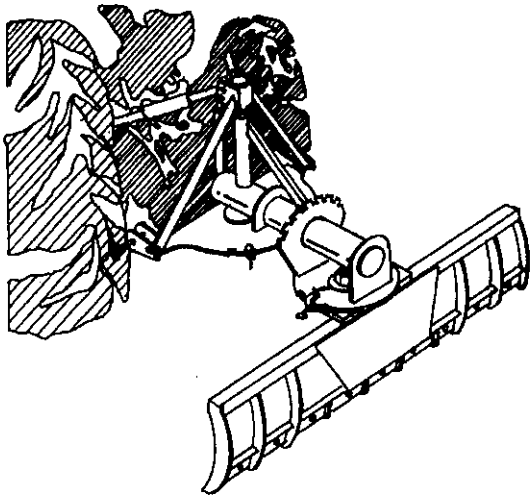


GRADER

HMG

GRADER

HMG210 / HMG270



Serial Number

The Serial and Model Numbers are stamped on the frame of your GRADER.

For future reference record the numbers below. ALWAYS quote them when ordering spareparts.

MODEL No. _____

SERIAL No. _____

DATE PURCHASED _____

We hope you will be happy with your RB Spraytech Bucket HMB210. Treat it well - and it will serve you diligently for many years to come. Should you encounter problems - or have question in respect of road building or work site levelling. Please feel free to contact us or consult our dealers.

Notes :

1) Continuous R&D may result in the technical contents of this Manual not always being identical to the specifications for the latest model delivered.

2) For more details and technical support, consult our web-page :
www.rbspraytech.com

“YOUR KEY TO SMART TECHNOLOGY”



! SAFETY PRECAUTIONS & OPERATING INSTRUCTION !

Before Use

- Ensure operators have read and are familiar with instructions contained in this manual.
- Consult the Tractor Manufacturer's Manual for instructions on mounting implements and safe working methods.
- Ensure the GRADER is sitting on firm level ground.
- Inspect the work area for obstructions which may constitute a hazard.
- Ensure the work area is clear of bystanders.
- Ensure that all bolts and nuts are tightened and that all hitch pins are properly secured before commencement of work.
- Disengage all clutches and shift into neutral prior to starting the tractor engine.

During Use

- Observe all safe driving procedure such as reducing speed on slopes and sharp turns.
- Avoid working on ground where there is a risk of the tractor overturning.
- Do not operate across the face of slopes.
- Be alert for hidden obstructions should an obstruction be struck, stop and check for damage to the GRADER before proceeding.

After Use

- Carry out lubrication and maintenance as detailed in this manual.
- Inspect the GRADER for damage and change the worn out parts before commencing the next session of work.
- Check that all bolts, nuts and fasteners are tight.
- Clean the implement and lubricate all pivot points before storage.



Always

- Wear substantial or safety footwear.
- Avoid loose clothing which may be caught in moving parts.
- Wear earmuffs or earplugs. Prolonged exposure to noise can cause impairment or loss of hearing.
- Wear gloves when handling worn implements or parts with sharp edges.
- Use the implement only for the purposes for which it was designed, tested and in accordance with the instructions contained in this manual.
- Ensure the GRADER is not operated by children or untrained persons.
- Interpret “left” or “right” as the left or right hand of the operator when sitting on the tractor seat and facing forward.

NEVER

- Allow passengers on the tractor or implement when operating.
- Check oil levels whilst the tractor is running.
- Carry out cleaning, lubricating, adjustments or repairs to a mounted implement unless the tractor engine is stopped and the implement firmly supported or lowered to the ground.
- Leave the tractor seat unless the implement is lowered, the gear shift in neutral, the brake applied, the engine stopped and the ignition key removed.

**BE A SAFE OPERATOR
BY THINKING - BEFORE ACTING**



SPECIFICATION OF YOUR GRADERS

Specification	HMG210	HMG270
Tractor HP, recommended	35 and above	
Working width	210 cm	270 cm
Linkage, three-point	Cat 1 / 2	
Weight	330 kg	390 kg
Parking Leg	Yes	
Multiset Locking - Angles	15° - 30° - 45° Left & Right	
- Positions	Offset, Swivel & Tilt	

HMG GRADER is a heavy duty GRADER for rear-mounting onto tractors of minimim 35HP with standard 3 point linkage Cat 1 or Cat 2.

MULTISET

GRADER is designed for off-setting in relation to the tractor ; swivelling through 360 degrees ; and has 11 different locking positions for tilts between 45° left and 45° right.

EASY-LOCK

On the Offset, Swivel and Tilt Quadrants are mounted stoppers which allow locking without the use of tools.

BLADE

The Cutting Blade is replaceable and is made of high grade carbon steel.

PARKING STAND

The Parking Leg is mounted in a socket and has locking for Raised / Travelling position.

MOUNTING OF THE GRADER	
1.	<p>Set the GRADER on level ground or floor area.</p> <p>There are two stoppers on the swivel quadrant and one on the offset quadrant. Check that these stoppers are securely holding the GRADER in the 'straight ahead' position on both swivel and offset quadrant; also check that the tilt quadrant is set level.</p> <p>Those are the positions in which the quadrant must be fixed before unhitching from tractor.</p>
Note:	<p>It is important that adjustments are only made when the GRADER is correctly supported to avoid it swinging round under its own weight from an out of balance position.</p> <p>Ensure that the Parking Leg is secured in its socket in the jacked position which is the reverse of the travelling (working) pos</p>



MOUNTING OF THE GRADER (continued)

2.	<p>Back the Tractor up to the GRADER.</p> <p>Couple tractor to the GRADER in accordance with the tractor manufacturers instruction for fitting a fully mounted three-point linkage GRADER.</p> <p>Ascertain that the tractor's lower link arms and top link are securely attached to the GRADER and the tractor's check chains or sway blocks are tight enough to prevent the GRADER from swinging sideways more than 5.0 cm (2 inches).</p>
3.	<p>Lift the GRADER clear of the ground using the tractor's hydraulic linkage.</p> <p>Remove the R-Clip and locking L-Pin and remove the Parking Leg from its socket in the jacked position.</p> <p>Reverse the Parking Leg into the top of the socket so that it stands up beside the top link mounting. Secure it with the locking L-Pin and R-Pin into the socket.</p>
4.	<p>Lower the GRADER by means of the tractor's hydraulic linkage, then adjust the tractor's top link until the main beam of the GRADER is parallel with the ground.</p>

SETTING OF THE GRADER

1.	<p>With the tractor's engine switched off, power take-off disengaged and handbrake applied in accordance with safety precautions, check the main beam of the GRADER is parallel with the ground.</p> <p>If it is not, then adjust the tractor's top link until the level is correct.</p>
2.	<p>Set the hydraulic control lever in 'POSITION' or 'HEIGHT' control.</p> <p>Do not use in 'DRAUGHT' control.</p>

SWIVELLING OF THE GRADER

1.	<p>Lift the GRADER clear of the ground by means of the tractor's hydraulic linkage.</p>
2.	<p>Using the Cam Lever RH to move the Angle Stopper away from/out of the slot on the right hand side of the swivelling quadrant.</p>
3.	<p>Using the Cam Lever LH to move the Angle Stopper away from/out of the slot on the left hand side of the swivelling quadrant.</p>
4.	<p>KEEPING FINGERS WELL CLEAR OF THE SLOTS IN THE QUADRANTS, turn the Scraper until the required angle is obtained, then put the left hand stopper into the exposed slot, ensuring that the spring holds it firmly.</p> <p>Engage the right hand stopper opposite the left hand stopper, again ensuring that it is firmly held by the spring.</p>



OFFSETTING OF THE GRADER

1.	Lift the GRADER just clear of the ground by means of the tractor's hydraulic linkage. Check the GRADER and tractor are both on level ground. This is important because uneven ground contours could, when the offset retaining stopper is removed, cause the body of the GRADER to swing round under its own weight thus causing an accident.
2.	Remove the retaining stoppers (Offset Stopper LH & RH) from the offset quadrant which is located behind the lower link mountings of the GRADER.
3.	KEEPING FINGERS WELL CLEAR OF THE SLOTS IN THE QUADRANTS, turn the GRADER's Main Frame until the required offset is obtained. Engage the stoppers in the exposed slots, ensuring that they are firmly seated in position.

TILTING OF THE GRADER

When tilting the GRADER, it should be raised by means of the hydraulics, and one end blocked up at the required height before lowering to obtain the required tilt angle.

This tilt angle may be limited by the linkage of the particular tractor.

However, some additional variation of tilt angle can be obtained by adjusting the tractor's linkage levelling box, which is located on one of the lift rods.

1.	First lift GRADER clear of the ground by means of the tractor's linkage.
2.	Remove the Tilting Stoppers from the tilt quadrant which is located directly on top of the Angle Adjuster of the GRADER.
3.	KEEPING FINGERS WELL CLEAR OF THE SLOTS IN THE QUADRANTS, tilt the Scraper to the required angle and engage the Tilting Stopper in the exposed slot, ensuring that it is firmly seated in position.

DISCONNECTION OF THE GRADER

1.	Find a suitable piece of level ground (or floor area) on which to leave the GRADER.
2.	Set the GRADER quadrants as follows :- Swivelling Quadrant - Straight Ahead Offset Quadrants - Straight Ahead Tilting Quadrants - Level



DISCONNECTION OF THE GRADER (continue)	
3.	Check that all five stoppers are securely in position.
4.	Remove the Parking Leg from the top of its socket in the travelling (working) position. Carefully reverse the leg into the base of the socket (jacked position) securing it firmly into position with the locking L-Pin and R-Clip.
5.	Lower the GRADER to the ground and detach it from the tractor link arms and top link.

ALTER ONLY ONE ADJUSTING QUADRANT AT A TIME

OPERATION

The GRADER is primarily designed for use with the tractor travelling forwards, however the Scraper can be angled right round into the reverse position and use for limited dozing, work, such as backfilling trenches.

Only use the blade in the reversed position on loose materials, never on hard, compacted earth.

After roughly levelling the ground, a smooth finish can be obtained more quickly by using the Scraper set in one of the angled positions, rather than in the "straight ahead" position.

The combined use of **TILT** and **OFFSET** quadrants enables the GRADER to be used for working along banks and ditches.

The **OFFSET** quadrant can be used to allow the GRADER to work to one side of the tractor in conditions where an obstacle, such as a hedge or a wall, prevents the tractor getting close enough to the work.

**NEVER USE THE GRADER UNLESS ALL FIVE
RETAINING STOPPERS ARE IN POSITION**



MAINTENANCE

Should any retaining stoppers become lost or damaged, they **MUST** be replaced before the **GRADER** is used.

Replace the Cutting Blade of the GRADER before the Scraper (or mouldboard) to which it is bolted begins to wear away. When replacing the Cutting Blade, always use new bolts and tighten until the bolt heads bite into the Cutting Blade.

Always switch off the tractor engine, disengage power take-off, apply handbrake and remove key in accordance with safety precautions, then take care to block up the GRADER securely, so that it cannot lower the tractors linkage whilst Cutting Blade is being fitted. The same care must be taken when extensions or other tools are being fitted.

Inspect after use and tighten any nuts, bolts or screw which may have become slack.

LUBRICATION

Since regular maintenance, including cleaning and lubrication, is essential to keep your GRADER in perfect working order, the following procedure should be adopted after use.

1. Clean the Scraper (mouldboard). Wipe the Cutting Blade with used engine oil to keep it bright.
2. The Swivel Quadrant is fitted with grease nipple. Use lithium based grease.
3. Immediately after use lubricate with oil all quadrants, stoppers, pins, bolt and nuts to prevent rust forming whilst the GRADER is out of use.
4. If Wheel Assembly is fitted, lubricate the wheel pivot shaft and wheel bearing using a lithium base grease.

USAGE

Some of the many applications of the RB Multiset GRADER:

Land Reclamation

Dirt Road Construction

Road Maintenance

Trench Back-Filling

Site Clearance

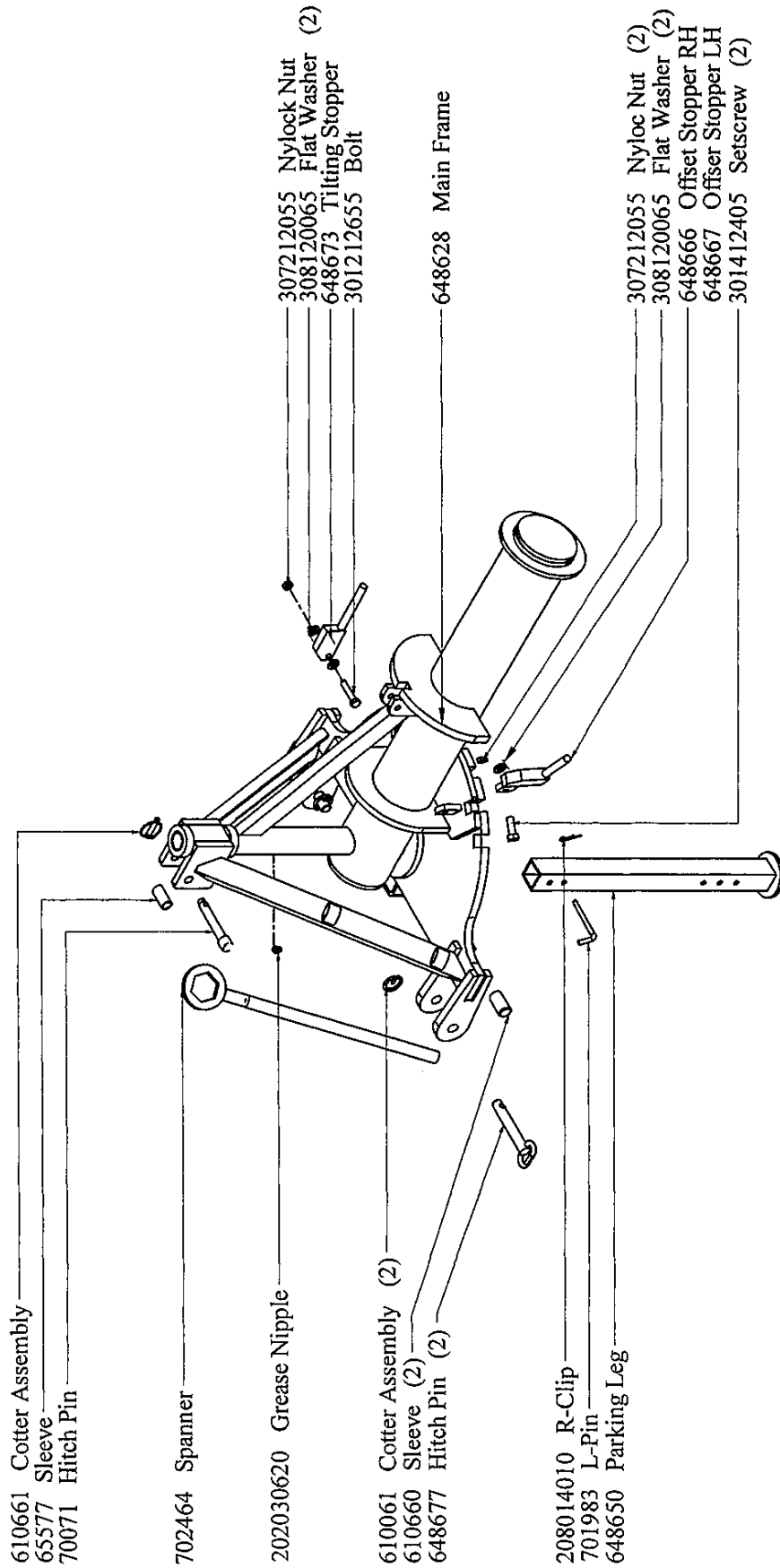
Contouring and Landscaping

Cutting Irrigation Channels

Yard Scraping

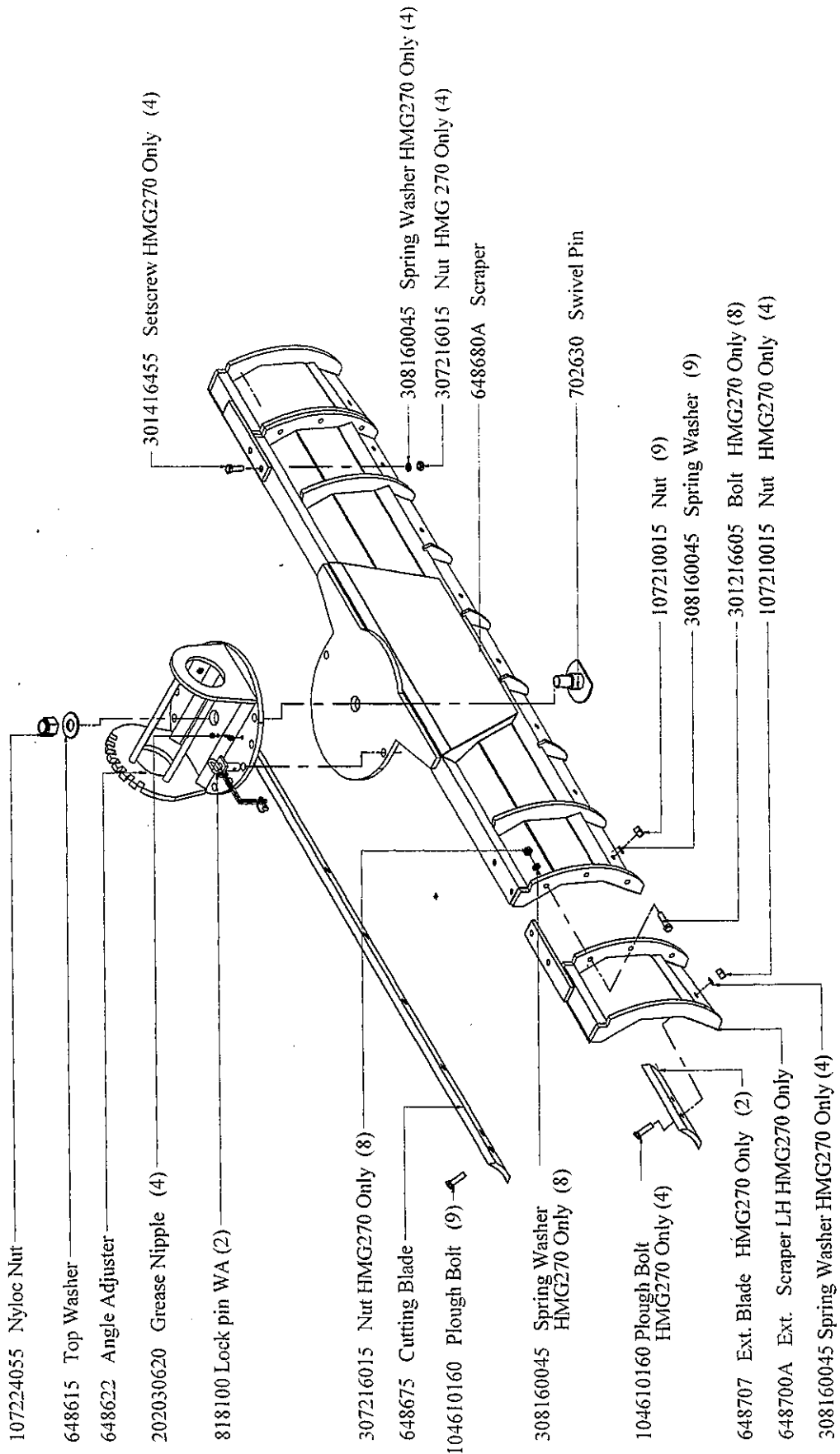


Angle Adjuster & Scraper





Angle Adjuster & Scraper





www.rbspraytech.com

WARRANTY

RB SPRAY TECH welcomes any warranty repair and apologises for any inconvenience caused. See the next page for the statement of the warranty coverage offered by RB SPRAY TECH. The following information will assist your understanding of warranty procedures.

Any authorised RB SPRAY TECH dealer service outlet can perform warranty repairs, however, we recommend that such repairs be carried out by the Dealer from whom you bought the machine.

Most warranty repairs are handled routinely, but sometimes requests for repairs cannot be accepted under warranty. Normal wear and tear is not covered by warranty nor does warranty apply if a machine fails prematurely and that failure can be attributed to abuse or neglect.

Whilst RB SPRAY TECH will abide by its warranty policy under all genuine circumstances, we must emphasise that such can only apply when our equipment has been used in applications for which it was designed and manufactured and that a reasonable degree of care and common sense has been exercised by the operator.

Warranty Repair Site

The warranty provides for repairs to be carried out at the servicing dealer's normal place of business. An owner may elect to have repairs carried out at his own residence but, whilst RB SPRAY TECH will accept the actual repair cost of the failed component(s), the travelling costs will not be covered under warranty.

Items Not Covered By Warranty

The warranty does not allow for the cost of the following items. These are the responsibility of the owner.

- 1) Labour to travel to and from a broken-down machine or for any distance charges.
- 2) Labour premiums that might apply for any repairs that are made outside the dealer's normal business hours.
- 3) Transportation costs of the machine to and from the service outlet.
- 4) Freight costs to get parts to and from the service outlet.
- 5) Telephone and fax calls made by the owner in connection with the warranty repair.

TO PASS SAFETY INFORMATION

The buyer is responsible towards the final user for the safety information shown on the sale documentation, concerning use limit, performances and product features.

VALIDITY AND ACCEPTANCE

The guarantee is valid if the CERTIFICATE OF GUARANTEE is sent, to RB Spraytech Sdn. Bhd., with every part of it filled in,



www.rbspraytech.com

CERTIFICATE OF WARRANTY

The warranty will not be considered valid if this coupon, with every part of it filled in, is not mailed to the following address: Head Office RB Spray Tech Sdn. Bhd. (627487-P), No.1 , Jalan Ikan Mata Duyung,KS10, Kampung Nelayan, Telok Gong, 42000 Pelabuhan Klang,Selangor Darul Ehsan, Malaysia.,or sent by fax to the following number: +603 31341194.

Last name, Name or
NAME OF THE FIRM

ADDRESS

Place PROVINCE ZIP

e.mail (*) telephone (*)

Date of purchase INVOICE N.

MACHINE MOD. MATRICULATION N.

SPRAYHEAD MOD.

Dealer's stamp (compulsory)

(*) NOT COMPULSORY DATA

PRIVACY

Consent for the personal data processing– **PROTECTION OF THE PRIVACY .**

I authorize you to do the processing of my personal data in observance of the law above mentioned, for the indicated purposes, and so that they can be communication to the subjects for the declared purposes.

Date Signature

CUT ALONG THE DOTTED LINE