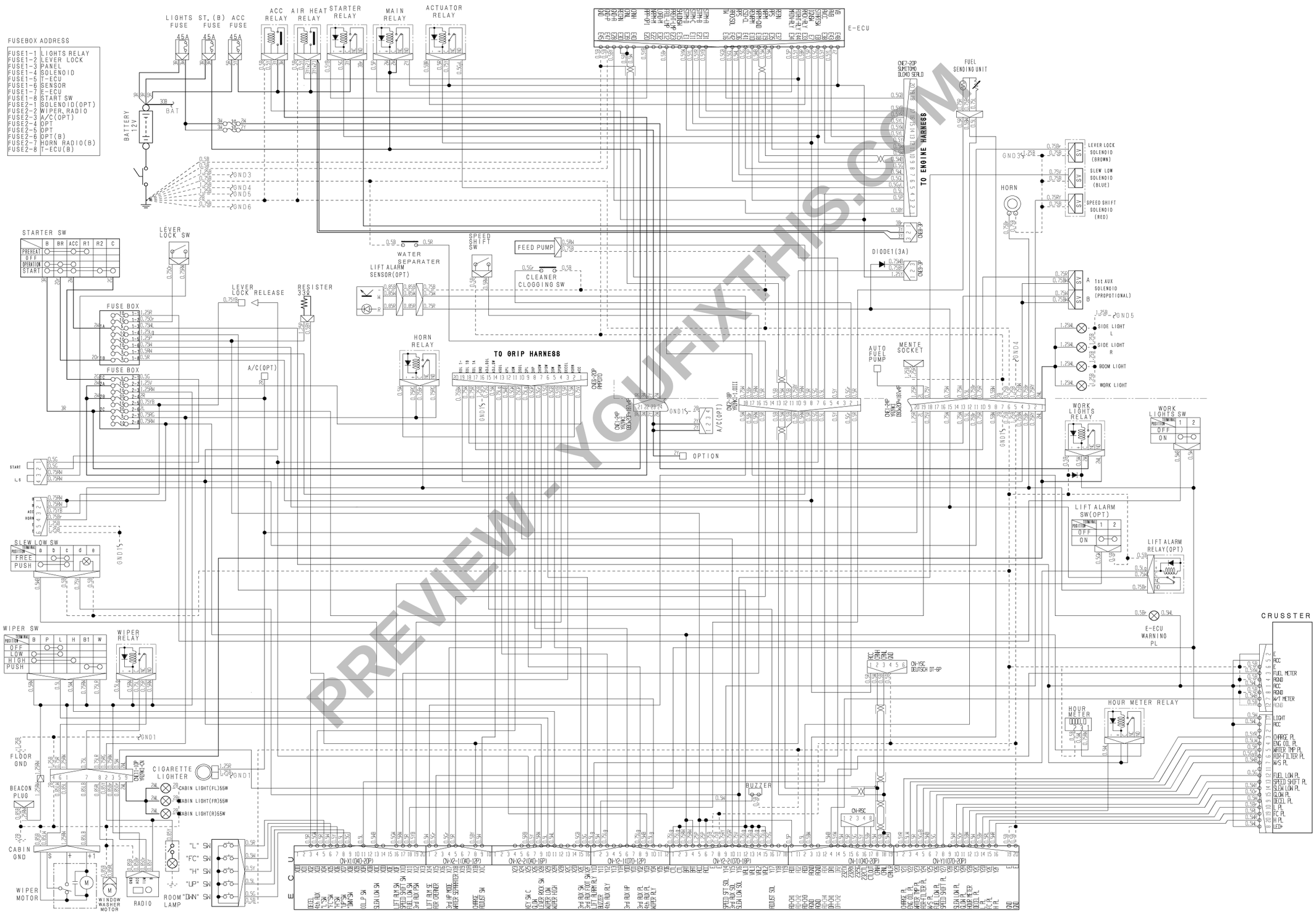
ELECTRICAL SYSTEM

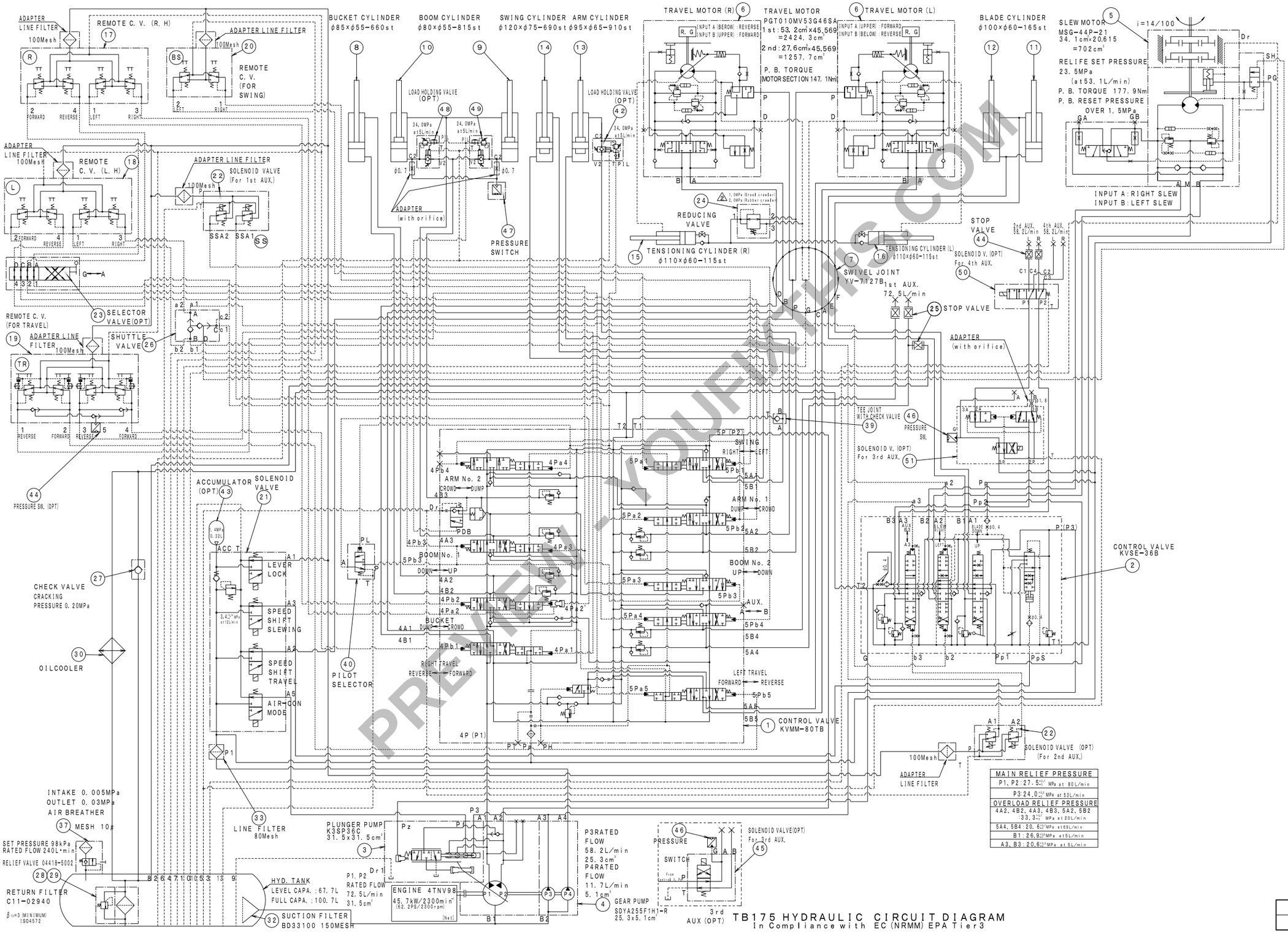
ELECTRICAL WIRING DIAGRAM



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

HYDRAULIC SYSTEM

HYDRAULIC CIRCUIT DIAGRAM



TB175 HYDRAULIC CIRCUIT DIAGRAM
In Compliance with EC (NRMM) EPA Tier3

Drawing No.	1/2
05601-00063-2	

L3C7141

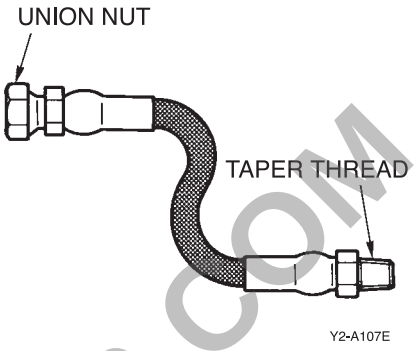
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TIGHTENING TORQUES

