

Spare parts list for Automatic High-Pressure Spray Gun

Ecco 320A

ECCO

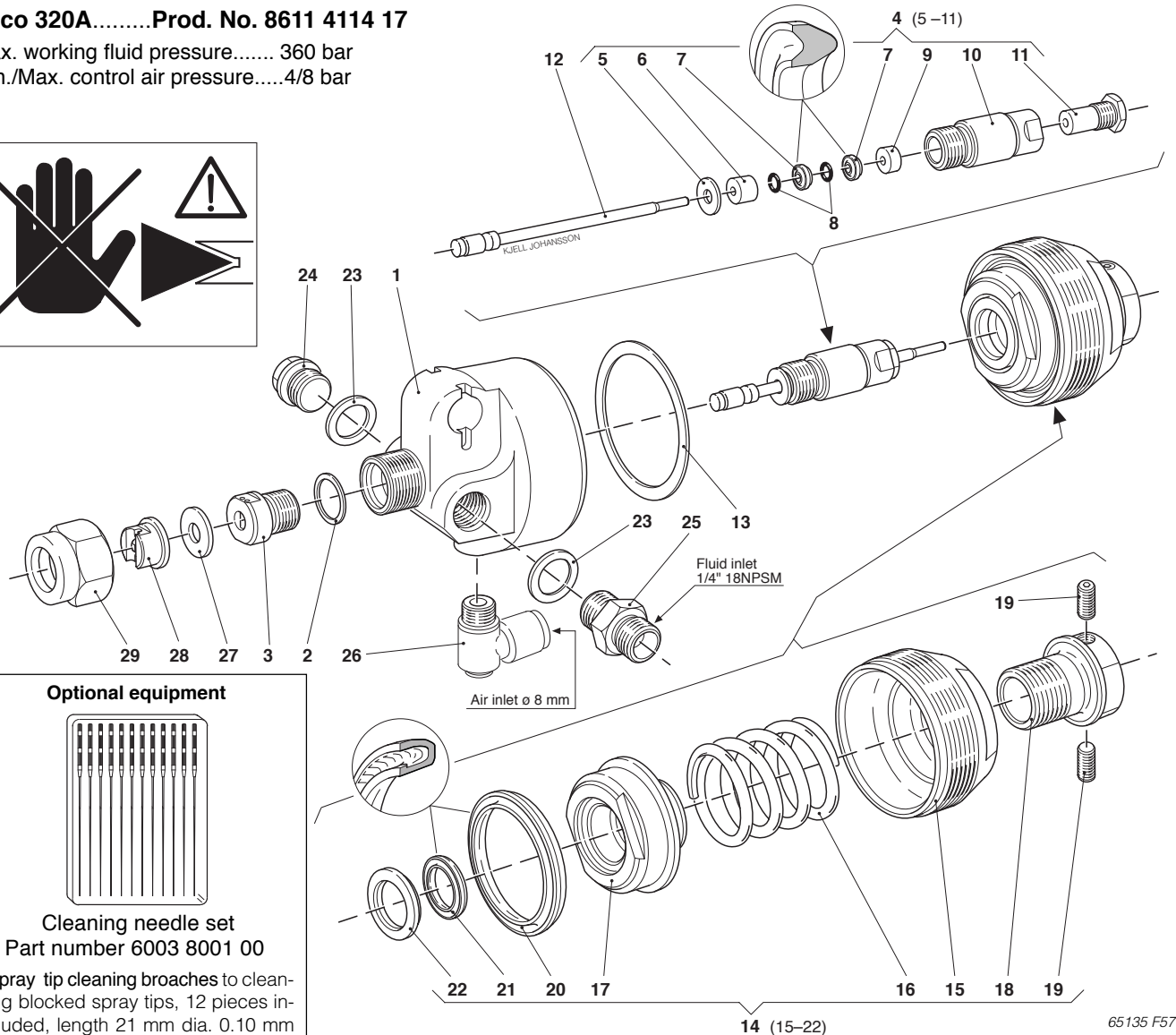
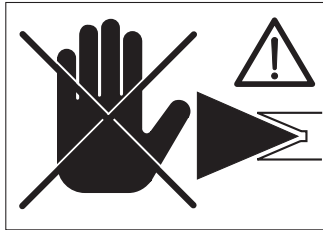
ECCO FINISHING

ESL 12/03-08

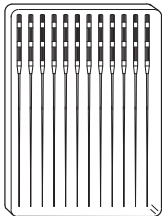
Ecco 320A.....Prod. No. 8611 4114 17

Max. working fluid pressure..... 360 bar

Min./Max. control air pressure.....4/8 bar



Optional equipment



Cleaning needle set Part number 6003 8001 00

Spray tip cleaning broaches to cleaning blocked spray tips, 12 pieces included, length 21 mm dia. 0.10 mm with spiral handles.

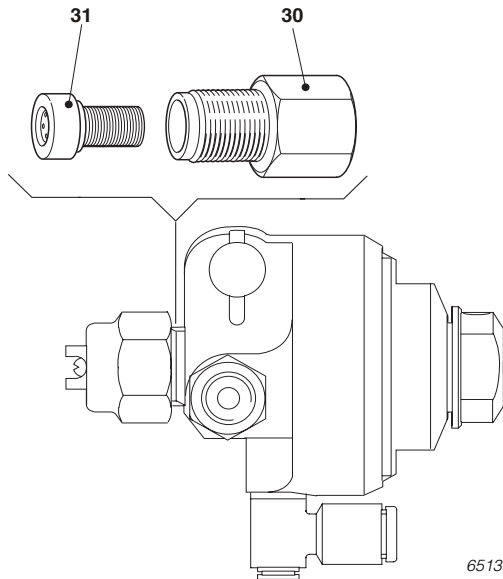
Part numbers **in bold type** designate consumption parts.

Service set 6103 1078 00 Consisting of parts with ref. Nos. 2, 5, 6, 7 (Qty 2), 8 (Qty 2), 9, 11, 13, 19 (Qty 2), 27.

Ref. No.	Part number	Qty	Description	Ref. No.	Part number	Qty	Description
1	6103 1146 30	1	Gun body	20	6803 1065 00	1	- Cup seal
2	6103 0812 00^a	1	Gasket	21	6803 1066 00	1	- Cup seal
3	6103 1054 01	1	Fluid nozzle	22	6103 1063 00	1	- Guide
4	6003 9957 00	1	Sealing element	23	0653 1059 00	2	Gasket (13/17 x 1 Kpr)
5	6103 1069 00 ^a	1	- Washer	24	0686 4202 03	1	Plug (G 1/4)
6	6103 1070 00 ^a	1	- Guide	25	6002 0233 00	1	Nipple (G 1/4 x 1/4" 18 NPSM)
7	6103 1071 00 ^a	2	- Packing (PTFE)	26	6003 9827 41	1	Elbow coupling (G 1/8 - 8)
8	0663 7110 00 ^a	2	- O-ring (3.1 x 1.6 FPM)	27	6101 5670 00^a	1	Gasket
9	6103 1072 00 ^a	1	- Sleeve	28	-	1	Standard spray tip (see spare parts list No. 9836 3060, ESL 12/04-16)
10	6103 1068 00	1	- Packing screw	29	6101 6254 00	1	Retaining ring (M18 x 1)
11	6103 1073 00 ^a	1	- Guide bushing	Delivered with the spray gun:			
12	6103 1056 00	1	Fluid needle	-	6103 1074 00	1	Tool set
13	0653 9211 00 ^a	1	Gasket (42/50 x 1 Al)	-	0902 0111 00	1	- Hexagon wrench (3 mm)
14	6003 9958 00	1	Servo part	-	0101 1293 00	1	- Pin (ø 5 mm)
15	6103 1060 00	1	- Back head	-	6000 8004 00	1	- Cleaning brush (ø 10 mm)
16	6103 1064 00	1	- Spring	Optional equipment (See also page 2)			
17	6103 1061 00	1	- Piston	-	6003 8001 00	1	Cleaning needle set (see above)
18	6103 1062 00	1	- Lock screw				
19	0190 1242 00 ^a	2	- Set screw (P6SS 6 x 8 A4 S.S.)				

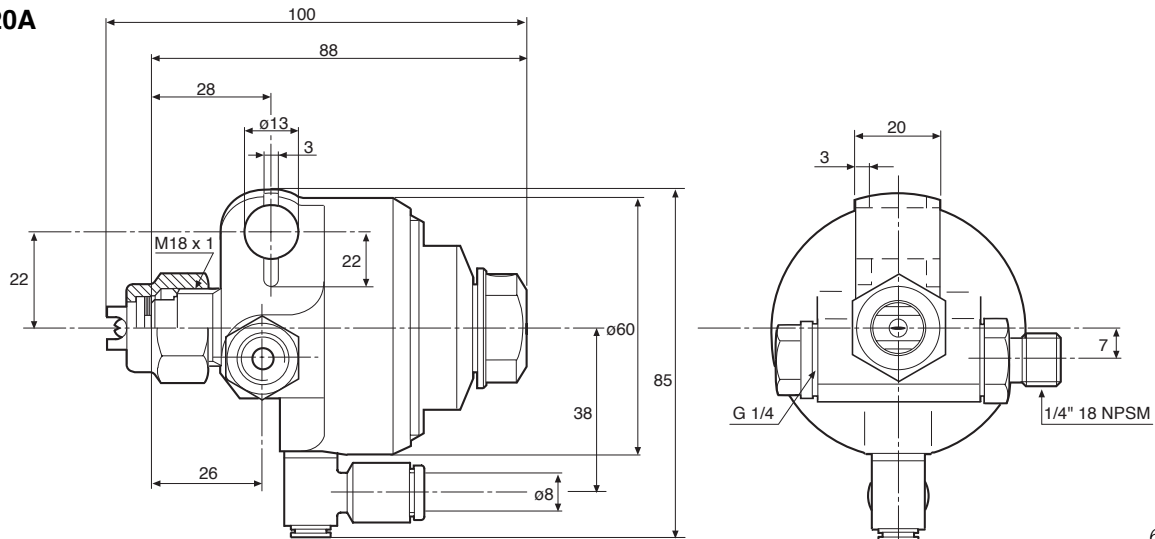
^a Including in service set 6103 1078 00.

Optional equipment



Ref. No.	Part number	Qty	Description
30	6003 6565 00	1	Nipple
31	6803 3077 00	1	Edge filter, slot width 0.127 mm (0.005") Suitable for tips with equivalent orifice diameter = 0.279 – 0.457 mm (0.011" – 0.018")
31	6803 3078 00	1	Edge filter, slot width 0.229 mm (0.009") Suitable for tips with equivalent orifice diameter = 0.483 mm (0.019") and larger

Ecco 320A



Dimension in mm.

Operator's Instructions

- Use Ecco genuine parts and accessories only for best function and safety.
- Before starting, read through **all instructions** carefully.

Important



WARNING

Do not use halogenated hydrocarbons in coating application equipment where aluminium or galvanized parts come in contact with the solvent or coating material. Halogenated hydrocarbons e.g. 1,1,1-trichloroethane and methylene chloride react, violently with such parts, causing corrosion and danger for explosion.



WARNING

The high velocity flow of material through hoses and nozzles may develop static electricity. Be sure that the equipment, object being sprayed, spraybooth, paint and waste container are properly grounded to prevent static discharge or sparks. Check the electrical resistance of the high pressure paint hose regularly. The operator is normally connected to earth through the spray gun.



WARNING

As the equipment works under very high pressure the utmost care must be observed during the work. Bearing this in mind, never aim the spray gun at a person or towards any part of the body. In the event of personal injury caused by the spraying pressure, immediate medical attention is essential. Before carrying out any adjustment or repair, the equipment must be switched off and the paint pressure relieved.

If the gun does not work satisfactorily it must on no account be used. Repair or replace it immediately.



WARNING

Always remove spray tip from gun to clean it.

Be very careful when removing spray tip or hose from gun. The pump must be switched off and paint pressure relieved.

A plugged high pressure hose contains fluid under high pressure. Loosen tip retaining nut or hose coupling slightly and

- **Max.** fluid pressure 360 bar.
- Fluid hose connection 1/4-18 NPSM.
- **Min./Max.** control air pressure 4/8 bar.
- Control air tube connection is elbow coupling for 6/8 mm nylon tubing.
- Blow the fluid and air tube clean before connecting them.
- When assessing the reaction time of the connected spray gun (the time from the start impulse until spraying commences) the reaction time of the control valve must be taken into consideration.
- Recommended sizes for control valve and air hoses:
 - Control valve, 3-way, G1/4. Min. flow area 28 mm². Mechanically, pneumatically or electrically actuated.
 - Air hose, nylon, dia. 6/8 mm, max. length 7.5 m for control air.
- To prevent the fluid hose from getting stuck on account of dried paint, it is recommended that the connection threads be greased with vaseline or a similar lubricant.
- Take great care to keep the spray gun clean and to lubricate all moving parts at regular intervals.
- Lubricants for paint spraying equipment must **not** contain silicones.
- Check that all connections are tight.
- If the gun does not work satisfactorily it must on no account be used. Repair or replace it immediately.

Paint spraying

Advice on high-pressure spraying

1. Consult your paint supplier for information to choose the correct spray tip for the actual paint.
2. As rule the best spraying distance is 30-40 cm.
3. The spray passes do not need to overlap as much as in spray painting with air atomization.
4. The capacity of high pressure spraying is very large. To avoid runs, the spray gun should usually be moved faster than in spray painting with air atomization.

Maintenance

The entire spray gun should be cleaned at the end of each working day. The spray tip should be cleaned more frequently.

Wipe the spray gun thoroughly clean on outside and clean it internally by flushing a suitable solvent through it.

More extensive cleaning and overhauling should be carried out at least once a month, depending on the material being sprayed.

Cleaning the spray tip

1. If the spray tip clogs while spraying shut off pump and relief paint pressure.
2. Loosen the retaining nut, for the spray tip, and release pressure slowly before removing completely.
3. Then remove spray tip and put it in solvent.
4. Blow obstruction out with air from front of spray tip, or let it soak long enough to dissolve the particle.
5. If it won't dissolve, clean it with a Ecco cleaning broach from front of spray tip.

Replacement of fluid needle and fluid needle gaskets

Removal

1. Shut off pump and relief paint pressure.
2. Undo the two screws (19).
3. Remove the servo part (14) by screwing out the back head (15).
4. Unscrew the sealing element (4).
5. Withdraw fluid needle (12) and take away the washer (5).
6. Unscrew the guide bushing (11).
7. Press the packing set out with the aid of the 5-mm pin provided in the tool set. **Note!** Take care to avoid damaging the outside diameter of the packing screw (10) which is a sealing surface. Use the flats of the packing screw when clamping between the jaws of a vice.
8. Clean and inspect all parts.

Assembly

All moving parts must be lubricated

1. Mount the packing set on the fluid needle (12) in the following order: The washer (5), the guide (6), the packings (7) with the o-rings (8) and finally the sleeve (9). **Note!** The packings (7) are to be fitted with the tip of the Vee facing away from the valve cone in the fluid needle.
2. Screw the assembled sealing element (4) into the gun body.
3. Drip a little oil onto the sealing surface of the packing screw and mount the servo part (14).
4. Secured the fluid needle with the two lock screws (19).

Replacement of fluid needle only

1. Unscrew the retaining ring (29) and remove the spray tip (28) together with its gasket (27)
2. Unscrew the fluid nozzle (3) with its gasket (2).
3. Undo the lock screws (19) and pull the fluid needle (12) out from the front.
4. Insert a new fluid needle and tighten the lock screws (19).
5. Fit the fluid nozzle (3) and spray tip (28). Don't forget to refit the gaskets (2 and 27).

Trouble shooting

Introduction

Always commence troubleshooting by checking the general condition of the spray gun. This can most easily be determined by test spraying, which provides an opportunity for checking the spray pattern and capacity and gasket leakage.

Types of problems

Collection of information which makes it possible to identify the error symptoms applicable to the spray gun in the event of malfunctioning is a matter of vital importance. Identification of symptoms makes it possible to decide whether the spray gun itself is the direct cause of the malfunctioning or if this may have been caused by an external factor.

The following external factors can cause malfunctioning and should be thoroughly checked:

1. The quality of the paint, i.e. its viscosity, purity, etc.
2. The paint pressure in relation to viscosity of the paint and spray tip used.
3. The size of paint hoses.



Trouble shooting chart (see the last page)

Trouble shooting chart



Correct Spray Pattern

The paint is uniformly dispersed over the entire spray angle.

Spray Pattern	Cause	Remedy
 <p>Symmetrical edge stripes</p>	<ul style="list-style-type: none"> a) Paint pressure too low. b) Paint viscosity too high. c) Wrong choice of spray tip. c) Spray tip orifices partly clogged. d) Spray tip damaged. 	<ul style="list-style-type: none"> a) Increase the paint pressure. Not that too high a paint pressure causes excessive spray mist. b) Thin the paint cautiously or change to a different spray tip size or spray angle. c) Choose the correct size of spray tip. d) Clean the spray tip with solvent. Use a brush and, if necessary, a sliver of wood. e) Change the spray tip.
 <p>Asymmetrical edge stripes</p>	<ul style="list-style-type: none"> a) Spray tip damaged. 	<ul style="list-style-type: none"> a) Change the spray tip.

Paint leaking	Cause	Remedy
Paint leaking	Worn needle packings and/or needle.	Replace damaged parts with new ones.
Paint leaking through the spray tip when the gun is closed.	Pollution between the needle and the fluid nozzle (3) or fluid needle (12) and nozzle worn or damaged.	Clean carefully and check for any sign of damages or wear.