do not lower the scissor arms onto the safety arm with test weight in the platform.

50 Turn the platform overload pressure switch 1/12 turn (half-flat) in a clockwise direction.

51 Return the safety arm to the stowed position.

52 Repeat this procedure beginning with step 43.

Confirm the load sense delay limit switch height

53 Lower the platform.

⊙ Result: The platform stops lowering at approximately 7 ft / 2 m. An alarm does not sound. The machine is functioning properly. Proceed to step 63.

⊠ Result: The platform stops lowering at approximately 7 ft / 2 m. An alarm sounds. The machine is not functioning properly. Proceed to step 54.

54 Activate the auxiliary lowering function and lower the platform to the stowed position.

55 Push in the red Emergency Stop button to the off position at the ground controls.

56 Pull out the red Emergency Stop button to the on position at the ground controls.

57 Raise the platform approximately 10 ft / 3 m from the ground.

58 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

59 Lower the scissor arms until the safety arm is nearly in contact with the scissor arms at both ends of the safety arm. Do not rest the scissor arms on the safety arm.

NOTICE Component damage hazard. Scissor arms can be damaged if loaded unequally. Do not lower the scissor arms onto the safety arm with test weight in the platform.

60 Adjust the load sense delay limit switch. Loosen the limit switch fasteners just enough to move the limit switch upwards 1/16 inch / 1.5 mm. Tighten the fasteners. Do not overtighten.

Note: When the load sense delay limit switch is adjusted, it may be necessary to adjust the down limit switch. If the machine stops at two separate times when lowering the platform, set the safety arm and move the down limit switch in an upwards direction the same distance as the load sense delay limit switch was moved.

61 Return the safety arm to the stowed position.

62 Repeat this procedure beginning with step 43.

63 Lower the platform to the stowed position and remove the test weight.

64 Raise the platform approximately 10 ft / 3 m from the ground.

65 Lift the safety arm, move it to the center of the scissor arm and rotate down to a vertical position.

66 Lower the scissor arms onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

67 Install the cover onto the platform overload pressure switch box and tighten the fasteners. Do not overtighten.

68 Apply Sentry Seal® to one of the fasteners securing the cover onto the platform overload pressure switch box.

69 Raise the platform slightly.

70 Return the safety arm to the stowed position.

71 Lower the platform to the stowed position.

72 Perform the function tests. Refer to the Operator's Manual.

Ground Controls

REV C

4-1
Manual Platform Lowering

How to Adjust the Manual Platform Lowering Cable

The manual platform lowering cable lowers the platform in the event of a main power failure. The manual platform lowering cable is attached to the barrel end of the lift cylinder and is activated next to the ground controls.

GS-2668 before serial number 41200:

1 Raise the platform 9 to 10 feet / 2.7 to 3 m.

2 Lift the safety arm, move to the center of the scissor arm and rotate to a vertical position.

3 Lower the platform onto the safety arm.

⚠CAUTION Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

4 Push the handle on the manual platform lowering cable all the way in.

5 Disconnect the cable mounting nut from the lowering valve at the barrel end of the lift cylinder.

6 Pull the cable tight and measure the distance between the end of the lowering cable and the end of the lowering valve.

⊙ Result: The measurement should be 3/16 to 1/4 inch / 4.7 to 6.4 mm.

7 To adjust, loosen the upper lock nut on the cable mounting bracket. Turn the lower lock nut clockwise to decrease the distance or counterclockwise to increase the distance.

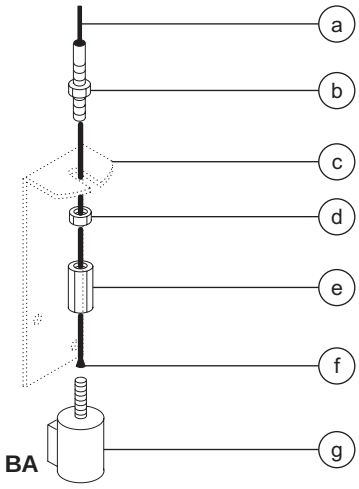
8 Tighten the upper lock nut and re-measure the distance between the end of the lowering cable and the end of the lowering valve. Re-adjust if needed.

9 Install the cable mounting nut onto the lowering valve.

10 Raise the platform and rotate the safety arm to the storage position.

11 Pull the manual lowering handle at the ground controls 2 to 3 times to ensure it is functioning correctly.

Cable distance	3/16 to 1/4 inch 4.7 to 6.4 mm



a manual lowering cable sheath
b upper lock nut
c cable mounting bracket
d lower lock nut
e cable mounting nut
f end of the lowering cable
g manual lowering valve

GS-2668 after serial number 41199 and GS-3268 (all)

In the event of a main power failure, activating the function enable and manual platform lowering buttons at the ground controls will lower the platform. There is no adjustment required.

Before serial number 41830, two 6V DC batteries are wired in series to supply power for the manual platform lowering function. These batteries are located behind the ground control panel.

After serial number 41829, these batteries are no longer used. Instead, onboard batteries supply power for the manual platform lowering function.

How to Replace the Manual Platform Lowering Batteries

Before serial number 41830:

1 Remove the cover from the ground control panel.

2 Tag and disconnect the wires from the battery to be removed.

3 Remove the battery from the machine.

4 Install the new battery and connect the wires.

5 Install the ground control cover.

4-2 Toggle Switches

See 1-5, *Toggle Switches*.

4-3
Control Relays

Relays used for single function switching are single pole double throw (SPDT) relays.

How to Test a Single Pole Double Throw Relay

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could cause death or serious injury. Remove all rings, watches and other jewelry.

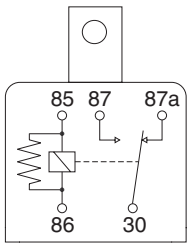
1 Label and then disconnect all the wiring from the relay to be tested.

2 Connect the leads from an ohmmeter or continuity tester to each terminal combination and check for continuity. Terminals 85 and 86 represent the coil and should not be tested in any other combination.

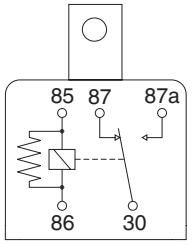
Test	Desired result
terminal 85 to 86	310 to 330Ω
terminal 87 to 87a and 30	no continuity (infinite Ω)
terminal 87a to 30	continuity (zero Ω)

3 Connect 24V DC and a ground wire to terminals 85 and 86, then test the following terminal combinations.

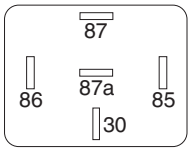
Test	Desired result
terminal 87a to 87 and 30	no continuity (infinite Ω)
terminal 87 to 30	continuity (zero Ω)



Relay schematic
(shown deactivated)



Relay schematic
(shown activated)



Terminal Number Legend
terminal no. 87a - N.C.
terminal no. 85 - ground
terminal no. 30 - common
terminal no. 86 - coil
terminal no. 87 - N.O.

4-4
Tilt Level Sensor

The Electronic Control Module (ECM) is programmed to deactivate the lift and drive functions and activate an alarm when a signal is received from the level sensor.

The tilt alarm sounds when the incline of the chassis exceeds 2° to the side, 3° to the front or 5° to the rear.

How to Install and Calibrate the Level Sensor (before serial number 41754)

⚠DANGER Tip-over hazard. Failure to install or calibrate the level sensor as instructed could result in the machine tipping over causing death or serious injury. Do not install or calibrate the level sensor other than specified in this procedure.

Note: Perform this procedure with the machine on a firm, level surface that is free of obstructions. Use a digital level to confirm.

1 Remove the platform controls from the platform.

2 Block the wheels at the non-steer end of the machine.

3 Center a lifting jack under the drive chassis at the steer end of the machine.

4 Raise the machine approximately 4 inches / 10 cm.

5 Place a 1.27 x 10 x 10 inch / 3.23 x 25 x 25 cm thick steel block under both wheels at the steer end of the machine.

6 Lower the machine onto the blocks.

7 Turn the key switch to platform control and pull out the red Emergency Stop buttons to the on position at both the ground and platform controls.

8 **Before serial number 41137:** Raise the platform at least 12 feet / 3.6 m.

⊙ Result - ANSI and CSA models: The tilt alarm will sound at 180 beeps per minute.

⊙ Result - CE and Australian models: The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute.

After serial number 41136: Raise the platform at least 12 feet / 3.6 m.

⊙ Result - The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute.

If you are not installing a new level sensor, proceed to step 21.

9 Push in the red Emergency Stop button to the off position at the platform controls.

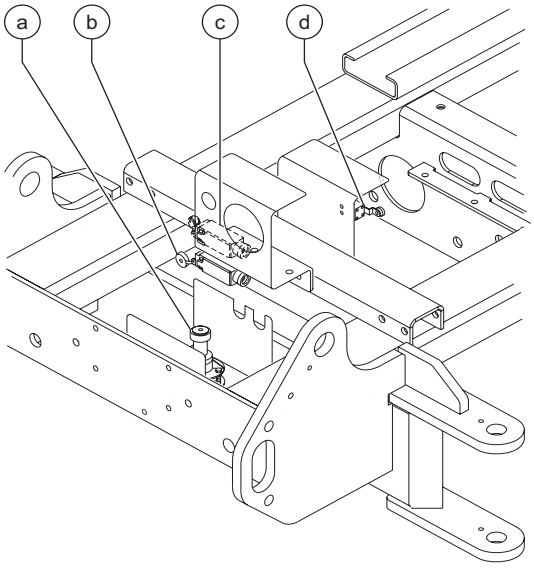
10 **Before serial number 41200:** Remove the ground control panel retaining fasteners and open the panel. Locate the level sensor behind the ground control panel.

11 **After serial number 41199:** Lift the safety arm, move to the center of the scissor arm and rotate to a vertical position.

12 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

13 Locate the level sensor enclosure on the chassis under the limit switches at the steer end of the machine. Remove the enclosure cover retaining fasteners and the cover.



Level sensor (after serial number 41199)

a level sensor
b max height limit switch (CE models)
c down limit switch
d load sense delay limit switch (CE models)

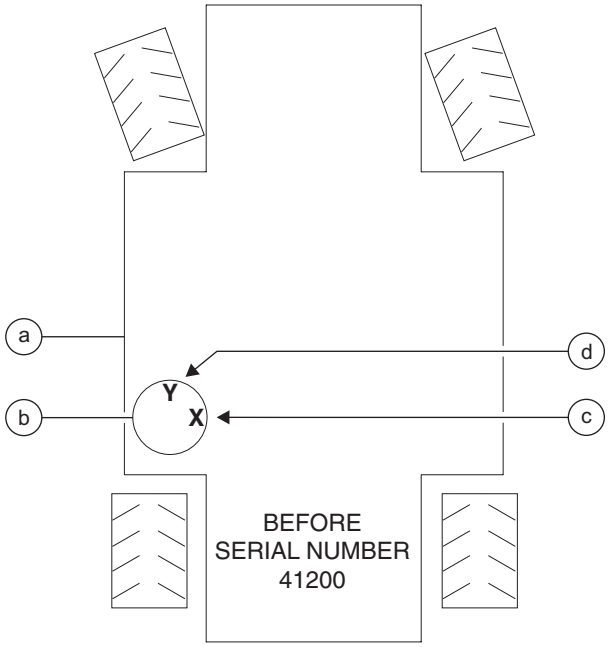
All models:

14 Tag and disconnect the wire harness from the level sensor.

15 Remove the fasteners securing the level sensor to the chassis. Remove the level sensor from the machine.

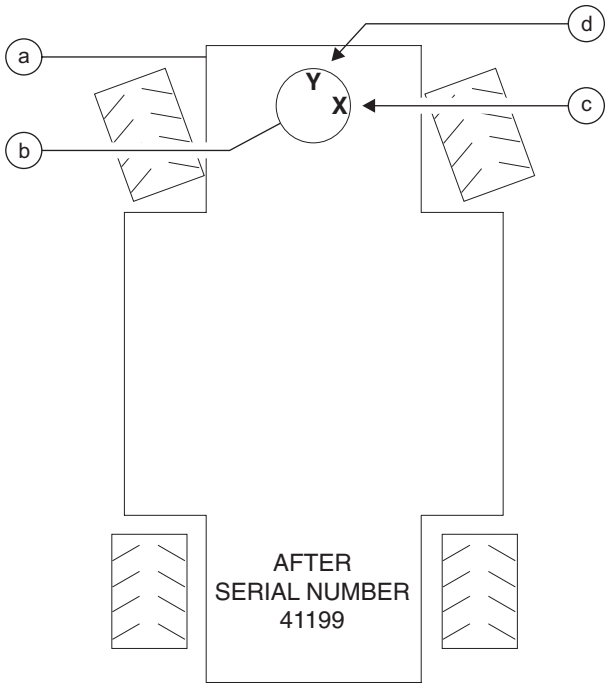
16 Install the new level sensor onto the machine with the "Y" on the level sensor base closest to the steer end of the machine. Install and tighten the level sensor retaining fasteners.

⚠DANGER Tip-over hazard. The tilt level sensor must be installed with the "Y" on the level sensor base closest to the steer end of the machine. Failure to install the tilt level sensor as instructed will cause the machine to tip over resulting in death or serious injury.



Level sensor

a chassis
b level sensor
c "X" indicator
d "Y" indicator



17 Connect the wire harness to the level sensor.

18 Pull out the red Emergency Stop button to the on position at the platform controls.

19 Tighten the level sensor adjusting fasteners until the bubble in the top of the level sensor is centered in the circles.

Note: Be sure there are threads showing through the top of the adjusting fasteners.

⊙ Result: The tilt sensor alarm should not sound.

20 **After serial number 41199:** Raise the platform and rotate the safety arm to the stowed position.

21 Lower the platform to the stowed position.

22 Raise the machine slightly.

23 Remove the blocks from under both wheels.

24 Lower the machine and remove the jack.

25 Remove the blocks from the wheels at the non-steer end of the machine.

26 Block the wheels at the steer end of the machine.

27 Center a lifting jack under the drive chassis at the non-steer end of the machine.

28 Raise the machine approximately 8 inches / 20 cm.

29 Place a 6.77 x 10 x 10 inch / 26.4 x 25 x 25 cm thick steel block under both wheels at the non-steer end of the machine.

30 Lower the machine onto the blocks.

31 **Before serial number 41137:** Raise the platform at least 12 feet / 3.6 m.

⊙ Result - ANSI and CSA models: The tilt alarm will sound at 180 beeps per minute.

⊙ Result - CE and Australian models: The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: If the tilt sensor alarm does not sound, adjust the tilt level sensor until the alarm just begins to sound OR the down limit switch may need to be adjusted.

After serial number 41136: Raise the platform at least 12 feet / 3.6 m.

⊙ Result - The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: If the tilt sensor alarm does not sound, adjust the tilt level sensor until the alarm just begins to sound OR the down limit switch may need to be adjusted.

32 Lower the platform to the stowed position.

33 Raise the machine slightly.

34 Remove the blocks from under both wheels.

35 Lower the machine and remove the jack.

36 Remove the blocks from the wheels at the steer end of the machine.

37 Center a lifting jack under the drive chassis at the ground controls side of the machine.

38 Raise the machine approximately 4 inches / 10 cm.

39 Place a 1.94 x 10 x 10 inch / 4.93 x 25 x 25 cm thick steel block under both wheels at the ground controls side of the machine.

40 Lower the machine onto the blocks.

41 **Before serial number 41137:** Raise the platform at least 12 feet / 3.6 m.

⊙ Result: The tilt alarm does not sound and all functions will operate. Proceed to step 43.

⊠ Result - ANSI and CSA models: The tilt alarm sounds at 180 beeps per minute. Proceed to step 42.

⊠ Result - CE and Australian models: The drive function and the lift function will not operate and the tilt alarm sounds at 180 beeps per minute. Proceed to step 42.

After serial number 41136: Raise the platform at least 12 feet / 3.6 m.

⊙ Result: The tilt alarm does not sound and all functions will operate. Proceed to step 43.

⊠ Result - The drive function and the lift function will not operate and the tilt alarm sounds at 180 beeps per minute. Proceed to step 42.

42 Turn the level sensor adjusting nuts just until the level sensor alarm does not sound.

43 Lower the platform to the stowed position.

44 Raise the machine slightly.

45 Remove the blocks from under both wheels.

46 Lower the machine and remove the jack.

47 Center a lifting jack under the drive chassis at the engine side of the machine.

48 Raise the machine approximately 4 inches / 10 cm.

49 Place a 2.25 x 10 x 10 inch / 5.72 x 25 x 25 cm thick steel block under both wheels at the ground controls side of the machine.

50 Lower the machine onto the blocks.

51 **Before serial number 41137:** Raise the platform at least 12 feet / 3.6 m.

⊙ Result - ANSI and CSA models: The tilt alarm will sound at 180 beeps per minute.

⊙ Result - CE and Australian models: The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: If the tilt sensor alarm does not sound, adjust the tilt level sensor until the alarm just begins to sound OR the down limit switch may need to be adjusted.

After serial number 41136: Raise the platform at least 12 feet / 3.6 m.

⊙ Result - The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: If the tilt sensor alarm does not sound, adjust the tilt level sensor until the alarm just begins to sound OR the down limit switch may need to be adjusted.

52 Lower the platform to the stowed position.

53 Push in the red Emergency Stop button to the off position at both the ground and platform controls.

54 Turn the key switch to the off position.

55 Raise the machine slightly.

56 Remove the blocks from under both wheels.

57 Lower the machine and remove the jack.

58 **Before serial number 41200:** Close the ground control panel. Install and securely tighten the retaining fasteners. Do not over tighten.

After serial number 41199: Install the cover onto the level sensor enclosure. Install and securely tighten the retaining fasteners. Do not over tighten.

How to Install and Calibrate the Level Sensor (after serial number 41753)

The Electronic Control Module (ECM) is programmed to deactivate the lift and drive functions and activate an alarm when a signal is received from the level sensor.

The tilt alarm sounds when the incline of the chassis exceeds 2° to the side and 3° to the front or rear.

⚠DANGER Tip-over hazard. Failure to install or calibrate the level sensor as instructed could result in the machine tipping over causing death or serious injury. Do not install or calibrate the level sensor other than specified in this procedure.

Note: Perform this procedure with the machine on a firm, level surface that is free of obstructions. Use a digital level to confirm.

1 Remove the platform controls from the platform.

If you are not installing a new level sensor, proceed to step 13.

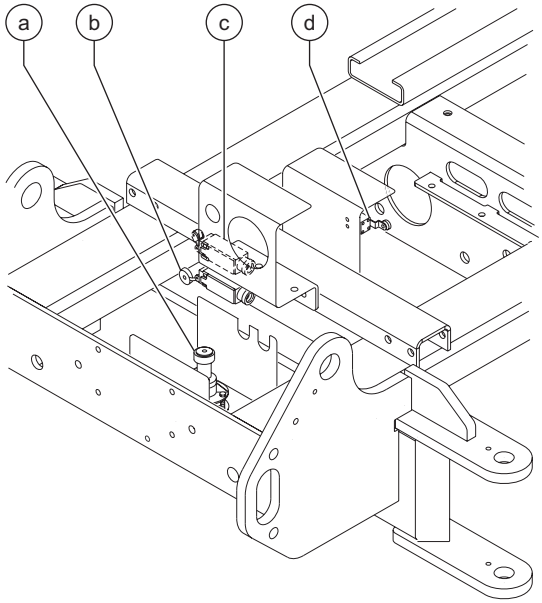
2 Raise the platform approximately 10 feet / 3 m.

3 Lift the safety arm, move to the center of the scissor arm and rotate to a vertical position.

4 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

5 Locate the level sensor enclosure on the chassis under the limit switches at the steer end of the machine. Remove the enclosure cover retaining fasteners and the cover.



Level sensor (after serial number 41199)

a level sensor
b max height limit switch (CE models)
c down limit switch
d load sense delay limit switch (CE models)

6 Tag and disconnect the wire harness from the level sensor.

7 Remove the fasteners securing the level sensor to the chassis. Remove the level sensor from the machine.

8 Install the new level sensor onto the machine with the "Y" on the level sensor base closest to the steer end of the machine. Install and tighten the level sensor retaining fasteners.

⚠DANGER Tip-over hazard. The tilt level sensor must be installed with the "Y" on the level sensor base closest to the steer end of the machine. Failure to install the tilt level sensor as instructed will cause the machine to tip over resulting in death or serious injury.

9 Connect the wire harness to the level sensor.

10 Turn the key switch to platform control and pull out the red Emergency Stop buttons to the on position at both the ground and platform controls.

11 Tighten the level sensor adjusting fasteners until the bubble in the top of the level sensor is centered in the circles.

Note: Be sure there are threads showing through the top of the adjusting fasteners.

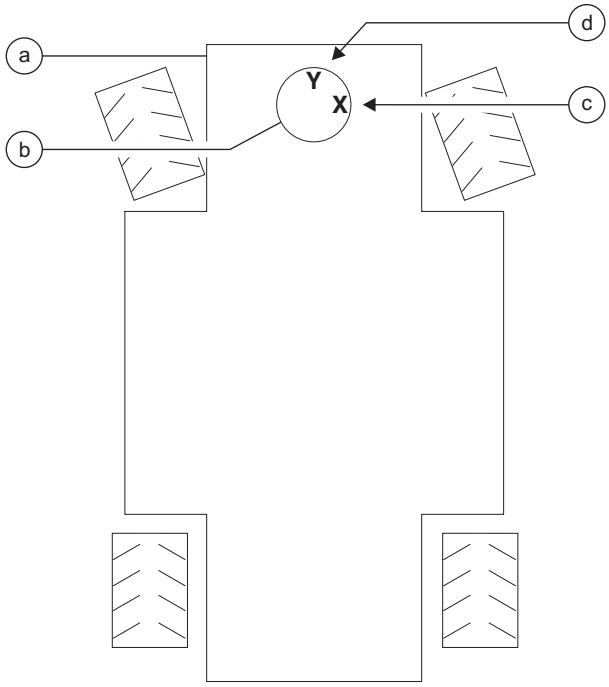
⊙ Result: The tilt sensor alarm should not sound.

12 Raise the platform and rotate the safety arm to the stowed position.

13 Lower the platform to the stowed position.

14 Center a lifting jack under the drive chassis at the ground controls side of the machine.

15 Raise the machine approximately 4 inches / 10 cm.



Level sensor

a chassis
b level sensor
c "X" indicator
d "Y" indicator

16 Place a 1.94 x 10 x 10 inch / 4.93 x 25 x 25 cm thick steel block under both wheels at the ground controls side of the machine.

17 Lower the machine onto the blocks.

GROUND CONTROLS REV C

18 Raise the platform at least 12 feet / 3.6 m.

⊙ Result: The tilt alarm does not sound and all functions will operate. Proceed to step 20.

⊠ Result - The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute. Proceed to step 19.

19 Turn the level sensor adjusting nuts just until the level sensor alarm does not sound.

20 Lower the platform to the stowed position.

21 Raise the machine slightly.

22 Remove the blocks from under both wheels.

23 Lower the machine and remove the jack.

24 Center a lifting jack under the drive chassis at the engine side of the machine.

25 Raise the machine approximately 4 inches / 10 cm.

26 Place a 2.25 x 10 x 10 inch / 5.72 x 25 x 25 cm thick steel block under both wheels at the ground controls side of the machine.

27 Lower the machine onto the blocks.

28 Raise the platform at least 12 feet / 3.6 m.

⊙ Result - The drive function and the lift function will not operate and the tilt alarm will sound at 180 beeps per minute.

⊠ Result: If the tilt sensor alarm does not sound, adjust the tilt level sensor until the alarm just begins to sound OR the down limit switch may need to be adjusted.

29 Lower the platform to the stowed position.

30 Push in the red Emergency Stop button to the off position at both the ground and platform controls.

31 Turn the key switch to the off position.

32 Raise the machine slightly.

33 Remove the blocks from under both wheels.

34 Lower the machine and remove the jack.

35 Install the cover onto the level sensor enclosure. Install and securely tighten the retaining fasteners. Do not over tighten.

Hydraulic Pump

REV B

5-1
Function Pump

The hydraulic pump is attached to the motor which makes up the Hydraulic Power Unit.

Before serial number 41200, the hydraulic pump is a 2-section, gear-type pump. Pump number 1 is the pump section which is closest to the pump motor and pump number 2 is the pump section that is farther from the pump motor. Each section of the pump has its own relief valve, located in the function manifold.

After serial number 41199, the hydraulic pump is a single section, gear-type pump. The relief valve is located in the function manifold.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

How to Test the Hydraulic Pump

1 Tag, disconnect and plug the high pressure hydraulic hose from pump number 1.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

2 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to the high pressure port on pump number 1.

3 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

4 Activate the platform up function and observe the reading on the pressure gauge.

⊙ Result: If the pressure gauge reads 3200 psi / 221 bar, immediately stop. The pump is good.

⊠ Result: If pressure fails to reach 3200 psi / 221 bar, the pump section or pump coupling is bad and will need to be serviced or replaced.

NOTICE Component damage hazard. There is no relief valve in the hydraulic pump and the pump can be damaged if the pressure is allowed to exceed 3200 psi / 221 bar.
When testing the pump, activate the pump in one second intervals until 3200 psi / 221 bar is confirmed.
Do not over-pressurize the pump.

5 Turn the key switch to the off position and push in the red Emergency Stop button to the off position at both the ground and platform controls.

6 Remove the pressure gauge from pump number 1 and install the hydraulic hose disconnected in step 1.

7 Tag, disconnect and plug the high pressure hydraulic hose from pump number 2.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

8 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to the high pressure port on pump number 2.

9 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

10 Activate the platform up function and observe the reading on the pressure gauge.

⊙ Result: If the pressure gauge reads 3200 psi / 221 bar, immediately stop. The pump is good.

⊠ Result: If pressure fails to reach 3200 psi / 221 bar, the pump section or pump coupling is bad and will need to be serviced or replaced.

11 Turn the key switch to the off position and push in the red Emergency Stop button to the off position at both the ground and platform controls.

12 Remove the pressure gauge from pump number 2 and install the hydraulic hose disconnected in step 7.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

How to Remove the Hydraulic Pump

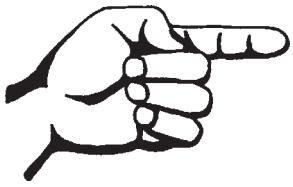
1 Tag, disconnect and plug the hydraulic hoses from the pump.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

2 Remove the pump mounting bolts. Carefully remove the pump.

⚠DANGER Tip-over hazard. If replacing the hydraulic pump, it is critical to return the lift speed and raised drive speed settings to original factory specifications. The machine may become unstable and tip over, resulting in death or serious injury.

Note: If the machine raised drive speed is exceeds specifications, refer to the Maintenance procedure B-9, *Test the Drive Speed - Raised Position* to confirm the speed, and refer to the Repair procedure 1-3, *Controller Adjustments* to correct the raised drive speed percentage settings.



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Function Manifold

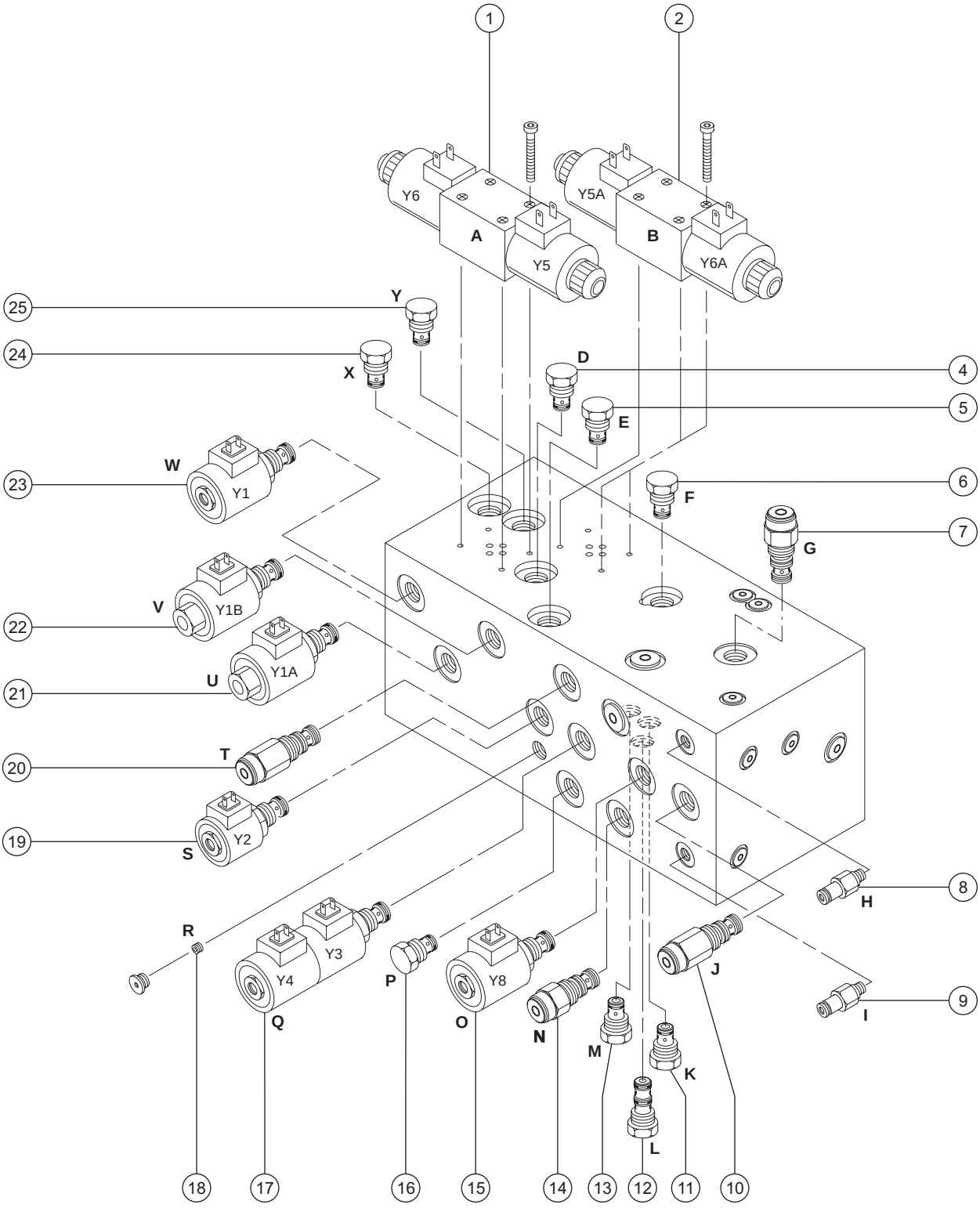
REV C

6-1
Function Manifold Components (before serial number 40594)

The function manifold is mounted inside the hydraulic power unit module tray

Index No.	Description	Schematic Item	Function	Torque
1	DO3 valve, 3 position 4 way	A	Controls flow to the ground control side drive motor in forward and reverse	60 in-lbs / 6.8 Nm
2	DO3 valve, 3 position 4 way	B	Controls flow to the battery pack side drive motor in forward and reverse	60 in-lbs / 6.8 Nm
4	Check valve	D	Drive speed select circuit	25 ft-lbs / 34 Nm
5	Check valve	E	Prevents power unit from running backwards when on an incline and reversing direction of travel	25 ft-lbs / 34 Nm
6	Check valve	F	Steer circuit	25 ft-lbs / 34 Nm
7	Relief valve, 3500 psi / 241.3 bar	G	Relief valve for pump one	20 ft-lbs / 27 Nm
8	Diagnostic nipple - Test port #1	H	Testing	
9	Diagnostic nipple - Test port #2	I	Testing	
10	Relief valve, 3500 psi / 241.3 bar	J	Platform up	20 ft-lbs / 27 Nm
11	Check valve	K	Drive circuit	25 ft-lbs / 34 Nm
12	Shuttle valve	L	Brake circuit	20 ft-lbs / 27 Nm
13	Check valve	M	Drive circuit	25 ft-lbs / 34 Nm
14	Relief valve, 3500 psi / 241.3 bar	N	Relief valve for pump two	20 ft-lbs / 27 Nm
15	Solenoid valve, 2 position 4 way	O	Platform up	25 ft-lbs / 34 Nm
16	Priority flow regulator, 2 gpm / 7.6 L/min	P	Steer circuit	25 ft-lbs / 34 Nm
17	Solenoid valve, 3 position 4 way	Q	Steer left/right	25 ft-lbs / 34 Nm
18	Orifice - plug, 0.035 inch / 0.9 mm	R	Brake circuit	
19	Solenoid valve, 2 position 2 way N.O	S	Brake circuit	20 ft-lbs / 27 Nm
20	Relief valve, 1500 psi / 103.4 bar	T	Steer left/right	20 ft-lbs / 27 Nm
21	Solenoid valve, 2 position 2 way N.O. poppet	U	Drive speed select circuit	25 ft-lbs / 34 Nm
22	Solenoid valve, 2 position 2 way N.O. poppet	V	Drive speed select circuit	25 ft-lbs / 34 Nm
23	Solenoid valve, 2 position 2 way N.C.	W	Drive speed select circuit	25 ft-lbs / 34 Nm
24	Check valve	X	Prevents overflowing the drive motors when in high drive speed	20 ft-lbs / 27 Nm
25	Check valve	Y	Prevents power unit from running backwards when on an incline and reversing direction of travel	25 ft-lbs / 34 Nm

REV C FUNCTION MANIFOLD



FUNCTION MANIFOLD REV C

6-2
Function Manifold Components (from serial number 40594 to 41199)

The function manifold is mounted inside the hydraulic power unit module tray

Index No.	Description	Schematic Item	Function	Torque
1	DO3 valve, 3 position 4 way	A	Controls flow to the ground control side drive motor in forward and reverse	60 in-lbs / 6.8 Nm
2	DO3 valve, 3 position 4 way	B	Controls flow to the battery pack side drive motor in forward and reverse	60 in-lbs / 6.8 Nm
3	Relief valve, 3000 psi / 206.8 bar	C	Relieves pressure on the battery pack side drive motor when moving rapidly from no flow to full flow	25 ft-lbs / 34 Nm
4	Check valve	D	Drive speed select circuit	25 ft-lbs / 34 Nm
5	Check valve	E	Prevents power unit from running backwards when on an incline and reversing direction of travel	25 ft-lbs / 34 Nm
6	Check valve	F	Steer circuit	25 ft-lbs / 34 Nm
7	Relief valve, 3500 psi / 241.3 bar	G	Relief valve for pump one	20 ft-lbs / 27 Nm
8	Diagnostic nipple - Test port #1	H	Testing	
9	Diagnostic nipple - Test port #2	I	Testing	
10	Relief valve, 3500 psi / 241.3 bar	J	Platform up	20 ft-lbs / 27 Nm
11	Check valve	K	Drive circuit	25 ft-lbs / 34 Nm
12	Shuttle valve	L	Brake circuit	20 ft-lbs / 27 Nm
13	Check valve	M	Drive circuit	25 ft-lbs / 34 Nm
14	Relief valve, 3500 psi / 241.3 bar	N	Relief valve for pump two	20 ft-lbs / 27 Nm
15	Solenoid valve, 2 position 4 way	O	Platform up	25 ft-lbs / 34 Nm
16	Priority flow regulator, 2 gpm / 7.6 L/min	P	Steer circuit	25 ft-lbs / 34 Nm

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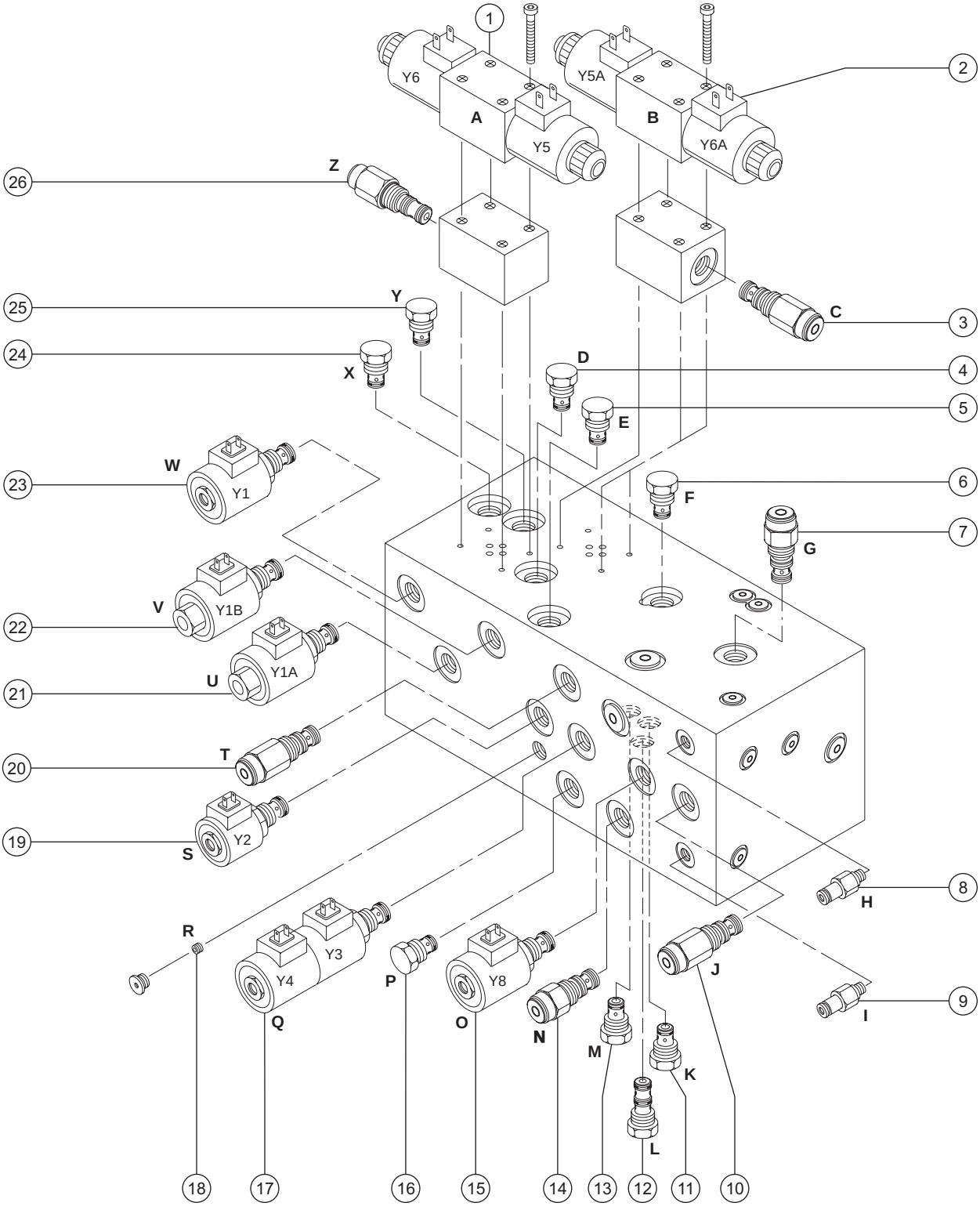
REV C FUNCTION MANIFOLD

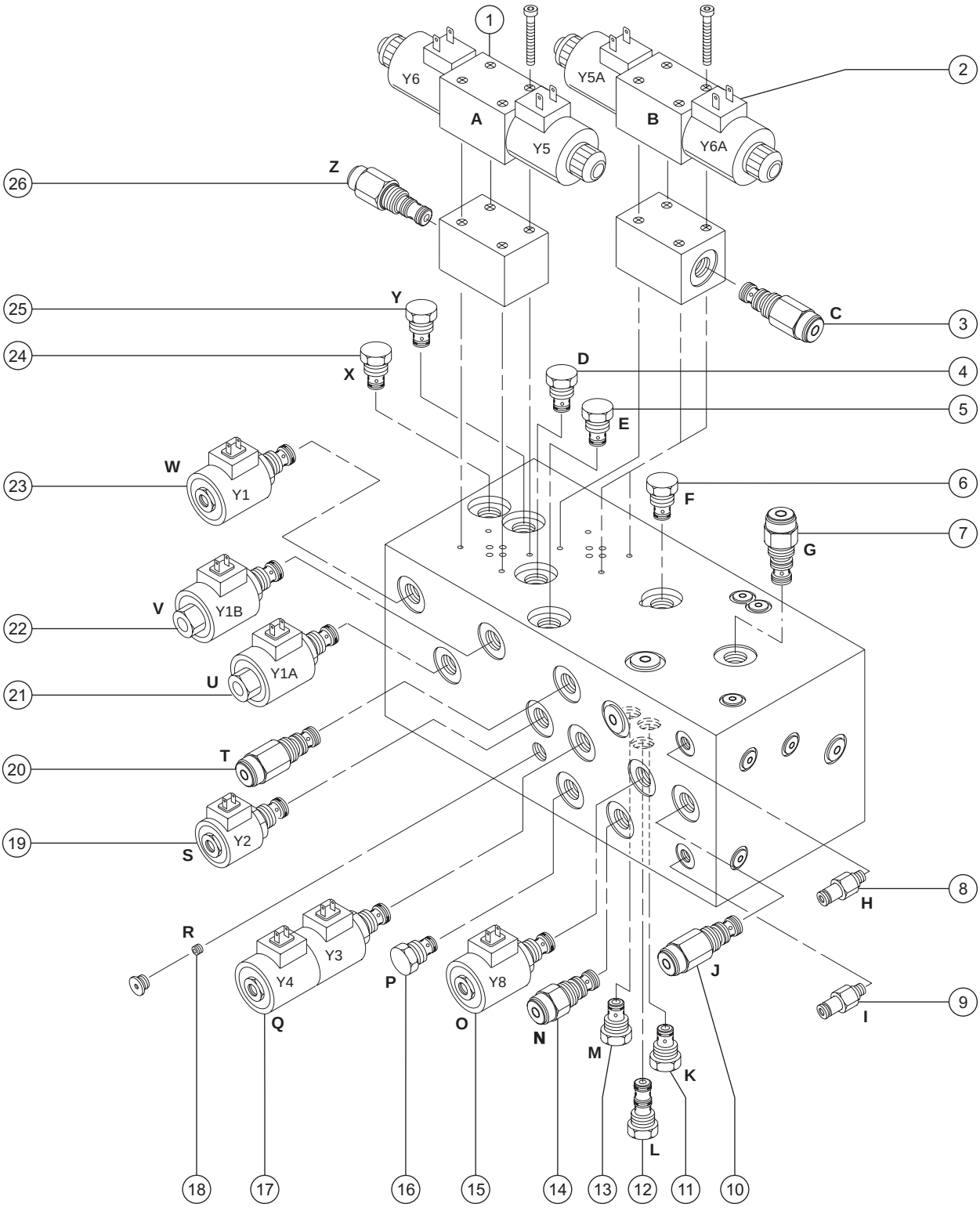


FUNCTION MANIFOLD REV C

Function Manifold Components (from serial number 40594 to 41199), continued

Index No.	Description	Schematic Item	Function	Torque
17	Solenoid valve, 3 position 4 way	Q	Steer left/right	25 ft-lbs / 34 Nm
18	Orifice - plug, 0.035 inch / 0.9 mm	R	Brake circuit	
19	Solenoid valve, 2 position 2 way N.O	S	Brake circuit	20 ft-lbs / 27 Nm
20	Relief valve, 1500 psi / 103.4 bar	T	Steer left/right	20 ft-lbs / 27 Nm
21	Solenoid valve, 2 position 2 way N.O	U	Drive speed select circuit	25 ft-lbs / 34 Nm
22	Solenoid valve, 2 position 2 way N.O	V	Drive speed select circuit	25 ft-lbs / 34 Nm
23	Solenoid valve, 2 position 2 way N.C.	W	Drive circuit	25 ft-lbs / 34 Nm
24	Check valve	X	Prevents overflowing the drive motors when in high drive speed	20 ft-lbs / 27 Nm
25	Check valve	Y	Prevents power unit from running backwards when on an incline and reversing direction of travel	25 ft-lbs / 34 Nm
26	Relief valve, 3000 psi / 206.8 bar	Z	Relieves pressure on the ground control side drive motor when moving rapidly from no flow to full flow	25 ft-lbs / 34 Nm

REV C FUNCTION MANIFOLD

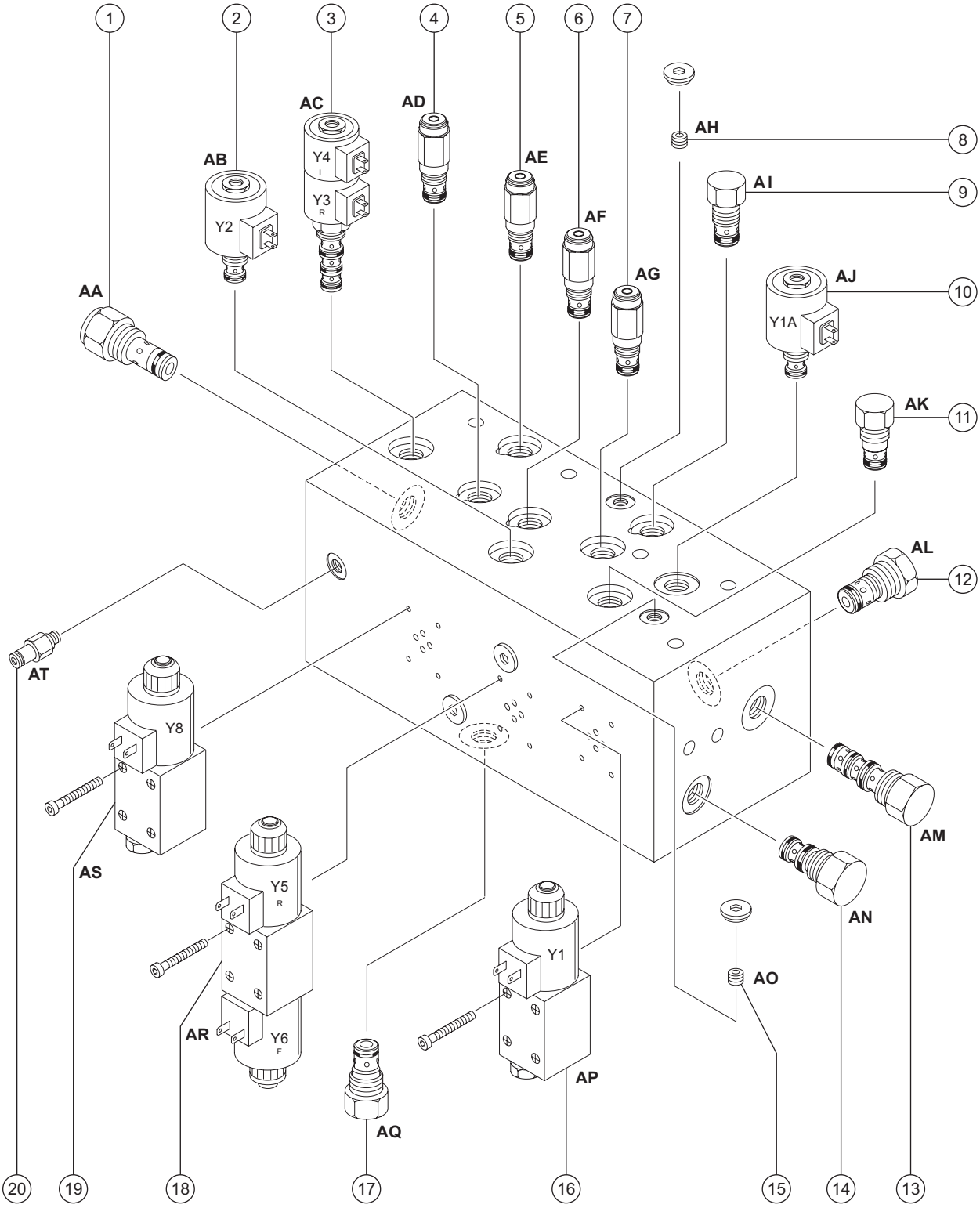


6-3
Function Manifold Components (after serial number 41199)

The function manifold is mounted inside the hydraulic power unit module tray

Index No.	Description	Schematic Item	Function	Torque
1	Priority flow regulator, 2 gpm / 7.5 L/min	AA	Steer circuit	30 ft-lbs / 41 Nm
2	Solenoid valve, 2 position 2 way N.O	AB	Brake circuit	20 ft-lbs / 27 Nm
3	Solenoid valve, 3 position 4 way	AC	Steer left/right	20 ft-lbs / 27 Nm
4	Relief valve, 3500 psi / 241 bar	AD	System relief	25 ft-lbs / 34 Nm
5	Relief valve, 1500 psi / 103.4 bar	AE	Steer left/right	20 ft-lbs / 27 Nm
6	Relief valve, (GS-2668 DC) 3600 psi / 241 bar (GS-3268 DC) 2800 psi / 137.9 bar	AF AF	Platform up Platform up	20 ft-lbs / 27 Nm 20 ft-lbs / 27 Nm
7	Relief valve, 4000 psi / 275.8 bar	AG	Drive forward/reverse	20 ft-lbs / 27 Nm
8	Orifice - plug, 0.035 in / 0.9 mm	AH	Brake circuit	
9	Check valve, 100 psi / 6.9 bar	AI	Drive circuit	25 ft-lbs / 34 Nm
10	Solenoid valve, 2 position 2 way N.O	AJ	High speed bypass	25 ft-lbs / 34 Nm
11	Check valve, 10 psi / 0.7 bar	AK	Drive circuit	20 ft-lbs / 27 Nm
12	Check valve, 2 psi / 0.14 bar	AL	Anti cavitation	25 ft-lbs / 34 Nm
13	Flow divider/combiner valve	AM	Controls flow to drive motors in forward and reverse	25 ft-lbs / 34 Nm
14	Check valve, 2 psi / 0.14 bar	AN	Anti cavitation	25 ft-lbs / 34 Nm
15	Orifice - plug, 0.035 in / 0.9 mm	AO	Reduces tire scrub when driving and turning at the same time	
16	DO3 valve, 2 position 4 way	AP	Drive speed select	60 in-lbs / 6.8 Nm
17	Check valve, 10 psi / 0.7 bar	AQ	Steer circuit	20 ft-lbs / 27 Nm
18	DO3 valve, 3 position 4 way	AR	Drive forward/reverse	60 in-lbs / 6.8 Nm
19	DO3 valve, 2 position 4 way	AS	Platform up	60 in-lbs / 6.8 Nm
20	Diagnostic nipple	AT	Testing	

REV C FUNCTION MANIFOLD



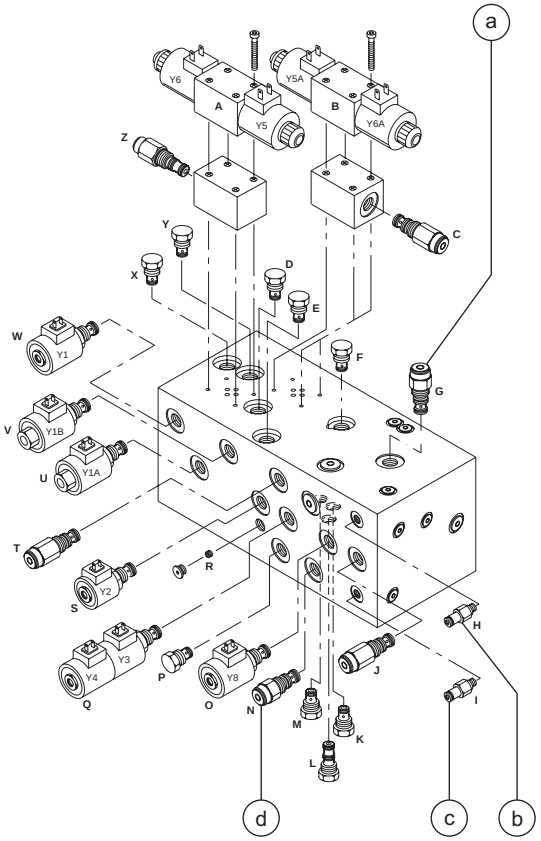
6-4
Valve Adjustments - Function Manifold

Note: Perform these procedures with the hydraulic oil level within the top 2 inches / 5 cm of the sight gauge.

How to Adjust the System Relief Valve

Before serial number 41200:

1 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to test port #2 (item I) and test port #1 (item H) on the function manifold.



a P1 system relief valve
b test port #1
c test port #2
d P2 system relief valve

2 Place wheel chocks in front of all four wheels.

3 Remove the platform controls from the platform and place the controls near the function manifold on the ground control side of the machine.

4 Press the high torque button (BN6).

5 Move the joystick full stroke in the forward direction and note the pressure readings on both pressure gauges. Refer to Section 2, *Specifications.*

6 Use a wrench to hold the P2 system relief valve (item N) or P1 system relief valve (item G) and remove the cap.

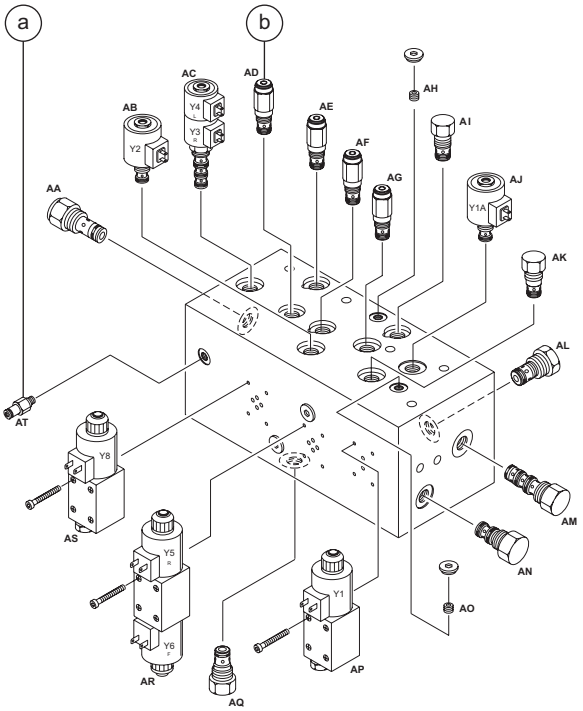
7 Adjust the internal hex socket. Turn it clockwise to increase the pressure or counterclockwise to decrease the pressure. Install the relief valve cap.

⚠ DANGER Tip-over hazard. Failure to adjust the relief valve as instructed will cause the machine to tip over resulting in death or serious injury. Do not adjust the relief valve higher than specified.

8 Repeat step 5 to confirm the relief valve pressures.

After serial number 41199:

1 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to the test port (item AT) on the function manifold.



a test port
b system relief valve

2 Place wheel chocks in front of all four wheels.

3 Remove the platform controls from the platform and place the controls near the function manifold on the ground control side of the machine.

4 Press the high torque button (BN6).

5 Move the joystick full stroke in the forward direction and note the pressure reading on the pressure gauge. Refer to Section 2, *Specifications.*

6 Use a wrench to hold the system relief valve (item AD) and remove the cap .

7 Adjust the internal hex socket. Turn it clockwise to increase the pressure or counterclockwise to decrease the pressure. Install the relief valve cap.

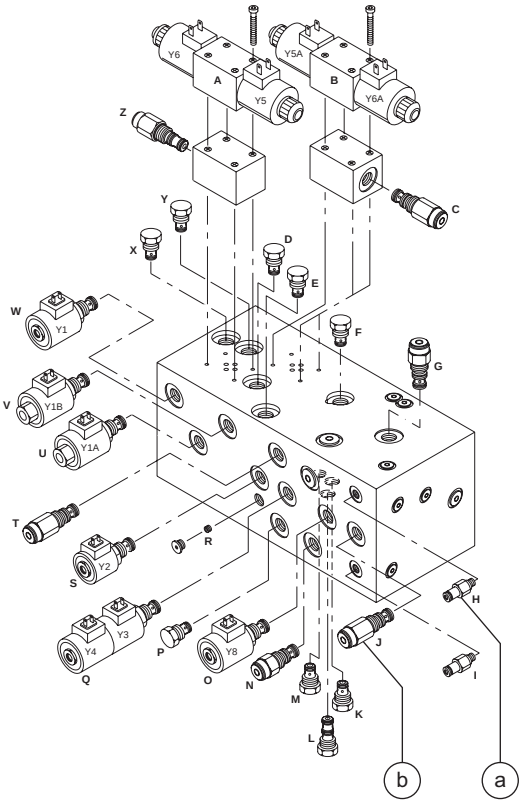
⚠ DANGER Tip-over hazard. Failure to adjust the relief valve as instructed will cause the machine to tip over resulting in death or serious injury. Do not adjust the relief valve higher than specified.