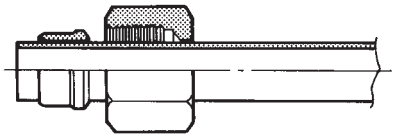
Hydraulic Hoses

Hose Fitting Size	Torque			
	Union Nut (G)		Taper Thread (R)	
	N·m	ft-lb	N·m	ft-lb
1/8	9.8 $^{+4.9}_{0}$	7.3 $^{+3.5}_{0}$	11.8 ±1.2	8.7 ±0.8
1/4	24.5 $^{+4.9}_{0}$	18.1 $^{+3.5}_{0}$	29.4 ±2.9	21.7 ±2.1
3/8	49 $^{+4.9}_{0}$	36.2 $^{+3.5}_{0}$	53.9 ±5.4	39.8 ±3.9
1/2	58.8 $^{+4.9}_{0}$	43.4 $^{+3.5}_{0}$	88.3 ±8.8	65.1 ±6.4
3/4	117.7 $^{+4.9}_{0}$	86.8 $^{+3.5}_{0}$	147.1 ±14.7	108.5 ±10.7
1	137.3 $^{+4.9}_{0}$	101.3 $^{+3.5}_{0}$	196.1 ±19.6	144.7 ±14.3



Bite Type Pipe Fitting for Steel Pipe

Pipe Outer Diameter (mm)	Torque	
	N·m	ft-lb
8	34.3 ±4.9	25.3 ±3.5
10	41.7 ±2.5	30.7 ±1.7
12	58.8 ±4.9	43.4 ±3.5
15	88.3 ±4.9	65.1 ±3.5
16	93.2 ±4.9	68.7 ±3.5
18	132.4 ±4.9	97.6 ±3.5
22	205.9 ±9.8	151.8 ±7.2
27.2	245.2 ±9.8	181.0 ±7.2
28	313.8 ±19.6	231.4 ±14.3
32	313.8 ±19.6	231.4 ±14.3
35	411.9 ±19.6	303.7 ±14.3



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

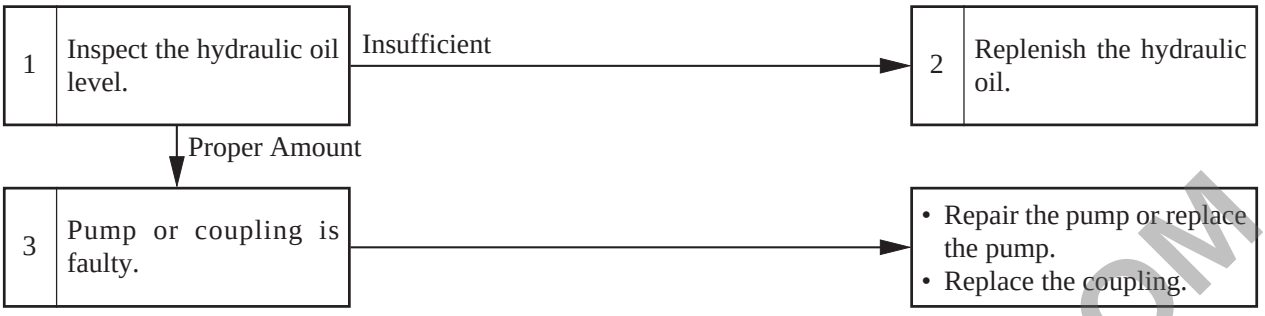
TB175 Maintenance software Ver1.0, Error Code Table

Error Code	Discription	Note
01	Key SW starter signal and start operation for a short time.	Key switch starter signal was entered in less than 2 seconds interval. PULL action of Engine Stop solenoid was repeated in short interval.
02	Engine oil pressure decrease after engine starts	
03	After the engine starts, Alternator charge is defective	
04	Overheating	Signal from water temperature switch
06	Air cleaner stopped up	
07	Lift over load	Lifting overload appeared (more than 1second) after ACC power supply
10	Glow key SW turning on for a long Time	Glow key switch had connected more than 10 seconds.
11	Ignition at time of head Glow	Glow had ignited more than 10 seconds.
12	The upper bound of voltage of the battery is abnormal	Voltage as over 29V had been measured over 0.5 second, after ACC power was supplied or engine was started.
13	the lower bound of voltage of the battery is abnormal	Voltage as under 16V had been measured over 2 second, after ACC power was supplied or engine was started.
15	Clock initialization	Clock in the controller had been reset. For example, It will happen when Battery have abnormal lower voltage in
16	Engine oil disconnection	Engine oil pressure switch condition was OFF, when key switch was turned on .
17	Alternator charge disconnection	Charge signal was ON, when key switch was turned on .
31	The upper bound of the voltage of the accelerator sensor is abnormal	Voltage as over 4.8V had been measured over 1.5 second
32	The lower bound of the voltage of the accelerator sensor is abnormal	Voltage as under 0.2V had been measured over 1.5 second
33	CAN Communication Error	

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

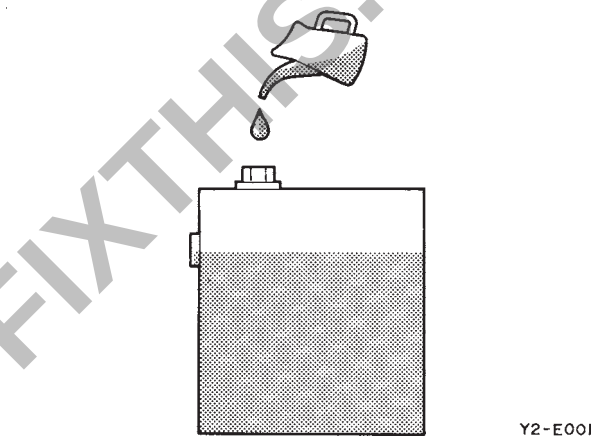
NO OPERATIONS CAN BE DONE.



1. Inspect the hydraulic oil level.
   ☞ "III. Machine Configuration, Hydraulic Tank"

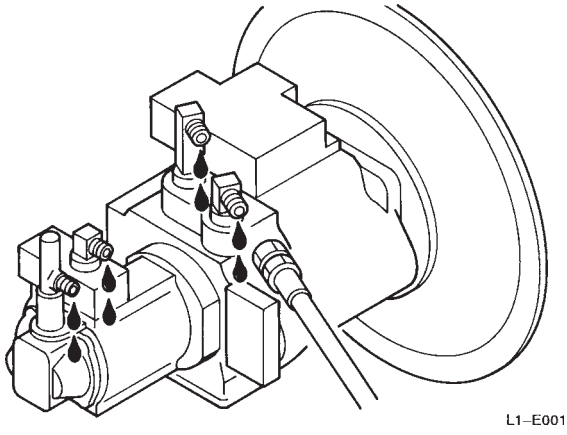
2. Replenish the hydraulic oil.
   Take out the plug and replenish the hydraulic oil.
   - The hydraulic oil supplied should be the same brand as the oil currently in the tank.

   ☞ "II. Specifications, Fluid Capacities"



3. Pump or coupling is faulty.
   a. Disconnect the discharge hose from the pump side.
      Also fit a plug in the disconnected hose to keep the hydraulic oil from pouring out.
   b. With the engine emergency stop knob pulled out all the way, turn the start switch to the "START" position to cause the engine to begin cranking. Check that the hydraulic oil is discharged from the pump at this time.

