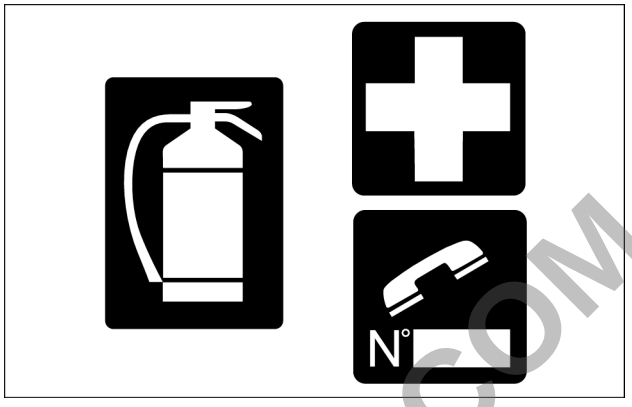
Emergency

Be prepared for emergencies. Always keep a fire extinguisher and first aid kit readily available. Ensure that the fire extinguisher is serviced in accordance with the manufacturer's instructions.



SMIL12WEX0174AA 3

Equipment

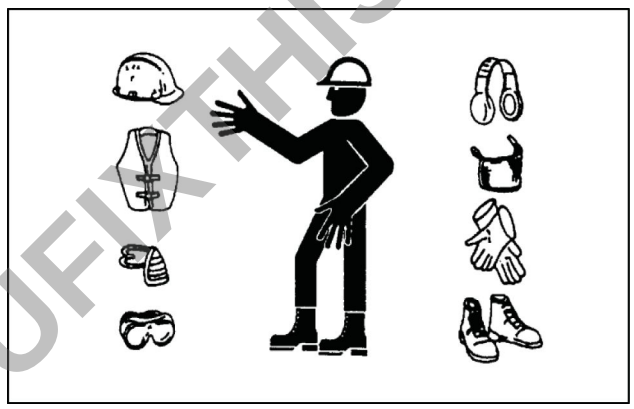
Wear close fitting clothing and safety equipment appropriate for the job:

- Safety helmet
- Safety shoes
- Heavy gloves
- Reflective clothing
- Wet weather clothing

If working conditions require, the following personal safety equipment should be on hand:

- Respirators (or dust proof masks)
- Ear plugs or acoustic ears protections
- Goggles with lateral shield or masks for eyes protection

Do not wear rings, wristwatches, jewels, unbuttoned or flapping clothing such as ties, torn clothes, scarves, open jackets or shirts with open zips which could get caught into moving parts.



TULI12WEX2008AA 4

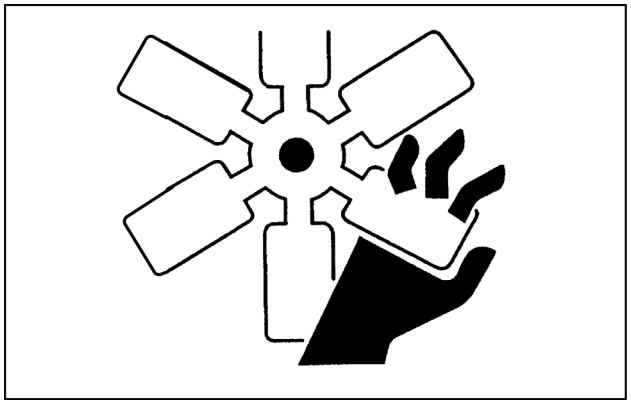
Engine - Radiator

Never leave the engine running in enclosed spaces without proper ventilation which is able to evacuate toxic exhaust gases. Keep the exhaust manifold and tube free from combustible materials.

Do not refuel with the engine running, especially if hot, as this increases fire hazard in case of fuel spillage.

Never attempt to check or adjust the belts when the engine is running.

Never lubricate the machine with the engine running.

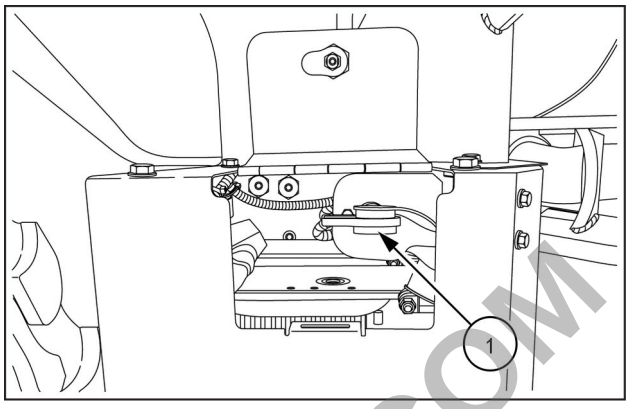


TULI12WEX2009AA 5

PREVIEW - YOUFIXTHIS.COM

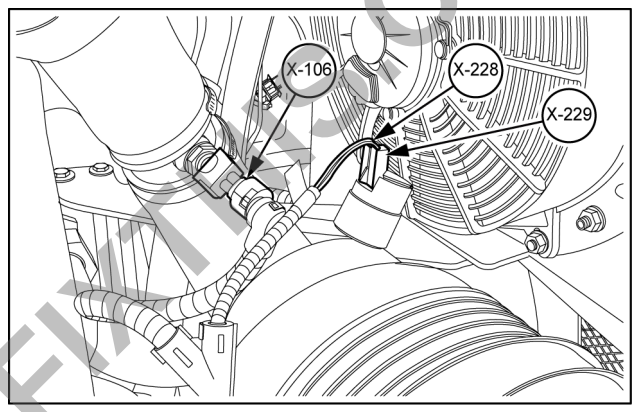
Download full manual at youfixthis.com

5. Put the battery main switch **(1)** in the OFF position.



LEIL14CWL0017AA 4

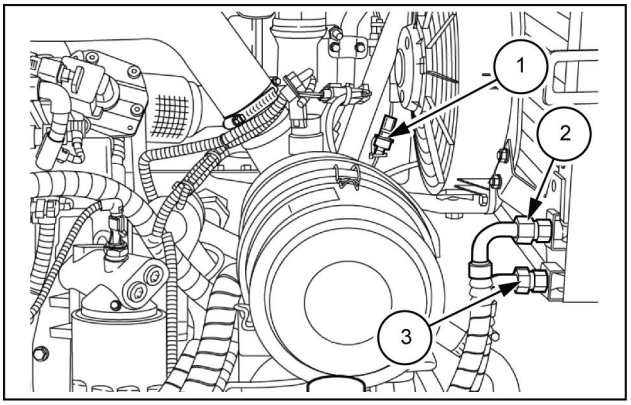
6. Disconnect the wiring harness (X-228) and (X-229) from the engine air filter.
   Disconnect the wiring harness (X-106) from the air temperature sensor.



LEIL14CWL0171AB 5

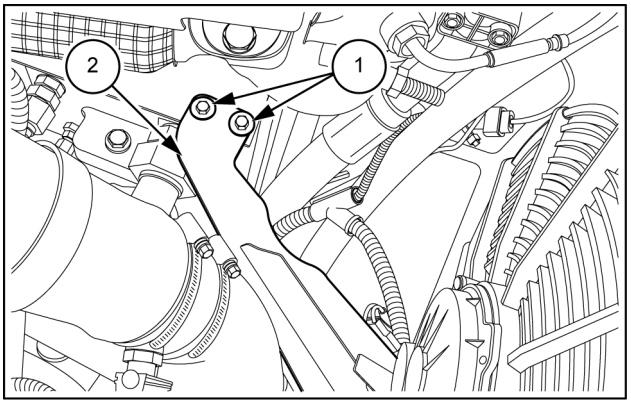
Versions with air conditioning

1. Drain the air conditioning system and disconnect the fan electrical connector **(1)**.
   Tag and disconnect the condenser hoses **(2)** and **(3)**.



LEIL14CWL0159A 6

2. Remove the two lower bolts **(1)** of the condenser bracket **(2)**.



LEIL14CWL0160AB 7

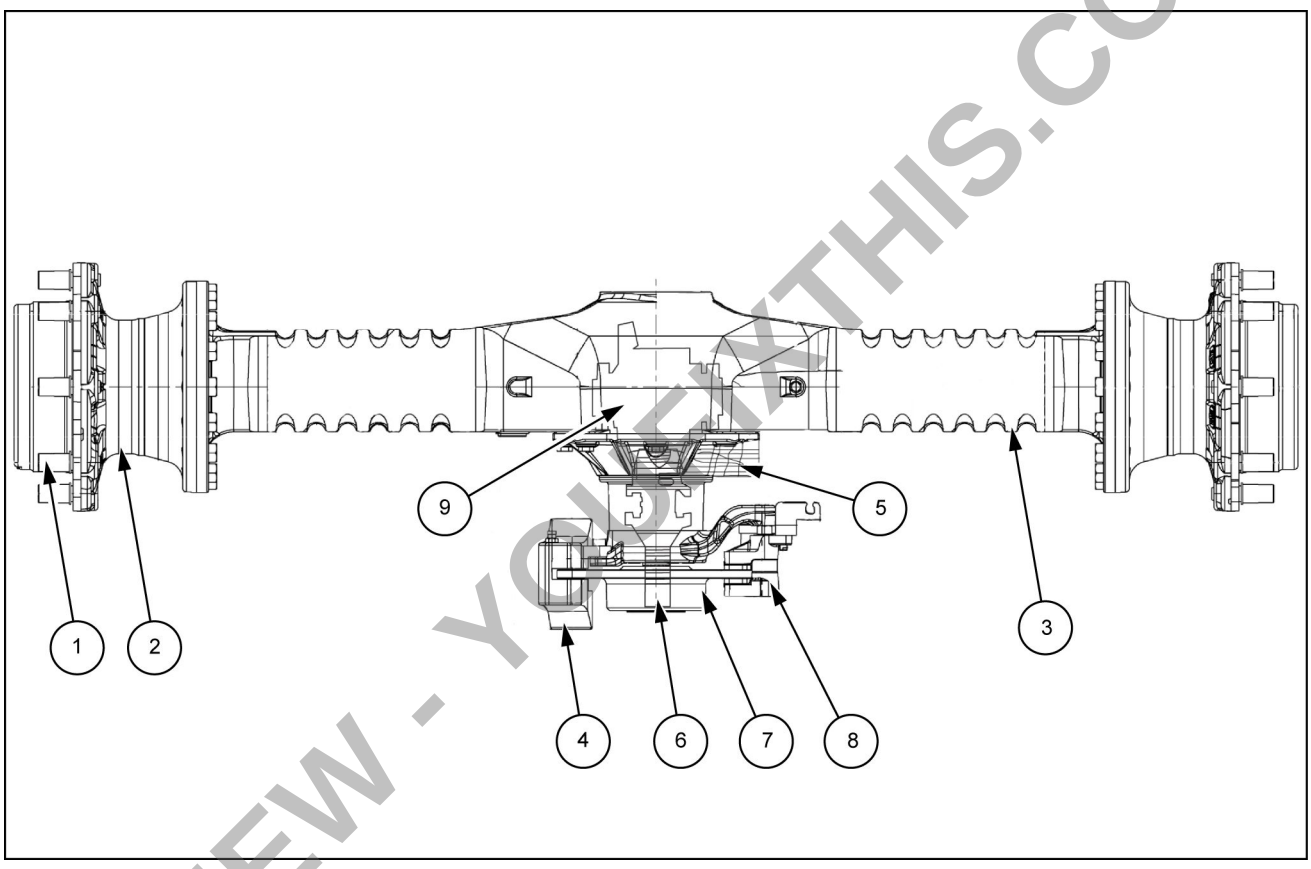
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Powered front axle - General specification

