



DRAPER[®]

2.7 – 4.5 METRE ATV

BOOM SPRAYER

07572



These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

1. TITLE PAGE

1.1 INTRODUCTION

USER MANUAL FOR: 2.7 – 4.5 Metre ATV Boom Sprayer

Stock No: 07572

Part No: BS45M

1.2 REVISION HISTORY

Date first published: August 2011.

First revision date: August 2021.

As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: <http://drapertools.com/manuals>

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1.3 UNDERSTANDING THIS MANUAL'S SAFETY CONTENT

Warning! – Information that draws attention to the risk of injury or death.

Important – Information that draws attention to the risk of damage to the product or surroundings.

1.4 COPYRIGHT © NOTICE

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3. WARRANTY

3.1 WARRANTY

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact

Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England.

Telephone Sales Desk: (023) 8049 4333 or Product Help Line (023) 8049 4344.

A proof of purchase **must** be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty period covering parts and labour is 12 months from the date of purchase except where tools are hired out when the warranty period is 90 days from the date of purchase. This warranty does not apply to any consumable parts, any type of battery or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This warranty applies in lieu of any other warranty expressed or implied and variations of its terms are not authorised.

Your Draper warranty is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the warranty period.

Please note that this warranty is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

4. INTRODUCTION

4.1 SCOPE

This 2.7-4.5m All-Terrain Vehicle (ATV) Boom Sprayer is compatible with Draper 12V DC All-Terrain Vehicle (ATV) Spot/Crop Broadcast Sprayers. Ideal for spraying fertiliser, weed killer, de-icer and ethylene glycol product. Spray width when fully deployed 4.5m.

- The flexible boom arms remove kinking and alleviates breaking of the pressure hose.
- Foldable for access through hedgerows and gates.
- Can be used in conjunction with a trigger operated lance via the twin connectors.

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

4.2 SPECIFICATION

STOCK NO.....	07572
PART NO.....	BS45M
SPRAY NOZZLES.....	4
SPRAY PATTERN/WIDTH.....	4.5M (15FT)
BOOM ARMS WIDTH DEPLOYED.....	2.78M
FOLDED DIMENSIONS.....	1570 X 500 X 500 MM
DIMENSIONS.....	460 X 2780 X 550 MM DEPLOYED
WEIGHT (GROSS).....	8KG

Note: For use in conjunction with Draper ATV/Crop Sprayers (Stock Nos.34674, 34676, or 34677).

Some images in this manual show the ATV/Crop Sprayers and how to connect the two together.

The ATV/Crop Sprayers listed are not supplied as part of this ATV Boom Sprayer.

4.3 HANDLING AND STORAGE

- Care must be taken when handling this product.
 - Dropping this product could have an effect on its accuracy and could also result in personal injury. This product is not a toy and must be respected.
- Environmental conditions can have a detrimental effect on this product if neglected.
 - Exposure to damp air can gradually corrode components.
 - If the product is unprotected from dust and debris, components will become clogged.
 - If not cleaned and maintained correctly or regularly, the machine will not perform at its best.

Always wear appropriate personal protective equipment whilst using, cleaning and servicing the boom sprayer. Store the sprayer in a well ventilated area out of reach of children and away from livestock.

5. HEALTH AND SAFETY INFORMATION

5.1 GENERAL SAFETY INSTRUCTIONS FOR SPRAYERS

Chemical application safety

Warning!

Caution must be used when spraying chemicals to avoid unsafe exposure to humans and the environment.

Heed the warnings below and follow all instructions carefully.

Before spraying

Sprayer prep. ALWAYS inspect and prepare the sprayer before use according to the directions provided in this manual.

Keep sprayer off. Do not turn on power to the sprayer until ready to spray in order to avoid unintentional spray release.

Broadcast nozzle down. Make sure broadcast nozzle is oriented to spray straight down before starting the sprayer. An incorrectly positioned broadcast nozzle may spray chemicals on you or others

Wind speed. NEVER spray when wind speed exceeds 8 KPH in order to minimize spray drift.

Clear area/post. ALWAYS keep the work area clear of people and pets. POST warning notices to restrict access by the public for the period recommended on chemical label.

Operator age. You must be 16 years of age or older to operate this sprayer. Pesticides are especially toxic to children.

During spraying

Over application. DO NOT over apply pesticide. Apply at a rate recommended by chemical manufacturer. Excess pesticide can be dangerous to humans, damage desirable plants, and contaminate soil and water sources.

Never point gun. NEVER point the spray gun at people or animals.

Children/pets. ALWAYS exercise extra caution when spraying near areas accessible to children and pets.

Eating/smoking. DO NOT eat, drink, smoke, rub your eyes, or touch any part of your bare skin while handling chemicals and spraying.

Heat/flames. DO NOT spray near open flames or sources of heat.

Spills. ALWAYS clean up spills immediately per instructions on the chemical label.

Unattended. ALWAYS turn off vehicle and set brake or block wheels, turn off power to sprayer, and relieve system pressure before leaving sprayer unattended.

Troubleshooting. ALWAYS refer to the safety instructions in the Troubleshooting Section before attempting any repairs.

After spraying

Clean sprayer. ALWAYS clean the sprayer immediately after use according to the directions provided in this manual.

Decontaminate. ALWAYS decontaminate yourself immediately after you are finished spraying and handling chemicals. Wash all exposed areas of the body with soap and water and remove and launder clothing.

Chemical disposal/storage. ALWAYS dispose of or store remaining chemicals properly as recommended on the chemical label.

5.2 ADDITIONAL SAFETY INSTRUCTIONS FOR SPRAYERS

ATV vehicle handling safety

Warning!

Serious injury can occur if the ATV on which the sprayer is mounted is driven unsafely.

1. Less stable. Be aware that all vehicle handling will be affected with the filled sprayer attached. See your ATV's warning label for the hazards associated with driving:
 - a) Too fast
 - b) On paved surfaces
 - c) On inclines or rough terrain.
2. These hazards will be increased drastically as a result of the additional weight and location of the filled sprayer. The centre of gravity will be higher and weight distribution different, causing the ATV to be less stable when braking, turning, and driving. Exercise extra caution in vehicle handling. Use particular caution on sloped or rough surfaces in order to prevent rollover. A vehicle equipped with Roll Over Protection System (ROPS) is recommended if you will be operating on non-level terrain.
3. Speed limit. DO NOT exceed 8 kph with sprayer mounted on ATV.
4. Ride/transport. NEVER ride or transport cargo on the sprayer.

Chemical accident procedures

Warning!

Before you fill the sprayer, review the following information with regard to handling accidents.

Chemical spills, sprayer leaks, personal contamination, and poisoning are accident situations which you may encounter. All require an immediate response – See instructions below.

Sprayer leak In the event that the sprayer develops a leak while spraying chemicals, you must immediately stop spraying.

Turn off power to the sprayer and follow the directions below, as applicable.

Bodily chemical contact

Personal contamination can occur when chemicals splash, spill, or spray directly onto a person.

Follow the emergency first aid instructions on the chemical label listed in the “First Aid” or “Statements of Practical Treatment” section.

General procedures include:

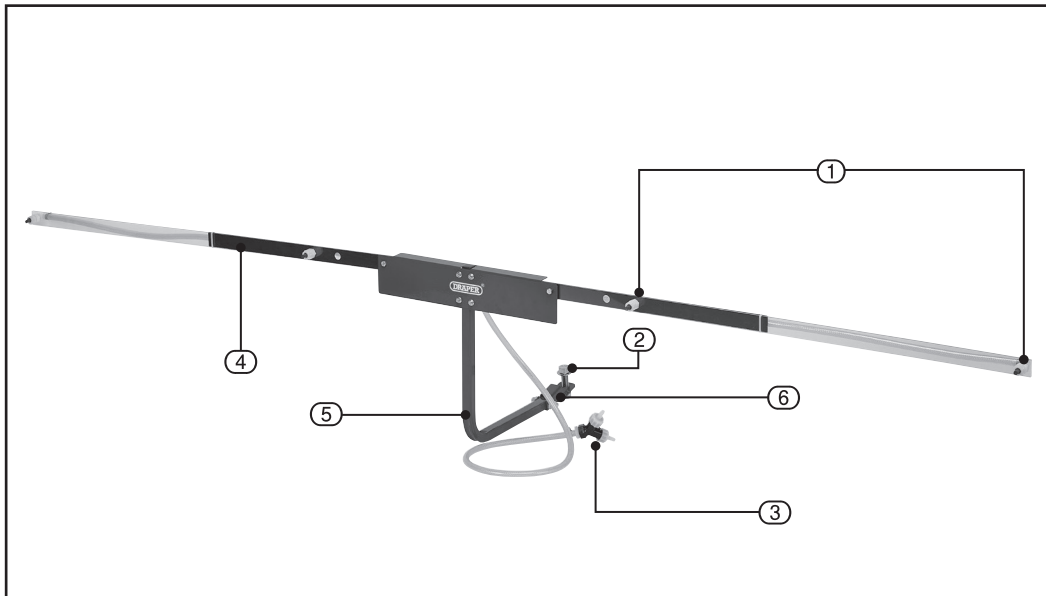
Eyes – immediately flush with water or follow other directions as specified on the chemical label.

Skin – immediately wash all contaminated skin surfaces with soap and water, or follow directions as specified on the chemical label.

Clothing – remove contaminated clothing immediately. Dispose of heavily contaminated clothing per the instructions on the chemical label for safe chemical/container disposal.

6. TECHNICAL DESCRIPTION

6.1 IDENTIFICATION



① Spray nozzles

② Tow hitch mount

③ Sprayer tank and lance connection

④ Folding boom arms

⑤ Main boom support

⑥ Hinged angle support

7. UNPACKING AND CHECKING

7.1 PACKAGING

Carefully remove the product from the packaging and examine it for any sign of damage that may have happened during shipping. Lay the contents out and check them against the parts shown below. If any part is damaged or missing, please contact the Draper Help Line (the telephone number appears on the Title page) and do not attempt to use the product.

The packaging material should be retained at least during the warranty period, in case the machine needs to be returned for repair.

Warning!

- Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.
- If any of the packaging is to be thrown away, make sure they are disposed of correctly, according to local regulations.

7.2 WHAT'S IN THE BOX

Note: For details of our full range of accessories and consumables, please visit drapertools.com

8. ASSEMBLY

Fig. 1 – Loosen the hose clamp on the existing gun hose. Remove the hose from the pump*. Save the hose clamp for step 3.

Fig. 2 – Screw the 3/4" x 3/8" hose barb into the base of the three-way ball valve. Place a rubber washer between the 3/8" flat seat hose barb and the ball valve. Tighten the 3/4" swivel nut onto one branch of the "Y". On the remaining Branch you will need to use either the 3/8" or 1/2" flat seat hose barb depending on what size your gun hose is. Place a rubber washer between the hose barb and ball valve and tighten with the remaining 3/4" swivel nut. You can discard the flat seat hose barb that you do not use.

Fig. 3 – Slide on one hose clamp onto one end of the supply hose. Push the hose onto the outlet of the pump*. Slide another hose clamp onto the supply hose. Push the inlet hose barb of the three-way ball valve assembly onto the free end of the supply hose. Tighten both hose clamps

Fig. 4 – Connect your existing gun hose to the 3-way valve with the existing hose clamp.

* Not supplied.

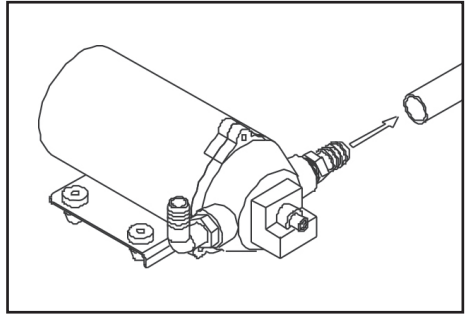


FIG. 1

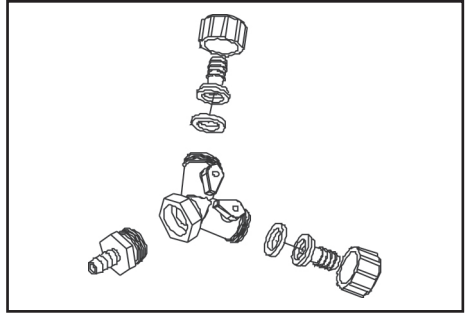


FIG. 2

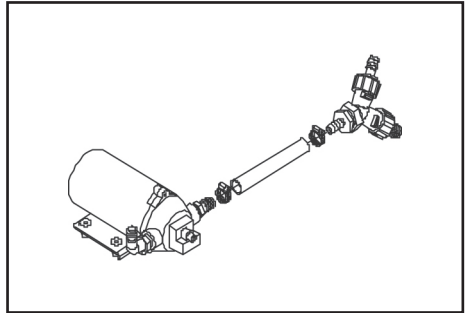


FIG. 3

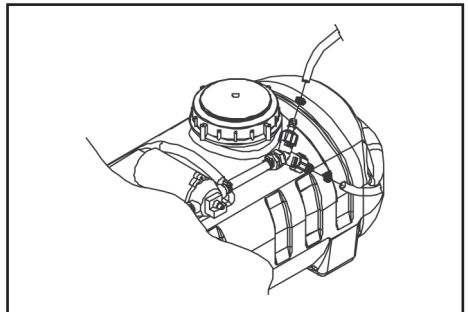


FIG. 4

Fig. 5 – Attach boom mount pivot to boom upright as shown using the 1/2" bolt, nut, lock washer, and 1/2" flat washers provided, moderately tighten. Next, press or hammer in the square tube plugs into the ends of the boom upright.

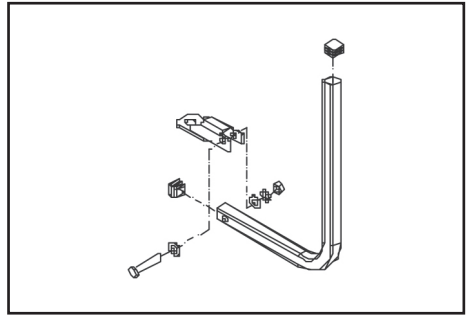


FIG. 5

Fig. 6 – Attach the boom mount plate to the boom upright assembly, using the two u-bolts and four 1/4-20 flange nuts.

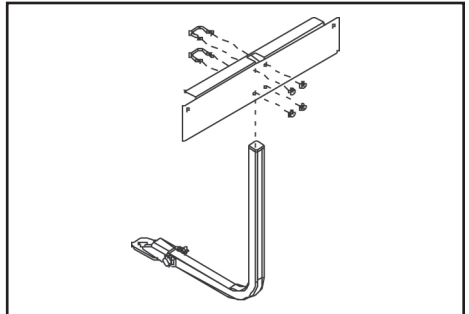


FIG. 6

Fig. 7 – Attach the boom mount assembly just completed, to the ATV hitch, using the 3/4" bolt, nut, lock washer and flat washers provided (DO NOT Tighten yet). Adjust the position of the boom mount so that it is parallel with the back of the ATV, or perpendicular to the line of travel. Then tighten the bolted joint.

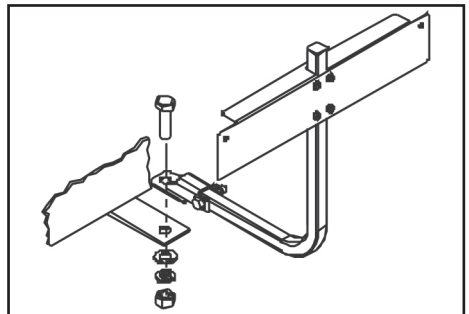


FIG. 7

Fig. 8 – Insert the elbow hose barb into the boom arm as shown. Fasten to the boom arm using the nozzle nut. Insert the nozzle strainer into the hose barb. Place the nozzle on top of the strainer. Be sure that the opening on the nozzle is positioned so that when the unit is assembled, the opening points at the ground. Tighten the nozzle and nozzle strainer into the hose barb using the swivel nut. Insert the "T" hose barb into the holes in the boom arm and the boom arm support as shown. Install the nozzle nut, nozzle strainer, nozzle and swivel nut. Make sure that both nozzles point in the same direction. Repeat this step for the other boom arm switching the direction of the nozzles, so that when fully assembled all nozzles will point down.

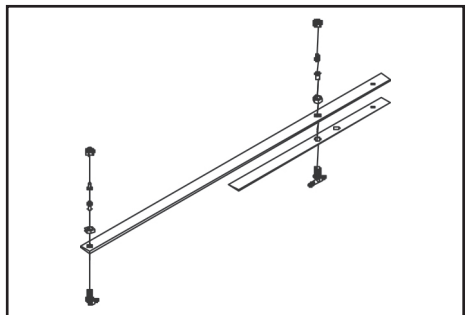


FIG. 8

8. ASSEMBLY

Fig. 9 – Slide a small hose clamp over both ends of the outside boom hoses and over one end of the centre boom hoses. Slide the outside boom hoses, and the centre boom hoses onto the hose barb ends of the nozzle bodies which are already assembled to the boom arms. Tighten the hose clamps. Attach the boom arms to the boom mount assembly, using the 5/16" bolts, nyloc nuts, and flat washers as shown.

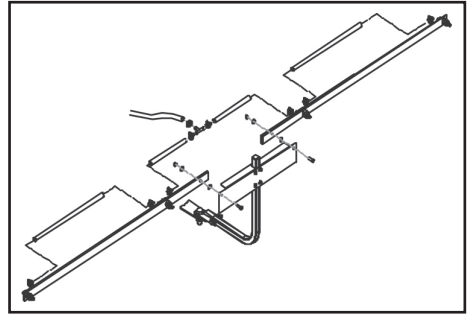


FIG. 9

Make sure the nozzles are pointing down. Next slide a small hose clamp over the free ends of the centre boom hoses, and the boom supply hose. Connect these three hose ends by sliding them on to the insert tee and tightening the clamps. Complete the final adjustment of the boom mount pivot by rotating the boom assembly until the bottom leg of the upright is parallel to the ground. Tightening the 1/2" bolt to 50-55 ft-lbs will clamp it in position (the pivot is to accommodate angled hitches).

Fig. 10 – Loosen the u-bolts and slide the boom mount plate up or down on the upright until you get the correct spray overlap. The nozzle height should be approximately 23" above ground.

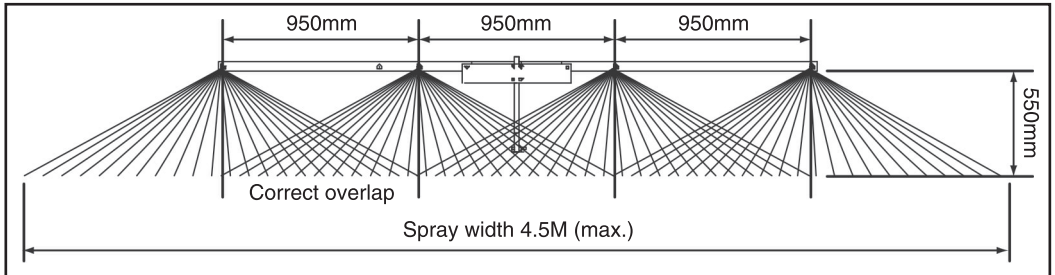


FIG. 10

Fig. 11 – Attach the tank to the ATV as described in your spot sprayer manual. Attach the boom supply hose to the remaining hose barb on the y-valve.

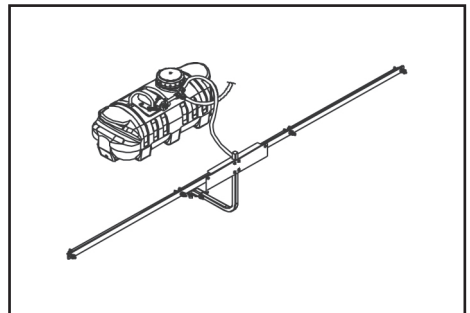


FIG. 11

9. OPERATION AND USE

With the unit turned OFF, check nozzles for debris or damage, also check for worn hoses and system leaks. Repair before operating.

Unfold the left and right boom arms.

Once the water and chemicals are well mixed in your sprayer tank, open the valve that is attached to the boom supply hose. Use the valve to turn the boom on and off as desired. If you use the spray gun while the boom is operating, you will not get the correct coverage from your boom.

Drive at the desired speed, as calculated by tables 1 and 2 on the next page.

To operate the spray gun, close the valve leading to the boom and make sure the valve leading to the gun is open.

Boom kit calibration

Below are some guidelines to help you calibrate your boom sprayer. This is a very important step in operating your boom sprayer so that you don't apply too much or too little chemical.

1. Use the suggested application rate (i.e. litres per hectare, litres per 100M², or litres per 10M²)
2. Using Table 1, find an application rate that corresponds to your chemical manufacturers suggested application rate, and pressure at which your sprayer is operating.
3. Follow this application rate up the chart to find the speed at which to drive your ATV.

Spray Height	Tip #	Pressure (BAR)	Flow (LPM)	LITRES PER HECTARE – Based on water						
				1 KM/H	2 KM/H	3 KM/H	4 KM/H	5 KM/H	7 KM/H	10 KM/H
58cm	1.5	1	0.68	447	224	149	111	89	63	45
58cm	1.5	1.7	0.90	596	298	199	149	119	86	60
58cm	1.5	2.4	1.05	695	348	232	175	138	101	69

Spray Height	Tip #	Pressure (BAR)	Flow (LPM)	LITRES PER 100M ² – Based on water						
				1 KM/H	2 KM/H	3 KM/H	4 KM/H	5 KM/H	7 KM/H	10 KM/H
58cm	1.5	1	0.68	4.5	2.2	1.5	1.1	0.9	0.6	0.5
58cm	1.5	1.7	0.90	6.0	3.0	2.0	1.5	1.2	0.9	0.6
58cm	1.5	2.4	1.05	7.0	3.5	2.3	1.7	1.4	1.0	0.7

Spray Height	Tip #	Pressure (BAR)	Flow (LPM)	LITRES PER 10M ² – Based on water						
				1 KM/H	2 KM/H	3 KM/H	4 KM/H	5 KM/H	7 KM/H	10 KM/H
58cm	1.5	1	0.68	0.45	0.22	0.15	0.11	0.09	0.06	0.05
58cm	1.5	1.7	0.90	0.60	0.30	0.20	0.15	0.12	0.09	0.06
58cm	1.5	2.4	1.05	0.70	0.35	0.23	0.17	0.14	0.10	0.07

9. OPERATION AND USE

Use the table below to choose the throttle setting on your vehicle:

Speed (mph)	Time required in seconds to travel a distance of:		
	10M	50M	100M
1	36	180	360
2	18	90	180
3	12	60	120
4	9	45	90
5	7	35	70
6	6	30	60
7	5	25	50

The coverage area can be found by dividing 37 Litres for the 34674 or 60 Litres for the 34676 or 98 Litres for the 34677 (a full tank) by the application rate.

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General enquiries: (023) 8026 6355

Service/Warranty Repair Agent:

For aftersales servicing or warranty repairs, please contact the Draper Tools help line for details of an agent in your local area.

YOUR DRAPER STOCKIST

RDTL0821

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