Specifications

Specifications(SH125X-3)

	SH125X-3	
1. Main data:		
Model name	SH125X-3 Ultra Small Tail Swing Hydraulic Excavator	
Operating weight	12,400 kg (500 mm grouser shoe)	
Engine output	64 kw / 2,100 rpm	
Bucket capacity	Heaped 0.45 m^3 Leveled 0.32 m^3	
2. Performance		
Standard weight	5.7 kN	
Swing speed	10 rpm	
Travel speed	Low Speed 3.2km/h High Speed 5.0 km/h	
Maximum drawbar pull	115 kN	
Grade ability	70% (35°)	
Ground pressure	40 kPa (500 mm grouser shoe)	
3. Complete machine dimensions		
	Standard arm (2.39 m)	Long arm (2.85 m)
Length	7,240 mm	7,210 mm
Width	2,490 mm	2,490 mm
Height	2,750 mm	2,750 mm
4. Main body dimensions		
Main body length	3,510 mm	
Main body width	2,490 mm	
Upper swing body width	2,415 mm	
Cab width	1,000 mm	
Main body height	2,750 mm	
Tail swing radius	1,480 mm	
Distance of rear swing body	1,480 mm	
Ground clearance for upper structure	880 mm	
Center-to-center of wheels	2,785 mm	
Overall track length	3,510 mm	
Maximum track width	2,490 mm	
Center-to-center for track	1,990 mm	
Width of track shoe	500 mm	
Minimum ground clearance	455 mm (to bottom of lower frame)	

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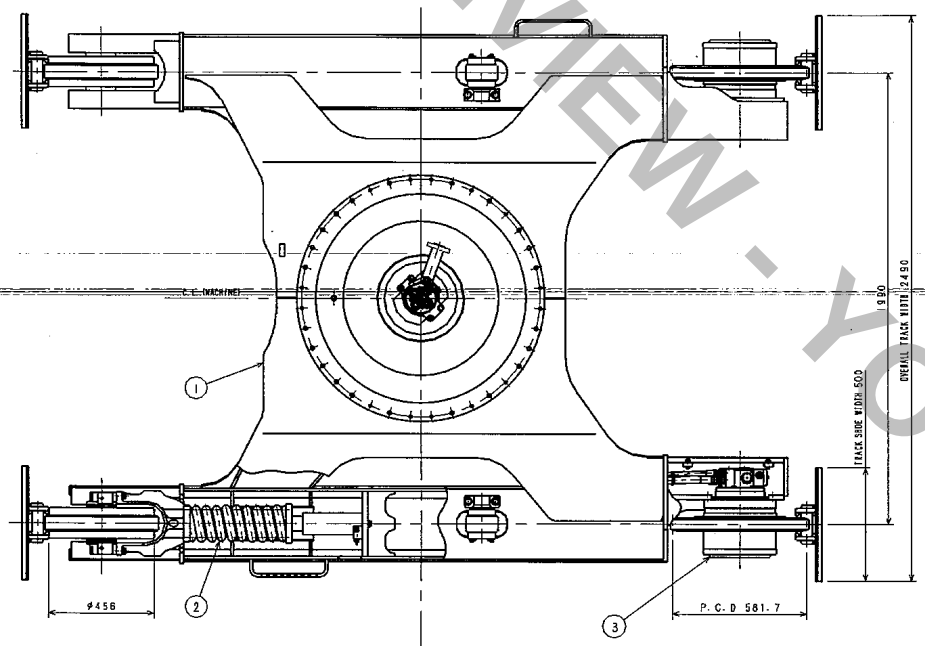
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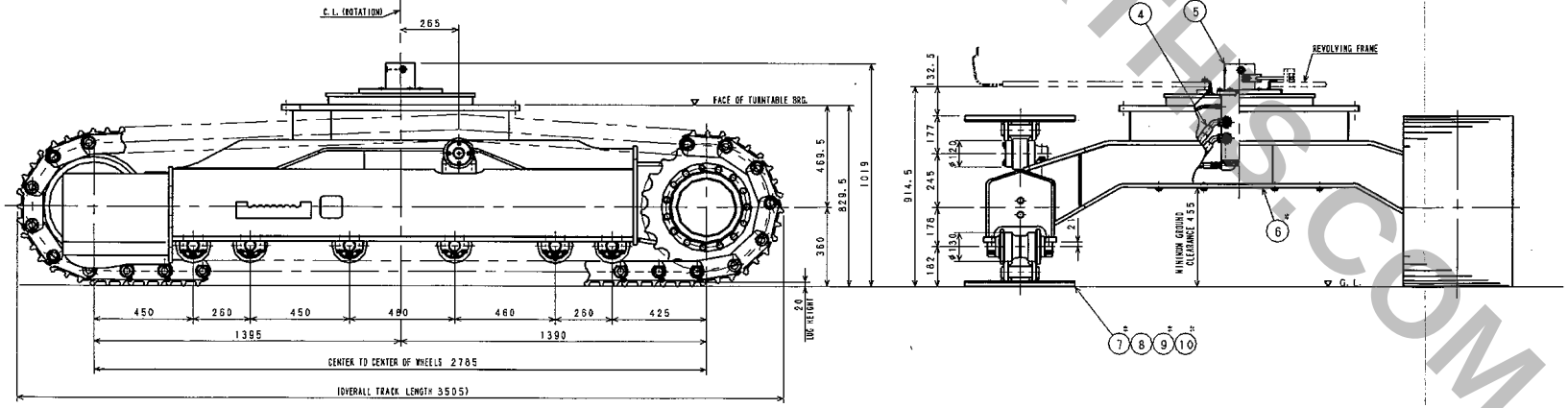
Specifications