8 Repeat step 5 to confirm the relief valve pressures.

How to Adjust the Lift Relief Valve

Before serial number 41200:

1 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to test port #1 (item H) on the function manifold.



a test port #1
b lift relief valve

2 Place the maximum rated load in the platform. Secure the load to the platform. Refer to the serial plate on the machine.

3 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

4 Fully raise the platform, then continue to activate the platform up function while observing the reading on the pressure gauge. Note the pressure. Refer to Section 2, *Specifications*.

5 Release the controls. Use a wrench to hold the lift relief valve and remove the cap (item J).

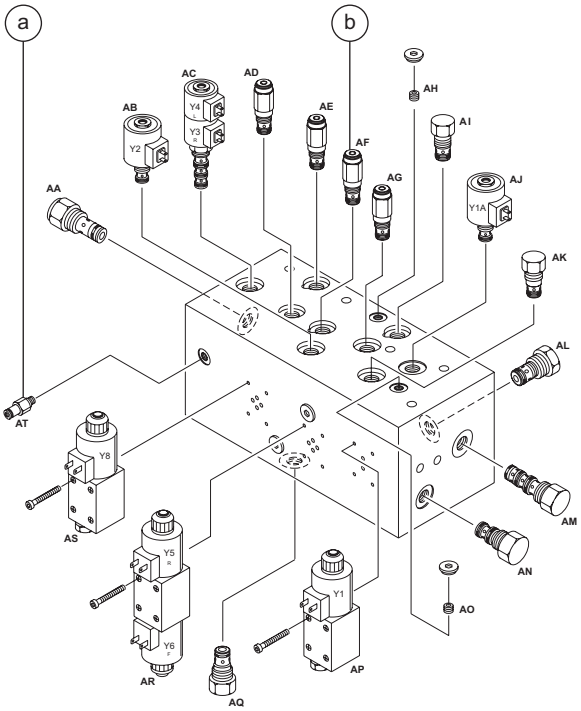
6 Adjust the internal hex socket. Turn it clockwise to increase the pressure or counterclockwise to decrease the pressure. Install the relief valve cap.

⚠ DANGER Tip-over hazard. Failure to adjust the relief valve as instructed will cause the machine to tip over resulting in death or serious injury. Do not adjust the relief valve higher than specified.

7 Repeat step 4 to confirm the relief valve pressure.

After serial number 41199:

1 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to the test port (item AT) on the function manifold.



a test port
b lift relief valve

2 Place the maximum rated load in the platform. Secure the load to the platform. Refer to the serial plate on the machine.

3 Turn the key switch to ground control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

4 Fully raise the platform, then continue to activate the platform up function while observing the reading on the pressure gauge. Note the pressure. Refer to Section 2, *Specifications*.

5 Release the controls. Use a wrench to hold the lift relief valve and remove the cap (item AF).

6 Adjust the internal hex socket. Turn it clockwise to increase the pressure or counterclockwise to decrease the pressure. Install the relief valve cap.

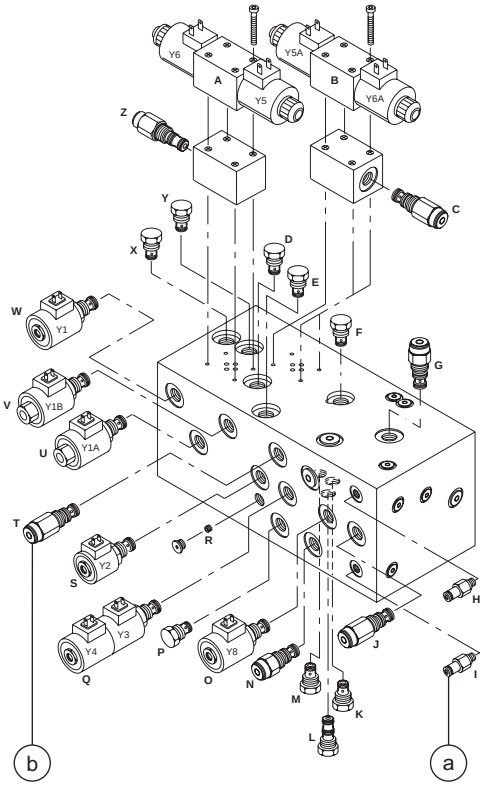
⚠ DANGER Tip-over hazard. Failure to adjust the relief valve as instructed will cause the machine to tip over resulting in death or serious injury. Do not adjust the relief valve higher than specified.

7 Repeat step 4 to confirm the relief valve pressure.

How to Adjust the Steer Relief Valve

Before serial number 41200:

1 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to test port #2 (item I) on the function manifold.



a test port #2
b steer relief valve

2 Remove the platform controls from the platform and place the controls near the function manifold on the ground control side of the machine.

3 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

4 Activate the steer right function. Allow the wheels to turn fully to the right, then continue to activate the steer right function while observing the reading on the pressure gauge. Note the pressure. Refer to Section 2, *Specifications*.

5 Release the controls. Use a wrench to hold the steer relief valve and remove the cap (item T).

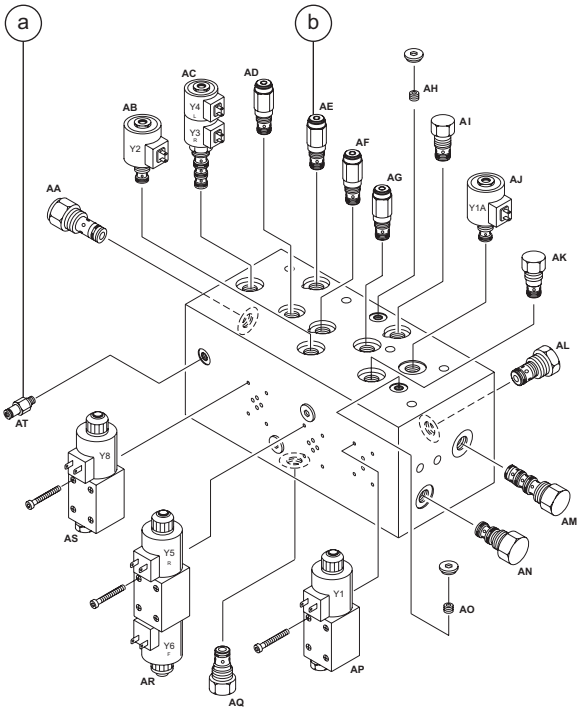
6 Adjust the internal hex socket. Turn it clockwise to increase the pressure or counterclockwise to decrease the pressure. Install the relief valve cap.

NOTICE Component damage hazard. Do not adjust the relief valve higher than specified.

7 Repeat step 4 to confirm the relief valve pressure.

After serial number 41199:

1 Connect a 0 to 5000 psi / 0 to 350 bar pressure gauge to the test port (item AT) on the function manifold.



a test port
b steer relief valve

2 Remove the platform controls from the platform and place the controls near the function manifold on the ground control side of the machine.

3 Turn the key switch to platform control and pull out the red Emergency Stop button to the on position at both the ground and platform controls.

4 Activate the steer right function. Allow the wheels to turn fully to the right, then continue to activate the steer right function while observing the reading on the pressure gauge. Note the pressure. Refer to Section 2, *Specifications*.

5 Release the controls. Use a wrench to hold the steer relief valve and remove the cap (item AE).

6 Adjust the internal hex socket. Turn it clockwise to increase the pressure or counterclockwise to decrease the pressure. Install the relief valve cap.

NOTICE Component damage hazard. Do not adjust the relief valve higher than specified.

7 Repeat step 4 to confirm the relief valve pressure.

How to Adjust the Drive Relief Valve

Drive relief valves are incorporated into the machines after serial number 40593. These relief valves are not intended to be adjusted.

If the drive relief valve(s) are tampered with in any way, consult the Genie Industries Service Department.

6-5
Valve Coils

How to Test a Valve Coil

A properly functioning valve coil provides an electromotive force which operates the solenoid valve. Critical to normal operation is continuity within the coil that provides this force field.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

1 Tag and disconnect the wire harness from the coil to be tested.

2 Test the coil resistance.

⊙ Result: The resistance should be within specification, plus or minus 30%.

⊠ Result: If the resistance is not within specification, plus or minus 30%, replace the coil.

Valve Coil Resistance Specifications

Note: The following coil resistance specifications are at an ambient temperature of 68°F / 20°C. As valve coil resistance is sensitive to changes in air temperature, the coil resistance will typically increase or decrease by 4% for each 18°F / 20°C that your air temperature increases or decreases from 68°F / 20°C.

Description	Specification
DO3 valve, 3 position 4 way 12V DC (schematic items A and B)	7Ω
Solenoid valve, 2 position 2 way 10V DC (schematic item S)	7Ω
Solenoid valve, 2 position 2 way 10V DC (schematic items U, V and W)	5Ω
Solenoid valve, 2 position 4 way 10V DC (schematic item O)	5Ω
Solenoid valve, 3 position 4 way 10V DC (schematic item Q)	5Ω
Solenoid valve, 2 position 2 way 24V DC (schematic item AB)	34Ω
Solenoid valve, 3 position 4 way 24V DC (schematic item AC)	34Ω
Solenoid valve, 2 position 2 way 24V DC (schematic item AJ)	29Ω
DO3 valve, 2 position 4 way 24V DC (schematic items AP and AS)	22Ω
DO3 valve, 3 position 4 way 24V DC (schematic item AR)	22Ω
Solenoid valve, 2 position 2 way 20V DC (schematic item BA)	12Ω

How to Test a Coil Diode

Genie incorporates voltage spike suppressing diodes in all of its coils. Properly functioning coil diodes protect the electrical circuit by suppressing voltage spikes. Voltage spikes naturally occur within a function circuit following the interruption of electrical current to a coil. Faulty diodes can fail to protect the electrical system, resulting in a tripped circuit breaker or component damage.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

1 Test the coil for resistance. See 6-5 *How to Test a Coil.*

2 Connect a 10Ω resistor to the negative terminal of a known good 9V DC battery. Connect the other end of the resistor to a terminal on the coil.

Note: The battery should read 9V DC or more when measured across the terminals.

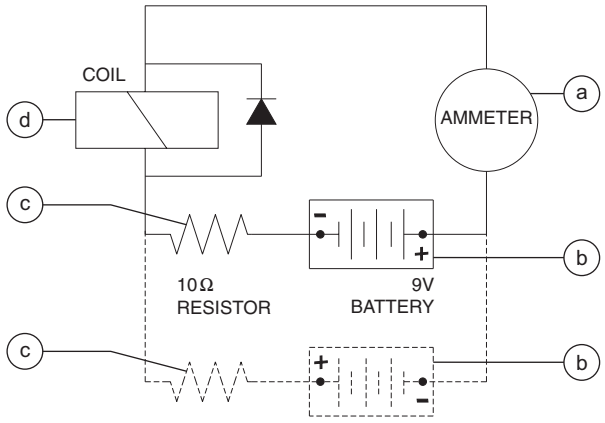
Resistor, 10Ω	
Genie part number	27287

3 Set a multimeter to read DC current.

Note: The multimeter, when set to read DC current, should be capable of reading up to 800 mA.

4 Connect the negative lead to the other terminal on the coil.

Note: If testing a single-terminal coil, connect the negative lead to the internal metallic ring at either end of the coil.



a multimeter
b 9V DC battery
c 10Ω resistor
d coil

Note: Dotted lines in illustration indicate a reversed connection as specified in step 6

5 Momentarily connect the positive lead from the multimeter to the positive terminal on the 9V DC battery. Note and record the current reading.

6 At the battery or coil terminals, reverse the connections. Note and record the current reading.

⊙ Result: Both current readings are greater than 0 mA and are different by a minimum of 20%. The coil is good.

⊠ Result: If one or both of the current readings are 0 mA, or if the two current readings do not differ by a minimum of 20%, the coil and/or its internal diode are faulty and the coil should be replaced.

Hydraulic Tank

REV B

7-1 Hydraulic Tank

The primary functions of the hydraulic tank are to cool, clean and deaerate the hydraulic fluid during operation. It utilizes internal suction strainers for the pump supply lines and has an external return line filter.

How to Remove the Hydraulic Tank

NOTICE Component damage hazard. The work area and surfaces where this procedure will be performed must be clean and free of debris that could get into the hydraulic system.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

Before serial number 41318:

1 Raise the platform approximately 10 feet / 3 m.

2 Lift the safety arm, move to the center of the scissor arm and rotate down to a vertical position.

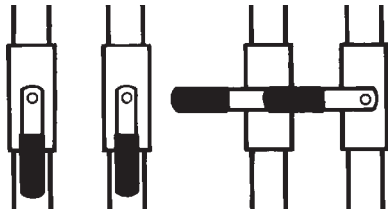
3 Lower the platform onto the safety arm.

⚠WARNING Crushing hazard. Keep hands clear of the safety arm when lowering the platform.

4 Remove the hose cover plate mounting fasteners and remove the cover.

5 Close the two hydraulic shutoff valves located at the hydraulic tank.

NOTICE Component damage hazard. The engine must not be started with the hydraulic tank shutoff valves in the closed position or component damage will occur. If the tank valves are closed, remove the key from the key switch and tag the machine to inform personnel of the condition.



Open Closed

REV B HYDRAULIC TANK

All models:

6 Disconnect the battery pack from the machine.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

7 Remove the drain plug from the hydraulic tank and allow all of the oil from the tank to drain into a suitable container. Refer to Section 2, *Specifications*.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

8 Tag and disconnect and plug the two suction hoses from the hydraulic tank.

9 Tag, disconnect and plug the hydraulic hose at the return filter. Cap the fitting on the filter.

10 Remove the tank strap fasteners and remove the tank strap.

11 Remove the hydraulic tank from the machine.

After serial number 41317:

1 Disconnect the battery pack from the machine.

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

2 Open the door to access the hydraulic tank.

3 Remove the drain plug from the hydraulic tank and allow all of the oil from the tank to drain into a suitable container. Refer to Section 2, *Specifications*.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

4 Tag, disconnect and plug the hydraulic hose at the return filter. Cap the fitting on the filter.

5 Tag, disconnect and plug the hydraulic pump inlet hose at the pump. Cap the fitting on the pump.

6 Remove the hydraulic tank retaining fasteners and remove the hydraulic tank from the machine.

Steer Axle Components

REV C

8-1
Yoke and Drive Motor

How to Remove the Yoke and Drive Motor

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

Before serial number 41318:

Battery Side:

1 Block the non-steer wheels.

2 Center a lifting jack under the drive chassis at the steer end of the machine.

3 Loosen the wheel lug bolts. Do not remove them.

4 Raise the machine approximately 6 inches / 15 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if not properly supported.

5 Remove the wheel lug bolts. Remove the tire and wheel assembly.

6 Tag, disconnect and plug the hydraulic hoses from the drive motor. Cap the fittings on the drive motor.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

7 Support and secure the yoke and drive motor assembly to a lifting jack.

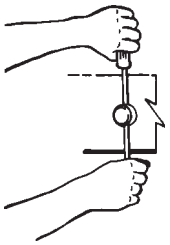
8 Remove the cotter pin from the outer steer cylinder clevis pin and remove the clevis pin.

9 Remove the cotter pin from the tie rod clevis pin and remove the clevis pin.

Note: Always use a new cotter pin when installing a clevis pin.

10 Remove the retaining fastener from the lower yoke pivot pin.

11 Place a rod through the pin and twist to remove the pin.



12 Repeat steps 9 through 11 for the upper yoke pivot pin.

13 Remove the yoke and drive motor assembly from the machine.

⚠CAUTION Crushing hazard. The yoke and drive motor assembly may become unbalanced and fall if not properly supported and secured to the lifting jack when it is removed from the machine.

Hydraulic Side:

1 Block the non-steer wheels.

2 Center a lifting jack under the drive chassis at the steer end of the machine.

3 Loosen the wheel lug bolts. Do not remove them.

4 Raise the machine approximately 6 inches / 15 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if not properly supported.

5 Remove the wheel lug bolts. Remove the tire and wheel assembly.

6 Tag, disconnect and plug the hydraulic hoses from the drive motor. Cap the fittings on the drive motor.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

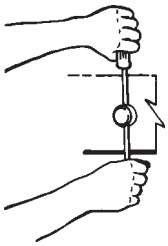
7 Support and secure the yoke and drive motor assembly to a lifting jack.

8 Remove the cotter pin from the tie rod clevis pin and remove the clevis pin.

Note: Always use a new cotter pin when installing a clevis pin.

9 Remove the retaining fastener from the lower yoke pivot pin.

10 Place a rod through the pin and twist to remove the pin.



11 Repeat steps 8 through 10 for the upper yoke pivot pin.

12 Remove the yoke and drive motor assembly from the machine.

⚠CAUTION Crushing hazard. The yoke and drive motor assembly may become unbalanced and fall if not properly supported and secured to the lifting jack when it is removed from the machine.

How to Remove a Drive Motor

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

Before serial number 41318:

1 Block the non-steer wheels and center a lifting jack under the drive chassis at the steer end.

2 Loosen the wheel lug bolts. Do not remove them.

3 Raise the machine approximately 2 inches / 5 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if it is not properly supported.

4 Remove the wheel lug bolts. Remove the tire and wheel assembly.

5 Tag, disconnect and plug the hydraulic hoses from the drive motor. Cap the fittings on the drive motor.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

NOTICE Component damage hazard. Hoses can be damaged if they are kinked or pinched.

6 Remove the drive motor mounting fasteners and remove the drive motor.

8-2
Yoke and Spindle

How to Remove the Yoke and Spindle

After serial number 41317:

Battery Side:

1 Block the non-steer wheels.

2 Center a lifting jack under the drive chassis at the steer end of the machine.

3 Loosen the wheel lug bolts. Do not remove them.

4 Raise the machine approximately 6 inches / 15 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if not properly supported.

5 Remove the wheel lug bolts. Remove the tire and wheel assembly.

7 Support and secure the yoke and spindle assembly to a lifting jack.

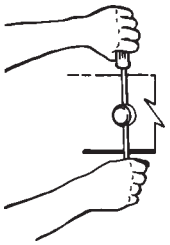
8 Remove the cotter pin from the outer steer cylinder clevis pin and remove the clevis pin.

9 Remove the cotter pin from the tie rod clevis pin and remove the clevis pin.

Note: Always use a new cotter pin when installing a clevis pin.

10 Remove the retaining fasteners from the lower yoke pin.

11 Place a rod through the lower yoke pin and twist to remove the pin.



12 Repeat steps 9 through 11 for the upper yoke pivot pin.

13 Remove the yoke and spindle assembly from the machine.

⚠CAUTION Crushing hazard. The yoke and drive motor assembly may become unbalanced and fall if not properly supported and secured to the lifting jack when it is removed from the machine.

Hydraulic Side:

1 Block the non-steer wheels.

2 Center a lifting jack under the drive chassis at the steer end of the machine.

3 Loosen the wheel lug bolts. Do not remove them.

4 Raise the machine approximately 6 inches / 15 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if not properly supported.

5 Remove the wheel lug bolts. Remove the tire and wheel assembly.

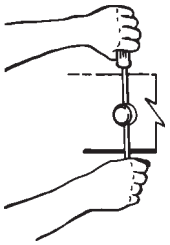
7 Support and secure the yoke and spindle assembly to a lifting jack.

8 Remove the cotter pin from the tie rod clevis pin and remove the clevis pin.

Note: Always use a new cotter pin when installing a clevis pin.

9 Remove the retaining fasteners from the lower yoke pin.

10 Place a rod through the lower yoke pin and twist to remove the pin.



11 Repeat steps 8 through 10 for the upper yoke pivot pin.

12 Remove the yoke and spindle assembly from the machine.

⚠CAUTION Crushing hazard. The yoke and drive motor assembly may become unbalanced and fall if not properly supported and secured to the lifting jack when it is removed from the machine.

How to Remove a Hub and Spindle

After serial number 41317:

1 Block the non-steer wheels and center a lifting jack under the drive chassis at the steer end.

2 Loosen the wheel lug bolts. Do not remove them.

3 Raise the machine approximately 2 inches / 5 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if it is not properly supported.

4 Remove the wheel lug bolts. Remove the tire and wheel assembly.

5 Remove the dust cap from the hub. Remove the cotter pin from the castle nut.

Note: Always use a new cotter pin when installing a castle nut.

6 Remove the castle nut.

7 Pull the hub off the spindle. The outer bearing, spindle washer and the thrust washer should fall loose from the hub.

Note: When installing the spindle and the tire and wheel assembly, the lug bolts and the castle nut must be torqued to specification during installation. Refer to Section 2, *Specifications*.

8 Remove the fasteners securing the spindle to the yoke.

9 Remove the spindle.

8-3
Steer Cylinder

How to Remove the Steer Cylinder

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

1 Block the non-steer wheels.

2 Tag, disconnect and plug the hydraulic hoses from the steering cylinder. Cap the fittings on the cylinder.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

NOTICE Component damage hazard. Hoses can be damaged if they are kinked or pinched.

3 Remove the pin retaining fasteners from the barrel-end pivot pin. Use a soft metal drift to remove the pivot pin.

Note: Note the quantity and location of the spacers when removing the rod-end pivot pin.

4 Remove the pin retaining fasteners from the rod-end pivot pin. Use a soft metal drift to remove the pin.

Note: Note the quantity and location of the spacers when removing the rod-end pivot pin.

5 Remove the steer cylinder from the machine.

8-4
Tie Rod

How to Remove the Tie Rod

1 Remove the cotter pin and remove the clevis pin from each end of the tie rod.

2 Remove the tie rod.

Note: Always use a new cotter pin when installing a clevis pin.

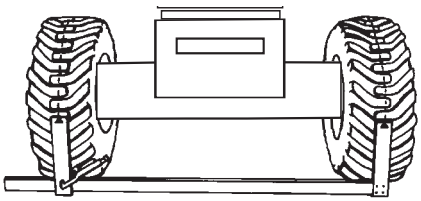
How to Perform the Toe-in Adjustment

Before serial number 33737:

1 Straighten the steer wheels.

2 Block the tires at the non-steer end of the machine.

3 Measure the steer tires, front to front and back to back, using a measuring fixture.



4 Center a lifting jack under the steer end of the drive chassis and raise the machine until the steer tires are off the ground.

5 Place blocks under the drive chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if it is not properly supported.

6 Loosen the jam nut on the adjustable end of the tie rod.

7 Remove the cotter pin from the clevis pin at the adjustable end of the tie rod.

Note: Always use a new cotter pin when installing a clevis pin.

8 Slide the tie rod off of the yoke and adjust it by turning the end.

Note: One half turn on the adjustable end equals approximately $^{1}/_{4}$ inch / 6.5 mm change in the front and rear measurements.

9 Slide the tie-rod onto the yoke. Install the clevis pin.

10 Lower the machine.

11 Repeat step 3. If further adjustment is needed, repeat steps 4 through 10.

12 Install a new cotter pin in the tie rod clevis pin.

13 Tighten the jam nut against the adjustable end of the tie rod.

Toe-in specification	
Measurement	0 ± 0.125 inch 0 ± 3.2 mm

Non-steer Axle Components

REV C

9-1
Brake Motor

How to Remove a Brake Motor

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

Before serial number 41318:

1 Block the steer wheels.

2 Center a lifting jack under the drive chassis at the non-steer end.

3 Loosen the wheel lug bolts. Do not remove them.

4 Raise the machine approximately 2 inches / 5 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if not properly supported.

5 Remove the wheel lug bolts. Remove the tire and wheel assembly.

6 Tag, disconnect and plug the hydraulic hoses from the brake motor. Cap the fittings on the brake motor.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

7 Support and secure the brake assembly to a lifting jack.

8 Remove the brake mounting fasteners.

9 Remove the brake motor from the machine.

⚠CAUTION Crushing hazard. The drive motor and brake assembly may become unbalanced and fall when it is removed from the machine if it is not properly supported and secured to the lifting jack.

9-2
Drive/Brake Motor

How to Remove a Drive/Brake Motor

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Section 2, *Hydraulic Hose and Fitting Torque Specifications*.

After serial number 41317:

1 Block the steer wheels.

2 Center a lifting jack under the drive chassis at the non-steer end.

3 Loosen the wheel lug bolts. Do not remove them.

4 Raise the machine approximately 2 inches / 5 cm. Place blocks under the chassis for support.

⚠WARNING Crushing hazard. The chassis will fall if not properly supported.

5 Remove the wheel lug bolts. Remove the tire and wheel assembly.

6 Tag, disconnect and plug the hydraulic hoses from the drive/brake motor. Cap the fittings on the drive/brake motor.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

7 Support and secure the drive motor/brake assembly to a lifting jack.

8 Remove the drive/brake motor mounting fasteners.

9 Remove the drive/brake motor from the machine.

⚠CAUTION Crushing hazard. The drive motor and brake assembly may become unbalanced and fall when it is removed from the machine if it is not properly supported and secured to the lifting jack.

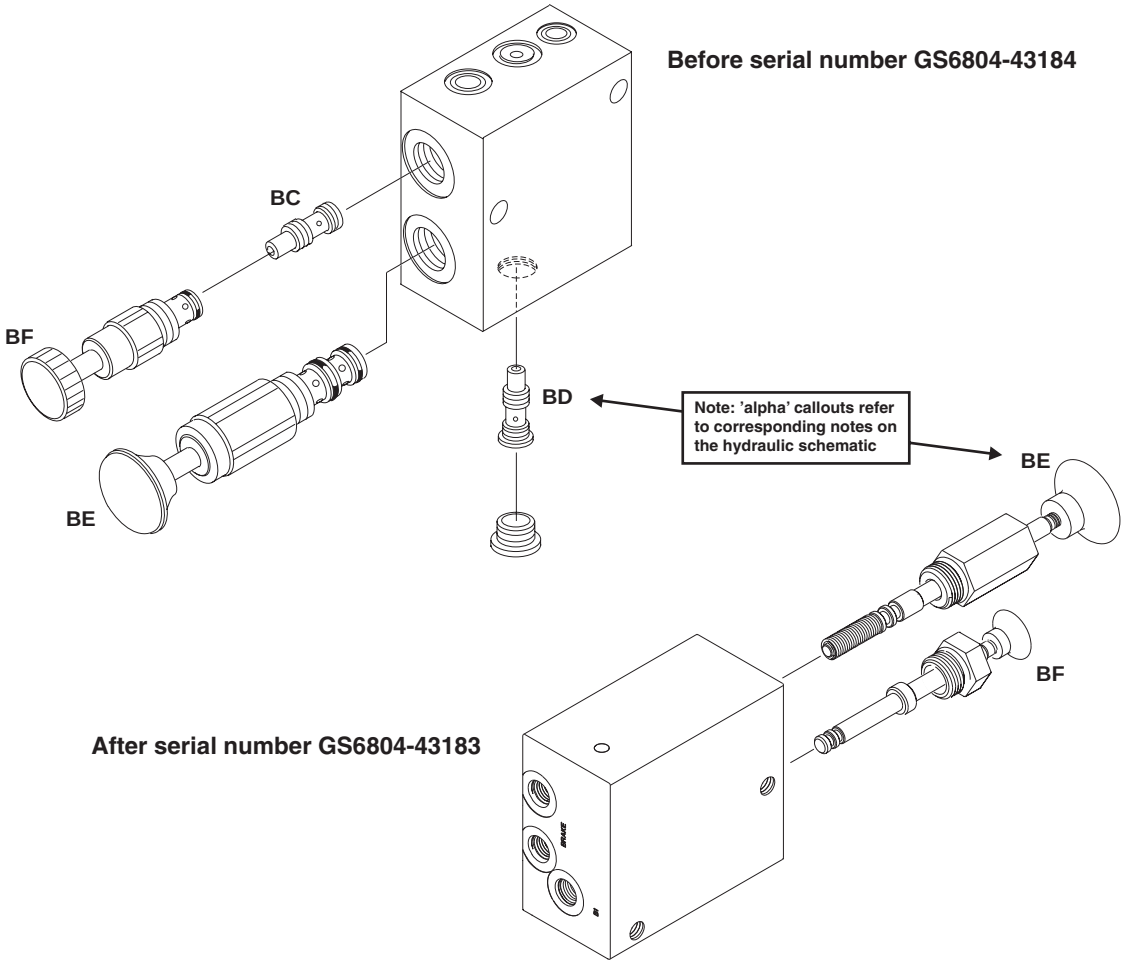
REV C

Brake Release Hand Pump Components

10-1
Brake Release Hand Pump Components

The brake release hand pump manifold is mounted behind the entry ladder next to the battery charger.

Index No.	Description	Schematic Item	Function	Torque
1	Shuttle valve	BC	Brake release circuit	45-50 ft-lbs / 61-68 Nm
2	Check valve, pilot operated	BD	Manual brake release circuit	65-70 ft-lbs / 88-95 Nm
3	Hand pump	BE	Manual brake release	30 ft-lbs / 41 Nm
4	Needle valve	BF	Manual brake release enable	45-50 ft-lbs / 61-68 Nm



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Troubleshooting Flow Charts

Observe and Obey:

- ☑ Troubleshooting and repair procedures shall be completed by a person trained and qualified on the repair of this machine.
- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating the machine.
- ☑ Unless otherwise specified, perform each repair procedure with the machine in the following configuration:
  - Key switch in the off position with the key removed
  - Machine parked on a firm, level surface
  - Platform in stowed position
  - Key switch in the off position with the key removed
  - The red Emergency Stop button in the off position at both ground and platform controls
  - Wheels chocked
  - All external AC power supply disconnected from the machine

Before Troubleshooting:

- ☑ Read, understand and obey the safety rules and operating instructions printed in the appropriate *Operator's Manual.*
- ☑ Be sure that all necessary tools and test equipment are available and ready for use.
- ☑ Read each appropriate flow chart thoroughly. Attempting shortcuts may produce hazardous conditions.
- ☑ Be aware of the following hazards and follow generally accepted safe workshop practices.

⚠DANGER Crushing hazard. When testing or replacing any hydraulic component, always support the structure and secure it from movement.

⚠DANGER Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

NOTICE Two persons will be required to safely perform some troubleshooting procedures.

TROUBLESHOOTING FLOW CHARTS

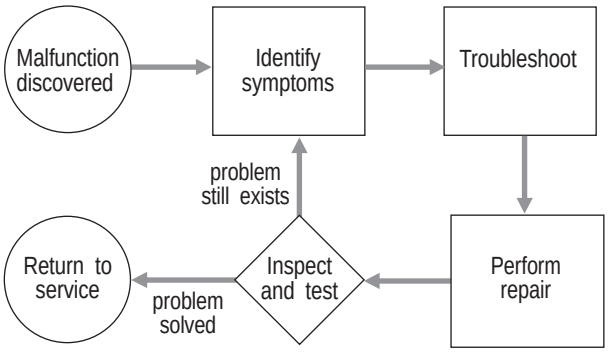
About This Section

When a malfunction is discovered, the flow charts in this section will help a service professional pinpoint the cause of the problem. To use this section, basic hand tools and certain pieces of test equipment are required—voltmeter, ohmmeter, pressure gauges.

The location of terminals mentioned in this section can be found on the appropriate electrical or hydraulic schematics provided in Section 6, *Schematics*.

Since various degrees of a particular function loss may occur, selecting the appropriate flow chart may be troublesome. When a function will not operate with the same speed or power as a machine in good working condition, refer to the flow chart which most closely describes the problem.

General Repair Process



LED Diagnostic Readout

The diagnostic readout displays numerical codes that provide information about the machine operating status and about malfunctions. The dot to the right of the numbers will blink during normal operation codes and remain on with fault codes.

The codes listed in the Fault Code Chart describe malfunctions and can aid in troubleshooting the machine by pinpointing the area or component affected.

REV C

Fault Code Chart

(before serial number 41200)

Fault Code	Fault	Condition	Possible Causes	Solution
00	CPU error.	Machine may not operate.	Damaged ECM.	Reset the ECM. If the problem remains consult Genie Industries Service Department.
10, 11, 14, 15, 16 and 17	CPU error.	Machine may not operate.	Damaged ECM.	Reset the ECM. If the problem remains consult Genie Industries Service Department.
33	Function enable switch is tied down.	Machine will not operate.	Joystick initialization good but function enable switch is tied down OR defective function enable microswitch.	Release the function enable switch OR check the switch for continuity in the joystick controller box (see Repair Section).
34	ECM does not recognize the platform controls.	Machine will not operate.	Defective main circuit board inside the platform controls OR the control cable from ECM to the platform controls is damaged.	Be sure the platform controls are connected OR replace joystick controls main circuit board OR replace the control cable from the ECM to the platform controls.
35	ECM does not recognize the platform controls.	Machine will not operate.	Defective main circuit board inside the platform controls OR the control cable from ECM to the platform controls is damaged.	Be sure the platform controls are connected OR replace joystick controls main circuit board OR replace the control cable from the ECM to the platform controls.
51	No power output from ECM to the motor controller contactor OR ECM does not sense the motor controller contactor.	Only the platform down function operates. No other functions operate.	Open in wiring from ECM to contactor (ckt A9-Curtis terminal 3) OR open in brown ground wire circuit to contactor OR defective contactor.	Check wiring and terminals at motor contactor ckt A9-Curtis terminal 3 OR check wiring and terminal at pin A9, ckt A9-Curtis terminal 3 on the ECM OR replace motor controller contactor.

Continued on next page

FAULT CODE CHART REV C
(BEFORE SERIAL NUMBER 41200)

Fault Code	Fault	Condition	Possible Causes	Solution
52	No power output from ECM to the drive forward valve coil OR ECM does not sense the drive forward valve coil.	Machine will not drive forward. Pump motor starts.	Open in wiring from ECM to drive forward valve coil (ckt C6-Forward coil) OR open in brown ground wire circuit to drive forward valve coil OR defective drive forward valve coil.	Check wiring and terminals at the drive forward valve coil, ckt C6-Forward coil OR check wiring and terminals at pin C6, ckt C6 Forward coil on the ECM OR replace drive forward valve coil.
53	No power output from ECM to the drive reverse valve coil OR ECM does not sense the drive reverse valve coil.	Machine will not drive in reverse. Pump motor starts.	Open in wiring from ECM to drive reverse valve coil (ckt A7-Reverse coil) or open in brown ground wire circuit to drive reverse valve coil OR defective drive reverse valve coil.	Check wiring and terminals at the drive reverse coil, ckt A7-Reverse coil OR check wiring and terminals at pin A7, ckt A7 Reverse coil on the ECM OR replace drive reverse valve coil.
54	No power output from ECM to the platform up valve coil OR ECM does not sense the platform up valve coil.	Platform will not raise. Pump motor starts.	Open in wiring from ECM to platform up valve coil (ckt A6-Up coil) OR open in brown ground wire circuit to platform up valve coil OR defective platform up valve coil.	Check wiring and terminals at the platform up coil, ckt A6-Up coil OR check wiring and terminals at pin A6, ckt A6 Up coil on the ECM OR replace platform up valve coil.
55	No power output from ECM to the platform lowering valve coil OR ECM does not sense the platform lowering valve coil.	Platform will not lower.	Open in wiring from ECM to platform lowering valve coil (ckt B6-Down coil) OR open in brown ground wire circuit to platform lowering valve coil OR defective platform lowering valve coil.	Check wiring and terminals at the platform lowering coil(s), ckt B6-Down coil OR check wiring and terminals at pin B6, ckt B6 Down coil on the ECM OR replace platform lowering valve coil(s).

REV C

FAULT CODE CHART
(BEFORE SERIAL NUMBER 41200)

Fault Code	Fault	Condition	Possible Causes	Solution
56	No power output from ECM to the steer right valve coil OR ECM does not sense the steer right valve coil.	Machine will not steer right. Pump motor starts.	Open in wiring from ECM to steer right valve coil (ckt C7-Right coil) OR open in brown ground wire circuit to steer right valve coil OR defective steer right valve coil.	Check wiring and terminals at the steer right coil, ckt C7 Right coil OR check wiring and terminals at pin C7, C7 Right coil on the ECM OR replace the steer right valve coil.
57	No power output from ECM to the steer left valve coil OR ECM does not sense the steer left valve coil.	Machine will not steer left. Pump motor starts.	Open in wiring from ECM to steer left valve coil (ckt B7-Left coil) OR open in brown ground wire circuit to steer left valve coil OR defective steer left valve coil.	Check wiring and terminals at the steer left coil, ckt B7 Left coil OR check wiring and terminals at pin B7, B7 Left coil on the ECM OR replace steer left valve coil.
58	No power output from ECM to the orifice (brake) valve coil OR ECM does not sense the orifice (brake) valve coil.	Machine will not drive but platform will still raise.	Open in wiring from ECM to orifice (brake) valve coil (ckt C9-Orf coil) OR open in brown ground wire circuit to orifice (brake) valve coil OR defective orifice (brake) valve coil.	Check wiring and terminals at the orifice (brake) coil, ckt C9 Orf coil OR check wiring and terminals at pin C9, C9 Orf coil on the ECM OR replace the orifice (brake) coil.
60	ECM does not allow the machine to function.	Machine will not operate.	Lift/drive toggle switch is turned to the "off" position or is in a neutral position.	Check switch position OR replace switch.
63	ECM does not allow the machine to function.	Machine will not operate. Flashing green LED at the platform controls.	Lift/drive toggle switch moved from lift to drive or drive to lift while the function enable switch is engaged.	Release function enable switch and move lift/drive switch to either lift or drive.

Continued on next page

FAULT CODE CHART REV C
(BEFORE SERIAL NUMBER 41200)

Fault Code	Fault	Condition	Possible Causes	Solution
88	CPU error.	Machine will not operate. ECM cannot be reset.	Damaged ECM.	Reset the ECM. If the problem remains consult Genie Industries service department.
no code available	Function enable switch is tied down.	Green flashing LED at the platform controls.	Function enable switch held for more than 10 seconds without activating any function.	Release function enable switch OR check the function enable microswitch for continuity in the joystick controller box. Reset controller and check for fault code 33 at power up.
no code available		Machine drive speed reduces to off limit drive speed OR platform raises slowly. Red flashing LED at the platform controls while function enable switch is activated.	Low Voltage Cut Back (LVCB) is activated because battery supply voltage is 18.5V DC or less.	Charge batteries.

REV C

Fault Code Chart

(from serial number 41200 to GS6805-44698)

Fault Code	Problem	Possible Causes	Solution
01	Internal ECM error.	EPROM not programmed.	Replace ECM.
02 (See Chart 20)	ECM/Platform communication error.	Faulty control cable OR faulty platform controls.	Troubleshoot control cable OR troubleshoot platform controls.
03	Undefined platform DIP switch settings.	DIP switch settings incorrect.	Correct DIP switch settings.
12 (See Chart 4A)	Chassis up/down toggle closed at start up.	Faulty up/down switch.	Troubleshoot up/down switch.
18 (See Charts11A, 15A or 16A)	Pothole guard fault.	Faulty pothole relay OR faulty relay wiring.	Troubleshoot pothole switch OR remove obstruction.
19 (See Chart 19)	Limit switch fault.	Faulty limit switch OR wire disconnected from limit switch.	Troubleshoot limit switch OR inspect wire connection.
42 (See Chart 5A or Chart 9A)	Platform left turn switch fault.	Faulty steer left microswitch.	Troubleshoot steer left microswitch.
43 (See Chart 5A or Chart 10A)	Platform right turn switch fault.	Faulty steer right microswitch.	Troubleshoot steer right microswitch.
46 (See Chart 5A)	Platform drive enable switch fault.	Faulty drive enable switch.	Troubleshoot drive enable switch.
47	Platform joystick fault.	Joystick potentiometer not centered.	Verify potentiometer setting.
52 (See Chart 13A)	Forward coil fault.	Faulty coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
53 (See Chart 14A)	Reverse coil fault.	Faulty coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
54 (See Chart 6A)	Up coil fault.	Faulty coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
55 (See Chart 8)	Down coil fault.	Faulty coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
56 (See Chart 10A)	Right coil fault.	Faulty coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
57 (See Chart 9A)	Left coil fault.	Faulty coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
58 (See Chart 11A or Chart 12A)	Brake coil fault.	Faulty coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
59 (See Chart 21)	Series/parallel coil fault.	DIP switch settings are incorrect.	Troubleshoot and correct DIP switch settings.
68	Low battery voltage.	Batteries discharged.	Charge batteries.
88	ECM has been erased.	Static strap(s) may be missing from the machine.	Replace static strap(s).

Fault Code Chart

REV A

(after serial number GS6805-44698)

Fault Code	Problem	Possible Causes	Solution
01	Internal ECM error.	EPROM not programmed.	Replace ECM.
02	ECM/Platform communication error.	Malfunctioning control cable OR malfunctioning platform controls.	Troubleshoot control cable OR troubleshoot platform controls.
03	Undefined platform DIP switch settings.	DIP switch settings incorrect.	Correct DIP switch settings.
12	Chassis up/down toggle closed at start up.	Malfunctioning up/down switch.	Troubleshoot up/down switch.
18	Pothole guard failure.	Malfunctioning pothole switch OR obstruction in pothole guard linkage.	Troubleshoot pothole switch OR remove obstruction.
19	Limit switch failure.	Malfunctioning limit switch OR wire disconnected from limit switch.	Troubleshoot limit switch OR inspect wire connection.
42	Platform left turn switch fault.	Malfunctioning steer left microswitch.	Troubleshoot steer left microswitch.
43	Platform right turn switch fault.	Malfunctioning steer right microswitch.	Troubleshoot steer right microswitch.
46	Platform drive enable switch fault.	Malfunctioning drive enable switch.	Troubleshoot drive enable switch.
47	Platform joystick fault.	Joystick potentiometer not centered.	Verify potentiometer setting.
52	Forward coil fault.	Malfunctioning coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
53	Reverse coil fault.	Malfunctioning coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
54	Up coil fault.	Malfunctioning coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
55	Down coil fault.	Malfunctioning coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
56	Steer right coil fault.	Malfunctioning coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
57	Steer left coil fault.	Malfunctioning coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
58	Brake coil fault.	Malfunctioning coil OR wire disconnected from coil.	Troubleshoot coil OR inspect wire connection.
59	Series/parallel coil fault.	DIP switch settings are incorrect.	Troubleshoot and correct DIP switch settings.
68	Low battery voltage.	Batteries discharged.	Charge batteries.
LL	Off level fault.	Tilt of chassis exceeds level sensor setting	Reduce chassis angle.
OL	Overload cutout fault.	Too much weight in platform	Remove weight.

Chart 1

REV D

All Functions Will Not Operate (before serial number 41200)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure both red Emergency Stop buttons are pulled out to the on position.

Be sure the batteries are fully charged and properly connected.

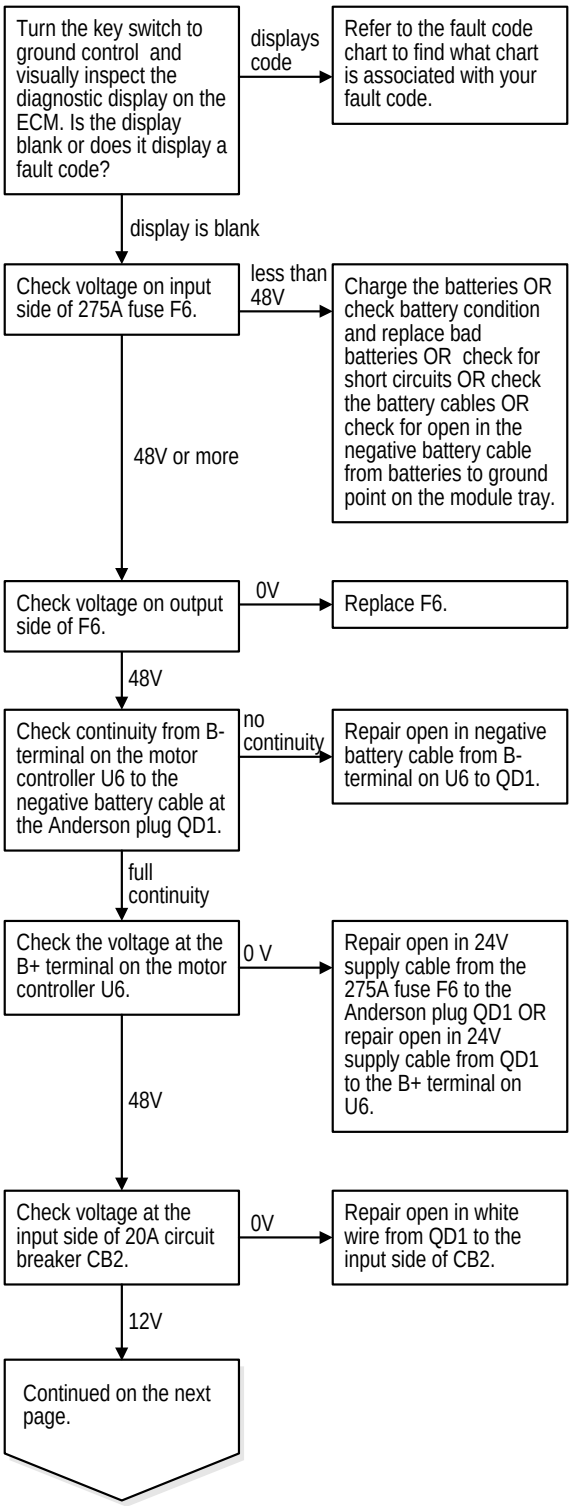


CHART 1 REV D

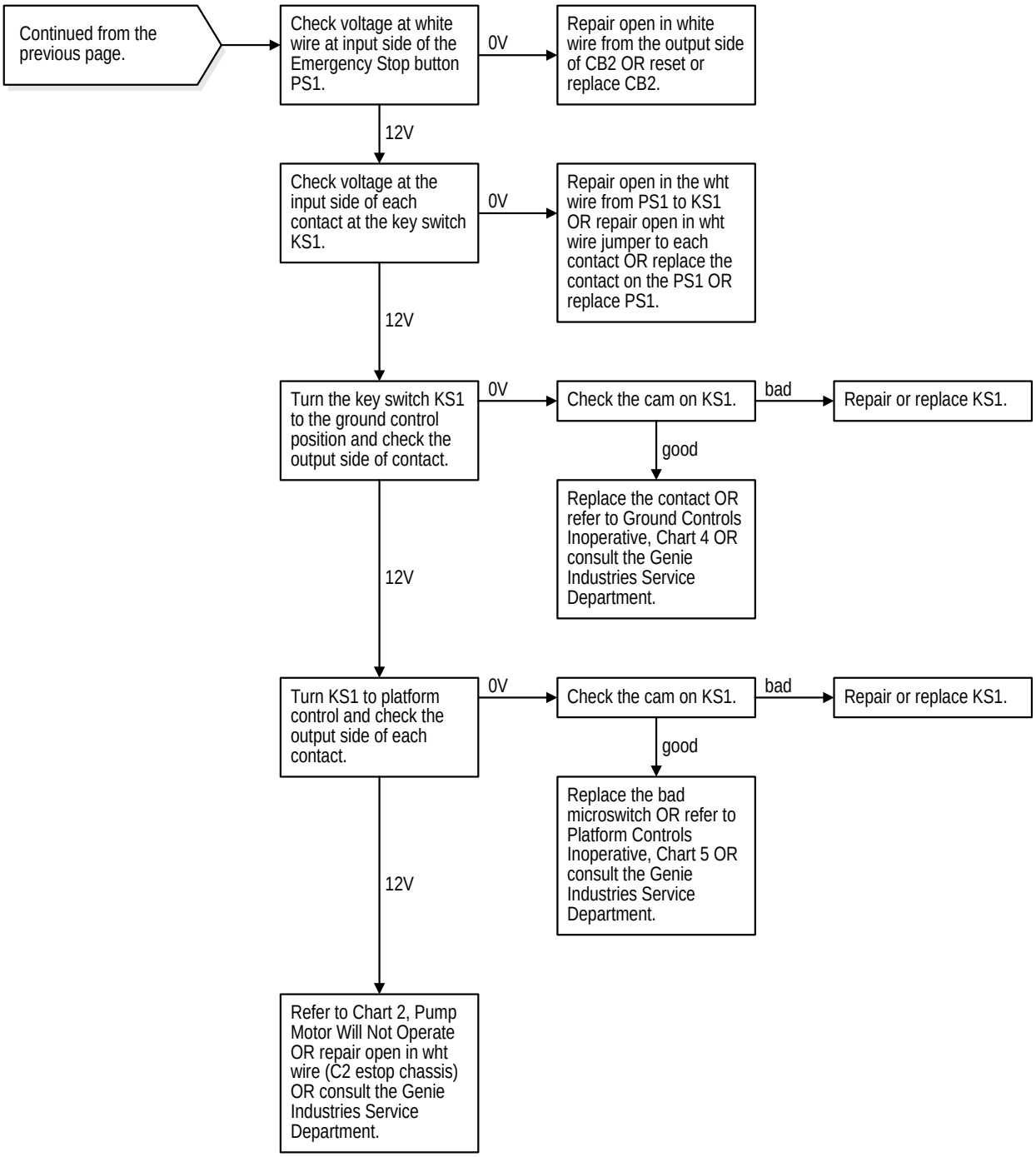

Continued from the previous page.
Check voltage at white wire at input side of the Emergency Stop button PS1.
0V
Repair open in white wire from the output side of CB2 OR reset or replace CB2.
12V
Check voltage at the input side of each contact at the key switch KS1.
0V
Repair open in the wht wire from PS1 to KS1 OR repair open in wht wire jumper to each contact OR replace the contact on the PS1 OR replace PS1.
12V
Turn the key switch KS1 to the ground control position and check the output side of contact.
0V
Check the cam on KS1.
bad
Repair or replace KS1.
good
Replace the contact OR refer to Ground Controls Inoperative, Chart 4 OR consult the Genie Industries Service Department.
12V
Turn KS1 to platform control and check the output side of each contact.
0V
Check the cam on KS1.
bad
Repair or replace KS1.
good
Replace the bad microswitch OR refer to Platform Controls Inoperative, Chart 5 OR consult the Genie Industries Service Department.
12V
Refer to Chart 2, Pump Motor Will Not Operate OR repair open in wht wire (C2 estop chassis) OR consult the Genie Industries Service Department.

Chart 1A

REV C

All Functions Will Not Operate (after serial number 41199)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure both red Emergency Stop buttons are pulled out to the on position.

Be sure the batteries are fully charged and properly connected.

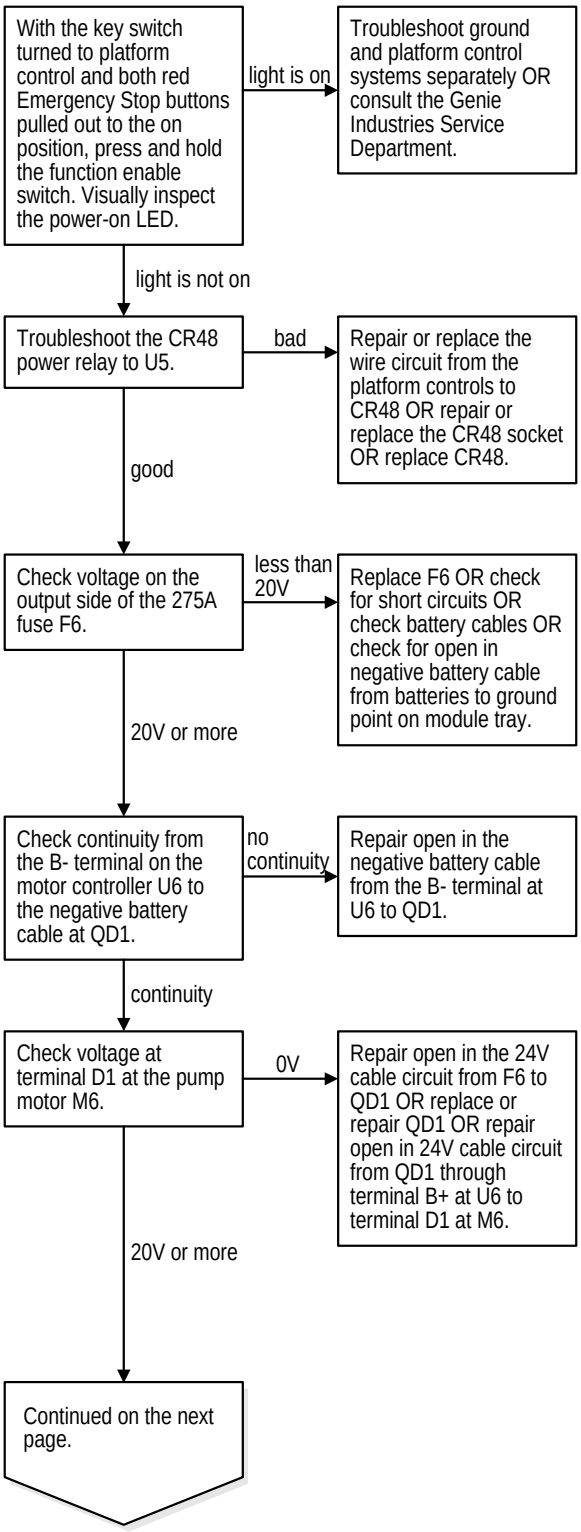


CHART 1A REV C

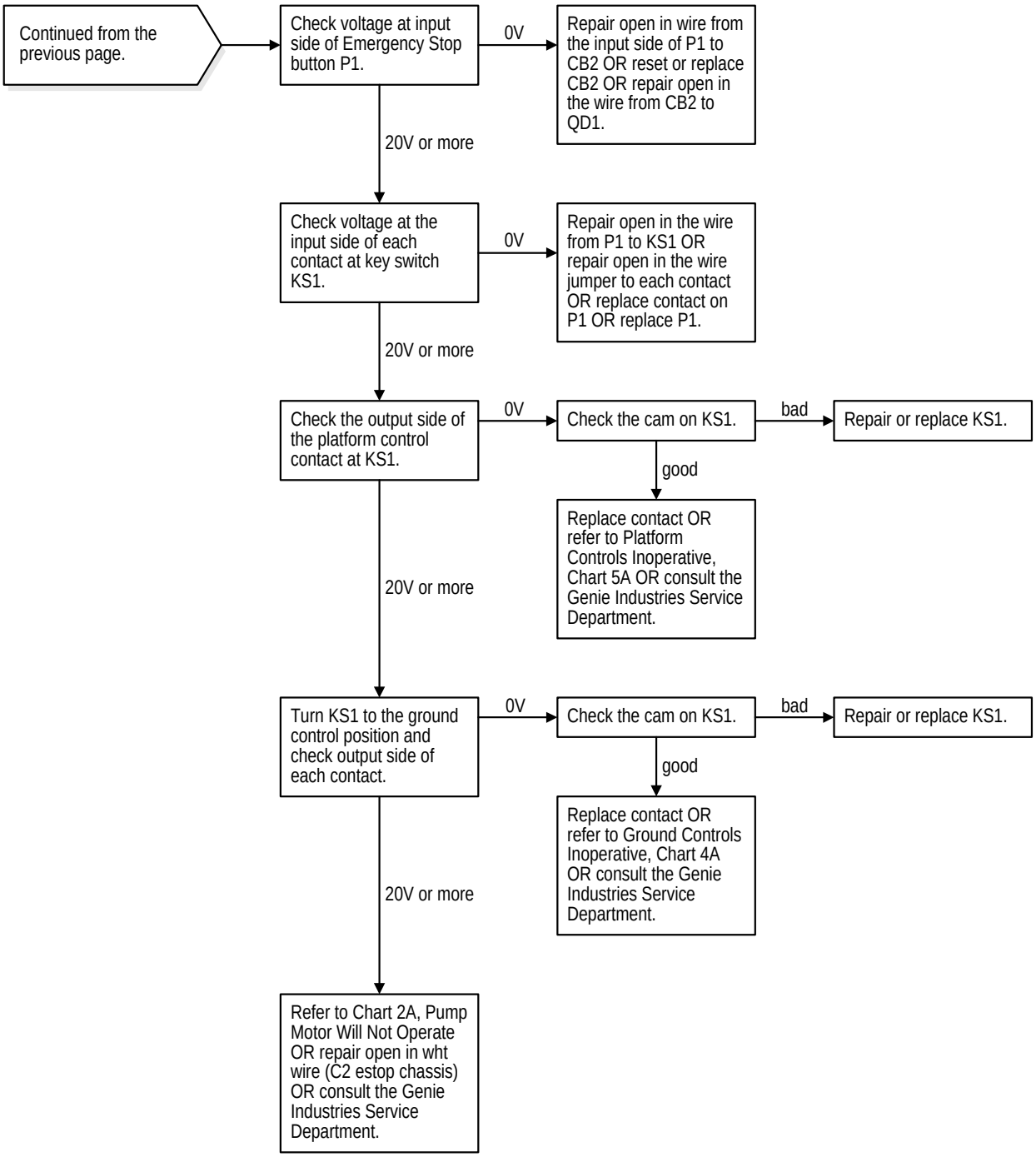


Chart 2

REV D

Pump Motor Will Not Operate (before serial number 41200)

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the battery cable connections are tight and free of corrosion.

