



TITAN®

OPERATING MANUAL

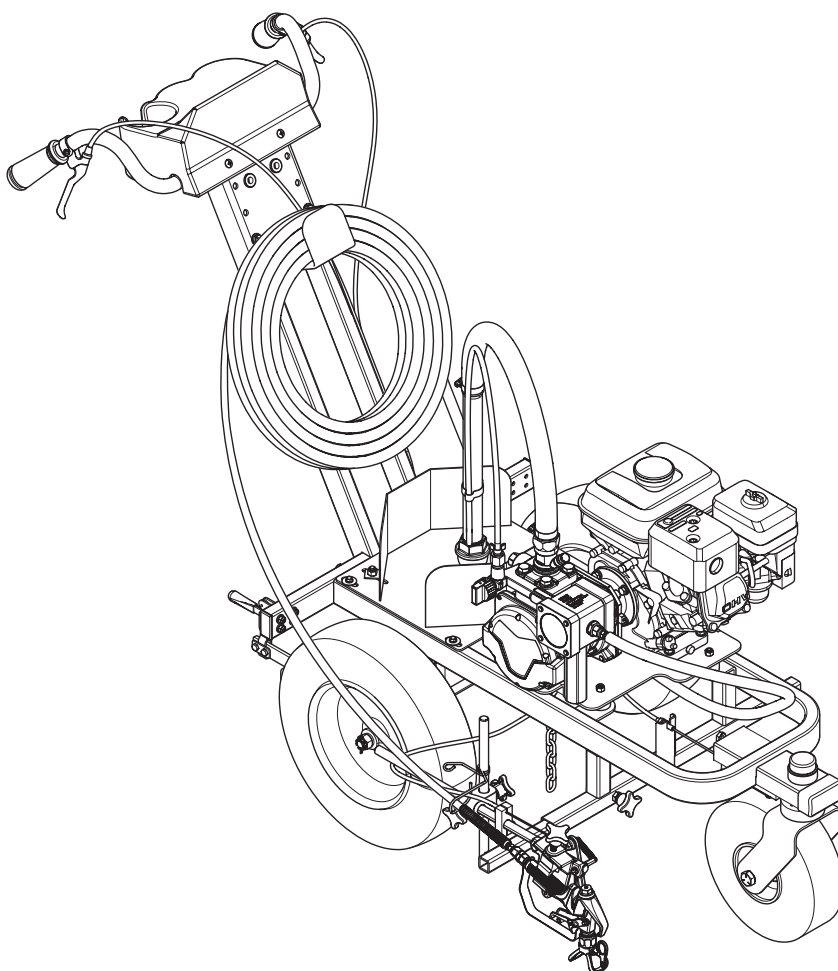
PowrLiner 3500

- D -	BETRIEBSANLEITUNG	26
- F -	MODE D'EMPLOI	50

AIRLESS, HIGH-PRESSURE
SPRAYING UNIT

AIRLESS HOCHDRUCK-
SPRITZGERÄT

GROUPE DE PROJECTION À
HAUTE PRESSION



MODEL 0537015

Warning!

Attention: Danger of injury by injection!
Airless units develop extremely high spraying pressures.

**1**

Never put your fingers, hands or any other parts of the body into the spray jet!

Never point the spray gun at yourself, other persons or animals.

Never use the spray gun without safety guard.

Do not treat a spraying injury as a harmless cut. In case of injury to the skin through coating materials or solvents, consult a doctor immediately for quick and expert treatment. Inform the doctor about the coating material or solvent used.

2

The operating instructions state that the following points must always be observed before starting up:

1. Faulty units must not be used.
2. Secure Titan spray gun using the trigger lock on the trigger.
3. Ensure that the unit is properly earthed.
4. Check allowable operating pressure of high-pressure hose and spray gun.
5. Check all connections for leaks.

3

The instructions regarding regular cleaning and maintenance of the unit must be strictly observed.

Before any work is done on the unit or for every break in work the following rules must be observed:

1. Release the pressure from spray gun and hose.
2. Secure the Titan spray gun using the trigger lock on the trigger.
3. Switch off unit.

Be safety conscious!

1	SAFETY REGULATIONS FOR AIRLESS SPRAYING	4	6	SERVICING	19
1.1	Explanation of symbols used	4	6.1	General servicing	19
1.2	Safety hazards	4	6.2	High pressure hose	19
1.3	Gasoline engine safety	6	6.3	Basic engine maintenance	20
1.4	Fueling (gas engine)	7	6.4	Troubleshooting	21
2	MAIN AREAS OF APPLICATION	8	7	REPAIRS	22
2.1	Application	8	7.1	Inlet valve pusher	22
2.2	Coating materials	8	7.2	Inlet valve	22
3	DESCRIPTION OF UNIT	9	7.3	Outlet valve	23
3.1	Airless process	9	7.4	Pressure control valve	23
3.2	Functioning of the unit	9	7.5	Typical wear parts	23
3.3	System diagram	10	8	APPENDIX	24
3.4	Technical data	11	8.1	Selection of tip	24
4	OPERATION	12	8.2	Servicing and cleaning of Airless hard-metal tips	24
4.1	Setup	12	8.3	Accessories	24
4.2	Starting the engine	13	WARRANTY	25	
4.3	Preparing a new sprayer	13	SPARE PARTS LIST	74	
4.4	Preparing to paint	14	Spare parts list for the main assembly	74/75	
4.5	Pressure relief procedure	15	Spare parts list for the cart assembly I	76/77	
4.6	Operating the front caster	15	Spare parts list for the cart assembly II	78/79	
4.7	Cleaning a clogged tip	15	Spare parts list for the pump assembly	80/81	
4.8	Interruption of work	16	Spare parts list for the high-pressure filter	82	
4.9	Handling the high pressure hose	16	Spare parts list for the outlet valve assembly	83	
5	CLEANUP	17	Spare parts list for the pusher stem assembly	84	
5.1	Special cleanup instructions for use with flammable solvents	17	Spare parts list for siphon system	85	
5.2	Cleaning the sprayer	17	Spare parts list for the gun holder assembly	86/87	
5.3	Cleaning the unit from outside	17	SPRAY GUN POSITIONS	88	
5.4	Suction filter	18	TR1 STRIPING TIP CHART	89	
5.5	Cleaning the high-pressure filter	18			
5.6	Cleaning the airless spray gun	19			

1 SAFETY REGULATIONS FOR AIRLESS SPRAYING

1.1 EXPLANATION OF SYMBOLS USED

This manual contains information that must be read and understood before using the equipment. When you come to an area that has one of the following symbols, pay particular attention and make certain to heed the safeguard.



→ This symbol indicates a potential hazard that may cause serious injury or loss of life. Important safety information will follow.



→ This symbol indicates a potential hazard to you or to the equipment. Important information that tells how to prevent damage to the equipment or how to avoid causes of minor injuries will follow.



→ Danger of skin injection



→ Danger of fire from solvent and paint fumes



→ Danger of explosion from solvent, paint fumes and incompatible materials



→ Danger of injury from inhalation of harmful vapors



→ Notes give important information which should be given special attention.

1.2 SAFETY HAZARDS



HAZARD: INJECTION INJURY

A high pressure stream produced by this equipment can pierce the skin and underlying tissues, leading to serious injury and possible amputation.

Do not treat a spraying injury as a harmless cut. In case of injury to the skin through coating materials or solvents, consult a doctor immediately for quick and expert treatment. Inform the doctor about the coating material or solvent used.

PREVENTION:

- NEVER aim the gun at any part of the body.
- NEVER allow any part of the body to touch the fluid stream. DO NOT allow body to touch a leak in the fluid hose.
- NEVER put your hand in front of the gun. Gloves will not provide protection against an injection injury.
- ALWAYS lock the gun trigger, shut the fluid pump off and release all pressure before servicing, cleaning the tip guard, changing tips, or leaving unattended. Pressure will not be released by turning off the engine. The PRIME/SPRAY valve or pressure bleed valve must be turned to their appropriate positions to relieve system pressure.
- ALWAYS keep tip guard in place while spraying. The tip guard provides some protection but is mainly a warning device.
- ALWAYS remove the spray tip before flushing or cleaning the system.
- NEVER use a spray gun without a working trigger lock and trigger guard in place.
- All accessories must be rated at or above the maximum operating pressure range of the sprayer. This includes spray tips, guns, extensions, and hose.

**HAZARD: HIGH PRESSURE HOSE**

The paint hose can develop leaks from wear, kinking and abuse. A leak can inject material into the skin. Inspect the hose before each use.

PREVENTION:

- Avoid sharp bending or kinking of the high-pressure hose. The smallest bending radius amounts to about 8" (20 cm).
- Do not drive over the high-pressure hose. Protect against sharp objects and edges.
- Replace any damaged high-pressure hose immediately.
- Never repair damaged high-pressure hoses yourself!
- Electrostatic charging of spray guns and the high-pressure hose is discharged through the high-pressure hose. For this reason the electric resistance between the connections of the high-pressure hose must be equal to or lower than 1MΩ.
- For reasons of function, safety and durability use only original Titan high-pressure hoses.
- Before each use, check all hoses for cuts, leaks, abrasion or bulging of cover. Check for damage or movement of couplings. Immediately replace the hose if any of these conditions exist. Never repair a paint hose. Replace it with another earthed high-pressure hose.
- Make sure power cord, air hose and spray hoses are routed in such a manner to minimize slip, trip and fall hazard.

**HAZARD: EXPLOSION OR FIRE**

Flammable vapors, such as solvent and paint vapors, in work area can ignite or explode.

PREVENTION:

- Use equipment only in well ventilated area. Keep a good supply of fresh air moving through the area to keep the air within the spray area free from accumulation of flammable vapors. Keep pump assembly in well ventilated area. Do not spray pump assembly.
- Gas models only - Do not fill fuel tank while engine is running or hot; shut off engine and allow to cool. Fuel is flammable and can ignite or explode if spilled on a hot surface.
- Eliminate all ignition sources, such as pilot lights, cigarettes, portable electric lamps and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable vapors are present.
- Ground equipment and conductive objects in work area. Make sure grounding chain is in place and reaches the ground.
- Use only grounded hoses.
- Hold spray gun firmly to the side of a grounded pail when triggering into pail.
- If there is static sparking or if you feel a shock, stop operation immediately.
- Know the contents of the paint and solvents being sprayed. Read all material Safety Data Sheets (SDS) and container labels provided with the paints and solvents. Follow the paint and solvent manufacturer's safety instructions.
- Do not use a paint or solvent containing halogenated hydrocarbons. Such as chlorine, bleach, mildewcide, methylene chloride and trichloroethane. They are not compatible with aluminum. Contact the coating supplier about compatibility of material with aluminum.
- Keep a fire extinguisher in work area.

**HAZARD: HAZARDOUS VAPORS**

Paints, solvents, and other materials can be harmful if inhaled or come in contact with body. Vapors can cause severe nausea, fainting, or poisoning.

PREVENTION:

- Wear respiratory protection when spraying. Read all instructions supplied with the mask to be sure it will provide the necessary protection.
- All local regulations regarding protection against hazardous vapors must be observed.
- Wear protective eyewear.
- Protective clothing, gloves and possibly skin protection cream are necessary for the protection of the skin. Observe the regulations of the manufacturer concerning coating materials, solvents and cleaning agents in preparation, processing and cleaning units.

**HAZARD: GENERAL**

This product can cause severe injury or property damage.

PREVENTION:

- Follow all appropriate local, state, and national codes governing ventilation, fire prevention, and operation.
- Pulling the trigger causes a recoil force to the hand that is holding the spray gun. The recoil force of the spray gun is particularly powerful when the tip has been removed and high pressure has been set on the airless pump. When cleaning without a spray tip, set the pressure control knob to the lowest pressure.
- Use only manufacturer authorized parts. User assumes all risks and liabilities when using parts that do not meet the minimum specifications and safety devices of the pump manufacturer.
- ALWAYS follow the material manufacturer's instructions for safe handling of paint and solvents.
- Clean up all material and solvent spills immediately to prevent slip hazard.
- Wear ear protection. This unit can produce noise levels above 85 dB(A).
- Never leave this equipment unattended. Keep away from children or anyone not familiar with the operation of airless equipment.
- Do not spray on windy days.
- The device and all related liquids (i.e. hydraulic oil) must be disposed of in an environmentally friendly way.

1.4 GASOLINE ENGINE SAFETY

1. Gas engines are designed to give safe and dependable service if operated according to instructions. Read and understand the engine manufacturer's Owner's Manual before operating the engine. Failure to do so could result in personal injury or equipment damage.
2. To prevent fire hazards and to provide adequate ventilation, keep the engine at least 1 meter (3 feet) away from buildings and other equipment during operation. Do not place flammable objects close to the engine.
3. People who are not operating the device must stay away from the area of operation due to a possibility of burns from hot engine components or injury from any equipment the engine may be used to operate.
4. Know how to stop the engine quickly, and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.
5. Gasoline is extremely flammable and is explosive under certain conditions.
6. Refuel in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the refueling area or where gasoline is stored.
7. Do not overfill the fuel tank. After refueling, make sure the tank cap is closed properly and securely.
8. Be careful not to spill fuel when refueling. Fuel vapor or spilled fuel may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.
9. Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death.
10. The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. To avoid severe burns or fire hazards, let the engine cool before transporting it or storing it indoors.
11. Never ship/transport sprayer with gasoline in the tank.



DO NOT use this equipment to spray water or acid.



Do not lift by cart handle when loading or unloading.
Device is very heavy. Three-person lift is required.

1.5 FUELING (GAS ENGINE)



Gasoline is extremely flammable and is explosive under certain conditions.

FUEL SPECIFICATIONS

Use automotive gasoline that has a pump octane number of 86 or higher, or that has a research octane number of 91 or higher. Use of a lower octane gasoline can cause persistent “pinging” or heavy “spark knock” (a metallic rapping noise) which, if severe, can lead to engine damage.



If “spark knock” or “pinging” occurs at a steady engine speed under normal load, change brands of gasoline. If spark knock or pinging persists, consult an authorized dealer of the engine manufacturer. Failure to do so is considered misuse, and damage caused by misuse is not covered by the engine manufacturer’s limited warranty.

Occasionally you may experience light spark knock while operating under heavy loads. This is no cause for concern, it simply means your engine is operating efficiently.

- Unleaded fuel produces fewer engine and spark plug deposits and extends the life of the exhaust system components.
- Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt, dust, or water in the fuel tank.

GASOLINES CONTAINING ALCOHOL

If you decide to use a gasoline containing alcohol (gasohol), be sure its octane rating is at least as high as that recommended by the engine manufacturer. There are two types of “gasohol”: one containing ethanol, and the other containing methanol. Do not use gasohol that contains more than 10% ethanol. Do not use gasoline containing methanol (methyl or wood alcohol) that does not also contain co-solvents and corrosion inhibitors for methanol. Never use gasoline containing more than 5% methanol, even if it has co-solvents and corrosion inhibitors.



Fuel system damage or engine performance problems resulting from the use of fuels that contain alcohol is not covered under the warranty. The engine manufacturer cannot endorse the use of fuels containing methanol since evidence of their suitability is incomplete at this time.

Before buying gasoline from an unfamiliar station, try to find out if the gasoline contains alcohol. If it does, confirm the type and percentage of alcohol used. If you notice any undesirable operating characteristics while using a gasoline that contains alcohol, or one that you think contains alcohol, switch to a gasoline that you know does not contain alcohol.

2 MAIN AREAS OF APPLICATION

2.1 APPLICATION

This airless line striper is a precision power tool used to spray many types of material for many types of applications including parking lots, curbs, and athletic fields.

Read and follow this instruction manual carefully for proper operating instructions, maintenance, and safety information.

2.2 COATING MATERIALS

PROCESSIBLE COATING MATERIALS

Paints containing solvents, two-component coating materials, dispersion and latex paints.

No other materials should be used for spraying without Titan's approval.



Pay attention to the Airless quality of the coating materials to be processed.

VISCOSITY

The unit is able to process coating materials with up to 20,000 mPas. If highly viscous coating materials cannot be taken in or the performance of the unit is too low, the paint must be diluted in accordance with the manufacturer's instructions.



Attention: Make sure, when stirring up with motor-driven agitators that no air bubbles are stirred in. Air bubbles disturb when spraying and can, in fact, lead to interruption of operation.

COATING MATERIALS WITH ABRASIVE MATERIALS

These particles have a strong wear and tear effect on valves and tips, but also on the spray gun. This impairs the durability of these wearing parts considerably.

FILTERING

Sufficient filtering is required for fault-free operation. The unit is equipped with a suction filter, an insertion filter in the spray gun and a high pressure filter on the unit. Regular inspection of these filters for damage or soiling is highly recommended.

3 DESCRIPTION OF UNIT

3.1 AIRLESS PROCESS

A diaphragm pump takes in the coating material by suction and conveys it to the tip. Pressed through the tip at a pressure of up to a maximum of 3300 PSI (228 bar, 22.8 MPa), the coating material is atomized. This high pressure has the effect of micro fine atomization of the coating material.

As no air is used in this process, it is described as an AIRLESS process.

This method of spraying has the advantages of finest atomization, cloudless operation and a smooth, bubble-free surface. As well as these, the advantages of high production speed and convenience must be mentioned.

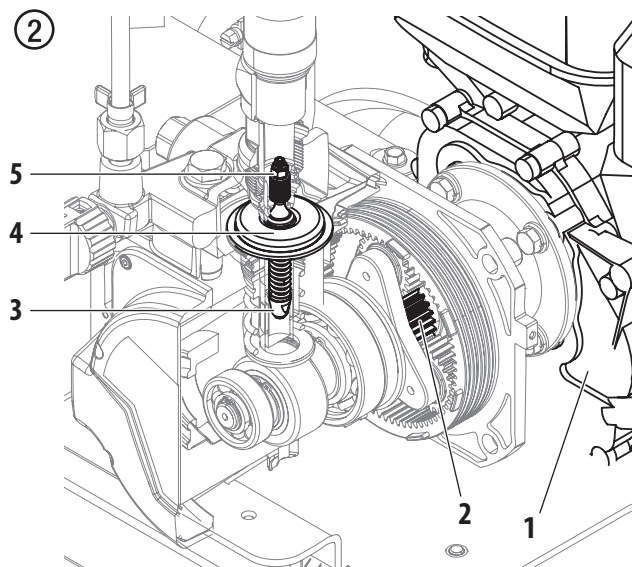
3.2 FUNCTIONING OF THE UNIT

The following section contains a brief description of the technical construction for better understanding of the function of the unit:

PowrLiner 3500 is a gas engine-driven high-pressure paint sprayer.

The gas engine (Fig. 2, 1) drives the hydraulic pump via planetary gears (2). A piston (3) is moved up and down so that hydraulic oil is moved under the diaphragm (4) which then moves.

The downwards movement of the machine opens the disk inlet valve (5) automatically and coating material is sucked in.





During the upwards movement of the diaphragm, the coating material is displaced and the outlet valve opens while the inlet valve is closed.

The coating material flows under high pressure through the high-pressure hose to the spray gun and is atomized when it exits from the tip.

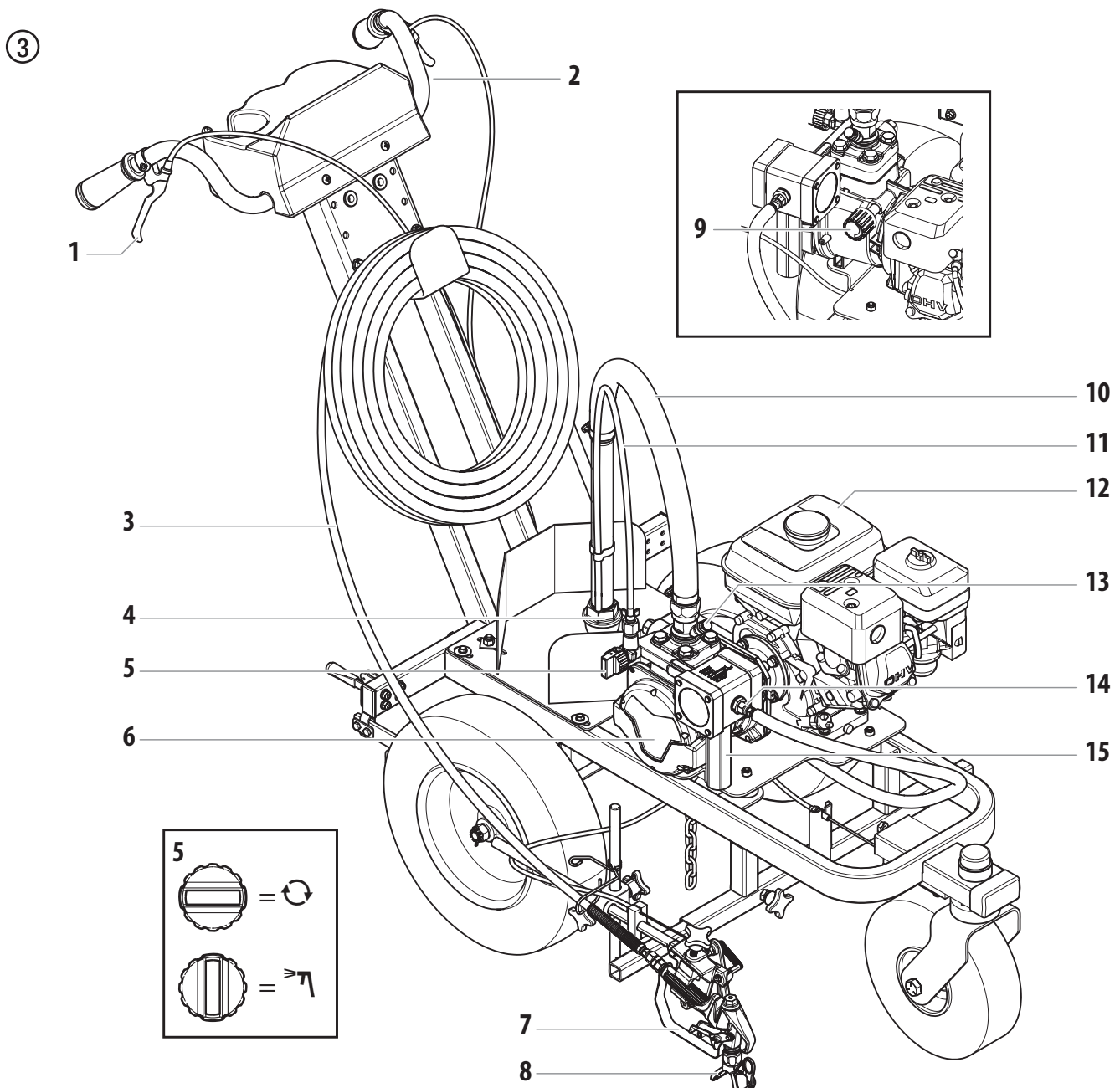
The pressure control valve limits the set pressure in the hydraulic oil circuit and thus also the pressure of the coating material.

A pressure change when the same tip is used also leads to a change in the amount of paint atomized.

3.3 SYSTEM DIAGRAM

1. Gun trigger
2. Caster trigger
3. High-pressure hose
4. Suction filter
5. Relief valve
PRIME = 
SPRAY = 
6. Hydraulic pump assembly

7. Spray gun
8. Tip guard with airless tip
9. Pressure control knob
10. Suction tube
11. Bleed hose
12. Gasoline engine
13. Pusher stem
14. High-pressure hose connection
15. High pressure filter



3.4 TECHNICAL DATA

Gasoline engine, power	
	120cc (Honda)
Fuel capacity	
	0.66 US gal (2.5 l)
Max. operating pressure	
	3300 PSI (22,8 MPa, 228 bar)
Max. volume flow	
	0.75 gal/min (2.8 l/min)
Volume flow at 0.6 MPa (6 bar) with water	
	0.61 gal/min (2.3 l/min)
Max. temperature of the coating material	
	109° F (43 °C)
Material hose connection	
	1/4"-18 NPSM
Max. viscosity	
	20,000 mPas
Max. size of tip with a spray gun	
	0.027" – 0.68 mm
Empty weight	
	192 lbs (87 kg)
Dimensions (L x W x H)	
	65" x 32.5" x 39.5" (165 cm x 82.5 cm x 100.3 cm)
Hydraulic oil filling quantity	
Hydraulics housing	1.15 liter
Gears	0.05 liter
Max. vibration at the spray gun	
	lower than 2.5 m/s ²
Max. sound pressure level	
	74 dB (A)*

* Place of measurement: 1 m distance from unit and 1.60m above floor, 12 MPa (120 bar) operating pressure, reverberant floor

OPERATING TEMPERATURE

This equipment will operate correctly in its intended ambient, at a minimum between +50°F (10°C) and 104°F (+40°C).

RELATIVE HUMIDITY

The equipment will operate correctly within an environment at 50% RH, 104°F (+40°C). Higher RH may be allowed at lower temperatures.

Measures shall be taken by the Purchaser to avoid the harmful effects of occasional condensation.

ALTITUDE

This equipment will operate correctly up to 2100 m (6890 ft) above mean sea level.



Honda service center can add a high-altitude kit if operation at higher elevation is required.

TRANSPORTATION AND STORAGE

This equipment will withstand, or has been protected against, transportation and storage temperatures of -13°F (-25°C) to 131°F (55°C) and for short periods up to 150°F (70°C).

It has been packaged to prevent damage from the effects of normal humidity, vibration and shock.

4 OPERATION



This equipment produces a fluid stream at extremely high pressure. Read and understand the warnings in the Safety Precautions section at the front of this manual before operating this equipment.

4.1 SETUP

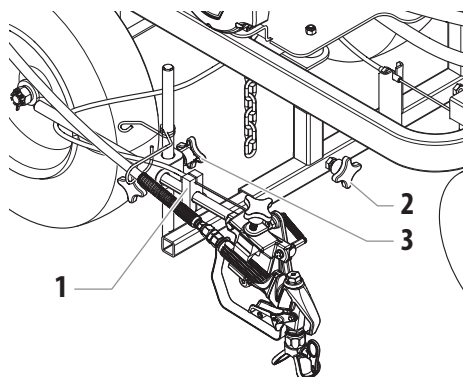
1. Ensure that the siphon hose and the return hose are attached and secure.
2. Position the spray gun (Fig. 4).
 - a. Disengage the trigger cable from the tensioning clamp (1).



Always disengage the trigger cable from the tensioning clamp before making any adjustments to the spray gun position.

- b. Loosen the support bar clamp (2) and slide the gun support bar to the desired horizontal position. The gun should be positioned wide enough so that the wheel will not roll through the spray pattern.
- c. Loosen the gun riser clamp (3) and slide the spray gun to the desired vertical position.
- d. Replace the trigger cable to the tensioning clamp (1).

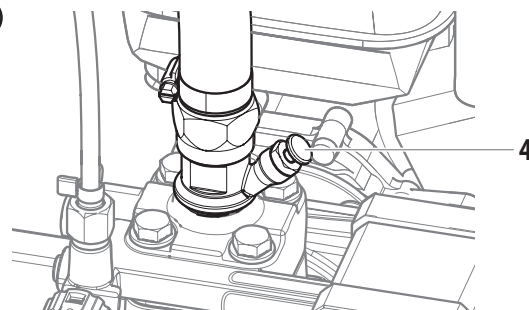
④



The height of the spray gun affects the width of the spray pattern (i.e., the lower the gun, the smaller the line width). Tip size also affects line width.

3. Fully depress the pusher stem (Fig. 5, item 4) to make sure the inlet ball is free.

⑤



4. Check the engine oil level daily before starting the sprayer. The gasoline engine oil level is determined by the engine manufacturer. Refer to the engine manufacturer's service manual supplied with this sprayer.
5. Make sure the sprayer is grounded/earthed. All sprayers are equipped with an grounding/earthing chain. Make sure the chain reaches all the way to the ground. Check your local electrical regulations for detailed grounding/earthing instructions.



Proper grounding/earthing is important. The passage of some materials through the nylon fluid hose will build up a static electric charge, which if discharged, could ignite solvent vapors present and create an explosion.

6. Strain all paints with a nylon strainer to ensure trouble free operation and freedom from frequent cleaning of the suction filter and gun filter.
7. Make sure the spray area is well ventilated to prevent hazardous operation with volatile solvents or exhaust fumes.

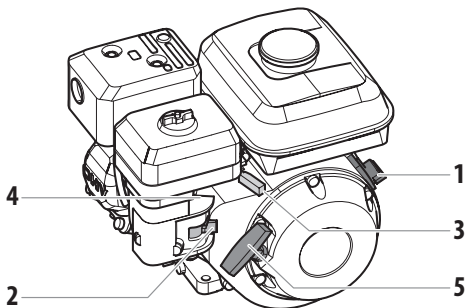
4.2 STARTING THE ENGINE



Follow these instructions whenever prompted in this manual to start the engine.

1. Move the fuel valve lever (Fig. 6, item 2) to the open position.
2. Move the throttle lever (3) to its middle point.
3. Move the choke lever (4) to the closed position for a cold engine or to the open position for a warm engine,
4. Turn the engine switch (1) to the ON position, and
5. Pull the starter rope (5) briskly until the engine starts.

⑥



If choke lever (4) was moved to closed position to start the engine, it must be opened again once the engine is running.

4.3 PREPARING A NEW SPRAYER



If this unit is new, it is shipped with test fluid in the fluid section to prevent corrosion during shipment and storage. This fluid must be thoroughly cleaned out of the system with mineral spirits before you begin spraying.



Attention

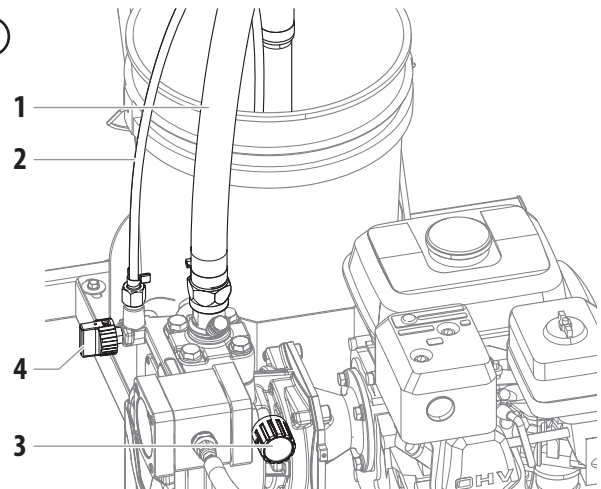
Always keep the trigger lock on the spray gun in the locked position while preparing the system. Refer to the spray gun instruction manual for trigger lock instructions.



Make sure that the spray gun does not have a tip or tip guard installed.

1. Immerse the suction tube (Fig. 7, Item 1) and return hose (2) into a container with mineral spirits.
2. Turn the pressure control knob counterclockwise (3) to minimum pressure.
3. Turn the relief valve (4) to PRIME (↻ circulation).

⑦



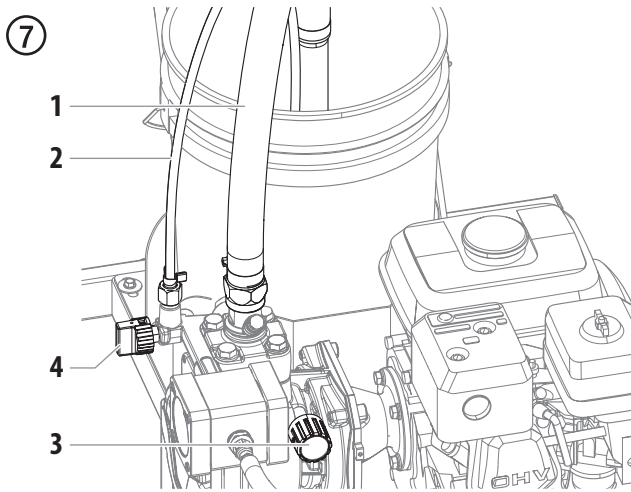
4. Start the engine (refer to section 4.2).
5. Wait until the cleaning agent exudes from the return hose.
6. Turn the relief valve (4) to SPRAY (→ spray).
7. Unlock the spray gun (refer to spray gun manual).
8. Aim the spray gun into an open waste container. Pull the gun trigger on the right handlebar.
9. Spray the cleaning agent from the unit into an open, grounded (earthed) collecting container.

4.4 PREPARING TO PAINT



Make sure that the spray gun does not have a tip or tip guard installed.

1. Immerse the suction tube (Fig. 7, Item 1) and return hose (2) into the coating material container.
2. Turn the pressure control knob counterclockwise (3) to minimum pressure.
3. Turn the relief valve (4) to PRIME (↻ circulation).

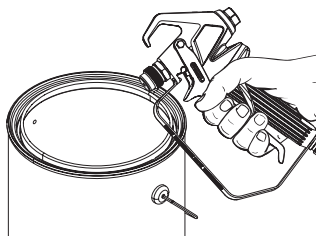


4. Start the engine (refer to section 4.2).
5. Turn the relief valve (4) to SPRAY (→ spray).
6. Aim the spray gun into an open waste container. Pull the gun trigger on the right handlebar.
7. Trigger the spray gun several times and spray into a collecting container until the coating material exits the spray gun without interruption.



Ground/Earth the gun by holding it against the edge of the metal container while flushing. Failure to do so may lead to a static electric discharge, which may cause a fire.

8



8. Lock the gun by pushing the gun trigger lock to the locked position (refer to spray gun manual).
9. Attach tip guard and tip to the gun as instructed by the tip guard or tip manuals.



POSSIBLE INJECTION HAZARD. Do not spray without the tip guard in place. Never trigger the gun unless the tip is in either the spray or the unclog position. Always engage the gun trigger lock before removing, replacing or cleaning tip.

10. Increase the pressure by slowly turning up the pressure control knob.

Check the spray pattern and increase the pressure until the atomization is correct.

Always turn the pressure control knob to the lowest setting with good atomization.

11. The unit is ready to spray.



Turning the pressure up higher than needed to atomize the paint will cause premature tip wear and additional overspray.

4.5 PRESSURE RELIEF PROCEDURE



Be sure to follow the Pressure Relief Procedure when shutting the unit down for any purpose, including servicing or adjusting any part of the spray system, changing or cleaning spray nozzles, or preparing for cleanup.

1. Lock the spray gun by pushing the gun trigger lock to the locked position.
2. Set the pressure to minimum by turning the pressure control knob fully counterclockwise.
3. Turn the relief valve (4) to PRIME (↻ circulation).
4. Move the throttle lever to the slow position.
5. Turn the engine switch to the OFF position.
6. Unlock the gun by pushing the gun trigger lock to the unlocked position (refer to spray gun manual).
7. Hold the metal part of the gun firmly to the side of a metal waste container to ground/earth the gun and avoid a build up of static electricity.
8. Trigger the gun to remove any pressure that may still be in the hose.
9. Lock the gun by pushing the gun trigger lock to the locked position (refer to spray gun manual).

4.6 OPERATING THE FRONT CASTER



The front caster on the cart is designed to track the sprayer in either a straight line or allow free motion.

Standing behind the sprayer, the trigger on the left handle of the cart controls the operation of the front caster.

1. To lock the front caster in the straight line position, squeeze then release the caster trigger and move the sprayer forward.
2. To allow free motion of the front caster, squeeze and hold the caster trigger.

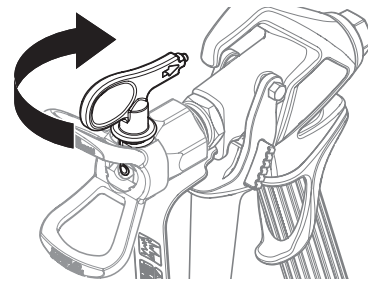
4.7 CLEANING A CLOGGED TIP



If the spray pattern becomes distorted or stops completely while pulling the trigger, perform the steps below.

1. Turn the relief valve to PRIME (↻ circulation).
2. If the tip clogs, rotate the tip handle 180° until the arrow on the handle is facing the opposite of the spray direction and the handle clicks in the reverse position (Fig. 9).
3. Turn the relief valve to SPRAY (➤ spray).

⑨




4. Trigger the gun once so that the pressure can blow the clog out. NEVER use the tip in the reverse position for more than ONE trigger pull at a time. This procedure can be repeated until the tip is free of clogging.





The flow from the spray tip is at very high pressure. Contact with any body part may be dangerous. Do not place finger on gun outlet. Do not point the gun at any person. Never operate the spray gun without the proper tip guard.



4.8 INTERRUPTION OF WORK

	Follow these steps if stopping work for up to 20 hours.
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1. Follow the "Pressure Relief Procedure" found in the Operation section of this manual, section 4.5.
2. If a standard tip is to be cleaned, see Page 24, Section 8.2.
If a non-standard tip is installed, proceed according to the relevant operating manual.
3. Leave the suction tube and return hose immersed in the coating material or immerse it into a corresponding cleaning agent.
4. Cover the coating material with plastic and place unit in a cool, shaded spot to keep material from drying out.

	If fast-drying or two-component coating material is used, ensure that the unit is rinsed with a suitable cleaning agent within the processing time.
	When ready to being spraying again, remove the plastic from the material container and restart the sprayer by following the steps in section 4.4.

4.9 HANDLING THE HIGH-PRESSURE HOSE



	The unit is equipped with a high-pressure hose specially suited for airless pumps.
	Danger of injury through leaking high-pressure hose. Replace any damaged high-pressure hose immediately. Never repair defective high-pressure hoses yourself!

The high-pressure hose is to be handled with care. Avoid sharp bends and folds: the smallest bending radius is about 8" (20 cm).



Do not drive over the high-pressure hose. Protect against sharp objects and edges.

Never pull on the high-pressure hose to move the device.

Make sure that the high-pressure hose cannot twist. This can be avoided by using a Titan spray gun with a swivel joint and a hose system.

	The risk of damage rises with the age of the high-pressure hose. Titan recommends replacing high-pressure hoses after 6 years.
	Use only Titan original-high-pressure hoses in order to ensure functionality, safety and durability.

5 CLEANUP


 <p>Attention</p>	<p>The sprayer, hose, and gun should be cleaned thoroughly after daily use. Failure to do so permits material to build up, seriously affecting the performance of the unit.</p>
	<p>Always spray at minimum pressure with the gun nozzle tip removed when using mineral spirits or any other solvent to clean the sprayer, hose, or gun. Static electricity buildup may result in a fire or explosion in the presence of flammable vapors.</p>

5.1 SPECIAL CLEANUP INSTRUCTIONS FOR USE WITH FLAMMABLE SOLVENTS

- Always flush spray gun preferably outside and at least one hose length from spray pump.
- If collecting flushed solvents in a one gallon metal container, place it into an empty five gallon container, then flush solvents.
- Area must be free of flammable vapors.
- Follow all cleanup instructions.


5.2 CLEANING THE SPRAYER

1. Follow the "Pressure Relief Procedure" found in the Operation section of this manual, section 4.5.
2. Remove the gun tip and tip guard and clean with a brush using the appropriate solvent.
3. Place the siphon tube into a container of the appropriate solvent.


 <p>Attention</p>	<p>Use only compatible solvents when cleaning out oil based enamels, lacquers, coal tar, and epoxies. Check with the fluid manufacturer for the recommended solvent.</p>
--	--

4. Place the bleed hose into a metal waste container.
5. Set the pressure to minimum by turning the pressure control knob fully counterclockwise.
6. Turn the relief valve to PRIME (↻ circulation).
7. Start the engine (refer to section 4.2).
8. Allow the solvent to circulate through the sprayer and flush the paint out of the bleed hose into the metal waste container.


9. Turn the relief valve to SPRAY (→ spray).

	<p>Earth the gun by holding it against the edge of the metal container while flushing. Failure to do so may lead to a static electric discharge, which may cause a fire.</p>
---	--


10. Trigger the gun into the metal waste container until the paint is flushed out of the hose and solvent is coming out of the gun.
11. Continue to trigger the spray gun into the waste container until the solvent coming out of the gun is clean.

	<p>For long-term or cold weather storage, pump mineral spirits through the entire system.</p>
---	---

12. Follow the "Pressure Relief Procedure" found in the Operation section of this manual.
13. Store the sprayer in a clean, dry area.

 <p>Attention</p>	<p>Do not store the sprayer under pressure.</p>
--	---

5.3 CLEANING UNIT FROM OUTSIDE

 <p>Attention</p>	<p>Never spray down the unit with a high-pressure washer or high-pressure steam cleaners. Do not put the high-pressure hose into solvents. Use only a wet cloth to wipe down the outside of the hose.</p>
--	---

Wipe down unit externally with a cloth which has been immersed in a suitable cleaning agent.

5.4 SUCTION FILTER

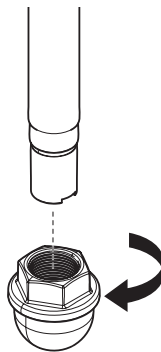


A clean suction filter always guarantees maximum feed quantity, constant spraying pressure and problem-free functioning of the unit.

1. Screw off the filter (Fig. 10) from suction tube.
2. Clean or replace the filter.

Carry out cleaning with a hard brush and an appropriate cleaning agent.

⑩



5.5 CLEANING THE HIGH-PRESSURE FILTER

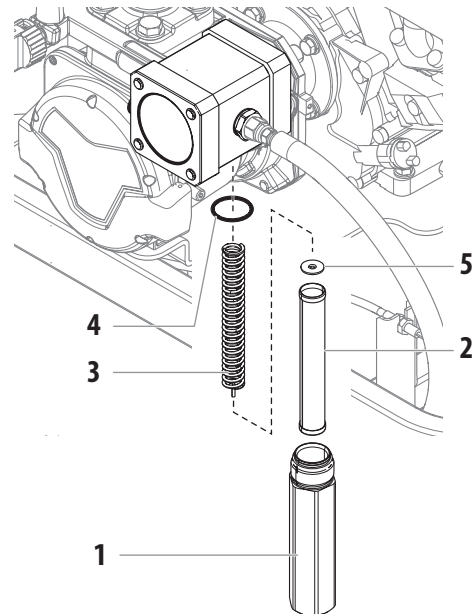


Clean the filter cartridge regularly.

A soiled or clogged high-pressure filter can cause a poor spray pattern or a clogged tip.

1. Follow the "Pressure Relief Procedure" found in the Operation section of this manual, section 4.5.
2. Unscrew the filter housing (Fig. 11, Item 1) with a strap wrench.
3. Pull the filter cartridge (2) from the filter support (3).
4. Clean all the parts with the corresponding cleaning agent. If necessary, replace the filter cartridge.
5. Check the O-ring (4), replace it if necessary.
6. Place the filter insert (5) against the filter support (3). Slide the filter cartridge (2) over the bearing spring.
7. Screw in filter housing (1) and tighten it as far as possible with the strap wrench.

⑪




Attention

The pulsation dampener (6) carries a lifetime warranty.

The pulsation dampener contains nitrogen gas and should never be opened. Tampering with the pulsation dampener (i.e. removing the four bolts on the dampener face) will void the lifetime warranty.

Contact Titan Technical Service at 1-800-526-5362 if you believe the pulsation dampener requires service.

5.6 CLEANING AIRLESS SPRAY GUN

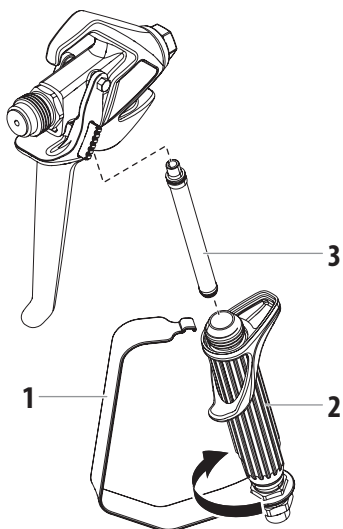
	Clean the spray gun after each use.
--	-------------------------------------

1. Rinse airless spray gun with an appropriate cleaning agent.
2. Clean tip thoroughly with appropriate cleaning agent so that no coating material residue remains.
3. Thoroughly clean the outside of the airless spray gun.

INTAKE FILTER IN AIRLESS SPRAY GUN (FIG. 12)


1. Unclip the top of the trigger guard (1) from the gun head.
2. Using the bottom of the trigger guard as a wrench, loosen and remove the handle assembly (2) from the gun head.
3. Pull the old filter (3) out of the gun head. Clean or replace.
4. Slide the new filter, tapered end first, into the gun head.
5. Thread the handle assembly into the gun head. Tighten with the trigger wrench.
6. Snap the trigger guard back onto the gun head.

12



6 SERVICING

6.1 GENERAL SERVICING

	We strongly recommend having an annual check carried out by technicians for safety reasons. Please observe all the applicable national regulations.
---	---

MINIMUM CHECK BEFORE EVERY STARTUP:



1. Check the high-pressure hose and spray gun connections.

CHECK AT PERIODICAL INTERVALS:

1. Check inlet and outlet valve accordingly for wear. Clean it and replace worn out parts.
2. Check all filter inserts (spray gun, suction system and pump filter), clean and replace if necessary.

6.2 HIGH-PRESSURE HOSE

Inspect the high-pressure hose visually for any notches or bulges, in particular at the transition in the fittings. It must be possible to turn the union nuts freely. A conductivity of less than 1 MΩ must exist across the entire length.

 Attention	Have all the electric tests performed by an Authorized Titan Service Center.
	The risk of damage rises with the age of the high-pressure hose. Titan recommends replacing high-pressure hoses after 6 years.

6.3 BASIC ENGINE MAINTENANCE (GAS ENGINE)

- For detailed engine maintenance and technical specifications refer to the separate gasoline engine manual.
- All service to the engine should be performed by a dealer authorized by the engine manufacturer.
- Use a premium quality motor oil. 10W30 is recommended for general all temperature use. Other viscosities may be required in other climates.
- Use only a (NGK) BR-6HS spark plug. Gap the plug to 0.028 to 0.031 in. (0.7 to 0.8 mm) Always use a spark plug wrench.

DAILY

1. Check engine oil level, and fill as necessary.
2. Check gasoline level, and fill as necessary.



Always follow the fueling procedure outlined earlier in this manual.

FIRST 20 HOURS

- Change engine oil.

EVERY 100 HOURS

- Change engine oil.
- Clean the sediment cup.
- Clean and re-gap the spark plug.
- Clean the spark arrestor.

WEEKLY

- Remove the air filter cover and clean the element. In very dusty environments, check the filter daily. Replace the element as needed. Replacement elements can be purchased from your local engine manufacturer dealer.

ENGINE OPERATION AND SERVICE

- Clean and oil air filter pad on gasoline engine every 25 hours or once weekly. Do not permit the air intake screen around the fly wheel of the gas engine to load up with paint or trash. Clean it regularly. The service life and efficiency of the gas engine model depends upon keeping the gasoline engine running properly. Change the oil in the engine every 100 hours. Failure to observe this may result in engine overheating. Consult the engine manufacturer's service manual provided.
- To conserve fuel, service life, and efficiency of the sprayer, always operate the gasoline engine at the lowest RPM at which it runs smoothly without laboring and delivers the amount required for the particular painting operation. Higher RPM does not produce higher working pressure.
- The warranty on gasoline engines or electric motors is limited to the original manufacturer.

6.4 TROUBLESHOOTING

Type of malfunction	What else?	Possible cause	Measures for eliminating the malfunction
Unit does not start		Engine out of gas	Fill engine with gas
Unit does not suck in	Air bubbles do not exit at the return hose	Inlet valve clogged	Press the inlet valve button until the stop is reached several times by hand
		Inlet/outlet valve soiled / foreign bodies drawn in / worn	Remove the valves and clean then (-> refer to Section 7.2/7.3) / replace worn parts
		Pressure control valve turned down completely	Turn the pressure control valve to the right until the stop is reached
	Air bubbles exit from the return hose	Unit is sucking in outside air	Check: Suction system tightened properly? Cleaning connection (if available) at rigid suction tube screwed tight and not leaking? Inlet valve button leaky? -> Replace wiper and O-ring (-> refer to Section 7.1)
Unit does not generate pressure	Unit has sucked in air	Air in the oil circuit	Bleed the oil circuit in the unit by turning the pressure control valve completely to the left and let it run approx. 2 – 3 min. Then turn the pressure control valve to the right and set the spraying pressure (repeat process several times, if necessary).
	Unit reached pressure, but the pressure collapses during spraying.	Suction filter clogged	Check the suction filter. If necessary, clean/replace
		Paint cannot be worked in this state. Due to its properties the paint clogs the valves (inlet valve) and the delivery rate is too low.	Dilute the paint
	Unit reached pressure, but the pressure collapses during spraying.	Clogged gun filter does not let enough paint pass	Check/clean the (high-pressure filter) gun filter
		Tip clogged	Clean the tip (-> refer to Section 4.6)
	Unit does not generate the max. pressure possible. Paint nevertheless exits at the return hose.	Relief valve defective	Please contact Titan Customer Service

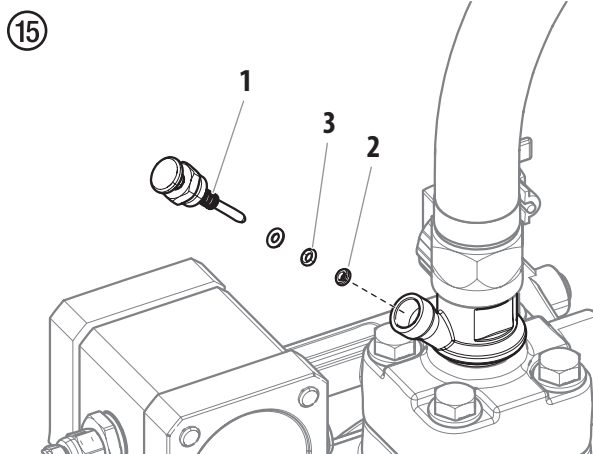
7 REPAIRS



Prior to making any repairs, make sure to perform the Pressure Relief Procedure, section 4.5.

7.1 INLET VALVE PUSHER

1. Use a 17 mm wrench to screw out the inlet valve pusher (Fig. 15, item 1).
2. Replace the wiper (2) and O-ring (3).

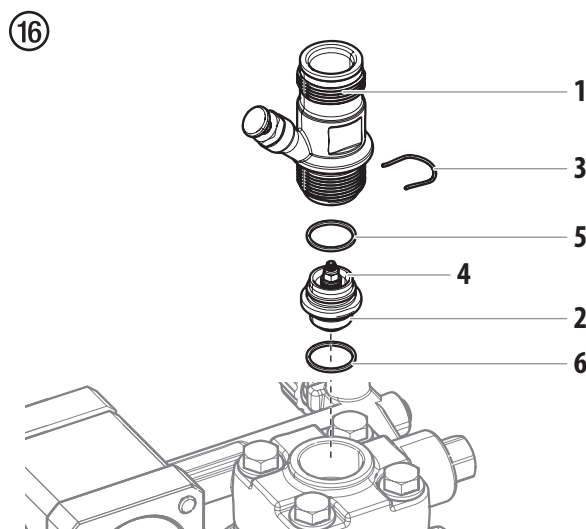


7.2 INLET VALVE

1. Place a 30 mm wrench on the housing (Fig. 16, item 1).
2. Loosen the housing (1) with light blows of a hammer on the end of the wrench.
3. Screw out the housing with the inlet valve (2) from the paint section.
4. Remove the clasp (3) using a screwdriver.
5. Place the 30 mm wrench on the inlet valve (2). Turn out the inlet valve carefully.
6. Clean the valve seat (4) with a cleaning agent and brush (ensure that no brush hairs are left behind).
7. Clean the seals (5, 6) and check for damage. Replace, if necessary.
8. Check all the valve parts for damage. In case of visible wear replace the inlet valve.

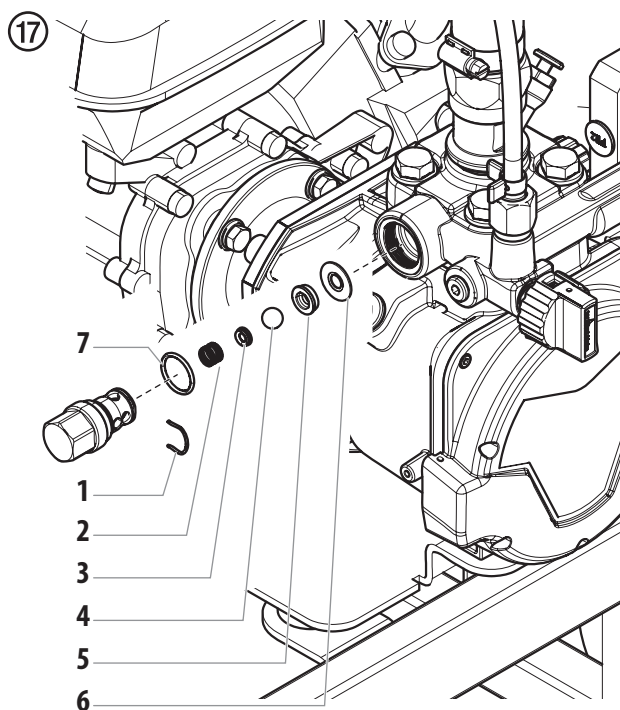
INSTALLATION

1. Insert the inlet valve (2) into the housing (1) and secure with the clasp (3). Ensure that the (black) seal (5) is mounted in the trigger housing.
2. Screw the unit from the housing and the inlet valve into the paint section. The same (black) seal (6) has to be mounted down inside the paint section.
3. Tighten the trigger housing with the 30 mm wrench and tighten with three light blows of the hammer on the end of the wrench. (Corresponds to approx. 90 Nm tightening torque).



7.3 OUTLET VALVE

1. Use a 22 mm wrench to remove the outlet valve from the paint section.
2. Carefully remove the clasp (Fig. 17, pos. 1) using a screwdriver. The compression spring (2) presses ball (4) and valve seat (5) out.
3. Clean or replace the components.
4. Check the O-ring (7) for damage.
5. Check the installation position when mounting the spring support ring (3) (clipped onto spring (2)), outlet valve seat (5) and seal (6), refer to figure.

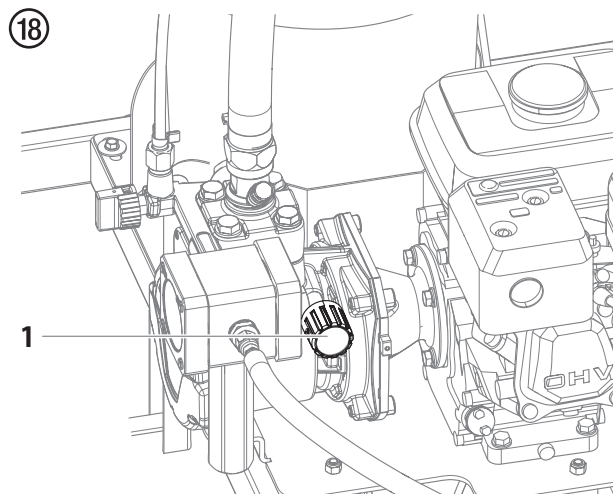


7.4 PRESSURE CONTROL VALVE



Only have the pressure control valve (1) replaced by an Authorized Titan Service Center.

The max. operating pressure has to be reset by an Authorized Titan Service Center.



7.5 TYPICAL WEAR PARTS

Despite the use of high-quality materials the highly abrasive effect of the paints means that wear can occur at the following parts:

INLET VALVE (spare part Order No.: 0344700)

For replacing refer to Section 7.2

(failure becomes noticeable through performance loss and/or poor or no suction)

OUTLET VALVE (spare part Order No.: 0341702)

For replacing refer to Section 7.3

WARRANTY

Titan Tool, Inc., ("Titan") warrants that at the time of delivery to the original purchaser for use ("End User"), the equipment covered by this warranty is free from defects in material and workmanship. With the exception of any special, limited, or extended warranty published by Titan, Titan's obligation under this warranty is limited to replacing or repairing without charge those parts which, to Titan's reasonable satisfaction, are shown to be defective within twelve (12) months after sale to the End User. This warranty applies only when the unit is installed and operated in accordance with the recommendations and instructions of Titan.

This warranty does not apply in the case of damage or wear caused by abrasion, corrosion or misuse, negligence, accident, faulty installation, substitution of non-Titan component parts, or tampering with the unit in a manner to impair normal operation.

Defective parts are to be returned to an authorized Titan sales/service outlet. All transportation charges, including return to the factory, if necessary, are to be borne and prepaid by the End User. Repaired or replaced equipment will be returned to the End User transportation prepaid.

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TITAN MAKES NO WARRANTY AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY TITAN. THOSE ITEMS SOLD, BUT NOT MANUFACTURED BY TITAN (SUCH AS GAS ENGINES, SWITCHES, HOSES, ETC.) ARE SUBJECT TO THE WARRANTY, IF ANY, OF THEIR MANUFACTURER. TITAN WILL PROVIDE THE PURCHASER WITH REASONABLE ASSISTANCE IN MAKING ANY CLAIM FOR BREACH OF THESE WARRANTIES.



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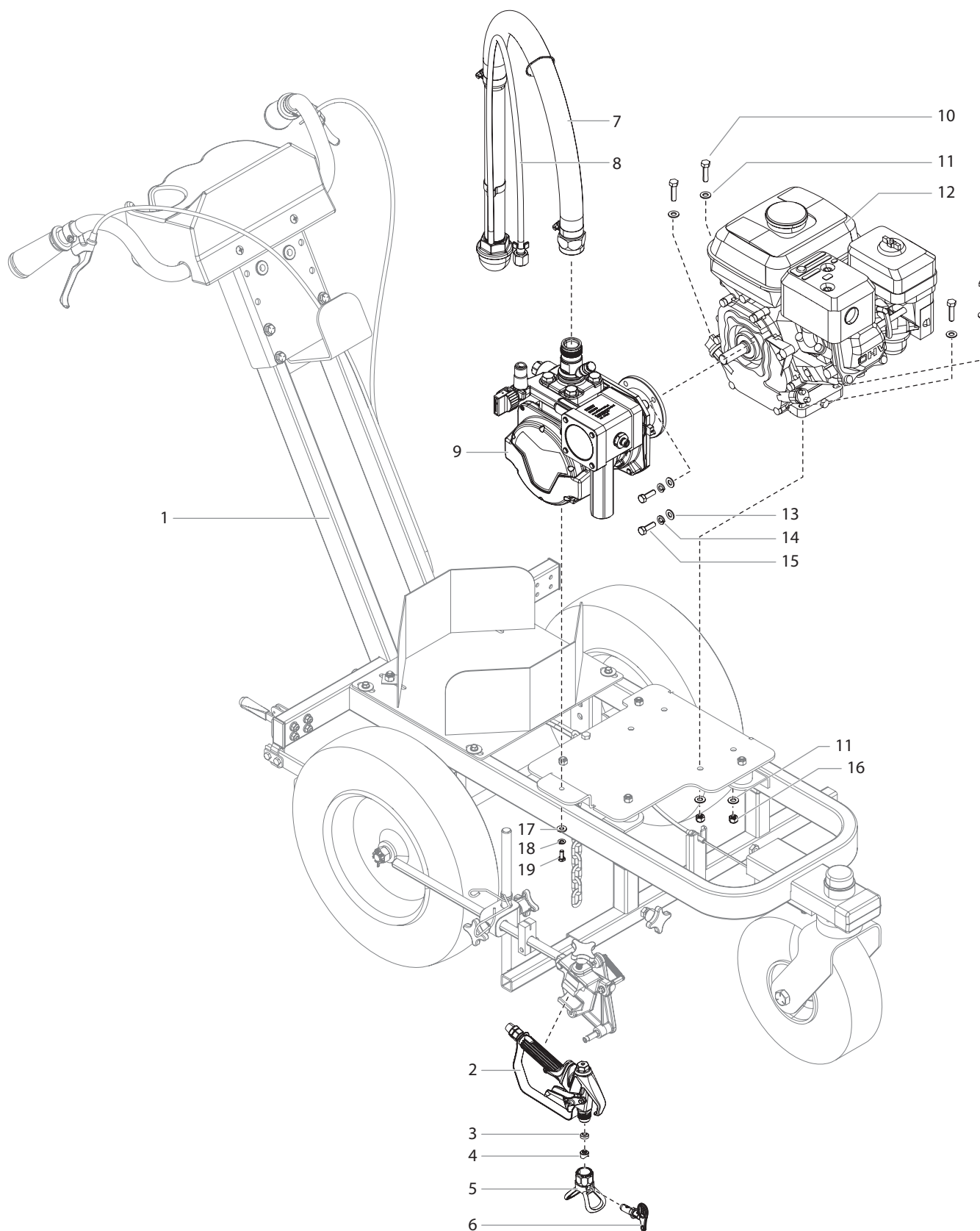
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ILLUSTRATION DES PIÈCES DE RECHANGE

GB MAIN ASSEMBLY

F ENSEMBLE PRINCIPAL

D HAUPTBAUGRUPPE



Pos.	PL3500	Description	Benennung	Description
1*	0537244A	Cart assembly	Wagenbaugruppe	Ensemble de chariot
2	0538014	Gun assembly	Pistoleneinheit	Ensemble de pistolet
3	651-020	Tip seal	Düsenkappe	Joint d'étanchéité
4	0297007	Tip seal retainer	Halter Düsenkappe	Dispositif de retenue du joint d'étanchéité
5	0289122	Tip guard assembly	Düsenschutzvorrichtung	Ensemble de la protection de la buse
6	697-419	Spray tip, 419	Spritzdüse, 419	Chapeau d'air, 419
7*	-----	Siphon assembly	Siphonbaugruppe	Ensemble de siphon
8	0537246A	Bleed hose assembly	Entlüftungsschlauchbaugruppe	Ensemble de tuyau de purge
9*	-----	Pump assembly	Pumpenbaugruppe	Ensemble de pompe
10	860-552	Screw (4)	Schraube (4)	Vis (4)
11	756-088	Washer (8)	Scheibe (8)	Rondelle (8)
12	980-332	Gas engine, Honda, 4.0 Hp	Benzinmotor, Honda, 4.0 PS	Moteur à essence, Honda, 4.0 HP
13	756-088	Washer (4)	Scheibe (4)	Rondelle (4)
14	860-002	Lock washer (4)	Sicherungsscheibe (4)	Rondelle Grower (4)
15	0509538	Screw (4)	Schraube (4)	Vis (4)
16	9811122	Nut (4)	Mutter (4)	Écrou (4)
17	770-601	Washer	Scheibe	Rondelle
18	858-002	Lock washer	Sicherungsscheibe	Rondelle Grower
19	9805459	Screw	Schraube	Vis

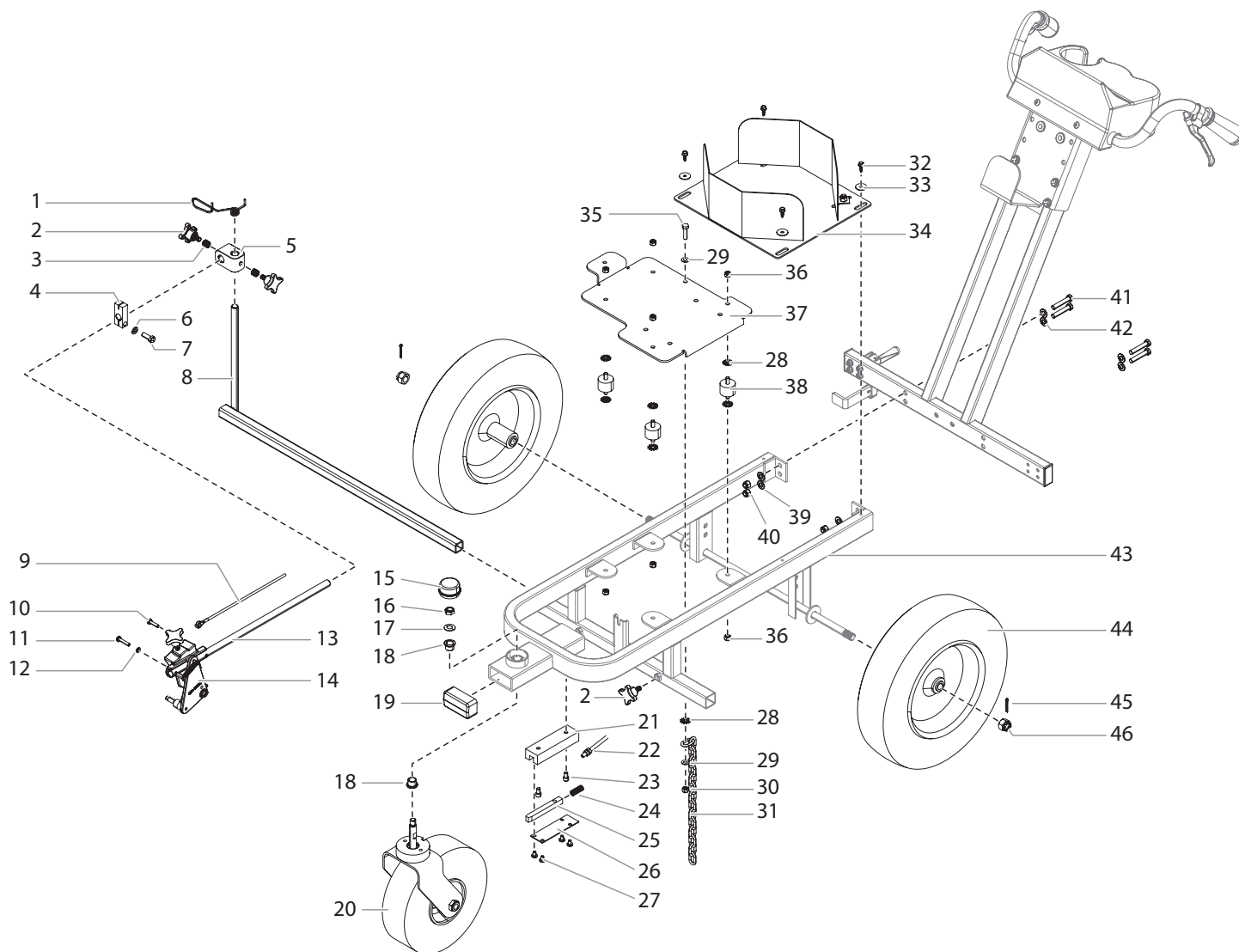
* See separate listing / Siehe separate Auflistung / voir la liste de pièces distincte

ILLUSTRATION DES PIÈCES DE RECHANGE

GB CART ASSEMBLY I

D WAGENBAUGRUPPE I

F ENSEMBLE DE CHARIOT I



Pos.	PL3500	Description	Benennung	Description
1	424-288	Cable guide	Kabelführung	Guide du câble
2	0290349	Clamping knob (3)	Klemmungsknopf (3)	Bouton de serrage (3)
3	0290350	Spring (2)	Feder (2)	Ressort (2)
4	424-226	Cable mounting clamp	Kabelmontageklammer	Collier de fixation du câble
5	0290899	Clamp body	Klemmenbaugruppe	Collier
6	0509292	Lock washer	Federscheibe	Rondelle de blocage
7	862-436	Screw	Schraube	Vis
8	0290167A	Gun riser weldment	Seitenrohrschweissteil	Ensemble soudé du tube glissant
9	0537518	Gun cable	Spritzpistolenkabel	Câble du pistolet
10	858-636	Screw	Schraube	Vis

Pos.	PL3500	Description	Benennung	Description
11	858-002	Lock washer (2)	Federscheibe (2)	Rondelle de blocage (2)
12	9805456	Screw	Schraube	Vis
13	0290327	Support arm	Stützarm	Bras de support
14*	0290381	Gun holder assembly	Baugruppe Pistolenhalter	Ensemble de support à pistolet
15	779-086	Dust cap	Staubdeckel	Protection contre les poussières
16	759-063	Nut	Mutter	Écrou
17	759-514	Spring washer	Federscheibe	Rondelle de ressort
18	759-430	Bushing (2)	Buchse (2)	Bague (2)
19	0290063	End cap	Abschlusskappe	Bouchon d'extrémité
20	0290143A	Wheel assembly	Sprüherbaugruppe	Assemblage de la roulette
21	0290897	Guide block	Böckchen	Dispositif de guidage
22	0537542	Wheel lock cable	Feststellbremskabel	Câble de blocage de roue
23	9805455	Socket screw (2)	Inbusschraube (2)	Vis creuse (2)
24	756-087	Lock spring	Feststellfeder	Ressort de blocage
25	0290898	Caster lock pin	Sprüher Arretierbolzen	Goupille d'arrêt de la roulette
26	0290896	Block cover	Verschlusskappe	Couvercle de blocage
27	0509219	Screw (4)	Schraube (4)	Vis (4)
28	9822639	Star washer (9)	Klemmscheibe (9)	Rondelle en étoile (9)
29	756-088	Washer (2)	Scheibe (2)	Rondelle (2)
30	9811122	Nut	Mutter	Écrou
31	0537919	Grounding chain	Erdungskette	Chaîne de mise à la terre
32	9805460	Screw (4)	Schraube (4)	Vis (4)
33	770-223	Washer (4)	Scheibe (4)	Rondelle (2)
34	0290697A	Bucket holder	Eimerhalter	Porte-godet
35	860-544	Screw	Schraube	Vis
36	9811122	Nut (8)	Mutter (8)	Écrou (8)
37	0290151A	Plate	Platte	Plaque
38	0537516	Vibration isolator (4)	Schwingungsdämpfer (4)	Amortisseur de vibration (4)
39	0509285	Flat washer (4)	Flache Unterlegscheibe (4)	Rondelle plate (4)
40	862-410	Lock nut (4)	Stellmutter (4)	Écrou de blocage (4)
41	9805477	Screw (4)	Schraube (4)	Vis (4)
42	0509285	Flat washer (4)	Flache Unterlegscheibe (4)	Rondelle plate (4)
43	0290096A	Frame	Rahmen	Châssis
44	759-216A	Rear wheel (2)	Hinterradl (2)	Roue arrière (2)
45	756-079	Cotter pin (2)	Spint (2)	Clavette (2)
46	756-078	Castle nut (2)	Kronenmutter (2)	Écrou à créneaux (2)

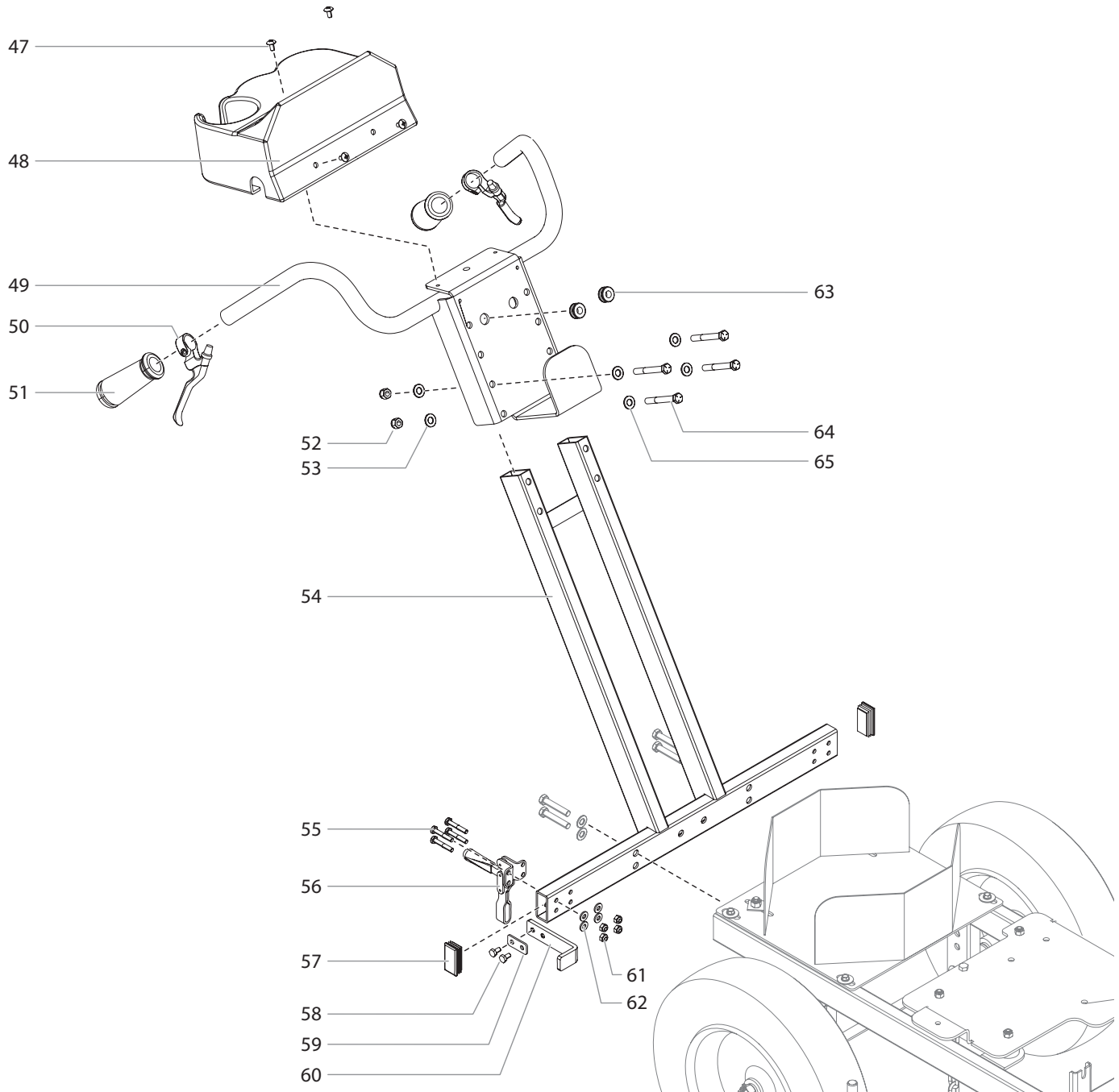
* See separate listing / Siehe separate Auflistung / voir la liste de pièces distincte

ILLUSTRATION DES PIÈCES DE RECHANGE

GB CART ASSEMBLY II

D WAGENBAUGRUPPE II

F ENSEMBLE DE CHARIOT II

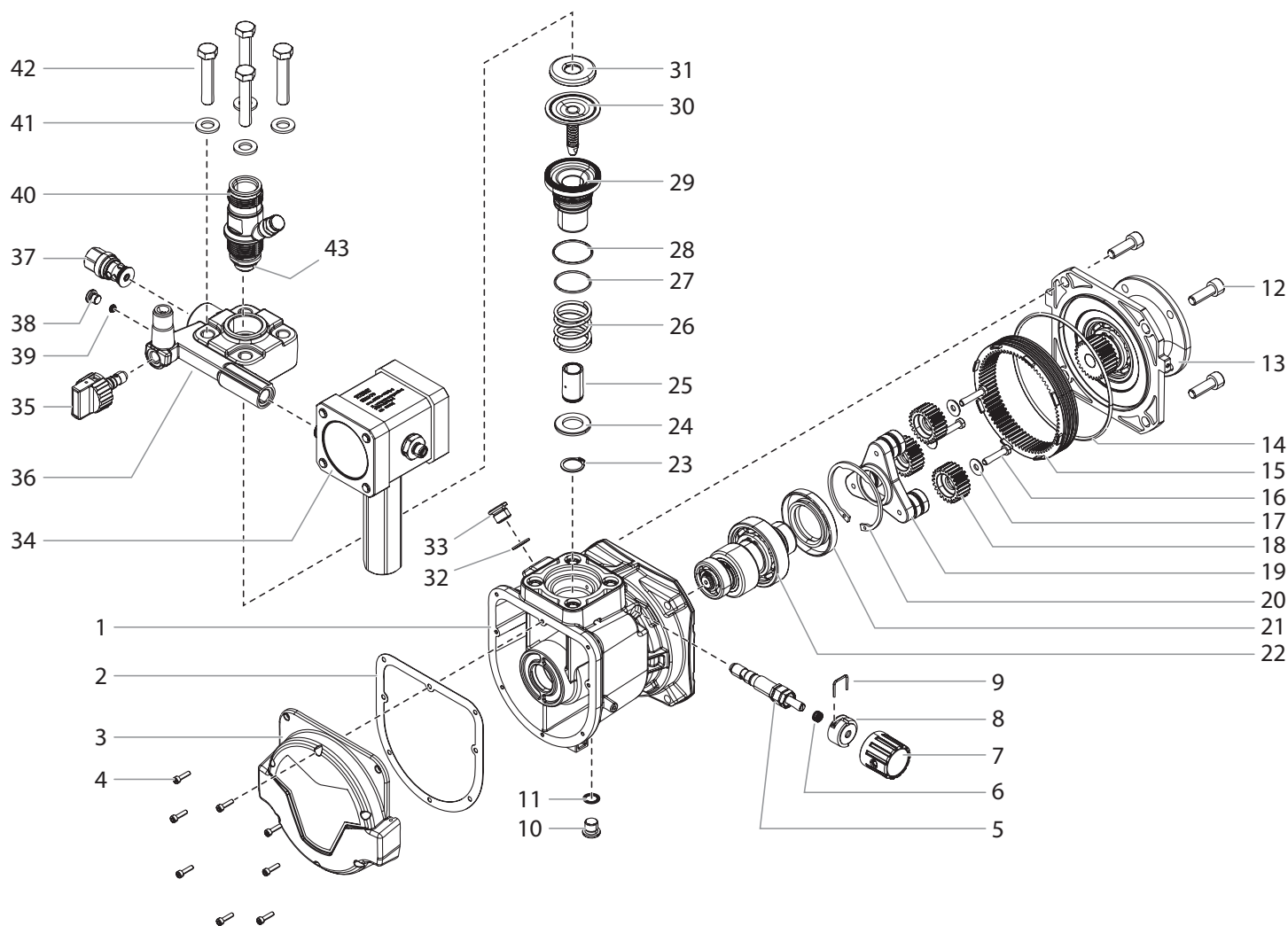


Pos.	PL3500	Description	Benennung	Description
47	9805459	Screw (4)	Schraube (4)	Vis (4)
48	0290161A	Dashboard	Instrumententafel	Tableau de bord
49	0537241	Handlebar weldment	Schweißkonstruktion Lenker	Assemblage soudé du guidon
50	759-215	Trigger lever (2)	Triggerhebel (2)	Levier de la détente (2)
51	424-245	Grip (2)	Griff (2)	Poignée (2)
52	862-410	Lock nut (4)	Stellmutter (4)	Écrou de blocage (4)
53	0509285	Flat washer (4)	Flache Unterlegscheibe (4)	Rondelle plate (4)
54	0290097	Handle assembly	Lenkstangenbaugruppe	Assemblage de la poignée
55	9805477	Screw (4)	Schraube (4)	Vis (4)
56	0290684	Brake clamp	Bremsenklemme	Collier du frein
57	779-121	Plastic plug (2)	Plastikstöpsel (2)	Fiche en plastique (2)
58	858-625	Screw (2)	Schraube (2)	Vis (2)
59	0537528	Brake plate	Bremsplatte	Plaque de freins
60	0537522	Brake pad	Bremsklotz	Plaquette de frein
61	862-410	Lock nut (4)	Stellmutter (4)	Écrou de blocage (4)
62	770-601	Flat washer (4)	Flache Unterlegscheibe (4)	Rondelle plate (4)
63	800-036	Grommet (2)	Gummidichtung (2)	Passe-fil (2)
64	9805441	Screw (4)	Schraube (4)	Vis (4)
65	0509285	Flat washer (4)	Flache Unterlegscheibe (4)	Rondelle plate (4)

ILLUSTRATION DES PIÈCES DE RECHANGE

GB PUMP ASSEMBLY
F ENSEMBLE DE POMPE

D PUMPENBAUGRUPPE



Pos.	PL3500	Description	Benennung	Description
1	2354418	Pump manifold	Pumpenverteiler	Collecteur de pompe
2	2359781	Manifold gasket	Dichtung Verteiler	Joint de collecteur
3	2354707	Front cover	Vordere Abdeckung	Couvercle avant
4	9900308	Screw (8)	Schraube (8)	Vis (8)
5	340222	Regulator assembly	Reglerbaugruppe	Ensemble de régulateur
6	0010861	Pressure spring	Druckfeder	Ressort de pression
7	341219	Pressure control knob	Druckregler	Bouton de commande de pression
8	0010859	Stop sleeve	Anschlaghülse	Manchon d'arrêt
9	0010858	Retaining clip	Klemme	Pince
10	9904307	Plug	Verschluss	Bouchon

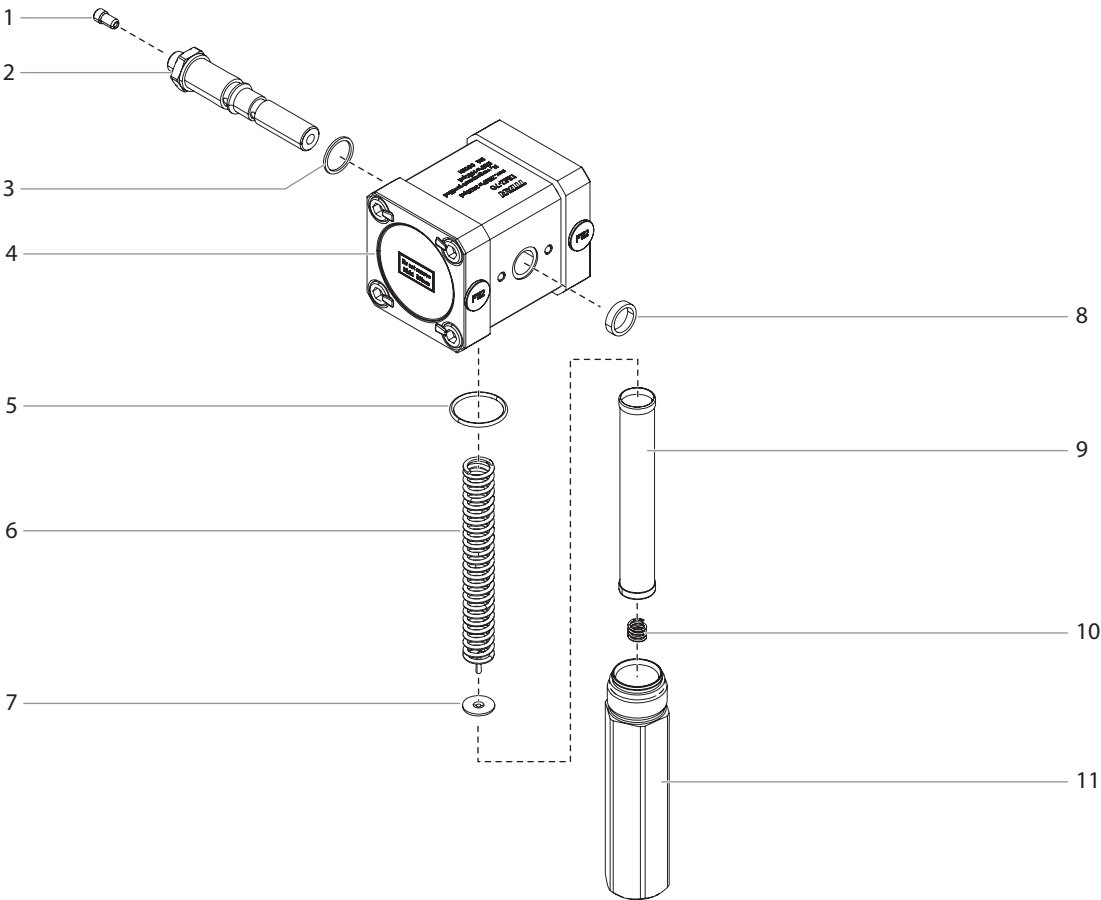
Pos.	PL3500	Description	Benennung	Description
11	9970210	Seal	Dichtung	Joint d'étanchéité
12	9900301	Screw (4)	Schraube (4)	Vis (4)
13	2360991	Flange assembly	Flansch	Ensemble de collet
14	2337102	O-ring	O-Ring	Joint torique
15	2334008	Gear ring	Zahnkranz	Couronne
16	9902101	Screw (3)	Schraube (3)	Vis (3)
17	9920304	Washer (3)	Scheibe (3)	Rondelle (3)
18	2343682	Planetary gear set (set of 3)	Planetengetriebe (3er-Satz)	Ensemble d'engrenages planétaires (ensemble de 3)
19	2333995	Carrier plate	Trägerplatte	Plaque-support
20	3056464	Retaining ring	Haltering	Bague de retenue
21	9970532	Shaft sealing ring	Wellendichtring	Joint d'étanchéité de l'arbre
22	2333998	Crankshaft assembly	Kurbelwellenbaugruppe	Ensemble de vilebrequin
23	2337078	Retaining ring	Haltering	Bague de retenue
24	3061423	Washer	Scheibe	Rondelle
25	2333996	Piston	Kolben	Piston
26	2337076	Compression spring	Druckfeder	Ressort de compression
27	2337113	O-ring	O-Ring	Joint torique
28	2337112	O-ring	O-Ring	Joint torique
29	2336971	Pressure vessel	Druckbehälter	Réservoir à pression
30	2342949	Diaphragm assembly	Membranbaugruppe	Ensemble de diaphragme
31*	340472	Inlet	Einlass	Orifice d'entrée
32	9970103	Seal	Dichtung	Joint d'étanchéité
33	9904302	Plug	Verschluss	Bouchon
34*	2360674	Filter assembly	Filterbaugruppe	Ensemble de filtre
35	0169248	Relief valve assembly	Überdruckventilbaugruppe	Ensemble de soupape de sûreté
36	2334010	Pump head assembly	Pumpenkopfbaugruppe	Ensemble de tête de pompe
37	2342946	Outlet valve assembly	Auslassventilbaugruppe	Ensemble de soupape de refoulement
38	9904306	Plug	Verschluss	Bouchon
39	9970218	Seal	Dichtung	Joint d'étanchéité
40*	2334402	Pusher stem assembly	Kolbenbaugruppe	Ensemble de tige de poussée
41	9920134	Washer (4)	Scheibe (4)	Rondelle (4)
42	9900217	Screw (4)	Schraube (4)	Vis (4)
43	0344700	Inlet valve	Ventilgehäuse	Compartiment des soupapes
	0537903	Valve repair kit (includes items 37 and 43)	Ventilreparatursatz (enthält Pos. 37 und 43)	Trousse de réparation de soupape (comprend les articles 37 et 43)
	0537904	Diaphragm kit (includes items 30-31)	Membrankappe (enthält Pos. 30-31)	Trousse de diaphragme (comprend les articles 30-31)

* See separate listing / Siehe separate Auflistung / voir la liste de pièces distincte

ILLUSTRATION DES PIÈCES DE RECHANGE

GB HIGH PRESSURE FILTER
F FILTRE À HAUTE PRESSION

D HOCHDRUCKFILTER

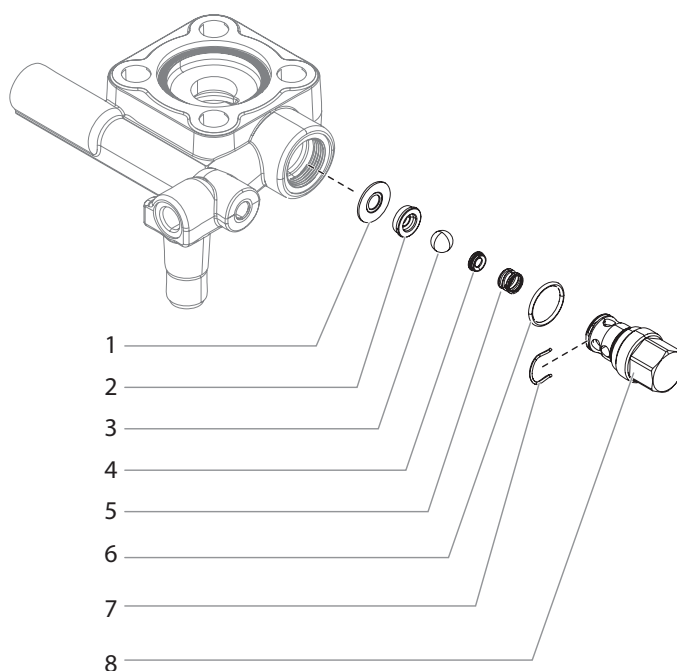


Pos.	PL3500	Description	Benennung	Description
1	2365157	Orifice	Öffnung	Orifice
2	2360658	Fitting	Fitting	Raccord
3	9970110	Washer	Scheibe	Rondelle
4	2360674	Pulsation dampener (includes items 1-10)	Pulsationsdämpfer (beinhaltet Pos. 1-10)	Amortisseur de pulsations (inclut les articles 1 à 10)
5	9974027	O-ring	O-Ring	Joint torique
6	702-251	Filter support spring	Filterstützfeder	Ressort de support du filtre
7	757-105	Filter insert	Filtereinsatz	Élément filtrant
8	0097304	Washer	Scheibe	Rondelle
9	730-067	Filter support	Filterträger	Support du filtre
10	9994245	Spring	Feder	Ressort
11	0097302	Filter housing	Filtergehäuse	Boîtier du filtre

GB OUTLET VALVE ASSEMBLY

D AUSLASSVENTILBAUGRUPPE

F ENSEMBLE DE SOUPAPE DE REFOULEMENT

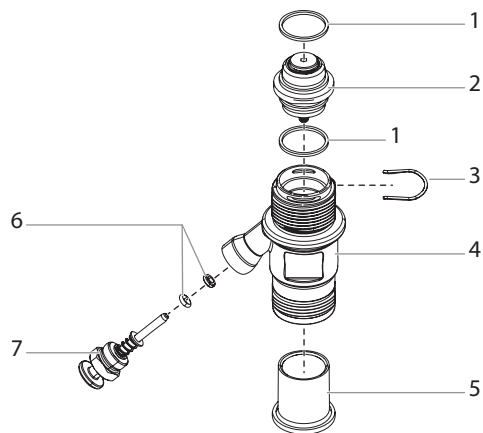


Pos.	PL3500	Description	Benennung	Description
1	341347	Seal	Dichtung	Joint d'étanchéité
2	341327	Outlet valve seat	Auslassventilsitz	Siège de soupape de sortie
3	9941501	Outlet valve ball	Auslassventilkugel	Bille de soupape de sortie
4	253405	Spring support ring	Federaufnahmering	Bague de soutien du support
5	341326	Compression spring	Druckfeder	Ressort de compression
6	9971470	O-ring	O-Ring	Joint torique
7	0341328	Clip	Schelle	Clip
8	-----	Outlet valve housing	Auslassventilgehäuse	Boîtier de la soupape de sortie
	2342946	Outlet valve assembly (includes items 1-8)	Auslassventilbaugruppe (beinhaltet Pos. 1-8)	Ensemble de soupape de refoulement (inclut les articles 1 à 8)

ILLUSTRATION DES PIÈCES DE RECHANGE

GB **PUSHER STEM ASSEMBLY**
F **ENSEMBLE DE TIGE DE POUSSÉE**

D **KOLBENBAUGRUPPE**

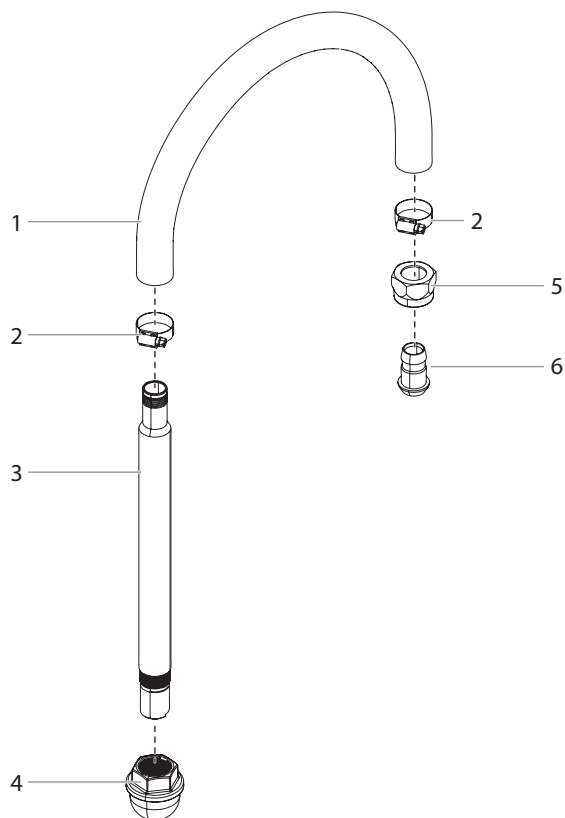


Pos.	PL3500	Description	Benennung	Description
1	341331	Seal (2)	Dichtung (2)	Joint d'étanchéité (2)
2	0344700	Inlet valve	Ventilgehäuse	Compartiment des soupapes
3	341336	Clip	Schelle	Agrafe
4	2334383	Inlet housing	Einlassgehäuse	Carter d'entrée
5	234339	Inlet	Einlass	Orifice d'entrée
6	-----	O-ring (2)	O-Ring (2)	Joint torique (2)
7	2337033	Inlet valve pusher assembly (includes item 6)	Baugruppe Einlassventilkolben (beinhaltet Pos. 6)	Ensemble de poussoir de la soupape d'admission (inclut l'article 6)

GB SIPHON HOSE ASSEMBLY
F ASSEMBLAGE DU TUYAU DE SIPHON

D SYPHONSCHLAUCHBAUGRUPPE

P/N 0537242A



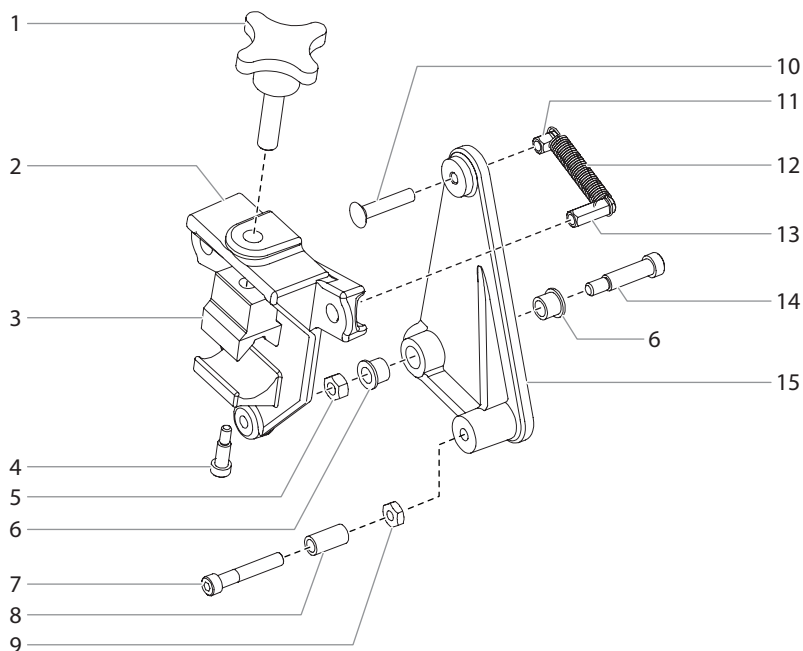
Pos.	PL3500	Description	Benennung	Description
1	0537920	Siphon hose	Siphonschlauch	Tuyau-siphon
2	103-679	Clamp (2)	Schelle (2)	Clamp (2)
3	0537512A	Down tube	Unterrohr	Tube diagonal
4	710-046	Inlet screen	Einlasssieb	Crépine d'entrée
5	253426	Suction set adapter	Siphonschlauch-Adapter	Adaptateur de tuyau-siphon
6	0034602	Adapter	Adapter	Adaptateur

ILLUSTRATION DES PIÈCES DE RECHANGE

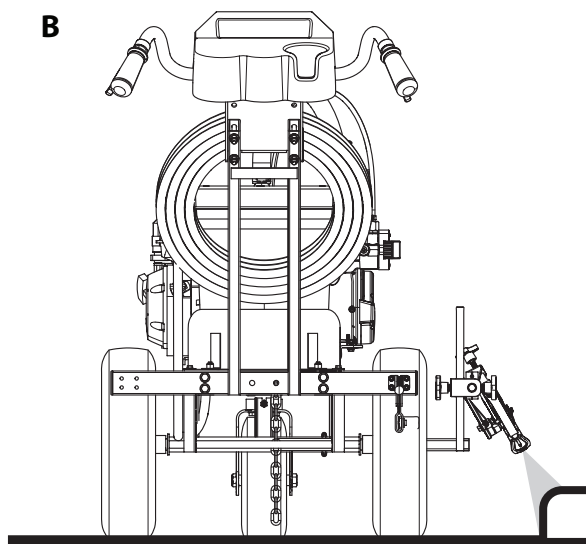
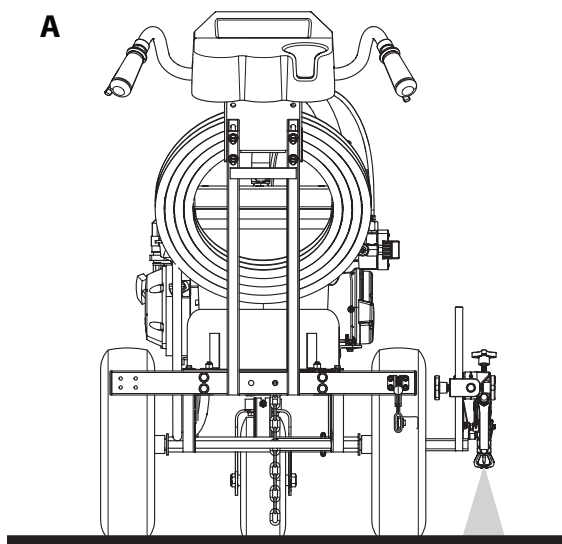
GB GUN HOLDER ASSEMBLY

D BAUGRUPPE PISTOLENHALTER

F ENSEMBLE DE SUPPORT À PISTOLET



Pos.	PL3500	Description	Benennung	Description
1	756-034	Clamping knob	Klemmungsknopf	Bouton de serrage
2	424-201	Gun holder	Spritzpistolenhalter	Support du pistolet
3	759-316	Clamp block	Klemmblock	Bloc de blocage
4	756-037	Shoulder screw	Schraube	Vis à épaulement
5	858-601	Jam nut	Blockierungsmutter	Contre-écrou
6	424-248	Flange bearing (2)	Flanschlager (2)	Palier applique (2)
7	858-653	Shoulder screw	Schraube	Vis à épaulement
8	424-249	Sleeve bearing	Gleitlager	Palier applique
9	858-603	Jam nut	Blockierungsmutter	Contre-écrou
10	703-079	Screw	Schraube	Vis
11	759-056	Spring holder (short)	Federhalter (kurz)	Support de ressort (court)
12	0509781	Return spring	Rückholfeder	Ressort de rappel
13	759-057	Spring holder (long)	Federhalter (lang)	Support de ressort (long)
14	860-936	Shoulder screw	Schraube	Vis à épaulement
15	424-202	Lever	Hebel	Levier

GB SPRAY GUN POSITIONS
F POSITIONS DU PISTOLET DE PULVÉRISATION
D POSITIONEN DER SPITZPISTOLE


A	Single line	Einzellinie	Ligne simple
B	One gun curb	Kante mit einer Pistole	Bordure à un pistolet

GB TR-1 STRIPING TIP CHART
D TABLEAU DE BUSE DE RAYAGE TR-1
F TR-1 STREIFENDÜSENTABELLE

#	Width Linienbreite Largeur de ligne	Orifice Oeffnungs- grösse Orifice	Common Uses	Gebräuchliche Anwendungen	Utilisations habituelles
			Stencils & Athletic Courts	Schablonen & Sportplätze	Modèles et terrains de sports
697-213	2" (51 mm)	.013" (.33 mm)	Light film (use 100 mesh filter)	Leichter Belag (Verwenden Sie Filterfeinheit 100)	Film léger (utiliser un filtre à tamis 100)
697-413	4" (102 mm)	.013" (.33 mm)	Light film (use 100 mesh filter)	Leichter Belag Verwenden Sie Filterfeinheit 100)	Film léger (utiliser un filtre à tamis 100)
697-215	2" (51 mm)	.015" (.38 mm)	Alkyd only, light film	Nur Alkyd, Leichter Belag	Alkyd uniquement, Film léger
697-415	4" (102 mm)	.015" (.38 mm)	Light film	Leichter Belag	Film léger
697-615	6" (152 mm)	.015" (.38 mm)	Light film	Leichter Belag	Film léger
697-217	2" (51 mm)	.017" (.43 mm)	Alkyd only, heavy film	Nur Alkyd, Schwerer Belag	Alkyd uniquement, Film épais
			Most traffic paints	Meiste Verkehrsfarben	La plupart des signalisations sur route
697-417	4" (102 mm)	.017" (.43 mm)	Medium film	Mittelstarker Belag	Film moyen
697-617	6" (152 mm)	.017" (.43 mm)	Light film	Leichter Belag	Film léger
697-219	2" (51 mm)	.019" (.48 mm)	Medium film	Mittelstarker Belag	Film moyen
697-419	4" (102 mm)	.019" (.48 mm)	Heavy film	Schwerer Belag	Film épais
697-619	6" (152 mm)	.019" (.48 mm)	Medium film	Mittelstarker Belag	Film moyen
697-421	4" (102 mm)	.021" (.53 mm)	Heavy film	Schwerer Belag	Film épais
697-621	6" (152 mm)	.021" (.53 mm)	Light film	Leichter Belag	Film léger
697-821	8" (203 mm)	.021" (.53 mm)	Light film	Leichter Belag	Film léger
697-423	4" (102 mm)	.023" (.58 mm)	Heavy film	Schwerer Belag	Film épais
697-623	6" (152 mm)	.023" (.58 mm)	Medium film	Mittelstarker Belag	Film moyen
697-823	8" (203 mm)	.023" (.58 mm)	Medium film	Mittelstarker Belag	Film moyen
697-425	4" (102 mm)	.025" (.64 mm)	Very heavy film	Sehr Schwerer Belag	Film très épais
697-625	6" (152 mm)	.025" (.64 mm)	Heavy film	Schwerer Belag	Film épais
697-823	8" (203 mm)	.025" (.64 mm)	Heavy film	Schwerer Belag	Film épais
697-427	4" (102 mm)	.027" (.69 mm)	High speed, light film	Hochgeschwindigkeit, Leichter Belag	Haute vitesse, Film léger
697-627	6" (152 mm)	.027" (.69 mm)	Heavy film	Schwerer Belag	Film épais
697-827	8" (203 mm)	.027" (.69 mm)	Heavy film	Schwerer Belag	Film épais
697-429	4" (102 mm)	.029" (.74 mm)	High speed, medium film	Hochgeschwindigkeit, Mittelstarker Belag	Haute vitesse, Film moyen
697-629	6" (152 mm)	.029" (.74 mm)	High speed, light film	Hochgeschwindigkeit, Leichter Belag	Haute vitesse, Film léger
697-829	8" (203 mm)	.029" (.74 mm)	High speed, light film	Hochgeschwindigkeit, Leichter Belag	Haute vitesse, Film léger
697-431	4" (102 mm)	.031" (.79 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-631	6" (152 mm)	.031" (.79 mm)	High speed, medium film	Hochgeschwindigkeit, Mittelstarker Belag	Haute vitesse, Film moyen
697-831	8" (203 mm)	.031" (.79 mm)	High speed, medium film	Hochgeschwindigkeit, Mittelstarker Belag	Haute vitesse, Film moyen
697-435	4" (102 mm)	.035" (.89 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-635	6" (152 mm)	.035" (.89 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-835	8" (203 mm)	.035" (.89 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
			All traffic paints	Alle Verkehrsfarben	Toutes les peintures pour la signalisation routière
697-439	4" (102 mm)	.039" (.99 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-639	6" (152 mm)	.039" (.99 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-839	8" (203 mm)	.039" (.99 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-443	4" (102 mm)	.043" (1,09 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-643	6" (152 mm)	.043" (1,09 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais
697-843	8" (203 mm)	.043" (1,09 mm)	High speed, heavy film	Hochgeschwindigkeit, Schwerer Belag	Haute vitesse, Film épais

- GB -

Note on disposal:

In observance of the European Directive 2002/96/EC on waste electrical and electronic equipment and implementation in accordance with national law, this product is not to be disposed of together with household waste material but must be recycled in an environmentally friendly way!

Titan or one of our dealers will take back your used Titan waste electrical or electronic equipment and will dispose of it for you in an environmentally friendly way. Please ask your local Titan service centre or dealer for details or contact us direct.



- D -

Entsorgungshinweis:

Gemäß der europäischen Richtlinie 2002/96/EG zur Entsorgung von Elektro-Altgeräten, und deren Umsetzung in nationales Recht, ist dieses Produkt nicht über den Hausmüll zu entsorgen, sondern muss der umweltgerechten Wiederverwertung zugeführt werden!

Ihr Titan-Altgerät wird von uns, bzw. unseren Handelsvertretungen zurückgenommen und für Sie umweltgerecht entsorgt. Wenden Sie sich in diesem Fall an einen unserer Service-Stützpunkte, bzw. Handelsvertretungen oder direkt an uns.



Consignes d'élimination:

Selon la directive européenne 2002/96/CE sur l'élimination des vieux appareils électriques et sa conversion en droit national, ce produit ne peut pas être jeté dans les ordures ménagères, mais est à amener à un point de recyclage en vue d'une élimination dans le respect de l'environnement!



Titan, resp. nos représentations commerciales reprennent votre vieil appareil Titan pour l'éliminer dans le respect de l'environnement. Adressez-vous donc directement à nos points de service resp. représentations commerciales ou directement à nous.



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