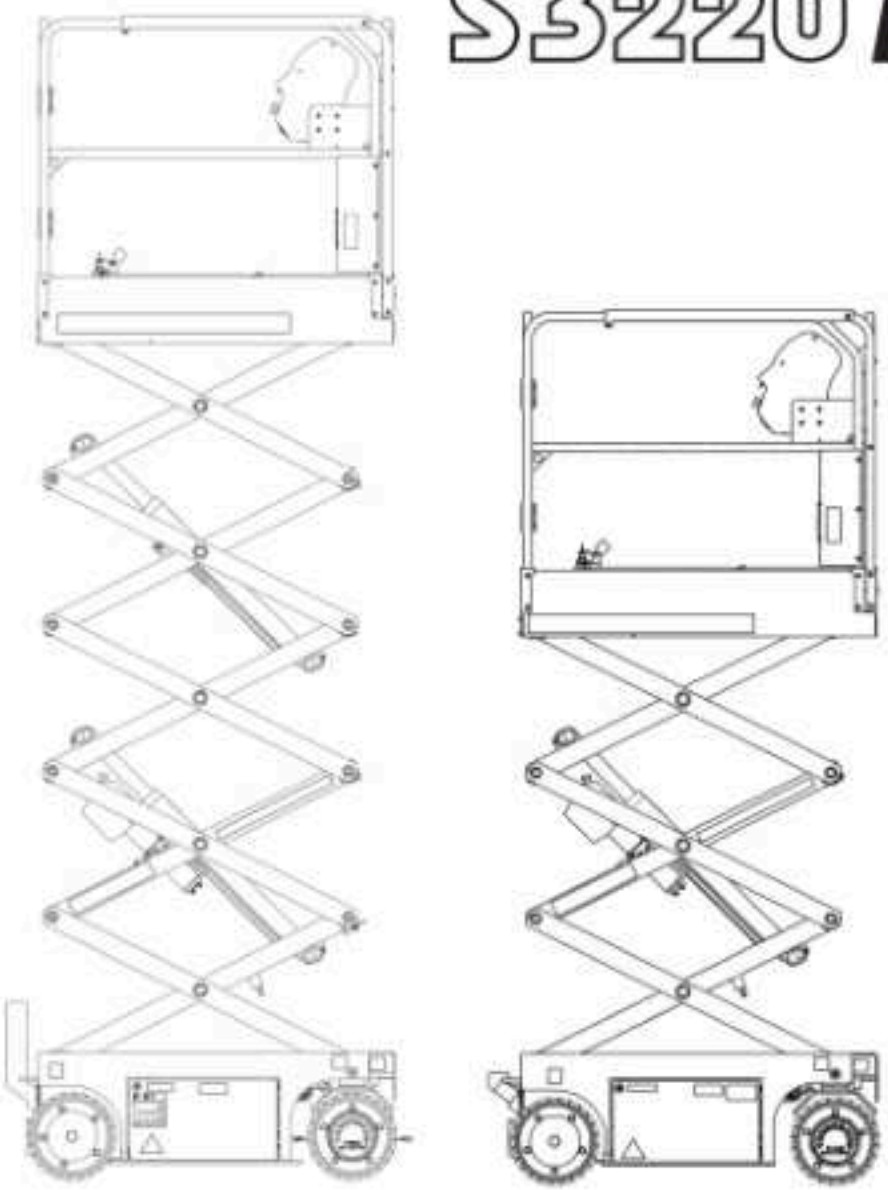
snorkel

S3013 MINI
S3220 MINI



SERVICE & MAINTENANCE MANUAL

Part Number 1510693-000
July 2025

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LIFT CYLINDER

Adjustment

Refer to drawing on page 26

1. Raise platform and properly position the safety prop.
2. Put 600 lbs in center of platform.
3. Operate lift and see if platform will lift 600 lbs weight, stow the safety prop and operate through range of motion.
3. If machine lifts 600 lbs, lower platform and remove weight.
4. If machine will not lift 600 lbs, go to cylinder and adjust Pressure Relief (item 9). If adjustment is needed, clockwise adjustment will increase the lifting capacity.
5. Lift the platform and properly position the safety prop. Put 660 lbs of weight in middle of the platform and operate lift. The machine should not lift 660 lbs. If it does, item 9 will need to be turned counterclockwise. Remove the 660 lbs and raise to stow the safety prop and stow the platform. It is very important that machine dose not lift the 660 lbs as that is part of the overload prevention.
6. Check operation of the machine to see if it will still lift the 600 lbs.