MAJOR EQUIPMENT SPECIFICATIONS

Lower Mechanism

Lower assembly diagram (overall) SH125X-3





DESCRIPTION	SYMBOL	QTY.	TOTAL WT.
LOWER FRAME ASSY	1	1	1,572.6
RECOIL SPRING AND ROLLER ASSY	2	2	560.8
TRAVEL UNIT ASSY	3	2	385.8
TRAVEL MOTOR LINE ASSY	4	1	15.7
ROTATING JOINT ASSY	5	1	30.2
※ LOWER BOTTOM COVER ASSY	6	1	14.5
※ LINK CHAIN SHOE ASSY 500	7	2	1,499.2
GROUSER SHOE 500 (SEALS INCLUDED)	8	2	1,421.7
※ GROUSER SHOE 600 (SEALS INCLUDED)	9	2	1,585.1
※ GROUSER SHOE 700 (SEALS INCLUDED)	10	2	1,685.1

NOTES

1. TOTAL WEIGHT DOES NOT INCLUDE OPTIONS.
2. PARTS MARKED WITH ※ ARE OPTIONAL.

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SH125/135X-3

(Emission Control Regulation Compliant Machine)

SERVICE TEXT

Hydraulic Circuits Section

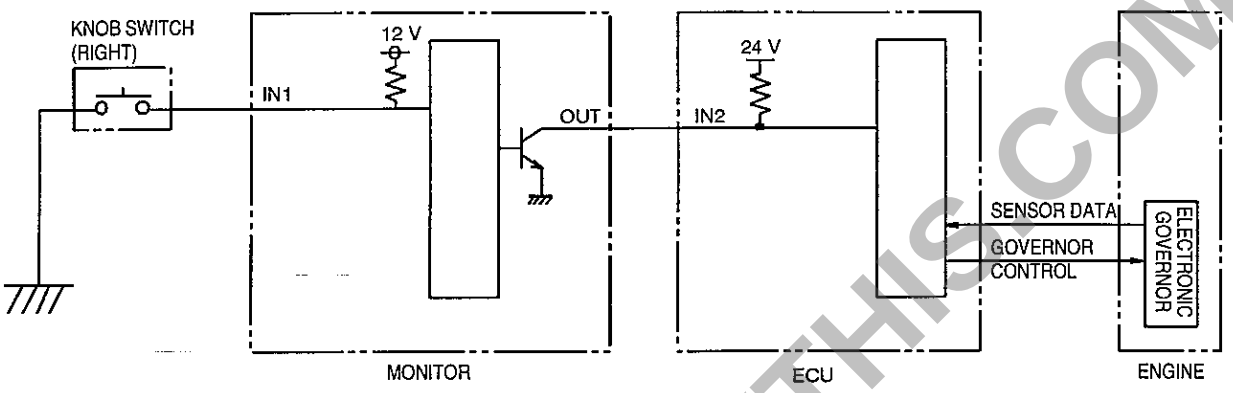
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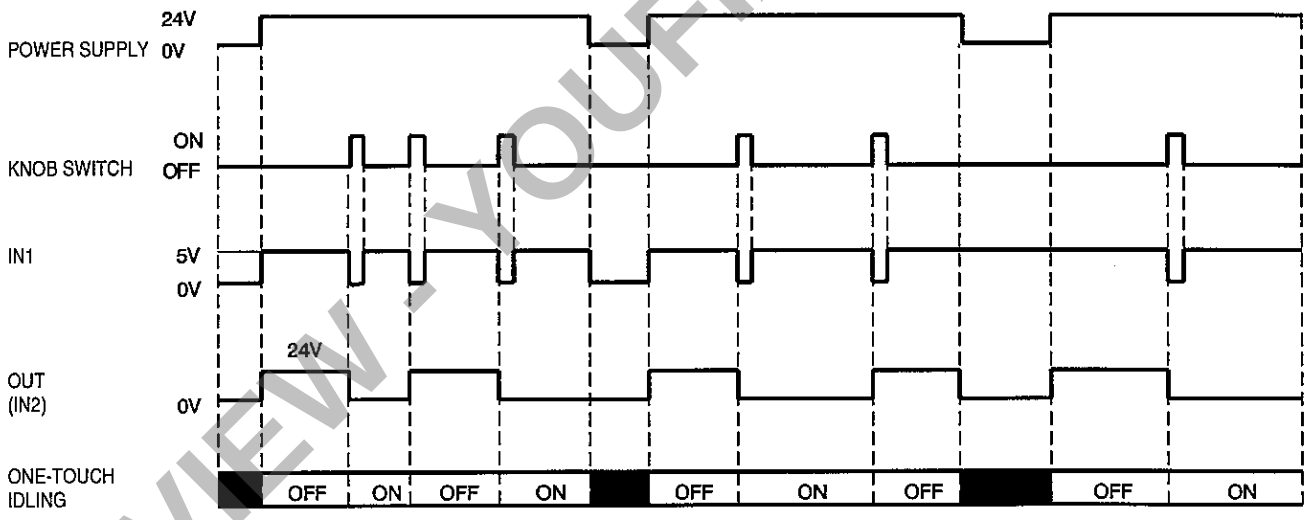
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1-3. One-touch idling

1. Circuit Configuration



2. Time chart



3. Switch-over of One-touch idling (idling at 1000 rpm)

a. If the key switch is turned OFF while one-touch idling is ON, it will be OFF when the key switch is turned ON again. (The previous data will be reset.)

b. Each time the knob switch is pressed, the one-touch idling is switched alternately as ON → OFF → ON → OFF and so on.

Note: The idling number of revolutions is maintained even when the crane mode is applied during one-touch idling.

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1. Measuring Pressure

A. Basic conditions

Oil temperature	45 to 55°C
