



rema.quicktrain





1. What is **rema.quicktrain**?
2. Circular Economy
3. Product description
4. rema.germany DPF – details
5. Differentiation from competition
6. Summary

rema.quicktrain = know-how = Success



- for new team-members
- as update
- in case of new market situations
- „FAQ“ basic paper
- easy to schedule
- also as training for your customer



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Circular Economy

Product lifecycle extension



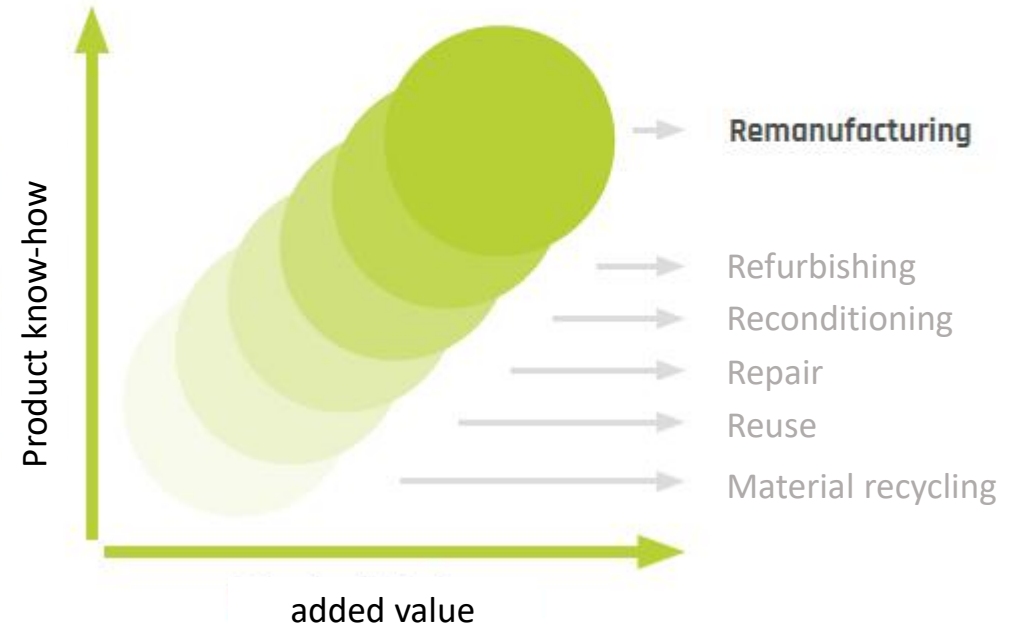


Definition

Remanufacturing – is NOT repair!

- „A remanufactured part fulfills a function, which is **at least equivalent** compared to the original part. It is restored **from an existing part (CORE)**, using **standardized industrial processes** in line with specific technical specifications. A remanufactured part is given the **same warranty** as a new part and it clearly identifies the part as a remanufactured part and states the remanufacturer.“

- High level engineering
- IATF 16949 certified manufacturers
- TÜV certified – DIN EN ISO 9001
- ISO 14001:2015 certified

