A TEREX COMPANY

# Service Manual

Serial Number Range

## Z™-30/20N
## Z™-30/20N RJ

from Z30N-5934 to
Z30N08-11499

Part No. 106373

Rev C

June 2008



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## Hydraulic Hose and Fitting Torque Specifications

Your machine is equipped with 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**

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 (Genie part number 49612).

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.

### 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 |



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REV A

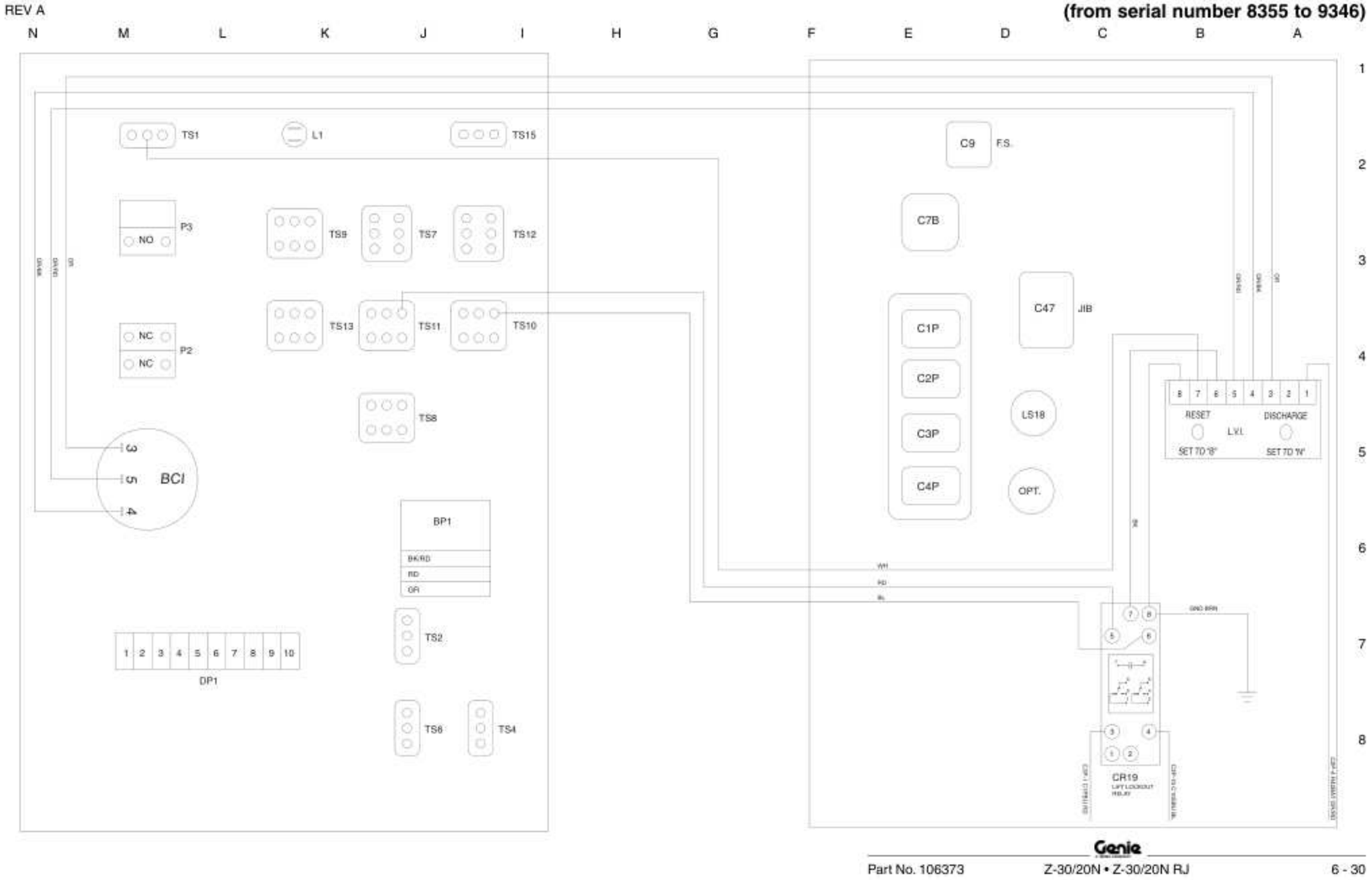
# Fault Code Chart

| Fault Code | Programmer Diagnostic Display | Condition | Possible Causes | Solution |
|---|---|---|---|---|
| Fault code LED is off or is on, but not blinking | COMMUNICATION ERROR | Machine will not drive. | The key switch or Emergency Stop button(s) was cycled on and off faster than 5 seconds OR controller sensed an internal error during start up. | Push in the ground control red Emergency Stop button to the off position and wait for 5 seconds. Pull out the ground control red Emergency Stop button to the on position. If problem persists, replace the motor controller. |
| 01 | | Normal operation. | | |
| 12 | HW FAILSAFE 1-2-3 | Machine will not drive. | The motor controller failed self test. | Replace the motor controller. |
| 13 | M- SHORTED | Machine will not drive. | The motor controller has a internal short between M- and B- terminals. | Test the motor controller. See Repair Section. |
| | FIELD OPEN | Machine will not drive. | Motor wiring is loose OR motor is defective OR motor controller has an internal short. | Check for loose or open connections at the drive motors and motor controller OR replace the defective drive motor OR test the motor controller. See Repair Section. |
| | ARM SENSOR | Machine will not drive. | Defective motor controller. | Replace the motor controller. |
| | FLD SENSOR | Machine will not drive. | Defective motor controller. | Replace the motor controller. |



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## LVI / BCI Option Wiring Diagram (from serial number 8355 to 9346)






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# Ground Control Panel Wiring Diagram (before serial number 6290)

REV A

| | | | | | | |
|---|---|---|---|---|---|---|
| | BRN-CB2 | BLK [OPTION 2] | 52 | BRN-CH | BRN-CR4 | GROUND |
