

CO₂e reduction with PANOLIN GREENMACHINE

Company:

M.M.T Macchine Movimento Terra Srl

Registration date: 12.07.2022

Alteration date: 12.07.2022

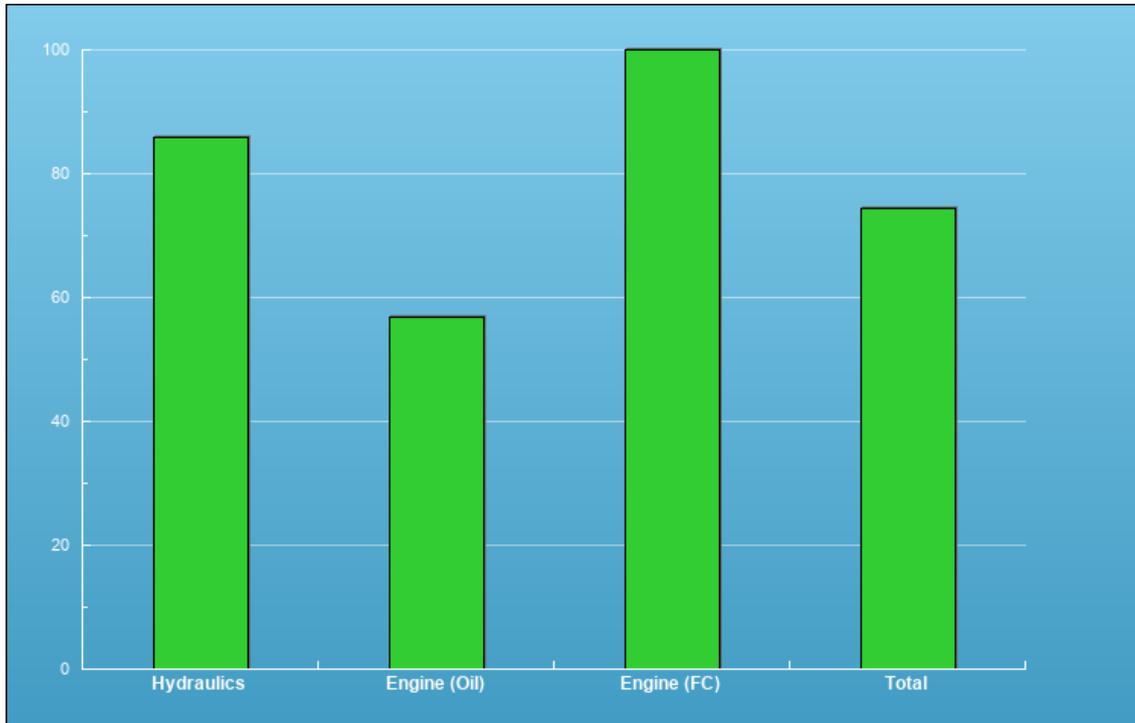
Machine / lubrication point	CO ₂ e (in kg/*)		CO ₂ e saving		Costs (in EUR/*)		Cost saving	
	Mineral oil	ECL	in kg/*	in %	Mineral oil	ECL	in EUR/*	in %
DOOSAN DX27Z	0.18	0.05	0.12	69.8	0.54	0.22	0.32	58.8
Hydraulics	0.06	0.01	0.05	76.9	0.19	0.07	0.11	61.0
Engine (Oil)	0.11	0.04	0.08	66.0	0.36	0.15	0.21	57.6
Engine (FC)	0.00	0.00	0.00	100.0	0.00	0.00	0.00	100.0
BOBCAT T76HFJ	0.21	0.05	0.17	78.1	0.60	0.22	0.39	63.8
Hydraulics	0.17	0.02	0.16	89.1	0.44	0.09	0.35	79.0
Engine (Oil)	0.04	0.03	0.01	31.0	0.16	0.13	0.04	22.3
Engine (FC)	0.00	0.00	0.00	100.0	0.00	0.00	0.00	100.0
Total for all machines	0.39	0.10	0.29	74.4	1.15	0.44	0.70	61.4

