



# **YANMAR Combine Harvester**

## **Model AW448T**

### **Regular Inspection/ Maintenance Manual**



**Yanmar Agricultural Machinery (Thailand) Co LTD**

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## 1. Yanmar Combine Harvester Inspection and Maintenance

Due to the machine's operating, vibration, and wearing of the machine parts changes in load and the unique characteristics of the environment in which farming machines have to operate when working, the technical conditions of the harvester will deteriorate, reducing machine's efficiency, and coordination between different sections, even leading to serious accidents. To prevent the above from taking place and ensure that the harvester operates normally and prolong its working life it is necessary to subject each and every section, every part and component to inspection, cleanup, tightening and tuning and when needs be, replacement of part. This is called the harvester's inspection and maintenance.

### 1. Routine maintenance

No	Content of inspection and maintenance	Item
1	Clean up weeds and straw wound between the driving sprocket and axles, clean up weeds and straw wound on the driving pulley axles	
2	Clean up soil and straw that have got into the pulley grooves	
3	Check the spring for tension of pick-up chain to see if it is ok. If tension is not adequate, remove chain link	1-10
4	Check the pick-up tine, replace in case of serious deformation or damage.	1-2
5	Lubricate moving chains, oil nipples, and cutting blades. Clean up soil, weeds and straw on the cutting blades. Check the blade wearing and upper/lower blade clearance.	
6	Check the retaining pin where the cutting shaft 1 and 2 are joined. In case of looseness, hammer it to right	1-36
7	Clean up all the cleaning ports. (chiefly the two spiral ports)	
8	Clean up straw and weeds on the concave sieve and shaking sieve in the threshing chamber (very important when the crops are green or high moisture). Check the concave sieve wearing and replace when necessary <ul style="list-style-type: none"> <li>● <b>Refrain from flushing with water the electric elements, shaking sieves and all the spirals as that may cause trouble or rust on the parts</b></li> </ul>	2-12 2-13 2-14
9	Check the threshing knife and grind or replace when necessary	2-10 2-11
10	Check on the threshing teeth, invert them or replace when necessary	2-3 2-15
11	Check and adjust the clearance between the straw holder bed and feed chain to 0 , lubricate the straw holder bed spring	2-20 2-21
12	Check crawler tension and adjust if necessary. Soil, straw and weeds that have got into the crawler sprocket, track roller, idling wheel, carrier roller, frame and range shift must be cleaned up as that will increase driving impedance, reduce power output and cause undue wearing of crawler and crawler sprockets	3-3 - 3-19
13	Check and clean up air filter element, pre-cleaner, hydraulic oil cooler, radiator screen and engine dust hood	4-4 - 4-9
14	Check engine oil, cooling water, electrolyte for leakage	4-10 - 4-13
15	Fill the fuel tank up <ul style="list-style-type: none"> <li>● <b>Be sure to let the fuel settle for over 48 hours before filling</b></li> </ul>	
16	Start engine and check all sections operate normally (including checking to see if the sensor of threshing depth are activated)	5-3 - 5-7

## 2. Regular maintenance

### 2.1 Inspection /maintenance at 50 hours (break-in period)

No	Content of inspection and maintenance	Item
1	Finish the above described routine maintenance	
2	Check the tension of the chains and belts.	1-2
3	Check the free play of threshing clutch lever and cutting clutch lever.	1-20 2-59
4	Check crawler tension.	3-5,3-6
5	Check on the operating of the steering system.	3-25
6	Tension of the fan belt (first time)	4-9
7	First time change of engine oil and filter. Do that at every 100 hours hereafter.	4-10,11, 12
8	Water separator must be drained every 50 hours and cleaned up every 100 hours.	4-2

### 2.2 Inspection and maintenance at every 100 hours

No	Content of inspection and maintenance	Item
1	Finish the inspection and maintenance at every 50 hours as described above.	
2	Check on the tension of Cutting clutch, threshing clutch and driving belt	1-19 2-59 3-1
3	Check all the safety fuses and warning devices	5-6,7
4	Replace the engine oil at every 100 hours	4-10

### 2.3 Inspection and maintenance at every 200 hours

No	Content of inspection and maintenance	Item
1	Finish the inspection and maintenance at every 100 hours as described above	
2	Check on the tension of cutting clutch, threshing clutch and driving belt	1-19 2-59 3-1
3	Dismount the generator and clean up (refrain from hitting with hard object the motor's magnet)	5-2
4	Check all the safety fuses and warning devices	5-2
5	Check on the wearing of the re-threshing drum teeth and invert direction when necessary	5-6,7,8
6	Apply grease where the spirals join and the re-threshing drum spline.	2-15
7	Check clearance and wearing of the cutting blades. Adjust or replace if necessary.	2-42,2-17
8	Check on the bearing /bearing sleeve of the driving tension arm, replace or apply lubricant when necessary	2-46,47
9	Check on the crawler sprockets for wearing. Replace or exchange right and left if possible.	3-9,3-10
10	Check the cooling system water pipes for leakage (especially the water drainage pipe). Replace water separator element every 200 hours)	4-2

### 2.4 Inspection and maintenance at every 300 hours

No	Content of inspection and maintenance	Item
1	Check wearing of star wheels. Exchange wheels left and right or replace if necessary.	1-11,12
2	Check up and tighten all bolts of the cutting section.	

## 2.5 Inspection and maintenance at every 400 hours

No	Content of inspection and maintenance	Item
1	Finish the inspection and maintenance at every 300 hours as described above	
2	Check up on the wearing of the bearings and oil seals at the driving link-lever of the cutting blades	1-16,17,18
3	Check up on the wearing of the guide rail of pick-up chain and upper conveying chain. Repair or replace if necessary.	1-6,1-7
4	Check distance of upper convey chain guide rails. Replace if it exceeds 30 mm.	1-28,29
5	Check wearing of the pick-up sprocket flat key. Replace if it is seriously worn.	1-8
6	Check wearing of star wheels. Replace if it is seriously worn out.	1-11
7	Check wearing of guide rod and anti-wind rods and adjust them if necessary.	1-34,1-41
8	Check one way clutch, clean up and lubricate. ● <b>Be sure to keep the one way clutch clean. When assembling, be sure to apply the Yanmar-exclusive NSK grease</b>	3-21,22
9	Check wearing of tension rollers and replace when wearing is serious.	1-5,2-52 1-31
10	Clean up accelerator wire, cutting clutch wire, straw discharging switch wire and lubricate them.	
11	Check up on all winnower fan bearings and replace if necessary	2-34
12	Check the height of each blade of the spirals.	2-37,38, 39,41
13	Check bearing at the top of 2nd lift conveyor and replace if necessary.	2-45
14	Check wearing of grain lift conveyor vane and repair or replace if wear seriously.	2-40
15	Check tension roller bearings of threshing belt and replace if it is seriously worn.	
16	Check wearing of concave screen retainers. If much un-threshed grains, they must be replaced	2-14
17	Check wearing of re-threshing drum teeth and replace them when necessary.	2-15
18	Check wearing of straw cutter bearing and replace if wearing is serious.	2-48
19	Check suction fan for deformation and cracks.	2-33
20	Apply grease to the suction fan spline.	2-35
21	Check the tension arms of the driving belt.	3-2
22	Check axle oil seal and replace if oil leaks.	3-18
23	Check whether combine stops moving when HST is in neutral position. If not, adjust HST lever links.	3-22
24	Check and adjust the free play of the brake pedal	
25	Change oil in gear boxes and transmission.	3-20,2-62, 63,64
26	Check up on generator shaft 6201, replace when necessary	5-2
27	Replace air filter element every 400 hours	4-5,4-6
28	Check on the connections of the electrical wiring, clean them of dirt and grease	
29	Change hydraulic oil and filters and make sure that all hydraulic oil pipe connections do not leak.	6-2,6-3

## 2.6 Inspection and maintenance at every 500 hours

No	Content of inspection and maintenance	Item
1	Finish inspection and maintenance at every 400 hours as described above	
2	Check wearing of the shock absorber rubber of the pick-up and replace if necessary.	
3	Check wearing of pick-up chain rollers and replace if necessary.	1-4
4	Check wearing of the upper conveyor chain tension roller and the lower conveyor chain tension roller and replace them if wearing is serious.	1-24,32,33 1-22,23,27
5	Check to see if chaff discharge lever moves smoothly.	2-1
6	Clean up fuel lines (fuel tank, fuel pipe, water separator and fuel filter element etc) and replace in case of damage.	4-1,4-2 4-3
7	Check battery breather. Clean up rust/dirt on battery and cable contact faces.	5-1

## 2.7 Inspection and maintenance at every 800 hours

No	Content of inspection and maintenance	item
1	Finish inspection and maintenance at every 400 / 500 hours as described above	
2	Check wearing of the guide rails of all chains and repair or replace if wear seriously.	1-6,7,28,29,41
3	Check wearing of rake-in belts and replace if wear seriously.	1-21
4	Check linearity of cutter blade and if deviation exceeds 2mm, correct it with washers when re-assembling.	1-15
5	Check cutter blade drive arm support poles (3 pieces), they need constant pre-tightening	1-17
6	Check wearing of all convey chains and replace in case of serious wearing.	
7	Check up on the cutting section lower convey drive sprocket, assist convey drive sprocket and pick-up roller and replace when necessary.	1-4
8	Check wearing and cracking of all belts and replace if necessary.	
9	Check wearing of dusting brush. When grain are carried to outside and cause loss, it must be replaced.	2-2
10	Check clearance of straw holder bed and feed chain. If it can not adjust to 0 mm, replace straw holder plate.	2-19
11	Check wearing and ageing of rubber seals of the shaking sieve.	2-28
12	Check for loosening of the shaking sieve fin seat and replace where the loosening is serious.	2-27
13	Check wearing of the shaking sieve fin and the plastic bearings and replace if wearing is serious.	2-25,26
14	Check up wearing of all screw conveyor spirals and replace if wearing is serious.	2-37,38,39,41
15	Change oil in all gearboxes and transmission.	
16	Check up on all rotating wheels in the driving section and their bearings and oil seals, replace where necessary	
17	Check up on the wearing of crawler guides.	3-7,8
18	Check up on starting motor bearings 129129-77230, 129129-77240, replace where necessary.	
19	Clean off scaling in the cooling water system	
20	Check to see that auto/manual threshing depth sensors are effective.	5-5
21	Check for cracking on cutting section lift cylinder support bases and weld if there is any crack.	

## 2.8 Inspection and maintenance at every 1500 hours

No	Content of inspection and maintenance	Item
1	Finish inspection and maintenance at every 800 hours as described above	
2	Check the cutting section frame is leveled. If height difference exceeds 30 mm, adjustment must be made.	
3	Check wearing of pick-up chain case and covers. Repair or replace if wear seriously.	
4	Check the bevel gears 22 of the 2 cutting shafts. If there are serious cracks or wearing, they must be replaced by pairs.	1-37
5	Check all tension arm bearings and replace where necessary	
6	Check the threshing drum top plate, rear reinforcement plate and the inlet. In serious cases, reinforcement plates must be welded on	2-7,2-8
7	Check wearing of chaff discharge fins and replace if wearing is serious.	2-1
8	Check wearing of the feed chain guide rail. Repair by welding or replace if necessary.	2-22
9	Check wearing of the threshing drum hole cover and invert directions or replace if necessary. Check wearing of the re-threshing drum bearing link plate.	2-4,16
10	Check wearing of re-threshing drum shaft diameter and bearing (front and rear) and replace if necessary.	2-17

11	Check wearing of the straw discharge chain guide rail, tension wheel and bearings. Repairs or replace if necessary.	2-49,2-52
12	Check wearing and position of the straw discharge bars and guide bar. Adjust or replace if necessary.	2-50,51
13	Check straw cutter shafts and when bearings have lost motion, replace them.	2-47
14	Check the spline of the suction fan and replace if wearing is serious.	2-35
15	Check the accelerator wire, speedometer wire, cutting clutch wire for seizure or damage, clean up or replace.	
16	Check on engine valve clearance (0.15-0.25 mm), injection pressure of the injection nozzle (200-220kgf/cm <sup>2</sup> ) and adjust them or replace if necessary.	
17	Check engine oil drainage pipe (rubber hose) for ageing and replace if necessary.	
18	Check the air inlet/exhaust pipes for ageing, cracking and replace if necessary.	
19	Check the cooling water pipes for leakage or ageing and replace if necessary.	
20	Check the threshing depth motor. When the nylon worm gear is damaged, replace. Check limit switch and the clearance between the limit point of upward conveyance and the limit switch	1-40
21	Check all hydraulic pipes, connections, cylinders for leakage and replace if necessary.	

### 2.9 Inspection and maintenance after over 1500 hours

No	Content of inspection and maintenance	Item
1	Finish the inspection and maintenance at every 1500 hours as described above	
2	Check crack of all convey chain cases. Repair by welding or replace if necessary.	
3	Check wearing of all convey chain guide rails and replace if necessary.	1-28,1-29
4	Check the spline at where spirals join and replace where wearing is serious.	2-44
5	Check chassis for cracking and repair by welding or replace where necessary.	2-4
6	Check the bearings and shaft sleeves in the wheel systems and replace where necessary.	
7	Check wearing of the spline axle shaft and replace is wearing is serious.	3-19
8	Check HST oil seal and wearing of the power input shaft spline sleeve. Replace the oil seal if it leaks and replace the spline sleeve if it is worn out.	
9	Check the lift cylinders for oil leakage and repair or replace if necessary.	
10	Check fuel injection pump plunger and replace where wearing is serious.	4-16
11	Check injection nozzle needle valve and replace if wearing is serious.	4-16
12	Check for erosion of the silencer and repair or replace where there is burnt-through.	
13	Change the coolant.	
14	Replace all rubber oil pipes and water pipes.	
15	Replace the battery.	5-1

3. Maintenance after season (for long time disuse)

No	Content of inspection and maintenance	Item
1	Thoroughly clean up the combine, grains remained at any location will invite rats, it will make their nests there and gnaw the cables.	
2	Retract the side crop-dividing poles	
3	Lower the cutting section.	
4	Set all levers to OFF position.	
5	Loosen up the crawler and belts in all sections and place flat wooden planks beneath crawlers	
6	Apply rust proof oil to exposed locations that are easy to grow rusty and apply grease to all the grease nipples of the chassis wheel systems	
7	Completely drain the water tank. <ul style="list-style-type: none"> <li>● <b>Open the radiator cover only after engine has stopped and temperature has dropped to 40 °C, turn the flywheel manually to thoroughly drain the cooling water.</b></li> </ul>	4-13
8	Fill the fuel tank up with fuel as empty tank can produce condensate which will cause rust in the tank walls.	4-3
9	Fully charge the battery and remove it from the combine and keep it in cool and well-ventilated place. <ul style="list-style-type: none"> <li>● <b>Clean up the battery terminals with sand paper, and apply grease to prevent erosion.</b></li> <li>● <b>When dismantling the battery, be sure to remove the negative terminal first and follow up with the positive terminal. When mounting it, do in reverse order.</b></li> <li>● <b>If the battery is to be kept mounted on combine, be sure to remove the connection wire from negative terminal. However, even not in use, the battery will discharge and that is why one must charge it once a month. Where possible one should start the machine once in a month and keep it running for over 10 minutes.</b></li> </ul>	5-1
10	Keep the combine in a dry, well ventilated and free from rain.	



## 2. Figures for inspection and maintenance of different Sections

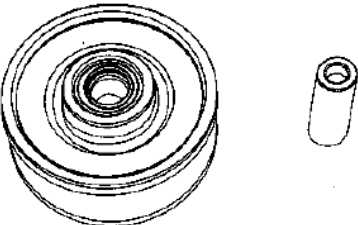
### 1. The Cutting Section

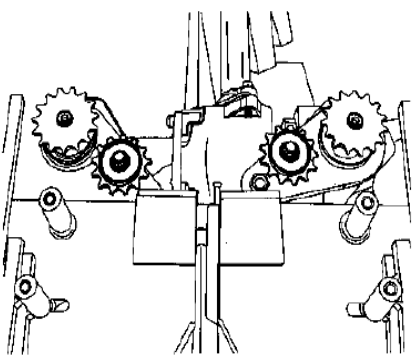
Section	Item	Content	Crop divider clearances		Suited to type: AW448T	
Cutting	1--1		Standard (mm)	Limit value (mm)		
			See figure left			
			Adjust each crop divider as per dimension requirements shown in figure. Failing that there may be poor cutter driving and poor performance of stalk- conveying etc. If crop divider is deformed or damaged, it shall be replaced			
			No	Description	Part No	Q'ty.
			1	Board Rr, large grass	1E9060-18000	1
			2	Board, small grass	1E8550-18300	2
			3	Board C, large grass	1E9060-18151	1
			4	Board L, large grass	1E9060-18251	1

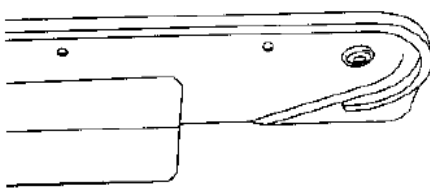
Section	Item	Content	Pick-up tine deformation		Suited to type: AW448T	
Cutting	1-2		Standard (mm)	Limit value (mm)		
			See figure on left			
			Visually check that the pick-up tines are at right angle with the pick-up plate. If they are everything is ok. In case of serious deformation or damage replace them			
			No	Description	Part No	Q'ty.
				Pick-up tine 129.5	1E8559-14291	80

Section	Item	Content	Staggering of the pick-up tine		Suited to type: AW448T	
Cutting	1-3		Standard (mm)	Limit value (mm)		
			20-30			
			Up/down staggering between the tines of adjacent pick-up chains should be 20-30 mm. Attention: when re-assembling chains after dismantling them, be sure to set the chain links on the same horizontal level, otherwise the tines will get confused.			
			No	Description	Part No	Q'ty.

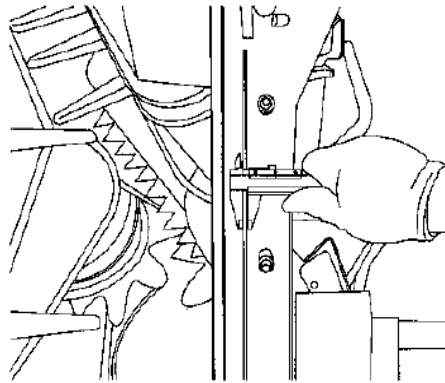
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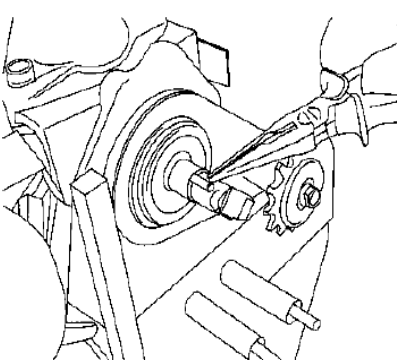
Section	Item	Content	Wearing of the internal diameter of the pick-up chain roller		Suited to type: AW448T	
Cutting	1--4					
			Standard (mm)		Limit value (mm)	
			Diameter 15		Diameter 16	
			Measure the inner diameter of the pick-up chain roller, if it exceeds 16 mm one must replace the roller bushing.			
			No	Description	Part No	Q'ty.
			1	Bushing 15×18×25	1E6310-27630	4

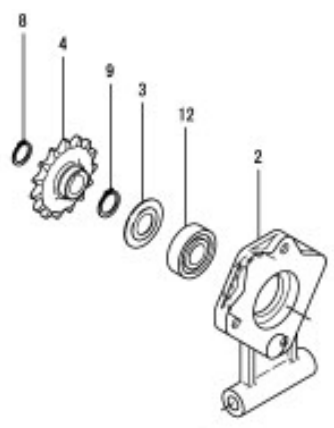
Section	Item	Content	Pick-up sprocket and tension sprocket		Suited to type: AW448T	
Cutting	1-5					
			Standard (mm)		Limit value (mm)	
			Diameter 15		Diameter 16	
			Replace them if excessive wear between teeth is found			
			No	Description	Part No	Q'ty.
			1	SPROCKET 15	1E8550-13240	4
2	SPROCKET 13,TENSION	1E8559-14100	4			

Section	Item	Content	Pick-up panel guide rail		Suited to type: AW448T	
Cutting	1-6					
			Standard (mm)		Limit value (mm)	
			12		2	
			Measure the thickness of panel guide rail and repair or replace if there is excessive wearing			
			No	Description		Q'ty.
			1	COVER R, PICK-UP CASE	1E8922-14210	1
2	COVER L, PICK-UP	1E8922-14200	1			
3	COVER CL, PICK-UP	1E9060-14220	1			
4	COVER CR, PICK-UP	1E9060-14230	1			

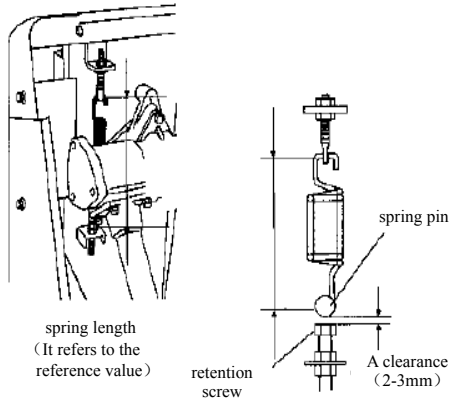
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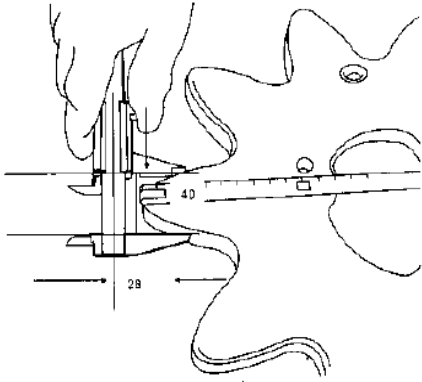
Section	Item	Content	Wearing of pick-up guide rail		Suited to type: AW448T
Cutting	1-7				
	Standard (mm)		Limit value (mm)		
	3		1.5		
	Measure the thickness of pick-up finger guide rails both upper and lower, repair or replace where they are excessively worn				
	No	Description	Part No	Q'ty.	
	1	RAIL R, TINE	1E9060-13340	2	
	2	RAIL R, AUX.TINE	1E9060-13380	4	
3	RAIL L, TINE	1E9060-13300	2		
4	RAIL L, AUX.TINE	1E9060-13350	4		

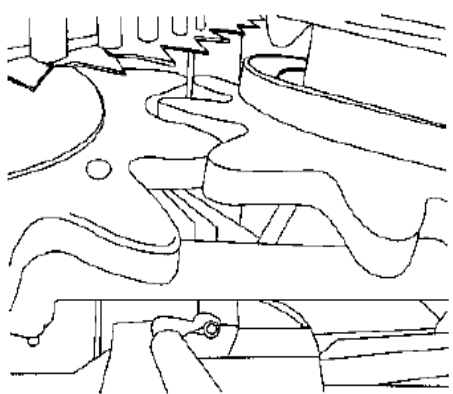
Section	Item	Content	Wearing of pick-up driving shaft key		Suited to type: AW448T
Cutting	1-8				
	Standard (mm)		Limit value (mm)		
	5		4.5		
	Hold the pick-up shaft still and gently turn the driving sprocket. If one feels it is very loose that means that the flat key is worn. If the wearing is in early stage one can turn the flat key for 90 degree when mounting it. If it is excessively worn, it must be replaced				
	No	Description	Part No	Q'ty.	
	1	Key 5×12	22550-050121	4	
	2	Key 5×15	22551-050150	4	
3	SPROCKET 15	1E8550-13240	4		

Section	Item	Content	Wearing of pick-up seat		Suited to type: AW448T
Cutting	1-9				
	Standard (mm)		Limit value (mm)		
	Replace it when the shell has cracks and damages. When bearings are without oil or damaged it needs to be replaced and if the chain sprocket is excessively worn, it needs to be replaced				
	No	Description	Part No	Q'ty.	
	1	SEAT L	1E8920-13200	3	
	2	SEAT, PICK-UP CL	1E8920-13210	1	
	3	Bearing 6203	24104-062034	4	
4	SPROCKET 15	1E8550-13240	4		

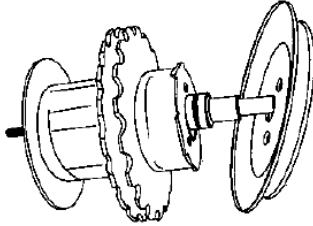
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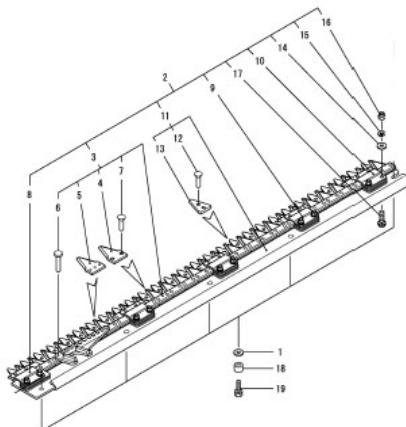
Section	Item	Content	Tension of pick-up chain		Suited to type: AW448T	
Cutting	1-10		Standard (mm)	Limit value (mm)		
 <p>spring length (It refers to the reference value)</p> <p>retention screw</p> <p>spring pin</p> <p>A clearance (2-3mm)</p>			223-228 (AW448T)			
			<p>Adjust the tension length of the spring and the clearance A so that it is 2-3 mm. Where there is no room for tension, one has to remove a number of chain links before adjusting. At the same time all four chains must to subjected to same adjustment</p>			
			No	Description	Part No	Q'ty.
			1	Pick-up chain 140	1E8920-13460	4

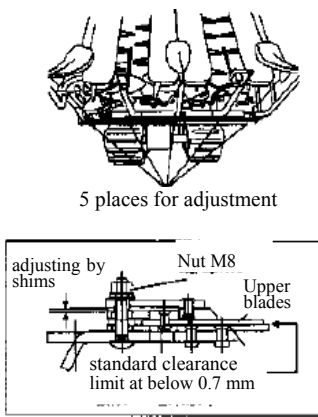
Section	Item	Content	Wearing of the star wheel		Suited to type: AW448T	
Cutting	1-11		Standard (mm)	Limit value (mm)		
 <p>40</p> <p>28</p>			40 (tooth circle diameter)	36		
			<p>Measure the width of the star wheel teeth. As the star wheel turns in one direction, if wearing is not much, the wheel can be put in reverse side. But when wearing is serious they have to be replaced as that will lead to disorderly stalks, poor threshing effect and clogging</p>			
			No	Description	Part No	Q'ty.
			1	Star wheel 330	1E8550-21000	4

Section	Item	Content	Vertical Nonalignment of star wheels		Suited to type: AW448T	
Cutting	1-12		Standard (mm)	Limit value (mm)		
			0-5	5		
			<p>Check the star wheels engagement and make them align to each other by adjusting the washer. Where the vertical difference exceeds 5mm one can use washers for fine adjustment so that difference drops below 5 mm. Where the star wheel gear support has deformation one has to put it right</p>			
			No	Description	Part No	Q'ty.

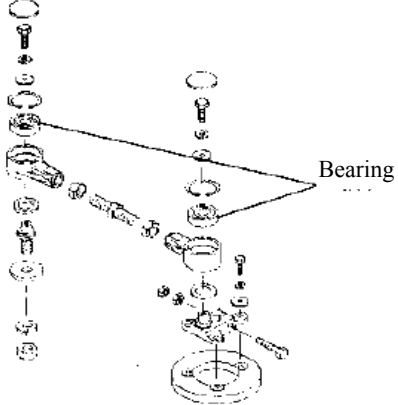
### 1. The Cutting Section

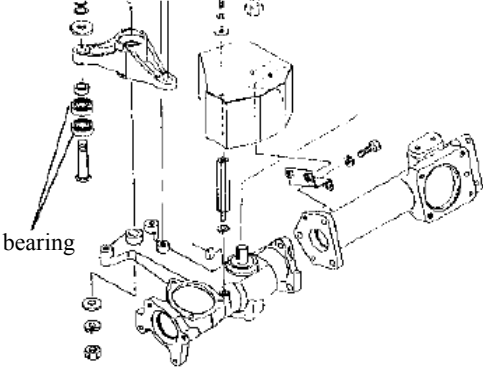
Section	Item	Content	Wearing of outer star wheel bearing		Suited to type: AW448T	
Cutting	1-13		Standard (mm)	Limit value (mm)		
			Check the wearing of the star wheel bearing and replace if the wearing is excessive.			
			No	Description	Part No	Q'ty.
			1	Bearing 6202UU	1E8552-06220	4

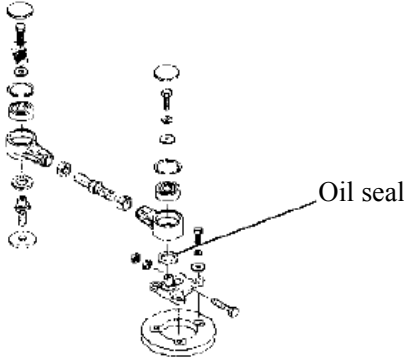
Section	Item	Content	Inspection of cutting blades		Suited to type: AW448T	
Cutting	1-14		Standard (mm)	Limit value (mm)		
			See figure			
			Check the cutting blades. If the blades are without any tooth or broken or deformed already, replace them. If due to the deformation of rivets the blades are slanting, one has to replace the rivets.			
			No	Description	Part No	Q'ty.
				Knife	1E8540-17530	28
				Knife 2	1E8540-17480	23
				Knife 3	1E8540-17490	4
				Rivet 5×23	1E8990-17540	12
				RIVET 5.0X16, FLAT HD	22631-500160	46

Section	Item	Content	Clearance between cutting blades		Suited to type: AW448T	
Cutting	1-15		Standard (mm)	Limit value (mm)		
 <p>5 places for adjustment</p>			Measure clearances between upper blade and fixed blade; where it is excessive adjustment needs to be made using washers. After adjusting, be sure to clean up and apply lubricant and tighten M8 bolts. Move manually the moving cutting blade assembly to be sure that it can operate normally.			
			No	Description	Part No	Q'ty.

### 1. The Cutting Section

Section	Item	Content	Wearing of bearing of the cutting blade driving crankshaft	Suited to type: AW448T		
Cutting	1-16			Standard (mm)	Limit value (mm)	
			Judge the bearings' wearing by the bearings' operation. If wearing is serious it needs to be replaced, otherwise the bearing of the driving shaft may get damaged. Note: AW448T has two locations of right and left			
			No	Description	Part No	Q'ty.
			1	Bearing	24104-063034	2

Section	Item	Content	Wearing of bearing of the cutter blade driving arm	Suited to type: AW448T		
Cutting	1-17			Standard (mm)	Limit value (mm)	
			If bearings wear seriously it needs to be replaced, otherwise the bearing of the driving shaft may get damaged. Note: AW448T has two locations of right and left.			
			No	Description	Part No	Q'ty.
			1	Bearing	24104-062034	2

Section	Item	Content	Wearing of oil seal of cutting blade drive	Suited to type: AW448T		
Cutting	1-18			Standard (mm)	Limit value (mm)	
			See figure			
			Check the wearing of the oil seals. Replace if wearing is serious. Note: AW448T has two locations of right and left			
			No	Description	Part No	Q'ty.
			1	Oil seal VC254005	24430-254005	2

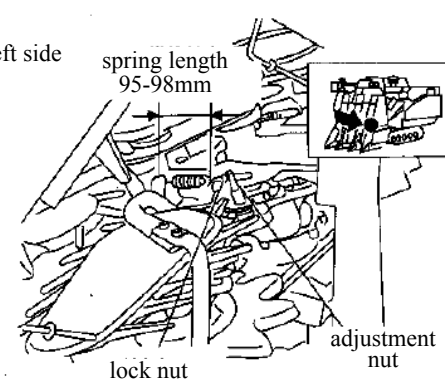
### 1. The Cutting Section

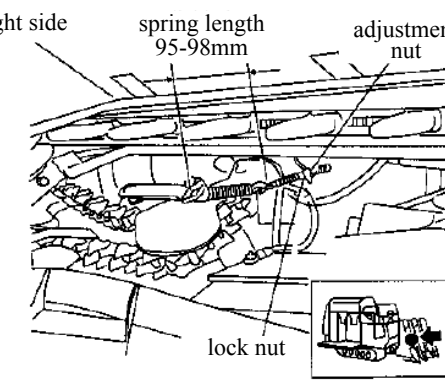
Section	Item	Content	Tension of Cutting clutch belt		Suited to type: AW448T
Cutting	1-19				
			Standard (mm)		Limit value (mm)
			60 (clutch lever free play)		
			79-81 (spring length B)		
			<p>Check cutting clutch lever free play. Standard free play is 60 mm. Adjust clutch wire (I in the figure). Replace the belt if it is seriously damaged.</p>		
No	Description		Part No	Q'ty.	
1	V-BELT LB60-AG6		1E8230-51600	1	

Section	Item	Content	Movement of Cutting clutch wire		Suited to type: AW448T	
Cutting	1-20					
<p>inspection: quarterly oil application: quarterly</p>			Standard (mm)		Limit value (mm)	
			Smooth movement			
			<p>Check the action of the Cutting clutch wire. If seizure is detected, apply oil at both ends of the wire</p>			
			No	Description		Part No
1	Cutting clutch wire		1E8559-65180	1		
2				1		

Section	Item	Content	Tension of the rake-in belt		Suited to type: AW448T	
Cutting	1-21					
<p>Fastening nut for tension wheel</p> <p>Deflection 10-15 mm</p>			Standard (mm)		Limit value (mm)	
			15-20			
			<p>Press with thumb the mid part of belt and adjust the belt deflection. If it can not be adjusted, the belt should be replaced</p>			
			No	Description		Part No
1	Rake-in belt A33		1E8559-22280	4		

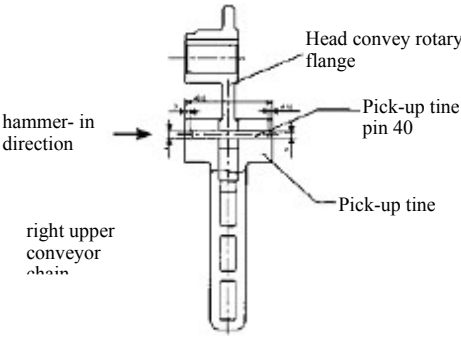
### 1. The Cutting Section

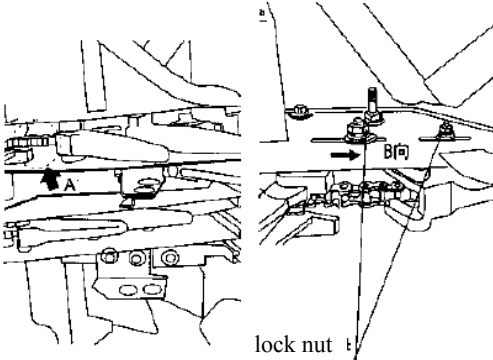
Section	Item	Content	<b>Tension of left lower conveyor chain</b>		Suited to type: AW448T	
Cutting	1-22		Standard (mm)	Limit value (mm)		
left side  spring length 95-98mm lock nut adjustment nut spring length 79-81mm	Standard (mm)		Limit value (mm)			
	95-98		Adjust the length of the tension spring, so that it is between 95 to 98 mm. If the chain is excessively worn, replace it.			
	No	Description	Part No	Q'ty.		
	1	Left lower conveyor chain	1E8550-23151	1		
2						

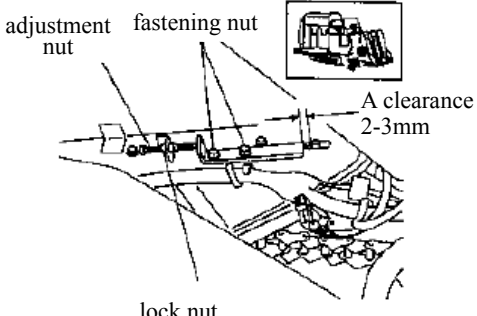
Section	Item	Content	<b>Tension of right lower conveyor chain</b>		Suited to type: AW448T	
Cutting	1-23		Standard (mm)	Limit value (mm)		
right side  spring length 95-98mm lock nut adjustment nut	Standard (mm)		Limit value (mm)			
	95-98		Adjust the length of the tension spring, so that it is between 95 to 98 mm. If the chain is excessively worn, replace it.			
	No	Description	Part No	Q'ty.		
	1	Right lower conveyor chain	1E8550-23161	1		
2						



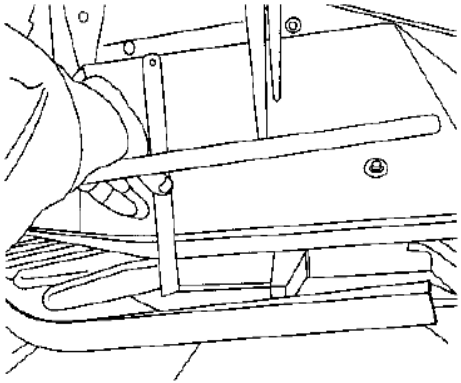
### 1. The Cutting Section

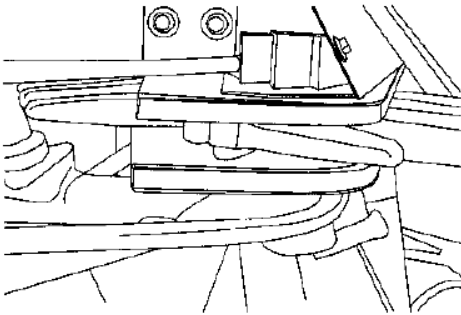
Section	Item	Content	Replacing the head convey pick-up tine in right		Suited to type: AW448T	
Cutting	1-25					
			Standard (mm)	Limit value (mm)		
			<p>When mounting the pick-up tines in right head convey, be sure to hammer in the tine pin 40 into pick-up tine 100 and the hole in the rotary flange as shown in the figure.</p>			
			No	Description	Part No	Q'ty.
				TINE 100	1E8800-24400	3

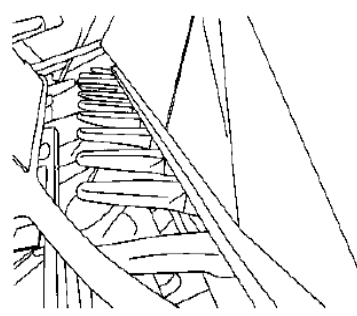
Section	Item	Content	Tension of left head convey chain		Suited to type: AW448T	
Cutting	1-26					
			Standard (mm)	Limit value (mm)		
			<p>Adjust the fastening nut so that when pressed with your finger the chain has a deflection of 3-7 mm at section A. adjust the chain links. If the chain is seriously worn, replace it</p>			
			No	Description	Part No	Q'ty.
			1	Chain L60	1E8800-25800	1

Section	Item	Content	Tension of right upper convey chain		Suited to type: AW448T	
Cutting	1-27					
			Standard (mm)	Limit value (mm)		
			<p>Loosen the fastening nut and adjust the adjustment bolt so that clearance A is 2-3 mm. Replace the chain if it is excessively worn.</p>			
			No	Description	Part No	Q'ty.
			1	Upper convey chain 217, R	1E8550-26823	1