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BATTERY CARE AND MAINTENANCE

Lithium-Ion Batteries

Overcharging will lead to serious damage, safety issues and will void the battery warranty. To maintain proper charging voltage, only charge the batteries using the onboard battery charger provided on the machine.

⚠Warning

The batteries contain lithium. Death or serious injury could result from a chemical explosion. Do not smoke or permit open flames or sparks when checking the batteries.

- Have a Class ABC or Class BC fire extinguisher in an accessible location during operation.
- When handling batteries always wear protective gear (PPE), including gloves with rubber or other insulating material barrier between fingers and electrical wiring and connectors.
- Turn the batteries off before handling to prevent system component damage or risk of electrical shock. When the batteries are turned off, the power button will be in the "out" position, and the LED lights will all be off. Confirm with a voltmeter that there is no voltage present. Batteries can be turned on after wiring is complete.
- Do not charge nor discharge battery when ambient temperature is above 131°F (55°C).
- Turn the batteries off and then disconnect if, during operation or charging, they emit an unusual smell, develop heat, or behave abnormally.
- Never short-circuit DC inputs. Doing so may result in risk of electric shock or fire. Handle batteries and battery-powered devices cautiously when using metal tools or other metal objects when around the system.
- Periodically inspect batteries during the regular machine maintenance schedule. Ensure cable connections are secure. In the case of damaged or swollen batteries, turn off the battery and contact the distributor or battery manufacturer for remedy.

Lithium Battery Maintenance

The following information pertains specifically to lithium batteries.

1. Batteries must be turned on to be charged.
2. To extend the life of the lithium batteries, do not let them discharge below 20% charge state. Battery life will be shortened if the batteries are regularly discharged below 20% charge state.
3. Fully charge the batteries before long periods of storage.
4. Turn the batteries off if the machine is to be stored and not operated for more than 15 days (refer to Figure 1). Press the power button to turn the battery power on or off. When on, the power button is illuminated and the percent battery power is displayed.