* /h, /km, /Mile

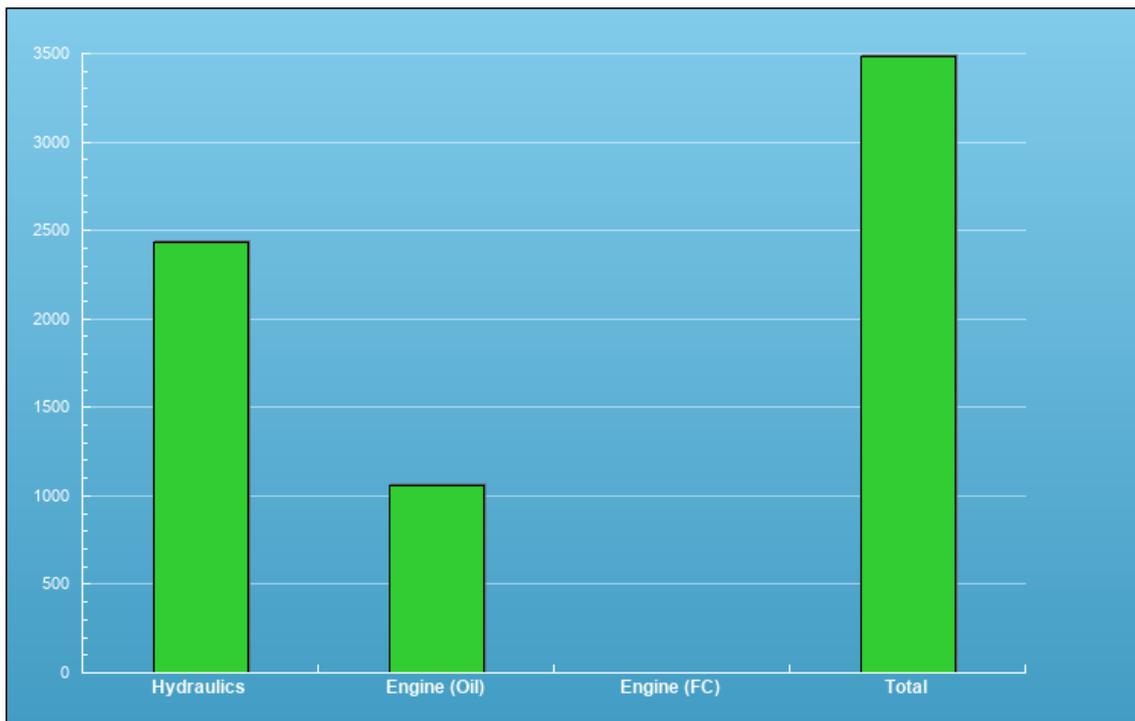
Machine / lubrication point	CO2e (in kg)		CO2e saving		Costs (in EUR)		Cost saving	
	Mineral oil	ECL	in kg	in %	Mineral oil	ECL	in EUR	in %
DOOSAN DX27Z	2'111	637	1'474	69.8	6'532	2'694	3'838	58.8
Hydraulics	741	171	570	76.9	2'259	882	1'377	61.0
Engine (Oil)	1'370	466	904	66.0	4'272	1'812	2'461	57.6
Engine (FC)	0	0	0	100.0	0	0	0	100.0
BOBCAT T76HFJ	2'578	565	2'012	78.1	7'250	2'628	4'622	63.8
Hydraulics	2'089	228	1'861	89.1	5'305	1'116	4'189	79.0
Engine (Oil)	489	338	151	31.0	1'945	1'511	433	22.3
Engine (FC)	0	0	0	100.0	0	0	0	100.0
Total for all machines	4'688	1'202	3'486	74.4	13'782	5'322	8'460	61.4