	W50 C - W60 C	W70 C - W80 C	W70 C - W80 C High Speed (HS)
28.16 - Limited Slip Differential (LSD)	X		
28.16 - Open Differential	X		
28.25 - Limited Slip Differential (LSD)		X	X
28.25 - Open Differential		X	X
28.25 - Lock Differential (100%)		X	X

Axle type 28.16 (W50C - W60C)



LEIL14CWL0270FB 1

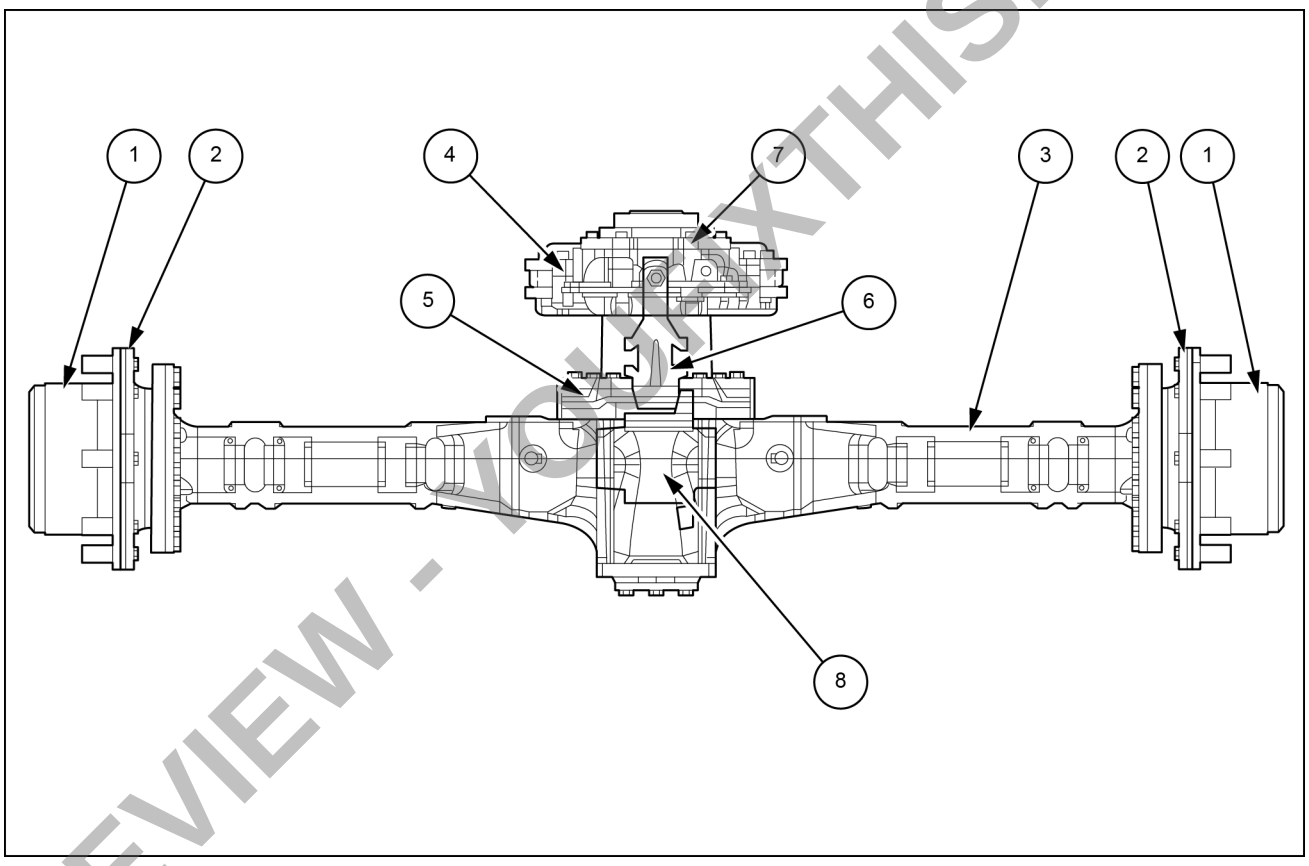
1. EPICYCLIC REDUCTION GEAR: planetary carrier with reduction/transmission parts
2. WHEEL HUB: wheel support parts containing the epicyclic reduction gears
3. AXLE BEAM TRUMPET: load-bearing shell structure of the axle
4. SERVICE BRAKE: brake parts and housing
5. DIFFERENTIAL SUPPORT: differential housing with ring bevel gear adjusting system
6. PINION: pinion with relative adjusting and support parts
7. FLANGE: flange and relative fastening parts
8. PARKING BRAKE: brake disc with caliper and support parts
9. DIFFERENTIAL: differential parts with ring bevel gear

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Powered rear axle - General specification

	W50C - W60C	W70C - W80C	W70C - W80C High Speed (HS)
28.20 - Differential: Limited Slip (LSD) With TB172 transmission	X	X	–
28.20 - Differential: Open With TB172 transmission	X	X	–
28.20 - Differential: Lock 100% With TB172 transmission		X	–
28.20 - Differential: Limited Slip (LSD) With TB138.5 transmission	–	–	X
28.20 - Differential: Open With TB138.5 transmission	–	–	X
28.20 - Differential: Lock 100% With TB138.5 transmission	–	–	X



LEIL16CWL0212FB 1

1. EPICYCLIC REDUCTION GEAR: planetary carrier with reduction/transmission parts
2. WHEEL HUB: wheel support part containing the epicyclic reduction gears
3. AXLE BEAM TRUMPET: load-bearing shell structure of the axle
4. TRANSMISSION BOX: structure with reduction gear
5. DIFFERENTIAL SUPPORT: differential housing with ring bevel gear adjusting system
6. PINION: pinion with relative adjusting and support parts
7. FLANGE: flange and relative fastening parts
8. DIFFERENTIAL: differential parts with ring bevel gear

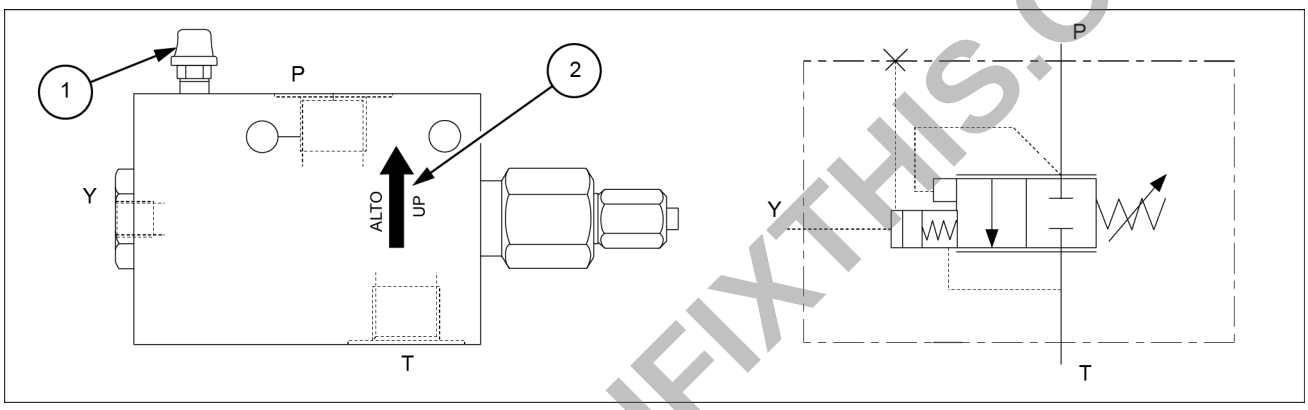
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Hydrostatic drive system valves - General specification - Inching valve

W50C TC	WE
W50C ZB	WE
W60C TC	WE
W60C ZB	WE

Maximum inlet pressure (P)	**60 bar** (**870 psi**)
Piloting pressure (Y)	**150 bar** (**2175 psi**)
Discharge (tank) pressure	**0.5 bar** (**7.2 psi**)
Valve setting	**30 bar** (**435 psi**)
Setting tolerance	**-2 – +5 bar** (**-29 – +72 psi**) (when the valve starts opening)



LEIL15CWL0344EB 1

P. Inlet port
T. Tank port
Y. Piloting port
1. Bleeding screw
2. Assembly direction

Hydrostatic drive system valves - General specification - Inching valve

W70C HS	WE
W70C	WE
W80C HS	WE
W80C	WE

Maximum inlet pressure (P)	**60 bar** (**870 psi**)
Piloting pressure (Y)	**150 bar** (**2175 psi**)
Discharge (tank) pressure	**0.5 bar** (**7.2 psi**)
Valve setting	**24 bar** (**348 psi**)
Setting tolerance	+/- **1.5 bar** (**21.8 psi**)(when the valve starts opening)

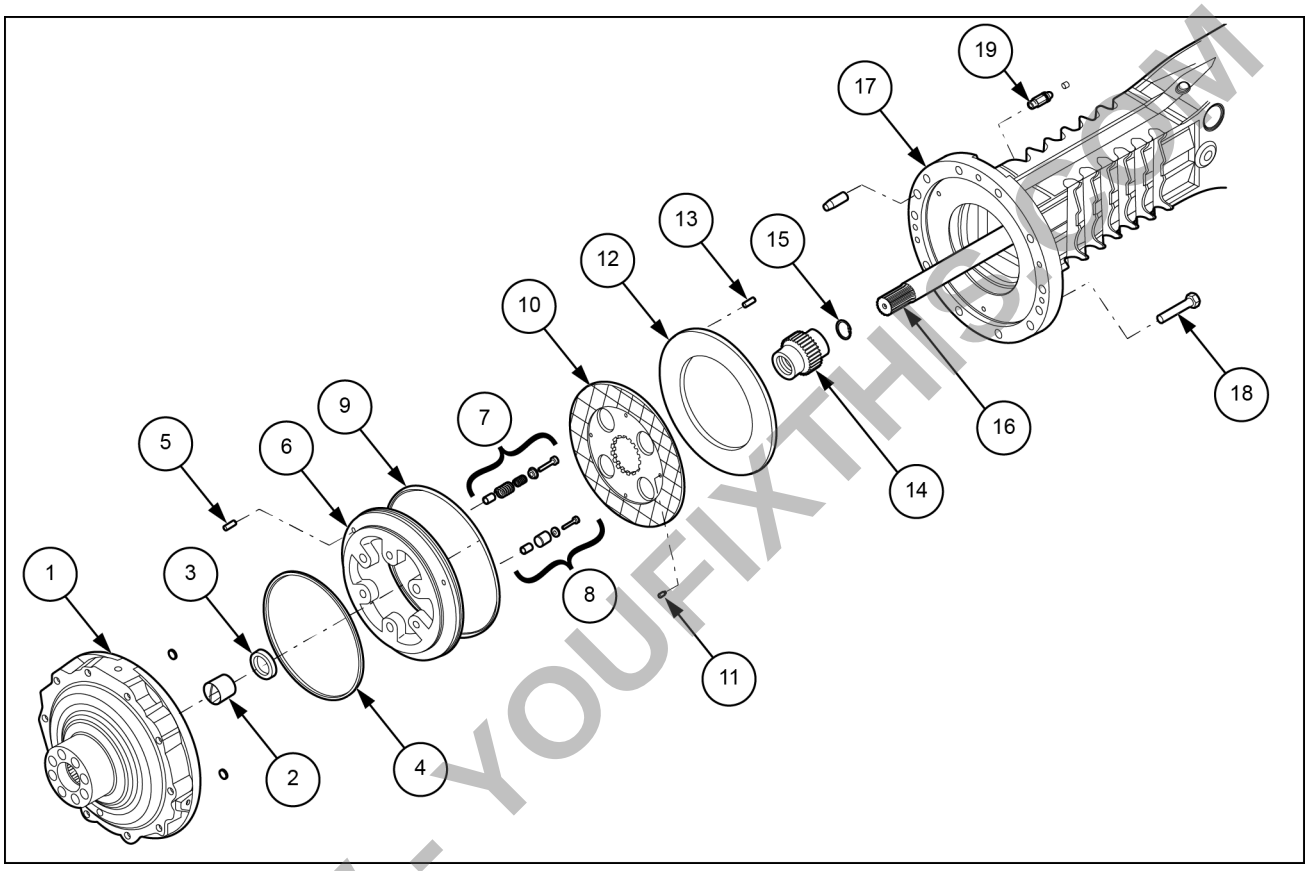
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Hydraulic service brakes - Component identification