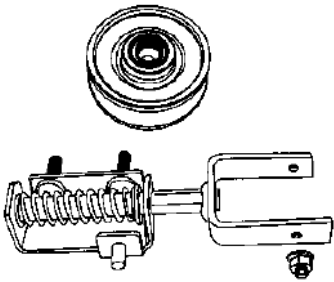
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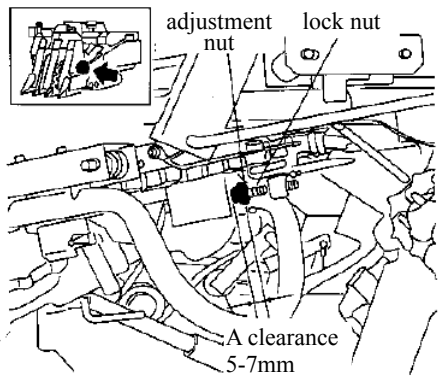
Section	Item	Content	Clearance in guide rails of right upper convey chain	Suited to type: AW448T	
Cutting	1-28				
	Standard (mm)		Limit value (mm)		
	26		30		
	Measure the clearance between the upper and lower guide rails of the upper convey chain. If clearance is excessive pick-up tines are likely to be derailed.				
	No	Description	Part No	Q'ty.	
	1	RAIL R, CASE TINE	1E8550-26450	1	
	2	RAIL, CASE CORNER UPR	1E8550-26480	1	
	3	RAIL R, COVER TINE	1E8550-26780	1	
4	RAIL, CVR.CORNER UPPR	1E8550-26800	1		


Section	Item	Content	Clearance in guide rails of left upper convey chain	Suited to type: AW448T	
Cutting	1-29				
	Standard (mm)		Limit value (mm)		
	26		30		
	Measure the clearance between the upper and lower guide rails of the upper convey chain. If clearance is excessive pick-up tines are likely to be derailed.				
	No	Description	Part No	Q'ty.	
	1	RAIL L, CASE URETHANE	1E8550-25220	1	
	2	RAIL L, CVR.URETHANE	1E8550-25260	1	

Section	Item	Content	Deformation and wearing of upper convey chain pick-up tines	Suited to type: AW448T	
Cutting	1-30				
	Standard (mm)		Limit value (mm)		
	Check visually the upper chain pick-up tines for deformation and wearing. If such deformation and wearing are affecting normal operation, replace them.				
	No	Description	Part No	Q'ty.	
	1	Pick-up tine 129.5 (left)	1E8559-14291	10	
	2	Pick-up tine 129.5 (right)	1E8559-14291	27	

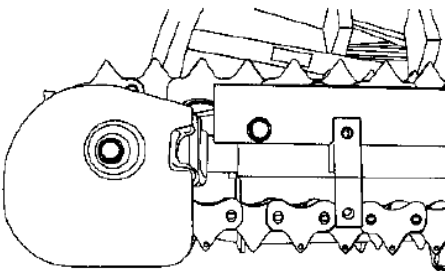
### 1. The Cutting Section

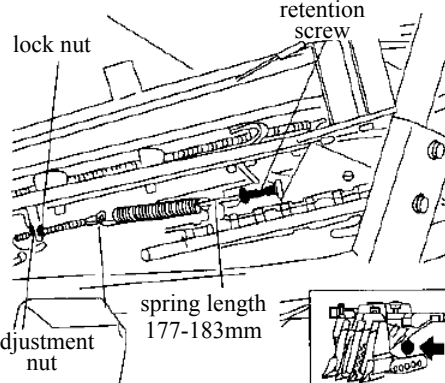
Section	Item	Content	<b>Wearing of the upper convey chain tension wheel</b>		Suited to type: AW448T
Cutting	1-31				
			Standard (mm)		Limit value (mm)
			15		16
			Measure the internal diameter of the tension wheel, replace if the wearing is serious enough.		
No	Description		Part No	Q'ty.	
1	Pick-up wheel		1E8559-14350	2	

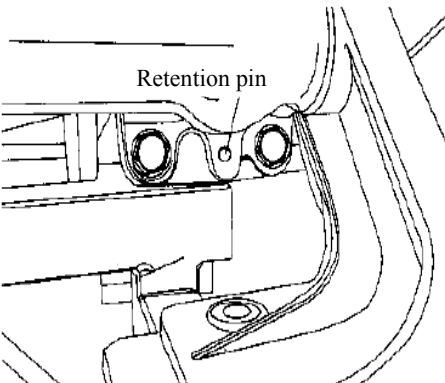
Section	Item	Content	<b>Tension of the vertical convey chain</b>		Suited to type: AW448T
Cutting	1-32				
			Standard (mm)		Limit value (mm)
			5-7		
			Loosen the fastening nut, and adjust the adjustment nut so that clearance A is 5-7 mm, replace the chain if it is seriously worn out.		
No	Description		Part No	Q'ty.	
1	Chain 30×46 L		1E8559-27151	1	

Section	Item	Content	<b>Wearing of vertical convey chain roller bearing</b>		Suited to type: AW448T
Cutting	1-33				
			Standard (mm)		Limit value (mm)
			Replace the bearing if it is without oil and damaged.		
No	Description		Part No	Q'ty.	
1	Bearing 6203 UU		24104-062034	1	

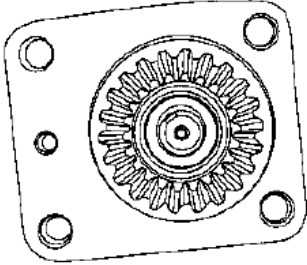
**1. The Cutting Section**

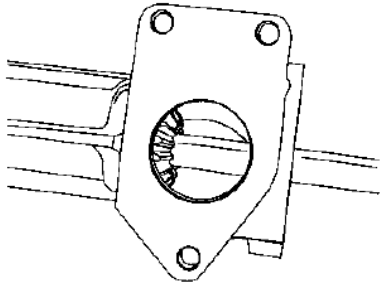
Section	Item	Content	Wearing of vertical convey chain guide plate		Suited to type: AW448T
Cutting	1-34				
	Standard (mm)		Limit value (mm)		
	38				
	Inspect the guide plate for ware and tear. If it is excessively worn out, repair or replace it.				
	No	Description	Part No	Q'ty.	
1	PLATE, CHAIN GUIDE	1E8559-27310	1		

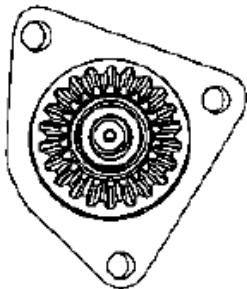
Section	Item	Content	Tension of assist convey chain		Suited to type: AW448T
Cutting	1-35				
	Standard (mm)		Limit value (mm)		
	177-183				
	Adjust the spring tension length so that it is between 177 to 183mm. If chain is excessively worn, replace it. Check the assist convey chain for deformation and make repairs.				
	No	Description	Part No	Q'ty.	
2	Assist convey roller 80x29	1E8559-27140	1		

Section	Item	Content	Retention pin at the joint of shaft 1 and shaft 2 of the cutting section		Suited to type: AW448T
Cutting	1-36				
	Standard (mm)		Limit value (mm)		
	In case the retention pin comes out, hammer it to its right place.				
	No	Description	Part No	Q'ty.	

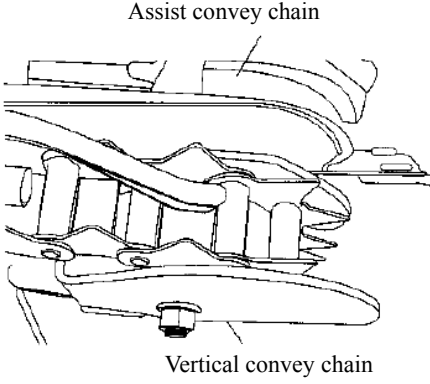
**1. The Cutting Section**

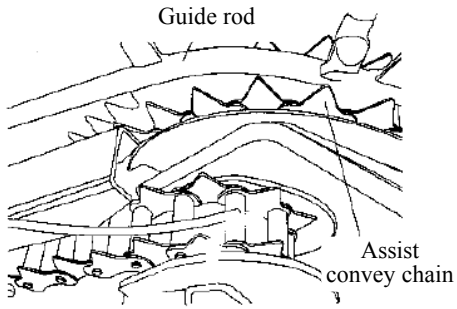
Section	Item	Content	<b>Inspection of the bevel gear and the O-ring</b>		Suited to type: AW448T
Cutting	1-37		Standard (mm)	Limit value (mm)	
			When such defects as obvious stepped wearing on the tooth surface and cracks in the tooth and damaged corners, it should be replaced.		
			No	Description	Q'ty.
			1	Bevel gear	1
			2	O-ring	1

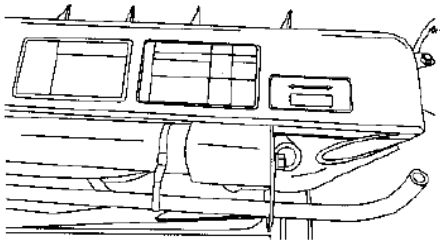
Section	Item	Content	<b>Wearing of pick-up horizontal bevel gear</b>		Suited to type: AW448T
Cutting	1-38		Standard (mm)	Limit value (mm)	
			When such defects as obvious stepped wearing on the tooth surface and cracks in the tooth and damaged corners, it should be replaced.		
			No	Description	Q'ty.
			1	Bevel gear	1

Section	Item	Content	<b>Wearing of pick-up lengthwise shaft bevel gear</b>		Suited to type: AW448T
Cutting	1-39		Standard (mm)	Limit value (mm)	
			When such defects as obvious stepped wearing on the tooth surface and cracks in the tooth and damaged corners, it should be replaced.		
			No	Description	Q'ty.
			1	Bevel gear	1

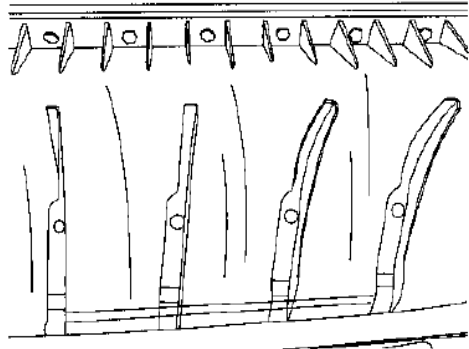
**1. The Cutting Section**

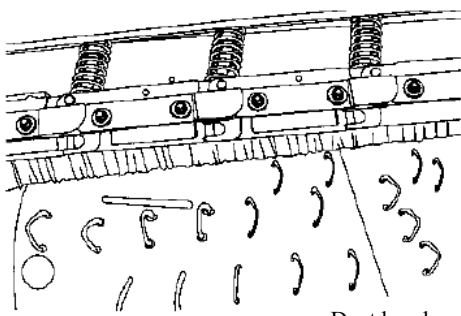
Section	Item	Content	Clearance between the vertical convey chain and the assist convey chain		Suited to type: AW448T	
Cutting	1-40		Standard (mm)	Limit value (mm)		
			Measure the clearance between the vertical convey chain and the assist convey chain the clearance at the deepest feed-in location should be 50-55 mm and at the shallowest location clearance should be 420-520 mm. Adjust by the vertical conveying stroke adjustment screw so that it is in a proper place and the vertical conveying reaches the above-mentioned limit.			
			No	Description	Part No	Q'ty.
			1			
			2			

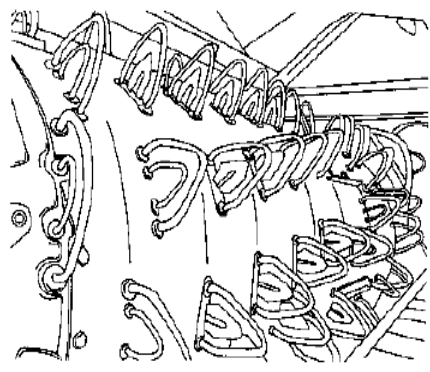
Section	Item	Content	Clearance between assist convey chain and the guide rod		Suited to type: AW448T	
Cutting	1-41		Standard (mm)	Limit value (mm)		
			Check and adjust the clearance between assist convey chain and the guide rod. Improper clearance will miss the stalks of straw when cutting volume is small and when volume is large, there will be clogging. The guide rod should be at the middle of the chain.			
			No	Description	Part No	Q'ty.

Section	Item	Content	Check the pick-up speed shift		Suited to type: AW448T	
Cutting	1-42		Standard (mm)	Limit value (mm)		
			Make sure that pick-up speed shift is set at "high speed" and "standard".			
			No	Description	Part No	Q'ty.

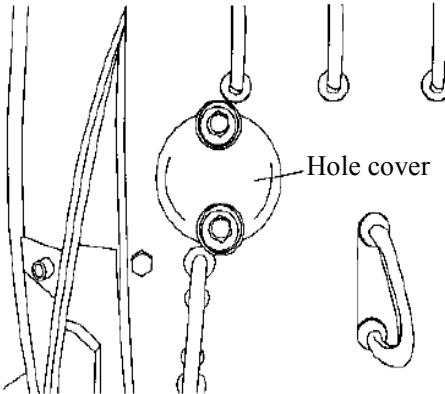
## 2. The Threshing Section

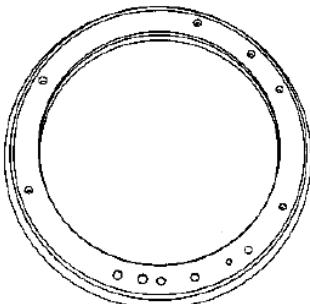
Section	Item	Content	<b>Chaff discharge lever, upper cover of threshing chamber</b>		Suited to type: AW448T
Threshing	2-1				
			Standard (mm)		Limit value (mm)
			Check to see if the chaff discharge lever moves smoothly. In case of seizure, dismount it and clean up and apply oil. In case the threshing chamber upper cover is worn through be sure to repair by welding.		
No	Description		Part No	Q'ty.	
10	VALVE, SCAVENGING		1E8550-38820	1	

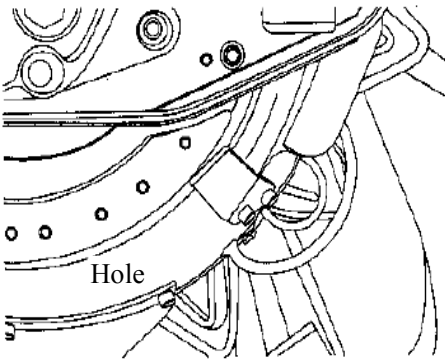
Section	Item	Content	<b>Dust brush</b>		Suited to type: AW448T
Threshing	2-2				
 <p style="text-align: center;">Dust brush</p>			Standard (mm)		Limit value (mm)
			Wearing or bristle fall-off can cause losses that grains are thrown with discharge straw.		
No	Description		Part No	Q'ty.	
1	BRUSH, PROTECT		1E8380-39584	1	

Section	Item	Content	<b>Wearing or deformation of threshing tooth</b>		Suited to type: AW448T
Threshing	2-3				
			Standard (mm)		Limit value (mm)
					3
			Check wearing of threshing teeth. As a threshing tooth wearing is on one side only, it can invert. However when wearing or deformation is excessive, it has to be replaced.		
No	Description		Part No	Q'ty.	
8	Threshing tooth O		1E8559-39310	12	
9	Threshing tooth S		1E8559-39320	8	
10	Threshing tooth T7		1E8559-39330	12	
14	Threshing tooth R7		1E8559-39340	108	
15	Threshing tooth S		1E8559-39400	56	

2. The Threshing Section

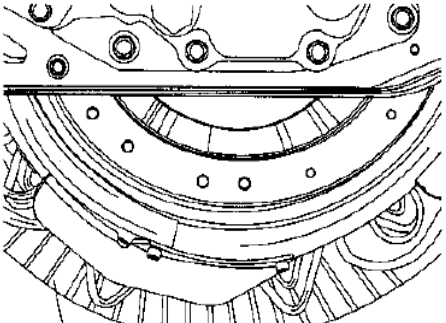
Section	Item	Content	Cover of the mounting hole of threshing drum		Suited to type: AW448T	
Threshing	2-4					
			Standard (mm)		Limit value (mm)	
			<p>Open the front/rear mounting hole covers at every 400 hours and tighten the fastening bolt of the threshing drum shaft. Failing that will increase the threshing drum's radial and axial bouncing, thereby causing damage.</p>			
			No	Description	Part No	Q'ty.
	1	Mounting hole cover	1E8559-39820	2		

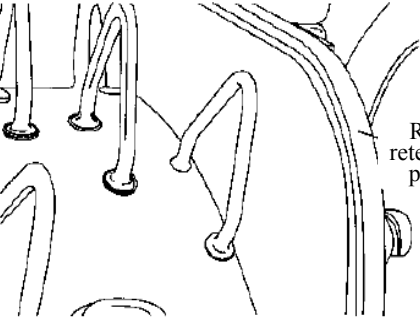
Section	Item	Content	Wearing of the threshing drum front case		Suited to type: AW448T	
Threshing	2-5					
			Standard (mm)		Limit value (mm)	
			<p>The front case serves to prevent winding straw. When it is worn out, be sure to repair by welding or replace it.</p>			
			No	Description	Part No	Q'ty.
	1	CASE CMP.	1E8559-39900	1		

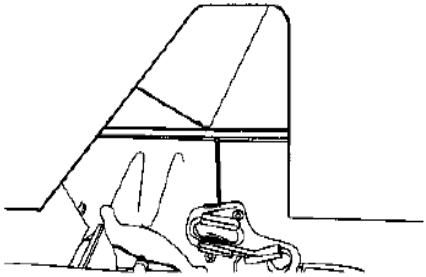
Section	Item	Content	Wearing of the threshing drum's front end cover		Suited to type: AW448T	
Threshing	2-6					
			Standard (mm)		Limit value (mm)	
			<p>Check up on the wearing of the threshing drum front-end cover. If it is in an early stage, repair by welding is possible. If wearing is serious, replace it.</p>			
			No	Description	Part No	Q'ty.
	16	Threshing drum front cover	1E8550-39500	1		
	25	Reinforcement plate A	1E8552-39860	3		
	26	Reinforcement plate B	1E8559-39870	1		
	20	Right scraper	1E8540-39780-1	1		



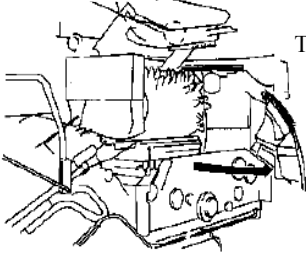

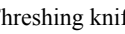
2. The Threshing Section

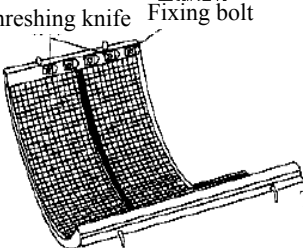


Section	Item	Content	Wearing of inlet port of threshing chamber		Suited to type: AW448T			
Threshing	2-7							
 <p>Threshing inlet</p>			Standard (mm)		Limit value (mm)			
			Check up on the wearing of inlet port of threshing chamber. In case of worn-out, repair by welding on an iron plate.					
			No	Description	Part No	Q'ty.		

Section	Item	Content	Clearance between threshing drum and rear retention plate		Suited to type: AW448T			
Threshing	2-8							
 <p>Rear retention plate</p>			Standard (mm)		Limit value (mm)			
			9-11					
			Check up on clearance between the threshing drum and rear retention plate. If clearance is out of standard, the threshing knives do not pass in the center of the threshing teeth.					
			No	Description	Part No	Q'ty.		

