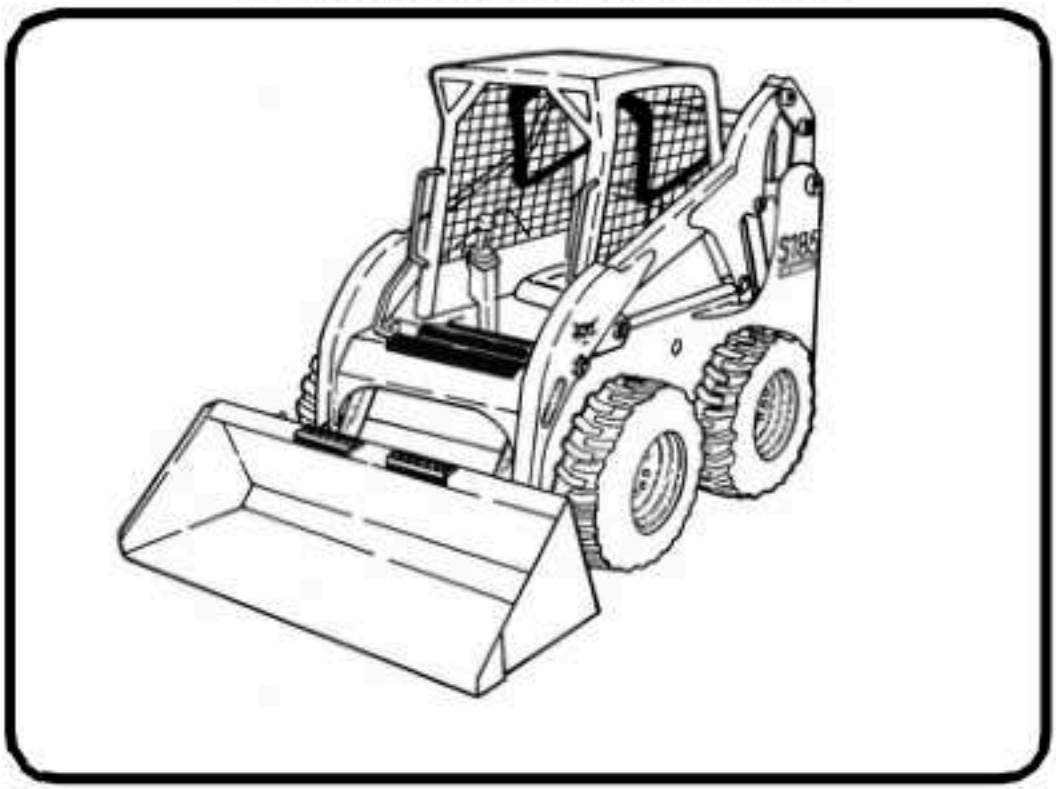
Bobcat®

Service Manual

S175/S185 Skid-Steer Loader

S/N 530111001 & Above
S/N 530211001 & Above
S/N A8NZ11001 - A8NZ59999
S/N A8M411001 - A8M459999
S/N A8NY11001 - A8NY59999
S/N 530311001 - 530359999
S/N 530411001 - 530459999
S/N ABRT11001 - ABRT59999



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

6904132 (5-08)

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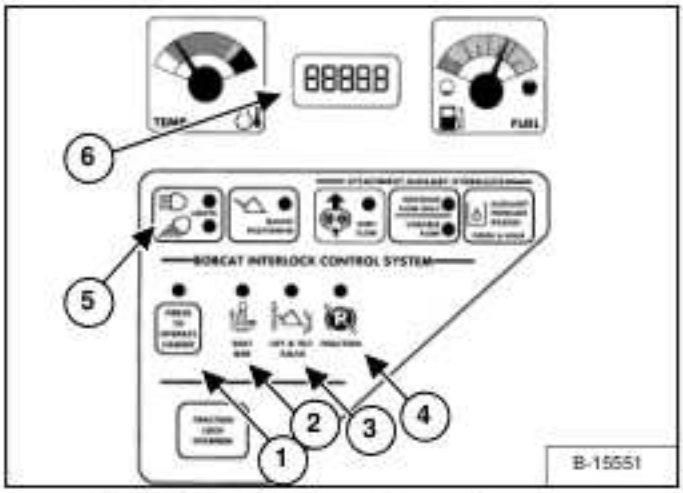
BOBCAT INTERLOCK CONTROL SYSTEM (BICS) (CONT'D)

Troubleshooting Chart

The following chart shows the effects which can happen to the loader, and the probable causes when the BICS Instrument Panel lights are off. See **[Figure 60-100-3]** for location of BICS lights and Icons. Have service procedures performed ONLY BY QUALIFIED BOBCAT SERVICE PERSONNEL.

Press and hold LIGHTS Button (Item 5) **[Figure 60-100-3]** for two seconds to view SERVICE CODES in the HOURMETER / CODE DISPLAY (Item 6) **[Figure 60-100-3]**. If more than one SERVICE CODE is present, the codes will scroll on the HOURMETER / CODE DISPLAY.

Figure 60-100-3



Indicator Light	Light ON	Light OFF	Effect on Operation of Loader When Light is OFF	SERVICE CODES Means System Error (See Your Bobcat Dealer for Service)		
				No. of Flashes	Service Code	Causes
1	PRESS TO OPERATE LOADER Button is pressed.	PRESS TO OPERATE LOADER Button is not pressed.	Lift, tilt and traction functions will not operate.	----	----	----
2	Seat Bar is down.	Seat Bar is up.	Lift and tilt functions will not operate.	2	11-05	Seat Bar sensor circuit shorted to battery voltage*.
				3	11-06	Seat Bar sensor circuit shorted to ground.
3	Control valve can be used.	Control valve cannot be used.	Lift, tilt and traction functions will not operate.	1	17-07	Valve output circuit is open.
				2	17-05	Valve output circuit shorted to battery voltage*.
				3	17-06	Valve output circuit shorted to ground.
				3	17-06	Controller not grounded or intermittent ground.
4	Loader can be moved forward & backward	Loader cannot be moved forward and backward.	Loader cannot be moved forward and backward.	1	16-07	Traction lock hold solenoid circuit is open.
				2	16-05	Traction lock hold solenoid circuit shorted to battery voltage*.
				3	16-06	Traction lock hold solenoid circuit shorted to ground.
				5	15-02	Traction lock pull solenoid circuit is shorted to battery voltage* - ERROR ON (Should be OFF).
				6	15-03	Traction lock pull solenoid circuit ERROR OFF (Should be ON).
SEAT BAR LIFT & TILT VALVE TRACTION				Continuous Flashing	03-09 03-10	System voltage low System voltage high

NOTES:

Multiple SERVICE CODES and/or Abnormal Symptoms can be caused by corroded or loose ground. Check grounds and both battery connections.

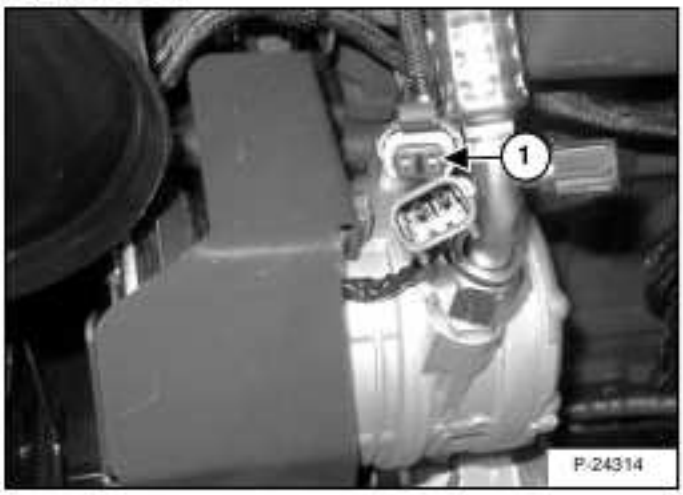
ERROR OFF = shorted to ground or bad fuse, faulty wiring, faulty open relay, no voltage from relay to controller.
ERROR ON = shorted to battery voltage, faulty wiring, faulty closed relay.

*Normal BICS operating voltage is less than the electrical system voltage.

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Electrical System (Cont'd)

Figure 80-30-8



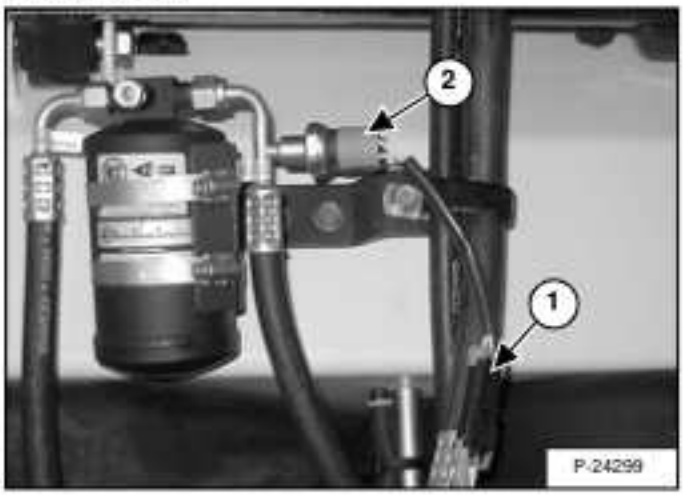
With a multi meter, check the voltage to the compressor clutch at the loader harness (Item 1) **[Figure 80-30-8]**

The voltage reading should be around 12 volts.

If there is no power at the clutch, check the wiring harness for broken wires.

If there is power at the clutch, reconnect the wiring harness to the compressor clutch.

Figure 80-30-9



Disconnect the loader harness (Item 1) from the pressure switch (Item 2) **[Figure 80-30-9]**.

Figure 80-30-10



Using a multi meter check the loader wiring harness (Item 1) **[Figure 80-30-10]** for voltage.

The voltage should be around 12 volts.

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

Figure 80-30-11



If there is voltage at the harness, check the resistance at the pressure switch (Item 1) **[Figure 80-30-11]**.

If there is no resistance value, check for low refrigerant level. (See Refrigerant Identification on Page 80-40-1.)

If a resistance value is observed, the pressure switch is good.

Reconnect the loader harness to the pressure switch.

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S185 LOADER SPECIFICATIONS (CONT'D)

Performance

Rated Operating Capacity (ISO)	1850 lbs. (839kg)
Tipping Load (SAE Rating)	3900 lbs. (1769 kg)
Operating Weight	5808 lbs. (2635 kg)
SAE Breakout Force-Lift	3600 lbs. (16013 N)
-Tilt	3550 lbs. (15791 N)
Axle Torque	4900 ft.- lbs. (6644 N•m)
Travel Speed - Single Speed Loader - Two-Speed Loader (Opt.) Low/High	0-7.3 MPH (11,7 km/hr) 7.5 MPH (12 km/hr) / 11.1 (17,8 km/hr)

Controls

Vehicle Steering	Direction and Speed controlled by two hand levers.
Loader Hydraulics Lift and Tilt	Controlled by separate foot pedals or optional hand controls.
Front Auxiliary	Controlled by electrical switch on RH steering lever.
Rear Auxiliary (Option)	Controlled by electrical switch on LH steering lever.
Engine	Hand lever throttle: Key-type starter switch and shutdown. Keyless start and shutdown with deluxe instrumentation.
Starting Aid	Glow Plugs Automatically activated by standard or deluxe instrumentation.
Service Brake	Two independent hydrostatic systems controlled by two hand opertated steering levers.
Secondary Brake	One of the hydrostatic transmissions.
Parking Brake	Mechanical Disc, switch in control panel.

Engine

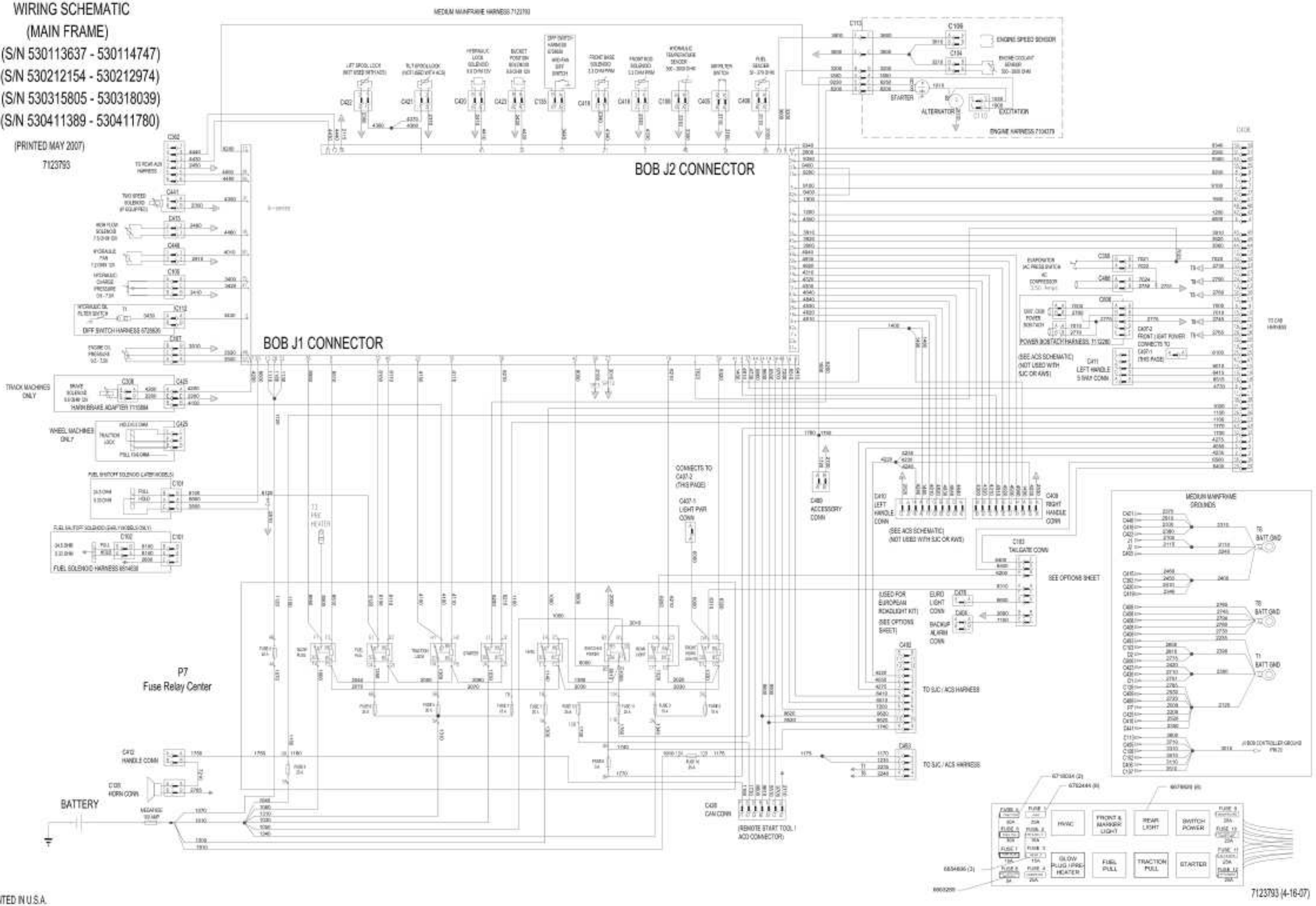
Make/Model	Kubota V2003-M-DI-T
Fuel/Cooling	Diesel/Liquid
Horsepower (SAE Net)	56 HP (42kW)
Torque (SAE Net)	120.8 ft.-lbs. (164 N•m) @ 1825 RPM
Number of Cylinders	Four
Displacement	122 cu.in. (2,0L)
Bore/Stroke	3.268/3.638 (83.0/92.4)
Lubrication	Pressure System W/Filter
Crankcase Ventilation	Open Breathing
Air Induction	Turbocharged
Air Cleaner	Dry replaceable cartridge w/safety element
Ignition	Diesel-Compression
High Idle RPM	2860-3000
Low Idle RPM	1195-1245

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WIRING SCHEMATIC
(MAIN FRAME)
S175 (S/N 530113637 - 530114747)
(S/N 530212154 - 530212974)
S185 (S/N 530315805 - 530318039)
(S/N 530411389 - 530411780)

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