Engine revolutions at no load	2150 rpm

B. Pressure settings

			Relief valve Individual pressure settings	Actual readings measured on machines (reference)	Method of measurement
Main relief pressure			34.3 MPa at 60 L/min (350 kgf/cm^2)	34.6 MPa (353 kgf/cm^2)	Arm relief
Boom overload relief		Up	37.8 MPa at 20 L/min (385 kgf/cm^2)	39.1 MPa (399 kgf/cm^2)	Fasten main relief 180° + Boom-up relief
		Down	37.8 MPa at 20 L/min (385 kgf/cm^2)	38.5 MPa (392 kgf/cm^2)	Fasten main relief 180° + Boom-down relief
Arm overload relief		Out	37.8 MPa at 20 L/min (385 kgf/cm^2)	39.5 MPa (403 kgf/cm^2)	Fasten main relief 180° + Arm-out relief
		In	37.8 MPa at 20 L/min (385 kgf/cm^2)	39.3 MPa (401 kgf/cm^2)	Fasten main relief 180° + Arm-in relief
Bucket overload relief		Open	37.8 MPa at 20 L/min (385 kgf/cm^2)	39.5 MPa (403 kgf/cm^2)	Fasten main relief 180° + Bucket-open relief
		Close	37.8 MPa at 20 L/min (385 kgf/cm^2)	39.7 MPa (405 kgf/cm^2)	Fasten main relief 180° + Bucket-closed relief
Swing relief		Right	28.0 MPa at 78 L/min (285 kgf/cm^2)	28.5 MPa (291 kgf/cm^2)	Swing relief
		Left	28.0 MPa at 78 L/min (285 kgf/cm^2)	28.5 MPa (291 kgf/cm^2)	Swing relief
Blade	Main		20.6 MPa at 54 L/min (210 kgf/cm^2)	21.5 MPa (220 kgf/cm^2)	Blade-up relief
	Overload relief	Up	23.5 MPa at 20 L/min (240 kgf/cm^2)	25.0 MPa (255 kgf/cm^2)	Fasten blade main relief 180° + Blade-up relief
		Down	23.5 MPa at 20 L/min (240 kgf/cm^2)	25.0 MPa (255 kgf/cm^2)	Fasten blade main relief 180° + Blade-down relief
Pilot relief			4.2 MPa (43 kgf/cm^2)	3.9 MPa (40 kgf/cm^2)	Lever neutral

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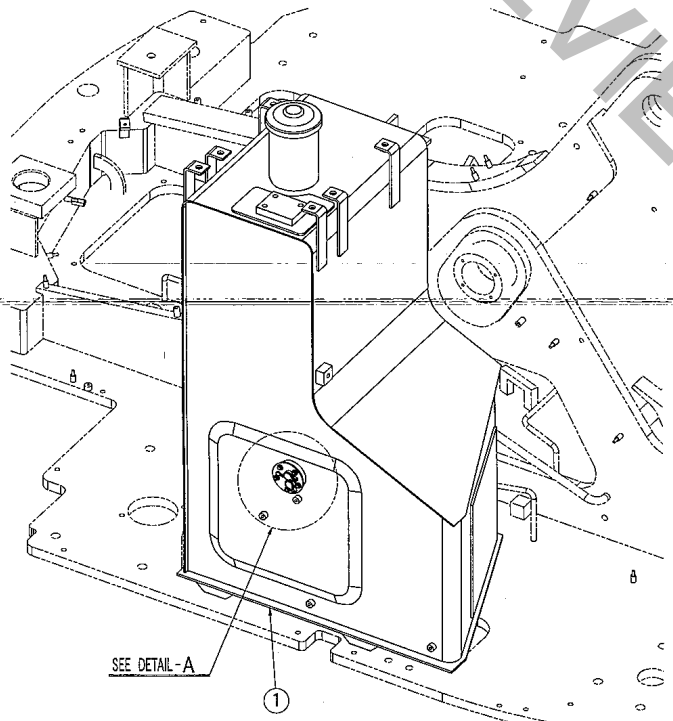
	SH125X-3
5. Engine	
Name	ISUZU BB-4BG1T
Model	4-cycle water-cooling overhead valve In-line direct injection engine (electronically controlled) with air-cooling type inter-cooler turbo
No. of cylinders – bore x stroke	4 – dia. 105 mm x 125 mm
Cylinder capacity	4,329 mL
Maximum torque	324 N·m / 1,600 rpm
Fuel consumption rate	251.8 g/kW·h
Starter	24 V 4.5 kW
Alternator	24 V 50 A AC system
Battery	12 V 64 Ah (2)
6. Hydraulic system	
Hydraulic pump drive system	Directly-coupled to motor (no transmission)
Hydraulic pump	
Model	Double variable displacement piston pump (1) Gear pump (1)
Discharge	Piston pump: 2 x 117 L/min Gear pump (for pilot use): 21.5 L/min
Pump control method	Simultaneous total output horsepower control
Set pressure of main relief valve	
Boom/Arm/Bucket/Travel	34.3 MPa
Swing	28.0 MPa
Set pressure of overload relief valve	
Boom/Arm/Bucket	37.8 MPa
7. Control valve	
Model	4-spool section + 5-spool section (1)
Operation method	Hydraulic pilot method: travel, swing and operating machine
8. Cooling system	
Fan type	Air intake
Radiator	Pressure type
Oil cooler	
Cooling method	Air-cooling type
Radiation area	15.73 m^2