W70C HS	WE
W70C	WE
W80C HS	WE
W80C	WE

Brake group

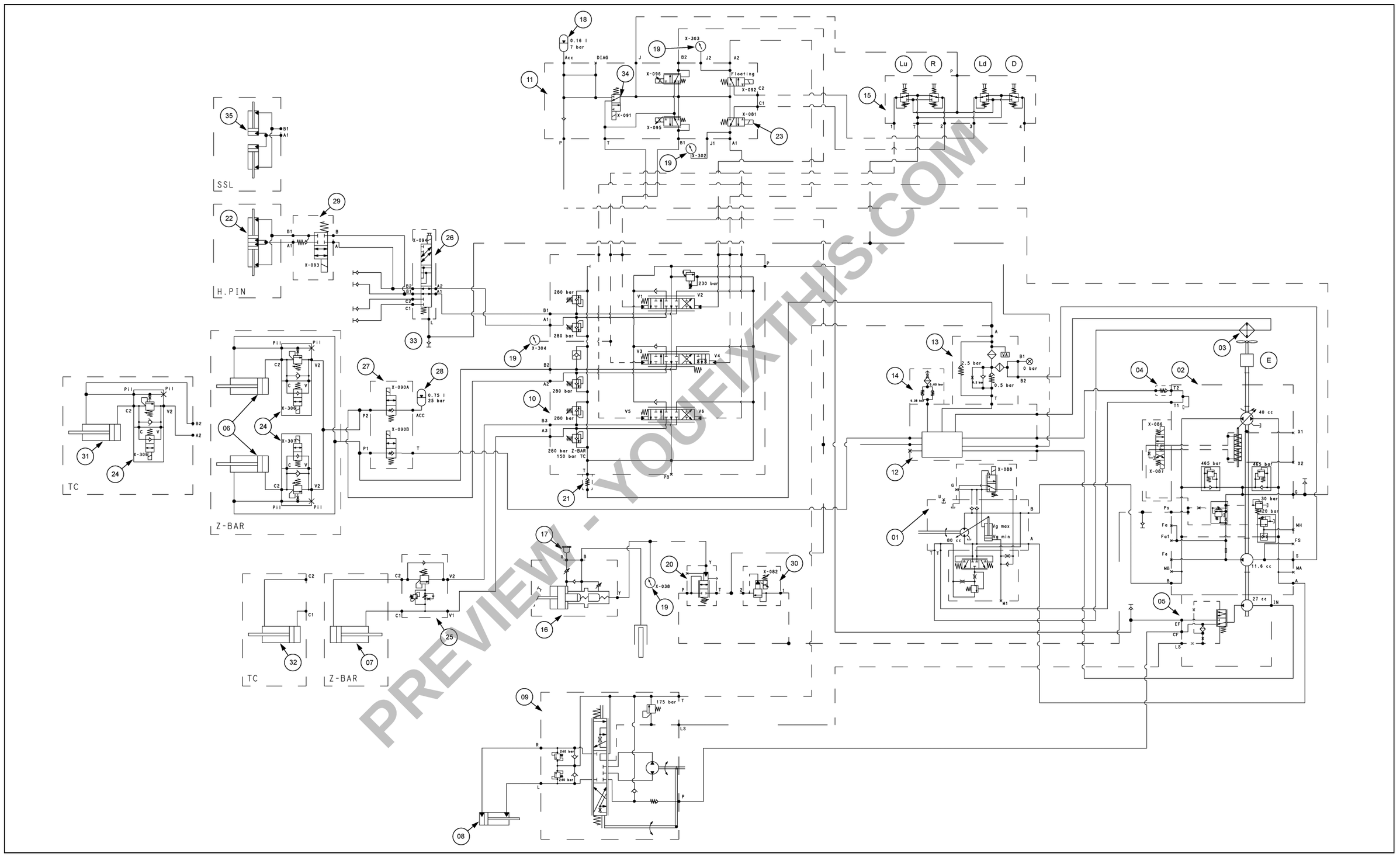


LEIL16CWL0546FB 1

1. Wheel shaft
2. Bushing
3. Seal ring
4. Seal ring
5. Pin
6. Brake piston
7. Self-adjust kit
8. Self-adjust kit
9. Seal ring
10. Brake disk
11. Pin
12. Brake counterdisk
13. Pin
14. Brake disk carrier
15. Lock ring
16. Long half-shaft
17. Axle beam
18. Retaining bolt
19. Breather

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

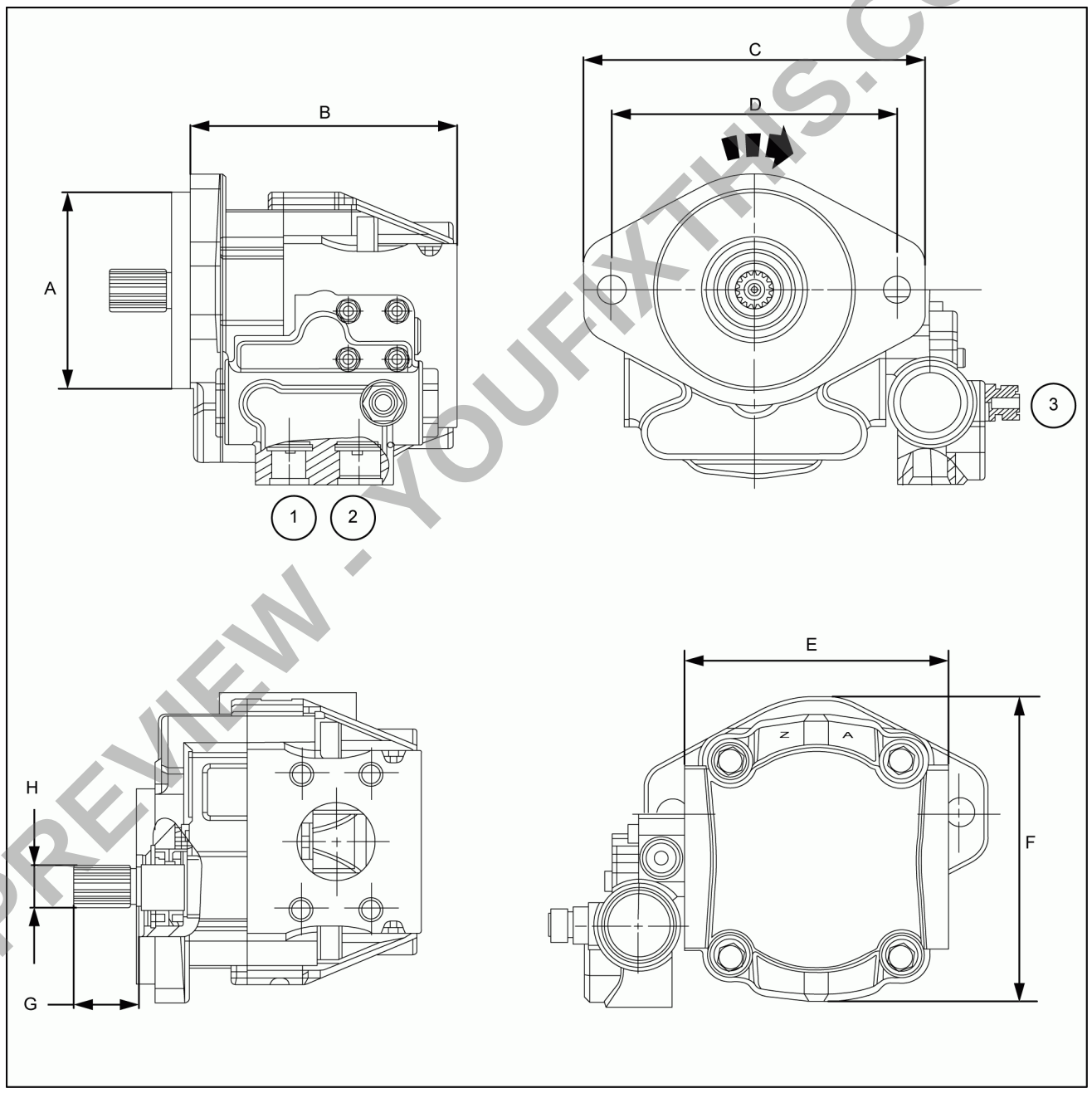


LEIL16CWL0135JB 1

Download full manual at youfixthis.com

Pump - Dimension - Gear pump

Ref.	Dimension	
	W50C TIER 4, W60C TIER 4	W70C TIER 4, W80C TIER 4
A	**101.6 mm** (**4.00 in**)	**101.6 mm** (**4.00 in**)
B	**131.8 mm** (**5.19 in**)	**136.8 mm** (**5.39 in**)
C	**174.5 mm** (**6.87 in**)	**174.5 mm** (**6.87 in**)
D	**146 mm** (**5.75 in**)	**146 mm** (**5.75 in**)
E	**134 mm** (**5.28 in**)	**134 mm** (**5.28 in**)
F	**157.5 mm** (**6.2 in**)	**157.5 mm** (**6.2 in**)
G	**33.3 mm** (**1.31 in**)	**33.3 mm** (**1.31 in**)
H	**Ø 21.8 mm** (**0.86 in**)	**Ø 21.8 mm** (**0.86 in**)



