

CJC® Filter Insert, type LO4D

Specially designed for lube oil on 4-stroke diesel engines operating on gas or light fuels

CJC® LO4D FILTER INSERT

The CJC® LO4D Filter Insert is specially designed for cleaning conventional crankcase lubricants on 4-stroke diesel engines burning gas or light fuels.

The CJC® LO4D Filter Insert is ideal for filtration of SAE30 and SAE40 lubricating oil - replacing the traditional centrifugal separator.

Compatible for engines operating on:

- Marine Gas Oil (MGO)
- Marine Diesel Oil (MDO)
- LNG
- BioFuel
- Hydrogen
- E-fuels

CONTAMINATION CAPACITIES

The CJC® LO4D Filter Insert has well balanced dirt holding capacity and high filtration efficiency for optimum control of the contamination level, removing:

- Combustion contaminants
- Wear particles
- Oil degradation products
- Asphaltenes
- Water

Frequency controlled flow up to 250 l/h per filter insert make CJC® LO filters as compact as a centrifuge. The CJC® LO4D is designed especially for engine lube oil and gives superior results; very fine filtration, increased oil life and long filter insert life. Better filtration than a centrifugal separator, and much lower oil and operation cost. Comprehensive field experience has proven a very long filter insert service life as well as extended lube oil services, keeping the level of insolubles below engine maker recommendations.

COMPONENTS

CJC® Filter Inserts consist of cellulose bonded discs, **made of 100% natural cellulose fibres from sustainable resources; no plastic, no metal, no chemicals.**



The CJC® LO4D complies with the objectives of DIN EN ISO 14001: 2015 "Environmental Management Systems" and the Recycling Management.

DISPOSAL OF USED CJC® FILTER INSERTS

CJC® Oil Filters are green solutions, and at C.C.JENSEN one of our objectives is caring for the environment. Therefore, please arrange for proper disposal of used filter inserts in accordance with your own local legislation.

IDENTIFICATION

To order the LO4D Filter Insert, please use:

Article No.:

- 1 x LO4D 27/27: PA5602320
- 2 x LO4D 27/27: PA5602321



LO4D 27/27

FILTRATION TECHNOLOGIES

- ▶ **Oil filtration degree**
For offline oil filtration, the dirt holding capacity is paramount because the offline process will have time to remove contaminants, unlike inline filtration. Our focus is on removing the smallest and most harmful particles e.g. metal wear particles, asphaltenes/soot etc.
- ▶ **Oxidation and oil degradation products**
The cellulose material retains oxidation by-products, resins, sludge, and varnish. The huge surface area of the filter media removes contamination through absorption and adsorption. By effectively removing contaminants we can slow down the rate of oil degradation.
- ▶ **Water removal**
Filter inserts will typically be able to keep the water in the oil below saturation point (mineral/synthetic oils). All three stages of water (dissolved, emulsions and free) will be absorbed by the cellulose fibres.
- ▶ **Acidity stabilisation**
Acidity is a natural part of the oil degradation process and will be retained by the CJC® Filter Insert using the absorption technology.

SPECIFICATIONS & CAPACITIES

CJC® LO4D FILTER INSERT		
Diameter	cm/inch	27/10.6
Height	cm/inch	27/10.6

COMPATIBLE ONLY WITH:

- CJC® Marine Lube Oil Filter for 4-stroke
- CJC® Marine Lube Oil Purifier 27
- CJC® Marine Lube Oil Purifier 427



BENEFITS in general

C.C.JENSEN DEPTH FILTER EFFICIENCY TEST

CJC® Filter Inserts are designed to last for one year, therefore testing of a high density depth filter for a few hours does not make sense. The C.C.JENSEN test is inspired by a modified ISO 16889, using finer test dust (UFTD), which resembles real dust and wear particles better than the coarse MTD test dust used in the standard Multi-pass test - designed for thin pleated filter media. The test modification also includes a much longer test time to get close to a real-life application scenario. The main advantage of CJC® Filter Inserts is the huge surface area, which distributes the oil flow and particles evenly and ensures stable low velocity for optimum retention of contamination. The large filter mass makes this unmatched high dirt holding capacity possible.

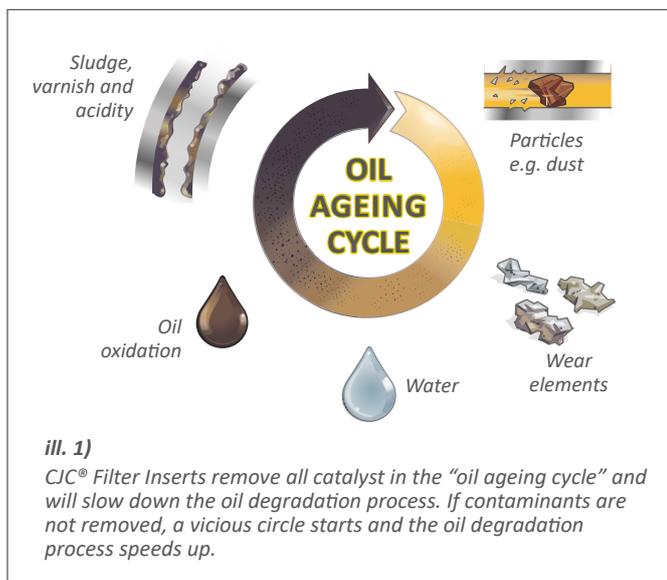
DIRT HOLDING CAPACITY CREATES VALUE

Competitive Filter Insert costs divided by dirt holding in kg:

3-micron filtration	Example 1	Example 2
Filter Insert type	Competitive pleated filter	CJC® cellulose depth media
Cost of element vs. Filter Insert	1 x €	4 x €
Dirt holding capacity	0.100 kg	4 kg
Cost per kg removed contamination	10 x € per kg	1 x € per kg

SLOW DOWN OIL AGEING

By removing all four contamination types (particles, water, acidity, and varnish), the CJC® Filter Inserts can slow down the oil ageing process and prolong the oil lifetime (see ill. 1). CJC® often results in 2-5 times longer oil lifetime, leading to considerable savings and reduction of CO₂ emissions. Field experiences show that removing particles of 3 µm and below with CJC® Filter Inserts has a significant effect on oil and component lifetime.



YOUR BENEFITS WITH CJC®

CJC® Filter Inserts have the highest dirt holding capacity on the market due to special cellulose-based material. Furthermore, the unique construction of the bonded discs, creates a large filtration area (see ill. 2) resulting in reduced costs of ownership. The CJC® Filter Inserts are a modular design, which allows them to fit any applications and requirements.

1. The CJC® Filter Insert features:

- a. Depth media of moulded cellulose.
- b. Highest Dirt Holding Capacities (DHC).
- c. **100% natural cellulose fibres from sustainable resources; no plastic, no metal, no chemicals.**



2. Removal of contaminants, 4-in-1:

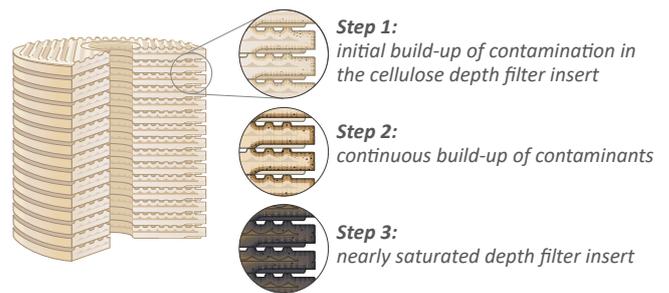
- a. **Particles:**
Lifetime of both oil and component are increased considerably.
- b. **Oil degradation products:**
Avoid sticking valves, lacquering, and varnish on metal surfaces.
- c. **Water:**
Reduce the risk of micro-pitting, bacterial growth, sludge etc.
- d. **Acidity/TAN:**
Reduce oil ageing and wear on equipment.

3. OEM requirements

Experience and application knowledge of C.C.JENSEN ensure that CJC® solutions can meet specifications from OEMs on oil cleanliness.

All helping to minimise further degradation of the oil.

CJC® DEPTH FILTRATION EFFICIENCY



ill. 2)

This graphic describes the technology and the efficiency of depth Filter Inserts removing contaminants by adsorption & absorption.

MAINTENANCE RECOMMENDATIONS

To achieve the highest possible oil cleanliness level, the CJC® Filter Inserts need to be changed at least once a year. Because of accumulated oil degradation products (oxidation, acids, and varnish) no matter what the pressure gauge indicates the used Filter Inserts should be replaced annually. Leaving filter media in service for longer than one year will result in decreased oil filtration efficiency and increased risk of breakdowns and component wear.