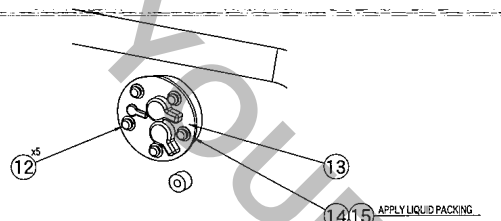
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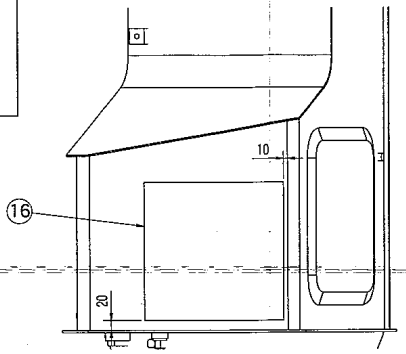
Fuel Tank

Sumitomo Part No.	KMH0786
Individual part weight	62.3 kg
Tank capacity	165 L
Fuel	Light oil (fuel for diesel engine)



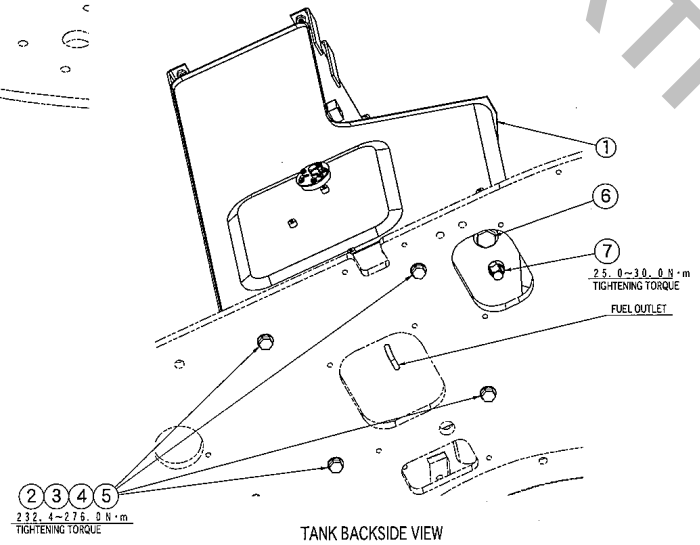


DETAIL- A

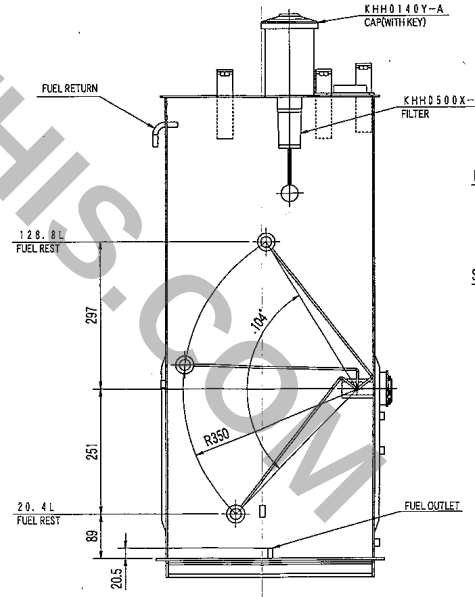


TANK FRONTSIDE VIEW

DESCRIPTION	SYM	QTY
TANK:FUEL	1	1
BOLT:SEMS M16X55	2	4
BOND	3	NEED
SHIM:PLATE (t=0.8)	4	NEED
SHIM:PLATE (t=2.0)	5	NEED
PLUG G3/4	6	1
COCK:DRAIN	7	1
MISSING NUMBER	8	
MISSING NUMBER	9	
MISSING NUMBER	10	
MISSING NUMBER	11	
SCREW:PAN HD M5X12	12	5
SENSOR:SPL	13	1
PACKING:SPL	14	1
PACKING:LIQUID	15	NEED
PLATE:RUBBER	16	1



TANK BACKSIDE VIEW



NOTES

1) TIGHTEN BOLTS (2) BY THE SPECIFIED TORQUE AFTER APPLYING LOCTITE #262 ON THE THREAD.

SPECIFICATIONS

FUEL TANK

1. TANK CAPACITY 165L
2. LIMITED INCLINED ANGLE 35°

KMH0816Z-D02

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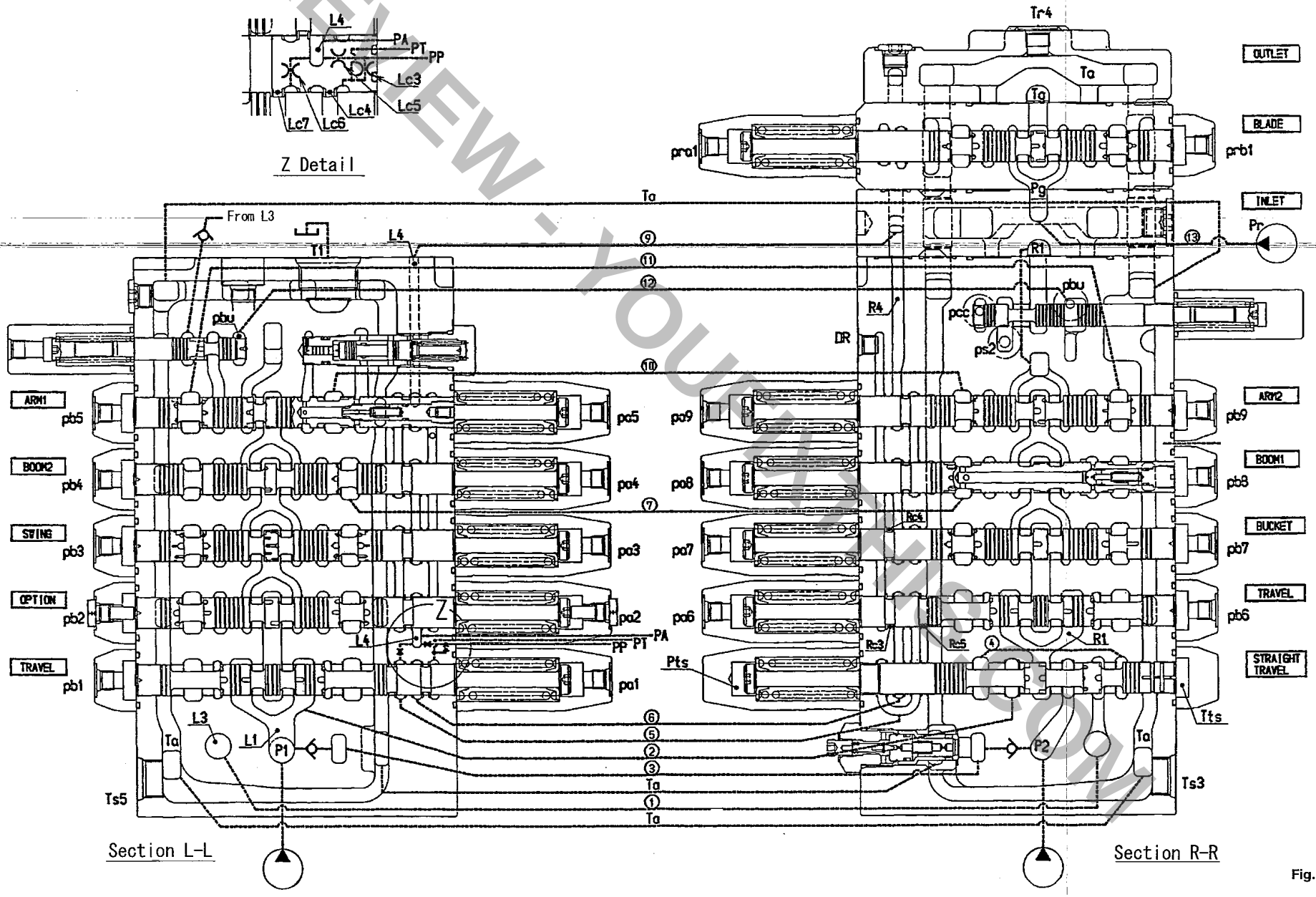
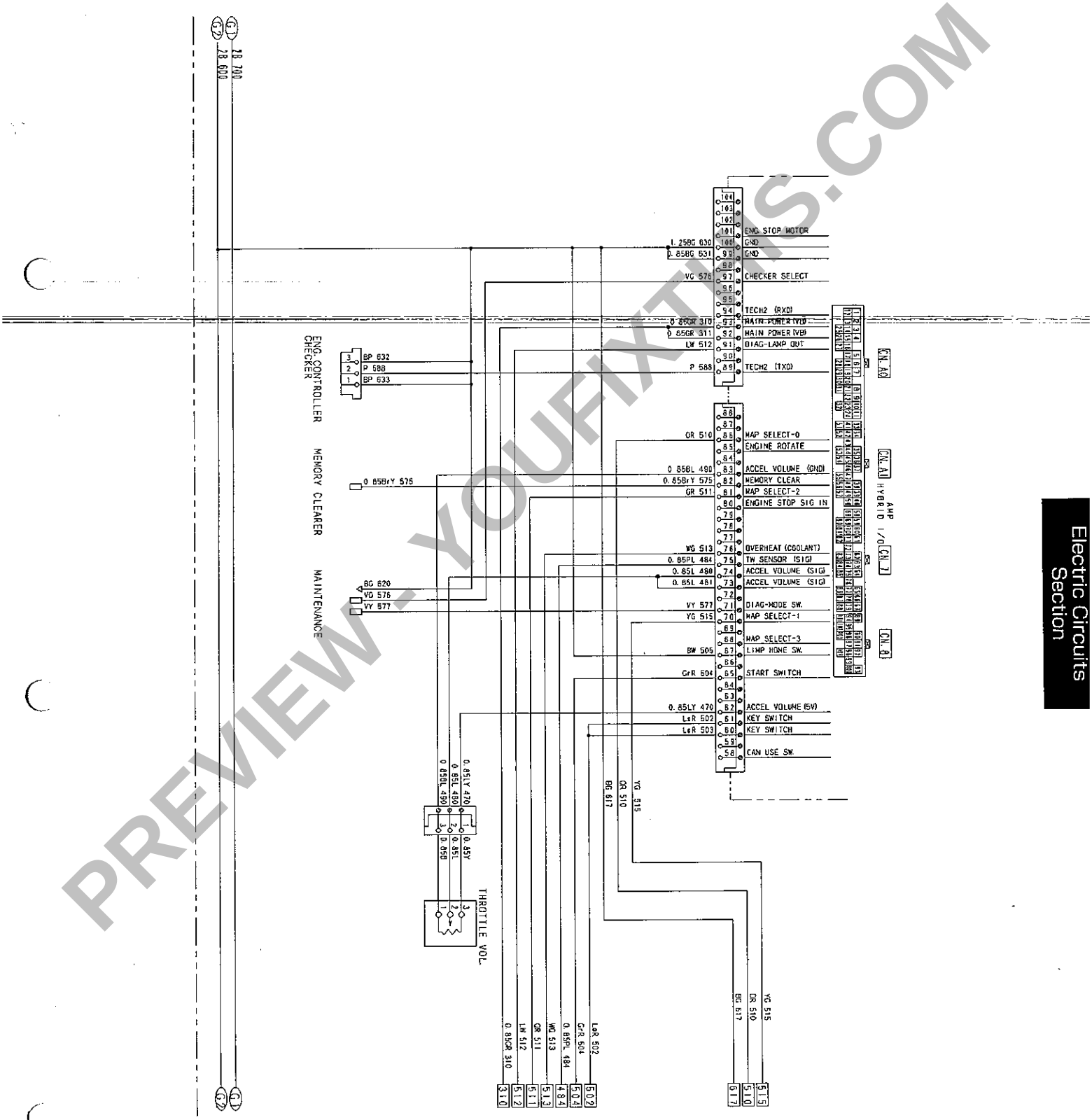


