



Maintenance Manual

Mobile Detector Holder

Model: Kenex 1330/4/1 (GE E06731BL)

Note: These instructions contain important information and should be read in full before commencing any maintenance procedure. A competent Engineer should carry out this work.

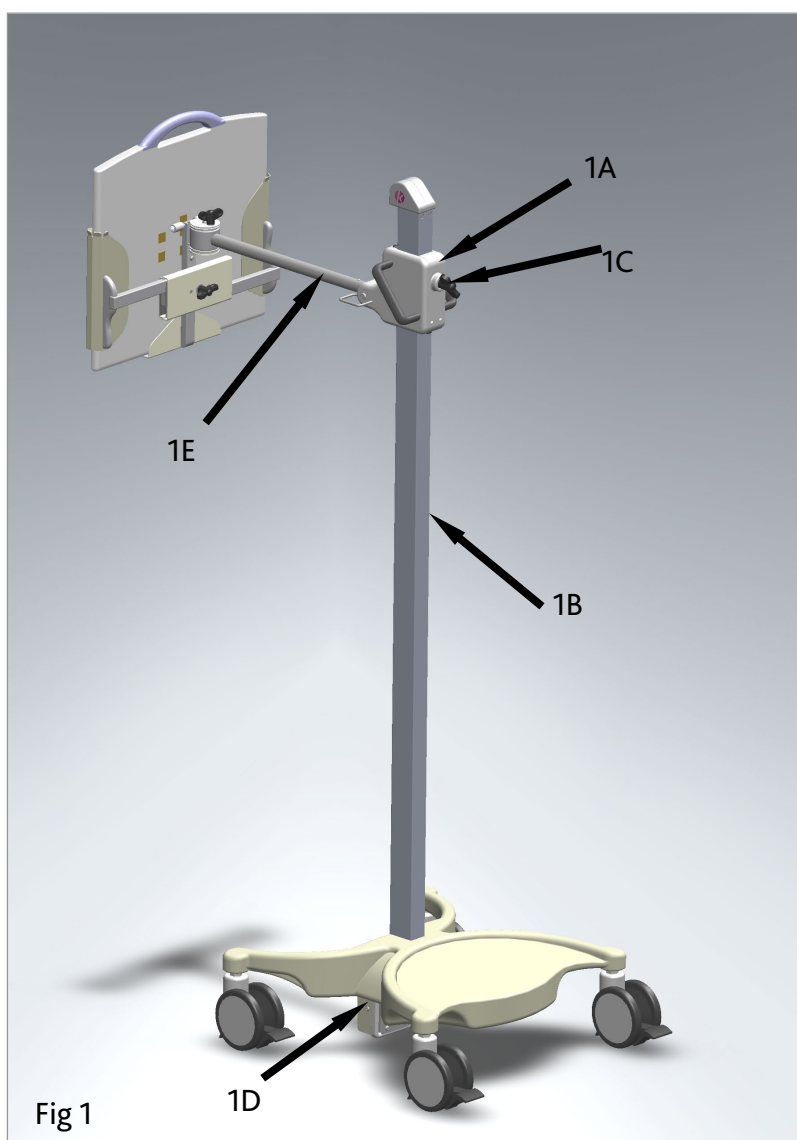


Fig 1

CAUTION



This mobile device includes a spring counterbalance mechanism that is designed to support a digital detector, a CR or film cassette with a weight of approximately 4.2 kg. However, if the weight is less the vertically sliding carriage (fig. 1A) could move rapidly up column (fig. 1B) (especially from a low level) when the handle (fig. 1C) is unlocked. The internal drum mounted extension springs; inside cover (fig. 1D) will then rotate at high speed. Care should therefore be taken when undertaking maintenance procedures.

CAUTION

Do not lean against or push the equipment with the brakes activated as it may overbalance.

Maintenance schedule

The mobile detector holder requires very limited maintenance. Generally, this includes periodic inspection to confirm the correct movement and function of the device as described in the User Instructions.

The holder should be examined for any damage following a collision with other equipment.

Counterbalance mechanism

The counterbalance mechanism comprises an extension spring assembly, a flexible steel suspension rope and a pulley. Each spring has an average fatigue life of 15,000 cycles. A replacement schedule should therefore be estimated which depends on the amount of use. Generally, this would be every 5 years.

The suspension rope is a flexible multi-strand stainless steel wire with a polyamide coating. The minimum breaking load of the rope with crimped-on end terminals is 1526 N (155 kg). The maximum load applied to the rope is 15 kg so it therefore does not need to be replaced (unless it has sustained damage). The polyamide pulley is fitted with sealed ball bearings and does not require maintenance.

Extension spring assembly

The spring assembly includes two 38 mm wide flat springs, mounted side-by-side on free running drums. As the springs resist unrolling with a uniform pull throughout their length, they produce a constant force. The free ends of each spring emerge between the drums and are connected, (via an interface) to a wire rope running over a pulley located at the top of the column (fig. 1B).

Tools required: -

- 1 x 3mm across flats hexagon key (Allen key)
- 1 x 4mm across flats hexagon key (Allen key)
- 1 x 13mm across flats socket spanner for 8 mm hexagon setscrews
- 2 x 13mm across flats spanner for 8 mm hexagon setscrews
- 1 x 10mm across flats spanner for M6 nuts

Extension spring assembly replacement

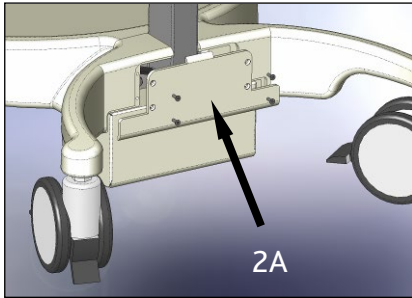


Fig. 2

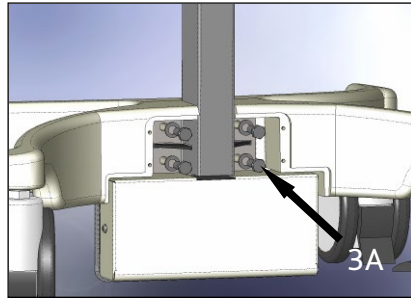


Fig. 3

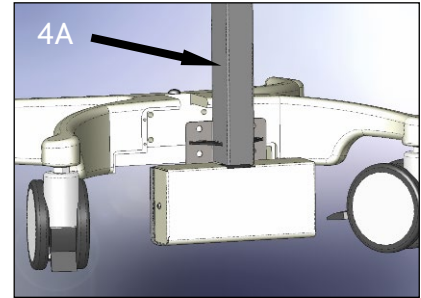


Fig. 4

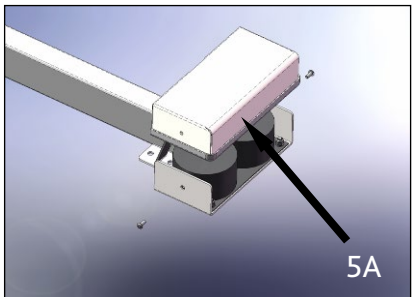


Fig. 5

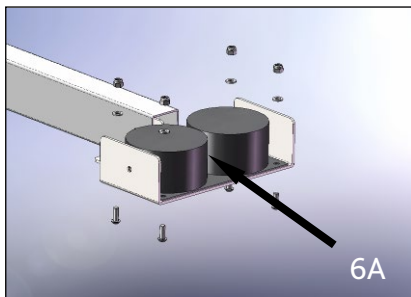


Fig. 6

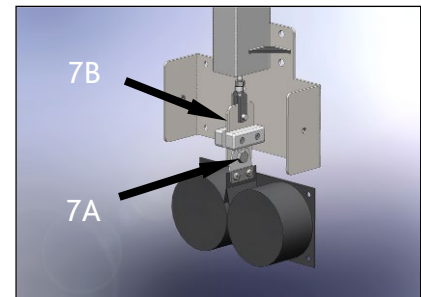


Fig. 7

Step 1

Hold the horizontal extension pole (fig. 1E), turn the handle (fig. 1C) anti-clockwise to unlock and move the vertically sliding carriage (fig. 1A) to the top of the column (fig. 1B). Turn the handle clockwise to lock.

Step 2

Unscrew 4, M4 x 12 mm socket countersunk head screws and remove the base cover plate (fig. 2A). Unscrew 4, M8 x 20 mm hexagon setscrews (fig. 3A) and remove the column assembly (fig. 4A) from the base.

Step 3

Unscrew 2, M5 x 12 mm button head screws and remove the spring assembly cover (fig. 5A). Unscrew 4, M6 locknuts from M6 x 16 mm socket button head screws & washers to separate the spring assembly (fig. 6A) from the column tray.

CAUTION: When completing step 4 DO NOT remove the 1, M6 x 12 mm hexagon set screw & nut which secure the ends of the two springs to a joining plate.

Step 4

Pull the spring assembly slightly down from the column end and unscrew the M8 locknut from the M8 x 16 hexagon setscrew (fig. 7A) to separate the spring assembly from the steel rope interface plate (fig. 7B). Attach a replacement spring assembly and complete steps 1 to 4 in reverse order.

Flexible steel rope replacement

NOTE: Complete the steps 1-4 for spring assembly replacement first, then continue as below.

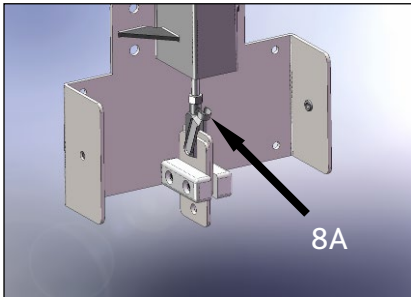


Fig. 8

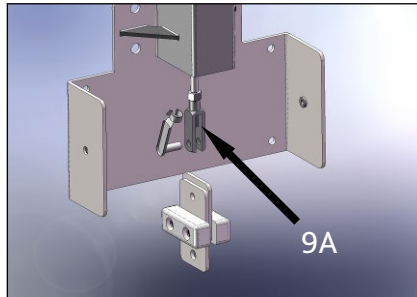


Fig. 9



Fig. 10

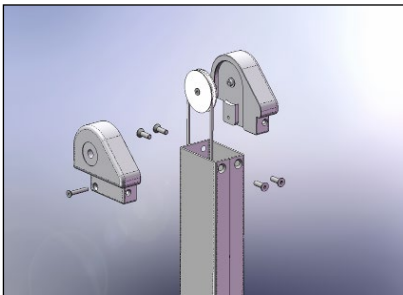


Fig. 11

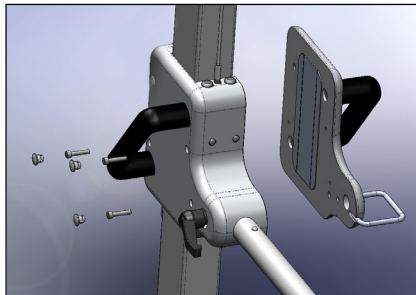


Fig. 12

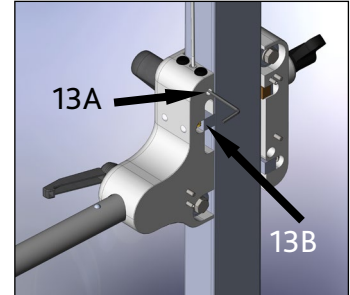


Fig. 13

Step 5

Release spring cup pin (fig. 8A) and withdraw pin from clevis (fig. 9A) to remove the steel rope from the interface plate.

Step 6

Unscrew 4, M5 x 16 mm socket countersunk head screws from the top front & rear of the column (fig 10) and slide the pulley assembly out.

Step 7

Remove 2, M4 x 25 mm socket countersunk head screw to separate the two halves of the pulley assembly (fig. 11). Remove the pulley and steel rope.

Step 8

Hold the horizontal extension pole (fig. 1E), turn the handle (fig. 1C) anti-clockwise to unlock and move the vertically sliding carriage (fig. 1A) to the bottom of the column (fig. 1B). Turn the handle clockwise to lock the carriage.

Step 9

Remove 3, plastic caps and 3, M4 x 20 mm socket cap screws from the vertical sliding carriage (fig. 12) and remove the side plate.

Step 10

Partially unscrew the M8 x 10 mm socket setscrew (fig 13A). Turn the handle (fig. 1C) anti-clockwise to unlock and remove the adjustment block from the slot (fig. 13B). Push the steel rope downwards into the vertical sliding carriage until the M6 half nut at the end of the rope terminal is visible in the slot. Unscrew the nut and pull the rope up from the carriage.

Step 11

Unscrew M6 lock nut and remove the clevis from the bottom end of the steel rope.

Step 12

Fit a steel rope and complete steps 1 to 11 in reverse order.