Be sure the batteries are fully charged and properly connected.

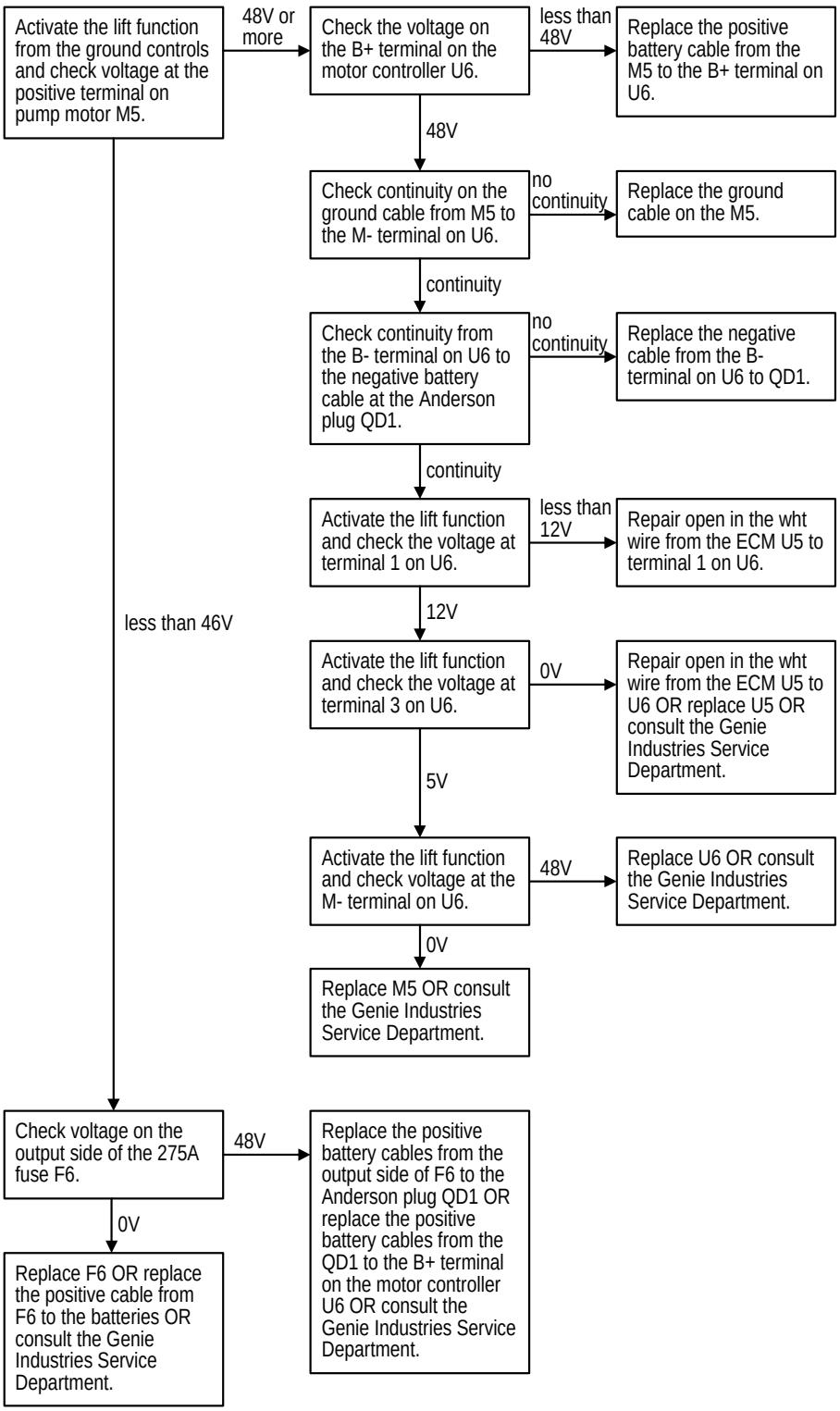


Chart 2A

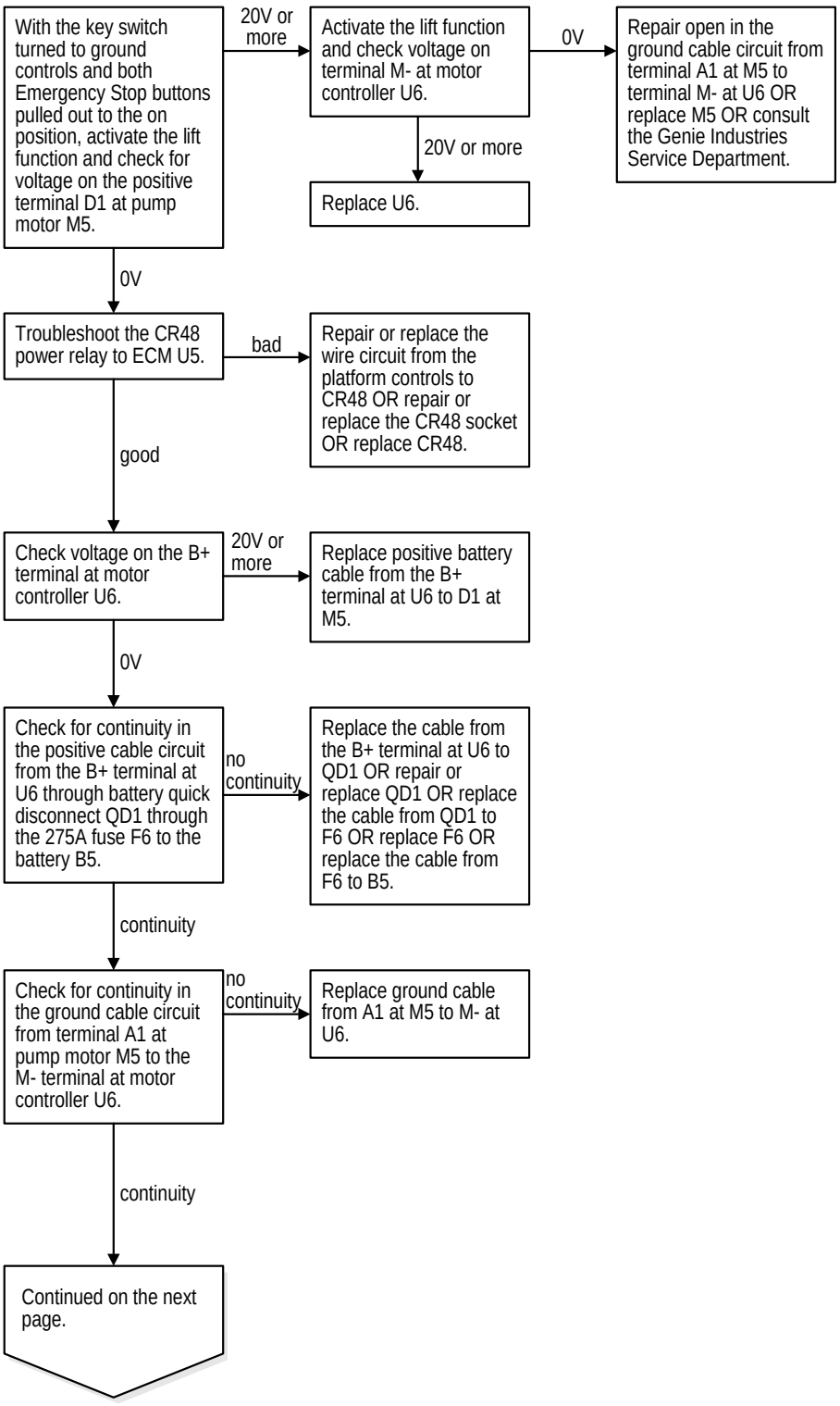
REV C

Pump Motor Will Not Operate (after serial number 41199)

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the battery cable connections are tight and free of corrosion.

Be sure the batteries are fully charged and properly connected.



REV C

CHART 2A

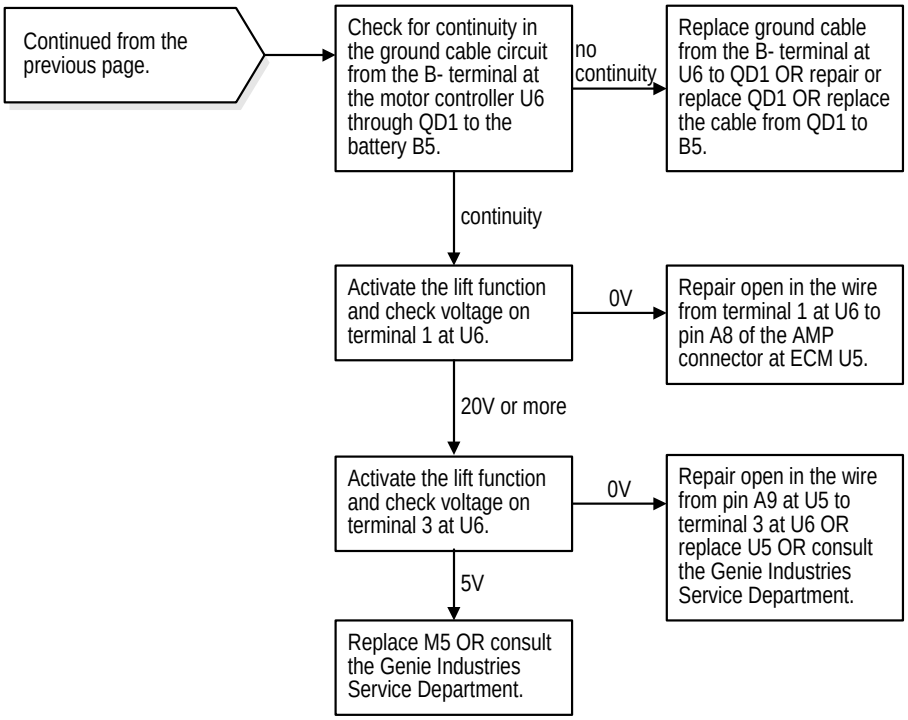


Chart 3

REV D

All Functions Inoperative, Power Unit Starts and Runs (before serial number 41200)

Be sure, if the Error Indicator light is on at the platform controls, you refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

Be sure the hydraulic tank is filled to the correct level.

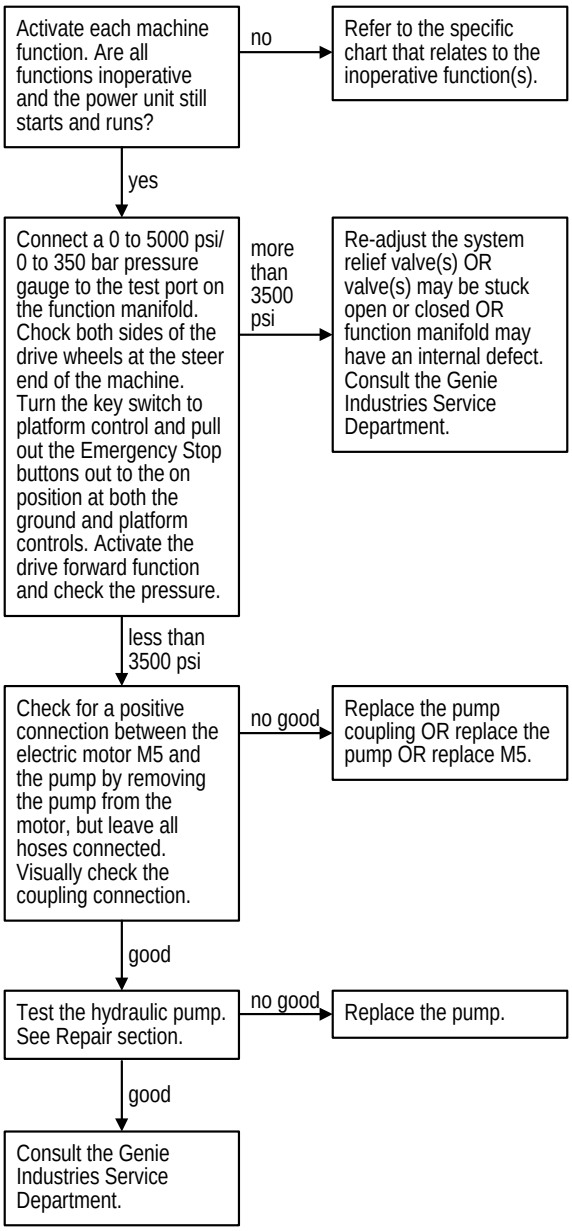
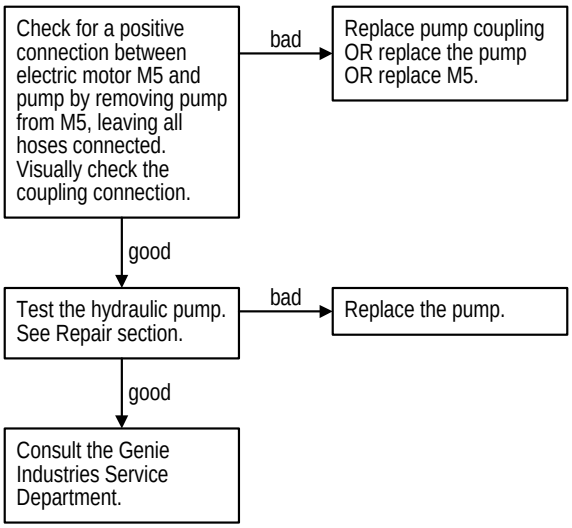


Chart 3A

REV C

All Functions Inoperative, Power Unit Starts and Runs (after serial number 41199)



If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM..

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

Be sure the hydraulic tank is filled to the correct level.

Chart 4

REV D

Ground Controls Inoperative, Platform Controls Operate Normally (before serial number 41200)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

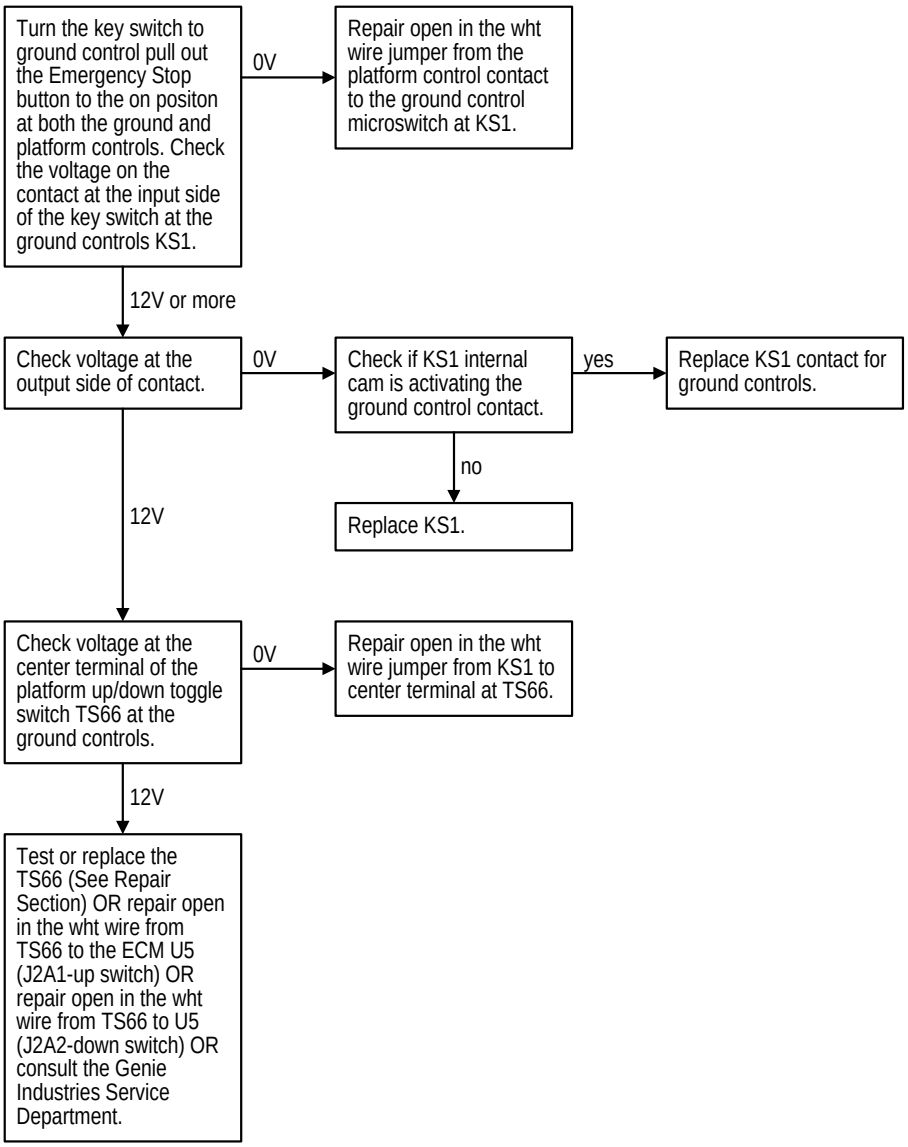


Chart 4A

REV C

Ground Controls Inoperative, Platform Controls Operate Normally (after serial number 41199)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

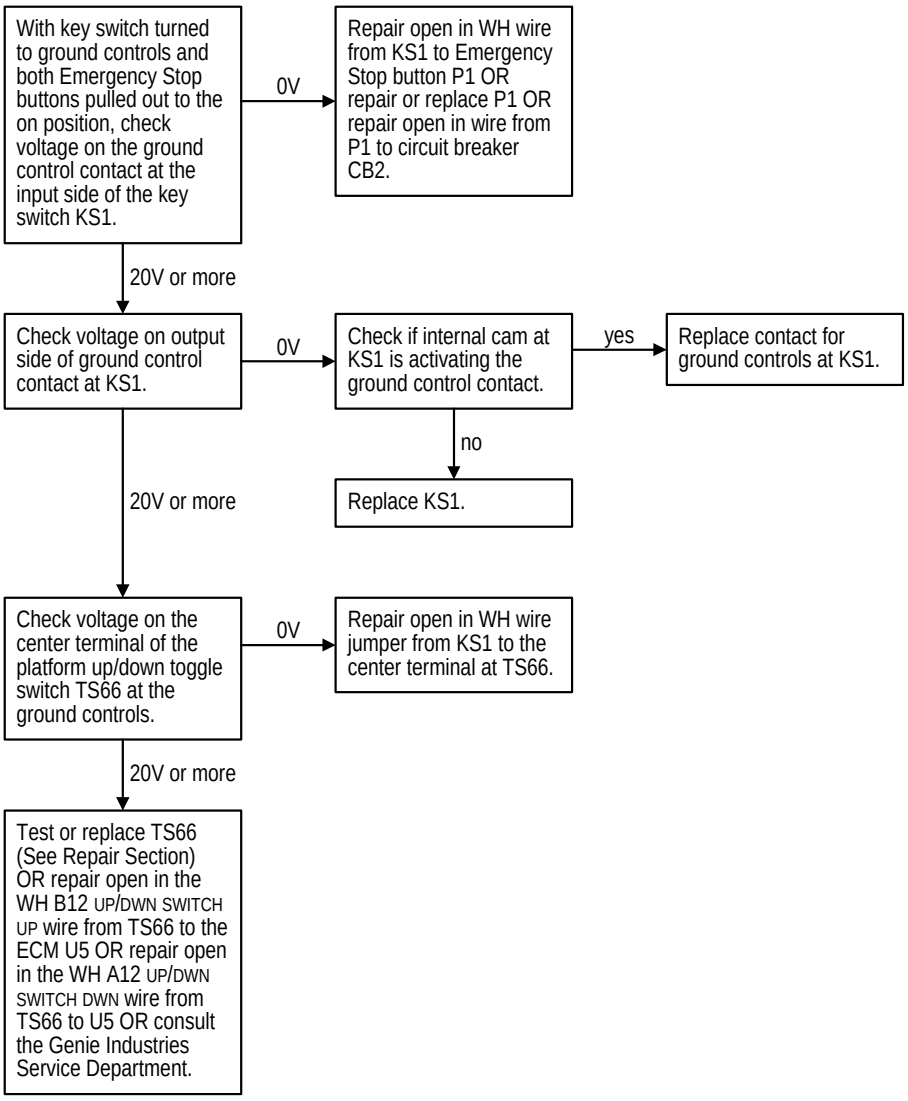


Chart 5

REV D

Platform Controls Inoperative, Ground Controls Operate Normally (before serial number 41200)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

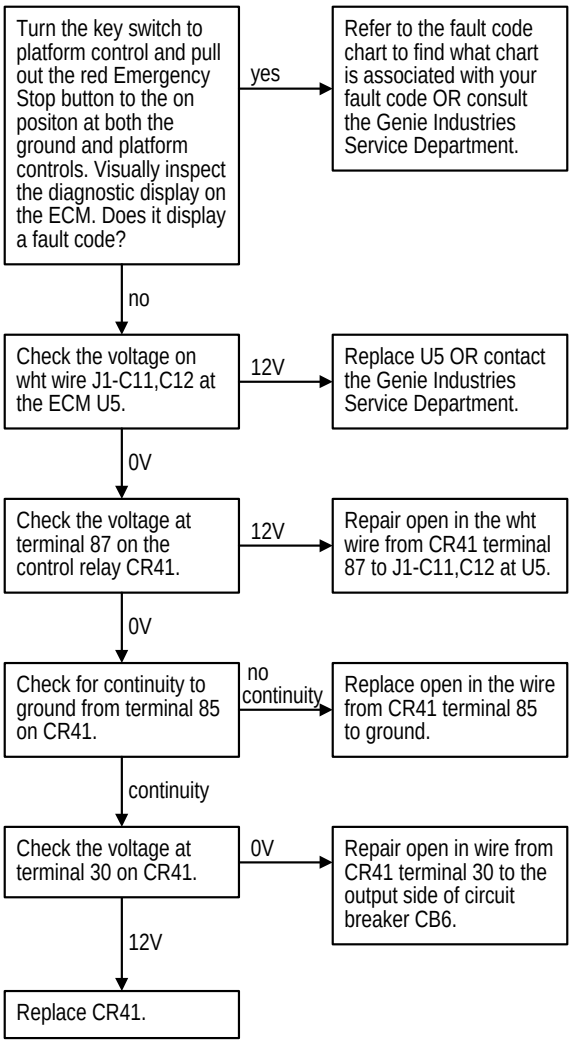


Chart 5A

REV C

Platform Controls Inoperative, Ground Controls Operate Normally (after serial number 41199)

Be sure, if the Error Indicator light is on at the platform controls, you refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

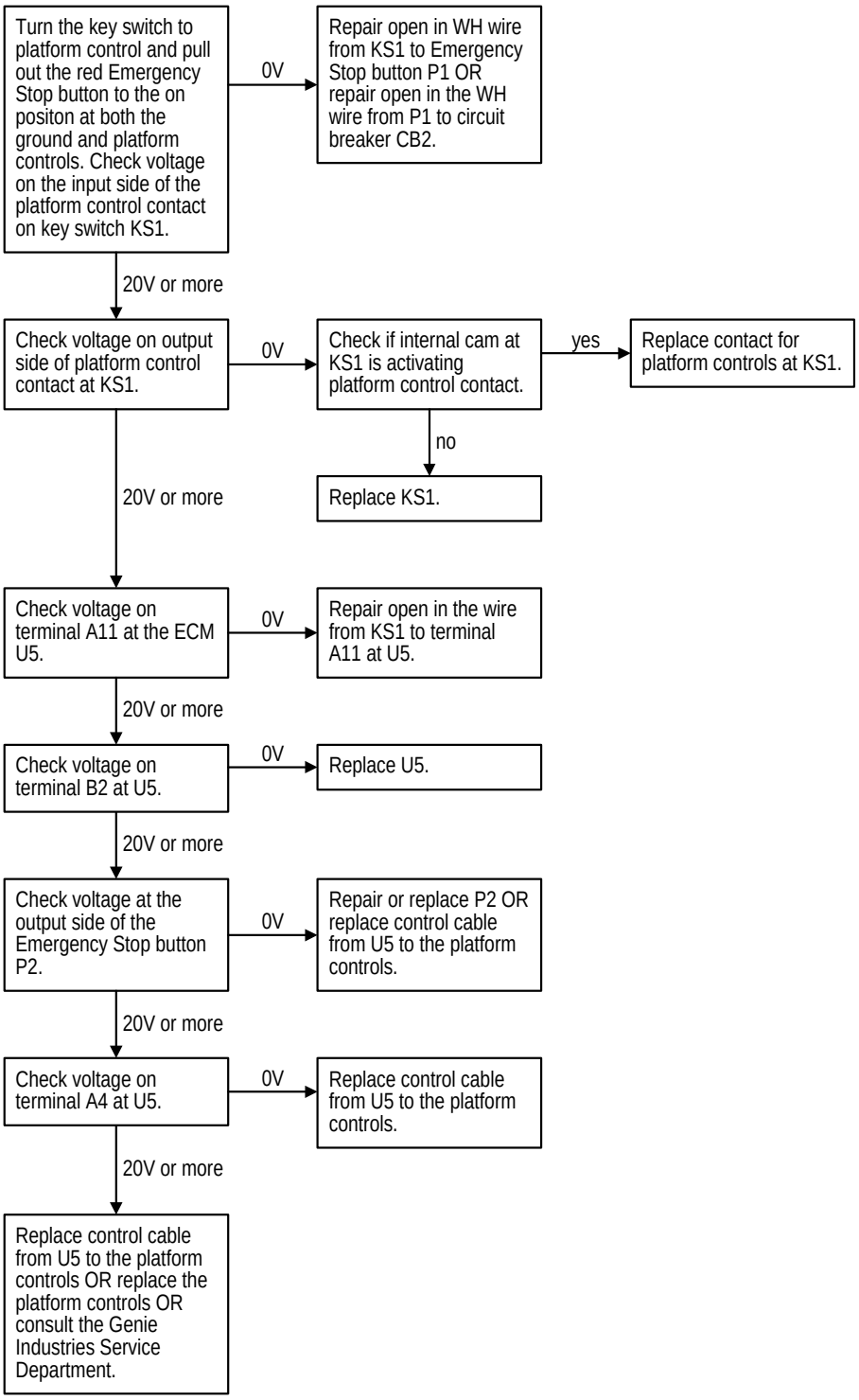


Chart 6

REV D

Platform Up Function Inoperative (before serial number 41200)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

Be sure the lift speed parameters are set correctly.

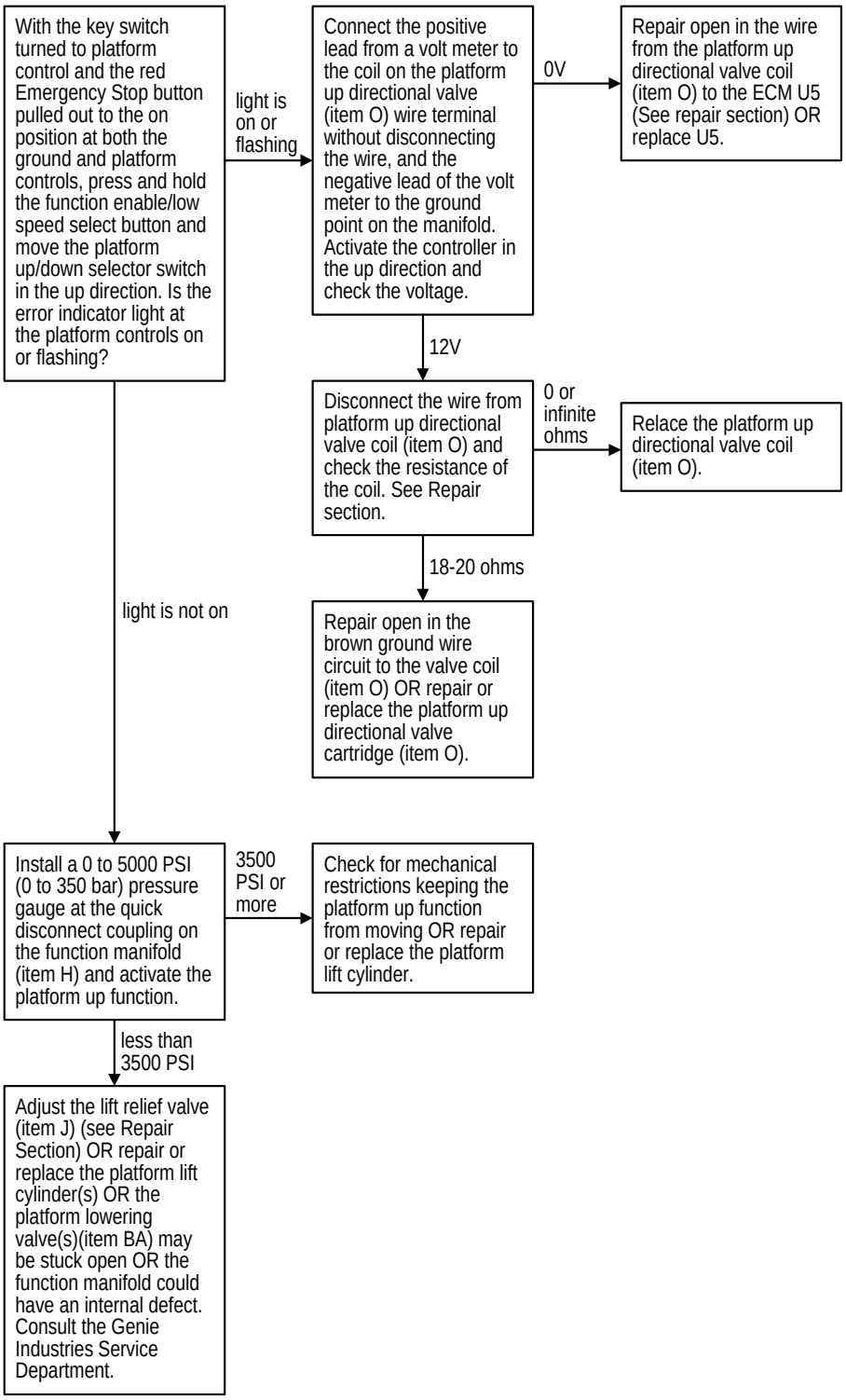


Chart 6A

REV C

Platform Up Function Inoperative (after serial number 41199)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

Be sure the lift speed parameters are set correctly.

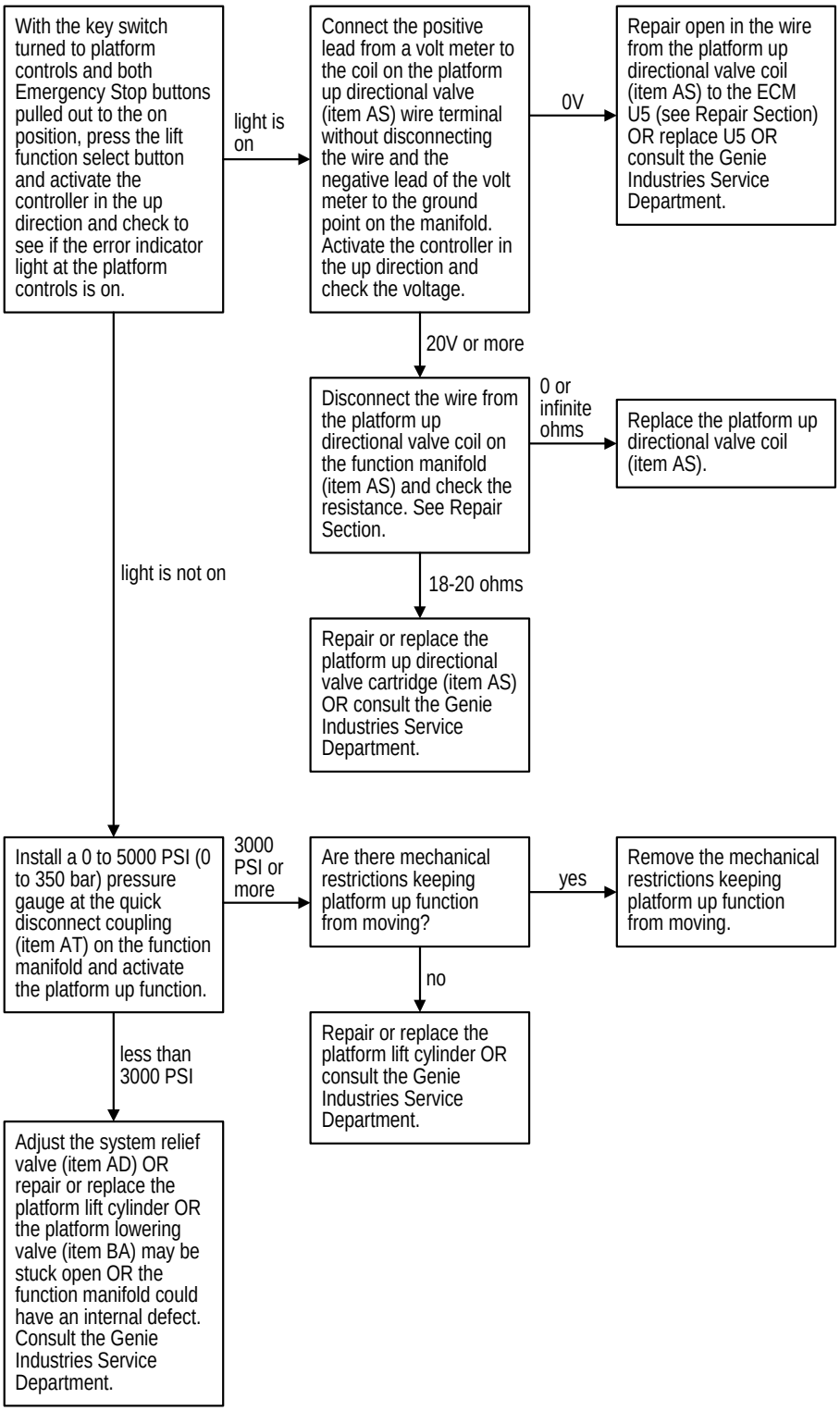


Chart 7

REV D

Platform Down Function Inoperative, GS-2668 DC (before serial number 41200)

Be sure all other functions operate normally.

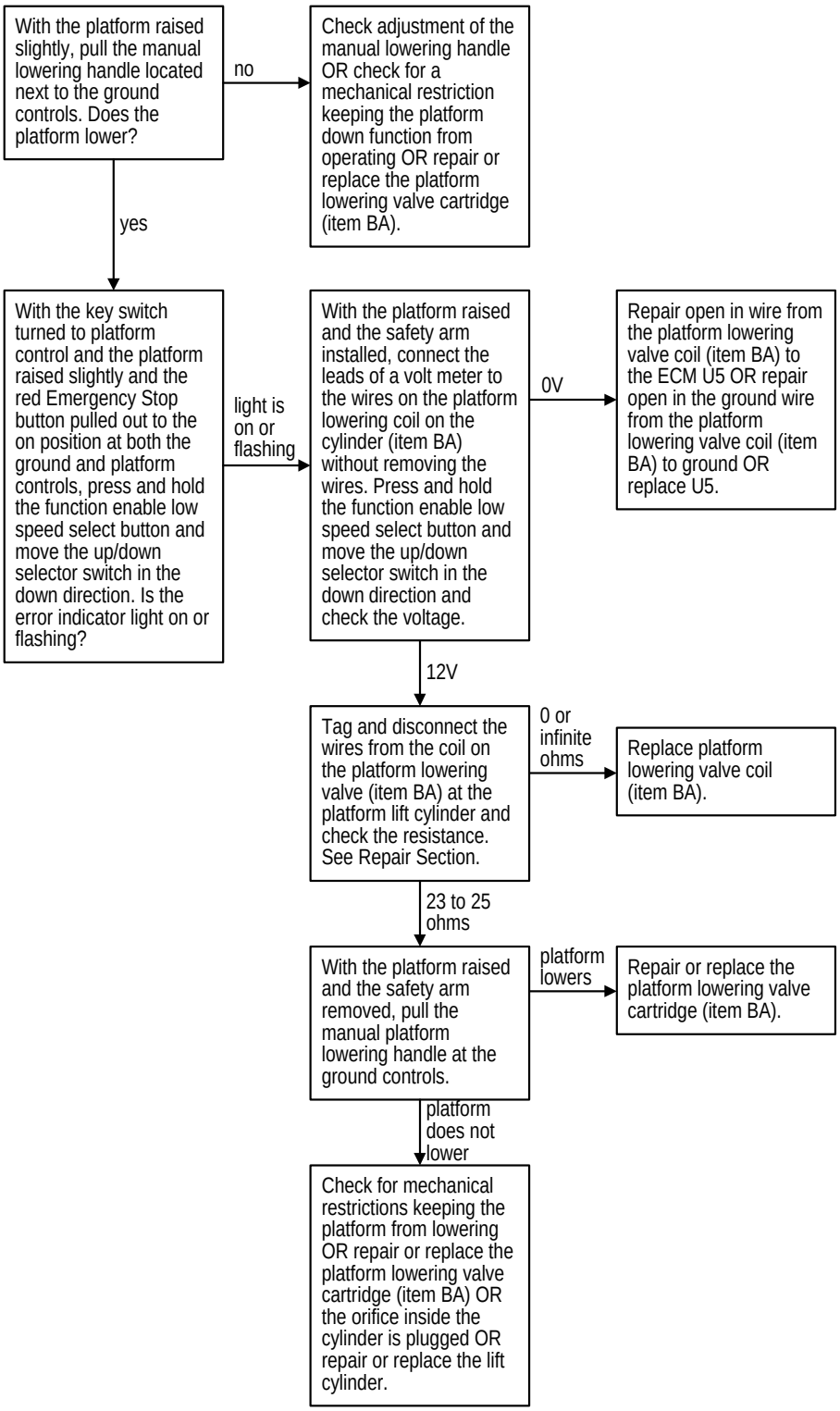


Chart 8

REV D

Platform Down Function Inoperative, GS-2668 DC (after serial number 41199) and GS-3268 DC (all)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

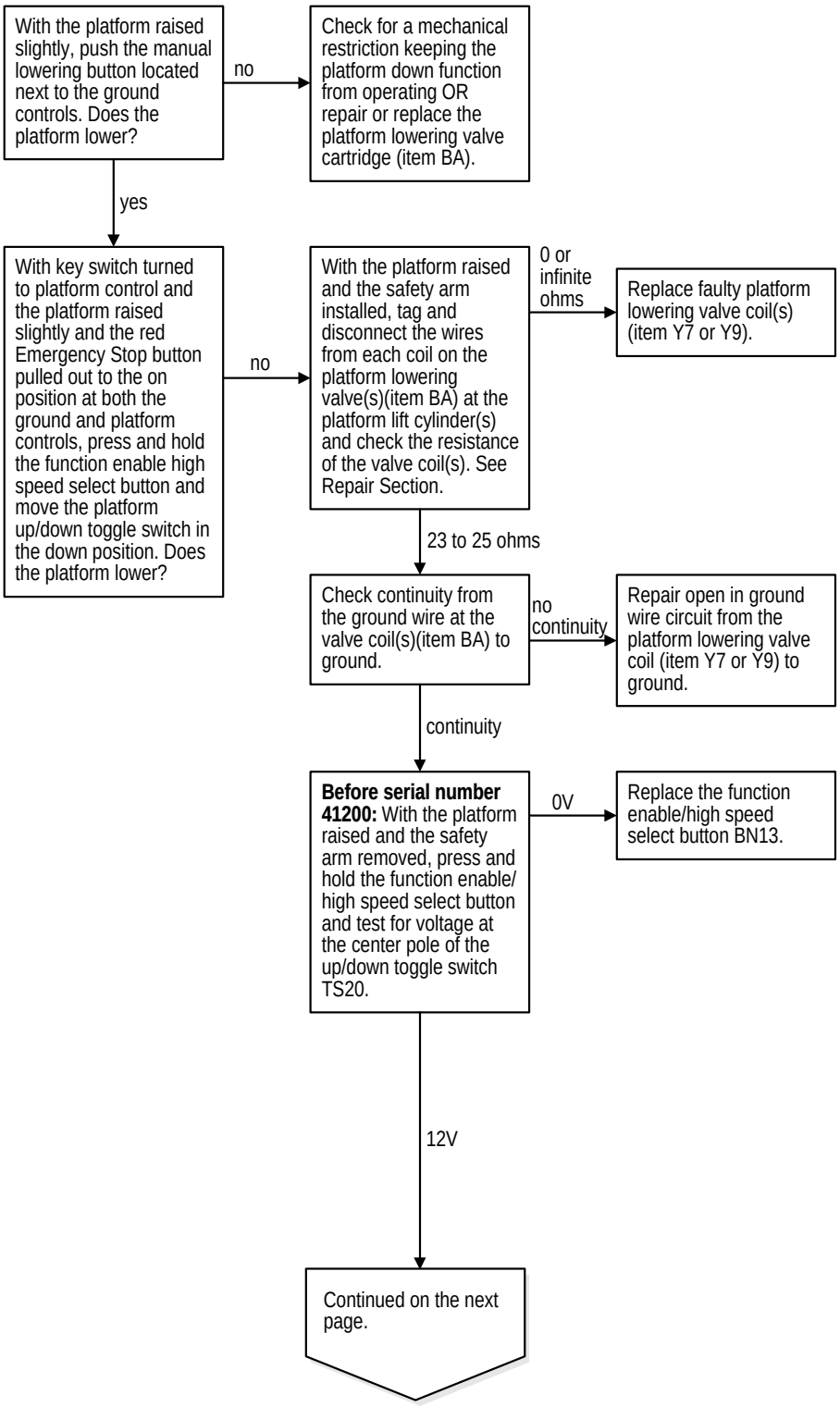


CHART 8 REV D

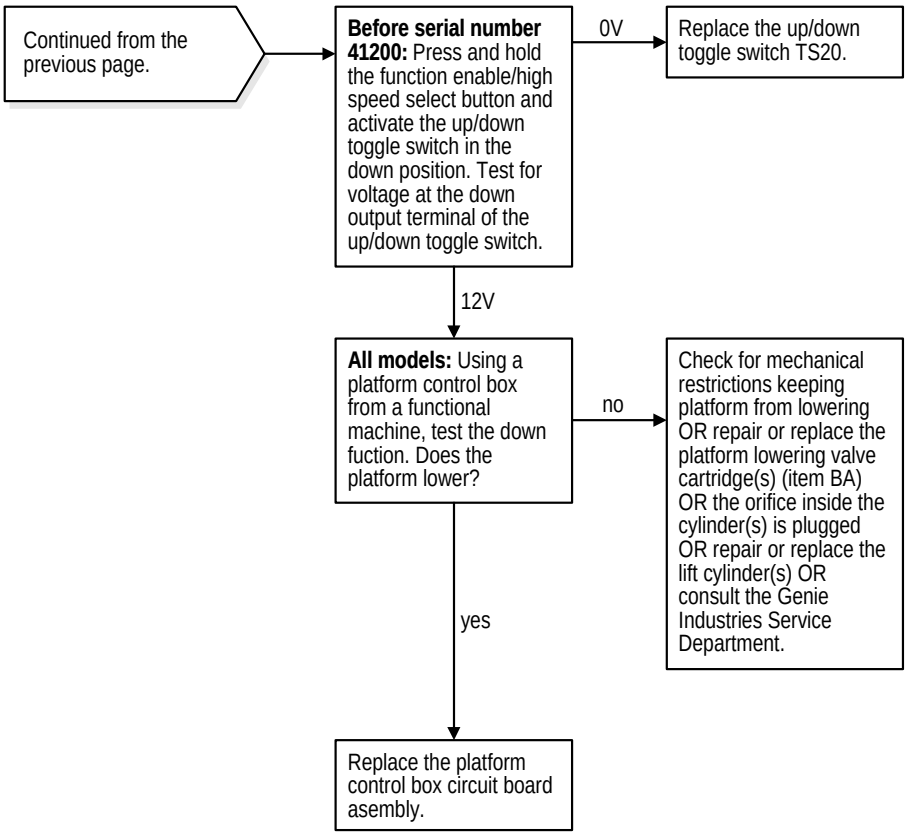

Continued from the previous page.
Before serial number 41200: Press and hold the function enable/high speed select button and activate the up/down toggle switch in the down position. Test for voltage at the down output terminal of the up/down toggle switch.
0V
Replace the up/down toggle switch TS20.
12V
All models: Using a platform control box from a functional machine, test the down fuction. Does the platform lower?
no
Check for mechanical restrictions keeping platform from lowering OR repair or replace the platform lowering valve cartridge(s) (item BA) OR the orifice inside the cylinder(s) is plugged OR repair or replace the lift cylinder(s) OR consult the Genie Industries Service Department.
yes
Replace the platform control box circuit board asembly.

Chart 9

REV D

Steer Left Function Inoperative (before serial number 41200)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

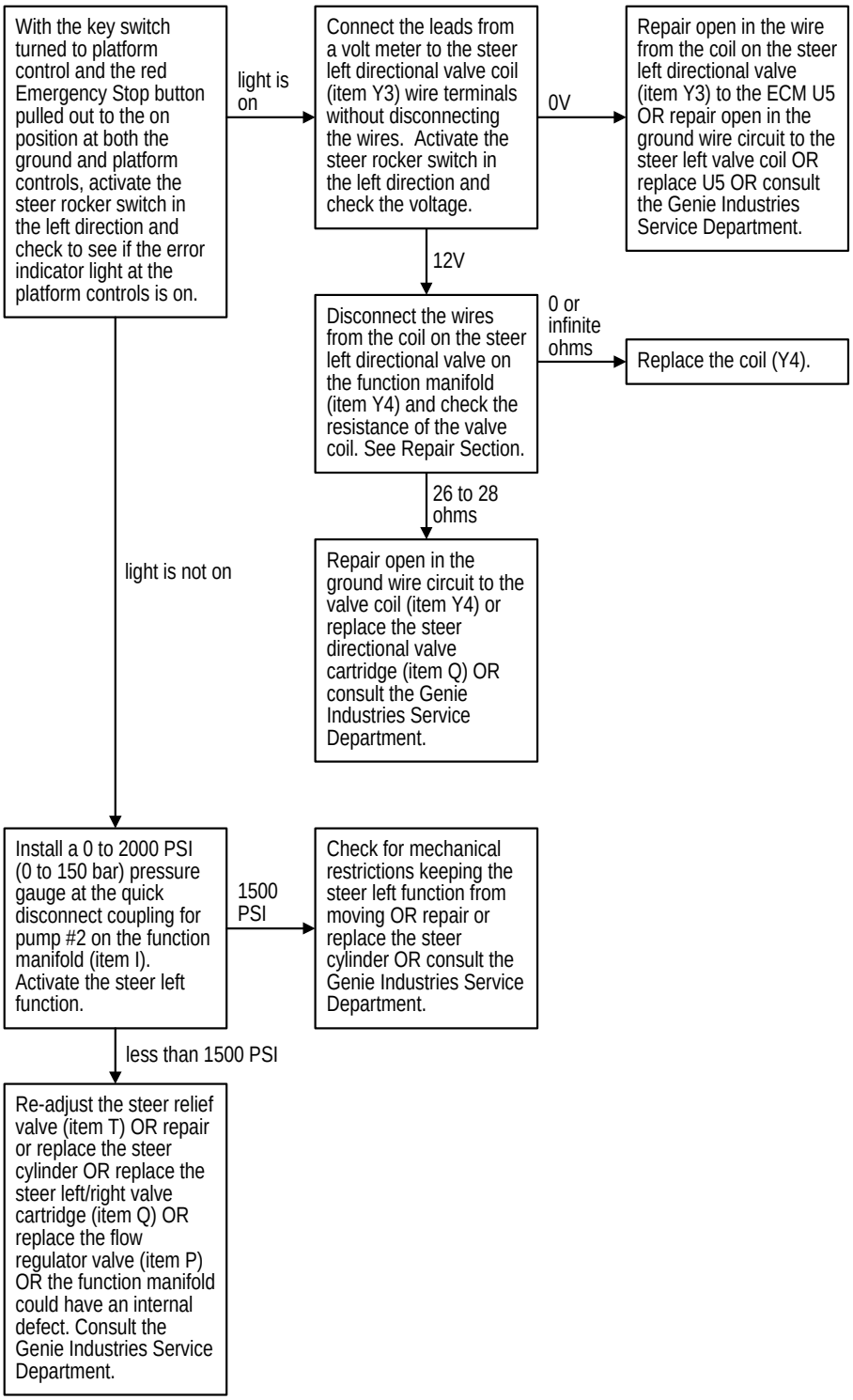


Chart 9A

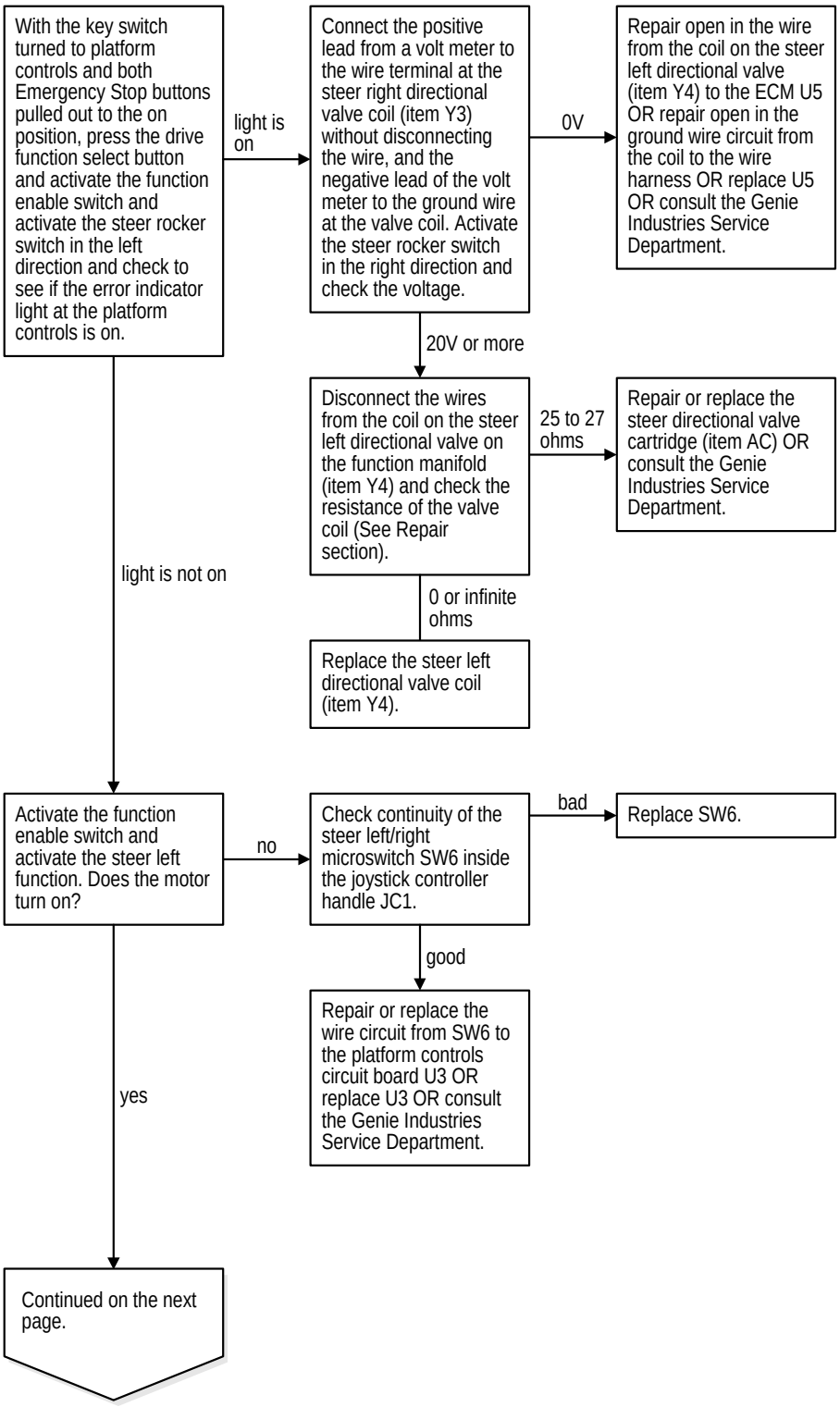
REV C

Steer Left Function Inoperative (after serial number 41200)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.