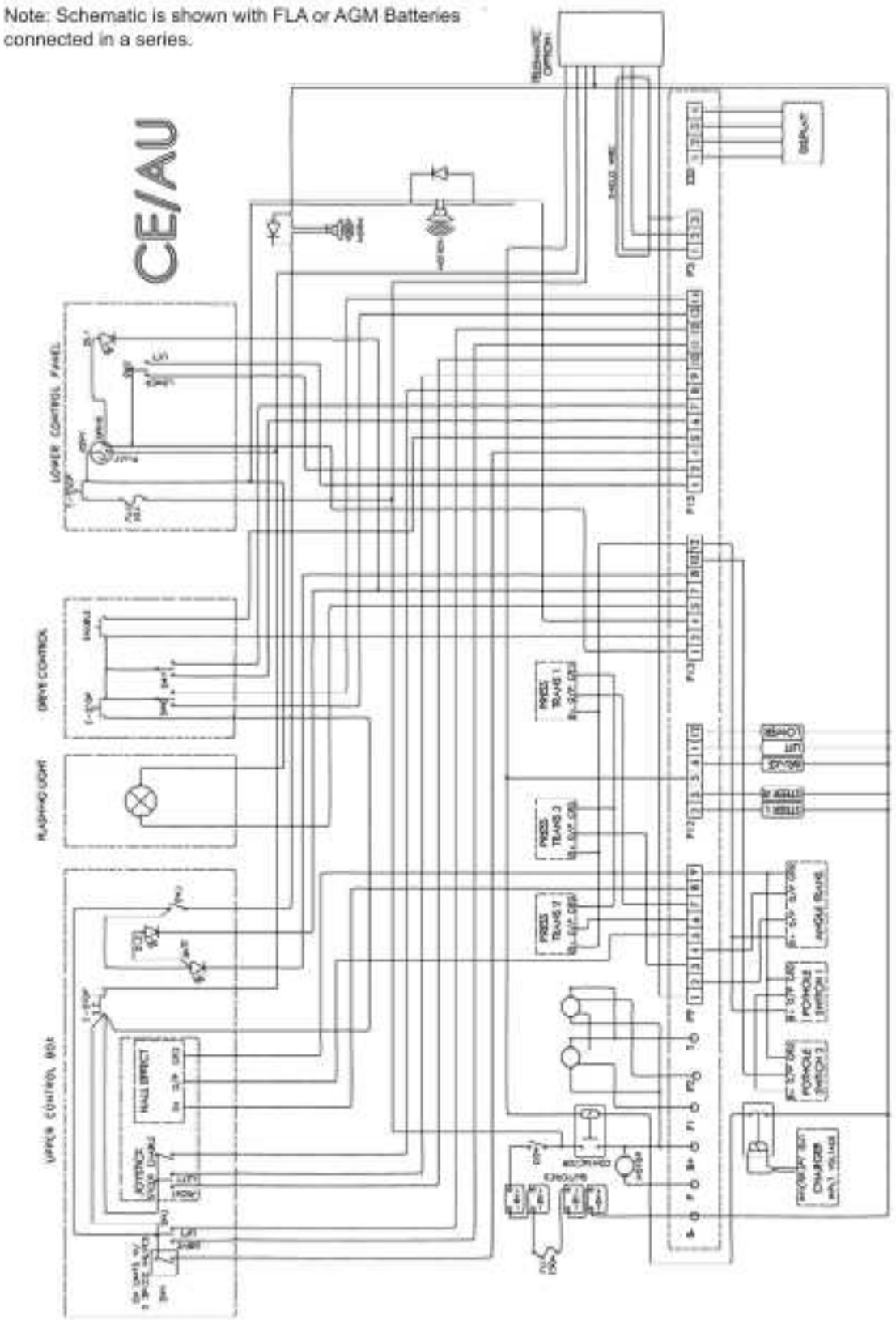
Figure 1 – Lithium Battery

4. Refer to the battery manufacturers information and/or website for additional lithium battery information.

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ELECTRICAL SCHEMATIC

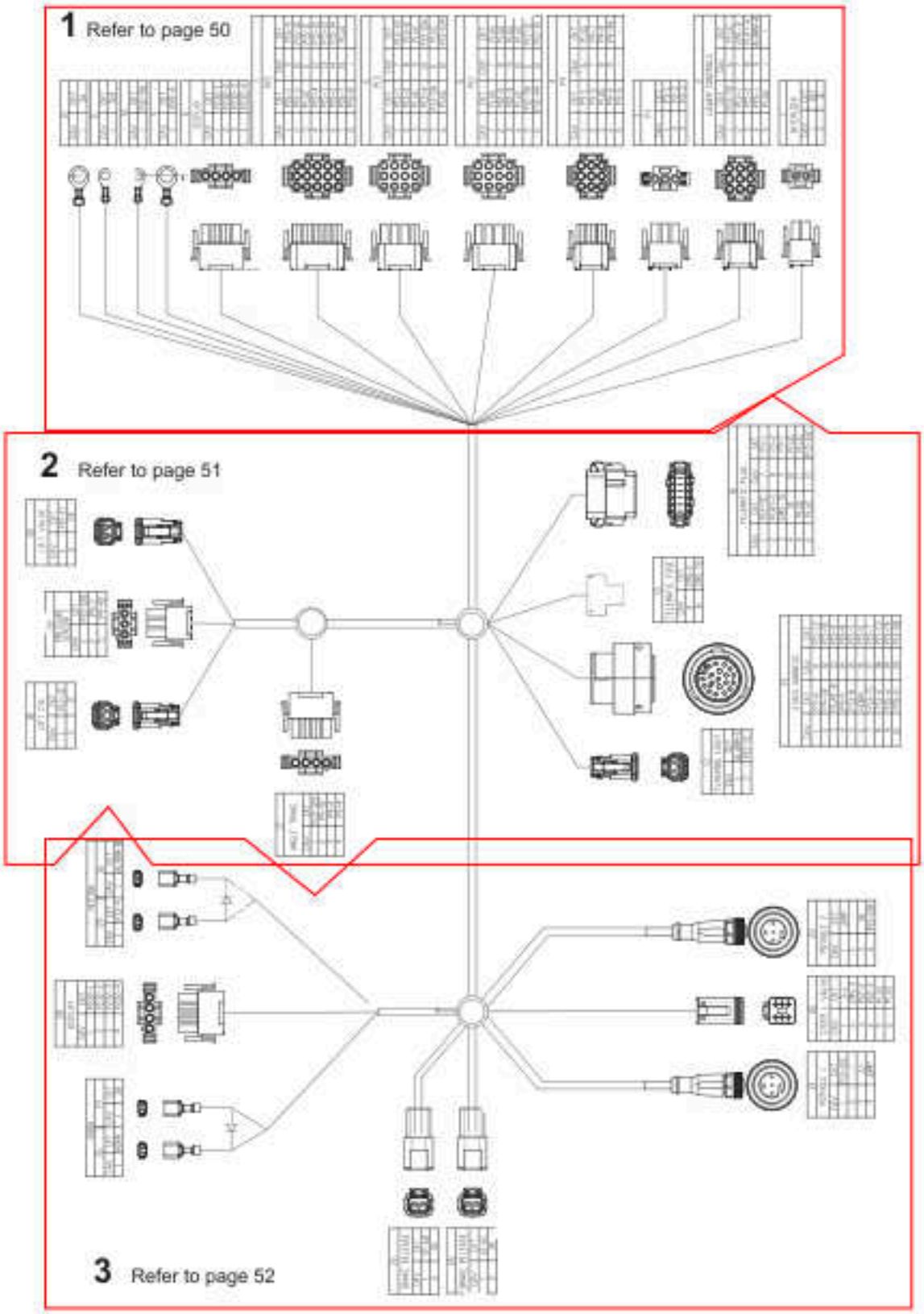
Note: Schematic is shown with FLA or AGM Batteries connected in a series.