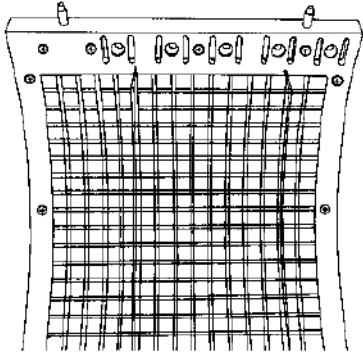
Section	Item	Content	Wearing of 2nd (tailings) returning port		Suited to type: AW448T			
Threshing	2-9							
			Standard (mm)		Limit value (mm)			
			Check the wearing of the port, in case of worn-through, repair by welding on an iron plate.					
			No	Description	Part No	Q'ty.		

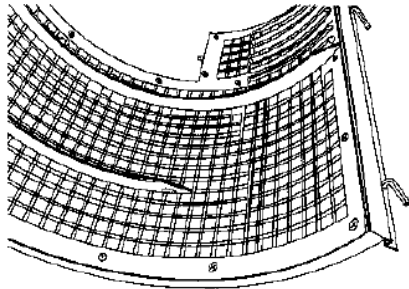
2. The Threshing Section

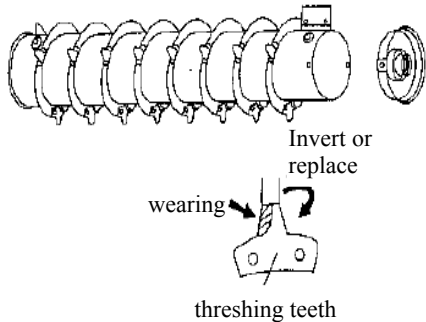
Section	Item	Content	Wearing of threshing knife of threshing drum chamber		Suited to type: AW448T
Threshing	2-10				
 <p>Threshing knife</p>  <p>File</p>  <p>Threshing knife</p>		Standard (mm)	Limit value (mm)		
		2	1		
	<p>When the tooth height of knife is below 1 mm, it should be sharpened or replaced.</p> <p>Note: check on the sharpness of the knife at every 50 hours, sharpen or replace when necessary.</p>				
	No	Description	Part No	Q'ty.	
1	KNIFE F, THRESHER SAW	1E6692-33240	4		

Section	Item	Content	Wearing of the concave threshing knife		Suited to type: AW448T
Threshing	2-11				
 <p>Threshing knife</p> <p>Fixing bolt</p>  <p>File</p>  <p>Threshing knife</p>		Standard (mm)	Limit value (mm)		
	<p>When the tooth height of knife is below 1 mm, it should be sharpened or replaced.</p> <p>Note: check on the sharpness of the blades at every 50 hours, sharpen or replace when necessary.</p>				
	No	Description	Part No	Q'ty.	
1	KNIFE F, THRESHER SAW	1E6692-33240	5		

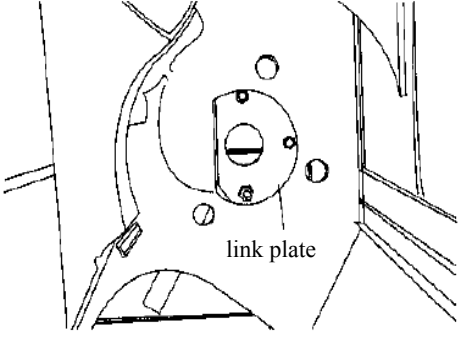
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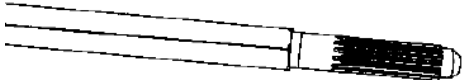
Section	Item	Content	Wearing of concave screen		Suited to type: AW448T
Threshing	2-13				
	Standard (mm)		Limit value (mm)		
	3.0				
	Take out the concave check on the damage or wearing of the screen. If the grid width is below 2 mm, replace it.				
	No	Description	Part No	Q'ty.	
	1	Screen	1E8922-33503	1	

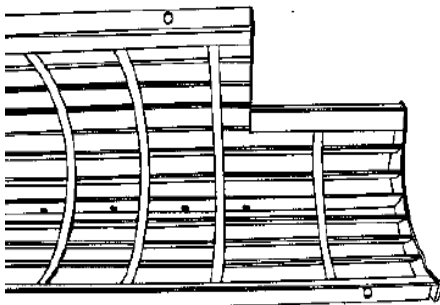
Section	Item	Content	Wearing of concave screen retainer		Suited to type: AW448T
Threshing	2-14				
	Standard (mm)		Limit value (mm)		
	25		23		
	If the retainers are excessively worn, replace them, otherwise grain loss (not threshed and remain on head) may increase.				
	No	Description	Part No	Q'ty.	
	1	Retainer A	1E9060-33301	2	
2	Retainer B	1E9060-33321	1		

Section	Item	Content	Wearing of re-threshing drum teeth		Suited to type: AW448T
Threshing	2-15				
	Standard (mm)		Limit value (mm)		
	As the teeth get worn on just one side, it can be inverted. When wearing is serious, replace them. Make sure that the bolts must be in the right direction.				
	No	Description	Part No	Q'ty.	
	1	Re-threshing drum tooth	1E8552-41560	24	
2	Bolts M6 × 16	1E8559-35380	48		

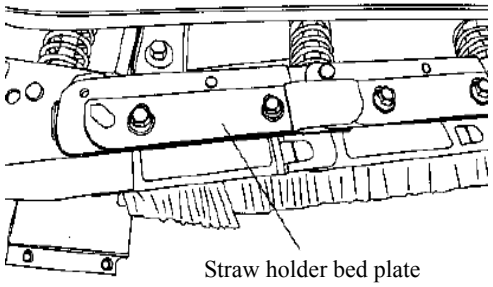
2. The Threshing Section

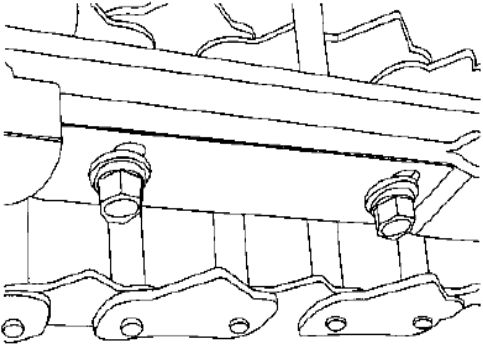
Section	Item	Content	<b>Damage to link plate of re-threshing drum bearing</b>		Suited to type: AW448T		
Threshing	2-16						
			Standard (mm)		Limit value (mm)		
			When damage is found in the link plate of the re-threshing drum bearing, repair must be made in time by welding.				
			No	Description	Part No	Q'ty.	

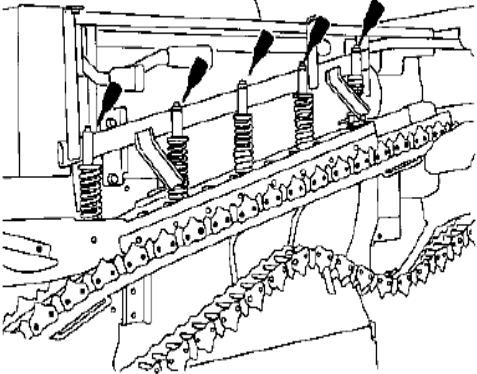
Section	Item	Content	<b>Re-threshing drum shaft</b>		Suited to type: AW448T		
Threshing	2-17						
			Standard (mm)		Limit value (mm)		
			Diameter 20		Diameter 19.9		
			When the re-threshing drum shaft get worn where the bearing is mounted, it must be replaced.				
			No	Description	Part No	Q'ty.	
1	Re-threshing drum shaft	1E8230-41262	1				
2	Bearing	24104-062044	2				

Section	Item	Content	<b>Wearing of the re-threshing drum concave frame</b>		Suited to type: AW448T		
Threshing	2-18						
			Standard (mm)		Limit value (mm)		
			Check the wearing of the re-threshing drum concave frame. If there is worn-through, repair by welding an iron plate on or replace the frame.				
			No	Description	Part No	Q'ty.	
	Frame	1E8559-41300					

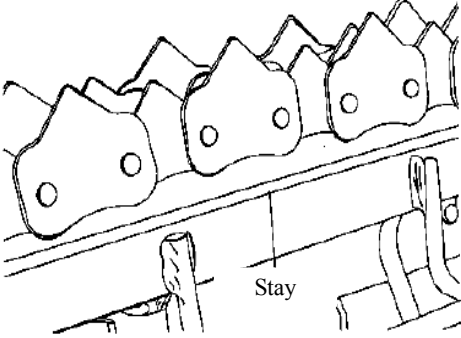
**2. The Threshing Section**

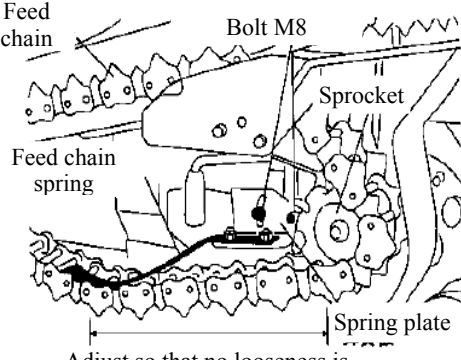
Section	Item	Content	<b>Wearing of the straw holder bed plate</b>		Suited to type: AW448T			
Threshing	2-19							
 <p>Straw holder bed plate</p>			Standard (mm)		Limit value (mm)			
			53		48			
			Adjust clearance of the straw holder bed and feed chain to 0 mm. If it is not possible to adjust, replace the plate.					
			No	Description		Part No	Q'ty.	
	Plate		1E8559-49340	4				

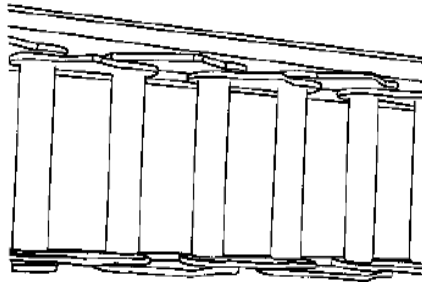
Section	Item	Content	<b>Clearance between straw holder bed and feed chain</b>		Suited to type: AW448T			
Threshing	2-20							
			Standard (mm)		Limit value (mm)			
			0					
			Check the clearance on a daily basis. When clearance is detected, loosen bolts to make adjustment. Partial plate clearance can be adjusted by loosening the fastening bolt of the straw holder bed plate.					
			No	Description		Part No	Q'ty.	
1	Straw keep plate		1E8922-49000	1				

Section	Item	Content	<b>Up/down movement of the straw holder bed guide pole</b>		Suited to type: AW448T			
Threshing	2-21							
			Standard (mm)		Limit value (mm)			
			Check the straw holder bed movement. If any seizure is detected, dismount it and clean up and apply oil. Failing that may cause clogging to the threshing drum.					
			No	Description		Part No	Q'ty.	

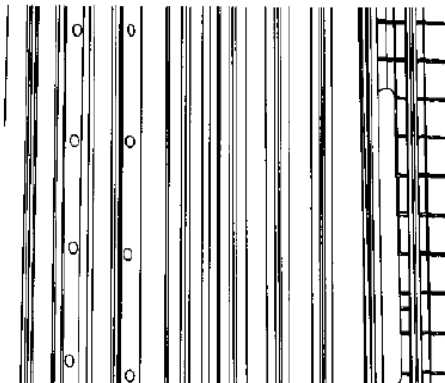
**2. The Threshing Section**

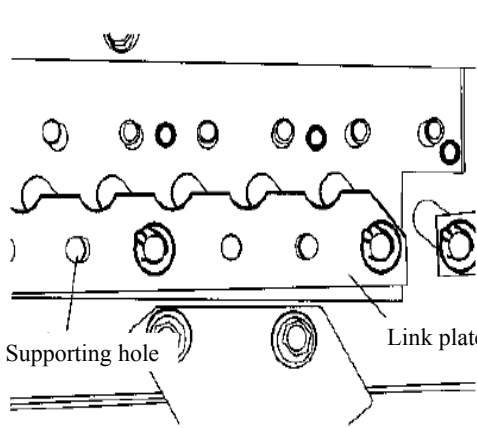
Section	Item	Content	Wearing of the feed chain stay		Suited to type: AW448T			
Threshing	2-22							
			Standard (mm)		Limit value (mm)			
			4.5		3			
			Check wearing of the feed chain stay and replace it if wearing is serious.					
			No	Description		Part No	Q'ty.	
3	Feed chain stay		1E8550-48200	1				

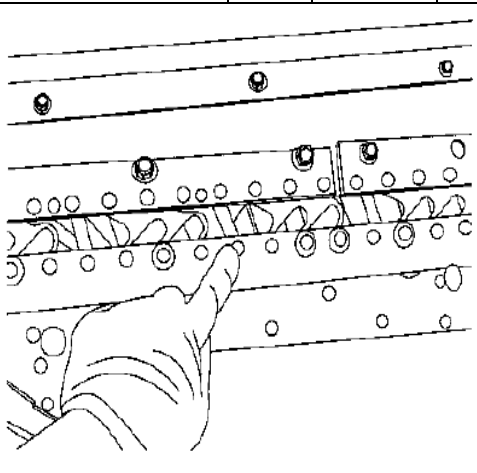
Section	Item	Content	Tension of the feed chain		Suited to type: AW448T			
Threshing	2-23							
			Standard (mm)		Limit value (mm)			
			Adjust the tension spring plate so that sprocket and the chain have no loose part in between them.					
			No	Description		Part No	Q'ty.	
1	Feed chain 58×116		1E8559-48001	1				
2	Sprocket		1E8550-37500	1				

Section	Item	Content	Tension of feed chain		Suited to type: AW448T			
Threshing	2-24							
			Standard (mm)		Limit value (mm)			
			If the chain cannot be tensioned, remove a certain number of chain links. If the roller is worn out replace the chain in time.					
			No	Description		Part No	Q'ty.	
1	Feed chain		1E8559-48001	1				

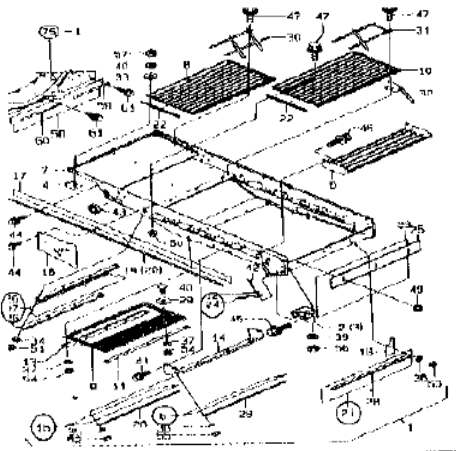
2. The Threshing Section

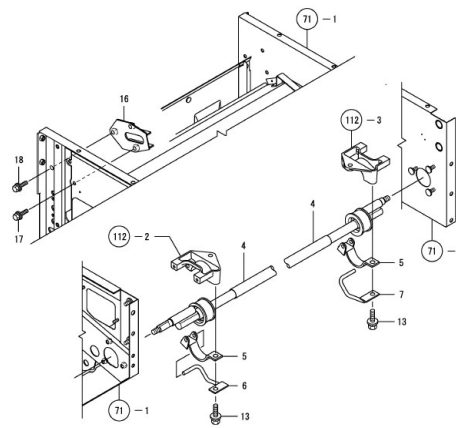
Section	Item	Content	Clearance of fins in shaking sieve	Suited to type: AW448T	
Threshing	2-25				
	Standard (mm)		Limit value (mm)		
	Fin clearance 15.3				
	Set the clean selection lever to 5 and measure fins clearance. Make adjustments where necessary.				
	No	Description	Part No	Q'ty.	

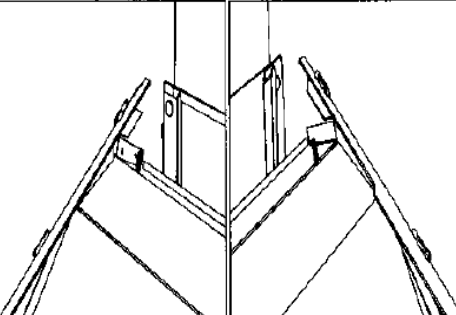
Section	Item	Content	Clearance in between the link-pins of shaking sieve fins	Suited to type: AW448T	
Threshing	2-26				
	Standard (mm)		Limit value (mm)		
	Diameter 8		Diameter 7.5		
	Check the clearance between the link plate and the supporting hole. In serious cases it needs to be replaced. The figure shows the measuring of outer diameter of the link plate.				
	No	Description	Part No	Q'ty.	
	17	Seal, swing side	1E8230-42822	2	

Section	Item	Content	Wearing of link pin hole of the shaking sieve fins	Suited to type: AW448T	
Threshing	2-27				
	Standard (mm)		Limit value (mm)		
	0		1.0		
	When the plastic supporting shaft of the seats of shaking sieve blades has displacement leftward and rightward exceeds 1mm, it should be replaced.				
	No	Description	Part No	Q'ty.	
	1	PIPE AF,CHAFF A.CONN	1E8990-42700	2	
	2	PIPE AR,CHAFF A.CONN	1E8559-42710	2	
	3	JNT.,CHAFF CONN.PIPE	1E8559-42720	2	
	5	CONNECTOR B,CHAF.ADJ	1E8559-42740	2	
11	BEARING,FIN	1E8559-43860	48		

2. The Threshing Section

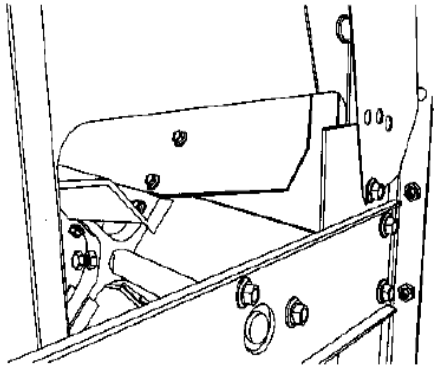
Section	Item	Content	Damage of rubber seal of the shaking sieve	Suited to type: AW448T		
Threshing	2-28					
			Standard (mm)	Limit value (mm)		
			Check on the damage of the rubber seal, replace if the damage is serious.			
			No	Description	Part No	Q'ty.
			5	SEAL,2ND FRONT	1E8230-42240	1
			7	SEAL,1ST	1E8559-42470	1
			8	SEAL,2ND	1E8559-42480	1
			20	SEAL,SWING REAR	1E8559-42890	1
			25	SEAL,SORTING WIND	1E8380-42980	1

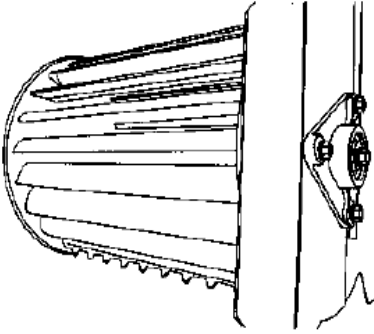
Section	Item	Content	Damage of shaking sieve guide and lubricate	Suited to type: AW448T		
Threshing	2-29					
			Standard (mm)	Limit value (mm)		
			Apply grease from time to time in order to reduce wearing of the guides and bearings to reduce noise generated by the shaking sieve.			
			No	Description	Part No	Q'ty.
			1	Guide, front fulcrum	1E8990-42000-1	2
			2	Bearing L, swing rear	1E8230-42030	1
			3	Bearing R, swing rear	1E8230-42040	1

Section	Item	Content	Sealing-off at the two ends of the winnower fan chamber	Suited to type: AW448T		
Threshing	2-30					
			Standard (mm)	Limit value (mm)		
			Check up from time to time and make timely repair by welding when sealing-off is found.			
			No	Description	Part No	Q'ty.

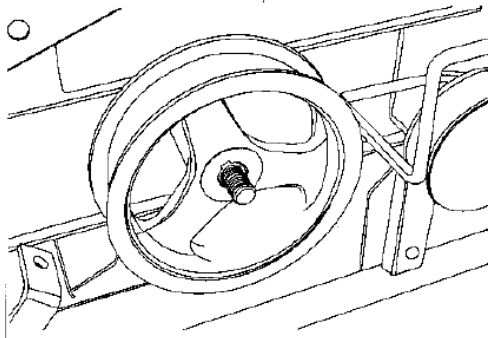


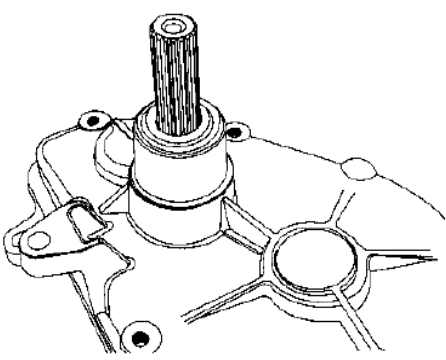
2. The Threshing Section

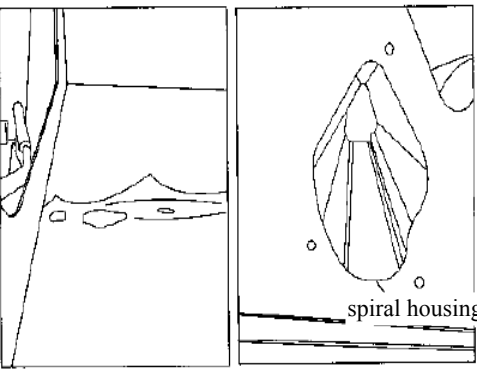
Section	Item	Content	<b>Deformation of the winnower fan</b>		Suited to type: AW448T	
Threshing	2-32		Standard (mm)	Limit value (mm)		
			Check up on the blades of the winnower fan and replace them if there are cracks that may affect the operation.			
			No	Description	Part No	Q'ty.
			1	Winnower fan	1E8550-44440-1	4

Section	Item	Content	<b>Deformation of the suction fan</b>		Suited to type: AW448T	
Threshing	2-33		Standard (mm)	Limit value (mm)		
			Check up on the suction fan and replace it if there are cracks that may affect its operation.			
			No	Description	Part No	Q'ty.
			1	Suction fan	1E8559-47402	1

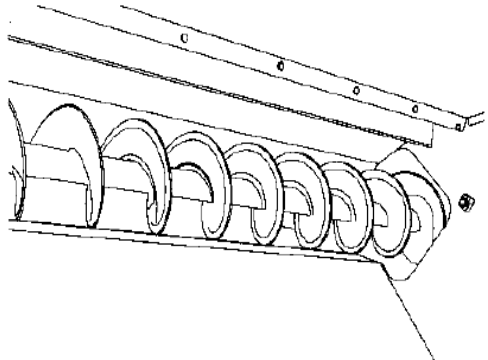
2. The Threshing Section

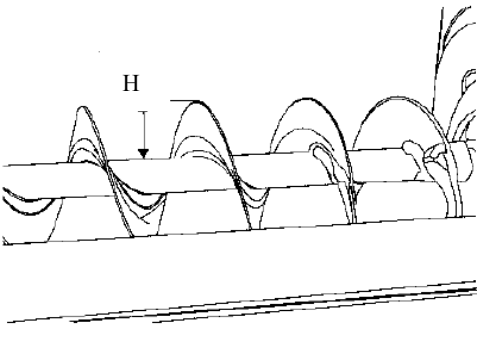
Section	Item	Content	<b>Winnower fan operation</b>		Suited to type: AW448T	
Threshing	2-34					
			Standard (mm)		Limit value (mm)	
			<p>Rotate the winnower fan manually. If rotation is not smooth, check the winnower fan shaft bearing. Replace the bearing in case of serious wearing. Straw can easily wind shaft end and give damage to bearings. Remove winding straw.</p>			
			No	Description	Part No	Q'ty.
			1	Bearing	24104-063034	2

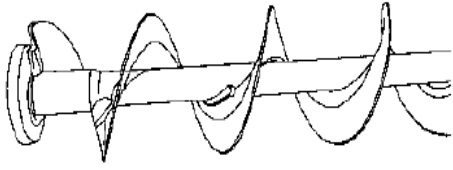
Section	Item	Content	<b>Suction fan shaft operation</b>		Suited to type: AW448T	
Threshing	2-35					
			Standard (mm)		Limit value (mm)	
			<p>Check suction fan operation and wearing of the spline. Apply grease in time.</p>			
			No	Description	Part No	Q'ty.
			1	Bearing 6202UU	1E8552-06240	1

Section	Item	Content	<b>Wearing of the spiral conveyor gutter</b>		Suited to type: AW448T	
Threshing	2-36					
			Standard (mm)		Limit value (mm)	
			<p>Check the wearing of the spiral conveyor gutter and make repairs where it is worn through by welding on iron sheet.</p>			
			No	Description	Part No	Q'ty.

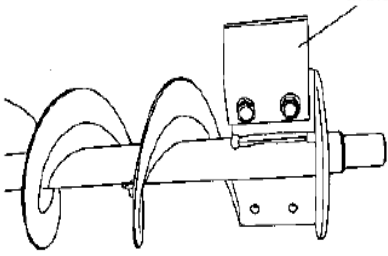
2. The Threshing Section

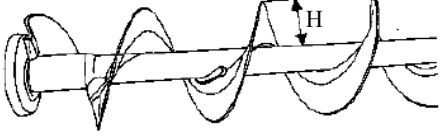
Section	Item	Content	Wearing of the 1st conveyor		Suited to type: AW448T
Threshing	2-37				
	Standard (mm)		Limit value (mm)		
	31 (central part)		28 (central part)		
	<p>Measure the height of the spiral blade and check on the wearing of the spiral. In the early stage of wearing it is possible to weld on steel sheet or steel bar along the blade by way of repair, but when wearing is serious it has to be replaced.</p>				
	No	Description	Part No	Q'ty.	
	1	1st conveyor	1E8559-45052	1	

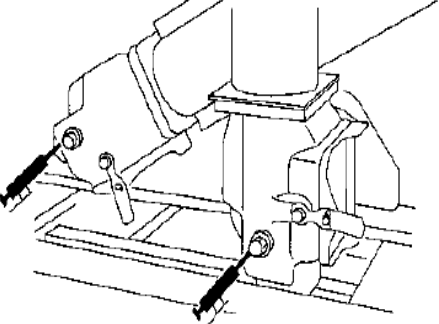
Section	Item	Content	Wearing of 2nd (tailings) conveyor		Suited to type: AW448T
Threshing	2-38				
	Standard (mm)		Limit value (mm)		
	36 (central part)		33 (central part)		
	<p>Measure the height of the spiral blade and check on the wearing of the spiral. In the early stage of wearing it is possible to weld on steel sheet or steel bar along the blade by way of repair, but when wearing is serious it has to be replaced</p>				
	No	Description	Part No	Q'ty.	
	1	2nd (tailings) conveyor	1E8550-46200	1	

Section	Item	Content	Grain lift conveyor wearing		Suited to type: AW448T
Threshing	2-39				
	Standard (mm)		Limit value (mm)		
	36 (central part)		33 (central part)		
	<p>Measure the height of the spiral blade and check wearing of the spiral, especially the root part. In the early stage of wearing it is possible to weld on steel sheet or steel bar along the blade by way of repair, but when wearing is serious it has to be replaced.</p>				
	No	Description	Part No	Q'ty.	
	1	Conveyor, grain ele.	1E8559-45401	1	

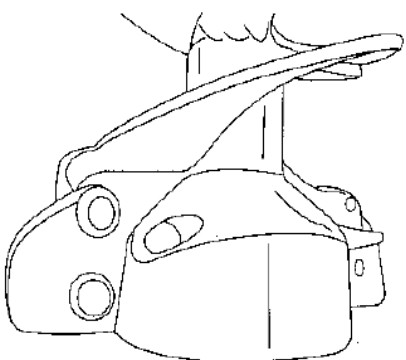
2. The Threshing Section

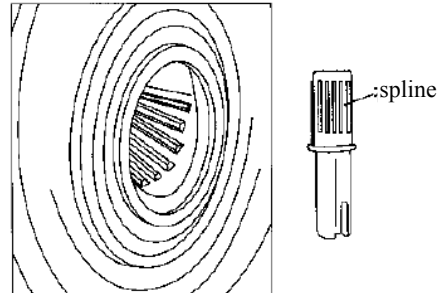
Section	Item	Content	<b>Wearing of the grain lift conveyor vane</b>		Suited to type: AW448T	
Threshing	2-40					
			Standard (mm)		Limit value (mm)	
			36		20	
			Measure the height of the grain lift conveyor vane. In its early stage of wearing it is possible to repair by welding on steel plate, but when wearing is serious, be sure to replace it.			
			No	Description	Part No	Q'ty.
	1	Blade, grain elevat'g	1E8559-45390	2		

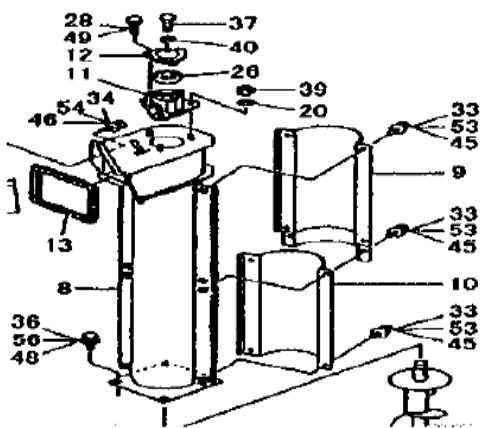
Section	Item	Content	<b>Wearing of 2nd (tailings) return conveyor</b>		Suited to type: AW448T	
Threshing	2-41					
			Standard (mm)		Limit value (mm)	
			36		33	
			Measure the height of the spiral blades and check on their wearing. In its early stage of wearing it is possible to repair by welding on steel sheet or steel bar along the edge of the blade, but when wearing is serious, be sure to replace it.			
			No	Description	Part No	Q'ty.
	1	conveyor	1E8559-46500	1		

Section	Item	Content	<b>Lubricant at conveyor gear box</b>		Suited to type: AW448T	
Threshing	2-42					
			Standard (mm)		Limit value (mm)	
			Apply grease at every 200 hours.			
			No	Description	Part No	Q'ty.

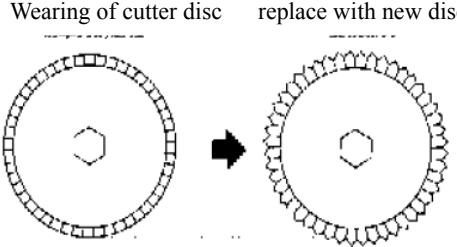
2. The Threshing Section

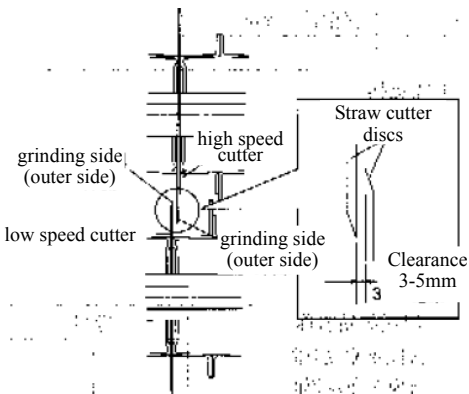
Section	Item	Content	<b>Wearing of the 1st conveyor end cap</b>		Suited to type: AW448T	
Threshing	2-43					
			Standard (mm)		Limit value (mm)	
			Check wearing of the 1st conveyor end cap. In the early stage of wearing repair by welding is possible but in case of serious wearing it must be replaced.			
			No	Description	Part No	Q'ty.
			1	1st conveyor	1E8559-45052	1

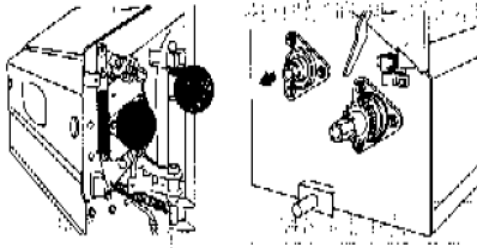
Section	Item	Content	<b>Wearing of the shaft spline in conveyor gear box</b>		Suited to type: AW448T	
Threshing	2-44					
			Standard (mm)		Limit value (mm)	
			Diameter 20			
			Replace the spline when it is seriously worn.			
			No	Description	Part No	Q'ty.
			1	Shaft, vert.drive 1st	1E8552-45230	1
			2	Shaft	1E8552-45240	1

Section	Item	Content	<b>2nd conveyor bearing</b>		Suited to type: AW448T	
Threshing	2-45					
			Standard (mm)		Limit value (mm)	
			In case of damage of the bearing 26 as shown in the figure, replace it.			
			No	Description	Part No	Q'ty.
			1	Bearing	24104-062044	1

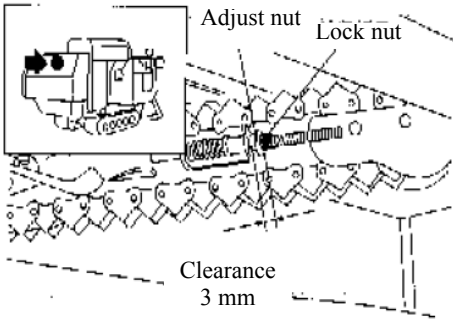
2. The Threshing Section

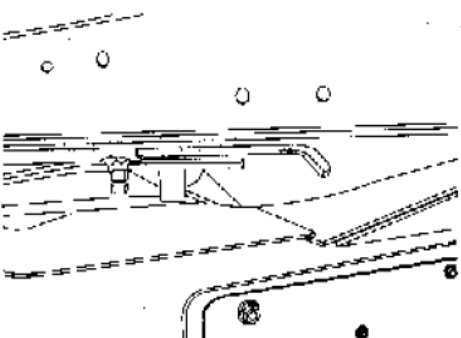
Section	Item	Content	Wearing of straw cutter disc		Suited to type: AW448T	
Threshing	2-46					
 <p>Wearing of cutter disc → replace with new disc</p>			Standard (mm)		Limit value (mm)	
					1	
			Check up on the wearing of the cutter disc. Replace when the tooth height is below 1mm. Normally discs at the side of high speed shaft wear out first, so one may swap them with discs at the ear side in the early stage of wearing.			
			No	Description	Part No	Q'ty.
			1	Cutter disc 180×27	IJ3810-21050	30

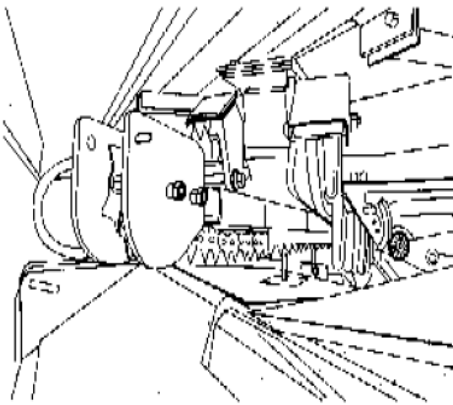
Section	Item	Content	Clearance of the straw cutter discs		Suited to type: AW448T	
Threshing	2-47					
			Standard (mm)		Limit value (mm)	
			3-5			
			Check up on the matching clearance in between the straw cutter discs. Adjust clearance by the adjusting nut at the high speed shaft's right side			
			No	Description	Part No	Q'ty.

Section	Item	Content	Straw cutter bearing		Suited to type: AW448T	
Threshing	2-48					
			Standard (mm)		Limit value (mm)	
			Make timely replacement when it is worn out/damaged.			
			No	Description	Part No	Q'ty.
			1	Bearing 6206UU	1E8552-06260	4

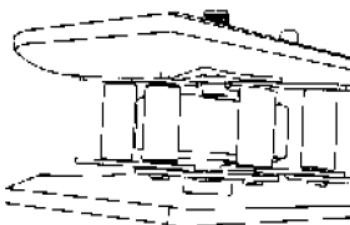
2. The Threshing Section

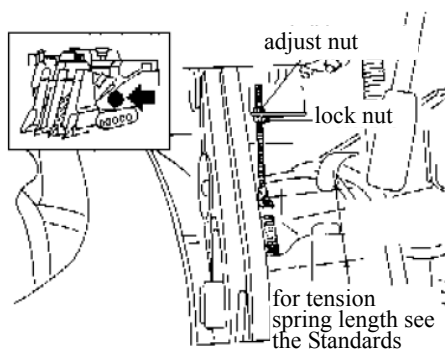
Section	Item	Content	Tension of the straw discharge chain		Suited to type: AW448T	
Threshing	2-49					
			Standard (mm)	Limit value (mm)		
			3			
			Adjust clearance to 3 mm by the adjust nut.			
			No	Description	Part No	Q'ty.
1	Straw discharge chain 25×70	1E9060-49200	1			
2	Tension roller 60	1E9060-49300	1			

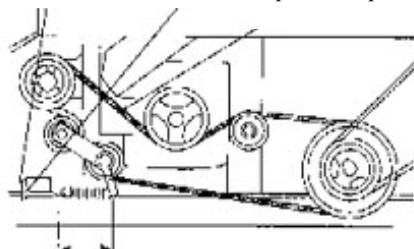
Section	Item	Content	Straw discharge chain guide rail		Suited to type: AW448T		
Threshing	2-50						
			Standard (mm)	Limit value (mm)			
			Make timely repair by welding when the rail is worn/damaged.				
			No	Description	Part No	Q'ty.	
				Straw discharge chain guide	1E9060-49152	1	

Section	Item	Content	Straw discharge guide rod		Suited to type: AW448T		
Threshing	2-51						
			Standard (mm)	Limit value (mm)			
			Confirm the position of the guide pole.				
			No	Description	Part No	Q'ty.	
			1	Guide, strw.dsc.aux.	1E8380-49851	1	
2	Rod	1E8550-49752	1				
3	Rod, straw dschrg. aux	1E8559-49790	1				

2. The Threshing Section

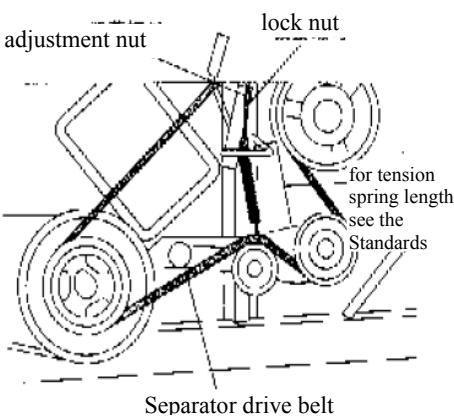
Section	Item	Content	<b>Straw discharge tension roller</b>		Suited to type: AW448T	
Threshing	2-52					
			Standard (mm)		Limit value (mm)	
			Check wearing of the tension roller and replace when wearing is serious.			
			No	Description	Part No	Q'ty.
	1	Tension roller 60	1E9060-49300	1		

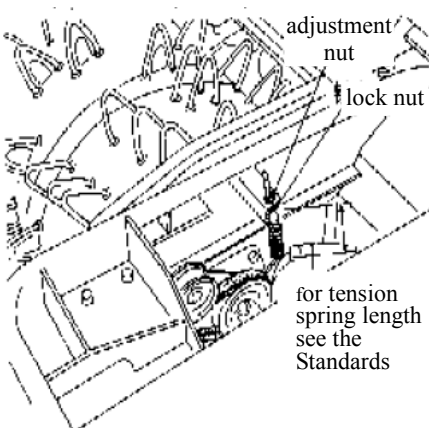
Section	Item	Content	<b>Tension of the threshing drum drive belt</b>		Suited to type: AW448T	
Threshing	2-53					
 <p>for tension spring length see the Standards</p>			Standard (mm)		Limit value (mm)	
			128-132 (AW448T)			
			Adjust the tension spring length and check on the damage of the belt. Replace it when damage is serious.			
			No	Description	Part No	Q'ty.
		V-belt LB97-AG8	1E8559-35750	2		

Section	Item	Content	<b>Tension of separator input belt</b>		Suited to type: AW448T	
Threshing	2-54					
			Standard (mm)		Limit value (mm)	
			107-111			
			Make adjustment to the tension spring length and check on the damage of the belt. Replace it when damage is serious.			
			No	Description	Part No	Q'ty.
	1	V-belt SC79W600	1E8559-35760	1		

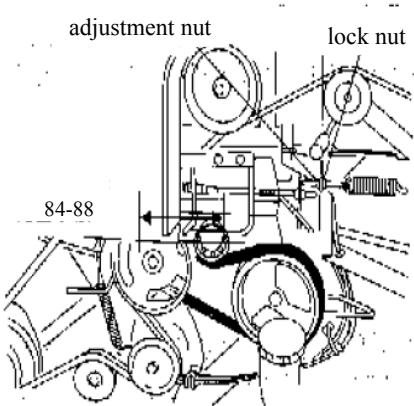


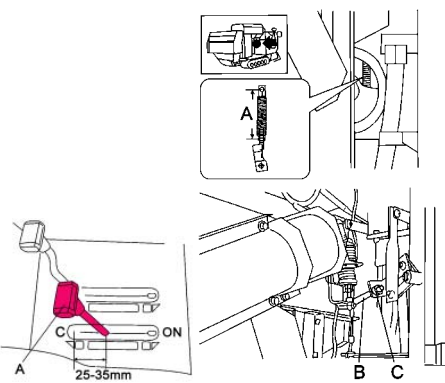
**2. The Threshing Section**

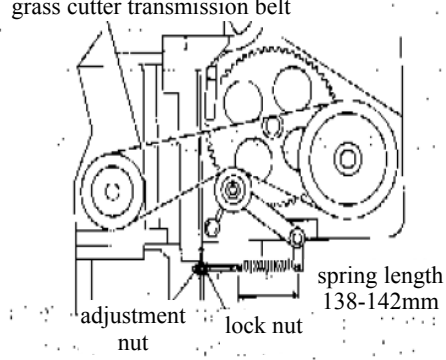
Section	Item	Content	Separator drive belt tension		Suited to type: AW448T	
Threshing	2-56					
			Standard (mm)		Limit value (mm)	
			132-136			
			Make adjustment to the tension spring length and check on the damage of the belt. Replace it when damage is serious.			
			No	Description	Part No	Q'ty.
	2	Conveying belt SC88W600	1E8559-35770	1		

Section	Item	Content	Tension of straw discharge drive belt		Suited to type: AW448T
Threshing	2-57				
			Standard (mm)		Limit value (mm)
			96-100 (AW448T)		
			Make adjustment to the tension spring length and check on the damage of the belt. Replace it when damage is serious.		
No	Description	Part No	Q'ty.		
	2	V-belt LB41	25123-004101	1 (AW448T)	

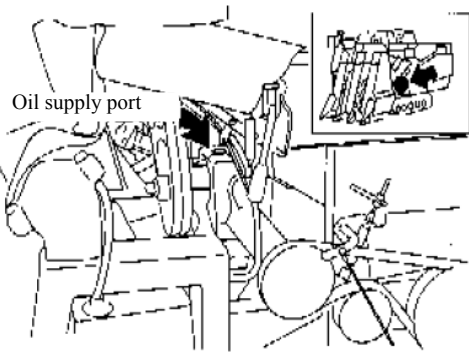
2. The Threshing Section

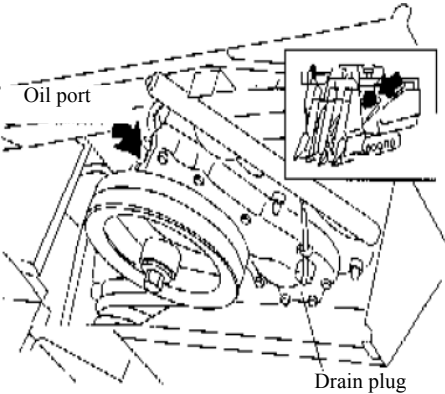
Section	Item	Content	Tension of shaking sieve drive belt		Suited to type: AW448T
Threshing	2-58				
			Standard (mm)		Limit value (mm)
			84-88		
			Make adjustment to the tension spring length and check on the damage of the belt. Replace it when damage is serious.		
No	Description	Part No	Q'ty.		
2	V belt LB37	25123-003700	1 (AW448T)		

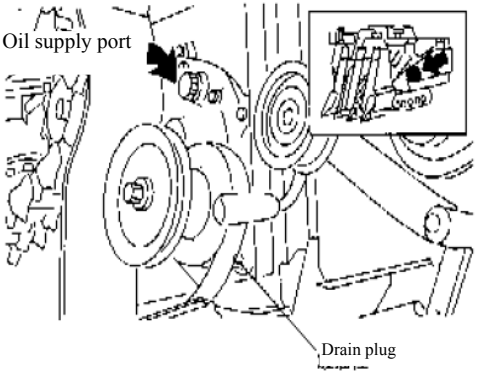
Section	Item	Content	Tension of threshing clutch belt		Suited to type: AW448T
Threshing	2-59				
			Standard (mm)		Limit value (mm)
			145-148 (AW448T)		
			Threshing clutch lever has a free play of 25-35 mm. Adjust clutch rod B in the figure. Check for damage of the belt and replace if it is serious.		
No	Description	Part No	Q'ty.		
2	V belt SB44W800	1E8559-51240	2 (AW448T)		

Section	Item	Content	Tension of straw cutter drive belt		Suited to type: AW448T
Threshing	2-60				
			Standard (mm)		Limit value (mm)
			140-144		
			Adjust the length of spring A, check for the belt's damages and replace if they are serious.		
No	Description	Part No	Q'ty.		
1	V-belt 60	25123-006001	1		

2. The Threshing Section

Section	Item	Content	Threshing gear box		Suited to type: AW448T	
Threshing	2-62					
 <p>Oil supply port</p>			Standard (L)		Limit value (L)	
			1 litter			
			Replace at every 400 hours.			
			No	Description	Part No	Q'ty.
	Yanmar gear oil #90					

Section	Item	Content	Threshing drum gear box		Suited to type: AW448T	
Threshing	2-63					
 <p>Oil port</p> <p>Drain plug</p>			Standard (L)		Limit value (L)	
			0.5 litter			
			First replacement shall be at 50 hours and thereafter at 400 hours.			
			No	Description	Part No	Q'ty.
	Yanmar gear oil #90					

Section	Item	Content	Feed chain gearmission box		Suited to type: AW448T	
Threshing	2-64					
 <p>Oil supply port</p> <p>Drain plug</p>			Standard (L)		Limit value (L)	
			0.3 litter			
			Replace at every 400 hours.			
			No	Description	Part No	Q'ty.
	Yanmar transmission box oil #90					

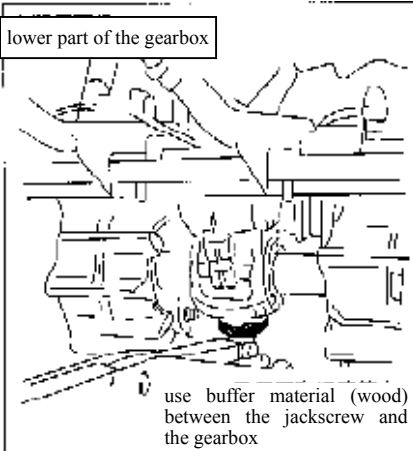
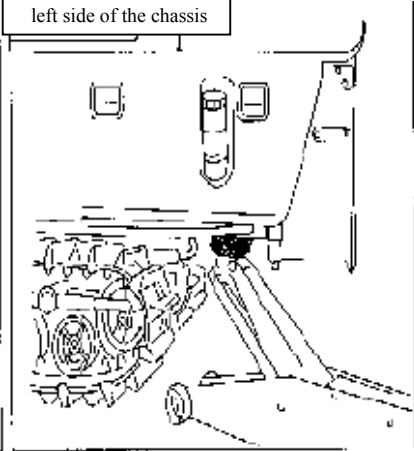
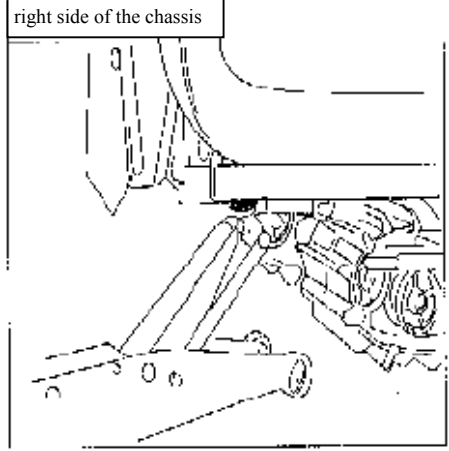
. The Driving Section

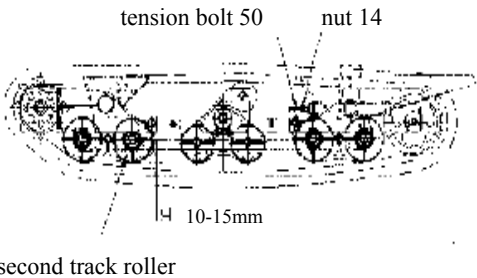
Section	Item	Content	<b>Tension of transmission drive belt</b>		Suited to type: AW448T	
Driving	3-1				Standard (mm)	Limit value (mm)
			181-188		Loosen the fastening nut and adjust the length of the tension spring, at the same time check for the damage of the belt. Replace in serious cases.	
			No	Description		
			3	V belt LB50AG6	1E8990-51260	2

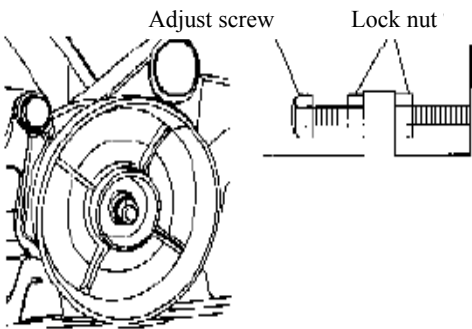
Section	Item	Content	<b>Tension arm bearing of transmission drive belt</b>		Suited to type: AW448T	
Driving	3-2				Standard (mm)	Limit value (mm)
					Apply grease from time to time.	
			No	Description		

Section	Item	Content	<b>Inspection of the crawler</b>		Suited to type: AW448T	
Driving	3-3				Standard (mm)	Limit value (mm)
					Check for their damage and replace when serious. Note: AW448T width of the crawler is 400 mm, in 42 links.	
			No	Description		
			1	Crawler	1E8800-73903	2

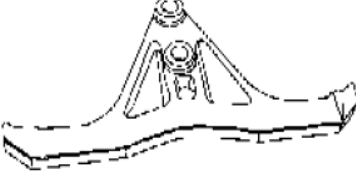
3. The Driving Section

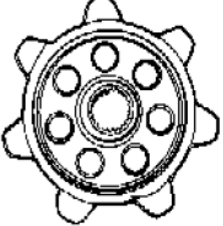
Section	Item	Content	<b>Figure shows lifting the machine to adjust crawler tension</b>		Suited to type: AW448T
Driving	3-4				
 <p>lower part of the gearbox</p> <p>use buffer material (wood) between the jackscrew and the gearbox</p>		 <p>left side of the chassis</p>	 <p>right side of the chassis</p>		

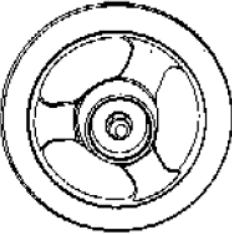
Section	Item	Content	<b>Tension of the crawler</b>		Suited to type: AW448T
Driving	3-5				
 <p>tension bolt 50    nut 14</p> <p>10-15mm</p> <p>second track roller</p>		Standard (mm)	Limit value (mm)		
No	Description	Part No	Q'ty.		

Section	Item	Content	<b>Tension of the crawler</b>		Suited to type: AW448T
Driving	3-6				
 <p>Adjust screw    Lock nut</p>		Standard (mm)	Limit value (mm)		
		10-15			
Lift combine as above described. Check and adjust the tension bolt so that the 3rd track roller has a clearance of 10~15mm to the crawler.					
<b>Note: Do not lift the fuel tank. It causes deformation of the tank. Be sure to lift the machine at a level place. Use a jack of capacity over 3 tons.</b>					
No	Description	Part No	Q'ty.		

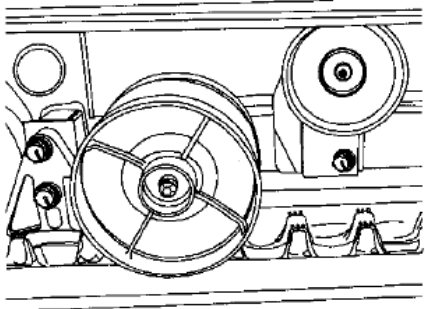
### 3. The Driving Section

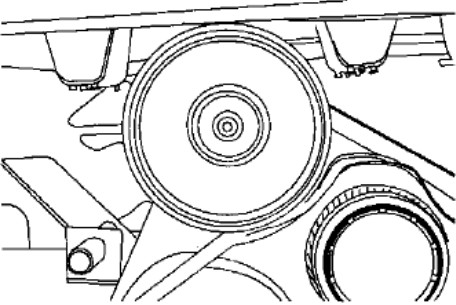
Section	Item	Content	<b>Inspection of crawler guide</b>		Suited to type: AW448T	
Driving	3-7				Standard (mm)	Limit value (mm)
					Check up on the wearing of the crawler guide and replace when such wearing is serious.	
			No	Description		
			1	Crawler guide	1E8555-73450	4

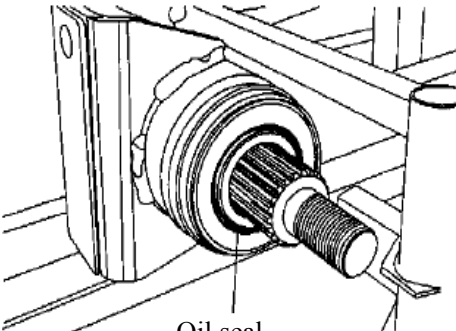
Section	Item	Content	<b>Wearing of the crawler sprocket</b>		Suited to type: AW448T	
Driving	3-10				Standard (mm)	Limit value (mm)
			30	20	Check up on the wearing of the crawler sprocket. As the crawler sprocket's wearing is in one, sprocket can be exchange the left and right. When wearing is in serious condition replace them. Measure at the point where tooth top is 15 mm from the base, the tooth width should be more than 20 mm	
			No	Description		
			1	Sprocket, 90-7T175	1E8922-73010	2

Section	Item	Content	<b>Wearing of the idling wheel</b>		Suited to type: AW448T	
Driving	3-11				Standard (mm)	Limit value (mm)
			250	240	Measure the diameter of the idling wheel. If it is excessively worn you need to replace it. When the bearing is seriously worn you need to replace it. Check also on the wearing of the idling wheel tension arm.	
			No	Description		
			1	Idling wheel	1E8550-73180	2
			2	Bearing	24104-062064	4
		3	Oil seal	1E8559-73060	2	

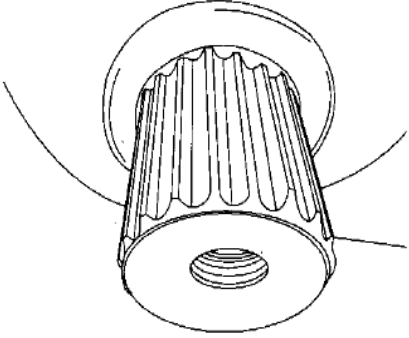
### 3. The Driving Section

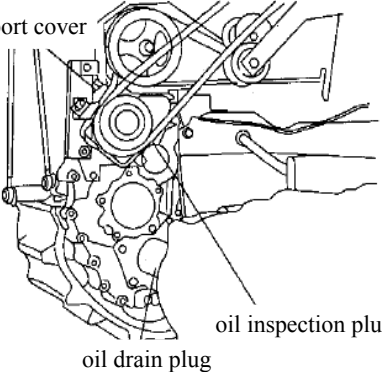
Section	Item	Content	<b>Wearing of track roller</b>		Suited to type: AW448T	
Driving	3-15				Standard (mm)	Limit value (mm)
			220			
			Measure the diameter of the track roller and replace it if wearing is excessive.			
			No	Description	Part No	Q'ty.
			1	ROLLER 220B	1E8550-73100	6
2	ROLLER 220B	1E8550-73110-1	2			

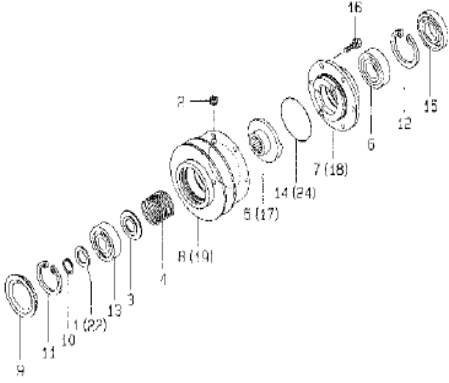
Section	Item	Content	<b>Wearing of Carrier roller</b>		Suited to type: AW448T	
Driving	3-17				Standard (mm)	Limit value (mm)
			138			
			Measure the diameter of the carrier roller and replace it if wearing is excessive.			
			No	Description	Part No	Q'ty.
			1	Carrier roller	1E8559-73500	2
2	Bearing	24010-060044	4			
3	Oil seal 28×42×9	1E8420-73150	2			

Section	Item	Content	<b>Wearing of the transmission axle oil seal</b>		Suited to type: AW448T	
Driving	3-18				Standard (mm)	Limit value (mm)
 <p style="text-align: center;">Oil seal</p>						
			Replace when oil leak is found.			
			No	Description	Part No	Q'ty.
				SEAL, QLFY548016	1E8540-55460	2

### 3. The Driving Section

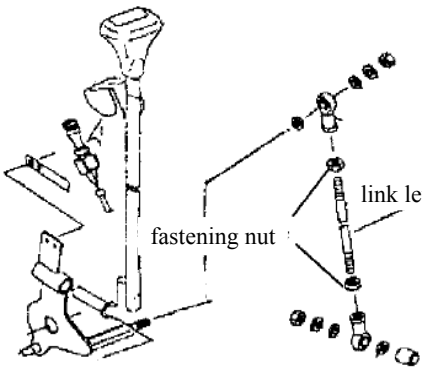
Section	Item	Content	<b>Wearing of the axle shaft spline</b>		Suited to type: AW448T		
Driving	3-19						
			Standard (mm)		Limit value (mm)		
			Internal diameter of spline Diameter 31.7				
			When exchanging the crawler sprockets, be sure to apply grease evenly at the spline. When spline is seriously worn out, replace axle shaft.				
			No	Description	Part No	Q'ty.	
1	SHAFT L, AXLE	1E9300-55410	1				
2	SHAFT R, AXLE	1E9300-55440	1				

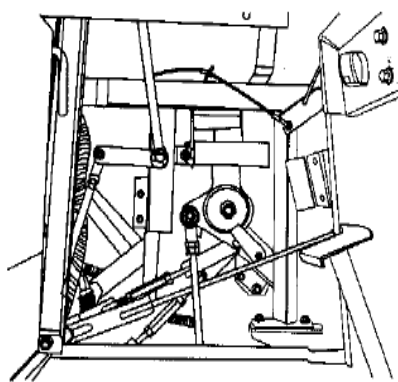
Section	Item	Content	<b>Inspection of the transmission oil</b>		Suited to type: AW448T		
Driving	3-20						
			Standard (L)		Limit value (L)		
			8.3 litter				
			Change oil at every 400 hours.				
			No	Description			Q'ty.
1	Yanmar transmission oil						

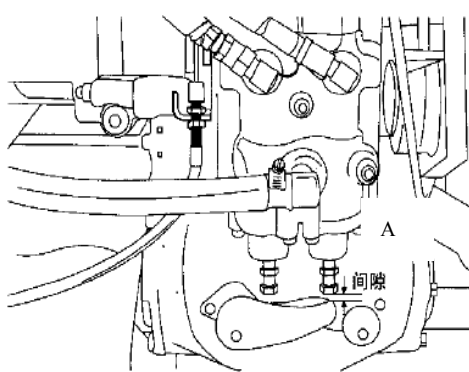
Section	Item	Content	<b>Inspection of the one way clutch</b>		Suited to type: AW448T		
Driving	3-22						
			Standard (mm)		Limit value (mm)		
			Dismount the clutch, and check on its wearing. It excessively worn, it needs to be replaced.				
			Note: assemble as per sequence shown in figure and do not assemble in wrong direction, which will damage the machine and make it impossible to operate normally.				
			No	Description	Part No	Q'ty.	
1	Clutch, one way S B	1E9300-54710	1				
2	Clutch, one way cover	1E9300-54750	1				



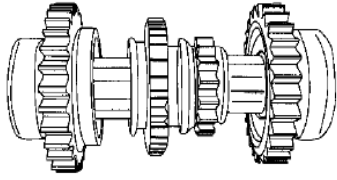
### 3. The Driving Section

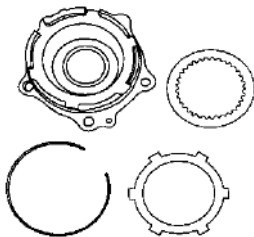
Section	Item	Content	Inspection of HST lever		Suited to type: AW448T	
Driving	3-23					
			Standard (mm)		Limit value (mm)	
			Set the range shift lever to "N" and HST lever at "N". If one way clutch belt pulley turns, loosen the fastening nut and adjust the length of the link lever until the one way clutch belt pulley stops turning. Tighten up the fastening nut again.			
			No	Description	Part No	Q'ty.

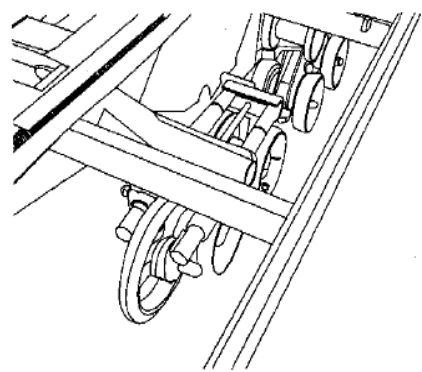
Section	Item	Content	Inspection of the range shift lever		Suited to type: AW448T	
Driving	3-24					
			Standard (mm)		Limit value (mm)	
			Confirm the action of the range shift lever.			
			No	Description	Part No	Q'ty.

Section	Item	Content	Inspection of the steering actuator		Suited to type: AW448T	
Driving	3-25					
			Standard (mm)		Limit value (mm)	
			0-0.5			
			Move almighty steering lever to left and right and check crawler of turning direction is locked. If not, check clearance A of actuator 0-0.5 mm. The steering adjusting wire needs constant cleaning up and lubricating. When steering is malfunctioning, check the contact switch.			
			No	Description	Part No	Q'ty.
			1	Steering adjusting wire		1
			2	Switch 161061		2

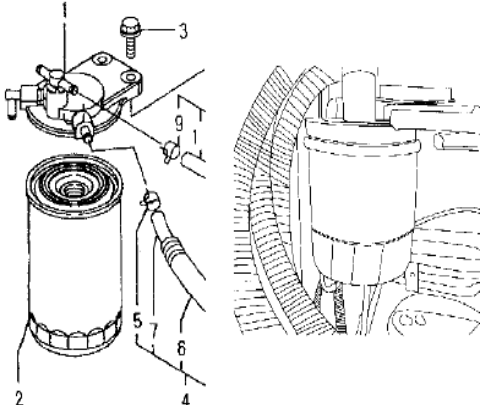
### 3. The Driving Section

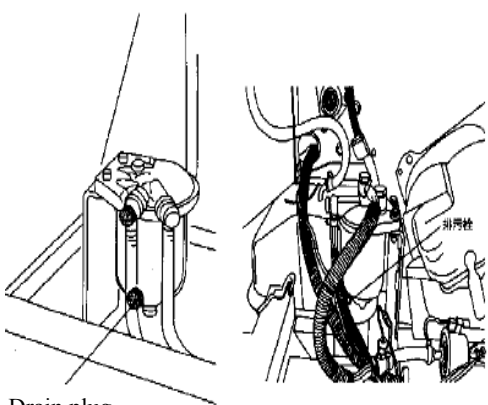
Section	Item	Content	<b>Wearing of the range shift gears</b>		Suited to type: AW448T		
Driving	3-26						
			Standard (mm)		Limit value (mm)		
			Replace when surface of the teeth have obvious steps of wearing and defects like cracks and damaged corners are seen in the teeth. Replace the bearing in time when it is damaged.				
			No	Description	Part No	Q'ty.	
1	Shaft, change assy	1E9300-54400	1				
2	Gear 23	1E9300-54450	1				

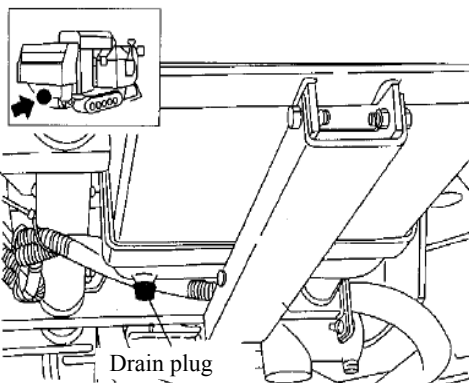
Section	Item	Content	<b>Friction disk of steering brake and pressure plate</b>		Suited to type: AW448T		
Driving	3-28						
			Standard (mm)		Limit value (mm)		
			Replace the friction disk and pressure plate when they have serious wearing, deformation or cracking. Replace the bearing 6207 when it is damaged.				
			No	Description	Part No	Q'ty.	
1	Friction disk	1E8270-52481	14				
2	Pressure plate	1E6740-55210	14				
3	Bearing 6307RSH2	174842-13730	2				

Section	Item	Content	<b>Inspection of the chassis</b>		Suited to type: AW448T		
Driving	3-29						
			Standard (mm)		Limit value (mm)		
			Check from time to time the chassis for cracking. Make repairs or replacement when necessary				
			No	Description	Part No	Q'ty.	

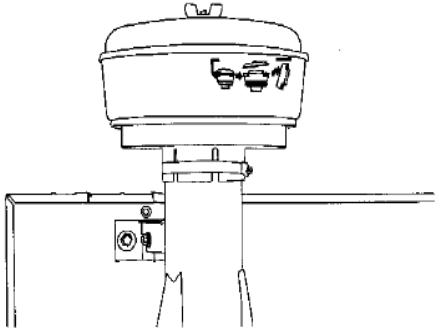
4. The Engine Section

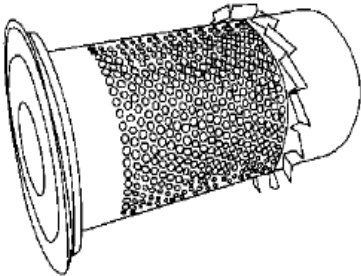
Section	Item	Content	Inspection of the fuel filter		Suited to type: AW448T
Engine	4-1		Standard (mm)	Limit value (mm)	
			Replace the filter at every 200 hours. Be sure to use genuine Yanmar spare part, otherwise premature wearing may result in for engine, injection pump and injection nozzle.		
			No	Description	Part No
	1	Fuel filter	119802-55801	1	

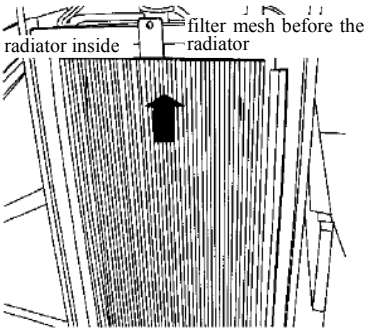
Section	Item	Content	Inspection of the water separator		Suited to type: AW448T
Engine	4-2		Standard (mm)	Limit value (mm)	
			Drain the dirt every 50 hours and clean up every 100 hours. Replace filter element every 200 hours. Note: When replacing element, be sure to check the o-ring and apply grease. If it is worn, replace it. Be sure to use genuine Yanmar parts, otherwise premature wearing may result in for engine, injection pump and injection nozzle.		
			No	Description	Part No
	1	Element, fuel oil	120324-55760	1	

Section	Item	Content	Fuel tank		Suited to type: AW448T
Engine	4-3		Standard (mm)	Limit value (mm)	
			54 litter		
			Use good quality diesel fuel. If you deposit fuel by yourself, be care about dirt in depositing container. Remove the oil drain plug every 100 hours to drain the sediments in the fuel tank. Note: let the diesel-oil settle for over 48 hours before filling it into the tank. When the tank has only 12 liters of fuel it will give a warning.		
		No	Description	Part No	Q'ty.

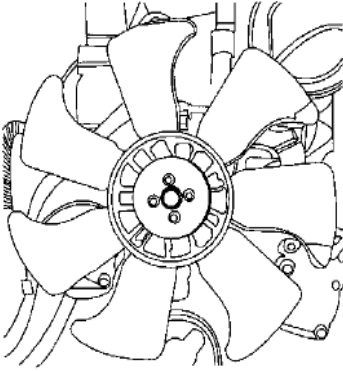
4. The Engine Section

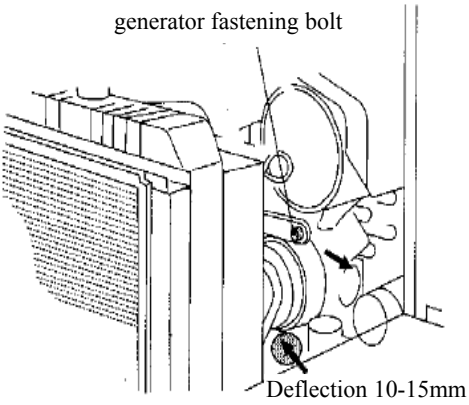
Section	Item	Content	Inspection of the pre-cleaner		Suited to type: AW448T	
Engine	4-4					
			Standard (mm)		Limit value (mm)	
			Constantly clean up the filter and keep it clean and dry.			
			No	Description	Part No	Q'ty.
	1	Pre-cleaner	121975-12601	1		

Section	Item	Content	Inspection of the air filter		Suited to type: AW448T	
Engine	4-6					
			Standard (mm)		Limit value (mm)	
			The filter element needs to be cleaned up everyday. Use compressed air at pressure of 7.0kg/cm <sup>2</sup> to blow out dust from the internal side. Replace it after one working season or every 400 hours.			
			Note: Do not clean filter element in oil or water. Be sure to use genuine Yanmar parts, otherwise premature wearing may result in for engine.			
No	Description	Part No	Q'ty.			
	1	Air filter	129065-12500	1		

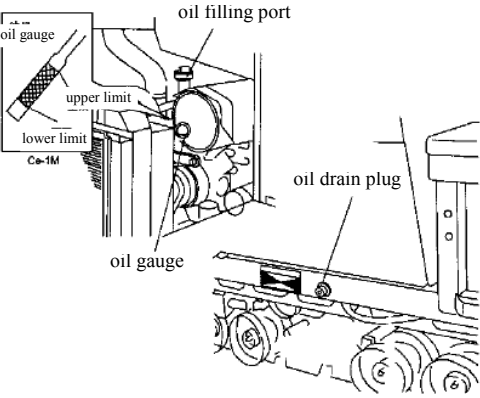
Section	Item	Content	Clean up of radiator		Suited to type: AW448T	
Engine	4-7					
			Standard (mm)		Limit value (mm)	
			Flush the dust out with compressed air from inside on daily basis. Note: Be sure to open the hydraulic oil cooler and clean up the covered part.			
			No	Description	Part No	Q'ty.

4. The Engine Section

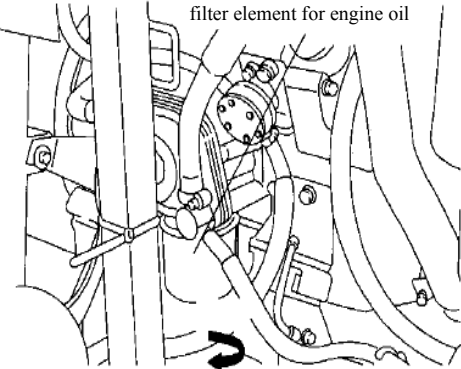
Section	Item	Content	<b>Inspection of the cooling fan</b>		Suited to type: AW448T	
Engine	4-8					
			Standard (mm)		Limit value (mm)	
			Check the fan blades for damage and cracks. When serious, replace it.			
			No	Description	Part No	Q'ty.
	Fan, cooling	29436-44740	1			

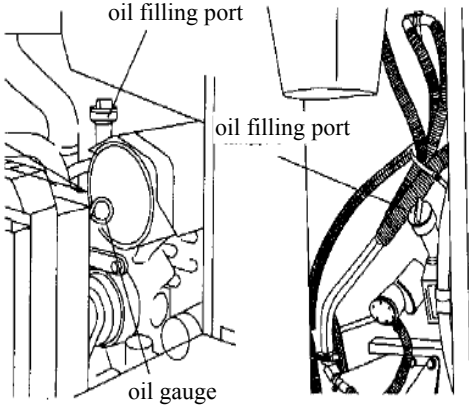
Section	Item	Content	<b>Tension of fan belt</b>		Suited to type: AW448T	
Engine	4-9					
 <p>generator fastening bolt</p> <p>Deflection 10-15mm</p>			Standard (mm)		Limit value (mm)	
			Apply a force of 10 kgf at the center the belt and adjust the generator's fastening bolt so that the belt has a deflection of 10-15 mm. At the same time, check the belt for damage. When serious, replace it.			
			No	Description	Part No	Q'ty.
1	Fan belt A40	25152-004000	1			

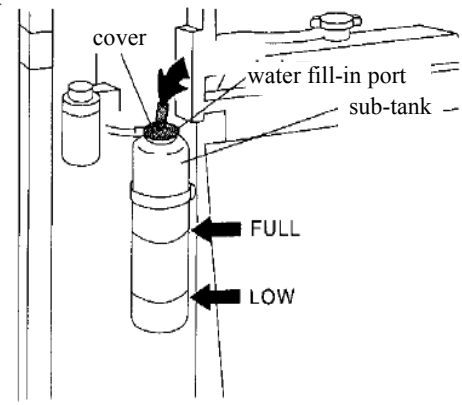
4. The Engine Section

Section	Item	Content	<b>Engine oil</b>		Suited to type: AW448T	
Engine	4-10					
 <p>oil filling port</p> <p>oil gauge</p> <p>upper limit</p> <p>lower limit</p> <p>oil gauge</p> <p>oil drain plug</p>			Standard (L)		Limit value (L)	
			6 litter			
			Replace at 50 hours at the first time. After that replace every 100 hours. Be sure to genuine Yanmar product, otherwise early wearing of engine and oil injection pump may result in. API grade CD or better and SAE 30 or 40.			
			No	Description	Part No	Q'ty.

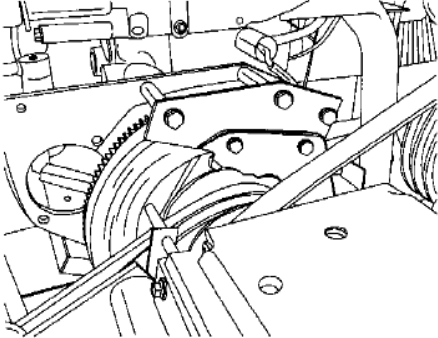
4. The Engine Section

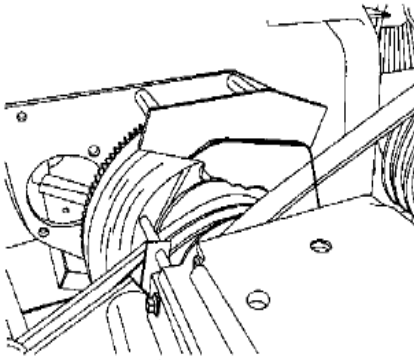
Section	Item	Content	Engine oil filter		Suited to type: AW448T	
Engine	4-11					
 <p>filter element for engine oil</p>			Standard (mm)		Limit value (mm)	
			<p>First time change is at 50 hours. After that will be every 200 hours. When changing to new product, apply new oil on surface of O-ring of the filter. Be sure to use genuine Yanmar product, otherwise early wearing of engine and oil injection pump may result in.</p>			
			No	Description	Part No	Q'ty.
	FILTER 80X80L	129150-35160	1			

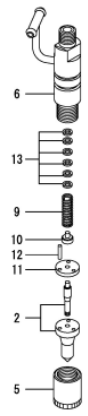
Section	Item	Content	Engine oil filling port		Suited to type: AW448T	
Engine	4-12					
 <p>oil filling port</p> <p>oil filling port</p> <p>oil gauge</p>			Standard (mm)		Limit value (mm)	
			<p>There are two oil filling ports with covers in yellow color. Be sure to properly tighten them.</p>			
			No	Description	Part No	Q'ty.

Section	Item	Content	Cooling water in sub-tank		Suited to type: AW448T	
Engine	4-13					
 <p>cover</p> <p>water fill-in port</p> <p>sub-tank</p> <p>FULL</p> <p>LOW</p>			Standard (mm)		Limit value (mm)	
			<p>Ex-factory standard: 70% of water, 30% of anti freezing agent. As cooling water is consumed, replenish pure water in the sub-tank. Water level must be between the "full" and "low" marks. When cooling water is unusually consumed, check the radiator, radiator cap, and water pipeline for the sealing. Never use river water, well water, mineral water etc as that is easy to cause scaling in the cooling system pipeline and lead to poor heat diffusion of the engine.</p>			
			No	Description	Part No	Q'ty.

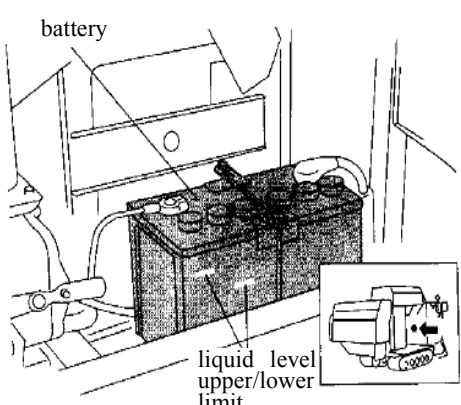
4. The Engine Section

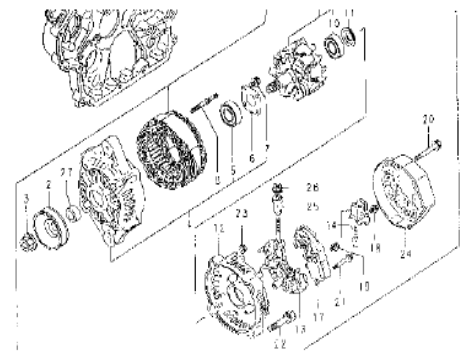
Section	Item	Content	<b>Engine silencer damage</b>		Suited to type: AW448T	
Engine	4-14				Standard (mm)	Limit value (mm)
			Be sure to check the engine silencer before operation every day. Crack, burnt hole must be repaired by welding or replaced, otherwise fire accident may result in.			
			No	Description	Part No	Q'ty.
			1	Silencer	129467-13510	1

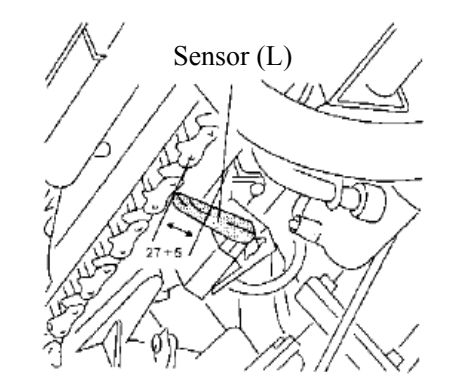
Section	Item	Content	<b>Cracking of threshing belt holder</b>		Suited to type: AW448T	
Engine	4-15				Standard (mm)	Limit value (mm)
			Check for the cracking of the holder. In its early stage of cracking repair by welding is possible. When serious, it has to be replaced or damage can be caused to the belt.			
			No	Description	Part No	Q'ty.
			1	Retainer	1E8559-51530-1	1

Section	Item	Content	<b>Injection nozzle</b>		Suited to type: AW448T	
Engine	4-16				Standard (mm)	Limit value (mm)
			When the engine gives inadequate power and the exhaust gas is in the form of white smoke, be sure to check the injection nozzle to see if injection pressure is 220-220kgf/cm <sup>2</sup> and its atomizing status. If they are not OK replace nozzle assy or valve assy..			
			No	Description	Part No	Q'ty.
			1	Nozzle assy, fuel inject	129100-53000	4
				Valve assy, fuel inject	729100-53100	4

5. The Electric Section

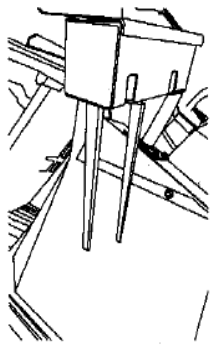
Section	Item	Content	Specific gravity of battery electrolyte		Suited to type: AW448T	
Electric parts	5-1		Standard (g/ml)	Limit value (g/ml)		
			1.28	1.24		
			<p>The electrolyte level must be kept between the upper and lower limits. When combine is stored for long period, battery must be charged once a month. When charging the battery, avoid from quick charge. Charge it for 8-10 hours with 7A current.</p> <p>Note: When disconnecting the battery, disconnect negative terminal first and follow with the positive terminal. When connecting, follow the reverse sequence.</p>			
			No	Description	Part No	Q'ty.
			1	Battery, 95D31R-MF	1E8809-83200	1

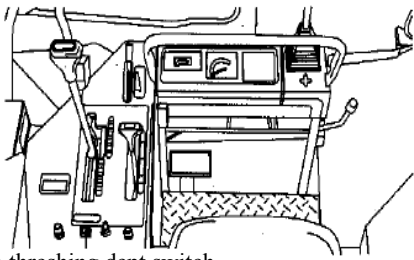
Section	Item	Content	Generator shaft		Suited to type: AW448T	
Electric parts	5-2		Standard (mm)	Limit value (mm)		
						
			<p>Disassemble the generator every 200 hours to clean up the dust. Check the bearings to see they are rotating flexibly. If not, replace it.</p>			
			No	Description	Part No	Q'ty.
			1	Ball bearing	24104-062010	2
			2	Ball bearing	24104-062010	2

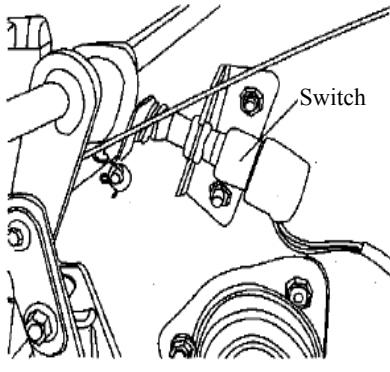
Section	Item	Content	Position and action of L sensor		Suited to type: AW448T	
Electric parts	5-3		Standard (mm)	Limit value (mm)		
			22-32			
			<p>Check up on and adjust the transverse difference between the L sensor and vertical convey chain. Check to see if the L sensor is in its right position and in normal contact.</p>			
			No	Description	Part No	Q'ty.
			1	Sensor switch L	1E6740-81850	1



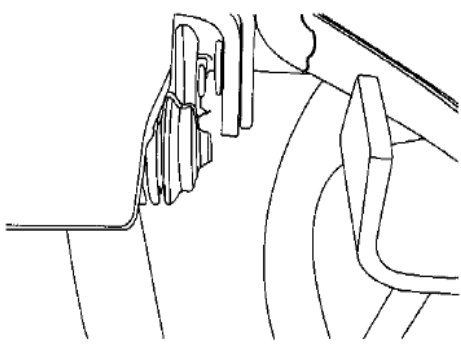
5. The Electric Section

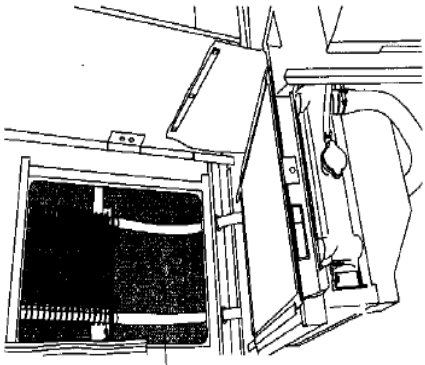
Section	Item	Content	M-H sensor, position and action		Suited to type: AW448T	
Electric parts	5-4					
			Standard (mm)		Limit value (mm)	
			8-12			
			Check and adjust the clearance between the covers of conveying chain on upper right of the M-H sensor.			
			No	Description	Part No	Q'ty.
			1	M-H sensor	1E8555-86550	1

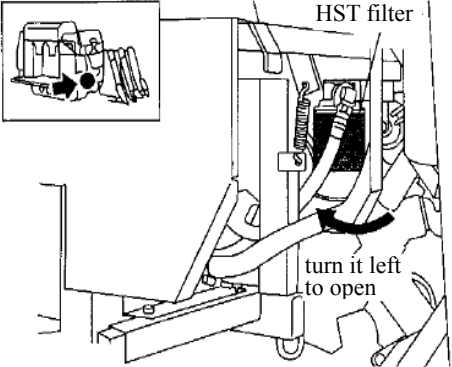
Section	Item	Content	Function of the automatic threshing depth control		Suited to type: AW448T	
Electric parts	5-5					
 <p>auto threshing dept switch</p> <p>sensor (L)</p> <p>turning knob</p> <p>sensor (H) sensor (M)</p>			Standard (mm)		Limit value (mm)	
			To confirm			
			Set the key switch to "ON" position. Set the threshing and cutting clutch levers "ON" position. Press automatic threshing depth control switch and push HST lever to "forward". Push L and move M-H sensors to confirm the action of vertical convey chain. Note: There will be warning sound. It is normal.			
			No	Description	Part No	Q'ty.

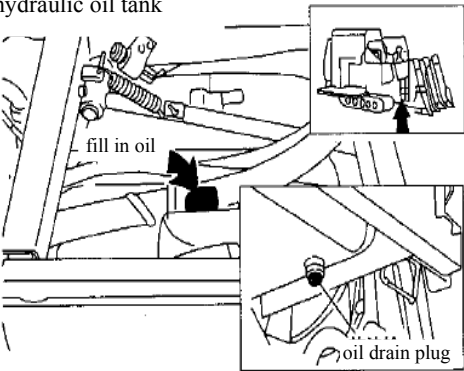
Section	Item	Content	Warning setup for straw cutter jamming		Suited to type: AW448T	
Electric parts	5-6					
 <p>Switch</p>			Standard (mm)		Limit value (mm)	
			To confirm			
			Adjust the switch to appropriate position so that the warning comes off just when the straw cutter gets jammed and engine comes to a stop.			
			No	Description	Part No	Q'ty.
			1	Switch	1J3780-47000	1

5. The Electric Section

Section	Item	Content	<b>Function of warning setup for aux conveying chain clogging</b>		Suited to type: AW448T			
Electric parts	5-7		Standard (mm)	Limit value (mm)				
			50					
			<p>Check up on and adjust the clearance between the aux conveying chain guide pole's upper and lower pressure plates and the warning sensor. When the engine is in normal operation, move the guide pole so that it comes into contact with sensor. Engine should come to a stop now.</p>					
			No	Description	Part No	Q'ty.		

Section	Item	Content	Clean up of HST oil cooler		Suited to type: AW448T	
HST	6-1					
 <p>Lower side cover</p>			Standard (mm)		Limit value (mm)	
			Use a clean brush to clean away dust every day. Clean up on a quarterly basis using low- pressure compressed air. Failing that can damage the HST due to overheating.			
			No	Description	Part No	Q'ty.

Section	Item	Content	HST filter		Suited to type: AW448T	
HST	6-2					
			Standard (mm)		Limit value (mm)	
			HST filter must be replaced every 400 hours together with the hydraulic oil.			
			No	Description	Part No	Q'ty.
			1	Hydraulic oil filter	1E8130-66791	1

Section	Item	Content	Quantity of hydraulic oil		Suited to type: AW448T	
HST	6-3					
			Standard (L)		Limit value (L)	
			17			
			Oil type shall be Yanmar super hydraulic oil VG46. Change oil every 400 hours.			
			No	Description	Part No	Q'ty.
			1	O-ring P16	24311-000160	1

## Checklist of main consumable parts

No	Description of part	Q'ty.	Remarks
1	Cutting driving belt	1	
2	Threshing driving belt	2	
3	Threshing belt shaft bearing	2	
4	Threshing drum driving belt	2	
5	Sorting feed-in conveying belt	1	
6	Sorting belt	1	
7	Shaking sieve driving belt	1	
8	Straw discharge driving belt	1	
9	Driving transmission belt	2	
10	Grass cutter driving belt	1	
11	Cooling fan/generator driving belt	1	
12	Rake-in belt	4	
13	Pick-up chain	4	
14	Pick-up chain rubber buffer	4	
15	Pick-up tine lower guide rail R	2	
16	Pick-up tine lower guide rail L	2	
17	Upper left conveying chain	1	
18	Upper right conveying chain	1	
19	Ear-Section (left) Type AW448T	1	
20	Pick-up tine for type AW448T	3	
21	Lower left conveying chain	1	
22	Lower right conveying chain	1	
23	Lengthwise conveying chain	1	
24	Lengthwise conveying chain shaft bearing	1	
25	Aux conveying chain	1	
26	Feed in chain	1	
27	Straw discharge chain	1	
28	Cutting blades assembly	1	
29	Moving blades assembly	1	
30	Stationary blades assembly	1	
31	Cutter rocker arm bearing	2	
32	Threshing inlet port rubber A	1	
33	Threshing inlet port rubber B	1	
34	Threshing inlet port rubber C	5	
35	Threshing knife	5	
36	Threshing knife	6	
37	Threshing tooth L 7	4	
38	Threshing tooth R7	4	
39	Threshing tooth O	8	
40	Threshing tooth S	4	
41	Threshing tooth T7	8	
42	Threshing tooth R7	44	
43	Pick-up tine	94	
44	Pick-up tine pin	94	
45	Threshing tooth R68	4	
46	Threshing tooth KL	4	
47	Threshing tooth S	44	
48	Threshing tooth R	41	
49	Hole cover of re-threshing drum	2	

## Checklist of main consumable parts

No.	Description of part	Q'ty.	Remarks
50	Rack teeth	24	
51	Hood of fixation hole	2	
52	Winnower fan shaft bearing	2	
53	Threshing drum front cover	1	
54	Threshing drum bolt	14	
55	Threshing drum bolt washer	20	
56	Anti dust brush	1	
57	Threshing chamber bolt M8x 16	6	
58	Reinforcement plate A	3	
59	Reinforcement plate B	1	
60	Grass scraper	1	
61	Aux grass pressing plate	4	
62	Primary spiral	1	
63	2nd (tailings) spiral	1	
64	Elevation spiral	1	
65	Elevation spiral grain scraper	2	
66	Bevel spiral	1	
67	Bevel spiral shaft bearing	1	
68	Oil pipe (for oil drain)	1	
69	Machine oil filter element	1	First replacement at 50 hours, replacement afterward at 200 hours.
70	Diesel oil filter element	1	Replacement at 200 hours.
71	Air filter element	1	Clean up everyday, replacement at 400 hours.
72	HST hydraulic oil filter element	1	Replacement at 400 hours.
73	Vehicle axle seal ring	2	
74	One-way clutch	1	
75	Crawler	2	
76	Crawler sprocket	2	
77	Carrier roller	2	
78	Crawler guide rail	4	
79	Concave plate sieve frame	1	
80	Concave sieve wire mesh	1	
81	Concave sieve reinforcement ribs (long)	1	
82	Concave sieve reinforcement ribs (short)	1	
83	Sieve mesh pressure plate	47	
84	Sieve mesh bolt	5	
85	Concave sieve screw	52	
86	Accelerator wire	1	
87	Cutting clutch wire	1	
88	Crop-pushing planetary gear	4	
89	Crop-pushing planetary gear shaft bearing	4	
90	Battery	1	
91	Straw cutter discs	36/30	AW448T 30 blades
92	Filter element of diesel oil settling cup	1	Replace at 200 hours
93	Shaft bearing of gearbox	all	Maintenance at 1000 hours
94	Oil seal of gearbox	all	Maintenance at 1000 hours
95	Steering clutch friction disk	all	Maintenance at 1000 hours
96	Steering clutch mid pressure plate	all	Maintenance at 1000 hours

### 3. Appendices

#### 1. Parameters of AW448T chains of different Sections

Descript of chain	No.	Total length (mm)	Number of links	Pitch (mm)	Number of removable links	specs
Pick-up chain	1E8920-13460	1778	140	12.7	2	140
Upper right conveying chain	1E8550-26823	2755.9	217	12.7	2	R217
Upper left conveying chain	1E8550-25553	825.5	65	12.7	6	L65
Lower right conveying chain	1E8550-23161	2079	63	33	2	63R
Lower left conveying chain	1E8550-23151	1353	41	33	2	41L
Aux conveying chain	1E8559-28241	112	34	33	2	30×34L
Lengthwise conveying chain	1E8559-27151	1518	46	33	2	36×46
Feed in chain	1E8559-48001	3430	98	35	2	58×98
Straw discharge chain	1E9060-49200	2310	70	33	2	25×70

#### 3. Parameters of tightening torque N-m (kg-m) for bolts/nuts of different Sections:

	4T (grade 4.8)	7T (grade 8.8)
M3	-	-
M6	4.90-6.86 (0.5-0.7)	10.78-13.72 (1.1-1.4)
M8	12.74-16.66 (1.3-1.7)	22.54-29.40 (2.3-3.0)
M10	24.50-34.36 (2.5-3.5)	44.10-58.80 (4.5-6.0)
M12	44.10-58.80 (4.5-6.0)	78.40-98.00 (8.0-10)
M14	68.80-83.30 (7.0-8.5)	117.60-147.00 (12-15)
M16	107.80-137.20 (11-14)	166.60-205.80 (17-21)
M18	156.80-186.20 (16-19)	235.20-284.20 (24-29)
M20	215.60-246.60 (22-27)	323.40-401.80 (33-41)

**Note: 4T, 7T are indicated at the ends of the bolts.**

#### 4. AW448T commonly used bearings

Section	Location of bearing	Figure in page	Bearing No	Quant.	remarks
Cutting Section	Cutter crank shaft	45-35	24104-063034	2	Symmetrical
	Center of rocker arm holder	45-34	24104-062044	2	
	One side of rocker arm holder	45-33	24104-062034	2	Driving the cutter
	Crop-pushing planetary gear (outer left, outer right)	50.51-8	24104-062024	4	
	Crop-pushing planetary gear (inner left, inner right)	55-24	24104-060034	4	
	Lower right conveying roller	59-23	24104-062034	1	
	Lower right conveying tension wheel80	59-24	24104-062034	1	

	Lower left conveying tension wheel 23 × 80	60-19	24104-062034	1	
	Lower left conveying tension wheel 80	60-20	24104-062034	1	
	Lengthwise conveying expanding roller80x29	70-18	24104-062034	1	
	Aux conveying expanding roller	73-24	24104-062034	1	
	Aux conveying tension sprocket	73-25	24104-062034	1	
	Cutting belt tension wheel 70	133-15	24104-062034	1	
	Cutting belt tension arm	133-14	24104-062024	2	
	One-way clutch	143-7	1E8379-54180	1	BB6303 UU NR
	One-way clutch	143-15	24104-060074	1	
Threshing Section					
	Sorting feed-in belt tension wheel 85	89-10	24104-062024	2	
	Sorting feed-in belt tension wheel 70	90-16	24104-063034	1	
	Sorting belt tension wheel 70	91-18	24104-063034	1	
	Shaking sieve belt tension wheel 65-B1	92-16	24104-062024	1	
	Threshing drum belt tension wheel 120	95-31	24104-062044	2	
	Threshing drum belt tension wheel 80	95-30	24104-062034	2	
	Threshing drum belt tension wheel 80	95-29	24104-062024	2	
	Straw discharge belt tension wheel 65-B1	97-11	24104-062024	1	
	Threshing belt tension wheel 80×49	99-17	24104-062044	2	
	Threshing clutch tension arm	99-16	24104-060034	2	Linked to threshing driving belt tension wheel
	Threshing clutch arm	158-24	24104-062024	2	Linked to threshing clutch link lever
	Threshing drum shaft end bearing seat	109-6	24104-062054	1	
	Re-threshing drum driving shaft mounting seat	112-5	1E8540-41280	1	BB2306 2RS
	Re-threshing drum driving shaft	112-14	24104-062044	2	One driving shaft at front and one at the rear
	Re-threshing drum driving shaft support	113-4	1E8230-41590	1	BB6204DDU
	Shaking sieve driving shaft holder	115-9	24104-062034	2	
	Winnower fan shaft bearing seat	118-8	24104-062034	2	
	Primary spiral shaft bearing holder	119-7	24104-062034	1	
	Bevel spiral driving shafts 1, 2	120-21	24104-062034	3	2 at shaft 1, and 1 at shaft 2
	Bevel spiral driving shaft 2	120-20	24104-062034	1	
	Upper cover of elevation spiral	121-7	24104-062034	2	
	Primary spiral bearing holder	123-4	24104-062034	1	
	Bevel spiral top	124-26	24104-062044	1	
	Suction fan bearing holder	125-13	24104-062024	1	
	Feed-in port roller holder	126-22	24104-062024	2	At the front end of feed chain guide rail
Feed chain guide rail side	126-23	24104-062024	2	At the center of feed chain guide rail	
Straw discharge chain tension wheel 60	129-19	24104-062024	1		
Grass cutter belt tension wheel 82	209-16	24104-062020	1		

	Grass cutter belt tension arm	209-21	24104-062014	2	
	Grass cutter low speed axle (front)	210-19	24104-062064	2	
	Grass cutter high speed axle (rear)	211-21	24104-062064	2	
Driving Section	Driving tension arm bearing	152-4	24104-062044	2	
	Driving belt tension wheel 80	152-23	24104-062034	2	
	Idling wheel shaft	169-12	24104-062064	4	
	Track roller axle 1	170-12	24104-062064	12	6 wheels
	Track roller axle 2	170-27	24104-062064	4	2 wheels
	Carrier roller axle	172-11	24104-062044	4	
Engine Section	Hydraulic oil pump	7-22	24105-060064	2	
	Oil injection pump (cam shaft)	12-8	129155-51050	1	Thrust ball bearing
	Oil injection pump (cam shaft)	12-86	24101-063034	1	
	Starting motor rotor (front)	16-9	129129-77240	1	
	Starting motor rotor (rear)	16-8	129129-77230	1	
	Generator	17	24104-062010	1	BB6201 UUC3



Published by  
Yanmar Agricultural Machinery (Thailand) Co., LTD.

20-01-2007