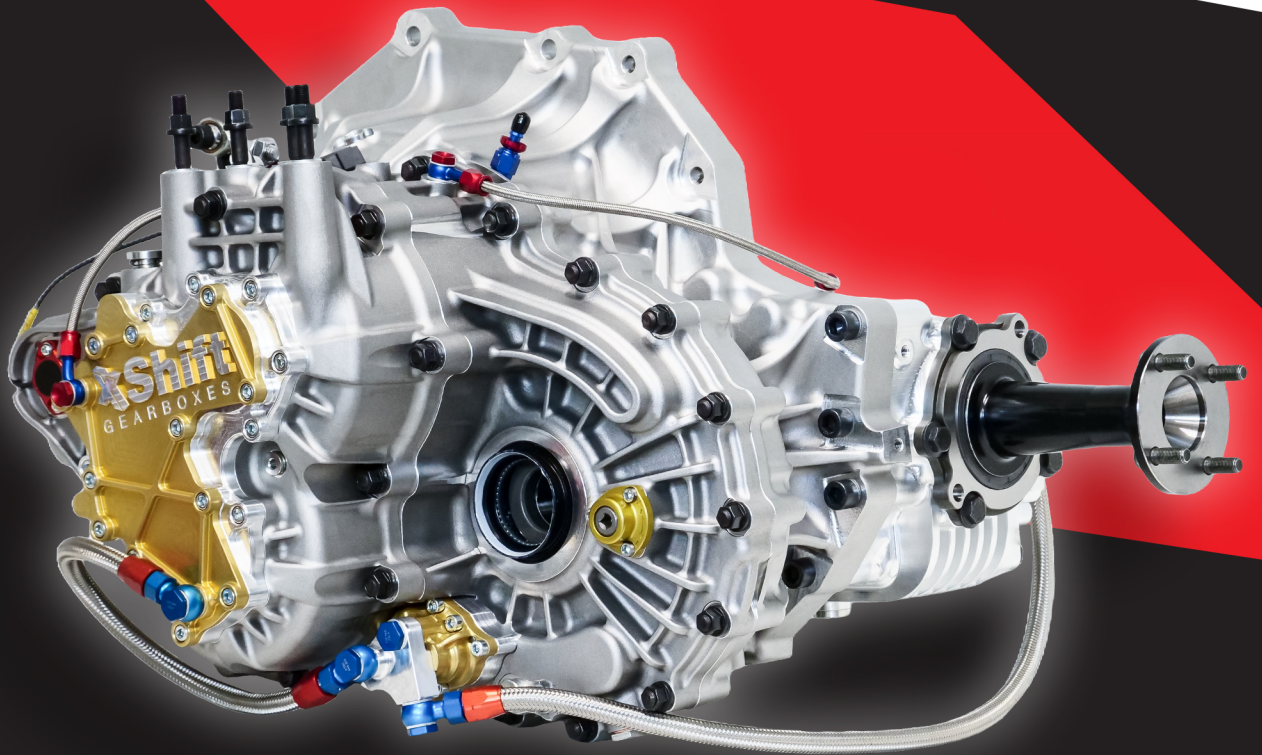




TOYOTA GR YARIS

5/6/7 speed sequential gearbox
SHD billet transfer case



2025

X SHIFT COMPANY EQUIPMENT



X Shift Gearboxes – SEQUENTIAL WAY TO WIN!

X Shift
GEARBOXES

INTRODUCTION

In 1999, František Macho, the owner of **X Shift Gearboxes**, entered the racing industry to enrich it with his many years of experience in the field of engineering and in 2012 he began to focus primarily on his new company and brand **X Shift Gearboxes**.

After years of successful sales of racing gearboxes to more than a hundred countries around the world, the company has grown and employs experienced managers, technologists and designers who develop unique products.

