Introduction

We at Diversified Manufacturing Incorporated thank you and welcome you to the rapidly growing list of DMI Speed Roller Owners. We are proud that you have chosen our well built, quality, U.S. made machine.

From the initial stages to the final coat of paint, great effort has been taken to assure of the finest quality materials and craftsmanship available today. Every component has been carefully engineered, machined, assembled, and tested to insure long lasting and trouble free service in the field.

We strongly recommend that you read this manual before proceeding with start-up.

This manual will assist you in the operation and service of your machine for safety, optimum performance, reliability, and high quality results.

We look forward to continue in assisting with your requirements.

Thank you.

Brian F Costello

Brian F. Costello, President
Diversified Manufacturing, Incorporated
# Speed Roller

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**Speed Roller**

**Important SAFETY Procedures**

1. Always have trailer safely and securely hitched to the transport vehicle while loading and unloading **Speed Roller**.
2. Keep hands and feet clear of rollers.
3. No riders
4. Never operate **Speed Roller** without guard in place.
5. Do not operate near bunkers, trees, or other hazards.
6. Do not operate without proper instruction.
7. Know how to operate controls.
8. Do not leave **Speed Roller** unattended while engine is running.
9. Know how to shut off engine quickly.
10. Be careful when towing. Trailer may be wider than tow vehicle.
11. Do not tow trailer on open public highway. Trailer not to exceed 10mph.

For safe & proper operation of engine, refer to engine manual. Use common sense when operating **Speed Roller**!

Remember – SAFETY FIRST
Speed Roller Operation

BEFORE starting engine:
BE SURE oil is in engine
BE SURE oil is in gearbox

Use regular unleaded gasoline
Never fill fuel while on green
Read Honda owner’s manual

Be sure no obstructions either side of Speed Roller

BE SURE trailer is securely hitched before unloading or loading Speed Roller

Read and heed caution labels on Speed Roller
**Speed Roller Operation**

**STARTING ENGINE**

1. Turn on fuel valve (A)
2. Turn on choke (B)
3. Set throttle speed. Move lever (C) to right to increase speed; (Note – Recommended ¼ to ½ throttle start).
4. Turn on engine switch (D).
5. Pull recoil start.
6. When engine is running release choke and adjust engine speed.
7. To stop, turn off engine switch and fuel valve.
Speed Roller
Operation

OPERATING SPEED ROLLER
Depress foot pedal for desired direction. Left to travel left and right to travel right. To stop movement depress opposite pedal.

Speed is controlled by throttle. When first learning to use Speed Roller set throttle at half speed.

The steering handle bars turn the two steering rollers for directional control of Speed Roller. See page 9 more details on Speed Roller steering.

UNLOADING SPEED ROLLER FROM TRAILER
1. Be sure trailer is hitched securely
2. Do not back trailer onto green
3. Park on level area
4. Lower ramp and drive Speed Roller off trailer onto apron.

RELOADING SPEED ROLLER ONTO TRAILER
1. Be sure trailer is hitched securely
2. Set engine throttle to ¼ - ½ speed
3. Line up Speed Roller on center of trailer and drive up ramp
4. DO NOT accelerate to hard
5. Be prepared to stop immediately when on your trailer
6. Once on trailer, secure Speed Roller with lock pin
Speed Roller Controls

Direction Control
Drive Left or Stop
Right Travel

Direction Control
Drive Right or Stop
Left Travel

Steering
Handle Bar

Seat
Adjustment

Cover Guard
Do NOT Remove Unless
Engine is Off

Roller to Trailer
Lockpin Tabs
Recoil Pull Start

Load in this
Direction ONLY

Identification
Plate

REFUELING: Move Seat Back for Easy Tank Access

NEVER REFUEL ON GREENS !!!
Speed Roller
Steering

SPEED ROLLER travels this way

Turning Handle Bars to Right turns Steering rollers this way

Turning Handle Bars to Left turns Steering Rollers this way

SPEED ROLLER travels this way
**Speed Roller**

**Rolling Technique**

**KEEP TRAILER LEVEL**

BE SURE Trailer is securely hitched to transport vehicle BEFORE Unloading or Loading.

Position Trailer & SPEED ROLLER near Green to be rolled.

DO NOT Drive Trailer on Greens or Tees.

DO NOT Stop or Park SPEED ROLLER on Greens for any period of Time to avoid 'Imprinting' Greens surface.

Putting Green

Roller & Trailer Assembly

Transport Vehicle.

Lower Tail Gate by removing 2 locking pins at rear. Keep hands and feet clear.

- 10 -
Speed Roller
Rolling Technique

Start Engine, release safety pin and drive roller slowly down tailgate ramp and off trailer.

Use the correct technique when rolling areas that are not flat such as steep or undulating putting greens.

Note: Roller Traction Affected by Dampness

Incorrect Method

Steep Incline

DO NOT try to roll up Steep Slopes

Correct Method

Better to Roll Across the Slope

Avoid Driving too close to Bunkers or Steep Drops

Wrong Method

DO NOT roll in a valley or Hollow as the edges of roller will leave crease marks.
Speed Roller
Rolling Technique

Pattern for full coverage.
Best method for rolling area - start at the edge of green and systematically work across - Roll 1, Roll 2, Roll 3 etc.

Care should be taken when stopping and starting. Sudden pressure on direction pedal will cause drive roller to slip and may result in damage to green.

It is suggested to drive off the green before changing direction until operator skills have developed.
Speed Roller
Rolling Technique

Due to light conditions it may be difficult to determine area already rolled. If this is the situation, the operator may use a method to mark area to be rolled.

Tees set into the edge of the green would work well. As operator rolls each direction simply move the tees over another three feet for the next roll.

When rolling is complete line up SPEED ROLLER with center of trailer tailgate ramp, reduce throttle to ½ slowly drive SPEED ROLLER onto trailer right side first. When SPEED ROLLER is in position on trailer secure Roller Locking Pin to hold SPEED ROLLER securely for transport. Switch off engine.

Raise & secure Tailgate. Drive to next area to be rolled.
Speed Roller Service

Oil Change – Engine

- Switch off Engine before attempting oil change.
- Change oil when engine is warm.
- Place oil catch container under oil drain hole. Remove drain plug (10mm wrench). After draining, replace drain plug and fill with 0.6 liters of 10W-30 motor oil.

**NOTE** - If engine oil level is low, engine may stall when changing directions.

Gear Box Oil Change

- Switch off engine before removing cover guard for servicing.
- Remove oil filler plug and oil level plug
- fill until oil runs out of the oil level plug hole.

**NOTE** - Refer to Honda engine owners manual.
Speed Roller Service

Belt Adjustment

If belt is too loose it will slip under load and decrease performance. Belt will normally require 1 or 2 adjustments after its first hours of use.
- Remove cover guard
- Belt tension should allow only 2 inches of upward movement at point A.
- To tighten belt, loosen adjuster lock nut then tighten the belt tightener nut to required tension.
- Relock by tightening the adjuster lock nut.
Speed Roller
Service

Chain Adjustment
- Remove cover guard.
- Chains should have ½“ free play up and down.
- Loosen ‘V’ belt before chain adjustment.
- To adjust chains, loosen clamp nuts “D” and slide clutch post in required direction. Then retighten clamp nuts.
- Retighten ‘V’ belt per belt adjustment procedure.
NOTE: Front chain is tighter than rear in free state. Front chain will loosen as rear chain tightens when adjusting the belt.

Clutch Adjustment
- Clutch operates by pressure on clutch sprocket lining and belt pulley. The clutch ramp, when rotated by pedal linkage, applies pressure to the clutch for engagement. If pedal travel becomes excessive, insufficient pressure may be exerted for proper clutch engagement. When pedal is depressed slightly (1”), the gap between the clutch ramps should be 1/8” to 3/16”. See next page.
- To take up excessive movement, loosen clamp bolt “A”.
- Loosen locking nut “B”
- Rotate bolt “C” in clockwise direction
- Retighten locking nut “B”
- Retighten clamp bolt “A”
NOTE: Excessive pressure on clutch may cause machine to drive in either direction by itself. If clutches are too tight, machine may be difficult to move by hand with engine off.

-SEE ILLUSTRATIONS ON PAGE 17-
“A” – Clamp bolt
“B” – Locking nut
“C” – Bolt
“D” – Clamp nut

Clutch Adjustment:

When pedal is depressed, the gap between the clutch ramps should be 1/8” to 3/16”. Clutches should move freely when not engaged. To verify this, loosen belt and rotate pulleys by hand.
Speed Roller Service

Periodic Maintenance
- Engine oil should be changed after 20 hours of use
- Chains should have light coating of grease
- Belt tension checked
- Spark plugs cleaned
- Air filter cleaned
- Grease bearings

Note: Add grease through the zerk fittings using a good grade of #2 lithium base grease. Do not over grease. Add a little grease until it shows a bit at the seals. Rotate bearing to distribute grease.

TROUBLE SHOOTING:

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<th>Probable Cause</th>
<th>Solution</th>
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<td>Choke on / spark plug</td>
<td>Release choke / Clean or replace plugs / Refer to engine manual</td>
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<tr>
<td></td>
<td>dirty / fuel mixture</td>
<td></td>
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<tr>
<td></td>
<td>incorrect</td>
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<tr>
<td>Engine Stall when changing direction</td>
<td>Oil level low</td>
<td>Fill engine oil, pg. 13 / Refer to engine manual</td>
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<tr>
<td>Pedal movement excessive / Roller not driving</td>
<td>Clutch is out of adjustment</td>
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<tr>
<td>Clutch holding but belt slipping</td>
<td>Belt is too lose / Moisture on belt</td>
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