

Autoclay 65

Instruction Manual



Acorn Target Systems Ltd

Thank you for choosing Acorn for your clay target launcher. Please take the time to read these instructions carefully in order to set up your machine correctly.

Parts list:

- Main Unit.
- Launch Plate.
- Left and right guard struts.
- Three hopper rods.
- One hopper support.
- One hopper attachment.
- Bag of screws
- Hopper.
- Two spigots on brackets.
- One spigot.
- Four yellow plastic guards.
- Footswitch on short lead.

Assembly Instructions

First, attach the left and right guard struts with M6 ×16mm screws (see fig 1).

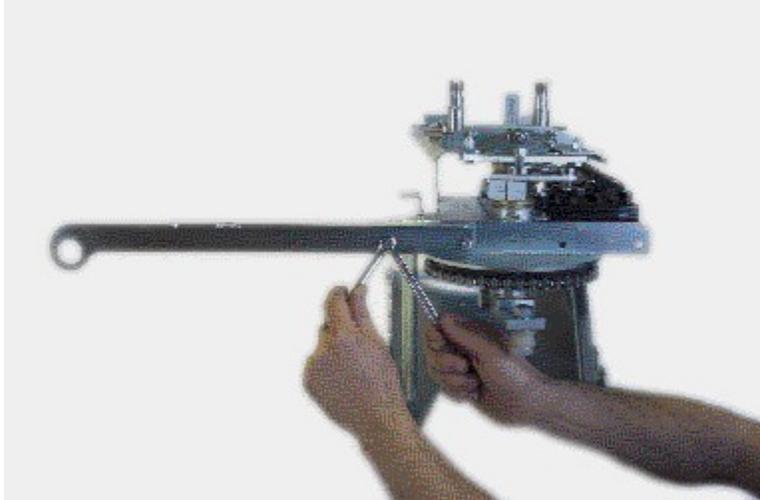


Figure 1

Remove the two rear screws from the top plate and swing top plate around to expose the motor and launch plate mountings (see fig 2 left). The Variac unit is positioned on the left hand side of the launch plate. The spring must be hooked onto the small screw positioned on the front left of the launch plate, adjacent to one of the mounting screws. A nyloc nut is provided to prevent the spring from becoming detached; this nut must not be tightened onto the spring. The mounting screws are already attached to the launch plate, remove the lower nut from each mounting screw and drop the launch plate into place on the main unit (see fig 2 right). Replace the nuts on the mounting screws but do not tighten them yet.

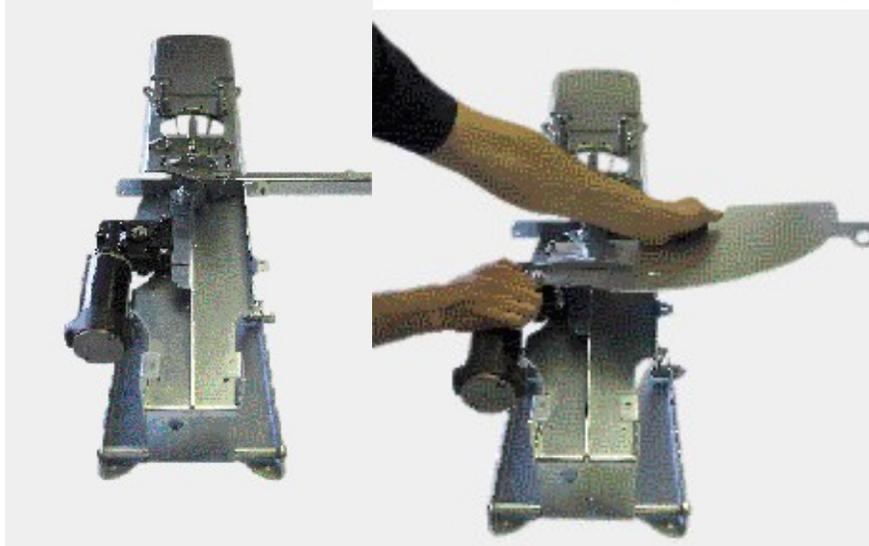


Figure 2

Setting up the arm height

In order for clays to be correctly launched, it is imperative that the arm, clay and launch plate are adjusted correctly. Take a clay and place on launch plate with the arm to the left (see fig 3). The arm needs to be pushing the clay on the drive band of the clay. By carefully adjusting the height-adjusting nuts underneath the launch plate, as you move the clay and arm around, the correct height can be easily set. Once this correctly set, lock into position with the locking nuts. After this has been done, the alignment must be rechecked. Miss-setting of this is the most common cause of the trap repeatedly breaking clays. Swing the top plate back, replace screws and attach hopper attachment bracket (see fig 4).

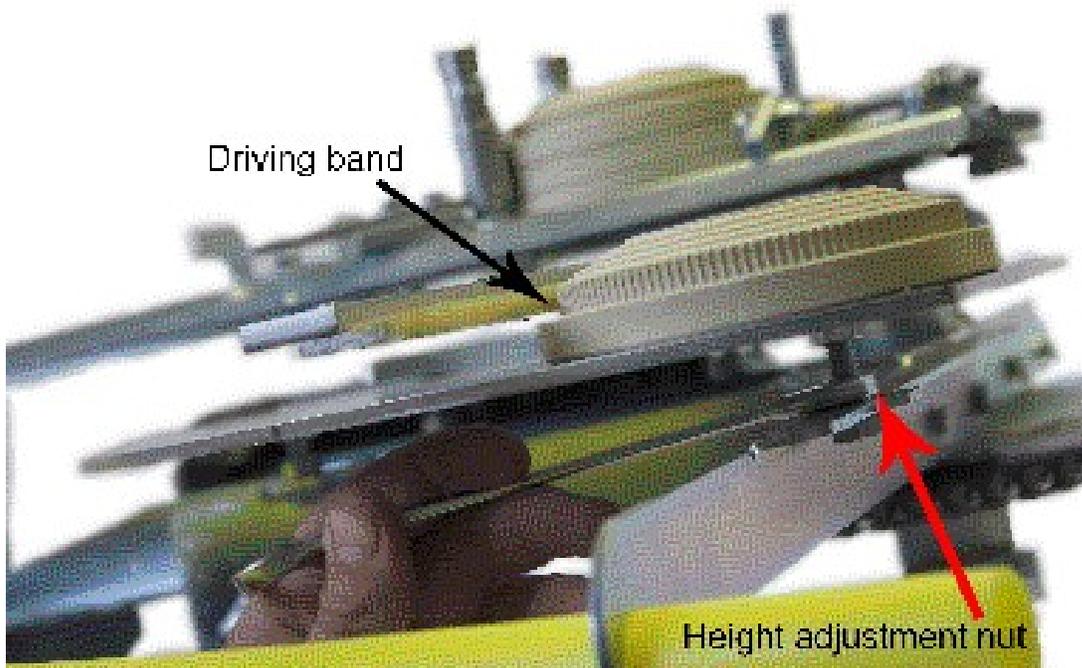


Figure 3



Figure 4

Setting the clay release mechanism

Decide which size clays you want to use, standard, midi or mini. Set the clay adjuster for the correct size clay (see fig 6). For standard's and midi's push upwards as far as it will go and for mini's push back, as far as it will go.

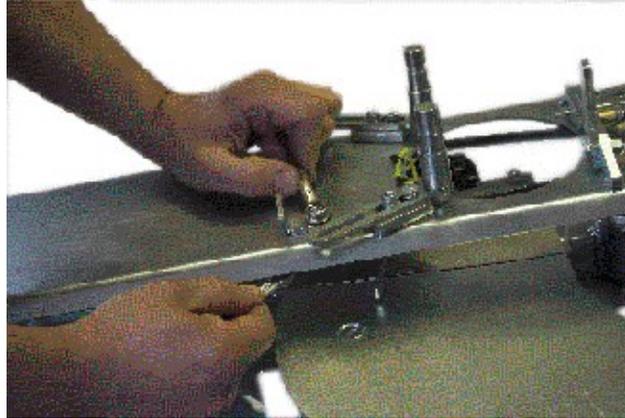


Figure 5

Place clay on to clay supports and push spigots up to touch the clay (**A**) while leaving a small (2mm) clearance between the plunger and the clay. A mini clay is shown in the illustration. To test, rotate the arm manually to ensure clay is cleanly released.

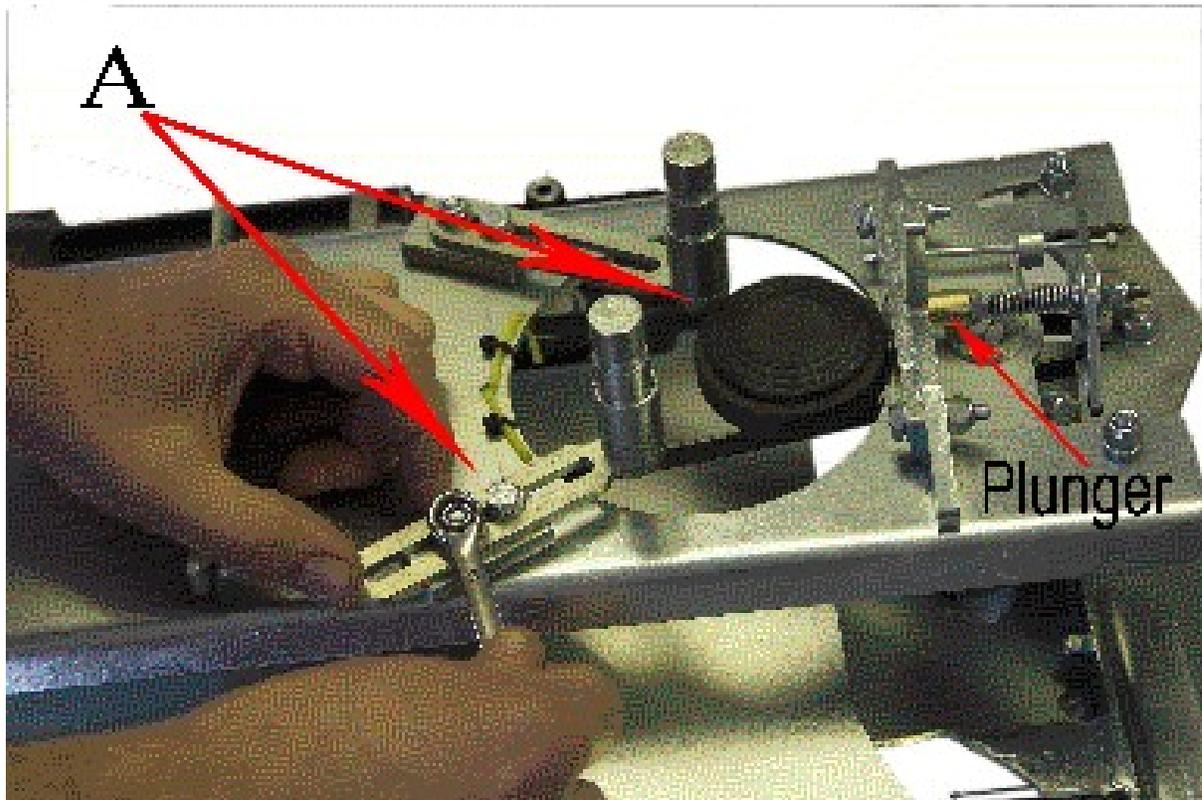
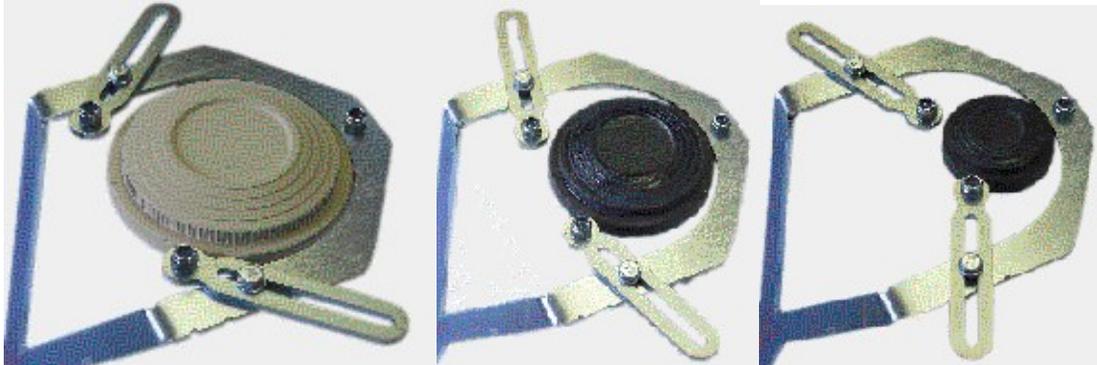


Figure 6

The clay hopper

Figure 7



Place hopper tubes on to the spigots on the top plate and screw locking screw into the front tube. There are three positioning notches on either side of the top support bracket to ensure that the top and bottom of the hopper is aligned. The front notch is for standard clays, the middle for midi's and the rear mini's. Align the spigot bracket with the notch and adjust to fit the size of clay in use. Slide the spigots on the top plate into the tubes and lock with the locking screw. Bolt the bracket to the hopper attachment bracket

Fit the main spring.

To fit the main spring place the hooked end around the white bushing on the spring crank and place the threaded rod through the hole in the back of the main unit, fit the nut and washer to the rod and tighten until the spring just starts to stretch. Lock into place with the lock nut.



Figure 8

IMPORTANT SAFETY INFORMATION

ONCE THE MAIN SPRING HAS BEEN FITTED THE YELLOW PLASTIC GUARDS SHOULD BE FITTED TOGETHER AND THEN INSERTED INTO THE GUARD STRUTS AND THE REAR OF THE MAIN UNIT.

Operation of the Autoclay 65

To operate the Autoclay 65 first set the required elevation by setting the legs into the chosen slot on the base unit. Ensure that the locking nuts are securely tightened. Load clays into the hopper by sliding them down from the top.



Figure 9

Attach the footswitch via its plug to the three pin socket coming from the main unit. Ensuring that the **Autoclay 65 is SWITCHED OFF**; attach the RED +ve and BLACK -ve battery leads to the battery ensuring the correct polarity. Make absolutely sure that the area in front of the Autoclay 65 is clear of people, livestock and any other potential hazard; whilst standing behind the unit, switch the unit on. The throwing arm will be driven round to the cocked position and the trap is now ready and armed. **FROM NOW ON, TREAT THE TRAP LIKE A LOADED GUN!** To launch a target press and release the footswitch; if the switch is continually depressed the unit will keep cycling and launching targets.

WARNING!

BEFORE ADJUSTING THE AUTOCLAY 65 OR REFILLING THE HOPPER YOU MUST DISARM IT BY MOVING THE MAIN SWITCH TO THE DISARM POSITION AND RELEASING; THE LAUNCH ARM WILL BE RELEASED BUT WILL NOT RECOCK. THE BATTERY LEADS MUST ALSO BE DISCONNECTED.

After use

Disarm the Autoclay 65 as described above. To remove the main spring reconnect the battery with the polarity reversed and move the main switch to the disarm position; the launch arm will rotate backwards until the spring is unstretched. Remove the spring by removing the nut and washer and unhook from the bushing on the spring crank. To store the Autoclay 65 rotate the launch arm so that it is under the top plate. Release the lock screw from the bottom of the hopper tube, unbolt the bracket from the hopper attachment bracket, and lift

the hopper from the top plate.

General maintenance

Occasionally smear a little light grease on the iris ballrace attached to the throwing arm. Lightly grease the brass Top Plate Pivot. Do not over lubricate, as this will impair the action of the mechanism.

Clean the launch plate to remove any build up of debris after each session. A wipe over with a solvent cleaner and a little light oil (Duck Oil) will prolong the plate's surface and improve performance. We do not recommend the use of WD40 or other penetrating type oils that could affect the working of the clutch.

There is little else that requires attention except for any obvious loose screws etc. that may appear after prolonged usage.

Setting the throwing arm

If the throwing arm and the spring crank become miss-aligned it will be necessary to reset the alignment. Start by slackening the throwing arm clamp bolt so that the throwing arm and spring crank rotate separately. To set the throwing arm first align the front edge of the arm with the notch on the edge of the launch plate (see fig 10 left). Once the arm is in position align the main spring crank, underneath the main unit, with the front edge of the unit and pointing toward the motor side of the unit (see fig 10 right).



Figure 10

Once both the arm and the crank are aligned, tighten the clamp bolt on the throwing arm to lock them together; both the arm and the crank should now rotate together.

Trouble shooting

1: Clays not feeding.

a). Clays wet or sticky:

Check that the clay separator is reaching and parting the clays.

b). Clay supports are not fully opening:

Check that the clay adjuster is set for the correct size of clay.

c). Plunger sticking:

Keep the plunger clean and check setting.

2: Clays breaking on launch.

a). Pick-ups:

Check before use for chips or cracks before re-using clays.

b). Clay being nipped by arm:

Ensure launch plate height is set correctly

c). Arm bent:

Check that the launch arm is straight if the arm appears to be bent carefully straiten the arm

d). Arm moved from correct setting:

Check that the launch arm and spring crank are correctly aligned.

e). Dirty launch plate:

This can increase friction and cause breakage. Simply clean the plate with a suitable solvent cleaner.

f). A build up of dirt underneath the soft landing plate:

Clean out any residue from underneath this plate.

g). Friction Strip on launch arm worn or damaged:

Check and replace if necessary.

4: Failure to fire clays

a). Flat Battery:

Make sure battery is fully charged.

b). Poor Connection:

Check for proper connections to battery.

c). Fuse Blown:

Replace fuse on power lead (15amp).

d). Faulty Release Button:

Check release button is making contact: Short OUTER contacts on socket to verify. (DO NOT make contact with the centre pin, which is used for an optional radio release)

e). Motor Leads Disconnected:

Check connection to motor.

Trap fires without stopping

a). Release button is stuck in the on position:

Disconnect from the plug to verify. Check that the plug/socket is not full of water.

b). Stop switch not working:

Check reed switch and magnet are in position (not missing).

c). Crank arm is over 'Top Dead Centre':

Advance reed switch by slackening mounting plate and moving towards rotation of arm: If set too finely this effect can sometimes appear after prolonged use or during hot weather when the mechanism has loosened up.

Warning! De-cock the trap before handling, as any movement of the stop switch will instantly fire the trap.

For clarity the safety guards are not fitted in some of the illustrations in this manual:

The safety gaurds must always be correctly fitted while the trap is in use!

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Autoclay 65 Modular Upgrades

Trolley 65

The front axle of the trolley comes in three parts the two larger diameter pieces fit

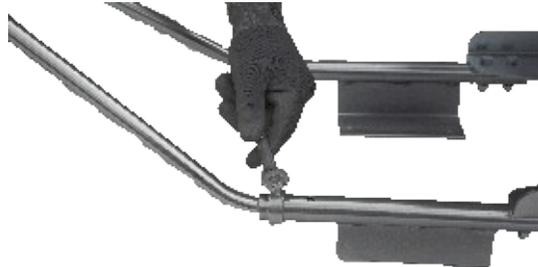


over the central piece and are bolted into position on the front bottom of the trap. The handle brackets are bolted



either side under the rear of the trap with the angled brackets facing downwards and inwards to hold a 12v leisure battery. (Please note that the handle illustrations show the same fitting on the Autoclay 300). The

handles are inserted into the other



end of the brackets and locked into place with the bolts. The handle piece is then clamped into place by its locking bolts.

Place a spit pin into the inner hole in each

of the axle tubes then slide the wheels on and secure with the second split pin.



Oscillating Base 65

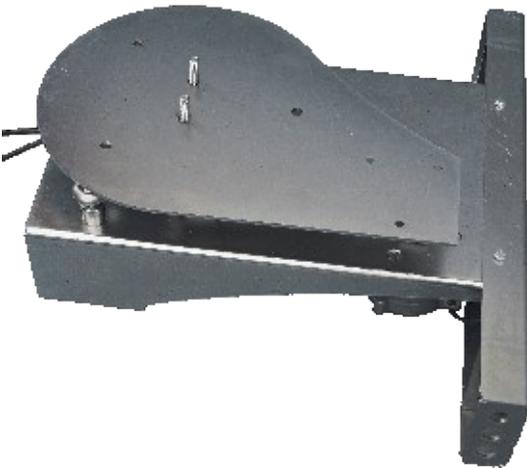
If you have a trolley, you will need to install the front axle into the front unit of the turner base. The centre part of the axle is placed into the front box with the two locking



collars round it. The outer axle tubes are then placed over the centre tube and the locking rings tightened so that they hold the axle in place. The rear brackets are bolted to the under

side of the turner unit in the same way as they would be if they were on the main unit.

The front box is bolted to the turner unit with two bolts. Once the front box is fixed, remove the nuts and washers from the two studs on the turning plate ready to fit the Autoclay 65. The trap sits on the turning plate with the studs fitting through the corresponding holes in the



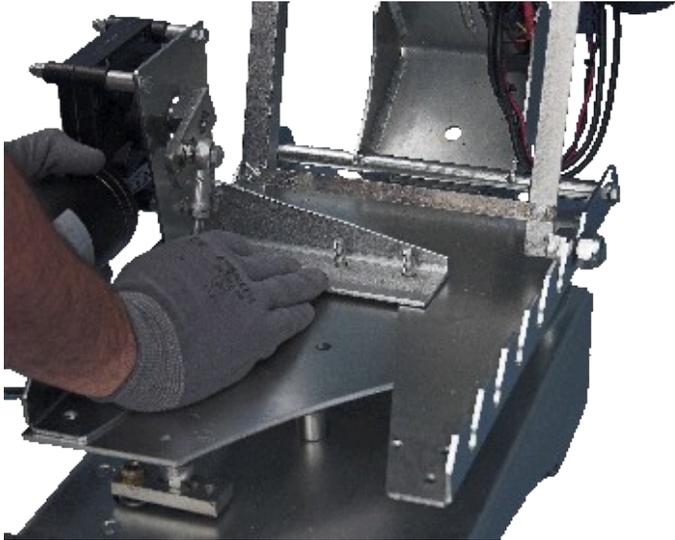
base of the trap, refit the washers and securely tighten the nuts to hold the trap to the turner plate. Once the trap is secured to the Oscillating base, plug the three-pin plug, from the base, into the socket on the trap. The controller is then plugged into the socket on the Oscillating base.

Lift unit 65

To fit the lift unit the Autoclay 65 must first be attached to the Oscillating base 65. Start by setting the trap to its highest position, the lift motor is attached to the base using the studs that hold the trap to the base. The nuts and washers must be removed and the lift motor placed over the studs the nuts and washers are then

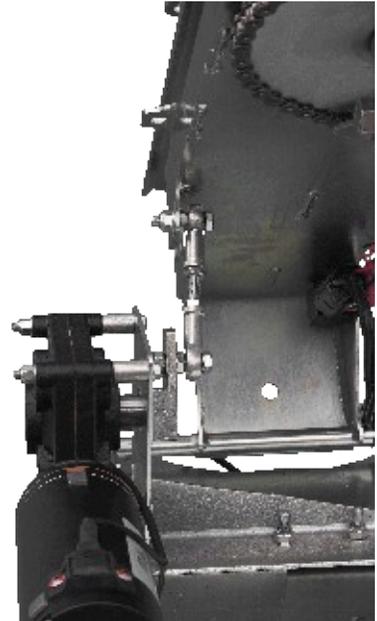
replaced and securely tightened. **With the trap fully raised, it will tend to topple backwards when the retaining nuts are removed; care should be used to prevent this when carrying out the procedure.**

While carefully supporting the trap remove the bolts from the top of the support legs and remove them. The bolt on the end of the drive rod knuckle is then placed into the trap and



the nut tightened.

The cable from the lift motor should be routed out of the rear of the trap and under the base and plugged into the electronics unit.

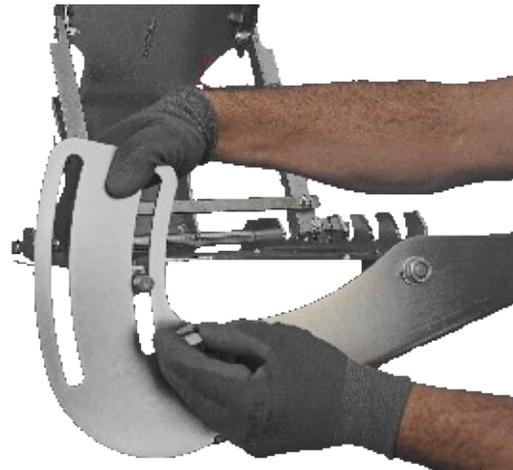


Tilt base



The two ends of the tilt base are handed so that when looking from the front the curved upright should be to the left and the lower parts face under the trap.

The mounting studs are fitted to the corners of the trap (Both the



Autoclay 65 and Autoclay 300 use the same fittings). With the mounting studs in place the end plate can then be fitted. The first slot is for the Autoclay 65 (shown in the picture) with the second used by the Autoclay 300. With both ends fitted the trap can then

be tilted to the desired angle and locked into place by tightening the nuts.

Fitting the trolley to the tilt base requires the use of the axle centre piece that comes with the trolley along with the one that is supplied with the tilt base. These

axle tubes are bolted to the tilt base so that they run

base so that



longitudinally under the base as shown in the pictures. The front outer axles are then directly bolted to the front tilt base. The rest of the trolley is then assembled as usual.