CO₂e savings potential for all machines

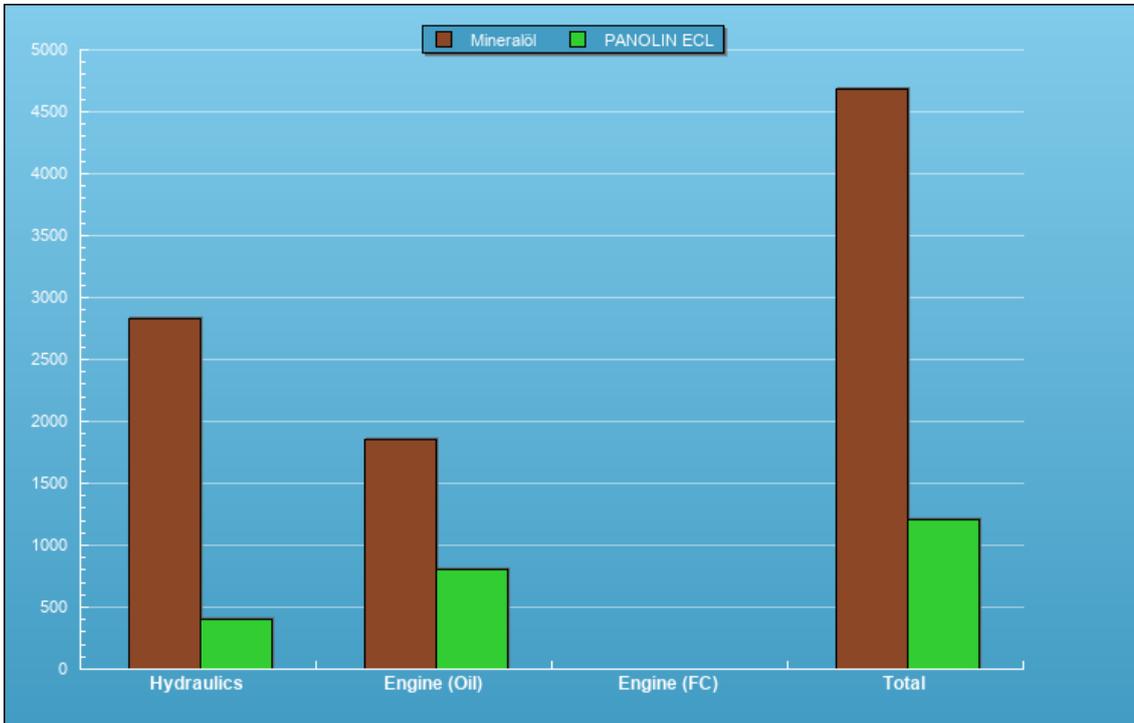
CO₂e savings potential in percent



CO₂e savings potential in kg

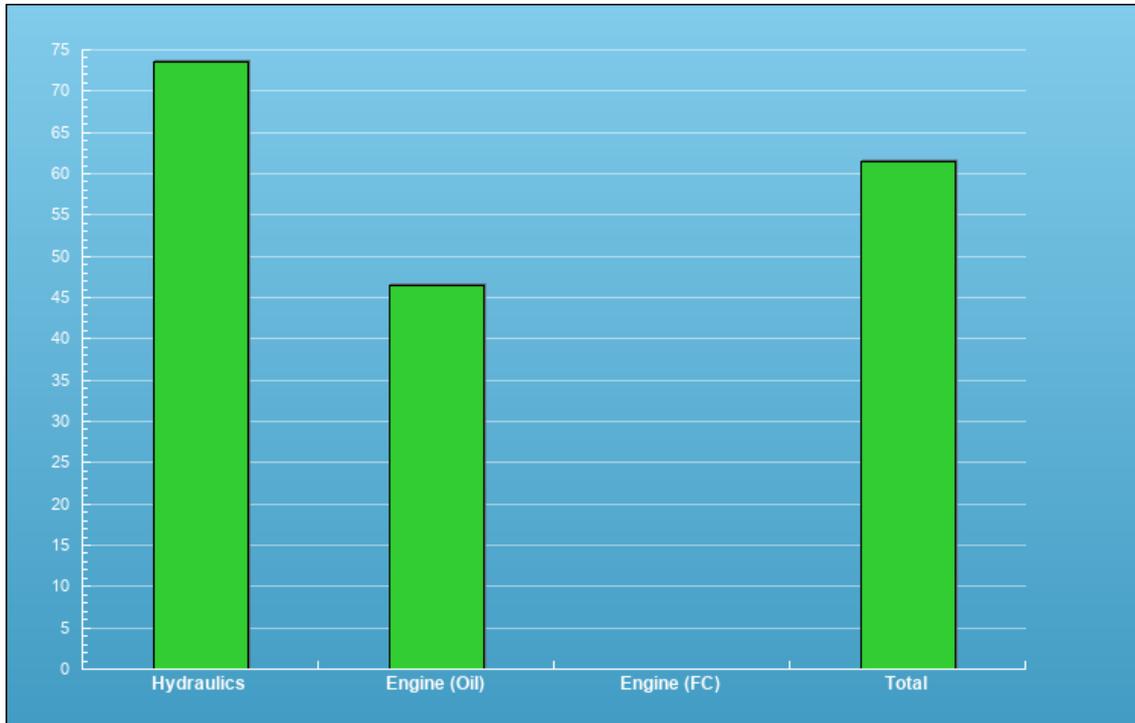


CO₂

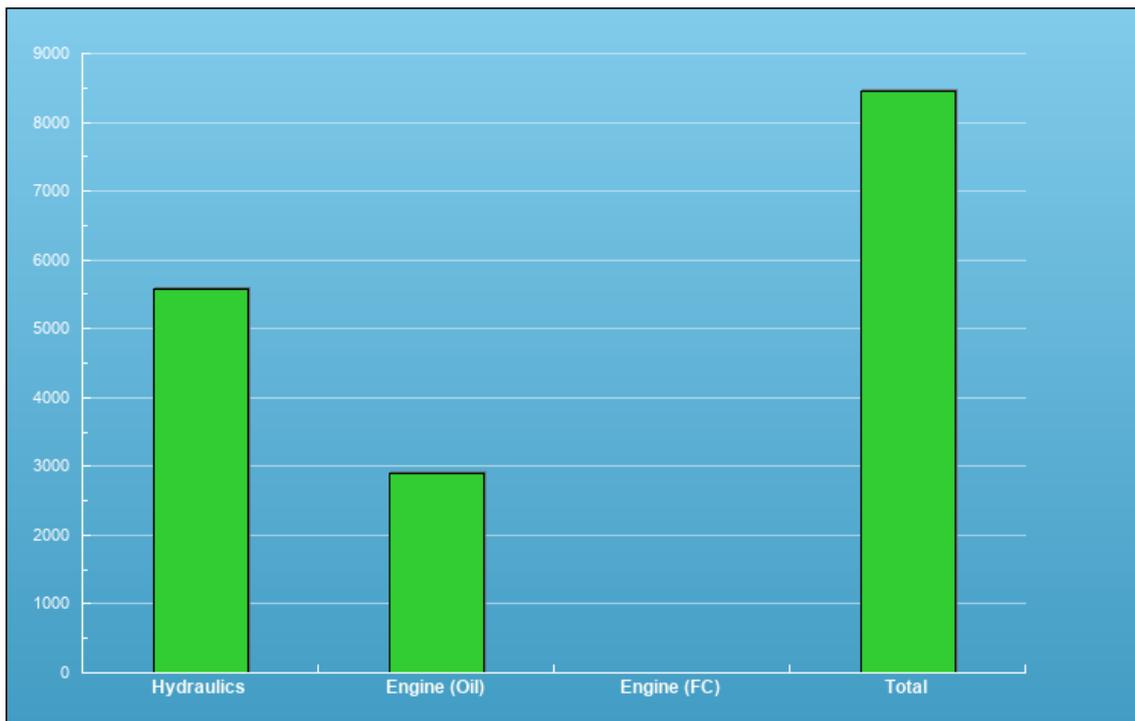


Cost savings potential for all machines

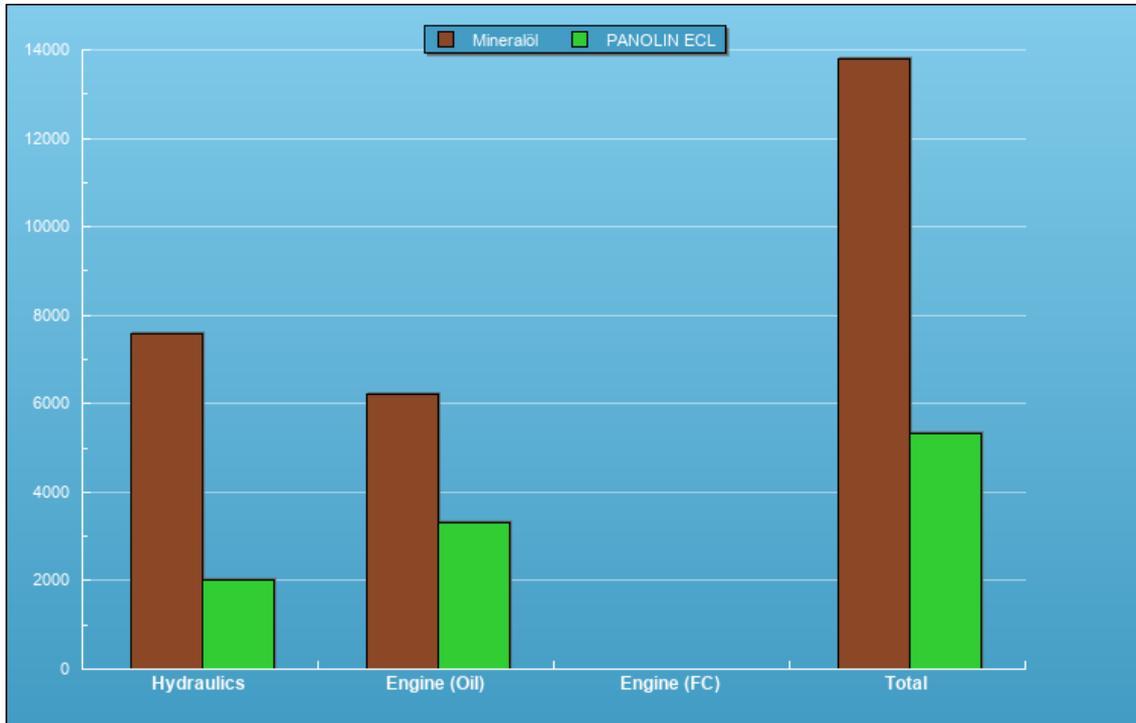
Cost savings potential in percent



Cost savings potential in EUR



Total costs for all machines in EUR



Panolin International Inc.
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8322 Madetswil

Zürich, 2017-08-04

Assessment Panolin CO2-Calculator

- 1) inspire AG is an independent, non-profit research organisation in the field of production technology and a strategic partner of ETH Zürich. Scientific work at inspire is under continuous supervision of a full professor at ETH Zürich, in this case the chair of the "Institute of Machine Tools and Manufacturing" (www.iwf.mavt.ethz.ch), Prof. Konrad Wegener.
- 2) Panolin has mandated inspire to assess their CO2-calculator. For this purpose, Panolin supplied all necessary information, gave access to the calculation scheme and to people working with the tool.
- 3) inspire has analysed the CO2-calculator according to the standard ISO/TS 14067:2013 (Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification and communication). It resulted in December 2016 in two recommendations in order to achieve full compliance with the above standard. Based on these findings, PANOLIN improved the CO2-calculator accordingly and has presented a comprehensive disclosure report according to ISO/TS 14067:2013. This report was reviewed by inspire in July 2017.
- 4) The review of the calculator and of the disclosure report (Version 26.4.2017) has left no doubt that it is fully compliant with ISO/TS 14067:2013. It shall be considered as a self-declared environmental claim in the sense of ISO 14021 (Environmental labels and declarations – Self-declared environmental claims).



inspire AG
Lukas Weiss
Group Leader Machine Tools



Institute of Machine Tools
and Manufacturing ETH Zürich
Prof. Dr. Konrad Wegener

Filling data

DOOSAN DX27Z Operating time: 12000 h

Number: 1

Hydraulics: 51l, MIN ISO 46 / PANOLIN HLP SYNTH 46

Engine: 8l, MIN SAE 15W/40 / PANOLIN BIOMOT LD 10W/40

BOBCAT T76HFJ Operating time: 12000 h

Number: 1

Hydraulics: 68l, MIN ISO 46 / PANOLIN HLP SYNTH 46

Engine: 6l, MIN SAE 15W/40 / PANOLIN BIOMOT LD 10W/40