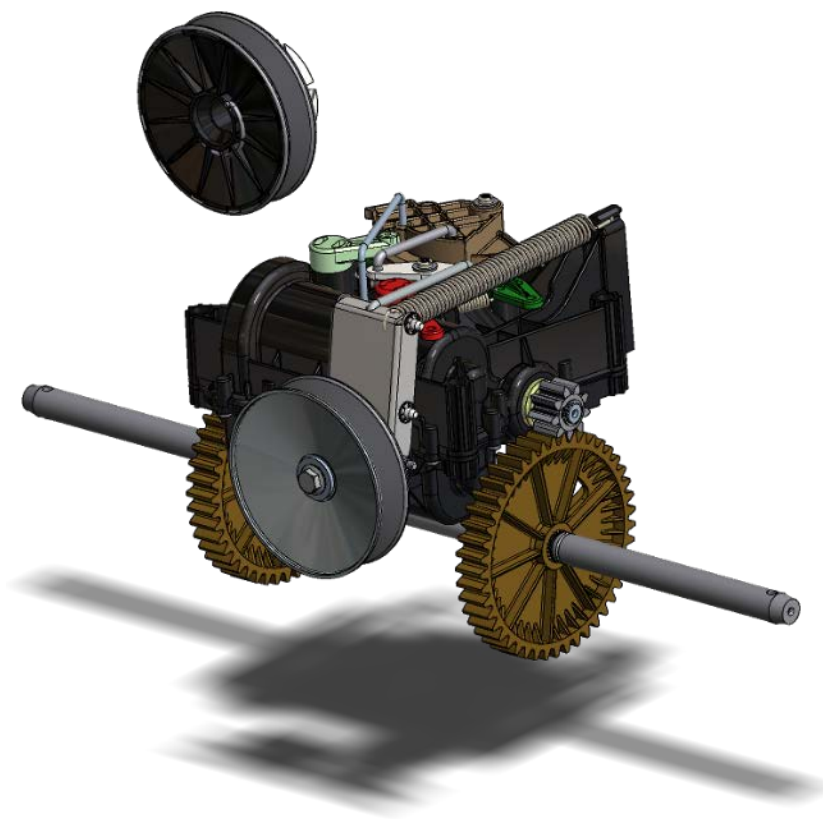




Drive solutions for outdoor power equipment

Snow Transmission Type HR300P



Service and Repair Manual

Transmission réf.
(87022-A)

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Introduction

I- General Transmissions presentation

With 3 production sites, Mexico, China, France, and a policy focus on product quality and continuous innovation, General Transmission became a world leader in the design and manufacture of gearbox and transaxle, for lawn and garden equipment

II- Manual introduction

The purpose of this manual is to provide service and repair information for the HR300P transmission. Also included are exploded view, troubleshooting and repair procedures.

III- HR300P general description

The HR300P transmission is design to provide an infinitely variable speed range and reverse operation thru a single hand control, for dual stage snow thrower. This transmission also offer a steering control.

V- How to use this manual

General Transmissions recommend, before tearing down the HR300P transmission, to make sure that you have a clean and organize work area, as well as the required specific tools.

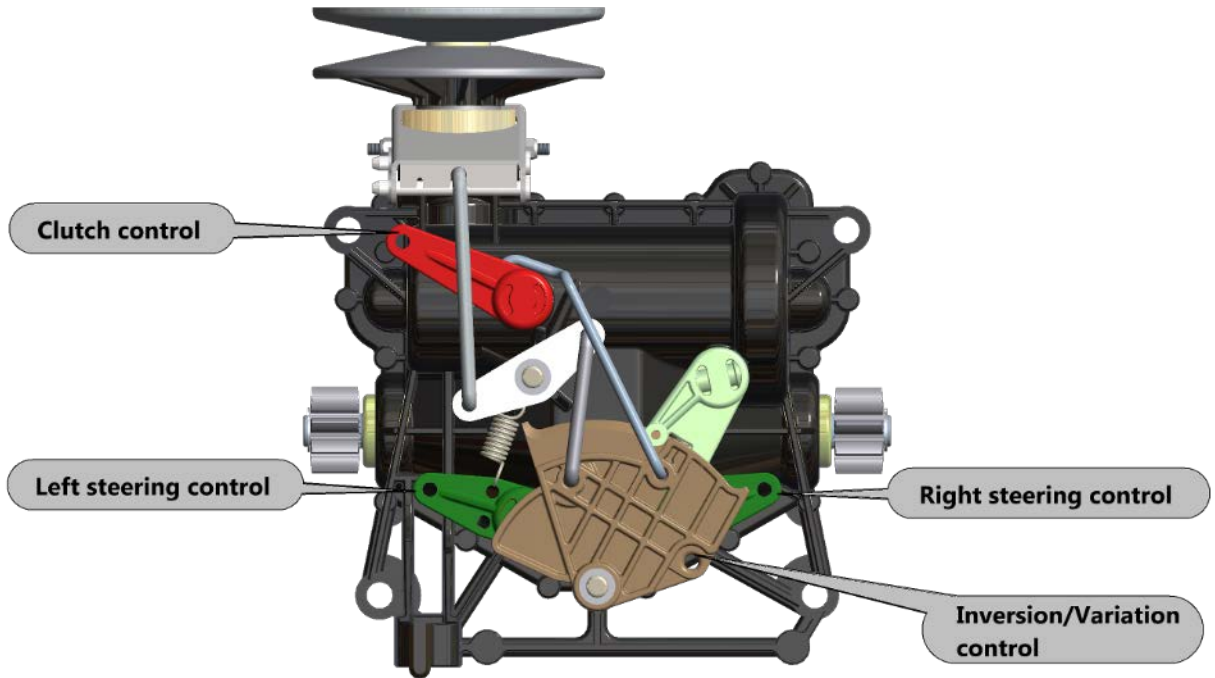
General Transmissions also recommend to carefully read the general instructions provided in the manual (p. 7), before starting any reparation.

Follow each steps of the repair procedures, to detect and repair the defective component.

A defective component might cause premature wear or deterioration of other components. Make sure that all defective components have been replaced.

For all service or repair operation, respect the shop and government safety rules.

External Controls and Functions



Product identification



-The product identification is located on the rear of the transmission.

Manufacturing day

Ex: 160, means 8th of June

Manufacturing year

Ex: **1** for the year 201**1**

Nth product of the day

Ex: 33rd product of the day



Customer P/N

General Transmissions P/N

Safety

Personal Safety

Safety precautions must be observed while servicing or repairing the transmission. This section is to be used in conjunction with all other safety material which may apply, such as:

- Local and shop safety rules.
- Government safety laws and regulations.

Wear appropriate clothing. Loose or hanging clothing can be hazardous. Use the appropriate safety equipment.

Tool Safety

Use the proper tools and equipment for the task.

Servicing Safety

Certain procedures may require the vehicle to be disabled.

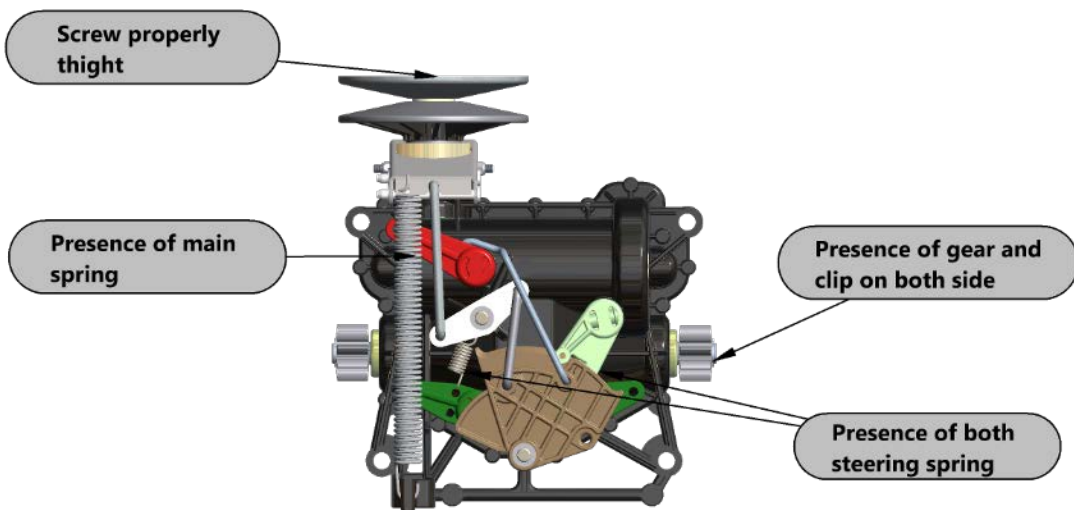
- Do not place speed above safety.

General Instructions

Preliminary check before tearing down the transmission

- Remove bottom cover and belt cover (see owner manual).
- Make sure that the belt is properly seated in both, engine and transmission pulleys.
- Verify clutch and steering cable (see view p.3).
- Verify link between handlebar and variation control (see view p. 3).

Preliminary check before re-install the transmission

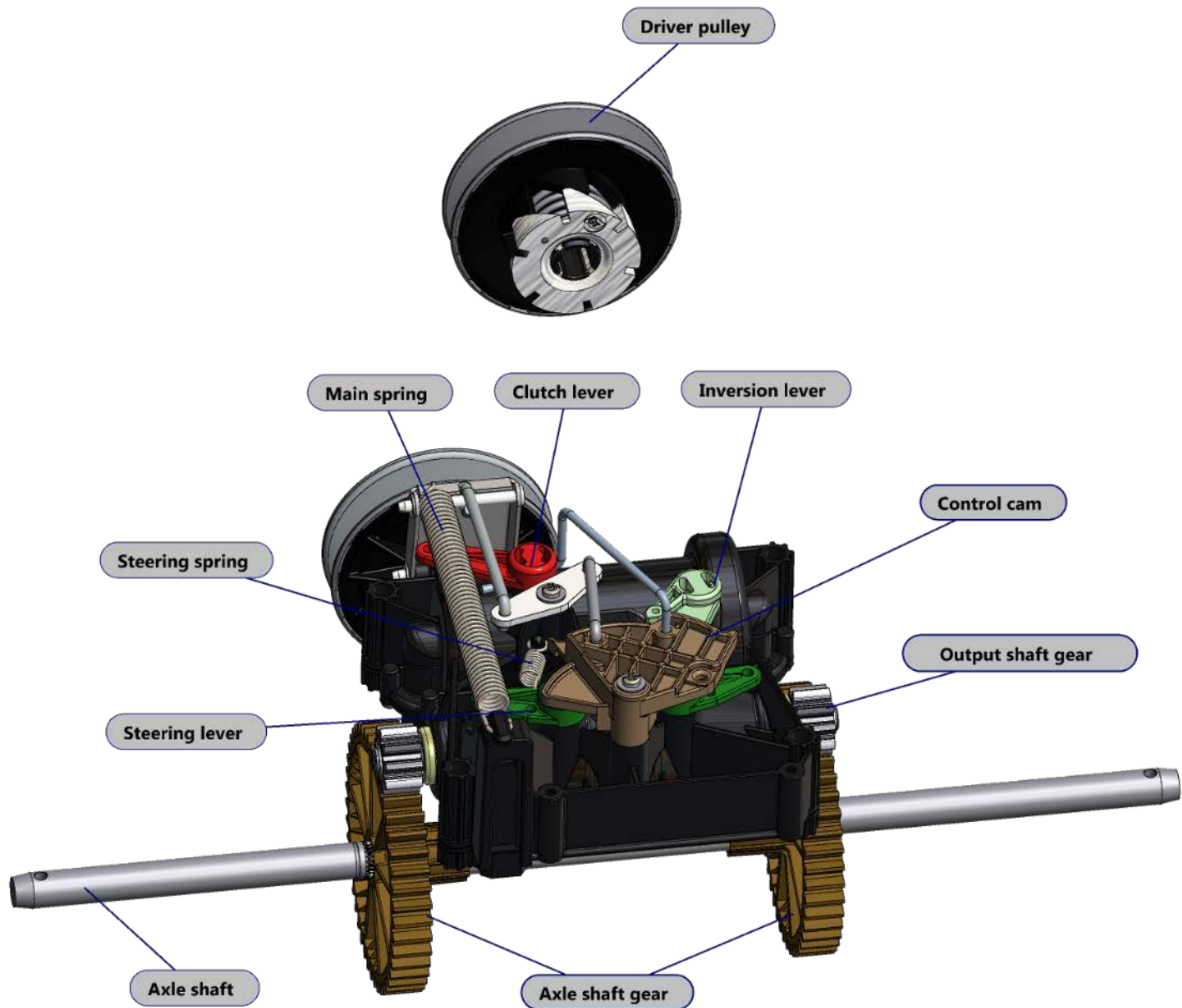


Troubleshooting

Customer complaints	Potential failure	Page
Loss of traction	Defective variation pulleys	10
	Broken clutch cable/spring	10
	Broken clutch lever	7
	Internal component failure	7
Loss of traction power in working condition	Failure of driver pulley	7
	Internal component failure	7
Loss of reverse function	Internal component failure	7
One wheel don't drive	Broken axle shaft gear	11
	Broken axle shaft	11
	Loss of output shaft gear	11
	Loss or broken steering spring	12
	Internal component failure	7
Unit have only low speed Loss of inversion function	Broken control cam	13
	Broken case	7
Loss of inversion function	Broken inversion lever	12
	Internal component failure	7
Unable to disengaged one wheel	Broken steering lever	7
	Broken steering cable	-
	Internal component failure	7
Important effort to varying speed from high to low	Loss or broken main spring	13
	Internal component failure	7
Leak	Leak	7

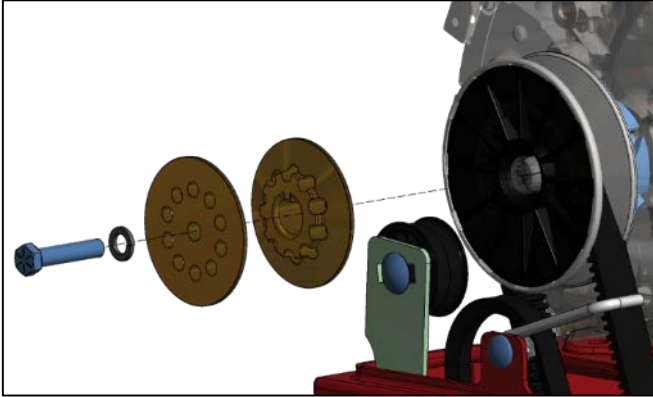
See components location next page

Components location

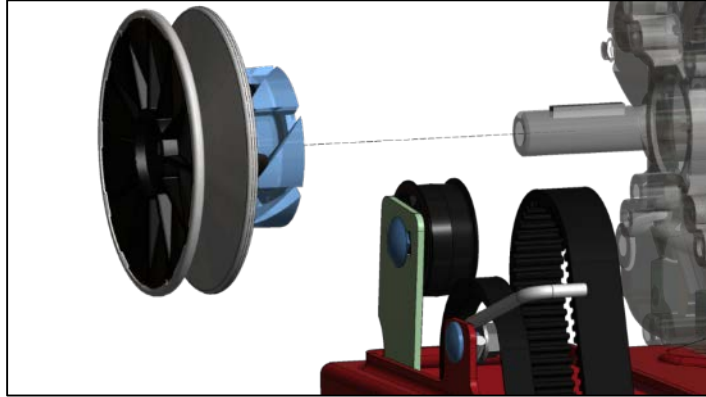


Transmission Tear Down

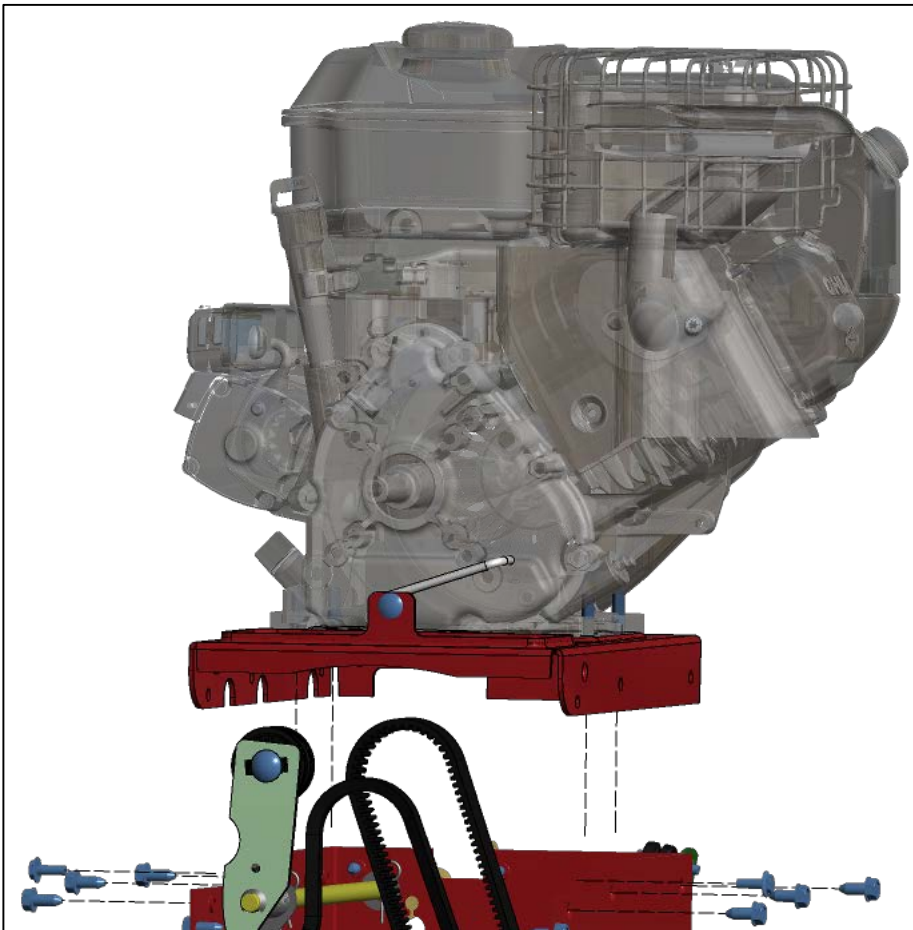
-After removing the belt cover (see owner manual), remove the auger drive pulley.



-Remove the driver pulley.



-Disconnect and remove the engine to access the transmission.

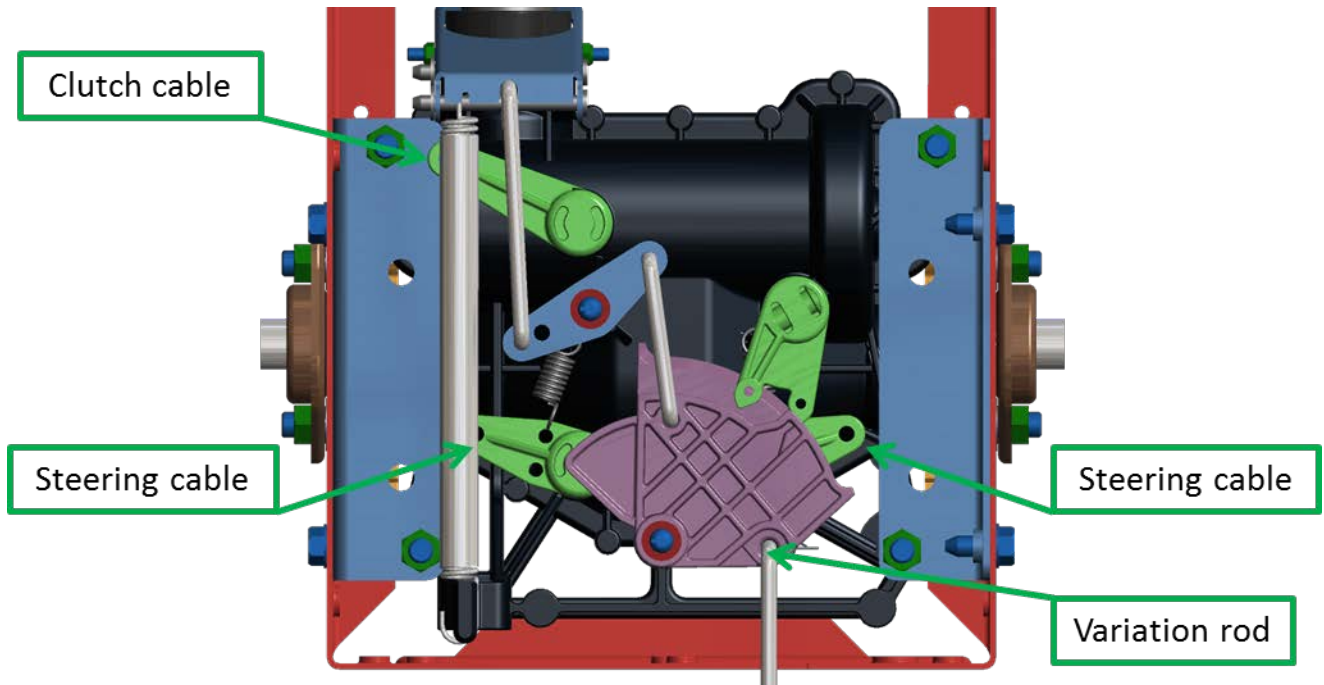


Transmission Tear Down

-Disconnect from the transmission:

- Clutch cable
- both steering cable
- variation rod

You may need to disconnect first from the handlebar, to be able to disconnect them from the transmission.

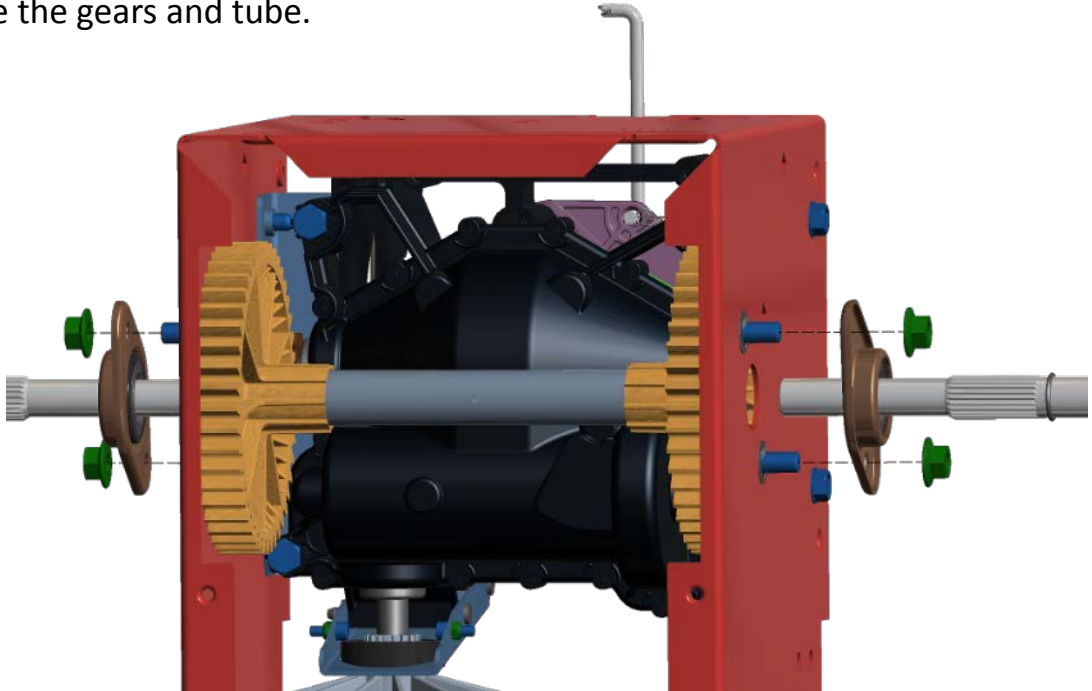


-Tip the machine forward, then remove the lower cover (see owner manual).

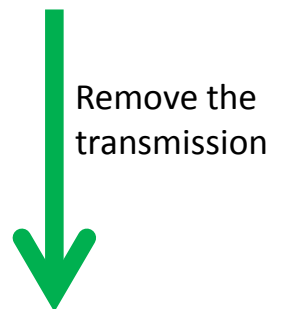
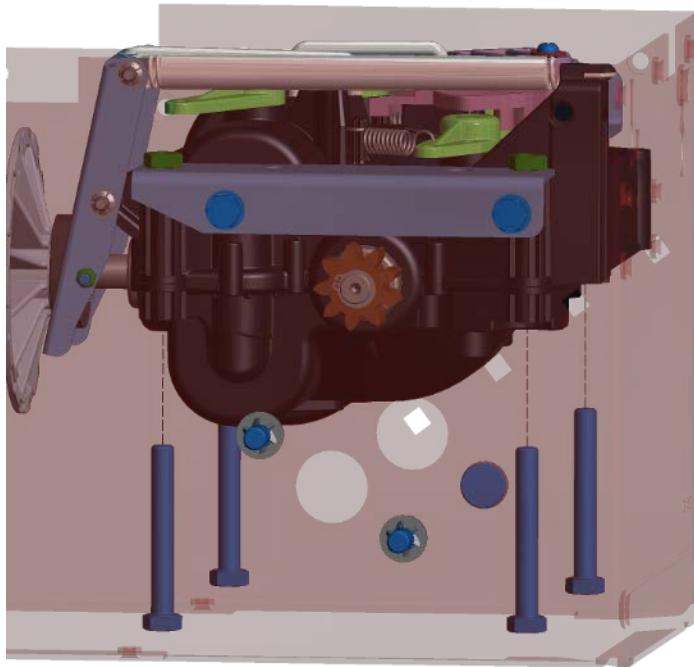


Transmission Tear Down

-After removing the wheels (see owner manual), remove the both axle shaft to liberate the gears and tube.



-Unscrew the 4 bolts, then remove the transmission to the bottom of the frame.