REV C CHART 9A

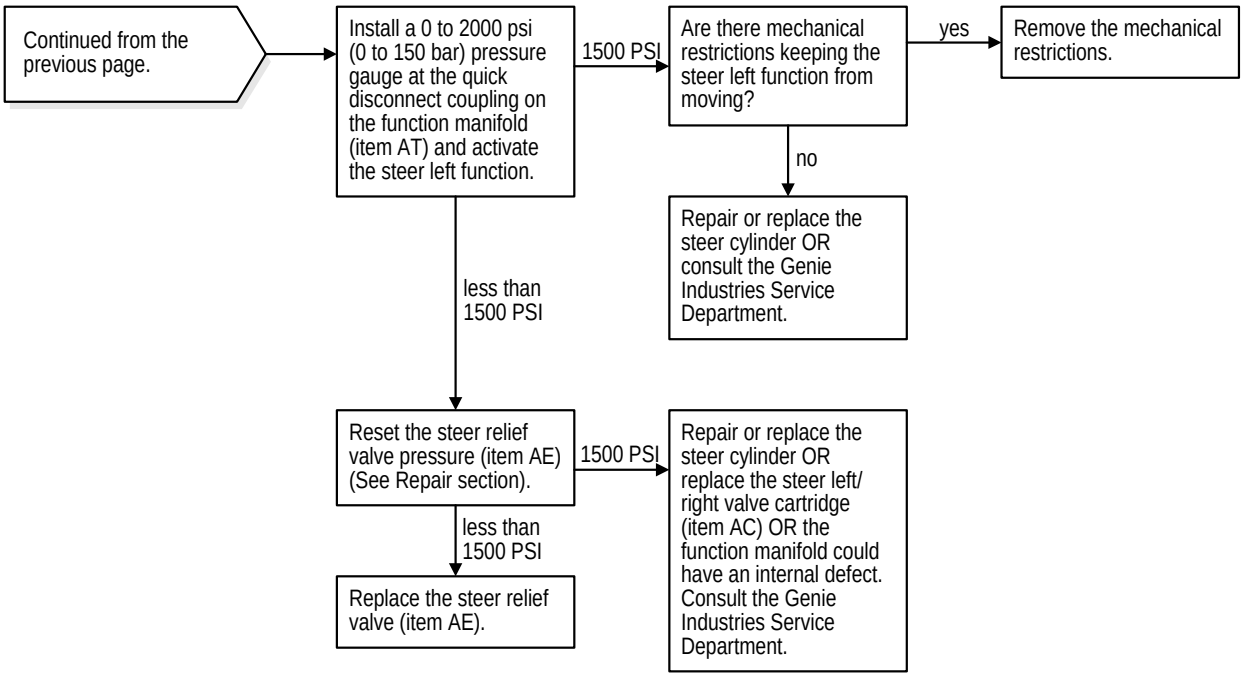


Chart 10

REV D

Steer Right Function Inoperative (before serial number 41200)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

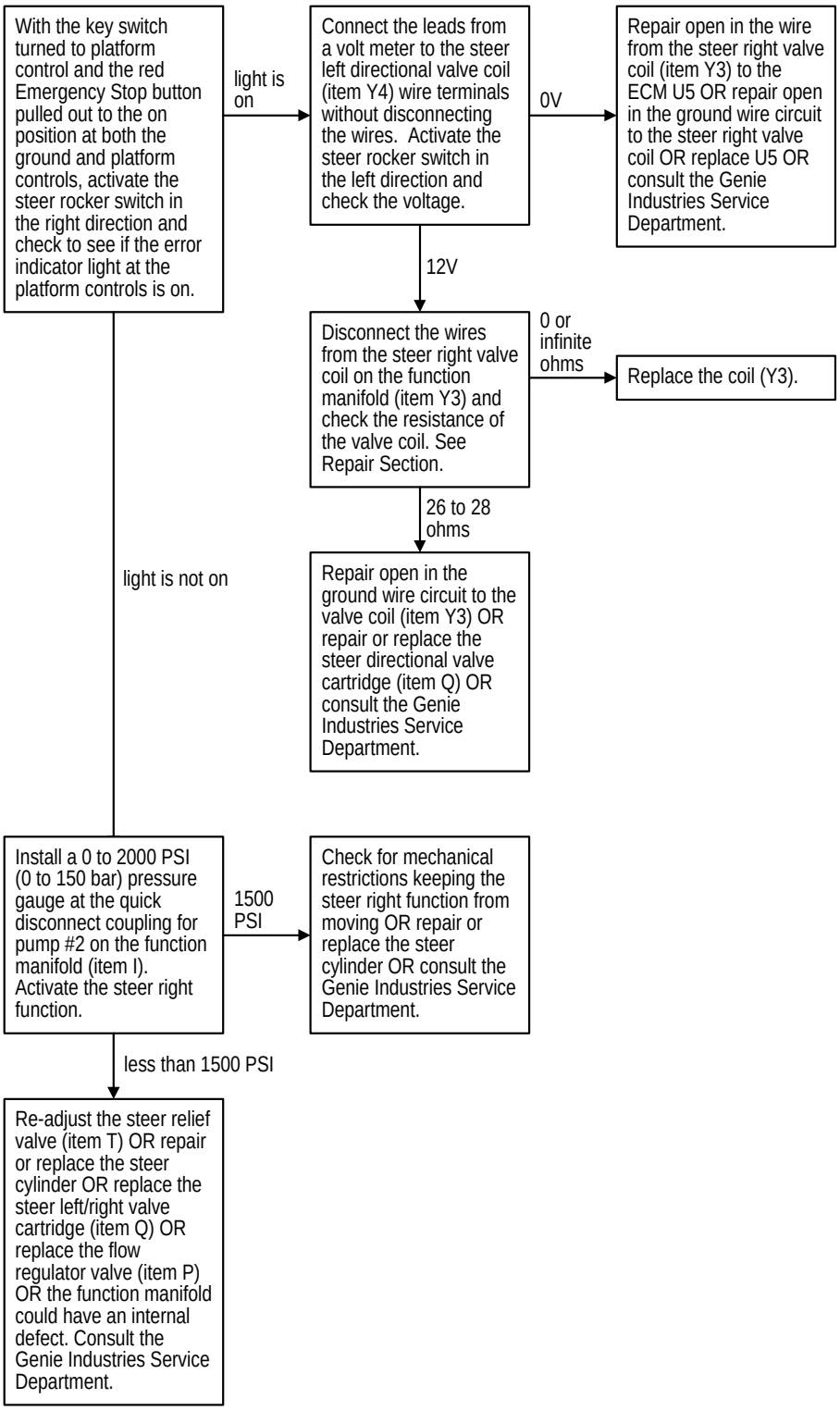


Chart 10A

REV C

Steer Right Function Inoperative (after serial number 41199)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

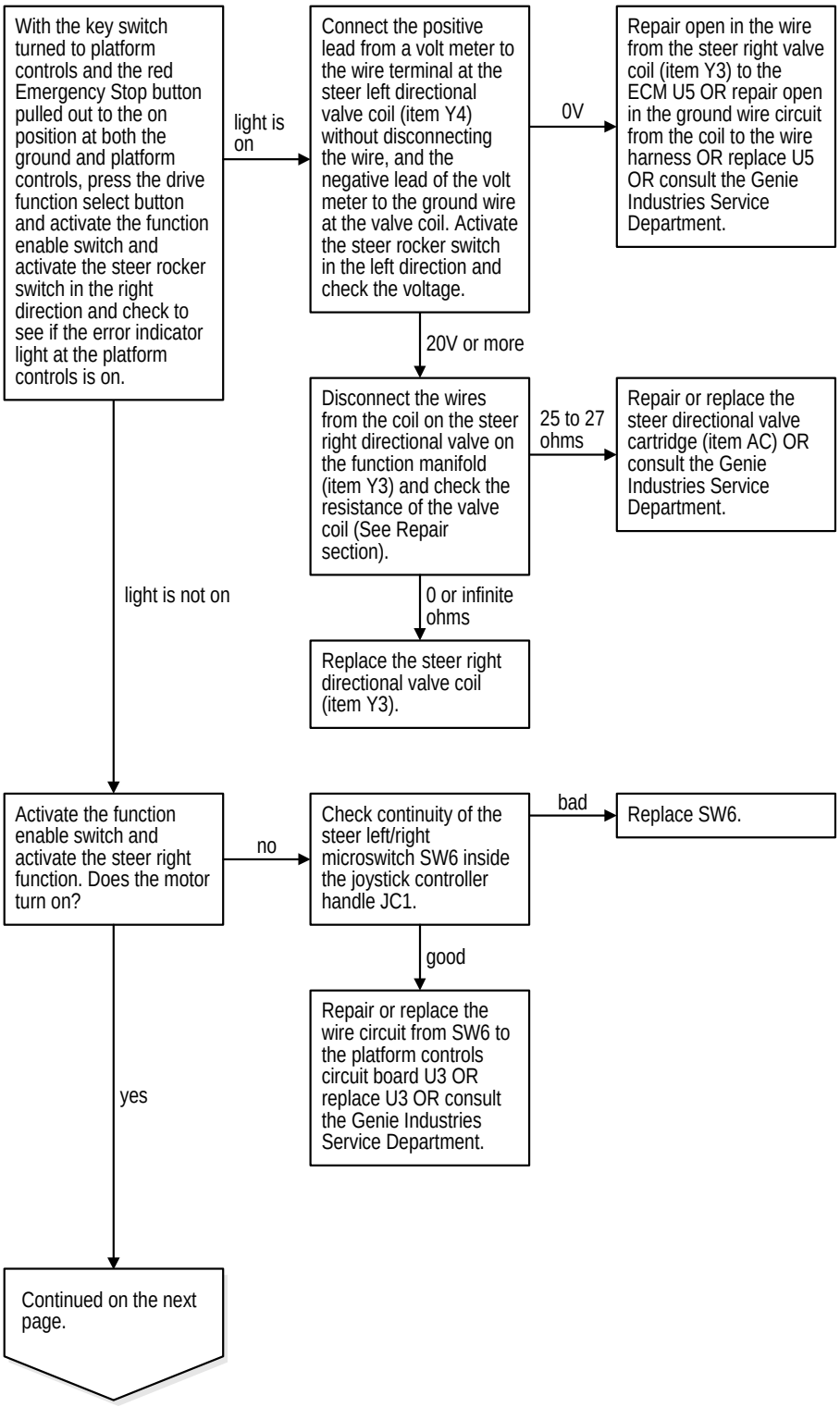


CHART 10A REV C

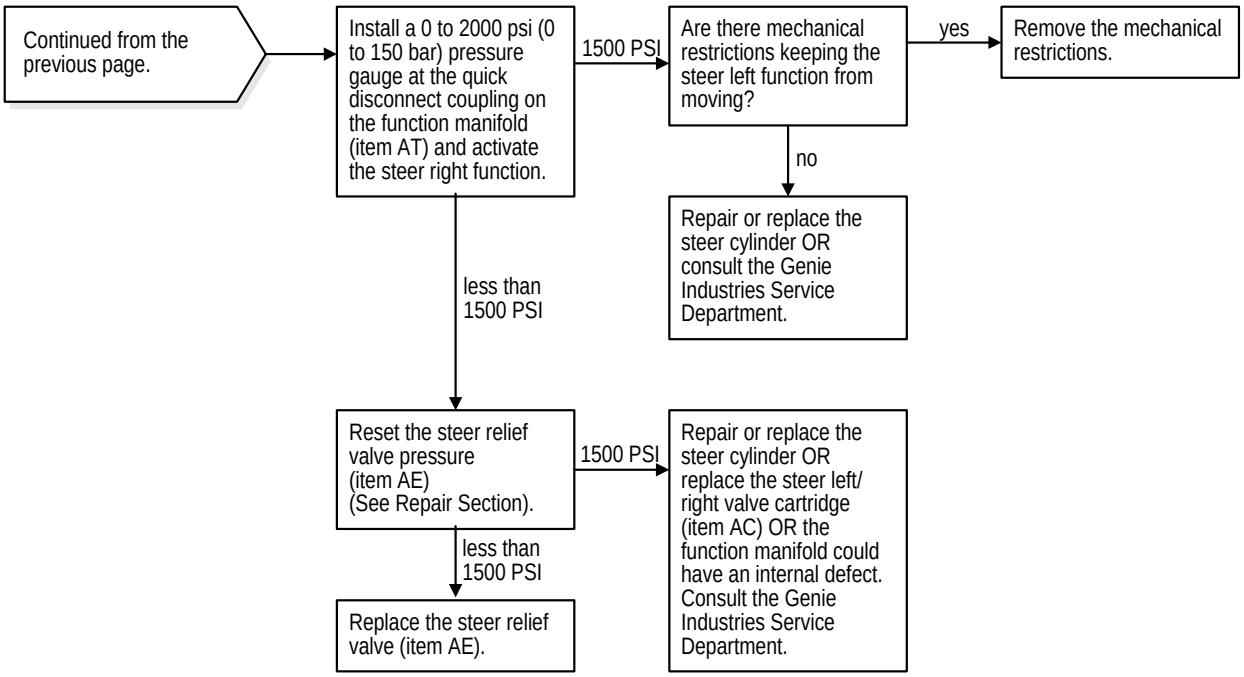


Chart 11

REV D

All Drive Functions Inoperative, All Other Functions Operate Normally (before serial number 41200)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

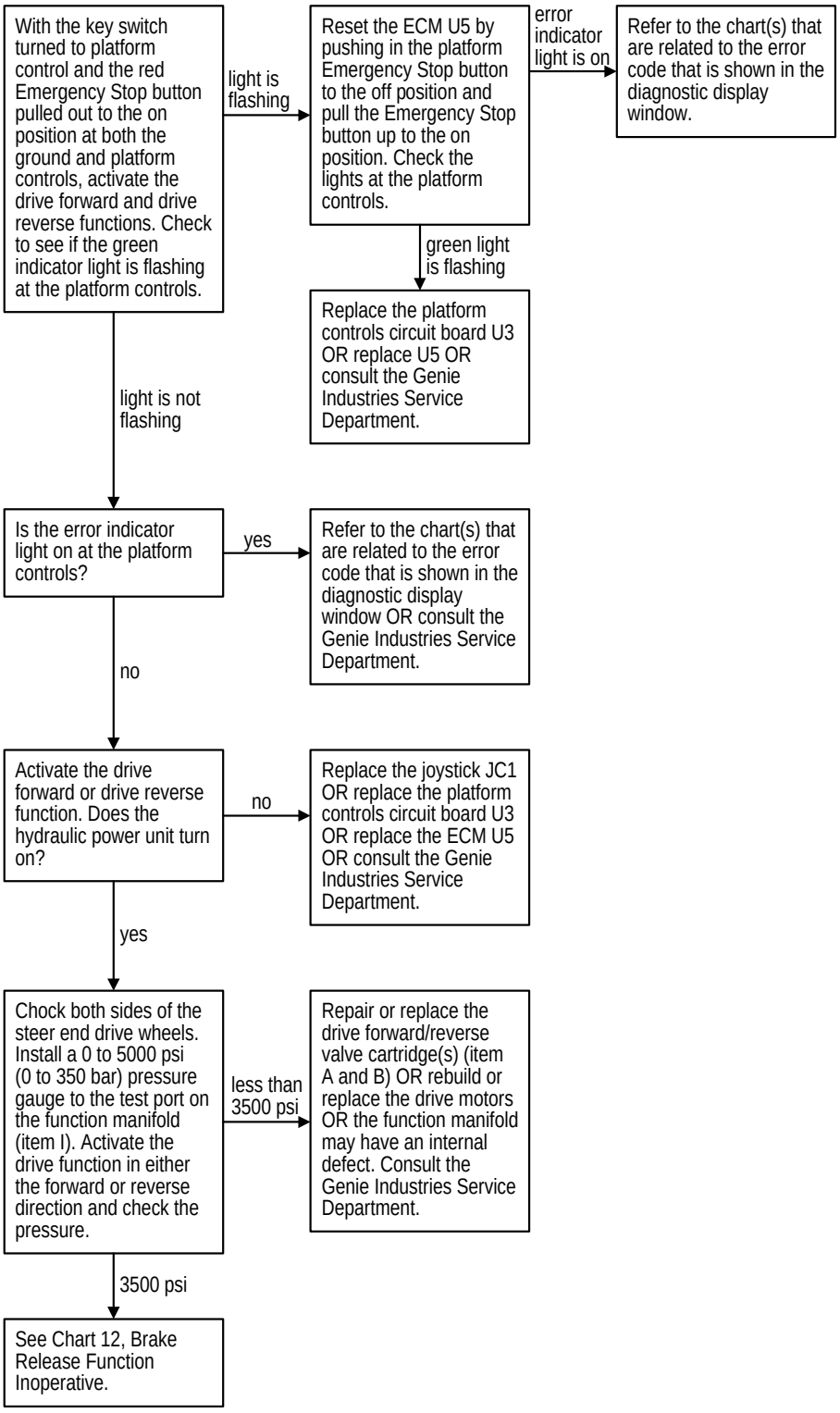


Chart 11A

REV C

All Drive Functions Inoperative, All Other Functions Operate Normally (after serial number 41199)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

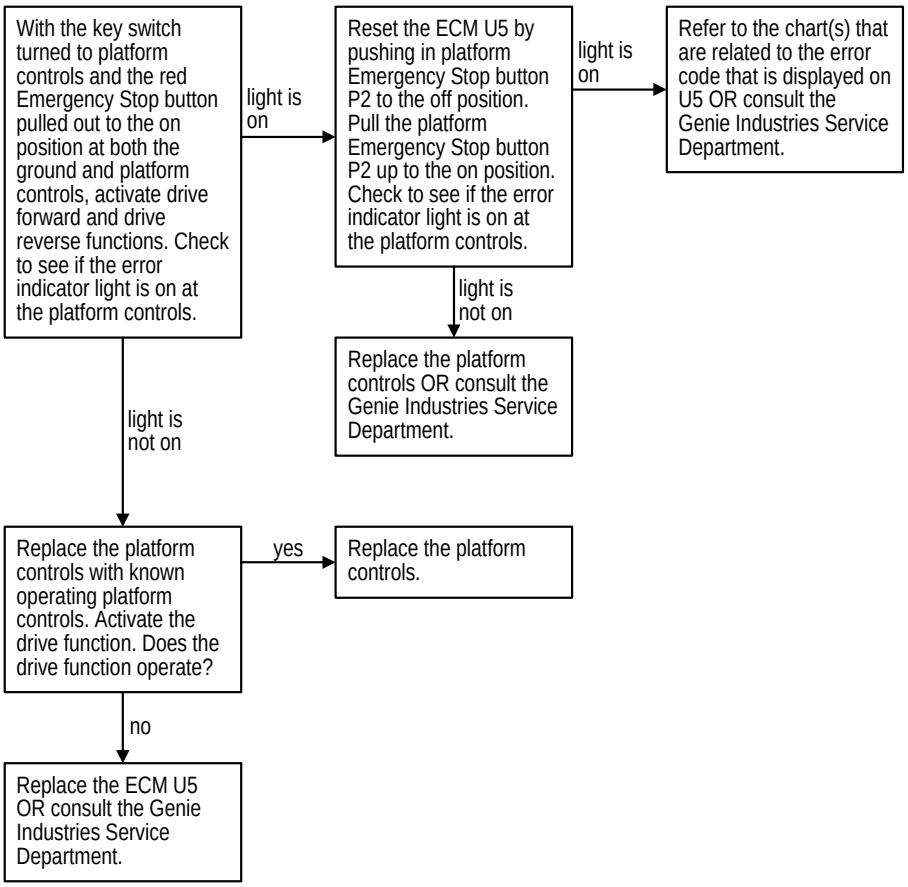


Chart 12

REV D

Brake Release Function Inoperative (before serial number 41200)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

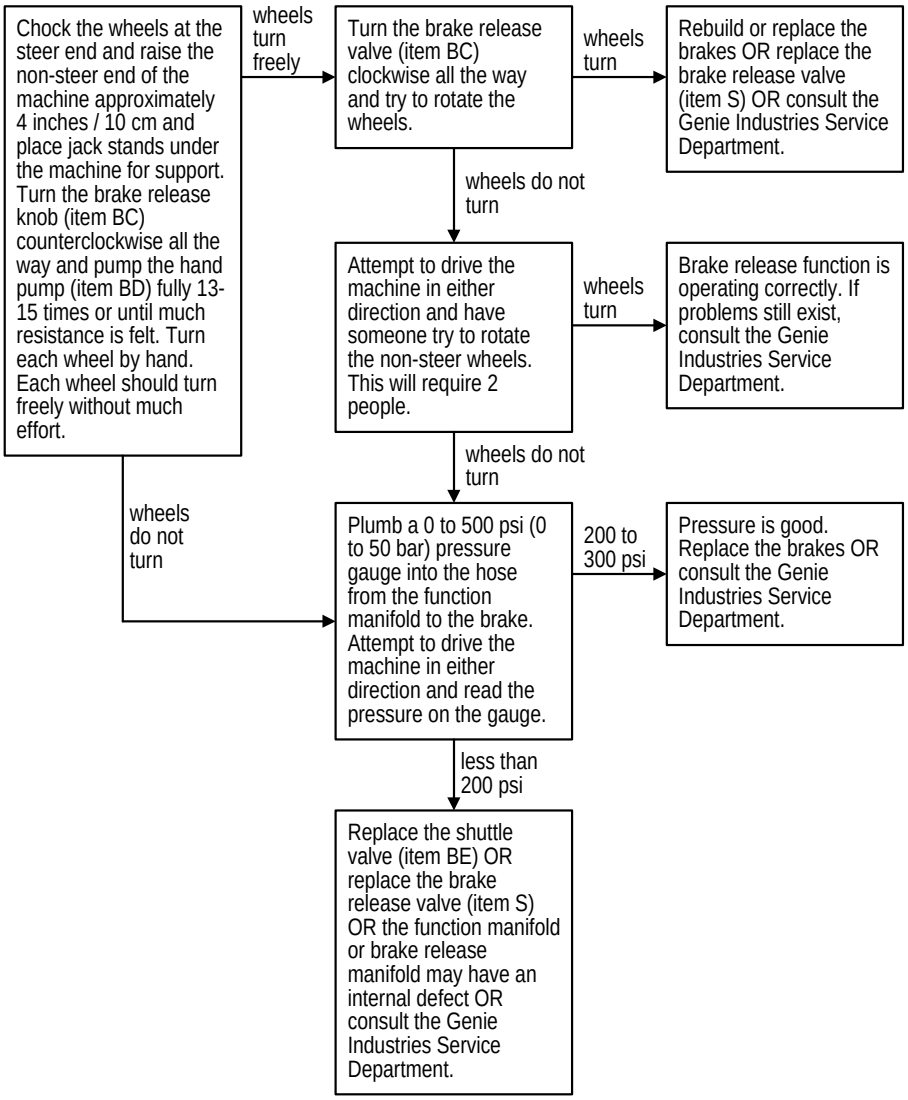


Chart 12A

REV C

Brake Release Function Inoperative (after serial number 41199)

If the Error Indicator light is on at the platform controls, please refer to the specific chart that relates to the error code that is displayed on the ECM.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

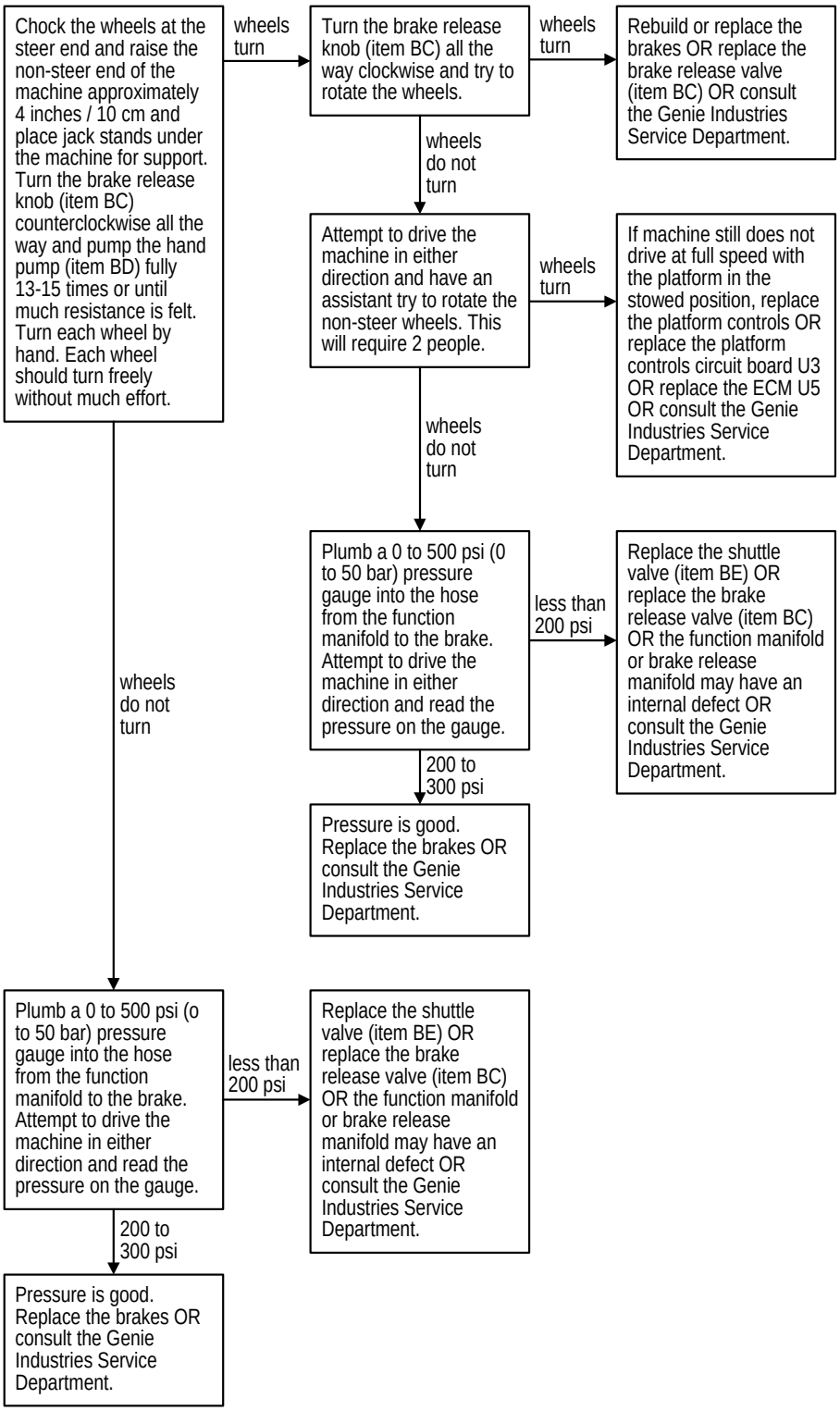


Chart 13

REV D

Drive Forward Function Inoperative (before serial number 41200)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

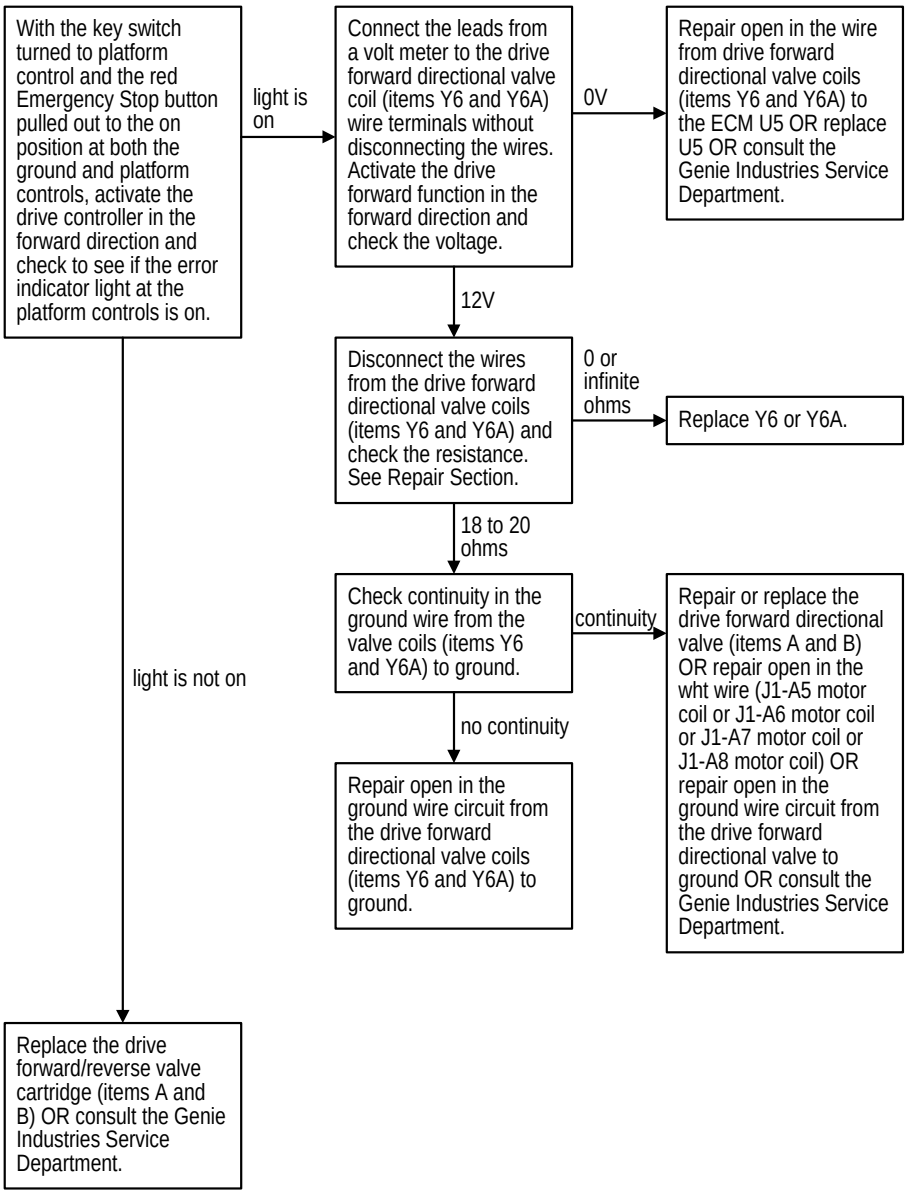


Chart 13A

REV C

Drive Forward Function Inoperative (after serial number 41199)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

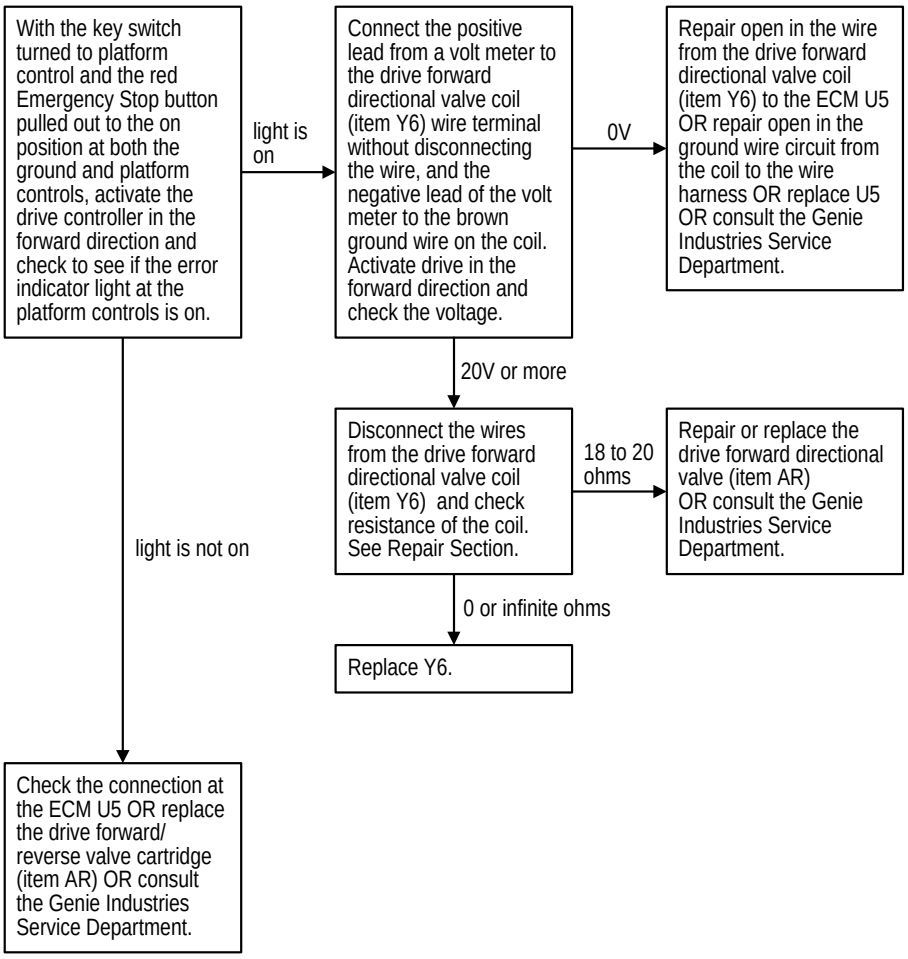


Chart 14

REV D

Drive Reverse Function Inoperative (before serial number 41200)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

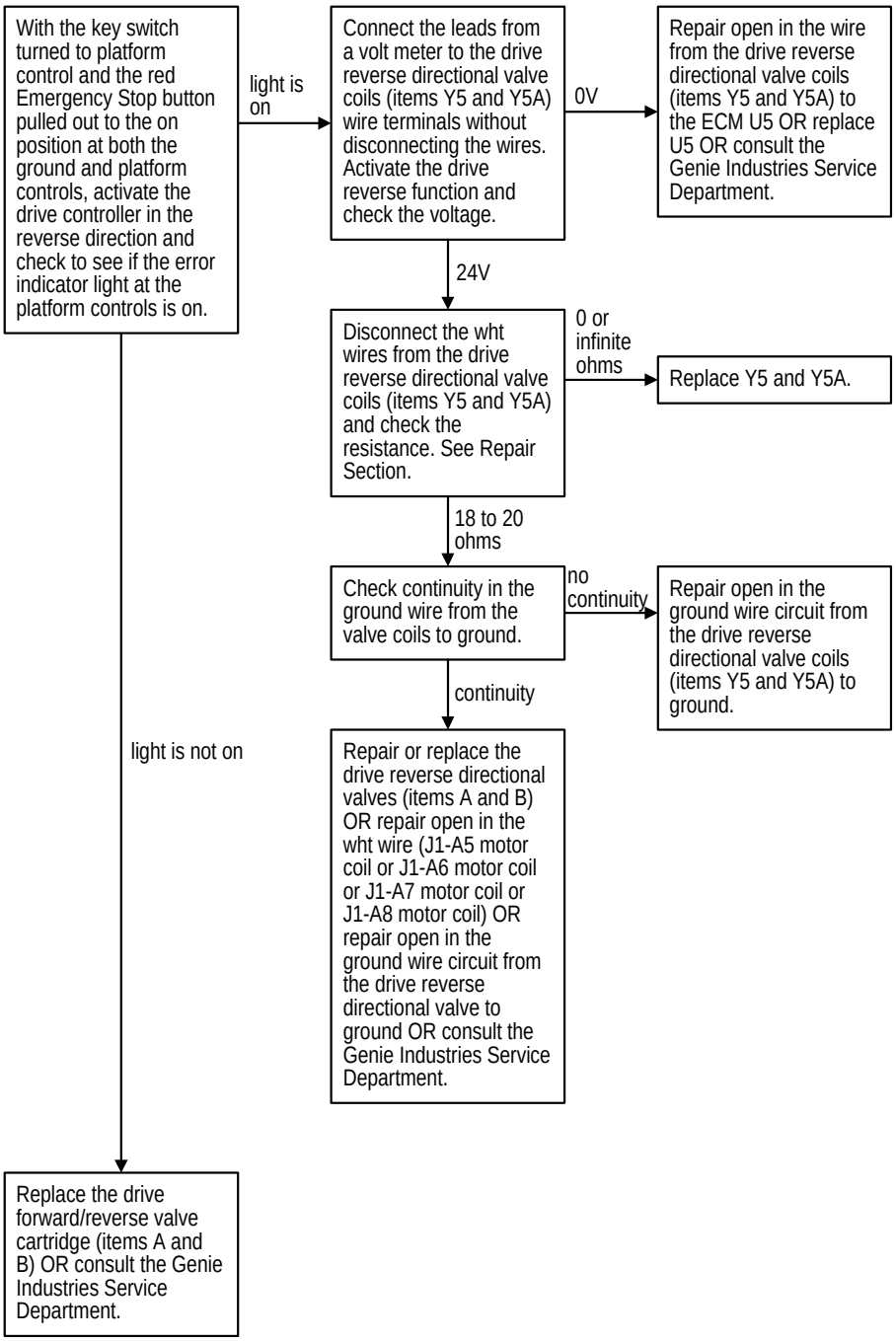


Chart 14A

REV C

Drive Reverse Function Inoperative (after serial number 41199)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

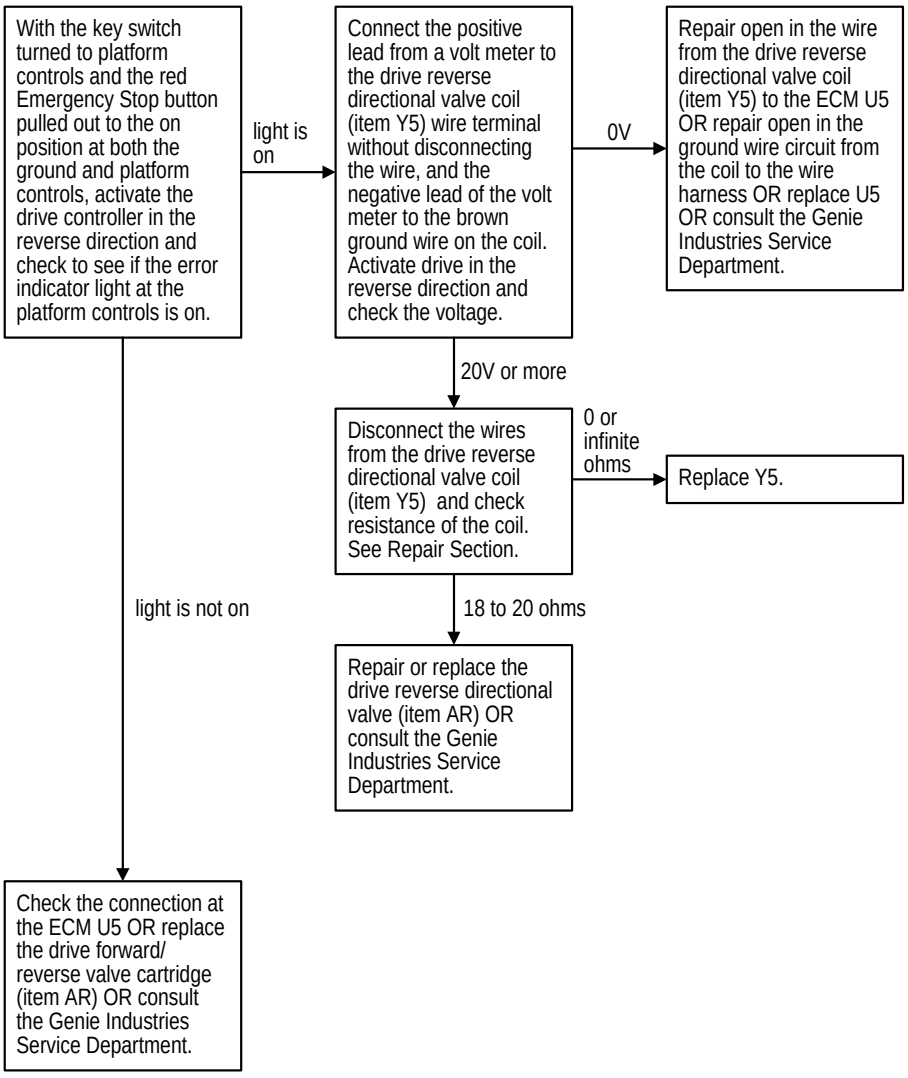


Chart 15

REV D

Machine Will Not Drive At Full Speed (before serial number 41200)

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

Be sure that the machine on incline button indicator light is OFF.

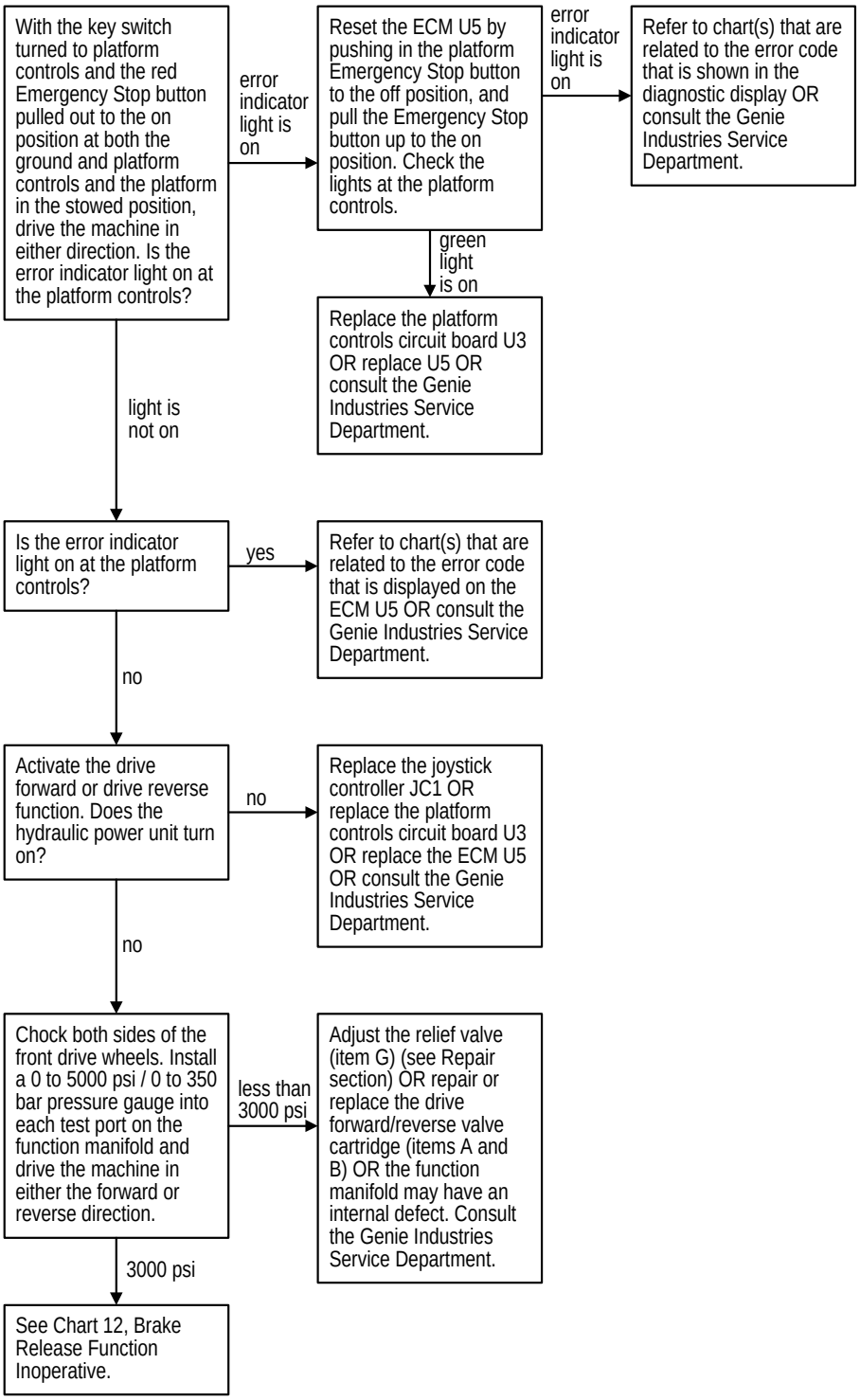


Chart 15A

REV C

Machine Will Not Drive At Full Speed (after serial number 41199)

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.

Be sure that the machine on incline button indicator light is OFF.

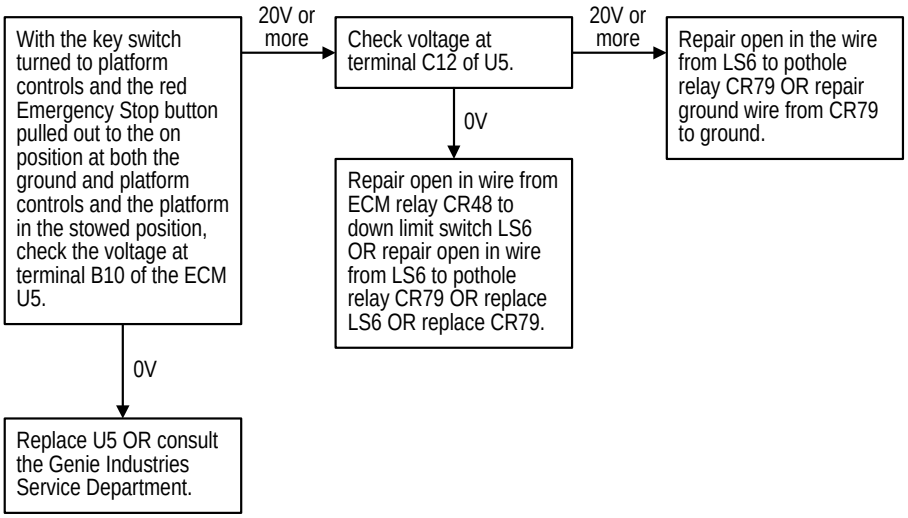


Chart 16

REV D

Machine Drives At Full Speed With Platform Raised (before serial number 41200)

Be sure the limit switches are free of debris and are functioning properly.

Be sure that the limit switches are not being activated by the cam on the number 1 inner scissor arm when the platform is raised.

Be sure that the machine on incline button indicator light is off.

Be sure that all other functions operate normally.

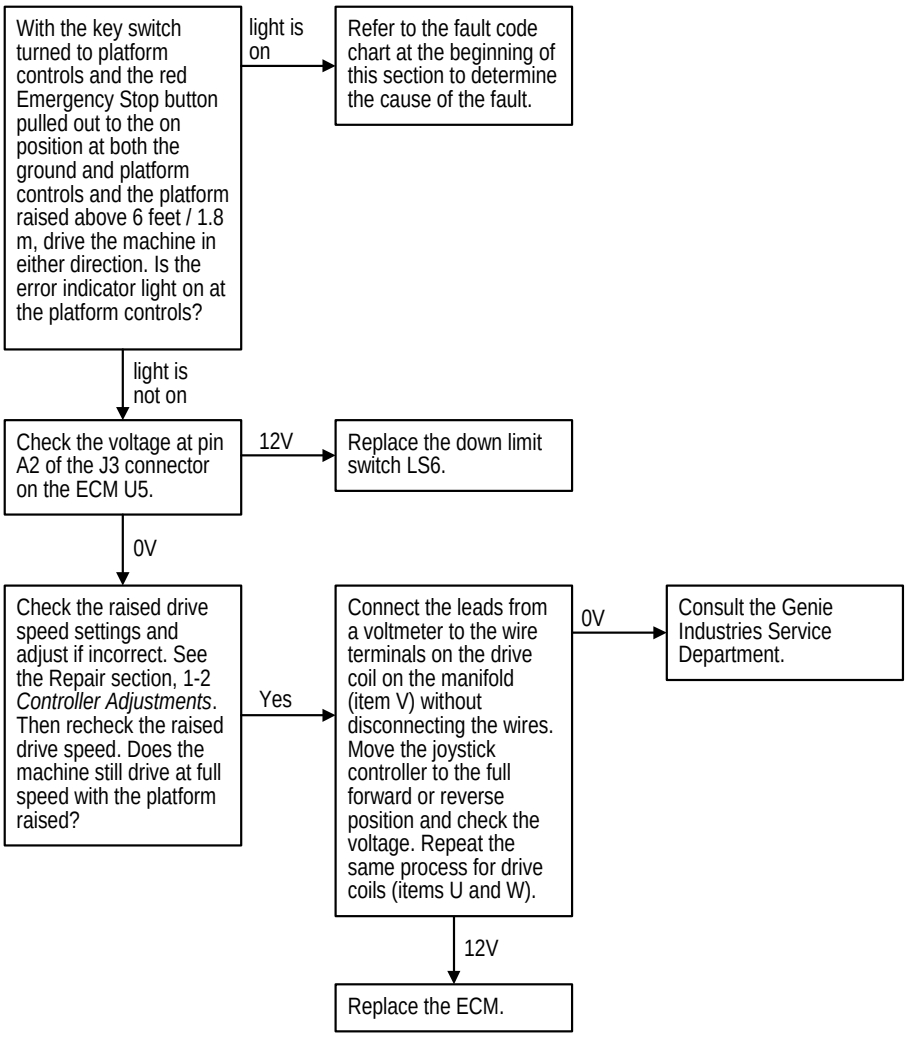
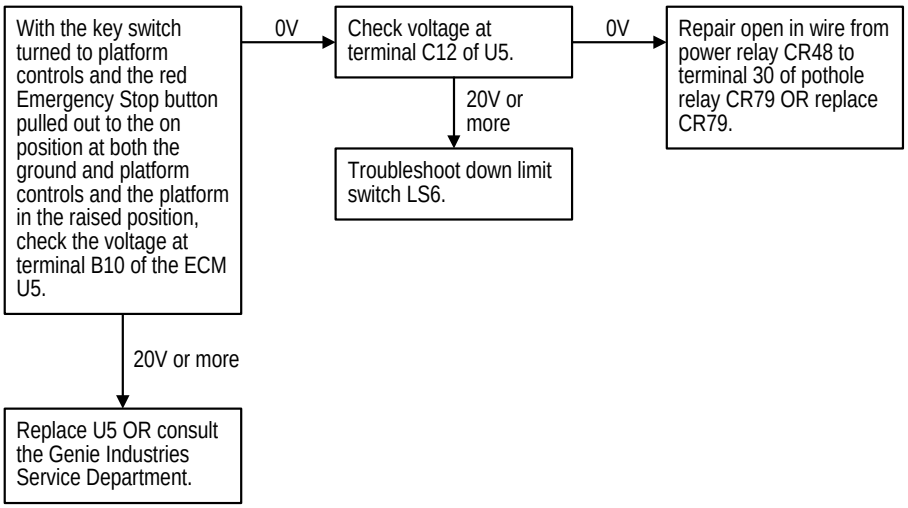


Chart 16A

REV C

Machine Drives At Full Speed With Platform Raised (after serial number 41199)



Be sure the limit switches are free of debris and are functioning properly.

Be sure that the machine on incline button indicator light is off.

Be sure that all other functions operate normally.

Chart 17

REV C

Manual Platform Lowering Function Inoperative, GS-2668 DC (before serial number 41200)

Be sure the platform lowering cable is not kinked or pinched.

Be sure the platform lowers using the platform up/down toggle switch at the ground controls.

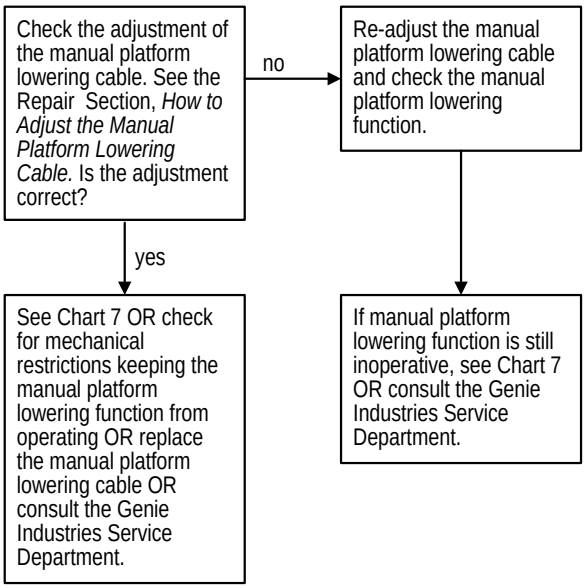


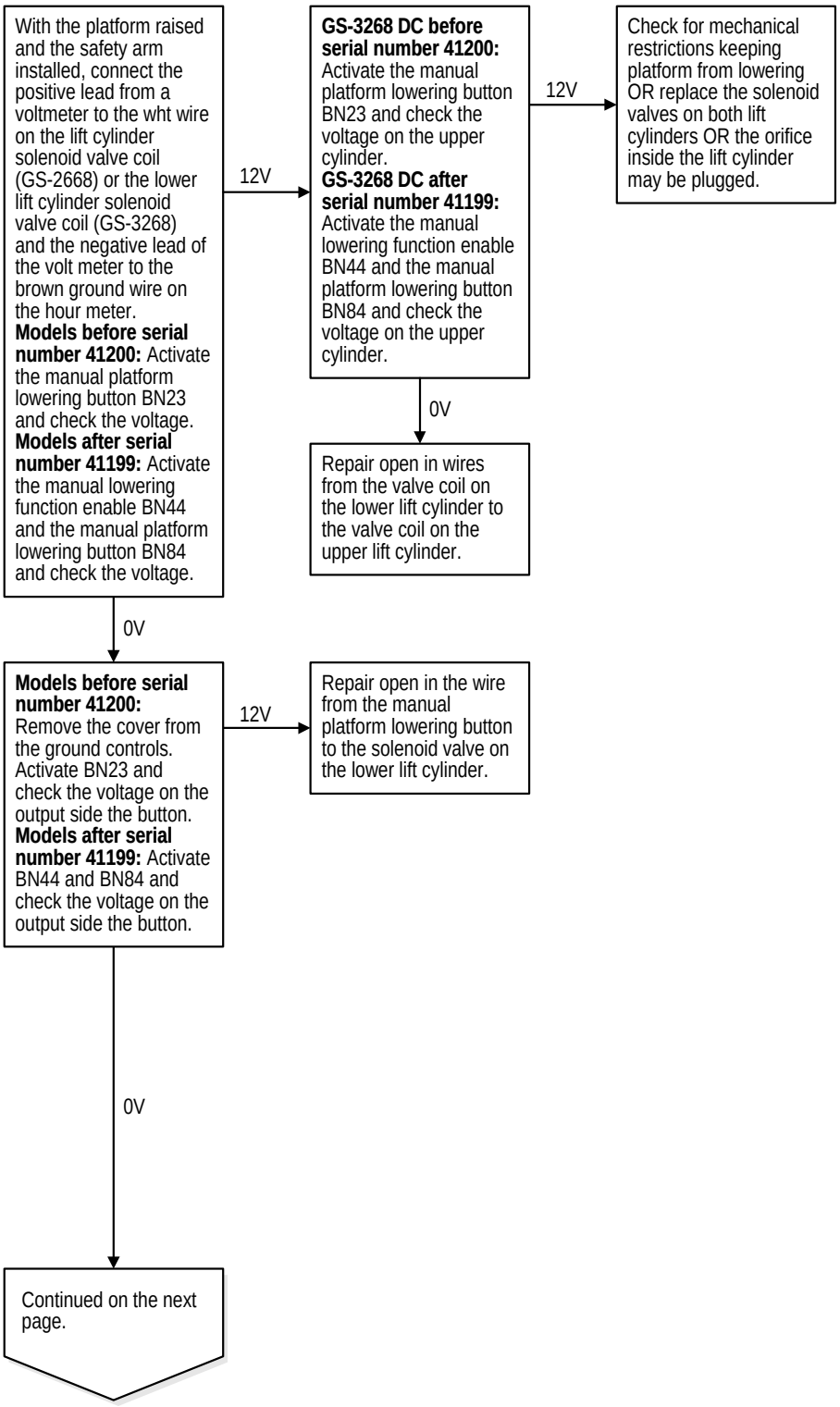
Chart 18

REV D

Manual Platform Lowering Function Inoperative, GS-2668 DC (after serial number 41199) and GS-3268 DC (all)

Be sure the platform lowers using the platform up/down toggle switch at the ground controls.

Be sure the batteries are fully charged and properly connected.



REV D CHART 18

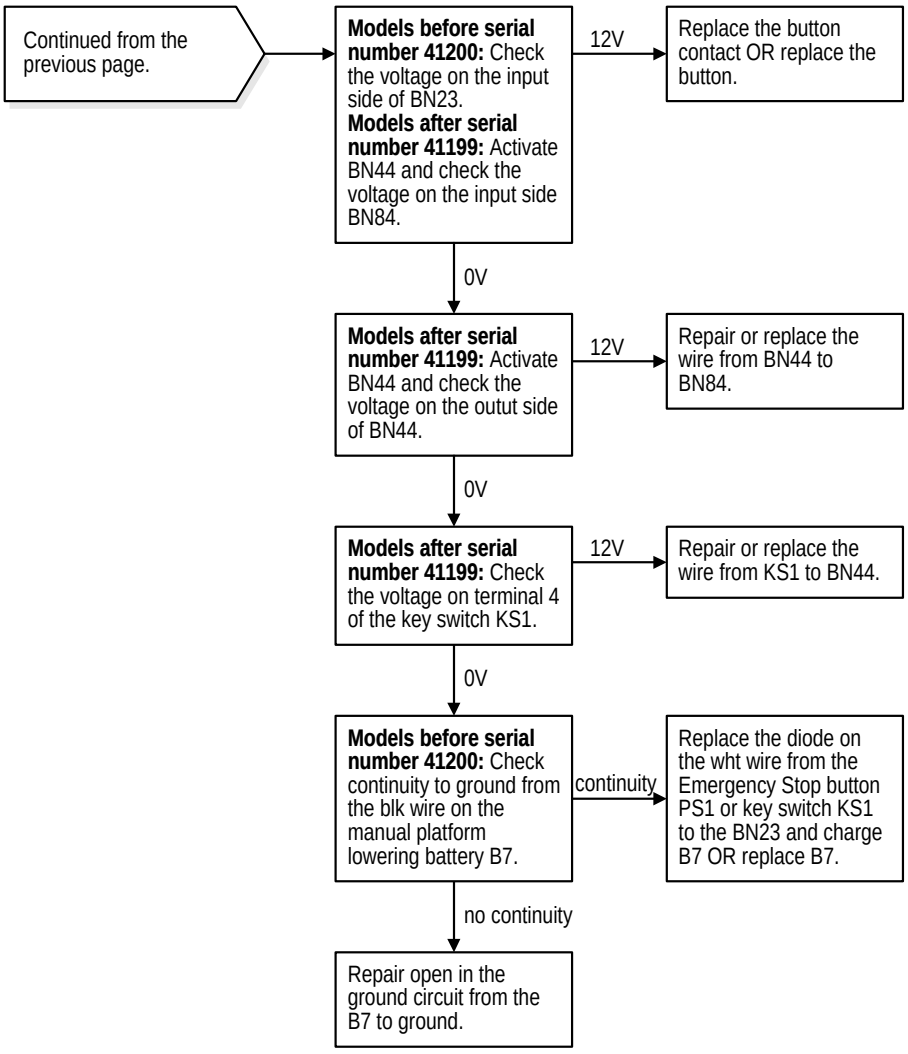


Chart 19

REV C

Limit Switch Function Inoperative (after serial number 41199)

Be sure the batteries are fully charged and properly connected.