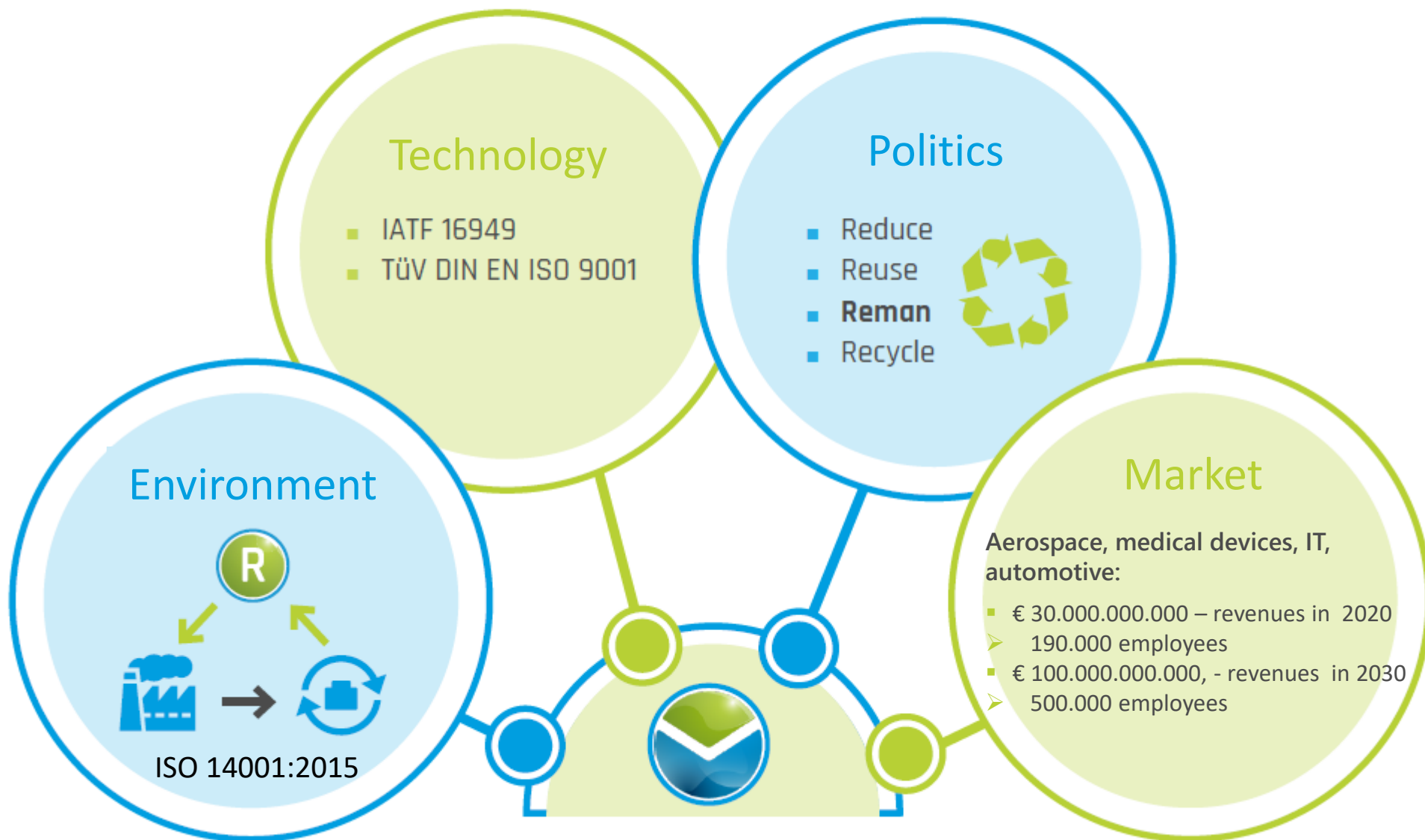


Remanufacturing

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High level engineering.