Screwing torque when reassembling: 9,5±2 lb-ft

Repair Procedures

Loss of Traction

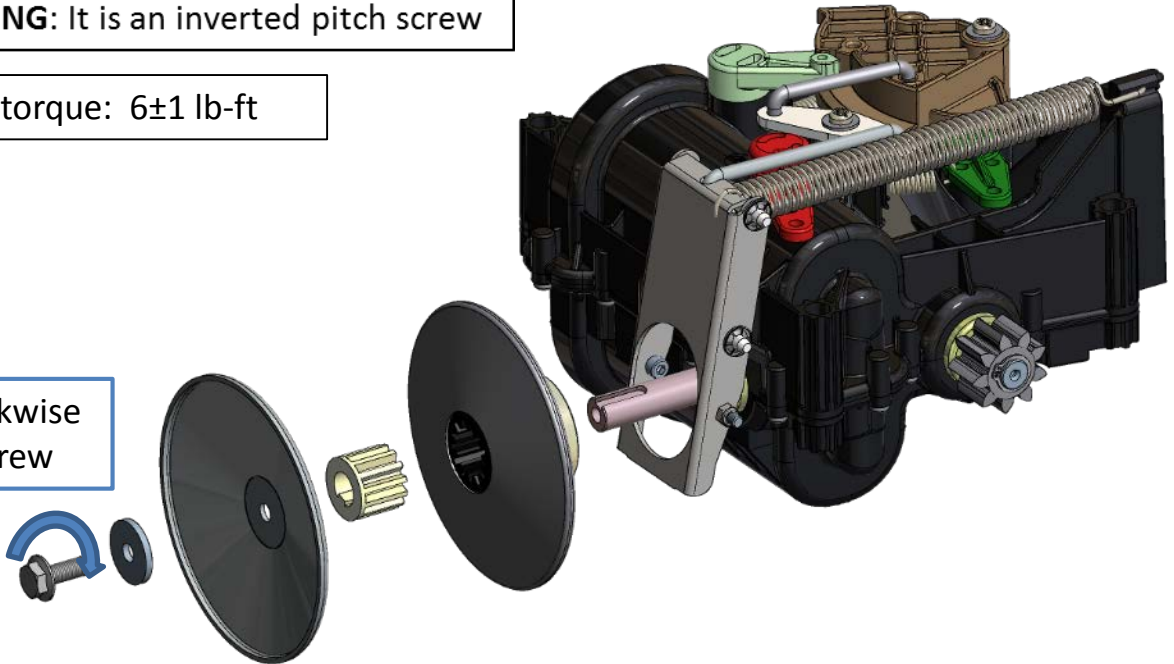
I- Defective variation pulleys

- In case of melting belt or flange, both pulleys and belt need to be replaced.
- To take off the driven pulley, remove the screw located at the end of the input shaft, using a 7/16" or 11mm socket.

 **WARNING:** It is an inverted pitch screw

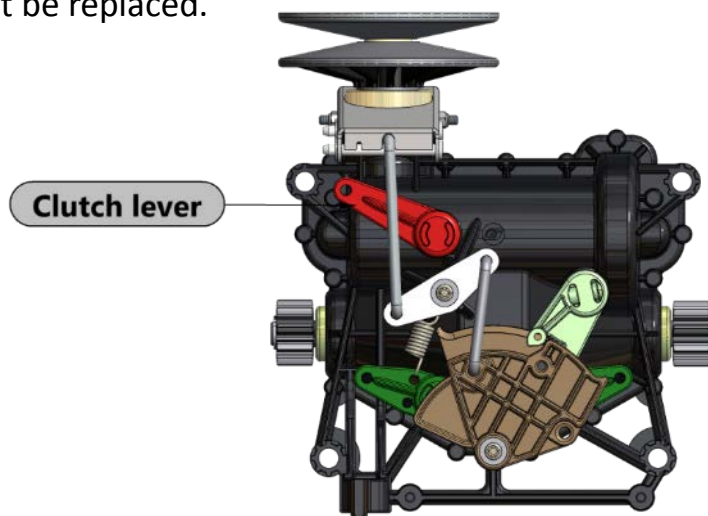
Screwing torque: 6 ± 1 lb-ft

Turn clockwise
to unscrew



II- Broken lever or cable

- For clutch cable or spring failure, see owner manual.
- Clutch lever cannot be replaced as an external component. In case of broken lever, the transmission must be replaced.



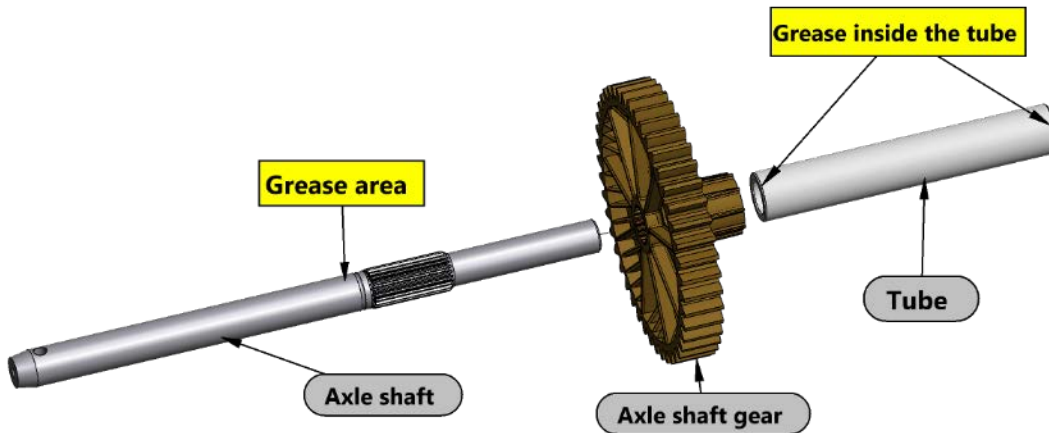
Repair Procedures

One wheel don't drive

I- Broken axle shaft or axle shaft gear

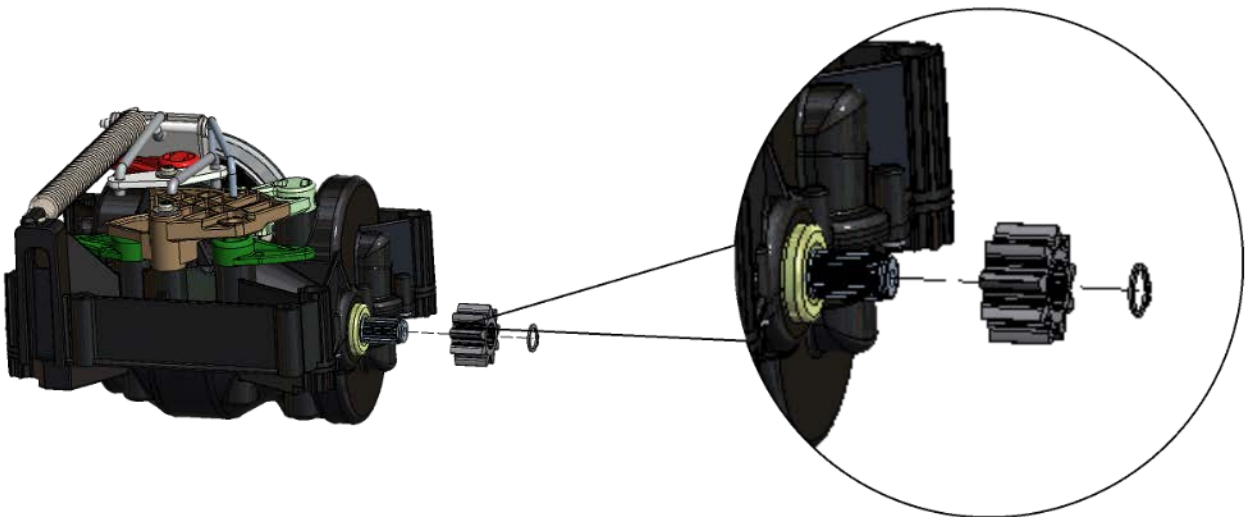
-See how to remove the axle shaft on page 7.

-When reinstalling the new parts, put grease in the tube and on the axle shaft bushing area.



II- Output shaft gear failure

-Loss of traction on one side may result of a output shaft gear defect or loss.



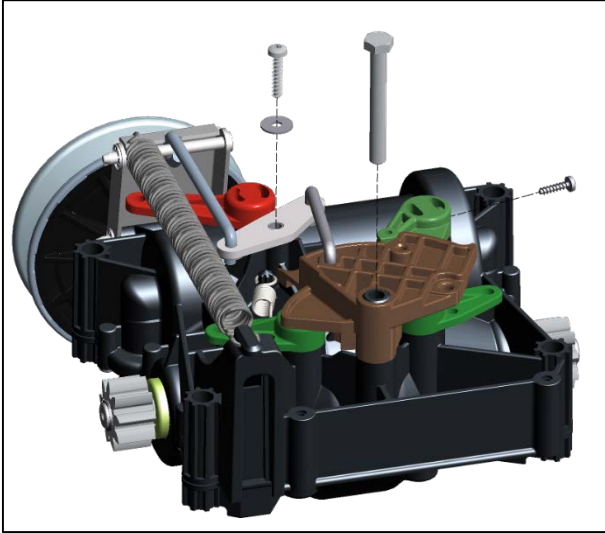
-When positioning the new clip, make sure to not deformed it

-Defected output shaft gear may have damaged the axle shaft gear. Make sure to replace all necessary components.

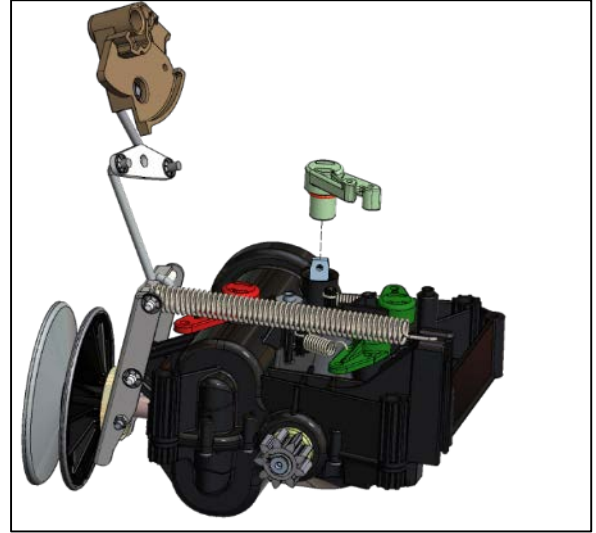
Repair Procedures

III- Steering spring failure

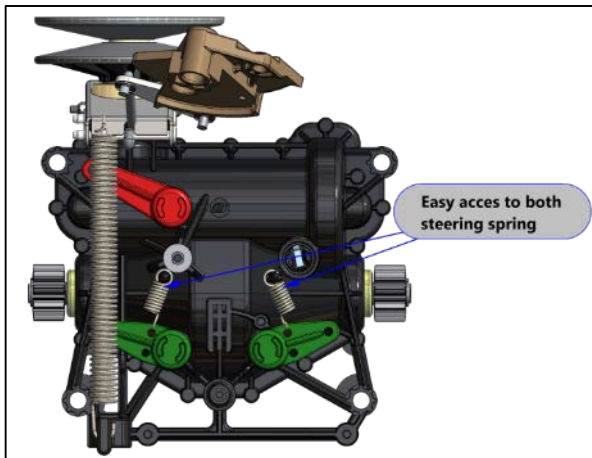
- Loss of traction on one side may result of a broken or loss steering spring.
- See how to tear down the transmission on page 7.



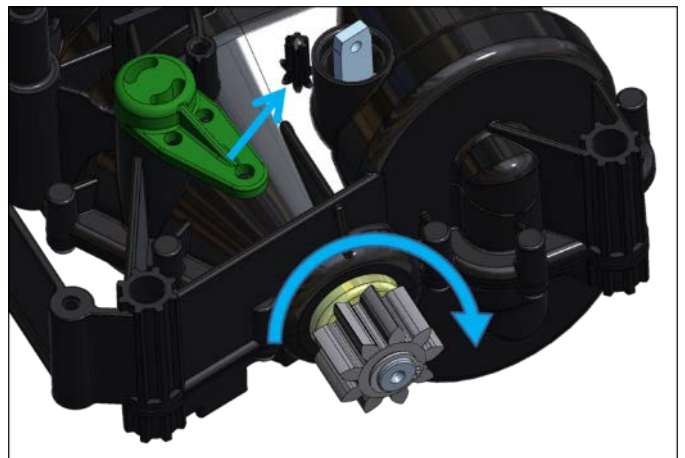
Remove the 3 screws



Remove the lever and rotate the control system



Access to both spring



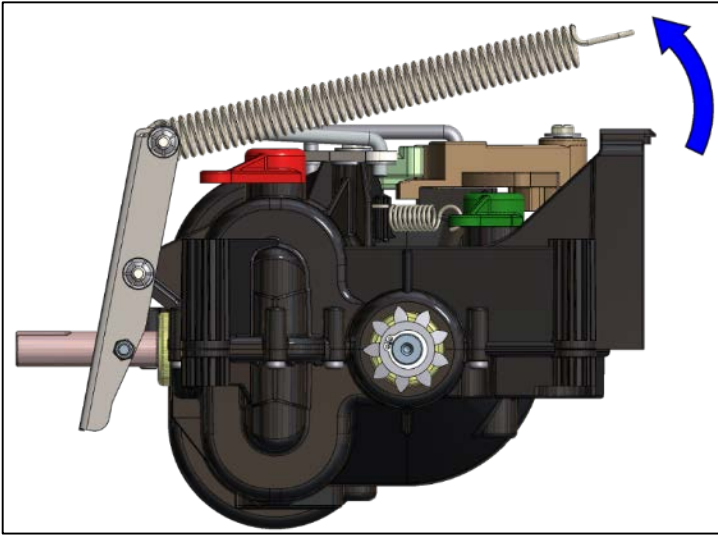
May need to turn the output shaft, to put the steering lever in position

- When reinstalling, we recommend to put sealant in the inversion lever to avoid any seepage.

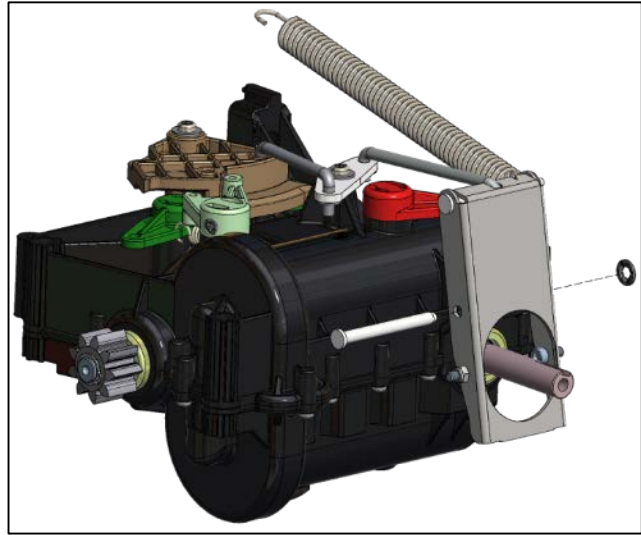
Repair Procedures

Low speed unit

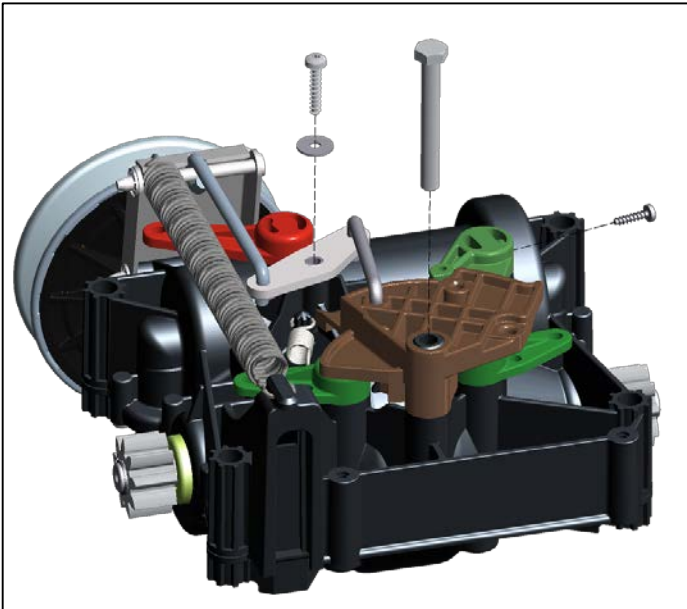
- I- Broken control cam, inversion lever or main spring
- See how to tear down the transmission on page 7.
- Remove the driven pulley, as shown page 10.



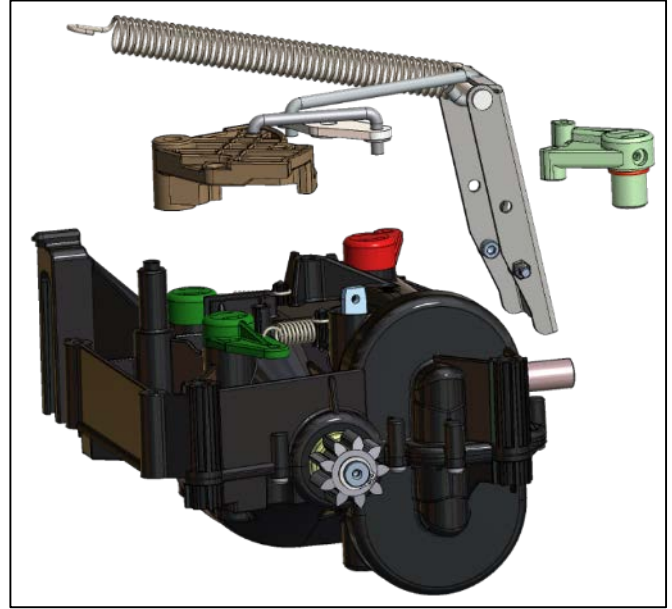
Unhook the main spring



Remove the variation lever axle



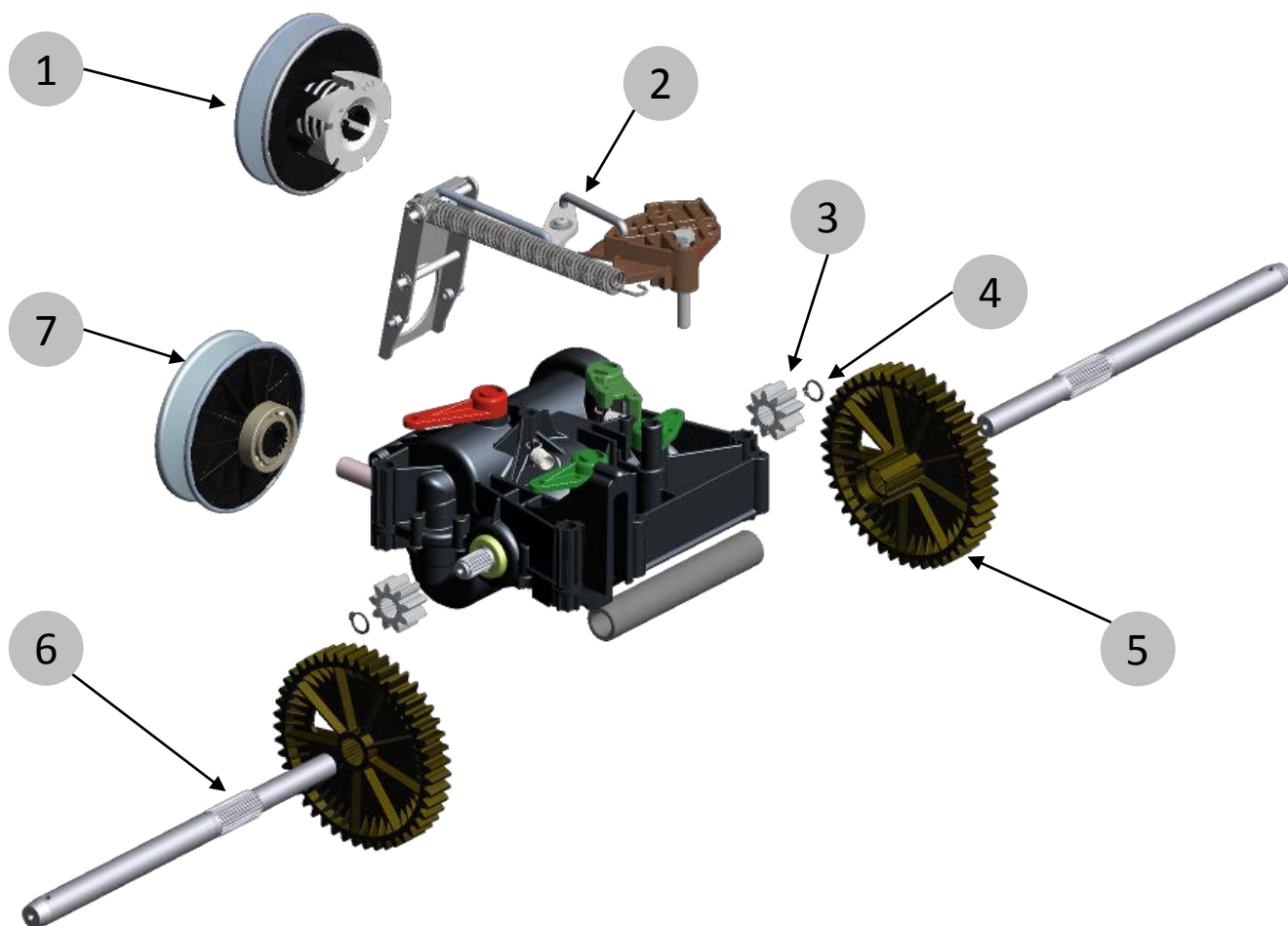
Remove screws



Remove controls kit

- When reinstalling, we recommend to put sealant in the inversion lever to avoid any seepage.

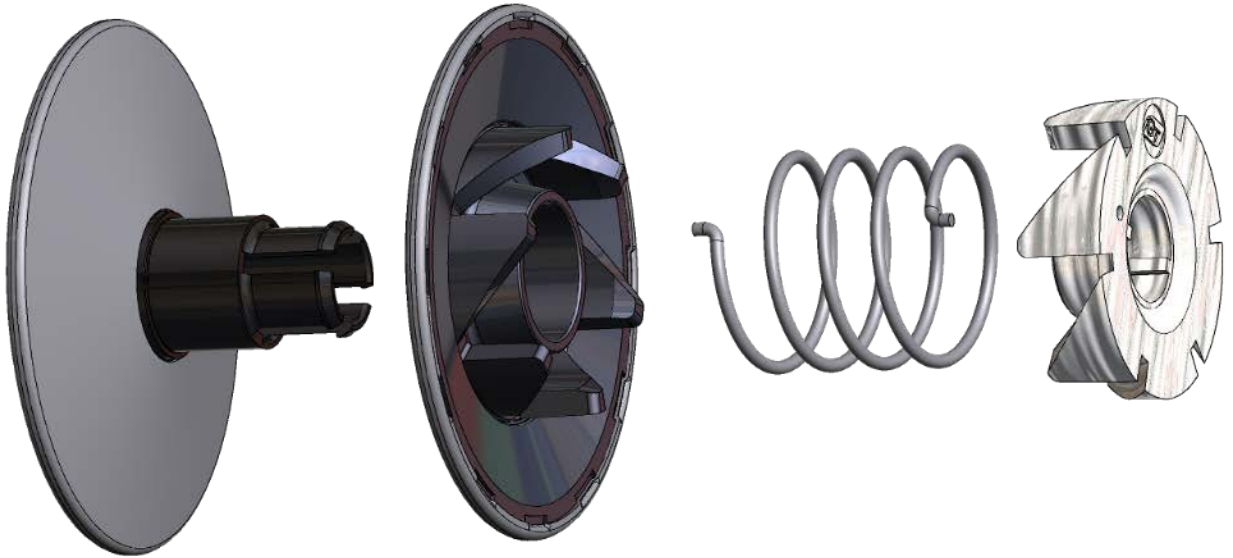
Exploded View



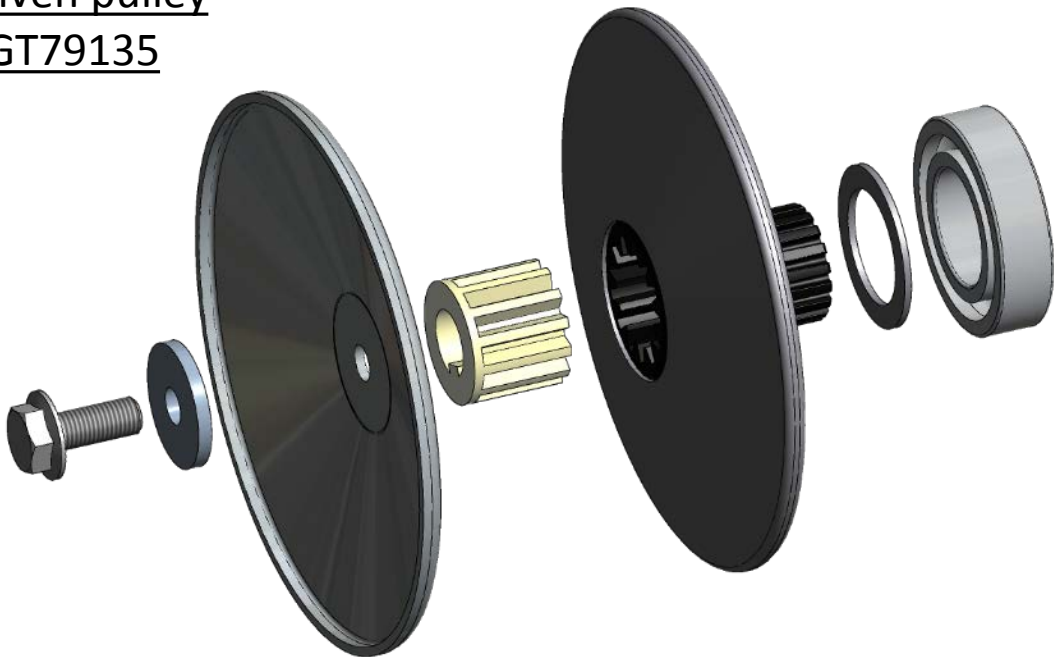
PART LIST		
Item	GT PN	Designation
1	GT86021	Engine Pulley
2	GT79331	Controls kit
3	GT35040	Output shaft gear
4	GT42307	Clip
5	GT35073	Axle shaft Gear
6	GT12477	Axle shaft
7	GT79135	Input Pulley

Exploded View

I- Driver pulley P/N GT86021



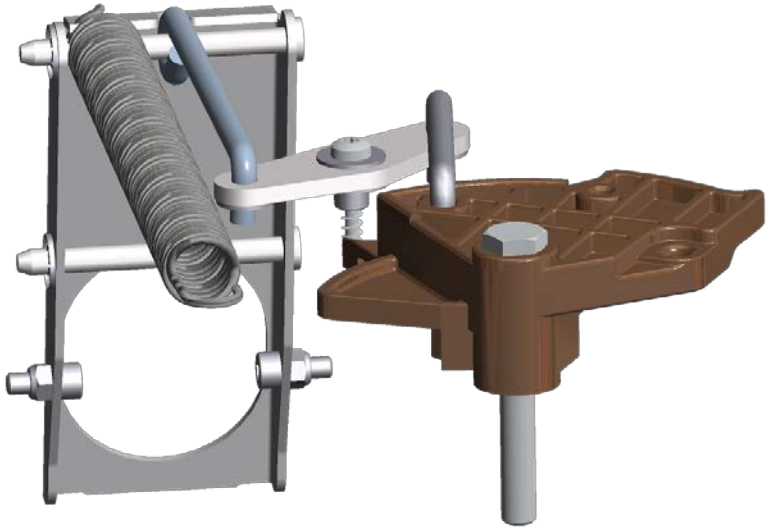
II- Driven pulley P/N GT79135



Exploded View

III- Controls kit

P/N GT79331



Notes

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Drive solutions for outdoor power equipment

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