   If the pump is normal, hydraulic oil will be discharged from it. If hydraulic oil is not discharged, the pump or the coupling is faulty.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

DISASSEMBLY AND ASSEMBLY

Removing the Engine

1. Disconnect the battery ground cable (1) from the battery.

2. Remove the engine hood, side cover L and R and engine cover [front].
   ☞ "Removing the Covers"

3. Remove the Counterweight.
   ☞ "Removing the Upper Frame"

4. Disconnect the electrical wiring from the air cleaner (3). Next, remove the air cleaner (3).

5. Disconnect the coolant drain hose (2).

6. Remove the radiator and oil cooler.
   ☞ "Removing the Radiator and Oil Cooler"

7. Remove the hydraulic pump.
   ☞ "Removing the Hydraulic Pump"

8. Close the valve (4), then disconnect the heater hoses [two] and fuel hoses (5).

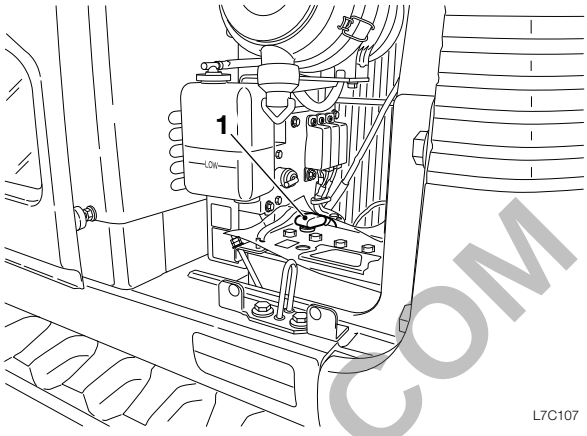
9. Disconnect the battery cable (6) and all the connections on the engine side of the electric wirings (7).
   - Attach identification labels to individual wirings.
   - Disconnect the wirings from the clamp and the band.

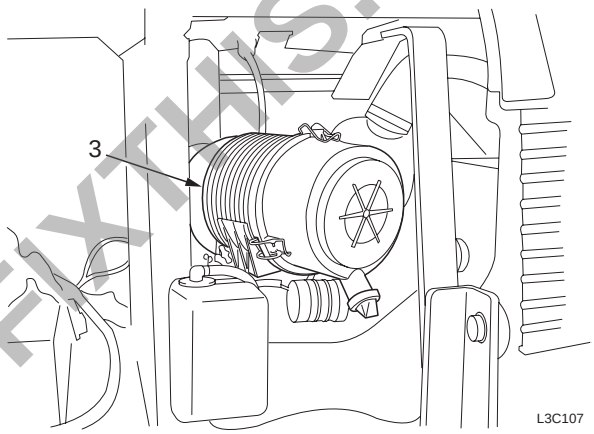
10. Disconnect the engine ground cable (8).

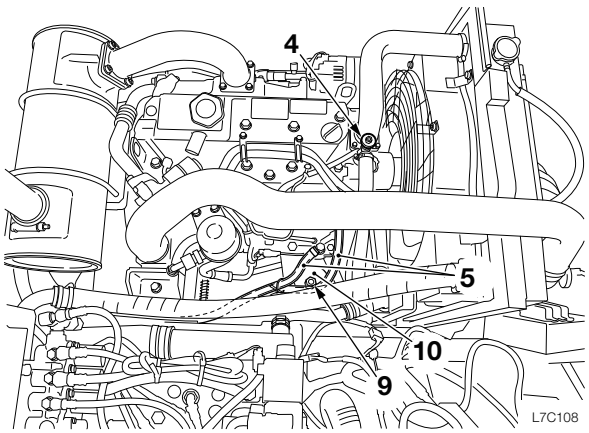
11. Remove the nuts (9) and then the stoppers (10) and cushion rubbers.
    - When re-assembling, install the stopper in the correct place that is marked A.

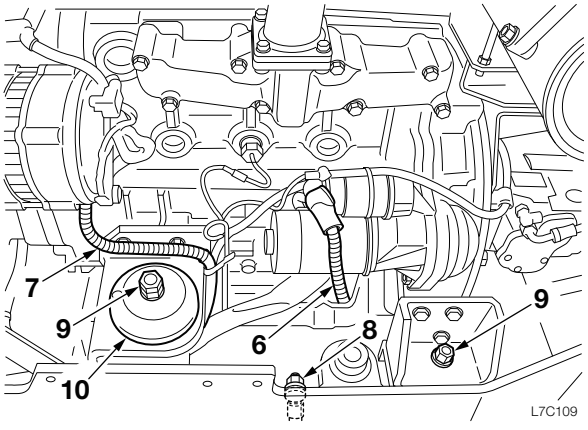
    Nut: 241N·m (upper)
    Nut: 193N·m (lower)

12. Suspend the engine temporarily, and remove the mount and the engine.
    Engine: 240 kg









PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SPECIFICATIONS TABLES

SPECIFICATIONS

Type				
0HQ				
	5	kg	7475	8025
	6W	kg	7685	8235
		–1	45.3/2300	@
%				
	5	P^3	0.245	@
	6W	P^3	0.185	@
3				
	6	–1	5.5/11.2	@
	T		2.9/5.5	@
		6W	2.8/5.3	@
	*	%	35	@
	*	3D	33.8	36.3
		6W 3D	35.2	37.3
	1	/ w$ 99		@
		6 / 3$ 74		@
				y@
	2	P	6555	6560
	2 W	P	2245	@
	2 W 5	P	2570	
		6W P	2565	
	T	P	1720	@
	W 8 W	P	1715	@
		5 P	785	@
		6W P	760	@
		5 P	2210	@
		6W P	2180	@
	2 WK 5	P	2855	@
		6W P	2830	@
	2 W	P	2150	@
	W	P	450	@
	0			
		5 P	385	@
		6W P	360	@

*
**

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

RECOMMENDED LUBRICANTS

Select the appropriate fuel, lubricant and grease according to the temperature by referring to the table below.
- Regardless of the specified time, change the oil if it becomes too dirty or degraded.
- When refilling, never mix oils of different brands. If a brand is to be changed, replace the whole fuel/oil.

Part	Type	Type by air temperature -20 -10 0 10 20 30 40°C	When to change/ replenish	Capacity
Engine oil pan	Diesel engine oil API: CD class ACEA-E3, E-4 or E-5	SAE 10W-30 SAE 15W-40	Every 250 hrs after the first 50 hrs	Upper limit 10.2 L Lower limit 5.7 L
Hydraulic oil tank	Takeuchi genuine hydraulic oil 46	ISO VG46	Every 4000 hrs***	Total amount of oil: 135 L Tank capacity: 68 L
	Anti-wear hydraulic oil	ISO VG32 ISO VG46 ISO VG68	Every 2000 hrs	
Engine cooling system	Cooling water (water + coolant)** SAE-J814C, J1941, J1034 or J2036 ASTM-D6210 or D4985 (USA)	Mixture of 50% coolant Mixture of 30% coolant	Every 1000 hrs	12.0 L
Travel reduction gear	Gear oil API: GL -4	SAE 90	Every 1000 hrs after the first 250 hrs*	1.5 L
Carrier roller	Diesel engine oil API: CF class	SAE 30	—	0.15 L
Track roller	Mobil oil SHC 680	—	—	0.13 L
Idler	Diesel engine oil API: CF class	SAE 30	—	0.15 L
Slew Gear Bath	Lithium grease EP-2 NLGI No.2	—	—	10 L
Slew bearing			Every 50 hrs	As required
Working equipment			Daily or every 10 hrs	
Levers			When required	

