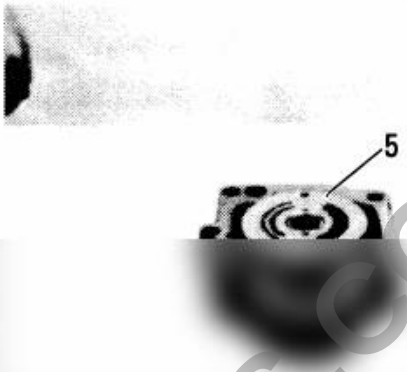
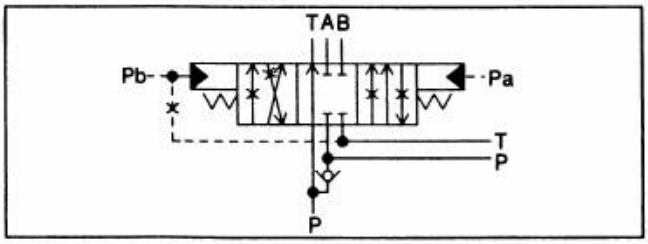
Procedure	
(2) Place valve plate **5** on body H **2** quietly with spring pin **40** on body H **2** fitted into the thin groove of valve plate **5**. ***Note:*** *Take care not to place the valve plate on the wrong side on body H. The thin-grooved side of the valve plate is contacted with the cylinder*	

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9) Swing



(1) Neutral

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3. SERVICING STANDARDS

Applicable model			3TNE78A-B1A	
Item		Unit	Standard	Wear limit
Backlash	Crank gear, cam gear, idle gear & fuel injection pump drive gear	mm	0.07 to 0.15	—
	Lubricating oil pump gear		0.11 to 0.19	—

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12) System relief valve

This relief valve is a balance piston type and consists of a body, a plug, a sleeve E, a main poppet, a valve seat, a pilot poppet and an adjuster.

The relief valve is located between the neutral passage "HP" and the low pressure passage "LP" in the inlet section. It operates as follows:







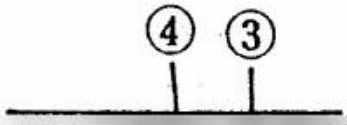
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5) Reduction Gear

The reduction gear consists of the 2-stage planetary structure.



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2. TECHNICAL DATA

Item			Unit	B25V
Hydraulic pilot control				
	Cut-off valve	Type		Magnetic solenoid operated
		Relief set pressure	kgf/cm²	30
Hydraulic oil tank (reservoir)				
	Oil capacity		L	76 (Tank : 55, Others : 21)
	Suction filter	Type		EBZ element 01207524071
		Filtration area	cm²	780

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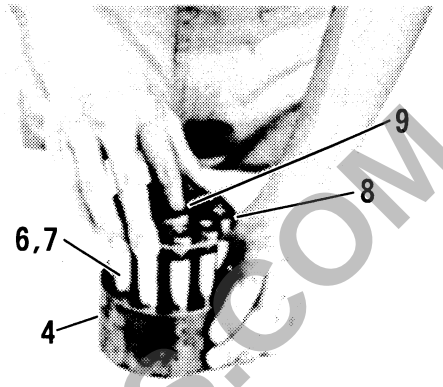
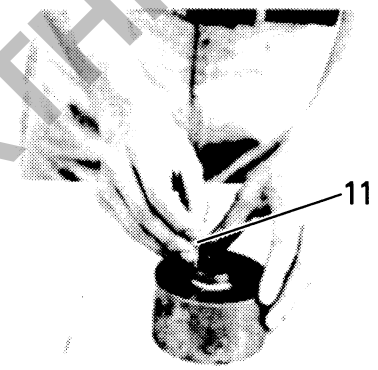
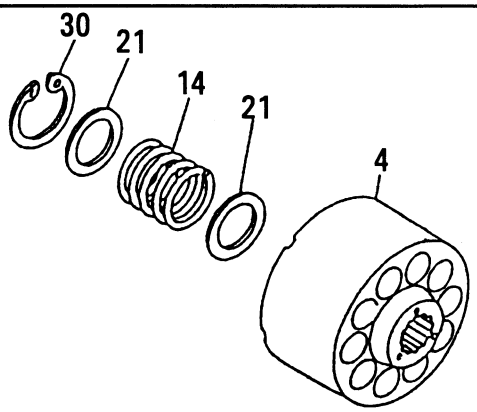
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Procedure	Photo
(17) Install inner face seal ㉔ into balancing plate ㉖ and outer face seal ㉕ onto the plate. Installing direction Outer face seal Inner face seal	