LEIL14CWL0754GB 1

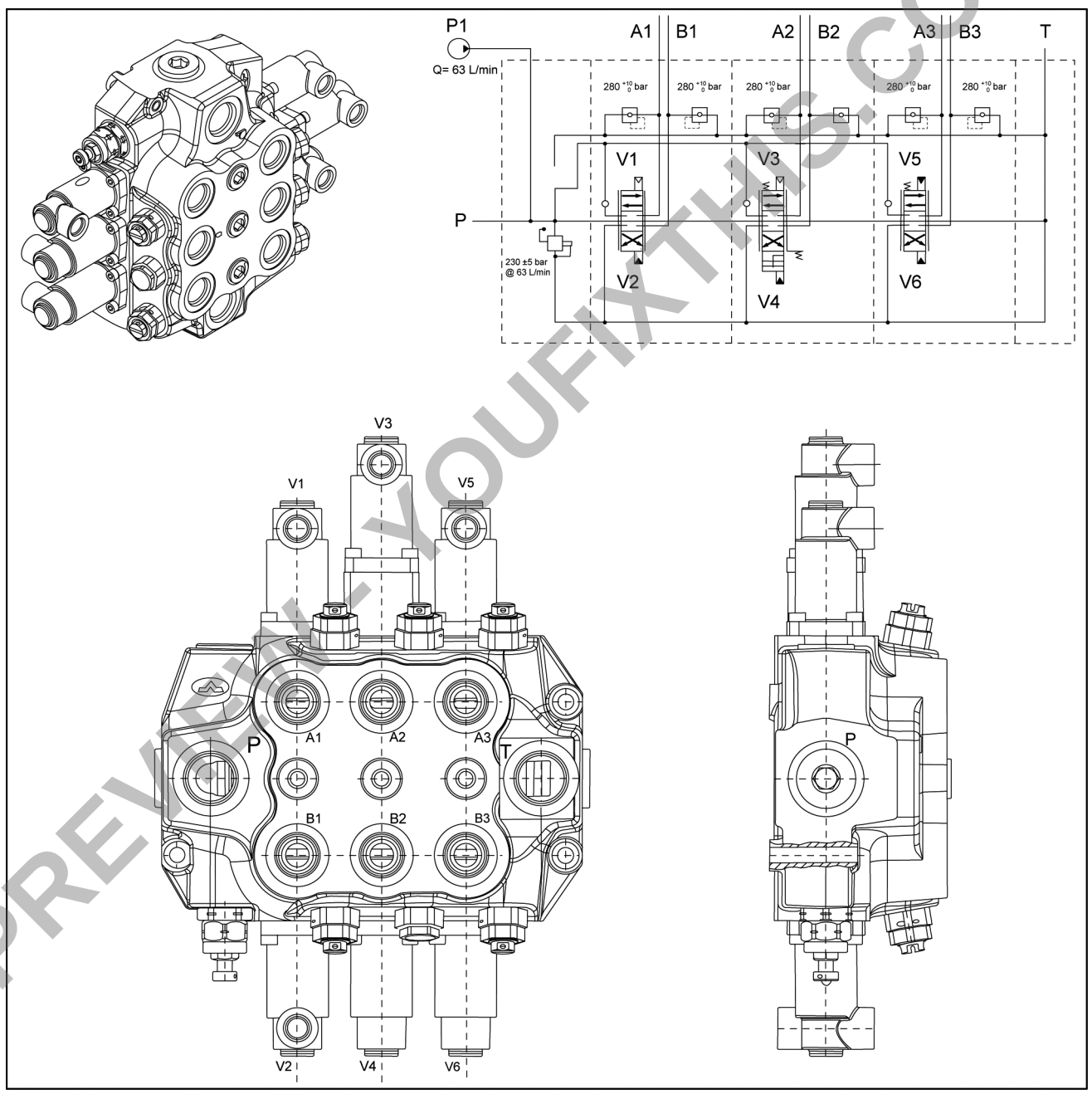
1. CF port 3/4” – 16 UNF – Tightening torque: **45 N·m** (**33.19 lb ft**)
2. EF (Excess Flow) port 7/8” – 14 UNF – Tightening torque: **70 N·m** (**51.63 lb ft**)
3. LS (Load Sensing) port 11/16" - 16 ORFS - Tightening torque: **44 N·m** (**32.45 lb ft**)

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

Main control valve - General specification

W50C Z-BAR – W60C Z-BAR models

Nominal flow	**65 L/min** (**17.2 US gpm**)
High pressure relief valve	Pressure setting **230 bar** (**3335 psi**) at **63 L/min** (**16.6 US gpm**)
Maximum back pressure	**25 bar** (**362 psi**)
Seal material	VITON
Fluid temperature	**-20 °C** (**-4 °F**) to **112 °C** (**234 °F**)
Environmental temperature	**-20 °C** (**-4 °F**) to **60 °C** (**140 °F**)



LEIL16CWL0119GA 1

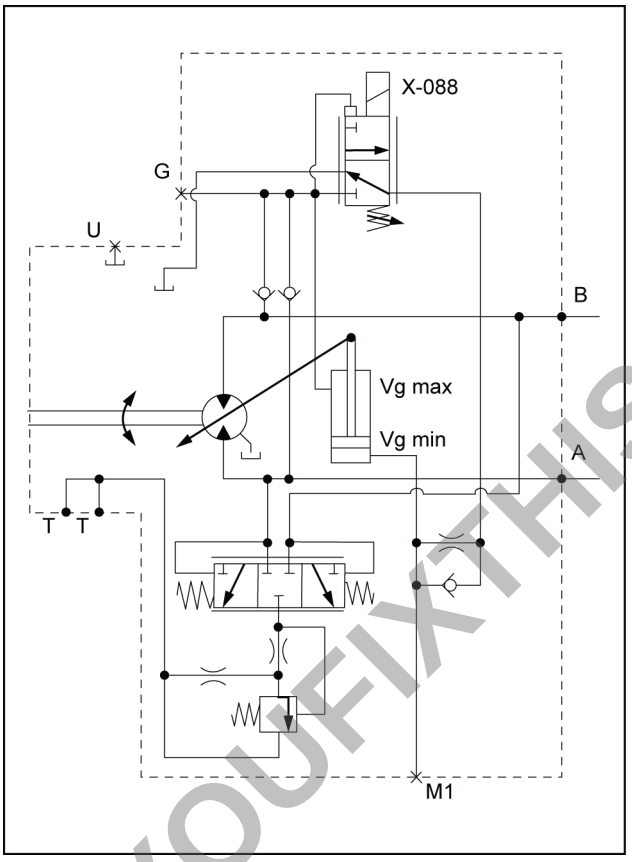
A1. - B1. Auxiliary function
A2. - B2. Lift arm cylinder
A3. - B3. Loader bucket control cylinder

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

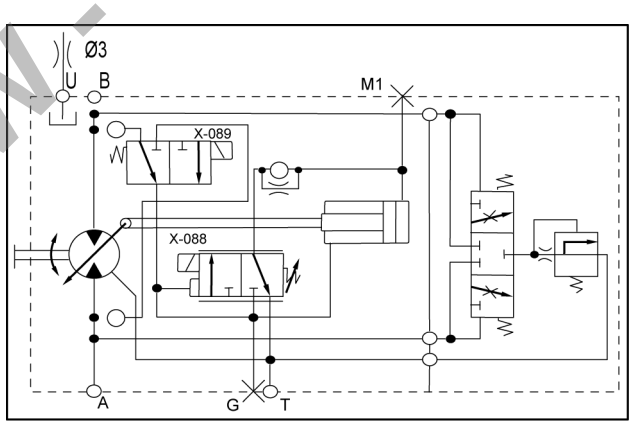
Hydraulic schema

For W50C, W60C, W70C, W80C versions



LEIL14CWL0201BA 1

For W70C HS, W80C HS versions



LEIL14CWL0202AA 2

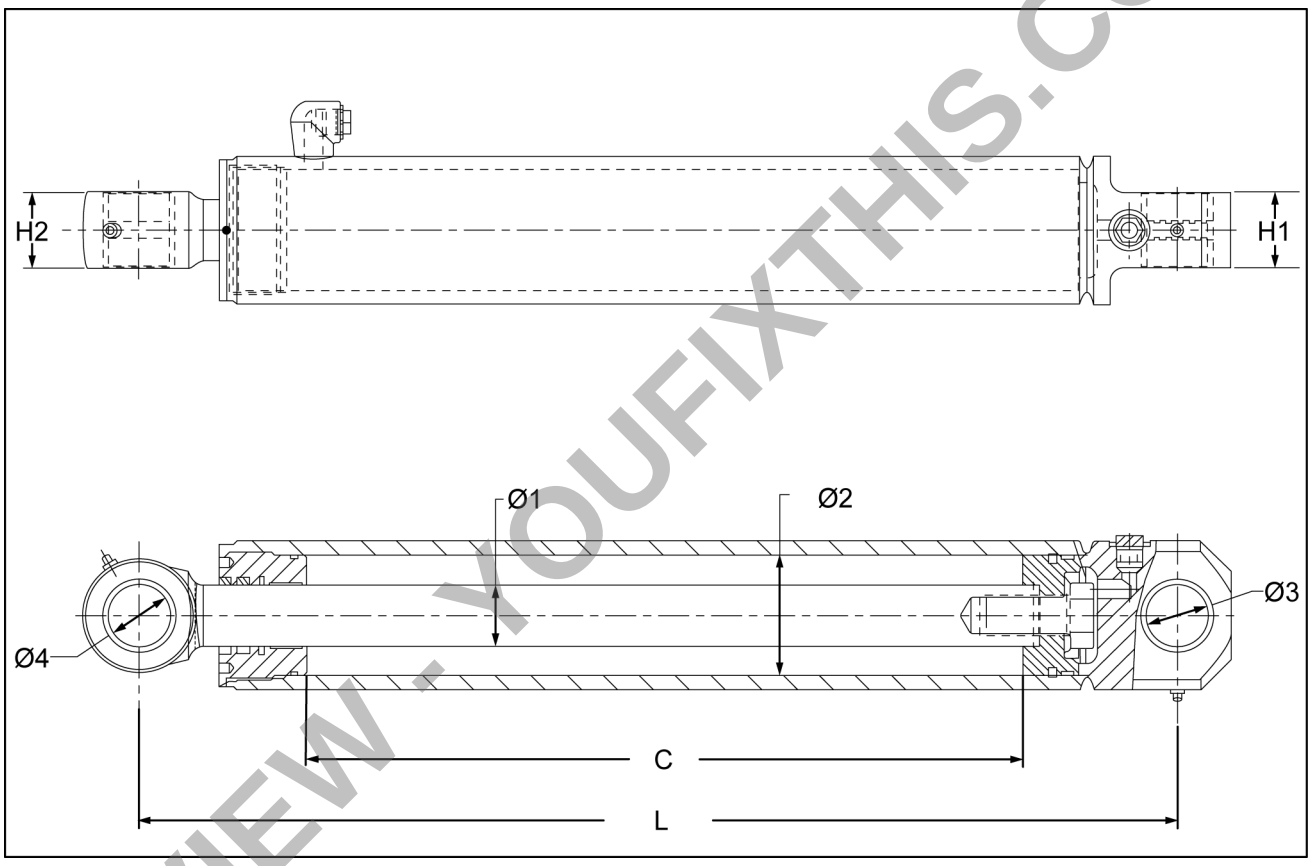
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Lift arm cylinder - General specification

W50C TC – W60C TC Models

Ø1	Rod	**50.8 mm** (**2.0 in**)
Ø2	Bore	**101.6 mm** (**4.0 in**)
Ø3	Bottom connection	**51 mm** (**2.0 in**)
Ø4	Rod connection	**51 mm** (**2.0 in**)
L	Completely retracted	**870 mm** (**34.3 in**)
C	Stroke	**600 mm** (**23.6 in**)
H1		**63.5 mm** (**2.5 in**)
H2		**63.5 mm** (**2.5 in**)

