



aerospace  
climate control  
electromechanical  
**filtration**  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



# Hydraulic Filter Division Europe Product Overview

Hydraulic Filtration and Contamination Control



ENGINEERING YOUR SUCCESS.

# Parker Hannifin Corporation

## ENGINEERING YOUR SUCCESS.



A global Fortune 300 company with customers in 48 countries, Parker Hannifin is the world's leading supplier of hydraulic, pneumatic, and electro-mechanical systems and components. Customers rely on Parker for engineering excellence, world-class manufacturing and outstanding customer service to provide comprehensive application solutions that are second to none.

### The Parker Brand Promise

*Parker is the global leader in motion and control technologies, partnering with its customers to increase their productivity and profitability.*

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- More than USD 12.1 billion in sales
- 298 plants worldwide
- 12,000 distributors
- 449,000 customers
- Serving 1,200 distinct markets
- Listed as PH on the New York Stock Exchange

Let Parker become part of your design team. Whether you need to develop new products, redesign existing applications, or design completely new systems, Parker offers unparalleled engineering expertise.



As the leader in the motion and control industry, Parker strives to be our customers' trusted partner. These relationships are cultivated by listening closely to our customers and repeatedly providing them with value measured in any currency: saved time, reduced waste, gained efficiency, expanded output and increased profitability.

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# Hydraulic Filtration & Contamination Control

**Parker Filtration has developed a comprehensive range of hydraulic and lube filtration solutions, fluid power products and fluid contamination monitoring equipment and has extensive manufacturing and engineering experience in most industry sectors.**

## Mobile/Construction

The presence of Parker Filtration within the mobile and construction equipment markets is significant. With the emphasis placed upon creating engineering solutions to increase performance, whilst reducing real performance costs, By providing unique, tailor-made solutions Parker Filtration continues to break new ground in engineering for mobile and industrial technology.

## Industrial solutions

At the heart of every industrial filtration solution is Parker's reputation for innovation and quality manufacturing. Here are just a few applications:

- Aviation fuel
- Wind generation
- Hydraulic Presses
- Industrial Machinery
- In-Plant Automotive
- Machine Tool
- Oil and Gas
- Paper

## Heavy duty fuel and lube solutions

Parker Filtration has many years experience in product innovation and development to create a range of filtration products to suit a wide variety of industry applications. From industrial lubrication applications through to power generation industry requirements Parker's extensive range of heavy duty fuel and lube filtration solutions covers most requirements.

A range of quality products created for specific application use including:

- Single high-flow filters
- Duplex change over filters
- Automatic back flushing filters
- Oil Separators

All Parker heavy duty and lube filtration solutions are backed by Parker Filtration's global reputation as a reliable supplier of superior filtration products, this reputation has been built on Parker's focused and integrated product development and manufacturing system.

## Marine Applications

Parker Filtration products will be found on board ship and in the dockyard providing hydraulic and lube solutions in the marine engine room, deck winches, steering gear and a wide range of applications above and below decks.

## Fluid contamination monitoring

Parker Filtration continues, through technical expertise and proven products, to retain a world class position as an innovator in designing and manufacturing fluid contamination monitoring and analysis equipment ensuring our customers can not only keep their hydraulic systems clean with effective filtration but can determine just how dirty the system was in the first place. Particle contamination in hydraulic oils and lubricants can have a significant impact on system efficiency, safety and operating costs. This is especially true in modern high performance systems, where tolerances are becoming ever tighter, and where equipment is used in critical industrial, mobile and process applications.

Recognizing this fact, Parker Filtration has developed innovative, laser-controlled contamination monitoring technology that measures both the size and concentration of particles in oils and lubricants.



# Low Pressure Filters

## ETF Series – Tanktop mounted return line filters



- ETF utilizes a re-inforced co-polymer head equipped with 2 return ports.
- Quick-release cover design.
- Flow from inside to out.
- Maximum pressure 6 bar. Maximum flow 140 l/min.
- An economic return line filter for hydraulic systems.

