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# HT– Tom (Special) Harvester User Manual



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# **HT– Tom (Special) Harvester**

## **Introduction**

Congratulations on the purchase of your *Harvester Concepts Ltd HT–Tom (special)Harvester*. This machine is of high quality and will reward you with reduced effort and a great harvest

Learning to operate your *HT–Tom Harvester* won't take long. You will soon find it to be an invaluable tool.

This handbook is for the standard HT-Tom but has been slightly modified for your special harvester.

## **Important Safety Note**

Read and understand all the instructions before using the *HT–Tom Harvester* (HT-T).

The HT-T should only be used for the purposes for which it was designed. Use it for no other purpose (e.g. it is not a grader blade or battering ram!). The HT-T is a light weight machine and if not used with care can easily be damaged. We have manufactured the HT-T using quality materials and manufacturing techniques however if faults do occur please have them corrected before you use it.

- Please read the Power Head instructions on page 8 before use. Pay particular attention to running in notes.
- Please read this instruction book before use and retain it for future reference.
- Unless mentioned in the instructions, it requires only one person to operate the HT-Tom Harvester—keep all others away!
- Always turn the Power Head off before adjusting its position in the frame.
- Immediately after turning the power head off, fit the cutter bar cover. It should be removed last, before restarting the power head.

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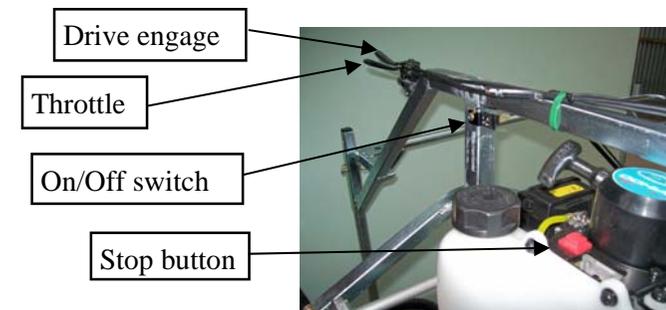
## HT-Tom (Special) Notes

### Assembly

For transport the power head is removed. Unfold the main frame and assemble with leg / wheel assemblies. See the picture on page 8—unlock the lever and offer the power head up to the mounting frame. (The 2 tubular clamps are like cam locks—they lock in both directions with the unclamped position in the middle). Slide the tubular clamps over the mounting frame and clamp tight.

Lift the other end of the power head up until it's mounting frame aligns with the main frame mount—bolt in place. Now lock the lever as shown on page 8.

Position the control cables in a gentle arc to either the left or right hand mounting position. Secure control levers in position and clamp the cables to the main frame with the reusable cable tie. Mount the on / off switch



The position of the cutter head cannot be changed, simply raised or lowered using the lynch pins in each wheel mounting leg. Adjust each leg to the same height, maybe rear legs slightly higher.

Being so wide it is envisaged that two operators will use the harvester. The controls can be mounted on the left or right hand sides.

## Specifications

Power Head: Ochiai V8X2HD-1210 (standard)  
Spark plug gap 0.6—0.7mm  
Type NGK BPM7A or Champion CJ-6Y  
Shipping box 1500x525x490mm, 0.386m<sup>3</sup>

### Total Harvester

Dry weight approx. 45.5 Kg  
Assembly time approx 2 minutes, longer if sling removed  
Cutter bar width 1210mm in arc shape  
Cutting height, at outside edges, adjustable from 100mm to 550mm  
Blade curve 1150mm radius (135mm Higher in centre)  
Wheel track 1610mm front, 1435 rear  
Overall width 1700mm  
Shipping pallet 1600L x 1385W x 750H, 1.66m<sup>3</sup>  
Packed weight 120Kg

## Freighting

Freighting on the back of a utility vehicle is preferred. The HT-Tom is very light and if transporting on a trailer it is not heavy enough by itself to make the trailer springs work i.e. it will get badly shaken about. On rough road / tracks this could cause structural damage. One solution is to put a extra weight on the trailer as well as the harvester so the springs actually work!

