

Instructions

M04632/1
Feb 1979

FORELINE TRAPS

<u>Model</u>	<u>Code No.</u>
FL25	04-A133-04-000
FLS25	04-C403-01-000
50mm	20-C042-01-000

Edwards High Vacuum

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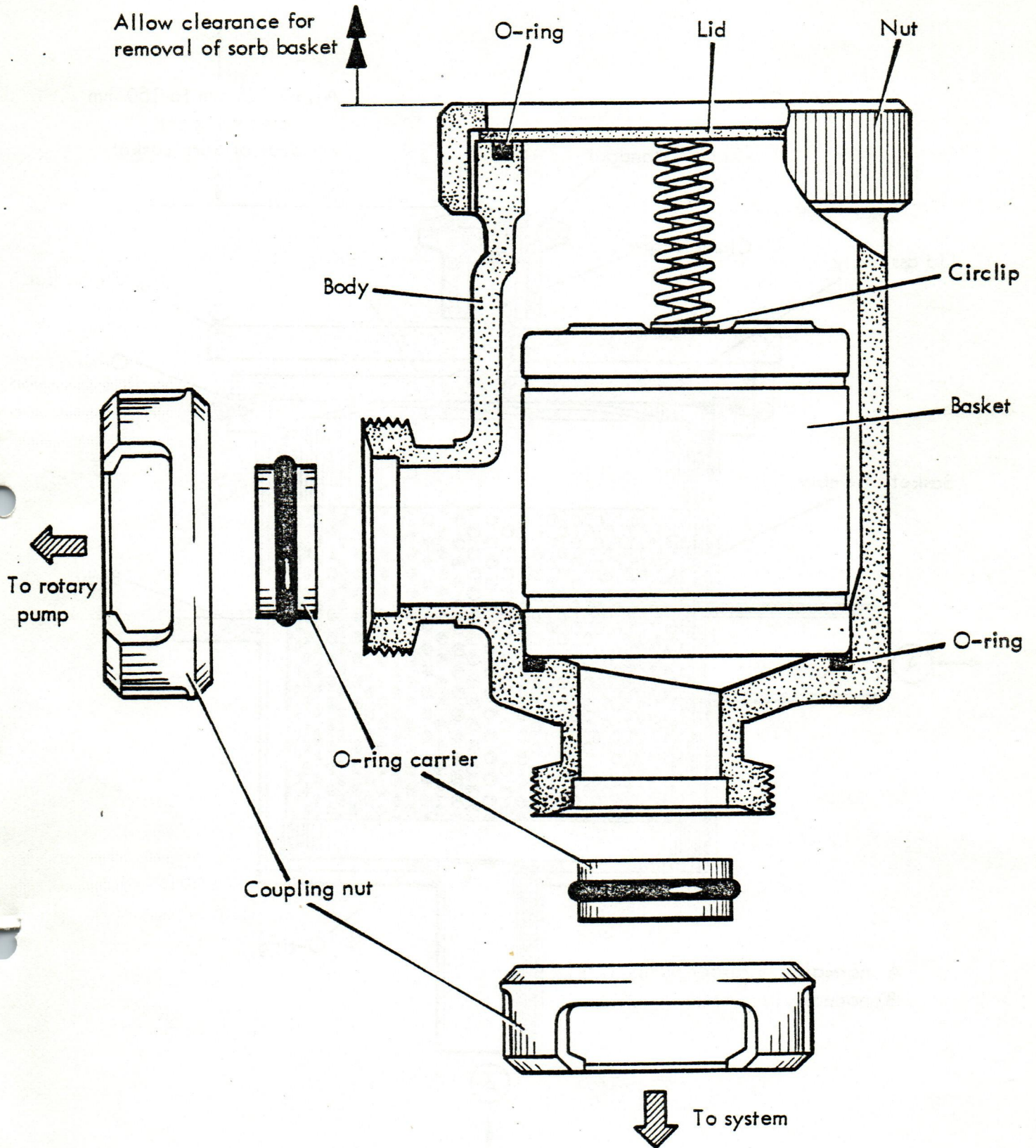


Figure 1-Model FL25 foreline trap

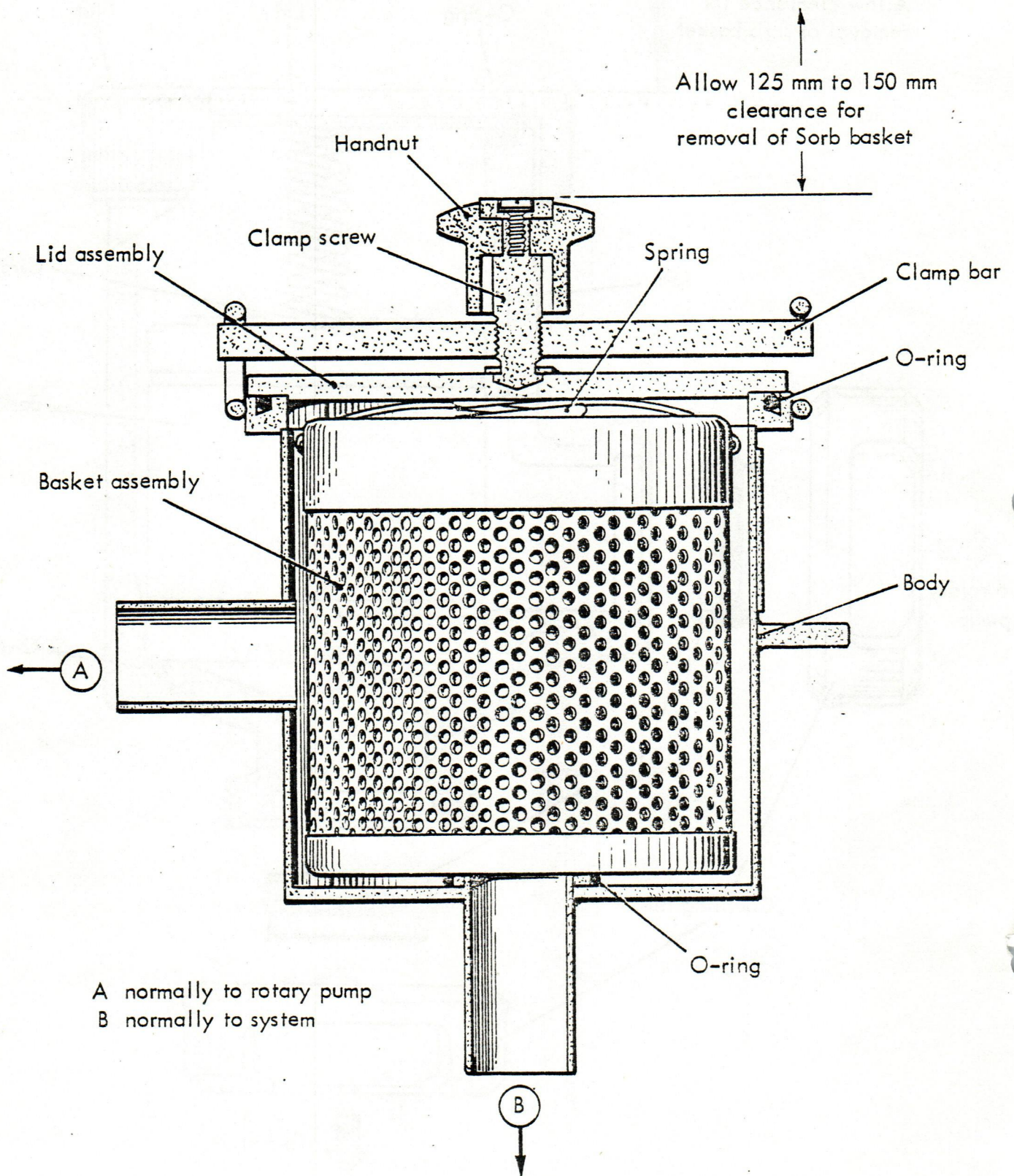


Fig 2 FLS25 FORELINE TRAP

General description

Edwards Foreline Traps are designed to exploit the exceptional trapping properties for oil vapour exhibited by activated alumina. The traps are suitable for use with rotary pumps up to $120 \text{ m}^3 \text{ h}^{-1}$ displacement and have been specially developed for use on clean pumping systems to minimise contamination due to back migration of oil vapour into the system during normal operation.

The sorbent, in the form of alumina balls of optimum size for most efficient trapping, is contained in a metal basket which is retained in the trap body by a hand-nut, lid and spring.

Installation and operating notes

1. Check Sorbent Charge

Unscrew the hand nut and remove together with lid. Remove the basket assembly (and spring) from the trap and check that it is fully charged with sorbent. Position the charged basket in the trap, ensuring that it is fully located on the inner O-ring seal. Replace the lid and nut.

2. Mounting

The trap can be mounted in any orientation as the sorbent is fully retained in the basket. The weight will be adequately supported by the pipeline connexions and either port may be connected to the rotary vacuum pump. Ensure there is adequate clearance for removal of sorbent basket.

The FL25 trap can be connected to the pump/system using the Edwards SC25 coupling components supplied - two coupling nuts, two O-ring carriers (and O-rings). A stepped O-ring carrier (SC25/1 in) for connexion to Edwards imperial size couplings is also supplied. Refer to supplementary instructions M08781 for assembly details. The FLS25 and 50mm models are fitted with plain tube connexions.

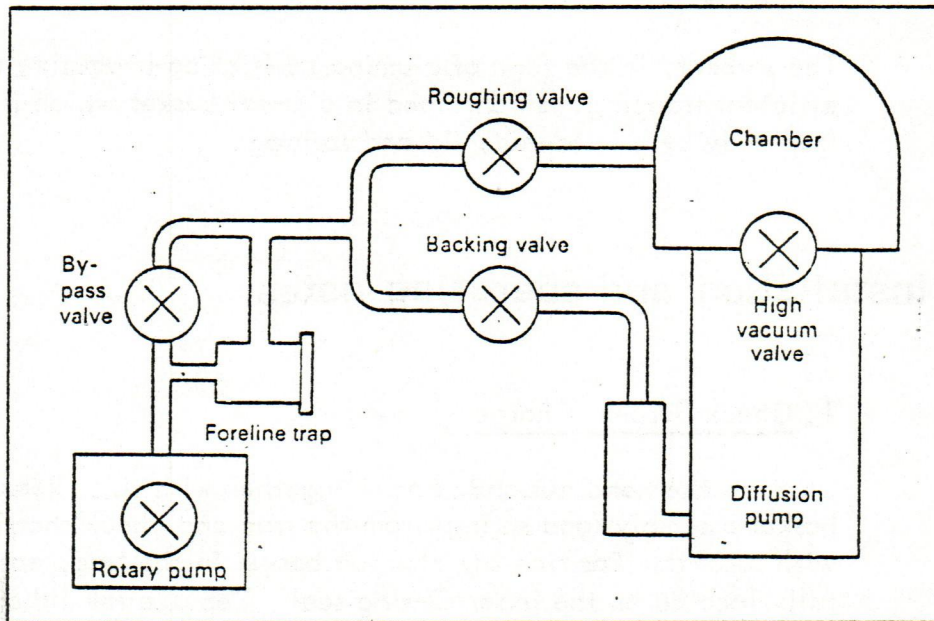
3. Operating Notes

The activated alumina charge has a long-term operating life but will eventually become saturated with oil vapour and must be renewed.

In common with other types of sorbent, activated alumina sorbs moisture - this will not affect the oil vapour trapping properties but may tend to prolong rough pumping time on successive pumping cycles. Regular regeneration by baking of the trap or renewal of the sorbent will be necessary for rapid pump-down.

If the trap has been open to atmosphere for lengthy periods, then prolonged pumping with a gas-ballasted rotary pump may be required to remove absorbed moisture or alternatively: Remove the basket from the trap and bake at 250°C to 300°C for two hours.

An automatic by-pass valve to enable the initial surge of water vapour to by-pass the trap and thus prevent early saturation, is also available (see under ACCESSORIES).



Typical by-pass system to prevent water saturation of sorbent.

Maintenance

Renewal of Sorbent

During service use, the sorbent material nearest the rotary pump connexion will become a brown colour and when the discolouration has reached the remotest layers, the sorbent material should be renewed. The time taken for this to occur will depend on the frequency of use and the siting of the trap in relation to the rotary pump. A typical charge life is six months, although it is advisable to renew the charge every three months as a routine maintenance procedure:

- (1) Model FL25: Unscrew the nut and remove complete with lid - remove the basket assembly (and spring) from the trap.

Detach the circlip from the spindle then remove the basket top cover and the perforated disc to permit removal of the alumina.

- (2) FLS25 and 50 mm: Unscrew the handnut, disengage the clamp bar and remove complete with lid.
Remove the basket assembly and spring. Detach the handle and the top cover to permit removal of the alumina

- (3) Rinse all metal parts in iso-propyl or ethyl alcohol and dry thoroughly.
CAUTION: Ensure adequate ventilation when using solvents for cleaning purposes.

If the trap body interior appears oily or dirty at any time after use, it should be washed out with iso-propyl or ethyl alcohol and thoroughly dried.

- (4) Refill the basket with activated alumina (available from Edwards High Vacuum in 2 lb sealed tin) - then assemble the top cover. Position the charged basket in the trap to locate fully on the O-ring, then fit the lid and secure with the nut.

Recommended spares

<u>Item Description</u>	<u>Ordering No.</u>	<u>Model</u>
O-ring seal (body/lid)	08-H021-06-164	FL25
O-ring seal (body/lid)	08-H021-06-213	FLS25
O-ring seal (body/lid)	08-H021-06-223	50 mm
Basket assembly	04-C041-02-014	FL25
Basket assembly	04-C041-01-002	FLS25
Basket assembly	04-C042-01-001	50 mm
Sorbent (activated alumina) 2 lb tin	20-H026-00-047	All models

Accessories

Foreline trap change-over valve Code No. 08-C079-02-000

Supplementary instructions

Edwards SC screwed coupling system M08781, Sheet 1

Return to manufacturer

The unit was tested for specification and performance before despatch. If it arrives damaged or will not operate satisfactorily please advise the supplier who will take the quickest action to help you.

United Kingdom only

Write to, or phone the Service Department, Edwards High Vacuum giving if possible:

- (a) The model number of the faulty equipment
- (b) The serial number of the faulty equipment
- (c) The date of purchase
- (d) Edwards sales reference, and customers order number
- (e) The nature of the fault

Edwards Service Department will normally arrange for either a Service Engineer to call or for the faulty equipment to be returned. Equipment should not be returned without prior agreement.

The above procedure also applies to damage to equipment incurred during transit, but both Edwards High Vacuum, and the Carrier MUST be notified within three days of receipt of the unit.

Destinations other than United Kingdom

Notify the accredited distributors of Edwards High Vacuum who will provide the required information regarding their procedure for the return of faulty equipment. Any notification will be relayed to Edwards High Vacuum by their accredited distributors.