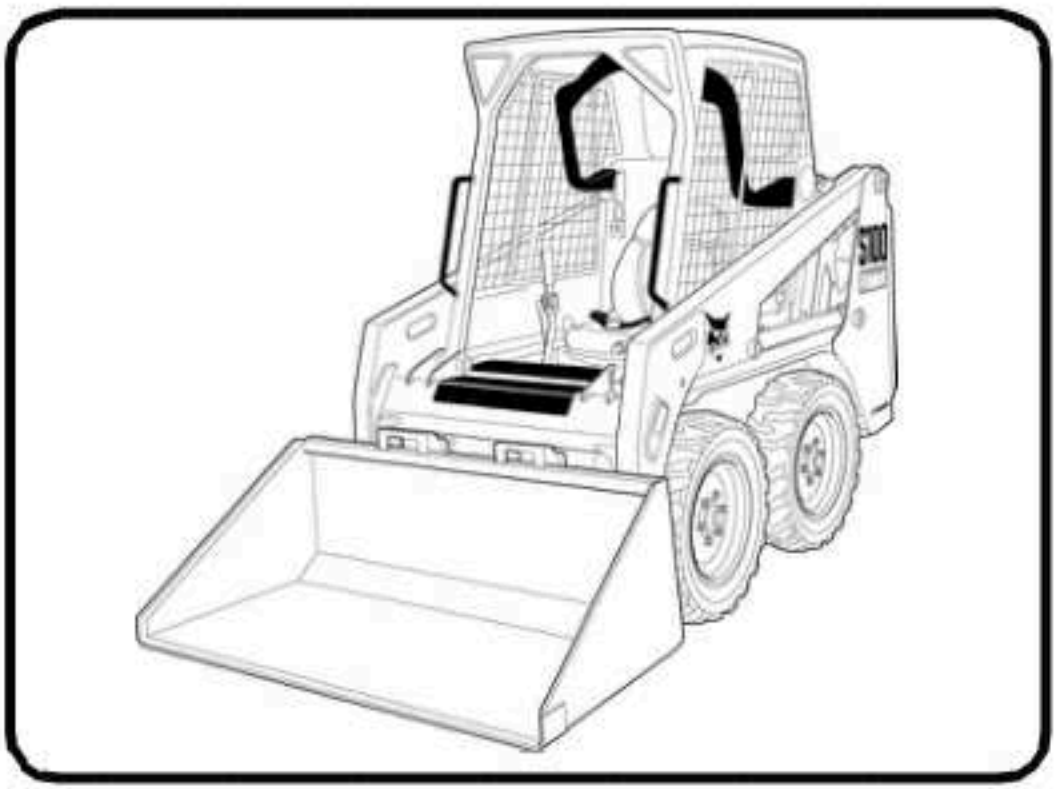
Bobcat®

Service Manual
S100 Skid-Steer Loader

S/N AB6420001 & Above



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS™)

6987401 (4-11)

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Specifications (Cont'd)

All dimensions are given in millimeters. Respective imperial dimensions are given in inches enclosed by parentheses.

Cylinders

Cylinder Bore I.D. (Standard)	78 - 78,019 mm (3.0709 - 3.0716 in)
Allowable Limit (Standard)	75,15 mm (3.077 in)
Cylinder Bore I.D. (Oversize)	78,5 - 78,519 mm (3.0906 - 3.0912 in)
Allowable Limit (Oversize)	78,65 mm (3.096 in)

Piston Rings

Ring Gap (Top)	0,30 - 0,45 mm (0.012 - 0.017 in)
Ring Gap (2nd Ring)	0,30 - 0,45 mm (0.012 - 0.017 in)
Ring Gap (Oil Ring)	0,25 - 0,40 mm (0.0098 - 0.015 in)
Allowable Limit (All Rings)	1,25 mm (0.0492 in)
Side Clearance of Ring Groove:	
2nd Ring	0,085 - 0,112 mm (0.00335 - 0.0044 in)
Allowable Limit	0,20 mm (0.008 in)
Oil Ring	0,02 - 0,055 mm (0.00079 - 0.0021 in)
Allowable Limit	0,15 mm (0.0059 in)

Pistons

Piston Pin Bore	22 - 22,013 mm (0.86615 - 0.86665 in)
Allowable Limit	22,03 mm (0.8673 in)

Connecting Rods

Piston Pin O.D.	22,002 - 22,011 mm (0.8662 - 0.8666 in)
Small End Bushing I.D.	22,025 - 22,040 mm (0.8671 - 0.8677 in)
Clearance Between Piston Pin And Small End Bushing	0,014 - 0,038 mm (0.00056 - 0.0014 in)
Connecting Rod Alignment Allowable Limit	0,05 mm (0.002 in)

Oil Pump

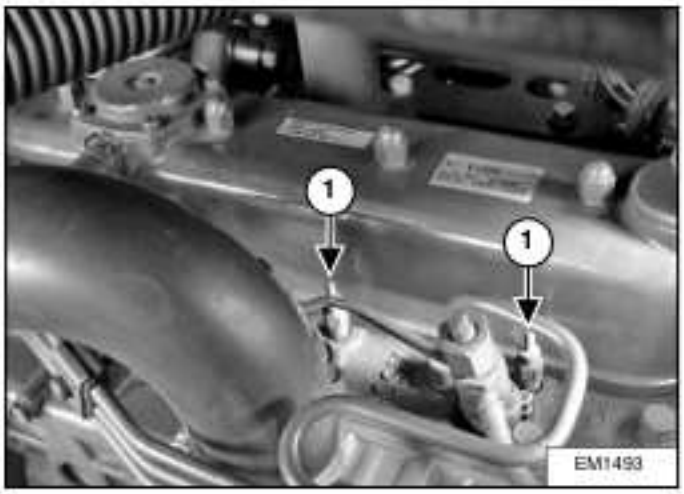
Oil Pressure at Rated RPM	0,20 - 0,44 MPa (2,0 - 4,4 bar) (28.5 - 64 psi)
Allowable Limit	0,15 MPa (1,5 bar) (21.3 psi)
Idle Speed Allowable Limit	0,05 MPa (0,5 bar) (7 psi)
Clearance Between Inner Rotor And Outer Rotor	0,06 - 0,18 mm (0.0024 - 0.0071 in)
Clearance Between Outer Rotor And Pump Body	0,1 - 0,180 mm (0.0039 - 0.0071 in)
End Clearance Between Inner Rotor And Cover	0,025 - 0,075 mm (0.00099 - 0.0029 in)

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Glow Plug Removal And Installation

Remove the glow plug wire harness and strap. (See Glow Plug - Testing on Page 70-80-1.)

Figure 70-80-4



Loosen and remove the glow plugs (Item 1) **[Figure 70-80-4]**.

Installation: Tighten the glow plugs to 7,8 - 14,7 N•m (69 - 130 in-lb) torque.

Figure 70-80-5



Photo **[Figure 70-80-5]** shows the glow plug removed from the engine. Inspect the glow plugs and replace when necessary.

Valve Clearance Adjustment

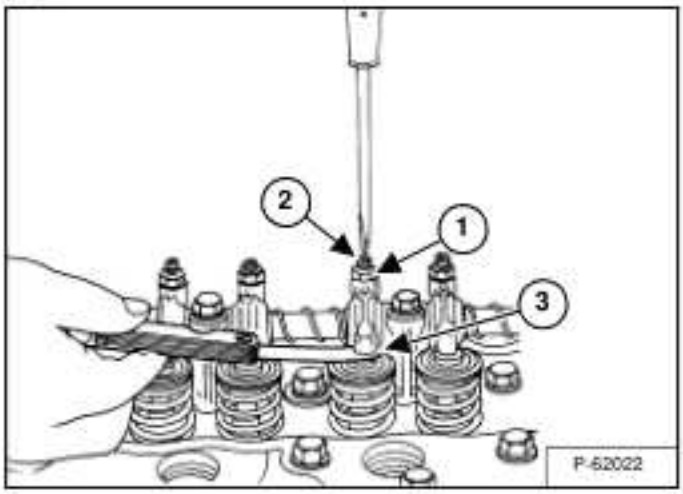
NOTE: The valve clearance must be checked and adjusted when engine is cold.

Remove the glow plugs. (See Glow Plug Removal And Installation on Page 70-80-2.)

Remove the valve cover. (See Cylinder Head Removal And Installation on Page 70-80-4.)

Bring number 1 piston to "TDC" (Top Dead Center).

Figure 70-80-6



Adjust the valve clearance as follows:

Loosen the lock nut (Item 1) **[Figure 70-80-6]**.

Turn the adjustment screw (Item 2) **[Figure 70-80-6]** until the correct clearance is obtained.

NOTE: The clearance is measured between the rocker arm and valve stem tip (Item 3) [Figure 70-80-6].

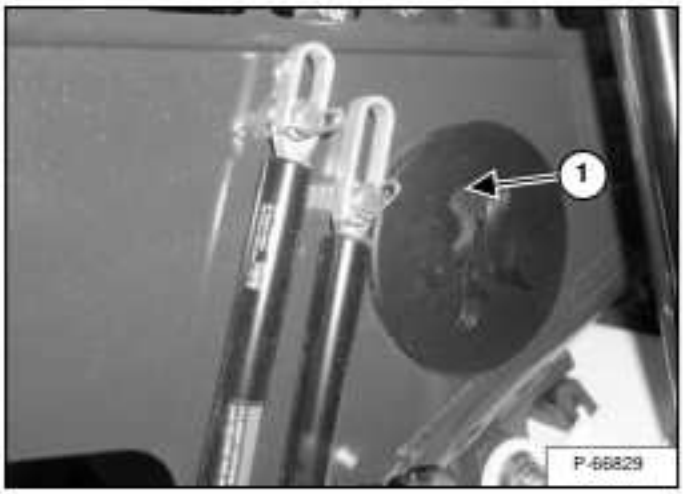
If adjustments are necessary, tighten lock nut before moving on to the next rocker arm.

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Electrical System

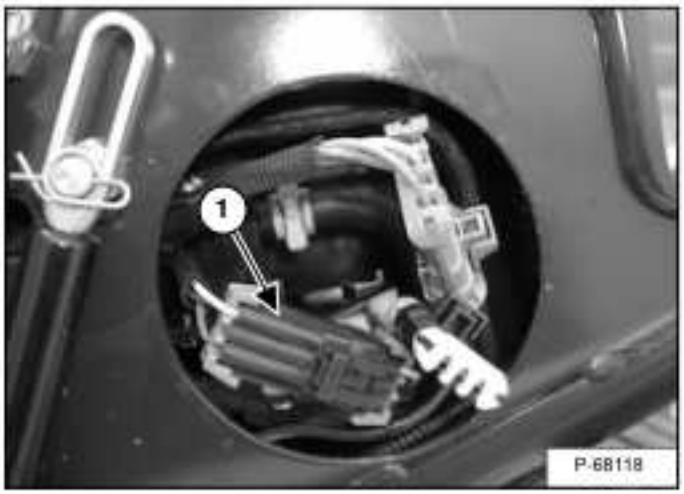
NOTE: The key must be put in the ON position when checking for power in circuits.

Figure 80-30-1



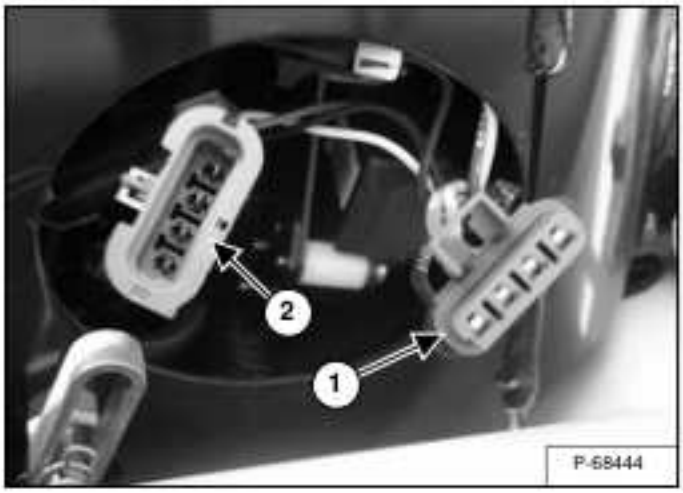
Remove the access cover (Item 1) **[Figure 80-30-1]** from the operator cab.

Figure 80-30-2



Disconnect the blower fan wiring connector (Item 1) **[Figure 80-30-2]** from the loader wiring harness.

Figure 80-30-3



Check the loader harness (Item 1) **[Figure 80-30-3]** for voltage. The voltage should be 12 volts.

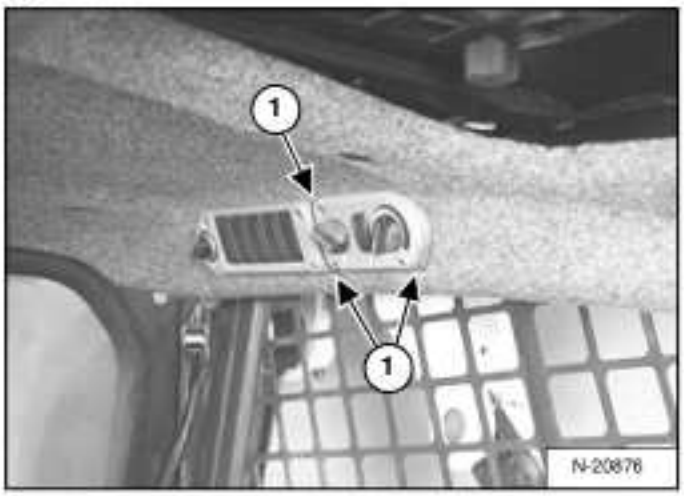
If there is no voltage at the wiring harness, check the harness for broken wires or blown fuse.

If there is voltage at the wiring harness, check the resistance to the blower fan at the blower fan wiring connector (Item 2) **[Figure 80-30-3]**.

If there is no resistance value replace the blower fan.

If there is a resistance value check the climate controls at the control panel inside the loader cab.

Figure 80-30-4



Remove the three mount screws (Item 1) **[Figure 80-30-4]** from the cab control panel.

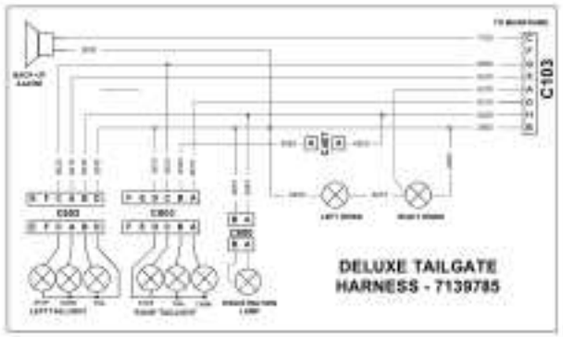
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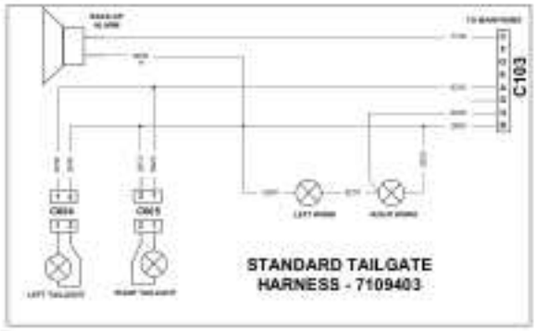
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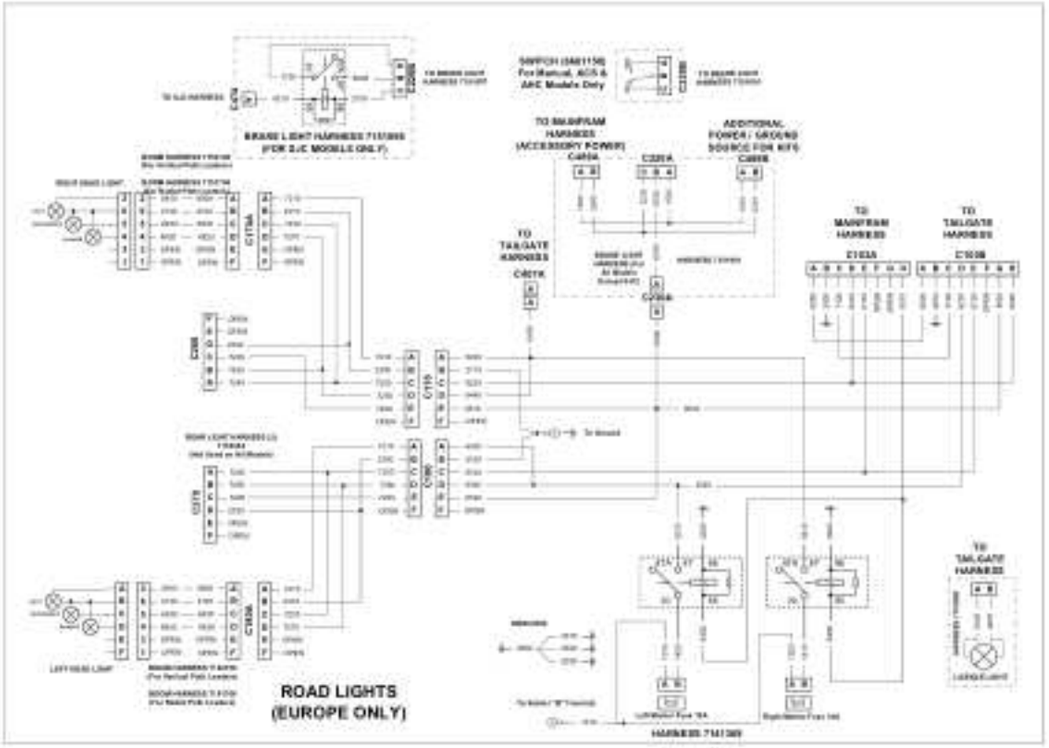
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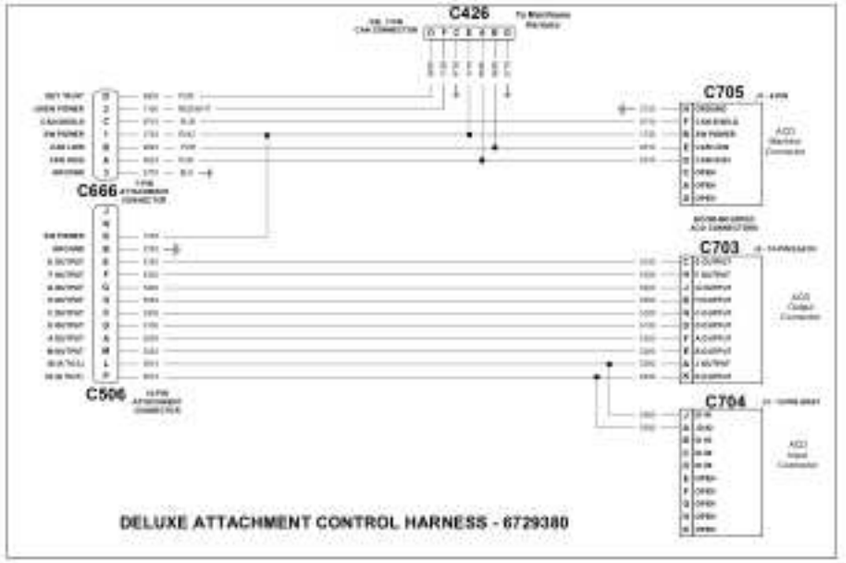
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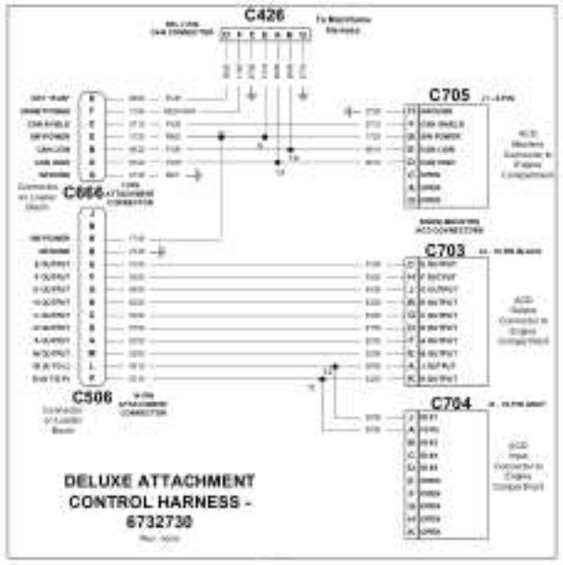
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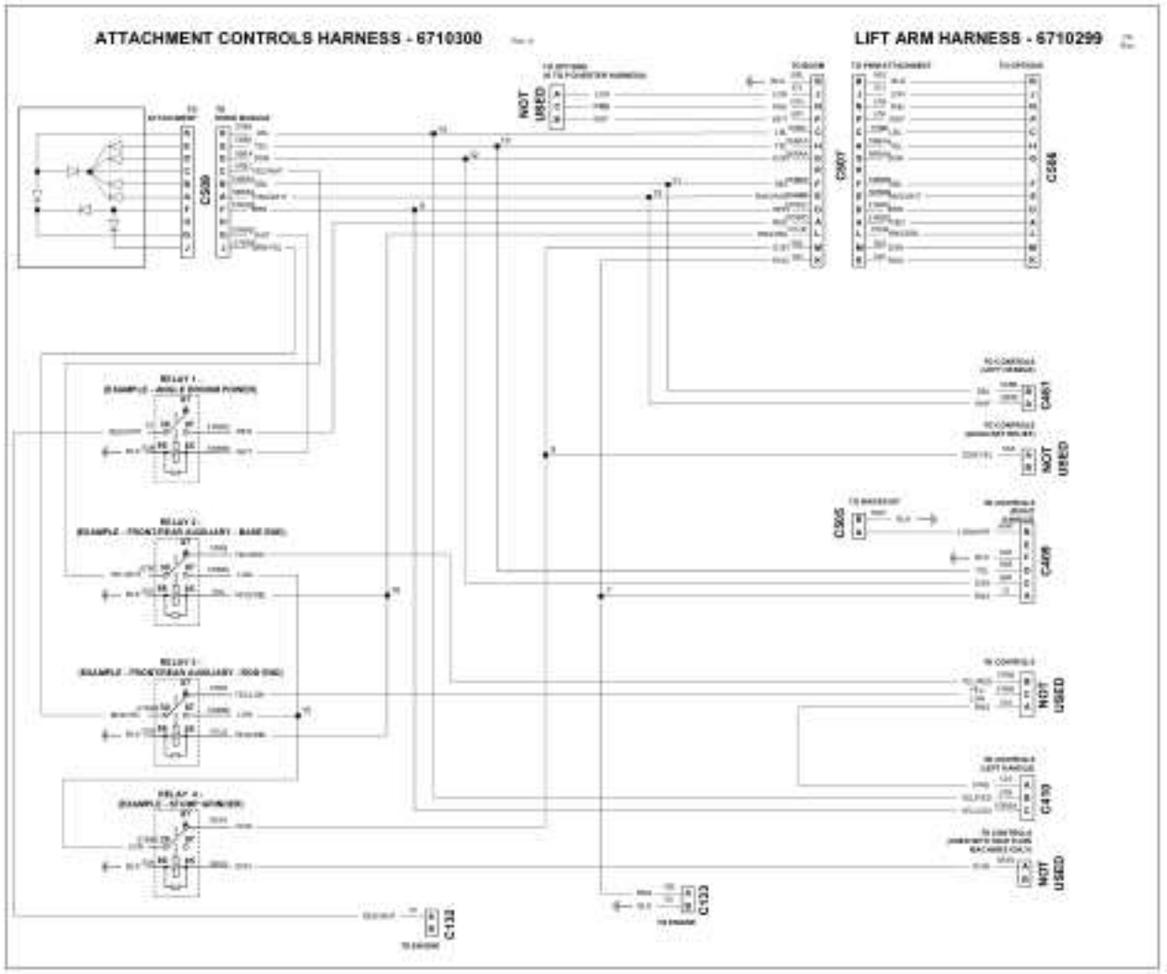


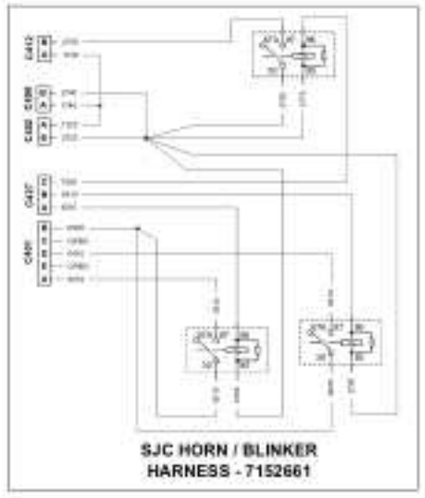


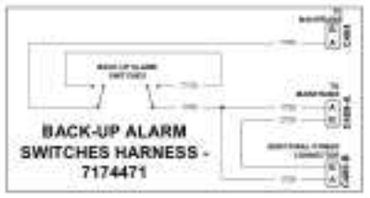


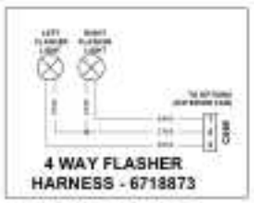








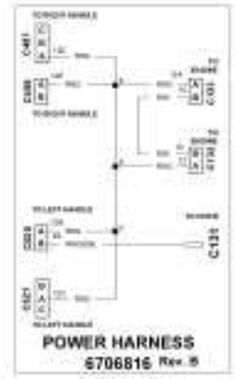












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