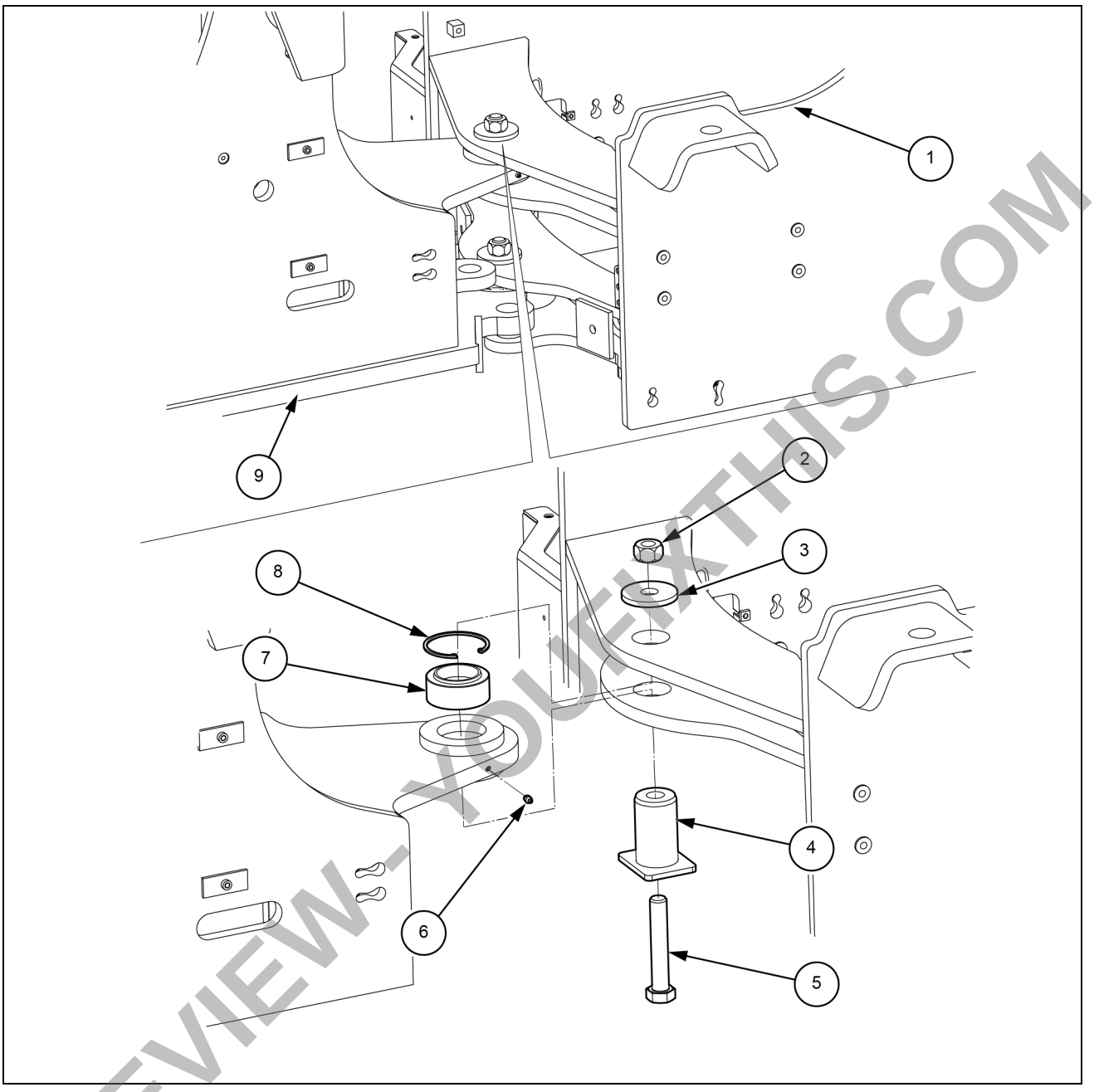


LEIL14CWL0210FA 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Articulation frame pivot - Exploded view - Upper joint



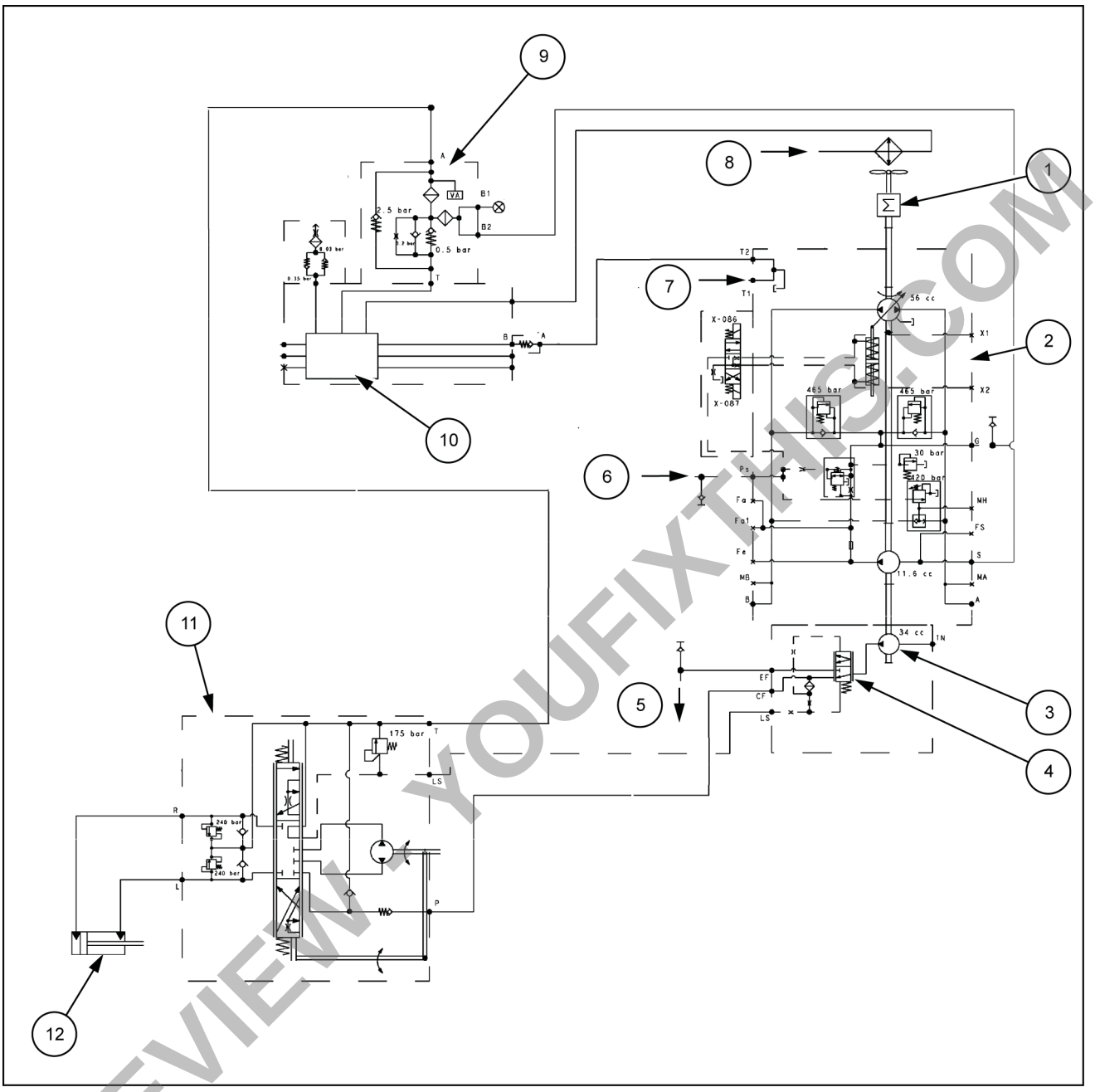
LEIL16CWL0217GB 1

1. Rear chassis
2. Nut M24
3. Washer
4. Upper pivot pin
5. Bolt M24x140
6. Grease nipple
7. Bushing
8. Circlip
9. Front chassis

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Steering control - Dynamic description



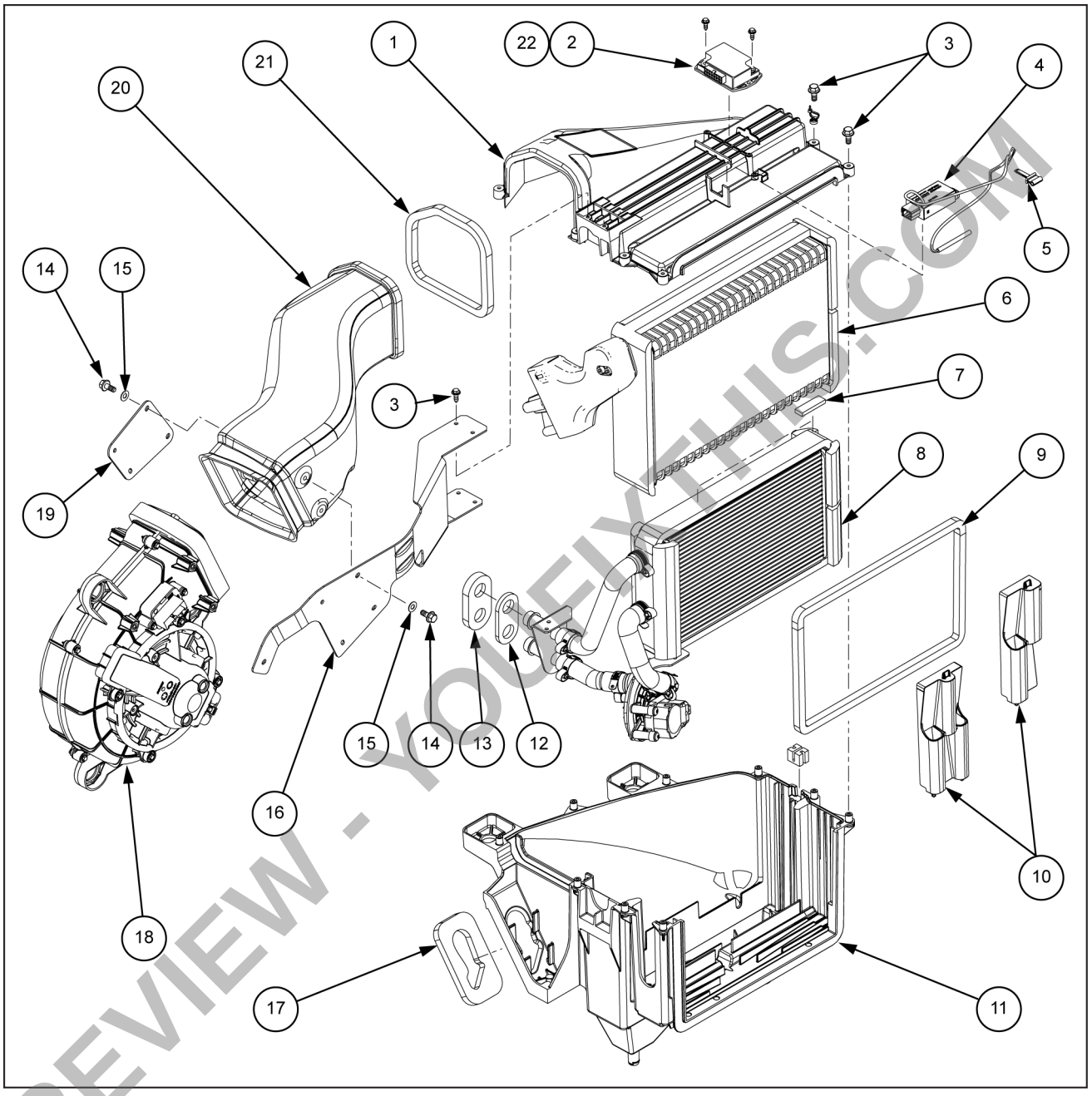
LEIL14CWL0732GB 1

1. Diesel engine
2. Variable displacement pump
3. Gear pump
4. Priority valve
5. To main valve
6. From inching valve
7. From hydrostatic motor
8. From hydrostatic motor
9. Return filter
10. Oil tank
11. Power steering
12. Steering cylinder

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Heating, Ventilation, and Air-Conditioning (HVAC) unit - Exploded view

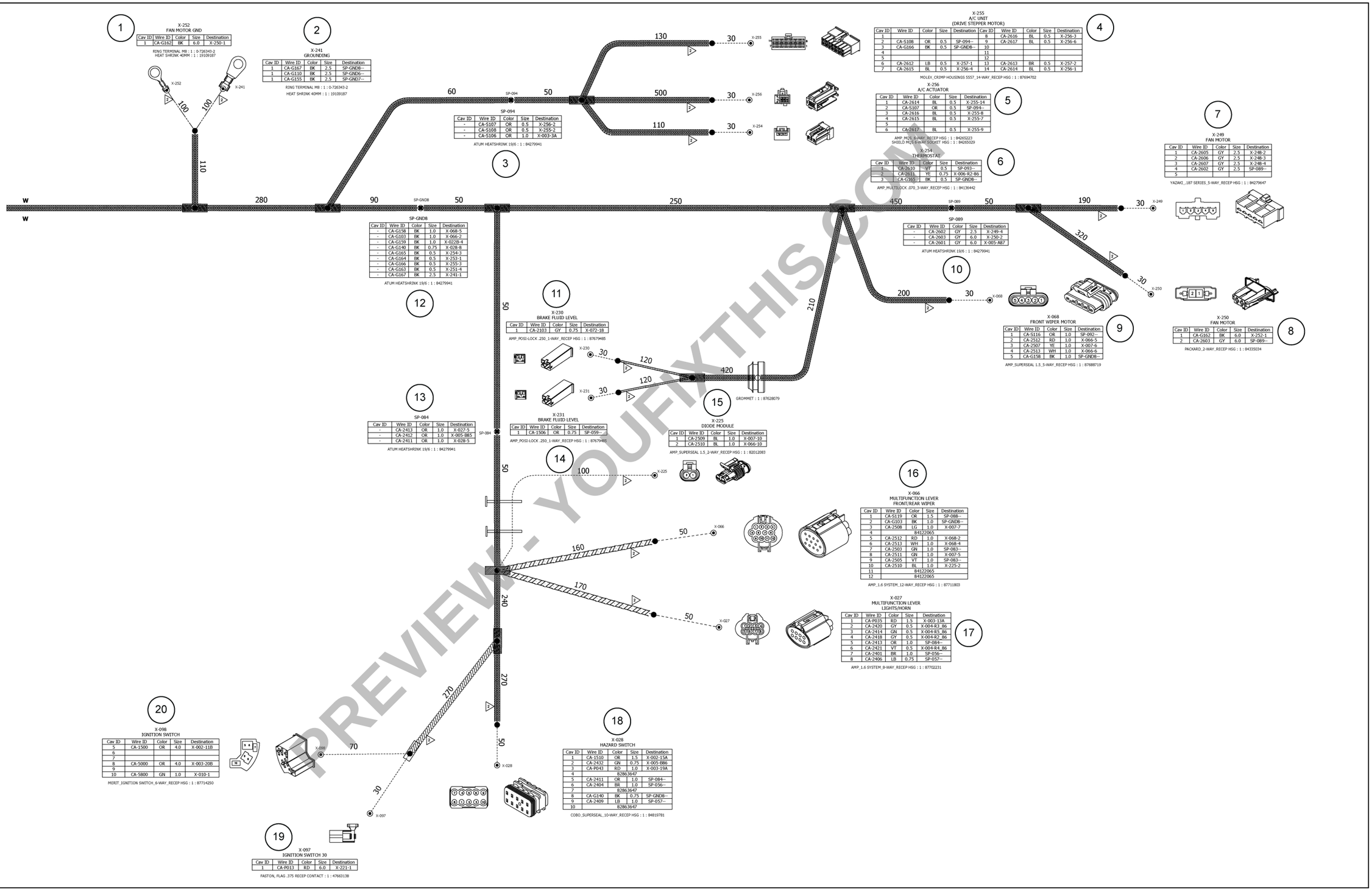


LEIL16CWL0182GB 1

1. Upper case
2. Drive stepper motor
3. Screw M4x12 (quantity 20)
4. Thermostat (only for the versions with air conditioning)
5. Clip
6. Evaporator (only for the versions with air conditioning)
7. Gasket (quantity 2)
8. Heat exchanger
9. Gasket
10. Baffle
11. Lower case
12. Gasket
13. Gasket

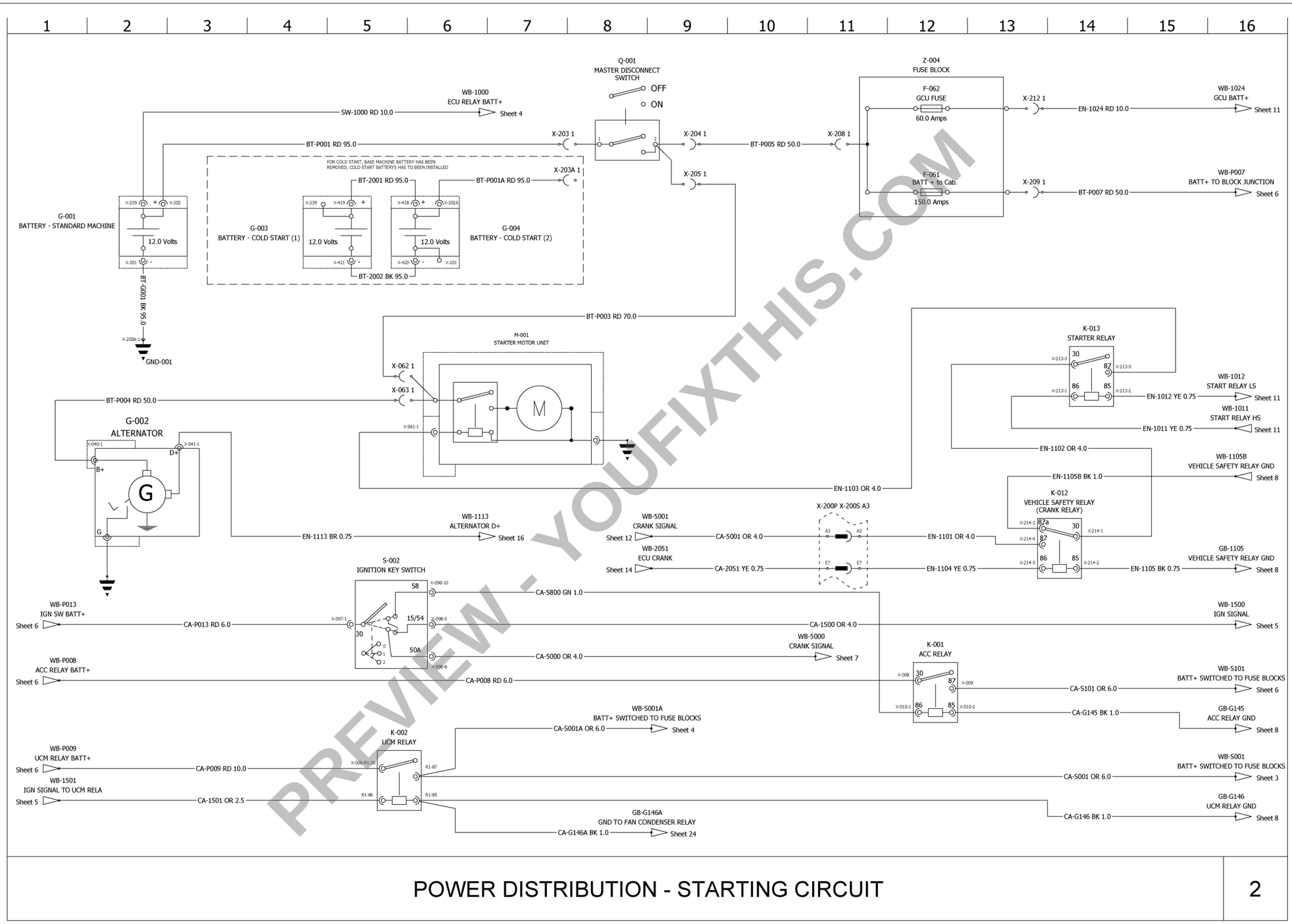
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

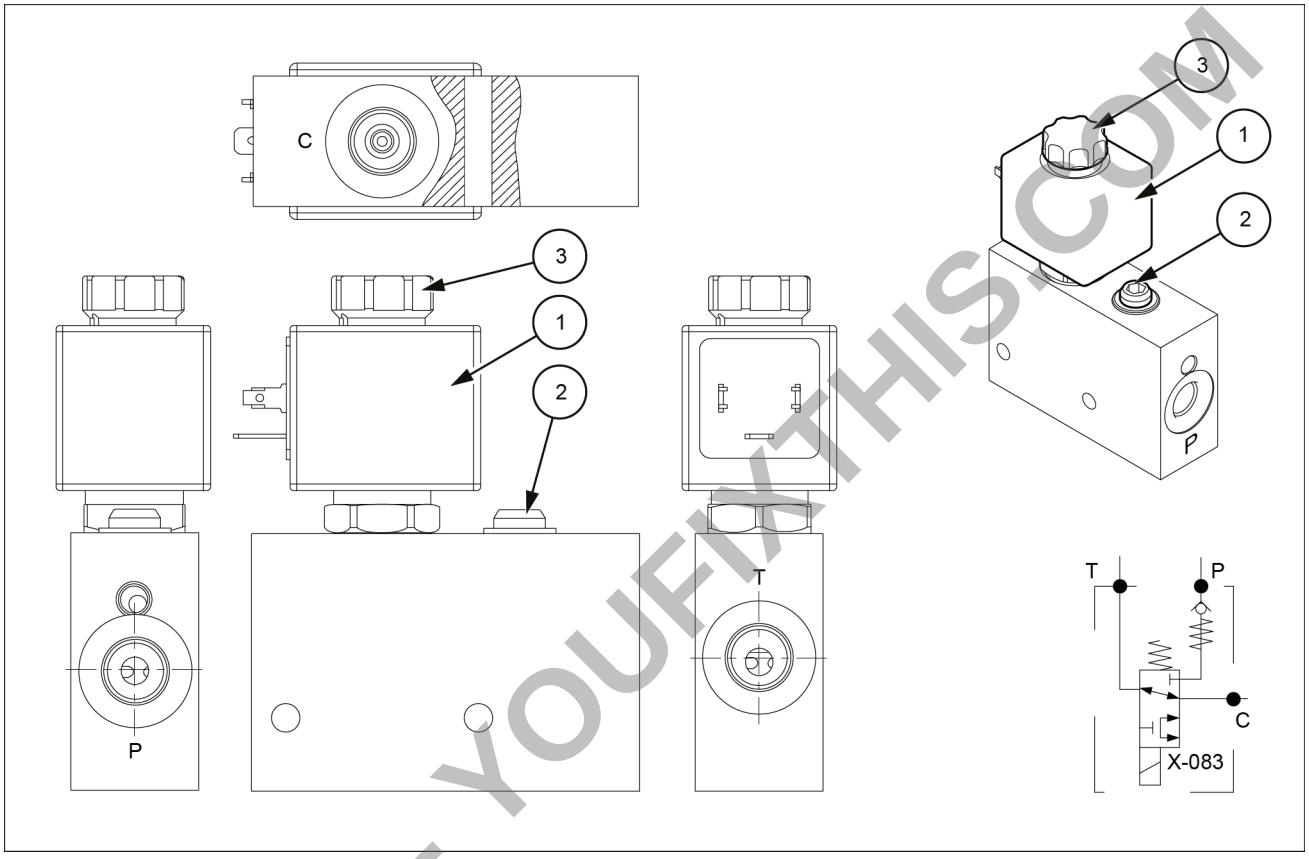


Download full manual at youfixthis.com

Differential lock solenoid - General specification

W70C HS	WE
W70C	WE
W80C HS	WE
W80C	WE

Ambient temperature range	**-30 °C** (**-22 °F**) to **+60 °C** (**+140 °F**)