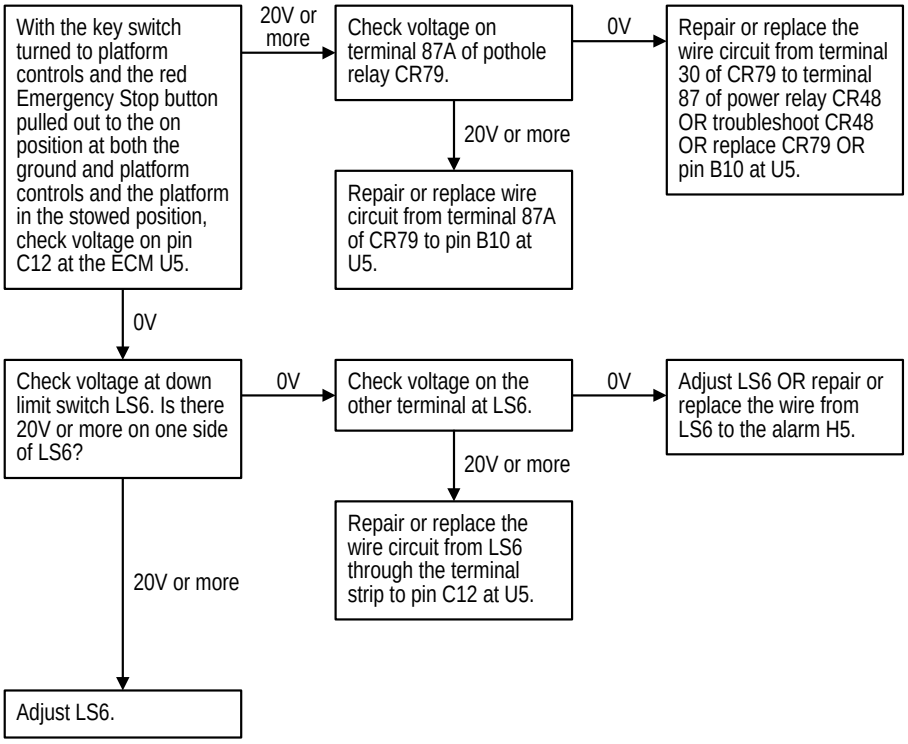


Chart 20

REV C

Fault Code 02 - ECM / Platform Communication Error (after serial number 41199)

Be sure the batteries are fully charged and properly connected.

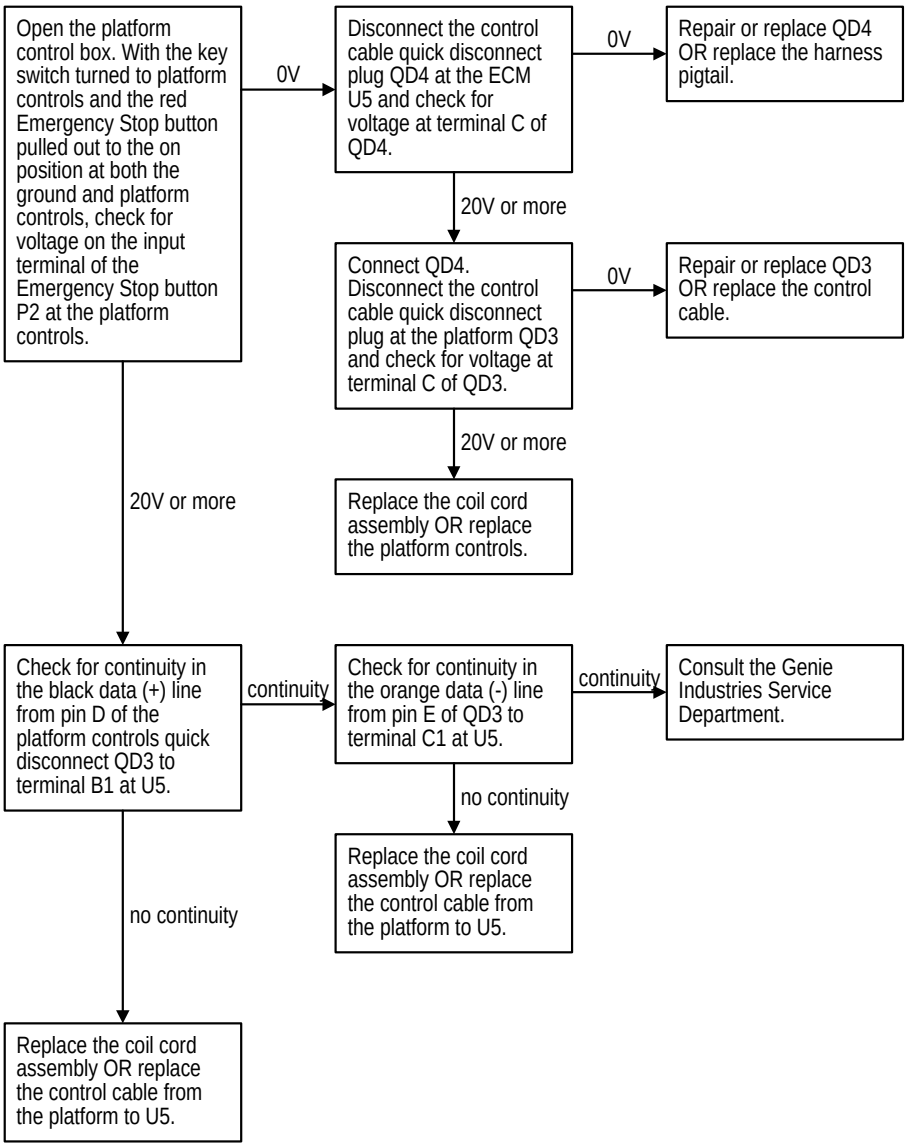


Chart 21

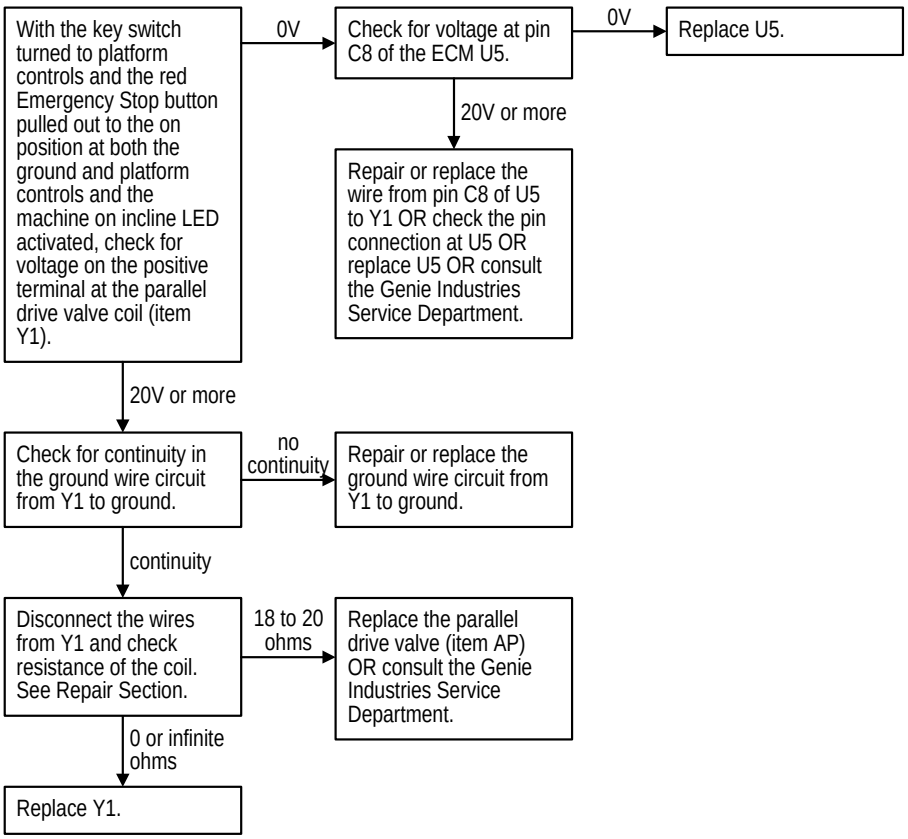
REV C

Fault Code 59 - Parallel / Series Coil Fault (after serial number 41199)

Be sure all other functions operate normally.

Be sure the circuit breaker and fuse are not tripped or blown.

Be sure the batteries are fully charged and properly connected.



Schematics

Observe and Obey:

- ☑ Troubleshooting and repair procedures shall be completed by a person trained and qualified on the repair of this machine.
- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating the machine.

Before Troubleshooting:

- ☑ Read, understand and obey the safety rules and operating instructions printed in the appropriate *Operator's Manual.*
- ☑ Be sure that all necessary tools and test equipment are available and ready for use.

About This Section

There are two groups of schematics in this section. An illustration legend precedes each group of drawings.

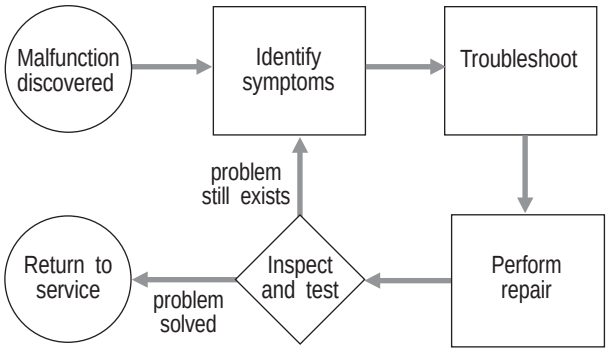
Electrical Schematics

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

Hydraulic Schematics

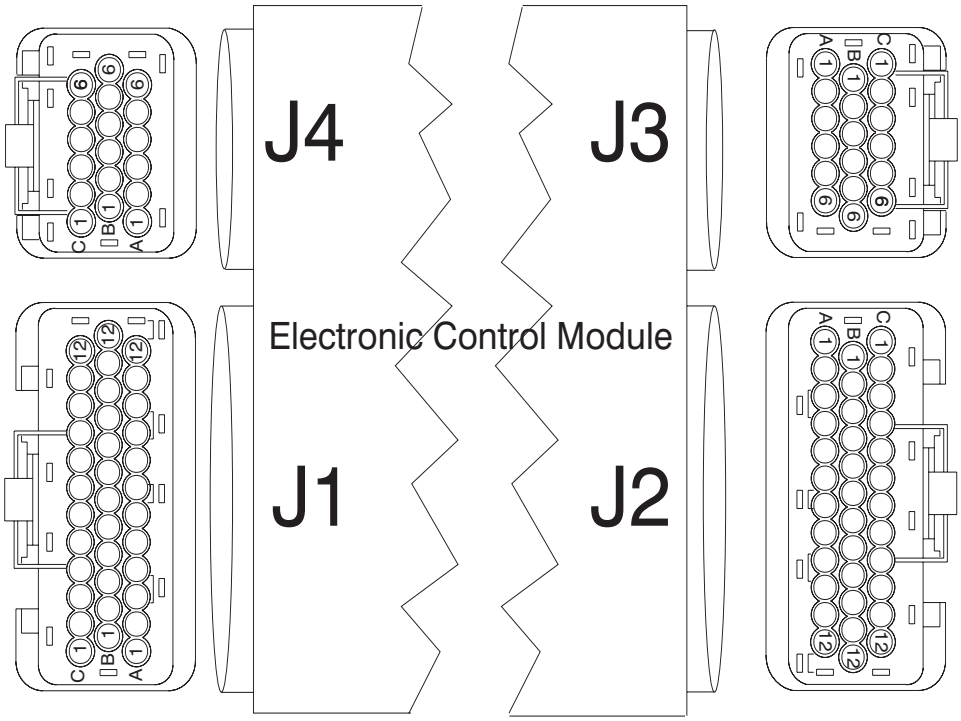
⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

General Repair Process



Electronic Control Module Pin-Out (before serial number 41200)

REV C



J1

A1	STEER RIGHT Y3
A2	STEER LEFT Y4
A3	PLATFORM UP Y8
A4	BRAKE RELEASE Y2
A5	DRIVE FORWARD LEFT Y6
A6	DRIVE REVERSE LEFT Y5
A7	DRIVE FORWARD RIGHT Y6A
A8	DRIVE REVERSE RIGHT Y5A
A9	PLATFORM DOWN Y7/Y9
A10	PARALLEL DRIVE Y1
A11	PARALLEL DRIVE Y1A
A12	PARALLEL DRIVE Y1B
B1	BEACONS (OPTION)
B2	PLUG
B3	PLUG
B4	PLUG
B5	PLUG
B6	PLUG
B7	PLUG
B8	PLUG
B9	PLUG
B10	PLUG
B11	PLUG
B12	PLUG
C1	MAIN POWER
C2	MAIN POWER
C3	MAIN POWER
C4	MAIN POWER
C5	PLUG
C6	PLUG
C7	GROUND
C8	GROUND
C9	PLUG
C10	PLUG
C11	ECM POWER
C12	ECM POWER

J2

A1	PLATFORM UP TS66
A2	PLATFORM DOWN TS66
A3	DECK EXTEND
A4	DECK RETRACT
A5	KEY SWITCH IN KS1
A6	LEVEL SENSOR IN S7
A7	PLUG
A8	PLUG
A9	PLUG
A10	PLUG
A11	PLUG
A12	PLUG
B1	PLUG
B2	PLUG
B3	PLUG
B4	PLUG
B5	PLUG
B6	PLUG
B7	PLUG
B8	PLUG
B9	PLUG
B10	LEVEL SENSOR OUT S7
B11	AUTO STYLE HORN OUT H2
B12	ALARM OUT H5
C1	DIAGNOSTIC DISPLAY A
C2	DIAGNOSTIC DISPLAY B
C3	DIAGNOSTIC DISPLAY C
C4	DIAGNOSTIC DISPLAY D
C5	DIAGNOSTIC DISPLAY E
C6	DIAGNOSTIC DISPLAY F
C7	DIAGNOSTIC DISPLAY G
C8	DIAGNOSTIC DISPLAY H
C9	DIAGNOSTIC DISPLAY J
C10	DIAGNOSTIC DISPLAY K
C11	PLUG
C12	PLUG

J3

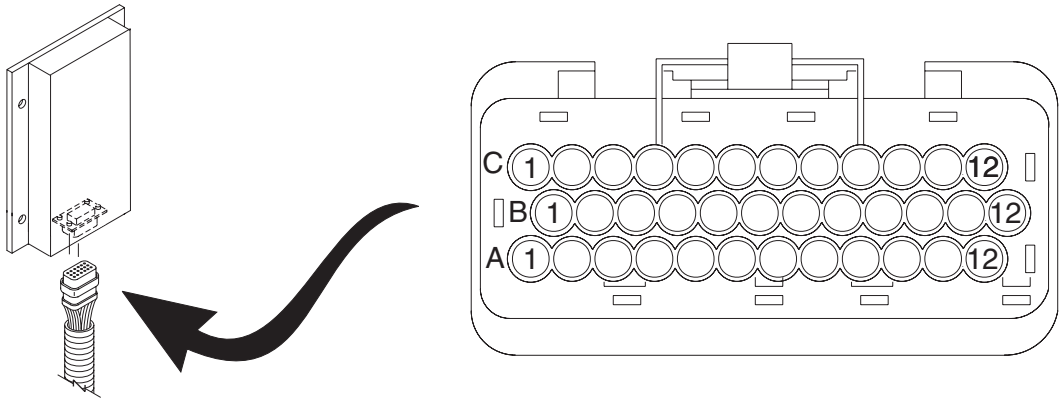
A1	UP LIMIT IN LS2
A2	DOWN LIMIT IN LS6
A3	DECK LIMIT IN LS9
A4	DATA HIGH (+)
A5	DATA LOW (-)
A6	PLUG
B1	PLUG
B2	PLUG
B3	POWER TO PLAT
B4	GROUND FROM PLAT
B5	PLUG
B6	HEAD LIGHTS
C1	PLUG
C2	PLUG
C3	PLUG
C4	PLUG
C5	PLUG
C6	PLUG

J4

A1	PLUG
A2	PLUG
A3	PLUG
A4	PLUG
A5	PLUG
A6	BATTERY IN
B1	PLUG
B2	PLUG
B3	POWER TO PLAT
B4	GROUND FROM PLAT
B5	PLUG
B6	HEAD LIGHTS
C1	PLUG
C2	PLUG
C3	PLUG
C4	PLUG
C5	MOTOR CONTROLLER IN
C6	PLUG

REV C

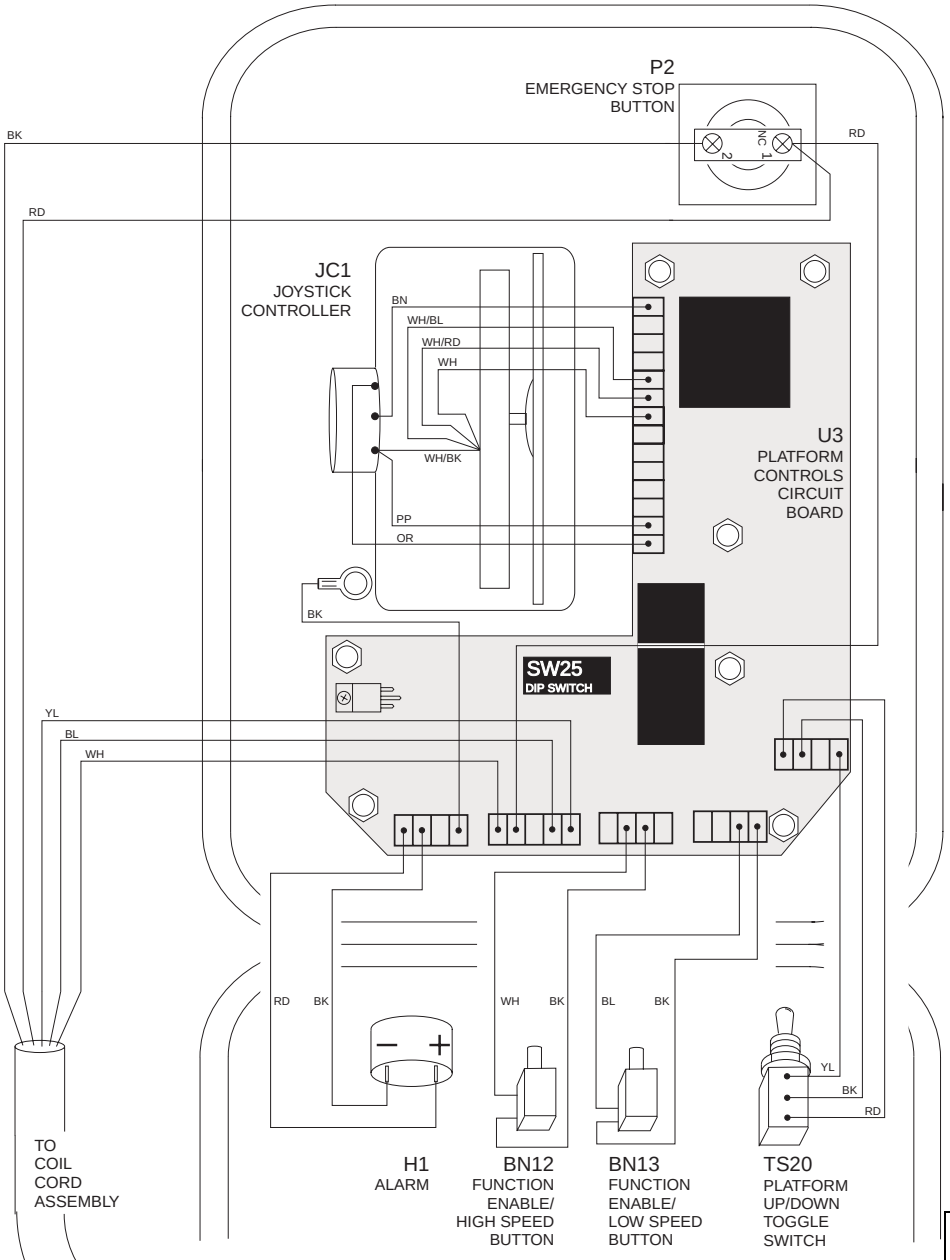
Electronic Control Module Pin-Out (after serial number 41199)



ECM PIN-OUT LEGEND (after serial number 41199)	
Pin	**Description**
A1	Flashing beacon FB1 (output)
A2	Ground from platform controls (input) (Blue wire at platform)
A3	Spare
A4	Power from platform controls to ECM (input) (White wire at platform)
A5	Level sensor power S7 (output)
A6	Platform up coil Y8 (output)
A7	Drive reverse coil Y5 (output)
A8	Motor controller U6, terminal 1
A9	Motor controller U6, terminal 3
A10	Overload sensor PS2 (input)
A11	Key switch (input)
A12	Platform down TS66 (input)
B1	Platform data link high (+) (input) (Black wire at platform)
B2	Spare
B3	ECM ground (output)
B4	Spare
B5	Spare
B6	Platform down coil Y7 (output)
B7	Steer left coil Y4 (output)
B8	Automotive-style horn H2 (option) (output)
B9	Multi-function alarm H5 (output)
B10	Pothole limit switch (input)
B11	Drive enable power (input)
B12	Platform up TS66 (input)
C1	Platform data link low (–) (input) (Yellow wire at platform)
C2	Power to ECM (input)
C3	Spare
C4	Spare
C5	Spare
C6	Drive forward coil Y6 (output)
C7	Steer right coil Y3 (output)
C8	Parallel coils Y1/Y1A (output)
C9	Brake release coil Y2 (output)
C10	Spare
C11	Level sensor signal S7 (input)
C12	Down limit switch LS6 (input)

Platform Controls Wiring Diagram (before serial number 41200)

REV D

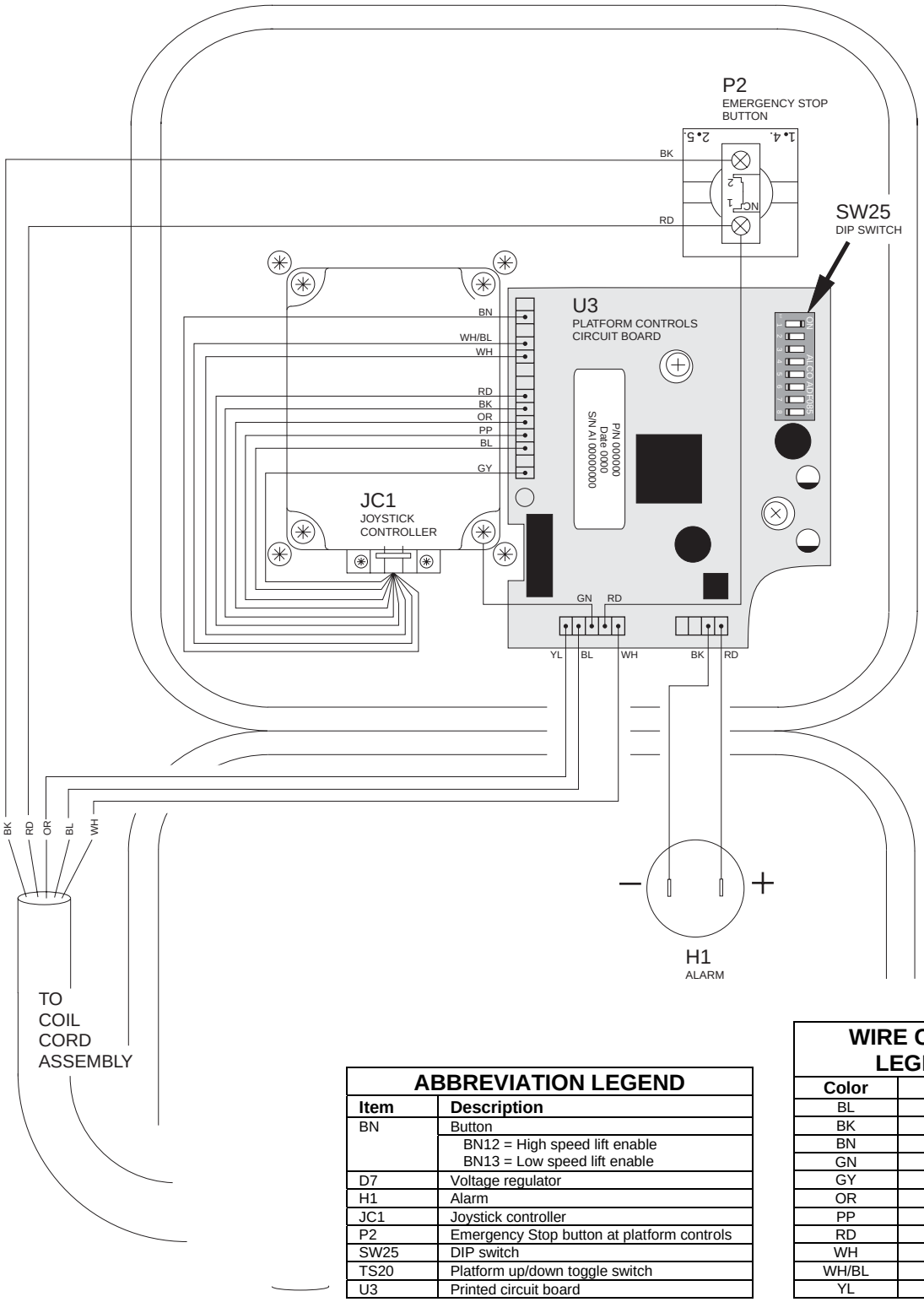


ABBREVIATION LEGEND	
Item	**Description**
BN	Button BN12 = High speed lift enable BN13 = Low speed lift enable
D7	Voltage regulator
H1	Alarm
JC1	Joystick controller
P2	Emergency Stop button at platform controls
SW25	DIP switch
TS20	Platform up/down toggle switch
U3	Printed circuit board

WIRE COLOR LEGEND	
Color	**Description**
BL	Blue
BK	Black
BN	Brown
OR	Orange
PP	Purple
RD	Red
WH	White
WH/BK	White / Black
WH/BL	White / Blue
WH/RD	White / Red
YL	Yellow

REV C

Platform Controls Wiring Diagram (from serial number 41200 to GS6805-44698)

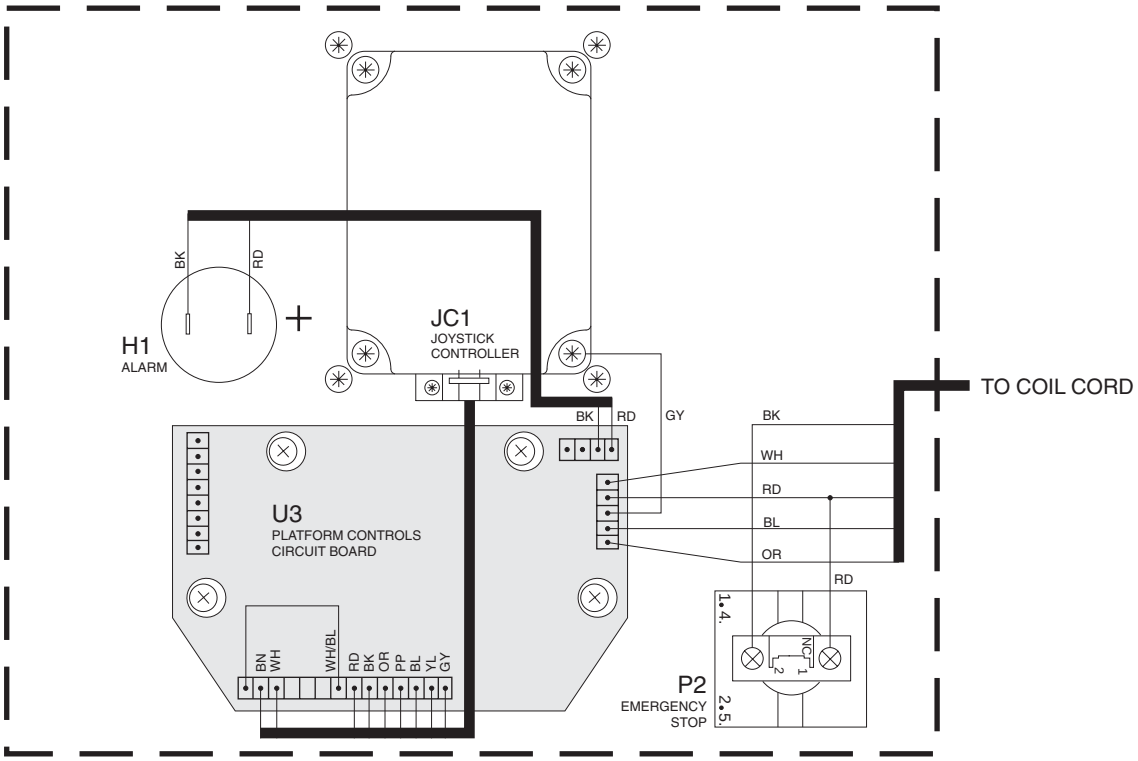


ABBREVIATION LEGEND	
Item	**Description**
BN	Button BN12 = High speed lift enable BN13 = Low speed lift enable
D7	Voltage regulator
H1	Alarm
JC1	Joystick controller
P2	Emergency Stop button at platform controls
SW25	DIP switch
TS20	Platform up/down toggle switch
U3	Printed circuit board

WIRE COLOR LEGEND	
Color	**Description**
BL	Blue
BK	Black
BN	Brown
GN	Green
GY	Grey
OR	Orange
PP	Purple
RD	Red
WH	White
WH/BL	White / Blue
YL	Yellow

Platform Controls Wiring Diagram (after serial number GS6805-44698)

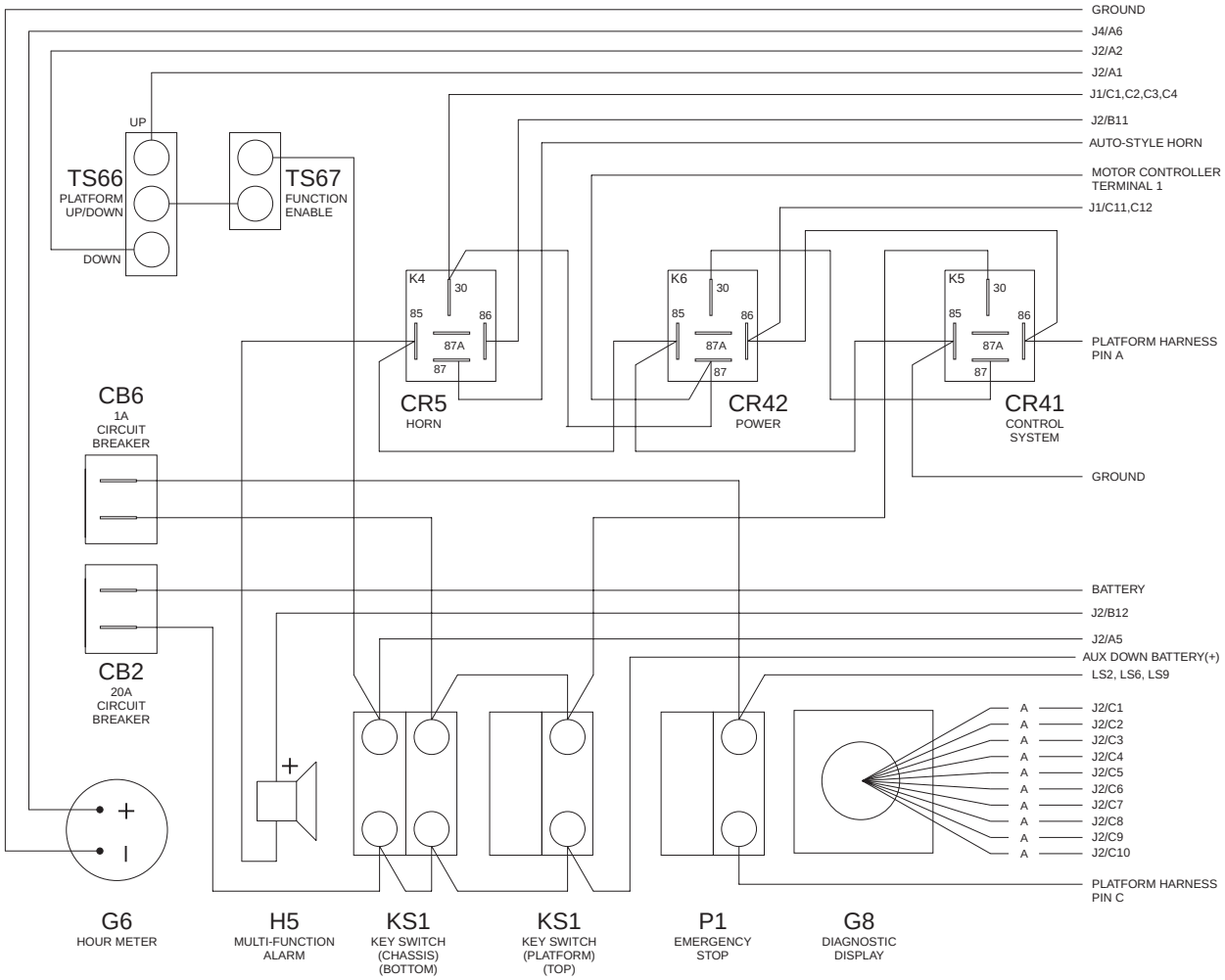
REV A



WIRE COLOR LEGEND	
Color	**Description**
BL	Blue
BK	Black
BN	Brown
GY	Grey
OR	Orange
PP	Purple
RD	Red
WH	White
WH/BL	White / Blue
YL	Yellow

REV A

Ground Controls Wiring Diagram (before serial number 21161)

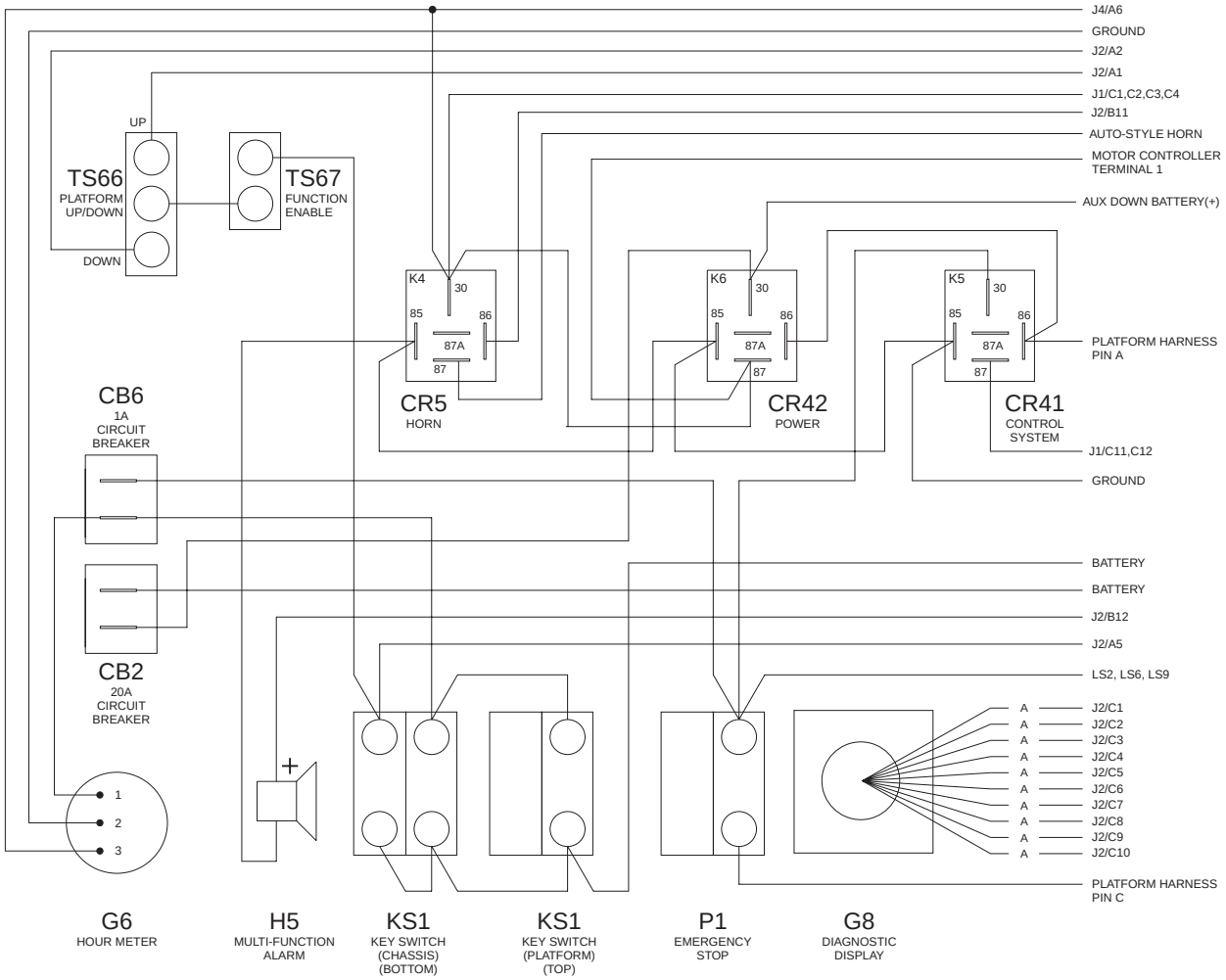


ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = High speed lift enable
	BN13 = Low speed lift enable
CB	Circuit breaker
	CB2 = 20A circuit breaker
	CB6 = 1A or 7A circuit breaker
CR	Control relay
	CR5 = Horn (option)
	CR41 = Control system
	CR42 = ECM power
	CR48 = Power
	CR79 = Pothole
	CR80 = Inverter

ABBREVIATION LEGEND	
Item	**Description**
G	Gauge
	G6 = Hour meter
	G8 = Diagnostic display
H5	Multi-function alarm
KS1	Key switch
P1	Emergency Stop button at ground controls
TS	Toggle switch
	TS66 = Platform up/down
	TS67 = Up/down function enable
	TS71 = Platform up
	TS72 = Platform down

Ground Controls Wiring Diagram (from serial number 21611 to 26562)

REV A

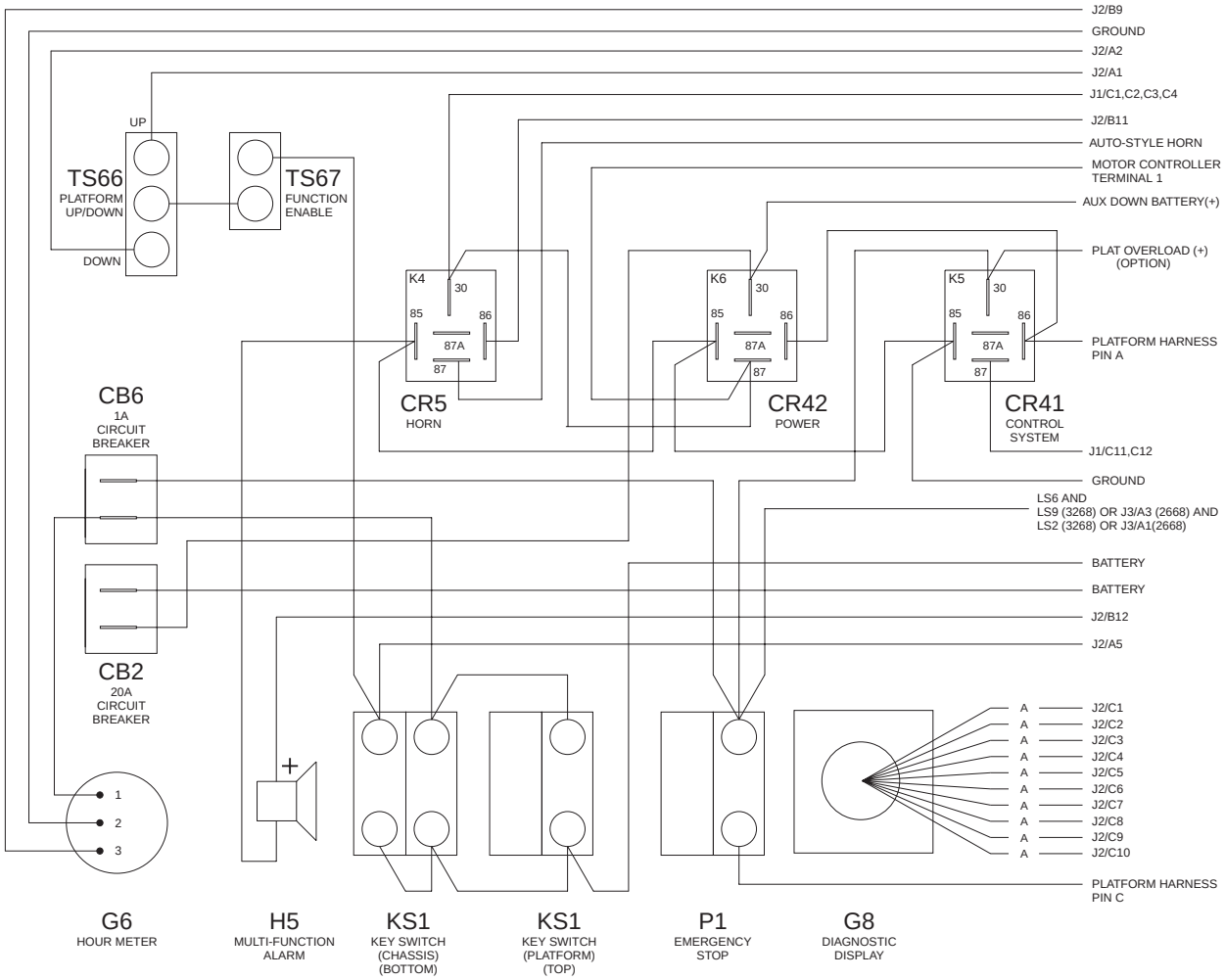


ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = High speed lift enable
	BN13 = Low speed lift enable
CB	Circuit breaker
	CB2 = 20A circuit breaker
	CB6 = 1A or 7A circuit breaker
CR	Control relay
	CR5 = Horn (option)
	CR41 = Control system
	CR42 = ECM power
	CR48 = Power
	CR79 = Pothole
	CR80 = Inverter

ABBREVIATION LEGEND	
Item	**Description**
G	Gauge
	G6 = Hour meter
	G8 = Diagnostic display
H5	Multi-function alarm
KS1	Key switch
P1	Emergency Stop button at ground controls
TS	Toggle switch
	TS66 = Platform up/down
	TS67 = Up/down function enable
	TS71 = Platform up
	TS72 = Platform down

REV A

Ground Controls Wiring Diagram (from serial number 26563 to 33850)

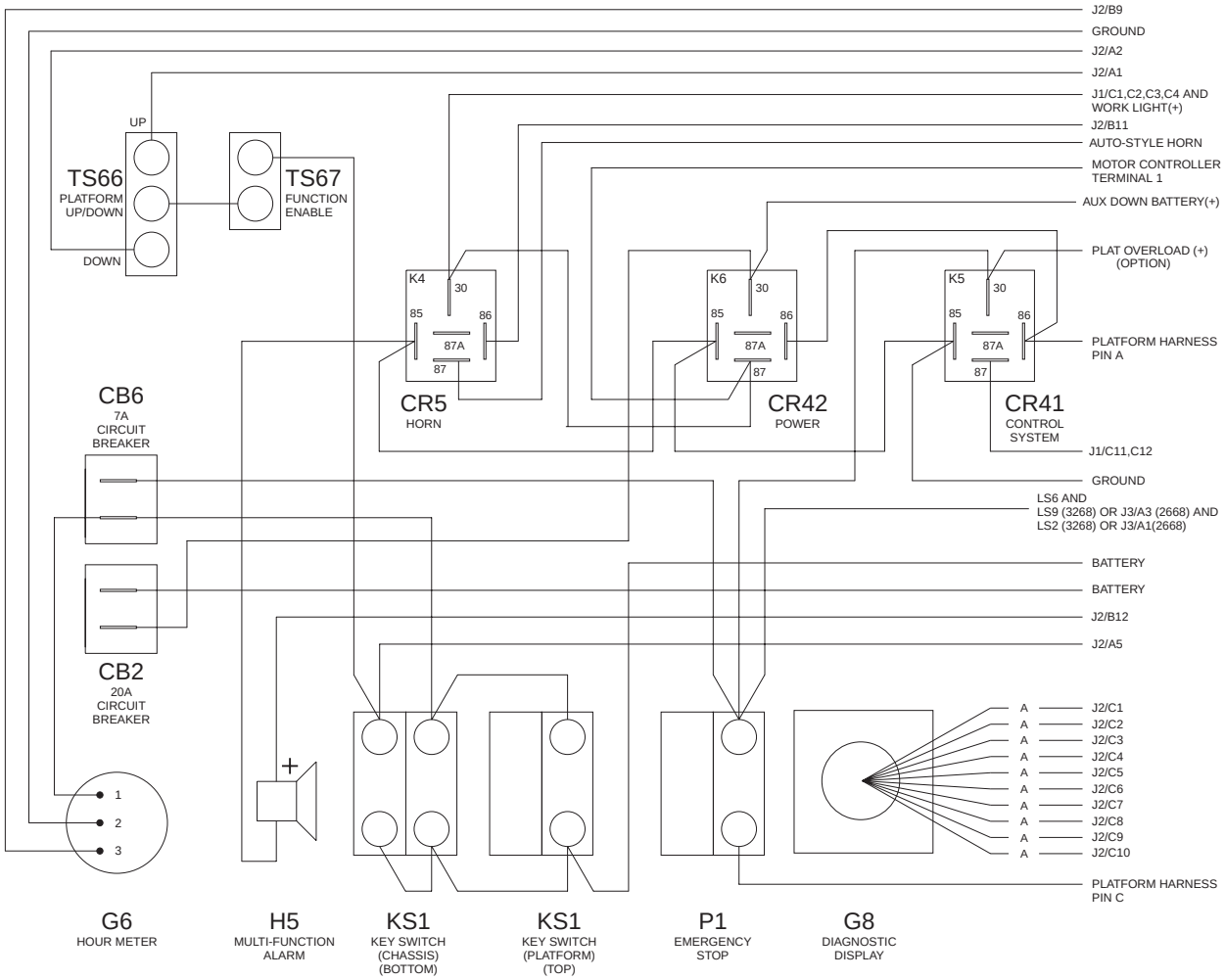


ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = High speed lift enable
	BN13 = Low speed lift enable
CB	Circuit breaker
	CB2 = 20A circuit breaker
	CB6 = 1A or 7A circuit breaker
CR	Control relay
	CR5 = Horn (option)
	CR41 = Control system
	CR42 = ECM power
	CR48 = Power
	CR79 = Pothole
	CR80 = Inverter

ABBREVIATION LEGEND	
Item	**Description**
G	Gauge
	G6 = Hour meter
	G8 = Diagnostic display
H5	Multi-function alarm
KS1	Key switch
P1	Emergency Stop button at ground controls
TS	Toggle switch
	TS66 = Platform up/down
	TS67 = Up/down function enable
	TS71 = Platform up
	TS72 = Platform down

Ground Controls Wiring Diagram (from serial number 33851 to 40463)

REV A

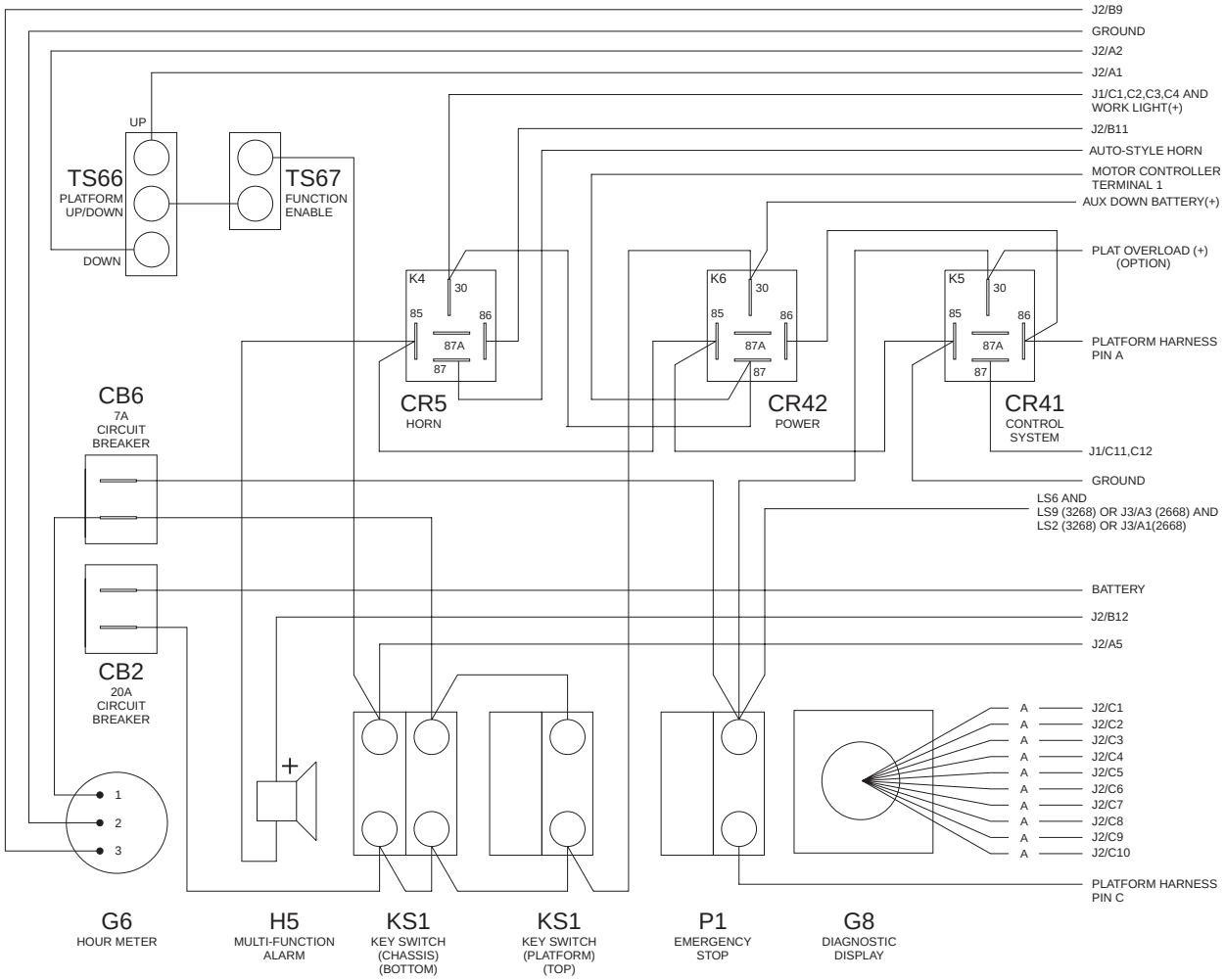


ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = High speed lift enable
	BN13 = Low speed lift enable
CB	Circuit breaker
	CB2 = 20A circuit breaker
	CB6 = 1A or 7A circuit breaker
CR	Control relay
	CR5 = Horn (option)
	CR41 = Control system
	CR42 = ECM power
	CR48 = Power
	CR79 = Pothole
	CR80 = Inverter

ABBREVIATION LEGEND	
Item	**Description**
G	Gauge
	G6 = Hour meter
	G8 = Diagnostic display
H5	Multi-function alarm
KS1	Key switch
P1	Emergency Stop button at ground controls
TS	Toggle switch
	TS66 = Platform up/down
	TS67 = Up/down function enable
	TS71 = Platform up
	TS72 = Platform down

REV A

Ground Controls Wiring Diagram (from serial number 40464 to 40751)

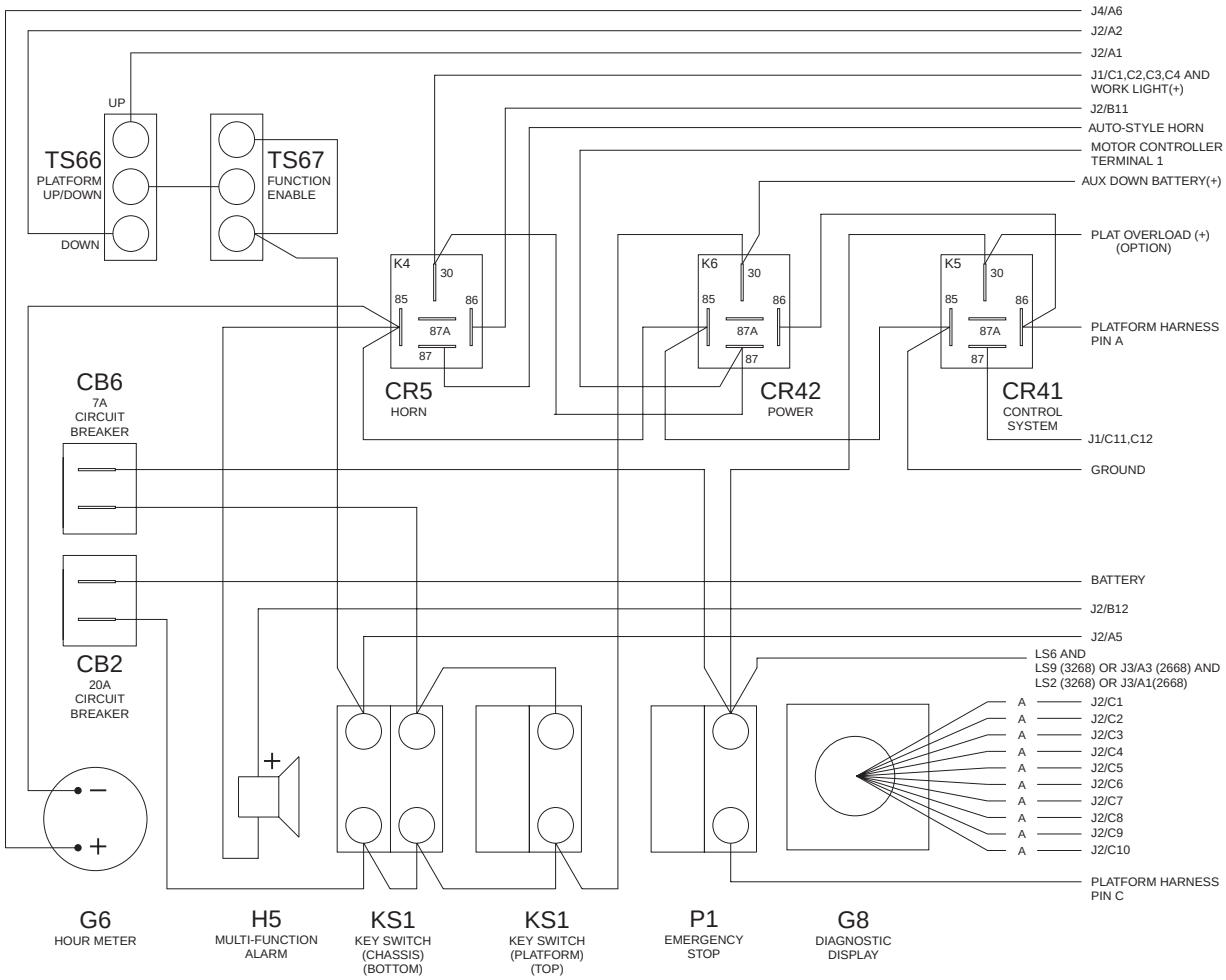


ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = High speed lift enable
	BN13 = Low speed lift enable
CB	Circuit breaker
	CB2 = 20A circuit breaker
	CB6 = 1A or 7A circuit breaker
CR	Control relay
	CR5 = Horn (option)
	CR41 = Control system
	CR42 = ECM power
	CR48 = Power
	CR79 = Pothole
	CR80 = Inverter

ABBREVIATION LEGEND	
Item	**Description**
G	Gauge
	G6 = Hour meter
	G8 = Diagnostic display
H5	Multi-function alarm
KS1	Key switch
P1	Emergency Stop button at ground controls
TS	Toggle switch
	TS66 = Platform up/down
	TS67 = Up/down function enable
	TS71 = Platform up
	TS72 = Platform down

Ground Controls Wiring Diagram (from serial number 40752 to 41199)

REV A

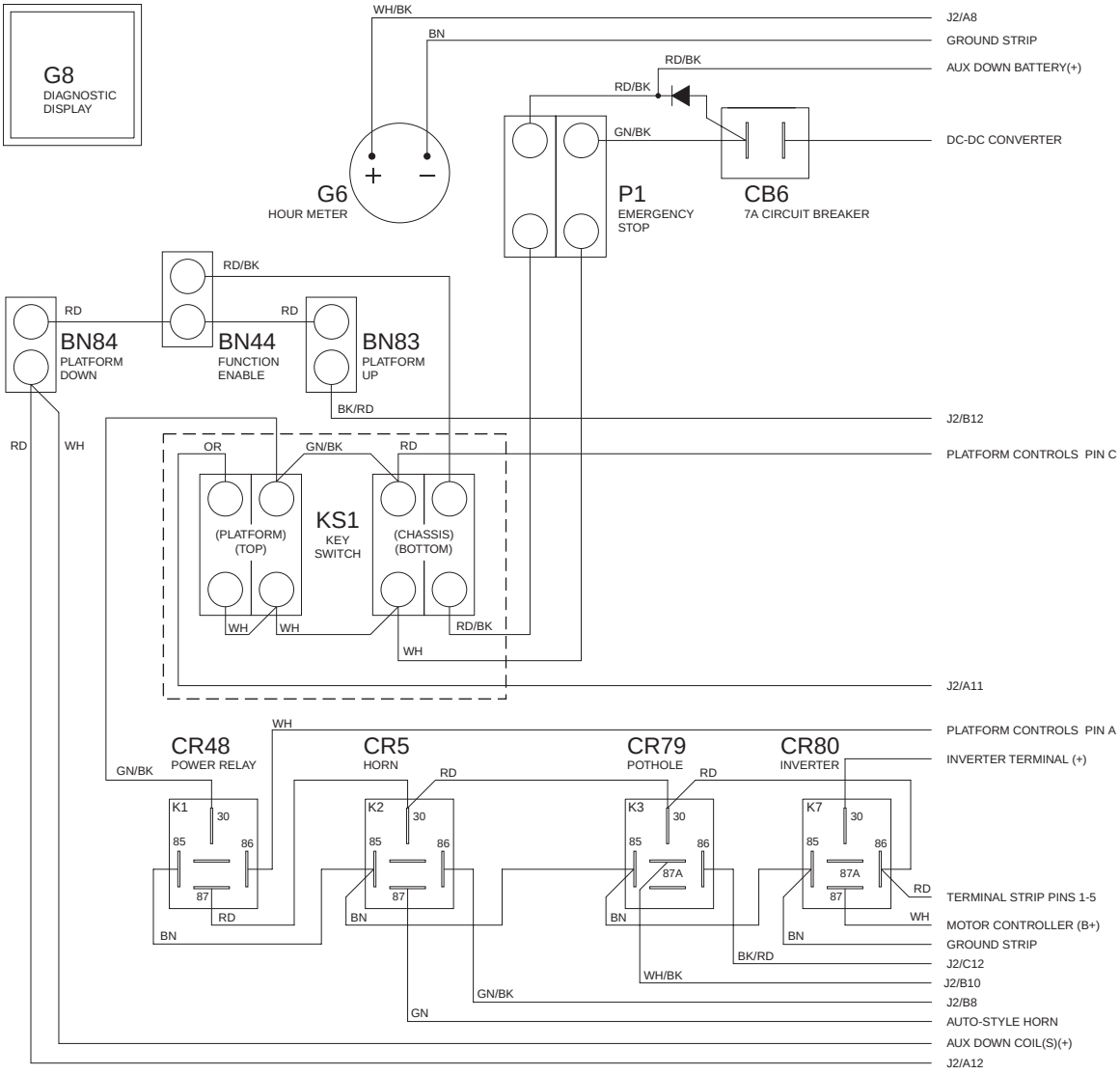


ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = High speed lift enable
	BN13 = Low speed lift enable
CB	Circuit breaker
	CB2 = 20A circuit breaker
	CB6 = 1A or 7A circuit breaker
CR	Control relay
	CR5 = Horn (option)
	CR41 = Control system
	CR42 = ECM power
	CR48 = Power
	CR79 = Pothole
	CR80 = Inverter

ABBREVIATION LEGEND	
Item	**Description**
G	Gauge
	G6 = Hour meter
	G8 = Diagnostic display
H5	Multi-function alarm
KS1	Key switch
P1	Emergency Stop button at ground controls
TS	Toggle switch
	TS66 = Platform up/down
	TS67 = Up/down function enable
	TS71 = Platform up
	TS72 = Platform down

REV B

Ground Controls Wiring Diagram (from serial number 41200 to 41829)

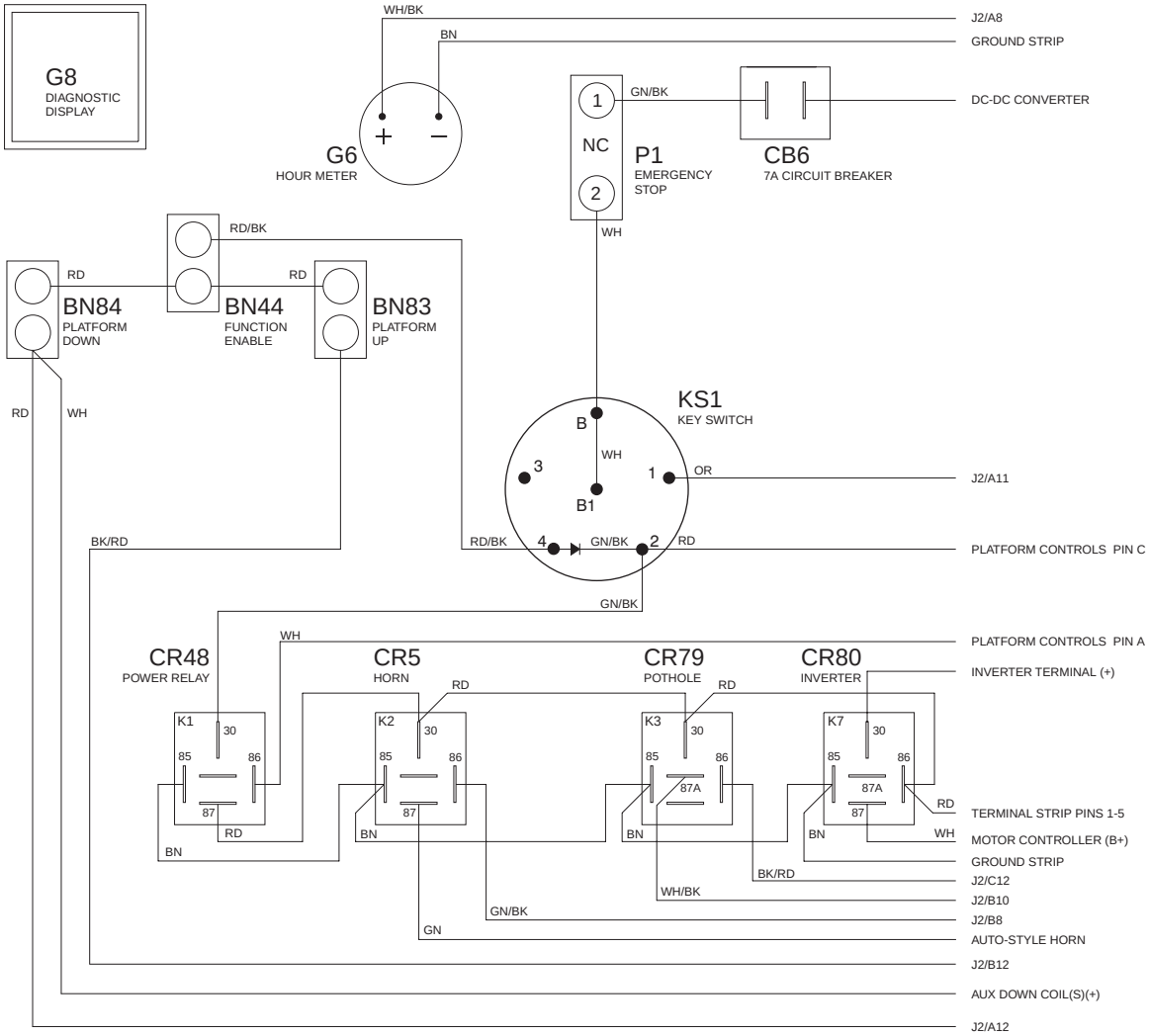


ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = Function enable up/down BN83 = Platform up BN84 = Platform down
CB	7 amp circuit breaker
CR	Control relay
	CR5 = Horn (option) CR48 = Power CR79 = Pothole CR80 = Inverter
G	Gauge
	G6 = Hour meter G8 = Diagnostic display
KS1	Key switch
P1	Emergency Stop button at ground controls

WIRE COLOR LEGEND	
Color	**Description**
BK/RD	Black / Red
BN	Brown
GN	Green
GN/BK	Green / Black
OR	Orange
RD	Red
RD/BK	Red / Black
WH	White
WH/BK	White / Black

Ground Controls Wiring Diagram (from serial number 41830 to GS6805-43529)

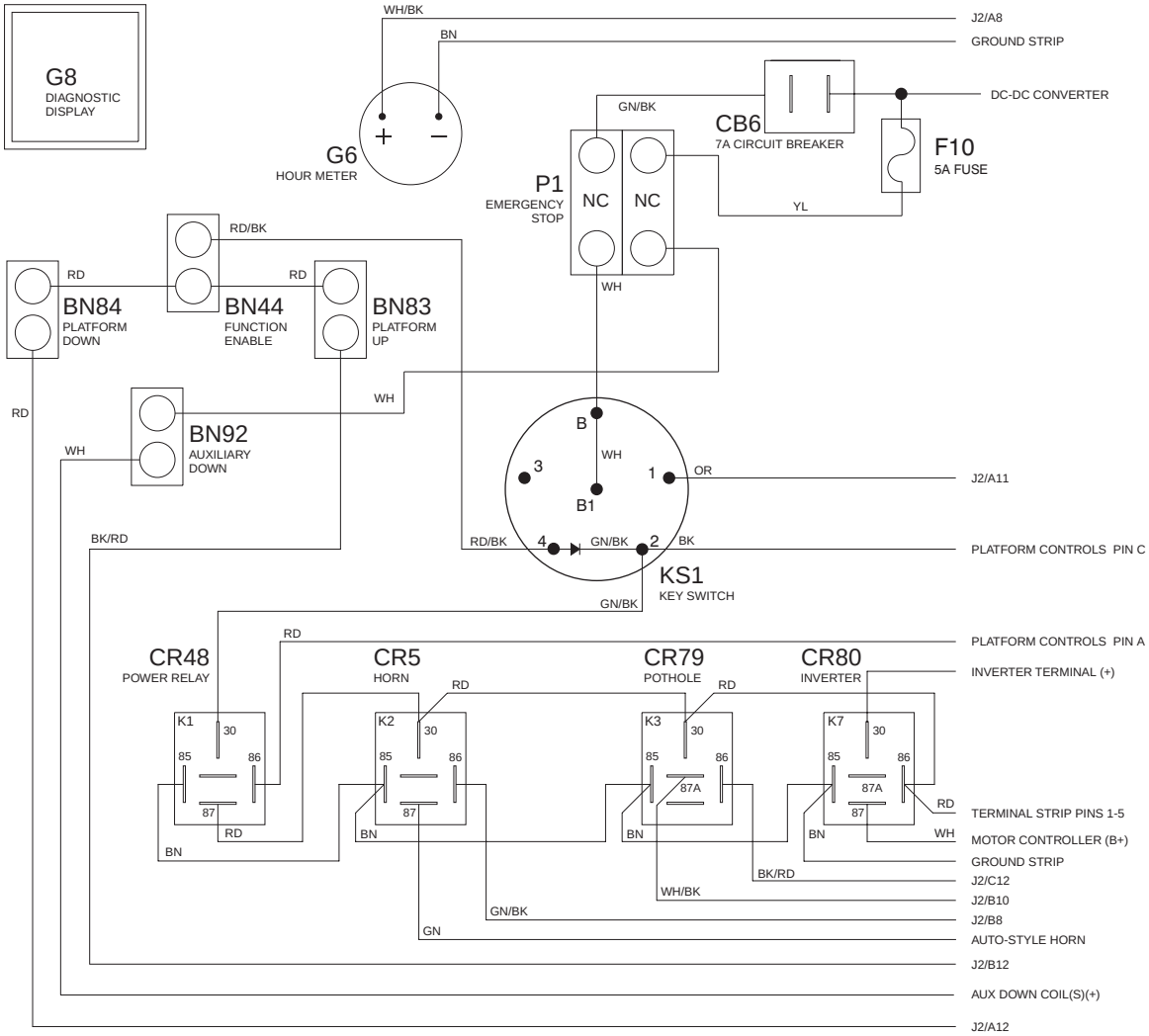
REV B



WIRE COLOR LEGEND	
Color	**Description**
BK/RD	Black / Red
BN	Brown
GN	Green
GN/BK	Green / Black
OR	Orange
RD	Red
RD/BK	Red / Black
WH	White
WH/BK	White / Black

REV A

Ground Controls Wiring Diagram (after serial number GS6805-43529)

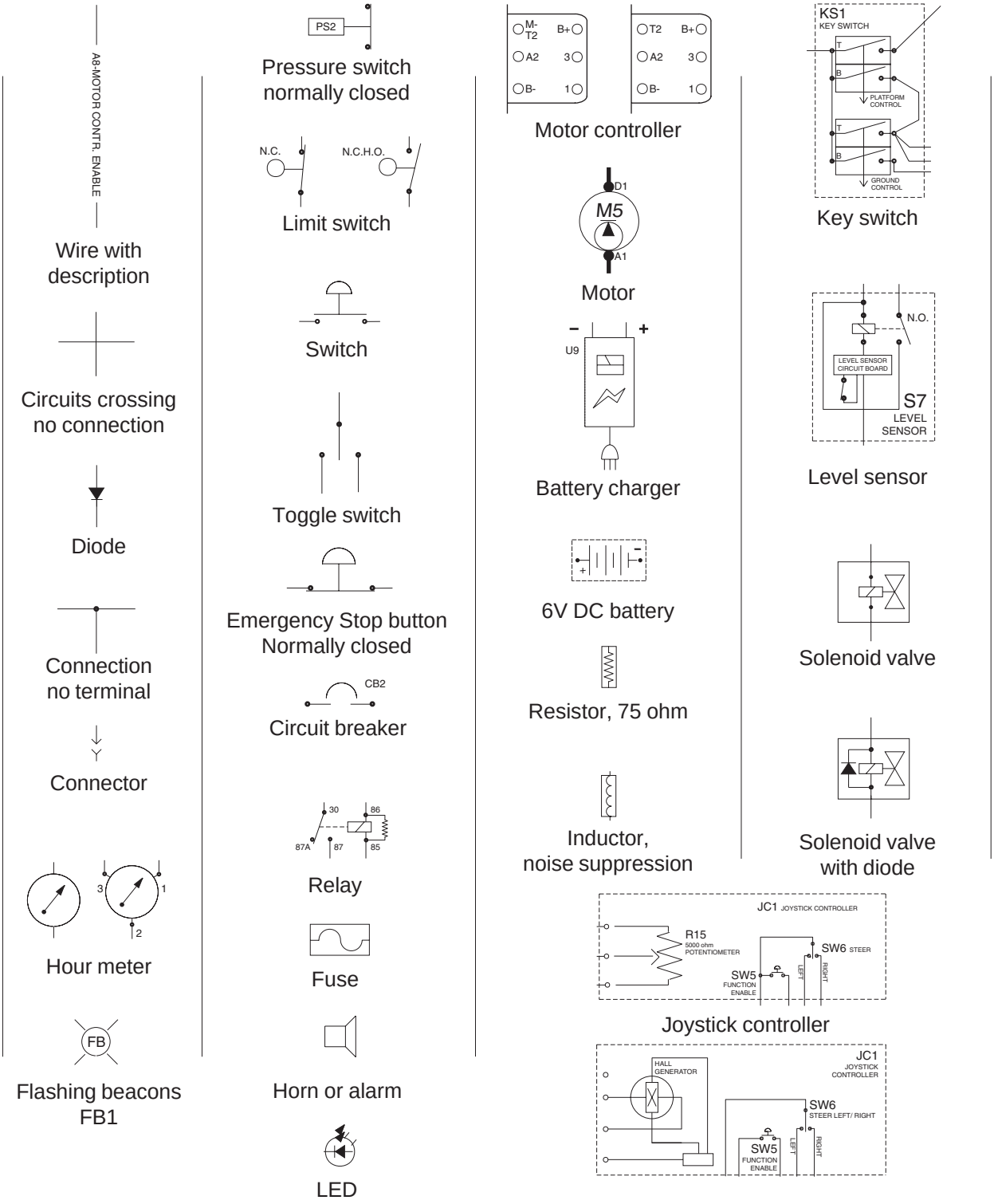


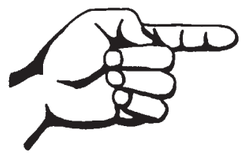
ABBREVIATION LEGEND	
Item	**Description**
BN	Button
	BN12 = Function enable up/down BN83 = Platform up BN84 = Platform down BN92 = Auxiliary down
CB	7 amp circuit breaker
CR	Control relay
	CR5 = Horn (option) CR48 = Power CR79 = Pothole CR80 = Inverter
F	5 Amp fuse
G	Gauge
	G6 = Hour meter G8 = Diagnostic display
KS1	Key switch
P1	Emergency Stop button at ground controls

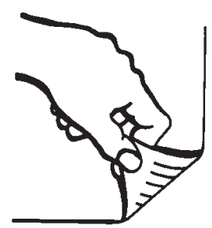
WIRE COLOR LEGEND	
Color	**Description**
BK/RD	Black / Red
BN	Brown
GN	Green
GN/BK	Green / Black
OR	Orange
RD	Red
RD/BK	Red / Black
WH	White
WH/BK	White / Black
YL	Yellow

Electrical Symbols Legend

REV B



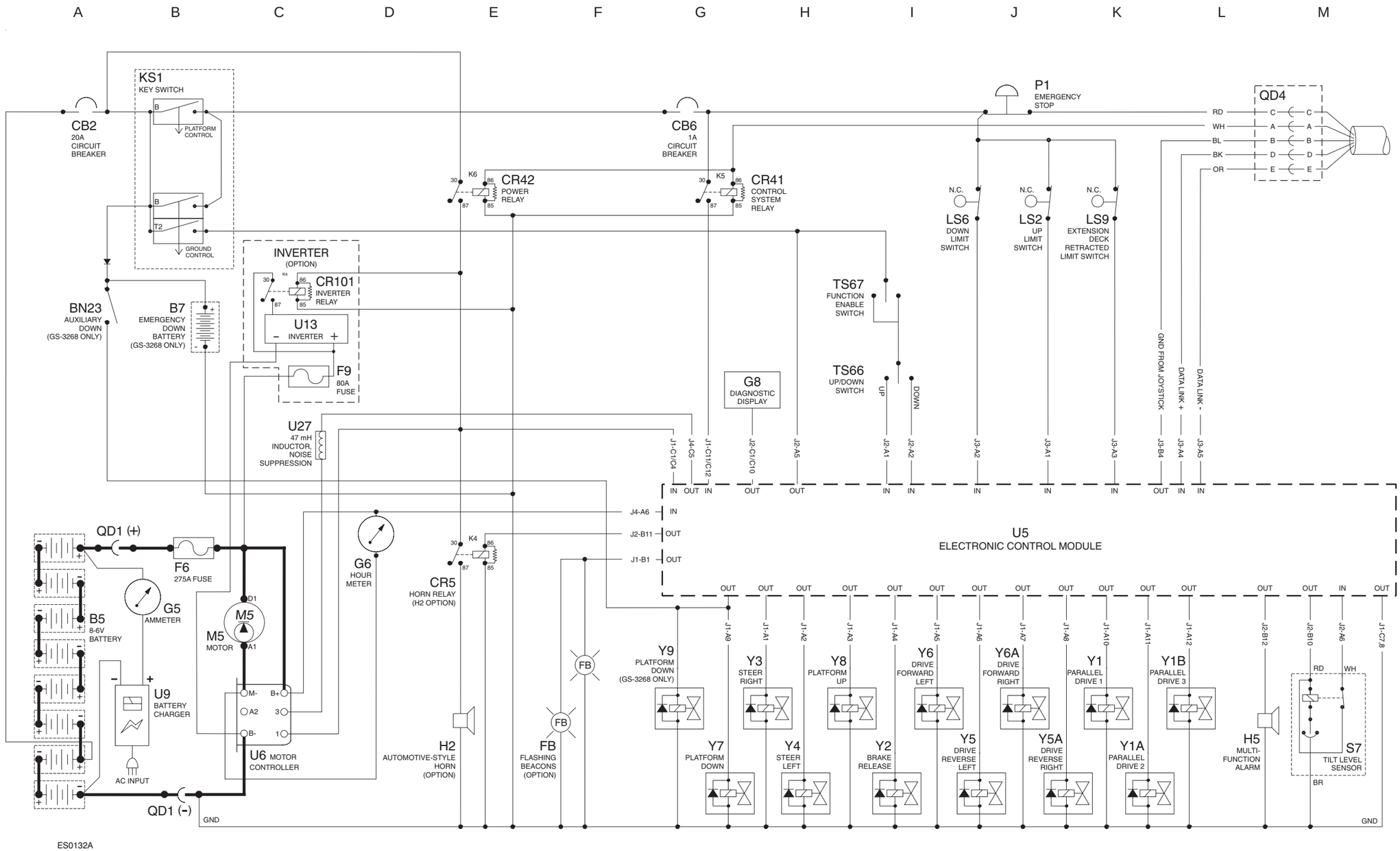




Electrical Schematic

REV C

(from serial number 101 to 21516)

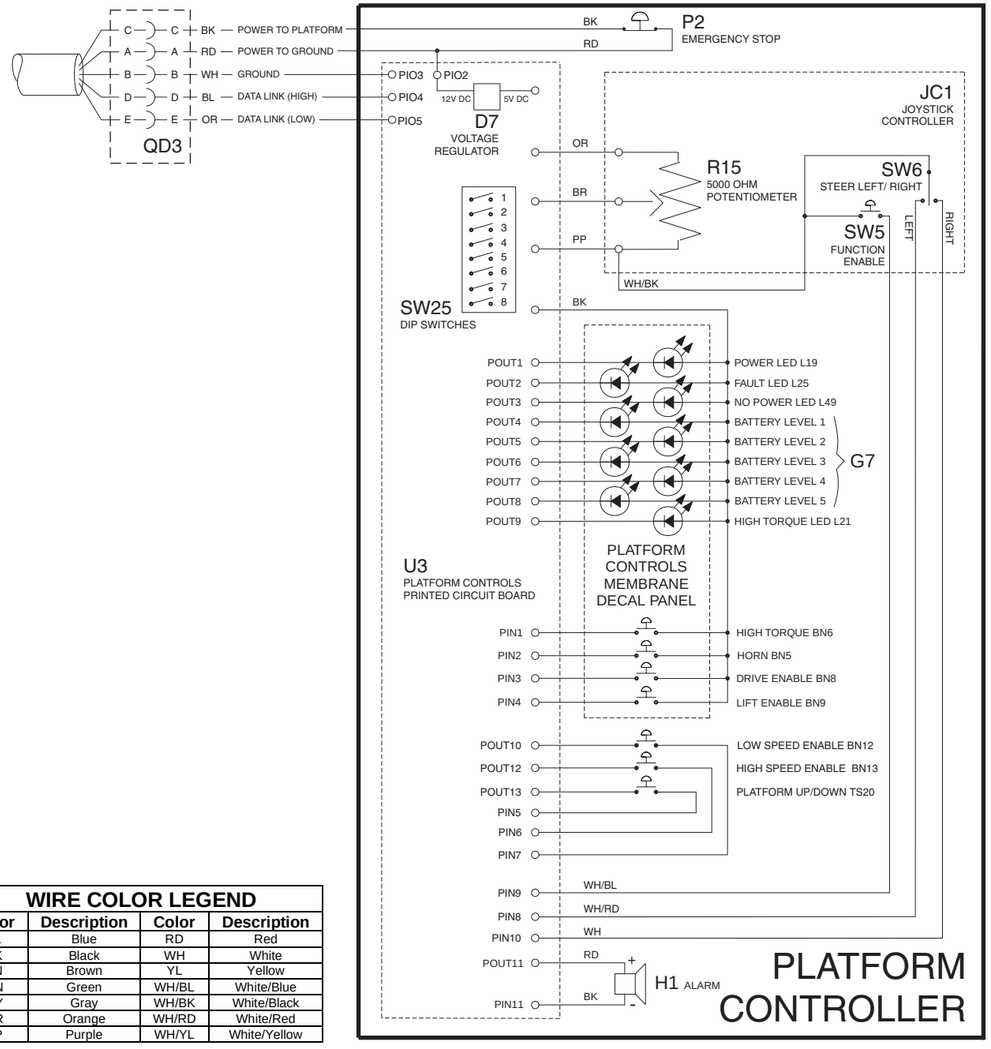


REV C

Electrical Schematic
(from serial number 101 to 21516)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8

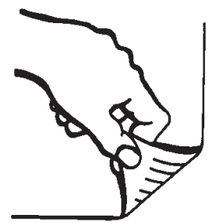


WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
CR	Control relay CR5 = Horn CR41 = Control system CR42 = Power CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
LS	Limit switch LS2 = Platform up LS6 = Platform down LS9 = Extension deck retracted

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y1B = Drive parallel Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y5A = Drive reverse Y6 = Drive forward Y6A = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

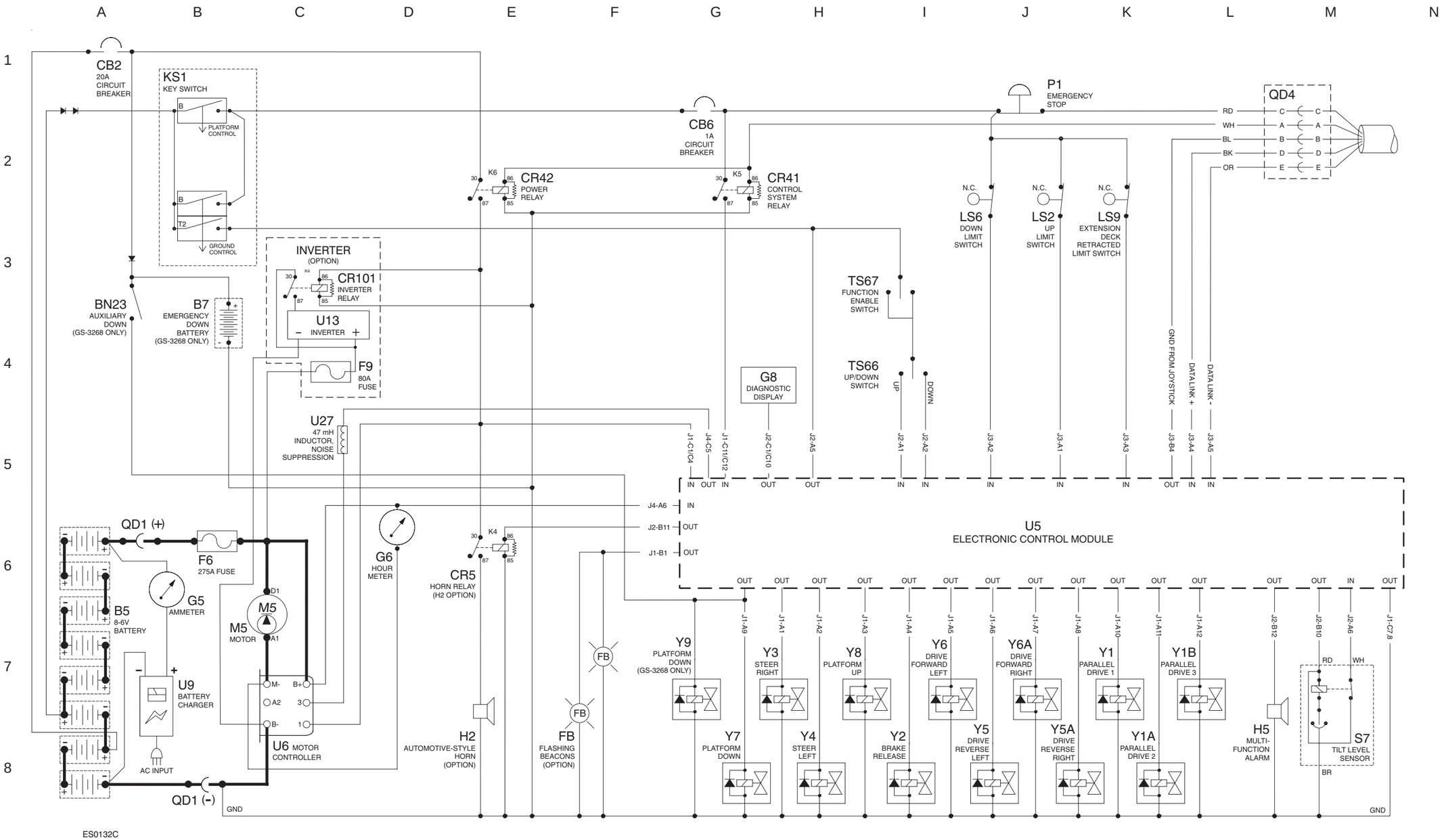
Electrical Schematic
(from serial number 101 to 21516)



Electrical Schematic

REV B

(from serial number 21517 to 21570)



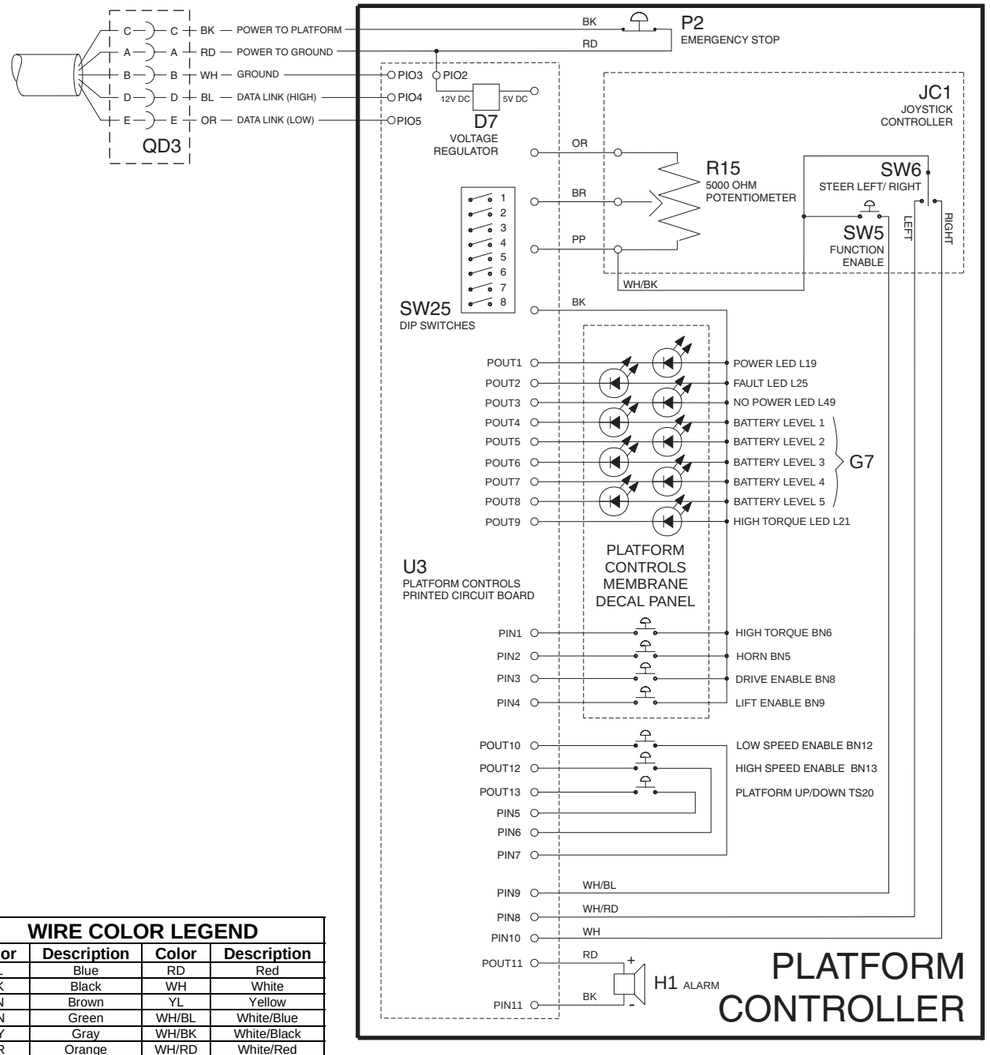
ES0132C

REV B

Electrical Schematic
(from serial number 21517 to 21570)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8



WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
CR	Control relay CR5 = Horn CR41 = Control system CR42 = Power CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
LS	Limit switch LS2 = Platform up LS6 = Platform down LS9 = Extension deck retracted

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
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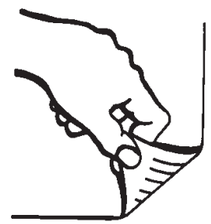
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y1B = Drive parallel Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y5A = Drive reverse Y6 = Drive forward Y6A = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

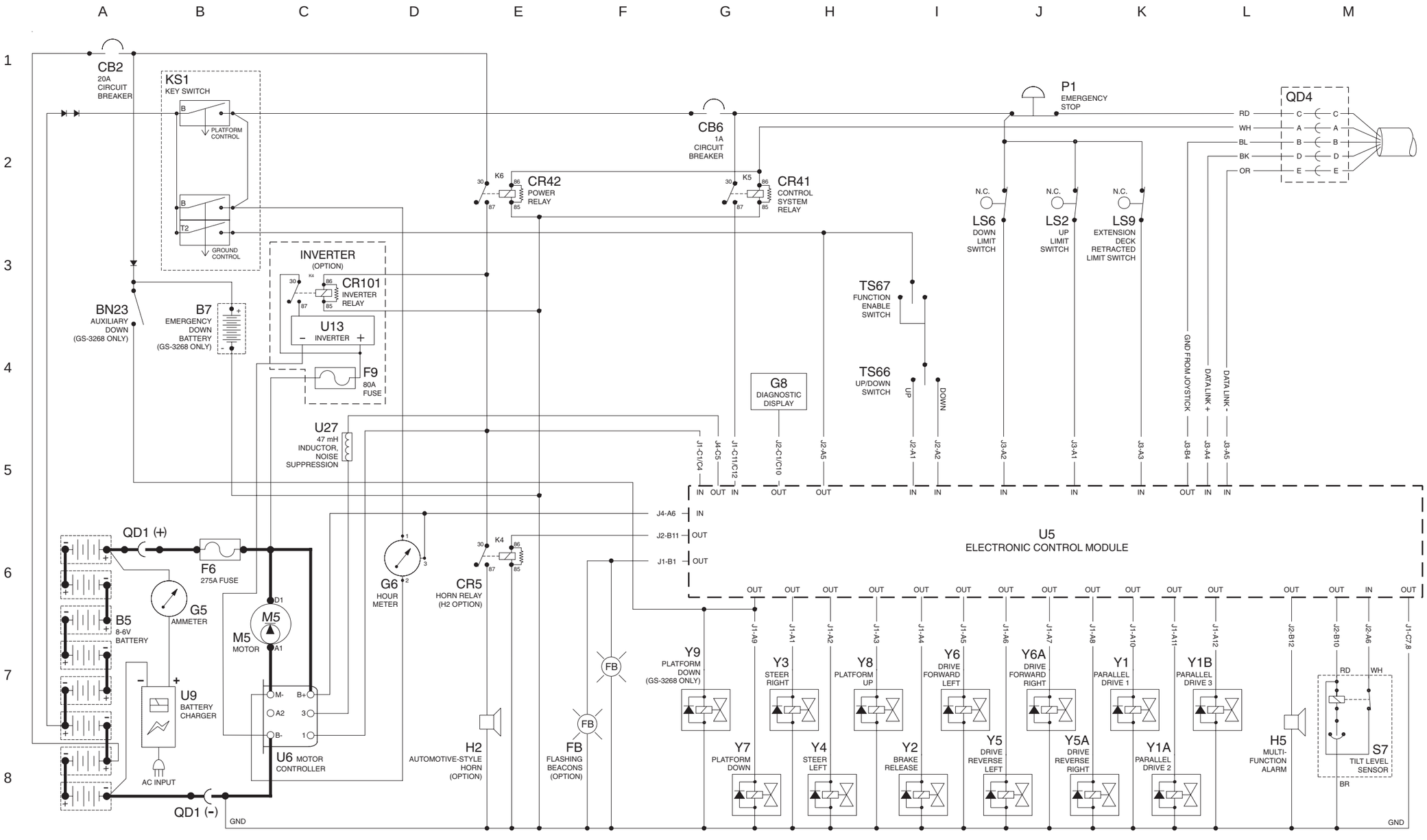
Electrical Schematic
(from serial number 21517 to 21570)



Electrical Schematic

REV B

(from serial number 21571 to 26562)

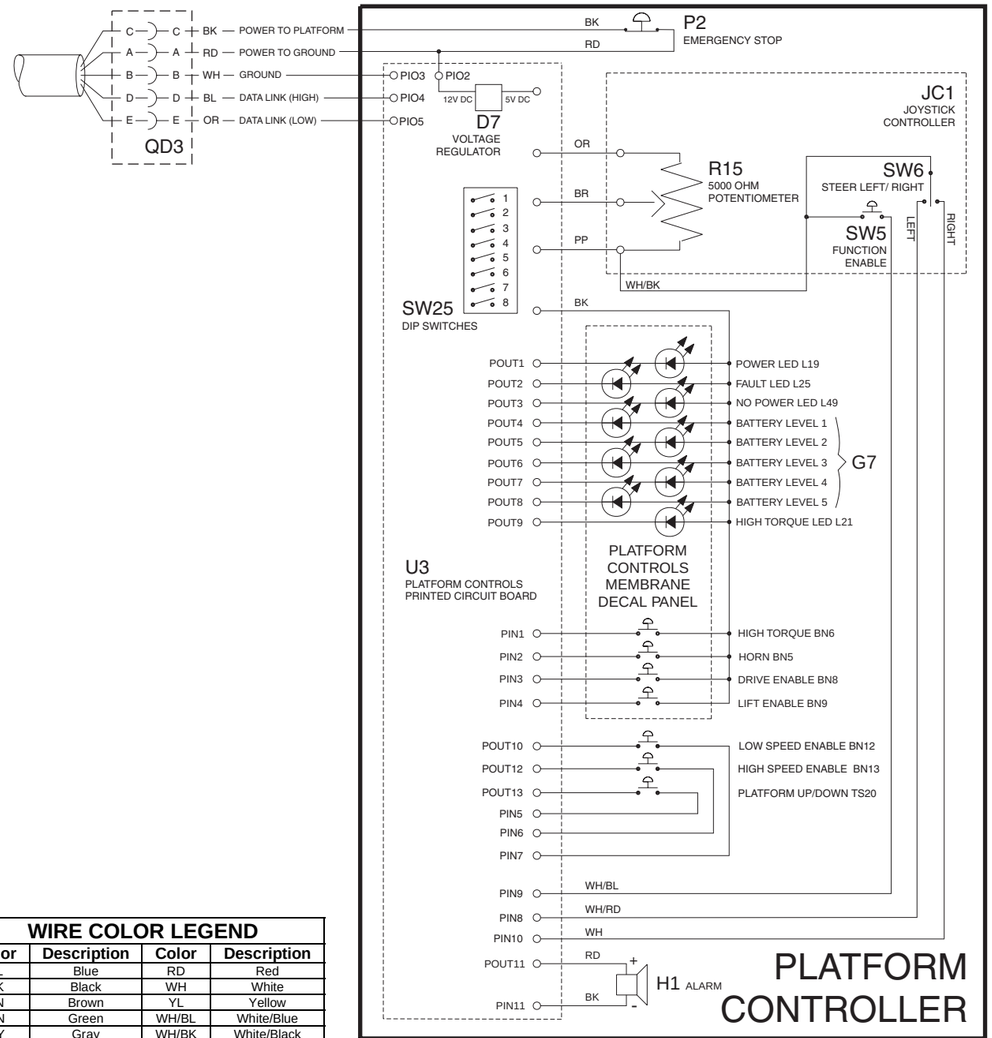


REV B

Electrical Schematic
(from serial number 21571 to 26562)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8



WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
CR	Control relay CR5 = Horn CR41 = Control system CR42 = Power CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
LS	Limit switch LS2 = Platform up LS6 = Platform down LS9 = Extension deck retracted

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
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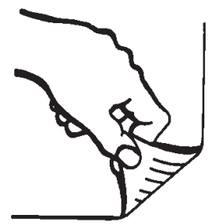
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y1B = Drive parallel Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y5A = Drive reverse Y6 = Drive forward Y6A = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

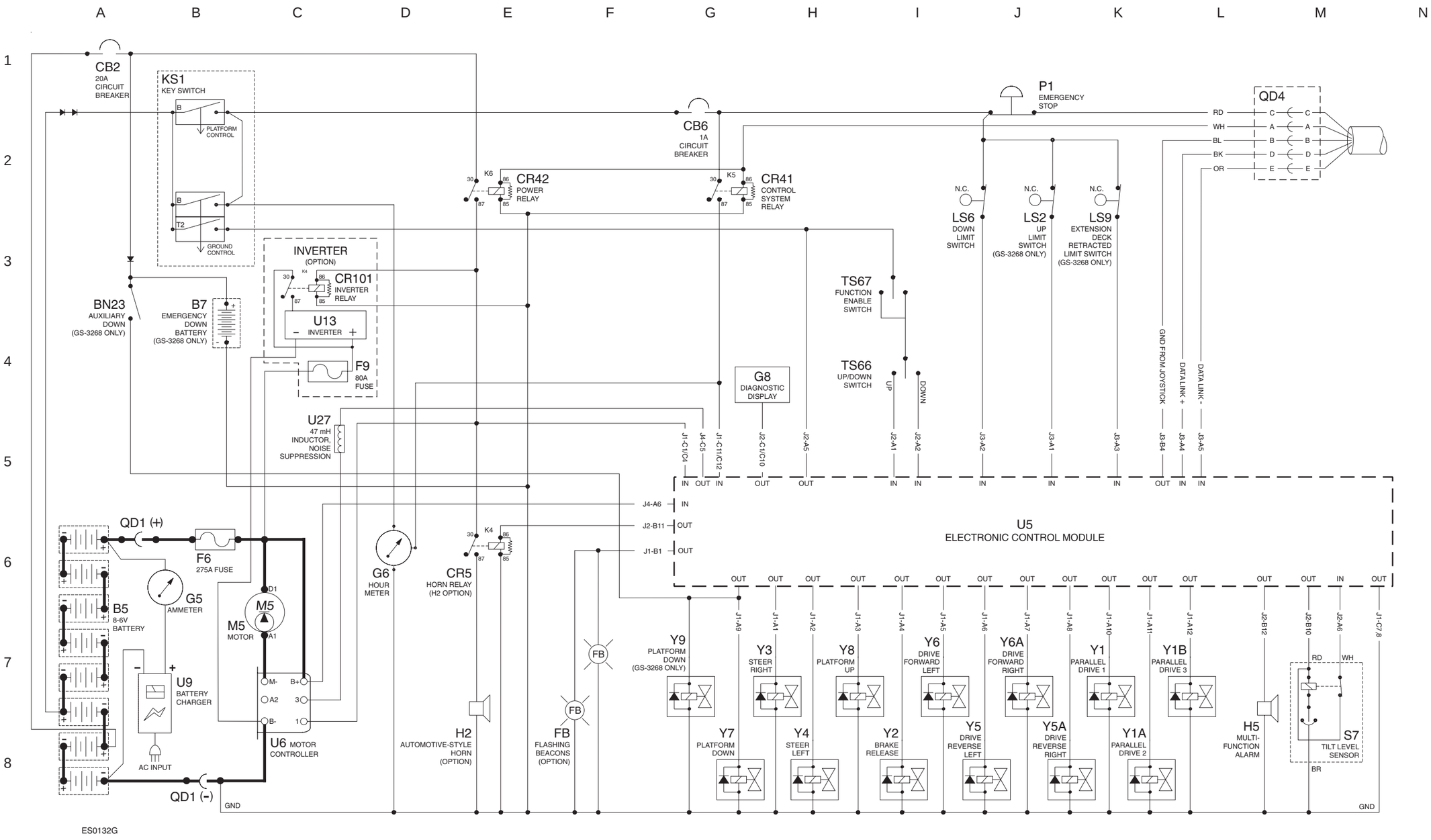
Electrical Schematic
(from serial number 21571 to 26562)



Electrical Schematic

REV B

(from serial number 26563 to 28475)

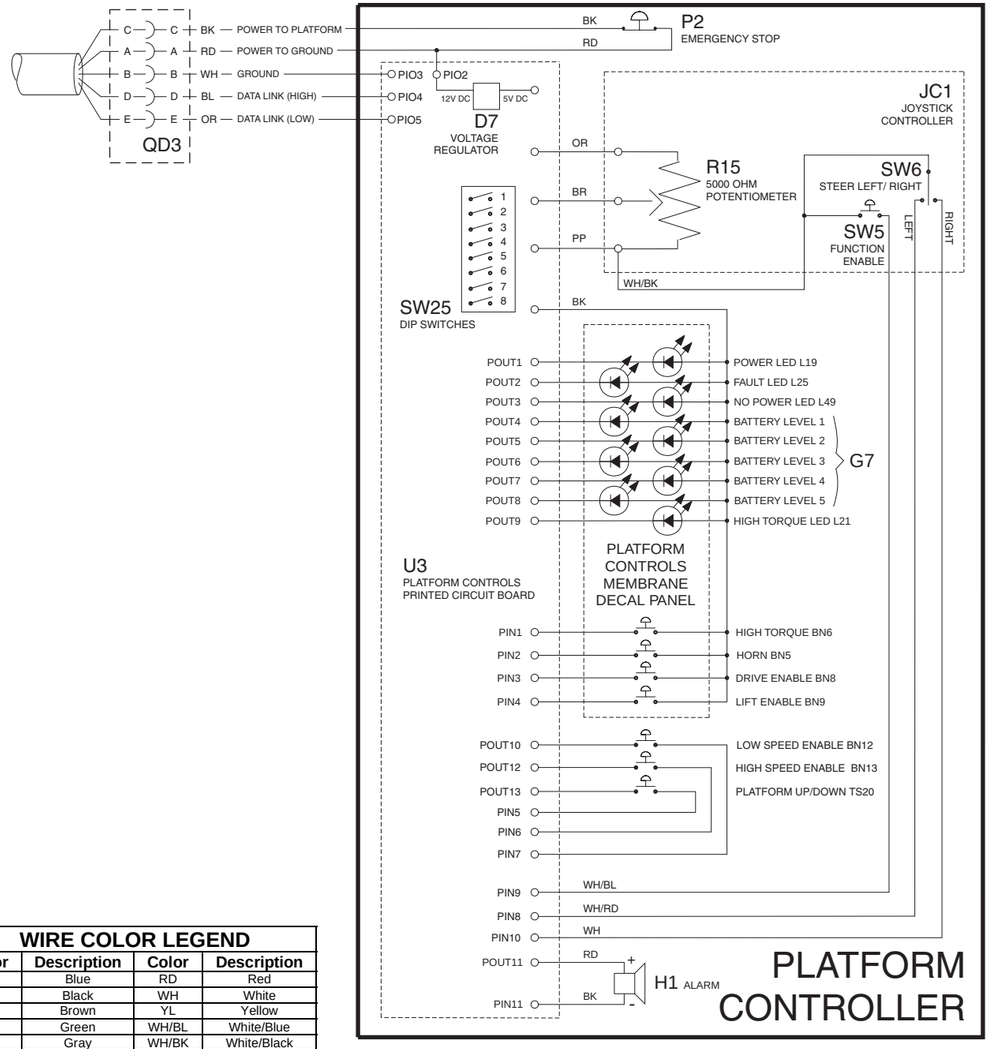


REV B

Electrical Schematic
(from serial number 26563 to 28475)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8

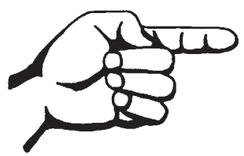


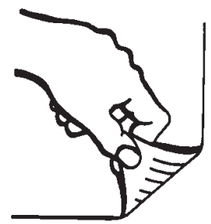
WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
CR	Control relay CR5 = Horn CR41 = Control system CR42 = Power CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
LS	Limit switch LS2 = Platform up LS6 = Platform down LS9 = Extension deck retracted

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y1B = Drive parallel Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y5A = Drive reverse Y6 = Drive forward Y6A = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

Electrical Schematic
(from serial number 26563 to 28475)

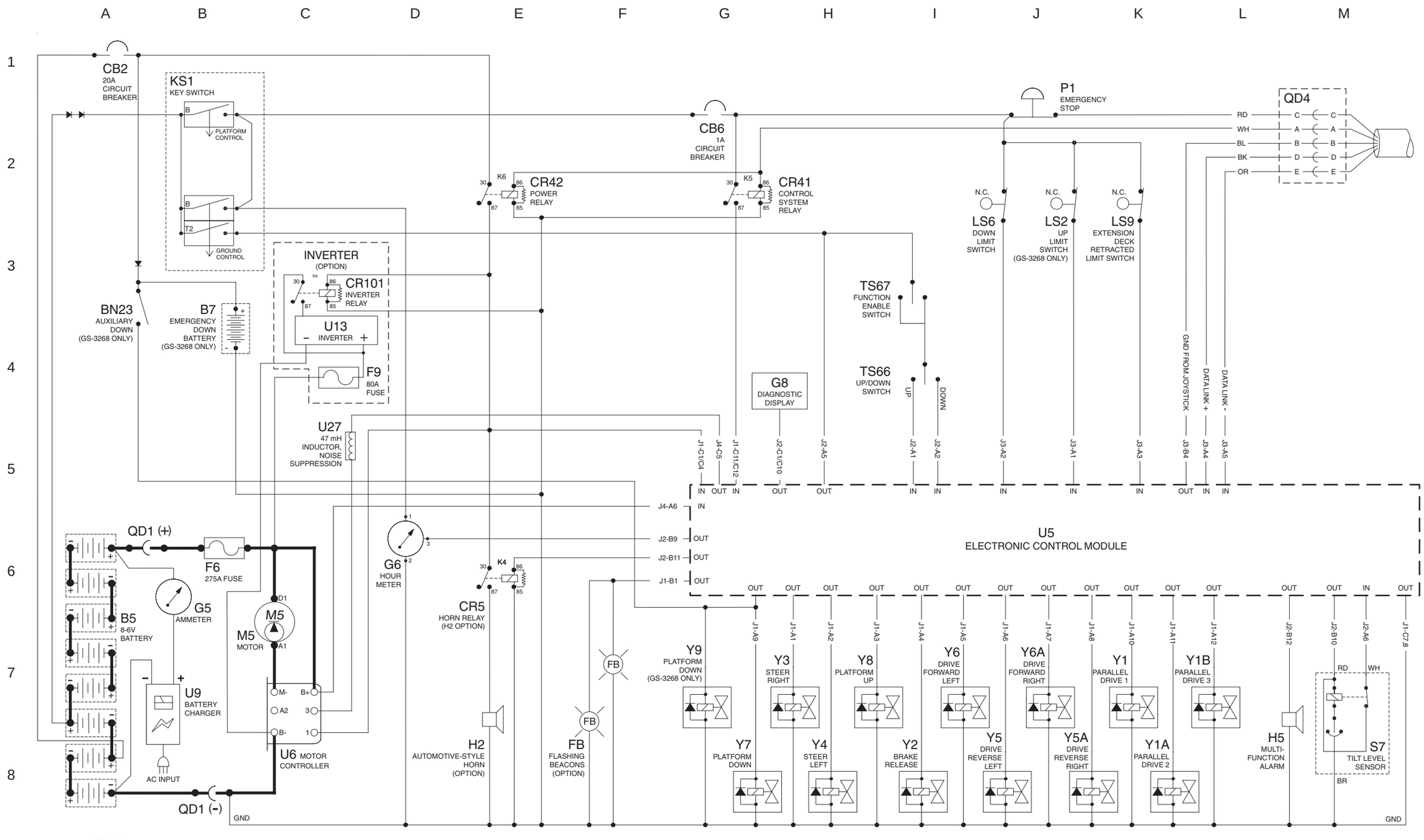




Electrical Schematic

REV B

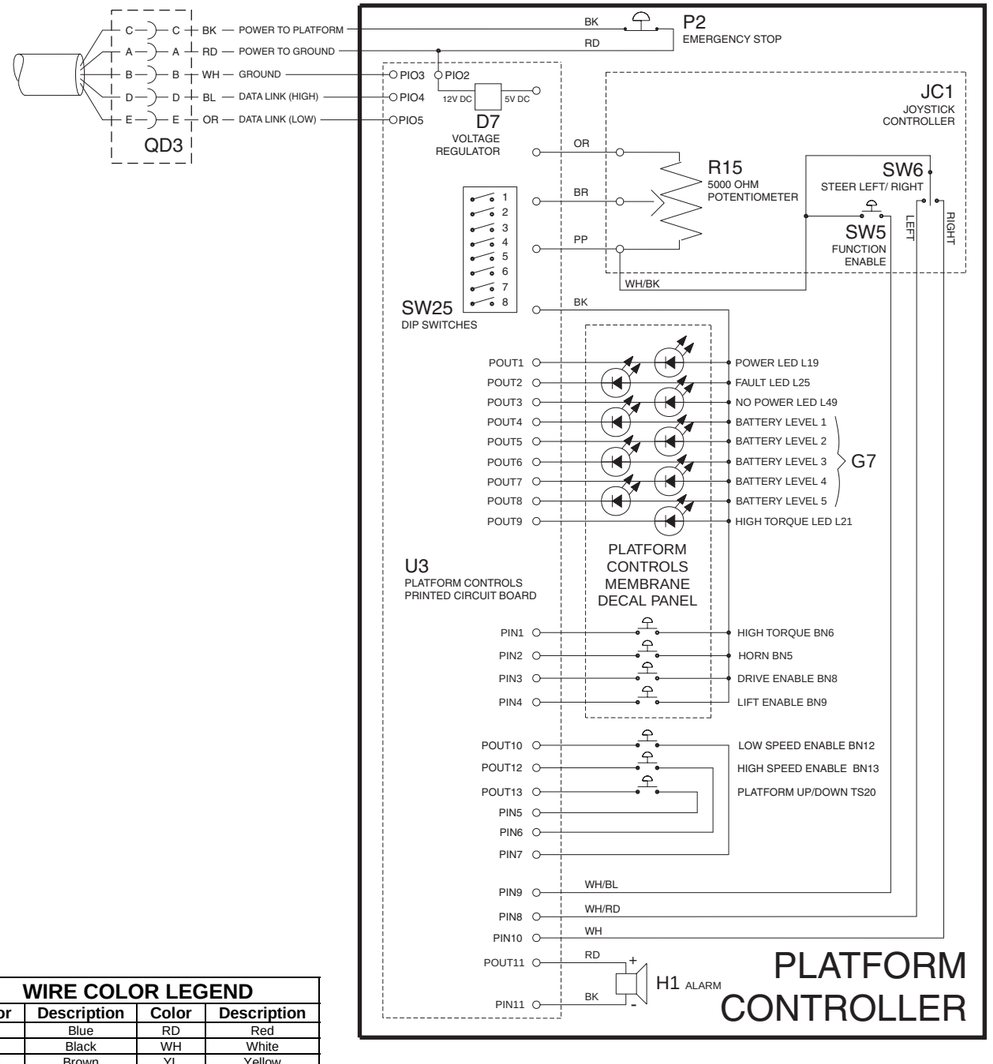
(from serial number 28476 to 33850)



REV B

Electrical Schematic
(from serial number 28476 to 33850)

N M L K J I H G F E D C B A



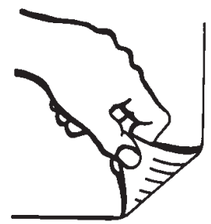
WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
CR	Control relay CR5 = Horn CR41 = Control system CR42 = Power CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
LS	Limit switch LS2 = Platform up LS6 = Platform down LS9 = Extension deck retracted

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y1B = Drive parallel Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y5A = Drive reverse Y6 = Drive forward Y6A = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

1 2 3 4 5 6 7 8

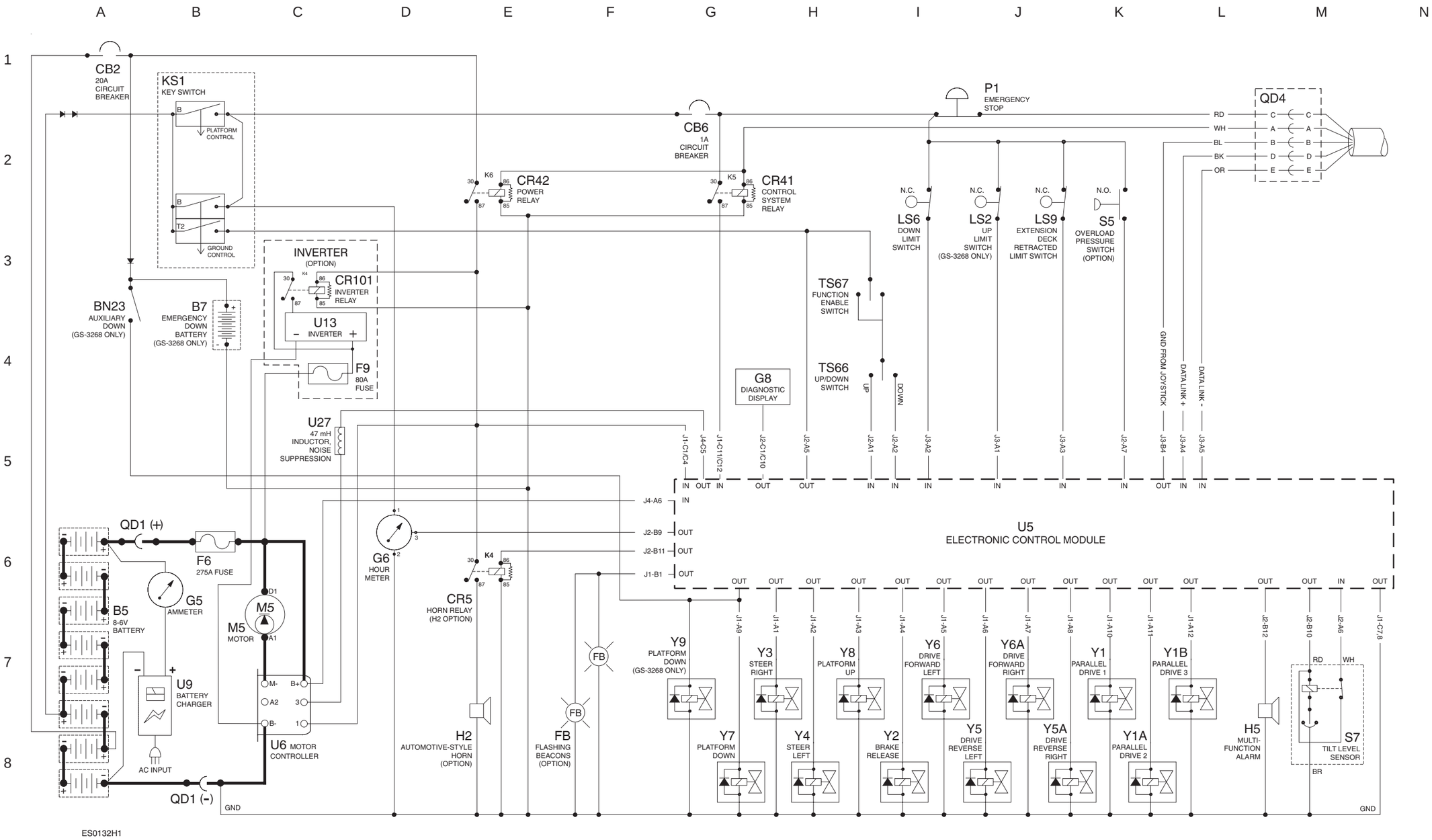
Electrical Schematic
(from serial number 28476 to 33850)



Electrical Schematic

REV B

(from serial number 33851 to 38464)

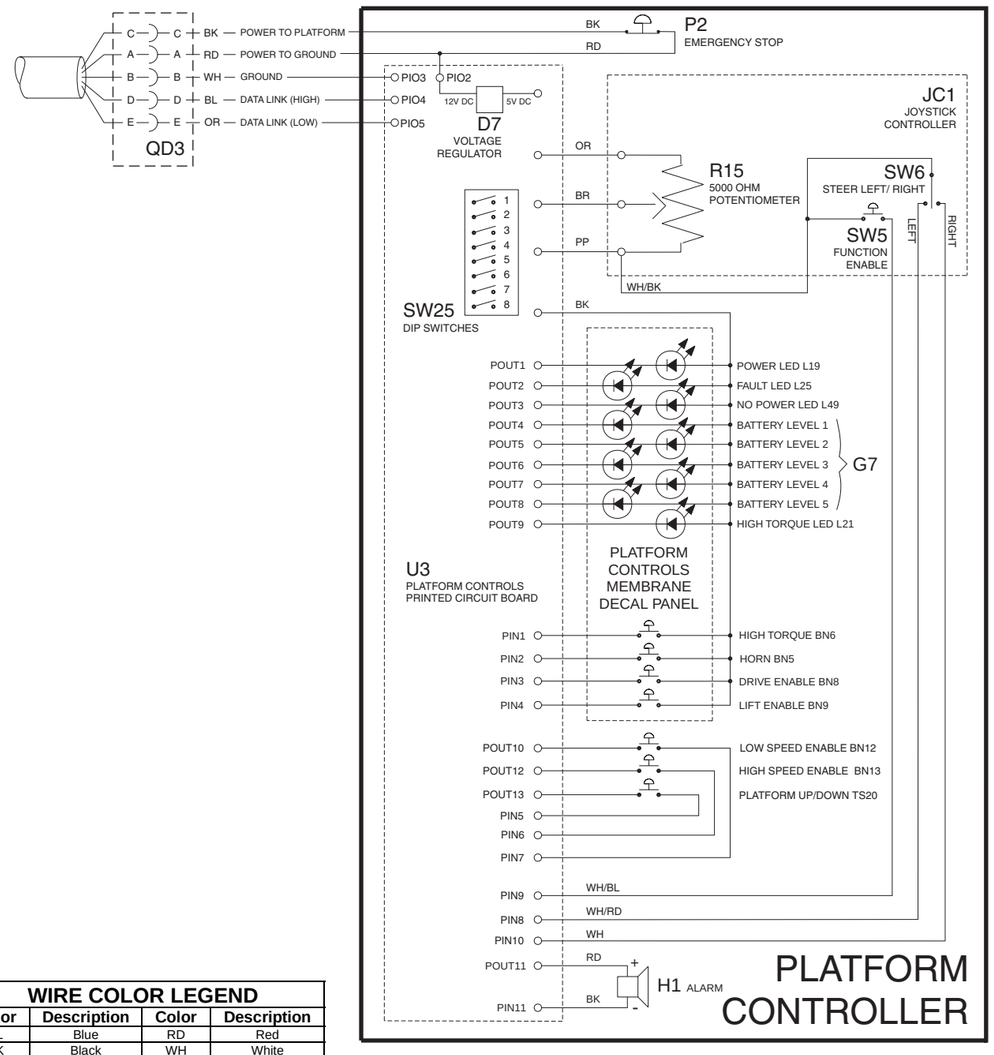


REV B

Electrical Schematic
(from serial number 33851 to 38464)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8



WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
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D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
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L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
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ABBREVIATION LEGEND	
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N.O.	Normally open
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PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
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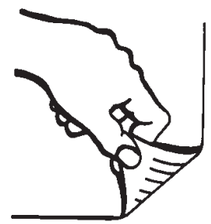
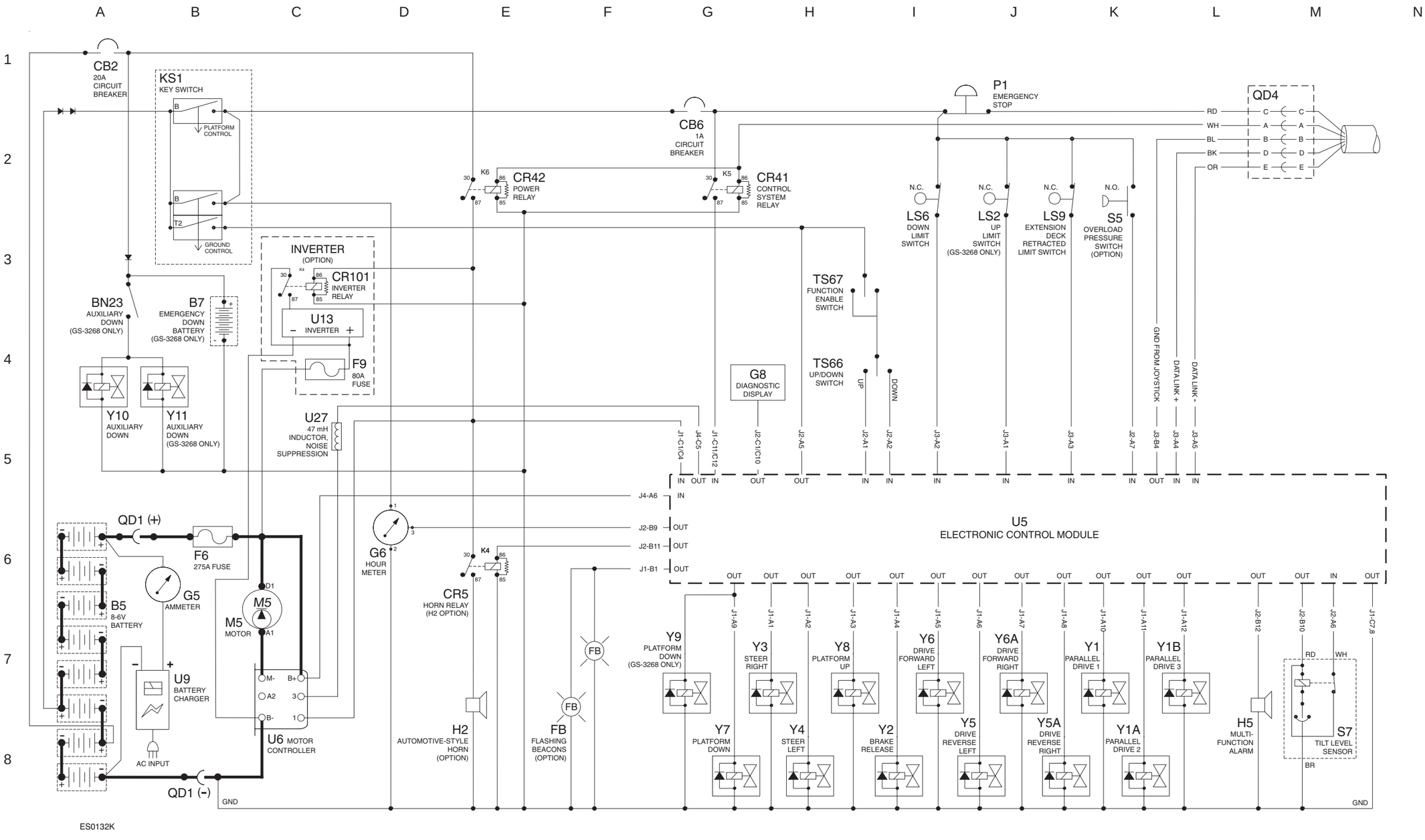
Electrical Schematic
(from serial number 33851 to 38464)



Electrical Schematic

REV B

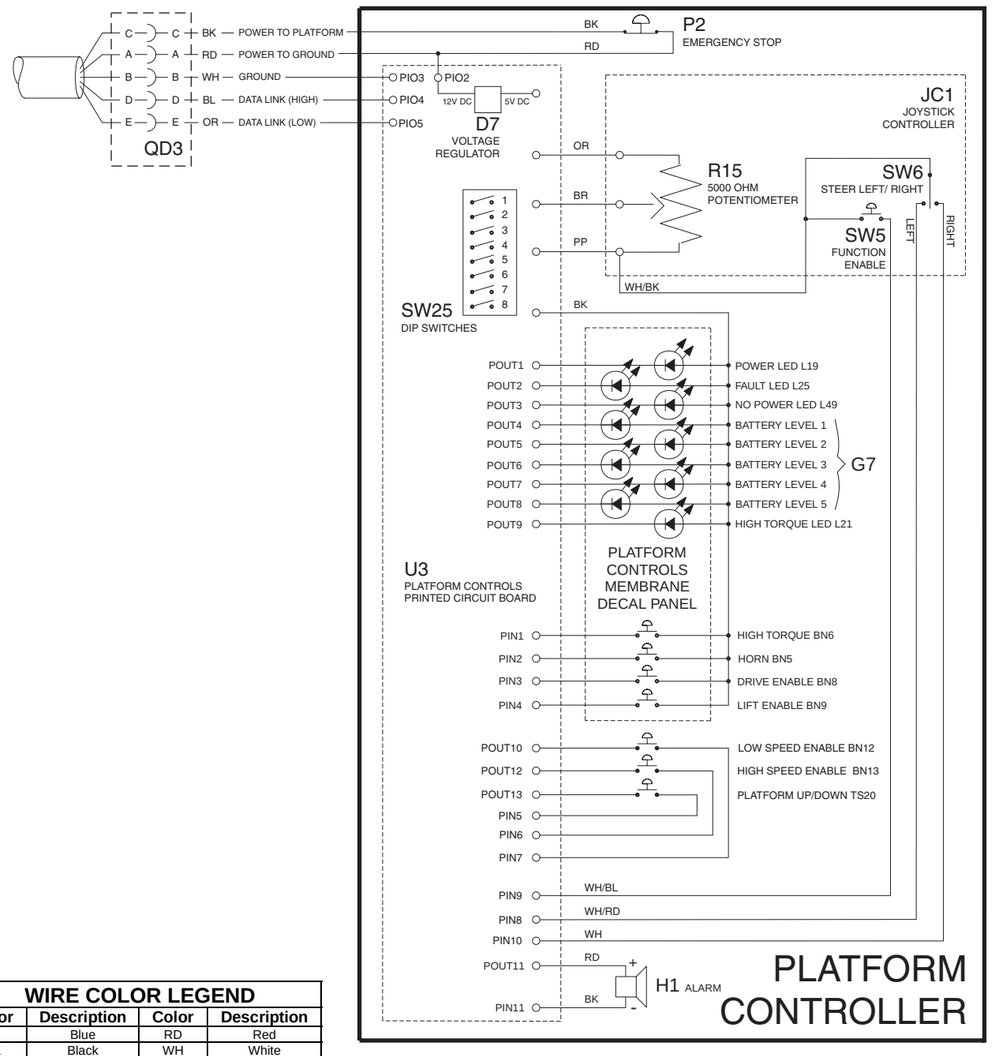
(from serial number 38465 to 40463)



REV B

Electrical Schematic
(from serial number 38465 to 40463)

N M L K J I H G F E D C B A



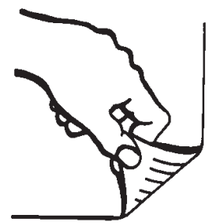
WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
CR	Control relay CR5 = Horn CR41 = Control system CR42 = Power CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
LS	Limit switch LS2 = Platform up LS6 = Platform down LS9 = Extension deck retracted

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y1B = Drive parallel Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y5A = Drive reverse Y6 = Drive forward Y6A = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

1 2 3 4 5 6 7 8

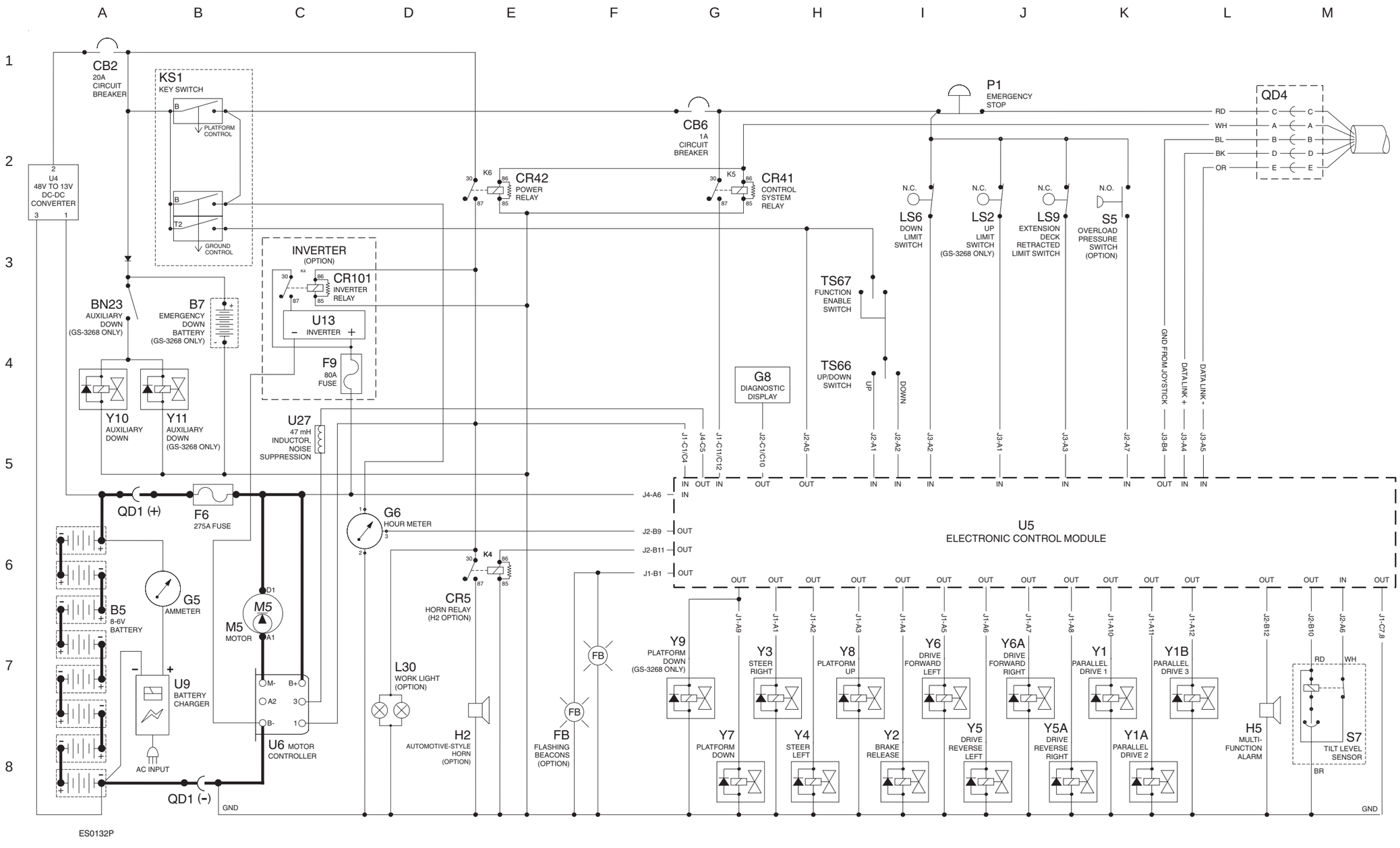
Electrical Schematic
(from serial number 38465 to 40463)



Electrical Schematic

REV B

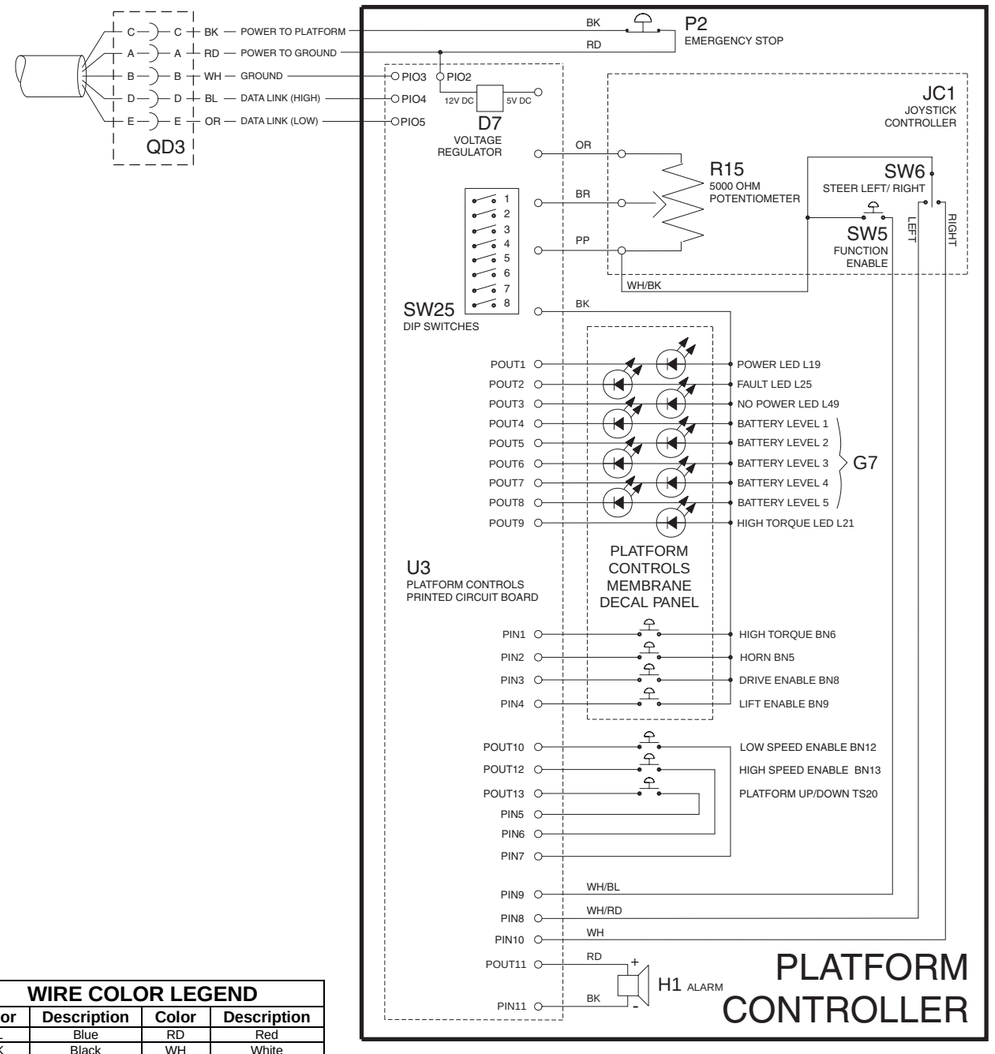
(from serial number 40464 to 41199)



REV B

Electrical Schematic
(from serial number 40464 to 41199)

N M L K J I H G F E D C B A

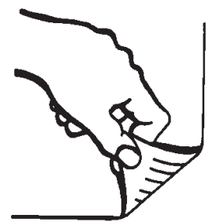


WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	RD	Red
BK	Black	WH	White
BN	Brown	YL	Yellow
GN	Green	WH/BL	White/Blue
GY	Gray	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
PP	Purple	WH/YL	White/Yellow

ABBREVIATION LEGEND	
Item	**Description**
B	Battery B5 = Main power B7 = Auxiliary platform down
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN12 = High speed lift enable BN13 = Low speed lift enable BN23 = Auxiliary platform lowering BN44 = Function enable CR48 = Power to U5 BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199) CB6 = 1 amp
CR	Control relay CR5 = Horn CR41 = Control system CR42 = Power CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L19 = Power L21 = High torque selected L25 = Fault L49 = No power
LS	Limit switch LS2 = Platform up LS6 = Platform down LS9 = Extension deck retracted

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
TS	Toggle switch TS66 = Platform up/down TS67 = Function enable
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger U27 = 47 mH inductor, noise suppression
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y1B = Drive parallel Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y5A = Drive reverse Y6 = Drive forward Y6A = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

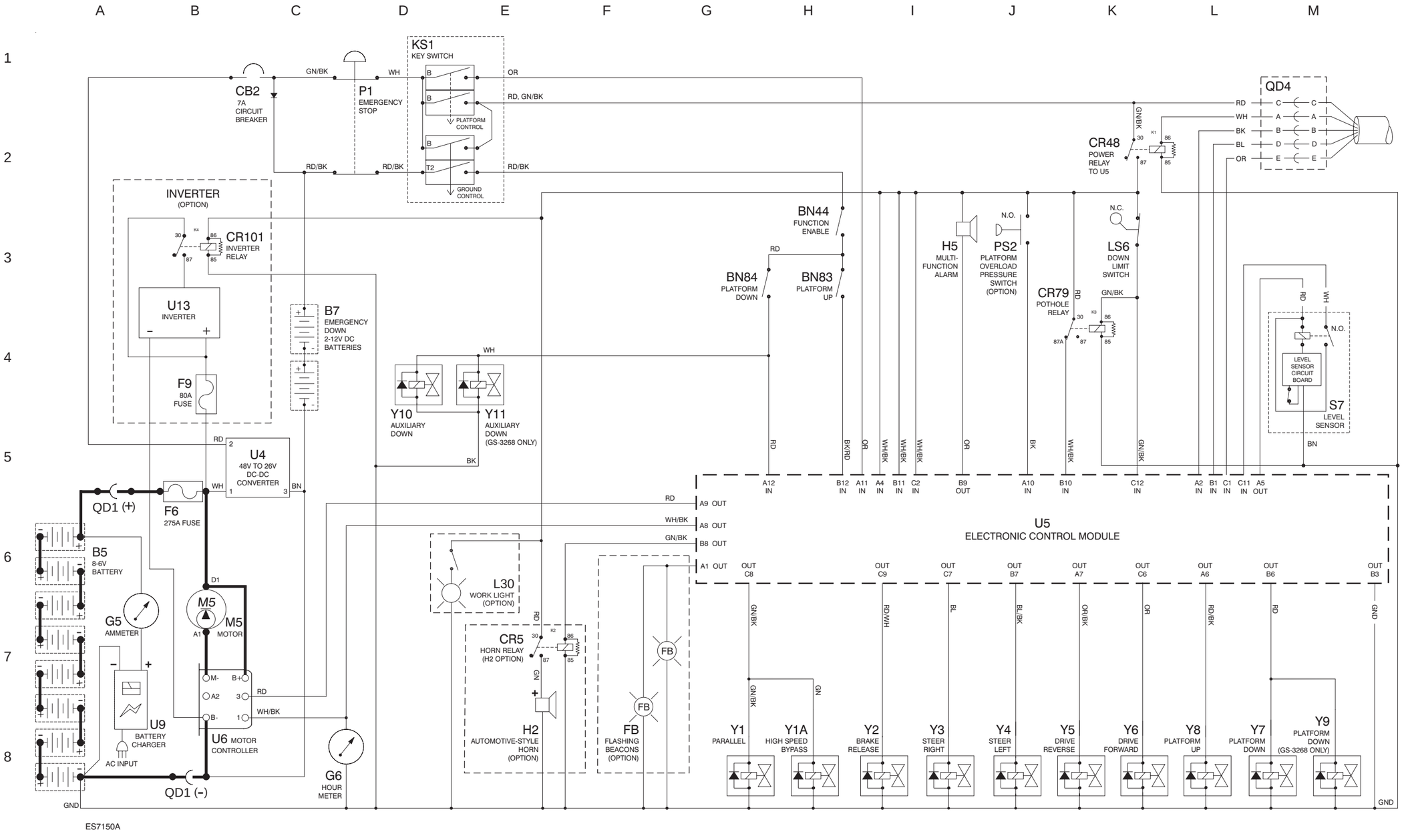
Electrical Schematic
(from serial number 40464 to 41199)



Electrical Schematic

REV C

(from serial number 41200 to 41803)

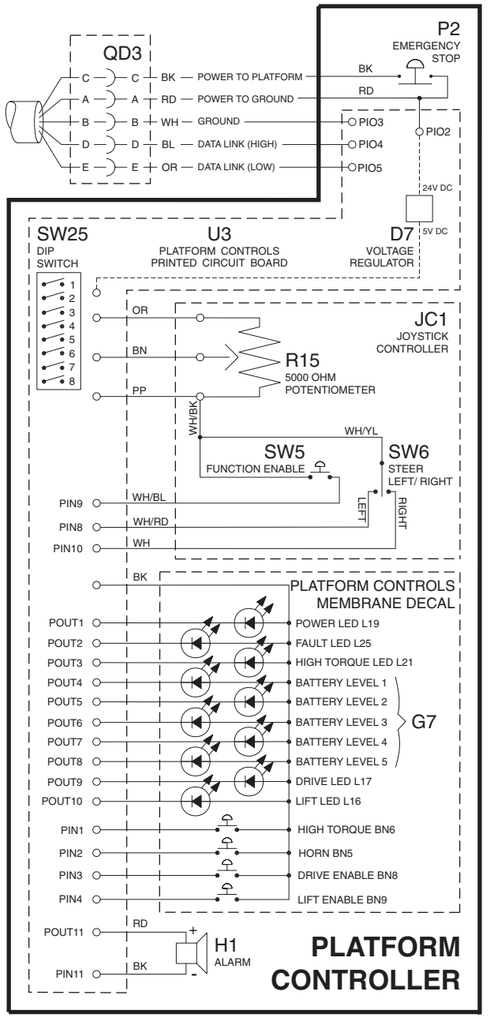


REV C

Electrical Schematic
(from serial number 41200 to 41803)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8

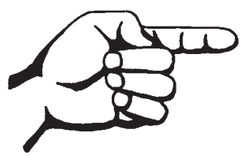


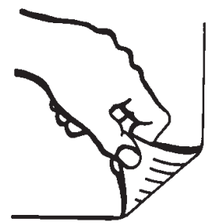
ABBREVIATION LEGEND	
Item	**Description**
B	Battery
	B5 = Main power
	B7 = Auxiliary platform down
BN	Button
	BN5 = Horn
	BN6 = High torque
	BN8 = Drive enable
	BN9 = Lift enable
	BN12 = High speed lift enable
	BN13 = Low speed lift enable
	BN44 = Function enable
	BN83 = Platform up
	BN84 = Platform down
CB	Circuit breaker
	CB2 = 20 amp (before serial number 41200)
	CB2 = 7 amp (after serial number 41199)
CR	Control relay
	CR5 = Horn
	CR48 = Power
	CR79 = Pothole
D7	Voltage regulator – 12V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge
	G5 = Ammeter
	G6 = Hour meter
	G7 = Battery charge indicator
GND	Ground
H	Horn or alarm
	H1 = Horn
	H2 = Automotive-style horn
	H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light
	L19 = Power
	L21 = High torque selected
	L25 = Fault
	L30 = Work light (option)
	L49 = No power
LS6	Limit switch platform down

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power
	P1 = Emergency stop button at ground controls
	P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect
	QD1 = Battery quick disconnect
	QD3 = Control cable to ground
	QD4 = Control cable to platform
R15	5000 ohm potentiometer
S7	Tilt level sensor
SW	Switch
	SW5 = Function enable
	SW6 = Steer left/right
	SW25 = DIP switch
TS20	Toggle switch platform up/down
U	Electronic component
	U3 = Encoder printed circuit board
	U4 = Voltage converter
	U5 = Electronic control module
	U6 = Motor controller
	U9 = Battery charger
Y	Valve coil
	Y1 = Drive parallel
	Y1A = Drive parallel (before serial number 41200)
	Y1A = High speed bypass (after s/n 41199)
	Y2 = Brake release
	Y3 = Steer right
	Y4 = Steer left
	Y5 = Drive reverse
	Y6 = Drive forward
	Y7 = Platform down
	Y8 = Platform up
	Y9 = Platform down (GS-3268 only)
	Y10 = Auxiliary platform down (GS-3268 only)
	Y11 = Platform down (GS-3268 only)

WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	PP	Purple
BL/WH	Blue/White	RD	Red
BK	Black	RD/BK	Red/Black
BK/RD	Black/Red	RD/WH	Red/White
BN	Brown	WH	White
GN	Green	WH/BL	White/Blue
GN/BK	Green/Black	WH/BK	White/Black
OR	Orange	WH/RD	White/Red
OR/BK	Orange/Black		

Electrical Schematic
(from serial number 41200 to 41803)

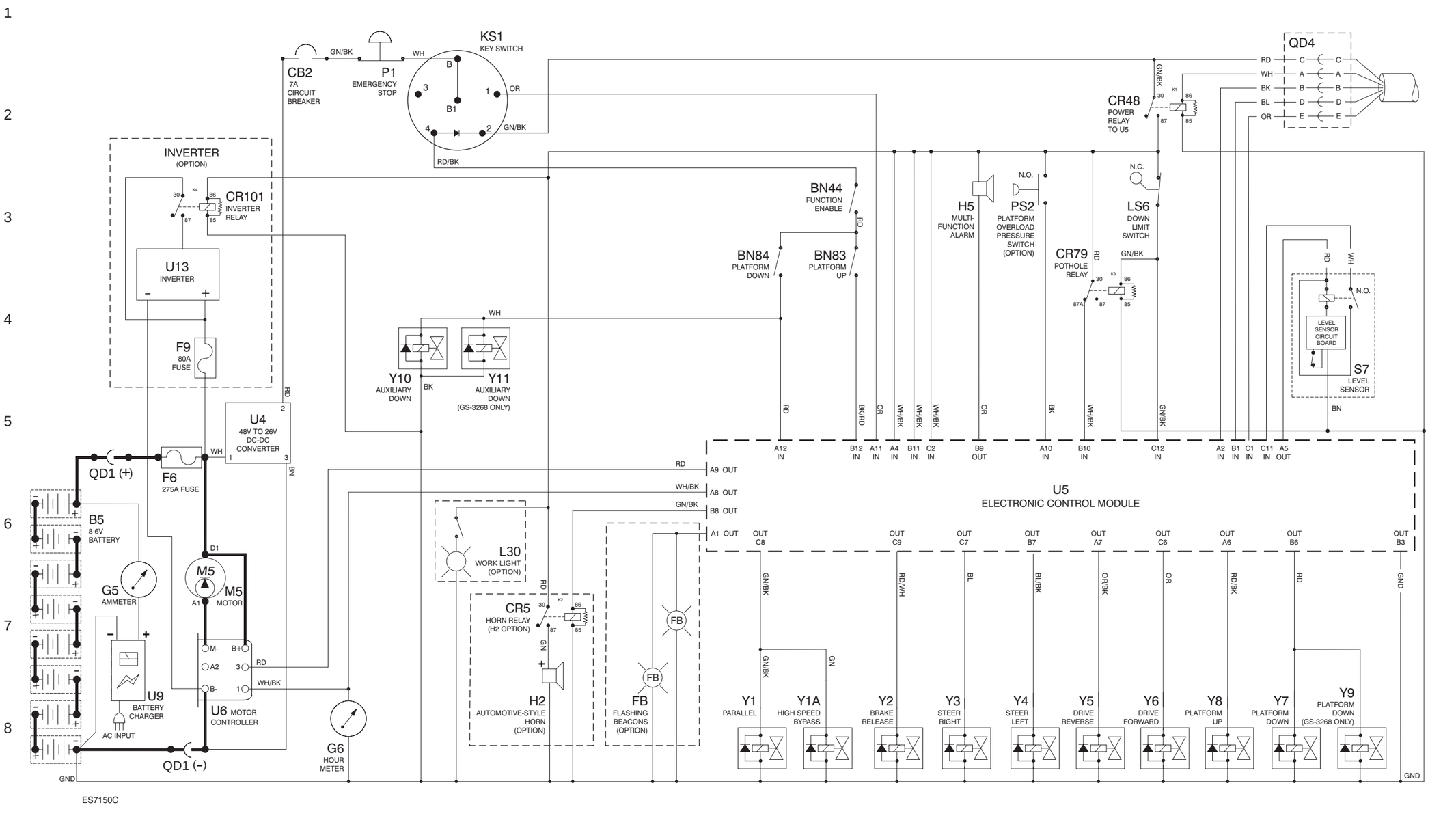




Electrical Schematic

REV B

(from serial number 41804 to GS6804-42449)

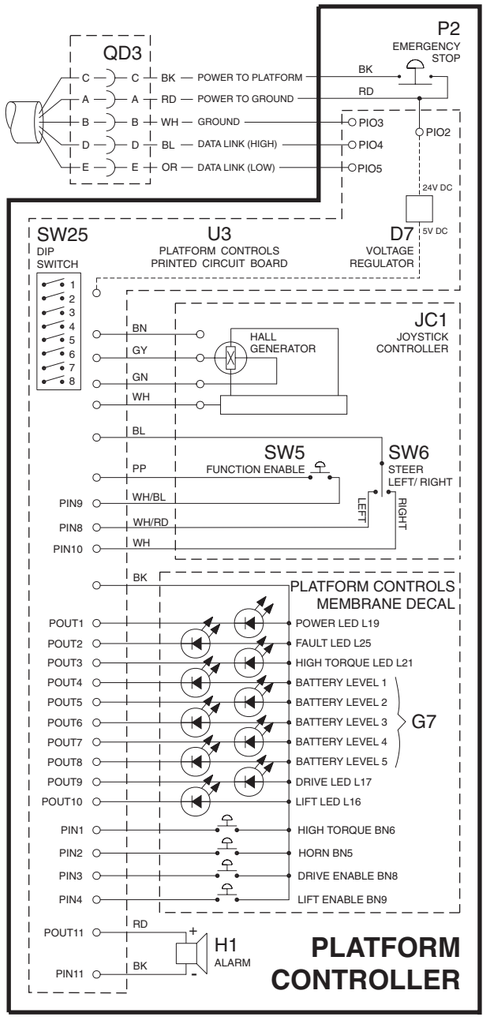


REV B

Electrical Schematic
(from serial number 41804 to GS6804-42449)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8

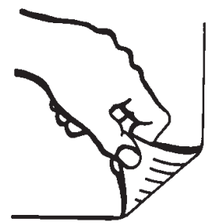


ABBREVIATION LEGEND	
Item	**Description**
B5	Battery Main power
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN44 = Function enable BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199)
CR	Control relay CR5 = Horn CR48 = Power CR79 = Pothole
D7	Voltage regulator – 24V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L16 = Lift L17 = Drive L19 = Power L21 = High torque selected L25 = Fault L30 = Work light (option)
LS6	Limit switch platform down

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y6 = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	OR	Orange
BL/BK	Blue/Black	OR/BK	Orange/Black
BK	Black	PP	Purple
BK/RD	Black/Red	RD	Red
BN	Brown	RD/BK	Red/Black
GN	Green	RD/WH	Red/White
GN/BK	Green/Black	WH	White
GY	Gray	WH/BK	White/Black

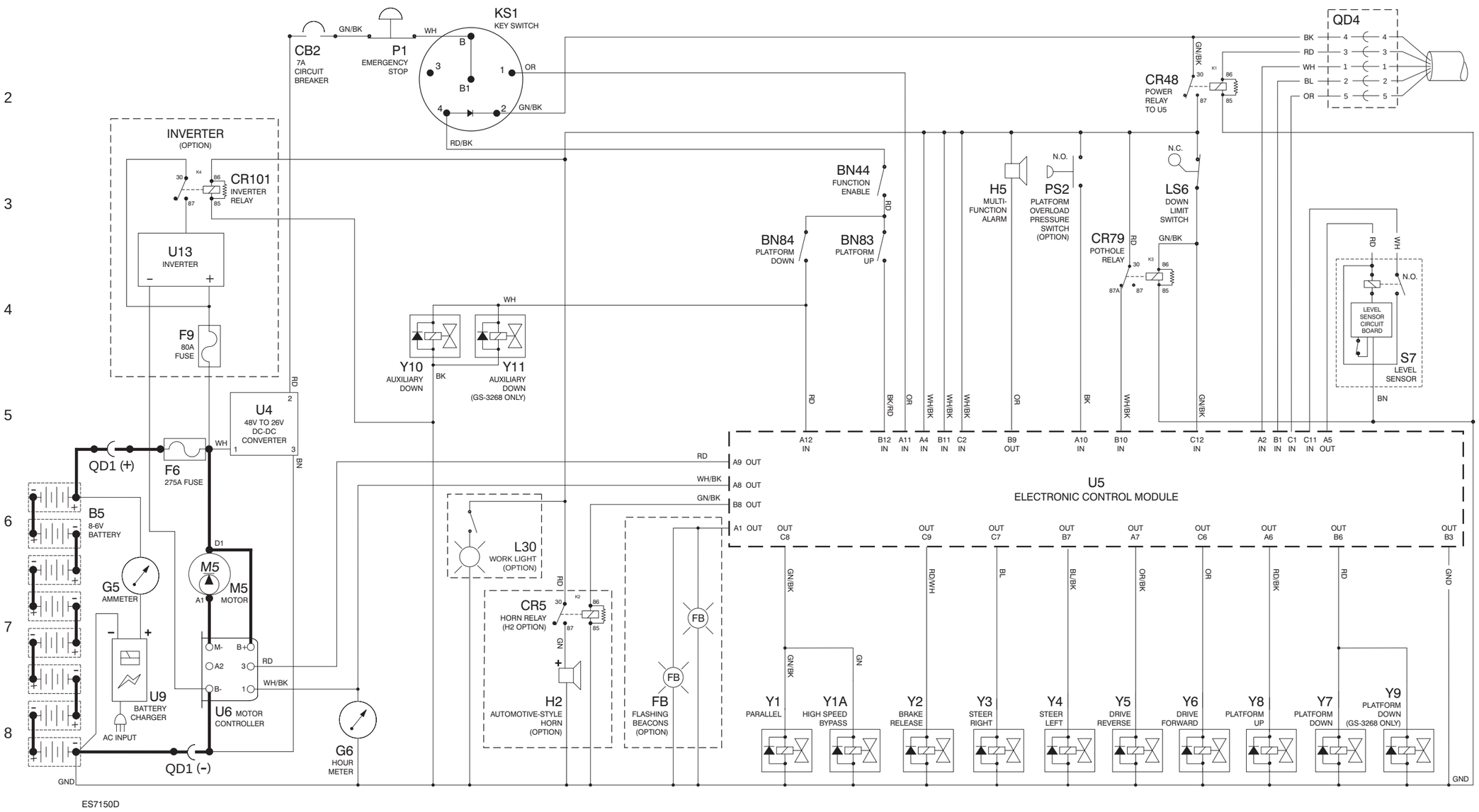
Electrical Schematic
(from serial number 41804 to GS6804-42449)



Electrical Schematic

REV B

(from serial number GS6804-42450 to GS6805-43529)



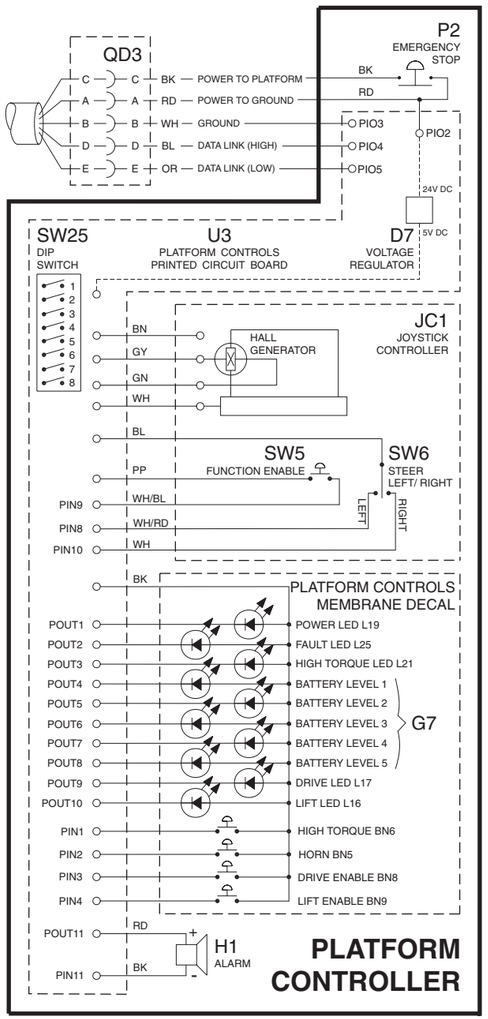
REV B

Electrical Schematic

(from serial number GS6804-42450 to GS6805-43529)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8

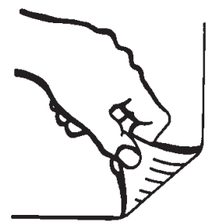


ABBREVIATION LEGEND	
Item	**Description**
B5	Battery Main power
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN44 = Function enable BN83 = Platform up BN84 = Platform down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199)
CR	Control relay CR5 = Horn CR48 = Power CR79 = Pothole
D7	Voltage regulator – 24V DC to 5V DC
FB1	Flashing beacons (option)
F6	275A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L16 = Lift L17 = Drive L19 = Power L21 = High torque selected L25 = Fault L30 = Work light (option)
LS6	Limit switch platform down

ABBREVIATION LEGEND	
Item	**Description**
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y6 = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	OR	Orange
BL/BK	Blue/Black	OR/BK	Orange/Black
BK	Black	PP	Purple
BK/RD	Black/Red	RD	Red
BN	Brown	RD/BK	Red/Black
GN	Green	RD/WH	Red/White
GN/BK	Green/Black	WH	White
GY	Gray	WH/BK	White/Black

Electrical Schematic
(from serial number GS6804-42450 to GS6805-43529)

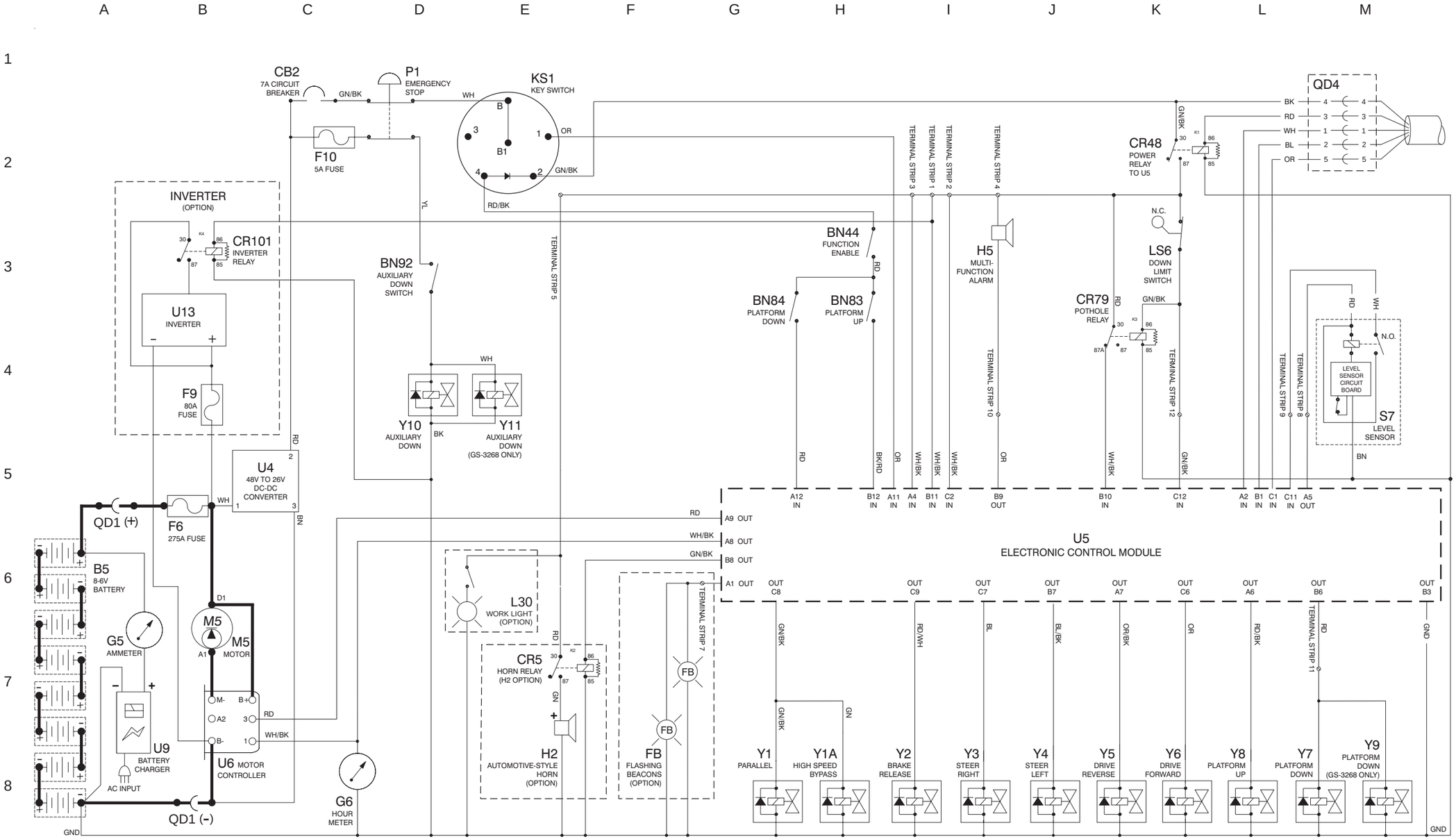


Electrical Schematic

REV B

ANSI, CSA and Australia Models

(from serial number GS6805-43530 to GS6805-44698)



ES7150G

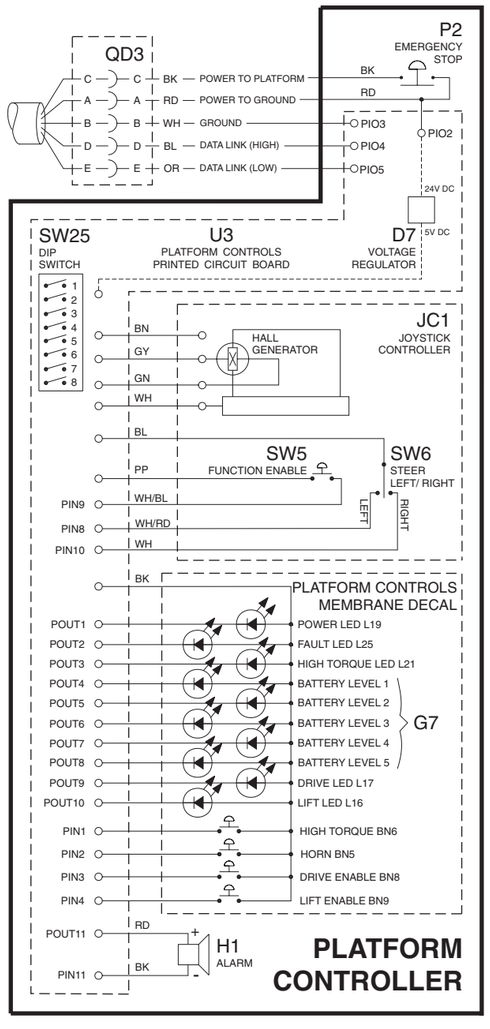
REV B

Electrical Schematic

ANSI, CSA and Australia Models

(from serial number GS6805-43530 to GS6805-44698)

N M L K J I H G F E D C B A



ABBREVIATION LEGEND	
Item	**Description**
B5	Battery Main power
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN44 = Function enable BN83 = Platform up BN84 = Platform down BN92 = Auxiliary down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199)
CR	Control relay CR5 = Horn CR48 = Power CR79 = Pothole
D7	Voltage regulator – 24V DC to 5V DC
FB1	Flashing beacons (option)
F	Fuse F6 = 275A fuse F10 = 5A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G7 = Battery charge indicator
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L16 = Lift L17 = Drive L19 = Power L21 = High torque selected L25 = Fault L30 = Work light (option)

ABBREVIATION LEGEND	
Item	**Description**
LS6	Limit switch platform down
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Platform overload pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right SW25 = DIP switch
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y6 = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

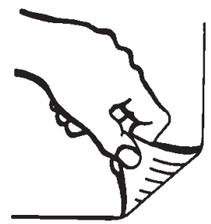
WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	OR/BK	Orange/Black
BL/BK	Blue/Black	PP	Purple
BK	Black	RD	Red
BK/RD	Black/Red	RD/BK	Red/Black
BN	Brown	RD/WH	Red/White
GN	Green	WH	White
GN/BK	Green/Black	WH/BK	White/Black
GY	Gray	YL	Yellow
OR	Orange		

1 2 3 4 5 6 7 8

Electrical Schematic

ANSI, CSA and Australia Models

(from serial number GS6805-43530 to GS6805-44698)

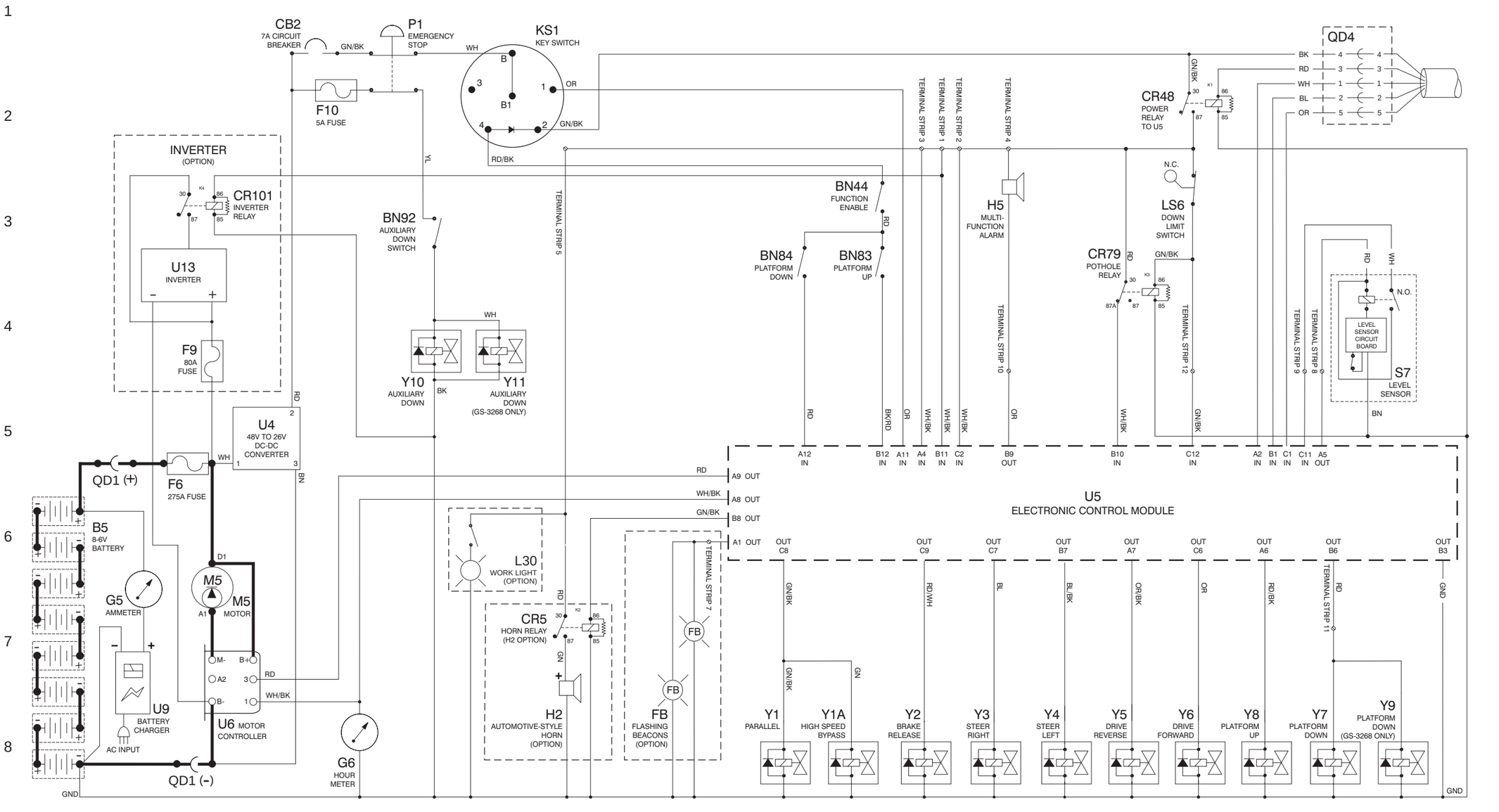


Electrical Schematic

REV B

ANSI, CSA and Australia Models

(after serial number GS6805-44698)



ES7150G

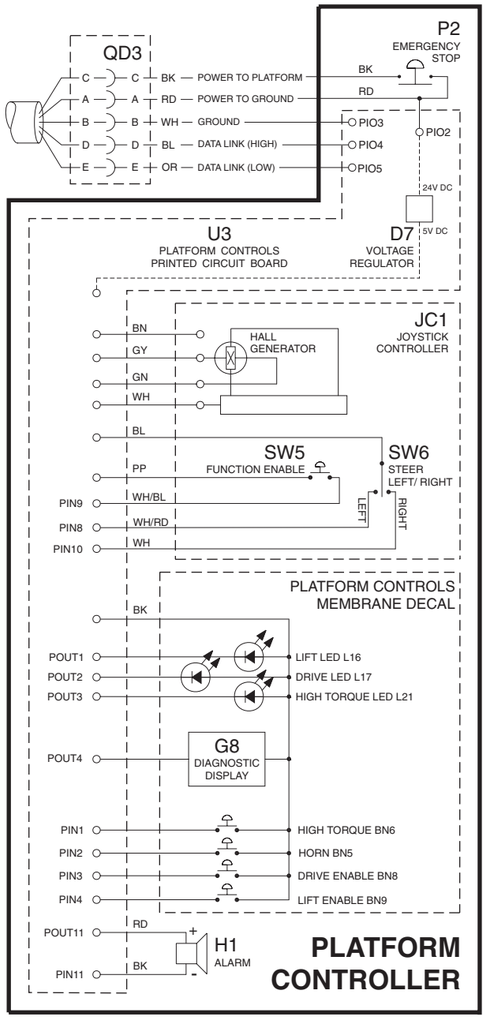
REV B

Electrical Schematic

ANSI, CSA and Australia Models

(after serial number GS6805-44698)

N M L K J I H G F E D C B A



ABBREVIATION LEGEND	
Item	**Description**
B5	Battery Main power
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN44 = Function enable BN83 = Platform up BN84 = Platform down BN92 = Auxiliary down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199)
CR	Control relay CR5 = Horn CR48 = Power CR79 = Pothole
D7	Voltage regulator – 24V DC to 5V DC
FB1	Flashing beacons (option)
F	Fuse F6 = 275A fuse F10 = 5A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L16 = Lift L17 = Drive L21 = High torque selected L30 = Work light (option)

ABBREVIATION LEGEND	
Item	**Description**
LS6	Limit switch platform down
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y6 = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

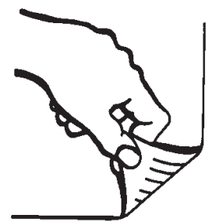
WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	OR/BK	Orange/Black
BL/BK	Blue/Black	PP	Purple
BK	Black	RD	Red
BK/RD	Black/Red	RD/BK	Red/Black
BN	Brown	RD/WH	Red/White
GN	Green	WH	White
GN/BK	Green/Black	WH/BK	White/Black
GY	Gray	YL	Yellow
OR	Orange		

1 2 3 4 5 6 7 8

Electrical Schematic

ANSI, CSA and Australia Models

(after serial number GS6805-44698)

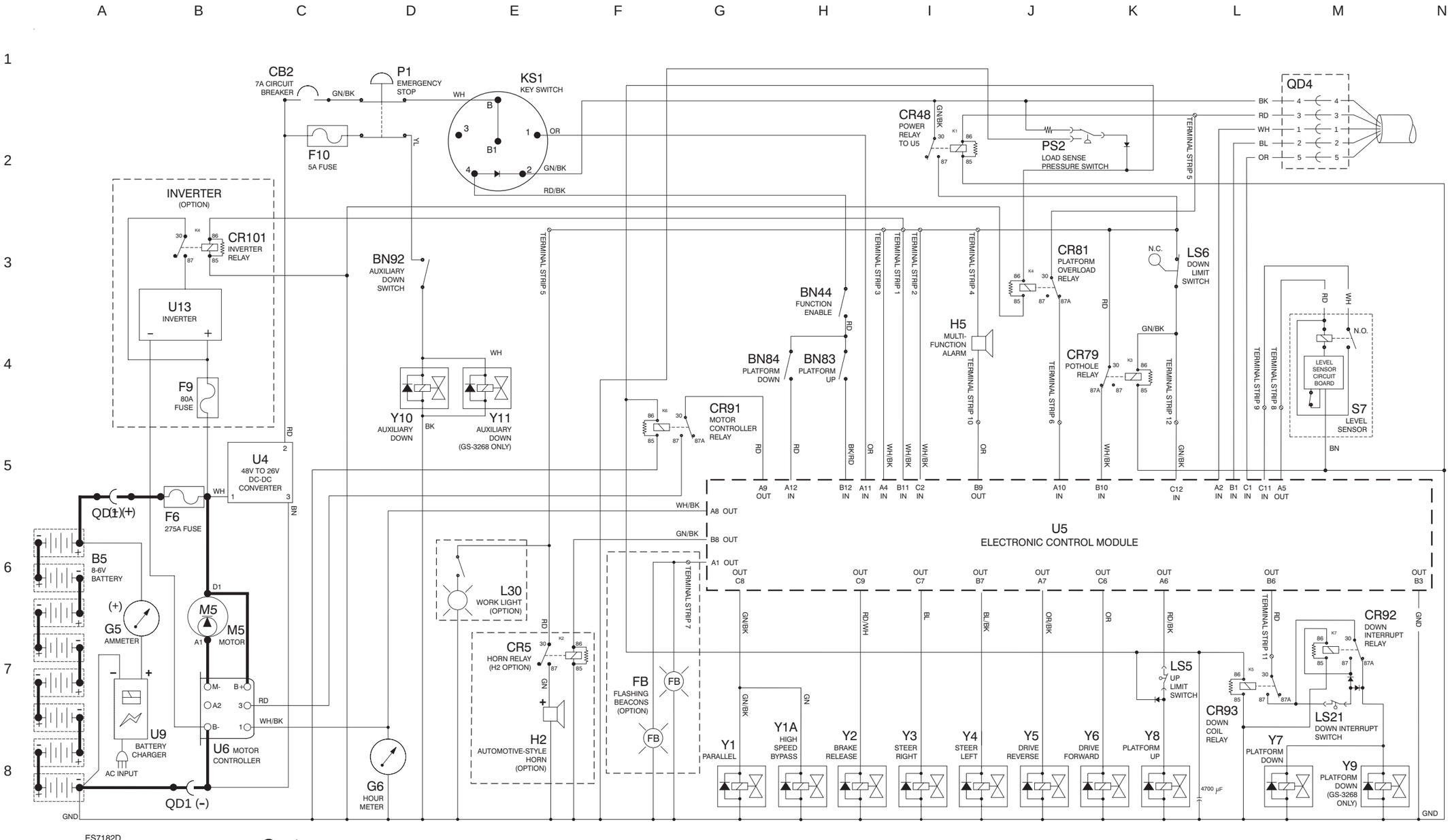


Electrical Schematic

REV B

CE Models

(from serial number GS6805-43530 to GS6805-44698)



ES7182D

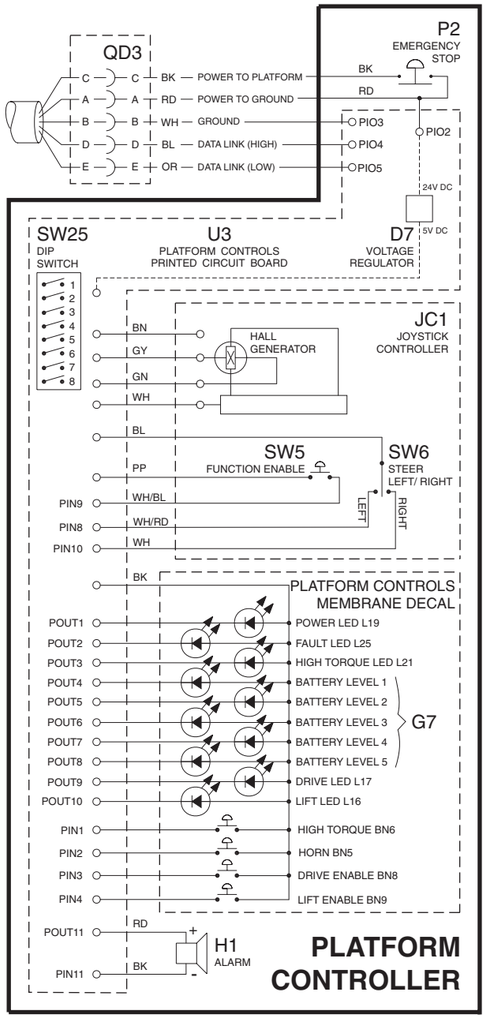
REV B

Electrical Schematic

CE Models

(from serial number GS6805-43530 to GS6805-44698)

N M L K J I H G F E D C B A



ABBREVIATION LEGEND	
Item	**Description**
B5	Battery Main power
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN44 = Function enable BN83 = Platform up BN84 = Platform down BN92 = Auxiliary down
CB	Circuit breaker CB2 = 20 amp (before serial number 41200) CB2 = 7 amp (after serial number 41199)
CR	Control relay CR5 = Horn CR48 = Power CR79 = Pothole CR81 = Platform overload CR91 = Motor controller CR92 = Down interrupt CR93 = Down delay
D7	Voltage regulator – 24V DC to 5V DC
FB1	Flashing beacons (option)
F	Fuse F6 = 275A fuse F10 = 5A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L16 = Lift L17 = Drive L21 = High torque selected L30 = Work light (option)

ABBREVIATION LEGEND	
Item	**Description**
LS	Limit switch LS5 = Platform up LS6 = Platform down LS21 = Down interupt
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Load sense pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y6 = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

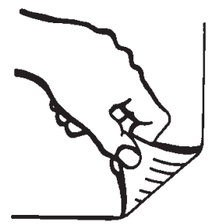
WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	OR/BK	Orange/Black
BL/BK	Blue/Black	PP	Purple
BK	Black	RD	Red
BK/RD	Black/Red	RD/BK	Red/Black
BN	Brown	RD/WH	Red/White
GN	Green	WH	White
GN/BK	Green/Black	WH/BK	White/Black
GY	Gray	YL	Yellow
OR	Orange		

1 2 3 4 5 6 7 8

Electrical Schematic

CE Models

(from serial number GS6805-43530 to GS6805-44698)

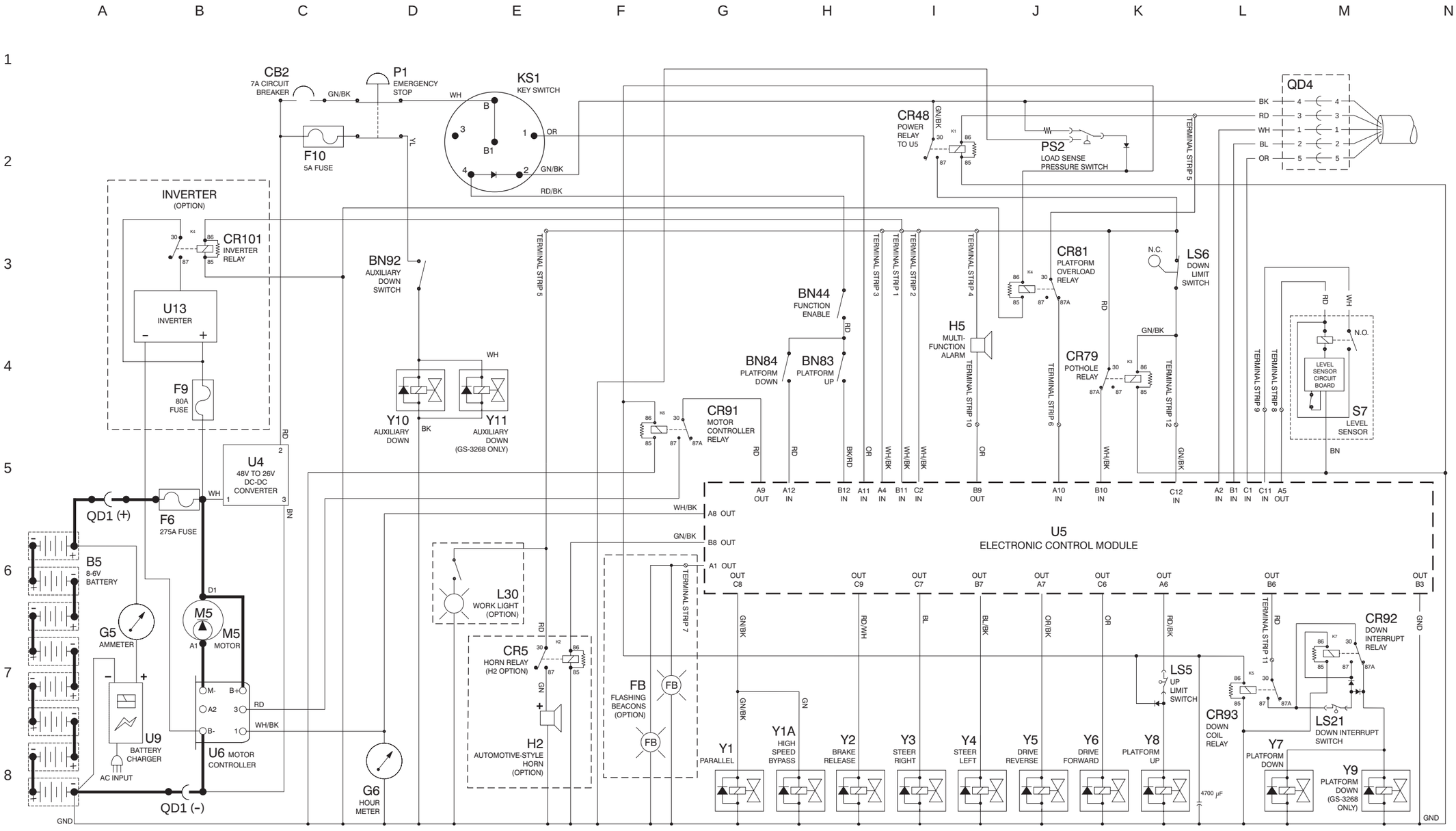


Electrical Schematic

REV B

CE Models

(after serial number GS6805-44698)



ES7182D

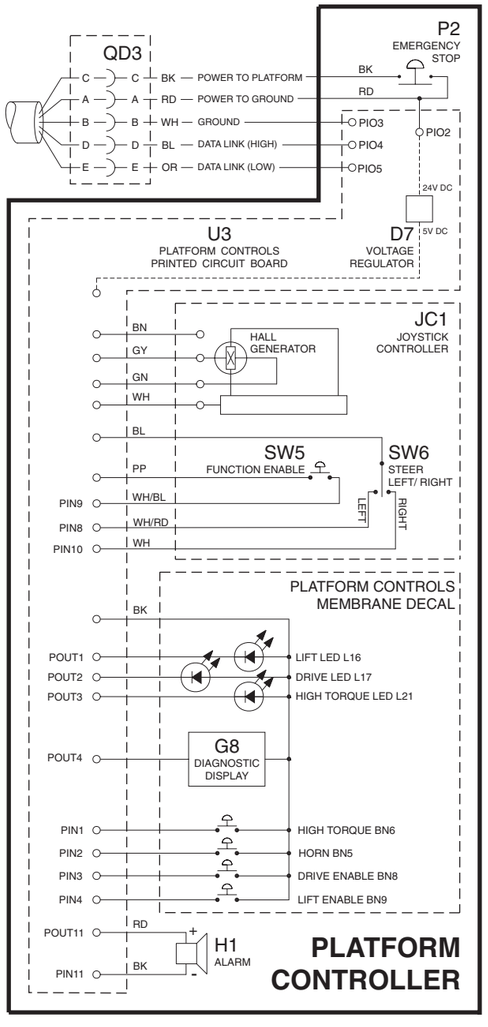
REV B

Electrical Schematic

CE Models

(after serial number GS6805-44698)

N M L K J I H G F E D C B A



ABBREVIATION LEGEND	
Item	**Description**
B5	Battery Main power
BN	Button BN5 = Horn BN6 = High torque BN8 = Drive enable BN9 = Lift enable BN44 = Function enable BN83 = Platform up BN84 = Platform down BN92 = Auxiliary down
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D7	Voltage regulator – 24V DC to 5V DC
FB1	Flashing beacons (option)
F	Fuse F6 = 275A fuse F10 = 5A fuse
G	Gauge G5 = Ammeter G6 = Hour meter G8 = Diagnostic display
GND	Ground
H	Horn or alarm H1 = Horn H2 = Automotive-style horn H5 = Multifunction alarm
JC1	Joystick controller- drive, steer, platform up/down
KS1	Key switch
L	LED or light L16 = Lift L17 = Drive L21 = High torque selected L30 = Work light (option)

ABBREVIATION LEGEND	
Item	**Description**
LS	Limit switch LS5 = Platform up LS6 = Platform down LS21 = Down interupt
M5	Hydraulic power unit
N.C.	Normally closed
N.O.	Normally open
P	Power P1 = Emergency stop button at ground controls P2 = Emergency stop button at platform controls
PS2	Load sense pressure switch
QD	Quick disconnect QD1 = Battery quick disconnect QD3 = Control cable to ground QD4 = Control cable to platform
S7	Tilt level sensor
SW	Switch SW5 = Function enable SW6 = Steer left/right
U	Electronic component U3 = Encoder printed circuit board U4 = Voltage converter U5 = Electronic control module U6 = Motor controller U9 = Battery charger
Y	Valve coil Y1 = Drive parallel Y1A = Drive parallel (before serial number 41200) Y1A = High speed bypass (after s/n 41199) Y2 = Brake release Y3 = Steer right Y4 = Steer left Y5 = Drive reverse Y6 = Drive forward Y7 = Platform down Y8 = Platform up Y9 = Platform down (GS-3268 only) Y10 = Auxiliary platform down (GS-3268 only) Y11 = Platform down (GS-3268 only)

WIRE COLOR LEGEND			
Color	**Description**	**Color**	**Description**
BL	Blue	OR/BK	Orange/Black
BL/BK	Blue/Black	PP	Purple
BK	Black	RD	Red
BK/RD	Black/Red	RD/BK	Red/Black
BN	Brown	RD/WH	Red/White
GN	Green	WH	White
GN/BK	Green/Black	WH/BK	White/Black
GY	Gray	YL	Yellow
OR	Orange		

1 2 3 4 5 6 7 8

Electrical Schematic

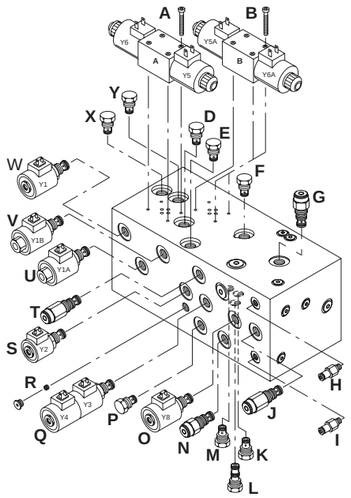
CE Models

(after serial number GS6805-44698)

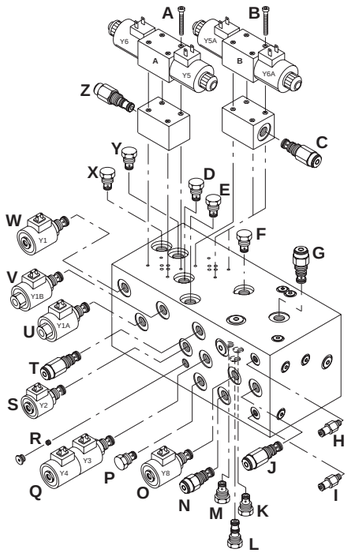
Hydraulic Symbols Legend and Component Reference

REV C

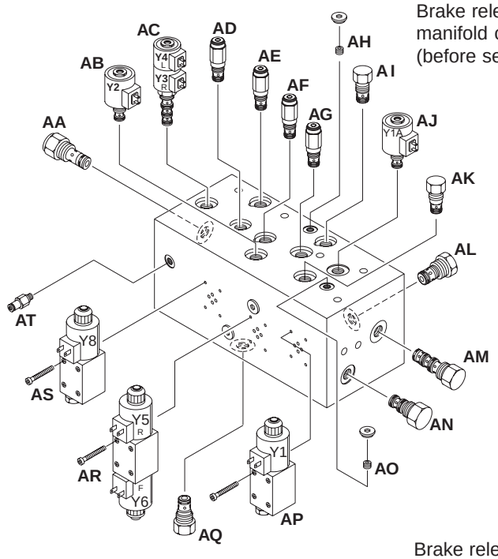
Hydraulic Symbols Legend and Component Reference



Function manifold components
(before serial number 40594)

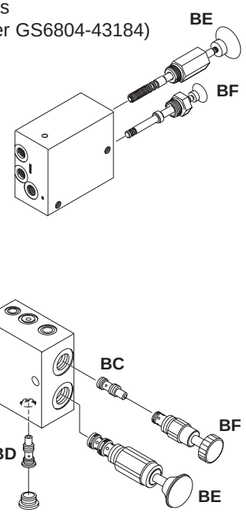


Function manifold components
(from serial number 40594 to 41199)



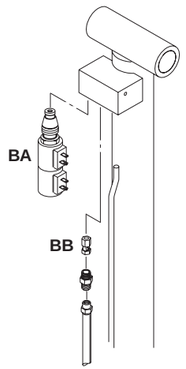
Function manifold components
(after serial number 41199)

Brake release hand pump
manifold components
(before serial number GS6804-43184)

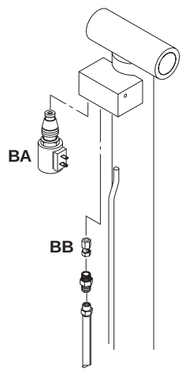


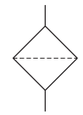
Brake release hand pump
manifold components
(after serial number GS6804-43183)

Lift cylinder components
(after serial number 38464)



Lift cylinder components
(before serial number 38465)



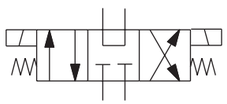


Filter

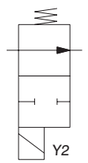
Fixed displacement pump

Bi-directional motor

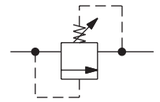
Variable speed motor



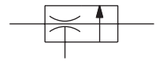
Solenoid operated
3 position 4 way
directional valve (D01)



Solenoid operated
2 position 2 way
directional valve



Relief valve

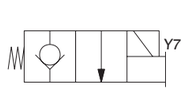


Priority flow regulator

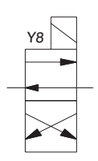
Orifice with size

Check valve

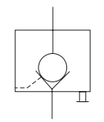
Dual acting cylinder



Solenoid operated
2 position 2 way valve,
normally closed
with manual over-ride



Solenoid operated
2 position 4 way
directional valve

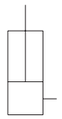


Check valve,
pilot to open

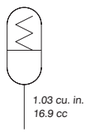
Shuttle valve

Brake

Hand pump



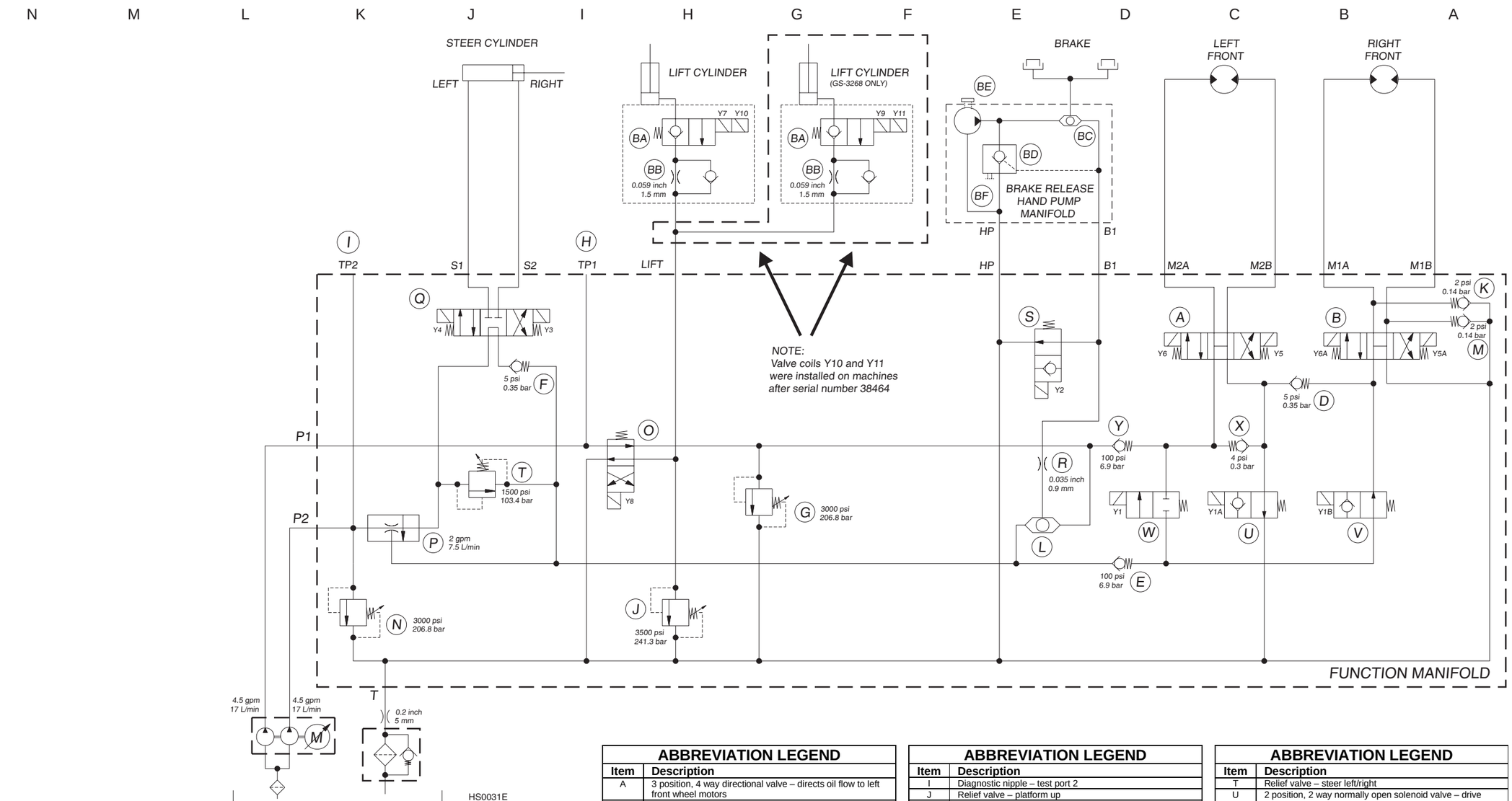
Single acting cylinder



Accumulator

REV B

Hydraulic Schematic
(before serial number 40594)



Note: 'alpha' callouts refer to components shown in the manifold illustrations.
Refer to the Repair Section.

ABBREVIATION LEGEND	
Item	**Description**
BA	2 position, 2 way solenoid valve – platform lowering
BB	Orifice – platform down circuit
BC	Shuttle valve – brake release circuit
BD	Check valve, pilot operated – manual brake release circuit
BE	Hand pump - manual brake release circuit
BF	Needle valve – manual brake release circuit

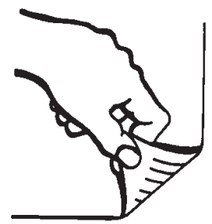
ABBREVIATION LEGEND	
Item	**Description**
A	3 position, 4 way directional valve – directs oil flow to left front wheel motors
B	3 position, 4 way directional valve – directs oil flow to right front wheel motors
C	Relief valve – right front drive motor circuit
D	Check valve – drive speed select circuit
E	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
F	Check valve – steer circuit
G	Relief valve – pump section number one (P1) circuit
H	Diagnostic nipple – test port 1

ABBREVIATION LEGEND	
Item	**Description**
I	Diagnostic nipple – test port 2
J	Relief valve – platform up
K	Check valve – drive circuit
L	Shuttle valve – brake circuit
M	Check valve – drive circuit
N	Relief valve – pump section number two (P2) circuit
O	2 position, 4 way solenoid valve – platform up
P	Priority flow regulator
Q	3 position, 4 way solenoid valve – steer left/right
R	Orifice – brake circuit
S	2 position, 2 way solenoid valve – brake circuit

ABBREVIATION LEGEND	
Item	**Description**
T	Relief valve – steer left/right
U	2 position, 2 way normally open solenoid valve – drive speed select circuit
V	2 position, 2 way normally open solenoid valve – drive speed select circuit
W	2 position, 2 way normally closed solenoid valve – drive speed select circuit
X	Check valve – prevents overflowing the drive motors when in high speed drive
Y	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
Z	Relief valve – left front drive motor circuit

Hydraulic Schematic
(before serial number 40594)

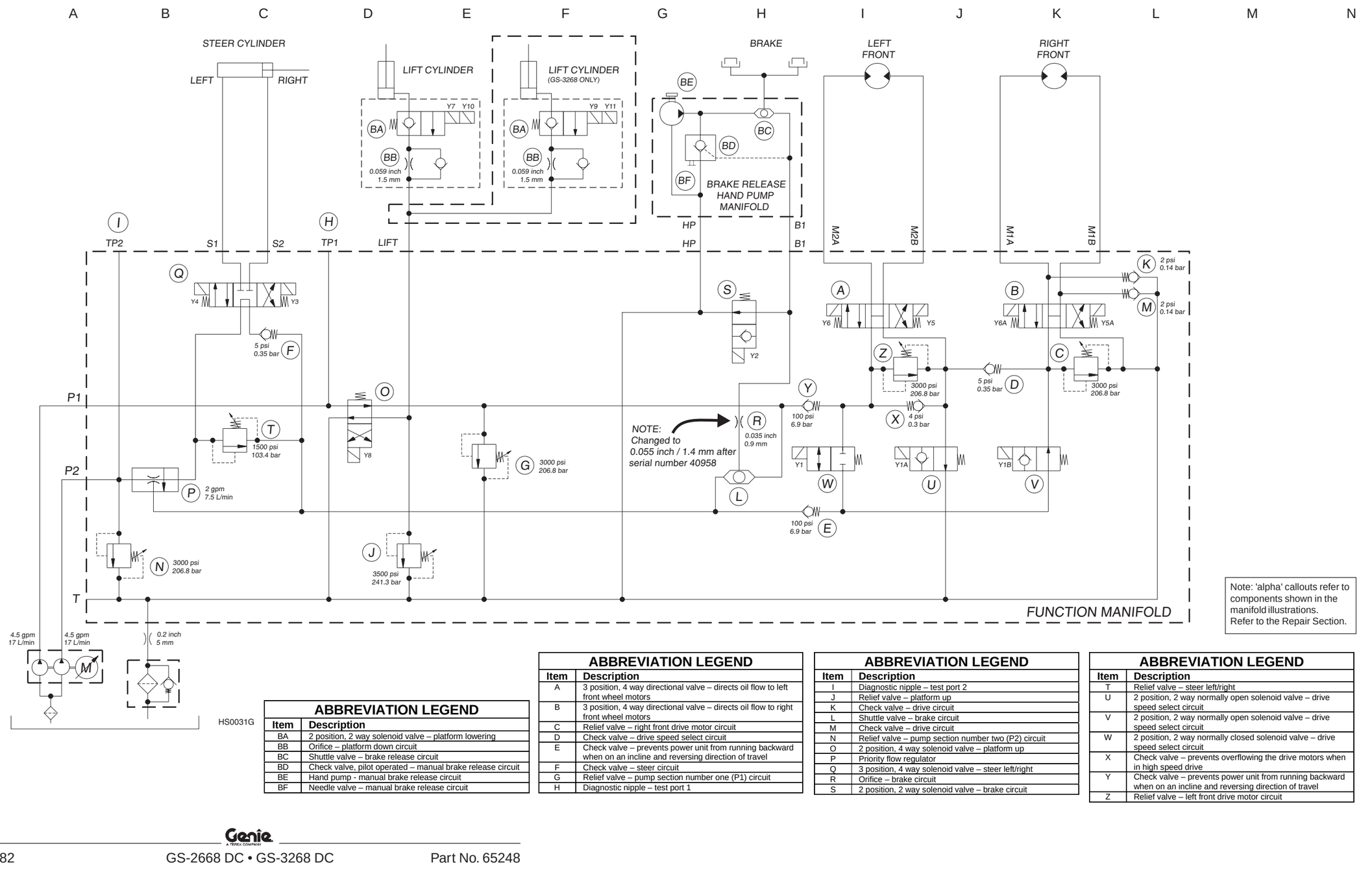
Hydraulic Schematic
(from serial number 40594 to 41199)



Hydraulic Schematic

REV A

(from serial number 40594 to 41199)



Note: 'alpha' callouts refer to components shown in the manifold illustrations. Refer to the Repair Section.

ABBREVIATION LEGEND	
Item	**Description**
BA	2 position, 2 way solenoid valve – platform lowering
BB	Orifice – platform down circuit
BC	Shuttle valve – brake release circuit
BD	Check valve, pilot operated – manual brake release circuit
BE	Hand pump - manual brake release circuit
BF	Needle valve – manual brake release circuit

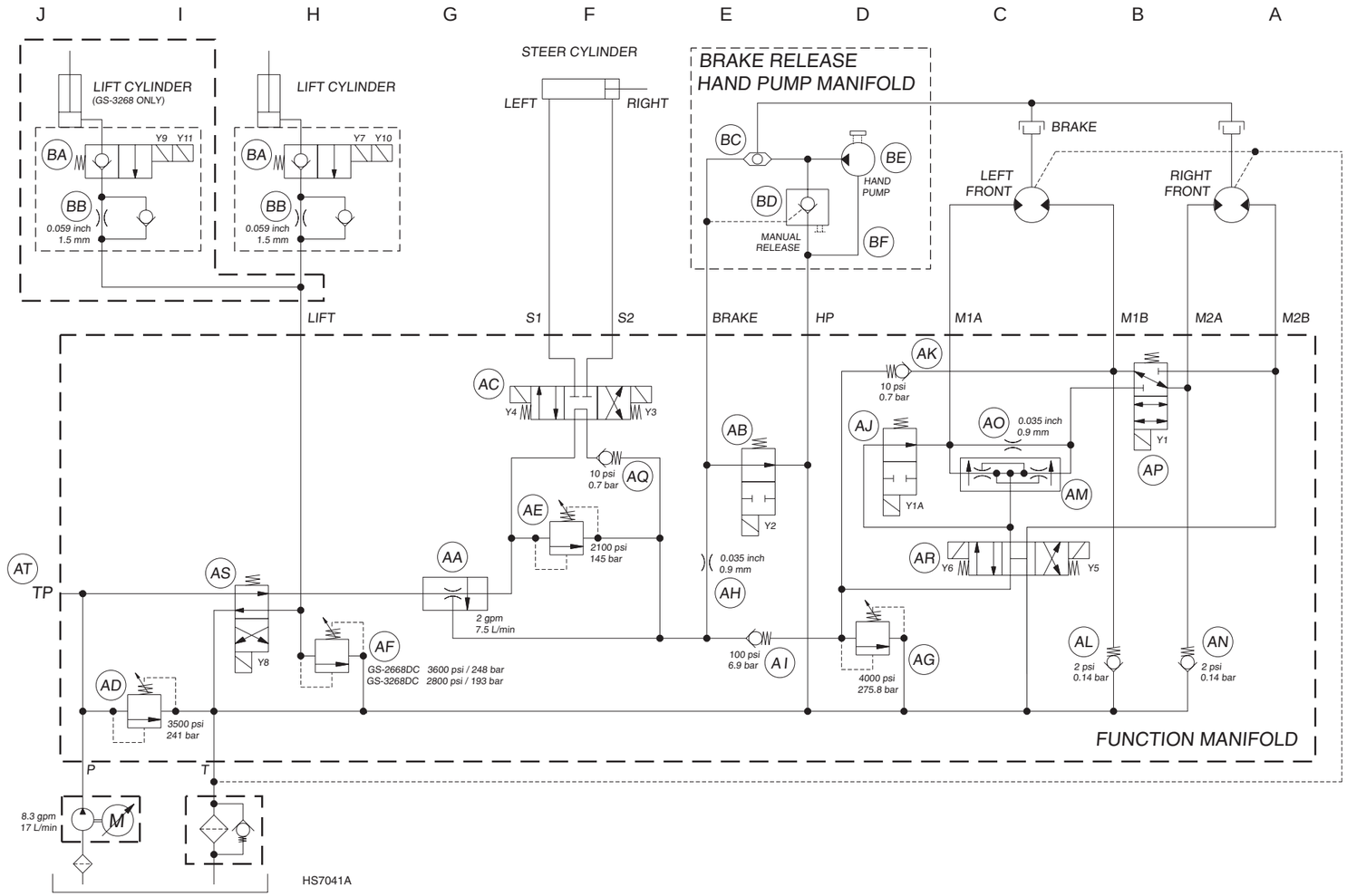
ABBREVIATION LEGEND	
Item	**Description**
A	3 position, 4 way directional valve – directs oil flow to left front wheel motors
B	3 position, 4 way directional valve – directs oil flow to right front wheel motors
C	Relief valve – right front drive motor circuit
D	Check valve – drive speed select circuit
E	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
F	Check valve – steer circuit
G	Relief valve – pump section number one (P1) circuit
H	Diagnostic nipple – test port 1

ABBREVIATION LEGEND	
Item	**Description**
I	Diagnostic nipple – test port 2
J	Relief valve – platform up
K	Check valve – drive circuit
L	Shuttle valve – brake circuit
M	Check valve – drive circuit
N	Relief valve – pump section number two (P2) circuit
O	2 position, 4 way solenoid valve – platform up
P	Priority flow regulator
Q	3 position, 4 way solenoid valve – steer left/right
R	Orifice – brake circuit
S	2 position, 2 way solenoid valve – brake circuit

ABBREVIATION LEGEND	
Item	**Description**
T	Relief valve – steer left/right
U	2 position, 2 way normally open solenoid valve – drive speed select circuit
V	2 position, 2 way normally open solenoid valve – drive speed select circuit
W	2 position, 2 way normally closed solenoid valve – drive speed select circuit
X	Check valve – prevents overflowing the drive motors when in high speed drive
Y	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
Z	Relief valve – left front drive motor circuit

REV B

Hydraulic Schematic
(from serial number 41200 to 41317)



Note: 'alpha' callouts refer to components shown in the manifold illustrations. Refer to the Repair Section.

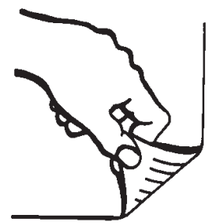
ABBREVIATION LEGEND	
Item	**Description**
BA	2 position, 2 way solenoid valve – platform lowering
BB	Orifice – platform down circuit
BC	Shuttle valve – brake release circuit
BD	Check valve, pilot operated – manual brake release circuit
BE	Hand pump - manual brake release circuit
BF	Needle valve – manual brake release circuit

ABBREVIATION LEGEND	
Item	**Description**
AA	Priority flow regulator
AB	2 position, 2 way solenoid valve – brake circuit
AC	3 position, 4 way solenoid valve – steer left/right
AD	Relief valve – system
AE	Relief valve – steer left/right
AF	Relief valve – platform up
AG	Relief valve – drive circuit
AH	Orifice – brake circuit
AI	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
AJ	2 position, 2 way solenoid valve – high speed bypass

ABBREVIATION LEGEND	
Item	**Description**
AK	Check valve, anti intensification – drive circuit
AL	Check valve, anti cavitation – drive circuit
AM	Flow divider/combiner – drive circuit
AN	Check valve, anti cavitation – drive circuit
AO	Orifice – drive circuit
AP	2 position, 4 way normally open solenoid valve – drive speed select circuit
AQ	Check valve – steer circuit
AR	3 position, 4 way directional valve – directs oil flow to the front wheel motors in both forward and reverse
AS	2 position, 4 way solenoid valve – platform up
AT	Diagnostic nipple – test port

Hydraulic Schematic
(from serial number 41200 to 41317)

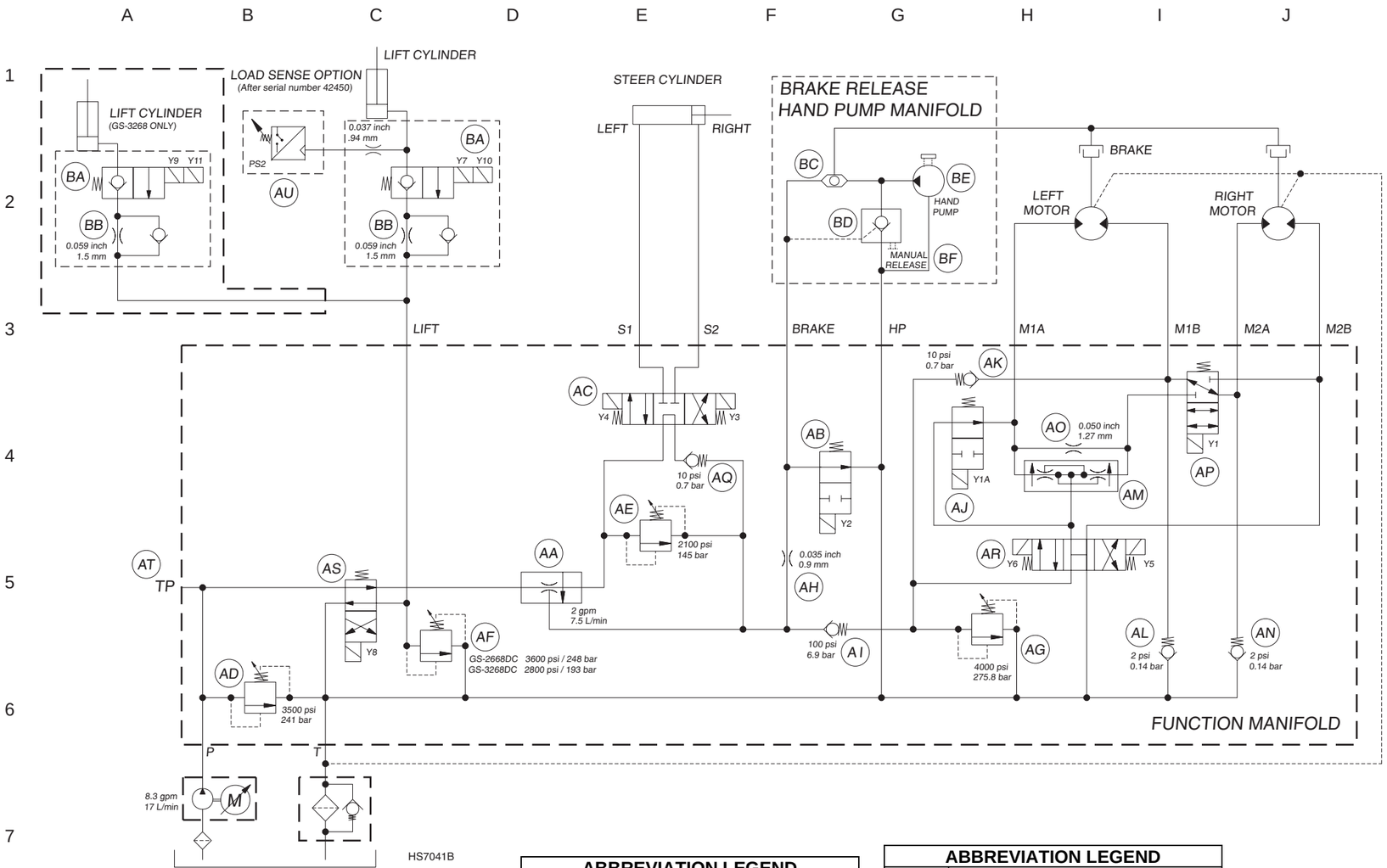
Hydraulic Schematic
(from serial number 41318 to GS6804-43183)



Hydraulic Schematic

REV B

(from serial number 41318 to GS6804-43183)



ABBREVIATION LEGEND	
Item	**Description**
BA	2 position, 2 way solenoid valve – platform lowering
BB	Orifice – platform down circuit
BC	Shuttle valve – brake release circuit
BD	Check valve, pilot operated – manual brake release circuit
BE	Hand pump - manual brake release circuit
BF	Needle valve – manual brake release circuit

ABBREVIATION LEGEND	
Item	**Description**
AA	Priority flow regulator
AB	2 position, 2 way solenoid valve – brake circuit
AC	3 position, 4 way solenoid valve – steer left/right
AD	Relief valve – system
AE	Relief valve – steer left/right
AF	Relief valve – platform up
AG	Relief valve – drive circuit
AH	Orifice – brake circuit
AI	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
AJ	2 position, 2 way solenoid valve – high speed bypass

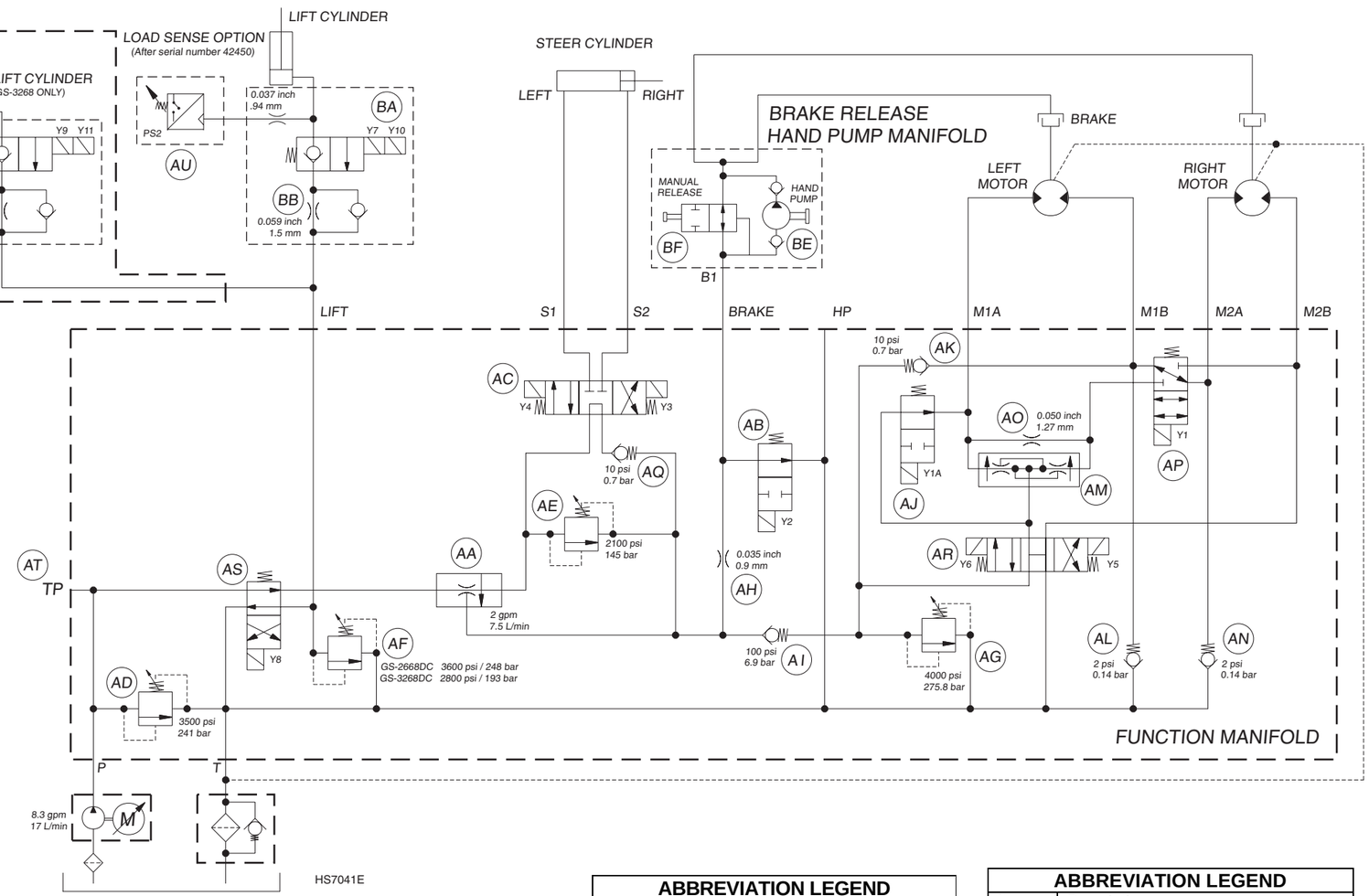
ABBREVIATION LEGEND	
Item	**Description**
AK	Check valve, anti intensification – drive circuit
AL	Check valve, anti cavitation – drive circuit
AM	Flow divider/combiner – drive circuit
AN	Check valve, anti cavitation – drive circuit
AO	Orifice – drive circuit
AP	2 position, 4 way normally open solenoid valve – drive speed select circuit
AQ	Check valve – steer circuit
AR	3 position, 4 way directional valve – directs oil flow to the front wheel motors in both forward and reverse
AS	2 position, 4 way solenoid valve – platform up
AT	Diagnostic nipple – test port
AU	Pressure switch, platform overload

Note: 'alpha' callouts refer to components shown in the manifold illustrations.
Refer to the Repair Section.

REV B

Hydraulic Schematic

(from serial number GS6804-43184 to GS6806-45257)



HS7041E

Note: 'alpha' callouts refer to components shown in the manifold illustrations. Refer to the Repair Section.

ABBREVIATION LEGEND	
Item	**Description**
BA	2 position, 2 way solenoid valve – platform lowering
BB	Orifice – platform down circuit
BE	Hand pump - manual brake release circuit
BF	Needle valve – manual brake release circuit

ABBREVIATION LEGEND	
Item	**Description**
AA	Priority flow regulator
AB	2 position, 2 way solenoid valve – brake circuit
AC	3 position, 4 way solenoid valve – steer left/right
AD	Relief valve – system
AE	Relief valve – steer left/right
AF	Relief valve – platform up
AG	Relief valve – drive circuit
AH	Orifice – brake circuit
AI	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
AJ	2 position, 2 way solenoid valve – high speed bypass

ABBREVIATION LEGEND	
Item	**Description**
AK	Check valve, anti intensification – drive circuit
AL	Check valve, anti cavitation – drive circuit
AM	Flow divider/combiner – drive circuit
AN	Check valve, anti cavitation – drive circuit
AO	Orifice – drive circuit
AP	2 position, 4 way normally open solenoid valve – drive speed select circuit
AQ	Check valve – steer circuit
AR	3 position, 4 way directional valve – directs oil flow to the front wheel motors in both forward and reverse
AS	2 position, 4 way solenoid valve – platform up
AT	Diagnostic nipple – test port
AU	Pressure switch, platform overload

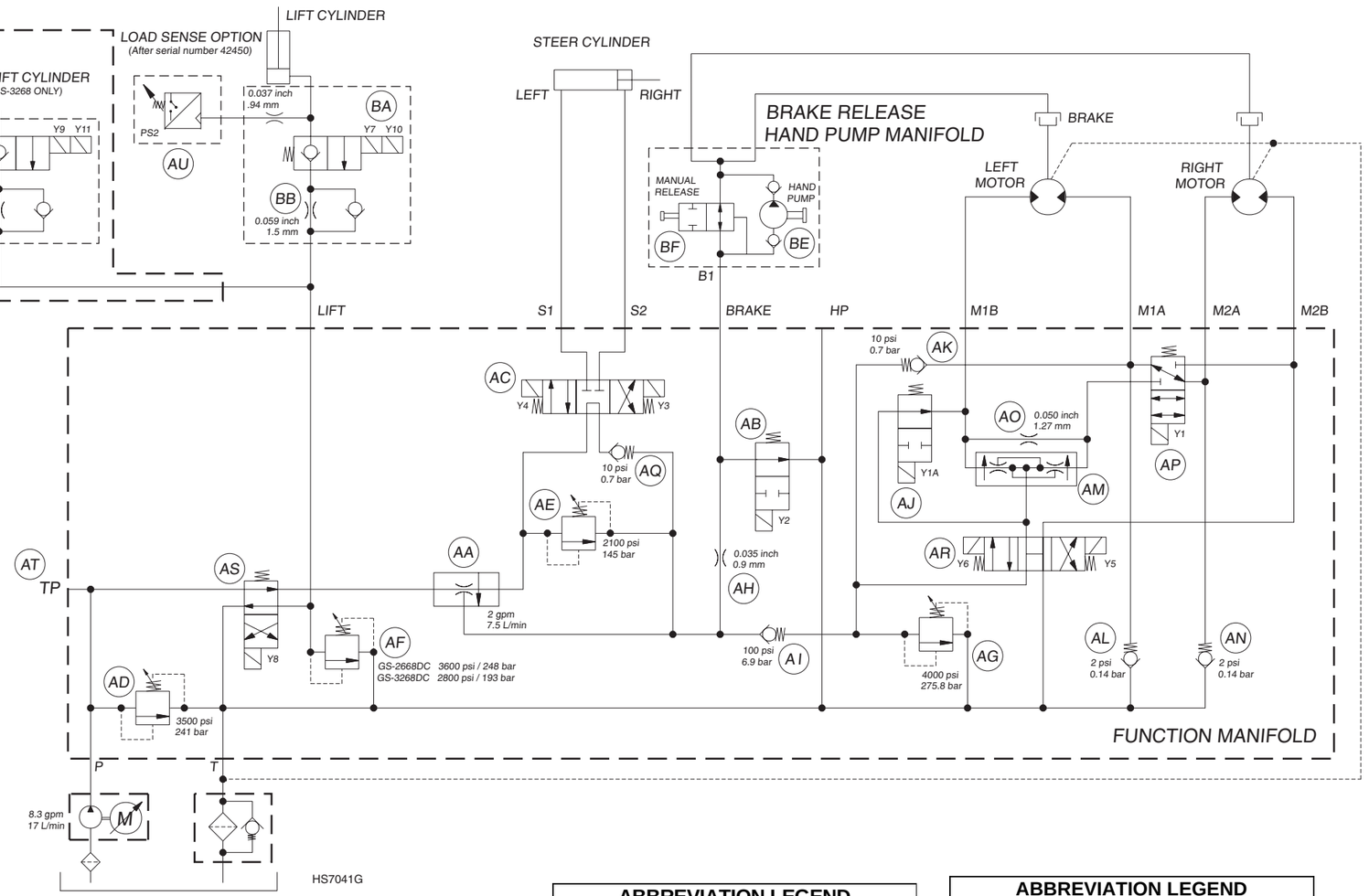
Hydraulic Schematic
(from serial number GS6804-43184 to GS6806-45257)

REV B

Hydraulic Schematic
(after serial number GS6806-45257)

N M L K J I H G F E D C B A

1 2 3 4 5 6 7 8



HS7041G

Note: 'alpha' callouts refer to components shown in the manifold illustrations. Refer to the Repair Section.

ABBREVIATION LEGEND	
Item	**Description**
BA	2 position, 2 way solenoid valve – platform lowering
BB	Orifice – platform down circuit
BE	Hand pump - manual brake release circuit
BF	Needle valve – manual brake release circuit

ABBREVIATION LEGEND	
Item	**Description**
AA	Priority flow regulator
AB	2 position, 2 way solenoid valve – brake circuit
AC	3 position, 4 way solenoid valve – steer left/right
AD	Relief valve – system
AE	Relief valve – steer left/right
AF	Relief valve – platform up
AG	Relief valve – drive circuit
AH	Orifice – brake circuit
AI	Check valve – prevents power unit from running backward when on an incline and reversing direction of travel
AJ	2 position, 2 way solenoid valve – high speed bypass

ABBREVIATION LEGEND	
Item	**Description**
AK	Check valve, anti intensification – drive circuit
AL	Check valve, anti cavitation – drive circuit
AM	Flow divider/combiner – drive circuit
AN	Check valve, anti cavitation – drive circuit
AO	Orifice – drive circuit
AP	2 position, 4 way normally open solenoid valve – drive speed select circuit
AQ	Check valve – steer circuit
AR	3 position, 4 way directional valve – directs oil flow to the front wheel motors in both forward and reverse
AS	2 position, 4 way solenoid valve – platform up
AT	Diagnostic nipple – test port
AU	Pressure switch, platform overload

Hydraulic Schematic
(after serial number GS6806-45257)

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Service Manual
GS-2668 DC•GS-3268 DC

(from introduction)

Part No. 65248

Rev D

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