



Tume-Agri Oy

97623704 2/2013

HANKMO – STARMIXER

90 / 320 / 300 S

Operator's manual



Right to make structural changes reserved

EC declaration of conformity
TUME-AGRI OY
PL 77
14201 TURENKI
FINLAND

Declares that TUME rotary tillers, models 90, 320 and 300 S conform to Directives 89/392/EEC, 93/441/EEC and 93/68/EEC. This declaration concerns machines from serial numbers ID 568 (H 78), ID 722 (H 90), ID 551 (H 320) and IE 722 (H 300 S) on.

General safety precautions

Everybody who is to use, service or otherwise handle the implement must read and understand this instruction book before starting work.

Do not go under a hydraulically lifted implement. Caution is needed specially when removing the Shaft.

Riding on a moving implement or standing near it is forbidden. The rotating knives are dangerous.

Drive with caution when the implement is lifted. The implement may swing to the side when cornering over uneven ground.

The implement does not cause any essential increase in the noise level in the tractor cabin. The need to use hearing protection depends on the noise isolation of the cabin.

Do not carry out any alterations to the implement without the consent of the manufacturer. The manufacturer is not responsible for any consequences of unauthorized alterations.

The intended use of the implement

The Tume rotary harrows are intended for use in seedbed preparation, stubble cultivation, breaking of grassland and pastures and fallow cultivation.

Tume can also be used for mixing in to the soil e.g. plant rests, green fertilizers, manure, fertilizers and chemicals. Thanks to its shearing and soil mixing knives, Tume can also be used for weed control.

Instructions for use. Picture 1-4

1. The chain should be loose during work in order to enable the harrow to follow the ground freely.
2. The drawbar. should be fastened so that the harrow works horizontally.
3. The tillage effect is regulated by adjusting the working angles.
4. If, during stubble cultivation winding occurs in the middle, change the left middle axle to the right back axle and vice versa

Service, Picture 5 – 8

5. Grease bearings twice daily when working continuously. In case the bearings gets overheated, dismantle *and* clean it thoroughly from soil and straw rests.
6. Check every now and then the tightness of the knives. The tightening nut is at the left of axle seen in the driving direction The nut should be tightened with about 785 Nm (80 kpm)
7. Axle assembly in connection with exchange of a knife:
 - Tap in the left threaded screw 16 so deep that the whole thread of the nut is covered by the thread of the axle.
 - Note that the distance from the end of the axle to the groove of the nut 15 (dimension A) should be 83 - 88 mm. This dimension can be achieved with 10, 15 or 20 mm-s washers 12
 - Check that the thrust washer (4 mm) is in the pedestal base before assembling the bearing.
8. Chek that the back edge of the anti-wrap knife ties against the axle nut. Hammer down the edge when needed.

Removing and replacing the shafts

DANGER! DO NOT GO UNDER THE IMPLEMENT WHEN HANDLING THE SHAFTS! SUPPORT THE IMPLEMENT MECHANICALLY, IF IT HAS TO BE IN A LIFTED POSITION!

Models 78, 90 and 320: Model 300 S

Lift the implement so that the shaft to be removed is just above the ground. Support the implement so that it can't fall.

Pull up the cotter bolt at the outer end of the shaft and hit the outer end of the shaft out of its guide.

The front shaft is detached to the front

The middle and rear shafts to the rear.

Replacing the shaft is carried out in the reverse order.

Support the implement on the side, where the shaft to be removed is, about fifteen centimeters above the ground.

Remove the bolts at the outer end of the shaft.

Knock the end of the shaft downwards. Beware of the falling shaft!

Storage of the implement

After use the implement must be cleaned and the bearings greased. Greasing the bearings is to be carried out after cleaning the implement. Grease the bearing until grease comes out of both sides of each bearing. In this manner water is kept away during storage. A good place for storage is under the roof.

Technical data			
Model	90	320	300 S
Working width, m	2,9	3,2	3,0
Weight kg	470	510	750
Number of knife crosses	45	47	45
Power requirement (kW)	45	50	55



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