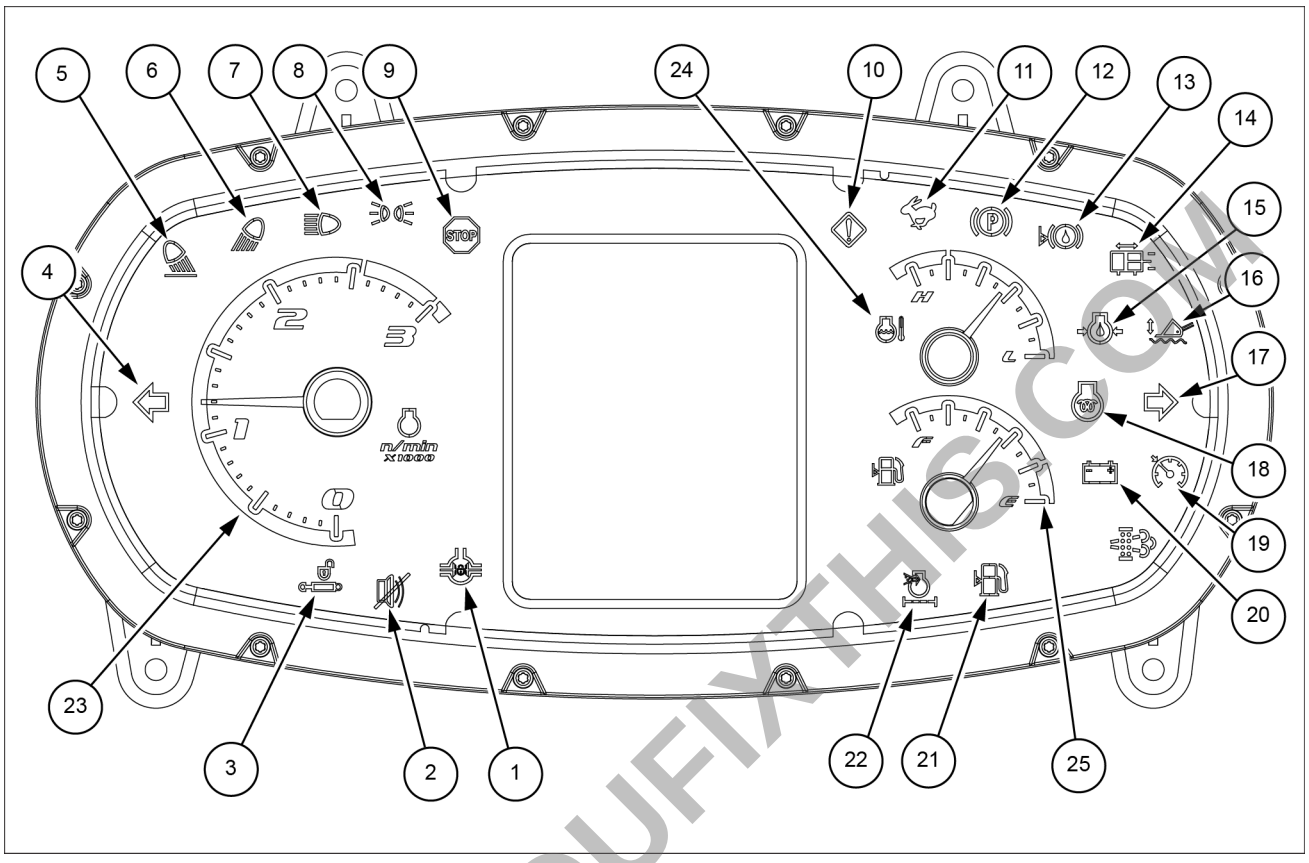
LEIL17CWL0339FB 1

1. Coil
2. Check valve
3. Cover

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

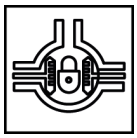
Instrument cluster - Overview



LEIL16CWL0579FB 1

Instrument cluster indicator lamps

1. Differential lock



2. Backup alarm disabled (not used)



3. Main hydraulic enabled



4. Turn left



5. Rear work lights



6. Work lights



7. Main high beam



8. Side lights



9. Stop



10. Warning



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Electrical systems - 55

FAULT CODES - DTC

PREVIEW - YOUFIXTHIS.COM

W50C TC, W50C ZB, W60C TC, W60C ZB, W70C HS, W70C, W80C HS, W80C

Download full manual at youfixthis.com

Front loader arm - Remove

W50C ZB	WE
W60C ZB	WE
W70C HS	WE
W70C	WE
W80C HS	WE
W80C	WE

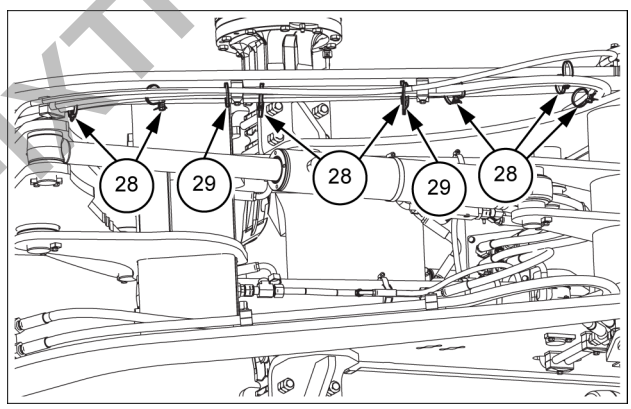
⚠ WARNING

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders. Failure to comply could result in death or serious injury.

W0398A

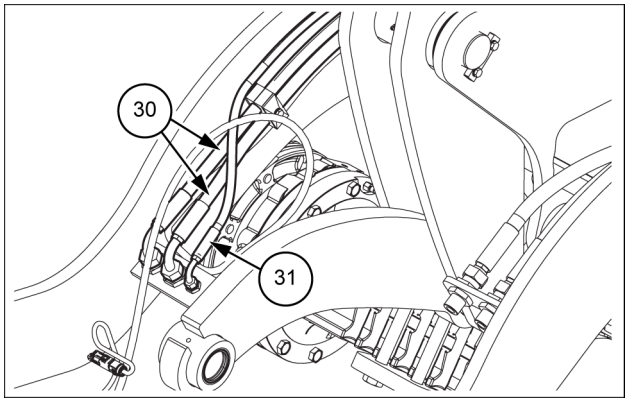
Prior operation:
Quick coupler - Remove - Horizontal pin version (82.300) (if equipped with Horizontal pin Quick coupler)
Quick coupler - Remove - SSL version (82.300) (if equipped with SSL Quick coupler)
Lift arm cylinder - Remove - Z-bar loader (35.701)
Loader bucket control cylinder - Remove - Z-Bar loader (35.723)

1. Remove the cable ties **(28)** and **(29)** from the hoses on the right-hand side of the loader arm.



LEIL17CWL0241AB 1

2. Disconnect the two hoses **(30)** and the hose **(31)** from their respective fittings on the right-hand side of the loader arm.



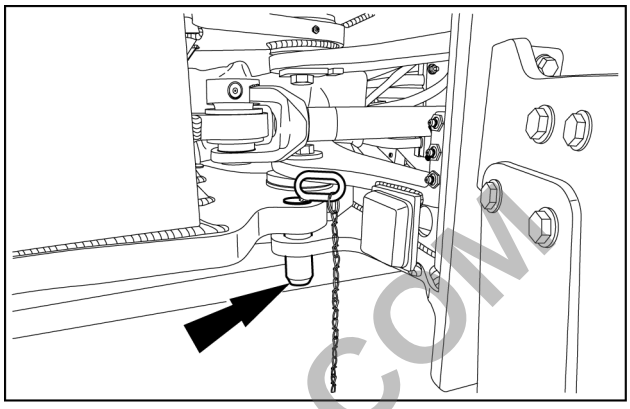
LEIL17CWL0242AB 2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Cab - Remove

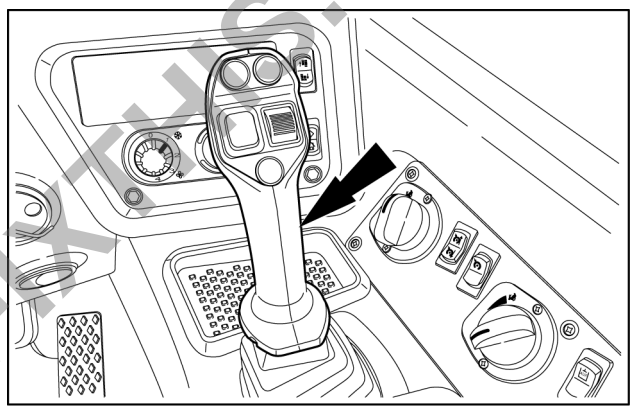
1. Park the machine on firm, level ground, lower the bucket/attachment to the ground.
2. Drive the machine into suche a position that the bores of the holders are aligned one above the other. The secure with the pin (arrow). The pin is located inside the support on the frame.
   Stop the engine.



LEIL14CWL0005AB 1

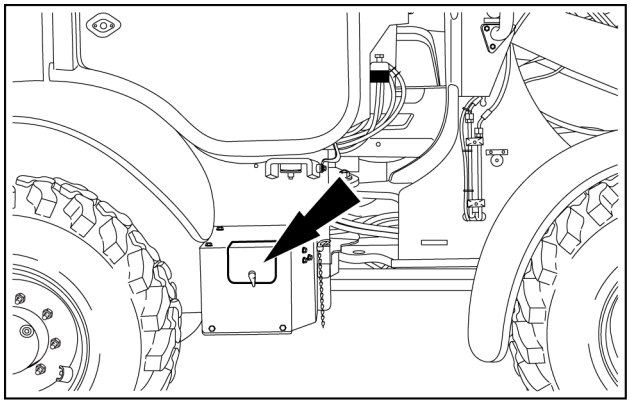
3. Keep all non-authorized personnel clear of the machine. Turn the ignition switch key to the “ON” position.
4. Move the joystick slowly forward and backward and from the right-hand to the left-hand approximately a dozen times. Turn the ignition key to the OFF position. Pump brakes approximately 30 times to bleed accumulators. Bleed ride control accumulator (if equipped) with bleed screw.

