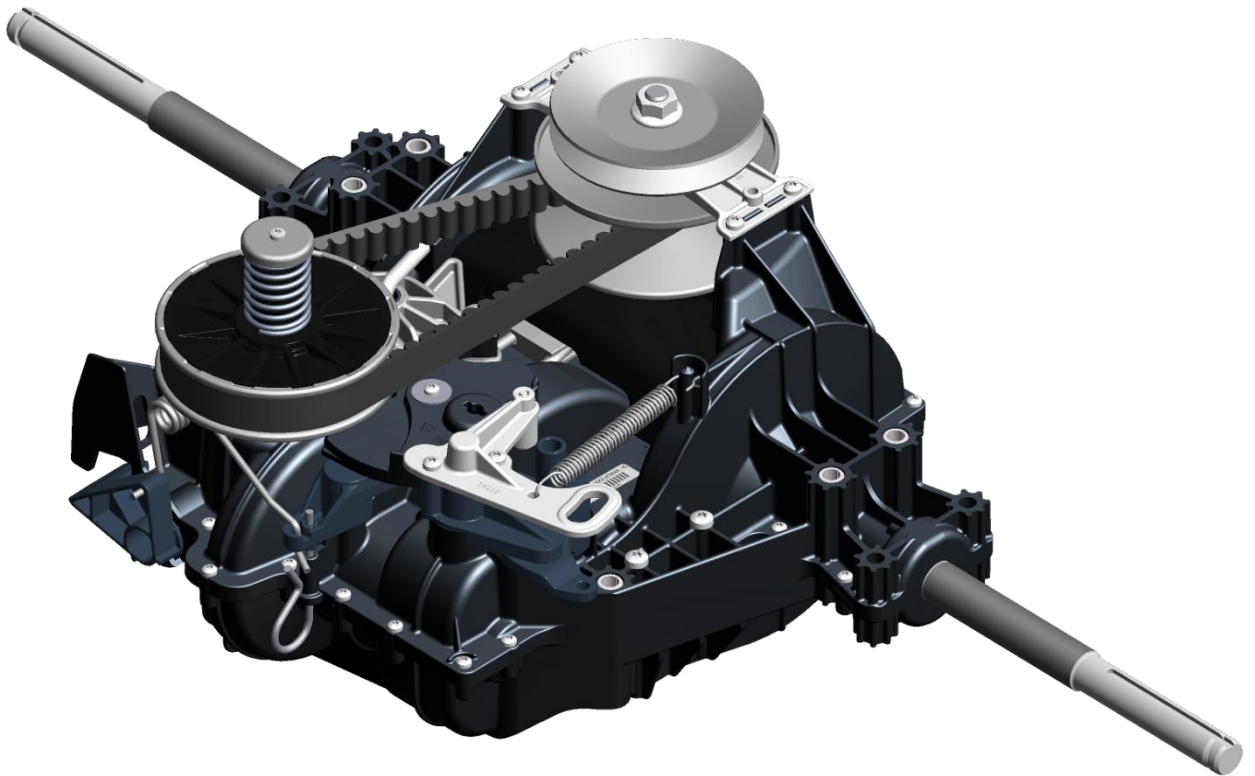


Transaxle Type RT400



Service and Repair Manual

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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 is 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 RT400 transaxle. Also included are exploded view, troubleshooting and repair procedures.

III- RT400 transaxle general description

The RT400 transaxle is design to provide an infinitely variable speed range thru one pedal control, and a reverse operation thru an hand control. This transaxle also offer an integrate differential function and a neutral automatic braking.

IV- How to use this manual

General Transmissions recommend, before tearing down the RT400 transaxle, to make sure that you have a clean and organize work area, as well as the required specific tools.

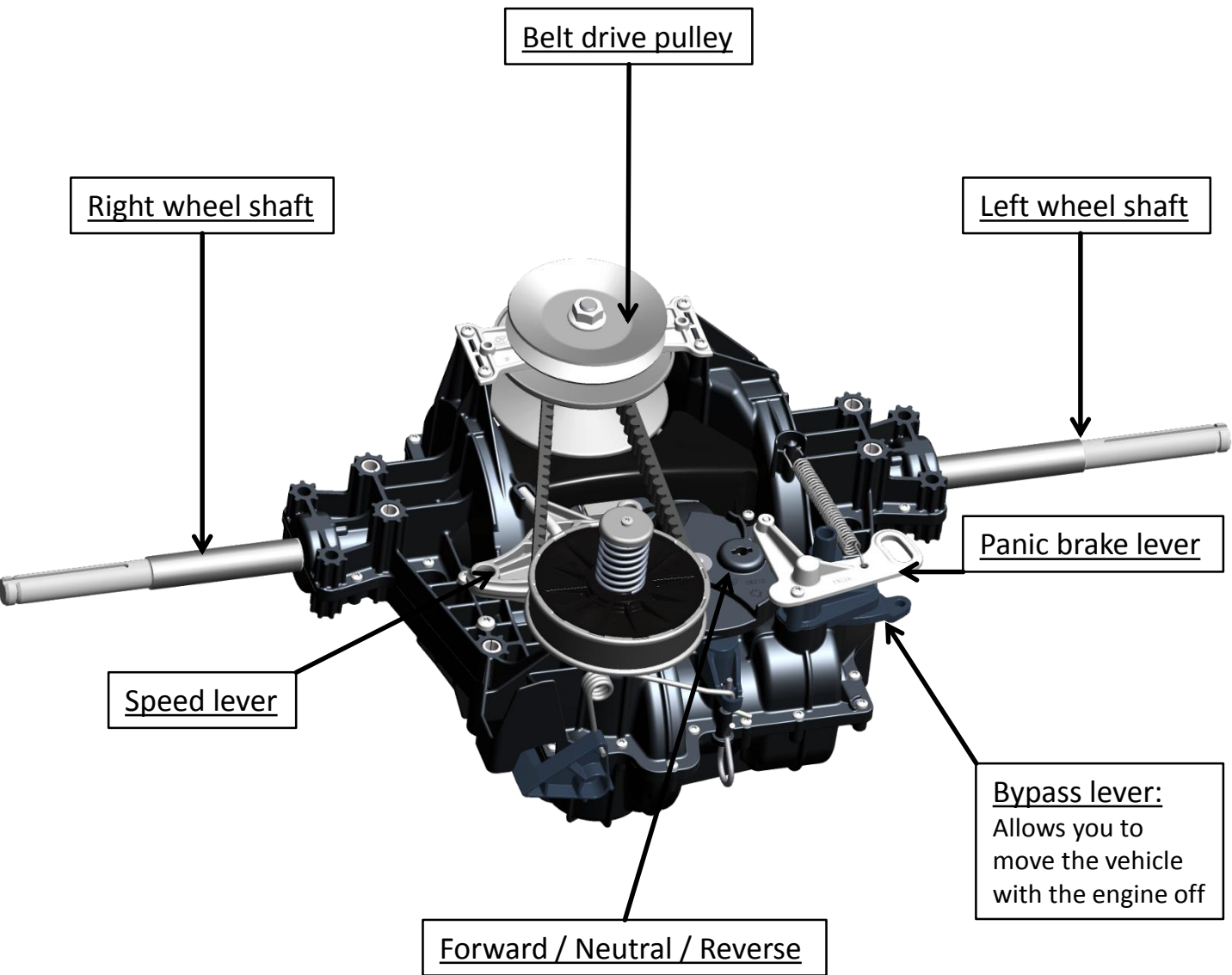
General Transmissions also recommend to carefully read the general instructions provided in the manual (p.5 to 6), before starting any reparation.

After detected the potential defective component, using the troubleshooting, follow the repair procedures. It is necessary to complete the Preliminary operation, to be able to make the Replacement operation (see troubleshooting p.7).

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

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

External Controls and Functions



Product identification

-There are two means of identifying the product:

1- By the engraving on the output shaft



1st 4 numbers: Manufacturing date

Ex: 2304, means **230th** day of the year 201**4** (August 18th of 2014)

Last 4 numbers: Nth product of the day (2nd product of the day)

-The product identification is located on the right output shaft.

-For each parts request, indicate the product reference and revision.

2- By the sticker on the upper case



1st Line: Product traceability

2nd Line: Bar code

3rd Line: GT product number

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.

Do not place speed above safety.

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.

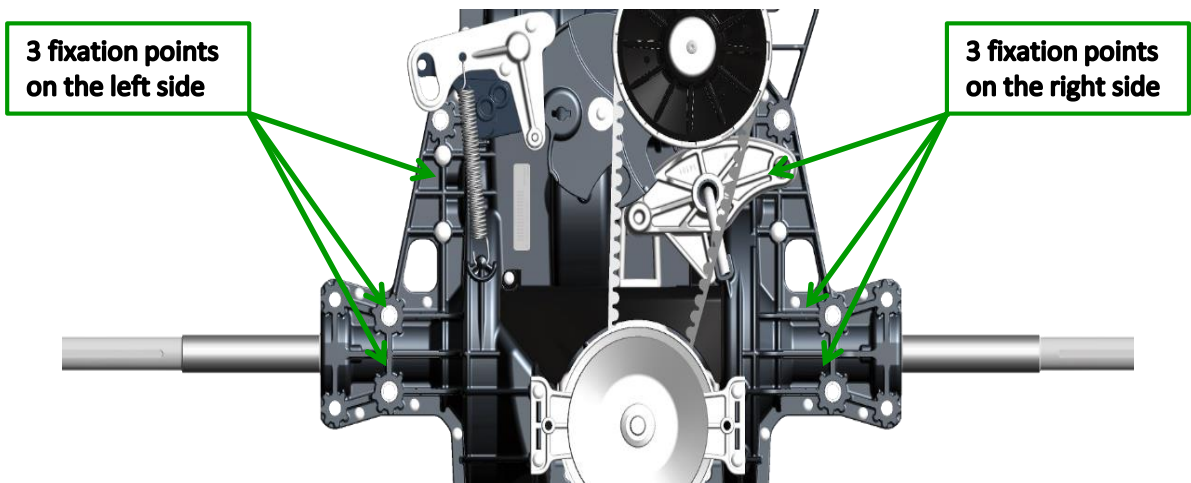
Servicing Safety

Certain procedures may require the vehicle to be disabled.

General Instructions

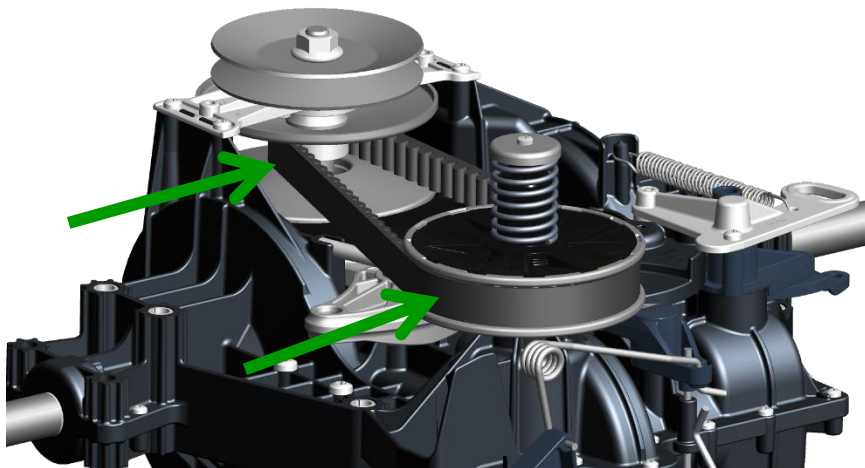
Preliminary check before tearing down the transmission

- Clean up the transmission
- Check all the linkages between tractor and transmission (see owner manual)
- Check the belt routing
- In case of failure in cold condition, check the transmission functionality after a while in a dry place. Failure might come from a frozen controls system.
- Check the correct installation of the transmission (see view below)

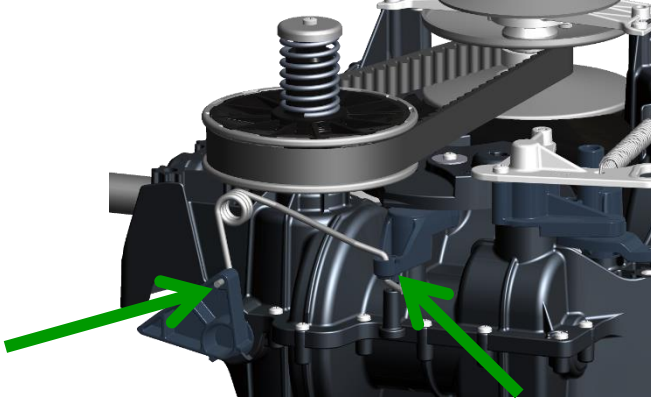


Preliminary check before re-installing the transmission

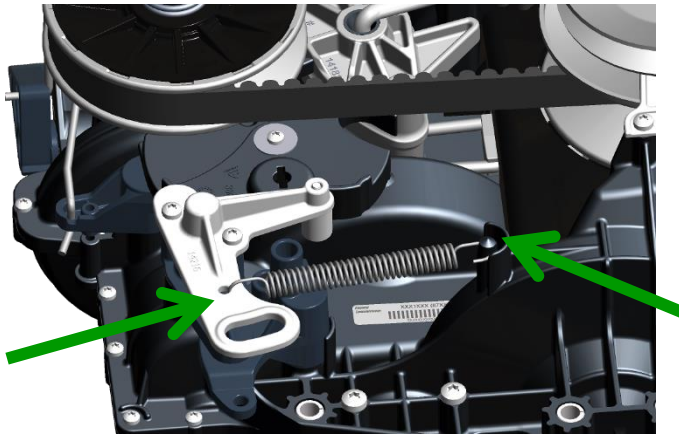
- Ensure that the variation belt is in the correct position.



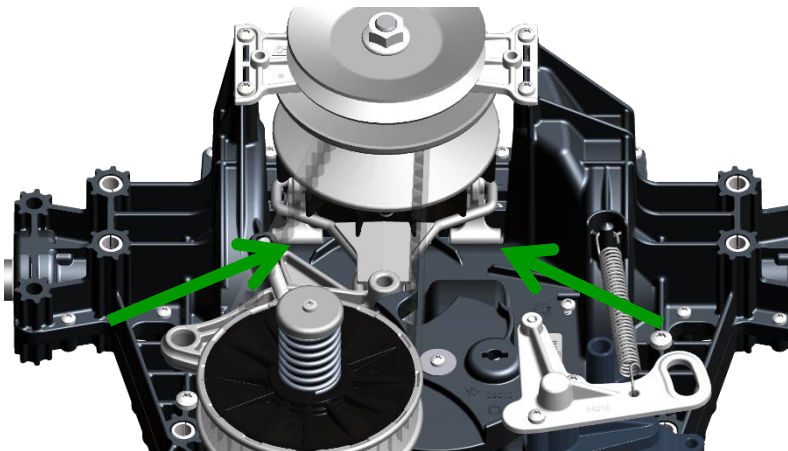
- Verify the position of the inversion rod.



- Verify the presence of the brake spring.



- Ensure that both variation levers are in the correct position.



Troubleshooting

TROUBLESHOOTING CHECKLIST				P.8	P.9	P.10	P.10	P.12	P.13	P.14
Customer complaints	Potential failure	Component to replace	P/N	OP 1	OP 2	OP 3	OP 4	OP 5	OP 6	OP 7
Loss of traction Loss of power	Failure of the driven pulley	driven kit	GT79244	R						
	Failure of the driver pulley	driver kit	GT79398		R					
	Damage belt	belt	GT37419	P	P	R				
	Broken cam	cam kit	GT79246	P			P	R		
	Broken inversion kit	inversion kit	GT79263	P			P	P	R	
	Variation controls failure	variation kit	GT79362	P	P		P	P		R
	Internal failure	transmission	GT87140							
Loss of panic brake	Broken brake lever	brake kit	GT79247				R			
Loss of neutral brake function (Loss of speed range)	Broken brake lever						R			
Loss of neutral brake function	Broken brake spring						R			
Loss of brake functions	Internal failure			transmission	GT87140					
loss of bypass function	Broken bypass lever	brake kit	GT79247				R			
	Broken plastic brake lever						R			
Improper disengaging in neutral position	Driver spring failure	driver kit	GT79398		R					
	Driver bearing failure				R					
Loss of speed range	Damaged driven flanges	driven kit	GT79244	R						
	Damaged driver flanges	driver kit	GT79398		R					
	Damaged main pulley flange				R					
	Damaged belt	belt	GT37419	P	P	R				
	Broken variation rod	variation kit	GT79362	P	P		P	P		R
Vibration	Damaged driven flanges	driven kit	GT79244	R						
	Damaged driver flanges	driver kit	GT79398		R					
	Broken variation rod	variation kit	GT79362	P	P		P	P		R
Noise	Damaged driven pulley	driven kit	GT79244	R						
	Damaged driver pulley	driver kit	GT79398		R					
	Damaged belt	belt	GT37419	P	P	R				
	Damaged variation rod	variation kit	GT79362	P	P		P	P		R

R = Replacement operation / P = Preliminary operation

-All preliminary operations needs to be done, to be able to complete the replacement operation.

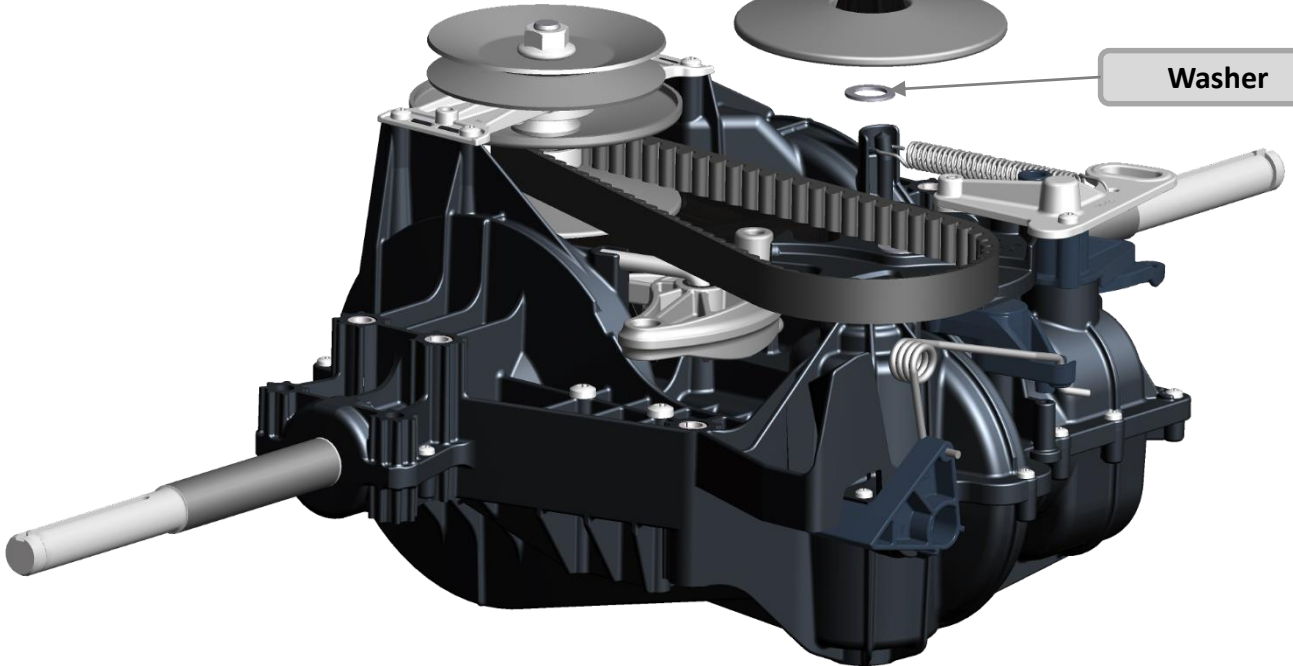
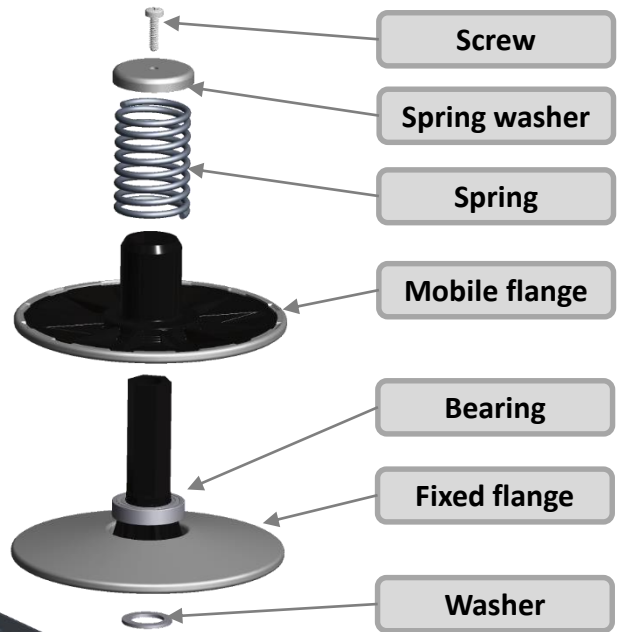
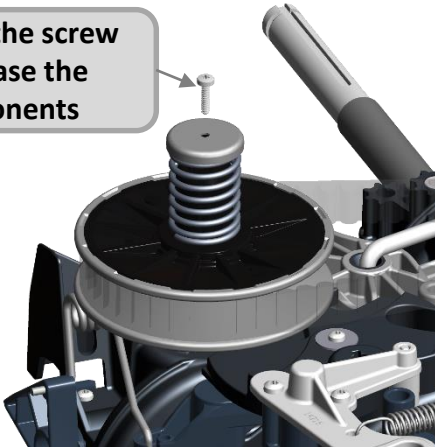
Repair Procedures

OP 1. Driven kit replacement

-After tearing down the transmission, visually check all the components shown below. If one of the components is damaged, the driven kit needs to be replaced.

-In certain cases the belt and parts of the driver pulley may have been damaged, and might also need to be replaced.

Remove the screw
to release the
components



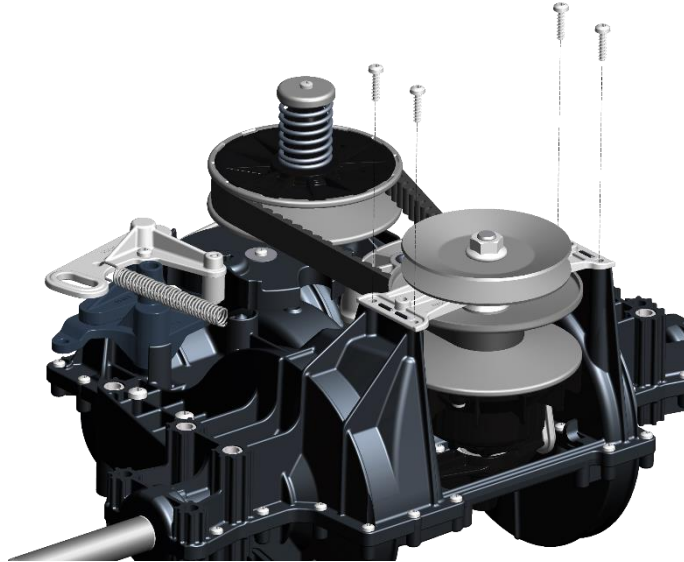
Important note: When reassembling the components, respect the tightening torque of the screw, 19.5 ± 1 lb.-in

**General Transmissions recommends using
Loctite 454 when tightening the screws**

Repair Procedures

OP 2. Driver kit replacement

- Remove the 4 screws to release the driver pulley system
- In few cases, belt and parts of the driven pulley may have been damaged, and might also need to be replaced.



Important note: When reassembling the components, respect the tightening torque of the screw, 28.3 ± 1 lb.-in

**General Transmissions recommends using
Loctite 454 when tightening the screws**

Repair Procedures

OP 3. Belt replacement

-If belt replacement is necessary, follow the OP1 "Driven pulley removal" and OP2 "Driver pulley removal".

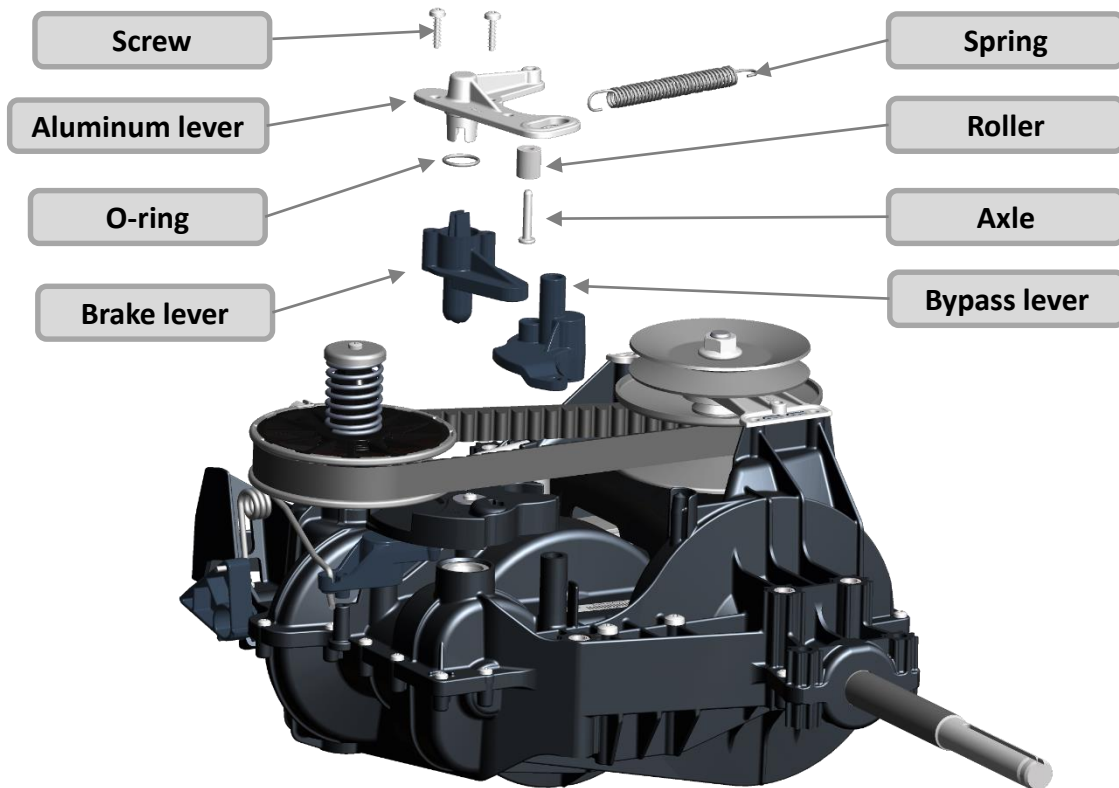
-In most cases, parts of the both driver and driven pulley may have been damage, and might also need to be replaced.

Important note: When reassembling the components, respect the tightening torque of the different screws and use Loctite 454.

OP 4. Brake kit replacement

-After tearing down the transmission, visually check all the components below. If the brake lever is damaged, the brake kit 79247 needs to be replaced.

-If the brake spring is broken or missing, the spring can be replaced only.

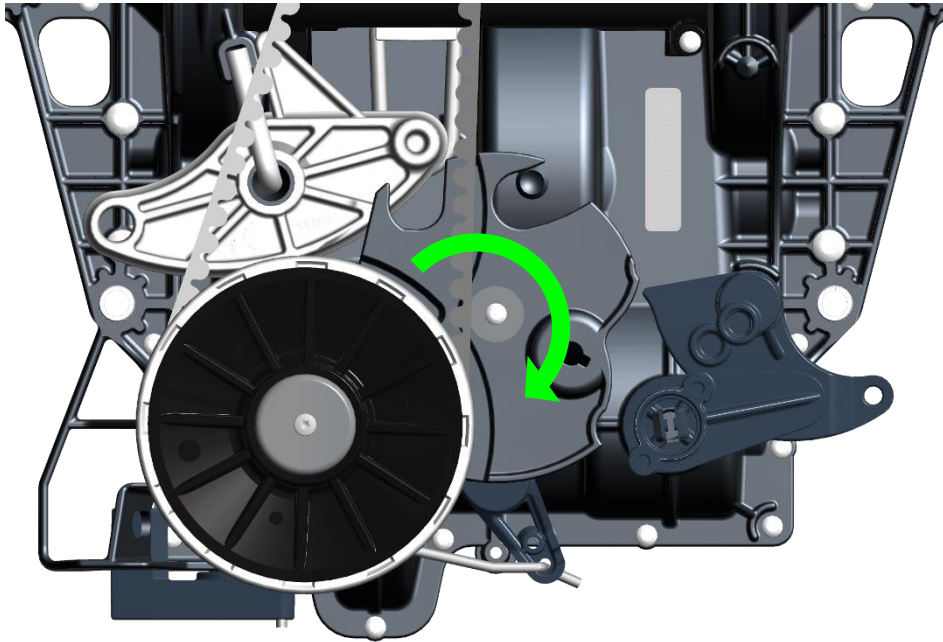


Important note: When reassembling the components, respect the tightening torque of the screw, 28.3 ± 1 lb.-in

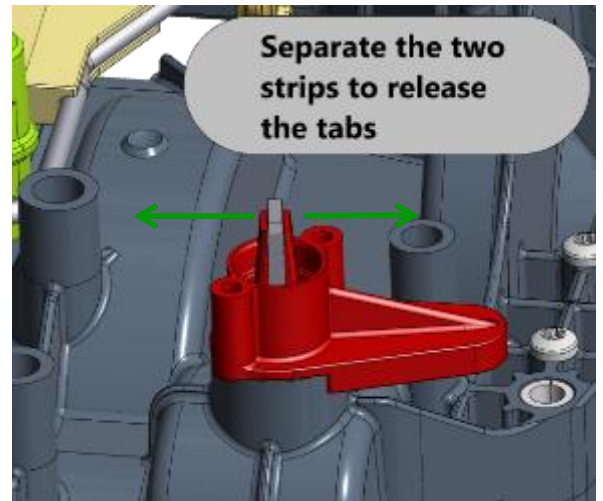
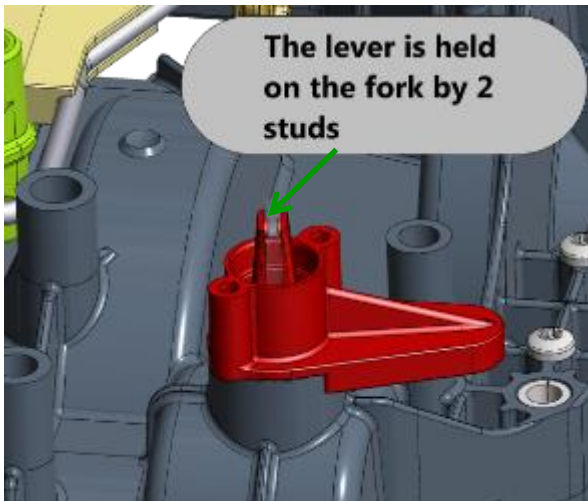
General Transmissions recommends using Loctite 454 when tightening the screws

Repair Procedures

-It is necessary to rotate the shift came to the reverse position, for removing the brake and bypass levers.

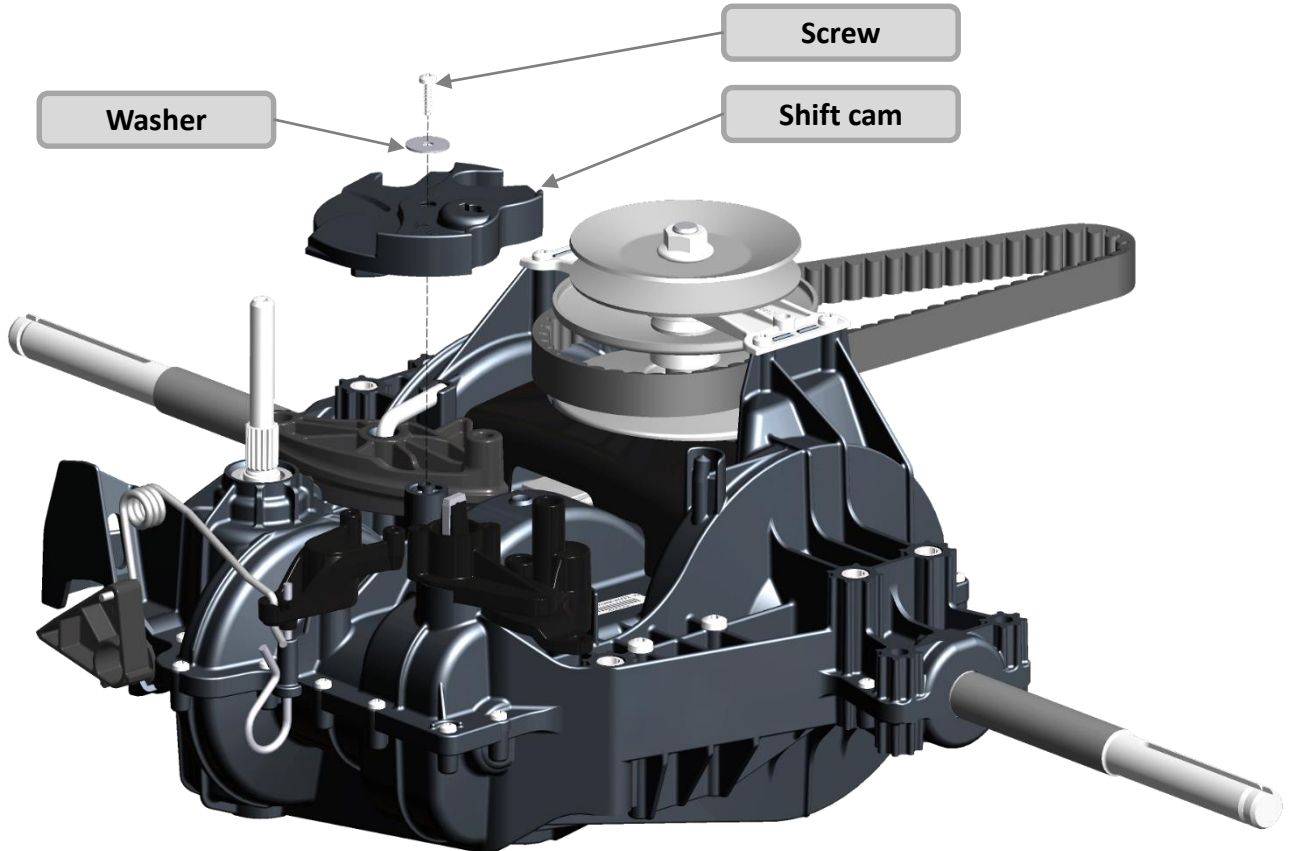


-To remove the brake lever, separate and hold the 2 strips of the lever, to release the two studs and allow the lever removing.



Repair Procedures

OP 5. Cam replacement



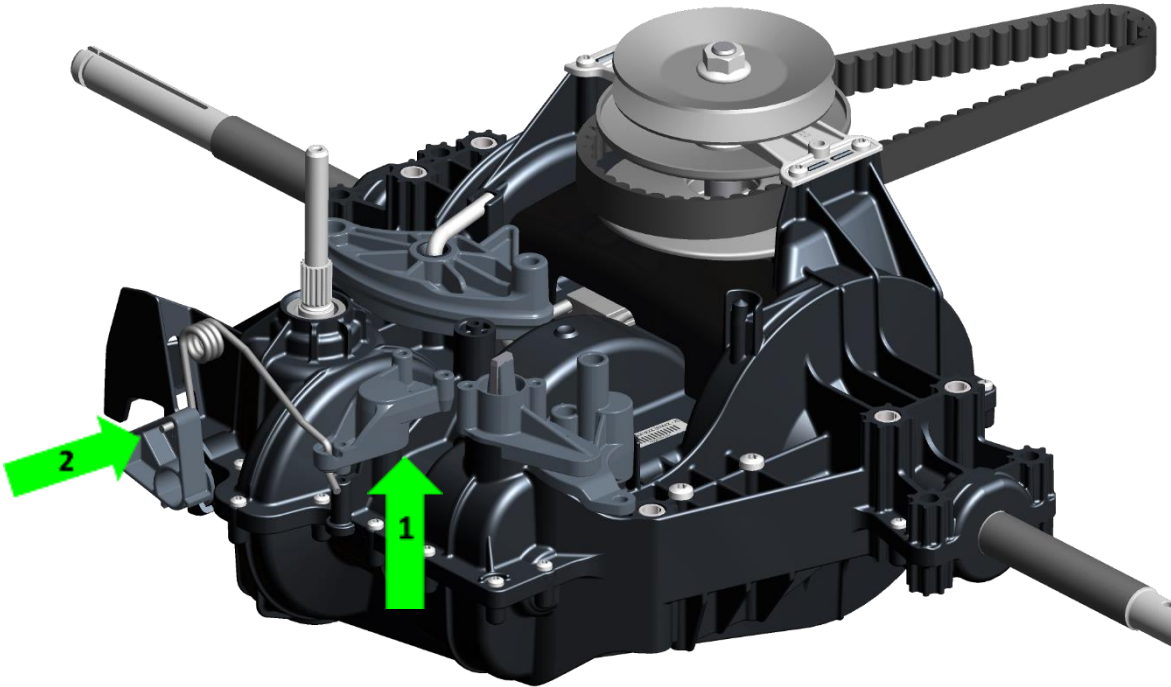
Important note: When reassembling the components, respect the tightening torque of the screws, 19.5 ± 1 lb.-in

General Transmissions recommends using Loctite 454 when tightening the screws

Repair Procedures

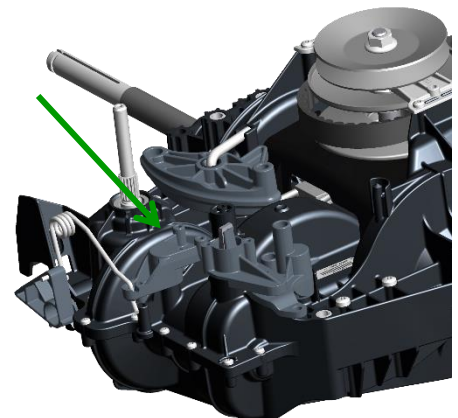
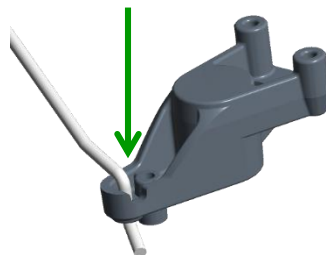
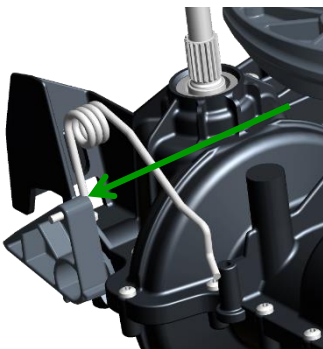
OP 6. Inversion kit replacement

-First remove the inversion lever from the upper case, then remove the spring from the fork lever.



-To install a new inversion rod:

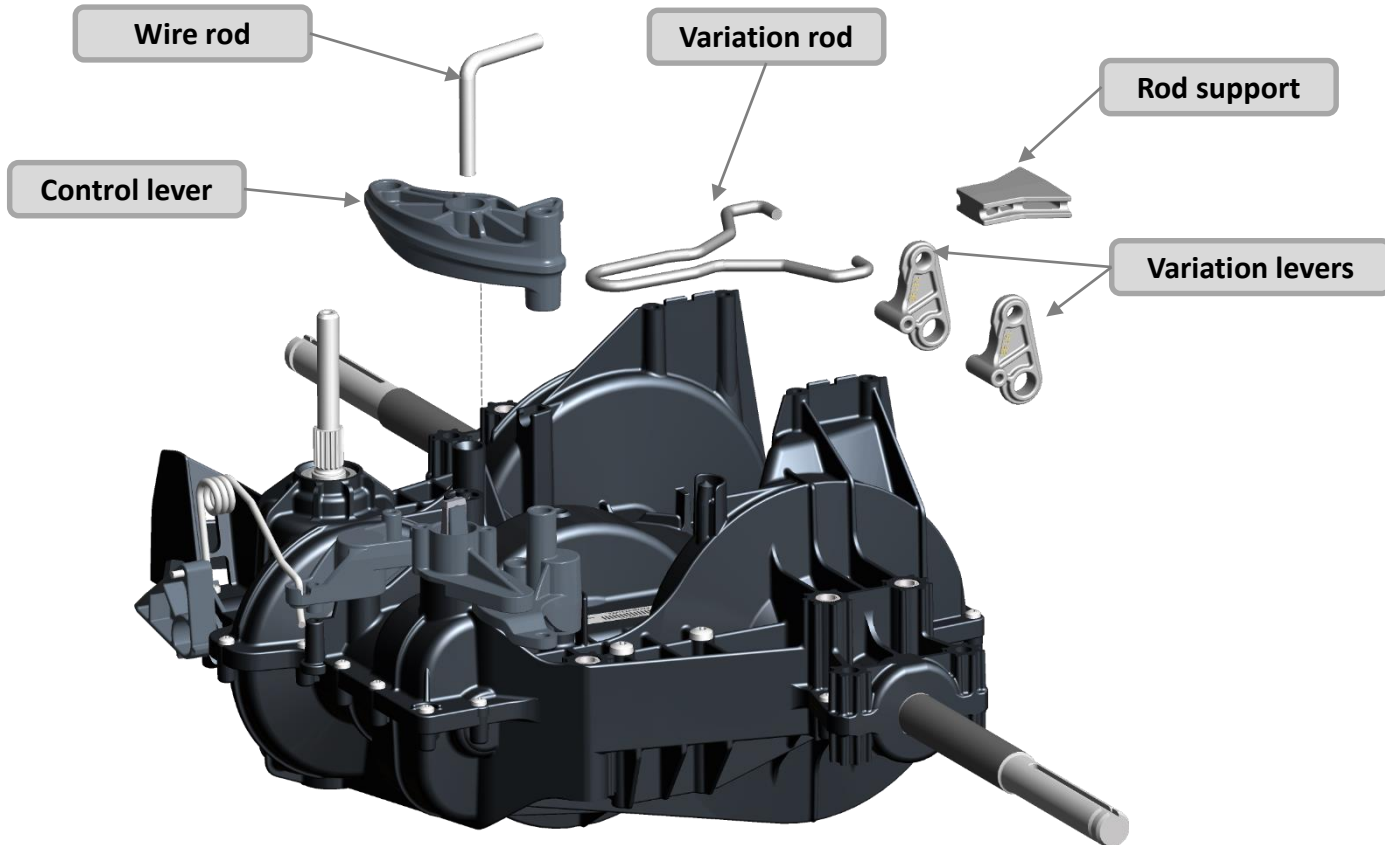
- 1- Insert the rod in the inversion fork lever.
- 2- Insert the rod in the inversion lever.
- 3- Install the inversion lever on the transmission.



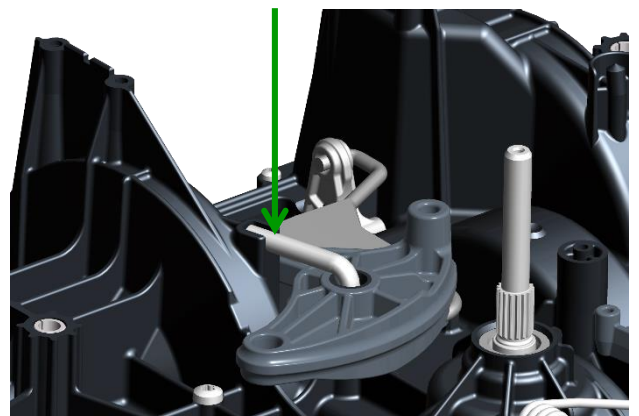
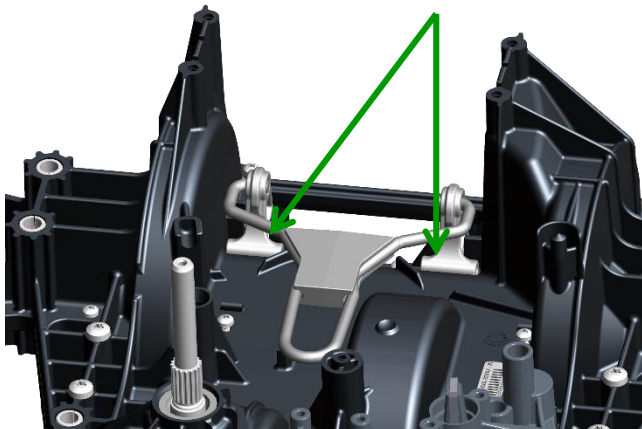
Repair Procedures

OP 7. Variation kit replacement

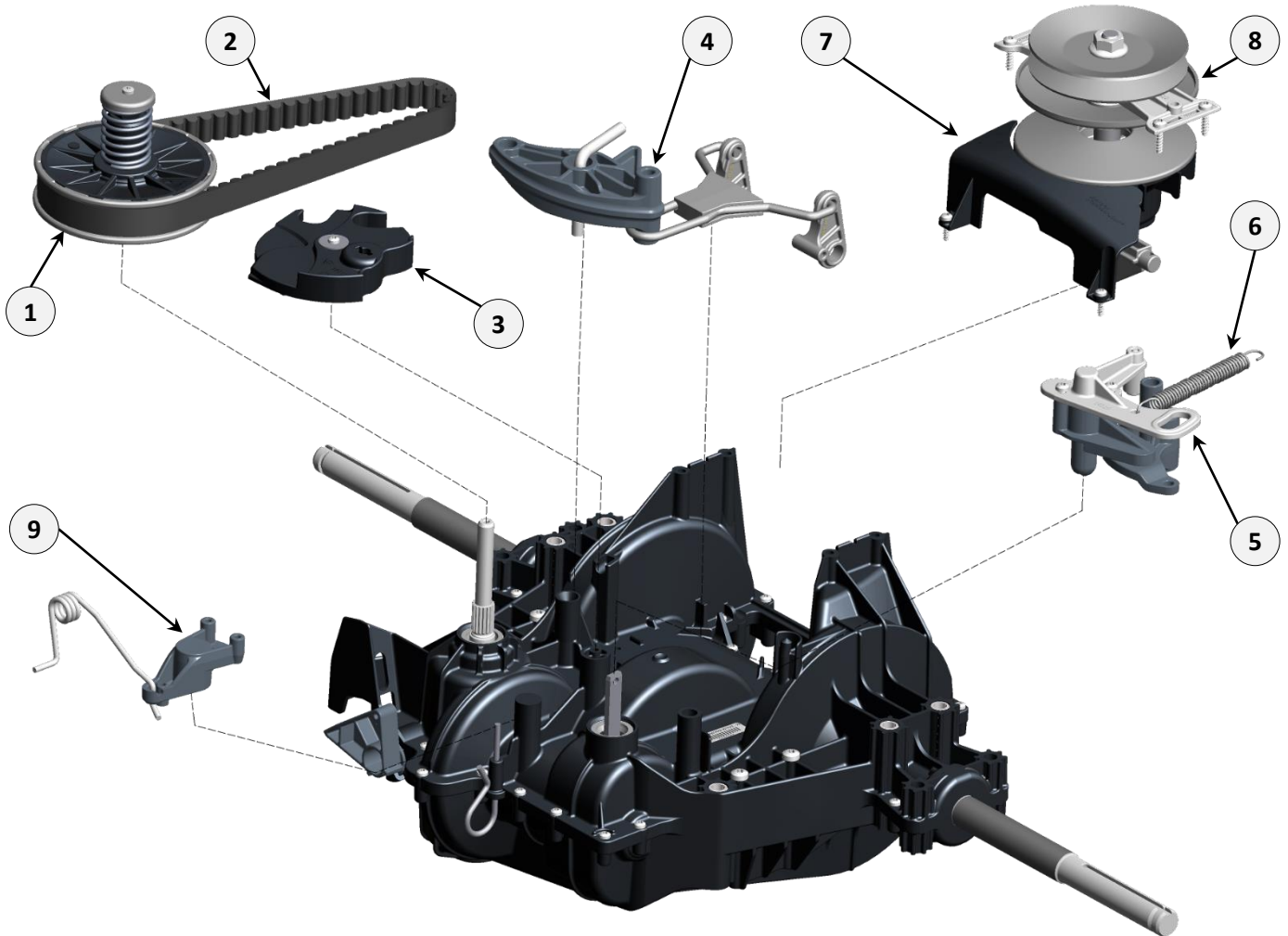
- First remove the wire rod, to be able to remove the control lever and variation parts.
- The 5 parts are available in the variation kit.



-When putting back the components on the transmission, make sure that the both variation levers are correctly seated, and the wire rod properly inserted.



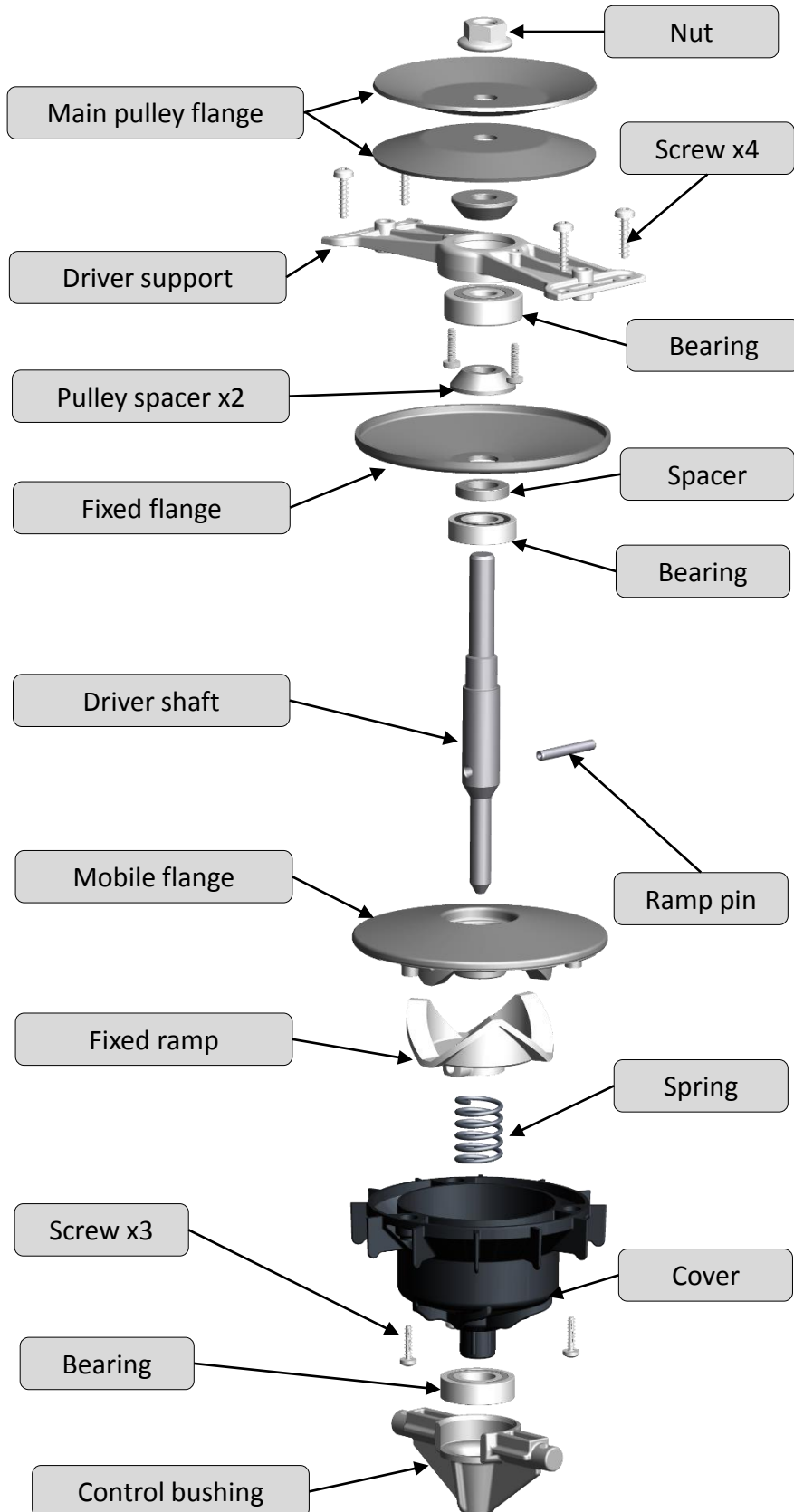
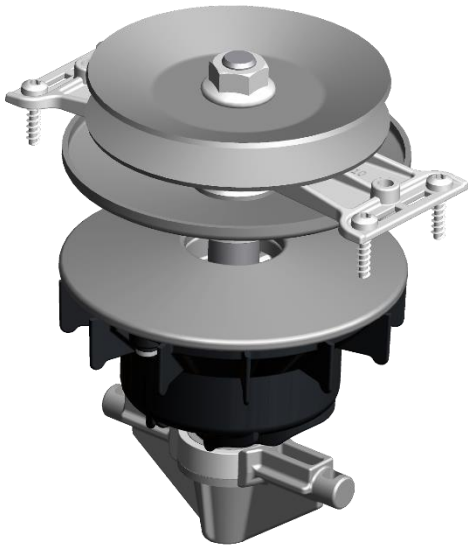
Exploded View



Item	Designation	PN
1	Driven kit / Secondary pulley	GT79244
2	Belt	GT37419
3	Shift cam	GT79246
4	Variation kit	GT79362
5	Brake kit	GT79247
6	Brake spring	GT36043
7	Shield	GT38808
8	Driver kit / Primary pulley	GT79398
9	Inversion kit	GT79263

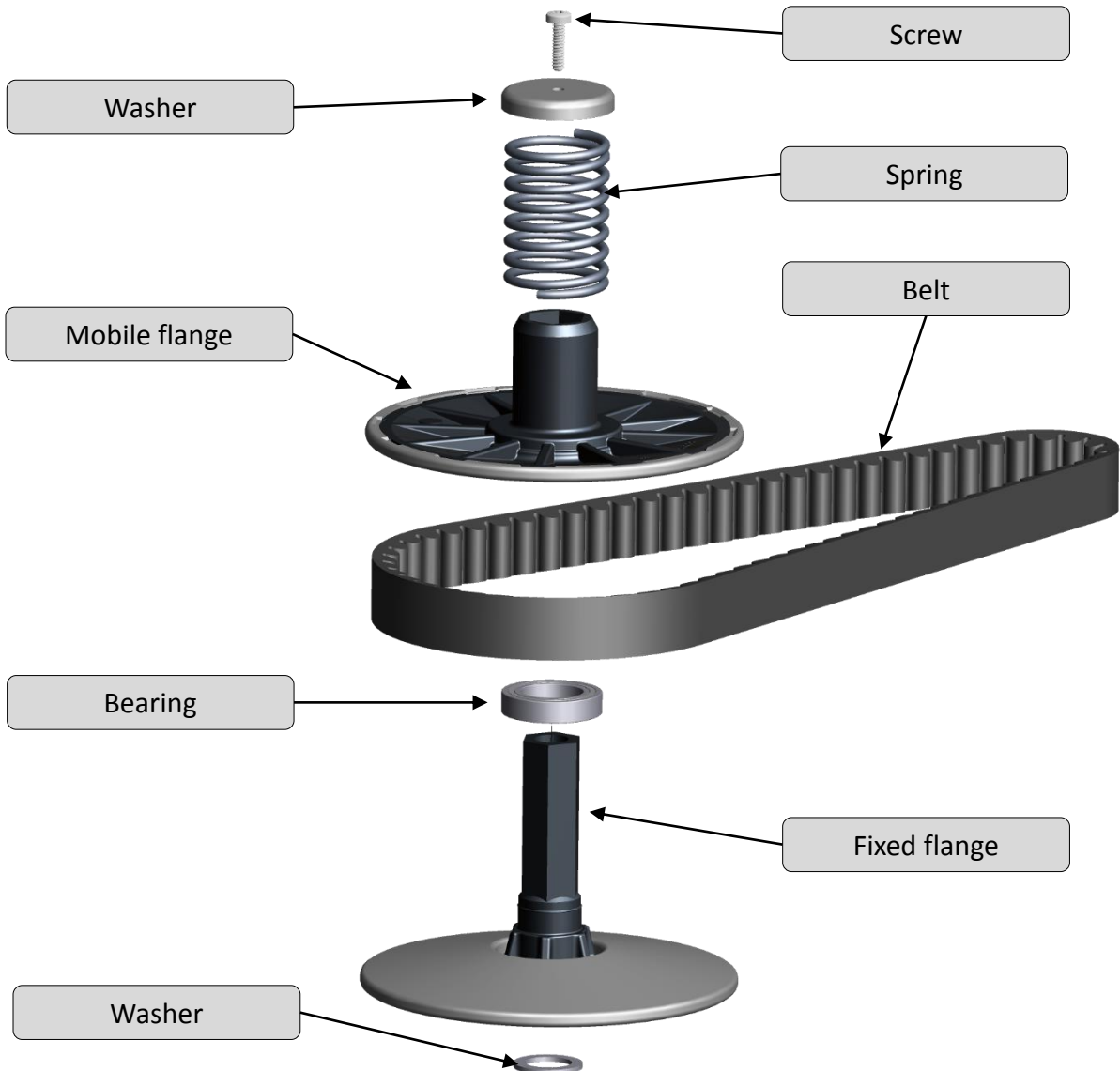
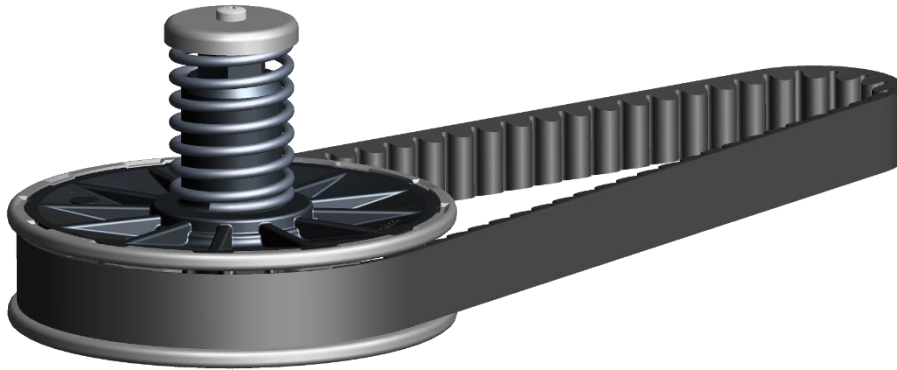
Driver kit exploded view

GT79398



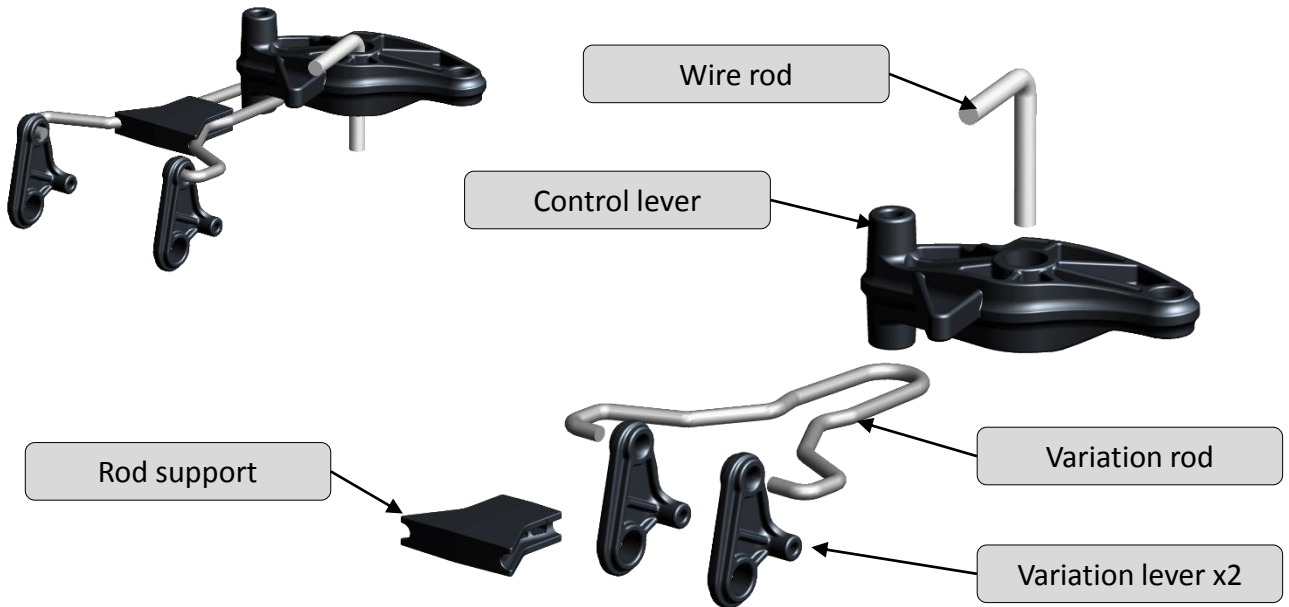
Driven kit exploded view

GT79244



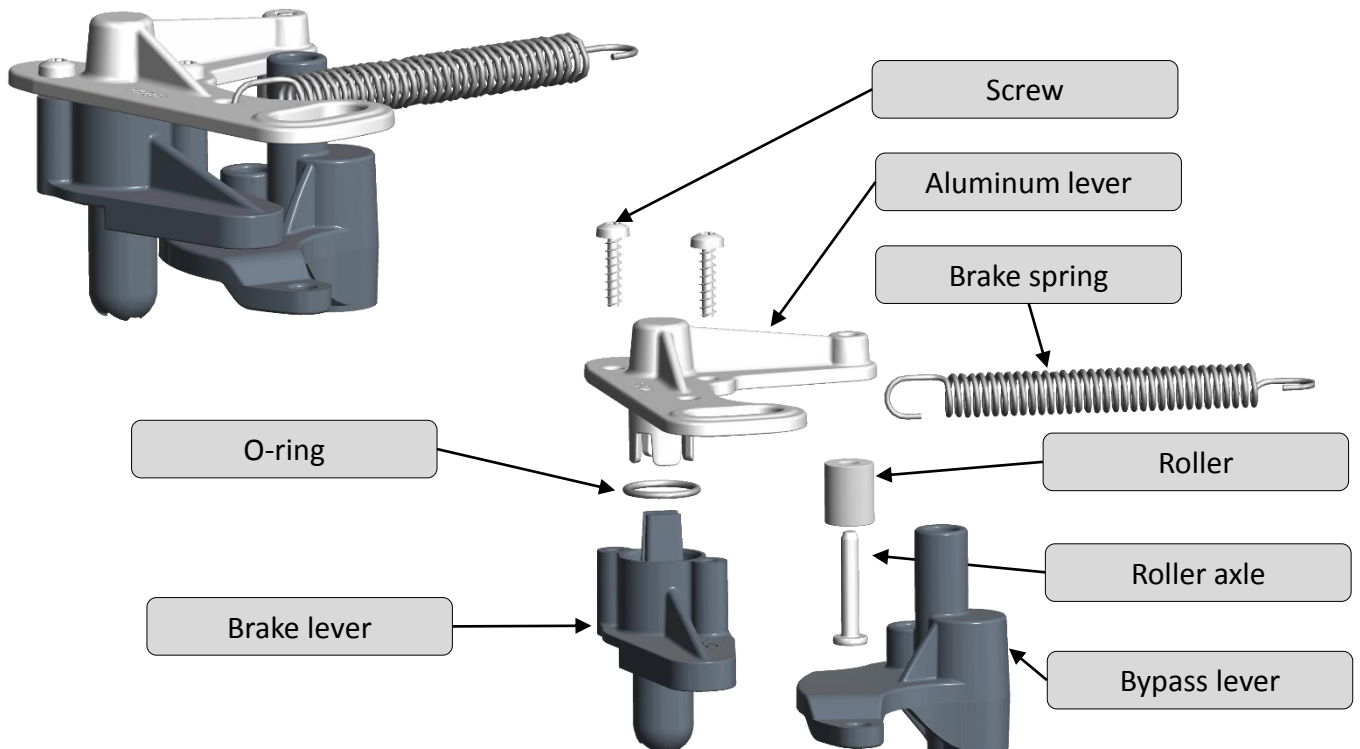
Variation kit exploded view

GT79362



Brake kit exploded view

GT79247



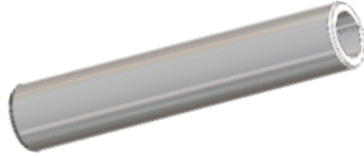
Shift came exploded view
GT79246



Inversion control exploded view
GT79263



Compression limiters GT79264 (6 per package)



Hardware kit GT79265



- 6 screws 5x16, also included in the driver kit (4) and the brake kit (2).



- 1 screw 4x16 and 1 washer, also included in the shift cam kit.



- 1 screw 4x16 and 1 spring washer, also included in the driven kit.

Belt GT37419



Cover GT38808



Notes

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Drive solutions for outdoor power equipment

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