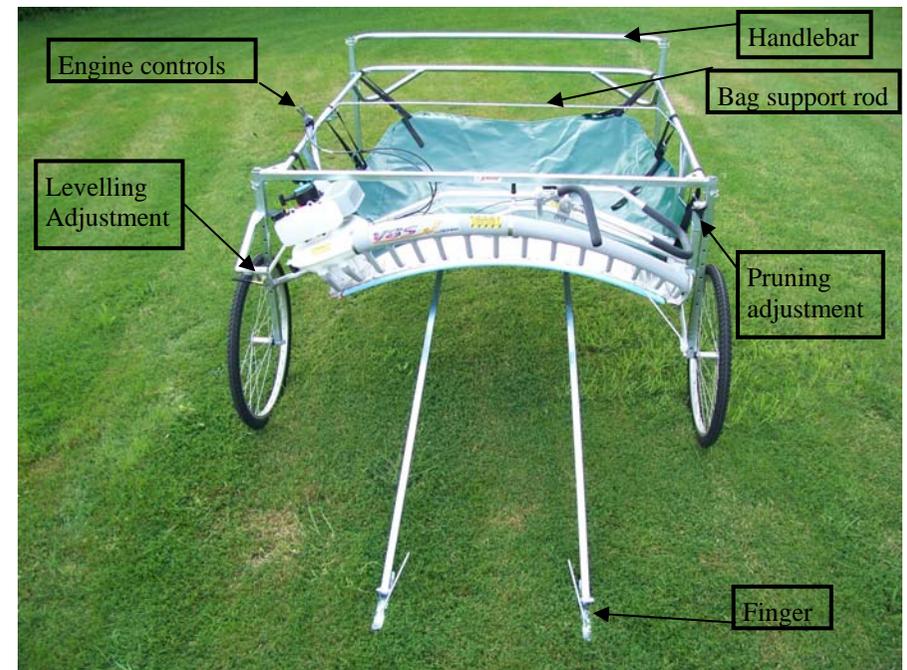
## Your HT-TOM Harvester

The HT-T consists of

1. The Ochiai power head is fitted with a Zenoah engine. The power head has had it's manual operating handles removed and adapters fitted to mount it in the HT-T frame. The power head comes with instruction book, bag & spanners.
2. The HT-T frame, folded up, c/w lynch pins and sling
3. A 6mm Allen Key is located in the rear edge of the sling
4. Large wheels / strut assemblies (2), c/w lynch pins
5. Small wheel strut assemblies (2), c/w lynch pins
6. Fingers c/w mount tube / clamps (2)
7. Bag quick release system

## Assembly

Assembly can be done in a different sequence but the following is a



good starting point:-

1. Remove lynch pins from the handle bar hinge area and **carefully** unfold the handlebars into the straight out position. Refit lynch pins to lock handlebars.
2. Fit the two front wheel strut assemblies by sliding them into the holders on each end of the cutting head. Select a suitable cutting head height and fit a lynch pin to secure each leg.
3. Fit the two rear wheel strut assemblies by sliding them into the holders on each at rear of harvester. Select a position so harvester frame is relatively level and fit a lynch pin to secure each leg.
4. Fit handle bar at a suitable height
5. If removed, fit the cutting head into the frame. Fit engine controls on frame mount ensuring cables are routed in gentle curves. Tighten wing bolt
6. If removed fit bag support rod. It may have to be sprung to fit.
7. Fit finger support assembly.  
Note It is easiest to feed this into



## **Maintenance**

During continuous use, lubrication should be applied as follows

1. Every time the engine is refueled, using an oil can apply some oil to each of the holes just behind the cutting blades.
2. Every 20 hours use a grease gun to lubricate the grease nipple on the gearbox below the engine.

Original Ochiai grease should be used.

After use it is a good idea to wash the blades (**Be Careful!!**) using a stiff bristle brush, water & detergent and allow to dry.

If the machine is to be stored for some time the blades can be sprayed or brushed with a light oil. The fuel should be drained from the fuel tank and the engine operated until it runs out of fuel

**WARNING\*** Ensure the fan housing is kept clear of debris, particularly underneath. This can be a problem particularly if the machine or power head only, is moved back and forth. Failure to do so can cause overheating and engine seizing.