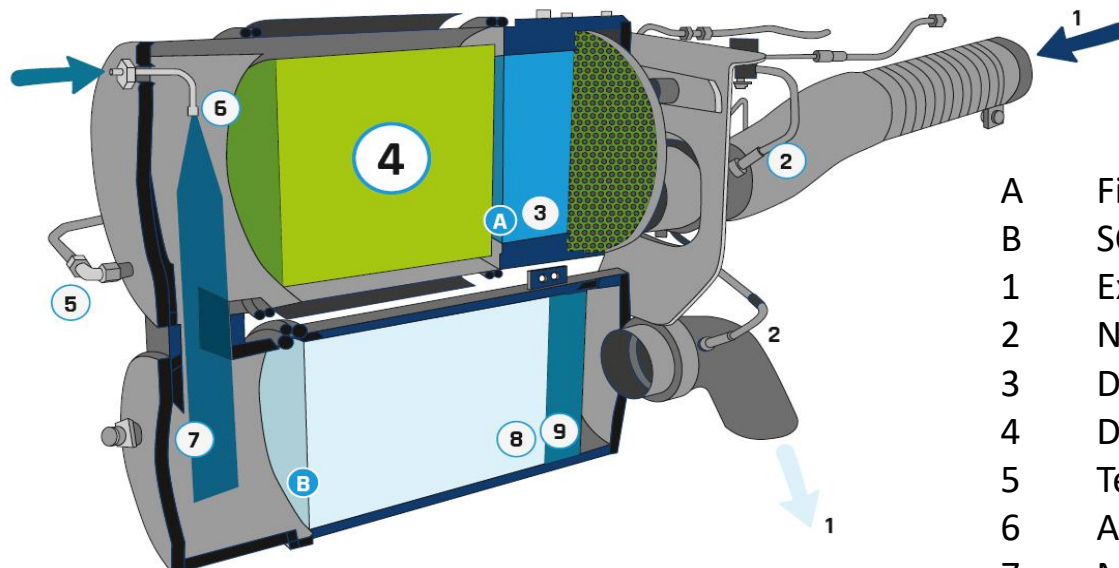


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Function

The DPF filters the particles from the exhaust gas and stores them. The pre-cleaned exhaust gas stream through the closed filter element. The particles are withheld within the porous structure of the DPF.



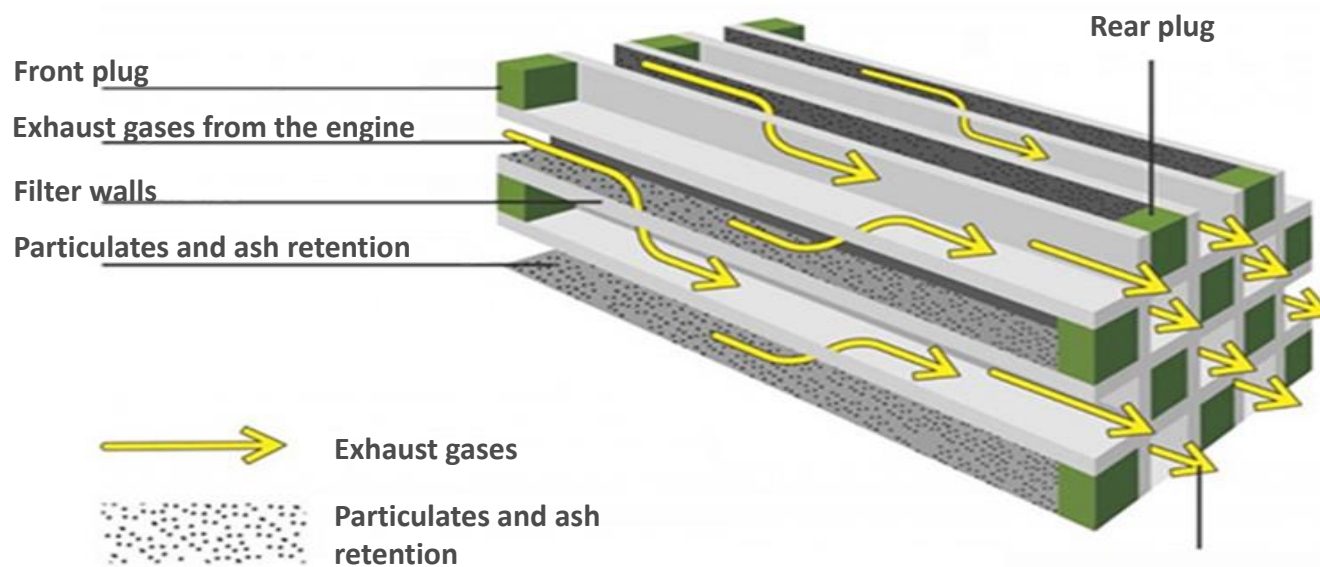
- A Filtersystem CRT (Pos. 3 and 4)
- B SCR-System (Pos. 6 to 9)
- 1 Exhaust stream
- 2 NOx- Sensor
- 3 Diesel-oxidation-catalyst DOC
- 4 Dieselparticulatefilter DPF
- 5 Temperature sensor
- 6 AdBlue-Injection
- 7 Mix- and hydrolysis for ammonia creation from urea
- 8 SCR-catalyst-module
- 9 Catalyst for ammonia leakage



Mode of operation

The DPF filters the particulates matter from the exhaust gas and stores them.

