

# Linear Actuator

## Fitting Instructions

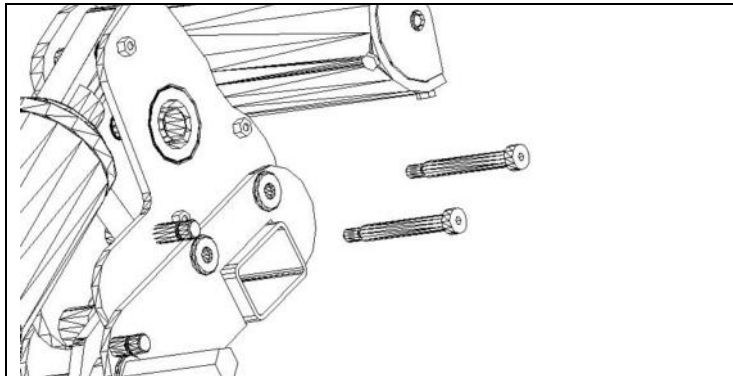
### TOOLS REQUIRED

10mm AF Spanner x 2  
13mm Spanner  
19mm AF Spanner  
5mm Allen Key  
4.5mm or 3-16" Pin Punch

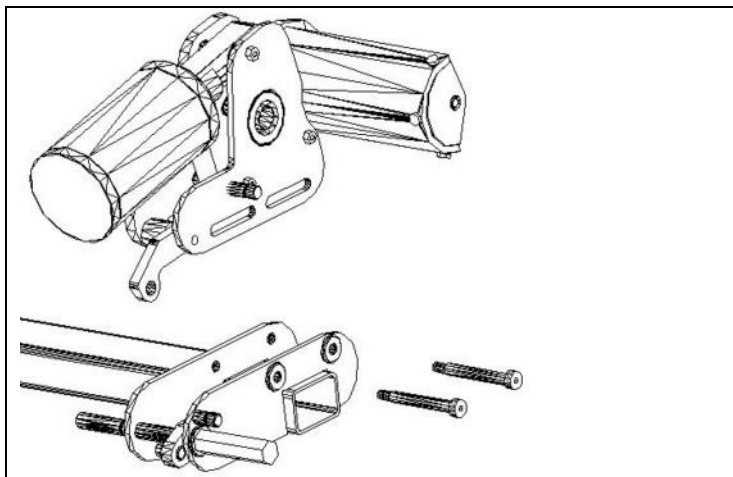
### EARLIER MODELS

4.5mm Pin Punch  
Hammer

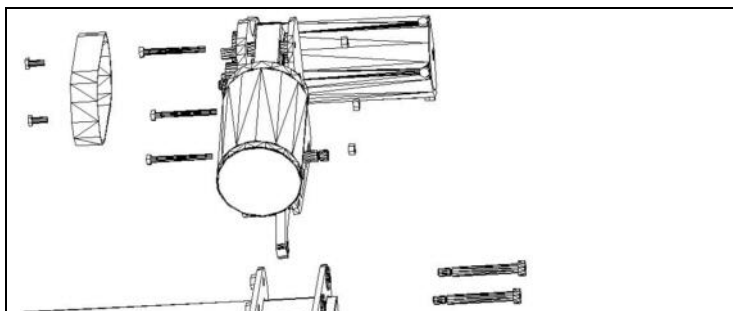
If required **REMOVE** Powrtouch from the caravan.



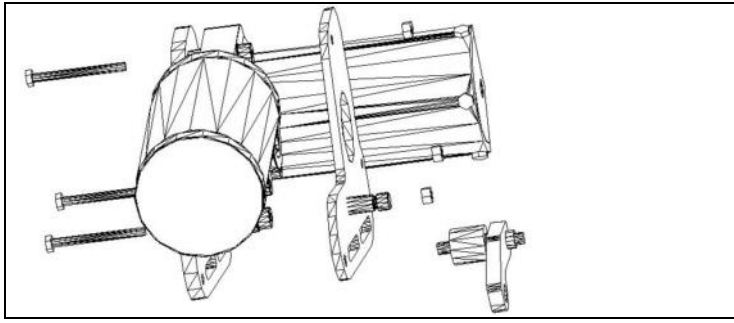
Remove the two 13mm (M8) lock nuts (Item A), then withdraw two long shoulder bolts, these need to be unscrewed using a 5mm Allen key.



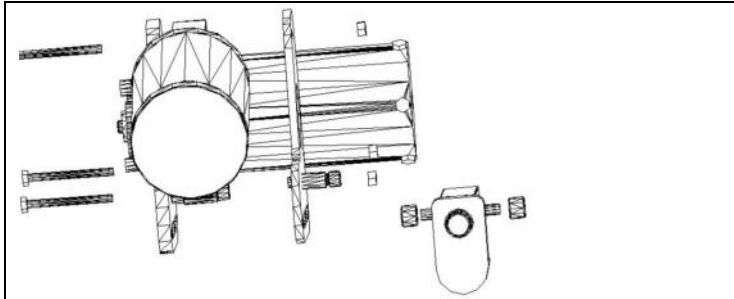
Separate the upper motor assembly from the lower mounting bracket by lifting the motor removing the spring and sliding the CAM off the CAM lever.



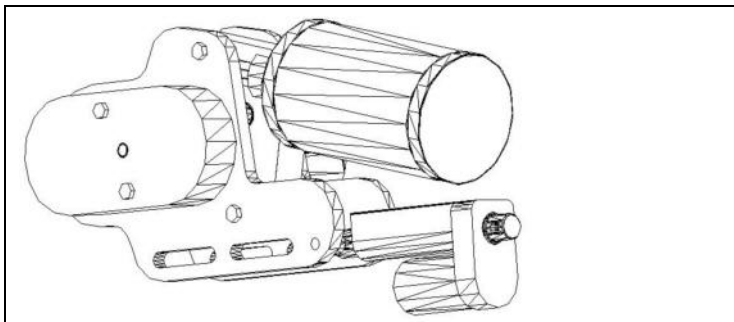
Separate the motor side plates by removing the three M6 Nyloc nuts (Item B) nuts and withdrawing the three M6 cross-bolts. NOTE: For Model 2, 3, 4, 6 and 7 you will need to remove the gear cover to access the lower mounting bolt.



Remove the existing CAM, Nylon spacer and pin; these items can now be discarded.

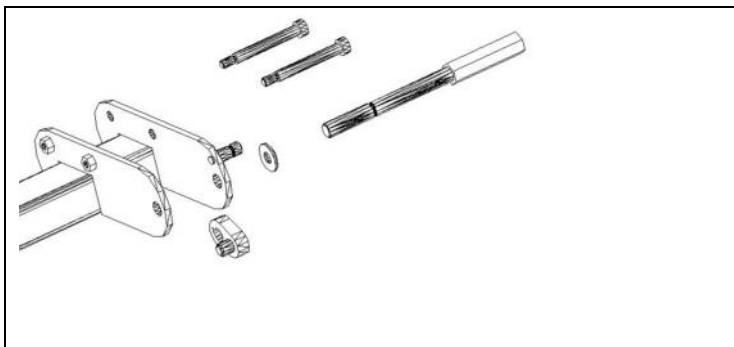


Insert the 6mm diameter dowel pin through the front actuator shaft location hole (Item C). NOTE: For model 1 use 55mm long dowel pin, For Model 2,3, 4, 6 use 60mm long dowel pin.



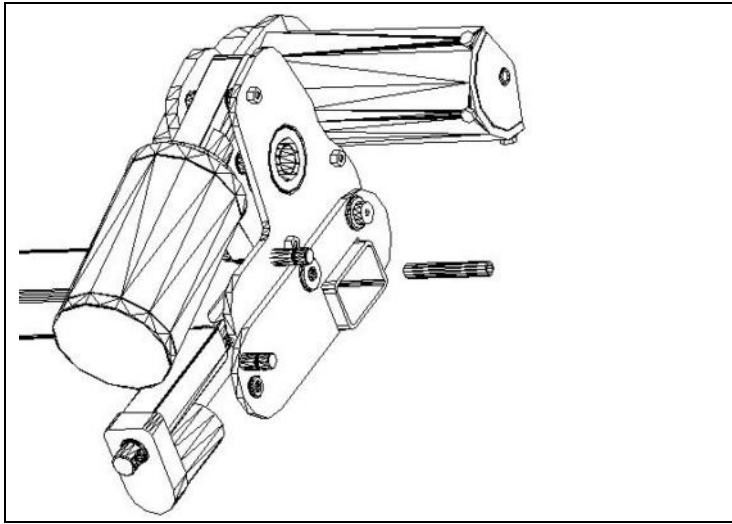
Place the two 12mm Nylon spacers on the dowel (one either side). Position dowel pin into the holes previously occupied by the CAM, Nylon spacer and pin. Reassemble the motor mounting plates, using the existing three bolts and nuts.

For Model 2,3, 4, 6 and 7 reattach the gear cover.



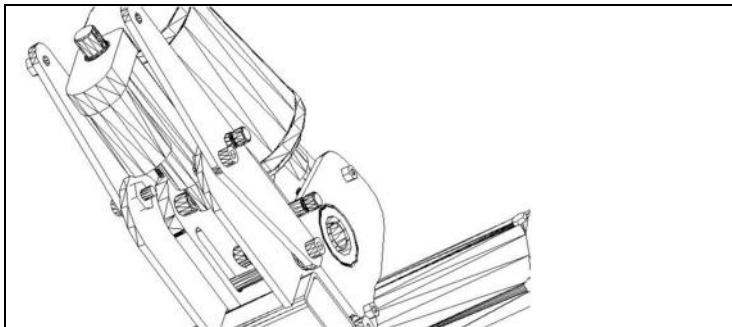
Withdraw the hexagonal shaft by sliding the CAM lever along the hexagonal shaft, exposing the Key; remove the Key, hexagonal shaft and CAM lever.

NOTE: On earlier models a 5mm diameter Spirol pin is used to locate the CAM lever on to the hexagonal shaft. Remove this by driving the pin out using a 4.5mm or 3-16" pin punch.



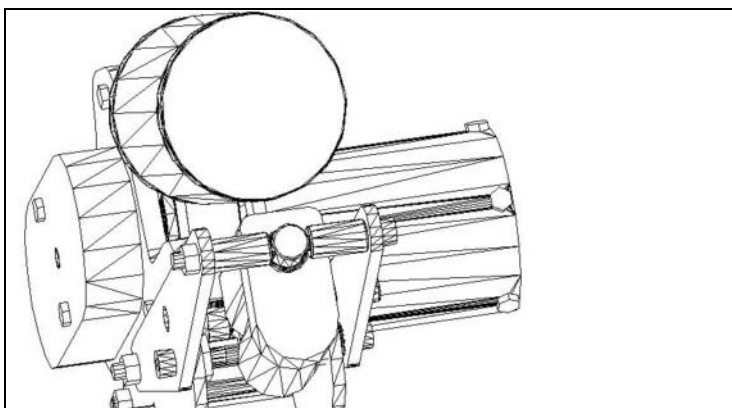
Place the upper motor assembly back into position. The front shoulder bolt can now be fixed into position.

Insert the steel tube (Item D) through the second shoulder bolt hole.



Place both of the actuator support plates on the outside of the lower mounting frame. Fix into place using the collar nuts and bolts into hole (Item 1). Place the 100mm bolt through the steel tube (see above) and secure the roller end of the actuator plates.

NOTE: A spacer washer (3mm Model 3, 7mm Model 1) needs to be placed between one of the actuator support brackets and the lower mounting frame on the same side as the steel fabricated washers.



The rear positioning hole of the linear actuator can now be bolted into position, placing the larger spacer on the inside, close to the chassis (32mm Model 1, 29mm Model 3) and the small washer on the outside, close to the roller (25mm Model 1, 28mm Model 3)

**REPEAT** instruction above for the opposite hand unit.

## ELECTRICAL ASSEMBLY & WIRING

The Powractor wires can now be routed along the underside of the trailer floor using the P clips provided (securing of the cables can be made with a suitable staple gun and the correct size staples – not provided).

Care should be taken to ensure that the cabling is securely fitted so that no chaffing can occur and that it does not sag. Also ensure cables do not make contact with the steel chassis (unless suitable cable clips are used – not provided).

If the Powrtouch is fitted in front of the wheels then the ECB should be wired to the FM Electronic Control box as shown below.

If in doubt please consult a Powrtouch Engineer.

