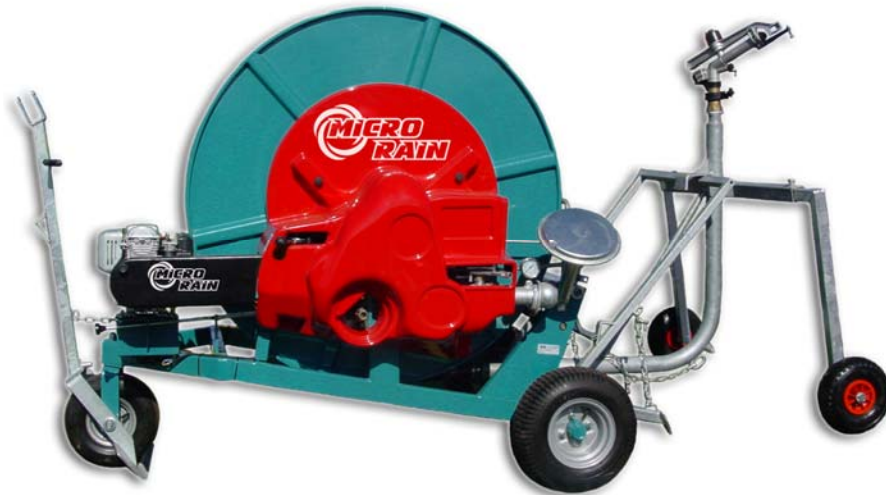




ENGINE DRIVE START-UP GUIDE



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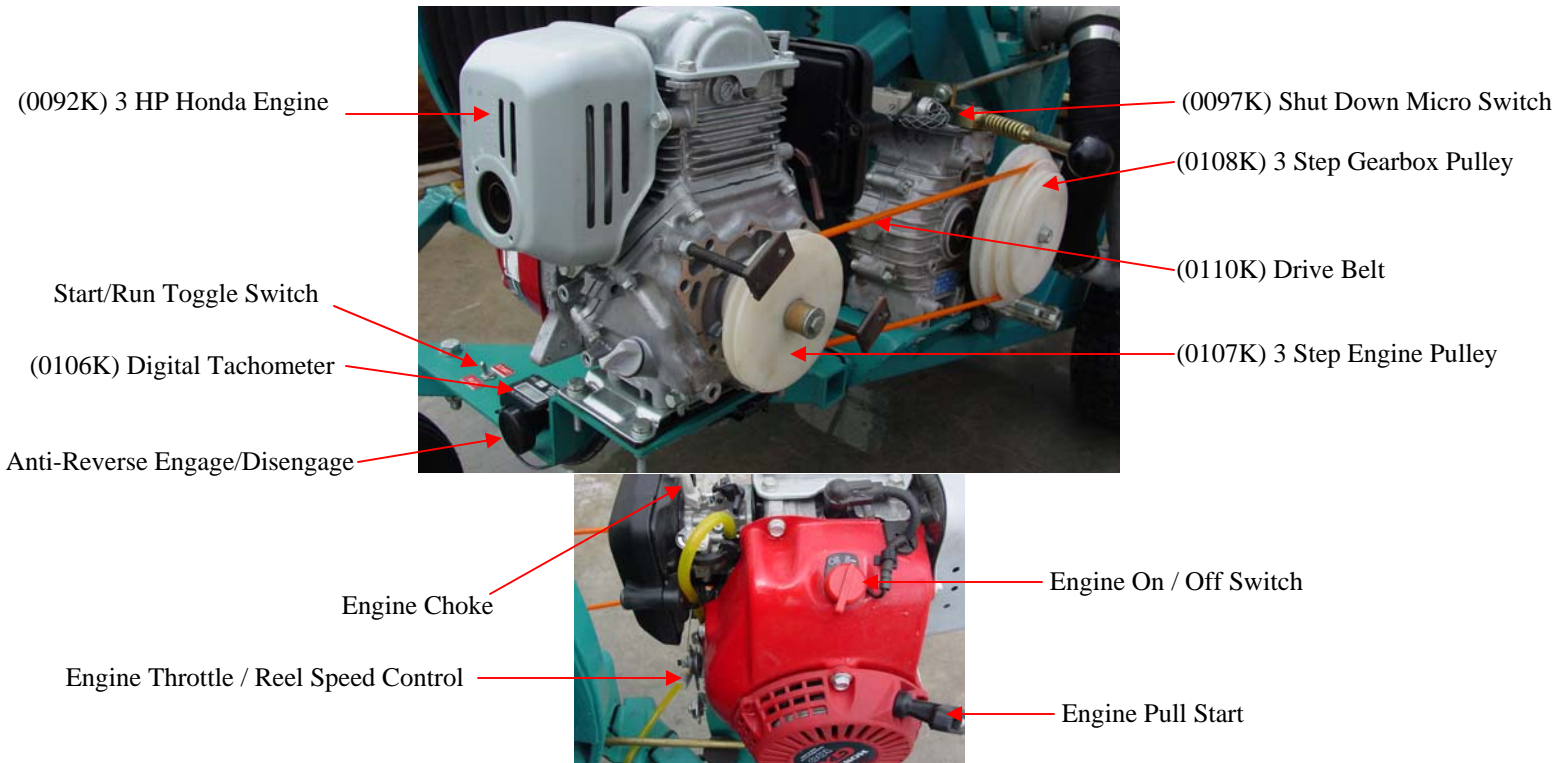
Specifications