The pre-cleaned exhaust gases flow through the closed filter element.
The particulates are held back in the porous honeycomb structure of the DPF.



Approx. 90% of the particulates mass and approx. 95% of the particulate quantity is retained.

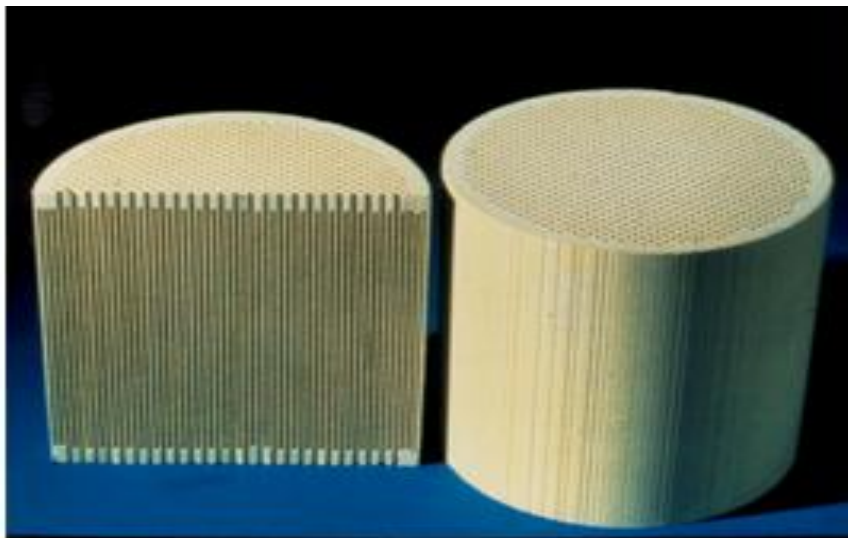


DPF – component description

The DPF consists of a stainless steel sheet metal enclosure and a substrate.

The substrate is located inside and consists of a porous, monolithic block of silicon carbide substrate (Cordierite- or alloy-titan-ceramics or Siliciumcarbide (segmented)).

The filter element is covered with an oxidation layer of precious metals (washcoat).





- The washcoat of any DPF must be equivalent to the OE DPF.
 - The required platinum coating needs to be covered by palladium to protect it from burning.
 - The cleaning capacity of the DPF (particulates) depends on the quality of the washcoat.
 - Any reduction of the washcoat in regard to quantity or quality results in:
 - Lower cleaning quality (less particulates can be bound)
 - Shorter cleaning frequencies
 - Non compliance with OE standards (Euro 6 non-compliance)



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DIESEL PARTICULATE FILTERS

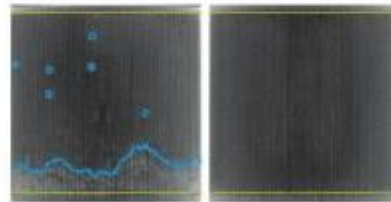
Euro 6

3 year warranty
without mileage limit



rema.germany DPF

- ✓ All DPF approved for the corresponding OE application
- ✓ Filter performance of the new DPF (initial) to OE standard or better!
- ✓ Europe's most comprehensive exchange program
- ✓ Remanufacturing according to OES standard processes:
 - Check the core
 - Cleaning in a complex procedure
 - Purge air process
 - Rinse
 - Dry
 - Filter performances of min. 97% achieved compared to new parts
- ✓ All environmental standards are satisfied (CE, RoHS, REACH...)
- ✓ Immediate replacement with no time lost
- ✓ Fair core criteria



