



SPORT TOPPER TOPDRESSER Model: BTD-10

Operation & Parts Manual

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Sport Topper Topdresser Model: BTD-10

Dear Owner,

Welcome to Bannerman, the Home of Sports Turf Magic.

Your new **Bannerman Sport Topper Topdresser BTD-10** is a precision-built, hydraulically powered top dresser. The ease of operation and low maintenance will give you many trouble free years of use. Please make sure that you read and understand the important instructions for the assembly, adjustment, operations, safety, and maintenance contained in this manual. If there are any instructions which you do not fully understand, contact your dealer or Bannerman Ltd. for clarification before using the unit.

When in need of replacement parts, specify the model and the serial number of your new **Bannerman BTD-10 Topdresser.** The serial plate that identifies your model and the serial number is located on the front right-hand side of the spreader. To give you many years of service, regular preventative maintenance is required. Should you need any further assistance, please feel free to contact your local Bannerman dealer or Bannerman directly.

Regards,

George Bannerman

George Bann R

Corporate Secretary

Warranty Statement

Bannerman Ltd warranties all Bannerman BTD-10 Topdressers, when appropriately applied and installed, to be free from defects in material and workmanship under normal use and service, for 1 year from the date of use. We must receive the Warranty Card, and Declaration or Delivery Card filled out in its entirety, via mail, fax, or email within 15 days of the date of sale. It is the responsibility of the end user to make sure that the Warranty Card is filled out and submitted to Bannerman

| Bannei | Phone: 1-41 | Canada M9W 5A3 w.sportsturfmagic.com 6-247-7875 ~ Fax: 1-416-247-654 -325-4871 ~ USA 1-800-665-2696 |
|--------------------|-------------------|--|
| WARRANT | Y CARD & DECLARAT | |
| Model # | Serial # | Code # |
| | CUSTOMER INFORM | ATION |
| Name: | | |
| Address: | | |
| City/Town: | Prov/State: | Postal/Zip: |
| Phone #: | Fax # | |
| Unit Received Comp | lete: X | Date: |
| | DEALER INFORMAT | ION |
| Name: | | |
| Address: | | |
| City/Town: | Prov/State: | Postal/Zip: |
| Phone #: | Fax # | |

Ltd. This warranty does not guarantee a particular service life of the products. Service life will vary with application, operating environment, level of maintenance and other factors beyond our control.

Bannerman Ltd's sole responsibility for the **Bannerman BTD-10 Topdresser**, or parts determined to be defective and covered by this warranty, is limited to repairing the product or part. An allowance is to be applied to the labour cost for the removal and replacement.

Prior authorization from **Bannerman Ltd** must be obtained before replacing or returning any part(s) or incurring any cost of labour. No charges for expenses incurred for parts, labour or transportation, by unauthorized persons, will be allowed under this warranty. Bannerman Ltd reserves the right to any part or Bannerman assembly (with transportation prepaid) claimed to be covered under this warranty.

Bannerman Ltd shall not be liable, in the event of proximate, incidental, consequential, special or other damages. This includes, but is not limited to, damages for loss of production, loss of profit, loss of opportunity, or injury to persons arising out of any breach of this warranty.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR PARTICULAR PURPOSE, OR ANY OTHER WARRANTY EXTENDING BEYOND THAT SET FORTH ABOVE

GORDON BANNERMAN LIMITED

41 Kelfield Street, Rexdale, Ontario, Canada, M9W 5A3

CONTACT US:

CAN 1-800-325-4871 USA 1-800-665-2696 info@sportsturfmagic.com

BTD-10 Sport Topper Topdresser Specifications

| Weight | Empty | 550 lbs. | 250 Kg |
|-----------------|--|-------------------------------|-------------------|
| | Maximum | 3800 lbs | 1724 Kg |
| Dimensions | Length | 56 inches | 142 cm |
| | Height | 50 inches | 127 cm |
| | Width | 70 inches | 178 cm |
| Spread | Width | 58 inches | 147 cm |
| | Speed | Variable | |
| Canacity | Cubic yards | 1-3/4 cubic yards | 1.34 cubic meters |
| Capacity | Cubic feet | 47 cubic feet | 9242 cubic cm |
| Ground Pressure | Only 10-12 p.s.i. when ful | ly loaded | |
| | Hydraulic to brush | | |
| Drive | Hydraulic to conveyor floor | | |
| Drive | Variable speed attained by means of (20) position restrictor valves – achieving variable depth of topdressing 3/32 inches to 2-1/5 inches. | | |
| Tires | Two pairs twin 18-9:50 x 8 turf tires on center pivot swing axle to ensure safe flotation, stability, and ensures consistent low p.s.i. on turf surface | | |
| | Galvanized steel, ribbed, light weight | | |
| Hopper | Strong ensuring maximum capacity material yet minimizing overall weight | | |
| Conveyor | Adjustable by means of two front bearing block adjusters | | |
| Brush | 8" sectional heavy duty poly-fiber brush at the rear of the conveyor ensures even spreading of all types of organic and sand topdressings | | |
| | Height and spread of the brush thrusts material partially into the grass plant and aeration holes thus requiring less labour for "dragging" with brushes, rakes or drag mats | | |
| - | Clevis style or option ball hitch | | |
| Tongue | Adjustable in vertical heig | tht to match all turf vehicle | S |

Requirements

| Tow Vehicle | 15 h.p. minimum with hydraulics | | |
|-------------|---------------------------------|------------------------|----------------------|
| Dimensions | Minimum flow | 2.6 gallons per minute | 12 Liters per minute |
| | Maximum flow | 5.5 gallons per minute | 21 Liters per minute |
| | Minimum pressure | 900 p.s.i. | |
| | Maximum pressure | 2000 p.s.i. | |

Work Safely - Follow These Rules!

-A careful operator is the best insurance against an accident-



<u>Warning</u>: Read this operation manual carefully and understand the controls before handling any equipment or commencing work.

- Before and during operation the area should be checked to assure that the area is clear of obstacles, hazards and personnel.
- Caution should be exercised when operating close to ditches, fences or on hill sides.
- Hands, feet, clothing and other objects must be kept away from all moving parts.
- Use extreme care when making adjustments.
- Always use the proper tools or equipment for the job at hand.
- Before starting work, visually check machines for damage or wear to working parts.
- Do not allow any unauthorized person to handle machines at any time.

Warning: Gasoline/Petrol is highly flammable

- Do not smoke while refueling the engine
- Do not refuel while the engine is running
- Do not touch a hot exhaust
- Do not operate near children or animals
- Do not allow persons under the age of 16 years to operate this machine
- Do not operate this machine on a steep gradient
- Keep hands and feet clear of the moving tines at all times
- Take care when adding or removing weights.
- Wear protective safety clothing: safety footwear, ear protectors, gloves, goggles, etc.

Safety Regulation

- 1. The Bannerman BTD-10 Topdresser is built solely for spreading small-grained, loose material such as sand, small granular material or similar products. The manufacturer is not responsible for any damage resulting from incorrect usage. This also includes compliance with the manufacturer's conditions of operation, maintenance and repair.
- 2. The spreader is built according to prior art and operationally reliable; however, the machine could put life and limb of the operator, or other persons, at risk if it is not used, maintained and repaired by persons who are familiar with it and have been informed of the dangers.



- 3. Any person who is employed by the owner, is responsible for the operation, maintenance and repair of the spreader, and must read and understand the operating instructions and the **Safety Regulations** in particular.
 - Detach the spreader from the towing vehicle during maintenance and service work.
 - Only use original spare parts from the manufacturer for repairs.
 - Along with these operating instructions, the general regulations for safety and for prevention of accidents must be observed.
 - When using public roads, the corresponding **Highway Act** will be in force.
 - Persons riding in or on the topdresser are not allowed!
- 4. A spreader may only be towed along public roads when it is properly equipped to meet the **Highway Act**. Complete road-worthiness certificate, licensing permit and the additional necessary safety facilities (lighting set, wheel chocks) are available on customer request.
- 5. The operator must check the spreader for any external damage or failure before operating the machine. Any changes (including operating performance) which might affect safety must immediately be corrected. Changes to, or rebuilding of, the spreader (other than changes allowed by the manufacturer) are, for reasons of safety, not allowed.
- 6. Before starting work, the operator must become familiar with all fittings and controls as well as their functioning.
 - Spreaders must be properly attached, or risk of injury may occur.
 - Before driving away, check the immediate vicinity and care for a good field of vision.
- 7. When the machine is in operation, no one is allowed to enter the spreader hopper. A label with this notice is placed on both sides of the spreader. This notice must always be legible and must be replaced if damaged.
- 8. While the spreader is in operation, do not stand at the rear of the spreader due to rotating parts and foreign flying particles that might cause any injuries.
- 9. Adjusting and repair work on axle (wheel bearings, tires) must only be undertaken by properly trained and authorized personnel.
- 10. It is important to check that before starting work on the hydraulic system, that there is no hydraulic pressure.
 - The hydraulic hose pipes must be regularly checked and replaced if damaged or worn out. The replacement hose pipes must conform to the manufacturer's technical requirements.

 Make sure the hydraulic pressure on your tractor you are using does not exceed 200#psi.
- 11. Do not exceed the authorized supporting load on the towing vehicle.
- 12. In the immediate vicinity of the brush on the **Topdresser model BTD-10**, a sound level of 74 dB(a) is emitted.

Machine Description

The **Topdresser BTD-10** is used for spreading small-grained, loose material, such as peat loam, light soils, pine bark chips, calcined clays, chipped lime stone, sand, small granular material or similar products. The spreading equipment on the topdresser is driven by a gear box with hydraulic motor for the conveyor belt and a separate hydraulic motor for the brush. The number of revolutions of the hydraulic conveyor belt can be continuously adjusted by means of a 10 position variable flow valve. Frequency of spread or spreading amount can be determined by the spreader ground speed and conveyor belt speed.

Operating the BTD-10 Topdresser

We want you to obtain the best performance from your new **Bannerman BTD-10 Topdresser**. If you have any difficulty in carrying out the following instructions please contact us or your local representative or dealer.

Before the First Initial Operation

- 1. If the spreader is to be used on public roads, check the local traffic Highway Act.
 - If required, attach license plate to plate holder at the left-handed rear side.
 - Attach and check lighting set.
- 2. After having filled and dispensed the first load of topdressing material:
 - Retighten wheel nuts.
 - Check wheel hub bearings and adjust, if necessary.
 - Check tire pressure.

Daily Operation

- Check for any external damage and make necessary adjustments and repairs.
- Check tire pressure.
- Check lighting set, if required.
- Check conveyor belt tension, reset if necessary. Conveyor belt must not graze the sides.

To Operate the Topdresser

1. Attaching to and from towing vehicle

- Attach spreader to towing vehicle so that top dresser bed is level. Be sure to use the supplied clevis pin and secure with locking cross.
- To connect the hydraulic pipes, connect the upper pipe to the oil pressure supply and the lower pipe to the oil return. Proper direction of oil circulation is required. At the factory, the hydraulic system has been filled with the multi-purpose tractor hydraulic oil No.10.
- With External Oil Supply, mount the plug-on pump on the PTO driven shaft of the tractor and secure against slippage using the mounted torque support chain. (PTO speed 450 rpm).

Tip: To ensure optimum operation, the oil temperature should reach around 25°C before starting work (see viewing window at the oil tank). Check the oil level before starting work (center of the oil viewing window).

Please Note:



- Locate hydraulic hoses in such a way that they do not drag to the ground or chafe at the towing vehicle.
- If floor of top dresser does not move and brush doesn't spin, reverse hydraulic lines.
- When un-attaching the spreader from the towing vehicle, secure the drop leg before removing the clevis pin.

2. Loading

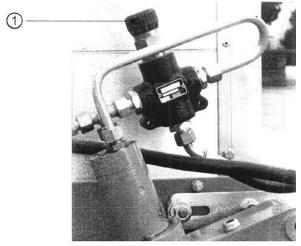
 When loading, do not exceed the desired maximum ground pressure or the authorized total weight.

3. Spreading

- Controls: Variable flow valve for setting the speed of the conveyor belt: Scale distribution 0 to 10
- **Note:** The brush speed can only be controlled by the tractor engine RPMs

4. Adjusting the Spreading Depth

- The spreading thickness (mm) or inches is dependent on:
- The speed of the towing vehicle
- The speed of the conveyor belt
- Set the required spreading depth on a firm surface before starting work.
- Set the variable flow valve or the conveyor belt speed to the required number 0 to 10.



To Determine How Thick You Want the Material Spread:

- 1. Chose a flat surface to experiment.
- 2. Adjust tractor to 22-2300 rpm.
- 3. Set regulator on top dresser to #3
- 4. Run tractor at approximately 3 mph.
- 5. Check output, Adjust speed of tractor and or regulator on top dresser to get desired material depth.
- 6. After you do this a few times, you will know and control the quantity of material needed and achieve the desired results.

Be sure to record ground speed, flow valve calibration and material depth for future use

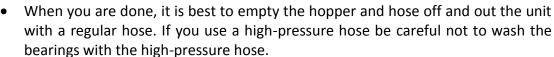
Repair and Maintenance

To obtain maximum benefit from this unit, please follow the repair and maintenance guidelines outlined below.



To Maintain Unit

- Always keep tire pressure at 10# psi.
- Grease the 2 front conveyer bearings, 2 rear conveyer bearings, 2 brush bearings and the 2 fittings on the swing beam under the unit at the axels.



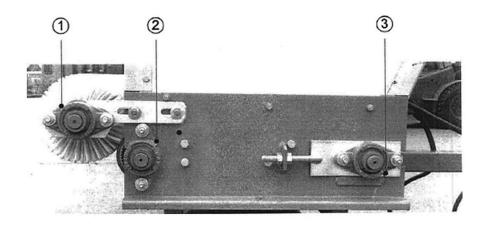
- Once a year, check and repack the high-speed wheel bearings with grease.
- Make timely repairs and order parts in advance.

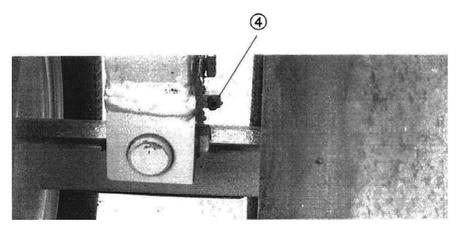
Lubricate spreader (every 50 operating hours)

Lubricate with multi-purpose grease:

- S
- Bearings on both ends of the brush shaft
- Bearings on both ends of the rear conveyor shaft
- Bearings on both sides of the wheel axle

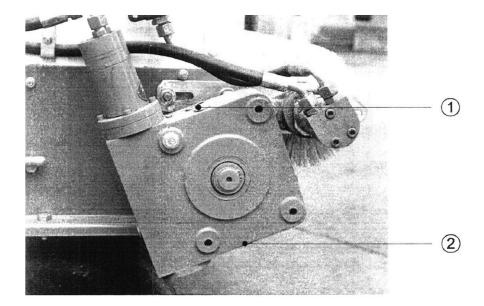
Note: Sealed bearings require no greasing





Conveyor Belt Gear Case – Change the Oil Every 100 Operating Hours

- 1. Unscrew filler cap (1).
- 2. Loosen drain plug (2) from the below inside area and drain off oil.
- 3. Screw in drain plug.
- 4. Add 0.6 L or 1 pint oil SAE 120 to 140



Axle Maintenance – Every 100 operating hours

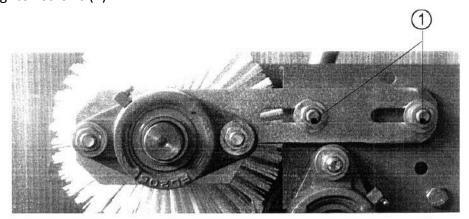
Maintenance work on the axle should only be carried out by fully trained and authorized personnel.



- 1. Retighten wheel nuts.
- 2. Check wheel bearings and adjust, if necessary.

Adjusting Distance Between the Brush and Conveyor

- 1. Loosen the two screws (1) on each side of the brush bearing support plate.
- 2. Move the brush until it slightly contracts the conveyor belt.
- 3. Retighten screws (1).

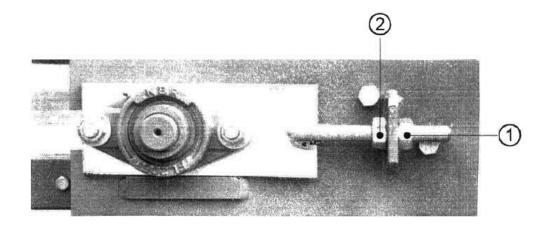


Adjusting conveyor belt tension (in case of slipping)

- 1. Loosen counternut (1).
- 2. Turn nut (2) once clockwise.
- 3. Tighten counternut.

Note: Excessive tension can reduce the life of the conveyor belt

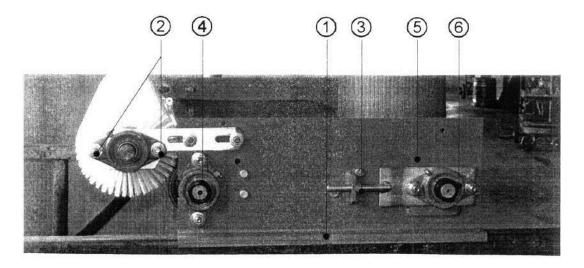


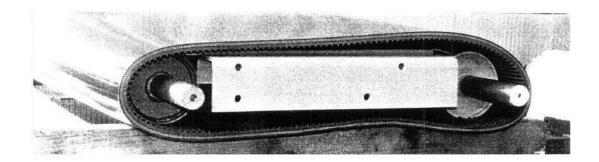


Installing and Removing the Conveyor Belt (See Next Page)

- 1. Loosen screws on both sides (1) and remove the chassis.
- 2. Remove the brush roller by loosening the screws (2).
- 3. Release the tension on the conveyor belt on both sides (3).
- 4. Remove the bearings on the right hand side seen in the direction of travel (4).
- 5. Remove the side plate (5) with tension bearing (6).
- 6. Remove the conveyor belt.

Reverse procedure to reassemble





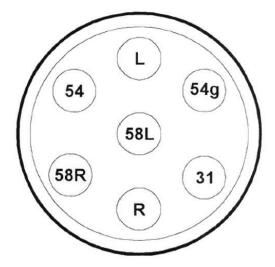
Adjusting the conveyor belt tension after assembly

- 1. Tension the conveyor belt on both sides evenly using two tension screws until it is stretched to 19" inches or 487mm (the distance between shaft centers).
- 2. Allow the conveyor belt to run for approximately 30 minutes observing that the conveyor belt is centered between the sides.

The conveyor belt should not be in contact with the side. If necessary, increase tension on the same side the conveyor belt is in contact.

Lighting Set Wiring Diagram – Seven-Pole Lighting Plug

| Code designation | Function | Wiring colour |
|---------------------|-------------------------------|---------------|
| L | left indicator | yellow |
| 54g | (towing vehicle battery +) | |
| 31 | ground | white |
| R | right indicator | green |
| 58R | rear light right | brown |
| 54 | brake lights | red |
| 58L | left rear light | black |

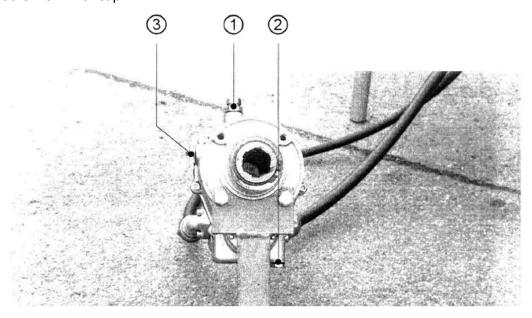


Seven pole lighting plug

External Hydraulic Gear Pump

Change oil for the hydraulic gear pump (every 100 operating hours)

- 1. Unscrew filler cap (1).
- 2. Loosen drain plug (2) and drain out oil.
- 3. Screw in drain plug.
- 4. Fill with SAE 90 oil to reach check level plug (3).
- 5. Screw on filler cap.



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External Hydraulic Reservoir (Tank)

Please Note: Each time before operating the Topdresser, check oil level and check oil for any contaminants.

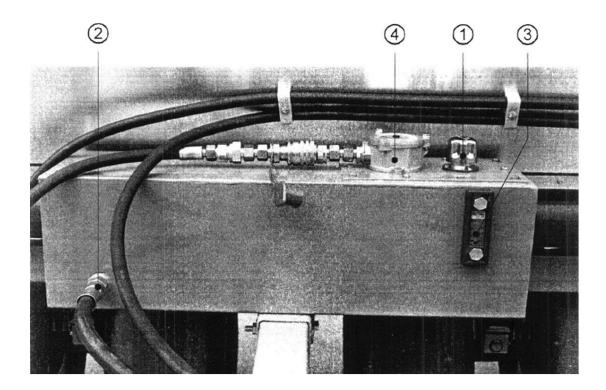
Oil Change for the Hydraulic Tank (Every 250 Operating Hours)

- 1. Unscrew the filler cap (1).
- 2. Unscrew the suction hose (2) and drain out the oil.
- 3. Screw the suction hose back on.
- **4.** Fill with **All Purpose Tractor Hydraulic Oil No. 10** until the level reaches the center of the viewing window.
- 5. Screw the filler cap back on.

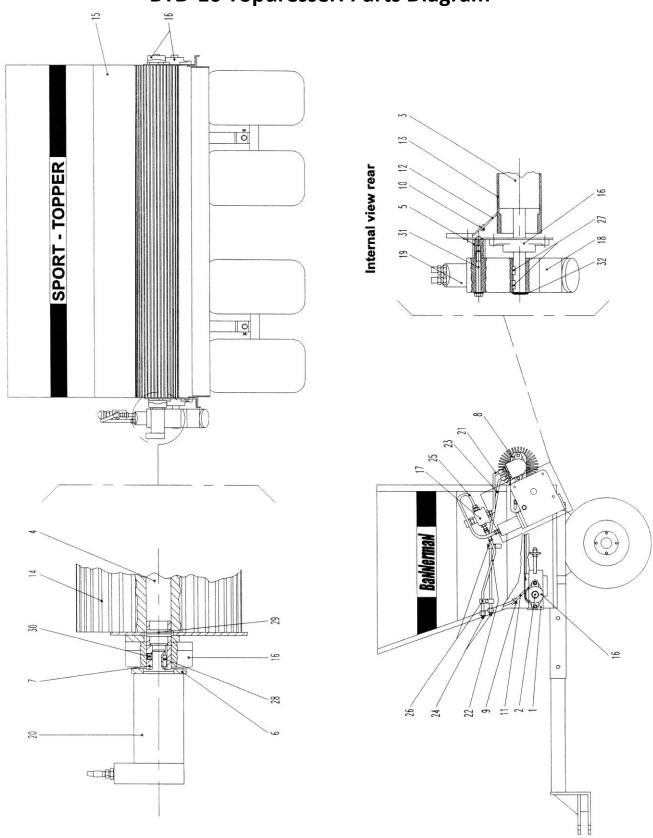




Please Note: This is a closed hydraulic circuit. To ensure a clear oil supply to hydraulic pump and motor, oil filter (4) must be replaced every 100 operating hours.



BTD-10 Topdresser: Parts Diagram



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BTD-10 Topdresser: Parts List

| Item# | Part # | Description | Qty. |
|-------|--------|---|------|
| 1 | R16112 | Clamping Device | 2 |
| 2 | R16129 | Roller-Front Conveyor | 1 |
| 3 | R16127 | Roller-Rear Conveyor | 1 |
| 4 | R16159 | Shaft for Brush Roller | 1 |
| 5 | R16161 | Torque Support for Conveyor Belt Drive System | 1 |
| 6 | R16157 | Torque Support for Brush Roller Drive System | 1 |
| 7 | R16160 | Connecting Sleeve | 1 |
| 8 | R16115 | Bracket – Brush Roller Brg | 2 |
| 9 | R10015 | Clamp Rail Front | 1 |
| 10 | R10021 | Clamp Rail Aside | 2 |
| 11 | R10573 | Rubber Stripper Front | 1 |
| 12 | R10407 | Rubber Stripper Aside | 2 |
| 13 | R10524 | Conveyor Belt | 1 |
| 14 | R10162 | Brush Sections (14 Plain Ends + 1 End Brush) | 15 |
| 15 | R10529 | Hopper | 1 |
| 16 | R11001 | Flange Bearings Dia. 30mm | 4 |
| 17 | R10335 | Flow valve 12 I | 1 |
| 18 | R10492 | Conveyor Belt Gear | 1 |
| 19 | R10572 | Hydraulic Motor for Conveyor Roller | 1 |
| 20 | R10473 | Hydraulic Motor for Brush Roller | 1 |
| 21 | R10673 | Hydraulic Hose NW 10x280 | 1 |
| 22 | R10672 | Hydraulic Hose NW 10x400 | 1 |
| 23 | R10671 | Hydraulic Hose NW 10x750 | 1 |
| 24 | R10667 | Hydraulic Hose NW 10x2800 | 1 |
| 25 | N/A | Hydraulic Tube | 1 |
| 26 | R10348 | Holder For Hydraulic Hose | 2 |
| 27 | R10100 | Feather Key 8x7x20 | 2 |
| 28 | R10483 | Feather Key 6x6x25 | 1 |
| 29 | R10605 | Clamping Sleeve 8x30 | 1 |
| 30 | R10430 | Set Screw M 8x6 | 1 |
| 31 | R10600 | Screw M 10x100 | 1 |
| 32 | R11002 | Circlip 30x1.5 | 1 |



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For any Questions, Customer Support or General Inquiries, please email info@sportsturfmagic.com