



# Sporlan Flush-All Kits and Accessories for System Conversion and Clean-up

SPORLAN



## Features and Benefits

Sporlan Flush-All Kit provides an effective combination for removing soluble and insoluble contaminants, helping avoid costly callbacks due to a metering device restriction.

- Kits are specially developed for refrigerant systems up to eight tons, with powerful FA Flush-All solvent and patented bi-flow Sporlan SFD-163S filter-drier.
- Ideal for R-410A conversions or system clean-up of air conditioning, heat pump or refrigeration systems with 3/8" OD liquid line sets.
- FA Flush-All Solvent leaves no residue during evaporation. Product is available separately for larger applications.
- FA Flush-All Solvent is non-toxic and non-flammable. Solvent accepted under the SNAP program of the U.S. EPA as a substitute for ozone depleting substances.
- Sporlan SFD-163S is specially developed to follow the flush procedure and remove disturbed debris not removed from nitrogen purging. This filter-drier is designed for permanent installation.

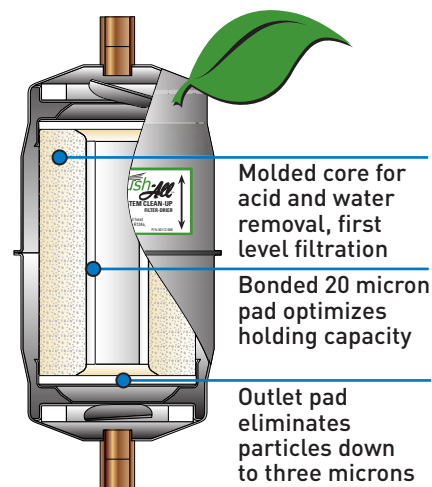


## Product Description

When a change in system chemistry occurs, thoroughly purging system line sets of chemical and solid contaminants is the key to eliminating a costly and frustrating callback related to a restricted metering device. The Flush-All Kits provide a unique total solution that couples the powerful FA Flush-All solvent with our patented bi-flow Sporlan SFD-163S filter-drier.

The ozone-safe FA Flush-All solvent aggressively addresses old oil, varnish and sludge within the line-sets before system start-up. This is

advantageous since oil breakdown products can exist in the liquid line and are difficult to remove with competing filter-driers that only address moisture concerns of HFC/POE lubricant systems. The Sporlan SFD-163S is an application specific filter-drier designed for permanent installation in the liquid line. The SFD-163S effectively eliminates disturbed debris not cleared during the flush procedure. The filter-drier removes particles down to three microns in size, preventing their accumulation at the metering device.



## Specifications

CATALOG NO.	ITEM NO.	PRODUCT DESCRIPTION
FAKIT1-S	475477	Flush-All 1 lb. Starter System Clean-up Kit. Includes FA-1 Canister, SFD-163S Filter-Drier, FA-V Canister Valve, and FA-G Gun/Hose Assembly
FAKIT1	475467	Flush-All 1 lb. System Clean-up Kit. Includes FA-1 Canister and SFD-163S Filter-Drier
FAKIT2-S	475459	Flush-All 2 lb. Starter System Clean-up Kit. Includes FA-2 Canister, SFD-163S Filter-Drier, FA-V Canister Valve, and FA-G Gun/Hose Assembly
FAKIT2	475478	Flush-All 2 lb. System Clean-up Kit. Includes FA-2 Canister and SFD-163S Filter-Drier
FA-1	475481	Flush-All Solvent – 16 oz. Canister
FA-2	475482	Flush-All Solvent – 32 oz. Canister
FA-V	475483	Flush-All Canister Valve
FA-G	475486	Flush-All Gun / 3' Hose Assembly

# Application

Experience has shown R-410A/ POE lubricant conversions cause occasional callbacks due to restricted flow, as residues from prior system chemistry deposit at the metering device. The restriction typically consists of a collection of small, 2-20 micron, particles. Common particles include copper oxide, originating from brazing operations, and/or metallic fines from compressor break-in, initiated by a foreign substance in the valve. Generally, these circulating particles will pass through without harm, and are less of an issue on larger systems where the metering device is more robust. For smaller tonnage systems these issues are more common, and are amplified if the metering device is marginally sized.

Callbacks are frustrating for everyone and affect the bottom-

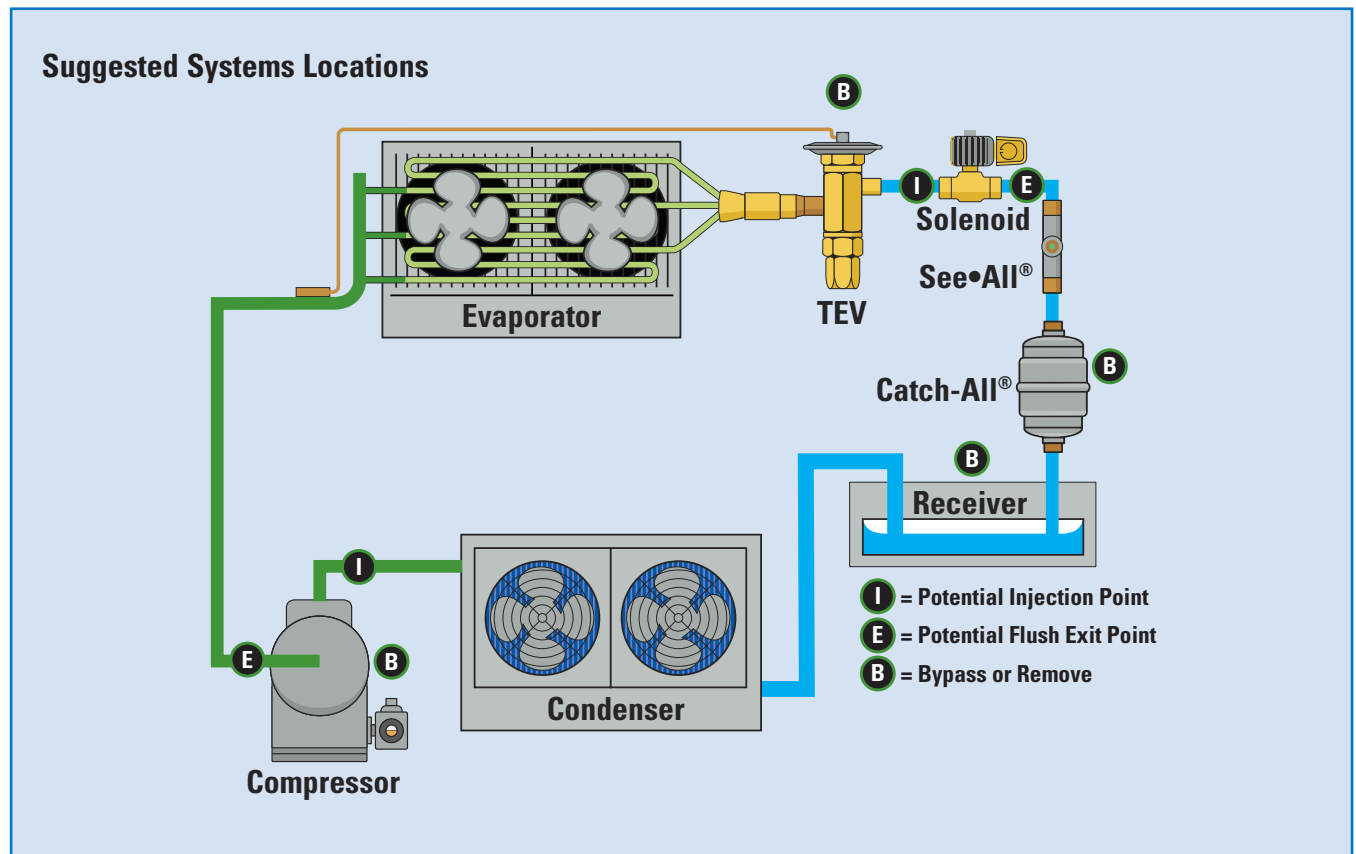
line and potentially the reputation of the service company. To assist in these circumstances, Sporlan developed the Flush-All Series to aid in the renewal of existing line-sets by offering the best insurance against contamination at the metering device.

The Sporlan Flush-All Kits enhance the industry accepted method of liquid and suction line filter-drier usage for system clean-up after a severe compressor burnout. The kit(s) provides the benefit of the FA solvent, instantly dispelling forms of carbonized oil (varnish/ sludge) from the system. A properly equipped filter-drier will also assist in the removal of these contaminants – but not all filter-driers are equal.

To best address this application specific need, the Sporlan SFD-163S filter-drier provides



final clean-up duty. The SFD-163S proven desiccant blend removes remaining trace contaminants such as moisture and acid. In addition, the unique Sporlan SFD-163S provides best-in-class filtration by removing down to three microns size particles dislodged during the flush procedure.



# General Guidelines

- Use in well ventilated area. Dispense solvent with rubber gloves and safety goggles.
- Review configuration of the system. For field build-up systems, consider cleaning the condenser, evaporator and line-sets separately. For larger systems, disassemble and clean in sections (always using gravity to your advantage in the collection of oil/deposits).
- Remove filter-drier/cores, bypass components such as TEV, compressor, accumulators, receivers, reversing valves, etc. Never run flush through a compressor. For products such as the filter-drier and suction accumulator (plugged orifice concern with debris from compressor burnout), need to be replaced. Contact Sporlan with additional questions.
- Identify, crimp/restrict the line set. This allows for added vigor during nitrogen purging step. Always purge to a well-ventilated area since the solvent fumes are heavier than air. Do not breathe high concentrations of solvent fumes or use in an area where an open flame exists.
- Use an open container to catch oil and contaminants from procedure.
- Inspect the FA-V canister valve (see photo 1) to ensure piercing stem is turned out. Install valve finger tight to FA canister. Never use a wrench to tighten.
- Affix FA-G gun/hose assembly to valve. See photo 2.
- Invert canister and open valve to disperse. A typical disperse time for a 3/8" OD liquid line is 20-30 seconds and 60-90 seconds for a 3/4" or 7/8" OD suction line. More time is required in the suction line due to its larger internal tube surface. Injection time should be tailored to each application based on internal surface area (tube size and linear feet).
- Inspect collected solvent for cleanliness. Repeat if necessary. Discard FA canister—never refill cylinder.
- Using FA-G, purge system with approximately 120-150 psig of nitrogen to thoroughly chase the contaminated solvent through the line-sets into the collection container. Dispose according to local regulations. See photo 3.
- Reconnect system components. For systems up to 8 tons\*, install Sporlan SFD-163S filter-drier. See photo 4.
- Evacuate and leak check system. Trace amounts of solvent that may remain will be removed as the internal pressure drops during evacuation process.
- Charge system with refrigerant (perhaps lubricant) and reconnect electrical connections.
- Verify proper system operation before leaving the jobsite.

\* For systems larger than 8 tons, the FA Flush-All solvent can be purchased separately.

## ⚠ WARNING – USER RESPONSIBILITY

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