Normal cleaning methods in IAM (**)

Remaining flow restrictions due to filter areas not being reached

- (*)
- Cleaning with chemicals or through ozonization (PSO)
 - Additional damage to the sensitive coatings of the system

rema.germany DPF cleaning system (**)

- As clean as new
- Optimum exhaust back pressure
 - Optimum fuel consumption

- (**)
- Cleaning by pulsating air and aqueous solution
 - No harm to the coatings



rema.germany DPF

Klemmen / Dichtungen immer inklusive

Anbaudübel auch separat erhältlich

Art.-Nr.	Applikation	DF-Nummer (Auszug)
B44160	Scania / DC09, DC13	570757 / 2265640
B44170	Scania / DC16	570745 / 2246964
B44220	DAF / MK1, MK3	1671485 / 1345456 / 2137441
B44140	Mercedes / OM47L, OM473	A0014902892 / A0014908992
B44190	Mercedes / OM934	A0014903692
B44270	Mercedes / OM470, OM471	A0014908092
B44010	Volvo / Renault / DT1K, DT3K, DT11, DT13	85013297 / 7486013301
B44030	Volvo / Renault / DT8, DT8	85013198 / 7421751157
B44180	MAN / D2676, D2676	8151030107 / 8151031930
B44120	MAN / D0834	8151030103 / 8151031913
B44130	MAN / D0836	8151031914 / 8151030111
B44340	Mercedes / OM473, OM473	A0014902892 / A001490289280
B44360	Mercedes / OM934, OM936	A0014903792 / A0014906892
B44370	Mercedes / OM936	A0014906492 / A001490649280
B44380	Mercedes / OM936	A0014906992 / A0014906992
B44390	Mercedes / OM934, OM936	A0014907092 / A0014906290
B44420	Mercedes / OM936	802490429280 / A0024904292
B44410	Volvo / Renault / DT1K, DT3K, DT3G, DT11, DT13	7421756800 / 850133004
B44560	Mercedes / OM470	A0014903192 / A0014908492
B44570	Mercedes / OM470, OM473, OM473	A0014908692 / A0014907092
B44580	Mercedes / OM470	A0014902792 / A0004904692

rema.germany, eine Marke der APS Germany GmbH, dem „easy to deal with“ Unternehmen!

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sales@rema-germany.com

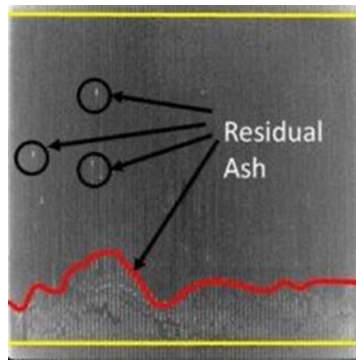
www.rema-germany.com

Vertriebs-Stützpunkte:

Deutschland · Frankreich · Schweiz · Österreich · Schweden · Norwegen · Finnland · Dänemark · Irland · Export



Importance of Cleaning process



· Paul Scherrer Institute, Switzerland



- Cleaning processes, which use pressurized air, chemicals or burning procedures, are by far less effective and also damage the washcoat of the substrate.
- Such a cleaning process leads to the effect that, within a short sequence, the largest possible amount of particulates, loose or bound, is loaded. This means that cleaning sequences are considerably shorter than with our system.
- Should those cleaning processes be used in a too aggressive or repeated way, the damage of the washcoat leads to a non-repairable damage of the filter and thus to the need for a new DPF.
- rema.germany DPF are cleaned by an OE standard process using just pulse-air and water. This protects the efficiency of the washcoat and enables a min. 97% cleaning result (compared with new DPF).



Regeneration and Cleaning

The present load state of the DPF is permanently monitored by pressure sensors.

Following the measurements the filter requires a passive or active regeneration.

Passive Regeneration

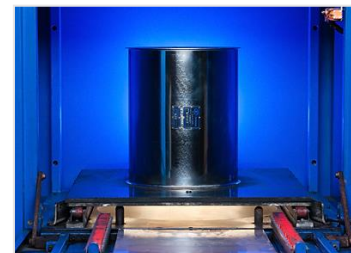
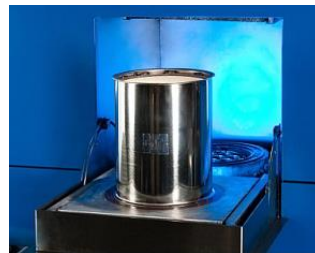
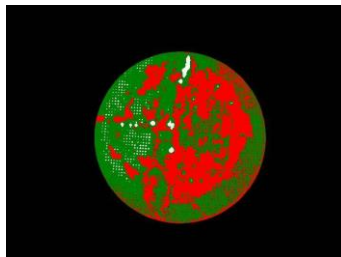
- The passive regeneration takes place continuously during cruising, controlled by system.
- The retained soot particles are converted into a gas by a chemical process.

Active Regeneration → see next slide



Active Regeneration

- The heated DPF are fully automatic cleaned by using a patented and material preserving method (water and purge air system). The components as substrate, isolation material and washcoat are not affected.
- Chemical and thermal cleaning methods (burning) can damage the filter elements.
- A final streaming/back-pressure test prove the result of the process. It is mandatory that the filters reach a cleaning level nearly as new filters.
- Additionally all DPF are x-rayed to discover internal damages.





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Data quality - Comparison OE ref allocation , i.e. MB

Mercedes OE	Engine Code	APS	Dinex
5AI005	5AI005-RX	001.490.5292, 001.490.5392, 001.490.7092, 001.490.8392, 001.490.8492, 001.490.8592, 001.490.8692	Mercedes

Mercedes OE	Engine Code	APS	Dinex
001 490 5292	OM 470	844560	5AI005-RX
001 490 5392	OM 471, OM 473	844140	5AI005-RX
001 490 7092	OM 470, OM 471, OM 473	844570	5AI005-RX
001 490 8392	OM 470, OM 471	844270	5AI005-RX
001 490 8492	OM 470	844560	5AI005-RX
001 490 8592	OM 471, OM 473	844140	5AI005-RX
001 490 8692	OM 470, OM 471, OM 473	844570	5AI005-RX



Data quality - Comparison OE ref allocation , i.e. MB

+	5AI005	+	5AI005-RX	001.490.5292, 001.490.5392, 001.490.7092, 001.490.8392, 001.490.8492, 001.490.8592, 001.490.8692	Mercedes
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844140
001 490 8592



844270
001 490 8392



844560
001 490 8492



844570
001 490 8692



- The housings (grey) are identical.
- The fitting kits are identical.
- The substrate (yellow) has different lengths and/or different positions in the housing!
- The washcoat is different! (cannot be seen visually!)



Data quality - Comparison OE ref allocation , i.e. Scania

6LI000	6LI000-RX	570759, 2097594, 2269640, 2575576, 2179961	Scania
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Scania OE	Model year	APS	Dinex
570759	MY 2003 – 2018	844160	6LI000-RX
2097594	MY 2003 – 2018	844160	6LI000-RX
2269640	MY 2003 – 2018	844160	6LI000-RX
2575576	MY from 2016	844320	6LI000-RX
2179961	MY 2003 - 2018	844160	6LI000-RX



Data quality - Comparison OE ref allocation , i.e. Scania

6LI000	6LI000-RX	570759, 2097594, 2269640, 2575576, 2179961	Scania
--------	-----------	--	--------

844160
2269640



844320
2575576



- The housings (grey) are identical.
- The fitting kit are identical.
- The substrate (yellow) is identical in length and position in the housing.
- The DPF filter weight is different by 3 kgs!
- The Washcoat (green) is different! (cannot be seen visually)



Summary: rema.germany vs competitor

- Both samples prove that such DPF are not interchangeable (as Dinex implies)!
- Some differences can be seen visually.
- Some differences cannot be seen visually.
- OEM homologate the different DPF just for the use with the respective engine or exhaust system!
- The use of a DPF not homologated leads to the infringement of the system and following the loss of registration for the vehicle!
- Collateral damages to the engine, vehicle and environment can result!



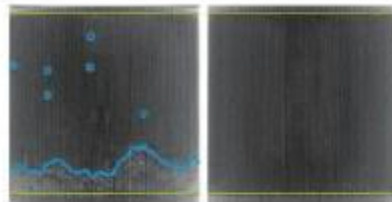
DIESEL PARTICULATE FILTERS

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rema.germany DPf

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rema.germany DPf cleaning system ()**
As clean as new
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(**)
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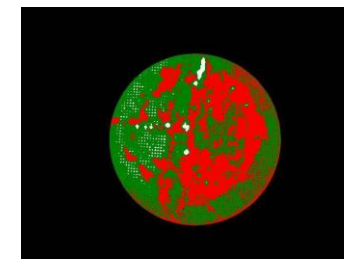
	Cleaning	Recon	New
Rating	Low priced	Best price	Highest quality
Price	low	Competitively viable	high
Outage time	24h – 48h	Low	low
Availability	24h – 48h	On stock	On stock
Warranty	none	2 years	3 years
EU type approval	None	Yes	Yes
Clamps and seal inclusive	none	yes	yes
Service	Shorter	medium	longer
Regeneration	often	medium	less
Fuel consumption	higher	medium	lower
exhaust gas back pressure	higher	medium	lower





Core-criterias

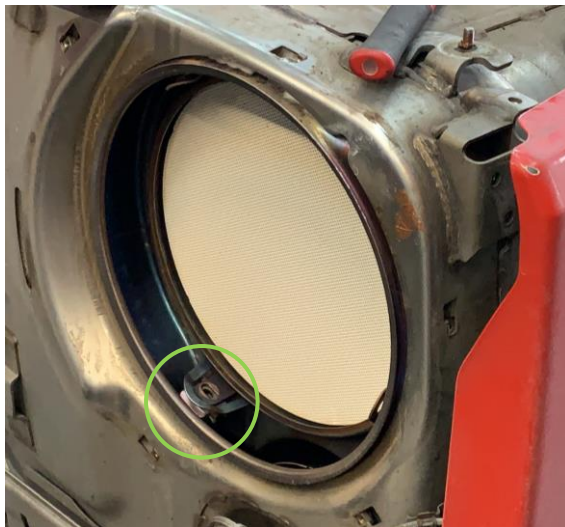
- The substrate must not show visual heavy damages.
- The housing must not show heavy damages.
- Only OE-DPF are accepted (no copies nor retrofits).
- Cores are accepted if cleaning is not possible due to internal damages or any other reason.





Important information on DPF!

Scania DPF – possible damages through installation mistakes



See photograph for correct installation of DPF.
For disassembly the plate of the tool is turned to allow flanges to be firmly positioned into the lugs.



Important information on DPF! Disassembly





Important information on DPF! Assembly

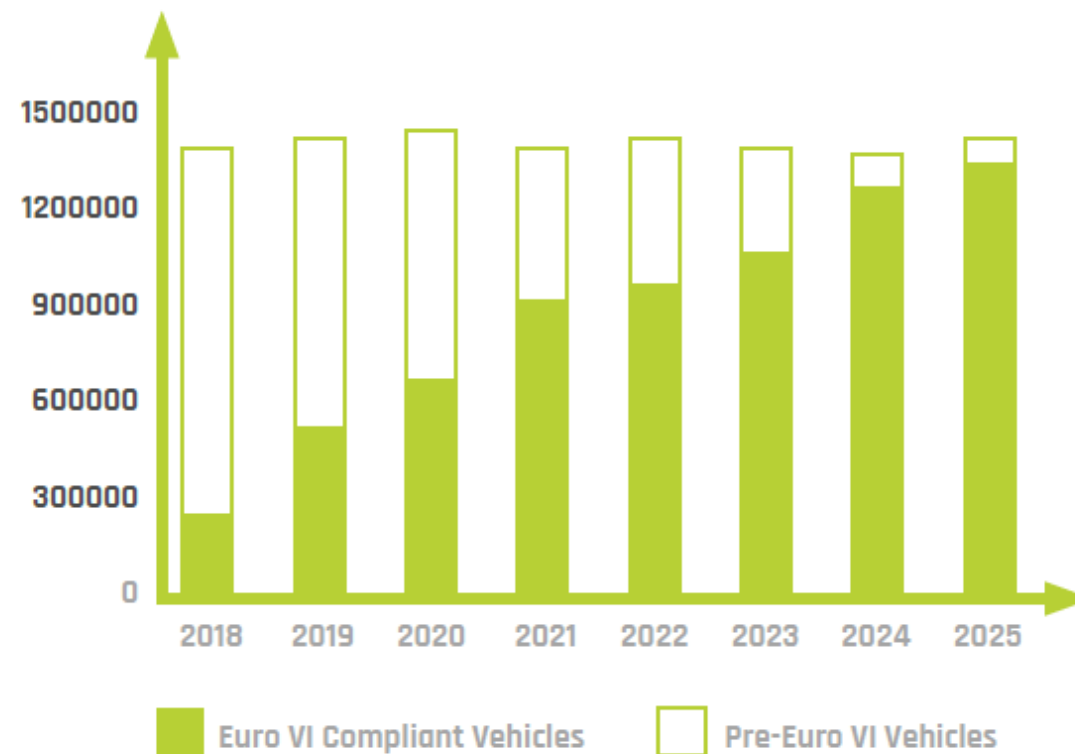




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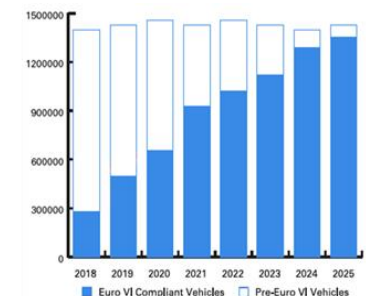
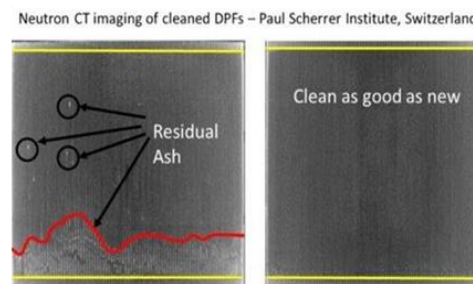
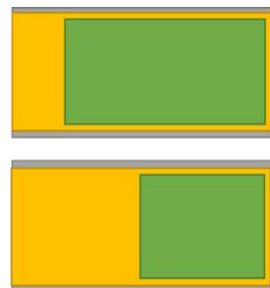
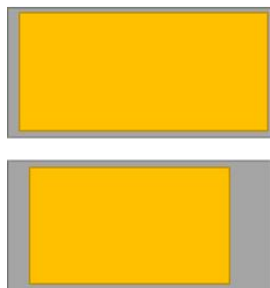
- ✓ Euro 6 from 12/13
- ✓ 1. Service OES
- ✓ 2. Service OES
- ✓ 3. Service by you?!





Summary

- rema.germany DPF program
 - ✓ Best program coverage at competitive prices
 - ✓ Continuous development of program to meet market potential
 - ✓ Additionally Fitting kits as part of program
 - ✓ Cleaning process as per OE standards
 - ✓ Infills (new DPF) min. on the same quality level as OE DPF
 - ✓ rema.germany DPF = as good as new



Let's make the truck **greener.**