NOTE: *Before carrying out any service work on the hydraulic system, it is necessary to allow the system to cool: the temperature should not be more than* ***40 °C*** *(****104.0 °F****).*



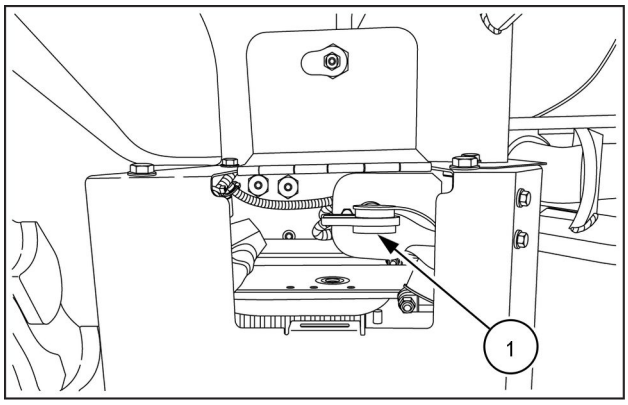
LEIL14CWL0003AB 2

5. Open the outer panel to access the battery main switch. The battery main switch box is located on the right-hand side of the machine, below the operator’s compartment.



LEIL14CWL0015AB 3

6. Put the battery main switch **(1)** in the OFF position.



LEIL14CWL0017AA 4

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SPECIAL TOOL INDEX

Genuine	Reference	PAGE
380200534 [Wrench]	Differential - Disassemble - Differential support	25.2 / 11
380200534 [Wrench]	Differential - Assemble - Differential support	25.2 / 13
380200534 [Wrench]	Differential - Assemble - Differential support	25.2 / 14
380002216 [Driver]	Differential - Assemble	25.2 / 18
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Differential - Assemble	25.2 / 18
380002216 [Driver]	Differential - Assemble	25.2 / 21
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Differential - Assemble	25.2 / 21
380200531 [Wrench]	Axle pinion - Disassemble	25.2 / 33
380200529 [Wrench]	Axle pinion - Disassemble	25.2 / 33
380002215 [Driver For The Assembly Of Pinion Bearing Outer Cup]	Axle pinion - Assemble	25.2 / 35
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Axle pinion - Assemble	25.2 / 35
380200527 [False pinion]	Axle pinion - Assemble	25.2 / 35
380200560 [False differential Kit]	Axle pinion - Assemble	25.2 / 35
380200527 [False pinion]	Axle pinion - Assemble	25.2 / 35
380200560 [False differential Kit]	Axle pinion - Assemble	25.2 / 35
380002224 [Driver For The Assembly Of Pinion Bearing]	Axle pinion - Assemble	25.2 / 37
380002224 [Driver For The Assembly Of Pinion Bearing]	Axle pinion - Assemble	25.2 / 37
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Axle pinion - Assemble	25.2 / 37
380200531 [Wrench]	Axle pinion - Assemble	25.2 / 37
380200529 [Wrench]	Axle pinion - Assemble	25.2 / 37
380002229 [Driver]	Axle shaft - Disassemble	25.3 / 11
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Axle shaft - Assemble	25.3 / 12
380002221 [Driver]	Axle shaft - Assemble	25.3 / 12
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Axle shaft - Assemble	25.3 / 12
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Axle shaft - Assemble	25.3 / 18
380002221 [Driver]	Axle shaft - Assemble	25.3 / 18
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Axle shaft - Assemble	25.3 / 18
380002232 [Driver]	Axle shaft - Assemble	25.3 / 18
380002211 [Handle. To Be Used With Various Pushers And Buffers]	Axle shaft - Assemble	25.3 / 18
380002223 [Driver For The Disassembly And Assembly Bushings In The Crown Retainer Hub]	Wheel hub - Disassemble - Wheel hub without brakes	25.3 / 31

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Contents

INTRODUCTION

Engine 10

[10.001] Engine and crankcase 10.1

[10.216] Fuel tanks 10.2

Four-Wheel Drive (4WD) system 23

[23.314] Drive shaft 23.1

Front axle system 25

[25.100] Powered front axle 25.1

[25.102] Front bevel gear set and differential 25.2

[25.108] Final drive hub, steering knuckles, and shafts 25.3

Rear axle system 27

[27.100] Powered rear axle 27.1

[27.106] Rear bevel gear set and differential 27.2

[27.120] Planetary and final drives 27.3

[27.124] Final drive hub, steering knuckles, and shafts 27.4

Hydrostatic drive 29

[29.100] Transmission and steering hydrostatic control 29.1

Brakes and controls 33

[33.202] Hydraulic service brakes 33.1

[33.110] Parking brake or parking lock 33.2

[33.204] Front axle brake 33.3

Hydraulic systems 35

[35.000] Hydraulic systems 35.1

[35.300] Reservoir, cooler, and filters 35.2

[35.104] Fixed displacement pump 35.3

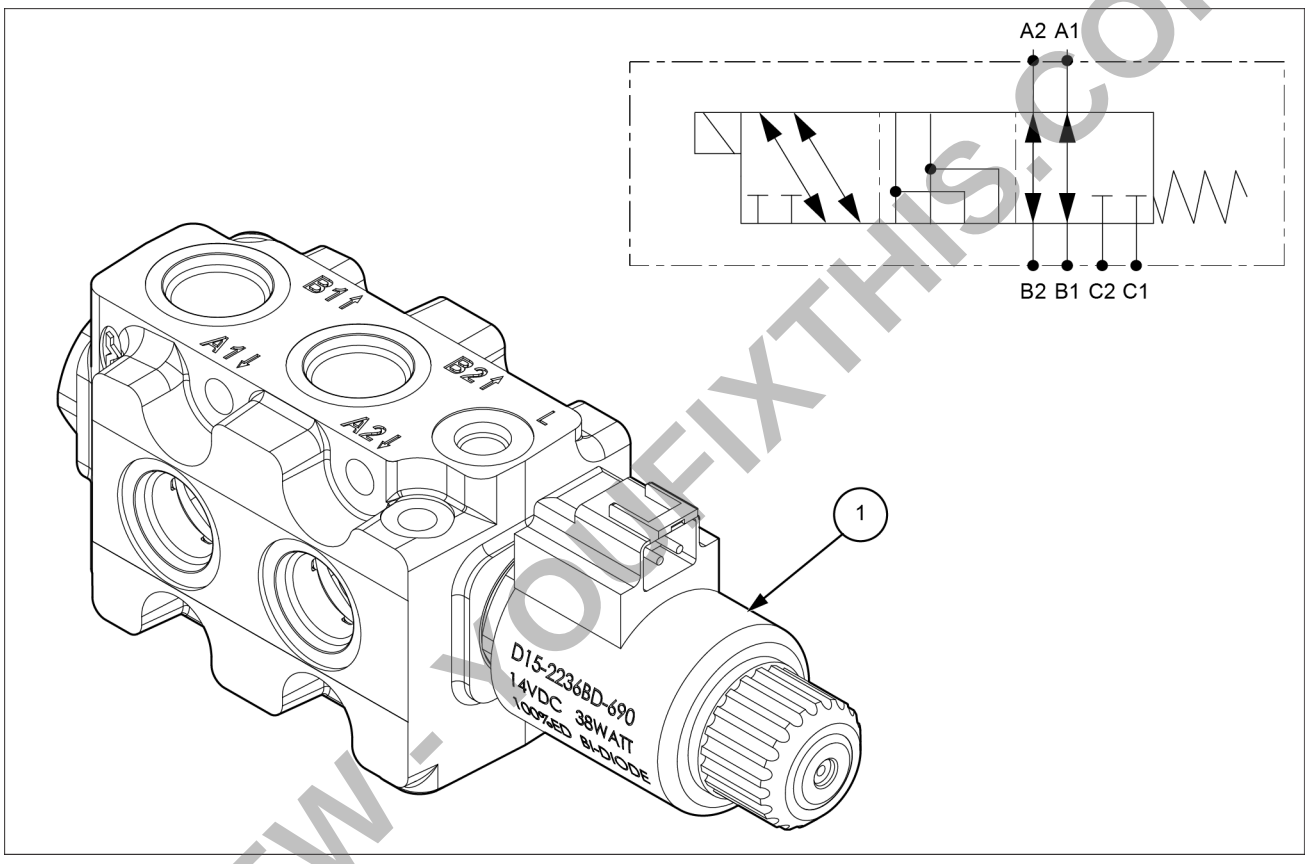
[35.106] Variable displacement pump 35.4

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Remote valve - General specification - Flow diverter valve

Nominal flow	**80 L/min** (**21.1 US gpm**)
Nominal pressure	**280 bar** (**4060 psi**)
Fluid temperature range	**-20 – +112 °C** (**-4 – +234 °F**)
Environmental temperature	**-20 – +50 °C** (**-4 – +122 °F**)
Nominal voltage	**14 V**
Nominal power	**38 W**
Nominal current	**2.91 A**
Electric resistance	**4.32 – 5.28 Ω**



LEIL16CWL0636FB 1

1. Flow diverter valve

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

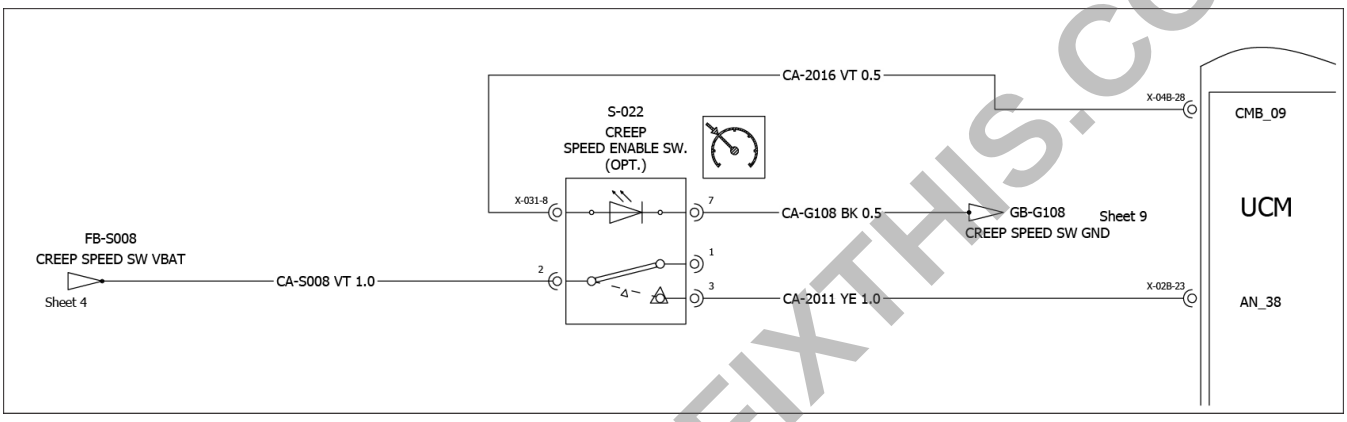
2874 - Short circuit to ground on Creep Speed LED (CMB)

Control Module: UCM

Context:
UCM has detected a short circuit to ground on the Creep Speed LED supply line.

Solution:

1. Check if the pin X-04B-28 is shorted to ground.
2. Check if the pin X-031-8 of the switch S-022 is shorted with the pin X-031-7.



LEIL15CWL0020EA 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 1617 pages

The full manual includes:

- All 1617 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

New Holland W50C, W60C, W70C, W80C Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual