NORGREN

Oil Removal Filter
F46 - ★★★ - ★★★★

F46
Installation & Maintenance Instructions

Port
6 ....3/4"
8 ....1"
A....1-1/4"

Service Indicator
00 ..Without
01 ..With mechanical indicator
04 ..With electrical service indicator

Drain
A....Automatic
M...Manual, 1/4 turn

Element
0 ....Coalescing

Bowl
D...1 litre (1 quart U.S.) metal with sight glass
M ..1 litre (1 quart U.S.) metal without sight glass

Thread Form
A....PTF
B....ISO Rc taper
G....ISO G parallel

* See Norgren publication IM-900.920 for specifications and electrical wire connections of the optional electric service indicator.

TECHNICAL DATA
Fluid: Compressed air
Maximum pressure: 17 bar (250 psig)
Operating temperature:* -34° to +65°C (-30° to +150°F)
* Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)
Particle removal: Down to 0.01 µm
Air quality: Within ISO 8573-1, Class 1 (particulates) and Class 2 (oil content)
Maximum remaining oil content in outlet air: 0,01ppm at +20°C (+70°F) with an inlet oil concentration of 17 ppm.
Maximum flow at 6,3 bar (90 psig) inlet pressure to maintain stated oil removal performance:
3/4″ ports: 42 dm³/s (90 scfm)
1″ ports: 59 dm³/s (125 scfm)
1 1/4″ ports: 59 dm³/s (125 scfm)
Nominal bowl size: 1 litre (1 quart US)
Drain connection: 1/8" pipe thread
Automatic drain operating conditions:
Minimum pressure: 0,7 bar (10 psig).
Drain opens when bowl pressure drops below 0,2 bar (3 psig).
Minimum air flow required to close drain: 1 dm³/s (2 scfm)
Materials:
Body: Aluminum
Bowl: Aluminum
Bowl sight glass: Pyrex
Elastomers: Neoprene and nitrile
Filter element: Synthetic fiber and polyurethane foam

REPLACEMENT ITEMS
Service kit (includes items circled on exploded view) ...5351-04
Liquid level lens kit (20, 22 thru 26) 2273-22
Manual drain (14, 15, 16) 619-50
Automatic drain (17, 18, 19).....3000-18
Mechanical service Indicator (1).....5797-50
Electrical service Indicator (6).....4020-51R

INSTALLATION
1. Shut-off air pressure. Install filter in air line -
   - vertically (bowl down),
   - with air flow in direction of arrow on body,
   - upstream of regulators, lubricators, and cycling valves,
   - as close as possible to the air supply when used as a main line filter,
   - as close as possible to the device being serviced when used as a final filter.
2. Connect piping to proper ports using pipe thread sealant on male threads only. Do not allow sealant to enter interior of unit.
3. Turn bowl (27) into body until arrowhead on bowl is aligned with or to the right of the arrowhead on the body
4. Flexible tube with 3mm (0.125") minimum I.D. can be connected to the automatic drain. Avoid restrictions in the tube.
5. Install a Norgren general purpose filter with a 5 µm element upstream of the oil removal filter to obtain maximum element service life.

SERVICING
1. Open manual drain to expel accumulated liquids. Keep liquids below element (28).
2. Replace filter element when pressure drop across element exceeds 0,7 bar (10 psig). The mechanical service indicator shows approximately full red and the optional electrical service indicator provides an electrical output when pressure drop across element reaches 0,7 bar (10 psig).

DISASSEMBLY
1. Filter can be disassembled without removal from air line.
2. Shut off inlet pressure. Reduce pressure in inlet and outlet lines to zero.
3. Disassemble in general accordance with the item numbers on exploded view.Do not remove the drains or the service indicators (1, 6) unless replacement is necessary. Remove and replace only if they malfunction

CLEANING
1. Element (28) cannot be cleaned. Clean mechanical indicator lens (3) with warm water only. Clean electrical indicator (6) with dry, clean cloth. Clean other parts with warm water and soap.
2. Rinse and dry parts. Blow out internal passages in body (30) with clean, dry compressed air.
3. Inspect parts. Replace those found to be damaged.

ASSEMBLY
1. Lubricate o-rings with o-ring grease.
2. If the 1/4 turn manual drain (14, 15, 16) was removed, lubricate the portion of the drain body (14) that contacts the bowl, and the hole in the manual drain body that accommodates the stem of drain valve (15) with o-ring grease. Press body (14,) thru hole from inside of bowl. Place retainer o-ring (16) over body (14) and position in groove. Press drain valve (15) thru hole in body (14).
3. Assemble the liquid indicator parts (20, 21, 22, 23, 24, 25) to bowl. Apply a 0,9 to 1,8 kg (2 to 4 pound) clamping force to upper and lower brackets (21) to pull brackets together. Tighten screws (20) to 0,9 to 1,1 N-m (8 to 10 inch-pounds).
4. Assemble filter as shown on the exploded view. Arrows on indicator (3, 8) and body (30) must point in same direction.
5. Torque Table

	Torque in N-m (Inch-Pounds)
2, 7 (Screw)	2,8 to 3,9 (25 to 35)
18 (Nut)	2,3 to 2,8 (20 to 25)
28 (Element)	5 to 6 (45 to 55)

6. Turn bowl (27) into body until arrowhead on bowl is aligned with or to the right of the arrowhead on the body.

CAUTION
Water vapor will pass through these units and could condense into liquid form downstream as air temperature drops. Install an air dryer if water condensation could have a detrimental effect on the application.

WARNING
These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under ***Technical Data***.

Before using these products with fluids other than air, for nonindustrial applications, or for life-support systems consult Norgren.