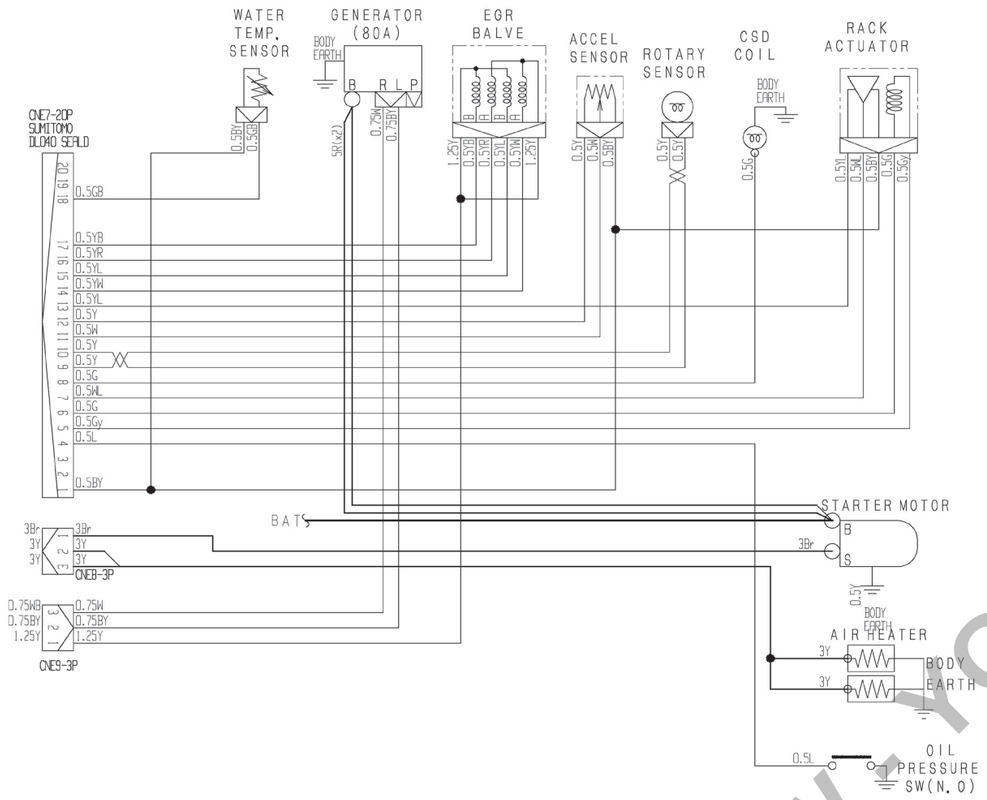
*: If the ratio of traveling time to total operating time is high, replace the gear oil earlier than the specified time.

**: For water, use tap water (soft). Do not use well or river water.
When the ambient temperature drops below 0°C, add coolant (antifreeze). Follow the coolant manufacturer's instructions to determine the mixture ratio.

***: The replacement interval for hydraulic oil depends on the oil type being used. New machines are shipped from the factory with the Takeuchi genuine hydraulic oil 46. This manual describes when to replace the hydraulic oil assuming that this Takeuchi oil 46 is used. When a conventional antiwear hydraulic oil is used, replace it every 2000 hours.

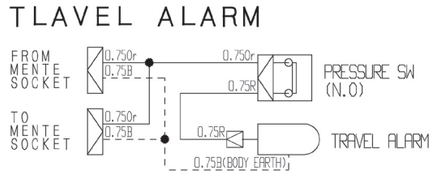
PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

ENGINE HARNESS

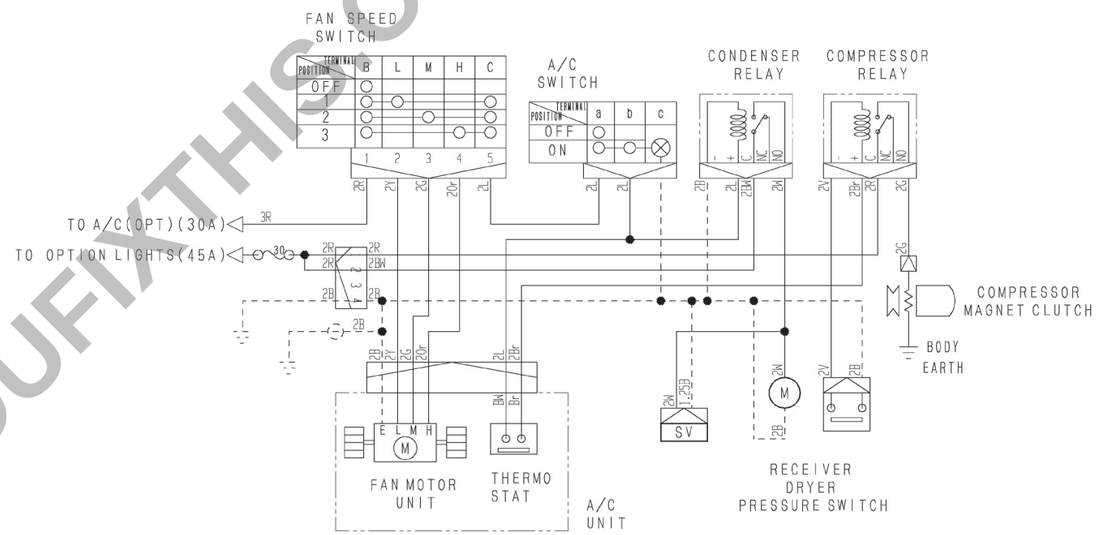


OPTIONS

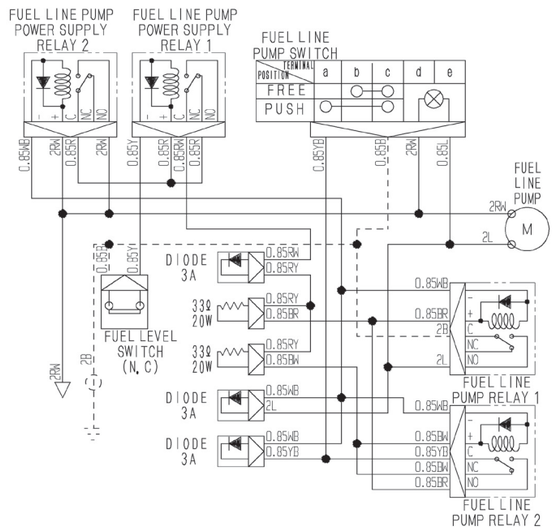
TLAVEL ALARM



AIR CONDITIONER



AUTO FUEL PUMP

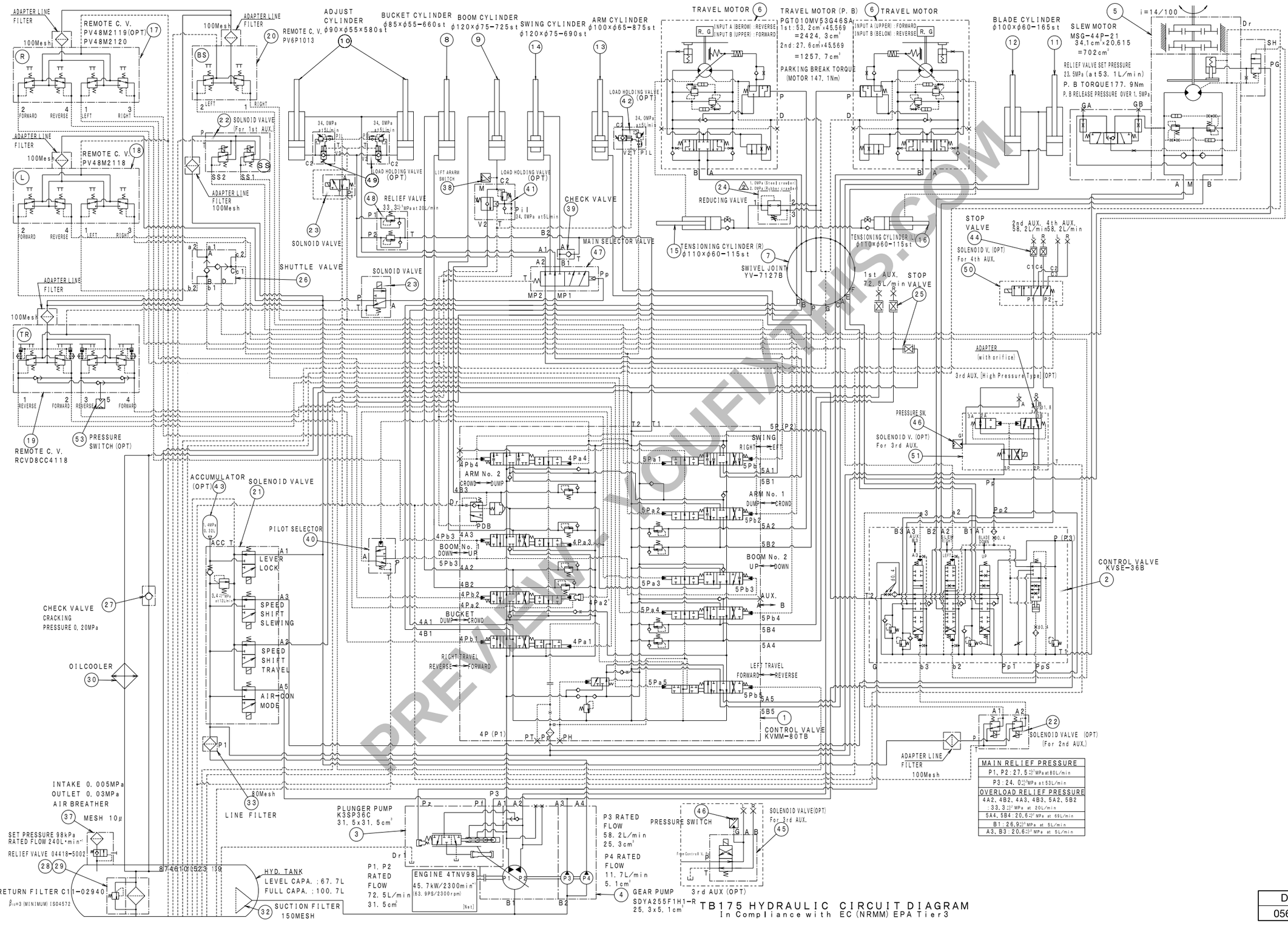


L3C831

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2-Piece Boom



TB175 HYDRAULIC CIRCUIT DIAGRAM
In Compliance with EC (NRMM) EPA Tier 3

Drawing No.	1/2
05601-00064-2	

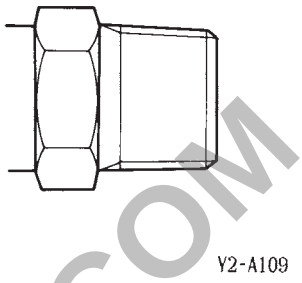
L3C7151

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Joints for Piping

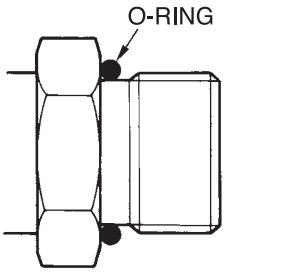
Nominal Thread Diameter (R)	Torque			
	Steel		Cast Steel	
	N·m	ft-lb	N·m	ft-lb
1/8	11.8 ±1.2	8.7 ±0.8	10.8 ±1.1	8.0 ±0.7
1/4	29.4 ±2.9	21.7 ±2.1	24.5 ±2.5	18.1 ±1.7
3/8	53.9 ±5.4	39.8 ±3.9	49 ±4.9	36.2 ±3.5
1/2	88.3 ±8.8	65.1 ±6.4	73.5 ±7.4	54.3 ±5.3
3/4	147.1 ±14.7	108.5 ±10.7	127.5 ±12.7	94.1 ±9.3
1	196.1 ±19.2	144.7 ±14.3	171.6 ±17.2	126.6 ±12.5


Y2-A109

Joints for Piping (O-ring Seal Type)

Nominal Thread Diameter (G)	Torque	
	N·m	ft-lb
1/8	19.6 ±2.0	14.5 ±1.4
1/4	34.3 ±4.9	25.3 ±3.5
3/8	53.9 ±4.9	39.8 ±3.5
1/2	63.7 ±4.9	47.0 ±3.5
3/4	93.2 ±4.9	68.7 ±3.5
1	107.9 ±9.8	79.5 ±7.2
1-1/4	117.7 ±9.8	86.8 ±7.2
1-1/2	137.3 ±9.8	101.2 ±7.2

Nominal Thread Diameter (UNF)	Torque	
	N·m	ft-lb
7/16–20	16.7 ±2.0	12.3 ±1.4
1/2–20	22.6 ±2.0	16.6 ±1.4
9/16–18	31.4 ±2.9	23.1 ±2.1
3/4–16	59.8 ±4.9	44.1 ±3.5
1-1/16–12	102.0 ±5.9	75.2 ±4.4
1-5/16–12	135.3 ±7.8	99.8 ±5.8
1-5/8–12	181.4 ±9.8	133.8 ±7.2

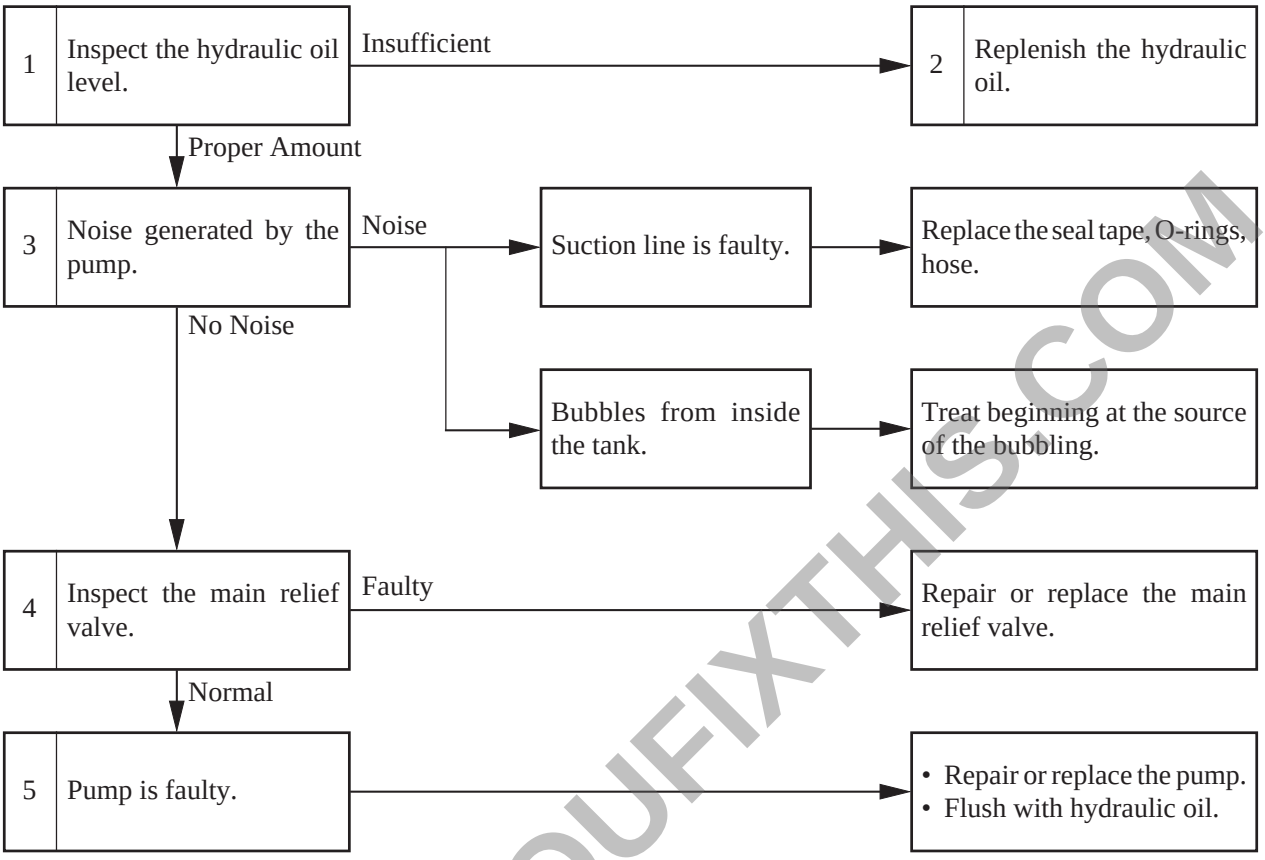


Y2-A110

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ALL OPERATIONS CAN BE DONE, BUT THERE IS NO POWER.



1. Inspect the hydraulic oil level.
   ☞ "III. Machine Configuration, Hydraulic Tank"

2. Replenish the hydraulic oil.
   ☞ "V-4"

3. Noise generated by the pump.
   A faulty suction line can make it easy for cavitation to occur in the pump and for noise to be generated. Carry out the following inspect.
   a. Inspect the piping used for suction of hydraulic oil.
      • Apply grease or oil to the part which appears to be making the noise and inspect if there is any change. (Inspect if it is sucking in air or not.)
   b. Inspect for clogging of the suction filter.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Removing the Hydraulic Pump

1. Remove the engine hood, side cover L and R and center cover.
   ☞ "Removing the Covers"

2. Remove the silencer.
   a. Remove the fixing bolts, then remove the silencer (1) from the exhaust pipe.
   b. Remove the fixing bolts, then remove the silencer (1) from the bracket.

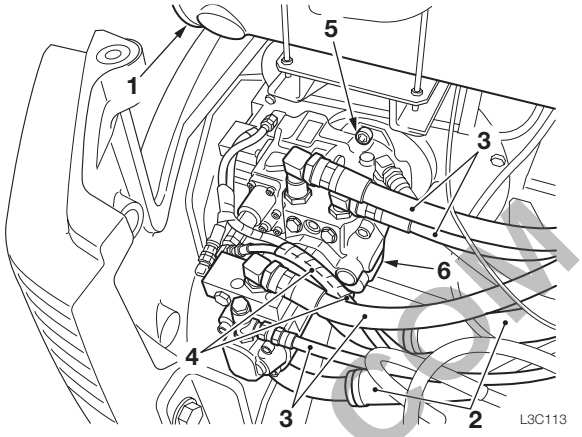
3. Drain out the oil from the hydraulic tank.
   ☞ "Removing the Hydraulic Tank"

4. Disconnect the discharge hoses (3) and hydraulic hoses (4) from the pump.

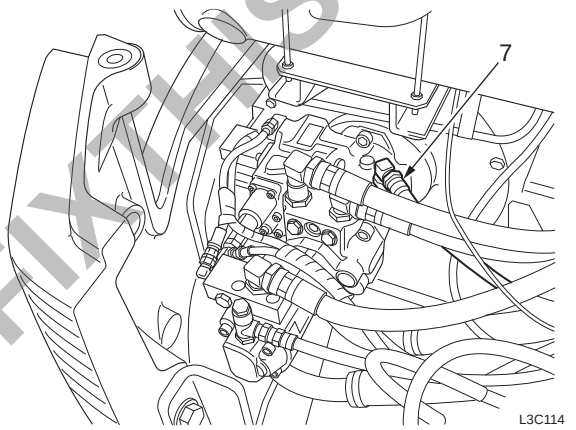
5. Disconnect the drain hose (7) from the pump.

6. Disconnect the suction hose (2) from the pump.

7. Remove the fixing bolts (5) and take out the hydraulic pump (6).
   ⊂⊃ Bolt: 255.8 N·m
   Apply molybdenum disulfide grease to the spline section (A).



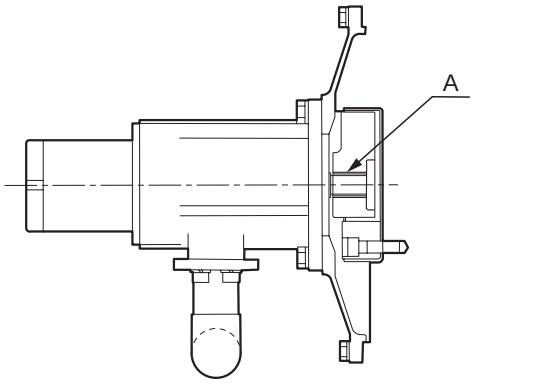
L3C113



L3C114

Installing the Hydraulic Pump

Follow the same procedure as for removal in the reverse order.



G4C114

Cautions when starting the hydraulic pump

1. Fill the pump housing with clean hydraulic oil before starting the pump.
   • Loosen the drain hose (7), fill in the oil through the opening until the oil overflows, and fasten the drain hose.

2. After starting the engine, let it run at a low idling speed for a while to completely bleed out the air within the circuit.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Machine Type		Mono-Boom	2-Pice Boom
Working Equipment (Hoe Attachment)			
Boom Swing Angle: L.H.	degree	80	←
R.H.	degree	50	←
Maximum Reach	mm	7055	7650
Maximum Reach at GRP	mm	6905	7510
Minimum Level Cut Radius with Bucket Flat on GRP	mm	2140	1810
Maximum Digging Depth	mm	4240	4440
Radius at Maximum Digging Depth	mm	3030	2665
Vertical Digging Depth	mm	3475	3955
Maximum Digging Height	mm	7025	7970
Radius at Maximum Digging Height	mm	3015	1355
Maximum Dumping Height	mm	4995	6000
Radius at Maximum Dumping Height	mm	2835	2090
Minimum Dumping Height	mm	1935	2310
Minimum Front Swing Radius	mm	2180	2505
Minimum Front Swing Radius at Boom Offset	mm	1635	1955
Overall Height at Minimum Front Swing Radius	mm	5255	4825
Overall Height at Minimum Front Swing Radius at Boom Offset	mm	5255	4825
Maximum Bucket Offset Volume: Left	mm	695	690
Right	mm	735	730
Digging Force: Bucket	kN	52.7	←
Arm	kN	36.7	36.0
Working Equipment (Dozer Blade)			
Dozer Blade: Width	mm	2150	←
Height	mm	500	←
Dozer Blade:			
Maximum Lifting Range above Ground Level	mm	525	←
Maximum Lowering Range below Ground Level	mm	410	←

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Figure 7-9 Preventive Maintenance Schedule.

PREVENTIVE MAINTENANCE SCHEDULE FOR AIR CONDITIONING SYSTEMS

NOTE: Typical Maintenance Schedule: 3 months or 15,000 miles, 6 Months or 30,000 miles, 12 Months or 60,000 miles

Installation Date: _____ Mileage: _____

Last Maintenance Check: _____ Mileage: _____

Checked by _____ Mileage: _____

COMPONENT	MAINTENANCE INTERVAL (months) 3*	6*	12*	DONE
1. COMPRESSOR				
Check noise level	•			❑
Check clutch pulley	•			❑
Check oil level	•			❑
Run system 5 minutes	•			❑
Check belts for tension (120 lb max.)	•			❑
Inspect shaft seal (leakage)		•		❑
Check mounting bracket (tighten bolts)		•		❑
Check alignment to clutch w/crankshaft drive pulley		•		❑
Perform manifold gauge check			•	❑
Verify clutch is engaging			•	❑
CONDENSER				
2. Clean dirt/bugs/leaves from coils (w/compressed air)	•			❑
Check inlet/outlet for obstructions/damage	•			❑
RECEIVER-DRIER				
3. Check inlet line from condenser (hot to touch)	•			❑
Check sight glass (streaks or cloudiness)	•			❑
Replace if system is opened			•	❑

COMPONENT	MAINTENANCE INTERVAL (months) 3*	6*	12*	DONE
4. EXPANSION VALVE				
Inspect capillary tube (leakage/damage/looseness)			•	❑
5. EVAPORATOR				
Clean dirt/bugs/leaves form fins/tubes (w/compressed air)			•	❑
Check solder joints on inlet/outlet tubes (leakage)			•	❑
Inspect condensate drain (R-12 or oil leak)			•	❑
6. OTHER COMPONENTS				
Check discharge lines (hot to touch)	•			❑
Check suction lines (cold to touch)	•			❑
Inspect fittings/clamps/hoses		•		❑
Check thermostatic switch (proper operation)			•	❑
Outlets in cab (temperature check; 40 to 50°F)		•		❑
Check fan clutch (proper operation)		•		❑
Inspect all wiring connections		•		❑
Operate manual controls through full functions	•			❑

The following require monthly maintenance:

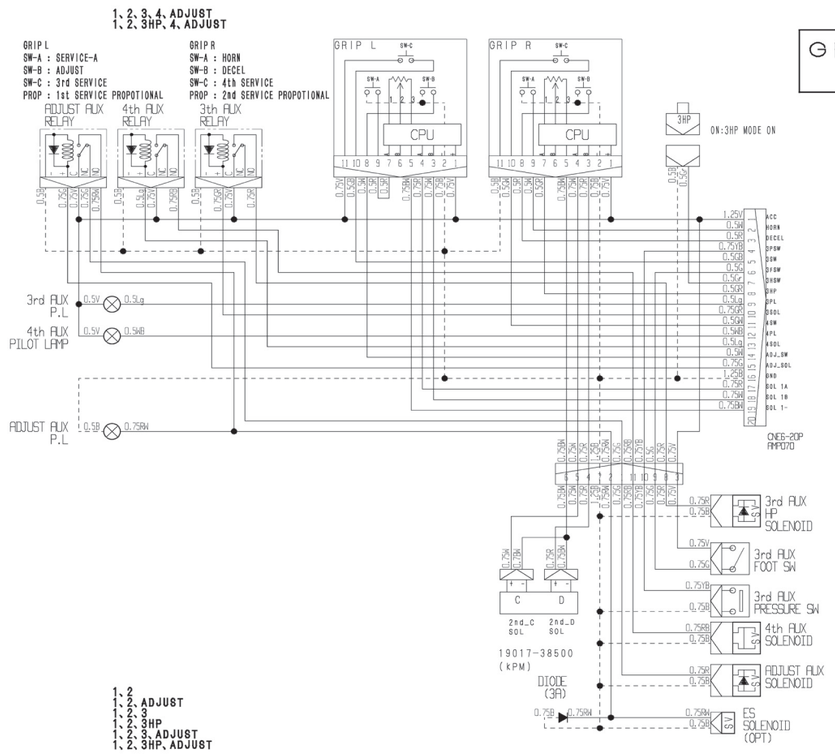
*Compressor – run system at least 5 minutes (40 degrees Fahrenheit minimum outside temp.) in order to circulate oil and lubricate components.