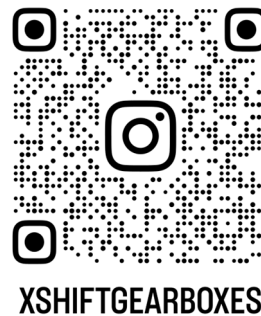
After diligent teamwork and development, we came up with a new technical solution for the **Subaru +PLUS** sequential Gearbox (2018), **Mitsubishi EVO STRONG** sequential Gearbox (2019), **Toyota GR Yaris** sequential Gearbox (2021) and other new products.

Last but not least, we should mention an important thing, which is a milestone that our company has reached in the Czech Republic, and we are extremely proud to have become the first supplier of sequential gearboxes for the **Toyota GR Yaris** rally special and a promoter for the **Toyota Yaris Cup Czech**.

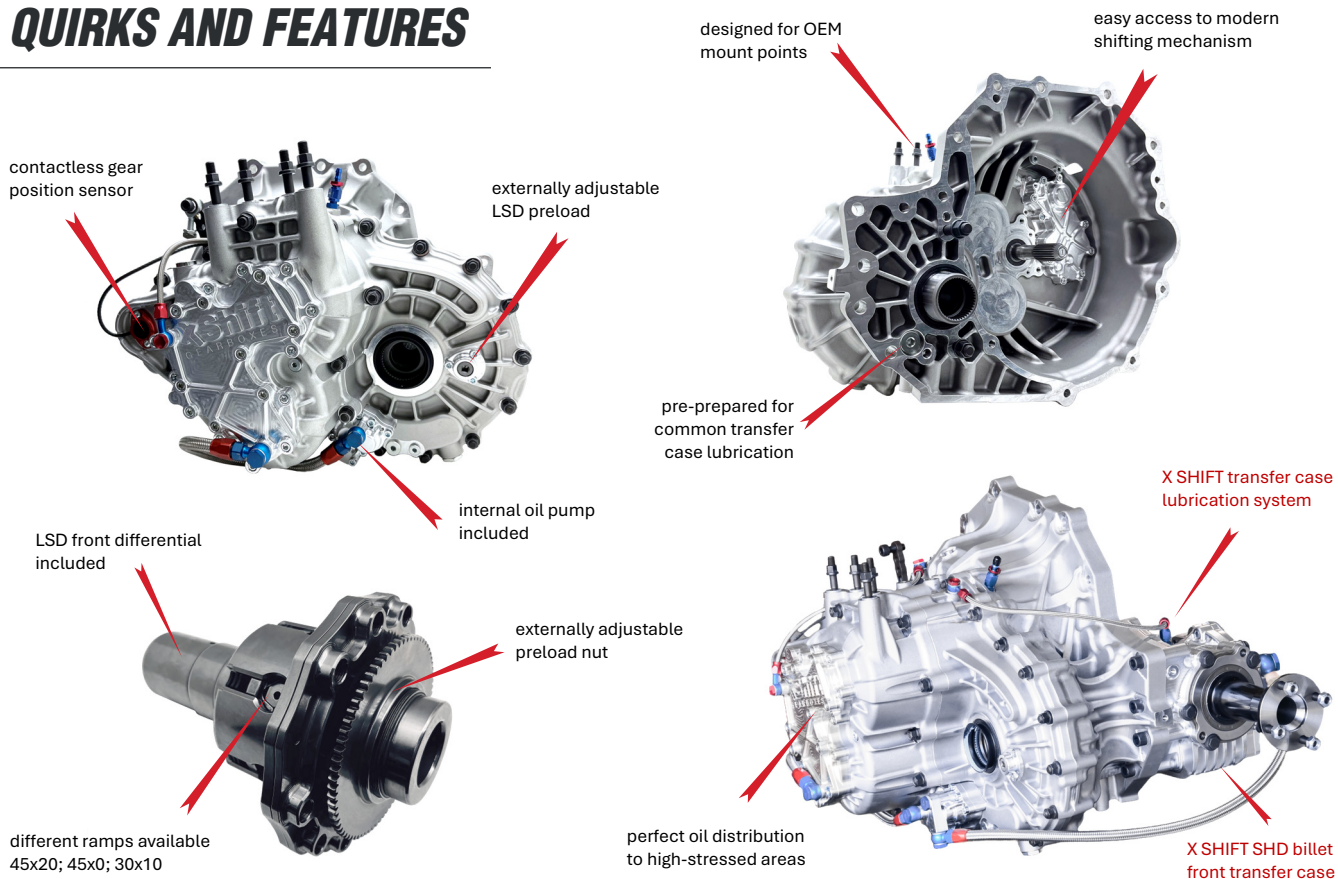
We are always working hard to keep improving and developing as much as possible and continue to design more great modern sequential racing gearboxes for the local and global market.

