SKID STEER
85 - 90 - 95 XT



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English version
may 1998
Training Center

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85XT/90XT/95XT Skid Steer
7-52240 HOW IT WORKS/
TROUBLESHOOTING AND SCHEMATIC SET

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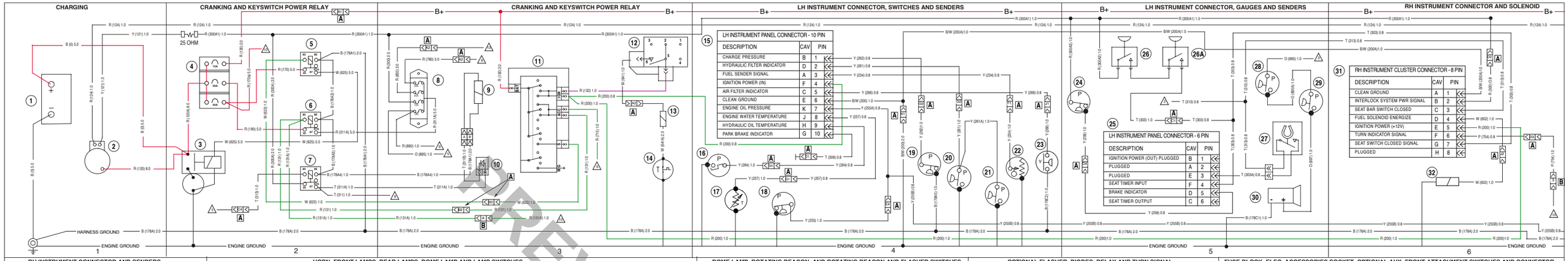
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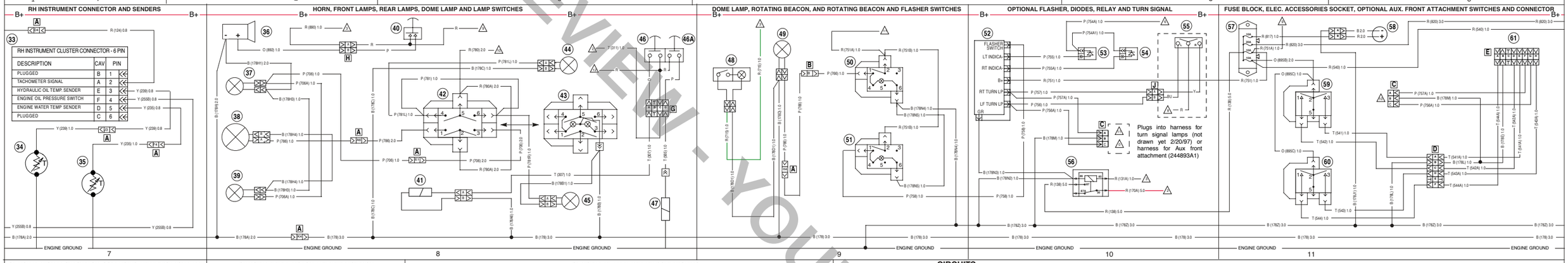
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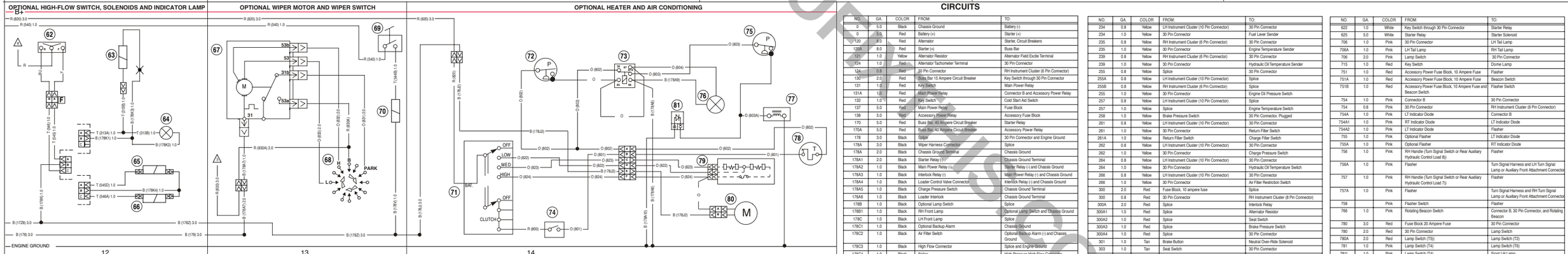
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Circuit Diagram Legends

- Earth connection terminal
- Intersection of two wires
- Intersection of two wires without connecting points
- Indicates Internally Grounded Components
- Indicates External Ground
- Diode
- Indicates test point
- Indicates frame continued on
- Indicates component number
- Bulb or lamp

Color Abbreviations

B---Black	LG--Light Green	T---Tan
BR-Brown	O---Orange	V---Violet
G---Gray	P---Pink	W---White
LB-Light Blue	R---Red	Y---Yellow

Wire Identifcation:

R (131) 1.0 — Wire Size / Wire Number / Wire Color

Harness Connector

Female Terminal — Male Terminal

Harness ConnectorWith Pin Number

Female Terminal — Male Terminal — Connector Pin Number

Harness ConnectorWith Pin Number And Connector Number

Female Terminal — Male Terminal — Connector Pin Number — Harness Connector Reference Letter

WIRE SIZE IN MM		WIRE SIZE IN STANDARD	
0.8 mm	2.0 mm	18 - Gauge	14 - Gauge
1.0 mm	5.0 mm	16 - Gauge	10 - Gauge

FUSES

1. Lights
2. Wiper
3. Interlock System/ Alternator
4. RH Handle/Backup Alarm
5. Accessories Socket
6. Blower/Air Conditioning
7. Beacon/ Flasher
8. Auxiliary Controls

INDICATES CONSTANT POWER

INDICATES POWER WHENKEY IS SWITCHED ON

INDICATES MOMENTARY POWER (KEY SWITCH IN START POSITION)

CONNECTOR A

K J H G F E D C B A

PIN	CIRCUIT	PIN	CIRCUIT
A1	130	K2	630
B1	PLUGGED	B3	622
C1	303	D3	754
D1	PLUGGED	G3	262
E1	706	J3	239
F1	234	A4	786
G1	257	B4	124
H1	641	C4	313
J1	266	D4	258
K1	200	E4	255
A2	780	F4	235
B2	131	G4	264
D2	300	H4	766
G2	261	J4	PLUGGED
J2	602	K4	178