3. Remove “end of Bar” bracket (retains wheel mount)
4. Fit adapter frame. It mounts on “end of Bar” bolt, one adjacent to the gearbox and 2 bolts under the handlebar rubber mounts



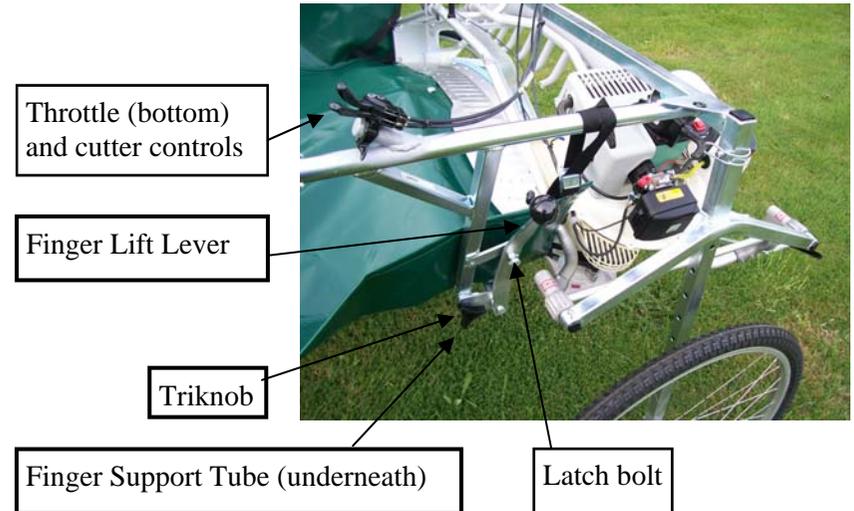
To fit the E7B1 follow these steps:-

1. Fit mounts to the HT-Tom frame (if not already fitted). Note that these are handed (4 bolts)
2. Place E7B1 on the ground, roughly in position under the mounts
3. Lower each adjusting leg down through the mount and use a lynch pin to connect it to the adapter frame.
4. Raise the E7B1 assembly to the desired cutting height and retain with lynch pins through the mounts (cutter bar should be level). Note that there are 2 holes in each mount enabling small height adjustments to be made

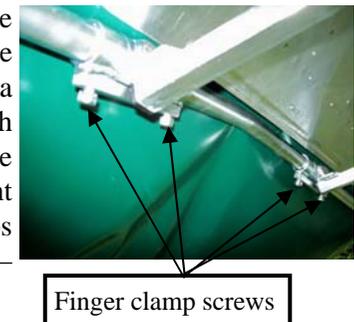
Removing the E7B1 or reverting to using it as a hedge trimmer is the reverse of above procedures.



position from the rear ensuring the fingers are positioned across the machine in roughly the correct position. Ensure lift lever is vertical. Fit the support tube on the spigot at the left hand side and secure the right hand end in position with the triknob



8. With the finger clamp screws undone, move the fingers side ways to suit the row width being cut. As a rough guide the finger width should be similar to the pruned width of the plant being harvested. The clamps are also lift travel stops—see below:-

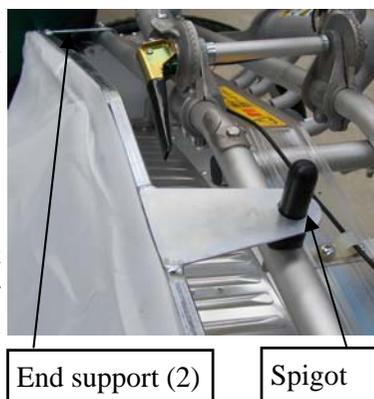


- A latch is provided for holding the fingers up for travel or when they are not required. Set the finger lift lever into the forward hole. Move the finger clamps anticlockwise (as viewed from RH side) until not quite hitting fingers. Use a 6mm allen key (supplied—in rear seam of sling), to lock each clamp in position. If positioned correctly, when the latch lever is moved rearwards into the recess it will lift the fingers fully up, evenly. If this is not achieved reposition the finger clamps. **Note:-** The Tom is a light weight machine and if not used with care can easily be damaged. Don't force anything. Whenever possible lower the fingers to ground level.



- Adjust the sling straps as required. The sling should be a snug fit up to the cutter head. Other straps should be adjusted so sling is roughly level and not sagging.

- Fit the collection bag. This should come fitted to the quick release frame (QRF). Unroll the bag and lay out on sling with frame at front end. To fit, the QRF is simply lowered over the spigot also ensuring the end supports fit over frame tubes and lower edge of QRF fits snugly in recess in cutting head panel area.



(TP). Put handle in horizontal position and tighten lock lever.

- Throttle assembly; undo wing bolt and remove from handle. With TP in frame, reposition throttle assembly onto main frame, routing cables in front of main frame cross member. Tighten wing bolt.

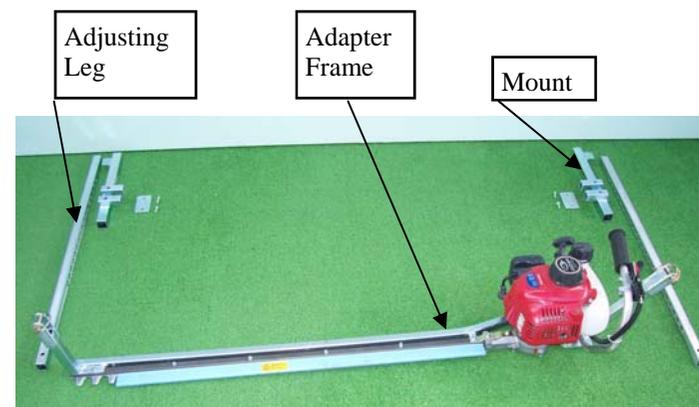
### **To Convert from Frame Mounted to Manual Operation**

This is a reversal of the above procedure taking note that:-

- Handles will need positioning for use
- The frame LH mount can stay attached to the TP at all times.

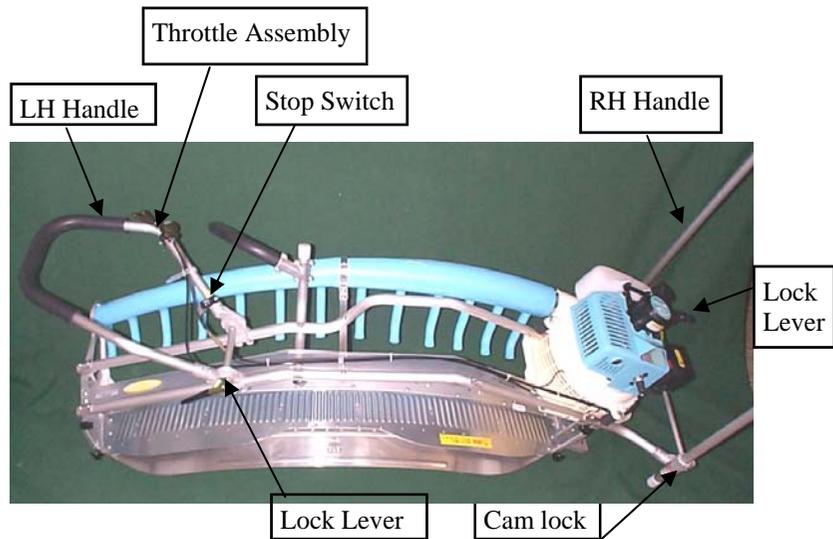
### **Optional Hedge Trimmer Mount**

This allows a Ochiai E7B1AT-880 to be mounted on the HT-Tom frame. The purpose of this is for heavy top pruning of shrubs or for low cutting of certain crops i.e. Peppermint.



To convert the E7B1 for use with the HT-Tom:-

- Remove RH handgrip (2 bolts)
- Remove wheel mount / handlebar



### Pruning

The HT-Tom can also be used for pruning the crop. Simply lowering it down, with or without using the fingers will prune but if you wish to shape the bushes more then the pruning position can be used.

The pruning position allows the left hand end of the cutter bar to be close to ground level resulting in a more vertical cut in that area. Prune one side of bushes as you travel down the row and then the other side on the way back.

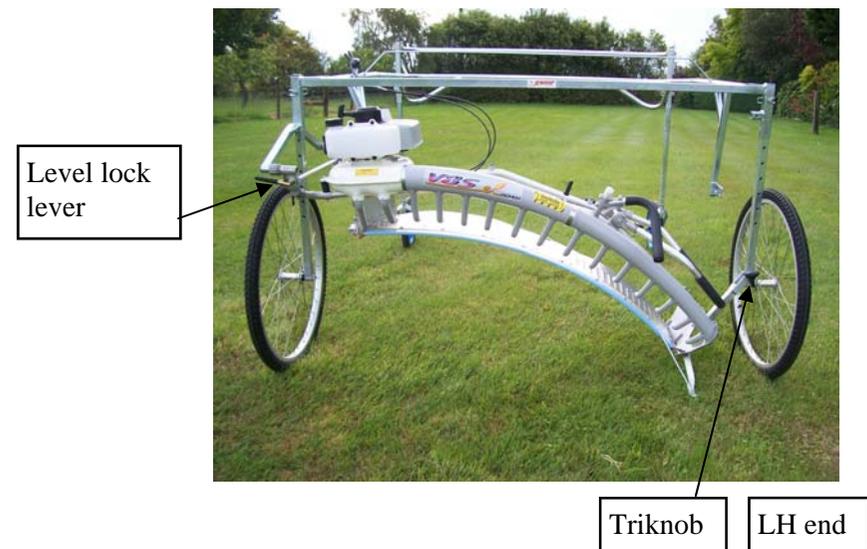
### To Convert from Manual to Frame Mount Operation

#### RH Handles:-

1. Remove 2 plastic bungs off bottom ends of handle (use crescent spanner over tube and tap with hammer)
2. Loosen 2 camlock clamps (central position loose—LH or RH tightens)
3. Slide handle tube out, refit bungs so they don't get lost.
4. Loosen lock lever, rotate serrated couplings until marks on couplings line up. Tighten lock lever
5. Insert RH frame mount adapter fully into camlock clamps and tighten clamps.

#### LH Handle:-

1. Loosen lock lever and move handle and clamps as far as possible to the centre of the tea plucker power head



NOTE:- the sling / collection bag are not usually fitted when pruning. To select the pruning position:- Remove collection bag and sling. Unlock level lock lever. Support cutting head and remove triknob holding the left hand end of cutter head to the main frame. Carefully lower LH end of cutting head ensuring level lock disengages. Reposition mounting strut and fit to lowest hole in wheel strut using triknob. Tighten level lock lever.



Unlocked

Locked

### **Dismantling For Transport or Storage**

Dismantling is a reversal of the assembly procedure. It is not necessary to remove the sling to fold the frame up. The power head can be totally removed or left in the frame

### **Operation**

The original power head instruction book is not in good English but the following notes should help:-

1. Ensure the engine is stopped before refuelling. Refuel the engine using a Fuel / oil mix of 25:1 91 octane fuel with a good quality 2 stroke oil for air cooled engines.

2. Fit harvesting bag / Quick release frame over spigot / frame at front and clothes pegs over bag support rod. Loop rear of bag over handle bars and hold by hand when in use. A small opening in the bag can be used to remove excess air from the bag.
3. After filling the engine with the petrol mix, press the brown rubber blister next to the square red stop button until it is full of fuel
4. Ensure stop switch (on LH carry frame) is switched on. Remove safety cover off cutter bar.
5. Apply choke and pull starting cable a few times until engine starts. Allow to warm up for a few minutes before revving the engine.
6. On the throttle control assembly, one lever is the throttle for engine / blade speed. The other lever dis/engages the drive to the cutter bar
7. When new, the power head requires some running in. Always allow the engine to warm up before revving it. During running in, don't rev for long periods of time. To stop the engine press the square red button on the engine. There is also a stop switch on the LH manual carry handle.
8. Refit safety cover on cutter bar

**\*WARNING\*** Ensure the fan housing is kept clear of debris, particularly underneath. This can be a problem particularly if the machine or power head only, is moved back and forth. Failure to do so can cause overheating and engine seizing.