

## Engine Bypass Filter Units How Clean is your Oil?





# FA-ST Filtration Analysis Services Technology Ltd

*For all your oil and fluid sampling, analysis & filtration requirements*

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FA-ST offers a range of Engine Bypass Filter Units, these are designed to add an additional level of filtration to engines of all sizes increasing oil life, reducing contamination in the system and assist in the reduction of wear in components. The Engine Bypass Filtration system is installed in a bypass loop. The oil will be finely recycled, and any water removed, as the equipment is operating. As a result of this process, the oil is maintained in a clean useable condition, dramatically changing any oil drain interval. As engines come in various sizes FA-ST provide a range of Engine Bypass filters to provide additional filtration to all engines.

All filtration units are supplied as a boxed kit containing: Filter housing, filter cartridge, lid seal, mounting bracket, inlet and outlet adaptors and nuts, bolts & washers. Hose assemblies are not supplied with the Filter Units. We recommend that hose assemblies for engine installations are made from PTFE Stainless Steel over braided hose. Flow and return in -4 (1/4") bore. This hose has a smooth internal bore, allows heat to dissipate, is resistant to cracking and resistant to internal build up from carbon.

## Contents

<b>FA-ST 9758 Micro Engine Bypass Filter Unit.....</b>	<b>2</b>
Replacement Filter Cartridge for 9758 .....	2
<b>FA-ST 9768 Light Duty Bypass Filter Unit .....</b>	<b>3</b>
Replacement Filter Cartridge for 9768 .....	3
<b>FA-ST 9778 Heavy Duty Bypass Filter Unit .....</b>	<b>4</b>
Replacement Filter Cartridge for 9778 .....	4
<b>FA-ST KU65 Heavy Duty EGR Bypass Filter Unit .....</b>	<b>5</b>
Replacement Filter Cartridge for KU65.....	5
<b>FA-ST 9788 Super Duty Engine Bypass Filter Unit.....</b>	<b>6</b>
Replacement Filter Cartridges for 9788:.....	6
<b>FA-ST 9778UMZ Zinc Heavy Duty Bypass Filter Unit.....</b>	<b>8</b>
Zinc Filter Housings .....	8
Replacement Filter Cartridge for 9778UMZ .....	9
<b>FA-ST 9788UMZ Zinc Super Duty Bypass Filter Unit .....</b>	<b>10</b>
Zinc Filter Housings .....	10
Replacement Filter Cartridges for 9788UMZ:.....	11

### FA-ST 9758 Micro Engine Bypass Filter Unit



The FA-ST 9758 Engine Bypass Filter

The 9758 Micro Engine Bypass filter is the smallest of the FA-ST Engine Bypass Filters: H160mm x D90mm

The unit is ideal for engines with a sump of up to 6 litres and will remove 0.15 litres of water per filter cartridge as well as 150g of particulate contaminate.

The 9758 housing is for use with small cars, light commercials vehicles and vans, small generators, forklifts and 4WD's with very tight space.

The unit is manufactured from a solid aluminium and is lathe turned and machined. Suitable for all types of engine oils and can also be used on diesel fuel and light hydraulic oil up to 32 viscosities

**Flow Rate:** Output levels are dependent on the viscosity, temperature, and degree of contamination and oil pressure. (Guide for SAE 15W40 oil at 158 degrees F and 60psi, the flow rate would be approx 4 to 7 litres per minute)

**Operating Temperatures:** Within operating specifications of engine, gear, and hydraulic oils.

**Operating Pressures:** Maximum rating of 10 bar. Lid torque is 23 lbs/foot

### [Replacement Filter Cartridge for 9758](#)

**1858 filter cartridges:** with dirt retention capacity of approx. max 150 g solid particles and approx max 150 ml water. These cartridges come **supplied as single filters or boxed quantity of 12.**

Cartridges filter fineness of 1µm nom, 3µm absolute. Temperature operating range 0-135°C, +/- 5°C.

The stated volumes of oil are only relative to installation of single filter housing.

All cartridges are protected by a nylon outer cover with pressed brass ring holder.

On installation the **BRASS RINGS MUST BE FACING UPWARDS**

**Filtration Level:** Particulate contamination in accordance with BS 5540 part 4: 1981 and ISO/DIS 4406. ISO 14/9 equivalent to NAS 1638 class 6 - hydraulic oil specification.

### FA-ST 9768 Light Duty Bypass Filter Unit



The 9768 Light Duty Engine Bypass Filter is the second smallest of the FA-ST Engine Bypass Filters: H16.83mm x D10.16mm

The unit is ideal for engines with a sump of up to 16 litres and will remove 0.23 litres of water per filter cartridge as well as 600g of particulate contaminate.

The 9768 housing is for use with commercials, generators, forklifts, 4WD's

with tight space. Suitable for all types of engine oils and can also be used on diesel fuel and light hydraulic oil up to 32 viscosities

**Flow Rate:** Output levels are dependent on the viscosity, temperature, and degree of contamination and oil pressure. (Guide for SAE 15W40 oil at 158 degrees F and 60psi, the flow rate would be approx 4 to 7 litres per minute)

**Operating Temperatures:** Within operating specifications of engine, gear, and hydraulic oils.

**Operating Pressures:** Maximum rating of 10 bar. Lid torque is 23 lbs/foot

### Replacement Filter Cartridge for 9768

**1868 filter cartridges:** with dirt retention capacity of approx. max 600 g solid particles and approx max 230 ml water. These cartridges come **supplied as single filters or boxed quantity of 12.**

All boxes and individual cartridges contain spare lid seals for filter housings. Cartridges filter fineness of 1µm nom, 3µm absolute. Temperature operating range 0-135°C, +/- 5°C.

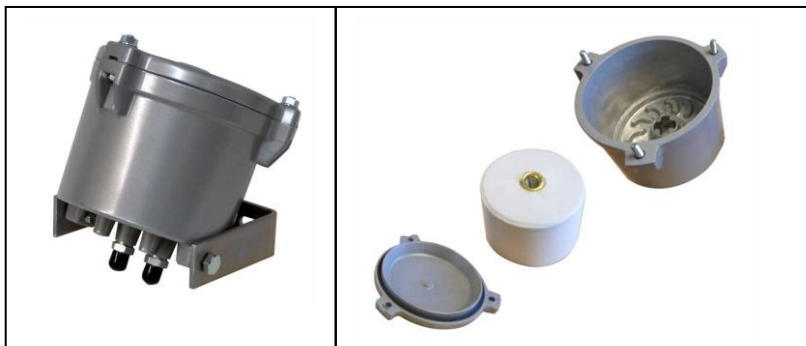
The stated volumes of oil are only relative to installation of single filter housing.

All cartridges are protected by a nylon outer cover with pressed brass ring holder.

On installation the **BRASS RINGS MUST BE FACING UPWARDS**

**Filtration Level:** Particulate contamination in accordance with BS 5540 part 4: 1981 and ISO/DIS 4406. ISO 14/9 equivalent to NAS 1638 class 6 - hydraulic oil specification.

### FA-ST 9778 Heavy Duty Bypass Filter Unit



The FA-ST 9778 Engine Bypass Filter

The 9778 Heavy Duty Engine Bypass Filter is the mid-range FA-ST Engine Bypass Filters: H16.5mm x D14.61mm

The unit is ideal for engines with a sump of up to 50 litres and will remove 0.87 litres of water per filter cartridge as well as 1.2Kg of particulate contaminate.

The 9778 housing is for use with general engines, heavy industry, and diesel fuel.

Suitable for all types of engine oils and can also be used on diesel fuel and light hydraulic oil up to 46 viscosities

**Flow Rate:** Output levels are dependent on the viscosity, temperature, and degree of contamination and oil pressure. (Guide for SAE 15W40 oil at 158 degrees F and 60psi, the flow rate would be approx 4 to 7 litres per minute)

**Operating Temperatures:** Within operating specifications of engine, gear, and hydraulic oils.

**Operating Pressures:** Maximum rating of 10 bar. Lid torque is 23 lbs/foot

### [Replacement Filter Cartridge for 9778](#)

**1878 filter cartridges:** with dirt retention capacity of approx. max 1.2Kg solid particles and approx max 870 ml water. These cartridges come **supplied as single filters or boxed quantity of 12.**

All boxes and individual cartridges contain spare lid seals for filter housings. Cartridges filter fineness of 1µm nom, 3µm absolute. Temperature operating range 0-135°C, +/- 5°C.

