

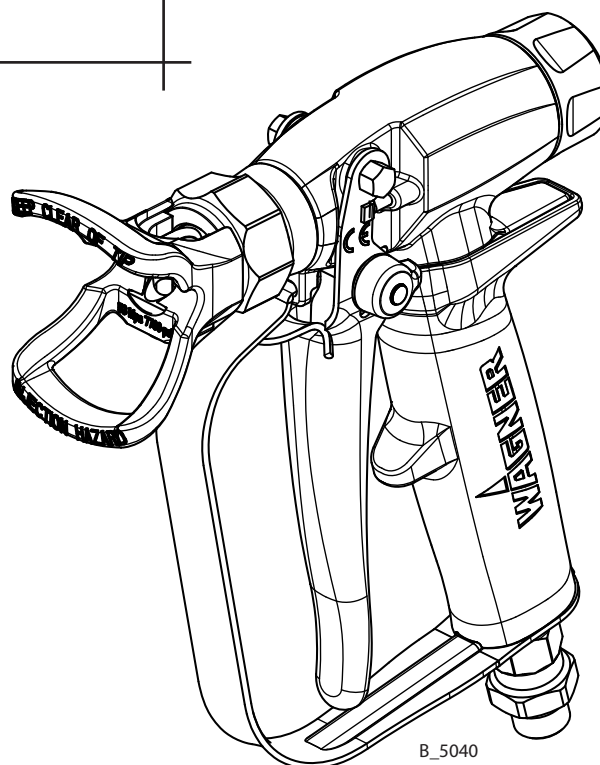
# WAGNER

Original Service Manual

GM 1-350  
GM 1-530

Version 02/2015

Airless manual gun



CE  II 2G X (Atex)

B\_5040

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# 1 ABOUT THESE INSTRUCTIONS

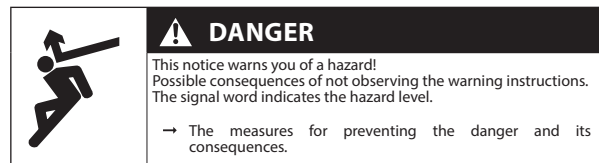
## 1.1 PREFACE

This service manual contains information on the maintenance and repair of the devices. This device can be hazardous if it is not operated in accordance with the information provided in this service manual and the relevant operating manual.

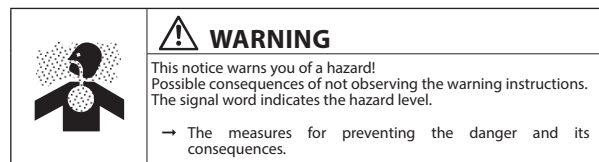
## 1.2 WARNINGS, NOTICES AND SYMBOLS IN THESE INSTRUCTIONS

Warning instructions in this operating manual highlight particular dangers to users and to the device and state measures for avoiding the hazard. These warning instructions fall into the following categories:

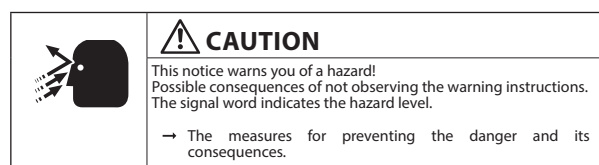
**Danger** - immediate risk of danger.  
Non-observance will result in death or serious injury.



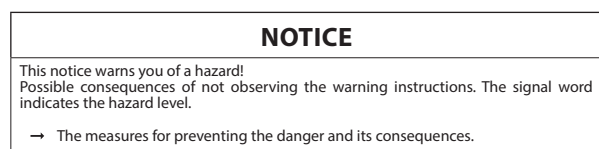
**Warning** - possible imminent danger.  
Non-observance may result in death or serious injury.



**Caution** - a possibly hazardous situation.  
Non-observance may result in minor injury.



**Notice** - a possibly hazardous situation.  
Non-observance may result in damage to property.



**Note** - provides information about particular characteristics and how to proceed.

### 1.3 LANGUAGES

The service manual is available in the following languages:

Language:	Order No.	Language:	Order No.
German	2355505	English	2355506

The operating manual is available in the following languages:

Language:	Order No.	Language:	Order No.
German	2348756	English	2349369
French	2355489	Italian	2355491
Spanish	2355493	Russian	2356564
Chinese	2356565		

Additional languages on request or at: [www.wagner-group.com](http://www.wagner-group.com)

### 1.4 ABBREVIATIONS

Order No.	Order number
ET	Spare part
K	Marking in the spare parts lists
Pos	Position
Stk	Number of pieces
SW	Wrench size
GM	Manual gun (gun, manual)
DN	Nominal diameter

## **2 REPAIR WORK**

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### **2.1 GENERAL NOTICES**

The following points must be noted for every repair carried out on the device:

- Observe the safety instructions in Chapter 4 of the associated operating manual (see Chapter 1).
- Decommissioning and cleaning as in Chapter 8.1.3 of the operating manual.
- Loosening of the various connections using the appropriate tools (product hoses and air hoses).
- Defective product hoses may not be repaired, but must instead be replaced as a complete part for safety reasons.
- After assembly, the repaired components and complete system must be checked in accordance with Chapter 3.

### **2.2 REPAIR STAFF**

Repair work must be carried out carefully by qualified and trained staff. They should be informed of specific hazards during their training.

The following hazards may arise during repair work:

- Health hazard from inhaling solvent vapors
- Use of unsuitable tools and aids

A skilled person must ensure that the device is checked for being in a reliable state after repair work is completed.

## 2.3 SAFETY INSTRUCTIONS

→ Observe the safety instructions in Chapter 4 and in Chapter 8.1.2 of the corresponding operating manual.

### Before repair work

- Flush and clean the system. → Chapter 8.1.3 in the operating manual.

### After repair work

- Carry out safety checks in accordance with Chapter 8.2.3. of the operating manual.
  - Commission the system and check for leaks as described in Chapter 6.8 of the operating manual.
  - Function test in accordance with Chapter 3.
- In accordance with the guideline for liquid ejection devices (ZH 1/406 and BGR 500 Part 2 Chapter 2.29 and Chapter 2.36):
- The liquid ejection devices should be checked by an expert (e.g. Wagner service technician) for their safe working conditions as required and at least every 12 months.
  - For shut down devices, the examination can be suspended until the next start-up.



## DANGER

### Incorrect maintenance/repair!

Danger to life and equipment damage.

- Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit.
- Before all work on the device and in the event of work interruptions:
  - Switch off the energy and compressed air supply.
  - Relieve the pressure from the spray gun and device.
  - Secure the spray gun against actuation.
- Observe the operating manual and service manuals at all times when carrying out work.

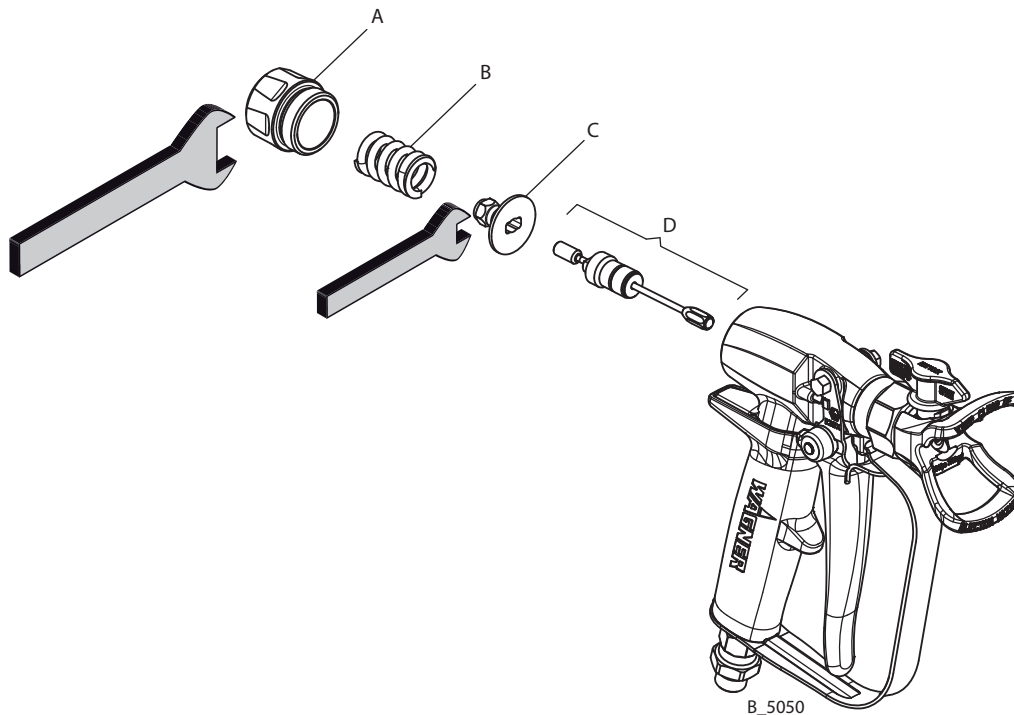
## 2.4 REPLACING THE VALVE ROD

### 2.4.1 DISASSEMBLING

1. Flush and clean the spray gun as described in Chapter 8.1.3.
2. Relieve the pressure on the spray gun and product pressure generator in accordance with Chapter 7.3.2.
3. Secure the spray gun with the locking device.
4. Unscrew preload nut (A) using open-end wrench (wrench size 30 mm; 1.18 inches) and remove pressure springs (B).
5. The valve rod (D) is unscrewed on the pressure plate (C) using wrench size 10. Attention: when unscrewing, ensure that the pressure plate is pushed fully onto the valve rod.
6. Carefully remove the pressure plate (C) and valve rod (D) from the gun housing, replace the valve rod (D).

**Note:**

The valve rod can only be ordered as a module; individual valve rod parts are not available.



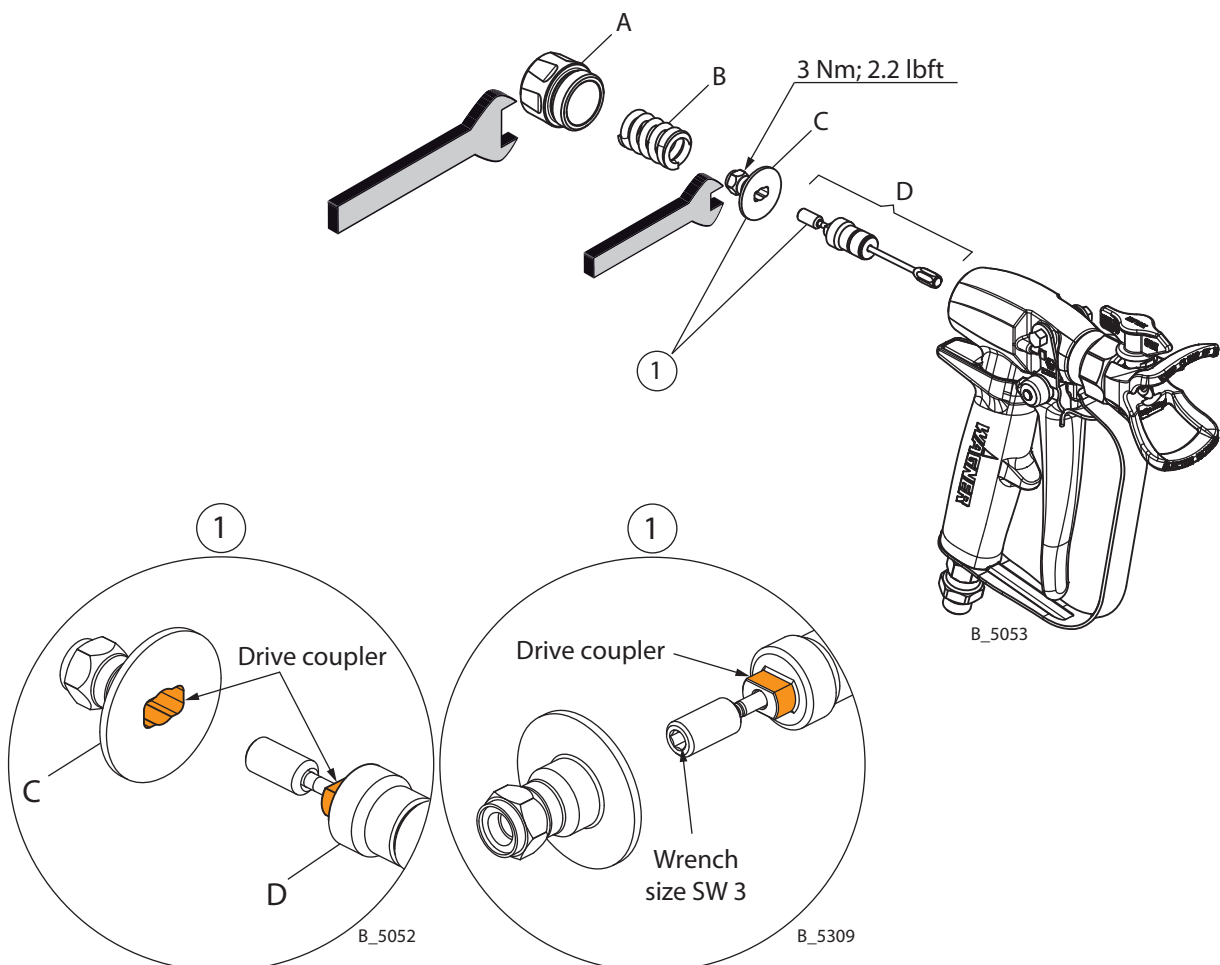
**2.4.2 ASSEMBLY**

1. The valve rod (D) is screwed into the gun housing using the pressure plate (C). Here, ensure that the pressure plate with the recess is pushed completely onto the valve rod's wrench size (drive coupler) in order to transfer the torque (see Detail 1).
2. Using a wrench size 6 on the pressure plate (C), screw the pressure plate and valve rod (D) into the gun housing, tightening torque  $6 \text{ Nm} \pm 1 \text{ Nm}$ ;  $4.43 \text{ lbft}$ .
3. Insert the pressure spring (B) and tighten the preload nut (A).
4. Adjust the valve rod (D) using the Allen wrench (size 3) so that no actuation occurs in the secured position. Opening stroke  $1.2 \pm 0.1 \text{ mm}$ .

**NOTICE****Unsuitable tool!**

Damage to seals and sealing surfaces

→ Do not hold the valve rod with pliers or a similar tool.





## 2.5 REPLACING THE FILTER TUBE

### 2.5.1 REQUIRED TOOLS AND AIDS

The following tools and aids are required for carrying out the repair work on the spray gun described below:



Description
- Allen wrench SW 6
- Hot-air gun
- Suitable oven for curing the adhesive

### 2.5.2 REQUIRED SPARE PARTS

The following spare parts are required for carrying out the repair work on the spray gun described below:

Description	Order No.
- Filter socket with seal	2353611
- Loctite 648	9992804

**2.5.3 SAFETY INSTRUCTIONS**

	 <b>WARNING</b>
	<p><b>Incompatibility of cleaning agent and working medium!</b> Risk of explosion and danger of poisoning by toxic gases</p> <p>→ Examine the compatibility of the cleaning agents and working media on the basis of the safety data sheets.</p>

**2.5.4 DISASSEMBLY/ASSEMBLY****Disassembly:**

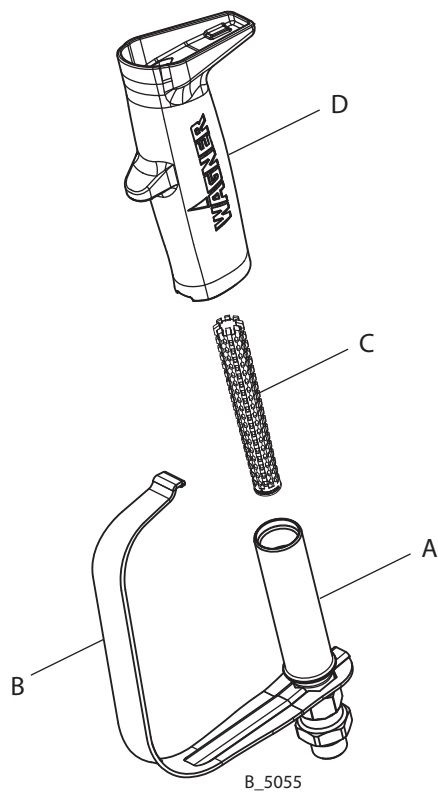
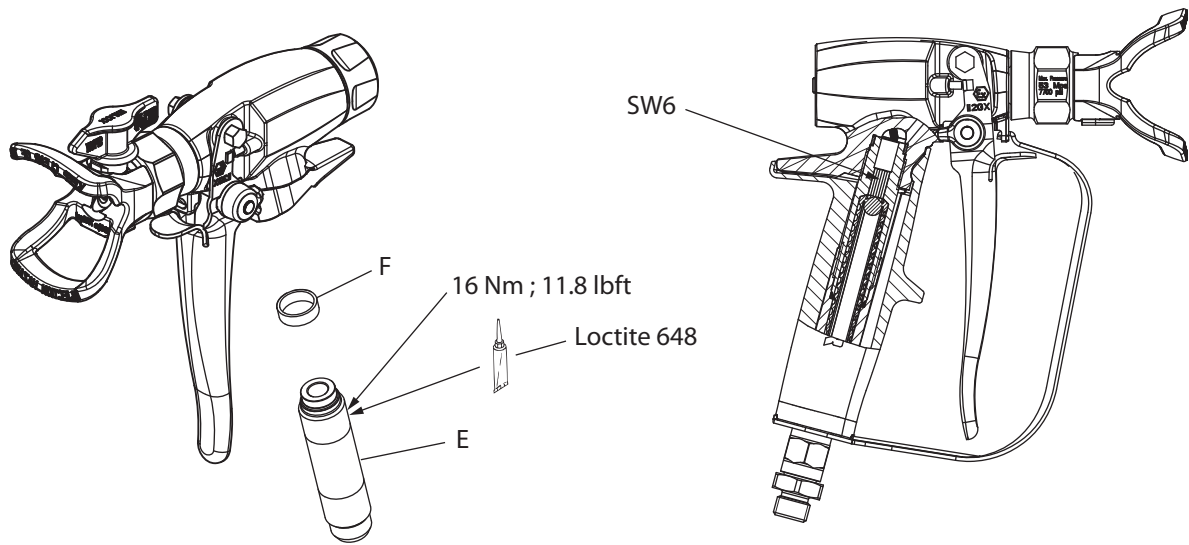
1. Flush and clean the spray gun as described in Chapter 8.1.3 of the operating manual.
2. Relieve the pressure on the spray gun and product pressure generator in accordance with Chapter 7.3.2 of the operating manual.
3. Secure the spray gun with the locking device.
4. Use the guard bracket (B) with integrated hex tool to loosen and unscrew the filter housing (A) (counterclockwise).
5. Remove the filter insert (C) from the filter housing (A).
6. Remove gun handle (D).
7. The filter socket (E) is secured with Loctite 648. Heat the area around the filter socket to approx. 150 °C; 302 °F.
8. Remove the filter socket (E) using an Allen wrench (size 6).
9. Remove and replace the seal of the filter socket (F).
10. Thoroughly clean all parts with flushing agent.

**Assembly:**

11. Screw the filter socket (E) with the new seal (F) back into the gun housing and secure the screw connection with Loctite 648. Place the spray gun into a suitable oven to cure the adhesive (max. 70 °C; 158 °F).
12. Reassemble the spray gun in reverse order.

**Note:**

The filter socket seal (F) becomes unusable by heating. When replacing the filter socket, also replace the seal.



### 3 FUNCTIONAL CHECK AFTER REPAIR

After all repairs, the gun must be checked for safe condition before recommissioning. The necessary scope of inspection and testing depends on the repair carried out and must be documented by the repair staff.

<b>Injection and final inspection</b>	
<b>Activities</b>	<b>Aid tools</b>
1. Trigger lever function test <ul style="list-style-type: none"> <li>- The trigger lever must be pulled as far as it will go. Make sure that the trigger lever can move slightly in its rest position.</li> <li>- Put the trigger lever locking device into locking position, configure product pressure and pull the trigger lever. (Beware of the the recoil; ensure firm footing and hold gun tight) No product may not leak out or escape.</li> <li>- Check that the trigger lever locking device is not reset by the trigger lever when pulling in the locking position.</li> </ul>	Manual inspection
2. Leak test <ul style="list-style-type: none"> <li>- Connect the spray gun and gradually increase the pressure until the maximum pressure specified on the type plate has been reached.</li> <li>- Trigger and flush the spray gun multiple times.</li> <li>- Make sure that: The product connection is sealed when the spray gun is closed. The product valve is sealed. Product does not discharge at the valve rod seal.</li> </ul>	Visual inspection  350 bar or 530 bar product connection
3. Flush the spray gun <ul style="list-style-type: none"> <li>- Stop the material supply, open the flushing valve, pull the trigger lever, and flush the spray gun or blow it out with air. Flush the spray gun without nozzle.</li> <li>- Close the flushing valve. When almost no material is escaping any longer, remove the product connection hose and blow the rest of the test medium out of the spray gun using an air gun.</li> </ul>	

## 4 SPARE PARTS

### 4.1 HOW CAN SPARE PARTS BE ORDERED?

Always supply the following information to ensure delivery of the right spare part:

#### **Order number, designation and quantity**

The quantity need not be the same as the number given in the quantity column "Stk" on the list. This number merely indicates how many of the respective parts are used in each component.

The following information is also required to ensure smooth processing of your order:

- Address for the invoice
- Address for delivery
- Name of the person to be contacted in the event of any queries
- Type of delivery (normal mail, express delivery, air freight, courier, etc.)



#### **Identification in spare parts lists.**

Explanation of column "K" (labeling) in the following spare parts lists:

- ◆ Wearing parts

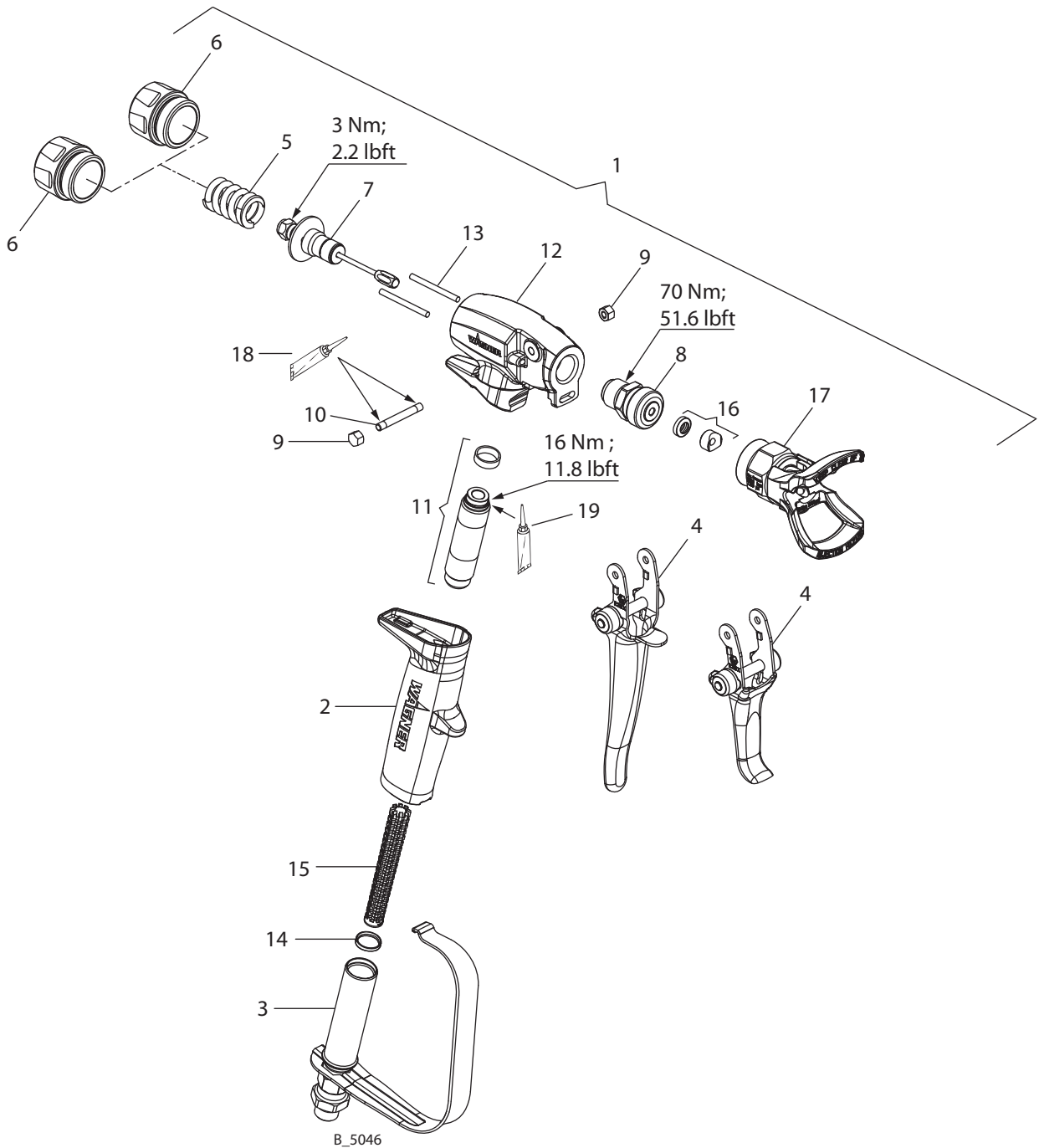
**Note:** These parts are not covered by warranty terms.

- Not part of standard equipment, available, however, as additional extra.

	 <b>DANGER</b>
<p><b>Incorrect maintenance/repair!</b> Danger to life and equipment damage.</p> <ul style="list-style-type: none"> <li>→ Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.</li> <li>→ Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit.</li> <li>→ Before all work on the device and in the event of work interruptions:             <ul style="list-style-type: none"> <li>- Switch off the energy and compressed air supply.</li> <li>- Relieve the pressure from the spray gun and device.</li> <li>- Secure the spray gun against actuation.</li> </ul> </li> <li>→ Observe the operating manual and service manuals at all times when carrying out work.</li> </ul>	



**4.2 SPARE PARTS LIST GM 1-350/530**



## Spare parts list GM 1

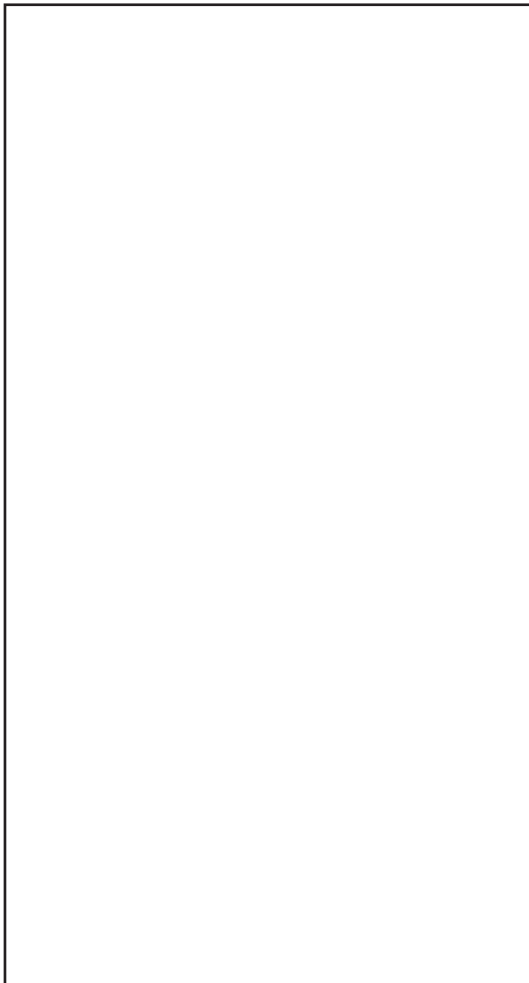
Pos	K	Stk	35 MPa Order No.	53 MPa Order No.	Designation
1		1	2347536	2346856	GM1
2		1	2346614	2346614	Handle
3		1	2353559	2353559	Filter housing with guard bracket
4		1	-	2353599	Trigger guard 4F, complete
4		1	2353600	-	Trigger guard 2F, complete
5		1	347335	347335	Pressure spring
6		1	-	2353606	Preload nut, 530 bar
6		1	2353607	-	Preload nut, 350 bar
7	★	1	2353556	2353556	Valve rod unit
8	★	1	2353546	2353546	Intermediate piece "G" 7/8-14-UNF
9		2	9910403	9910403	Cap nut
10		1	2343085	2343085	Bolt
11		1	2353611	2353611	Filter socket with seal
12		1	2353613	2353613	Spray gun body
13		2	43411	43411	Actuating pins
14	★●	1	364340	364340	Seal, filter
15	◆	1	-	-	Filter insert, yellow (middle), 100 mesh per inch *
	◆●	1	2315723	2315723	* Filter insert, red (fine), 200 mesh per inch – 10 pieces
	◆●	1	2315724	2315724	* Filter insert, blue (middle), 150 mesh per inch – 10 pieces
	◆●	1	2315725	2315725	* Filter insert, yellow (middle), 100 mesh per inch – 10 pieces
	◆●	1	2315726	2315726	* Filter insert, white (coarse), 50 mesh per inch – 10 pieces
16	★●	1	2353548	2353548	Seal kit PT-HD GM1 – 5 pieces
17	●	1	2353549	2353549	Nozzle holder PT-HD GM1
18		1	9992590	9992590	Loctite 222
19		1	9992804	9992804	Loctite 648
20	●	1	2353551	2353551	Service set GM1

◆ = Wearing parts

★ = Included in service set

● = Not part of the standard equipment, but available as a special accessory

# WAGNER



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