Fig.1

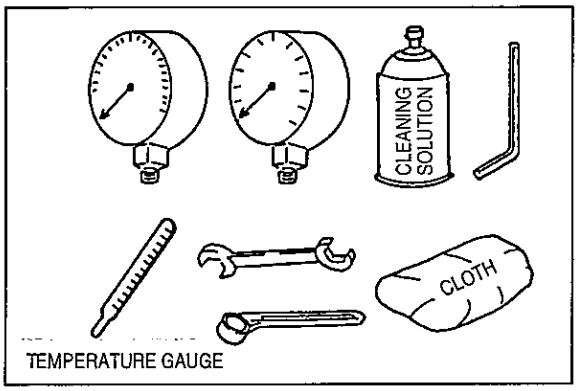
Electric Circuit Diagram 2



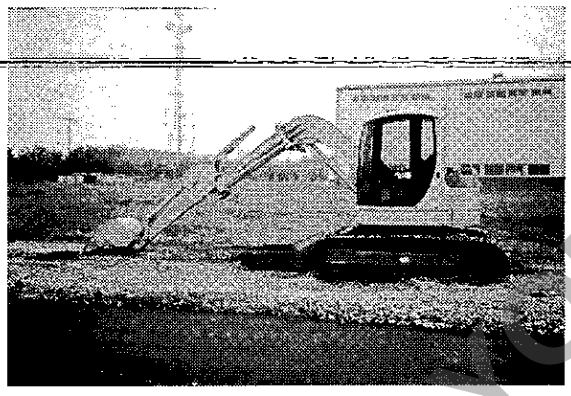
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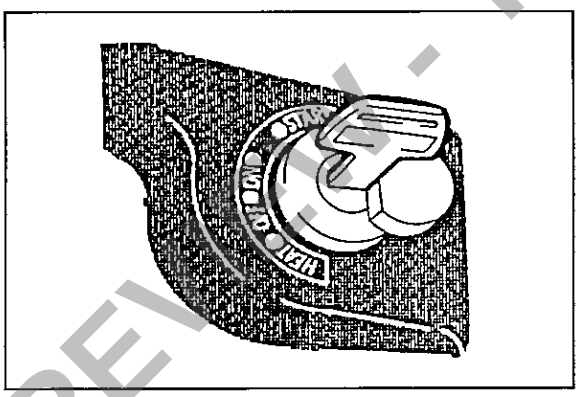
D. Preparation for Measuring Pressure



1. Items needed
   - Pressure gauges
     for 49.1MPa (500 kgf/cm^2)
     for 9.81 MPa (100 kgf/cm^2)
   - Tools: Spanners (closed wrench),
     17 mm and 27 mm
     Hexagonal bar wrenches, 5mm and 6mm
   - Other: Cloth, cleaning solution,
     temperature gauge

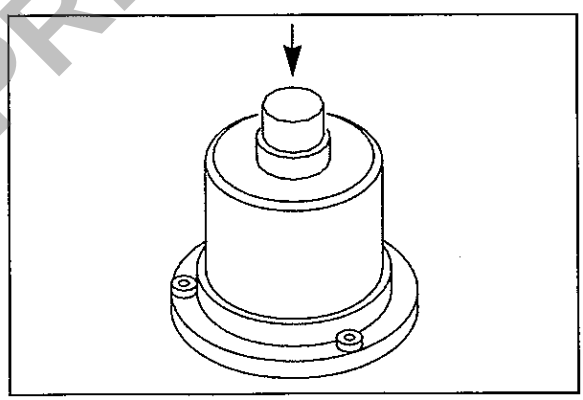


2. Positioning the machine
   - Position the machine on solid level ground.
     Lower the boom so the arm end touches the ground with the bucket cylinder out at stroke end and the arm cylinder out at stroke end.
     The blade should also be lowered to touch the ground.



3. Relieving pressure in circuit
   - Turn the starter switch off and confirm that the engine has stopped. Turn the key on again.

   Note: Do not start the engine.
   - Operate each lever 10 times or more and check that the attachments no longer move. Then turn off the starter switch.



4. Relieving pressure in hydraulic oil tank
   - Press the air breather button located on the hydraulic oil tank to release the pressure in the tank.

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Standard Arm (2.39 m) 1/2
Long Arm (2.85 m) 2/2

Specifications(SH125X-3 with Blade) **125-1-01-00-28**
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Complete Machine Dimensions(SH125X-3 with Blade) **125-1-01-01-29**
Standard Arm (2.39 m) 1/2
Long Arm (2.85 m) 2/2

Work Range (SH125X-3 with Blade) **125-1-01-02-29**
Standard Arm (2.39 m) 1/2
Long Arm (2.85 m) 2/2

Specification(SH135X-3 with Blade) **135-1-01-00-31**
1/5

Complete Machine Dimensions(SH135X-3 with Blade) **135-1-01-01-32**
Standard Arm (2.39 m) 1/2
Long Arm (2.85m) 2/2

Work Range(SH135X-3 with Blade) **135-1-01-02-32**
Standard Arm (2.39 m) 1/2
Long Arm (2.85 m) 2/2

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