

# *GR48 GOLF GREEN ROLLER MANUAL*



GR48 Manual Cover

***TRU-TURF EQUIPMENT***  
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# IMPORTANT

## PLEASE READ AND UNDERSTAND BEFORE OPERATING MACHINE

1. Pre-check all nuts, bolts, grub screws for tightness prior to operating machine.
2. Understand the operating procedures and the controls before operating.
3. Use the machine to roll 18-36 greens then check that all nuts, bolts etc. are tight.
4. **Loose transmission and drive roller sprockets will cause damage to shafts & keyways. Ensure they are correctly tightened at all times.**
5. For the initial transmission oil change, use the Roller to roll 18-36 Golf Greens, then only change the oil when hot.
6. As a guide to correct transmission oil use **Mobil I 5W-50W Synthetic oil or Penrite 10-10<sup>th</sup> Synthetic Oil.**

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SEPARATE HONDA ENGINE OWNERS MANUAL INCLUDED

Congratulations on your investment in the GR48 Golf Green Roller and your move to smoother, faster, more consistent putting Greens. The following operation and maintenance manual has been prepared for use with the GR48 Golf Green Roller. It is intended as a guide and supplemental updates to the manual may take place at a future date.

This machine is engineered to be simple to operate and easy to maintain. If you have any questions or concerns that this manual does not address, please feel free to contact your distributor at:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

TELEPHONE: \_\_\_\_\_

FACSIMILE: \_\_\_\_\_

### **MACHINE INFORMATION**

**GR48 Eaton  
Golf Green Roller**

Serial # \_\_\_\_\_

Engine # \_\_\_\_\_

Transmission # \_\_\_\_\_

Purchase Date: \_\_\_\_\_

## **SAFETY INFORMATION**

Safety is of the utmost importance when operating turf equipment. To ensure safe operation of the GR48 Golf Green Roller, please follow the following safety guidelines.

- \* Always make a pre-operation inspection before you start the engine. If this procedure is not carried out damage to property or personnel may occur.
- \* Keep children, pets and inexperienced personnel away from the machine. This machine should only be operated by trained and skilled personnel – check with your supervisor if you are unsure.
- \* Know how to stop the engine when in motion. Read and understand engine manufacturers manual, as supplied.
- \* Never permit inexperienced operators to use the machine. This machine requires certain knowledge and expertise to operate it; you must be a trained person to use this machine. Unskilled persons can harm themselves and others if they operate this machine.
- \* Do not use in enclosed areas unless well ventilated. Carbon monoxide gases are dangerous if inhaled, it can cause death; use the machine outdoors.
- \* When transporting the roller, make sure the trailer lock down mechanism is secure to prevent premature release. If the trailer lock is not correctly engaged while towing and releases accidentally the front of the roller can dig into the ground, causing the machine to move dangerously in any direction and cause bodily injury. This also applies during normal maintenance procedures – make sure the latch is locked and in place. When carrying out maintenance ensure the latch is engaged correctly; if it is not the trailer arm could fly up making contact with a person (s) causing serious injury.
- \* When engine is running, always keep hands and loose clothing away from rotating chains and sprockets in transmission area. If hair, clothing or loose objects become entangled on a rotating shaft serious bodily injury could occur. Stop engine before opening safety cover fitted to the transmission area.

**OPERATOR, REMEMBER IT IS YOUR RESPONSIBILITY TO BE AWARE OF YOUR SURROUNDINGS. TO AVOID ACCIDENTS, THINK SAFE AND OPERATE SAFE.**

## **WARRANTY**

**THE WARRANTY PROVIDED SHALL BE THAT AS OFFERED BY TRU-TURF EQUIPMENT INTERNATIONAL AGENCIES. ALL WARRANTY CLAIMS ARE TO BE DIRECTED TO THE SUPPLIER.**

- 10.1** Subject as provided below the Supplier warrants to Buyer that the goods will be free from defects due solely to faulty materials or bad workmanship until after the following periods;
- (a) in respect of whole goods, from date of delivery to the first retail purchaser;-
    - 6 months for federal, state and local government organisations, sporting clubs and agricultural contractors.
    - 3 months for industrial contractors and commercial usage.
  - (b) in respect of spare or replacement parts (whether supplied under the contract or pursuant to a warranty claim) 90 days, or the remainder of the warranty period for the whole goods into which the part is incorporated.
  - (c) In respect to the engine and transmission, the period as offered by that manufacturer through its appointed representative (distributor or agent) in the country in which the machine has been sold.
- 10.2** The Supplier's obligation under 10.1 above shall be to replace - at no charge ex-factory - to the buyer any part of the goods which is defective in materials or workmanship, or ( at the Supplier's option) to grant a monetary credit to Buyer equal to then ex-works price to the buyer of such part.
- 10.3** The Supplier's liability under 10.1 above shall be conditional upon:
- (a) every claim being delivered in writing to the Supplier within 50 days of the occurrence of the alleged failure, giving full particulars thereof and stating
    - (1) Date of delivery to first buyer
    - (2) Serial number(s) of the goods
    - (3) Hours of operation
    - (4) Date of failure
  - (b) (where requested by the Supplier) the part which is alleged to have failed being returned to the Supplier or otherwise made available for inspection by Supplier or its appointed representative, the cost of carriage of such part to the Supplier being reimbursed to the buyer upon acceptance of the claim.
- 10.4** The Supplier's obligations under this Warranty shall not cover or apply to :-
- (a) transportation, installation or labour costs or other charges incurred by the Buyer
  - (b) tyres, engine and transmission/drive and other proprietary articles not manufactured by the Supplier of the product, but the Supplier will pass on to Buyer the benefit of any claim made by the Supplier and accepted by the manufacturer of such articles under a warranty given by that component manufacturer.
  - (c) any goods or parts thereof which in the opinion of the Supplier have been affected adversely by methods of assembly and/or incorporation into another product adopted by buyer or its sub-contractor or customer, or have altered, repaired, neglected, used in such a way as to affect adversely their stability or reliability, or have been used in any product or for any purpose for which they were not designed.
- 10.5** Where directed by the Supplier, the Buyer shall lodge any claims under this warranty directly with the duly appointed Supplier distributor in the territory of use of that product.

## INITIAL ASSEMBLY

When you receive the crate, the machine will be broken down into components ready for assembly. If you run into any problems during assembly, please feel free to call your local distributor or agent.

### *List of Components*

- (1) Operation, Maintenance & Parts Manual
- (2) Machine Frame/Body

#### **Seat Mounting Components**

- (1) Drivers Seat
- (1) Seat Pin
- (2) 12mm External Circlip

#### **Steering Arm Components**

- (1) Steering Joystick
- (1) Woodruff Key

#### **Dampener Strut (1)**

#### **Wheel Components**

- (2) Tyres mounted on Wheel Rim
- (2) 1" x 1 3/4" Flat Washers
- (2) 25mm External Circlips

#### **Trailer Arm Components**

- (1) Left-side Trailer Arm
- (1) Right-side Trailer Arm
- (2) 25mm External Circlips

#### **Tow/Latch Components**

- (1) Drawbar Coupling Assembly
- (2) 2.1/4" x 3/8" UNF Hex Head Bolt
- (2) 3/8" UNF Nyloc Nuts

**Step 1: MOUNTING THE SEAT TO THE SEAT FRAME**

- \* Remove the circlip and the 12mm diameter pin from the seat frame
- \* Place the seat, with the seat back oriented toward the rear of the machine (the front of the machine is the side where the pedals are located)
- \* Replace 12mm diameter seat locating pin through seat frame guides and through the seat guide, replace external circlip on the end of 12mm diameter rod to prevent the seat pin sliding out.

**Step 2: MOUNT THE STEERING ARM TO THE MACHINE**

- \* Select the steering joystick
- \* Place the keyed end of the steering joystick into the hole on top of the steering support cylinder ( the cylinder is located directly behind the foot pedal and is approximately 12" high. There is a sealed bearing laying flat in the top and bottom of the cylinder.
- \* Slide the steering joystick into the hole until it rests against the shoulder. If the steering joystick stops before reaching the shoulder, use emery cloth to polish the shaft. You may also use a light oil on the bearing and shaft to allow the shaft to slide freely.
- \* Lift up the smoothing roller side of the machine so that you can get to the underside of the machine. On the opposite side of the machine from the smoothing rollers, there is a trailer pivot pin ( 25mm in diameter ) welded on the top of the body which will prevent the machine from rolling on its side.  
**VERY IMPORTANT:** Brace the machine so that it will not fall over. Secure the machine with a rope or blocks to prevent the machine from falling.
- \* Locate the joystick shaft on the underside of the machine (Again, this is toward the front of the machine).
- \* Locate the Woodruff Key. The Woodruff Key is a 3/4" x 3/16" thick piece of steel in the shape of a half circle.
- \* Place the round-side of the Woodruff Key into the rectangular key slot on the joystick shaft. Hammer or squeeze with pliers into place. When complete, the flat side of the Woodruff Key should be parallel to the steering rod.



## MOUNTING THE STEERING ARM TO THE MACHINE CONTINUED

- \* Place the steering linkage assembly onto the steering shaft. The “shiny” arm or rod end should be on the ground-side or lower side of the steering arm assembly.
- \* Line up the “square groove” on the steering arm assembly with the Woodruff Key with your hand, slide or knock the assembly onto the joystick toward the bearing as far as it will go and tighten the 5/16 Grub screw up against the joystick shaft . Make sure that the steering linkage remains aligned with the Woodruff Key and the Woodruff Key remains parallel to the rod when sliding the steering linkage on the rod.

***IMPORTANT*** Do not reduce the thickness of the Woodruff Key. It is designed to be a no tolerance fit.

### Step 3: ATTACHING TRAILER ARMS TO MACHINE BODY

- \* Locate the trailer arm support rod, which extends out on each side of the machine. Slide left side and Right side trailer arms, onto the Rod with the bends facing each other. (The Rod is located between the Transmission and the Engine across the top of the body )
- \* Fasten in position with 25mm external circlip. Ensure circlip is fitted correctly into the groove.
- \* Grease both trailer arm support rods.

### Step 4: ATTACHING DRAWBAR TO TRAILER ARMS

- \* Locate the tow ball coupling assembly
- \* Gather the ends of the right and left trailer arms. Locate the two holes in the end.
- \* Place the tow ball coupling assembly between the trailer arms and align the holes.
- \* Place one 2 ¼” x 3/8” Head Bolt through each hole.
- \* Place one 3/8” UNF Nyloc Nut on each bolt and tighten.
- \* Test and ensure trailer latch is correctly locking in the down position. This is important when trailing the machine.

### Step 5: ATTACHING WHEELS TO TRAILER ARMS

- \* Find the two wheels for the left and right side trailer arms
- \* Fill the tyres with the appropriate amount of air (to about 18psi). Do not exceed this pressure.
- \* Onto one trailer arm, slide a wheel onto the shiny axle-rod. Ensure the rubber air filler valve is facing out from the actual trailer arm.
- \* Place the 25mm External Circlip, 25mm Flat Washer on the end of the wheel axle, ensure the circlip is fitted correctly in the axle groove to prevent the wheel from sliding off the axle.
- \* Repeat the same procedure for the other wheel.

### Step 6: ATTACH DAMPENER STRUT

- \* Locate dampener strut. Remove wrapping from unattached end.
- \* **Remove the wire locking clip from the unattached end.**
- \* Fit the ball socket on to the ball located on the trailer arm.
- \* **Refit the wire locking clip.**
- \* When roller is fully assembled, test the operation of the dampener. When it is operating correctly it should allow the roller to lower to the ground gently and the trailer will move up to its locking position, which will hold the wheels off the ground whilst rolling.
- \* Coupling assembly should raise slowly. This prevents the operator from being injured.

### Step 7: REPLACE ENGINE OIL

- \* A tag is placed on the engine's On/Off switch indicating you must fill the machine with oil prior to operation. The fluid placed in the machine is designed to keep the inside of the engine from rusting until it is replaced with engine oil.
- \* Replace engine oil as described in the Honda or Briggs & Stratton Manual

### Step 8: LUBRICATE ROLLER PIVOT BEARINGS

- \* There is a grease nipple covered with a plastic cap located on both smoothing head centre ball joint swivels. Apply grease to lubricate fittings.

## **PRE-OPERATION CHECKS**

- \* Check engine as per Honda manual
- \* Ensure steering joystick has no looseness
- \* Check that foot pedal depresses under normal foot pressure.
- \* Ensure that the trailer bar locking catch mechanism is securely locked to the main frame bolt when in the trailing position.
- \* Check and tighten grub screws fitted to joystick steering arm, and end bearing lock rings on the rubber coated drive roller.
- \* Grease lightly smoothing roller heads centre ball-joint swivels. Replace plastic cap.
- \* Oil rod ends sparingly
- \* Check tyre pressure for proper operating pressure (18psi)
- \* Check for oil leaks - rectify before using machine.

## **STANDARD OPERATION PROCEDURES**

- \* Inspect and check that the roller is serviceable prior to departing from workshop.
- \* Use a suitable towing vehicle to move roller from green to green.
- \* Do not speed when towing roller or travel across rough terrain at excessive speeds. If you do, damage may occur to the trailer or rubber drive roller. Maximum recommended speed would be equal to a motorised golf buggy. Approximately 4mph/7kph.
- \* When approaching the green do not tow roller onto the green to set up; put the roller on the fringe of the green. Put trailer in the up position, start up the roller and drive it onto the green.
- \* Greens can be rolled in any direction; take care to ensure there are no crease lines produced on the surface.
- \* It is recommended that you place the smoothing head rollers on the high side of the green when rolling. This puts more weight on the rubber drive roller and helps give more traction, thus less slipping or spinning of the drive roller will occur on the green.
- \* Whilst becoming familiar with the roller, set the throttle at about 1/2 speed. Press the left or right foot pedal down gently but not suddenly. Be smooth with your action, hold in this

**STANDARD OPERATION PROCEDURES CONT.**

position until nearing the edge of the green, then take your foot gently off the pedal, the roller will stop. Rest your other foot on the opposite pedal and gently apply the pressure on the pedal. It then starts to move the roller into the opposite direction. Once again be gentle with the pedal, but not sudden. By using the left and right pedal in this manner, will ensure there is no damage to the green, less wear and tear on the equipment and operator.

- \* The correct procedure for rolling the green is:
  - (a) Select the correct direction to roll the green
  - (b) Start on one side of the green and work your way across the green in a zigzag fashion, slightly overlapping each lap you roll: this makes sure you miss no part of the green and all of the green is rolled. Avoid coming back across the green to roll missed areas if possible. You should be able to complete the rolling of 18 greens in the same time or quicker than mowing using a triplex mower.
- \* When the rolling of the green is completed, move the roller onto the fringe, stop the engine, lock the trailer into the trailing position, connect it to the towing vehicle then move off to the next green to be rolled. Do not put the trailer down into the towing position on the green; damage may occur to the green from the roller tyres and body.

**POINTS TO REMEMBER**

1. Make sure the roller is serviceable before rolling.
2. Start rolling from the fringe of the green.
3. Smooth operation on the foot pedals.
4. Pick a point on the other side of the green to roll to.
5. Do not look at the green close to the roller; it makes it difficult to steer the roller; look well ahead.
6. Use 1/2 throttle until you are proficient at operating the roller.
7. Move the steering joystick a little at a time to change direction; excessive movement of the joystick makes it difficult to maintain a straight line.
8. Roll in straight lines.

**POINTS TO REMEMBER CONT.**

9. Do not leave the engine running with the roller parked on the green; the engine vibration will cause roller depressions on the green.
10. Move off the green when rolling is complete before putting the trailer in the down position.
11. When rolling steep greens and the engine stops, check engine oil level. The engine is fitted with a safety switch; when the engine oil level is low the engine will stop.

**MAINTENANCE**

- \* Stop engine before performing any maintenance
- \* Service the Honda or Briggs and Stratton Vanguard 4HP engine according to the manufacturers maintenance schedule.
- \* Check transmission oil level. The oil in the plastic container on top of the transmission should be to the indicated line.  
***IMPORTANT*** Do not overfill the plastic container as the oil requires room to expand when hot.
- \* As a guide to correct transmission oil use Mobil 1 or Penrite 10-10<sup>th</sup>

**STORING**

- \* It is important to store this roller in the towing position. This ensures the trailer strut is in the closed position, protecting the shaft from corrosion, then failure.

**SERVICE OF DRIVE SYSTEM**

**REPLACEMENT** - Use only the chain and sprockets recommended.

**TENSIONING THE DRIVE CHAIN** - No adjustment is required, the chain tension is automatically adjusted.

## **FAULT FINDING**

### **ROLLER LOOSES POWER OR SLOWS DOWN WHEN OPERATING**

- Check:**
- \* Correct oil is used in transmission (Mobil 1 or equivalent)
  - \* Smoothing Rollers & Drive roller bearings are not seized
  - \* Drive chain seized
  - \* Engine problems
  - \* Faulty transmission

### **ROLLER WILL NOT MOVE ONE OR EITHER WAY**

- Check:**
- \* Chain is okay
  - \* Foot control not operating - check all arms are secure
  - \* For Sheared Pulley Key
  - \* Ensure Transmission neutral lever is in the upright position

### **ROLLER WILL NOT STEER**

- Check:**
- \* Joystick locating grub screw is tight
  - \* Woodruff Key is in place
  - \* Rod ends are connected to smoothing roller head and the steering arm
  - \* Centre swivel bearing on top centre of smoothing rollers has not seized

### **ROLLER HAS EXCESSIVE VIBRATION**

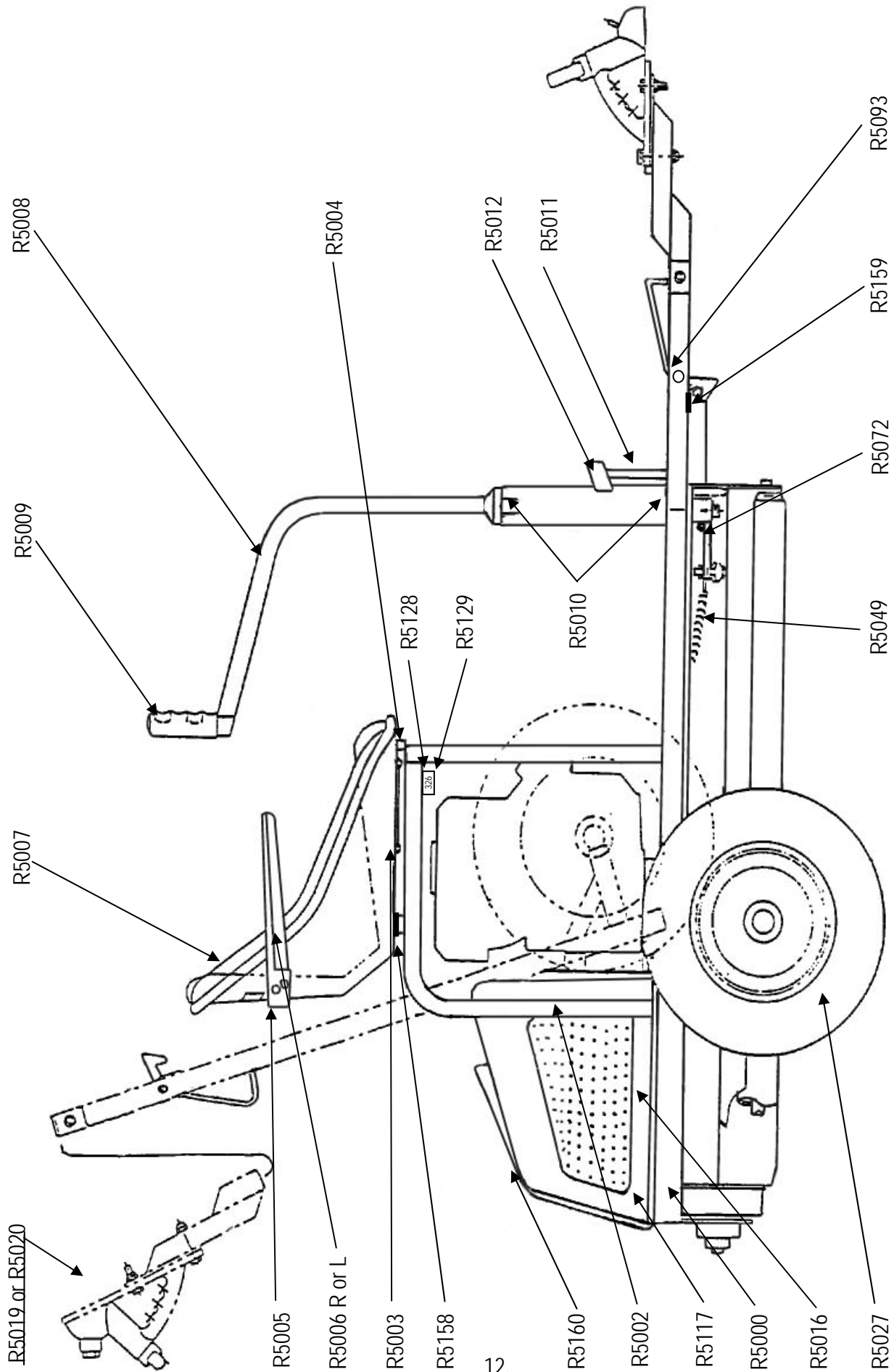
- Check:**
- \* Disconnect engine-to-transmission and isolate the drive chain to determine whether the problem is in the engine or into the transmission
  - \* If engine is at fault contact your nearest Honda agent for rectification
  - \* If the transmission is at fault, repair or replace as necessary

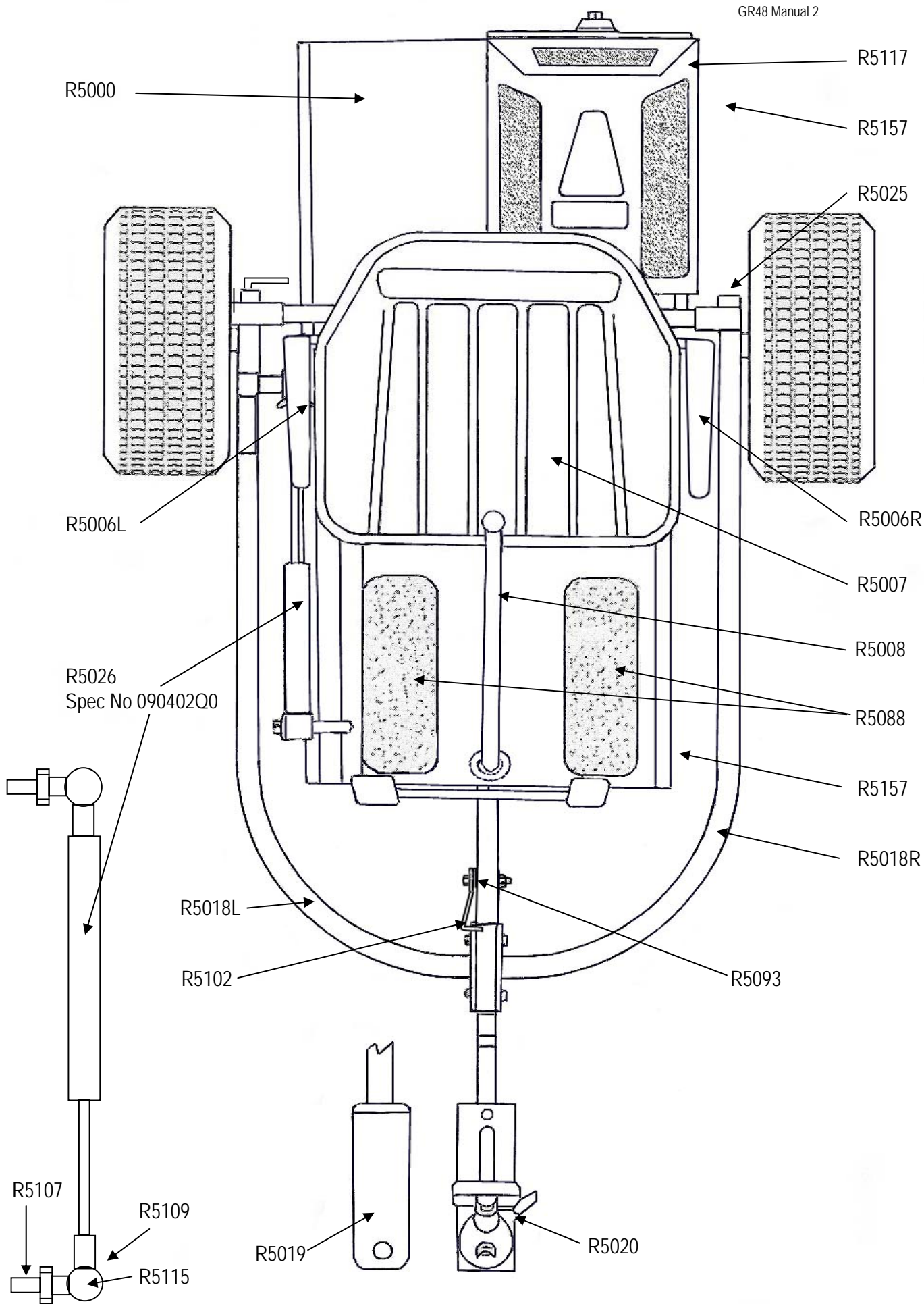
### **SMOOTHING ROLLERS SEIZED**

- Check:**
- \* End float on rollers is sufficient, Minimum 1/16" (1mm)
  - \* Bearing has not seized

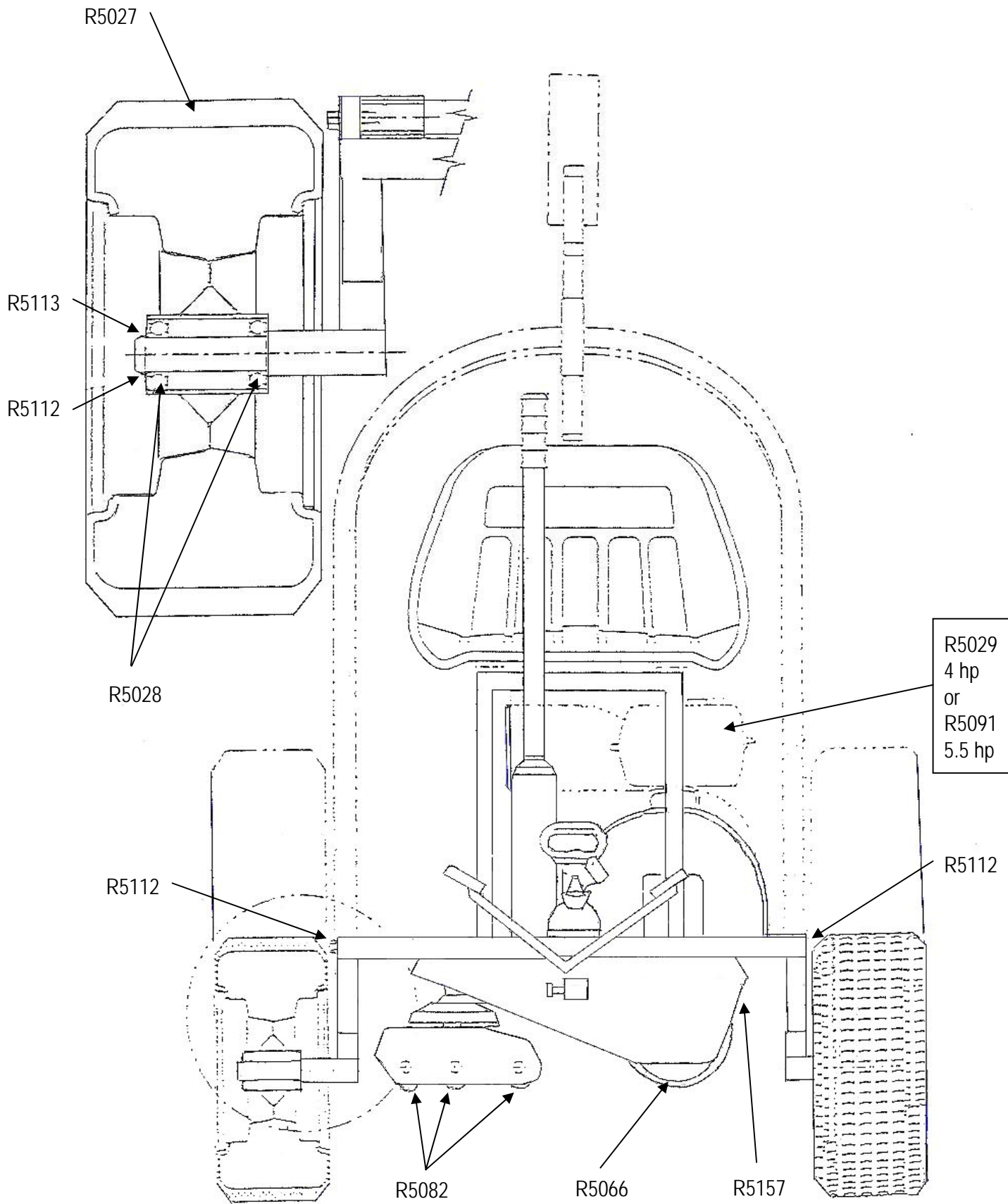
### **RUBBER DRIVE ROLLER WILL NOT ROTATE**

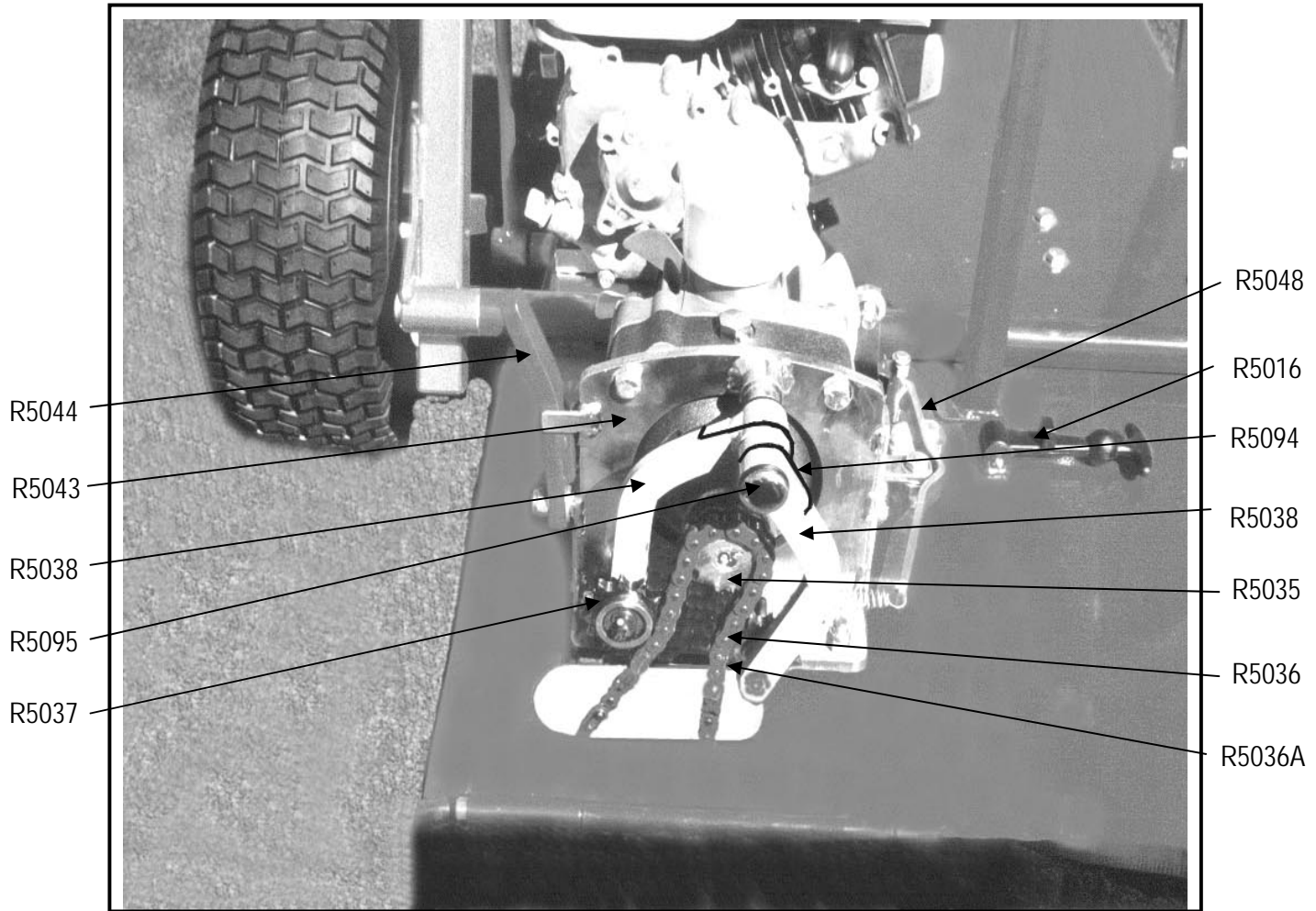
- Check:**
- \* Roller shaft end bearings have not seized
  - \* Broken chain

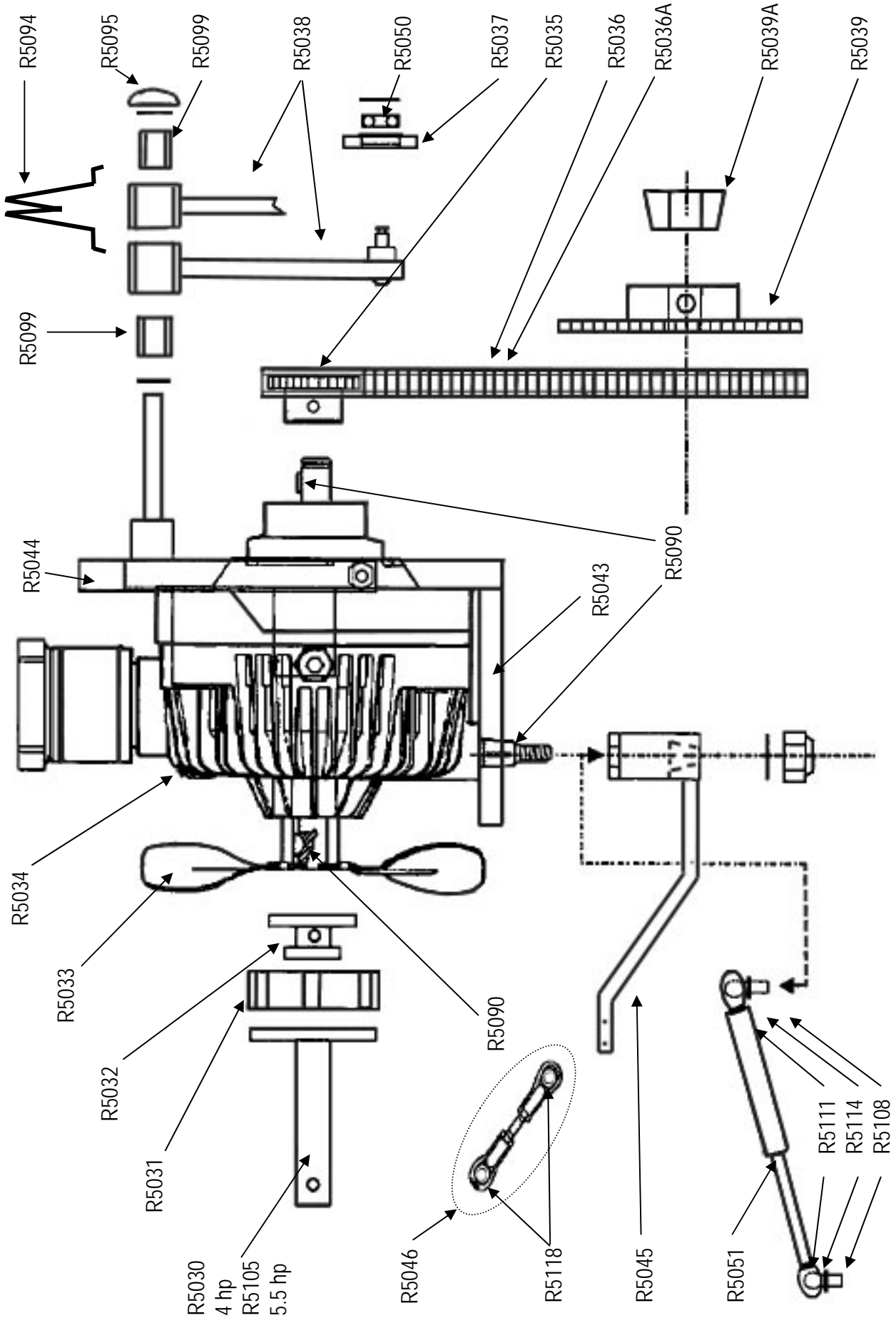


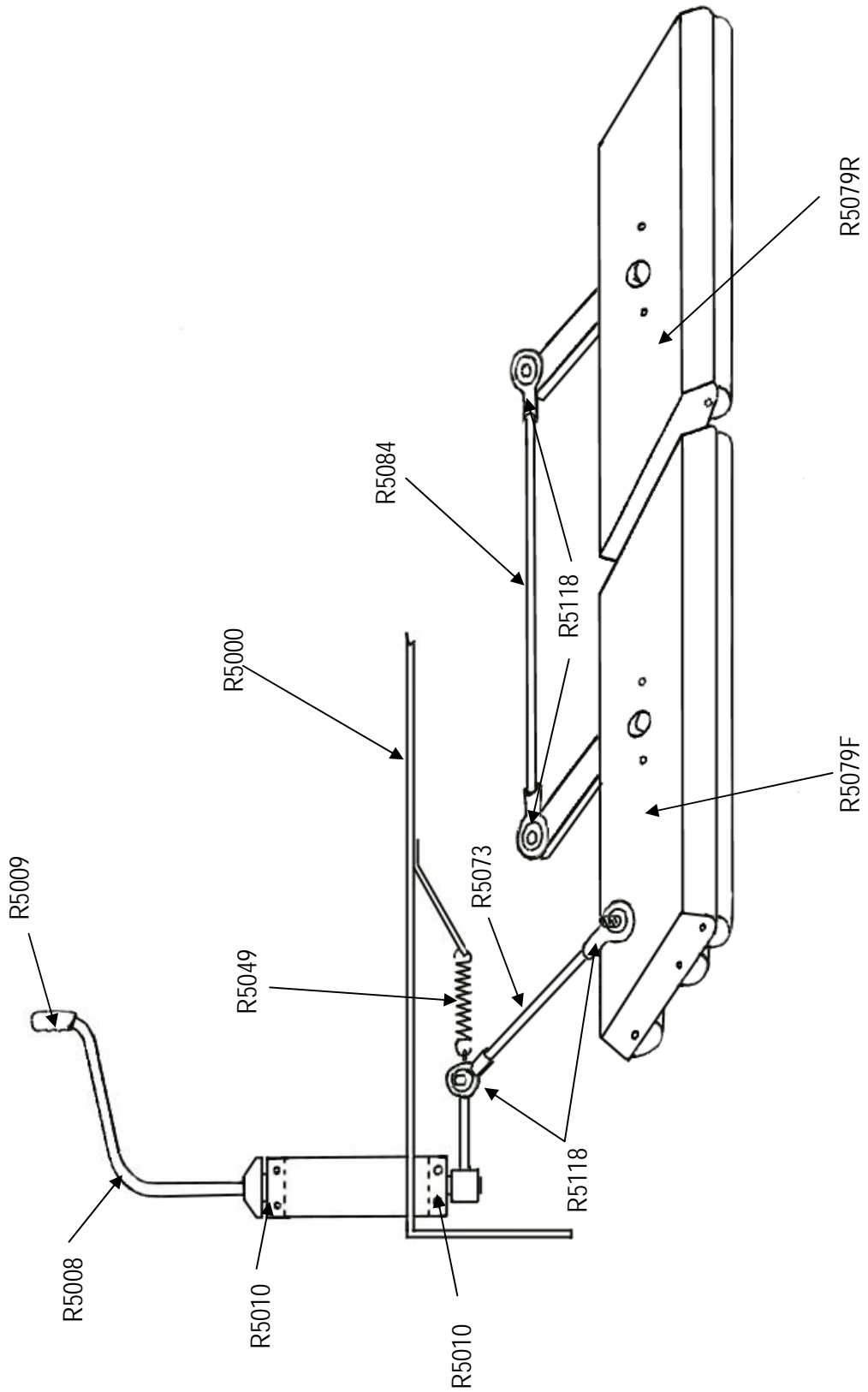


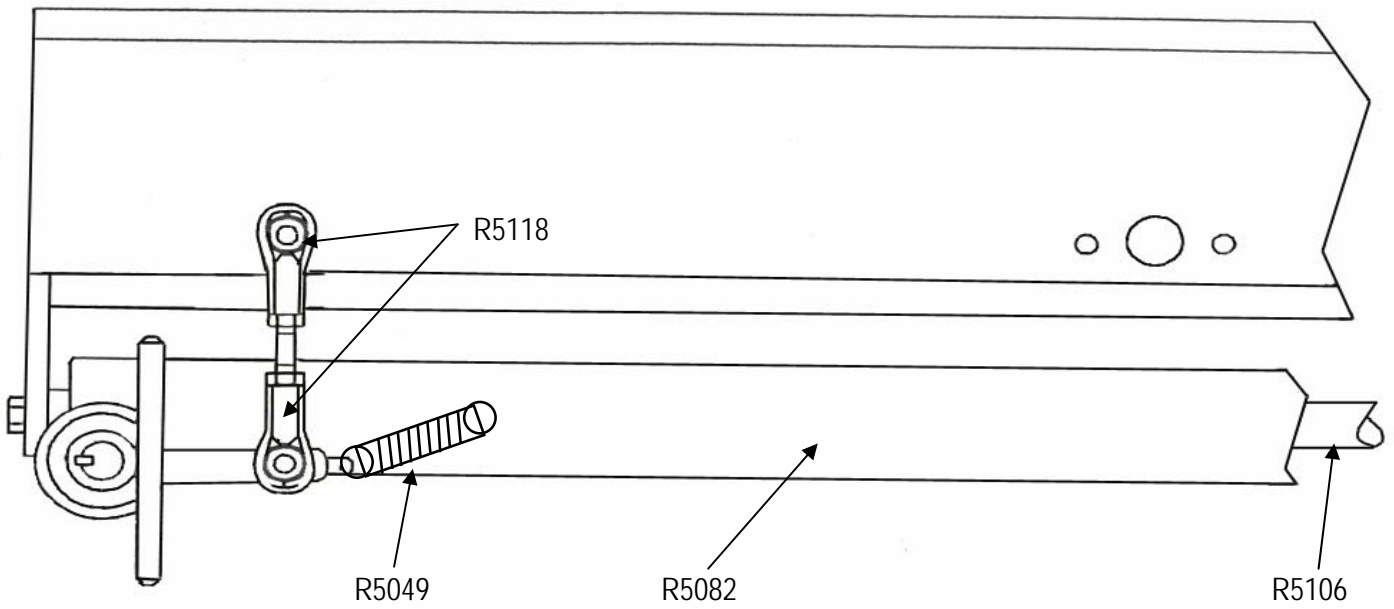
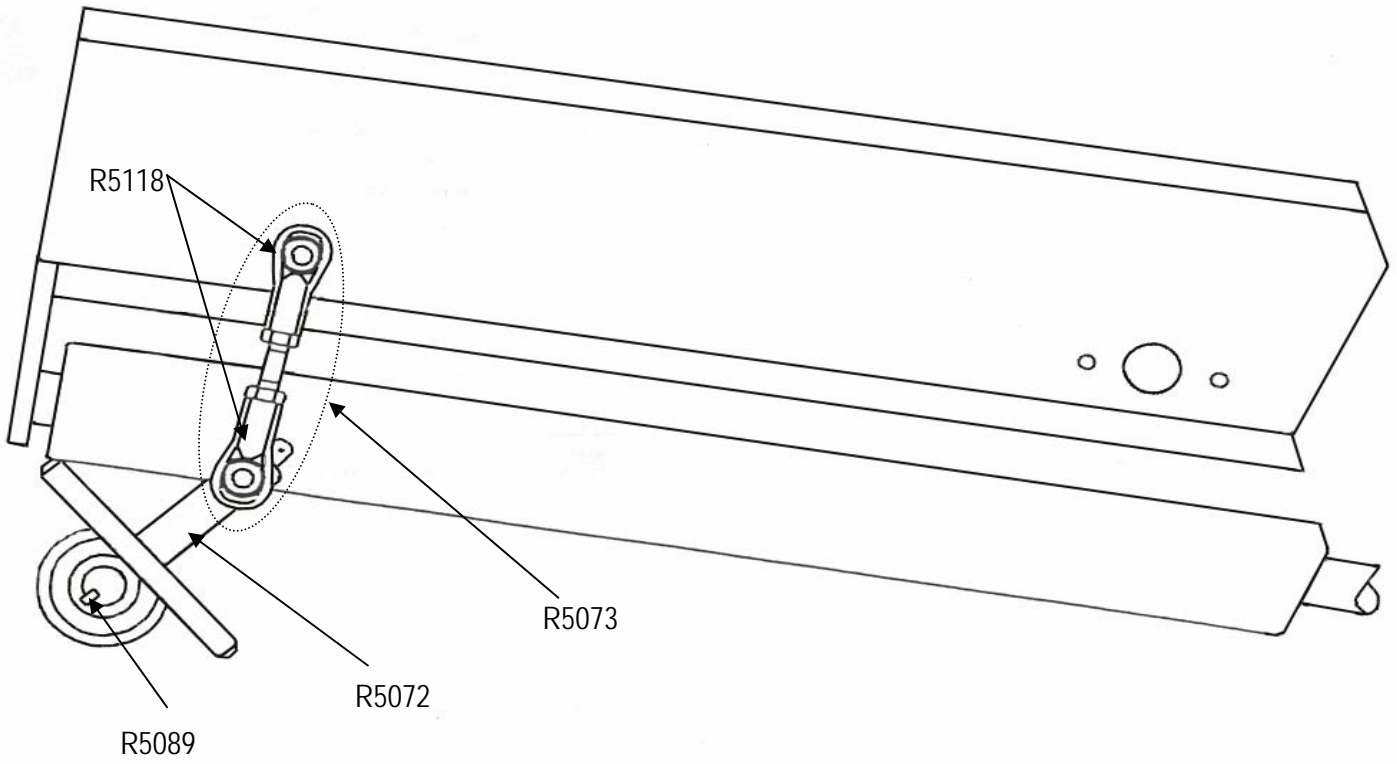




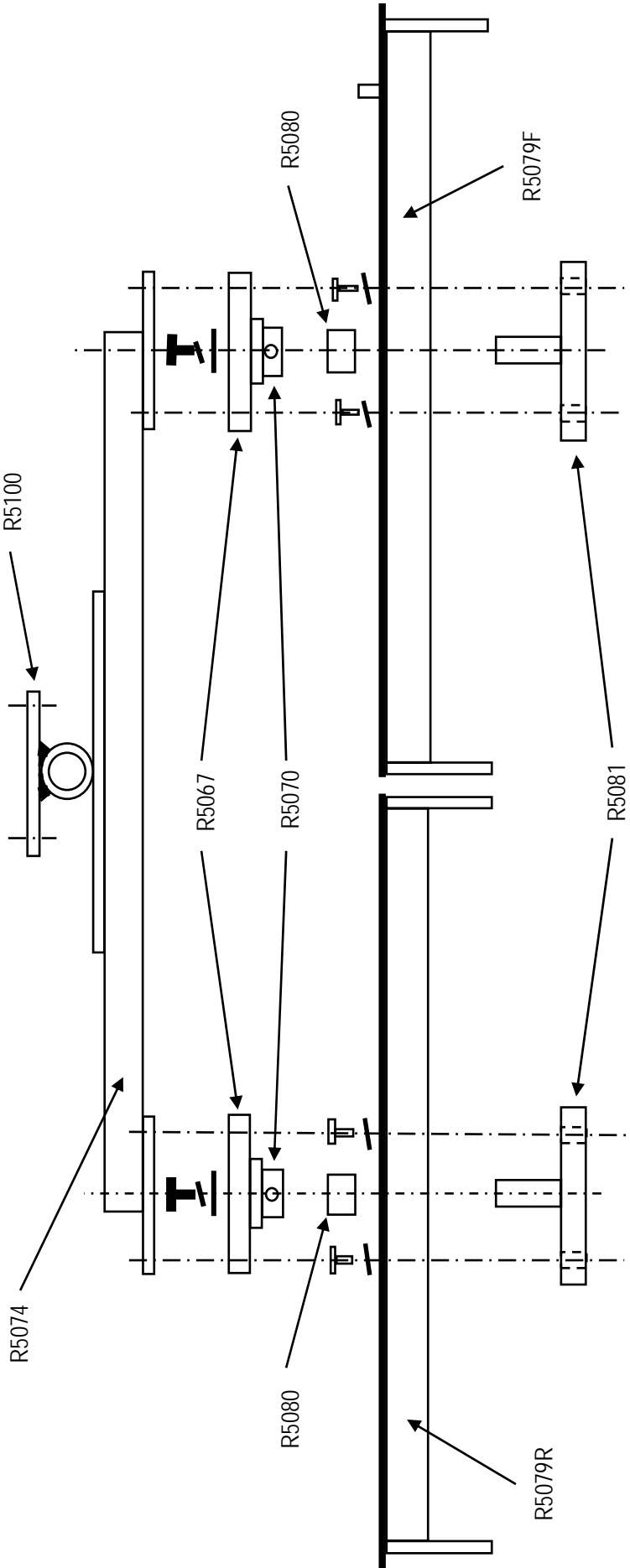


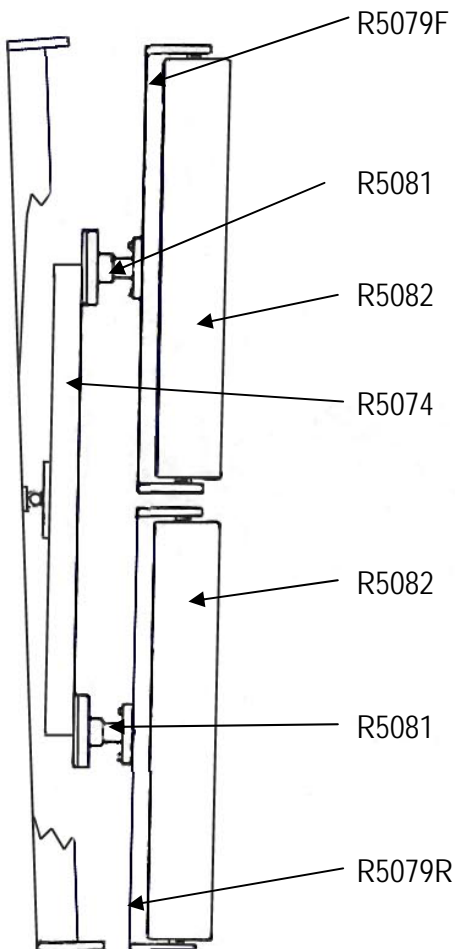
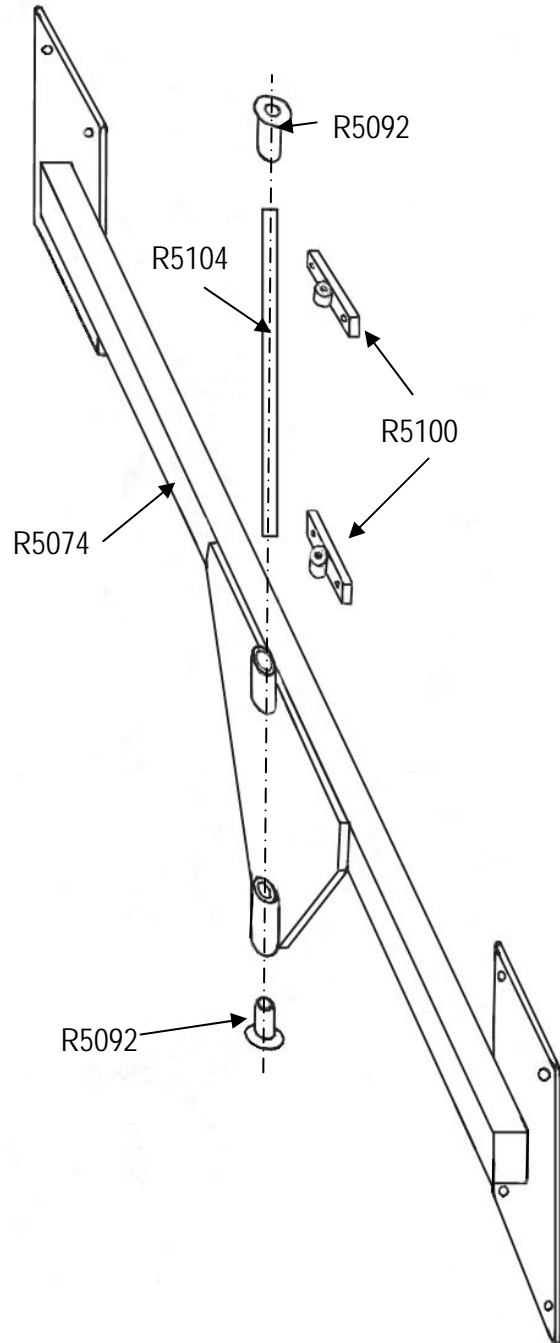
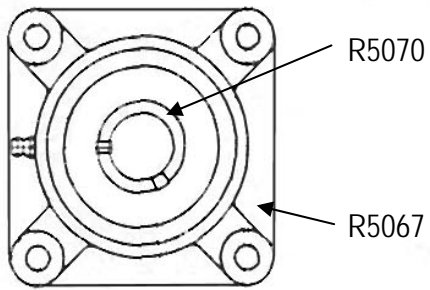


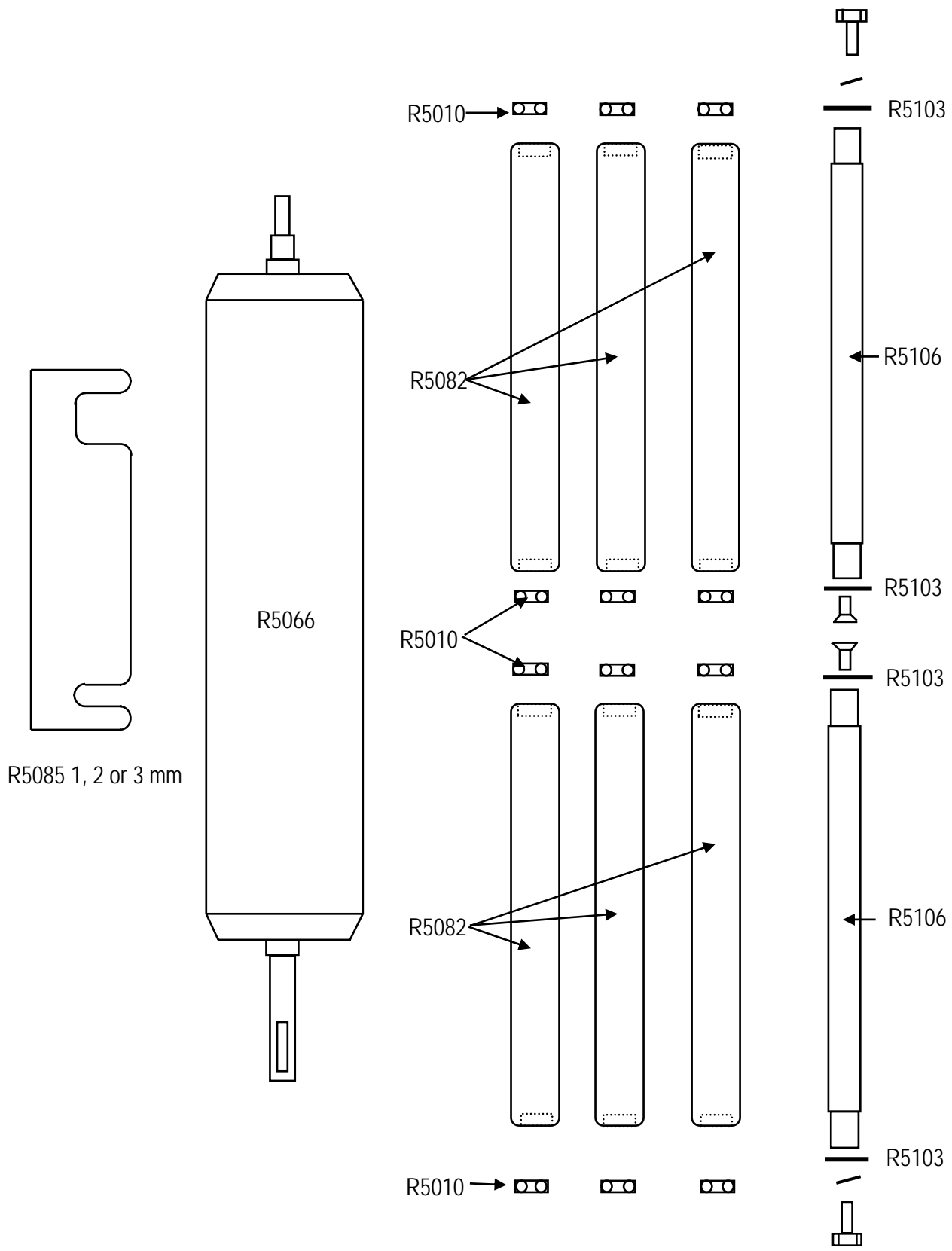




GR 48 Smoothing Head Swivel



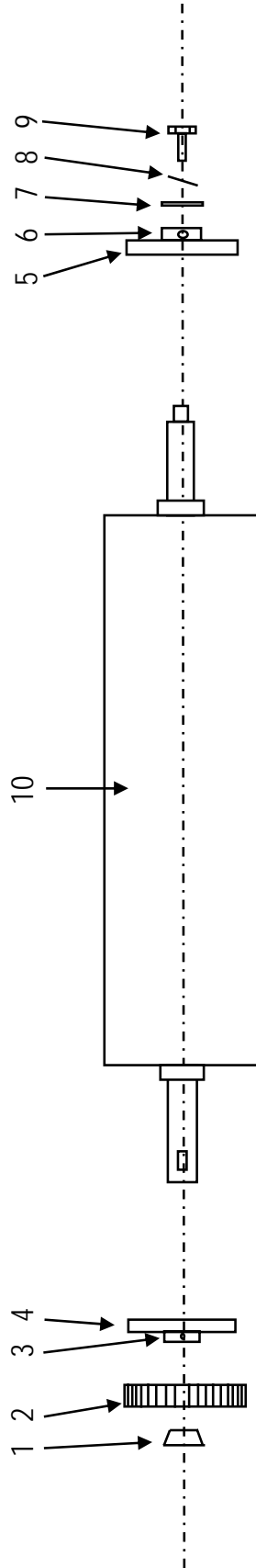


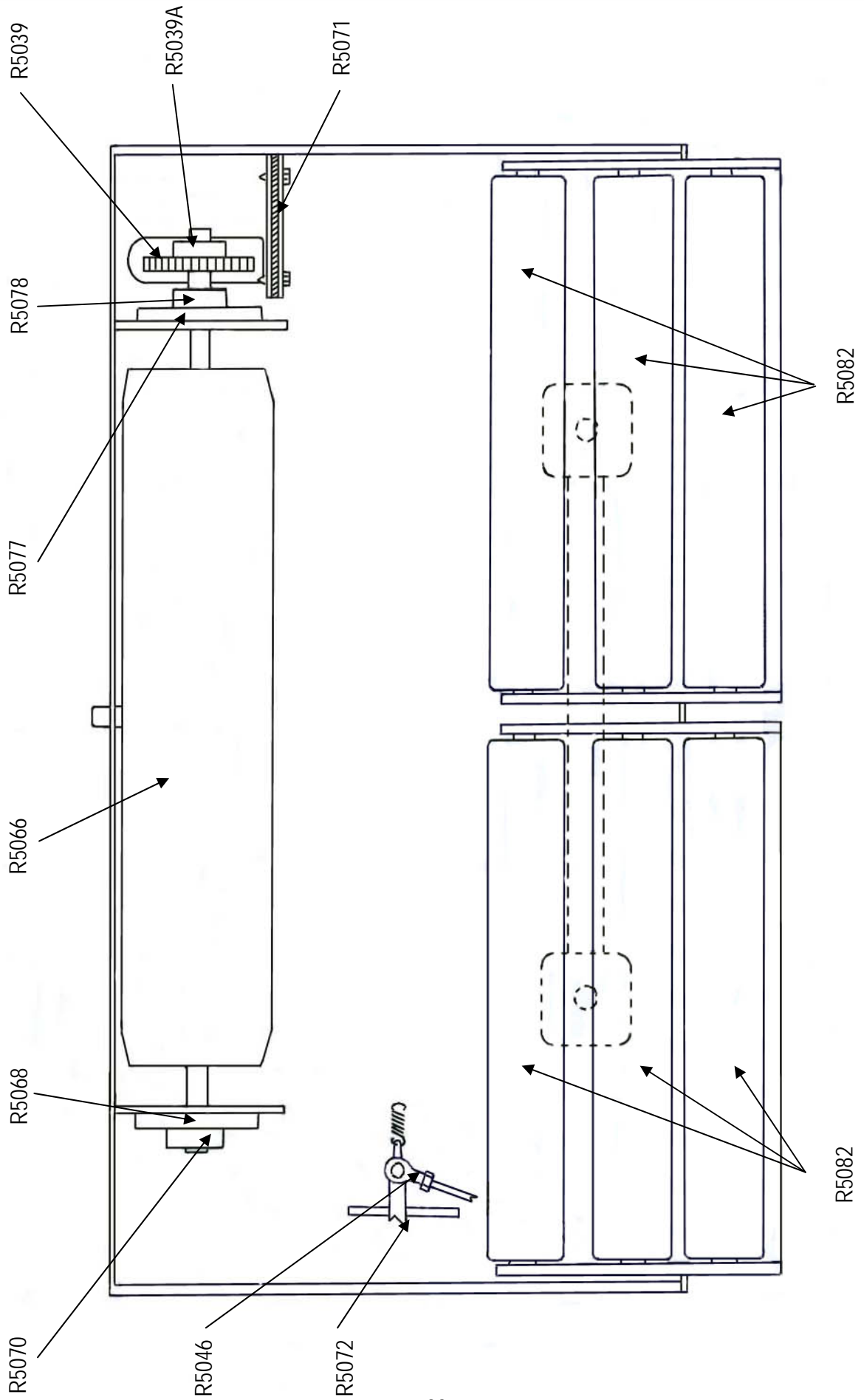




ROLLER ASSEMBLY LAY OUT

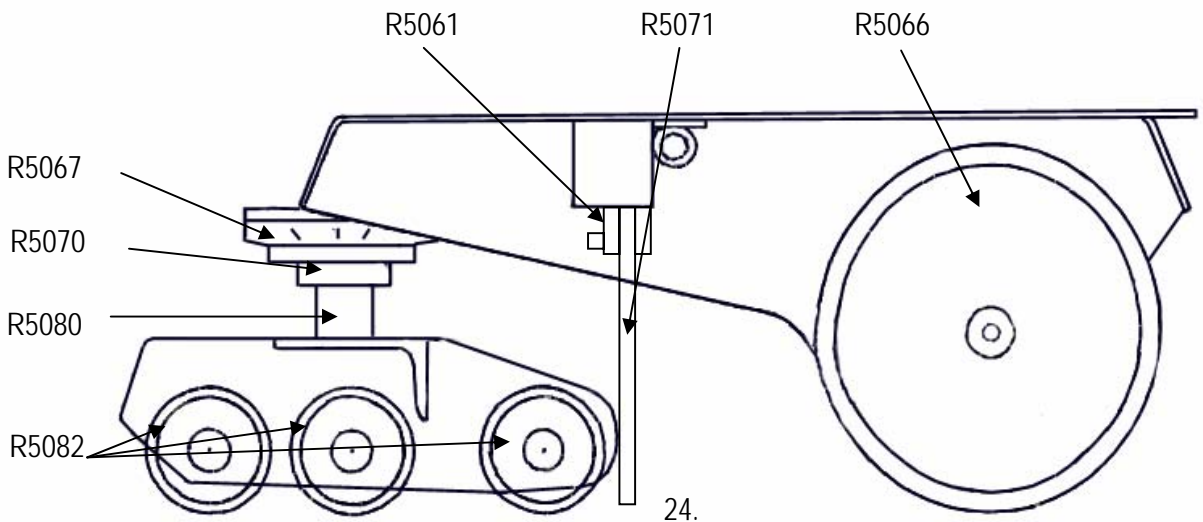
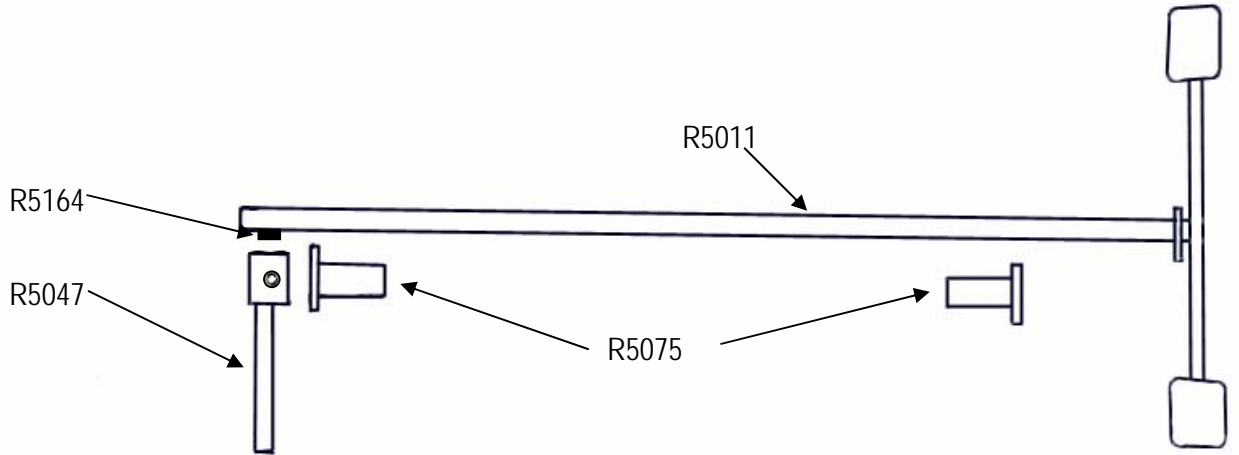
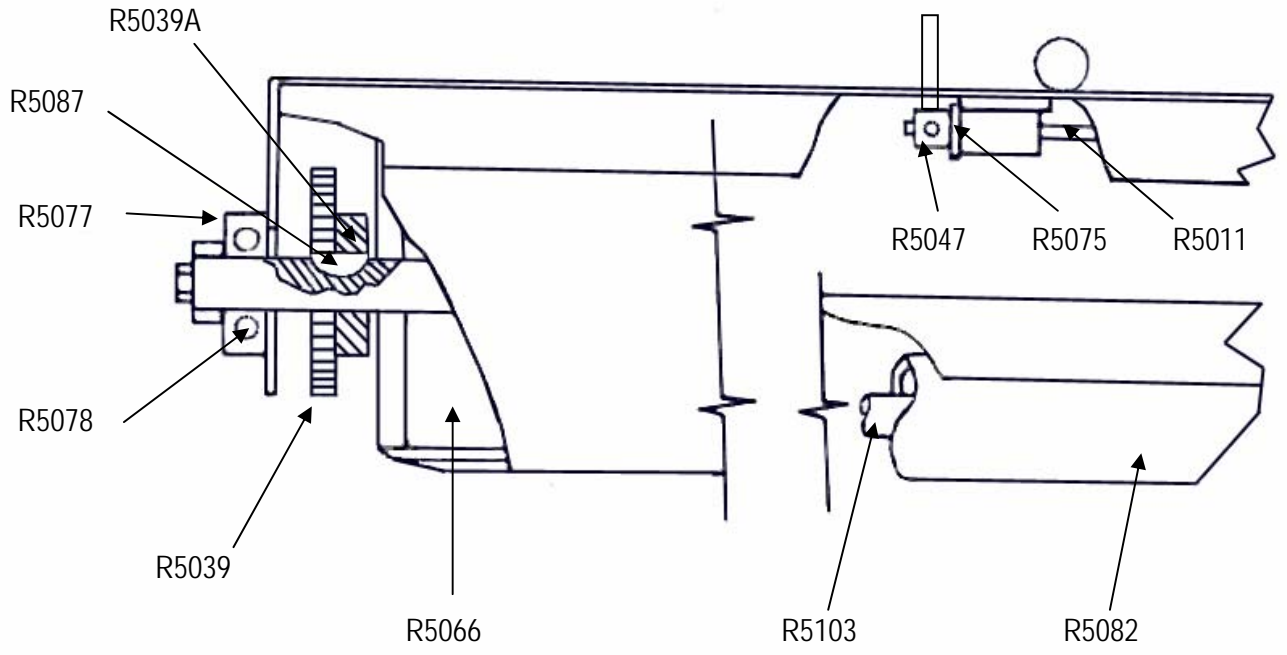
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|-----------|-------------|
| 1. R5039A | 6. R5070    |
| 2. R5039  | 7. FWasher  |
| 3. R5078  | 8. S/Washer |
| 4. R5077  | 9. Bolt     |
| 5. R5068  | 10. R5066   |





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Part No R5160



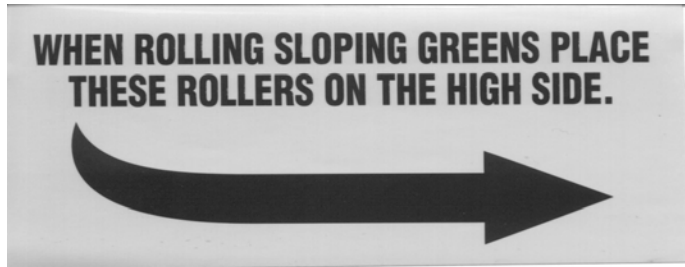
Name & Model attached to rear of Transmission Cover



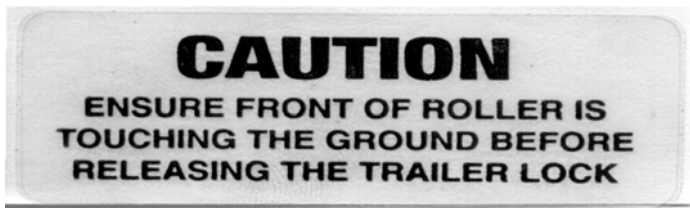
Attached to the Body beside the Transmission Cover



Attached to the Body under the Foot Pedals



Attached to the front top of the Smoothing Head



Attached to the front of both trailer arms at the Release Catch position

## PARTS LIST

PART NUMBER	PART DESCRIPTION
R5000	Main Body
R5002	Seat Frame
R5003	Seat Base
R5004	Seat Base Pin
R5005	Arm Rest Support
R5006R	Arm Rest RH
R5006L	Arm Rest LH
R5007	Seat
R5008	Joystick
R5009	Hand Grip (Joystick)
R5010	Bearing 6304
R5011	Foot Pedals
R5012	Foot Pedal Pads (2)
R5016	Catch ( Rubber, Pin, Hook )
R5018R	Trailer Arm RH
R5018L	Trailer Arm LH
R5019	Drawbar (Pin Type)
R5020	Drawbar (50mm Ball Coupling)
R5025	Trailer Plastic Plug Kit ( 4-35x35, 2-30x30, 1-1/4" dia )
R5026	Hydraulic Strut Spec-090402Q0 - Roller
R5027	Tyre & Rim ( 2 off inc. 2x1" Washers & 2x25 Circlips )
R5028	Wheel Bearings
R5029	Engine (Honda 4HP 2 : 1 reduction)
R5030	Engine Coupling (inc. Key & Allen Screw 5/16") Honda 4 h.p.
R5031	Rubber Coupling (inc. 4x5/16x 1 1/2" x 5/16 UNF Bolts & Nyloc Nuts )
R5032	Transmission Coupling (inc. 5/16 Allen Screw ) Eaton 7
R5033	Fan
R5034	Transmission Eaton 7
R5035	Sprocket 11T & 1/8" Woodruff Key
R5036	Chain Eaton 7
R5036A	Chain Joiner
R5037	Sprocket 12T x 2 ( inc. Bearing & Circlip )
R5038	Chain Tensioner Arms (pair)
R5039	Sprocket 30T
R5039A	Taper Lock 30mm
R5043	Bracket Transmission
R5044	Lever Transmission Neutral
R5045	Transmission Yoke
R5046	Rod Ends x 2 inc. rod
R5047	Foot Pedal Arm
R5048	Self Centring Arm

## GR48 PARTS LIST CONTINUED

R5049	Spring Self Centring & Steering Return
R5050	Bearing 6000
R5051	Strut Transmission Spec 081200Q0
R5061	Mud Flap Strap
R5066	Drive Roller ( inc. 1"x3/8 NF Bolt Body Washer & Spring Washer 8x7x30 Key or 8x30 Woodruff Key )
R5067	Housing
R5068	Housing
R5070	Bearing
R5071	Mud Flap
R5072	Steering Arm
R5073	Steering Connecting Rod ( inc. 2 x Rod Ends )
R5074	Smoothing Head Swivel Bracket inc. Plastic plugs
R5075	Nylon Bushes (black)
R5077	Bearing Housing
R5078	Bearing
R5079F	Smoothing Head Front
R5079R	Smoothing Head Rear
R5080	Spacer
R5081	Smoothing Head Bearing Carrier Mount 2 off
R5082	Smoothing Rollers 6 off
R5084	Connecting Rod ( inc. 2 Rod Ends )
R5085	Shim (Honda)
R5087	Woodruff Key 8 x 30
R5088	Mat Foot (pair)
R5089	Woodruff Key 3/16"
R5090	Woodruff Key 1/8"
R5091	Engine Honda 5.5 hp
R5092	Nylon Bush – Swivel Smoothing Head
R5093	Spring (Coil Drawbar)
R5094	Chain Tensioner Spring
R5095	Dome Cap (16mm)
R5099	Chain Tensioner Bronze Bush
R5100	Pivot Bush Pin Mount Blocks x 2
R5102	Catch, Front Trailer (no spring tab)
R5103	Smoothing Roller Shaft Washer (1/8" thick)
R5104	Shaft – Pivot Bush (to suit red nylon bush R5092)
R5105	Engine coupling (inc. key & allen screw 5/16") 5.5 hp
R5106	Roller Shaft Stepped (inc. 2 washers R5103)
R5107	Ball Strut 10mm thread
R5108	Ball Foot Pedal Strut
R5109	Spring Locking – Strut Trailer /Roller

## GR48 PARTS LIST CONTINUED

R5111	Spring Locking – Foot Pedal Strut
R5112	25mm External Clip
R5113	25mm Flat Washer
R5114	Foot Pedal Strut End
R5115	Trailer Strut End
R5116	Self Centring Arm Support
R5117	Transmission Cover (2 hook)
R5118	Rod Ends
R5128	Hour Tach Bracket
R5129	Hour Tach Meter
R5157	Body mesh Front & Rear
R5158	Seat Frame Rubber Strip
R5159	Trailer Rest Rubber Strip
R5160	Sticker Safety Pack GR48
R5164	Woodruff key 4mm

**TRU-TURF EQUIPMENT INTERNATIONAL AGENCIES**

Excel - Maintenance Schedule

**APPLIES TO ALL MOTORISED ROLLERS**

**MAINTENANCE SCHEDULE - ONGOING**

	<u>Pre - Delivery</u>	<u>Pre-start Check</u>	
Check Engine Oil	X	X	
Check Transmission Oil Level	X	X	<b>Beware of contaminates entering the container</b>
Lubricate drive chain with WD40	X	X	
Check Tyres	X	X	
Check Gas	X	X	
Check Smoothing Roller Bearings	X	X	
Check Drive Roller Bearings	X	X	
Grease Trailer Arm Pivot Bushes	X		
Check for loose Nuts & Bolts	X	X	

**LUBRICANTS & REPLACEMENT SCHEDULE**

	<u>Monthly</u>	<u>3 Monthly</u>	<u>6 Monthly</u>	<u>12 Monthly</u>
Renew Engine Oil	As per Manufacturers Handbook			
Renew Transmission Oil	X			<b>or when dark in colour</b>
Grease Trailer Arm Pivot Bushes	X			
Lubricate Chain Tensioner Arm Pivot		X		
Renew Smoothing Roller Bearings	When defective or		X	
Renew Drive Roller Bearings	When defective or			X
Renew Chain Tensioner Sprocket Bearings	As required or			X
Renew Drive Chain	As required or			X
Replace Foot Pedal Struts	When defective & as a pair			
Replace Trailer Strut	When defective			