

BANNERMAN



PARTS AND OPERATIONS MANUAL

Revised January 2017

Operating Instructions

BLT-14, BLT-15, BGT-27

BEFORE OPERATION:

1. Read this manual – Become completely familiar with the controls and operation before actual use of the Dethatcher.
2. Read the engine manual – Proper care and operation will prolong life of the engine
3. Check the engine oil level and fill the tank with clean, fresh gasoline – The use of old or stale gasoline will result in gum deposits, clogging the fuel system and carburetor.

NOTE: Due to recently higher concentrations of ethanol in “regular” fuel, it may be advised to utilize the “middle” grade fuel to avoid any carburetor issues.

4. Before attempting to operate the unit, place it on a flat surface and make certain the tips of the blades clear that surface by at least ½”.
5. The cutting reel is coupled directly to the engine by a V-Belt and starts rotating when the engine is started (KEEP HANDS AND FEET AWAY). Therefore, the unit must be in transport position when starting the engine.
6. The throttle control lever controls the speed of the engine and therefore, the speed of the blades.
7. To start the engine;
 - i. Ensure the gas tank is fueled.
 - ii. Advance throttle control to the middle position.
 - iii. Advance the choke lever to choke position, and hold the bail handle up.
 - iv. Pull starter rope rapidly.(Repeat if necessary with choke slightly open)
 - v. When engine starts, push choke lever to run position and place the throttle control lever in desired running speed.
8. To stop the engine, release the bail handle.

NOTE: Proper engine operating and maintenance instructions have been provided with this unit by the engine manufacturer. It is important to read and maintain this manual. Warranty on this engine and engine accessories are provided by the engine manufacturer.

Cutting Tips

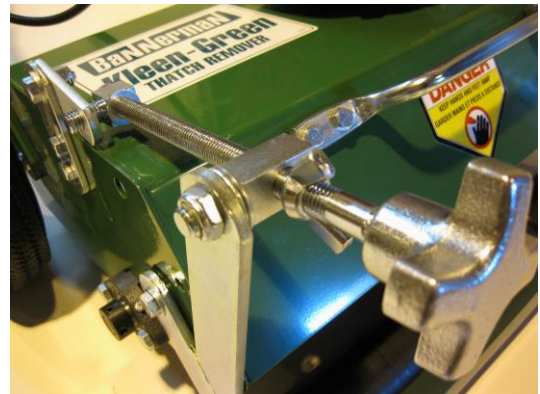
All grasses, such as blue grass, bent grass, Bermuda grass, fescue grass and zoysia grass need dethatching. The dethatcher is a special purpose machine that is used periodically for thatch removal. It should not be used instead of a lawn mower. Deep thatching should only be done in spring and fall when grass is growing vigorously. Blades are set just above ground level to remove thatch. Light thatching can be done any time. Blades are set about half-way between the mowing height of cut and ground level. Spacing between blades is 1-3/8" on BLT-14 & 15 models, good for all grasses on lawns. The only time to use closer spacing is for light thatching of bent grass lawns. Blades can then be set 5/8" apart, as with the BGT-27 model. Thatch no more than three times over, each time in a different direction. Thatching at 30 degree angles is a good procedure. Adjust the unit so that the thatch is removed a little at the time. The dethatcher can also be used as a renovation tool. To do this, set the blades to ground level and thatch in different directions, fertilize, seed and water.

Adjustments

Never make any adjustments or repairs while the engine is running. Making sure that the ignition switch is in the "OFF" position.

Depth control for the unit is provided by loosening the wing nut located on the right hand side (**both sides for BGT-27 model) of the main chassis and by adjusting the threaded rod up or down.

Adjustment Rod (**BGT-27**)



CUTTING REEL ADJUSTMENT - First ensure engine is stopped, and then set depth adjustment so that the blades are just 'tickling' the grass. The depth adjustment threaded rod will lock with the wing nut in position until changed by the operator. After the machine is running, increase engine speed by advancing the throttle control lever, and move machine forward for trial run. If sufficient grass and thatch is not being removed, make further adjustments and set blades a little deeper. Repeat this process until the desired amount of material is being removed.

DRIVE BELT ADJUSTMENT - Due to normal "wearing in", the drive belt may start to slip under load. To correct this, loosen engine mounting bolts and slide engine toward rear of the unit. Re-tighten the engine mounting bolts.

BLADE REPLACEMENT

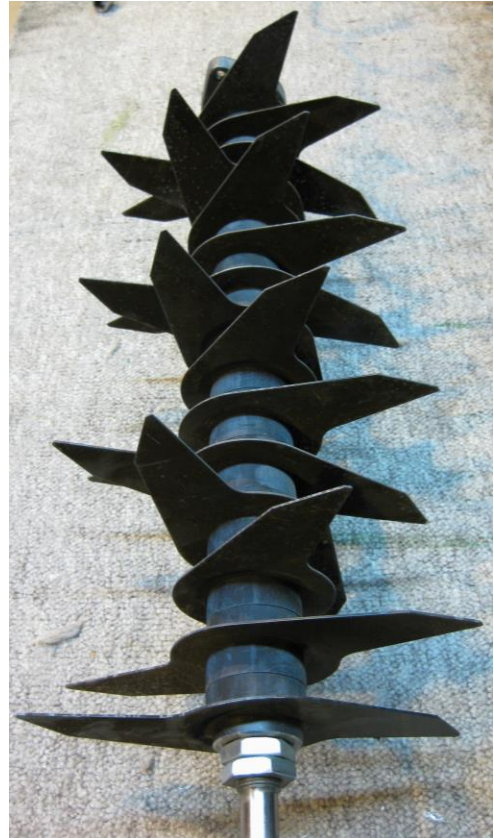
i. Removing The Shaft

First remove belt cover from engine, then loosen (4) mounting bolts on base of engine. Tension on drive belt is removed by moving engine forward on deck. Remove V-belt. The pulley on the blade shaft is a taper lock type. Remove the (3) screws from the outer pulley's blind holes and thread them into the tapped holes. Tighten these screws evenly $\frac{1}{4}$ turn at a time, until the outer pulley comes away from the inner piece. Remove the (2) bolts holding each bearing and the shaft can be removed from the deck.

ii. Removing The Blades

The bearings are an eccentric locking type. Loosen the set screw first, then use a punch in the hole of the collar to twist it to unlock. If the collar does not move in the first few hits, try going to the way. Once the bearing is removed, loosen the (2) lock nuts at the end of the shaft, and remove the shaft collar. The blades and spacers will slide easily off of the shaft. When re-installing the blades, place each successive blade $\frac{1}{8}$ of a turn (one notch) in the same direction to produce a spiral effect. The BLT-14 & BLT-15 use (2) spacers between each blade, the BGT-27 model uses (1) spacer between each blade. Re-install the collar and nuts, and reverse procedure.

Spiral Blade Pattern (**BLT-15**)



**** SEE ENGINE MANUAL FOR MORE DETAILED INFORMATION REGARDING SERVICE OF THE ENGINE**

After Season

When the season has come to an end, check machine thoroughly for parts that may need replacing. In the event that parts are needed, place an order with your dealer in the fall or winter to avoid any delays caused by the usual spring rush. When placing a parts order, please specify the model number of the unit, not the engine. See serial plate (located on the deck) for this information.

While the engine is still warm after its last use, drain oil from crankcase and refill with fresh oil (this will help)

Before storing unit, remove all fuel from gas tank to prevent gum deposits forming on essential parts such as the carburetor, fuel line and tank. Remove spark plug, pour (1) ounce of S.A.E 20 oil into cylinder and crank slowly to spread oil. Replace spark plug. Refer to engine manual for proper engine storage.

Lubricate wheel bearings and all moveable linkages. You may lightly oil the edge of the cutting blades to prevent any rust from occurring.

Store your unit in a clean dry place. With the proper care outlined above, your machine will give you prolonged service.

****NEVER STORE A MACHINE WITH GASOLINE IN THE TANK, INSIDE A BUILDING WHERE FUMES MAY REACH AN OPEN FLAME OR COULD BE EXPOSED TO A SPARK. ALLOW ENGINE TIME TO COOL BEFORE STORING IN ANY ENCLOSURE.**

Warranty

Bannerman Ltd warranties all **BLT-14/15 & BGT-27** dethatchers, when applied and installed, to be free from defects in material and workmanship under normal use and service for a period of 1 year from date of use. 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 responsibilities for the **BLT-14/15 & BGT-27** dethatcher 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 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 expense incurred in parts, labour or transportation by unauthorized persons will be allowed under this warranty. **Bannerman Ltd** reserves the right of any part or Bannerman assembly (with transportation charges prepaid) claimed to be covered under this warranty.

Bannerman Ltd shall not be liable, in event, for 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 in 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

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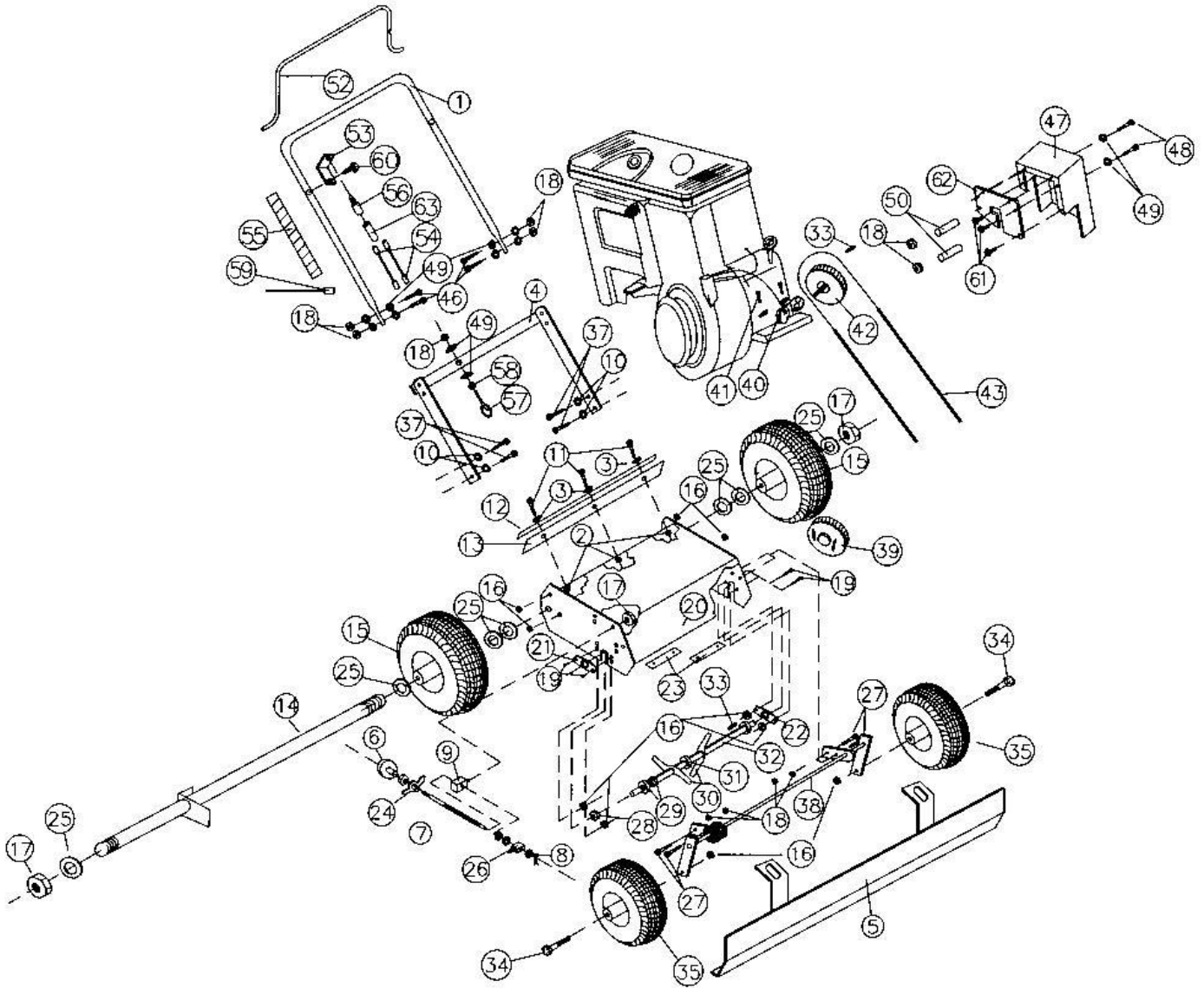
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BLT – 14 Renovation/Lawn Thatcher
BLT – 15 Lawn Thatcher
BGT – 27 Greens Thatcher

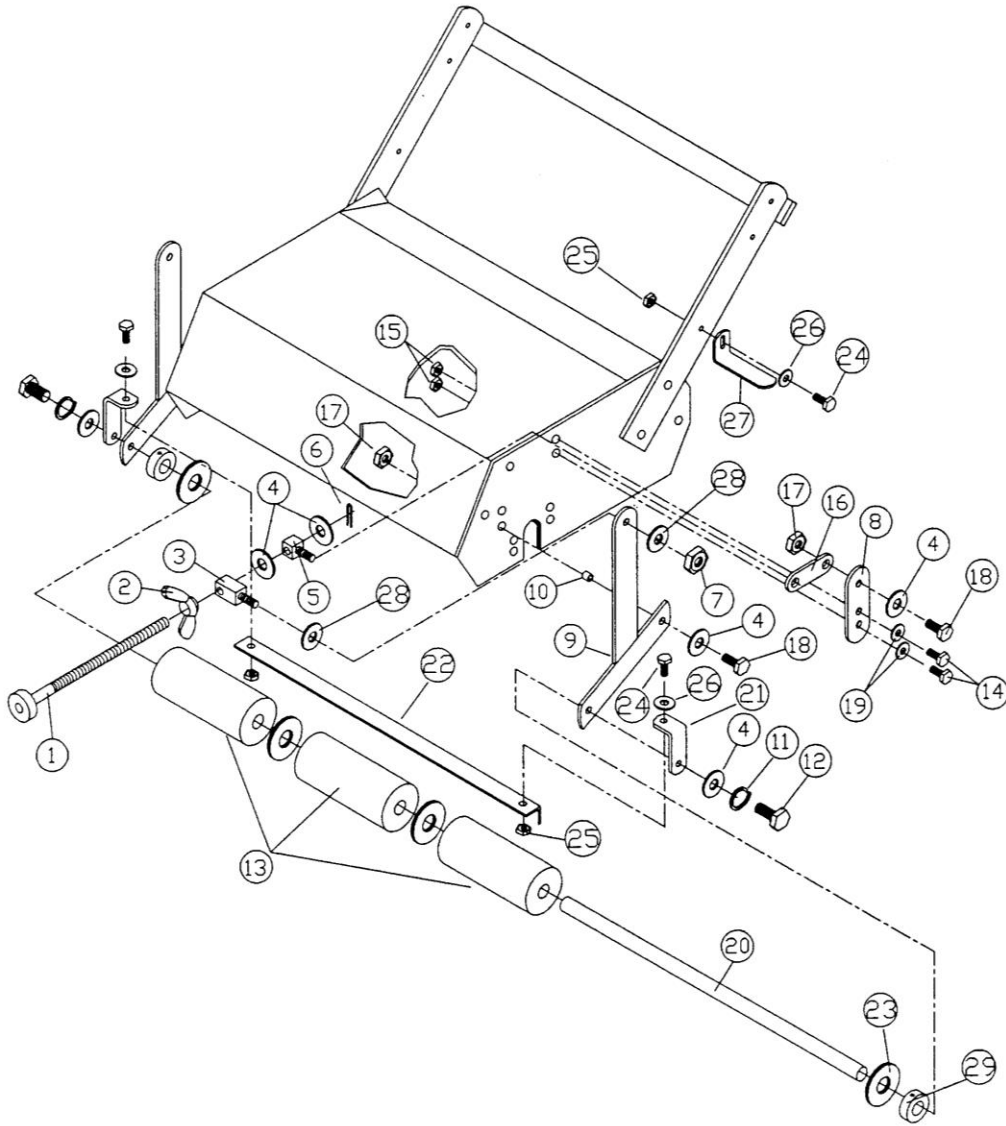


BLT-14/15 & BGT-27

| ITEM NO | PART NO | PART DESCRIPTION | QTY |
|---------|---------|--|-----|
| 1 | 03001 | Handle Assembly – Upper | 1 |
| 2 | 02066 | Nut, Nylon Insert – ½"-20 | 3 |
| 3 | 03007 | Washer, Flat – ¼" | 3 |
| 4 | 03008 | Handle Assembly – Lower | 1 |
| 5 | 03097 | Guard – Toe | 1 |
| 6 | 03202 | Knob | 1 |
| 7 | 03201 | Adjusting Rod | 1 |
| 8 | 03014 | Pin, Cotter – 1/8" x ¾" | 1 |
| 9 | 03072 | Adjusting Rod Pivot Block | 1 |
| 10 | 03016 | Screw, Hex Head Cap – 3/8" – 16 x 1 | 4 |
| 11 | 03013 | Screw, Hex Head Cap – ¼" – 20 x ¾" | 3 |
| 12 | 03018 | Backing Strip | 1 |
| 13 | 03019 | Guard – Rear Deflector | 1 |
| 14 | 03063 | Axle – Rear | 1 |
| 15 | 08065 | Wheel – Rear (Pneumatic) | 2 |
| | 03021 | Wheel – Rear (10 x 1.75) | 2 |
| 16 | 03022 | Nut, Nylon Insert – 3/8 – 16 | 10 |
| 17 | 03024 | Nut, Nylon Insert – ½" – 13 | 3 |
| 18 | 02004 | Nut, Nylon Insert – 5/16" – 18 | 9 |
| 19 | 03083 | Screw, Hex Head Cap-3/8" – 16 x 1-1/4" | 4 |
| 20 | 03027 | Hood Assembly | 1 |
| 21 | 03028 | Bearing, Flange – Right Hand | 1 |
| 22 | 03029 | Bearing, Flange – Left Hand | 1 |
| 23 | 03030 | Engine Mounting Bar | 2 |
| 24 | 03031 | Nut, Wing – ½" – 13 | 1 |
| 25 | 03032 | Washer – Flat – ½" | 6 |
| 26 | 03074 | Adjusting Rod Pivot Block | 1 |
| 27 | 02013 | Screw-5/16" – 18x3/4 | 4 |
| 28 | 03038 | Nut – Special | 2 |
| 29 | 03039 | Collar | 1 |
| 30 | 03040 | Cutter Blade 1/16" or 1.60mm Thick (BLT15) | 15 |
| | 03041 | Cutter Blade 1/32" or 0.80mm Thick (BGT27) | 27 |

| | | | |
|----|---------|---|----|
| | 03130 | Cutter Blade 1/8" or 3.18mm Thick (BLT14) | 14 |
| 31 | 03042 | Spacer, Blade (BLT 14 / 15) | 28 |
| | 03042 | Space, Blade (BGT 27) | 26 |
| 32 | 03044 | Shaft, Blade | 1 |
| 33 | 03045 | Key, Square - 3/16" | 2 |
| 34 | 02029 | Bolt, Shoulder | 2 |
| 35 | 02027 | Wheel, Front (8 x 1.75) | 2 |
| 37 | 02024 | Washer, Flat - 3/8 SAE | 4 |
| 38 | 03200 | Front Suspension Assembly | 1 |
| 39 | 03055 | Pully, Blade | 1 |
| 40 | 02003 | Washer, Lock - 5/16 | 4 |
| 41 | 03057 | Screw, Hex Head Cap-5/16" - 18x1-1/2" | 4 |
| 42 | 03058 | Pully, Engine - 3/4" Bore | 1 |
| 43 | 03059 | Belt - 3V300 | 1 |
| 46 | 02002 | Screw, Hex Head Cap-5/16" - 18 x 1 | 4 |
| 47 | 03068 | Guard, Belt | 1 |
| 48 | 02007 | Screw, Hex Head Cap-5/16" - 18x2-1/4" | 2 |
| 49 | 02005 | Washer, Flat 5/16 SAE | 4 |
| 50 | 03066 | Spacer, Belt Guard (BLT14/15) | 4 |
| | 03066 | Spacer, Belt Guard - Long (BGT27) | 1 |
| 51 | 03067 | Spacer, Belt Guard - Short (BGT27) | 1 |
| 52 | 03098 | Grip Rod | 1 |
| 53 | 03099 | Plunger Bracket | 1 |
| 54 | 03093 | Wire Shorting - 42" | 2 |
| 55 | 03088 | Conduit - 39" | 1 |
| 56 | 03089 | Plunger Bracket | 1 |
| 57 | 03064 | Bolt, Eye | 1 |
| 58 | 08078 | Nut, Running 5/16 - 18 | 1 |
| 59 | 02064 | Zip Ties | 3 |
| 60 | 11232 | Screw, Self Drill | 1 |
| 61 | 491-048 | Screw, Self Tapping | 4 |
| 62 | 03208 | Guard - Rubber Finger | 4 |
| 63 | 15112 | Grip | 1 |
| 64 | 02082 | Grip - Upper Handle | 2 |

B-GT-27 Roller Kit



B-GT-27 Roller Kit

| ITEM NO | PART NO | PART DESCRIPTION | QTY |
|---------|---------|------------------------------|-----|
| 1 | 03070 | Adjuster Rod | 2 |
| 2 | 03031 | Nut, Wing ½" – 13 | 2 |
| 3 | 03072 | Adjustor Rod Pivot Block | 2 |
| 4 | 03024 | Washer, Flat 3/8" SAE | 2 |
| 5 | 03074 | Adjuster Pivot Rod Block | 1 |
| 6 | 03014 | Pin, Cotter 1/8" | 2 |
| 7 | 03024 | Nut, Nylon Insert ½" – 13 | 8 |
| 8 | 03077 | Bracket – Pivot Block | 2 |
| 9 | 03078 | Bracket – Roller | 2 |
| 10 | 03051 | Bushing, Pivot | 2 |
| 11 | 03049 | Washer, Lock 3/8" | 2 |
| 12 | 03016 | Bolt, 3/8" – 16 x 1" HHC | 4 |
| 13 | 03082 | Roller, Gauge | 1 |
| 14 | 02013 | Bolt, 5/16" – 18 x 1" HHC | 4 |
| 15 | 03025 | Nut, Nylon Insert 5/16" – 18 | 4 |
| 16 | 03075 | Bar – Chassis Pivot | 2 |
| 17 | 03022 | Nut, Nylon Insert 3/8" – 16 | 4 |
| 18 | 03083 | Bolt, 3/8" – 16 x 1.25" HHC | 2 |
| 19 | 02005 | Washer, 5/16" SAE | 4 |
| 20 | 03084 | Shaft – Roller | 1 |
| 21 | 03096 | Bracket – Scraper | 2 |
| 22 | 03095 | Scraper – Roller | 1 |
| 23 | 06037 | Washer, ¾" SAE | 4 |
| 24 | 03013 | Bolt, ¼" – 20 x ¾" HHC | 2 |
| 25 | 02066 | Nut, Nylon Insert ¼" – 20 | 4 |
| 26 | 03007 | Washer, ¼" SAE | 4 |
| 27 | 03081 | | 2 |
| 28 | 03032 | | 4-6 |
| 29 | 03009 | | 2 |