COMPONENTS

1. Battery
2. Alternator
3. Starter and Starter Solenoid
4. Buss Bar
5. Starter Relay
6. Main Power Relay
7. Interlock Relay
8. Fuse Block
9. Loader Valve Solenoid
10. Diode
11. Key Switch
12. Cold Start Aid Switch
13. Optional Cold Start Solenoid
14. Optional Cold Start Temperature Switch
15. LH Instrument Cluster-10 Pin
16. Hydraulic Oil Temperature Switch
17. Engine Temperature Switch
18. Engine Oil Pressure Switch
19. Charge Pressure Switch
20. Return filter Switch
21. Charge Filer Switch
22. Fuel Sender
23. Air filter Switch
24. Brake Pressure Switch
25. LH Instrument Cluster-6 Pin
26. Seat Switch
26A. Seat Plate Switch
27. Seat Bar Switch
28. Backup Alarm Switch #1
29. Backup Alarm Switch #2
30. Backup Alarm
31. RH Instrument Cluster - 8 Pin
32. Fuel Shutoff Solenoid
33. RH Instrument Cluster - 6 Pin
34. Optional Hydraulic Oil Temperature Sender
35. Optional Engine Temperature Sender
36. Horn
37. LH Tail Lamp
38. Rear Work Lamp
39. RH Tail Lamp
40. Horn Button
41. Neutral Over-Ride Solenoid
42. Lamp Switch
43. Lamp Switch
44. Front LH Lamp
45. Front RH Lamp
46. Brake Button
46A. Two Speed Button
47. 2 Speed Solenoid
48. Dome Lamp
49. Rotating Beacon
50. Rotating Bacon Switch
51. Flasher Switch
52. Flasher
53. LT Indicator Diode
54. RT Indicator Diode
55. Turn Signal Switch or Auxillary Control Switch
56. Accessory Power Relay
57. Accessory Power Fuse Block
58. Electric Accessory Socket
59. LH Auxiliary Switch
60. RH Auxiliary Switch
61. Auxiliary Front Attachment Connector
62. Hi Flow Switch
63. Hi Flow Solenoid
64. High Pressure Hi-Flow Indicator Lamp
65. Low Pressure Hi-Flow Forward Solenoid
66. Low Pressure Hi-Flow reverse Solenoid
67. Wiper Motor
68. Wiper Switch
69. Hydraulic Coupler Switch
70. Hydraulic Coupler Solenoid
71. Fan Auxiliary Switch
72. Low Pressure Switch
73. Air Conditioner Control Relay
74. Air Conditioner Switch
75. High Pressure Switch
76. Air Conditioner Indicator Lamp
77. Air Conditioner Compressor
78. Thermostat Switch
79. Blower Motor Speed Resistor with Thermal Fuse
80. Blower Motor
81. Diode

CIRCUITS

NO.	GA.	COLOR	FROM:	TO:
0	5.0	Black	Chassis Ground	Battery (-)
0	8.0	Black	Battery (-)	Starter (-)
120	8.0	Red	Alternator	Starter, Circuit Breakers
120A	8.0	Red	Starter (+)	Buss Bar
121	1.0	Yellow	Alternator Resistor	Alternator Field Excite Terminal
124	1.0	Red	Alternator Tachometer Terminal	30 Pin Connector
124	0.8	Red	30 Pin Connector	RH Instrument Cluster (8 Pin Connector)
130	2.0	Red	Buss Bar 15 Ampere Circuit Breaker	Key Switch through 30 Pin Connector
131	1.0	Red	Key Switch	Main Power Relay
131A	1.0	Red	Main Power Relay	Connector B and Accessory Power Relay
132	1.0	Red	Key Switch	Cold Start Aid Switch
137	5.0	Red	Main Power Relay	Fuse Block
138	5.0	Red	Accessory Power Relay	Accessory Fuse Block
170	5.0	Red	Buss Bar, 40 Ampere Circuit Breaker	Starter Relay
170A	5.0	Red	Buss Bar, 40 Ampere Circuit Breaker	Accessory Power Relay
178	3.0	Black	Splice	30 Pin Connector and Engine Ground
178A	3.0	Black	Wiper Harness Connector	Splice
178A	2.0	Black	Chassis Ground Terminal	Chassis Ground
178A1	2.0	Black	Starter Relay (-)	Chassis Ground Terminal
178A2	1.0	Black	Main Power Relay (-)	Starter Relay (-) and Chassis Ground
178A3	1.0	Black	Interlock Relay (-)	Main Power Relay (-) and Chassis Ground
178A4	1.0	Black	Loader Control Valve Connector	Interlock Relay (-) and Chassis Ground
178A5	1.0	Black	Charge Pressure Switch	Chassis Ground Terminal
178A6	1.0	Black	Loader Interlock	Chassis Ground Terminal
178B	1.0	Black	Optional Lamp Switch	Splice
178B1	1.0	Black	RH Front Lamp	Optional Lamp Switch and Chassis Ground
178C	1.0	Black	LH Front Lamp	Splice
178C1	1.0	Black	Optional Backup Alarm	Chassis Ground
178C2	1.0	Black	Air Filter Switch	Optional Backup Alarm (-) and Chassis Ground
178C3	1.0	Black	High Flow Connector	Splice and Engine Ground
178C4	1.0	Black	Splice	High Pressure High Flow Connector
178C5	1.0	Black	High Pressure High Flow Indicator Lamp	Splice
178C6	1.0	Black	High Pressure High Flow Solenoid	Splice
178C7	1.0	Black	Low Pressure High Flow Solenoids	Low Pressure High Flow Connector
178D	1.0	Black	Rotating Beacon Connector	Splice
178D1	1.0	Black	Dome Lamp Connector	Rotating Beacon Connector and Chassis Ground
178E	1.0	Black	Connector D	Splice and Engine Ground
178E1	1.0	Black	Auxiliary Front Attachment Connector E	Connector D
178H	2.0	Black	Optional Horn	Chassis Ground
178H1	2.0	Black	LH Tail Lamp (-)	Optional Horn (-) and Chassis Ground
178H3	1.0	Black	RH Tail Lamp (-)	LH Tail Lamp (-) and Chassis Ground
178H4	1.0	Black	Rear Work Lamp (-)	RH Tail Lamp (-) and Chassis Ground
178J	3.0	Black	Blower and Air Conditioning Connector	Splice and Engine Ground
178J1	1.0	Black	Electrical Accessory Connector	Splice and Engine Ground
178K	1.0	Black	Connector for High Flow	Splice and Engine Ground
178K1	1.0	Black	Splice	Connector for High Flow
178K2	1.0	Black	High Pressure High Flow Indicator Lamp	Splice
178K3	1.0	Black	High Pressure High Flow	Splice
178L	1.0	Black	Connector for Rear Auxiliary Controls	Splice and Engine Ground
178M	1.0	Black	Turn Signal Harness or Auxiliary Front Attachment Harness	Splice and Engine Ground
178M1	1.0	Black	Auxiliary Front Attachment Connector E	Connector C
178N2	1.0	Black	Accessory Power Relay	Chassis Ground
178N3	1.0	Black	Flasher	Accessory Power Relay and Chassis Ground
178N4	1.0	Black	Rotating Beacon Switch	Chassis Ground
178N5	1.0	Black	Flasher Switch	Rotating Beacon Switch and Chassis Ground
178P	1.0	Black	Turn Signal Lamps or Auxiliary Front Attachment	Chassis Ground
178Z	3.0	Black	Chassis Ground	Engine Ground
190	5.0	Red	Buss Bar 40 Ampere Circuit Breaker	Main Power Relay
200	0.8	Red	Key Switch	10 Pin LH Instrument Cluster Connector (Ignition Power-IN)
200	1.0	Red	Key Switch	8 Pin RH Instrument Cluster Connector (Ignition Power-IN)
200	2.0	Black/White	Splice and 30 Pin Connector	Chassis Ground
200A	1.0	Black/White	RH Instrument Cluster (8 Pin Connector)	Splice and 30 Pin Connector

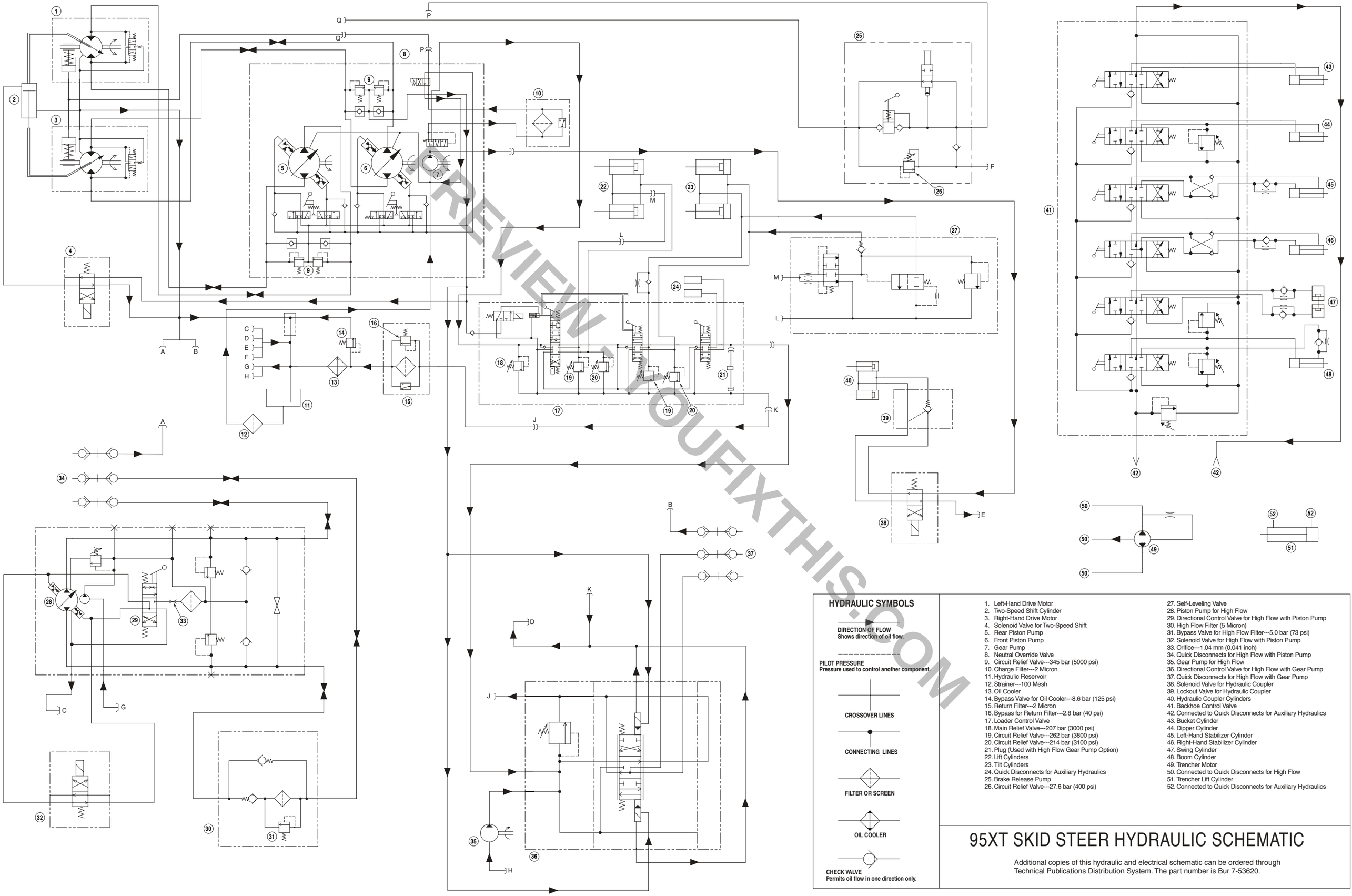
NO.	GA.	COLOR	FROM:	TO:
234	0.8	Yellow	LH Instrument Cluster (10 Pin Connector)	30 Pin Connector
234	1.0	Yellow	30 Pin Connector	Fuel Level Sender
235	0.8	Yellow	RH Instrument Cluster (8 Pin Connector)	30 Pin Connector
235	1.0	Yellow	30 Pin Connector	Engine Temperature Sender
239	0.8	Yellow	RH Instrument Cluster (8 Pin Connector)	30 Pin Connector
239	1.0	Yellow	30 Pin Connector	Hydraulic Oil Temperature Sender
255	0.8	Yellow	Splice	30 Pin Connector
255A	0.8	Yellow	LH Instrument Cluster (10 Pin Connector)	Splice
255B	0.8	Yellow	RH Instrument Cluster (8 Pin Connector)	Splice
255	1.0	Yellow	30 Pin Connector	Engine Oil Pressure Switch
257	0.8	Yellow	LH Instrument Cluster (10 Pin Connector)	Splice
257	1.0	Yellow	Splice	Engine Temperature Switch
258	1.0	Yellow	Brake Pressure Switch	30 Pin Connector, Plugged
261	0.8	Yellow	LH Instrument Cluster (10 Pin Connector)	30 Pin Connector
261	1.0	Yellow	30 Pin Connector	Return Filter Switch
261A	1.0	Yellow	Return Filter Switch	Charge Filter Switch
262	0.8	Yellow	LH Instrument Cluster (10 Pin Connector)	30 Pin Connector
262	1.0	Yellow	30 Pin Connector	Charge Pressure Switch
264	0.8	Yellow	LH Instrument Cluster (10 Pin Connector)	30 Pin Connector
264	1.0	Yellow	30 Pin Connector	Hydraulic Oil Temperature Switch
266	0.8	Yellow	LH Instrument Cluster (10 Pin Connector)	30 Pin Connector
266	1.0	Yellow	30 Pin Connector	Air Filter Restriction Switch
300	2.0	Red	Fuse Block, 10 ampere fuse	Splice
300	0.8	Red	30 Pin Connector	RH Instrument Cluster (8 Pin Connector)
300A	2.0	Red	Splice	Interlock Relay
300A1	1.0	Red	Splice	Alternator Resistor
300A2	1.0	Red	Splice	Seat Switch
300A3	1.0	Red	Splice	Brake Pressure Switch
300A4	1.0	Red	Splice	30 Pin Connector
301	1.0	Tan	Brake Button	Neutral Over-Ride Solenoid
303	1.0	Tan	Seat Switch	30 Pin Connector
303	0.8	Tan	30 Pin Connector	RH Instrument Cluster (8 Pin Connector) and LH Instrument Cluster (6 Pin Connector)
303A	0.8	Tan	Seat Bar Switch	LH Instrument Cluster (6 Pin Connector
307	1.0	Tan	LH Handle (Brake Switch)	Neutral Over-Ride Solenoid Connector at Piston Pump
309	0.8	Tan	LH Instrument Cluster (10 Pin Connector)	30 Pin Connector and plug
311	1.0	Tan	Interlock Relay	LH Handle 4 Pin Connector
311A	5.0	Red	Main Power Relay	Fuse Block
311A	1.0	Tan	Interlock Relay	Diode or Optional Loader Control Disconnect Switch
311B	1.0	Tan	Diode or Optional Loader Control Disconnect Switch	Loader Valve Connector
313	0.8	Tan	Interlock Relay	Seat Bar Switch and 8 Pin RH Instrument Cluster
313A	1.0	Tan	Connector for High Pressure High Flow	Splice
313B	1.0	Tan	Splice	High Pressure High Flow Solenoid
541	1.0	Tan	LH Auxiliary Switch	Connector D)
541A	1.0	Tan	Connector D	Connector E - Auxiliary Front Attachment Connector
542	1.0	Tan	LH Auxiliary Switch	Connector D
542A	1.0	Tan	Connector D	Connector E - Auxiliary Front Attachment Connector
543	1.0	Tan	RH Auxiliary Switch	Connector D
543A	1.0	Tan	Connector D	Connector E - Auxiliary Front Attachment Connector
544	1.0	Tan	RH Auxiliary Switch	Connector for Rear Auxiliary Controls (Load 4)
544A	1.0	Tan	Connector D	Connector E - Auxiliary Front Attachment Connector
545	1.0	Tan	LH Handle (Power to Load 5)	Connector for High Pressure High Flow
545C	1.0	Tan	Splice	High Pressure High Flow Indicator Lamp
545D	1.0	Tan	Connector for Low Pressure High Flow	Low Pressure High Flow Forward Solenoid
546	1.0	Tan	LH Handle (Power to Load 6)	Connector for Low Pressure High Flow
546A	1.0	Tan	Connector for Low Pressure High Flow	Low Pressure High Flow Reverse Solenoid
565	1.0	Tan	LH Handle (2 Speed Switch)	2 Speed Solenoid Valve
602	1.0	White	RH Instrument Cluster (8 Pin Connector)	30 Pin Connector and Fuel Shutoff Solenoid
641	1.0	White	Optional Cold Start Switch	Optional Ether Injection Solenoid
641A	2.0	White	Optional Ether Injection Solenoid	Optional Ether Temperature Switch

NO.	GA.	COLOR	FROM:	TO:
622	1.0	White	Key Switch through 30 Pin Connector	Starter Relay
625	5.0	White	Starter Relay	Starter Solenoid
706	1.0	Pink	30 Pin Connector	LH Tail Lamp
706A	1.0	Pink	LH Tail Lamp	RH Tail Lamp
706	2.0	Pink	Lamp Switch	30 Pin Connector
715	1.0	Red	Key Switch	Dome Lamp
751	1.0	Red	Accessory Power Fuse Block, 10 Ampere Fuse	Flasher
751A	1.0	Red	Accessory Power Fuse Block, 10 Ampere Fuse	Beacon Switch
751B	1.0	Red	Accessory Power Fuse Block, 10 Ampere Fuse and Beacon Switch	Flasher Switch
754	1.0	Pink	Connector B	30 Pin Connector
754	0.8	Pink	30 Pin Connector	RH Instrument Cluster (8 Pin Connector)
754A	1.0	Pink	LT Indicator Diode	Connector B
754A1	1.0	Pink	RT Indicator Diode	LT Indicator Diode
754A2	1.0	Pink	LT Indicator Diode	Flasher
755	1.0	Pink	Optional Flasher	LT Indicator Diode
755A	1.0	Pink	Optional Flasher	RT Indicator Diode
756	1.0	Pink	RH Handle (Turn Signal Switch or Rear Auxiliary Hydraulic Control Load 8))	Flasher
756A	1.0	Pink	Flasher	Turn Signal Harness and LH Turn Signal Lamp or Auxiliary Front Attachment Connector
757	1.0	Pink	RH Handle (Turn Signal Switch or Rear Auxiliary Hydraulic Control Load 7))	Flasher
757A	1.0	Pink	Flasher	Turn Signal Harness and RH Turn Signal Lamp or Auxiliary Front Attachment Connector
758		Pink	Flasher Switch	Flasher
766	1.0	Pink	Rotating Beacon Switch	Connector B, 30 Pin Connector, and Rotating Beacon
780	3.0	Red	Fuse Block 20 Ampere Fuse	30 Pin Connector
780	2.0	Red	30 Pin Connector	Lamp Switch
780A	2.0	Red	Lamp Switch (T5)	Lamp Switch (T2)
781	1.0	Pink	Lamp Switch (T4)	Lamp Switch (T6)
781L	1.0	Pink	Lamp Switch (T4)	Front LH Lamp
781R	1.0	Pink	Lamp Switch (T6)	Front RH Lamp
786	2.0	Pink	Lamp Switch	30 Pin Connector
786	1.0	Pink	30 Pin Connector	Rear Work Lamp
817	1.0	Red	Accessory Power Fuse Block, 10 Ampere Fuse	Electrical Accessory Connector and Electrical Accessories Socket
820	3.0	Red	Accessory Power Fuse Block, 20 Ampere Fuse	Blower and Air Conditioning Connector
830	3.0	Red	Fuse Block, 25 Ampere Fuse	30 Pin Connector and Wiper Harness Connector
890	1.0	Red	Fuse Block, 10 Ampere Fuse	RH Handle Connector (Horn Button)
892	1.0	Orange	RH Handle (Horn Button)	Horn
895	1.0	Orange	Fuse Block, 10 Ampere Fuse	Backup Alarm Switch #1
895A	1.0	Orange	Backup Alarm Switch 1	Backup Alarm Switch #2
895B	2.0	Orange	Accessory Power Fuse Block, 10 Ampere Fuse	LH Auxiliary Switch
895C	1.0	Orange	Accessory Power Fuse Block, 10 Ampere Fuse and LH Auxiliary Switch	RH Auxiliary Switch
897	1.0	Orange	Backup Alarm Switch #2	Backup Alarm

85, 90, 95XT SKID STEER ELECTRICAL SCHEMATIC

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HYDRAULIC SYMBOLS

DIRECTION OF FLOW
Shows direction of oil flow.

PILOT PRESSURE
Pressure used to control another component.

CROSSOVER LINES

CONNECTING LINES

FILTER OR SCREEN

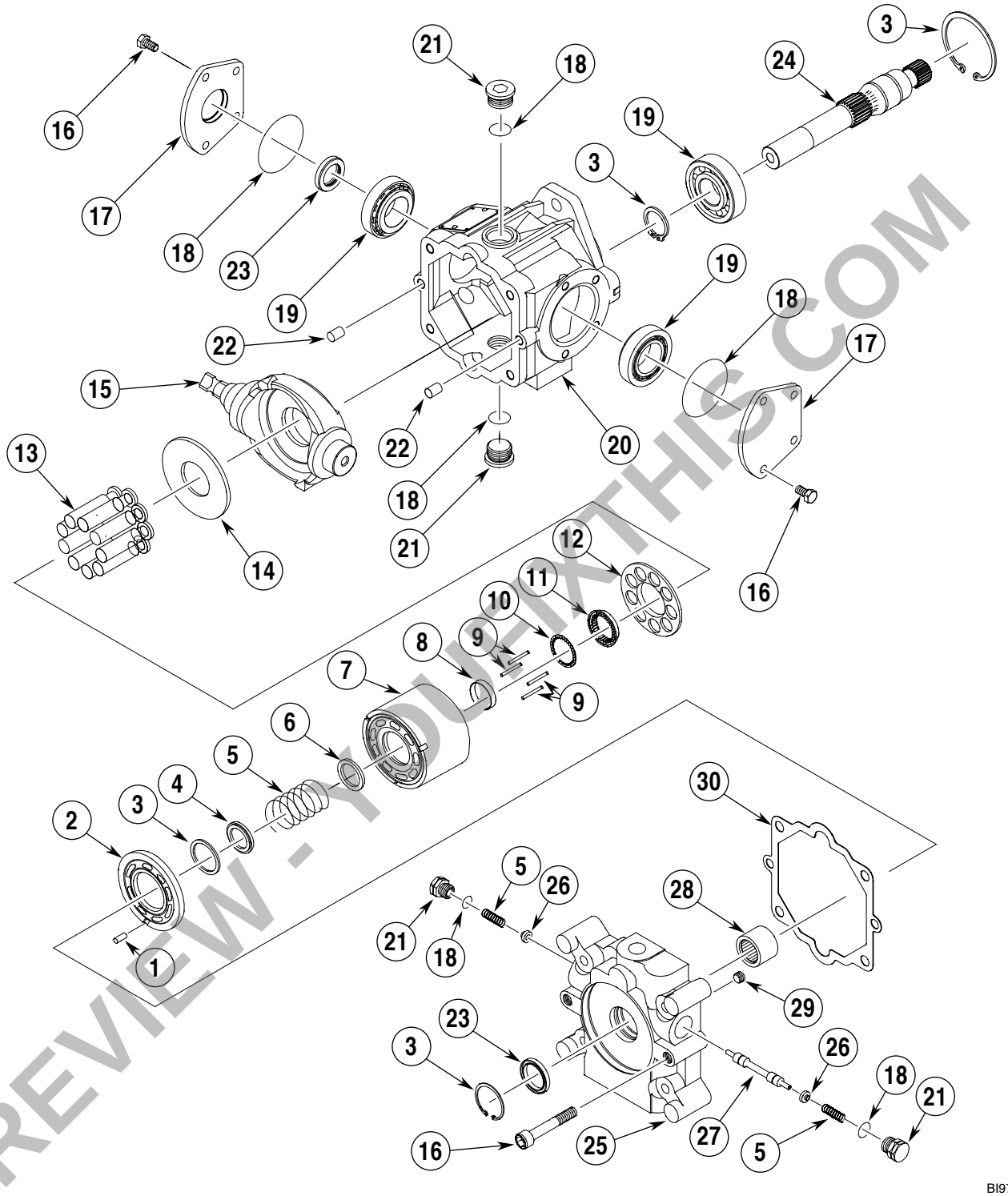
OIL COOLER

CHECK VALVE
Permits oil flow in one direction only.

1. Left-Hand Drive Motor
2. Two-Speed Shift Cylinder
3. Right-Hand Drive Motor
4. Solenoid Valve for Two-Speed Shift
5. Rear Piston Pump
6. Front Piston Pump
7. Gear Pump
8. Neutral Override Valve
9. Circuit Relief Valve---345 bar (5000 psi)
10. Charge Filter---2 Micron
11. Hydraulic Reservoir
12. Strainer---100 Mesh
13. Oil Cooler
14. Bypass Valve for Oil Cooler---8.6 bar (125 psi)
15. Return Filter---2 Micron
16. Bypass for Return Filter---2.8 bar (40 psi)
17. Loader Control Valve
18. Main Relief Valve---207 bar (3000 psi)
19. Circuit Relief Valve---262 bar (3800 psi)
20. Circuit Relief Valve---214 bar (3100 psi)
21. Plug (Used with High Flow Gear Pump Option)
22. Lift Cylinders
23. Tilt Cylinders
24. Quick Disconnects for Auxiliary Hydraulics
25. Brake Release Pump
26. Circuit Relief Valve---27.6 bar (400 psi)
27. Self-Leveling Valve
28. Piston Pump for High Flow
29. Directional Control Valve for High Flow with Piston Pump
30. High Flow Filter (5 Micron)
31. Bypass Valve for High Flow Filter---5.0 bar (73 psi)
32. Solenoid Valve for High Flow with Piston Pump
33. Orifice---1.04 mm (0.041 inch)
34. Quick Disconnects for High Flow with Piston Pump
35. Gear Pump for High Flow
36. Directional Control Valve for High Flow with Gear Pump
37. Quick Disconnects for High Flow with Gear Pump
38. Solenoid Valve for Hydraulic Coupler
39. Lockout Valve for Hydraulic Coupler
40. Hydraulic Coupler Cylinders
41. Backhoe Control Valve
42. Connected to Quick Disconnects for Auxiliary Hydraulics
43. Bucket Cylinder
44. Dipper Cylinder
45. Left-Hand Stabilizer Cylinder
46. Right-Hand Stabilizer Cylinder
47. Swing Cylinder
48. Boom Cylinder
49. Trencher Motor
50. Connected to Quick Disconnects for High Flow
51. Trencher Lift Cylinder
52. Connected to Quick Disconnects for Auxiliary Hydraulics

95XT SKID STEER HYDRAULIC SCHEMATIC

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BI97J019

1. SLOTTED PIN
2. VALVE PLATE
3. RETAINING RING
4. SPRING RETAINER
5. SPRING
6. WASHER
7. CLYINDER BLOCK
8. PIN RETAINER
9. SLIPPER HOLD DOWN PIN
10. THRUST WASHER
11. SLIPPER RETAINER GUIDE
12. SLIPPER RETAINER
13. PISTON ASSEMBLY
14. THRUST PLATE
15. SWASHPLATE
16. CAP SCREW
17. TRUNNION COVER
18. O-RING
19. ROLLER BEARING
20. VARIABLE HOUSING
21. PLUG
22. PIN
23. LIP SEAL
24. SHAFT
25. END CAP
26. SPRING GUIDE
27. SHUTTLE SPOOL
28. NEEDLE BEARING
29. ORIFICE PLUG
30. GASKET

90XT and 95XT Hydrostatic Drive Motor

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Troubleshooting

SYMPTOM	POSSIBLE CAUSE	CORRECTION
Bucket does not maintain level while raising at different engine speeds.	Bucket self-leveling is designed to work at high idle.	Run engine at high idle.
Bucket does not maintain level while raising at high idle.	Flow divider spool stuck. Incorrect orifice plate in flow divider spool. Metering spool stuck in leveling valve.	Check flow divider spool for free operation. Replace orifice in flow divider spool. Check metering spool for free operation.
Excessive bucket drift towards the dump direction.	Bad bucket cylinder packing. Excessive loader control valve port leakage. Metering spool in the leveling valve stuck.	Repack cylinder. Replace loader valve. Check metering spool for free operation.
Excessive bucket drift towards the roll back direction.	Bad bucket cylinder packing. Excessive loader control valve port leakage. Defective check valve poppet in the leveling valve.	Repack cylinder. Replace loader valve. Check valve for leakage.