## TTF Series – Tanktop mounted return line filters



- TTF features pre-filtration by means of a magnet column.
- Full flow bypass with low hysteresis.
- Maximum pressure 10 bar. Maximum flow 500 l/min.
- Options include a filling port in the filter cover and second return port.
- Patented LEIF® elements safeguard filtration quality.
- Flow from inside to out.

## BGT Series – Tanktop mounted return line filters



- BGT features pre-filtration by means of a magnet column.
- Filter heads with multiple ports available.
- Flow from inside to out.
- Full flow bypass with low hysteresis.
- Maximum pressure 10 bar. Maximum flow 2400 l/min.
- Patented LEIF® elements safeguard filtration quality.

## IN-AGB Series – In-tank mounted return line filters



- IN-AGB features a bypass construction with low hysteresis.
- Magnetic pre-filtration and a high dirt-holding capacity.
- Wide range of diffusers including airtight options.
- Flow from inside to out.
- Flow rates from 30 l/min to 2400 l/min.
- Patented LEIF® elements safeguard filtration quality.

## Tanktopper Series I, II & III – Tanktop mounted with integrated air breather



- Tanktopper offers a total filtration solution with integrated air breather.
- In-to-Out filtration plus gauge and switch options.
- Maximum pressure 10 bar. Maximum flow 650 l/min.
- Patented LEIF® elements safeguard filtration quality.

## SR Series – Tanktop mounted suction and return filters



- SR capable of feeding filtered oil under positive pressure to the suction side of the boost pump.
- Filters both open and closed loop oil systems through one filter.
- Maximum pressure 10 bar. Maximum flow 250 l/min.
- SR uses patented LEIF® elements to safeguard filtration quality.

# Low Pressure Filters

## PT Screw-in filters



- Return line filter for direct mounting in copolymer reservoirs.
- Patented designs safeguard filtration quality.
- In to out flow avoids re-contamination of the system.
- Flow capability up to 400 l/min.

## Maxiflow Series – Spin-on filters



- Maxiflow full flow filters for suction or return applications.
- Available with a variety of integrated and add-on indicators.
- Maximum pressure 10 bar. Maximum flow 360 l/min.
- High quality filter medium.

## ATZ Series – Submersible suction filters



- ATZ submersible suction filters locate below tank oil level.
- Pre-filtration takes place by means of a magnetic column.
- Maximum flow 300 l/min.
- In-to-Out filter stops contaminated oil leaking back into the system.

Note: BGLS Series – low pressure filters are designed for hydraulic and lube applications. See page 7 for details.

# Medium Pressure Filters

## 15/40/80CN Series – medium pressure filters



- CN utilizes a cast aluminium head and bowl.
- Excellent fatigue pressure ratings.
- Maximum pressure 70 bar. Maximum flow 600 l/min.
- An economic 'multi-purpose' filter solution.

## 45M/45M Eco Series – medium pressure filters



- 45M utilizes a cast iron head and steel bowl.
- Solves the problem of protecting system components at lower pressures.
- Maximum pressure 40 bar. Maximum flow 260 l/min.
- An ideal filter series for harsh environments.

Note: Eco 130 Series – medium pressure filters are designed for hydraulic and lube applications. See page 7 for details.

Note: BGAH Series – medium pressure filters are designed for hydraulic and lube applications. See page 7 for details.

# High Pressure Filters

## 15P/30P Series – high pressure filters



- 15P/30P utilizes a compact aluminium housing with 2 head sizes and 2 bowl lengths.
- Microglass III filter media.
- Maximum pressure 207 bar. Maximum flow 200 l/min.
- A quality filter for better control and long component life.

## 100P Series – high pressure filters



- 100P design, only the bowl end-cap is removed on element change.
- Microglass III glassfibre media is standard.
- Maximum pressure 414 bar. Maximum flow 1000 l/min.
- An ideal solution where space is at a premium.

## WPF iprotect Series



**NEW**  
Available 2009

- A new generation of high pressure filters.
- Quality of filtration is safeguarded.
- Manifold heads contribute to cost-effective integration of filters in a system.
- Ecological design.
- Rated at 450 bar for flows up to 700 l/min.
- Multiple bypass settings up to 7 bar..