| | BRN-5 | BRN-2 | 51 | BRN-MH | BRN-SP | GROUND |
| | WHT-6 | WHT-6 | 50 | | | LS2-LS4 JUNCTION |
| | BLK-7 | BLK-6 | 49 | | | LS1-LS2 JUNCTION |
| | WHT/BLK-5P | RED/WHT-CR5 | 48 | RED/WHT-MH | RED/WHT-SP | BRAKE RELEASE |
| | | ORG/BLK-1 | 47 | | ORG/BLK-SP ** | JIB BOOM ROTATE RIGHT |
| | | ORG-1 | 46 | | ORG-SP ** | JIB BOOM ROTATE LEFT |
| 2 | | GRN/BLK-1 | 44 | | GRN/BLK-SP | JIB BOOM DOWN |
| | | GRN-1 | 43 | | GRN-SP | JIB BOOM UP |
| | ORG/RED-CR1 | ORG/RED-1 | 42 | ORG/RED-CH | ORG/RED-LS | SWITCHED 48V DC |
| | BLK-8 | | 40 | | ORG-CH | OFF-LIMIT SPEED |
| | BLU/BLK-19D | BLU/BLK-1 | 37 | | BLU/BLK-MH | STEER RIGHT |
| | BLU-19D | BLU-1 | 36 | | BLU-MH | STEER LEFT |
| | | WHT/RED-1 | 32 | | WHT/RED-CH | JOYSTICK POT. LOW |
| | | WHT/BLK-1 | 31 | | WHT/BLK-CH | DRIVE REVERSE |
| 3 | | WHT-1 | 30 | | WHT-CH | DRIVE FORWARD |
| | | RED/WHT-1 | 29 | | RED/WHT-CH | 2-WIRE POT. |
| | WHT-TILT | RED/BLK-1 | 28 | | | TILT ALARM |
| | RED-CR3 | RED-1 | 27 | | RED-SP | AUXILIARY PUMP SELECT |
| | [OPTION 2] | | 23 | | | KEY SWITCH POWER |
| | RED-TILT | WHT-2 | 23 | | WHT-SP | KEY SWITCH POWER |
| | WHT-7 | BLK-2 | 20 | BLK-CR4 | BLK-SP | +24V DC TO PLATFORM |
| | TB36/TB37 | GRN/WHT-CR3 | 19 | | GRN/WHT-MH | LIFT PUMP |
| 4 | WHT/BLK-5P | GRN/WHT-3 | 19 | | GRN/WHT-SP | LIFT PUMP |
| | | GRN/BLK-3 | 18 | | GRN/BLK-SP | PLATFORM ROTATE RIGHT |
| | | GRN-3 | 17 | | GRN-SP | PLATFORM ROTATE LEFT |
| | RED-5 | ORG/RED-3 | 16 | | ORG/RED-CR6 | DRIVE ENABLE |
| | " | ORG/BLK-3 | 15 | ORG/BLK-MH * | ORG/BLK-SP | PLATFORM LEVEL DOWN |
| | " | ORG-3 | 14 | ORG-MH * | ORG-SP | PLATFORM LEVEL UP |
| | WHT-5 | BLU/RED-3 | 13 | | | DRIVE ENABLE LIGHT |
| 5 | BLK-5 | BLU/WHT-3 | 12 | | BLU/WHT-CH | FOOTSWITCH |
| | | BLU/BLK-3 | 11 | BLU/BLK-MH | BLU/BLK-SP | SECONDARY BOOM DOWN |
| | | BLU-3 | 10 | BLU-MH | BLU-SP | SECONDARY BOOM UP |
| | BLK/RED-CR4 | BLK/RED-3 | 9 | | | HORN |
| | | BLK/WHT-3 | 8 | BLK/WHT-MH | BLK/WHT-SP | BOOM RETRACT |
| | | BLK-3 | 7 | BLK-MH | BLK-SP | BOOM EXTEND |
| | | WHT/RED-3 | 6 | WHT/RED-MH | WHT/RED-SP | BOOM FUNCTION FLOW CONTROL |
| | | WHT/BLK-3 | 5 | WHT/BLK-MH | WHT/BLK-SP | TURNTABLE ROTATE RIGHT |
| 6 | | WHT-3 | 4 | WHT-MH | WHT-SP | TURNTABLE ROTATE LEFT |
| | RED/WHT-CR1 | RED/WHT-3 | 3 | | | 48V DC RELAY COIL POWER |
| | | RED/BLK-3 | 2 | RED/BLK-MH | RED/BLK-SP | PRIMARY BOOM DOWN |
| | | RED-3 | 1 | RED-MH | RED-SP | PRIMARY BOOM UP |

D C B A

7

[* SEE OPTIONAL WIRING]
[** JIB BOOM ROTATE OPTION]

8

### CONTROL RELAY I.D.

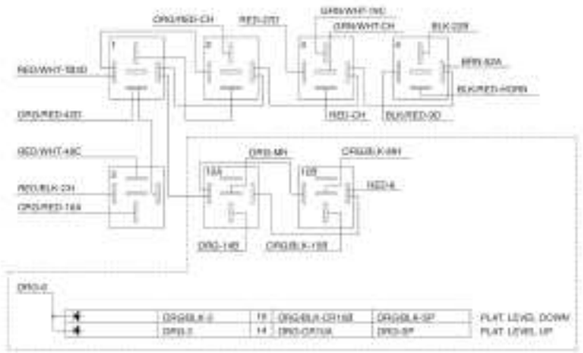
CR1 - SECONDARY 48V DC POWER
CR2 - PRIMARY 48V DC POWER
CR3 - AUXILIARY PUMP
CR4 - HORN
CR5 - BRAKE RELEASE
CR10A - PLATFORM LEVEL CUTOUT (CE ONLY)
CR10B - PLATFORM LEVEL CUTOUT (CE ONLY)

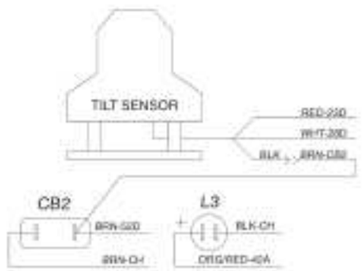
### SPARE WIRE LIST

BLK-1
BLK/WHT-1
BLK/RED-1
BLU/WHT-1
BLU/RED-1
GRN/WHT-1

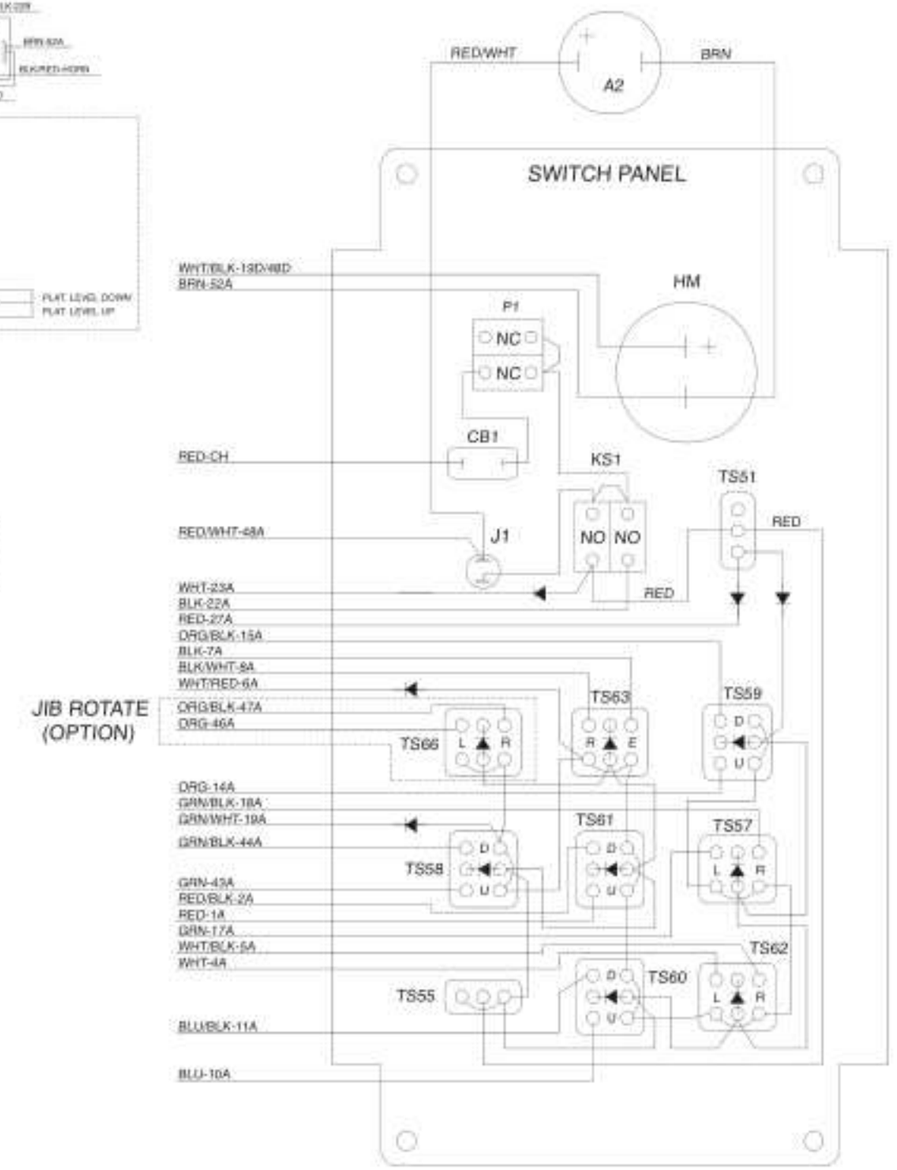
### OPTION NUMBERS

1 - PLATFORM LEVEL CUTOUT
2 - FLASHING BEACON
3 - DESCENT ALARM




| LABEL | DESCRIPTION |
|---|---|
| P1 | EMERGENCY STOP BUTTON |
| KS1 | KEY SWITCH |
| TS51 | AUXILIARY TOGGLE SWITCH |
| TS55 | FUNCTION ENABLE TOGGLE SWITCH |
| TS57 | PLATFORM ROTATE TOGGLE SWITCH |
| TS58 | JIB BOOM UP/DOWN TOGGLE SWITCH |
| TS59 | PLATFORM LEVEL TOGGLE SWITCH |
| TS60 | SECONDARY BOOM UP/DOWN TOGGLE SWITCH |
| TS61 | PRIMARY BOOM UP/DOWN TOGGLE SWITCH |
| TS62 | TURNTABLE ROTATE TOGGLE SWITCH |
| TS63 | BOOM EXTEND/RETRACT TOGGLE SWITCH |
| TS66 | JIB BOOM ROTATE TOGGLE SWITCH (OPTION) |
| CR1 | CIRCUIT BREAKER, CONTROLS, 10A |
| CB2 | CIRCUIT BREAKER, CONTROLS RETURN, 10A |
| J1 | BRAKE RELEASE JACK |
| HM | HOURMETER |
| CH | CHASSIS HARNESS |
| MH | MANIFOLD HARNESS |
| SP | SWITCH PANEL |
| CR | CONTROL RELAY |
| A2 | BRAKE RELEASE/TRAVEL ALARM |
| A3 | DESCENT ALARM (OPTION) |
| LS | CONTROLLER STATUS LED |






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