



SERVICE MANUAL



CEASEFIRE CLEAN AGENT BASED FIRE EXTINGUISHERS

FOREWORD

This Manual is for the sole purpose as guideline help and procedural work to be carried out by competent, trained and authorised personnel of OEM to maintain portable fire extinguisher in line of BS 5306 part 3 & 8 and as per recommendation of OEM.

SCOPE

This manual covers caution to be adhered while servicing the fire extinguisher. Instructions on maintenance service to be carried out annually or while routine service and service to be carried out as per schedule.

The manual shall also cover procedure work to be carried out while servicing and refilling the fire extinguisher. Manual contains identification of all components of fire extinguisher, specialised tool required for servicing and list of spare parts to replace damaged components.

It is mandatory and essentially for refilling of the Fire Extinguisher to be carried out by and in authorised clean agent gas filling station.

GENERAL SAFETY INSTRUCTIONS

Prohibition

-  Appearance of this sign warrants unauthorized modifications are not allowed and any kind of operation which can result in unsafe situation and failure of equipment to function as intended. Unsafe working is not allowed.

Caution/Note

-  This symbol draws attention to one of objection and situation as below.
 - a) Possibility to loss of life and limb if instruction is not follow.
 - b) Unsafe or improper working of the system can lead to damage to equipment and property.

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CAUTION

 Read the service manual carefully and completely. Manufacturer will not be liable for any loss of property, life, warranty in case of instruction of the manual is not followed.

In case of any malfunctioning the manufacturer would be liable to the limit of replacing the faulty part, parts or product.

Return of the faulty component is mandatory to process any warranty claim

Do not use the extinguisher outside the specified temperature range.

1. Content under pressure. (Depressurize the cylinder before opening to prevent injury)

2. Do not puncture, incinerate or tamper with the extinguisher.

3. Make sure to totally depressurize the cylinder before opening the valve.

4. Replace all parts which are deteriorated and, or damaged.

5. Always tighten the threaded part with rated torque value.

6. Use appropriate PPE while servicing cylinder.

 Do not use the extinguisher outside the specified temperature range. Dispose agent and parts as per local laws.

MAINTENANCE & SERVICE INFORMATION

 Maintenance is to be carried out only by authorized and trained persons of OEM by and in authorised clean agent gas filling station.

 Maintenance and service is to be carried out in line with BS 5306 & BS 6643 and as per the OEM manual.

1. Examine the extinguisher carefully every 12 months or as per schedule on instruction sticker.

2. Periodically check and ensure the safety pin is not missing, corroded or damaged.

3. Check the Gross weight of the cylinder on a calibrated weighing Scale.

4. Remove the plastic base and then examine whole fire extinguisher for corrosion.

5. Check the Magnetic pressure gauge with magnet (SM-RM3448 See Table "C" SPECIAL TOOLS) if the Needle is in green zone, it is ok.

6. A non-magnetic pressure gauge will be checked against calibrated pressure gauge such that you get approximately same reading.

7. Use only products and spare parts in conformity with agreed model for refilling and maintenance.

8. Regularly clean and ensure the exterior of the fire extinguisher is free from dirt and corrosion.

RECHARGE INSTRUCTIONS

Applicable for Product code: - CF-001333, CF-001334, CF-001335, CF-001336.

 This extinguisher must be charged or recharged by an authorised, trained and competent person, by and in authorised clean agent gas filling station only.

 Completely discharge /de-pressurise the extinguisher before opening cylinder's valve as per local gas law.

 Replace all parts only with the original part recommended.

1. Check if the safety pin/Seal is intact to prevent any accidental usage.

If the safety pin/Seal is missing place a temporary pin/seal to avoid the same

2. REMOVING THE VALVE

For gun housing model: - **CF-001333.**

Remove the hose assembly from the valve and check for damage or deterioration to it and the nozzle, and then unscrew, the screw provided at the back of extinguisher on the gun housing to remove the same. After removing the gun housing rotate the valve body with the help of an adjustable wrench of 12" for two turns anticlockwise or until the relief notch on valve thread is exposed to release any residual pressure.

 Do not hammer the trigger assembly.

For Squeeze grip model: - **CF-001334, CF-001335, CF-001336.**

Remove the hose assembly from the valve and check for damage or deterioration to it and the nozzle. Open the valve on the cylinder using special spanner (part code RM-3449 See Table "C" SPECIAL TOOLS) for two turns anticlockwise or until the relief notch on valve thread is exposed to release any residual pressure.

 Open the valve completely only when sure all propellant has escaped.

3. Remove the pressure gauge and test it against calibrated pressure gauge.

4. Remove the valve and syphon tube carefully from the cylinder as a loose dip tube may get dislodged in to the cylinder and may be difficult to remove. Detach the dip tube from the valve and clear any clogging in the dip tube.

5. Remove the safety seal and depress the lever to check the smooth operation of the lever and valve.

6. Examine the valve for any damage or deterioration in the valve and thread of the valve. Clean the valve thoroughly using appropriate cleaning technique.

 Make sure that the valve is completely dry or free of any wet agent used for cleaning.

 Replace faulty part or valve in case of damage or deterioration. (Available part for your model as per Table "B1, B2" PART LIST)

7. Syphon tube is screwed back on to the valve and tightened by hand.

8. Empty the cylinder shell and clean any residual agent with a clean cloth and dry nitrogen if required.

 Very low pressure nitrogen less than 1 bar pressure could be used to clean and dry components.

 Thoroughly clean all residue dust or grease from internal bores, spindle, spindle seal, neck and neck threads.

9. Remove plastic base cap using Teflon hammer. Examine exterior and interior of shell for any corrosion.

10. Refill of cylinder has to be carried out by and in authorised clean agent gas filling station.

 Refilling and pressurization of cylinder is to be carried out at recommended ambient condition.

A) Clean, dry, area

B) Temperature of 20°C +/- 5°C

11. Fill contents as per (Table "A" TECHNICAL SPECIFICATION) recommended refill contents for your product size/model.

 Do not over fill.

12. Insert a new "O" ring (seal) on valve and lightly grease "O" ring (seal), any moving part and neck thread.

13. Reinsert the valve body with syphon tube carefully in to the filled cylinder and tighten the valve using torque spanner (See Table A for recommended tool and torque setting for your model.) to recommended torque settings.

 Only use torque settings and tools as recommended in table "A". Never over tighten.

 Change 'O' ring (seal) for valve, hose assembly and pressure gauge every time opened for service

14. Refit pressure gauge using torque spanner with recommended torque settings.

 Only use torque of 10 N-m. Never over tighten.

15. Fix a recharging adaptor to the outlet of the valve.

16. Depress the valve lever to pressuring the cylinder to recommended service pressure of 10 bars at ambient temperature of 20°C +/- 5°C.

17. Release the valve lever and disconnect the recharging adaptor after relieving pressure from the pressurizing line.

18. Check all joints for leakages using soap bubble solution.

 Re-tighten to stop all leakages. This can only be done for minor adjustments, else depressurise the fire extinguisher and change "O" ring (seal) and recharge. Clean the extinguisher of any residual soap solution.

19. Refit Valve with Hose Assembly as applicable.

For gun housing model: - **CF-001333**.

Refit the gun housing by reversing the process of removing it explained in step 2 above.

 Tighten the Hose using torque spanner with torque not more than 2.5 N-m. Never over tighten.

For Squeeze grip model (large Size):- **CF-001334, CF-001335, CF-001336**.

 Fix the hose assembly to the valve using torque spanner with torque setting of 6 N-m. Never over tighten.

20. Insert a safety pin or seal and plastic base cap to extinguisher.

21. Fix new instruction sticker if required and mark the next maintenance schedule date on the sticker.

22. Return the extinguisher to its original location or stand

TABLE (A)

TECHNICAL SPECIFICATION			
SR. NO.	PRODUCT CODE & DESCRIPTION	SPECIFICATION	RIFFLING CONTENT
1.	CF-001333 - 2 Kg Clean Agent FK-5-1-12	Fire Rating 21B. Extinguishing medium: Clean Agent. Propellant: Dry Nitrogen. Body Test Pressure: 35Bar. Maximum service pressure: 20bar. Operating pressure: 10bar. Operating temperature range: -30°C to +60°C.	Total content 2 Kg Tolerance limit of -5% (by Volume.) Do not overfill. Recommended torque setting to tighten valve 50 N-m.
2.	CF-001334 - 4 Kg Clean Agent FK-5-1-12	Fire Rating 34B. Extinguishing medium: Clean Agent. Propellant: Dry Nitrogen. Body Test Pressure: 35Bar. Maximum service pressure: 20bar. Operating pressure: 10bar. Operating temperature range: -30°C to +60°C.	Total content 4 Kg Tolerance limit of -5% (by Volume.) Do not overfill. Recommended torque setting to tighten valve 30 N-m.
3.	CF-001335 - 6 Kg Clean Agent FK-5-1-12	Fire Rating 34B. Extinguishing medium: Clean Agent. Propellant: Dry Nitrogen. Body Test Pressure: 35Bar. Maximum service pressure: 20bar. Operating pressure: 10bar. Operating temperature range: -30°C to +60°C.	Total content 6 Kg Tolerance limit of -5% (by Volume.) Do not overfill. Recommended torque setting to tighten valve 30 N-m.
4.	CF-001336 - 9 Kg Clean Agent FK-5-1-12	Fire Rating 55B. Extinguishing medium: Clean Agent. Propellant: Dry Nitrogen. Body Test Pressure: 35Bar. Maximum service pressure: 20bar. Operating pressure: 10bar. Operating temperature range: -30°C to +60°C.	Total content 9 Kg Tolerance limit of -5% (by Volume.) Do not overfill. Recommended torque setting to tighten valve 30 N-m.



CF-001333 - CLEAN AGENT 2 KG

PRODUCT CERTIFICATION

Designed and manufactured under Pressure Equipment Directive 97/23/EC-PED and BS EN3.



CF-001334 - CLEAN AGENT 4 KG

PRODUCT CERTIFICATION

Designed and manufactured under Pressure Equipment Directive 97/23/EC-PED and BS EN3.



CF-001335 - CLEAN AGENT 6 KG

PRODUCT CERTIFICATION

Designed and manufactured under Pressure Equipment Directive 97/23/EC-PED and BS EN3.



CF-001336 - CLEAN AGENT 9 KG

PRODUCT CERTIFICATION

Designed and manufactured under Pressure Equipment Directive 97/23/EC-PED and BS EN3.



TABLE (B1)

PART LIST		PRODUCT CODE
PART NO.	Part Description	CF-001333 - 2 Kg Clean Agent (FK -5-1-12) Gun Housing.
1.	Valve Assembly (Plastic Seal, Stopper, Gun Housing, Trigger, Pressure Gauge, 'O'-ring for Valve Assembly)	SM-VA004
2.	Wire Bracket Assembly	SM-WB0002
3.	Plastic Seal	SM-RM0254
4.	Stopper	SM-RM0229
5.	Gun Housing	SM-RM0252
6.	Cylinder	N/A
7.	Trigger	SM-RM0250
8.	Pressure Gauge	SM-RM2085
9.	'O'-ring for Valve Assembly	SM-RM1133
10.	'O'-ring for Pressure Gauge	SM-RM1144
11.	Plastic Base Black	SM-RM1008
12.	Dip Tube	SM-RM0140A
13.	Hose Assembly	SM-HA0001
14.	'O' Ring for Hose Assembly	SM-RM1136

TABLE (B2)

Part List		Product Code		
S. NO	Part Description	CF-001334 - 4 Kg Clean Agent (FK -5-1-12)	CF-001335 - 6 Kg Clean Agent (FK -5-1-12).	CF-001336 - 9 Kg Clean Agent (FK -5-1-12).
1	Valve Assembly (Safety Pin, 'O' Ring for Valve Assembly, SS Rivet Pin 4x26, Plastic Safety Seal)	SM-RM3389		
2	Safety Pin	SM-RM2397		
3	Hose Assembly	SM-HA0004M	SM-HA0009M	SM-HA0014M
4	Plastic Base Black	SM-RM0302	SM-RM0325W	SM-RM0345W
5	Pressure Gauge	SM-RM2085		
6	Cylinder	N/A		
7	'O' Ring for Valve Assembly	SM-RM1133		
8	'O' Ring for pressure Gauge	SM-RM1144		
9	SS Rivet Pin 4x26	SM-RM2076		
10	Dip Tube	SM-RM0140B	SM-RM0140C	SM-RM0140D
11	Plastic Safety Seal	SM-RM0288		
12	'O' Ring for Hose Assembly	SM-RM1136		

TABLE (C)

SPECIAL TOOLS			
SR. NO.	ITEM NAME	ITEM CODE	APPLICATION
1.	Magnetic Test Tool 	SM-RM3448	To check the working of Pressure Gauge
2.	Special Spanner 	SM-RM3449	To screw and un-screw the Brass Valve Assembly

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