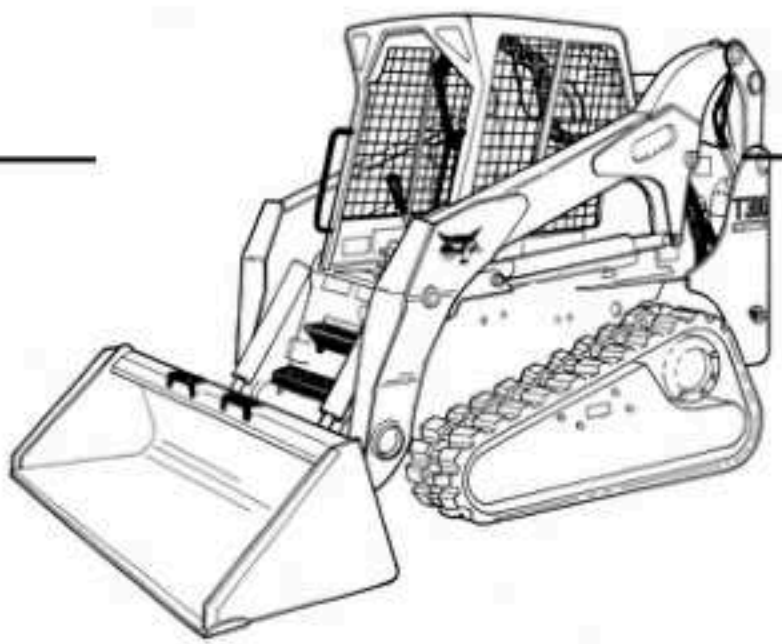
T300
TURBO

T300
TURBO
HIGH FLOW

Bobcat®

Service Manual

S/N 521911001 & Above
S/N 522011001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6901936 (3-06)

Ingersoll Rand
Compact Vehicle Technologies
Printed in U.S.A.

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ACS- ADVANCED CONTROL SYSTEM
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BICS™-BOBCAT INTERLOCK CONTROL SYSTEM

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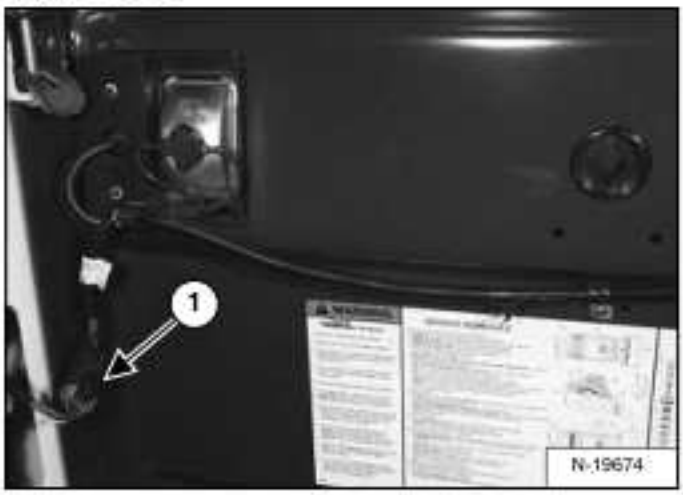
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REAR DOOR

Removal And Installation

Figure 50-70-1



Open the rear door.

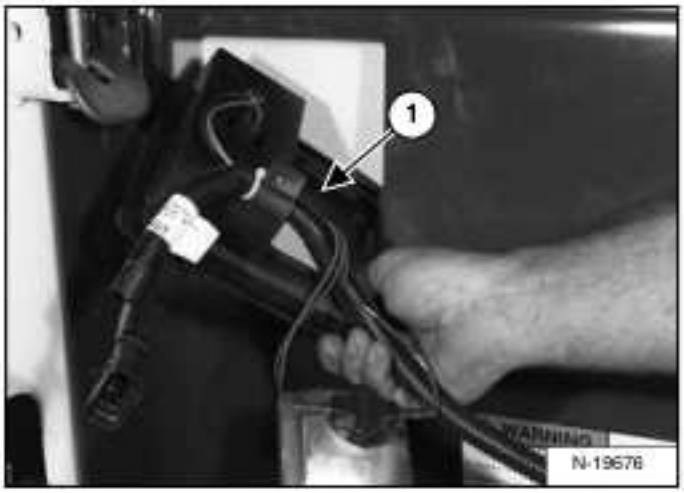
Disconnect the light harness connector (Item 1) **[Figure 50-70-1]** from the engine harness.

Figure 50-70-2



Remove the light bulb (Item 1) **[Figure 50-70-2]** from the light housing. (Both sides).

Figure 50-70-3



Remove the light housing (Item 1) **[Figure 50-70-3]** from the rear door. (Both sides).

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SYSTEM TROUBLESHOOTING CHART (CONT'D)

Gauge Pressure Related Troubleshooting

Normal compressor suction (low side) and discharge (high side) pressure at ambient temperatures of 86-96 degrees F (30-38 degrees C) and compressor speed of approximately 2000 RPM are:

High pressure side pressure: 210-265 PSI

Low pressure side pressure: 15-33 PSI

As a rule of thumb the high side pressure will be around eight times greater then the low side pressure.

Possible Cause	Inspection	Solution
Low pressure side Too high.	The low pressure side pressure normally becomes too high when the high pressure side pressure is too high. As this is explained below, the following inspection is only used when the low pressure side is too high.	
1. Expansion valve opens too far.	Frost is present on the suction hose.	Replace expansion valve.
2. Dective compressor.	The high and low pressure side gauge pressures equalize when the magnetic clutch is engaged.	Replace compressor.
Low pressure side Too low.		
1. Low refrigerant charge.	The high side pressure will be low and bubbles may be present in sight glass on receive drier.	Repair any leaks and recharge the refrigerant to the correct level.
2. Clogged or closed expansion valve.	The expansion valve's inlet side is frosted. Moisture or other Contaminants can be the cause.	Clean or replace the expansion Valve.
3. Restriction between drier and expansion valve.	Frost on the line between drier and expansion valve. A Negative low pressure reading may be shown.	Flush system or replace hose.
4. Thermostat malfunction.	The evaportator is frozen.	Adjust themostat's temperature setting or probe placement or replace thermostat.
5. Restriction in reciever drier.	Excessive frost on reciever drier.	Replace reciever drier.
High pressure side Too high.		
1. Poor condenser performance.	Dirty or clogged condenser fins. Condenser fans not Operating.	Clean fins, and/or repair the fan.
2. Excessive refrigerant.	The high pressure side pressure will be high.	Use refrigerant recovery equipment to capture excess refrigerant. Charge to the correct refrigerant level.
3. Excessive oil charge.	The high pressure side will be high.	Evacuate system. Remove oil from condenser and compressor. Measure oil from compressor and add correct oil charge back into compressor. Flush system with nitrogen. Replace drier.
4. Air in system.	Pressure is high on both high and low sides.	Evacuate and recharge with Refrigerant.
5. Restriction in drier, condenser or high pressure line.	High pressure side will be high, and low pressure side will be low.	Evacuate and flush system replacing defective parts.

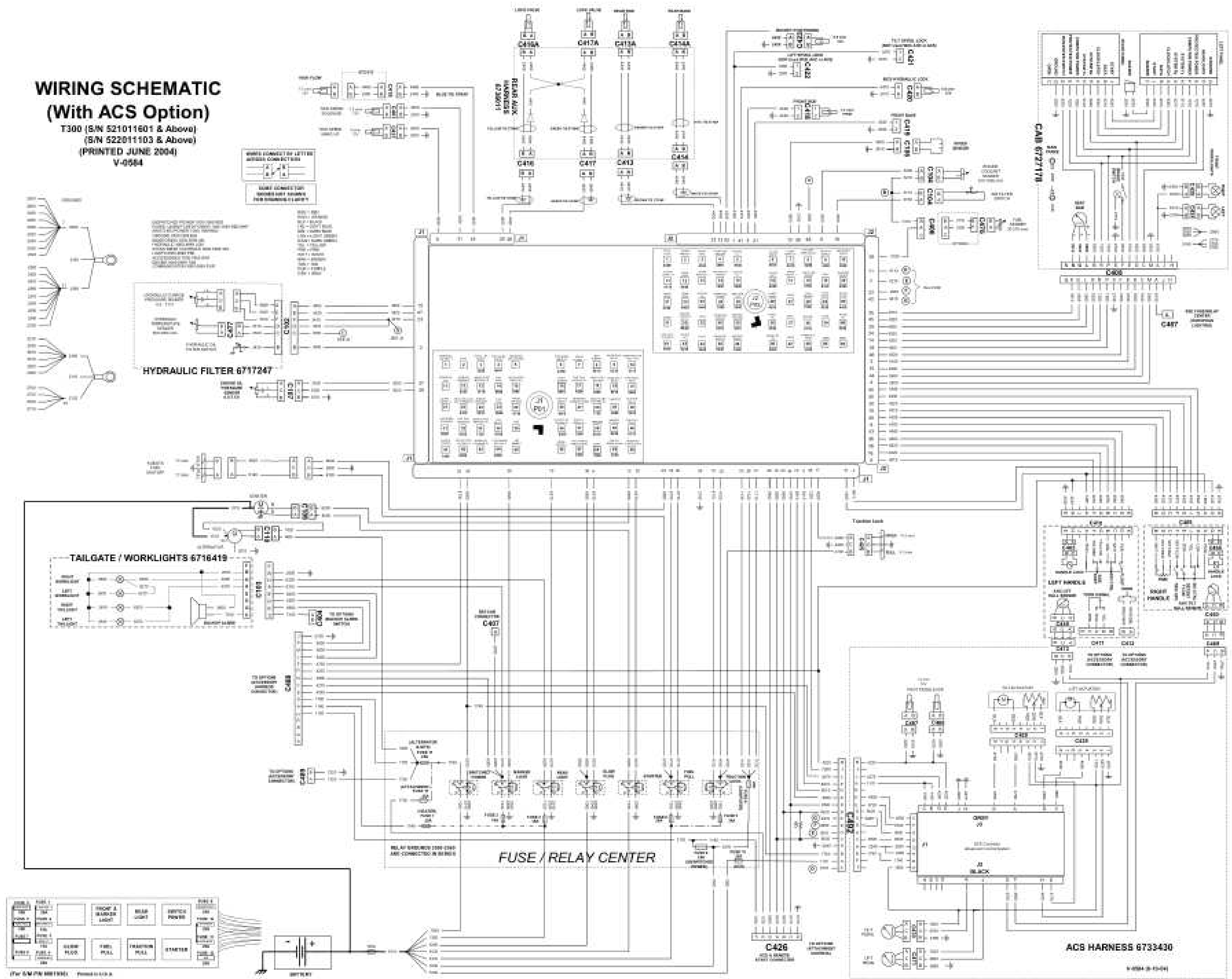
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LOADER SPECIFICATIONS (T300) (CONT'D)

Hydraulic System

Pump Type	Engine driven, gear type
Pump Capacity (S/N 521911523 & Below) - Standard	18.7 GPM (70,8 L/min.) @ 2550 Engine Rpm (High Idle)
Pump Capacity (S/N 521911523 & Below) High Flow Option	29.2 GPM (110,5 L/min) @ 2550 Engine Rpm (High Idle)
Pump Capacity (S/N 521911523 & Above) - Standard	21.2 GPM (80,2 L/min.) @ 2550 Engine Rpm (High Idle)
Pump Capacity (S/N 521911523 & Above) High Flow Option	31.7 GPM (120 L/min) @ 2550 Engine Rpm (High Idle)
System Relief at Quick Couplers	3300 PSI (227,5 Bar)
Filter (Hydraulic)	Full flow replaceable, 3-micron synthetic media element
Hydraulic Cylinders	Double-acting; tilt cylinders have cushioning feature on dump and rollback
Bore Diameter: Lift Cylinder (2)	3.00 in. (76,2 mm)
Tilt Cylinder (2)	3.00 in. (76,2 mm)
Rod Diameter: Lift Cylinder (2)	1.63 in. (41,4 mm)
Tilt Cylinder (2)	1.50 in. (38,1 mm)
Stroke: Lift Cylinder (2)	25.00 in. (636,0 mm)
Tilt Cylinder (2)	15.10 in. (383,5 mm)
Control Valve	3-Spool, open center type with float detent on lift and electrically controlled auxiliary spool
Fluid Lines	SAE Standard tubelines, hoses and fittings
Fluid Type	Bobcat Fluid (P/N 6563328) If fluid is not available, use 10W-30/10W-40 Class SE motor oil for temperatures above 0°F (-18°C) or 5W-30 Class SE Class SE motor oil for temperatures below 0°F (-18°C)
Hydraulic Function Time:	
Raise Lift Arms	4.4 Seconds
Lower Lift Arms	3.2 Seconds
Bucket Dump	2.5 Seconds
Bucket Rollback	1.9 Seconds

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