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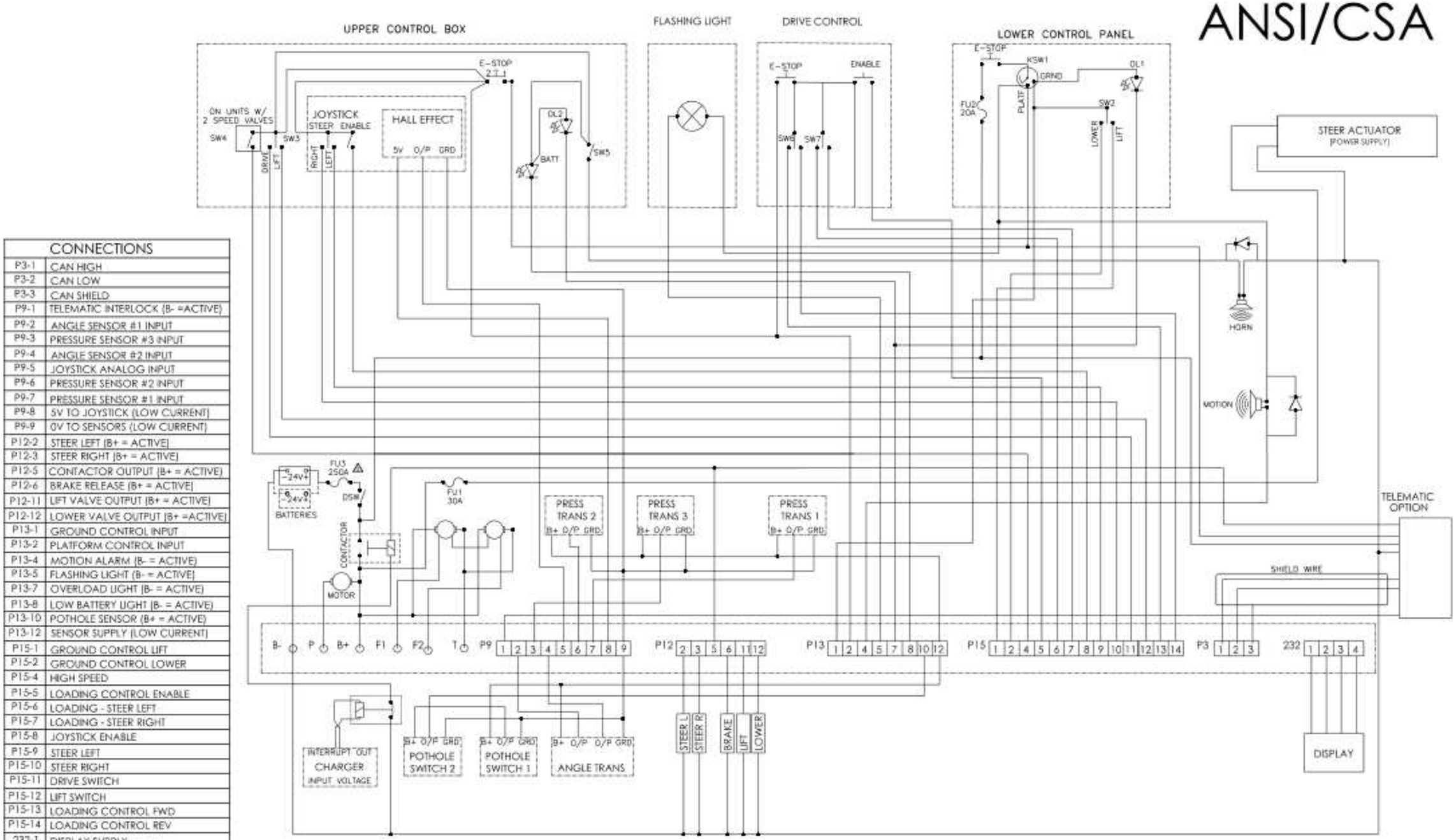
HARNESSES

