DIESEL FILTRATION – WHY IS IT NECESSARY?

Diesel oil samples before and after filtration. The samples were taken in September 2009 in Ghana.

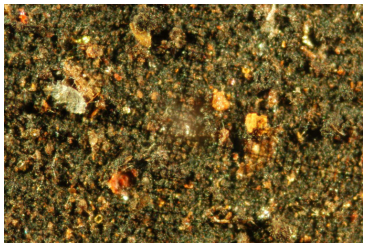
The colour of the diesel oil is a common sight in West Africa and it is obvious <u>what damage this does to the engines for which it is being used.</u>

The diesel oil samples were analyzed by Filtrex Services in the Netherlands:

(Copies of laboratory reports can be made available on request)

Microscope pictures of samples -

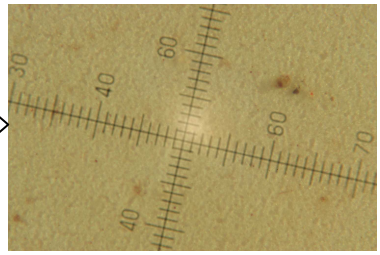
Before filtration:



Our filter insert after use:

(Example F27/27 insert)

After filtration: (one pass)



Number of particles per 100ml:

> 2µm : n/c
> 5µm : n/c
>15µm : n/c

ISO Class : >24/23/20

Water concentration: 401ppm

Fuel oil is heavily contaminated and will cause drastic reduction in lifespan of the applied components.

ONE PASS

Number of particles per 100ml:

> 2µm : 100048
> 5µm : 43610
>15µm : 1955

ISO Class : 17/16/11

Water concentration: 12 ppm

Fuel oil is still good for use.

***(Comments from laboratory report)**

Economy:

Recommended contamination level for hydraulic systems:

ISO 14/12/9	Silt sensitive systems aerospace or laboratory	5.5kg*
ISO 16/14/10	Critical systems general servo systems	11 kg*
ISO 17/15/11	High quality general proportional valves	22 kg*
ISO 18/16/13	Medium pressure systems	44 kg*
ISO 20/19/15	Low pressure systems with large clearances	90 kg*
ISO 21/19/15	Not suitable for hydraulic systems	>190kg*

*"If the oil passes through a pump with the capacity of 200 ltr/min, 8 hours a day, 230 working days per year the amount of dirt passing the pump per year is listed above with corresponding ISO code".
(Source: Filtrex Services)

This corresponds to a monthly flow or diesel consumption of about 61.000 litres.

With an ISO code as indicated for our diesel samples it is safe to assume that we have at least 190 kg of dirt to remove from our 61.000 litres of diesel (The ISO code is indicative of the level of dirt based on above figures). Cleaning it to ISO code 17/16/11 we are removing about 168 kg of dirt from the diesel fuel.

Economy using our depth filter inserts:

Cost per insert:	EUR 130,00
Dirt holding capacity:	4 kg (minimum)
Cost per kg removed:	EUR 32,50
Cost for 61.000ltr/month:	EUR 5.460,00

Economy using in-line/surface filters:

Cost per insert:	EUR 60,00
Dirt holding capacity:	400 grams/ 0.4 kg (Can vary)
Cost per kg removed:	EUR 150,00
Cost for 61.000ltr/month:	EUR 25.200,00

(Or ask your filter supplier for data and do your own re-calculation using above method)

YOU WILL FIND THAT THE SAVINGS PAYS FOR THE CJC FILTRATION SYSTEM WITHIN A SHORT TIME – MOST OFTEN FAR LESS THAN A YEAR!

F 27/27 CJC™ Product Sheet

CJC™ Offline Filter Insert for diesel filtration

FILTRATION CAPABILITY

Particle Removal

All CJC™ Filter Inserts have the following filtration degree:

- 3 µm absolute:
98.7% of all solid particles >3 µm
- 0.8 µm nominal:
50% of all solid particles **>**0.8 µm
are retained in each pass.

The dirt holding capacity of an F 27/27 Insert is **4 litres** of evenly distributed solids.

Degradation Products

Oxidation by-products, resin / sludge, and varnish are retained by the cellulose material. The cellulose will retain **appr. 4 kg** of degradation products.

Water Removal

The type F 27/27 Filter Insert will not permanently hold water, as its free passage is integral to the water separation process.

Please look at our A- and B- Filter Inserts for water absorption abilities.

DIMENSIONS

The figures below are nominal:
Diameter: 27 cm
Height: 27 cm

COMPONENT

CJC™ Filter Inserts type F consist of bonded discs.
Ingredient: Wood cellulose.

The CJC PTU Filter separator range:

Model: PTU 15/25
Range: 45 – 120 ltr/h
Application: Smaller systems and on-board vehicles.

Model: PTU 27/27
Range: 200 – 250 ltr/h
Application: Tanks and fuel supplies.

Model: PTU 27/54-108
Range: 400 – 800 ltr/h
Application: Tanks and fuel supplies.

Model: PTU X x 27/MULTI STAY
Range: 1200 – ? ltr/h
Application: Tanks and fuel supplies.