The stated volumes of oil are only relative to installation of single filter housing.

All cartridges are protected by a nylon outer cover with pressed brass ring holder.

On installation the **BRASS RINGS MUST BE FACING UPWARDS**

**Filtration Level:** Particulate contamination in accordance with BS 5540 part 4: 1981 and ISO/DIS 4406. ISO 14/9 equivalent to NAS 1638 class 6 - hydraulic oil specification.

### FA-ST KU65 Heavy Duty EGR Bypass Filter Unit



The FA-ST KU65 Engine Bypass Filter

The KU65 Heavy Duty EGR Engine Bypass Filter is the second largest of the FA-ST Engine Bypass Filters: H16.51mm x D18.89mm

The unit is ideal for engines with a sump of up to 65 litres and will remove 0.95 litres of water per filter cartridge as well as 1.9Kg of particulate contaminate.

The KU65 housing is for use with diesel

EGR engines, heavy industry, and diesel fuel. Suitable for all types of engine oils and can also be used on diesel fuel and light hydraulic oil up to 46 viscosities

**Flow Rate:** Output levels are dependent on the viscosity, temperature, and degree of contamination and oil pressure. (Guide for SAE 15W40 oil at 158 degrees F and 60psi, the flow rate would be approx 4 to 7 litres per minute)

**Operating Temperatures:** Within operating specifications of engine, gear, and hydraulic oils.

**Operating Pressures:** Maximum rating of 10 bar. Lid torque is 23 lbs/foot

### Replacement Filter Cartridge for KU65

**KU65 filter cartridges:** with dirt retention capacity of approx. max 1.9Kg solid particles and approx max 950 ml water. These cartridges come **supplied as single filters or boxed quantity of 6.**

All boxes and individual cartridges contain spare lid seals for filter housings. Cartridges filter fineness of 1µm nom, 3µm absolute. Temperature operating range 0-135°C, +/- 5°C.

The stated volumes of oil are only relative to installation of single filter housing.

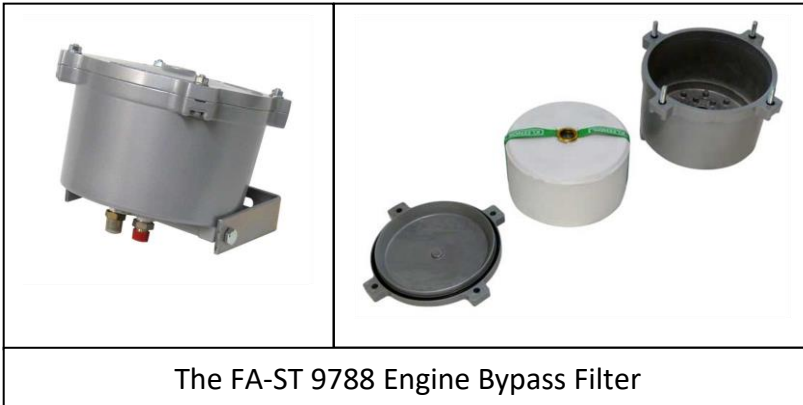
All cartridges are protected by a nylon outer cover with pressed brass ring holder.

On installation the **BRASS RINGS MUST BE FACING UPWARDS**

**Filtration Level:** Particulate contamination in accordance with BS 5540 part 4: 1981 and ISO/DIS 4406. ISO 14/9 equivalent to NAS 1638 class 6 - hydraulic oil specification.



### FA-ST 9788 Super Duty Engine Bypass Filter Unit



The 9788 Super Duty Bypass Filter is the largest of the FA-ST Engine Bypass Filters: H17.15mm x D22.23mm

The unit is ideal for engines with a sump of up to 85 litres and will remove 0.98 litres of water per filter cartridge as well as 2.5Kg of particulate contaminate.

The 9788 housing is for use with large engines, heavy industrial & plant

machinery. Suitable for all types of engine oils and can also be used on diesel fuel and light hydraulic oil up to 46 viscosities.

**Flow Rate:** Output levels are dependent on the viscosity, temperature, and degree of contamination and oil pressure. (Guide for SAE 15W40 oil at 158 degrees F and 60psi, the flow rate would be approx 4 to 7 litres per minute)

**Operating Temperatures:** Within operating specifications of engine, gear, and hydraulic oils.

**Operating Pressures:** Maximum rating of 10 bar. Lid torque is 23 lbs/foot

#### Replacement Filter Cartridges for 9788:

**1888H Filter Cartridge:** with dirt retention capacity of approx. max 2.5Kg solid particles and approx max 980 ml water. These are the standard FA-ST filter cartridges supplied with all units unless requested otherwise. These cartridges come **supplied as single filters or boxed quantity of 6.**

**1888SPT Filter Cartridge:** with dirt retention capacity of approx. max 2.5Kg solid particles and approx max 980 ml water. These cartridges are made of two layers of filter media with a 1-micron layer in the middles. These filter cartridges are ideal for polishing light oils and diesel fuels. These cartridges come **supplied as single filters or boxed quantity of 6.**

**1888SH Filter Cartridge:** with dirt retention capacity of approx. max 2.5Kg solid particles and approx max 980 ml water. These filters are designed for systems using high viscosity oils from 320 to 460 viscosity, as an amount of oil can bypass the filter. This allows for filtration of higher viscosity oils however due to the bypass effect will require more passes to remove contaminants. These cartridges come **supplied as single filters or boxed quantity of 6.**

**2088PP Filter Cartridge:** For filtering emulsified fluids & water glycol, these filters allow water to pass through however will still entrap dirt in the filter. These filters are made from a 5-micron Polypropylene filter media with a 1-micron filter base layer. This filter cartridge **DOSE NOT absorb water** but has a dirt retention capability like the 1888H filter cartridge. These cartridges come **supplied as single filters or boxed quantity of 6.**

**2088PP6 Filter Cartridge:** For filtering emulsified fluids & water glycol, these filters allow water to pass through however will still entrap dirt in the filter. These filters are made from a 5-micron Polypropylene filter media with 6 x 1-micron filter base layer for increased filtration. This filter cartridge **DOES NOT absorb water** but has a dirt retention capability like the 1888H filter cartridge. These cartridges come **supplied as single filters or boxed quantity of 6.**

**2088CPS Filter Cartridge:** These are mainly for high viscosity oils as they are 50% polypropylene on the top, with 50% cellulose on the base this reduces the amount of back pressure on the filter and allows the higher viscosity oils to pass through the dense media. (retention is 50% of 1888H). These cartridges come **supplied as single filters or boxed quantity of 6.**

All boxes and individual cartridges contain spare lid seals for filter housings. Cartridges filter fineness of 1µm nom, 3µm absolute. Temperature operating range 0-135°C, +/- 5°C.

The stated volumes of oil are only relative to installation of single filter housing.

All cartridges are protected by a nylon outer cover with pressed brass ring holder.

On installation the **BRASS RINGS MUST BE FACING UPWARDS**

**Filtration Level:** Particulate contamination in accordance with BS 5540 part 4: 1981 and ISO/DIS 4406. ISO 14/9 equivalent to NAS 1638 class 6 - hydraulic oil specification.



### FA-ST 9778UMZ Zinc Heavy Duty Bypass Filter Unit



The FA-ST 9778UMZ Zinc Engine Bypass Filter

The 9778UMZ Zinc Heavy Duty Engine Bypass Filter is smallest FA-ST Zinc Engine Bypass Filters: H16.5mm x D14.61mm

The unit is ideal for engines working in hazardous environments with a sump of up to 50 litres and will remove 0.87 litres of water per filter cartridge as well as 1.2Kg of particulate contaminate.

The 9778UMZ housing is for use with general engines, heavy industry, and diesel fuel. Suitable for all types of engine oils and can also be used on diesel fuel and light hydraulic oil up to 46 viscosities

**Flow Rate:** Output levels are dependent on the viscosity, temperature, and degree of contamination and oil pressure. (Guide for SAE 15W40 oil at 158 degrees F and 60psi, the flow rate would be approx 4 to 7 litres per minute)

**Operating Temperatures:** Within operating specifications of engine, gear, and hydraulic oils.

**Operating Pressures:** Maximum rating of 10 bar. Lid torque is 23 lbs/foot

### Zinc Filter Housings

FA-ST also offer a selection of Heavy-Duty Zinc engine bypass filter housings, specifically designed for hazardous applications where anti-sparking, strength and durability are required. These units are manufactured in Zinc to comply with the statutory regulations for hazardous areas and underground mining operations. All units are subject to individual pressure testing and strict quality control, they are powder coated white and supplied fitted with a cartridge, mounting bracket & nut/bolt set.

#### **Anti-Sparking.**

Zinc is non sparking and suitable for hazardous location applications such as coal mines, gold mines, tankers, and refineries.

#### **Strength & Ductility.**

Zinc offers high strengths (to 50,000psi) and superior elongation for strong designs and formability for bending, crimping and riveting operations. Few materials provide the toughness of Zinc, impact resistance is significantly higher than cast aluminium, plastic, and grey cast iron.

#### **Rigidity.**

Zinc has the rigidity of metals with modules of elasticity characteristics equivalent to other die-castable materials. Stiffness properties are, therefore, far superior to engineering plastics.

#### **Thin Wall Castability.**

High casting fluidity allows for thinner wall sections to be cast therefore reducing the overall weight and allowing good heat dissipation.

### Replacement Filter Cartridge for 9778UMZ

**1878 filter cartridges:** with dirt retention capacity of approx. max 1.2Kg solid particles and approx max 870 ml water. These cartridges come **supplied as single filters or boxed quantity of 12.**

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### Replacement Filter Cartridges for 9788UMZ:

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**1888SPT Filter Cartridge:** with dirt retention capacity of approx. max 2.5Kg solid particles and approx max 980 ml water. These cartridges are made of two layers of filter media with a 1-micron layer in the middles. These filter cartridges are ideal for polishing light oils and diesel fuels. These cartridges come **supplied as single filters or boxed quantity of 6.**

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## Oil & Fuel Sampling

With our wide range of sample bottles and containers our customers can take a wide range of samples including oils, diesel fuel, coolants, glycols and a selection of chemicals and other fluids. Supplying our customers with:

Vacuum Sampling Pumps  
Sample Bottles  
Sample Tubing  
Complete Oil & Fuel Sampling Kits



## Oil Analysis

FA-ST provide a comprehensive range of oil testing allowing you to determine the cleanliness, contamination, chemistry and identify wear particles in lubrication oils, diesel fuel, coolants, and greases etc. at our independent oil analysis laboratory.

With the support of the FA-ST oil analysis program you can consistently monitor the quality of the fluids used on your machinery & equipment, detect potential component failure, reduce maintenance costs and help decide the correct oil change intervals.



## Oil Filtration

FA-ST have an extensive range of oil filtration equipment especially designed to remove particulate, water and magnetic particles from oils, diesel fuel, coolants & glycols. Working with some of the industries leading businesses we aim to bring you the finest filtration equipment on the market including:

Oil, Diesel & Glycol Filtration Systems  
Filter Cartridges for a wide range of fluids  
Magnetic Pre-Filters  
Bypass Filter Systems



**How Clean is your Oil?**

For all your oil sampling, filtration & Analysis needs contact FA-ST:

Phone +(0)1246268900  
Email: [sales@fa-st.co.uk](mailto:sales@fa-st.co.uk)  
Visit: [www.oilsampling.co.uk](http://www.oilsampling.co.uk)