## 18/28/38P Series – high pressure filters



- Multiple bypass settings up to 7 bar.
- 18/28/38P features a range of head and bowl sizes and connection options.
- Microglass III glassfibre media is standard.
- Maximum pressure 414 bar. Maximum flow 700 l/min.
- A proven filter solution for 'heavy duty' hydraulic systems.

## 70/70 Eco Series – high pressure filters



- 70/70 Eco features a range of head and bowl sizes and connection options.
- Microglass III glassfibre and Ecoglass III media is available.
- Maximum pressure 420 bar. Maximum flow 450 l/min.
- A proven filter offering high levels of system protection.

## 22PD/32PD Series – high pressure duplex filters



- 22PD/32PD utilizes a duplex design with integrated balancing valve and vent ports.
- Microglass III glassfibre media is standard.
- Maximum pressure 210 bar. Maximum flow 260 l/min.
- Designed to offer continuous operation during element change.

# Filter Indicators

## FMU $\Delta p$ – indicators and pressure indicators



- The FMU range of filter condition indicators, designed for use on a wide range of Parker filters
- Accurate visual, electronic or electrical filter condition feedback.
- Maximum pressure 420 bar.
- Mobile, industrial and marine applications.

# Heavy duty filtration products

## GS Series – medium pressure in-line filters



- GS utilizes a cast iron housing design making it suitable for marine engine rooms and industrial gearbox installations.
- Microglass III or a cleanable metal mesh option.
- 3 different housing sizes can be specified.
- Maximum pressure 40 bar. Maximum flow 350 l/min.

## GA Series – medium pressure in-line filters



- GA utilizes an 'in to out' design which eliminates contamination returning into the system.
- Microglass III, Ecoglass III media or a cleanable metal mesh option.
- Maximum pressure 30 bar. Maximum flow 230 l/min.
- An ideal solution for metal cutting equipment.

## BGAH Series – medium pressure in-line filters



- BGAH is an ideal in-line solution for straight pipelines.
- Microglass III, Ecoglass III media or a cleanable metal mesh option.
- Patented LEIF® elements safeguard filtration quality
- Maximum pressure 25 bar. Maximum flow 500 l/min.
- Highly customizable for differing applications.

## BGLS Series – low pressure in-line filters



- BGLS utilizes an aluminium upper housing and steel lower housing.
- Low weight with high capacity solution.
- Maximum pressure 10 bar. Maximum flow 2000 l/min.
- Ideal for lube systems, wind turbines and hydraulic presses
- Patented LEIF® elements safeguard filtration quality
- Microglass III, Ecoglass III media or a cleanable metal mesh option..

## SF1040 Series – low pressure in-line filters



- SF1040 features a strong welded steel housing with DN80 or DN100 connections.
- Microglass III glassfibre media or a cleanable metal mesh option.
- Maximum pressure 10 bar. Maximum flow 1400 l/min.
- Ideal for gas and high flow systems.

# Heavy duty filtration products

## Eco 130 Series – medium pressure filters



- Eco 130 is a versatile, modular filter system.
- Ability to bank multiple filters together in a 'duplex' format.
- Maximum pressure 30 bar. Maximum flow 1000 l/min.
- Microglass III, Ecoglass III media or a cleanable metal mesh option.

## DF2145 Series – duplex filters



- DF2145 duplex utilizes a robust cast iron housing for secure, continuous filtration.
- Microglass III, Ecoglass III media or a cleanable metal mesh option.
- Maximum pressure 30 bar. Maximum flow 80 l/min.
- A high specification filter for fuel, lube and hydraulic systems.

## DF40 Series – duplex in-line filters



**NEW**  
Available 2009

- DF40 duplex utilizes a cast iron and steel design ideal for marine applications such as engine room installations.
- Microglass III, Ecoglass III media or a cleanable metal mesh option.
- Maximum pressure 40 bar. Maximum flow 200 l/min.
- Ideal for fuel, lube and hydraulic fluid systems.

## DFBO Series – duplex in-line filters



**NEW**  
Available 2009

- DFBO duplex brings Parker Racor FBO filters to the marine engine room.
- Ensuring efficient water separation at all times.
- Maximum pressure 10 bar. Maximum flow 115 l/min.
- 2 bowl lengths, easy service and no special tools required.

## DF2089 Series – duplex filters



- DF2089 duplex utilizes a cast iron housing with 'in to out' flow to hold back contamination even during element change.
- Microglass III or a cleanable metal mesh option.
- Maximum pressure 40 bar. Maximum flow 350 l/min.
- A high specification filter for fuel, lube and hydraulic systems.

## DF2110 Series – duplex filters



- DF2110 duplex is a 'heavy-duty' performer with high in to out flow to hold back contamination even during element change.
- Microglass III or a cleanable metal mesh option.
- Maximum pressure 20 bar. Maximum flow 1200 l/min.
- DN80 PN25 connections.





# Heavy duty filtration products

## DF2050 Series – duplex filters



- DF2050 duplex features a cast iron housing with high dirt holding capacity yet low pressure drop.
- Microglass III or a cleanable metal mesh option.
- Maximum pressure 20 bar. Maximum flow 1200 l/min.
- DN80 PN25 connections.

## DF2035 Series – duplex filters



- DF2035 duplex utilizes an aluminium housing providing a lightweight, high capacity filter solution.
- Microglass III or a cleanable metal mesh option.
- Maximum pressure 8 bar. Maximum flow 600 l/min.
- Ideal for industrial gear and diesel engine lube systems.

## DF2060 Series – duplex filters



- DF2060 duplex slim design provides maximum performance with minimum installation height.
- Microglass III or a cleanable metal mesh option.
- Maximum pressure 10 bar. Maximum flow 2200 l/min.
- Ideal for industrial and heavy duty diesel engine lube systems.

## DF2070 Series – duplex filters



- DF2070 duplex design provides a welded housing with cast iron change over valve.
- Microglass III or a cleanable metal mesh option.
- Maximum pressure 10 bar. Maximum flow 1800 l/min.
- Ideal for diesel engine and high flow industrial lube systems.

# Portable Filtration Systems

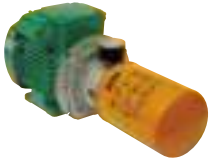
## Guardian® portable filtration system



- Guardian® is designed to 'clean' new oil and deliver it to a system.
- Carries out a clean up of used fluid to its original condition.
- Maximum pressure 3.4 bar. Maximum flow 15 l/min.
- Filters petroleum based oils, water emulsions and diesel fuels.

# Portable Filtration Systems

## Filtration Unit



- Filtration unit offers both permanent and offline fluid cleaning where higher levels of contamination are expected.
- Lightweight design. Spin-on 10 micron Abs. element.
- Maximum pressure 6 bar. Maximum flow 15 l/min.
- Robust construction.

## 10MFP hydraulic trolley



- 10MFP hydraulic trolley is the ideal way to pre-filter and transfer fluids into reservoirs or to clean up a system.
- Heavy-duty frame but still lightweight and portable.
- Maximum flow 38 l/min.
- Par-Gel™ water removal elements available.

## PVS Series-Models 185, 600, 1200, 1800 and 2700



- PVS draws water contaminated fluid out of a system.
- Removes water content and returns the 'clean' fluid to the reservoir.
- Maximum flow 170 l/min (PVS2700).
- Reduce the catastrophic results of water contamination.

## PAR◊FIT™

### Interchange replacement element range



- **Par◊Fit** elements are manufactured to the same exacting standards as Parker original elements using Microglass III and Ecoglass III media.
- Quality backed by Parker's unrivalled technical resources.
- Reduce stockholding and costs by sourcing all your replacement elements from Parker.
- Interchange elements for Pall, Hydac, Mahle, Internormen, MP Filtri, Donadson and over 140 more manufactures.
- Cross reference information available for over 30,000 part numbers.

### Hydac interchange element range



- The latest interchange elements range added are for the latest Hydac "R" type elements.
- Replacement sizes available are for Hydac: 0030, 0060, 0075, 0110, 0160, 0165, 0240, 0330, 0500, 0660, 0850, 0950, 1300, 1700 and 2600.
- Featuring Fluoroelastomer seals as standard for optimum performance.
- Top and bottom end caps manufactured from glass reinforced nylon.
- Top end cap includes integrated bypass assembly.
- Bottom end cap features a bayonet locking lug for use with the re-useable contamination retainer (Not supplied).
- Elements are suitable for use with the following Hydac housings: RF, RFD, RFM, RFL, RFLD, NF, NFD and oil service units as well as many OEM applications.

# Par-Gel™

## Water removal filter elements



- Par-Gel™ elements control water related problems in hydraulic power and lubrication systems.
- Helps reduce component wear and system downtime.
- Increases system efficiency and machine productivity.
- Reduces the chance of catastrophic system failure.

## Reservoir equipment

### Environmental air filters



- EAB Series – air flows up to 1500 l/min. Visual gauge option.
- ABL Series – 3 micron Abs. LEIF® element. 2 sizes.
- Triceptor – easy to fit, disposable when the silica gel turns to pink.
- 3 environmental breather options suitable for most applications.

### Glass-filled nylon air breathers



- Moulded in non-corrodible, glass-filled nylon – strong and light.
- Single hole, 6 hole and 3 hole installation.
- Screw-on breather range – G1/2 and G3/4 options.
- Compact range – G1/4, G3/8, R1/2 and R3/4 options.

### Metal filler breathers



- Metal filler breathers – pressurized threaded type.
- Metal filler breathers – unpressurized threaded type.
- Filter flange type.
- Lockable range for reservoir security and oil protection.

### Air filters



- High capacity air breathers to remove airborne contamination.
- Disposable, 5 micron nominal quality elements.
- Models – 700, 1500, 1700 and 3000 l/min.
- Ideal for high flow heavy contamination systems.

### Fluid level indication



- 3 sizes of fluid level/temperature gauge. 2 hole mounting.
- 76mm, 127mm and 254mm mounting centres.
- Adjustable float switches – 3 lengths available.
- Capacitive level switch designed to give a low level alarm.

# Reservoir equipment

## Fluid power products



- In-tank suction strainers and oil diffusers.
- Metal and polyester in-line filters and drive couplings.
- Multiclamp and inline check valves.
- Gauge isolator valves and 63mm/100mm pressure gauges.

# Contamination Control and Flowmeters

## Fluid condition monitoring

### icountLCM20 portable particle counter



- Icount LCM20 is a proven answer to fluid system contamination monitoring.
- 2-minute test procedure
- Multi-standard ISO, NAS and AS4059 cleanliness reporting.
- Data entry, data graphing and integral printer.
- Single Point Samplers (SPS's) are fingertip operated control valves that connect icountLCM20 and H2Oil into a system.
- 420 bar rated maximum pressure.

### icountBS bottle sampler



- icountBS provides quick sample bottle analysis with variable test time options from 15 second and volume capacities from 10ml.
- Repeatable and re-producible results performance, calibration carried out to ISO11171 via ISO11943 principles.
- Design concept allows for portability with DC and rechargeable battery power options built-in.
- Sample tube self-cleaning sleeve minimizing contamination crossover.
- No specific bottle required:
  - Maximum size = 75mm dia. x 150mm high.
  - Maximum volume = 250ml.

### icount Mini-Lab



- icount Mini-Lab is the portable solution to fluid contamination bottle sampling, using the icountBS bottle sampler.
- Cleanliness awareness and monitoring control is only an oil sample away with the easy, 3-step/2 minute fluid analysis process.
- On-screen, full 256 colour, backlit STN transmissive.
- A cost-effective alternative to external laboratory service.
- Interactive software provides templates for printing 2-page analysis reports including ISO compliant results, raw data for full-sweep, particle size counts and graphs.

# Fluid condition monitoring

## icountPD particle detector



- icountPD provides online and independent monitoring of system contamination trends.
- Laser diode light obscuration technology for repeatable results.
- Calibration to approved, on-line methods.
- Early warning LED or digital display indicators for low, medium and high contamination levels.
- Moisture RH% indicator option for real time water ingress awareness before saturation damage occurs.
- Fully PC/PLC integration technology such as:
  - RS232/485, 0-5V, 4-20mA, CANBUS (J1030).

## System 20 sensors and monitors



- 3 sizes of inline System20 sensor for pressures up to 420 bar.
- Analogue monitor utilizes 3 day-glow gauges with protective cover.
- EM20 electronic monitor with full digital display and 300 test memory.
- For use with all mineral oils, water and water/oil emulsions.

## MCM20 autoremote monitor



- MCM20 online continuous particle counting ensures constant system monitoring within defined parameters.
- Calibration carried out to ISO1171 via ISO11943 principles. Multi-standard ISO and NAS reporting including full count/100 ml. detection at size ranges.
- Interactive handset options available for direct test sequencing, change test parameters and last test results.
- PC/PLC controlled.
- Can be pre-set to carry out tests at specific intervals.
- Connects permanently to a System20 sensor via 2 metre hose assembly.

## H2Oil – water in oil monitor



- H2Oil is a two-channel, non-dispersive absorption spectrometer, designed to measure the level of water content polluting oil.
- Totally portable unit without the need for mains power.
- 90 second test time and 500 test memory.
- Data entry and on-board printer.

# Fluid condition monitoring

## MS moisture sensor range



- MS moisture sensors provide fast, reliable and accurate inline detection of moisture in fluids
- Technology developed for preventative maintenance programmes.
- MS150 'low pressure' suction line/reservoir applications. Temperature outputs. 10 bar maximum operating pressure.
- MS200 'Programmable' sensor monitoring and reporting relative humidity (RH), moisture content in oils.
- MS300 'Intrinsically safe' sensor ATEX certified for use in hazardous Zone 0 environments.

## Par-Test



- The Par-Test service is a complete laboratory analysis service.
- Analysis is performed on a small quantity of fluid supplied by the customer.
- Parker Filtration has 3 European laboratory locations
- The resulting Par-Test report is comprehensive in its detail.

# Fuel hydrocarbon monitoring

## icountACM20 contamination monitor



- icountACM20 monitors aviation fuel contamination to DEFSTAN 91-91 Jet A-1 fuel specification.
- A proven product that adopts Energy Institute Test Method IP 564.
- 2-minute test procedure. Multi-standard ISO cleanliness reporting.
- On-board, case-mounted pump means direct monitoring at a fuel storage tank for example is possible.

## icountACM20 Z2



- icountACM20 Z2 is assembled in an approved and certified Stainless Steel enclosure.
- Complies with ATEX Directive 94/9/EC and EN50 021 requirements.
- Designed for use in explosive and hazardous areas including offshore and mining applications.
- Has all the features of an icountLCM20 and an icountACM20.

## icountPD – Fuel particle detector



- Dedicated count sizing to ISO4406:1999 and capable of discerning moisture in fuel.
- Opportunities for Go/No-Go indicator sensor mythology for fuel up-lift into aircraft.
- ATEX Zone 2 approval under review. Contact Parker CMC for further information.

# Transducers and transmitters

## Asic 'Performer'



- A quality range of transducers and transmitters with pressure ratings - 25, 60, 100, 250, 400 and 600 bar.
- One-piece body and diaphragm machining ensures long-term stability.
- All Stainless Steel construction.
- Cost-effective solution in many industry applications.

# Flowmeters and Monitors

## Flowmeters, Flowswitches and Flow Monitors



- LoFlow oil and water flowmeters. 10 bar max. working pressure.
- Easiflow meters and Flowswitches. Work in any plane. Flows from 1 to 150 l/min.
- Dataflow 4-20mA and pulse output flow transmitters and Dataflow Compact inline flow transmitter
- Flowline oil, water and air calibrated flowmeters and flowswitches available in brass or Stainless Steel.
- Hydraulic Test Units for the speedy diagnosis of hydraulic circuit faults with flow ranges from 2 to 360 l/min.



## **WARNING – USER RESPONSIBILITY**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

## **Offer of Sale**

Please contact your Parker representation for a detailed 'Offer of Sale'.

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