

Extending oil change interval from 250 hours to 1000 hours

Study case:

- regular Oil exchange on engine or sub engine after 250 hours together with exchange of primary filters.

Why to use Bypass Oil filtration:

- Oil filtration extend lifetime of the engine and extend the oil change interval from 250 hours to 1000 hours.

How it works:

- secondary bypass filtration unit equipped with unique filter media connected directly to the engine in combination with special media air filter.

Benefits:

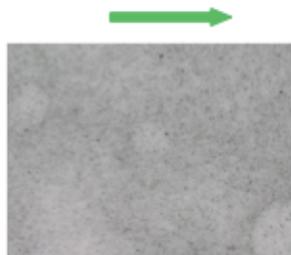
- extension of oil change up to 4 times from 250 hours to 1000 hours,
- extension of lifetime for primary filters,
- removal of mechanical contamination (carbon, metal abrasion, silicates, dust, sand),
- slowing down of oil degradation,
- cost savings associated with oil purchase and waste oil management,
- important reduction of wear and extension of engine lifetime,
- reducing repair costs and downtime (up to 50%).
- high environmental benefits of lower consumption of engine oil,

Conditions for use:

- to have free access to the engine for installation and regular checks,
- to have enough space in the engine area for the installation of the unit.
- usage of special long-life air filter



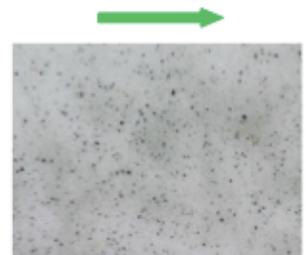
Without filtration
250 HRS.
10.2.2017
Mechanical impurities : 1410 mg/l
Ashes : 25,9 % T



With filtration
250 HRS.
25.10.2017
Mechanical impurities : 12 mg/l
Ashes : 93,5 % T



With filtration
697 HRS.
18.7.2018
Mechanical impurities : 5 mg/l
Ashes : 89,8 % T



With filtration
1000 HRS.
10.10.2018
Mechanical impurities : 13 mg/l
Ashes : 80,9 % T

Study case of Bus engine with result from 250 hours to 1000 hours.

No.	0.	1.	4.	5.	6.	7.	-
Parameter	Reference oil (CASTROL TECTION EXTRA 15W-40)	250 HRS. 10.2.2017 Without filtration	155 HRS. 20.9.2017 With filtration	250HRS. 25.10.2017 With filtration	697HRS. 18.7.2018 With filtration	1000 HRS. 10.10.2018 With filtration	LIMIT
Viscosity at 40 ° C [cSt]	105,6	99,41	95,65	94,66	93,29	97,16	± 15 %
Viscosity at 100 ° C [cSt]	14,43	14,33	13,93	13,36	13,23	13,82	12,5 - 16,3
Glycol content [%]	0	0	0	0	0	0	0,2
Nitration [abs/mm ²]	0	0,11	0,01	0,04	0,04	0,08	1,0
Oxidation [abs/ mm ²]	0	0,10	0,01	0,03	0,04	0,06	1,0
Sulfation [abs/ mm ²]	0	0,17	0,03	0,00	0,10	0,08	1,0
Ashes [% T] FTIR	100	25,9	95,5	93,5	89,8	80,9	>30
Antioxidation [%]	100	80,3	91,8	98,2	66,9	58,1	>30
TBN [mgKOH/g]	9,6	8,6	8,8	9,1	8,4	8,6	> 3
Water content [ppm]	185	110	132	160	304	290	max. 3000
Fuel content [hm %]	0	0	0	0	0	0	max. 4
Mechanical contamination [mg/l]	1	1410	15	12	5	13	-

Filter element:



Special filter element New



Cross-section of used filter element

Final Recomand:

Using of bypass filtration unit with unique filter media with easy installation gives you the opportunity to postponed the oil change interval up to 4 times from regular oil change, meaning from 250 hours up to 1000 hours by keeping the chemical properties of the oil in balance. As a secondary benefit is the less usage of primary filters, longer lifetime of engine, minimize breakdowns and extending of the lifetime wear, which gives you a big economical advantage.