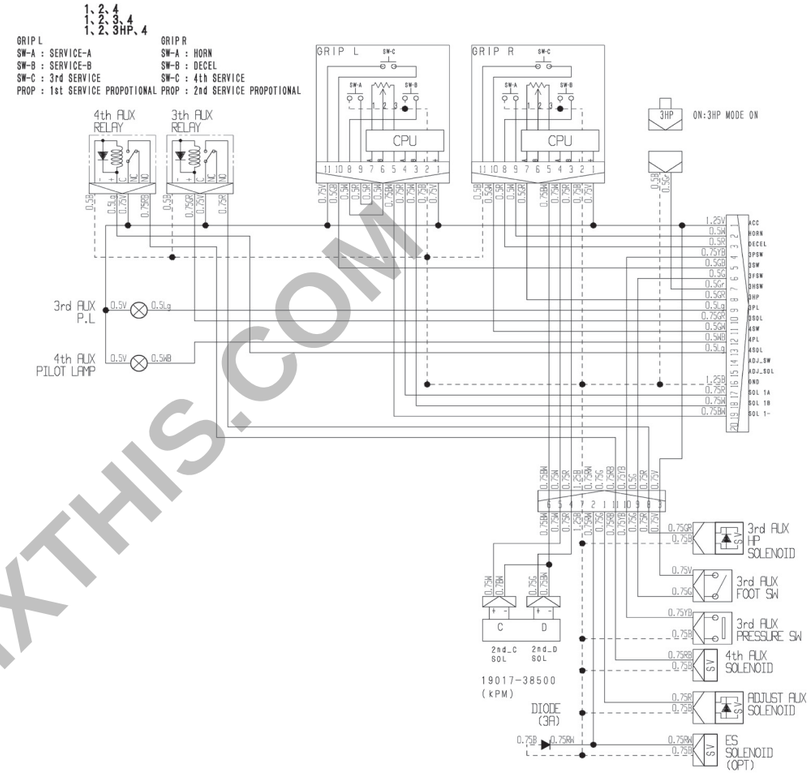
Maintenance notes: _____

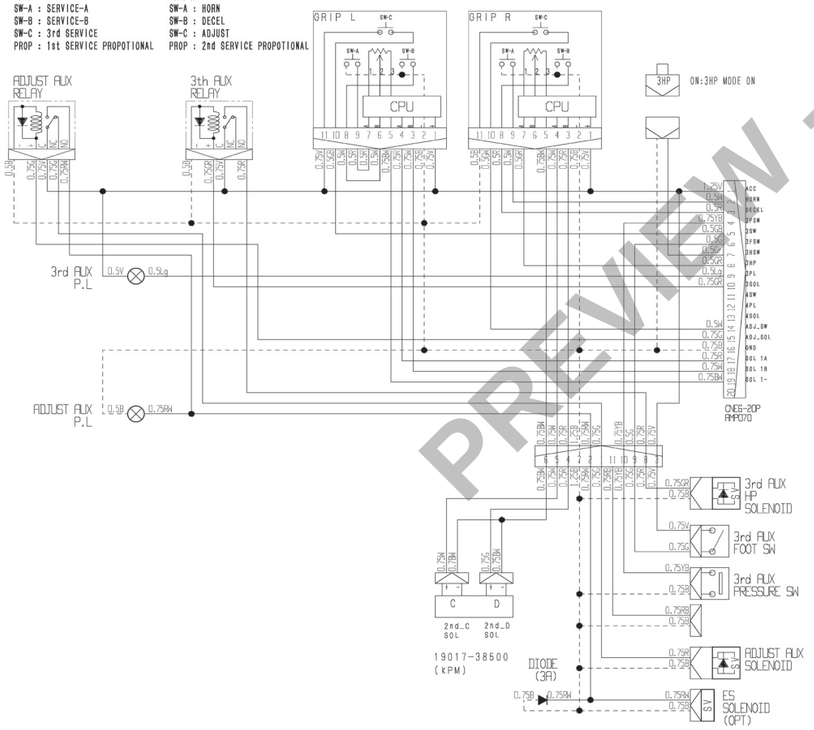
PREVIEW - YOUFIXTHIS.COM

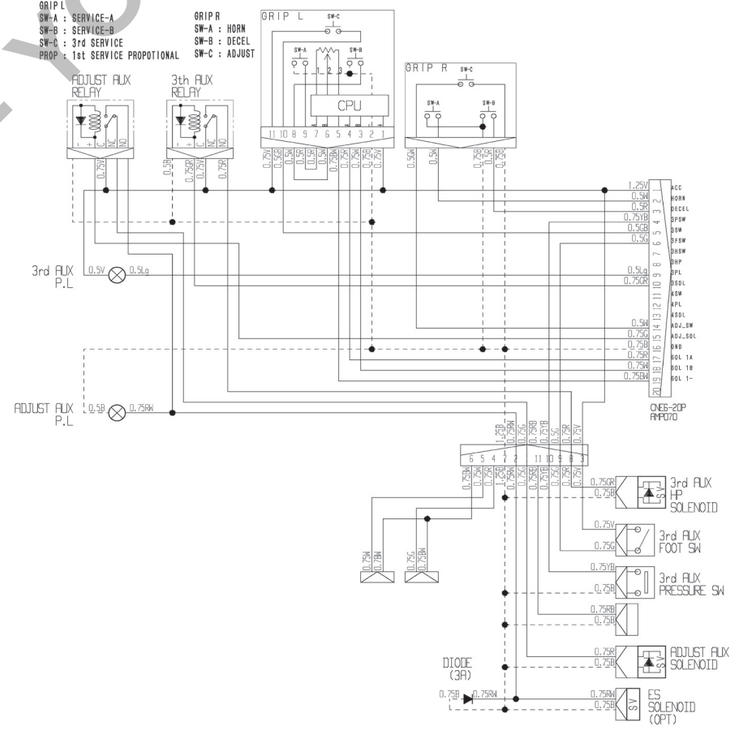
Download full manual at youfixthis.com

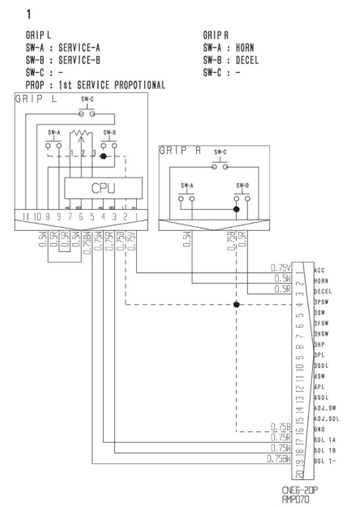
GRIP HARNESS & OPTIONS









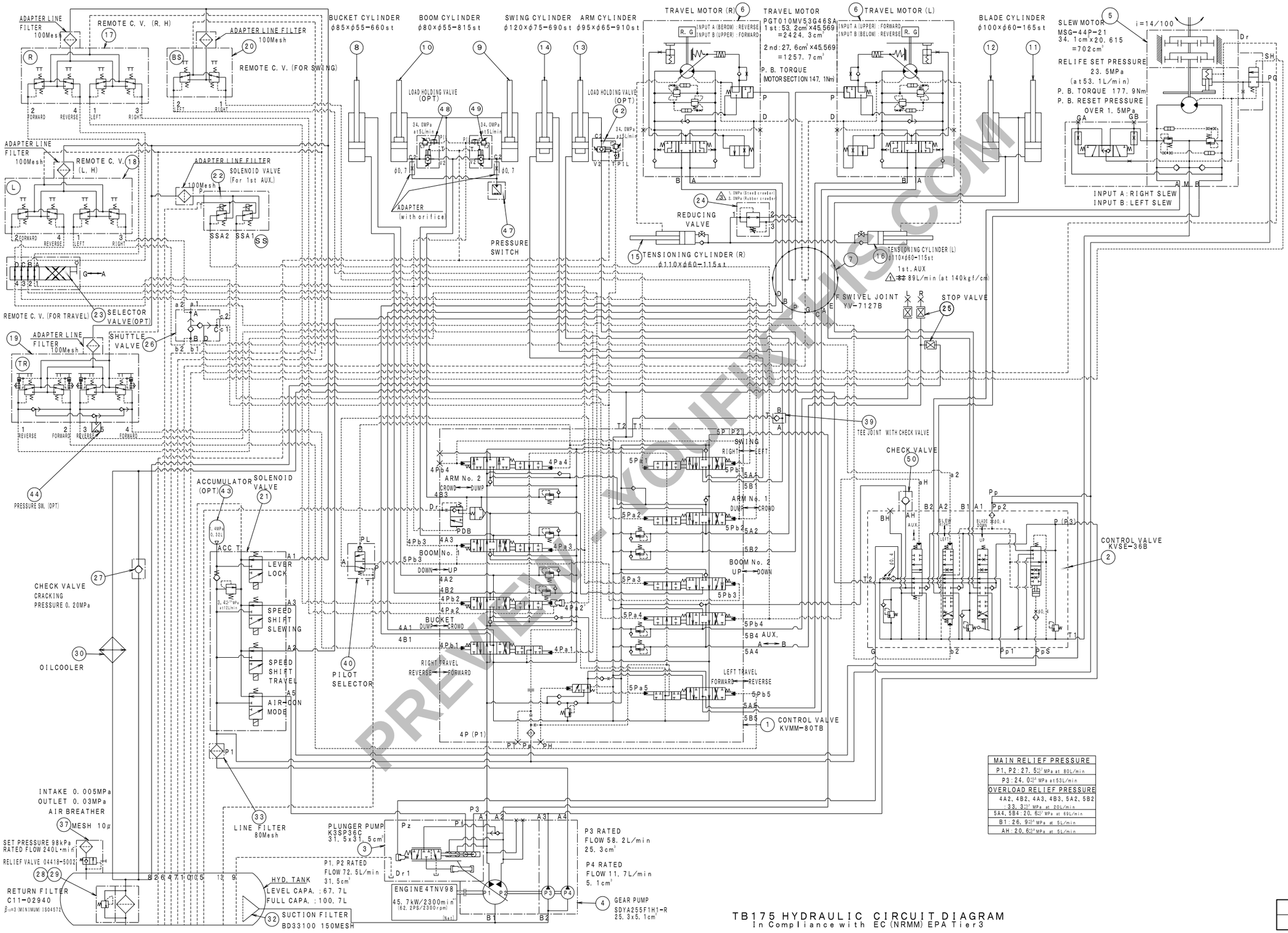


L3C832

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

High Flow



MAIN RELIEF PRESSURE
P1, P2: 27.5 MPa at 80L/min
P3: 24.0 MPa at 53L/min
OVERLOAD RELIEF PRESSURE
4A2, 4B2, 4A3, 4B3, 5A2, 5B2: 33.3 MPa at 20L/min
5A4, 5B4: 20.6 MPa at 69L/min
B1: 26.9 MPa at 5L/min
AH: 20.6 MPa at 5L/min

TB175 HYDRAULIC CIRCUIT DIAGRAM
In Compliance with EC (NRMM) EPA Tier3

Drawing No.	1/2
05601-00065-3	

L3C7161

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Bolts and Nuts (for ISO Strength Category 10.9)

Thread	Size × Pitch	Torque					
		General Tightening Points			Special Tightening Points		
		N·m	kgf·m	ft-lb	N·m	kgf·m	ft-lb
Coarse	M 6 × 1.0	9.8 ±0.5	1.0 ±0.05	7.2 ±0.4	11.8 ±0.6	1.2 ±0.06	8.7 ±0.4
	M 8 × 1.25	22.6 ±1.1	2.3 ±0.11	16.6 ±0.8	26.5 ±1.3	2.7 ±0.13	19.5 ±0.9
	M10 × 1.5	47.1 ±2.4	4.8 ±0.24	34.7 ±1.7	54.9 ±2.7	5.6 ±0.28	40.5 ±2.0
	M12 × 1.75	83.4 ±4.1	8.5 ±0.42	61.5 ±3.0	97.1 ±4.8	9.9 ±0.49	71.6 ±3.5
	M14 × 2.0	134.4 ±6.7	13.7 ±0.68	99.1 ±4.9	155.9 ±7.7	15.9 ±0.79	115.0 ±5.7
	M16 × 2.0	207.9 ±10.4	21.2 ±1.06	153.3 ±7.7	241.2 ±12.1	24.6 ±1.23	177.9 ±8.9
	M20 × 2.5	410.9 ±20.5	41.9 ±2.09	303.1 ±15.1	475.6 ±23.7	48.5 ±2.42	350.8 ±17.5
Fine	M 8 × 1.0	24.5 ±1.2	2.5 ±0.12	18.1 ±0.9	28.4 ±1.4	2.9 ±0.14	21.0 ±1.0
	M10 × 1.25	50.0 ±2.5	5.1 ±0.25	36.9 ±1.8	58.8 ±2.9	6.0 ±0.30	43.4 ±2.2
	M12 × 1.5	87.3 ±4.3	8.9 ±0.44	64.4 ±3.2	102.0 ±5.1	10.4 ±0.52	75.2 ±3.8
	M14 × 1.5	135.3 ±6.8	13.8 ±0.69	99.9 ±5.0	157.9 ±7.8	16.1 ±0.80	116.5 ±5.8
	M16 × 1.5	220.6 ±11.0	22.5 ±1.12	162.7 ±8.1	256.0 ±12.7	26.1 ±1.30	188.8 ±9.4
	M20 × 1.5	452.1 ±22.6	46.1 ±2.30	333.4 ±16.6	524.7 ±26.1	53.5 ±2.66	387.0 ±19.2

1. General Tightening Points (Non-lubricated)
   - All securing points other than the special tightening points.

2. Special Tightening Points (Grease with molybdenum disulfide applied.)
   - Points where particularly necessary due to function.
     Special tightening positions and associated instructions are given in the text.

3. Points where thread-locking compound is used (Three Bond #1324 is applied.)
   Thread-locking compound positions and associated instructions are given in the text.

4. If tightening torque values are provided in this manual, then tightening should be done according to those values.
   (This indicates that the tightening torque differs from the values given in this table.)

5. In order to tighten bolts and nuts evenly, they should be tightened alternately top, bottom, left, right.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 18 of 488 pages

The full manual includes:

- All 488 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Takeuchi TB175 Workshop Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual