Capacities

NOTE: *Machines with the optional Severe Cold Weather Package (SCWP) use the SCWP recommended fluids. Your machine will have a decal that indicates that the machine is equipped with the SCWP option. The decal is on the left-hand side of the engine near the maintenance decal.*

Engine crank case

Standard specification:	**CASE AKCELA UNITEK NO. 1™ SBL CJ-4 SAE 10W-40**
SCWP specification:	**CASE AKCELA UNITEK NO. 1™ SSL CJ-4 SAE 0W-40**
Capacity:	
With filter change	**8.0 L** (**8.5 US qt**)

Fuel tank

Standard specification:	**ASTM D975 GRADE NO. 2-D S15** (No. 2 diesel)
SCWP specification:	Winter diesel fuel blend with a diesel fuel additive
Capacity:	**114 L** (**30 US gal**)

NOTE: *Contact your CASE CONSTRUCTION dealer for assistance and availability of winter diesel fuel blends in your area. Follow the directions on the manufactures label of the cold weather diesel fuel additive for recommended use.*

Cooling system

Standard and SCWP specification:	**CASE AKCELA ACTIFULL™ OT EXTENDED LIFE COOLANT** (**50 %** concentrate and **50 %** distilled water)
Without heater	**17.3 L** (**18.3 US qt**)
With heater	**18.0 L** (**19.0 US qt**)

Hydraulic system

Standard specification:	**CASE AKCELA NEXPLORE™ FLUID**
SCWP specification:	**CASE AKCELA HY-TRAN® ULTRACTION SSL**
Capacity:	
Total system	**100.0 L** (**105.7 US qt**)
Total system with Extendahoe	**105.7 L** (**111.7 US qt**)
Reservoir with filter change	**55.0 L** (**58.1 US qt**)
Reservoir without filter change	**53.0 L** (**56.0 US qt**)

Transmission

Standard specification:	**CASE AKCELA NEXPLORE™ FLUID**	
SCWP specification:	**CASE AKCELA HY-TRAN® ULTRACTION SSL**	
Manual (powershuttle)		
	Two wheel drive	Four wheel drive
Total system	**17.0 l** (**18 US qt**)	**19.4 l** (**21 US qt**)
Refill (with or without filter change)	**10.5 l** (**11 US qt**)	**13.0 l** (**14 US qt**)
NOTE: *The master brake cylinder receives fluid from the transmission.*		

Front drive axle - Four-Wheel drive (4WD)

Standard and SCWP specification:	**TUTELA TRANSAXLE FLUID SAE 80W-140**
Capacity:	
Differential	**5.5 L** (**5.8 US qt**)
Each planetary hub	**0.7 L** (**0.7 US qt**)

Download full manual at youfixthis.com
PREVIEW - YOUFIXTHIS.COM

Engine - General specification

Model	Diesel, F5HFL463D*F005, emissions compliant
Type	Four cylinder, turbocharged
Firing order	1-3-4-2
Bore and stroke	**99 mm** x **110 mm** (**3.90 in** x **4.33 in**)
Displacement	**3.4 l** (**207.5 in³**)
Compression ratio	17 to 1
Fuel injection	Direct HPCR
Horsepower - rated at **2200 RPM**	
Gross	**55 kW** (**75 Hp**)
Net with **39 °** fan	**51 kW** (**69 Hp**)
Net with viscous fan	**53.5 kW** (**72.7 Hp**)
Peak torque at **1400 RPM**	
Gross	**316 N·m** (**233 lb ft**)
Net with **39 °** fan	**298 N·m** (**220 lb ft**)
Net with viscous fan	**310 N·m** (**229 lb ft**)
Maximum torque rise	**36 % ± 5 RPM**
Engine speeds	
Rated speed, full load	**2200 RPM**
Low idle	**900 - 1000 RPM**
High idle, no load	**2330 - 2430 RPM**
Converter stall	**2025 - 2200 RPM**
Backhoe stall	**2150 - 2300 RPM**
Loader stall	**2150 - 2300 RPM**
Combine stall	**1450 - 1720 RPM**

Engine - Speeds Stall test check sheet

NOTE: *The following specifications are for engines with more than 50 hours of operation.*

NOTE: *Engine RPM speed is based on the* ***ISO 14396*** *Cetane number of at least 51 and density between* ***820 - 845 kg/m³ (1382 - 1424 lb/yd³)****. Fuel inlet* ***36.0 - 40.0 °C (96.8 - 104.0 °F)****.*

Results from stall test procedure (fill in values accordingly)

ID	RPM test valve	Stall test component (specified value)
1		Loader hydraulic stall speed (**2150 - 2300 RPM**)
2		Backhoe hydraulic stall speed (**2150 - 2300 RPM**)
3		Torque converter stall speed (**2025 - 2200 RPM**)
4		Combined - loader hydraulic and torque converter - stall speed (**1450 - 1720 RPM**)

Stall test reference chart

ID	RPM	Results
1 2 3 4	**2150 - 2300 RPM** **2150 - 2300 RPM** **2025 - 2200 RPM** **1450 - 1720 RPM**	All systems operating within normal specified RPM values.
1 2 3 4	Above **2300 RPM** **2150 - 2300 RPM** Above **2200 RPM** Above **1720 RPM**	Engine problem. Check engine speeds. Refer to the engine service manual.
1 2 3 4	Below **2150 RPM** **2150 - 2300 RPM** Below **2025 RPM** Below **1450 RPM**	Engine problem. Check engine speeds. Replace the fuel and air filters. Refer to the engine service manual.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Power shuttle transmission - General specification

580N EP FOUR-WHEEL DRIVE (4WD) TIER 4B (FINAL)	Transmission - Power Shuttle
580N EP TWO-WHEEL DRIVE (2WD) TIER 4B (FINAL)	Transmission - Power Shuttle

Type of transmission oil	MS-1209, Hy-Tran™ Ultra
Clutch disc clearance	**2.3 - 4.3 mm** (**0.1 - 0.2 in**)

Capacity - Two wheel drive	
Total system	**18.5 l** (**19.5 US qt**)
Refill capacity with or without filter change	**16 l** (**16.9 US qt**)

Capacity - Four wheel drive	
Total system	**21 l** (**22.2 US qt**)
Refill capacity with or without filter change	**18.5 l** (**19.5 US qt**)

Specifications

NOTE: *All specifications shown were taken from a sampling of new production machines with less than 20 hours. Your figures may differ slightly depending upon the temperature, instrument variables, engine hours, etc.*

Parameter	Operating Pressure / Temperature
Output of pump supply	**32 - 68 l/min** (**8.5 - 18.0 US gpm**) at **900 - 2200 RPM**
Pump supply pressure (4WD)	**1248 - 1551 kPa** (**181 - 225 psi**) at **900 - 2200 RPM**
Regulated clutch pressure	**1103 - 1303 kPa** (**160 - 189 psi**) at **900 - 2200 RPM**
Torque pressure IN pressure	**48 - 903 kPa** (**7 - 131 psi**) at **900 - 2200 RPM**
Torque converter OUT pressure	**0 - 427 kPa** (**0 - 62 psi**) at **900 - 2200 RPM**
Lubrication pressure	**40 - 303 kPa** (**6 - 44 psi**) at **900 - 2200 RPM**
Transmission oil operating temperature (normal)	**78 - 82 °C** (**172 - 180 °F**)
Forward/Reverse clutch solenoids	4.7 ± 10% Ohm at **20 °C** (**68 °F**)
Four wheel drive solenoid	6.8 ± 10% Ohm at **20 °C** (**68 °F**)
Park brake solenoid	9.8 Ohm at **20 °C** (**68 °F**)
Differential lock solenoid valve pressure	
Without differential lock solenoid energized	**0 bar** (**0 psi**)
With differential lock solenoid energized (4WD)	**12.5 - 15.5 bar** (**181.3 - 224.8 psi**)
With differential lock solenoid energized (2WD) and direction control lever in Forward or Reverse position	**11 - 13 bar** (**159.5 - 188.5 psi**)
Park brake check port	**13.5 - 15.5 bar** (**195.8 - 224.8 psi**)

NOTICE: *Vehicle may move during park brake pressure check. Check park brake pressure from inside of the cab by removing the floor plate.*

Power shuttle transmission - Torque

580N EP FOUR-WHEEL DRIVE (4WD) TIER 4B (FINAL)	Transmission - Power Shuttle
580N EP TWO-WHEEL DRIVE (2WD) TIER 4B (FINAL)	Transmission - Power Shuttle

Pipe plug in end of four-wheel drive shaft	**30 N·m** (**265.5 lb in**)
Solenoid valve in four-wheel drive valve	**22.0 N·m** (**194.7 lb in**)
Nut for solenoid coils on transmission control valve	**7 - 10 N·m** (**62.0 - 88.5 lb in**)
Fittings for four-wheel drive clutch tube	**30 N·m** (**265.5 lb in**)
Allen head screws for valve plate on front housing	**23 N·m** (**203.6 lb in**)
Test port plugs	**23 N·m** (**203.6 lb in**)
Detent plugs	**80 N·m** (**59.0 lb ft**)
Bolts for rear cover	**50 N·m** (**36.9 lb ft**)
Bolt for output flange	**139 N·m** (**102.5 lb ft**)
Allen head screws for shifter assembly	**23 N·m** (**203.6 lb in**)
Hollow cap screws for tube on front housing	**40 N·m** (**354.0 lb in**)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Differential - Exploded view

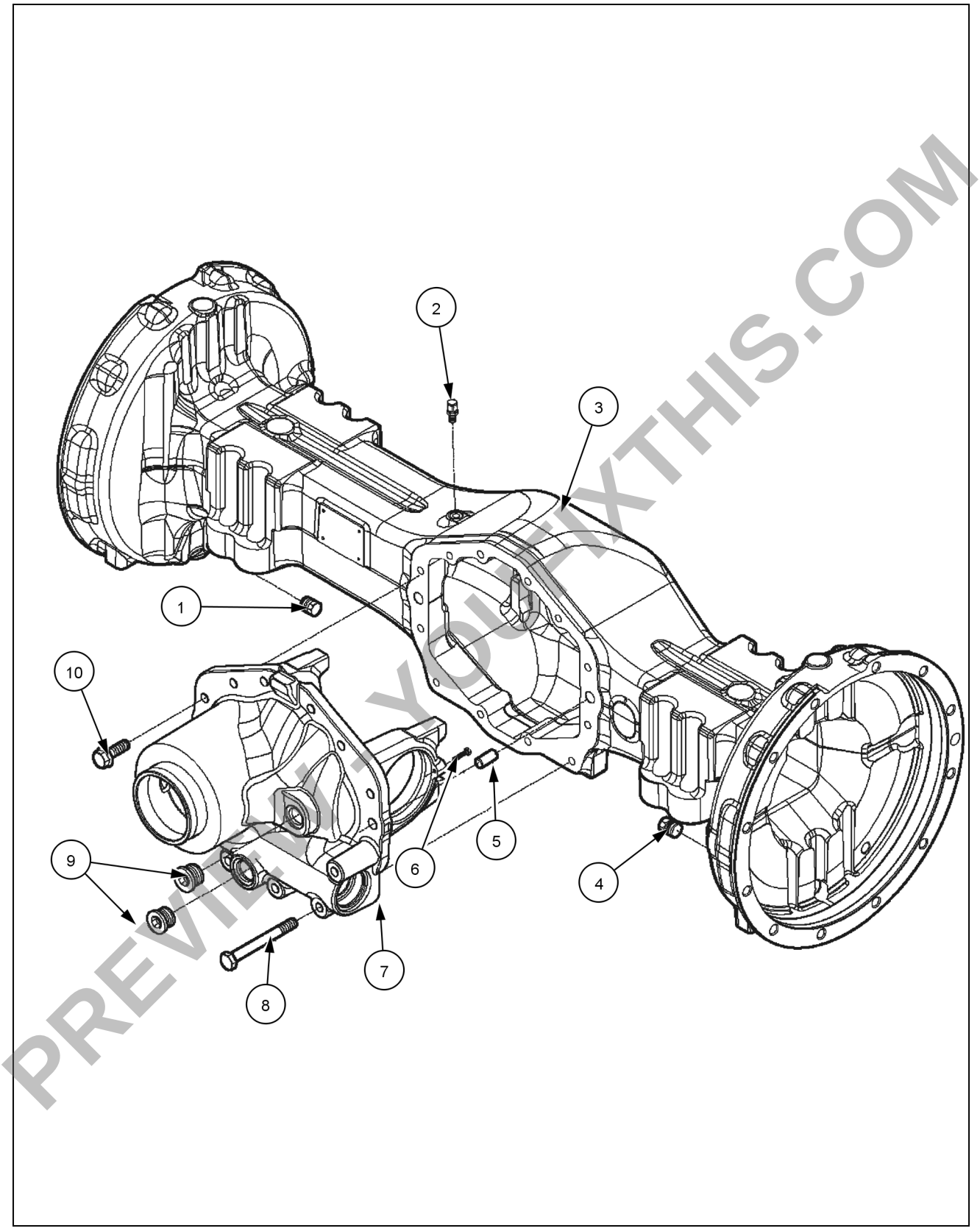
580N EP FOUR-WHEEL DRIVE (4WD) TIER 4B (FINAL)	

Differential				
1. Differential Carrier	7. Crush sleeve	13. Side gear	19. Bolt	25. Bolts
2. Cover	8. Bearing	14. Thrust Washer	20. Bearing caps	26. Locking finger bolts
3. O-ring	9. Spacer	15. Differential housing	21. Side gear	27. Locking pin for diff. cross shaft
4. Seal	10. Pinion shaft	16. Bearing	22. Crown gear	28. Differential cross shaft
5. Outboard bearing	11. Thrust Washer	17. Spanner nut	23. Bearing	
6. Washer	12. Spider gear	18. Locking finger	24. Spanner nut	

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Rear axle housing - Drawing



RCPH10TLB7GAL 1

1	Plugs	6	Bolt M6x25
2	Vent	7	Differential support
3	Axle housing	8	Bolt M12x100

Download full manual at youfixthis.com

Hydraulic service brakes - General specification

Rear Axle	
580N, 580SN	
Capacity	**13.6 l** (**14.4 US qt**)
Type of Fluid	Wet Brake/Transmission Lubricant - SAE 80W140 MAT3510
580SN-WT, 590SN	
Capacity - center bowl	**18.6 l** (**19.7 US qt**)
Type of Fluid.	Wet Brake/Transmission Lubricant - SAE 80W140 MAT3510

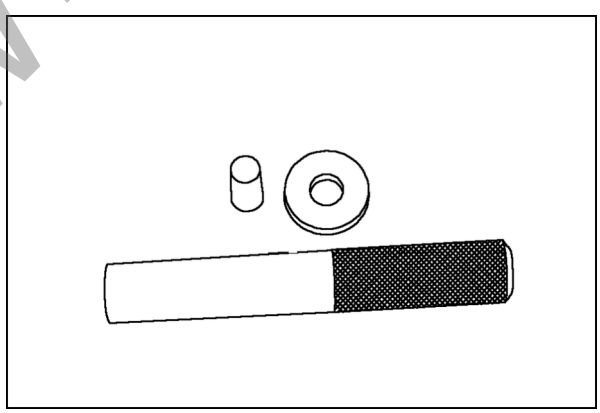
Axle Special Torques	
Allen head bolts for hub housing	**226 N·m** (**166.7 lb ft**)
Drain hole plugs at wheel hub	**60 N·m** (**44.3 lb ft**)
Fill and drain hole plugs at differential	**80 N·m** (**59.0 lb ft**)
Brake self adjuster shouldered bolt	**16 N·m** (**141.6 lb in**)
Brake bleeder	**8 - 12 N·m** (**70.8 - 106.2 lb in**)
Wheel studs	**70 N·m** (**51.6 lb ft**)

Wheel Nuts Special Torques	
Initial torque	**136 N·m** (**100.3 lb ft**)
2nd torque	**271 N·m** (**199.9 lb ft**)

NOTE: *Turn nuts an additional **30 °** after second torque.*

Transmission Special Torques	
Park brake housing	**50 N·m** (**36.9 lb ft**)
Output flange bolt	**139 N·m** (**102.5 lb ft**)
Park brake solenoid	**20 N·m** (**14.8 lb ft**)

Hydraulic service brakes - Special tools

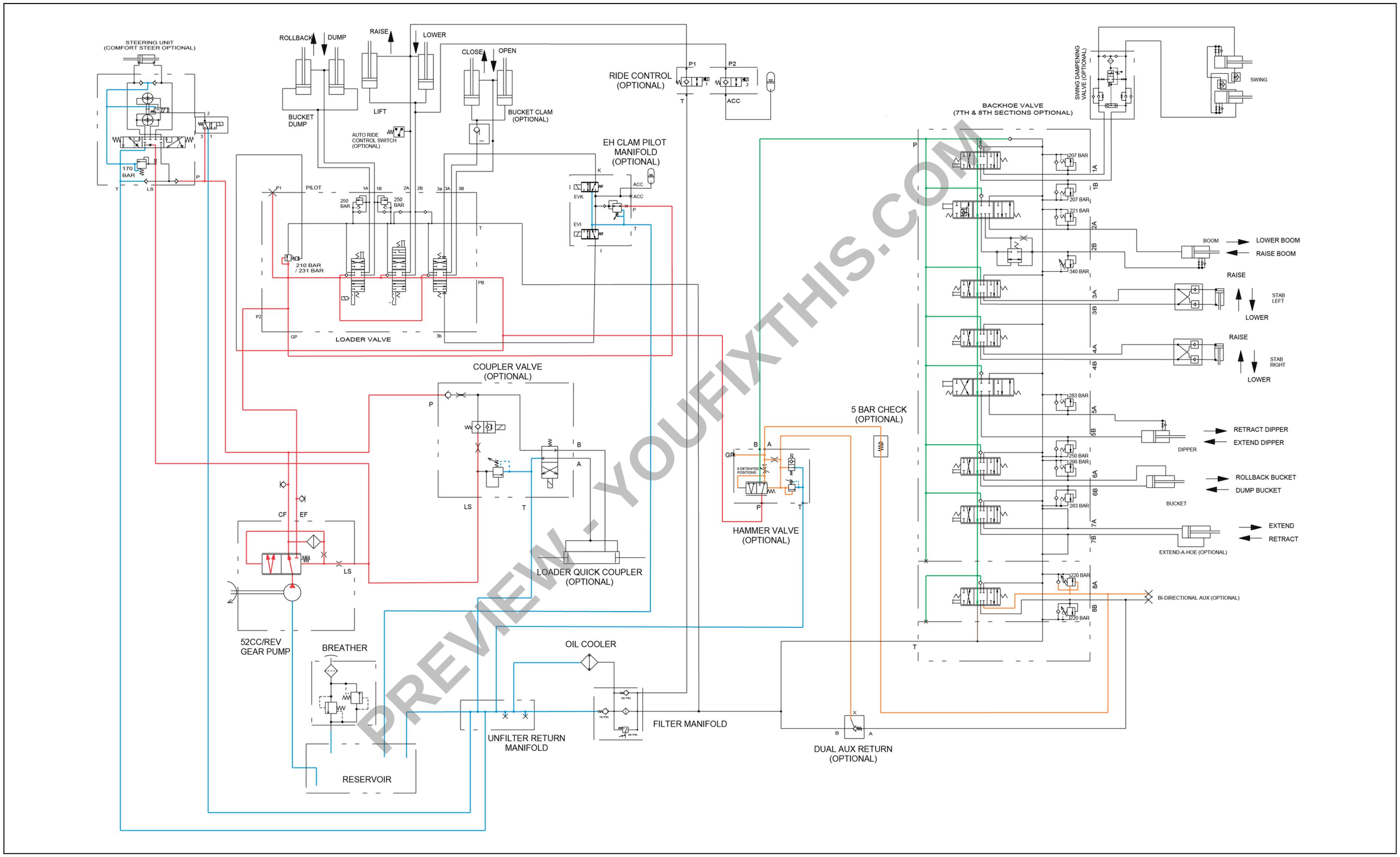


RCPH10TLB378AAL 1

Self adjusting brake tools 380002435

NOTE: *Part of rear axle service tools.*

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

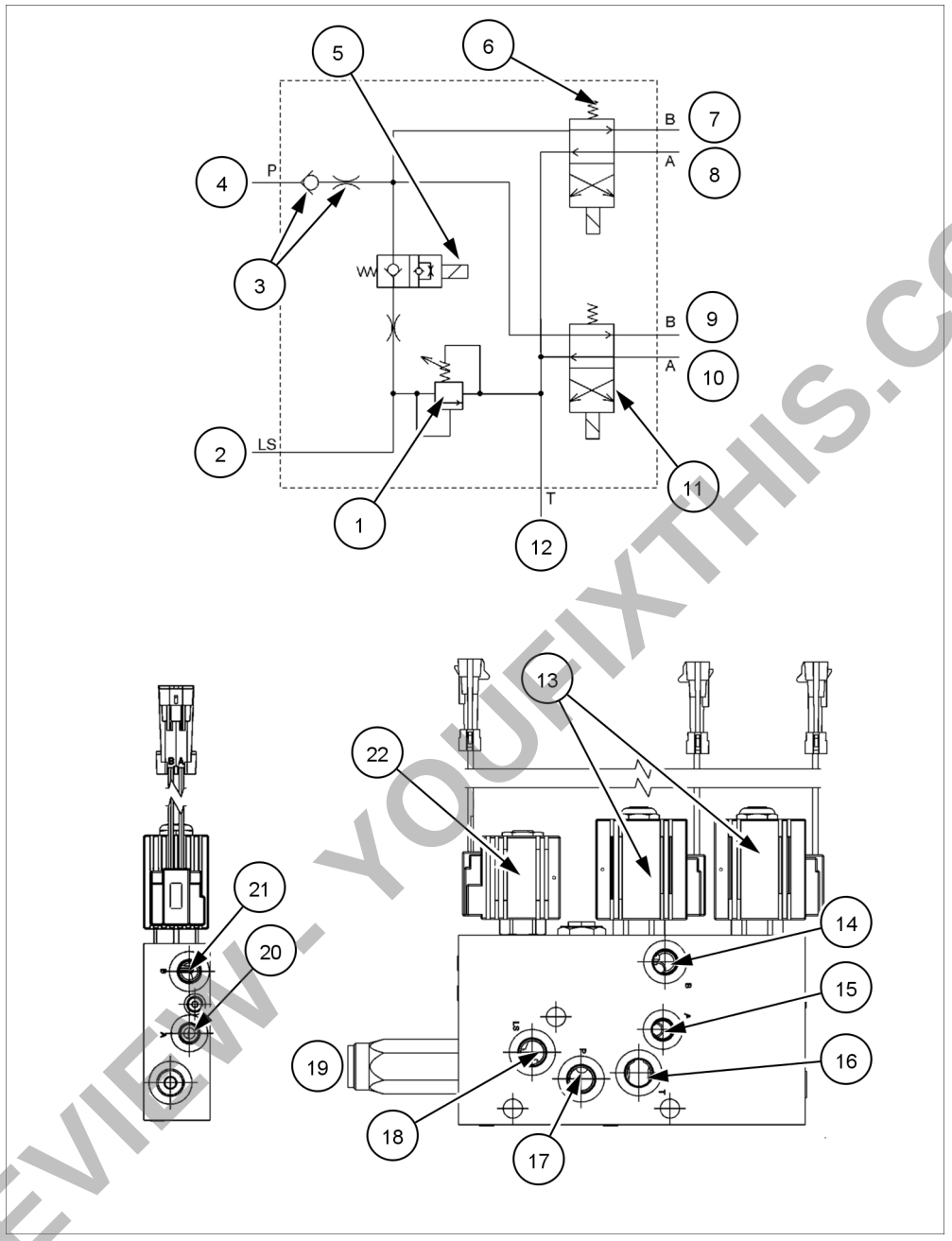


RAIL14TLB0906JA 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Quick coupling - Sectional view Backhoe and loader quick coupler, dual valve



RCPH10TLB002HAM 1

1	Pressure relief valve	12	To tank
2	Load sensing port	13	Two position - 4 way solenoid to control cylinder
3	Orifice and check valve	14	B Port - To EXTEND side of cylinder
4	Pressure Port	15	A Port - To RETRACT side of cylinder
5	Two position - 2 way solenoid valve to control pilot pressure	16	To tank
6	Two position - 4 way solenoid to control cylinder	17	Pressure Port
7	B Port - To EXTEND side of cylinder	18	Load sensing port
8	A Port - To RETRACT side of cylinder	19	Pressure relief valve
9	B Port - To EXTEND side of cylinder	20	A Port - To RETRACT side of cylinder
10	A Port - To RETRACT side of cylinder	21	B Port - To EXTEND side of cylinder

Download full manual at youfixthis.com
PREVIEW - YOUFIXTHIS.COM

Front wheels - Torque

NOTE: *Tighten bolts and washers in a crossing pattern (sequence).*

Two-Wheel Drive (2WD)

Tire size	Torque
14 x 17.5	**119 - 125 N·m** (**88 - 92 lb ft**) plus an additional **20 °** to set the preload
11 x 16	**156 - 203 N·m** (**115 - 150 lb ft**)

Four-Wheel Drive (4WD)

Tire size	Torque
12 x 16.5	**119 - 125 N·m** (**88 - 92 lb ft**) plus an additional **20 °** to set the preload
12.5/80 x 18	
14 x 17.5	

Front wheels - Tire pressure

Two-Wheel Drive (2WD)

Tire size	Torque
11 x 16	**359 kPa** (**52 psi**)
14 x 17.5	**276 kPa** (**40 psi**)

Four-Wheel Drive (4WD)

Tire size	Torque
12 x 16.5	**345 kPa** (**50 psi**)
12.5/80 x 18	**414 kPa** (**60 psi**)
14 x 17.5	**379 kPa** (**55 psi**)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Air conditioning - Overview Operation

The refrigerant circuit of the air conditioning system contains five major components: compressor, condenser, receiver-drier, expansion valve and evaporator. These components are connected by tubes and hoses and operate as a closed system. The air conditioner system is charged with HFC134a refrigerant.

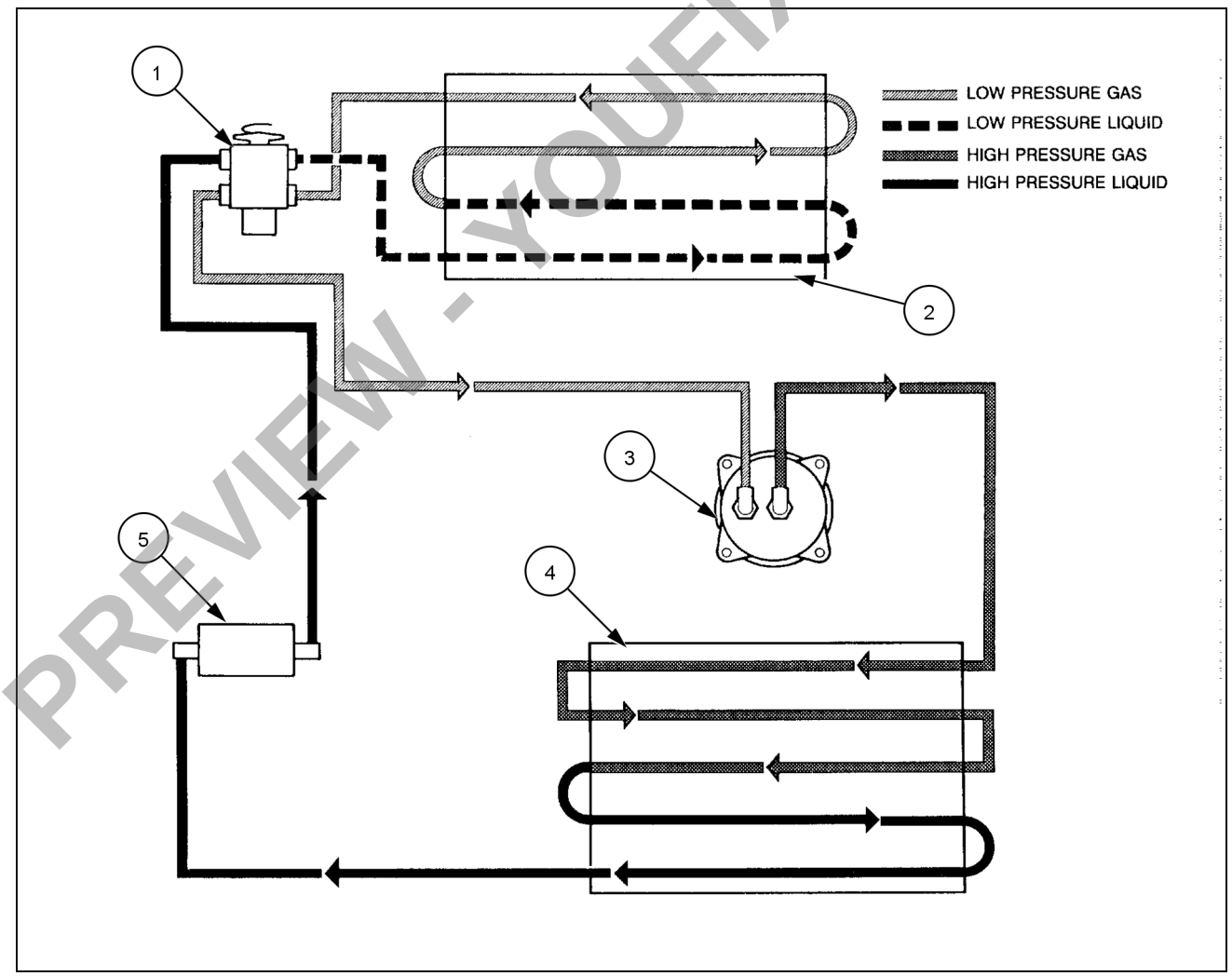
The compressor receives the refrigerant as a low pressure gas. The compressor then compresses the refrigerant and sends it in the form of a high pressure gas to the condenser. The air flow through the condenser then removes the heat from the refrigerant. As the heat is removed the refrigerant changes to a high pressure liquid.

The high pressure refrigerant liquid then flows from the condenser to the receiver drier. The receiver-drier is a container filled with moisture removing material, which removes any moisture that may have entered the air conditioner system in order to prevent corrosion of the internal components of the air conditioner system.

The refrigerant still in a high pressure liquid form, then flows from the receiver-drier to the expansion valve. The expansion valve then causes a restriction in flow of refrigerant to the evaporator core.

As the refrigerant flows through the evaporator core the refrigerant is heated by the air around and flowing through the evaporator fins. The combination of increased heat and decreased pressure causes the air flow through the evaporator fins to become very cool and the liquid refrigerant to become a low pressure gas. The cooled air then passes from the evaporator to the cab for the operator's comfort.

The electrical circuit of the Air Conditioning System consists of a fan speed control, temperature control, three (3) mini relays, two (2) 10 amp circuit breakers, two (2) fan motors, a blower motor, blower resistor, compressor clutch, low pressure switch, high pressure switch, and warning light.

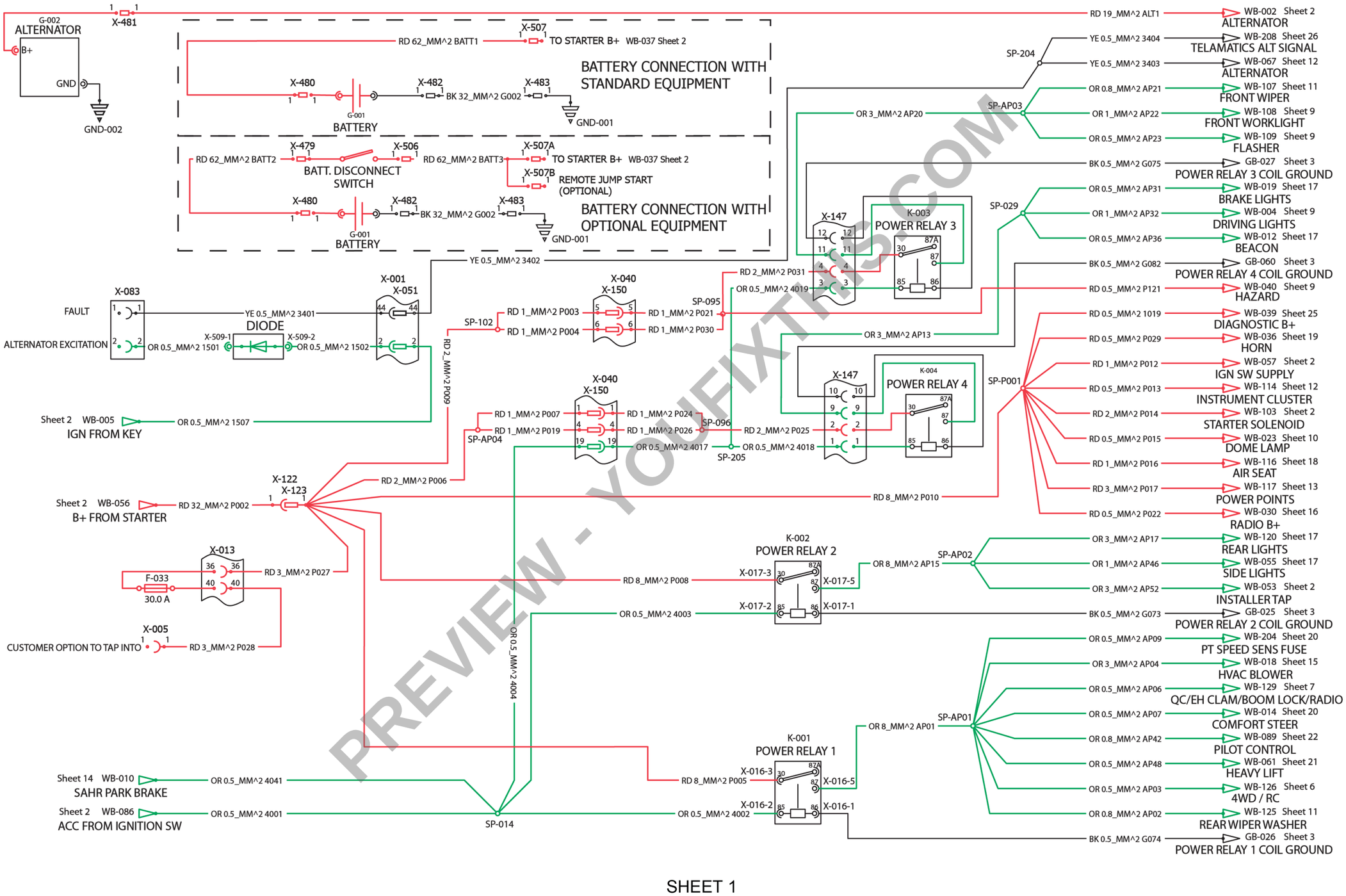


RCPH10TLB137GAL 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

POWER DISTRIBUTION / CHARGING SYSTEM



SHEET 1

RAIL14TLB0574JA 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

CONNECTOR X-013 - X-013

CONNECTOR X-013 - X-013			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	4043 (OR)	X-013 SP-052	**SHEET 14**
2	0717 (WH)	SP-201 X-013	**SHEET 21**
3	P013 (RD)	SP-P001 X-013	**SHEET 01**
4	1019 (RD)	SP-P001 X-013	**SHEET 01**
5	4041 (OR)	SP-014 X-013	**SHEET 01**
6	AP72 (WH)	X-013 SP-200	**SHEET 21**
7	1P03 (RD)	X-013 SP-022	**SHEET 12**
8	1021 (RD)	X-009 X-013	**SHEET 25**
9	25A2 (LB)	SP-113 X-013	**SHEET 06**
10	25B2 (LB)	SP-112 X-013	**SHEET 06**
11	P018 (RD)	X-013 X-021	**SHEET 02**
12	3P01 (OR)	SP-012 X-013	**SHEET 02**
13	5203 (YE)	X-013 SP-109	**SHEET 06**
14	5204 (YE)	X-013 SP-109	**SHEET 06**
15	P012 (RD)	SP-P001 X-013	**SHEET 01**
16	3P0X (OR)	X-013 X-028	**SHEET 12**
17	7004 (YE)	X-150 X-013	**SHEET 20**
18	7013 (WH)	X-013 SP-090	**SHEET 20**
19	G051 (BK)	X-013 SP-G19	**SHEET 03**
20	6003 (BR)	SP-049 X-013	**SHEET 15**
21	-	-	
22	-	-	
23	60B2 (BR)	X-013 X-020	**SHEET 15**
24	-	-	
25	7026 (YE)	SP-091 X-013	**SHEET 20**
26	G084 (BK)	X-013 SP-G17	**SHEET 20**
27	60A3 (BR)	X-013 SP-050	**SHEET 15**
28	60A4 (BR)	SP-050 X-013	**SHEET 15**
29	-	-	
30	-	-	
31	-	-	
32	-	-	
33	AP48 (OR)	SP-AP01 X-013	**SHEET 21**
34	5045 (YE)	X-013 SP-037	**SHEET 07**
35	AP52 (OR)	SP-AP02 X-013	**SHEET 01**
36	P027 (RD)	X-013 X-123	**SHEET 01**
37	AP49 (OR)	X-013 SP-142	**SHEET 21**
38	G019 (BK)	X-013 SP-G19	**SHEET 03**
39	AP53 (OR)	X-013 X-003	**SHEET 02**
40	P028 (RD)	X-013 X-005	**SHEET 01**
41	5026 (YE)	X-013 SP-036	**SHEET 07**
42	5015 (YE)	SP-035 X-013	**SHEET 07**
43	5013 (YE)	X-013 SP-035	**SHEET 07**
44	5014 (YE)	X-013 SP-035	**SHEET 07**
45	G017 (BK)	SP-G19 X-013	**SHEET 07**
46	G018 (BK)	SP-G19 X-013	**SHEET 07**
47	5044 (YE)	SP-037 X-013	**SHEET 07**
48	5025 (YE)	SP-036 X-013	**SHEET 07**

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Connector Number	Connector Name	Schematic Frame
X-424	To right-hand stabilizer switch	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)** **Wiring harnesses - Electrical schematic sheet 22 Pilot control inputs (55.100)**
X-425	To left-hand stabilizer switch	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)** **Wiring harnesses - Electrical schematic sheet 22 Pilot control inputs (55.100)**
X-426	To left-hand stabilizer pressure solenoid	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)** **Wiring harnesses - Electrical schematic sheet 22 Pilot control inputs (55.100)**
X-430	To hammer valve harness connector X-443	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)**
X-439	To hammer valve jumper harness connector X-719	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)**
X-441	To hammer control push-button	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)** **Wiring harnesses - Electrical schematic sheet 23 Combo / Aux / Uni hydraulics (55.100)**
X-443	To pilot control harness connector X-430	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)** **Wiring harnesses - Electrical schematic sheet 23 Combo / Aux / Uni hydraulics (55.100)**
X-455	To Chassis harness connector X-054	**Wiring harnesses - Electrical schematic sheet 08 Pilot controls (55.100)** **Wiring harnesses - Electrical schematic sheet 22 Pilot control inputs (55.100)**
X-718	To hammer valve solenoid	**Wiring harnesses - Electrical schematic sheet 28 Accessory jumpers (55.100)**
X-719	To pilot control harness connector X-439	**Wiring harnesses - Electrical schematic sheet 28 Accessory jumpers (55.100)**

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1001-Engine Air Filter Blocked

Context:
The instrument cluster detects a signal to ground on pin 16 indicating that the air filter restriction switch is tripped. The instrument cluster will illuminate the air filter restriction lamp  while this fault is active.

Cause:
The instrument cluster detects that the air filter restriction switch has been tripped.

Possible failure modes:

1. The air filter is clogged.
2. The signal wire has a short circuit to minus battery or chassis ground.
3. A faulty air filter restriction switch.
4. A problem within the instrument cluster.

Solution:

1. Verify that the fault code is active.

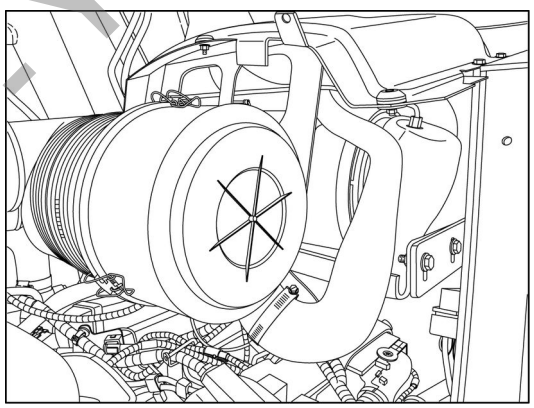
   Connect the Electronic Service Tool to the service tool connector.

   To check for fault codes: Start and operate the machine.

   A. The fault code is not recorded again. OK to return the machine to service.

   B. Fault code 1001 is recorded again. Go to step **2**.
2. Inspect the engine air filter.

   Inspect the engine air filter. Replace the filter if needed.



RCPH11TLB004BAD 1

   A. The engine air filter is OK and does not need to be replaced. Go to step **3**.

   B. The engine air filter is in poor condition or is clogged. Replace the filter. Return to step **1** to confirm elimination of the fault.
3. Verify that the wiring and the connectors are free of damage.

   Inspect the instrument cluster and the air filter restriction switch connections. All connections should be secure, tight, free of corrosion, abrasion, and damage.

   Inspect the harness from the instrument cluster and the air filter restriction switch. Verify that the harness is free of damage, corrosion, abrasion, and incorrect attachment.

   A. The connectors are secure and the harness is free of damage. Go to step **3**.

Download full manual at youfixthis.com
PREVIEW - YOUFIXTHIS.COM

3028-Engine oil pressure too low

Context:
The Engine Control Unit (ECU) A-9000 monitors the oil pressure switch S-9016 for proper operation. The oil pressure switch S-9016 changes from its off to on state between **0.6 - 0.9 bar** (**8.7 - 13.0 psi**). If the oil pressure switch S-9016 does actuate once the engine has been running for **6.0 s** at greater than **500.0 RPM**, this fault will occur.

Cause:
The ECU A-9000 has determined that the oil pressure switch S-9016 did not actuate.

Possible failure modes:

1. Faulty oil level, too low.
2. Faulty oil pressure switch S-9016, failed internally.
3. Faulty oil pressure switch S-9016 circuit wiring, shorted to chassis ground.
4. Faulty oil pressure, too low or blockage.
5. Faulty ECU A-9000, hardware or software.

Solution:

1. Verify that the fault is present and active.

   Use the Electronic Service Tool (EST) to check the status of this fault.

   A. If the fault is present and active, continue with Step **2**.

   B. If the fault is no longer present or in an inactive state, the fault may be intermittent and not currently active. Continue with Step **8**.

2. Check oil level.

   Use the appropriate operator or service manual, if necessary, to determine if the lubrication system has the appropriate amount of oil.

   There should be at least the minimum acceptable level of oil.

   A. If there is at least the minimum acceptable level of oil, continue with Step **3**.

   B. If there less than the minimum acceptable level of oil, use the appropriate operator or service manual, if necessary, to determine the type and quantity of oil required to re-fill the oil system.

3. Check the condition of the oil pressure switch S-9016.

   Disconnect the engine harness (EN) from the oil pressure switch S-9016 at connector **X-9016**.

   With the engine not running, use a multimeter to check for continuity on the component side :

From	To	Result
X-9016 pin 1	chassis ground	There should be continuity.

   Start the engine and allow it to run at greater than **500 RPM** for at least **6.0 s**.
   While the engine is running at greater than **500 RPM**, use a multimeter to check for continuity on the component side :

From	To	Result
X-9016 pin 1	chassis ground	There should be no continuity.

   A. If the specified values are measured, leave connector **X-9016** disconnected and continue with Step **4**.

   B. If the oil pressure switch S-9016 did not change state, leave connector **X-9016** disconnected and continue with Step **7**.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

3252-Controller Watchdog - SPI Communication Failure

Context:
The Engine Control Unit (ECU) A-9000 monitors the communication between the ECU A-9000 processor and the power stage controller over the SPI bus. If there is an error in the communication, this fault will occur.

Solution:

1. Check the ECU A-9000 for the appropriate software and re-flash, if necessary.
   A. If the fault has been resolved, return the machine to service.
   B. If the fault has not been resolved, escalate an ASIST concern.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3616-Torque limitation due to turbo charger protection

Context:
This fault is for information purposes only and may have been caused by another fault. The Engine Control Unit (ECU) A-9000 has detected an active power reduction due to turbocharger protection. This fault may have been caused by a detection of high altitude or extreme working conditions for a period greater than **120.00 s**. If this fault occurs, a power reduction or engine speed reduction of equal to or greater than **25 %** of the desired torque will be active in order to protect the turbocharger from a potential overspeed condition. If the power reduction occurred due to actual defect, the failure triggering the torque limitation should also be in the failure memory. Use the Electronic Service Tool (EST) to check for related fault codes and diagnose them first, then check the status of this fault, **3616 - Torque limitation due to turbo charger protection**.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3812-Physical range check high for ECU temperature sensor

Context:
The Engine Control Unit (ECU) A-9000 has an internal temperature sensor. The ECU A-9000 monitors this sensor. If the ECU A-9000 determines that the temperature sensor value is too high, this fault will occur.

Cause:
The ECU A-9000 has determined that the internal ECU A-9000 temperature sensor value is too high.

Possible failure modes:

1. Machine is operating in extreme environmental conditions.
2. Faulty ECU A-9000, software.

Solution:

1. Check the ECU A-9000 for the appropriate software and re-flash, if necessary.
   A. If the fault has been resolved, return the machine to service.
   B. If the fault has not been resolved, escalate an ASIST concern.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Arm - Remove Loader frame

1. Raise the loader frame until the pivot pins for the piston rod eyes of the lift cylinders are above the hood. Stop the engine.
2. Fasten suitable lifting equipment to the loader frame to hold the loader frame in place.
3. Remove the outer snap ring that holds the pivot pins for the piston rod eyes of the lift cylinders.
4. Use suitable drivers and drive the pivot pins out of the loader frame. Do not remove the drivers at this time.
5. Disconnect the lifting equipment and lower the bucket to the floor.
6. Hold the right lift cylinder and remove the driver. Lower the lift cylinder onto the front axle.
7. Hold the left lift cylinder and remove the driver. Lower the lift cylinder and strut onto the front axle.
8. Move the loader control lever to the right or left to relieve any pressure in the bucket circuit.
9. Disconnect the bucket cylinder hoses from the tubes on the right side of the machine chassis upright. Fasten an identification tag to each tube.
10. Install a cap on each hose and a plug in each tube. Thread size is 7/8-14.
11. If equipped, disconnect the clam cylinder hoses from the tubes on the left side of the machine chassis upright. Fasten an identification tag on each tube.
12. Install a cap on each hose and a plug in each tube. Thread size is 7/8-14.
13. Remove both retaining bolts for the return-to-dig switch mounting bracket. It is not necessary to disconnect the return-to-dig switch wiring.
14. Disconnect the anti-rollback rod from the right bucket cylinder link.
15. Disconnect the anti-rollback rod from the self-leveling cam. Put the antirollback rod out of the way.
16. Remove the snap ring and the two hardened flat washers from the right end of the loader lift frame pivot shaft.
17. Fasten suitable lifting equipment to the loader frame to hold the loader frame in place.
18. Use a suitable driver and drive the pivot shaft out of the loader frame.
19. A wave washer and the self-leveling cam are located between the loader frame and the machine chassis upright. Raise the loader frame and remove these parts.
20. Carefully move the machine out of the loader frame.

Next operation:
Bucket - Install (84.100)

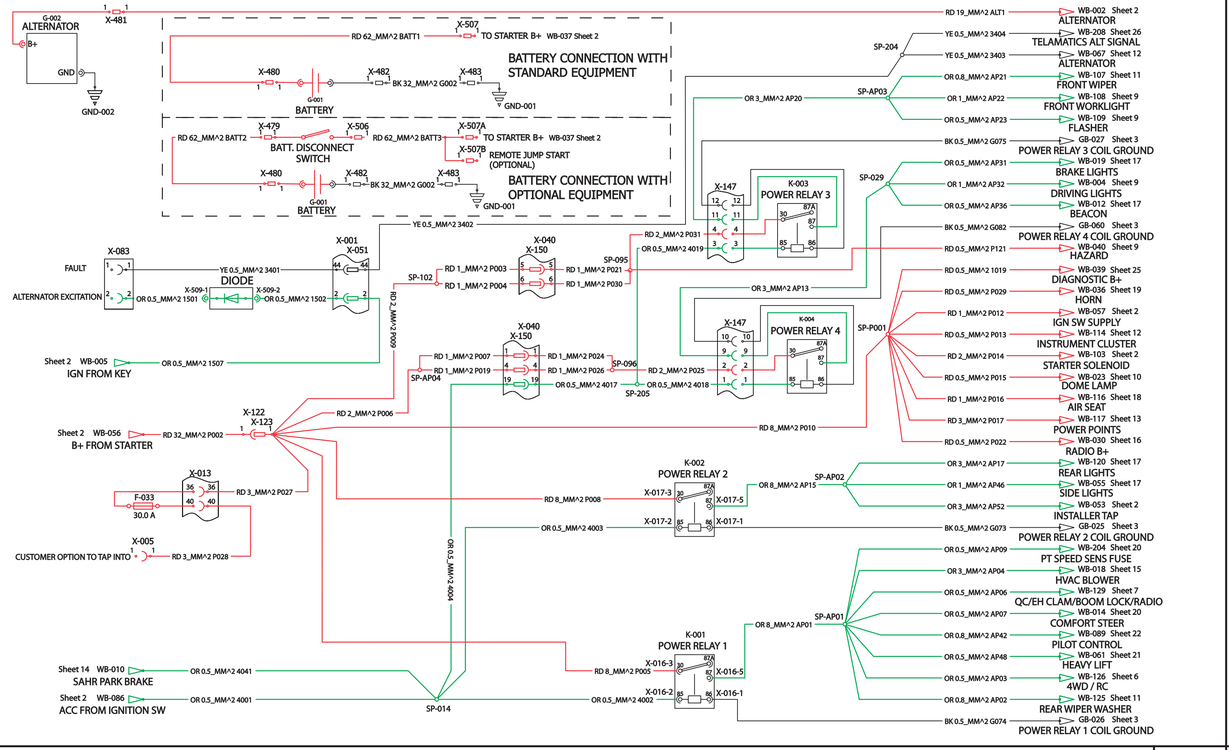
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

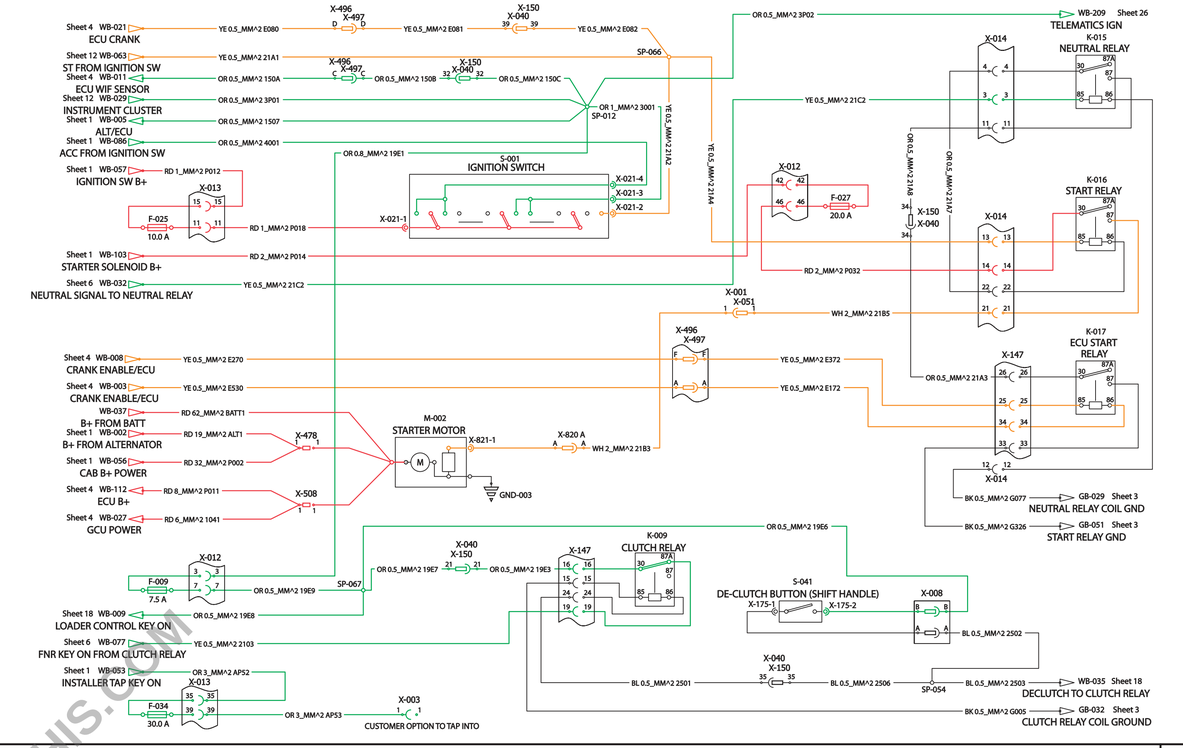
1	Bolt	30	Insulator
2	Wire tie	31	Lock nut
3	Retaining ring	32	Washer
4	Knob	33	Lock nut
5	Roll pin	34	Bracket
6	Spring	35	Bolt
7	Isolator knob	36	Boot
8	Bushing	37	Bolt
9	Roller bearing	38	Christmas tree clip
10	Guide	39	Rubber bumper
11	Suspension shock	40	Air compressor
12	Roll pin	41	Lower housing
13	Spring	42	Fitting
14	Roller bearing	43	Lock nut
15	Rubber bumper	44	Air line
16	Bushing	45	Pedestal
17	Isolator control	46	Bolt
18	Bolt	47	Washer
19	Fore/aft isolator shock	48	Shaft
20	Housing	49	Air spring
21	Rubber bumper	50	Switch
22	Spring	51	Bushing
23	Bolt	52	Wire harness
24	Roll pin	53	Roller bearing
25	Bushing	54	Fitting
26	Guide	55	Wire tie
27	Bolt	56	Suspension assembly
28	Upper housing	57	Roller bearing
29	Washer		

PREVIEW - YOUFIXTHIS.COM

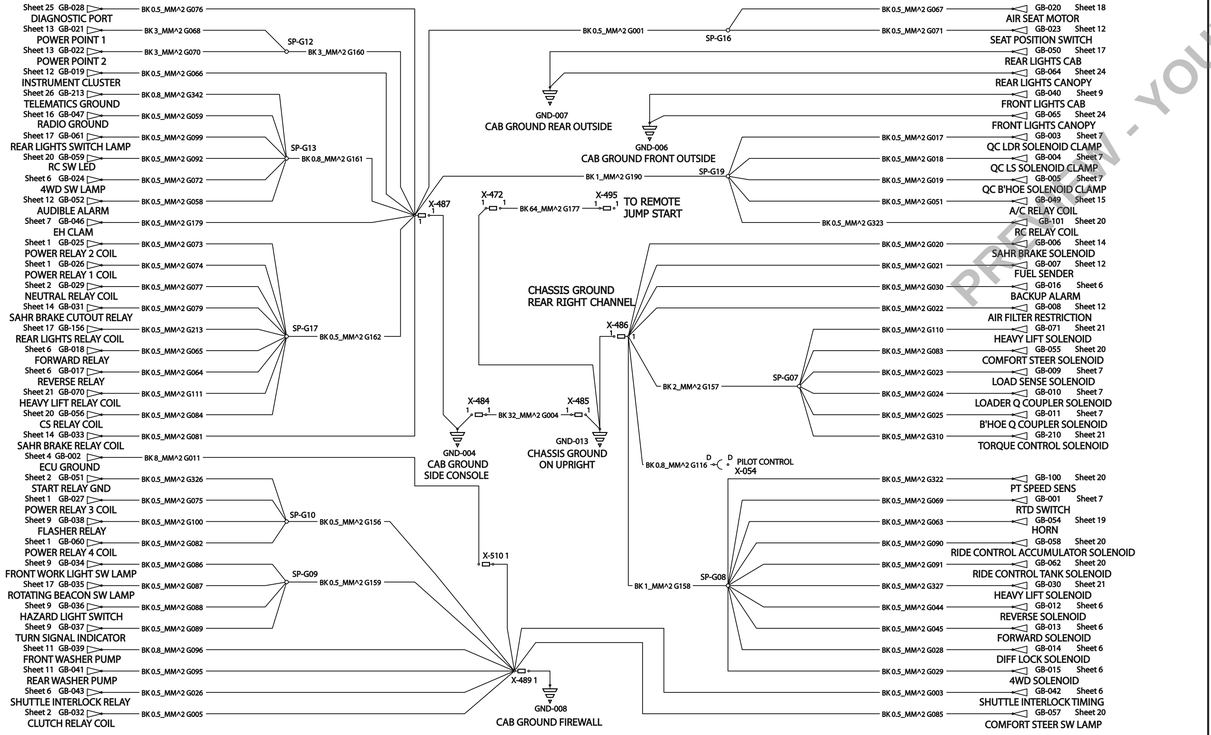
Download full manual at youfixthis.com



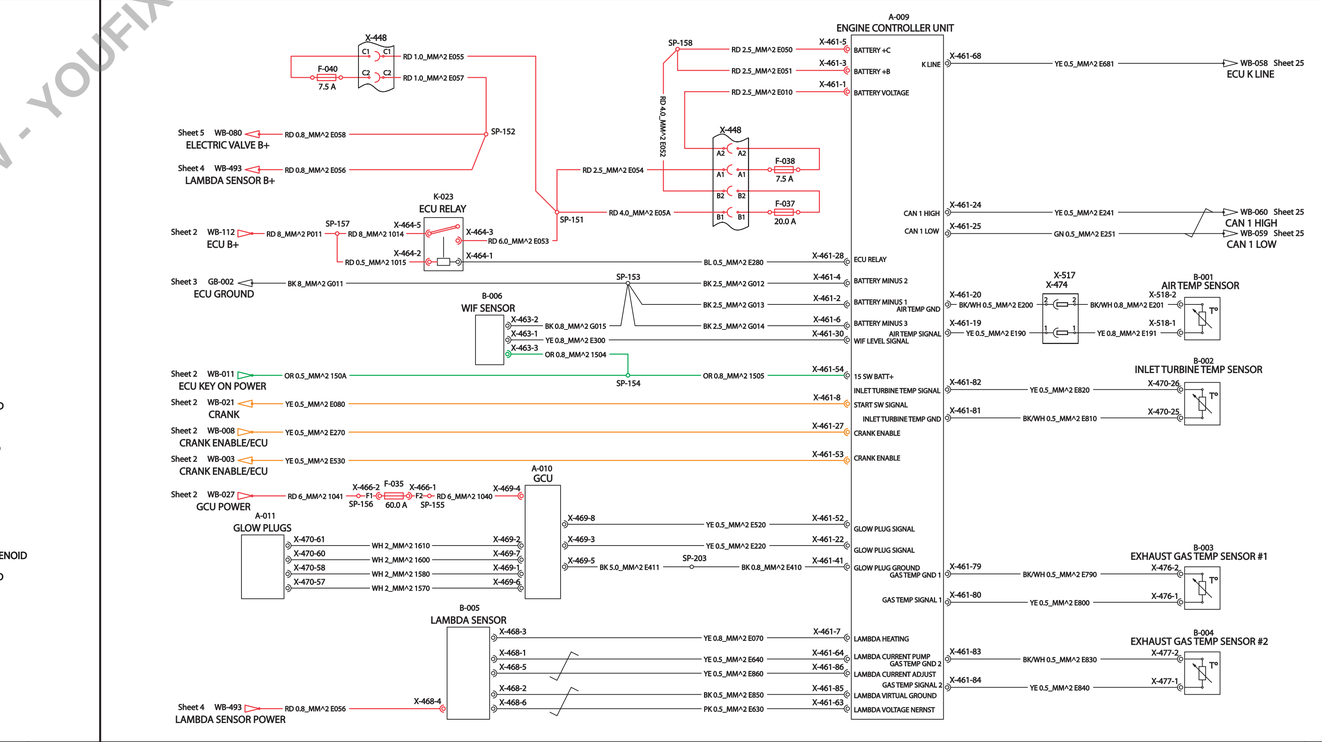
POWER DISTRIBUTION - CHARGING | 1



STARTING SYSTEM | 2



GROUNDING | 3



ENGINE CONTROL | 4

SHEET	DESCRIPTION	SHEET	DESCRIPTION	SHEET	DESCRIPTION
1	POWER DISTRIBUTION - CHARGING	10	INTERIOR LIGHTS	19	HORN
2	STARTING SYSTEM	11	WIPERS AND WASHERS	20	COMFORT STEER - RIDE CONTROL
3	GROUNDING	12	INSTRUMENT CLUSTER	21	HYDRAULIC OPTIONS
4	ENGINE CONTROL	13	POWER POINTS	22	PILOT CONTROL INPUTS
5	ENGINE CONTROL	14	SAHR PARK BRAKE	23	COMBO-AUX-UNI HYDRAULICS
6	DRIVES	15	HVAC	24	CANOPY EXTERIOR LIGHTS
7	HYDRAULICS	16	AUDIO	25	CAN BUS - DIAGNOSTIC
8	PILOT CONTROLS	17	REAR LIGHTS EXTERIOR	26	TELEMATICS
9	FRONT EXTERIOR LIGHTS	18	OPTIONS	27	2WD RIDE CONTROL JUMPER

LEGEND

- INDICATES CONSTANT POWER 12V
- INDICATES POWER WHEN KEY SWITCH IS ON
- INDICATES POWER WHEN KEY SWITCH IS IN START POSITION
- INDICATES 5V SECONDARY POWER SUPPLY FROM MODULE

ABBREVIATION-------COLOR

BK----------BLACK
BK\WH----------BLACK\WHITE
BL----------BLUE
BR----------BROWN
GN----------GREEN

COLOR ABBREVIATIONS

GY----------GRAY
LB----------LIGHT BLUE
LG----------LIGHT GREEN
OR----------ORANGE
PK----------PINK
RD----------RED
TN----------TAN
VT----------VIOLET
WH----------WHITE
YE----------YELLOW

TRACTOR LOADER BACKHOE 55 kW 580N EP TIER 4B FINAL ELECTRICAL SCHEMATIC

SHEET 1 SIDE 1

Additional copies of this schematic can be ordered through Technical Publications Distribution System. Part # RAC 47736519

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

[33.202] Hydraulic service brakes 33.2

Hydraulic systems 35

[35.000] Hydraulic systems 35.1

[35.102] Pump control valves 35.2

[35.104] Fixed displacement pump 35.3

[35.106] Variable displacement pump 35.4

[35.204] Remote control valves 35.5

[35.300] Reservoir, cooler, and filters 35.6

[35.350] Safety and main relief valves 35.7

[35.359] Main control valve 35.8

[35.525] Auxiliary hydraulic valves and lines 35.9

[35.703] Stabilizer hydraulic system 35.10

[35.723] Front loader bucket hydraulic system 35.11

[35.726] Excavator and backhoe hydraulic controls 35.12

[35.736] Boom hydraulic system 35.13

[35.737] Dipper hydraulic system 35.14

[35.738] Excavator and backhoe bucket hydraulic system 35.15

[35.739] Swing arm hydraulic system 35.16

[35.740] Telescopic arm hydraulic system 35.17

Frames and ballasting 39

[39.100] Frame 39.1

[39.129] Stabilizers 39.2

Steering 41

[41.101] Steering control 41.1

[41.200] Hydraulic control components 41.2

[41.216] Cylinders 41.3

Wheels 44

[44.511] Front wheels 44.1

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Contents

Brakes and controls - 33

[33.110] Parking brake or parking lock 33.1

[33.202] Hydraulic service brakes 33.2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

A. If you find damage or the display indicates other than normal display readings, then repair the damage discovered during the inspection or locate and repair the other than normal display condition and verify that the error has been resolved.

B. If you do not find damage and the display indicates only normal readings, then erase the fault code and continue operation.

Wiring harnesses - Electrical schematic sheet 01 – Power distribution and starting (55.100.DP-C.20.E.01)
Wiring harnesses - Electrical schematic sheet 04 – Engine Control Unit (ECU) vehicle connector (55.100.DP-C.20.E.04)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 24 of 2386 pages

The full manual includes:

- All 2386 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Case 580N EP Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual