

GR39 GOLF ROLLER MANUAL



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SEPARATE HONDA ENGINE OWNERS MANUAL INCLUDED

Congratulations on your investment in the GR39 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 GR39 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

**GR39 Eaton
Golf Green Roller**

Serial # _____

Engine # _____

Purchase Date: _____

SAFETY INFORMATION

Safety is of the utmost importance when operating turf equipment. To ensure safe operation of the GR39 Eaton 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 drop and dig into the ground, causing the machine to move dangerously in any direction causing bodily injury. This also applies during normal maintenance procedures - make sure the latch is locked 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 the 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 the 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
- (1) 12mm External Circlip

Steering Arm Components

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

Shock Absorber

- (1) 16mm Star Clip

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" x 3/8" UNF Hex Hd Bolts
- (2) 3/8" UNF Nyloc Nuts

Step 1: MOUNTING THE SEAT TO THE SEAT FRAME

- * Remove the circlip and 12mm diameter pin from the seat frame
- * Place the seat down 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 clip 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 pedals 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 in 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

MOUNTING THE STEERING ARM TO THE MACHINE CONTINUED

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.

- * 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 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).
 - * Fasten in position with 25mm external circlip. Ensure circlip is fitted correctly groove.

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" 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 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.
- * Slide end of dampener onto the mating pin welded to the trailer arm. Fasten in position with the Star clip supplied.
- * Ensure the nylon bushes are fitted in the eye of the dampener before fitting.
- * 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 Manual

Step 8: LUBRICATE SMOOTHING HEAD PIVOT BEARING

- * There is a grease fitting covered with a plastic cap located on the smoothing head centre ball joint swivel. Apply grease to lubricate fitting.

PRE-OPERATION CHECKS

- * Check engine as per Honda or Briggs & Stratton manual
- * Ensure steering joystick has no looseness
- * Ensure that the trailer bar locking catch mechanism is securely locked to the main frame bolt when in the towing or trailering position.
- * Check and tighten grub screws fitted to joystick steering arm.
- * Grease smoothing roller head centre ball-joint swivel lightly. Replace cap.
- * Oil rod ends sparingly
- * Check all bearing races for correct function
- * Check that split pins and washers are in place
- * Check for oil leaks - rectify before using machine.

STANDARD OPERATION PROCEDURES

- * Check the position of the transmission neutral lever, (attached to the transmission bracket). Ensure lever is in the upright position. If this lever is in the forward position, the transmission is in neutral.
- * 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 coated 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.
- * Carefully select the direction you roll the greens, roll with the undulations not across them; 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 applies 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

STANDARD PROCEDURES CONTINUED

right foot pedal down gently the further the pedal is depressed the faster the roller will travel. Be smooth with your action. Hold in this position until a few short distance from the edge of the green, then take your foot off the pedal, gently Rest your other foot on the opposite pedal and gently apply the pressure on the pedal. The roller will move in the opposite direction. 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 make a straight line.

POINTS TO REMEMBER CONTINUED

8. Roll in straight lines; Zig Zag pattern, the roller is not designed to turn sharp corners
9. Do not leave the roller engine running with the roller parked on the green; the engine vibration cause roller depressions to be left 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.
12. Use oil as recommended by the manufacturer.

MAINTENANCE

- * Stop engine before performing any maintenance task.
- * Service the Honda engine or the Briggs and Stratton Vanguard 4HP engine according to their manufacturers maintenance schedule.
- * Check transmission oil level. The plastic container on top of the transmission should be at the level indicated on the container. **IMPORTANT** Do not overfill the plastic container, the oil requires space to expand when hot.
- * As a guide to correct **transmission oil use D.T.E. 16M Mobil** or equivalent.

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 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

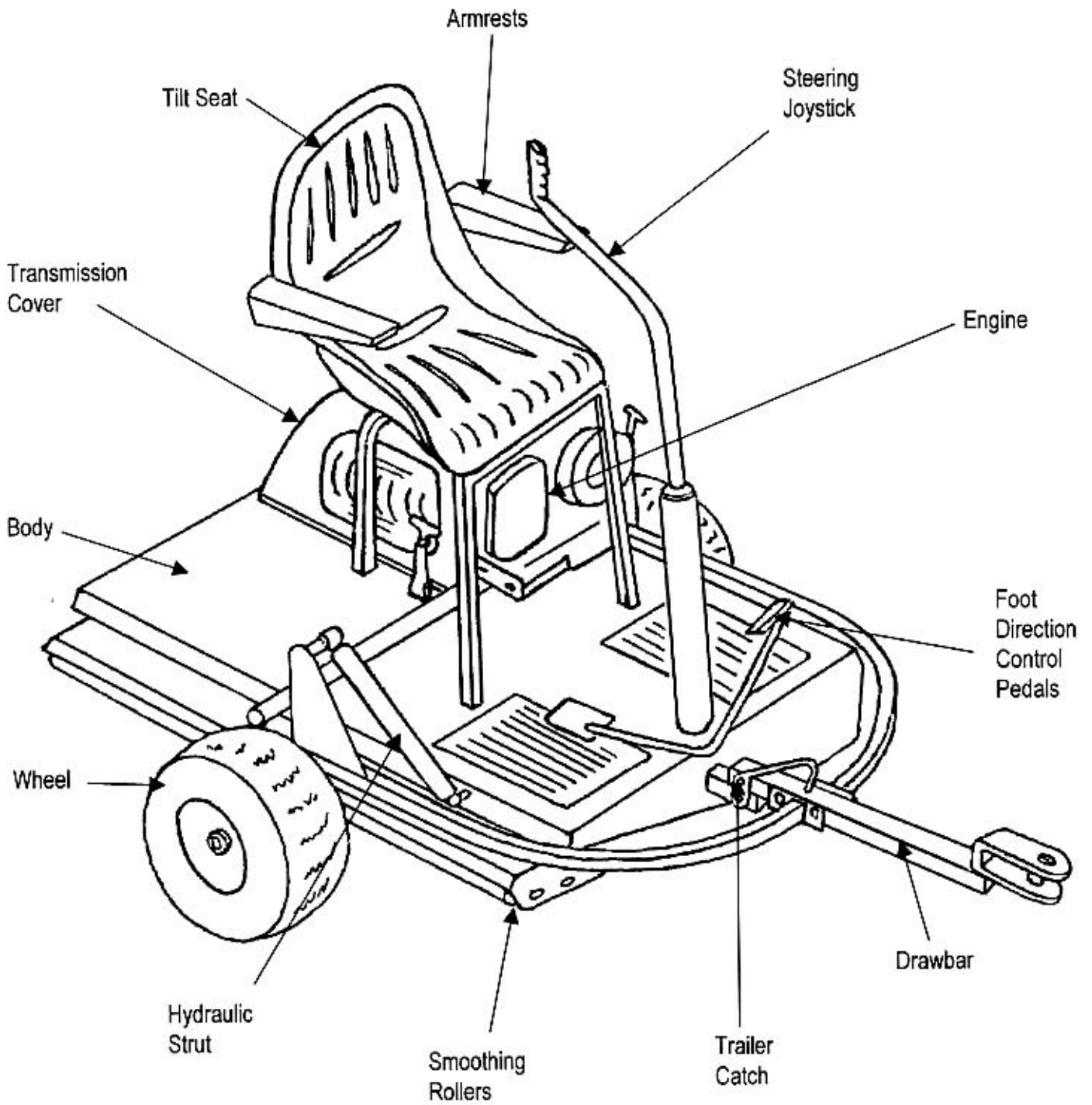
SMOOTHING ROLLERS SEIZED

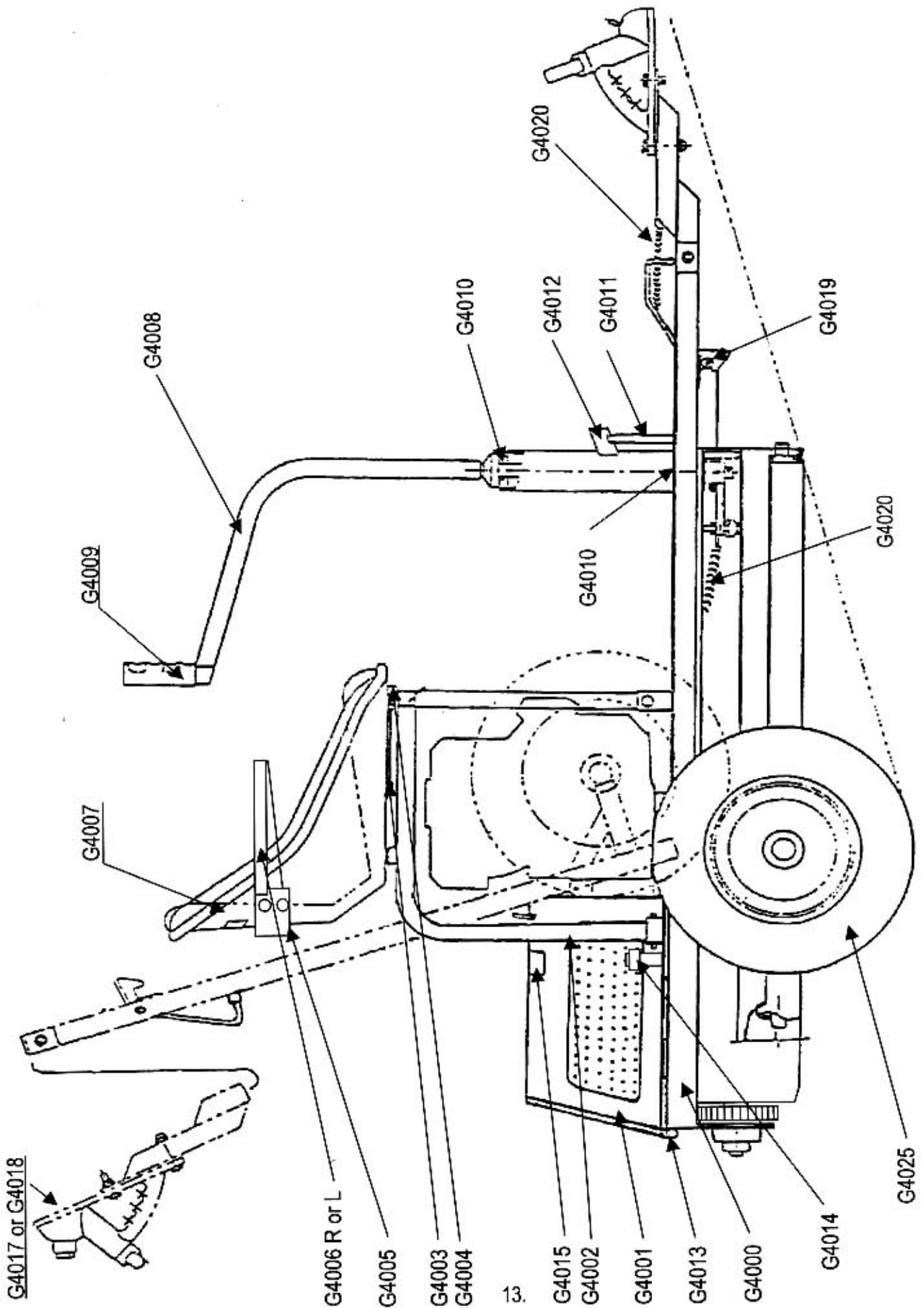
- Check:**
- * End float on rollers is sufficient, Minimum 1/16" (1mm)
 - * Bearing has not seized

RUBBER DRIVE ROLLER WILL NOT ROTATE

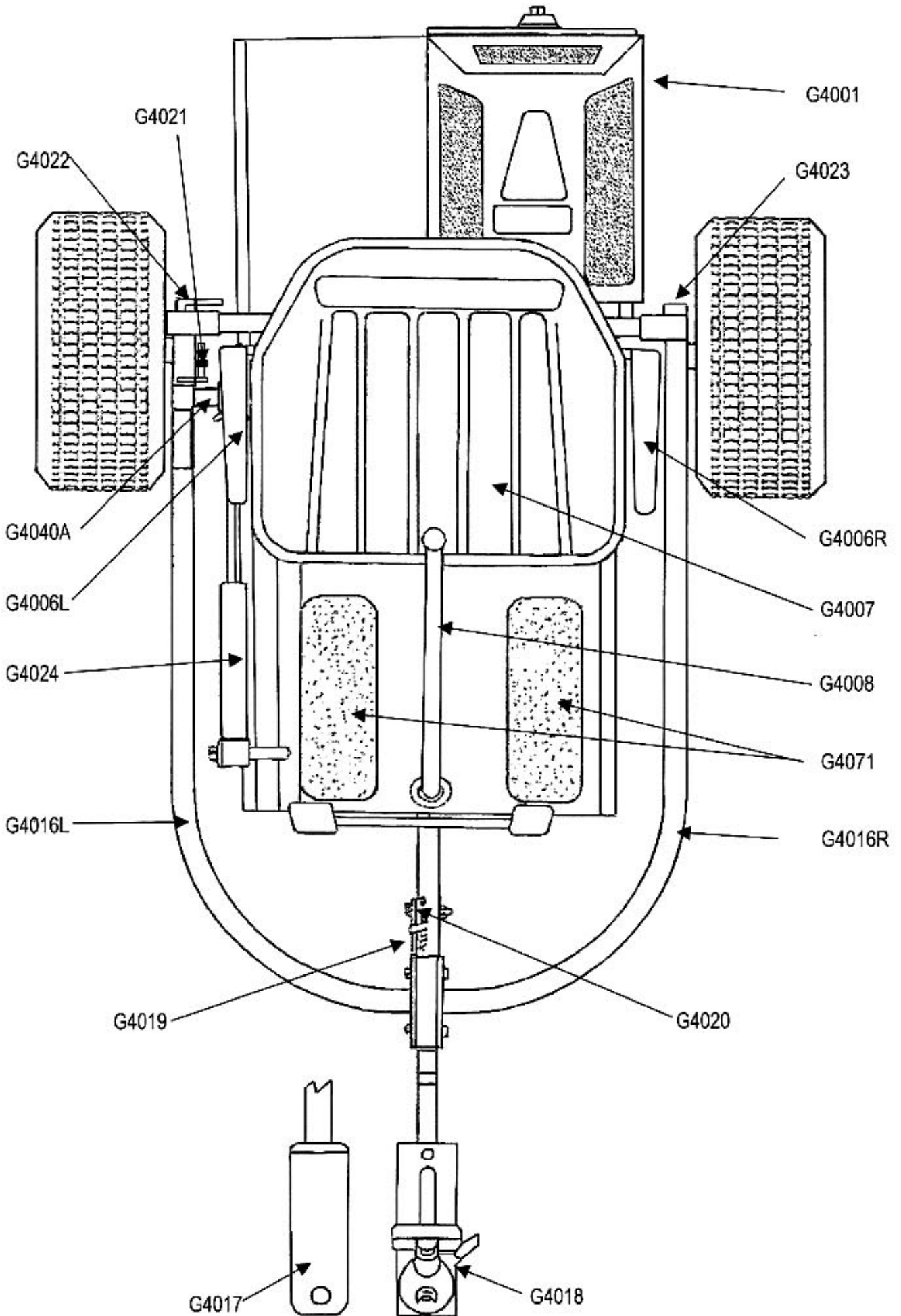
- Check:**
- * Roller shaft end bearings have not seized
 - * Broken chain

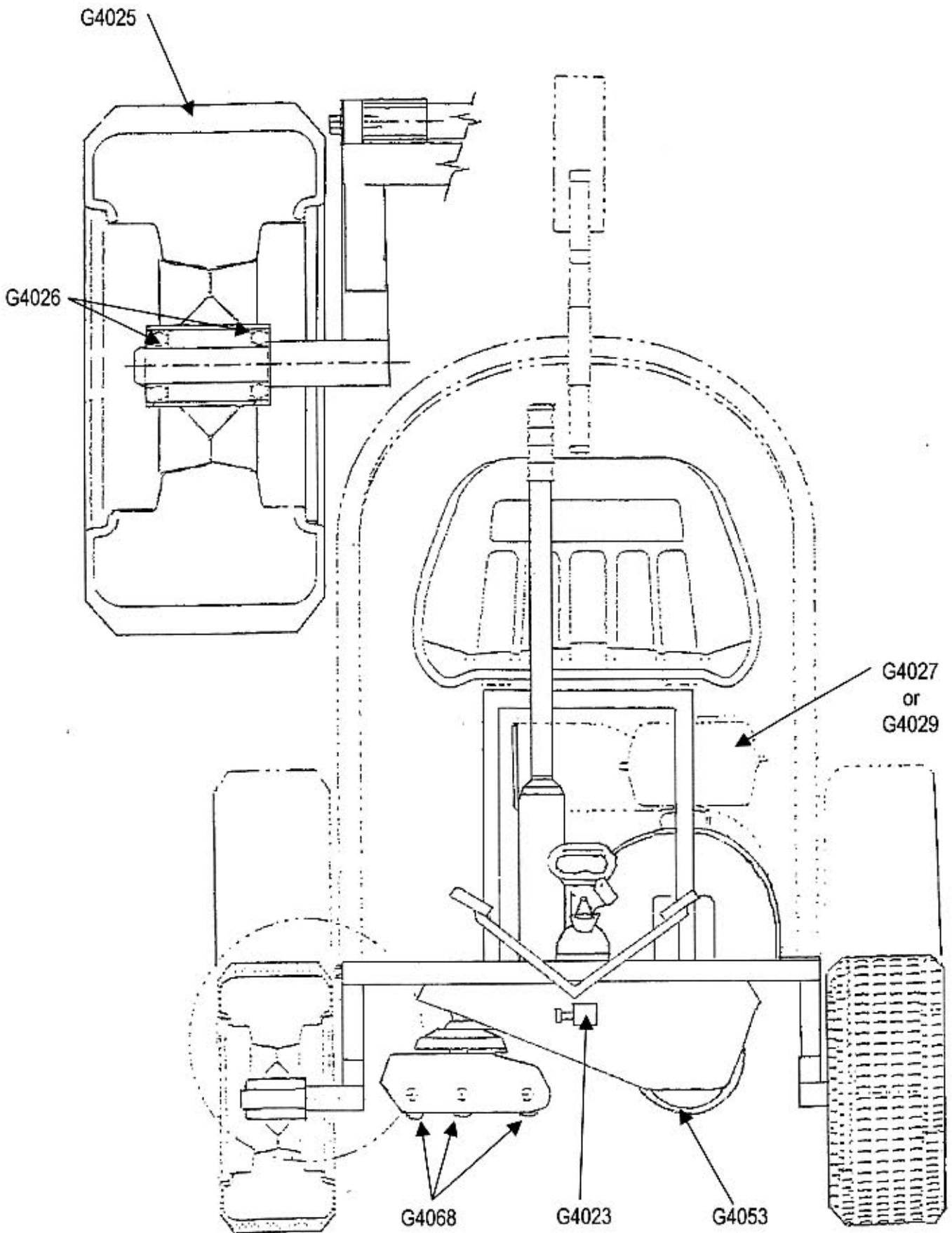
Machine Components

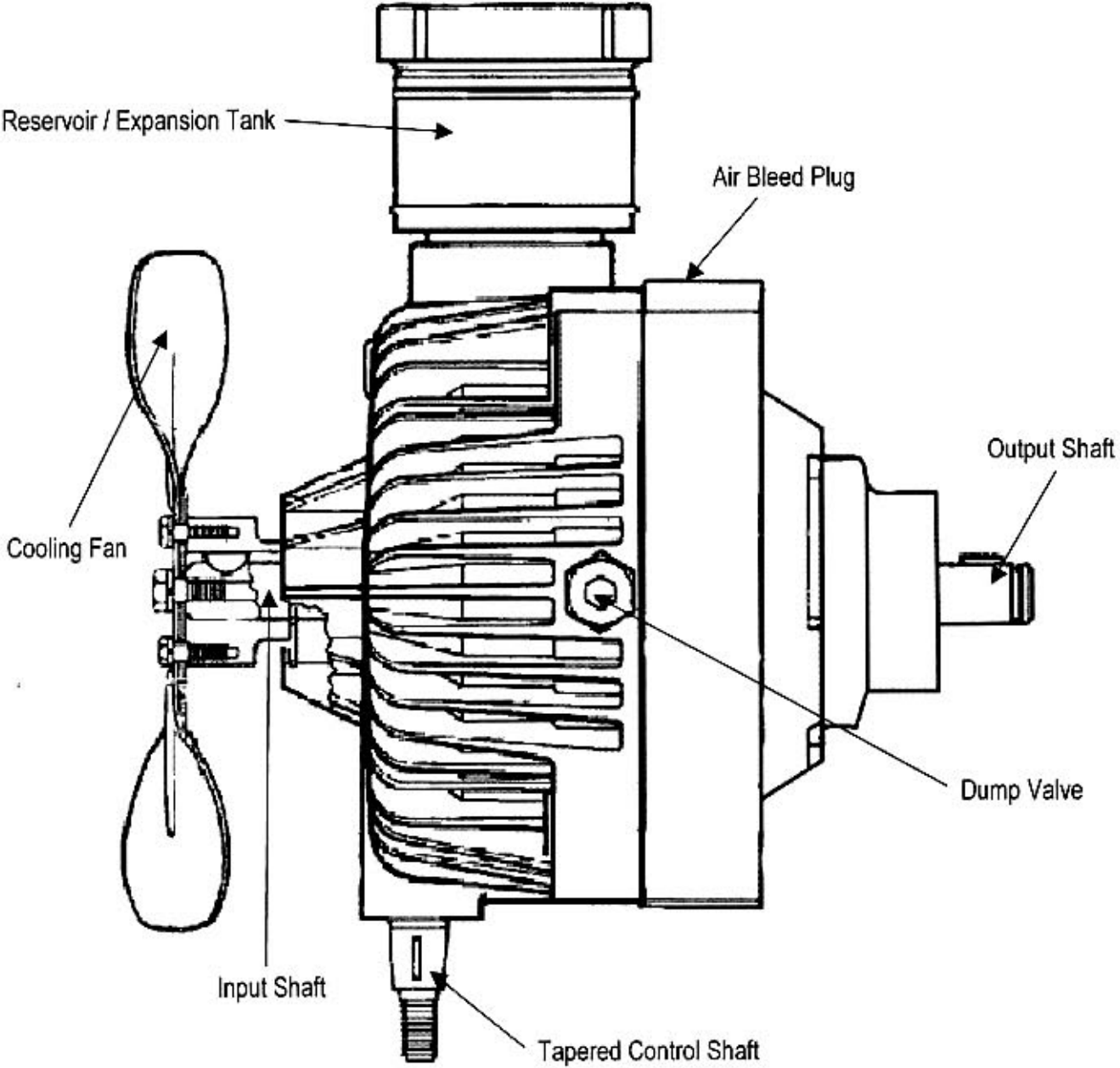


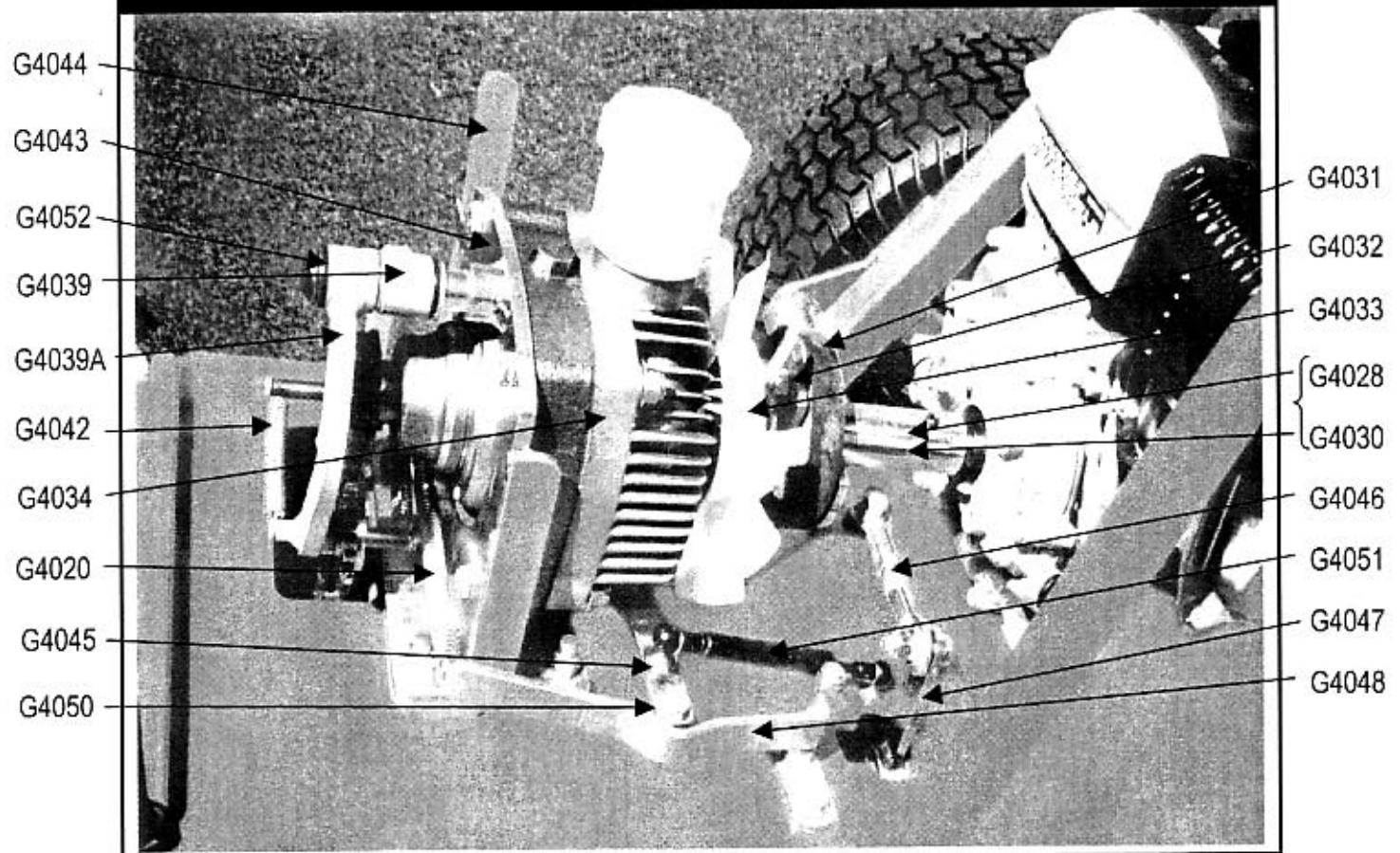
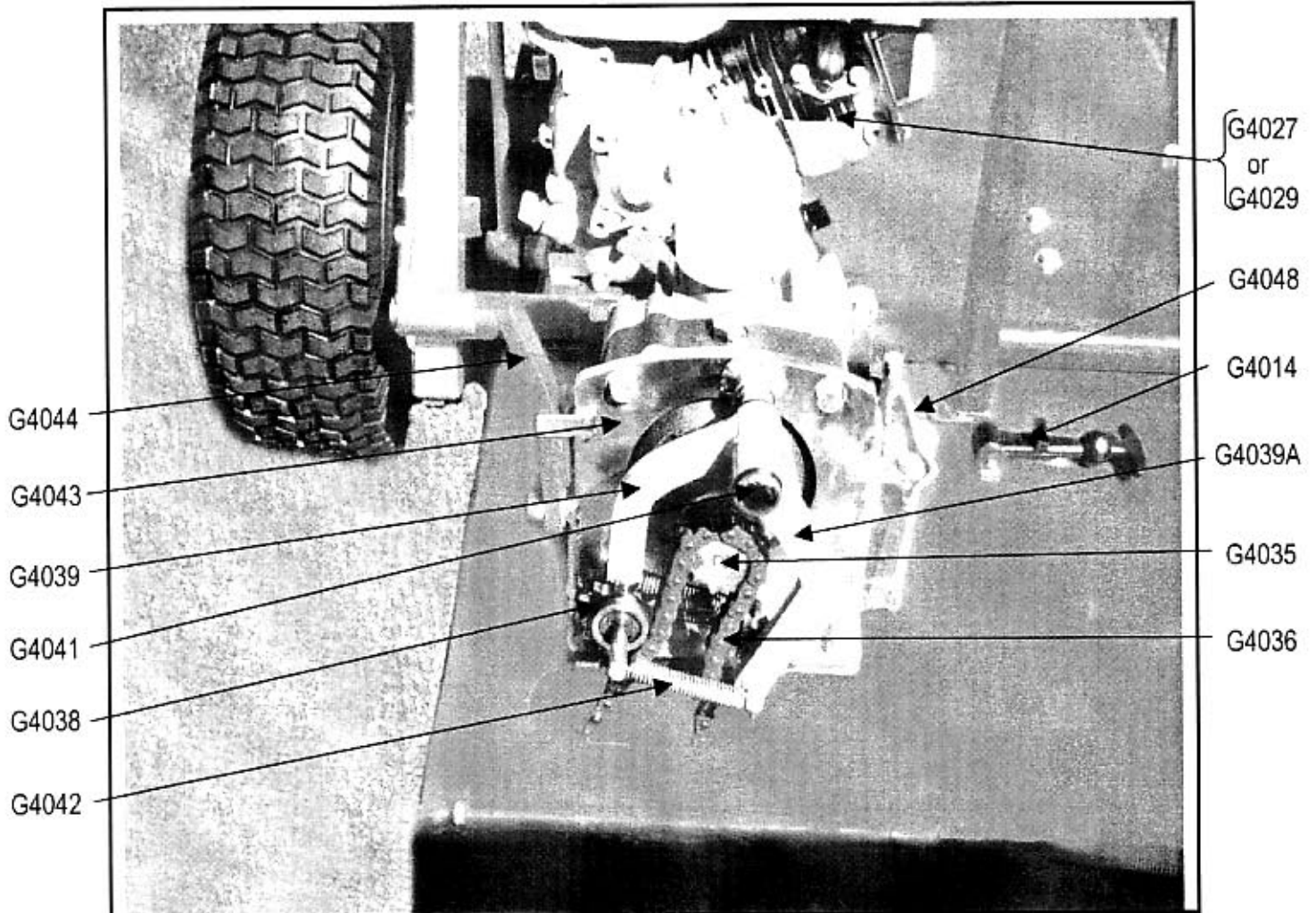


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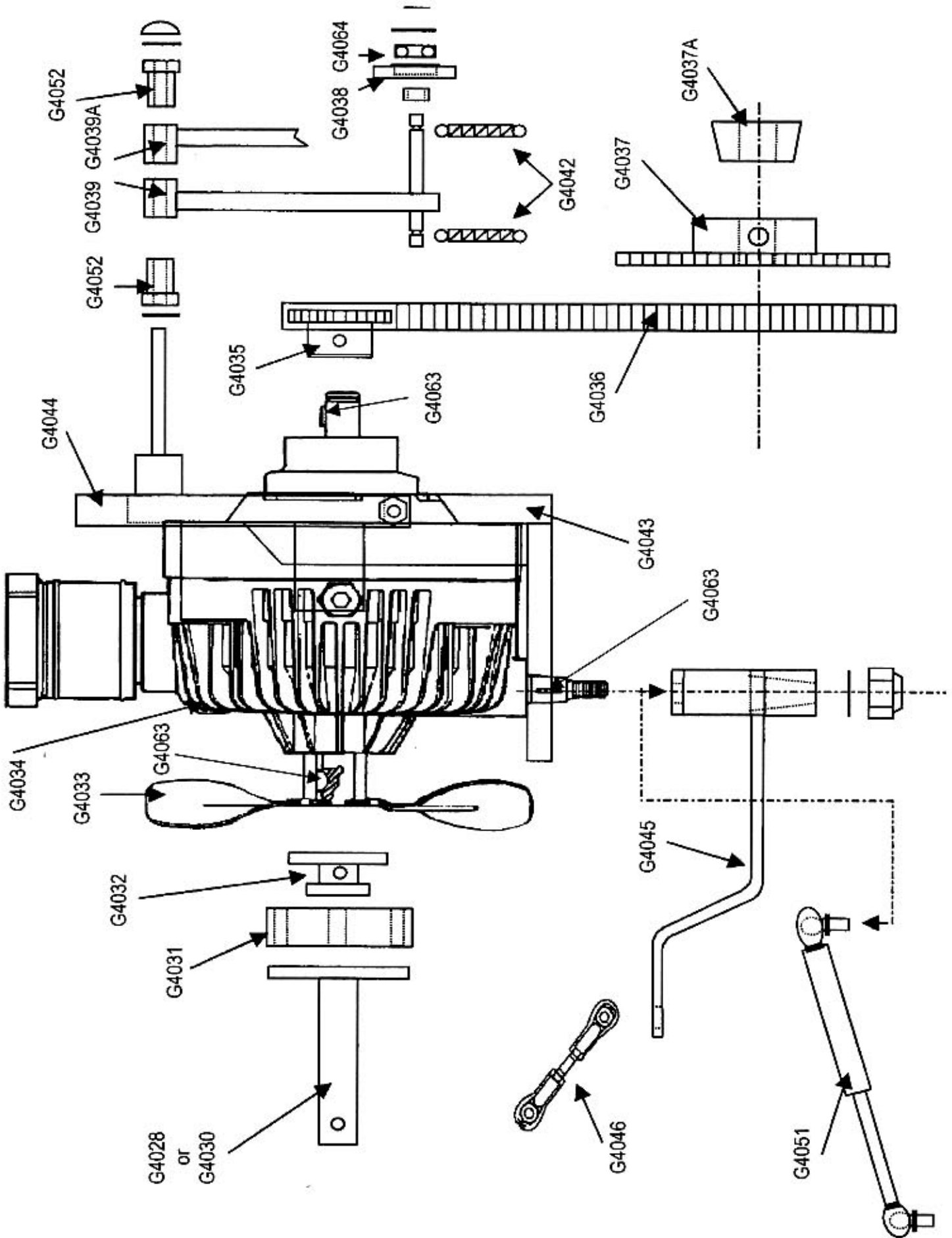


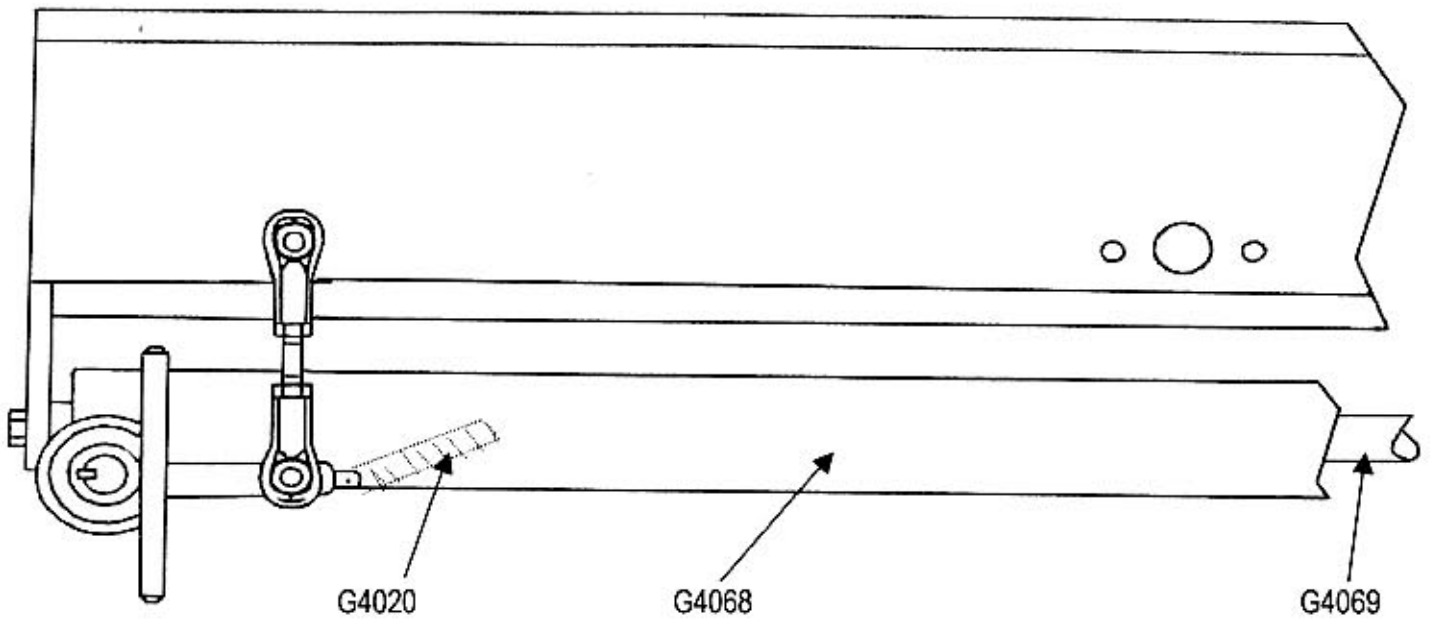
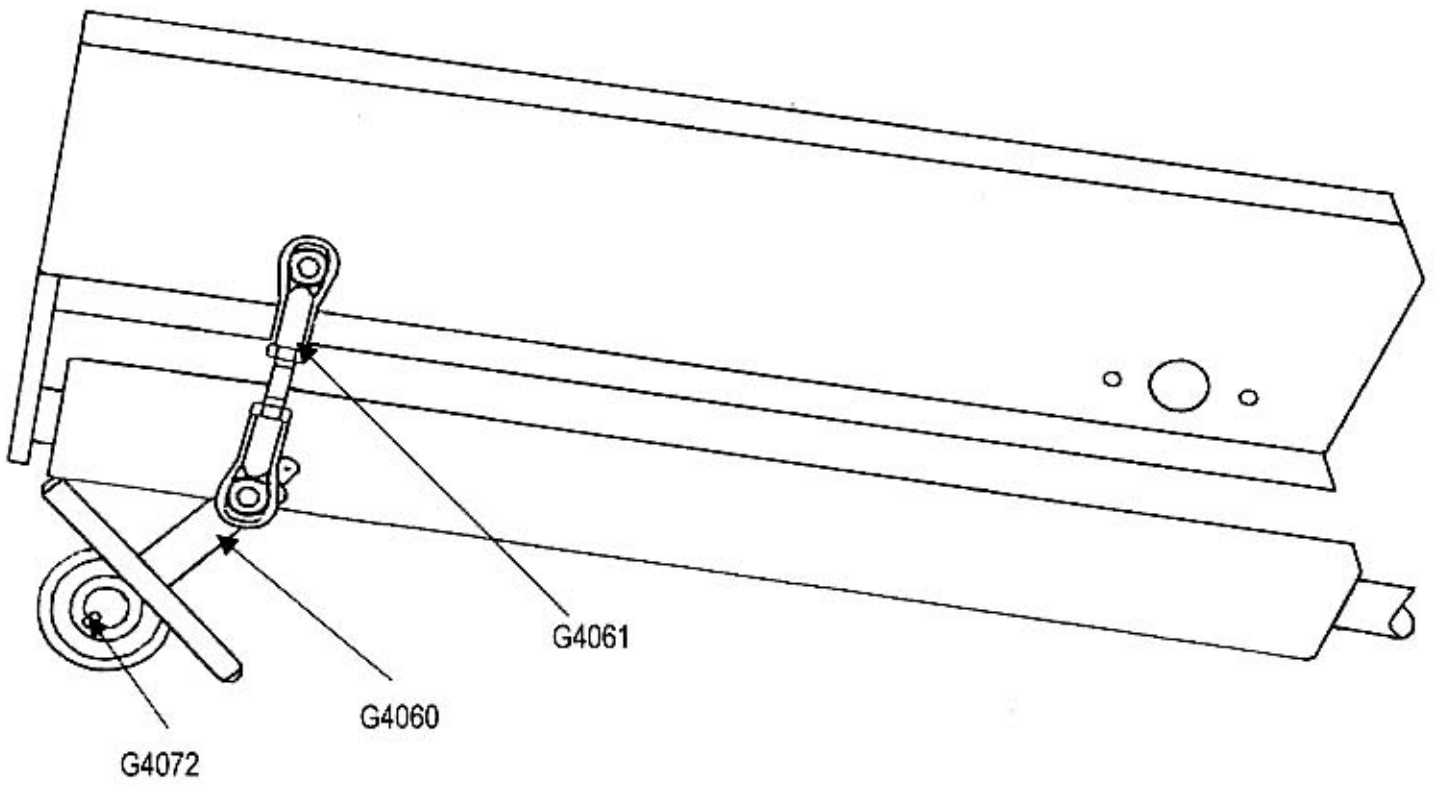






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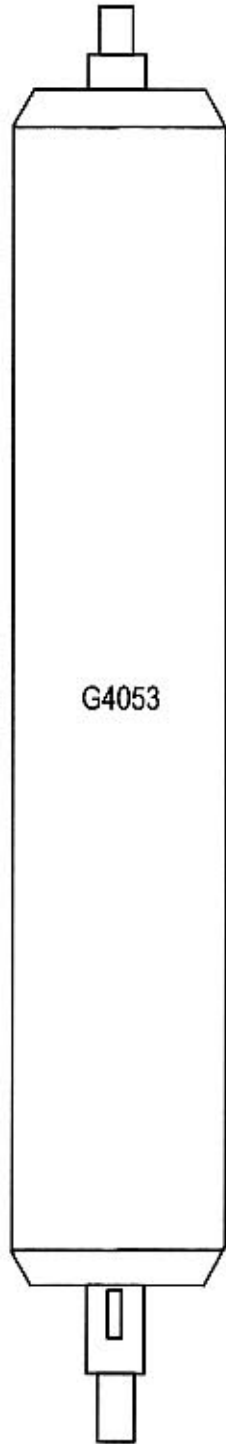




G4074 1, 2 or 3 mm



G4073 1, 2 or 3 mm



G4010 →

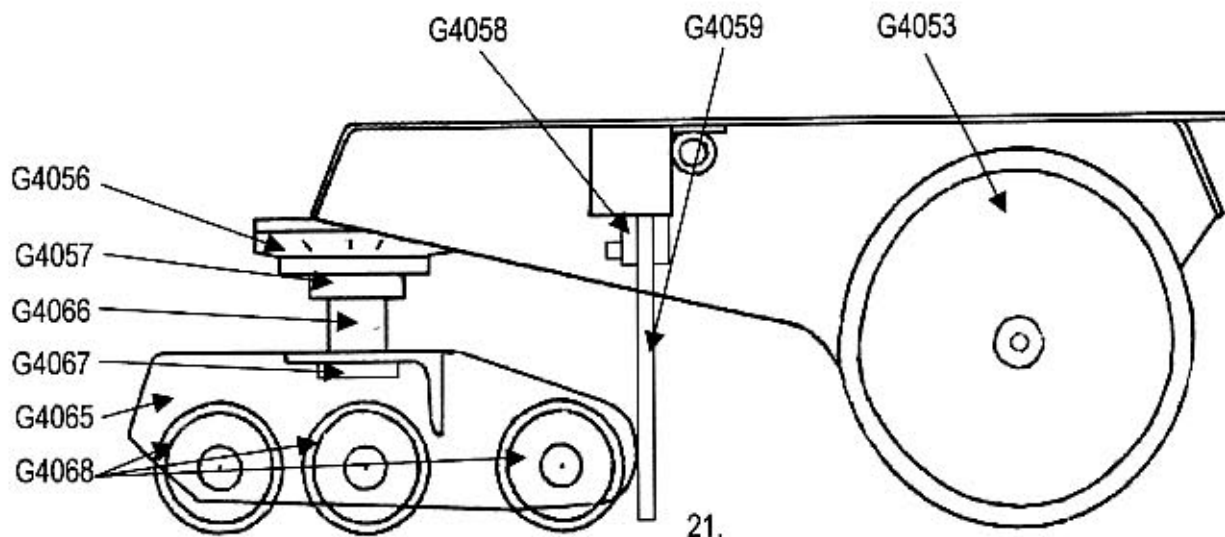
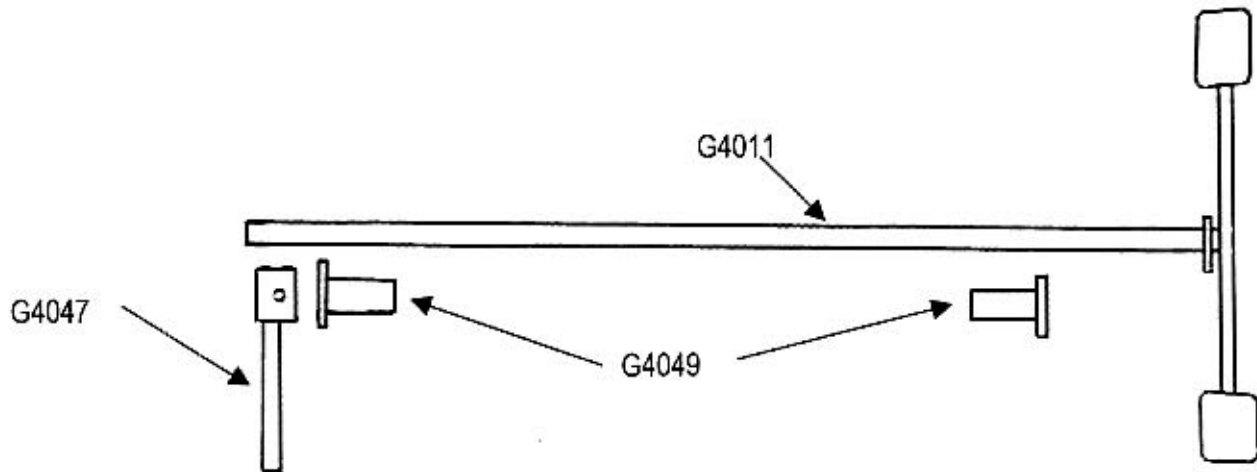
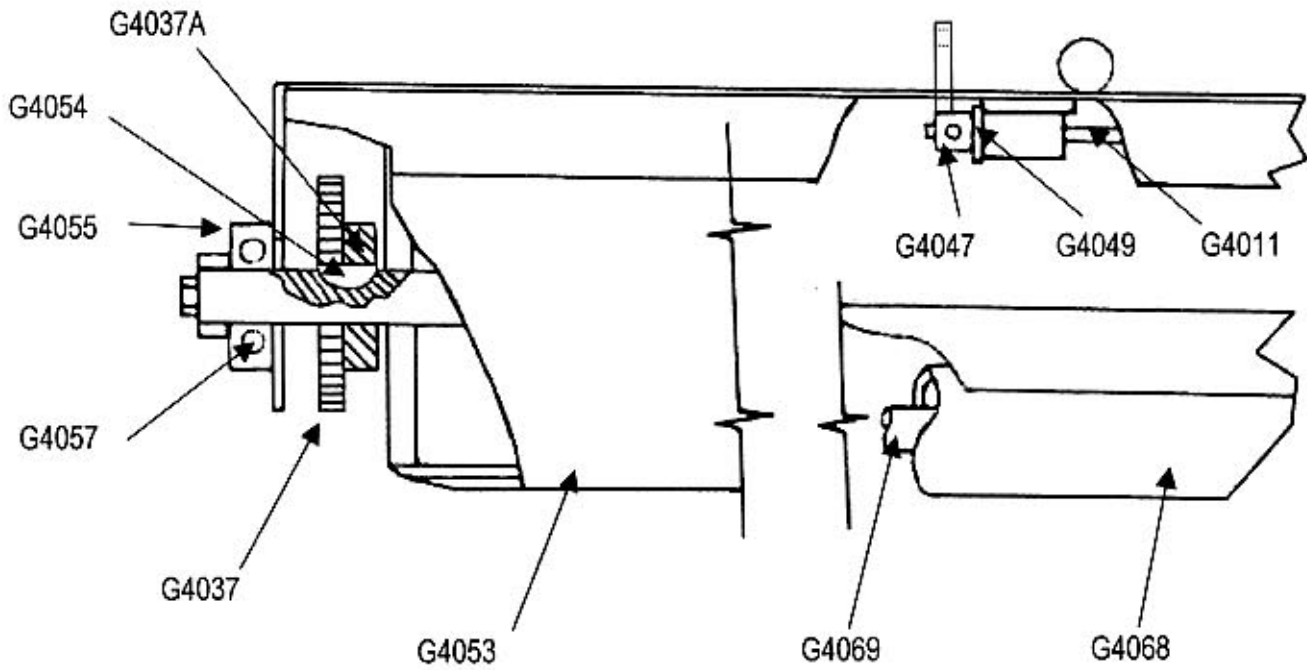
G4068 →

G4010 →



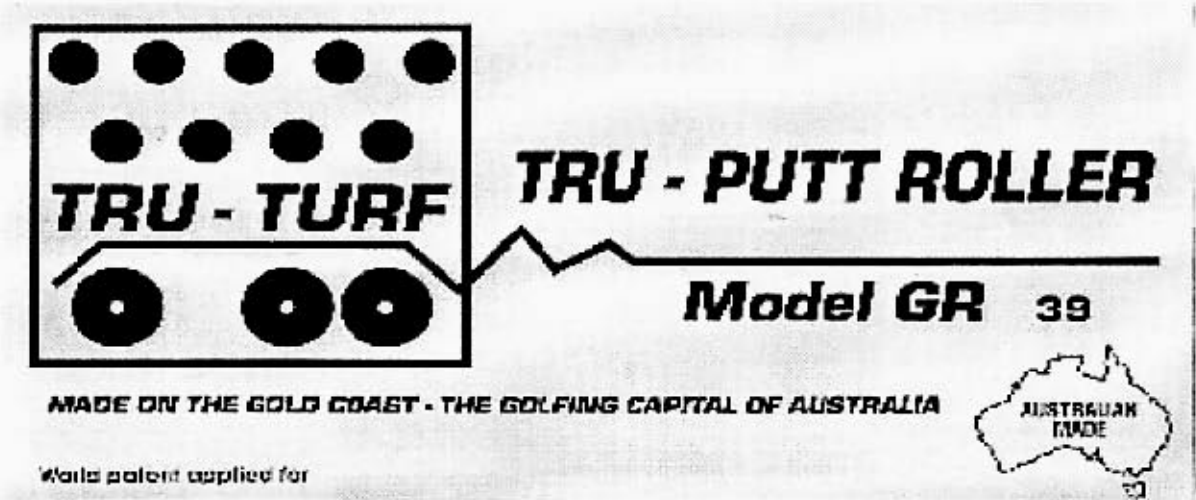
← G4069

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Part No. G4015

Name & Model attached to rear of Transmission Cover



**DO NOT OPEN COVER
WHEN MACHINE
IS OPERATING**

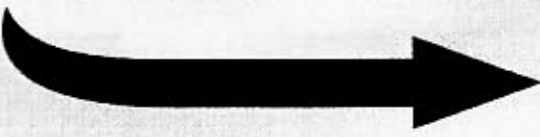
Attached to the Transmission Cover
near the opening handle

PRESS & HOLD PEDAL TO MOVE LEFT

PRESS & HOLD PEDAL TO MOVE RIGHT

Attached to the Body under the
Foot Pedals

**WHEN ROLLING SLOPING GREENS PLACE
THESE ROLLERS ON THE HIGH SIDE.**



Attached to the front top of the
Smoothing Head

CAUTION
**ENSURE FRONT OF ROLLER IS
TOUCHING THE GROUND BEFORE
RELEASING THE TRAILER LOCK**

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

PARTS LIST

PART NUMBER	PART DESCRIPTION
G4000	Main Body
G4001	Transmission Cover
G4002	Seat Frame
G4003	Seat Base
G4004	Seat Base Pin
G4005	Arm Rest Support
G4006R	Arm Rest RH
G4006L	Arm Rest LH
G4007	Seat
G4008	Joystick
G4009	Hand Grip
G4010	Bearing
G4011	Foot Pedal
G4012	Foot Pedal Pads (2)
G4013	Cover Pin
G4014	Cover Catch (includes Pin & Hook)
G4015	Sticker (Safety Sticker Pack)
G4016R	Trailer Arm RH
G4016L	Trailer Arm LH
G4017	Drawbar (Pin Type)
G4018	Drawbar (50mm Ball Coupling)
G4019	Catch, Front Trailer
G4020	Spring
G4021	Catch, Rear Trailer
G4022	Spring
G4023	Trailer Plastic Plug Kit
G4024	Hydraulic Strut
G4025	Tyre & Rim
G4026	Wheel Bearings
G4027	Engine Honda (4HP 2 : 1 reduction)
G4028	Coupling, Honda Engine
G4029	Engine Vanguard B & S (4HP 2 : 1 reduction)
G4030	Coupling, Vanguard Engine
G4031	Rubber Coupling (inc. 4x1 1/2"UNF Bolts & 5/16 UNF Nyloc Nuts)
G4032	Trans Coupling

GR39 EATON PARTS LIST CONTINUED

PART NUMBER	PART DESCRIPTION
G4033	Fan
G4034	Transmission
G4035	Sprocket 11T (1/8" Woodruff Key & 5/16 Allen Screw)
G4036	Chain
G4037	Sprocket 30T
G4037A	Taper lock 30mm
G4038	Sprocket Tensioner 12T 2off (inc. Bearing & Circlip)
G4039	Tensioner Arm
G4039A	Tensioner Arm
G4040	Bush Nylon
G4040A	Bush Nylon
G4041	Capped Washer 1/2"
G4042	Spring
G4043	Bracket
G4044	Lever
G4045	Yoke
G4046	Rod (inc. 2 x Rod Ends)
G4047	Foot Pedal Arm
G4048	Self Centring Kit
G4049	Bush Nylon
G4050	Bearing
G4051	Dampener
G4052	Bush Nylon
G4053	Drive Roller (inc. 1"x3/8 NF Bolt Body washer & Spring washer)
G4054	Woodruff Key 8x7x30 key or 8x30 Woodruff Key
G4055	Housing
G4056	Housing
G4057	Bearing
G4058	Mud Flap Strap
G4059	Mud Flap
G4060	Steering Arm
G4061	Steering Connecting Rod inc. 2 Rod Ends
G4062	---
G4063	Key - Transmission
G4064	Bearing Idler Sprocket

GR39 EATON PARTS LIST CONTINUED

PART NUMBER	PART DESCRIPTION
G4065	Smoothing Head
G4066	Smoothing Head Spacer
G4067	Smoothing Head Bearing Carrier
G4068	Smoothing Rollers 3 off
G4069	Shaft, 2x6304 Bearings, complete with Bolts & Washers
G4070	---
G4071	Mats - Foot
G4072	Key
G4073	Shim Engine Honda 1, 2 or 3 mm thick, (state the thickness req.)
G4074	Shim Engine Vanguard 1, 2 or 3 mm thick (state the thickness req.)

Emission Control System Warranty

Your new Honda Power Equipment engine complies with both the U.S. EPA and State of California emission regulations. American Honda provides the same emission warranty coverage for engines sold in all 50 states.

YOUR WARRANTY RIGHTS AND OBLIGATIONS:

California

The California Air Resources Board and American Honda Motor Co., Inc. are pleased to explain the emission control system warranty on your Honda Power Equipment engine. In California, new utility and lawn and garden equipment engines must be designed, built and equipped to meet the State's stringent anti-smog standards.

Other States

In other areas of the United States your engine must be designed, built, and equipped to meet the U.S. EPA Phase I Emission standard for spark ignited engines at or below 19 kilowatts.

All States

American Honda Motor Co., Inc. must warrant the emission control system on your power equipment engine for the period of time listed below provided there has been no abuse, neglect or improper maintenance of your power equipment engine. Where a warrantable condition exists, American Honda Motor Co., Inc. will repair your power equipment engine at no cost to you including diagnosis, parts and labor.

Your emission control system may include such parts as the carburetor or fuel injection system, the ignition system, and catalytic converter. Also included may be hoses, connectors and other emission-related assemblies.

MANUFACTURER'S WARRANTY COVERAGE:

The 1995 and later power equipment engines are warranted for two years. If any emission-related part on your engine is defective, the part will be repaired or replaced by American Honda Motor Co., Inc.

OWNER'S WARRANTY RESPONSIBILITY:

As the power equipment engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. American Honda Motor Co., Inc. recommends that you retain all receipts covering maintenance on your power equipment engine, but American Honda Motor Co., Inc. cannot deny warranty coverage solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the power equipment engine owner, you should however be aware that American Honda Motor Co., Inc. may deny you warranty coverage if your power equipment engine or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

You are responsible for presenting your power equipment engine to a Honda Power Equipment dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact:

American Honda Motor Co., Inc.
Power Equipment Customer Relations
4475 River Green Parkway
Duluth, Georgia 30136-2565
Telephone: (770) 497-6400

WARRANTY COVERAGE:

Honda power equipment engines manufactured after January 1, 1995 and sold in the State of California, and U.S. EPA certified engines manufactured on or after September 1, 1996 and sold in all of the United States, are covered by this warranty for a period of two years from the date of delivery to the original retail purchaser. This warranty is transferable to each subsequent purchaser for the duration of the warranty period.

Warranty repairs will be made without charge for diagnosis, parts or labor. All defective parts replaced under this warranty become the property of American Honda Motor Co., Inc. A list of warranted parts is on the reverse side of this warranty statement. Normal maintenance items, such as spark plugs and filters, that are on the warranted parts list are warranted up to their required replacement interval only.

American Honda Motor Co., Inc. is also liable for damages to other engine components caused by a failure of any warranted part during the warranty period.

Only Honda approved replacement parts may be used in the performance of any warranty repairs and must be provided without charge to the owner. The use of replacement parts not equivalent to the original parts may impair the effectiveness of your engine emission control system. If such a replacement part is used in the repair or maintenance of your engine, and an authorized Honda dealer determines it is defective or causes a failure of a warranted part, your claim for repair of your engine may be denied. If the part in question is not related to the reason your engine requires repair, your claim will not be denied.

TO OBTAIN WARRANTY SERVICE: (see page 2)

EXCLUSIONS: (see page 2)

DISCLAIMER OF CONSEQUENTIAL DAMAGE AND LIMITATION OF IMPLIED WARRANTIES: (see page 2)

Emission Control System Warranty

TO OBTAIN WARRANTY SERVICE:

You must take your Honda power equipment engine or the product on which it is installed, along with your warranty registration card or other proof of original purchase date, at your expense, to any Honda Power Equipment dealer who is authorized by American Honda Motor Co., Inc. to sell and service that Honda product during his normal business hours. Claims for repair or adjustment found to be caused solely by defects in material or workmanship will not be denied because the engine was not properly maintained and used.

If you are unable to obtain warranty service, or are dissatisfied with the warranty service you received, contact the owner of the dealership involved. Normally this should resolve your problem. However, if you require further assistance, write or call the Power Equipment Customer Relations Department of American Honda Motor Co., Inc.

EXCLUSIONS:

FAILURES OTHER THAN THOSE RESULTING FROM DEFECTS IN MATERIAL OR WORKMANSHIP ARE NOT COVERED BY THIS WARRANTY. THIS WARRANTY DOES NOT EXTEND TO EMISSION CONTROL SYSTEMS OR PARTS WHICH ARE AFFECTED OR DAMAGED BY OWNER ABUSE, NEGLIGENCE, IMPROPER MAINTENANCE, MISUSE, MISFUELING, IMPROPER STORAGE, ACCIDENT AND/OR COLLISION, THE INCORPORATION OF, OR ANY USE OF, ANY ADD-ON OR MODIFIED PARTS, UNSUITABLE ATTACHMENTS, OR THE UNAUTHORIZED ALTERATION OF ANY PART.

THIS WARRANTY DOES NOT COVER REPLACEMENT OF EXPENDABLE MAINTENANCE ITEMS MADE IN CONNECTION WITH REQUIRED MAINTENANCE SERVICES AFTER THE ITEM'S FIRST SCHEDULED REPLACEMENT AS LISTED IN THE MAINTENANCE SECTION OF THE PRODUCT OWNER'S MANUAL, SUCH AS: SPARK PLUGS AND FILTERS.

DISCLAIMER OF CONSEQUENTIAL DAMAGE AND LIMITATION OF IMPLIED WARRANTIES:

AMERICAN HONDA MOTOR CO., INC. DISCLAIMS ANY RESPONSIBILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES SUCH AS LOSS OF TIME OR THE USE OF THE POWER EQUIPMENT, OR ANY COMMERCIAL LOSS DUE TO THE FAILURE OF THE EQUIPMENT; AND ANY IMPLIED WARRANTIES ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. THIS WARRANTY IS APPLICABLE ONLY WHERE THE CALIFORNIA OR U.S. EPA EMISSION CONTROL SYSTEM WARRANTY REGULATION IS IN EFFECT.

Emission Control System Warranty Parts

<u>SYSTEMS COVERED BY THIS WARRANTY:</u>	<u>PARTS DESCRIPTION:</u>
Fuel Metering	Carburetor assembly Fuel injection pump Fuel injection nozzle Fuel regulator
Exhaust System	Catalyst
Air Induction	Air filter housing Air filter element* Crankcase breather tube
Ignition	Flywheel magneto Ignition pulse generator Ignition control module Ignition coil assembly Spark plug cap Spark plug*
Miscellaneous Parts	Tubing, fittings, seals, gaskets and clamps associated with these listed systems.

* Covered up to the first required replacement only. See the maintenance schedule in the owner's manual.

TRU-TURF EQUIPMENT

IMPORTANT BULLETIN GR39 & RS48 Golf Greens Rollers

Eaton Transmission Oil

Problem:

Loss of drive through prolonged use, due to overheating of the transmission oil.

Remedy:

Drain existing oil when transmission oil is hot. Replace it with one of the following available oils;

1. Mobil 1, 10-50 motor oil, or
2. Castrol **HI-Spin AWH-M68** Hydraulic oil.

Both of these oils are designed to operate under the most difficult & arduous conditions.

Important to maximize the life of the transmission it is important to monitor the oil color within the plastic reservoir. If the oil color is darkening or black it must be immediately drained & refilled with one of the above correct oils. Failure to do so could void a warranty claim.

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 1 5W-50W Synthetic oil or Penrite 10-10th Synthetic Oil.**