The Micro Rain engine drive travelers utilize a 3 hp Honda engine for retraction instead of the standard water turbine drive. These machines are designed for operation when flows and pressures are not adequate for operating a standard water turbine drive or to achieve fast retraction rates for artificial sports turf watering, horse arena watering, slurry applications, and more. System is belt driven, with a micro switch shutdown for the Honda engine upon run completion. Specifications are as follows:

Specifications:

- **3 HP Honda Engine Belt Drive w/Auto Shutdown**
- **Throttle Speed Control w/Digital Tachometer RPM Readout**
- **3 Step Pulley Settings for Slow, Fast, & Ultra Fast Speeds**
- **End of Run Water & Drive Shut Down**
- **Flow Range 5 to 150 GPM Depending on Model**
- **Retraction Rates Over 500 feet per hour**

Engine Drive Components



Safety Instructions:

- 1) Read all safety instructions in main manual.
- 2) Never let small children near traveler during operation.
- 3) Do not attempt to change belt settings with machine in operation.
- 4) Do not operate machine without belt guard in place.

Start Up Instructions

The Micro Rain Engine Drive Watering System has been designed for simple and durable operation. The following guide will insure that you perform the basic steps to successfully operate your new engine drive traveling sprinkler.

IN ADDITION TO THIS GUIDE, PLEASE FOLLOW THE DETAILED INSTRUCTIONS FOR START UP IN THE MAIN MICRO RAIN OPERATION MANUAL AND FOLLOW ALL WARNING DECALS.



Step 1) Position machine at one end of area to be watered and raise pull hitch into stabilize position which places stabilizer foot onto the ground as shown.



Step 2) Pull anti-reverse lever out a short distance, down and lock into place as shown. This will release the reel and allow it to unwind during pull out. **IMPORTANT:** Make sure transmission shift lever is in neutral as indicated by the decal on the shield located by the transmission shift lever.



Step 3) Tow sprinkler cart out at a speed about the pace of a fast walk. **IMPORTANT:** Do not pull cart out at high rates of speed to avoid any damage to drive components or hose.

If machine model is MR50,58,or 63, refer to main operators manual for instructions on high cart pull out and cart lift positioning.



Step 4) Un-hook from sprinkler cart and lift shut-off valve lever into open position as shown.

If machine model is MR50,58,or 63, refer to main operators manual for instructions on opening shut off valve.



Step 5) Lift anti-reverse knob and spring tension will allow lever to engage back into run position.

IMPORTANT: ONCE ANTI-REVERSE LEVER IS RE-ENGAGED, BE SURE TO TIGHTEN ANY LOOSE WRAPS ON THE REEL BY TURNING THE DRUM BY HAND. ANTI-REVERSE LEVER WILL RACHET AND ALLOW THE DRUM TO TURN WHILE TIGHTENING LOOSE WRAPS. ALWAYS START REEL WITH REMAINING WRAPS ON DRUM TIGHT!!!



Step 6) Attach supply hose from water source to machine inlet and secure. **IMPORTANT:** Before connecting the supply hose to the machine, flush out the hose or check to be sure there is no foreign matter that could eventually plug the sprinkler nozzle.

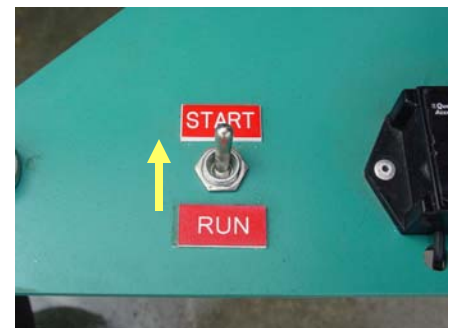
Water may now be turned on to start water through the machine.



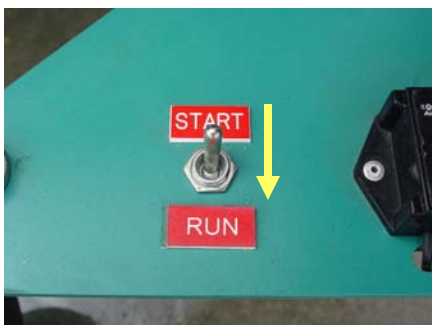
Step 7) Turn engine on/off switch to on as shown in left image.

Turn start/run switch to start as shown in right image. This will override the micro switch that stops the Honda Engine and allow start up.

Honda engine may now be started.



Step 8) Once Honda engine is started, transmission may be shifted into gear and reel will begin retracting.



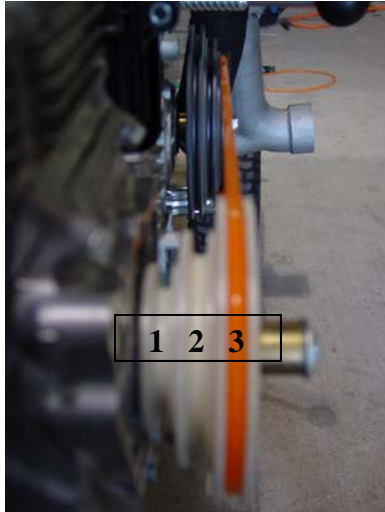
Step 9) After engine is started and reel is engaged, start/run switch must be moved to “run” position to activate the micro switch that shuts the Honda engine off when irrigation setting is completed.

Throttle may be increased or decreased as shown in right image to fine tune desired retraction rate. Refer to next page for speed settings.



Speed Settings

The Micro Rain engine drive system allows the user to decide between 3 major speed ranges: slow, medium, and fast. This is set by placing the belt on one of the three pulley settings as shown below. After speed range is set by placing the belt on a pulley setting, the fine speed adjustment is then determined by setting the engine rpms. Refer to diagrams below for instruction.



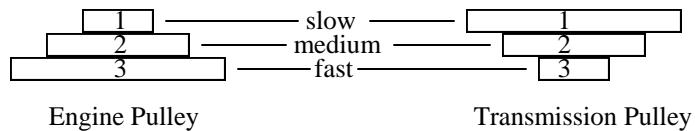
Pulley Settings

Pulley Settings

Pulley Setting #1 = Slow

Pulley Setting #2 = Medium

Pulley Setting #3 = Fast



IMPORTANT: Always keep belt straight and aligned on the same pulley setting for engine pulley and transmission pulley!

Speed Setting Examples

Note: Below are low end and high end examples to show the minimum and maximum speed range. It is recommended to not operate the engine at less than 1500 RPM.



Engine Tachometer Readout

Pulley Setting #1 (Slow)	Engine RPM 1500	5hrs 20 min. retraction time @ 75 feet/hour
Pulley Setting #2 (Medium)	Engine RPM 1500	2hrs 40 min. retraction time @ 140feet/hour
Pulley Setting #3 (Fast)	Engine RPM 1500	1hrs 45 min. retraction time @ 225 feet/hour
Pulley Setting #1 (Slow)	Engine RPM 4000	2hrs 00 min. retraction time @ 195 feet/hour
Pulley Setting #2 (Medium)	Engine RPM 4000	1hrs 20 min. retraction time @ 315 feet/hour
Pulley Setting #3 (Fast)	Engine RPM 4000	0hrs 45 min. retraction time @ 525 feet/hour

Belt Changing Instructions:

- 1) Turn off Honda engine so reel is NOT retracting.
- 2) Remove black belt cover guard and main red shield.
- 3) Simply stretch round drive belt over desired pulley setting. **IMPORTANT:** Always line belt up on same pulley setting for transmission pulley and engine pulley.
- 4) Replace black belt cover guard and main red shield.

SAFETY—IMPORTANT!!

- 1) NEVER CHANGE BELT SETTINGS WITH ENGINE RUNNING!**
- 2) NEVER OPERATE MACHINE WITHOUT BELT OR GEAR GUARDS IN PLACE!**
- 3) ALWAYS TURN ENGINE OF AND STOP REEL TO PERFORM ANY MAINTENANCE!**