Chassis Harness



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ANSI/CSA



CONNECTIONS	
P3-1	CAN HIGH
P3-2	CAN LOW
P3-3	CAN SHIELD
P9-1	TELEMATIC INTERLOCK (B- =ACTIVE)
P9-2	ANGLE SENSOR #1 INPUT
P9-3	PRESSURE SENSOR #3 INPUT
P9-4	ANGLE SENSOR #2 INPUT
P9-5	JOYSTICK ANALOG INPUT
P9-6	PRESSURE SENSOR #2 INPUT
P9-7	PRESSURE SENSOR #1 INPUT
P9-8	5V TO JOYSTICK (LOW CURRENT)
P9-9	0V TO SENSORS (LOW CURRENT)
P12-2	STEER LEFT (B+ = ACTIVE)
P12-3	STEER RIGHT (B+ = ACTIVE)
P12-5	CONTACTOR OUTPUT (B+ = ACTIVE)
P12-6	BRAKE RELEASE (B+ = ACTIVE)
P12-11	LIFT VALVE OUTPUT (B+ = ACTIVE)
P12-12	LOWER VALVE OUTPUT (B+ =ACTIVE)
P13-1	GROUND CONTROL INPUT
P13-2	PLATFORM CONTROL INPUT
P13-4	MOTION ALARM (B- = ACTIVE)
P13-5	FLASHING LIGHT (B- = ACTIVE)
P13-7	OVERLOAD LIGHT (B- = ACTIVE)
P13-8	LOW BATTERY LIGHT (B- = ACTIVE)
P13-10	POTHOLE SENSOR (B+ = ACTIVE)
P13-12	SENSOR SUPPLY (LOW CURRENT)
P15-1	GROUND CONTROL LIFT
P15-2	GROUND CONTROL LOWER
P15-4	HIGH SPEED
P15-5	LOADING CONTROL ENABLE
P15-6	LOADING - STEER LEFT
P15-7	LOADING - STEER RIGHT
P15-8	JOYSTICK ENABLE
P15-9	STEER LEFT
P15-10	STEER RIGHT
P15-11	DRIVE SWITCH
P15-12	LIFT SWITCH
P15-13	LOADING CONTROL FWD
P15-14	LOADING CONTROL REV
232-1	DISPLAY SUPPLY
232-2	DISPLAY RECEIVE
232-3	DISPLAY TRANSMIT
232-3	DISPLAY 0V RETURN

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