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SPECIFICATIONS

Equipment Pump Flow Total (Machine Traveling) ..... 104.5 L/min (27.7 U.S. gpm) at 35.1 bar (500 psi)
- To Charge ..... 18.0 L/min (4.8 U.S. gpm) at 35.1 bar (500 psi)
- To Loader ..... 86.5 L/min (22.9 U.S. gpm) at 35.1 bar (500 psi)

Equipment Pump Flow Total (Machine in Neutral) ..... 104.5 L/min (27.7 U.S. gpm) at 35.1 bar (500 psi)
- To Charge ..... 6.4 L/min (1.7 U.S. gpm) at 35.1 bar (500 psi)
- To Loader ..... 98.4 L/min (26.0 U.S. gpm) at 35.1 bar (500 psi)

Loader Control Valve Relief Pressure Settings
- Main Relief Pressure ..... 203 to 210 bar (2950 to 3050 psi)
- Circuit Relief Pressure - Port A1 ..... 262 bar (3800 psi)
- Circuit Relief Pressure - Port B1 ..... 214 bar (3100 psi)
- Circuit Relief Pressure - Port A2 ..... 262 bar (3800 psi)
- Circuit Relief Pressure - Port B2 ..... 214 bar (3100 psi)

Cycle Times With Rated Load In Bucket
- Loader Raising Time ..... 4.1 seconds
- Loader Lowering Time ..... 3.5 seconds
- Bucket Dump Time ..... 2.3 seconds
- Bucket Rollback Time ..... 1.7 seconds

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Pump Adjustments

Stopping Machine Creep

In order to correct a “creeping” hydrostatic drive, a systematic diagnostic procedure must be followed. First, determine if it is the pump’s fault by disconnecting the control linkage to the servo control levers on the pump. If the problem disappears, check out the linkage and correct the problem.

If after disconnecting the linkage, the system still moves, pump adjustments are available to correct the problem. If the only operational symptom noted is that one or both drive systems continue to move with the controls in neutral, adjustment of the servo control valve may possibly be all that is required (see hydraulic neutral adjustment). If the unit does not track in a straight line or if the pump tends to continue in the direction that is was going to last, it is recommended to adjust the servo piston centering mechanism before adjusting the hydraulic neutral control. The hydraulic neutral adjustment must always be done after the servo piston has been centered.

Centering The Servo Piston

The servo control piston has a very strong spring centering mechanism to return the pump to a neutral condition when the hydraulic servo control is in neutral. A control rod from the centering mechanism runs through one end cover to allow for external adjustment. Use the following procedure to center the servo piston:

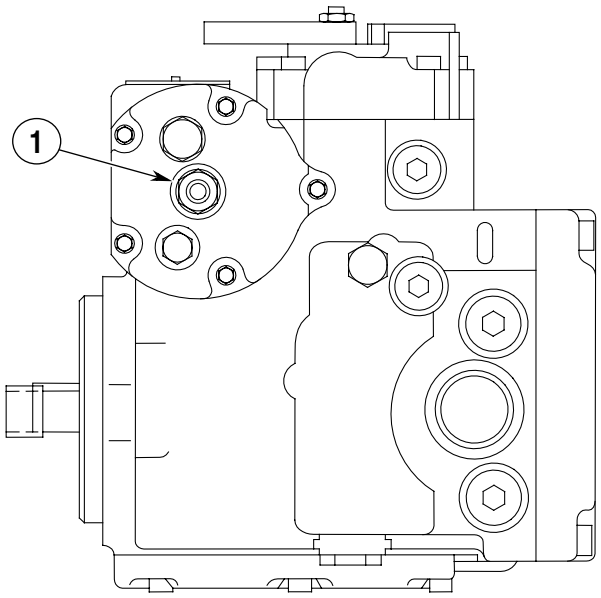
1. Raise and securely block the unit off the ground.
2. Deactivate the hydraulic servo control spool for the pump to be adjusted by assuring that the Neutral Override Solenoid is not activated. This causes equalization of pressure on both ends of the piston.
3. Connect the parking brake release lines to a charge pressure oil source.
4. Start the engine and run the engine at full throttle.
5. Remove the cap and turn the servo adjusting screw in one direction until the tires just begin rotate, note the position of the adjusting screw. Turn the adjusting screw in the opposite direction until the tires just begin to rotate in the opposite direction, note the position of the screw. Repeat these steps again to verify the position of the screw when the tires begin to rotate. Center the adjusting screw between both positions and tighten the lock nut.

NOTE: If more than one and one half to two full turns of the adjusting screw is required to attain tire rotation in each direction, the internal locking nut at the servo piston centering spring is probably misadjusted (see servo centering spring adjustment).

6. Stop the engine.

If the other drive pump requires adjustment, repeat steps 2 through 6 for that pump.

7. Reconnect the brake hoses to the original position.

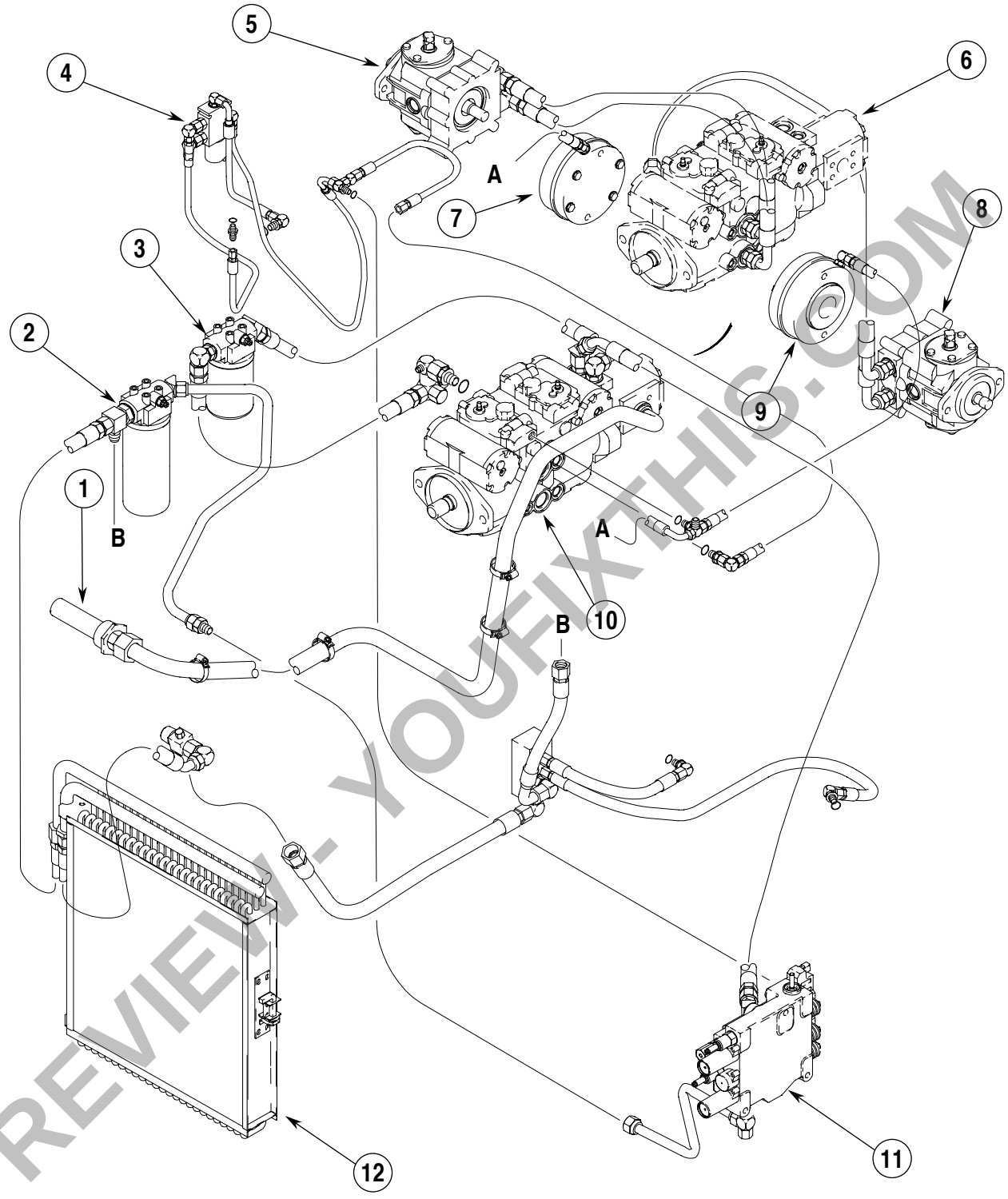


BT97J071

1. PUMP NEUTRAL ADJUSTMENT

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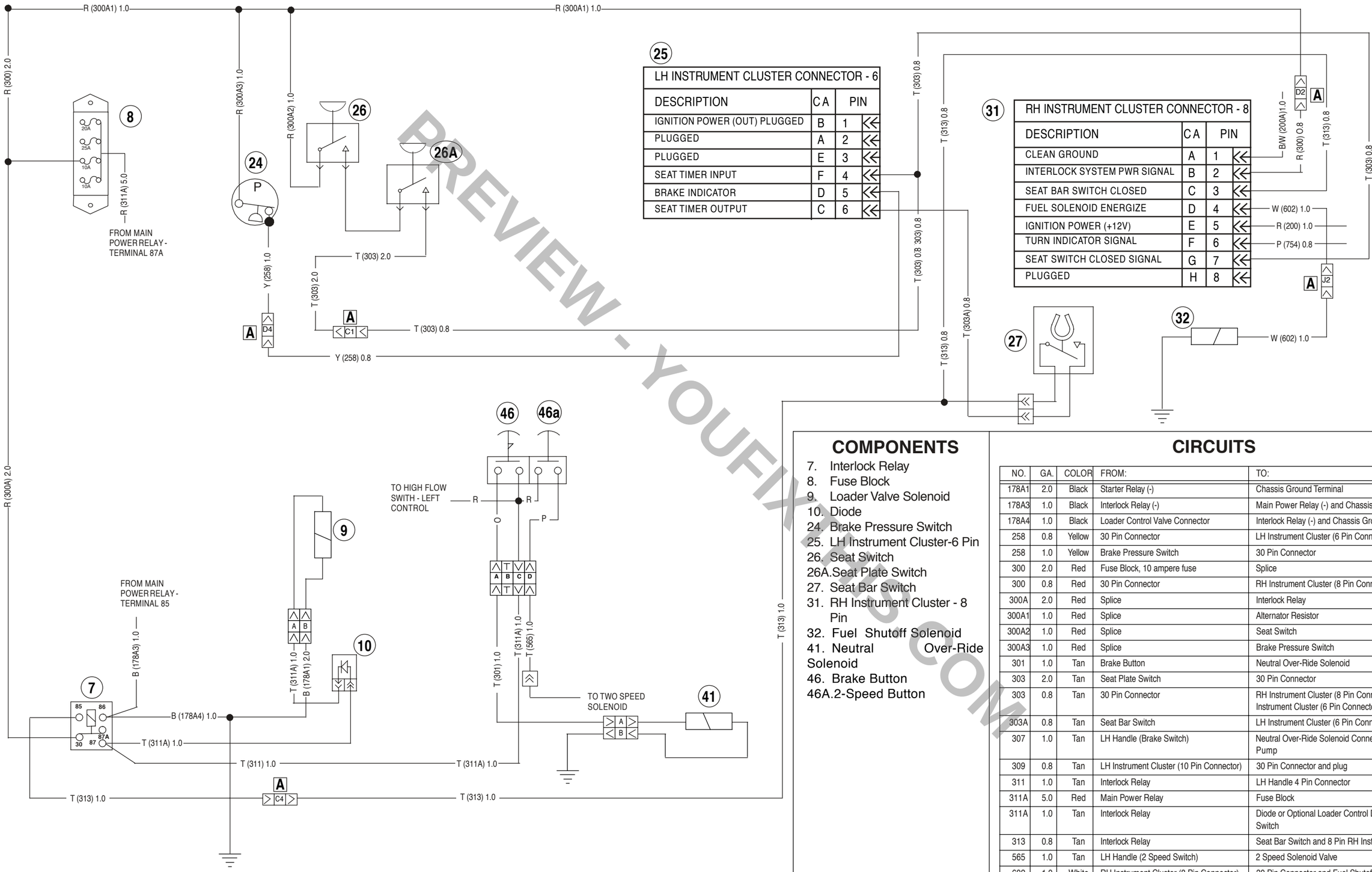
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BT97D127

1. SUCTION SCREEN IN HYDRAULIC RESERVOIR
2. HYDRAULIC FILTER
3. CHARGE FILTER
4. TWO SPEED SOLENOID
5. LH TWO SPEED DRIVE MOTOR
6. HYDRAULIC CHARGE PUMP
7. LH PARKING BRAKE
8. RH TWO SPEED DRIVE MOTOR
9. RH PARKING BRAKE
10. HYDROSTATIC PUMP (PISTON)
11. HYDRAULIC CONTROL VALVE
12. OIL COOLER

Hydrostatic Drive System 90XT AND 95XT

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COMPONENTS

7. Interlock Relay
8. Fuse Block
9. Loader Valve Solenoid
10. Diode
24. Brake Pressure Switch
25. LH Instrument Cluster-6 Pin
26. Seat Switch
26A. Seat Plate Switch
27. Seat Bar Switch
31. RH Instrument Cluster - 8 Pin
32. Fuel Shutoff Solenoid
41. Neutral Over-Ride Solenoid
46. Brake Button
46A. 2-Speed Button

CIRCUITS

NO.	GA.	COLOR	FROM:	TO:
178A1	2.0	Black	Starter Relay (-)	Chassis Ground Terminal
178A3	1.0	Black	Interlock Relay (-)	Main Power Relay (-) and Chassis Ground
178A4	1.0	Black	Loader Control Valve Connector	Interlock Relay (-) and Chassis Ground
258	0.8	Yellow	30 Pin Connector	LH Instrument Cluster (6 Pin Connector)
258	1.0	Yellow	Brake Pressure Switch	30 Pin Connector
300	2.0	Red	Fuse Block, 10 ampere fuse	Splice
300	0.8	Red	30 Pin Connector	RH Instrument Cluster (8 Pin Connector)
300A	2.0	Red	Splice	Interlock Relay
300A1	1.0	Red	Splice	Alternator Resistor
300A2	1.0	Red	Splice	Seat Switch
300A3	1.0	Red	Splice	Brake Pressure Switch
301	1.0	Tan	Brake Button	Neutral Over-Ride Solenoid
303	2.0	Tan	Seat Plate Switch	30 Pin Connector
303	0.8	Tan	30 Pin Connector	RH Instrument Cluster (8 Pin Connector) and LH Instrument Cluster (6 Pin Connector)
303A	0.8	Tan	Seat Bar Switch	LH Instrument Cluster (6 Pin Connector
307	1.0	Tan	LH Handle (Brake Switch)	Neutral Over-Ride Solenoid Connector at Piston Pump
309	0.8	Tan	LH Instrument Cluster (10 Pin Connector)	30 Pin Connector and plug
311	1.0	Tan	Interlock Relay	LH Handle 4 Pin Connector
311A	5.0	Red	Main Power Relay	Fuse Block
311A	1.0	Tan	Interlock Relay	Diode or Optional Loader Control Disconnect Switch
313	0.8	Tan	Interlock Relay	Seat Bar Switch and 8 Pin RH Instrument Cluster
565	1.0	Tan	LH Handle (2 Speed Switch)	2 Speed Solenoid Valve
602	1.0	White	RH Instrument Cluster (8 Pin Connector)	30 Pin Connector and Fuel Shutof Solenoid

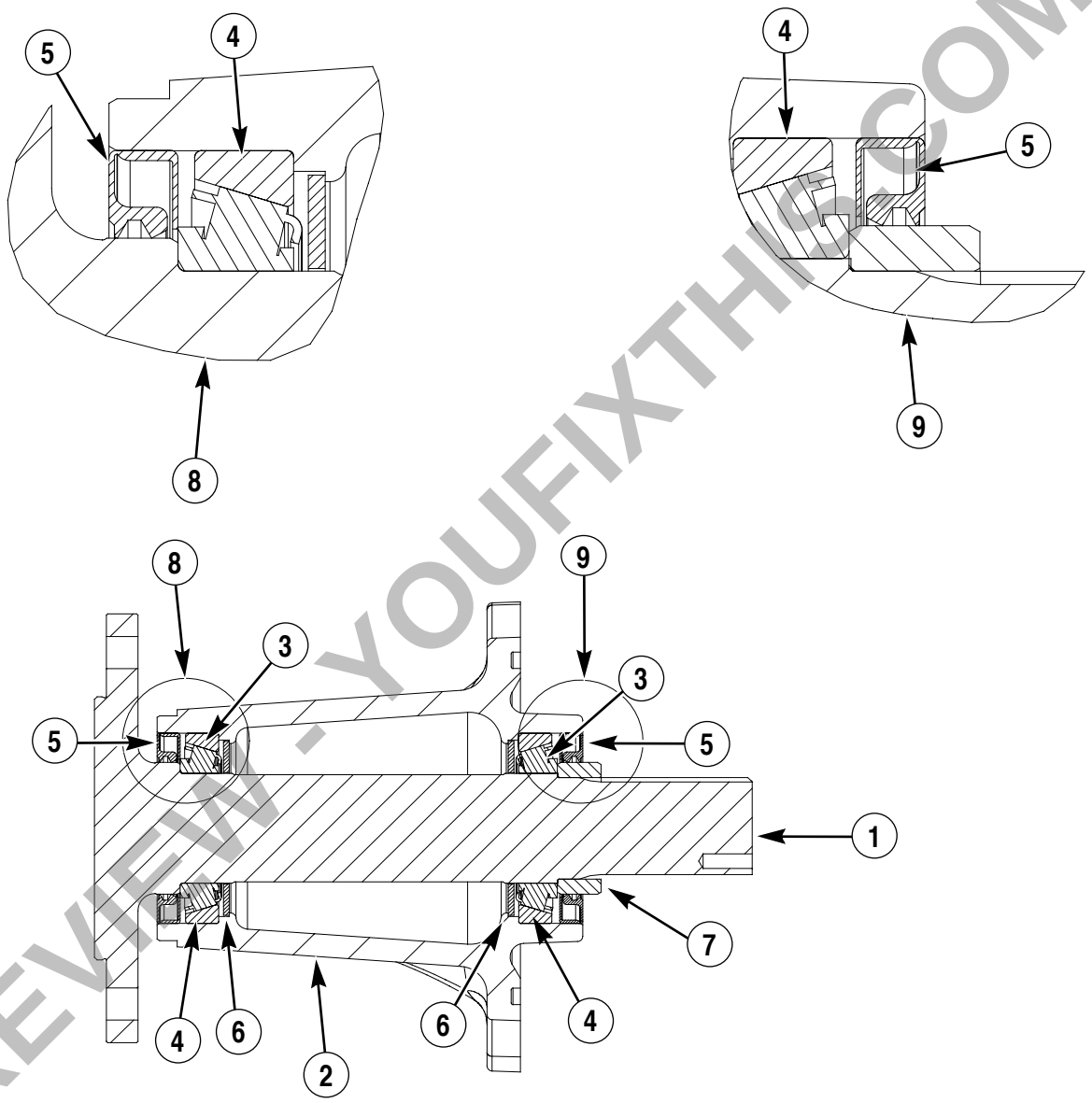
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Axle Housing Assembly

The axle shaft is forged and is 63.5 mm (2.5 inches) on the 90XT and 95XT. On the 85XT, the axle shaft is 49 mm (2.0 inches). The axles are supported in the housings with tapered roller bearings.

The axle sprocket is retained to the drive axle with a 14 mm bolt, which is to be secured in place with Loctite 243. Clean the axle and the bolt and apply Loctite 243 to the first 10 to 15 threads before assembly. The bolt is to be torqued to 203 to 244 Nm (150 to 180 pound-feet).



BT96K6013

1. AXLE ASSEMBLY
2. AXLE HOUSING
3. BEARING
4. BEARING CUP
5. SEAL
6. PLASTIC GREASE DISC
7. AXLE SPACER
8. BEARING CUP DETAIL
9. AXLE SEAL DETAIL

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