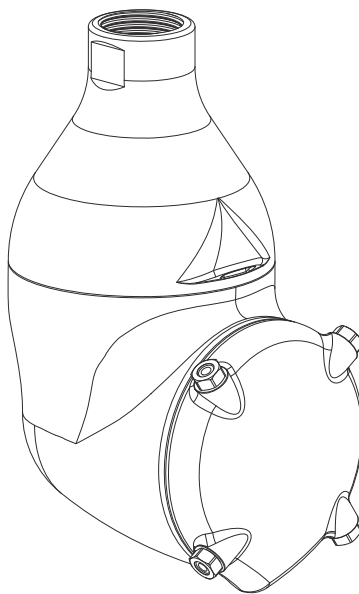


# Instruction Manual

## BIO 10



#BIO10 22

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***This Manual Applies for the Following Products:***

<u>Type</u>	<u>Date</u>
SCANJET BIO 10	2021-03-22

***Spare Parts Department***

**Contact Information**

Read "9. How to Order Spare Parts" on page 26

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**This manual is intended to assist in the handling and operation of the Scanjet BIO 10 Tank Cleaning System. Continuous product improvement is the policy of Scanjet Marine AB and we reserve the right to alter the specifications at any time without prior notice.**



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## 1. Introduction

The Scanjet BIO 10 is a highly versatile machine designed for use in hygienic applications, as well as other industrial applications. The unique design makes it easy to install, use and maintain as well as reduces the pressure drop through the machine.

The BIO 10 is available with 4 nozzles, but a special configuration with 2 extra nozzles on the body enables cleaning of the outside of the machine and provides unmatched self cleaning capability.

This manual has been prepared as a guide for persons who will be operating and maintaining the tank cleaning machine. The key to long machine life will always be carefully planned maintenance, if this is properly executed the Scanjet BIO 10 will keep servicing for years.

## 2. Safety Instructions

- If the machine is used in potentially explosive atmospheres then tapes or joint sealing compounds, which are electrical insulators, must **not** be used on threads or joints, unless an electrical connection is otherwise established to ensure an effective grounding. Scanjet recommend that the connecting pipe work is electrically conductive and grounded to the tank structure. It's important that the tank cleaning machine always is properly grounded. The resistance between the nozzle and the tank structure should not exceed 20 000 Ohm. This is important in order to avoid any build up of static electricity in the machine. For further information see CENELEC R044-001 Safety of Machinery, guidance and recommendations to avoid any hazard due to static electricity.
- When the equipment is operating in potentially explosive atmospheres, measures have to be taken to verify that the tank is inert at all times during cleaning operation. This is to avoid sparks and possible explosions since fluids moving at high velocities through air causes electrostatic build up in the media. As an extra precaution the cleaning media could be made conductive.
- The machine should be installed in accordance with national regulations for safety and other relevant regulations and standards.
- Precautions should be made to prevent starting of the tank cleaning operation while personnel are inside the tank or otherwise can be hit by the jets.
- In EU-countries the complete system has to comply with EU-machine directives and should be CE-marked. In North America, consult Underwriters Laboratory for any specific regulatory needs relative to the entire CIP (Clean In Place) System.
- Earmuffs should always be used when operating the machine.
- Be careful not to drop any tank cleaning machine/equipment when lifting and/or carrying. Dropping the machine could cause serious injuries. Never stand underneath the machine during mounting or operation.
- When handling the tank cleaning machine, never lift by the nozzle housing.
- The equipment may only be used for tank cleaning operations as described in this manual.
- The equipment has not been assessed as a safety related device as referred to in directive 2014/34/EU Annex II, clause 1.5

**Always follow these instructions before taking the BIO 10 into service!**



### 3. General Description

The Scanjet BIO 10 is a media driven and lubricated tank cleaning machine. No lubrication substances as oil, grease, etc. are used. All materials in contact with the machine meet the general standards for hygienic processes. Ceramic and tungsten bearings are standard for an extra long service life. The unique design of the BIO 10 makes it completely self-cleaning and self-draining. There are no interior pockets where water and dirt can accumulate, making this machine one of the best choices for hygienic applications.

#### Functional Principle

When cleaning media enters the machine it first passes through a turbine and a worm gearbox, then a nozzle housing leading it out through 4 nozzles into the tank. The turbines rotation drives the worm gearbox, making the machine rotate around its own axle and at the same time, the nozzle housing is forced to rotate clockwise.

A combined motion of the machine's body and nozzle housing creates a criss-cross cleaning pattern inside the tank. After  $6 \frac{1}{8}$  rotation of the nozzle housing, a first course pattern has been created inside of the tank. This process is repeated 8 times, each time indexed from the other until a full cleaning pattern has been created. When this is finalized after 47 rotations of the machine body, or 49 rotations of the nozzle housing, the first cycle will be repeated.

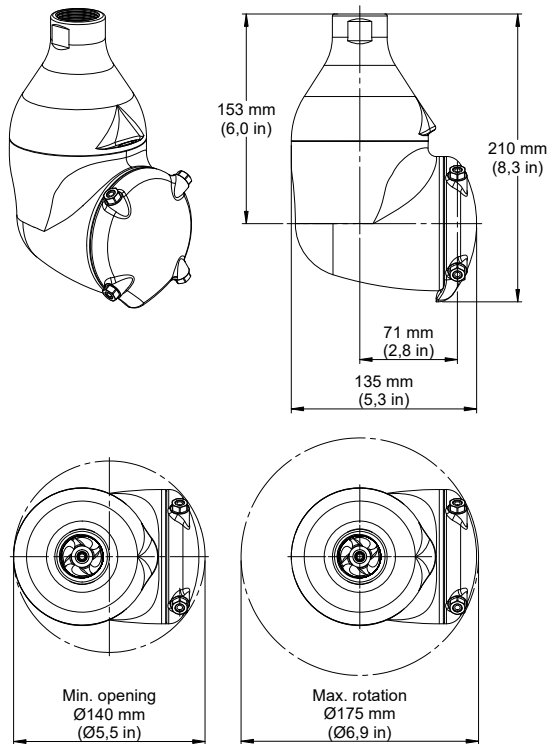
Cleaning of tanks is a process depending on a number of factors; soilage, distance between nozzles and tank walls, cleaning agent, temperature etc. All of these factors need to be considered before a proper cleaning can be accomplished.

The rotation speed of the machine depends on flow rate through the machine. Higher flow rate makes the turbine spin faster and because of this the machine is equipped with different turbines depending on nozzle size and intended operating parameters.

## 4. Technical Data

<b>Weight</b>	: 5 kg (11 US Pounds)
<b>Operating pressure range</b>	: 3-8 bar (40-115 psi)
<b>Nominal pressure range</b>	: 5-7 bar (70-100 psi)
<b>Max pressure</b>	: 12 bar (180psi)
<b>Max working temperature</b>	: 95°C (200°F)
<b>Max ambient temperature</b>	: 140°C (284°F)
<b>Materials</b>	: AISI 316L, Tefzel, PEEK, EPDM, Al <sub>2</sub> O <sub>3</sub>

### 4.1. Dimensions



## 5. Performance Data

Under performance data Scanjet presents Effective Jet Length.

Effective Jet Length is defined as the distance between the nozzle and the tank surface where the jet achieves 250 mm water column (50lbs/sqr.ft) impact force at tank surface. The Effective Jet Length is measured at horizontal and static conditions.

The Jet Length is affected by a lot of different factors such as rotation speed of the machine (velocity of the jet at the tank surface), temperature of the cleaning media, cleaning agent used and so on.

The vertical jet length can be estimated to be approximately 1/3 less than the horizontal jet length.

The following graphs show the flow, effective jet length (radius) and complete cleaning time for each combination of inlet pressure and nozzle diameter. Other nozzle diameters and maximum jet lengths are available upon request.

Inlet pressure has been measured at the machine inlet. In order to achieve the same performance as indicated in the these curves, the pressure drop in the supply line must be taken into consideration.

Nozzle size	Supply pressure MPa (Bar)							
	0,3 (3)		0,4 (4)		0,5 (5)		0,6 (6)	
	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]
<b>4xØ3,0 mm</b>	4,3	4	5	4,3	5,6	4,5	6,2	4,7
<b>4xØ3,5 mm</b>	4,9	4,5	5,7	4,7	6,4	5	7	5,5
<b>4xØ4,0 mm</b>	5,3	5	6,2	5,5	7,0	6	7,8	6,3
<b>4xØ4,5 mm</b>	6,1	5,5	7,2	6	8,1	6,5	8,9	7
<b>4xØ5,5 mm</b>	7,7	6	9,0	6,5	10,1	7	11,1	7,5

<sup>1</sup> Because of variations in part wear, water temperature, installation etc., the flow may differ ±10% from specified value.

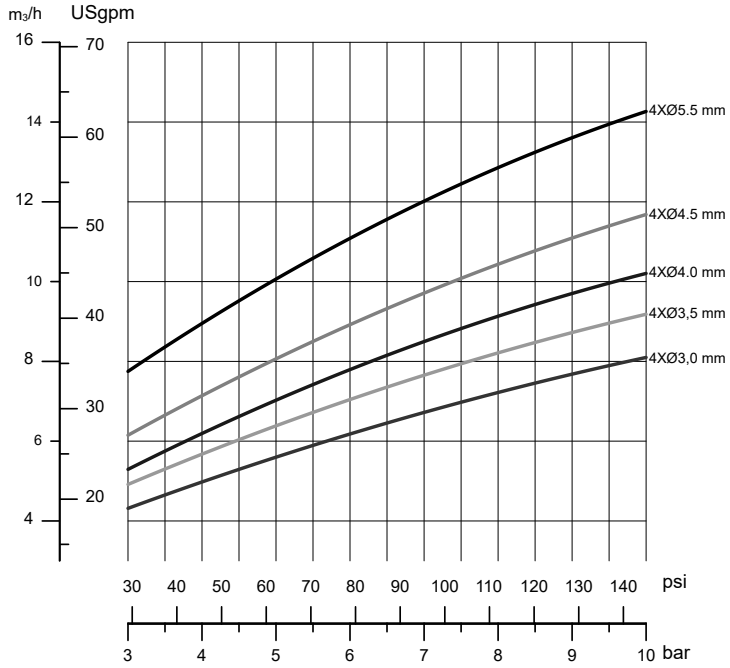


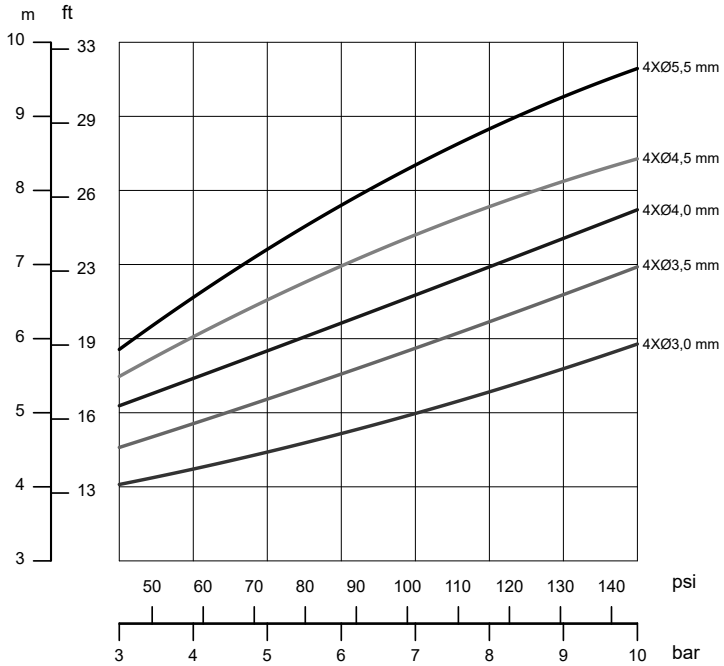
**Supply pressure MPa (Bar)**

Nozzle size	0,7 (7)		0,8 (8)		0,9 (9)		1,0 (10)	
	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]	Flow <sup>1</sup> [m <sup>3</sup> /h]	Jet length [m]
<b>4xØ3,0 mm</b>	6,7	5	7,2	5,2	7,7	5,5	8,1	6
<b>4xØ3,5 mm</b>	7,7	6,3	8,2	6,3	8,7	6,5	9,2	7
<b>4xØ4,0 mm</b>	8,5	6,5	9,2	6,8	9,7	7,5	10,2	7,7
<b>4xØ4,5 mm</b>	9,7	7,5	10,4	7,7	11,1	8	11,7	8,5
<b>4xØ5,5 mm</b>	12,0	9	12,8	8,5	13,6	9,5	14,3	9,5

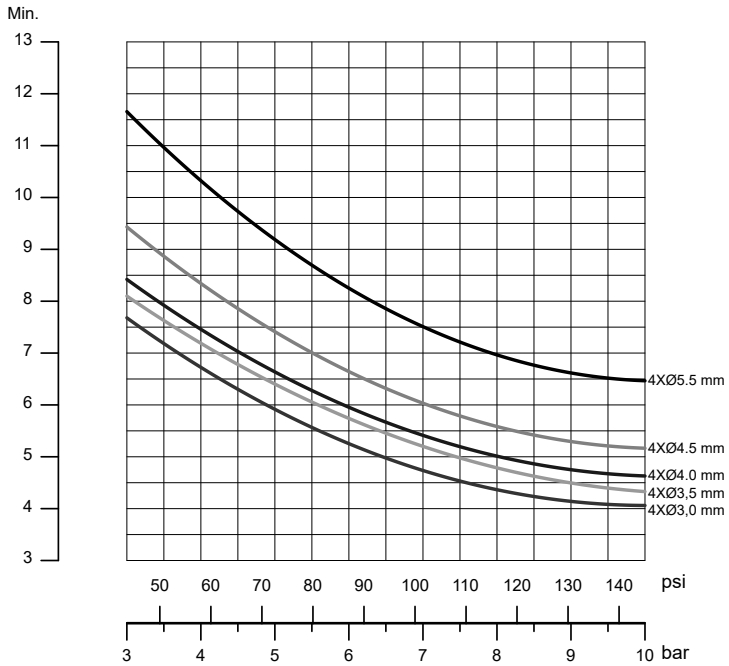


### Flow vs Pressure





## Complete Pattern Time at Different Inlet Pressures





## 6. Installation Instructions

**General Installation Instructions:** The Scanjet BIO 10 cleaning machine is designed to be installed in a vertical upright or inverted position, however, the machine may operate horizontally or in any other desired position.

**NOTE!** The machine is only self-draining if installed in a vertical position, upright or inverted.

**Supply line:** Scanjet recommends installing a filter with up to 3 mm mesh in the supply line. However, it is important to consider the amount and size of any particles when selecting the filter, filter size should be chosen accordingly. Supply lines should ALWAYS be flushed to remove dirt and particles before connecting the machine to the system.

**Cleaning Media:** Only media compatible with the materials listed in the reference list of parts for your model should be used. See "4. Technical Data" on page 7.

**After Use Cleaning:** Depending on the type of cleaning that has been performed and the type of cleaning media used, a procedure for after use flushing of the cleaning system should be developed for your application. In general, a fresh water flush is recommended after each cleaning.

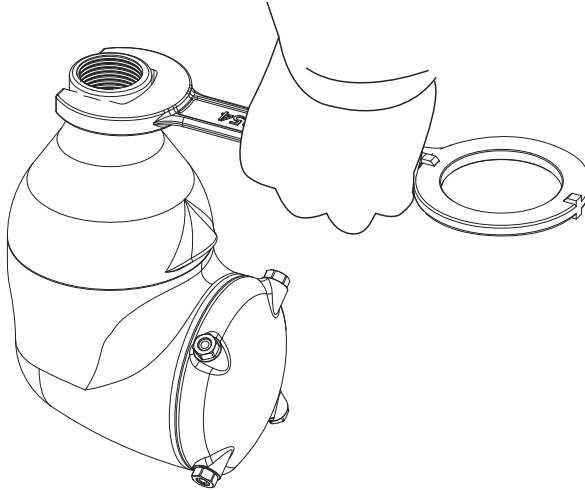
**Pressure:** Hydraulic shocks may damage the system. In order to avoid shocks increase pressure gradually from 0 to maximum operating pressure over 5-7 seconds. Do not exceed 12 Bar (180 PSI) inlet pressure! Higher pressure in combination with higher flow rates will increase consumption of wear parts and result in major leakage.

**Warning!** If the machine is *used in potentially explosive atmospheres* then tapes or joint sealing compounds, which are electrical insulators, must not be used on threads or joints, unless an electrical connection is otherwise established to ensure an effective grounding. Scanjet recommend that the connecting pipe work is electrically conductive and grounded to the tank structure. It's important that the tank cleaning machine always is properly grounded. This is important in order to avoid any build up of static electricity in the machine.



## 6.1. Connecting to Supply Line

Never attach the Scanjet BIO 10 by grabbing the nozzle housing! Always use proper tools, and turn the threaded connection as shown in the picture below.



When threading the inlet connection of the tank cleaning machine to the cleaning media connection, Scanjet recommends that Food Grade Teflon tape or any other appropriate food grade anti-seizing compound is used to avoid metal galling (Galling means that threads clamp together and cannot easily loosen).

**Following anti-seize compounds are recommended for use with food industry, "FDA approved"**

Loctite Product Numbers: \_\_\_\_\_ Scanjet Article No. \_\_\_\_\_

8014: Food Grade Anti-Seize; 32 oz. can

250061-0,9



## 7. Maintenance

### 7.1. Preventive maintenance

In order to keep your Scanjet tank cleaning machine servicing you as an efficient tool in your tank cleaning operations, it is essential to care for maintenance. Following a simple maintenance program will keep your tank cleaning machine in good condition and the machine will maintain its high performance.

**Good maintenance is careful and regular attention!**

The following recommended preventive maintenance program is based on tank cleaning machines working in average conditions. However, a cleaning machine, which has a rough and dirty job to do, will need more frequent attention than one working in ideal conditions. It is recommended that the maintenance program is adjusted to suit such a situation.

**Only** use proper tools when servicing the machine; see chapter "16. Tool Kit" for Scanjet standard tool kit. Never use excessive force or hammer components together or apart. Always follow all assembly/disassembly steps in the order described in this manual. Never assemble components without previous cleaning; this is especially important at all mating surfaces. Work only in a clear well lighted working area.

**NOTE!** Timely replacement of bearings will prevent costly damages to the gears. However, all bearing bushes, made from high performance PEEK (PolyEtherEtherKetone) material, are mounted with a press-fit and should not be removed unless they need to be replaced.

**Using any other than Scanjet original parts will invalidate the warranty.**



## 7.2. Service kit

Tank cleaning machines are installed and operated under extremely rough conditions. In order to ensure continued safe operation of the Scanjet tank cleaning machines it is advised to follow given service instructions.

Scanjet has identified components which should be checked at regular intervals and replaced if necessary, because of wear or damage. This is important in order to avoid unplanned stops or breakdowns and to assure safe, smooth and trouble free operation of the tank cleaning machines. The components that may be subject to wear and need replacement have been included in service kit, naturally optimized for each specific model and type of Scanjet tank cleaning machine.

Service intervals are described on the following page. Note that the intervals may be more frequent for machines installed in any other position than vertical, upright or inverted.

Service kits are rapidly available and easy to order, as well as being more economical compared to ordering parts separately.

The service kits are specified at page 32.

<u>Scanjet part no.</u>	<u>Description</u>
<b>KIT BIO10-600</b>	<b>Wear kit for 600 hours of service</b>
<b>KIT BIO10-1200</b>	<b>Wear kit for 1200 hours of service</b>
<b>KIT BIO10-1200-2</b>	<b>Wear kit for 1200 hours of service</b>
<b>T BIO 10</b>	<b>Scanjet basic tool kit including all necessary tools to service the machine</b>





### **7.3. Service intervals**

#### **Every 600 Working Hours**

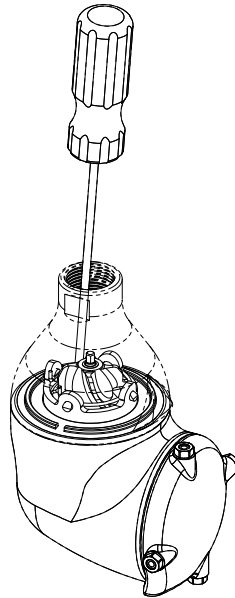
1. Order the service kit for 600 hours service "KIT BIO10-600"
2. Thoroughly flush the machine prior to disassembly and ensure that no particles remain in the machine.
3. Disassemble machine as described on the following pages.
4. Upon complete disassembly of the machine, all parts should be thoroughly washed and/or degreased in the appropriate manner, then inspected accordingly.
5. Inspect seals, bushings and gears for wear; locate position numbers from "10. Exploded Drawing View - BIO 10" on page 27. Replace if unduly worn.
6. Reassemble the machine. A service card is included with this manual; see page 37. This should be completed each time service is performed on the tank cleaning machine so that a proper maintenance record/history is kept.

#### **Every 1200 Working Hours**

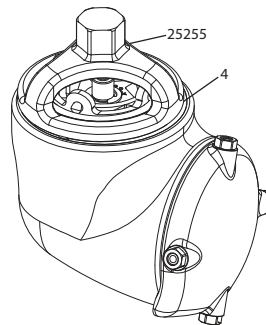
1. Order the special service kit for 1200 hours service "KIT BIO10-1200" or "KIT BIO10-1200-2"
2. Do the same inspection as for 600 hours above.
3. Replace the parts in the service kit. Check all parts for wear, replace if necessary.

## 7.4. Disassembly

1. Use a screwdriver (Scanjet tool 25257) to remove the round spring holding the locking shafts in place inside the connection.
2. Remove the four locking shafts. This can be done by rotating the whole machine "gravity" or by using the screwdriver to force them out. As you do this, be sure that the flow guide and turbine are in their lowest position!
3. When the locking shafts are out the inlet cone can easily be removed.
4. Remove flow guide and turbine assembly.
5. Make sure to heat the housing after disassembling the cone, before disassembling the machine.



6. Hold the machine steady (use soft material when holding it to avoid damaging the surface) and use Scanjet tool 25255 to undo the support bearing (pos. 4). Insert the shaft as shown on the picture to line up the stator and prevent damages while undoing the support bearing. It is very important that the shaft is kept in place during the entire procedure. **NOTE!** The thread is a right handed thread.

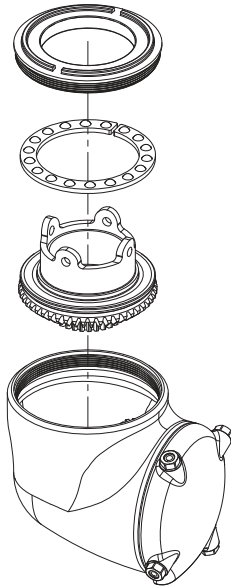


**NOTE!** If the support bearing appears to be stuck in place with Loctite, an electrical heater gun may be used around the thread (pos. 4).

**NOTE!** Be careful not to cause galling when undoing the support bearing.

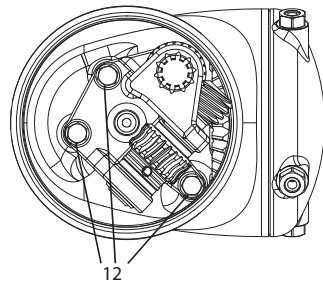
If the thread feels like it is about to get stuck, **turn back** by threading the support ring on and then try to undo it again. If needed, repeat carefully until the bearing is loose.

7. Remove ball race and stator.

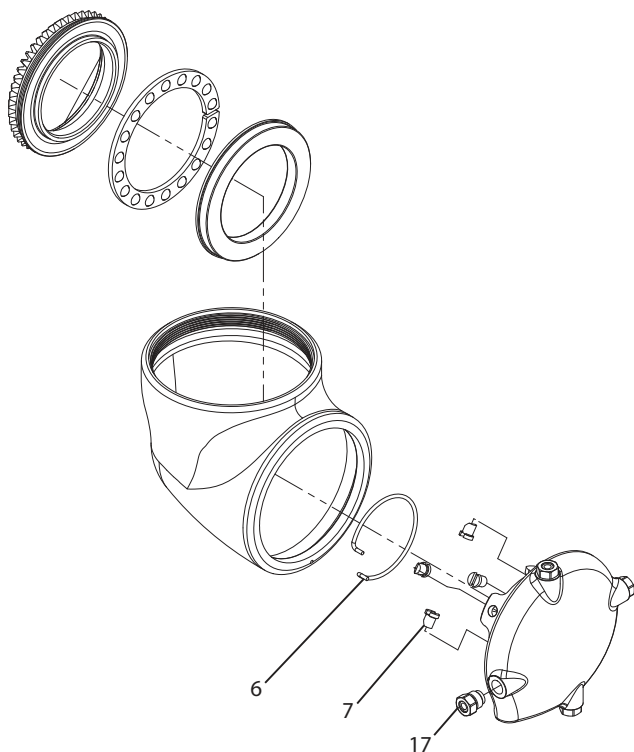


8. Undo the three bolts (pos. 12) holding the gearbox in position, and then remove the gearbox. Be careful not to damage the gears!

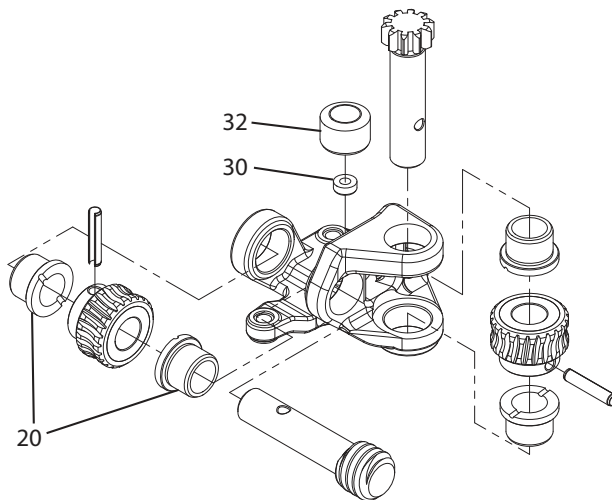
9. Carefully remove the locking spring inside (pos. 6), use a screwdriver (Scanjet tool 25257).



10. Remove the four locking shafts (pos. 7) if they do not come off themselves. When the locking shafts are out the nozzle housing assembly can be removed by pulling it and all other parts out.
11. Use a box wrench (Scanjet tool 12031) to remove the nozzles (pos. 17). The flow guides behind the nozzles should only be removed if absolute necessary, since they can easily be damaged if removed.
12. When disassembling the gearbox, withdraw the spring pins (pos. 25) in the gears and then disassembly the horizontal gear shaft and gear first. Be careful not to damage the gears!

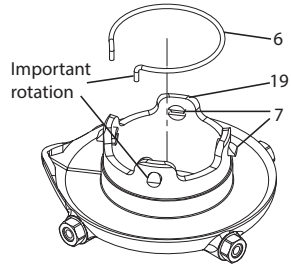


13. Remove the vertical gear and gear shaft in the same way.
  
14. If needed, change the bearings (pos. 20, 23) for the gear shafts and turbine shaft, by carefully pressing them out. To withdraw the bearing (pos. 30), turn the gearbox upside down and use a fitting tool through the little hole in the bottom the press out the bearings.

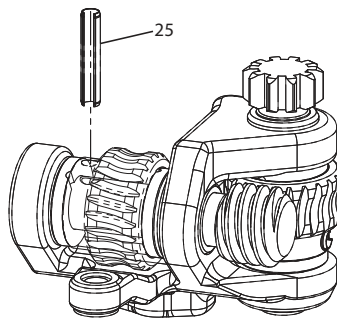


## 7.5. Reassembly

1. Start by mounting the four locking shafts (pos. 7) in the nozzle housing (pos. 19). The chamfer should be facing **away** from the nozzle housing (see picture).

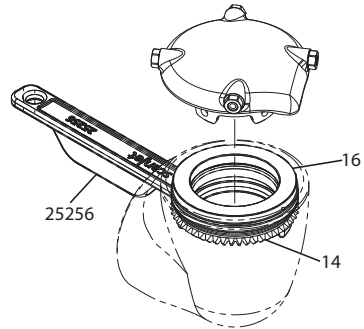


2. When mounting the locking rings (pos. 6) it is important that the pins are facing towards the nozzle housing (as shown on the picture) otherwise they could prevent the machine from rotating.
3. Now reassemble the gearbox. If the bearings have been changed, carefully press them into their places. Be observant when mounting the bearing 20021 (pos. 30 on previous page) so that it is mounted flat to avoid unnecessary wear.
4. Be careful not to damage the gear teeth while mounting the gear and gear shafts.
5. Use a plier to press the pins into their place (pos. 25). Do this carefully!



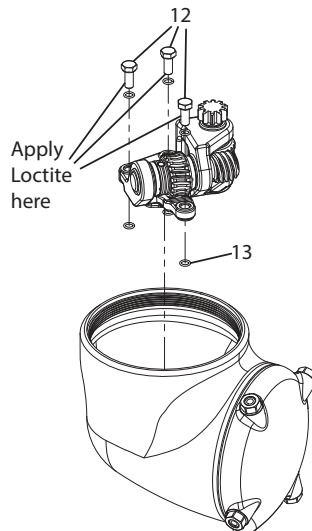
6. Place the bearing ring (pos. 16) into the nozzle housing, along with the ball race and nozzle gear (pos. 14). These will be loose inside the machine. Mounting the nozzle housing will lock the bearings and gear in their positions.

7. Use Scanjet tool 25256 to keep the nozzle gear and the bearings in place while mounting the nozzle housing. You can either hold the tool in vertical position or fasten the tool in a screw vice while placing the housing, with bearings inside, upon the tool (see picture below). Make sure that all four locking shafts have been fixed properly, without having to use too much force.

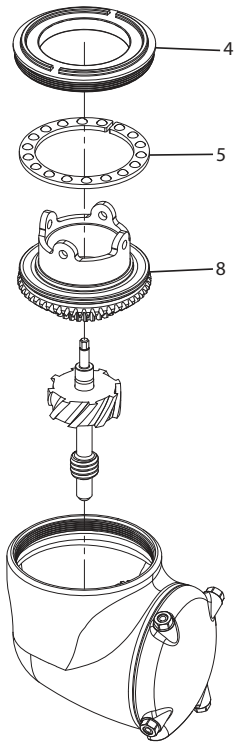
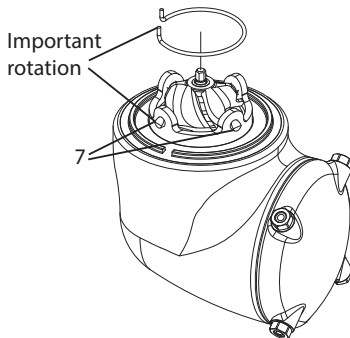


8. It is strongly recommended that the o-rings in the gearbox (pos. 13) are replaced each time the gearbox is reassembled after service.

9. Insert the gearbox and fasten it into the housing with the three bolts. Use Loctite 2046, Scanjet article no. 250062-0,012, on the bolts.



10. Mount the stator (pos. 8) and ball race (pos. 5).
11. Use one or two points of Loctite 2046, Scanjet art. no 250061-0,012 on the thread of the support bearing (pos. 4). Be careful! Too much Loctite will make it difficult to disassemble. Use Scanjet tool 25255 to mount the support bearing as shown on page 18. Minimum torque to be applied is 80Nm (60Lb-Ft).
12. Insert turbine assembly and flow guide.
13. Mount the four locking shafts (pos. 7) in the stator (pos. 8). The rotation is important and the chamfer should be facing upwards as shown on the picture below.



14. Also mount the pins on the locking ring (pos. 6) facing upwards.
15. Mount the connection by carefully pushing it onto the machine until it locks. Check that all four locking shafts (pos. 7) have fallen into place.
16. Test run the machine to check that everything is working as it should!





## 8. Trouble Shooting Guide

### **Symptom: Tank cleaning machine will not clean**

Possible causes are:

1. No or insufficient liquid flow
  - a. Check fluid supply to ensure that pressure and flow as per the operating curves are being observed. For this to be properly accomplished, you should install a pressure gauge as close to the machine inlet as possible, not further from the tank cleaning machine than 4,5 m or 15 feet.
2. Tank cleaning machine inlet is blocked.
  - a. Check inlet of machine (pos. 1) and ensure that no debris or particles is present. Remember that it was advised earlier in this manual (page 13) to employ a 3 mm mesh filter.
3. Tank cleaning nozzles are blocked.
  - a. Remove the nozzles (pos. 17) and check for any foreign matter. If present, clean the nozzles and then remount them.

### **Symptom: Tank cleaning machine will not rotate**

Possible causes are:

4. Bevel gears are blocked.
  - a. If foreign matter has entered the machine and passed through the turbine, it may have lodged itself in the bevel gears (pos. 8 and pos 14). To check these areas refer to "7.4. Disassembly" on page 18. Take care to review the gearing and ensure that there is no damage that could prevent operation.
5. Gearbox rotation is restricted.
  - a. If foreign matter has entered through the stator (pos. 8) it may have lodged itself in the gearbox; to perform an inspection see "7.4. Disassembly".
6. Worn parts; replacements required.
  - a. After items 1-5 above have been checked; it may be necessary to replace parts due to normal wear associated with your type of operation (or possible damage). One of the best ways to determine the need to replace parts is a visual inspection of the primary wear parts as indicated in "11. Part List - BIO 10" on page 28.



## 9. How to Order Spare Parts

To order spare parts please contact our "Spare Parts Department" at spares@scanjet.se, further contact information on page 2.

Scanjet has prepared service kit due to regular maintenance, see "7.2. Service kit" on page 16 for further information.

**Using any other than Scanjet original parts will invalidate the warranty.**

The serial number is on the back of your machine. When ordering spare parts the following data must be referred to for securing a correct and rapid delivery.

**Company name:** *Name*

**Invoice address:** *Customer name and address*

**Contact person:** *Customer responsible person*

**Your order no:**

**Mode of delivery:** *By mail, courier etc.*

**Shipping address:**

**Shipping mark:** *Marking of delivery*

**Equipment model:** *BIO 10, and nozzle size*

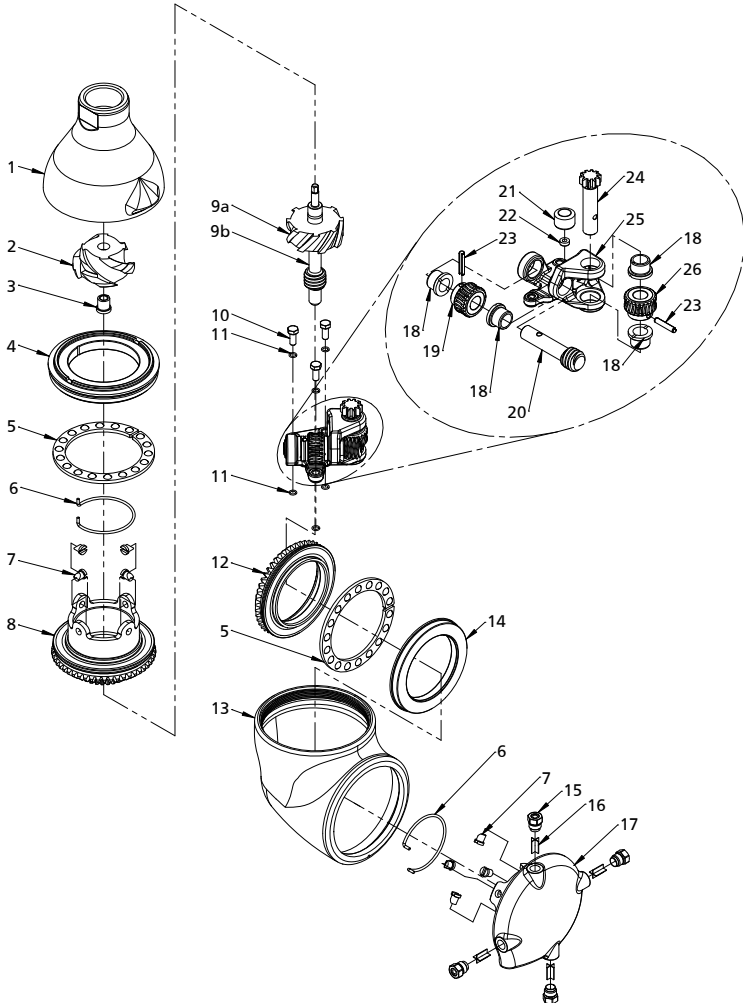
**Serial no:** *Serial numbers of machines*

### Spare part list:

POS	PART NO	QTY	DESCRIPTION
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

## 10. Exploded Drawing View - BIO 10

List dated 2021-03-22





## 11. Part List - BIO 10

List dated 2021-03-22

**NOTE!** Part numbers may be changed without prior notice.

### Part List - BIO 10

Pos.	Part No.	Qty.	Description	Material
1	25281-064	1	Connection 1" BSP	AISI 316L
	25281-104	(1)	Connection 1" NPT	
	25280-064	(1)	Connection 1" BSP Aseptic	
2	25275-2	1	Flow Guide	PEEK
3	25279-TX	1	Bearing	PEEK
4	25223-3	1	Support Bearing	AISI 316L
5	25228-3	2	Ball Bearing	AISI 316L / Tefzel
	25228-PE	(2)	Ball bearing	AISI 316L / PE1000
6	25234-1	2	Locking Ring	AISI 316L
7	25221	8	Locking Shaft	AISI 316L
8	25268-2	1	Stator <sup>1</sup>	AISI 316L
9a	25283-B-x	1	Turbine <b>Check basic settings</b>	PEEK
	5000060	(1)	Turbine <b>Check basic settings</b>	PEEK
9b	25267-1	1	Turbine Shaft Assembly <b>Check basic settings</b>	AISI 316L
	25267-2	(1)	Turbine Shaft Assembly <b>Check basic settings</b>	AISI 316L
10	25289	3	Bolt	A4
11	120382	6	O-ring	EPDM
12	25314	1	Nozzle Gear	AISI 316L
13	25260	1	Housing	AISI 316L
14	25222-2	1	Support Ring	AISI 316L
15	25230-x,x	4	Nozzle	AISI 316L
16	25231	8	Flow Plate	AISI 316L
17	25262	1	Nozzle Housing	AISI 316L
18	25326-TX	4	Bearing	PEEK

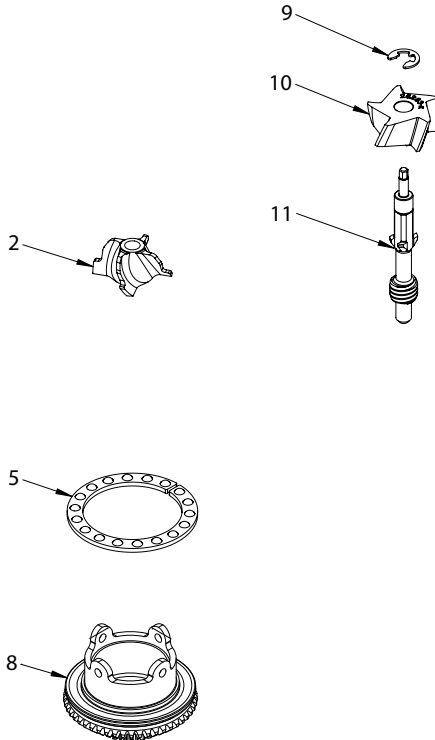
<sup>1</sup> When replacing Stator (25268-2) Scanjet recommend to also replace Support bearing (25223-3).

19	25272-TX-1	1	Worm Gear <b>Check basic settings</b>	PEEK
20	25263	1	Worm Gear Shaft	AISI 316L
21	20015-TX	1	Bearing	PEEK
22	20021	1	Bearing	Al <sub>2</sub> O <sub>3</sub>
23	106358-2	2	Spring Pin	AISI 316L
24	25266	1	Gear Shaft	AISI 316L
25	25264	1	Gearbox Housing	AISI 316L
26	25272-TX	1	Worm Gear <b>Check basic settings</b>	PEEK
	25272-TX	(2)	Worm Gear <b>Check basic settings</b>	PEEK

## 12. Part List - Old versions

List dated 2021-03-22

**NOTE!** Part numbers may be changed without prior notice.

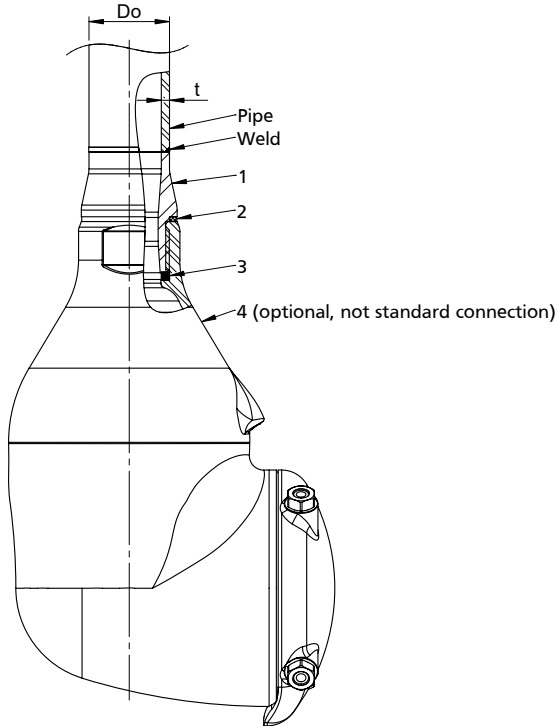


### Part List Bio 10 - Old versions

Pos.	Part No.	Qty.	Description	Replaced by:
2	25275	1	Flow Guide	25275-2
5	25228	2	Ball Bearing	25228-3 / 25228-PE
8	25268	1	Stator	25268-2
9	106288	1	Circlip	
10	25283-x	1	Turbine	25267-1 (Pos. 9a)
11	41031	1	Turbine Shaft Assembly	25283-B-x (Pos. 9b)

## 13. Accessories

### 13.1. Welding Adapter



#### Accessories - Welding Adapter

Pos.	Part No.	Description	Do x t [mm]	Material
1	25286-064-764	Adapter 1" ASTM A312 SCH 40S	Ø33,4 x 3,38	EN1.4404
	25286-064-784	Adapter 1" ISO 1127	Ø33,7 x 3,25	EN1.4404
	25286-064-866	Adapter 1½" ISO 2037	Ø38 x 1,6	EN1.4404
	25286-064-886	Adapter 1½" ISO 2037	Ø38 x 1,2	EN1.4404
2	25285-B10	Sealing Washer (Included in pos. 1)		PTFE
3	120631	Square O-ring (Included in pos. 1)		EPDM
4	25280-064	Connection		EN1.4404



## 14. Service Kit Contents

The serial number is on the back of your machine. When ordering service kit the following data must be referred to for securing a correct and rapid delivery.

### KIT BIO10-600

Service Kit 600-hours

Pos.	Part No.	Qty.	Description
3	25279-TX	1	Bearing
5	25228-3	2	Ball Bearing
	25228-4	(2)	Ball Bearing
11	120382	6	O-ring

### KIT BIO10-1200

Service Kit 1200-hours

Pos.	Part No.	Qty.	Description
3	25279	1	Bearing
5	25228-3	2	Ball Bearing
7	25221	2	Locking Shaft
9b	25267	1	Turbine Shaft Assembly
11	120382	6	O-ring
18	25326	4	Bearing
19	25272	2	Worm Gear
20	25263	1	Worm Gear Shaft
21	20015-2	1	Bearing
22	20021	1	Bearing
23	106358-2	2	Spring Pin
24	25266	1	Gear Shaft





### KIT BIO10-1200-2

Service Kit 1200-hours

<b>Pos.</b>	<b>Part No.</b>	<b>Qty.</b>	<b>Description</b>
3	25279-TX	1	Bearing
5	25228-3	2	Ball Bearing
	25228-4	2	Ball bearing
7	25221	2	Locking Shaft
9b	25267-1	1	Turbine Shaft Assembly
11	120382	6	O-ring
18	25326-TX	4	Bearing
19	25272-TX-1	1	Worm Gear
20	25263	1	Worm Gear Shaft
21	20015-TX	1	Bearing
22	20021	1	Bearing
23	106358-2	2	Spring Pin
24	25266	1	Gear Shaft
26	25272-TX	1	Worm Gear

## 15. Basic Settings

This list is a guide for ordering spare parts depending on the size of the nozzles. This list may be changed without prior notice.

### BIO 10

#### Nozzle size Ø 3,0mm

Pos.	Part No.	Qty.	Description	Material
2	25275-2	1	Flow Guide	PEEK
9a	25283-B-4	1	Turbine T4	PEEK
9b	25267-2	1	Turbine Shaft Assembly	AISI 316L
15	25230-3,0	4	Nozzle Ø3,0	AISI 316L
26	25272-TX	2	Worm Gear	PEEK

#### Nozzle size Ø 3,5mm

Pos.	Part No.	Qty.	Description	Material
2	25275-2	1	Flow Guide	PEEK
9	S000060	1	Turbine T0	PEEK
9b	25267-1	1	Turbine Shaft Assembly	AISI 316L
15	25230-3,5	4	Nozzle Ø3,5	AISI 316L
19	25272-TX-1	1	Worm Gear	PEEK
26	25272-TX	1	Worm Gear	PEEK

#### Nozzle size Ø 4,0mm

Pos.	Part No.	Qty.	Description	Material
2	25275-2	1	Flow Guide	PEEK
9	25283-B-3	1	Turbine T3	PEEK
9b	25267-1	1	Turbine Shaft Assembly	AISI 316L
15	25230-4,0	4	Nozzle Ø4,0	AISI 316L
19	25272-TX-1	1	Worm Gear	PEEK
26	25272-TX	1	Worm Gear	PEEK

### Nozzle size Ø 4,5mm

Pos.	Part No.	Qty.	Description	Material
2	25275-2	1	Flow Guide	PEEK
9	25283-B-4	1	Turbine T4	PEEK
9b	25267-1	1	Turbine Shaft Assembly	AISI 316L
15	25230-4,5	4	Nozzle Ø4,5	AISI 316L
19	25272-TX-1	1	Worm Gear	PEEK
26	25272-TX	1	Worm Gear	PEEK

### Nozzle size Ø 5,5mm


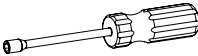
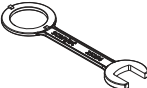
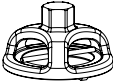


Pos.	Part No.	Qty.	Description	Material
2	25275-2	1	Flow Guide	PEEK
9	25283-B-5	1	Turbine T5	PEEK
9b	25267-1	1	Turbine Shaft Assembly	AISI 316L
15	25230-5,5	4	Nozzle Ø5,5	AISI 316L
19	25272-TX-1	1	Worm Gear	PEEK
26	25272-TX	1	Worm Gear	PEEK

## 16. Tool Kit

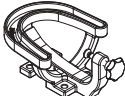
### 16.1. Standard Tool

For normal maintenance and operation the following tools are included in Scanjet tool kit:

This tool kit can also be ordered as Scanjet part no. T BIO 10

Pos.	Part no.	Qty.	Description	
1	12031	1	Box Wrench 11 mm	
2	12063	1	Box Driver 8 mm	
3	25254	1	Tool for Mounting	
4	25255	1	Tool for Support Bearing	
5	25256	1	Tool for Nozzle Housing	
6	25257	1	Screwdriver	

### 16.2. Optional Tool

Pos.	Part no.	Qty.	Description	
1	25259-B10	1	Assembly Fixture Bio10	







## 18. Claim Report

It is important to get accurate information in this report to help us keep your process running trouble free. Be sure to work through the trouble shooting guide first, before filling this in.

**Ref. Claim number** \_\_\_\_\_

Nature of problem \_\_\_\_\_

Probable cause of problem \_\_\_\_\_

### Machine information

Machine type \_\_\_\_\_ Serial Number \_\_\_\_\_

Nozzle size \_\_\_\_\_

### Working conditions

Inlet pressure \_\_\_\_\_ Working temp \_\_\_\_\_

Working hours before failure \_\_\_\_\_ Could hydraulic shock be the cause? \_\_\_\_

Inlet line flushed before installation? \_\_\_\_\_

Cleaning media and concentration	Temperature	Time	Recirculation?

Is sterilization being used? \_\_\_\_\_

Procedure Media/Temp \_\_\_\_\_

Is steam injection being used? \_\_\_\_\_

Procedure Time/temp \_\_\_\_\_

(1/2)



## Claim Report

### Cleaning Media

Type of cleaning media? \_\_\_\_\_

- Clean  Contaminated with? \_\_\_\_\_
- Chemicals / Solvents \_\_\_\_\_
- Hard particles size \_\_\_\_\_  Soft particles size \_\_\_\_\_
- Solidifying  Crystallizing

Is there a filter installed in supply line? Mesh size \_\_\_\_\_

Is the tank cleaning machine flushed with clean water after cleaning?

### Type of tank contents to be removed

Type of sludge in the tank (name, formula, concentration etc) \_\_\_\_\_

What is the sludge soluble in? \_\_\_\_\_

Nature of material:

- Crystalline  Solidifying  Hard particles
- Soft Particles  High Viscous  Low Viscous
- Explosive  Sticky

Is the tank cleaning machine lowered into the material? \_\_\_\_\_

### Other information

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_ Signature: \_\_\_\_\_





## 19. Declaration of Conformity 2006/42/EC (CE)



# EU Declaration of Conformity

### Name and adress of Manufacturer

Scanjet Marine & Systems AB  
Törnedalsgatan 1  
SE-275 21 Sjöbo  
Sweden

This declaration of conformity is issued under the sole responsibility of the manufacturer

<u>Product type:</u>	Bio 10
<u>Description of product:</u>	Media driven tank cleaning machine
<u>Serial no.:</u>	B200048 ->
<u>EU Directive:</u>	2006/42/EC (CE)
<u>DoC no.:</u>	DoC_2006_42_EC(CE)_B10_B200048

On the behalf of Scanjet Marine AB  
Sjöbo, 17th of March 2021

Joacim Cronholm  
Design and Quality Manager

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## - Intelligent Tank Management

Scanjet is a leading global supplier of equipment and solutions for any marine, offshore and industrial application.

Scanjet designs and produces fixed and portable tank cleaning equipment, marine protection systems, high level overflow alarms, vapour emission control systems, tank level gauging equipment, P/V valves, water ingress systems and inert gas systems for any efficient and environmentally friendly installation.

Using the most modern and efficient technology ensures that our clients will receive equipment with maximum performance and quality to last for many years.

Our business mission is to continuously co-operate directly with our clients offering economical solutions and high quality range of products.

Please visit [www.scanjet.se](http://www.scanjet.se) for more information.

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