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Procedure	
7. Disassembly of cylinder barrel kit (1) Remove shoe holder **8** with assembly of pistons **6** and shoes **7** installed and barrel holder **9** from cylinder barrel **4**.	
(2) Remove needles **11**.	
(3) Remove internal snap ring **30** and then take retainer **21**, spring C **14** and retainer **21** in order out of cylinder barrel **4**.	

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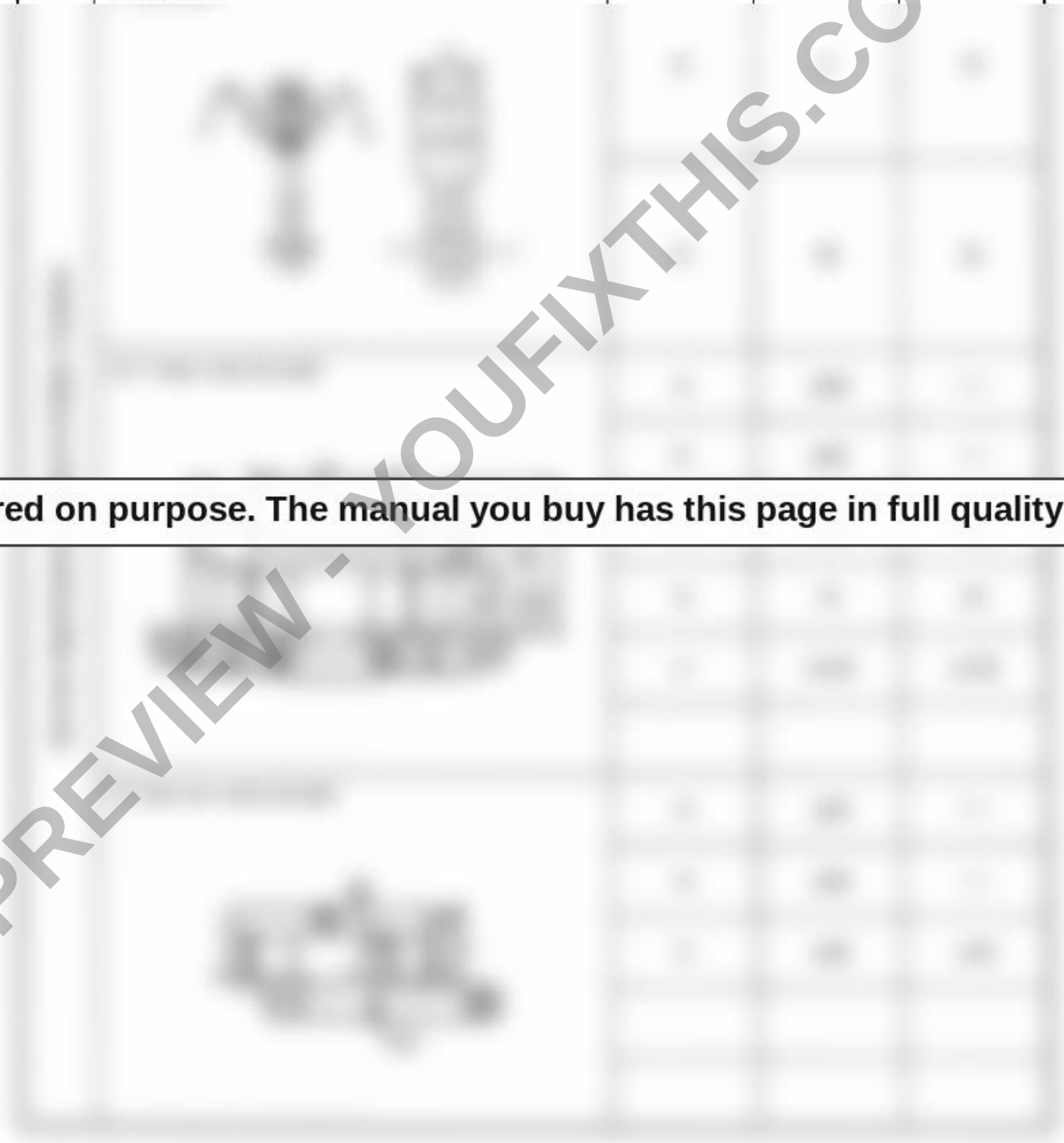
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3-3-3 Common Specifications of Steel & Rubber Crawlers

(Unit : mm)

Applicable model		B25V		
	Part	Where to be measured	Standard	Allowable limit
	(1) Sprocket			



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4-2-8 Gears

1. Checking gears

Inspect the gears and replace if the teeth are damaged, worn, or chipped.

2. Measuring the backlash

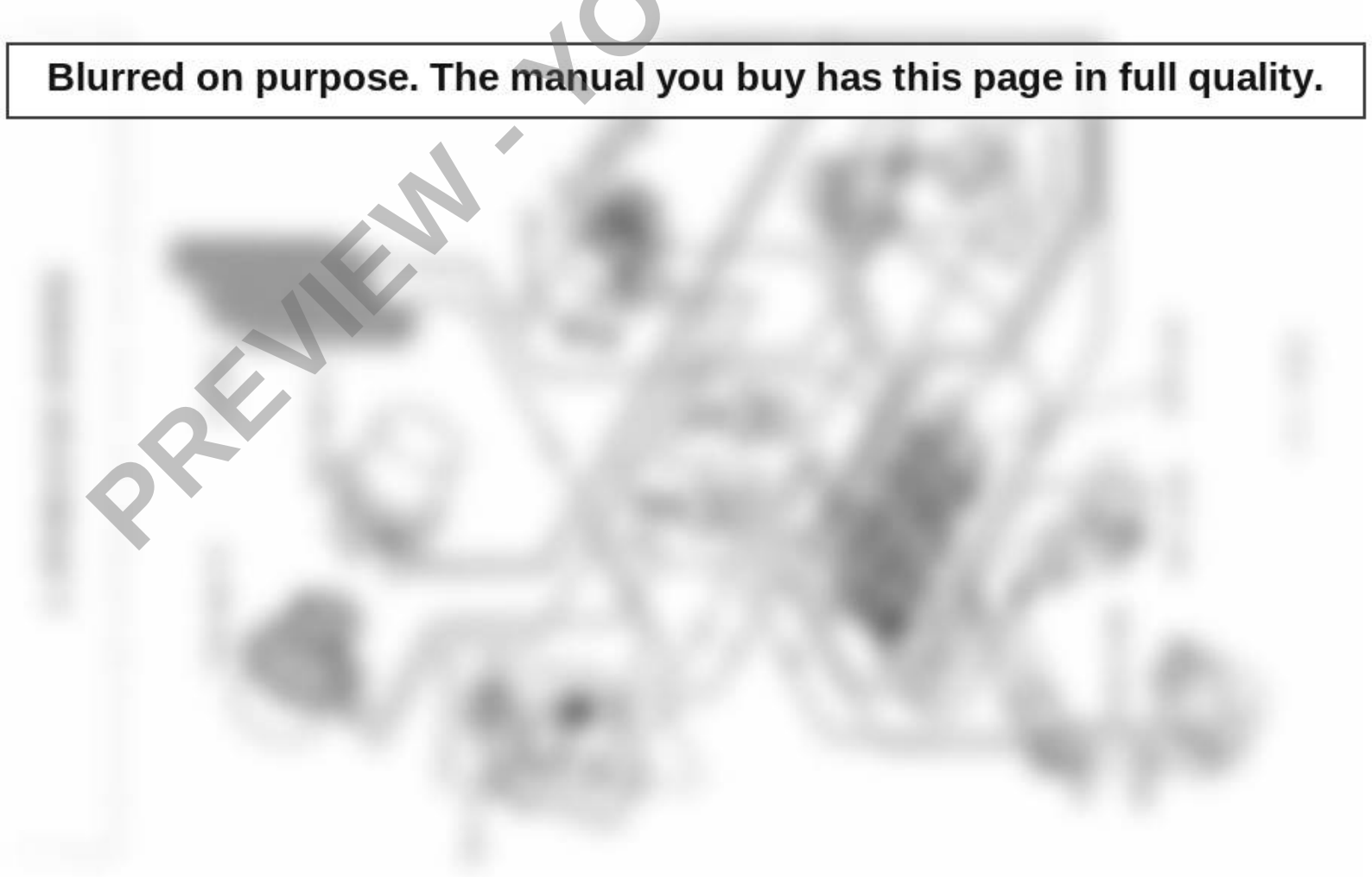
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(2) Bucket curl operation

The pilot oil flows into the port Pb to move the spool to the right. The neutral passage is closed, and the oil from the neutral passage runs through the passage a and opens the load check valve to flow to the actuator port B. The oil from the parallel feeder also flows to the actu-

orifice (boom priority orifice).

The oil returned from the actuator port A flows to the return (lower pressure) passage through the throttle of the spool and then back to the hydraulic oil tank. The spool is returned to the neutral position by the return spring.



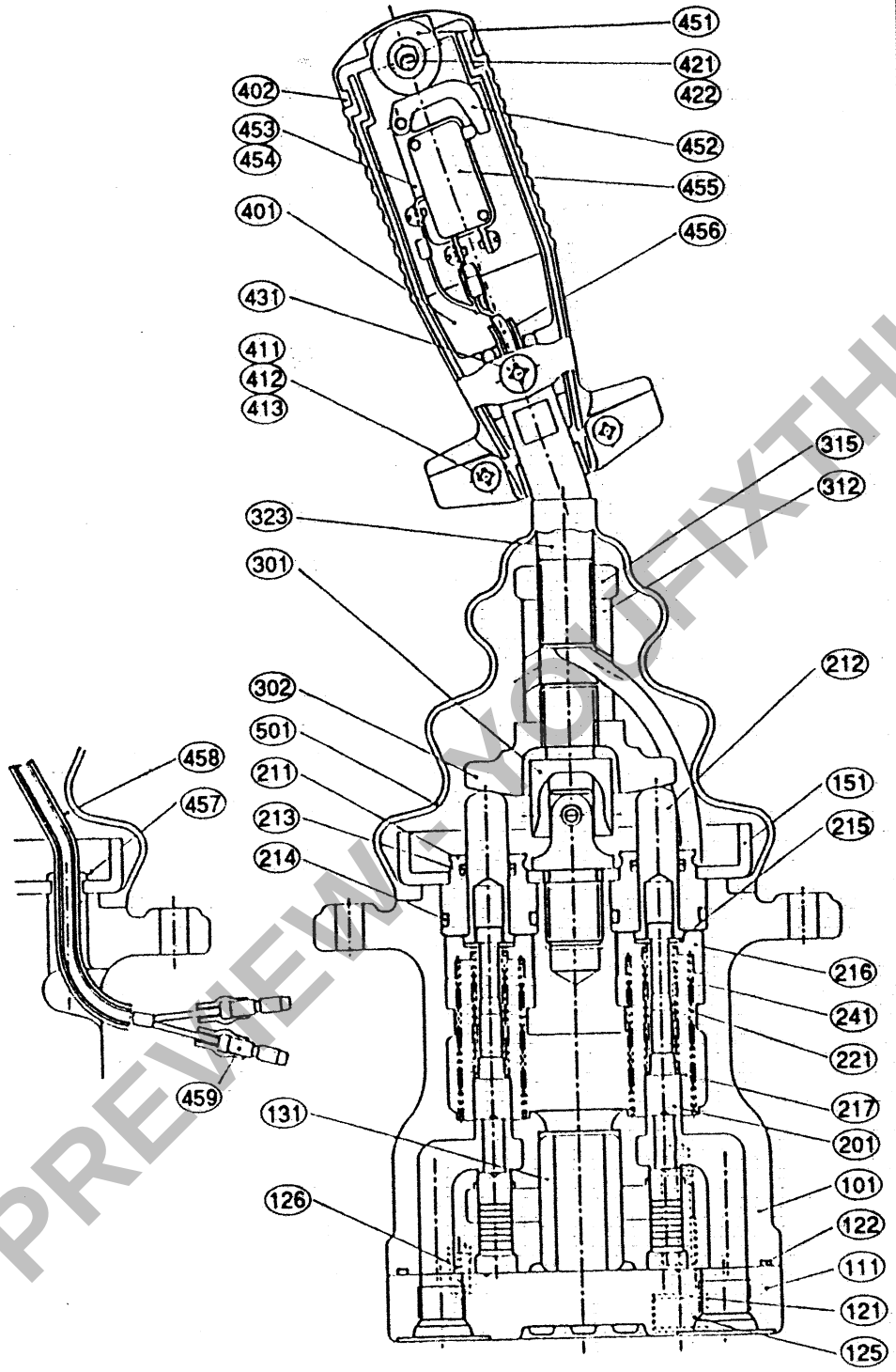
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2) Exploded View and List of Parts

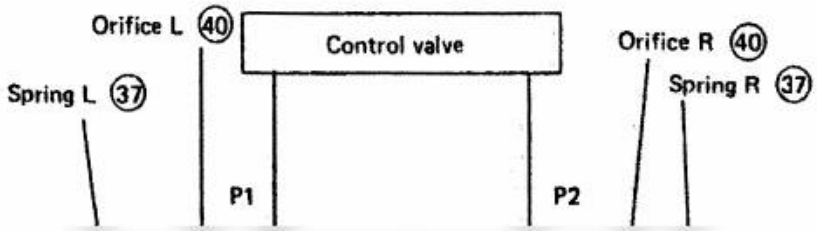


No.	Part Name	Q'ty
501	Bellows	1
459	Terminal	2
458	Tube	1
457	Bush	1
456	Cord	1
455	Switch	1
454	Seat 2, switch	1
453	Seat 1, switch	1
452	Lever switch	1
451	Roller	1
431	Screw 3	2
422	Nut	1
421	Screw 2	1
413	Plain washer	2
412	Nut	2
411	Screw 1	2
402	Handle cap	1
401	Handle	2
323	Bar handle	1
315	Lock nut	1
312	Adjust nut	1
302	Circular plate	1
301	Joint	1
241	Spring	4
221	Spring	4
217	Washer 2	4
216	Spring seat	4
215	Washer 1	8
214	O-ring	4
213	Seal	4
212	Push rod	4
211	Plug	4
201	Spool	4
151	Plate	1
131	Bush	1
126	Spring pin	1
125	Screw hex. S.H. C.	2
122	O-ring	1
121	Seal washer	2
111	Port plate	1
101	Casing	1

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(1) Counter-Balance Function



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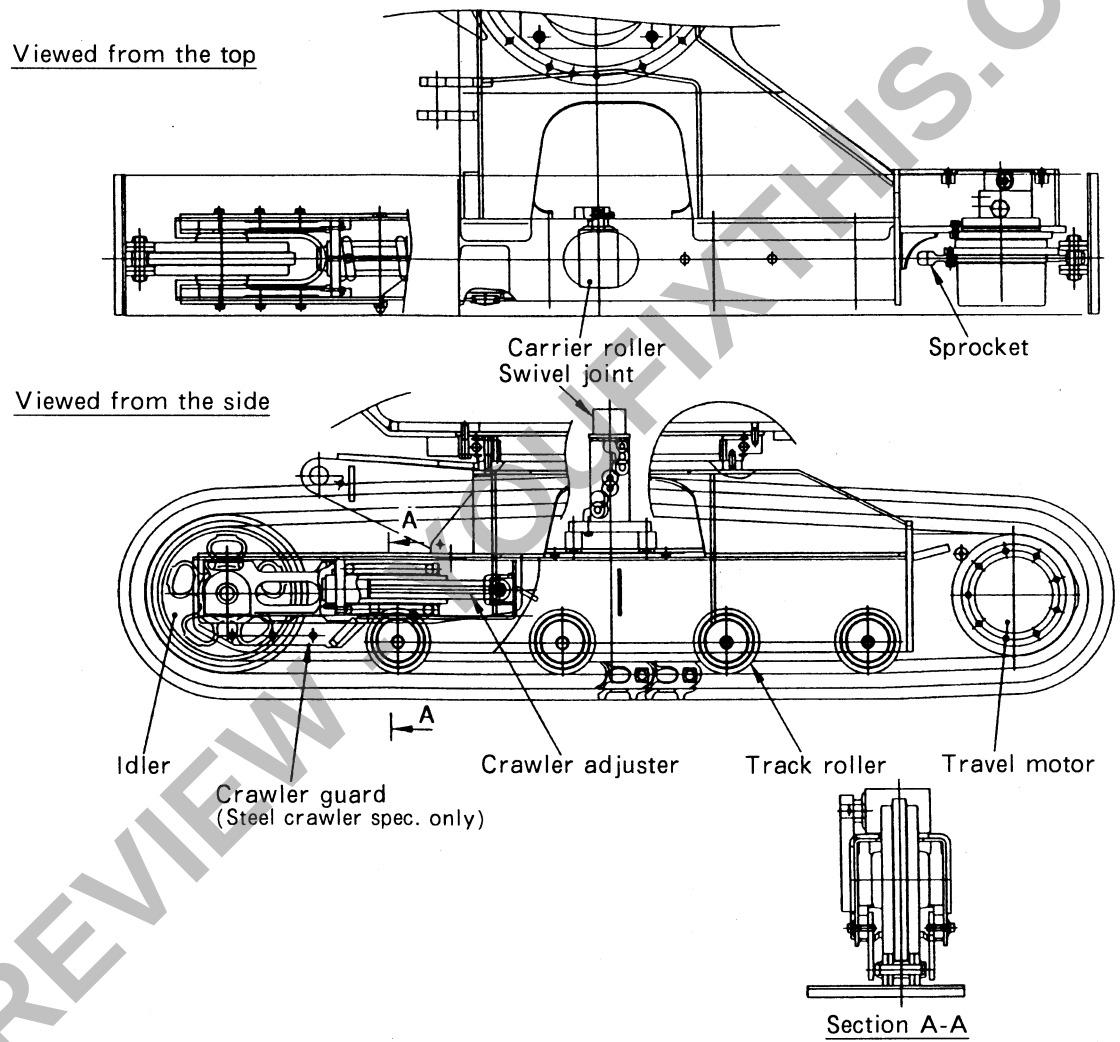
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7-2 Undercarriage

7-2-1 Outline

Hydraulic oil fed through the control valve and the swivel joint from the hydraulic pump causes the counter balance valve installed in the travel motor to open. When the counter balance valve is opened, the motor starts rotating. Its rotation is reduced by the reduction gear to increase the revolving torque, which is transmitted to the crawler via the sprocket. When the oil flow is blocked, the counter balance valve is closed and the brake is automatically applied.



7-2-2 Major Parts

The maximum interchangeability is introduced between the steel and rubber crawler spec. models.
For the interchangeability of the major parts, see the right table.

Interchangeability of Major Parts

Spec. / Part name	Steel track	Rubber track
Travel motor	○	○
Sprocket	○	○
Idler	×	×
Track roller	○	○
Carrier roller	○	○
Crawler guard	×	–

Note: *Special part: No interchangeability*

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8. PERIODIC INSPECTION AND SERVICING

8. List of Periodic Inspection and Servicing

◇:Check ○:Supply ●:Replace □:Adjust(clean) △:Oil & grease

Check & service items			Daily	Every 50	Every 100	Every 250	Every 500	Every 1000 hrs
General	Check falling off, breakage of parts		◇					
	Check loosened bolts & nuts, retighten		◇					
	Check engine condition		◇					
	clean		□					
Fuel system	Check oil level, resupply		○					
	Drain water-separator, clean element	Drain	◇					
		Clean			□			
	Fuel filter element	Clean			□			
		Replace					●	
	Drain water and sediment from fuel tank			□				
Cooling water system	Cooling water	Check, supply	◇					
		Check water leakage	◇					
	Check and clean radiator fin						□	
	Check and clean cooling water system (drain water)						□ within one year	
	Check and adjust fan belt tension		◇			□		
Air cleaner	Element	Check, clean				□		
		Replace					●	
Lube oil	Engine oil	Check, supply	◇					
		Replace		● 1 st time		●		
	Replace engine oil filter			● 1 st time		●		
	Travel reduction gear oil	Check, supply				○		
		Replace			● 1 st time			●
Hydraulic system	Hydraulic oil	Check, supply	◇					
		Replace						●
	Clean suction filter					□ 1 st time		□
	Replace return filter					● 1 st time		
	Check for abnormality of hydraulic pump		◇					
Grease	Check grease-up positions, grease	Refer to section "Start-up Inspection" for where to check.	△ Before operation					

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