At the end of 2021, a collaboration with **Italian racing team T-racing** began to take shape, who were very interested in a sequential gearbox from X Shift Gearboxes for the GR Yaris. This sequential gearbox was the **only one homologated** for the **Italian GR Yaris Rally Cup**, and have been working for years without any problems.

We consider the overall growth of the company in terms of new modern CNC machines, on which highly qualified employees are working, able to cover the highest production requirements to achieve huge progress in the motorsport industry. Come join us!



QUIRKS AND FEATURES

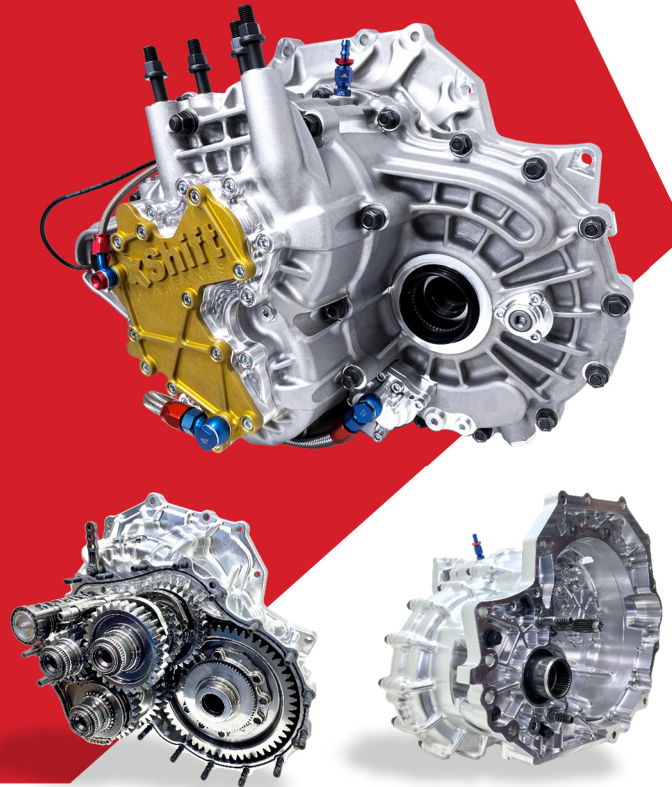


THE FULL SEQUENTIAL GEARBOX

TOYOTA GR YARIS/COROLLA

5/6/7 speed

- Complete gearbox with LSD diff and bellhousing
- Casings are made from aircraft grade aluminium
- Torque up to 1200 / 1400 Nm – casted / billet case
- Latest shifting mechanism with dual aretation
- Upgraded undercut dog engagement system
- Strong dogrings, shifting forks and rods
- Contactless gear position sensor included
- LSD with externally adjustable preload included
- Integrated oil pump – better lubrication and lifespan
- Shifting with rod or cable in neat interior design
- Option for pneumatic paddle shifting
- Option for original or custom oil temperature sensor
- Option for cooling the transfer case together with the gearbox



PERFORMANCE AND STRENGTH

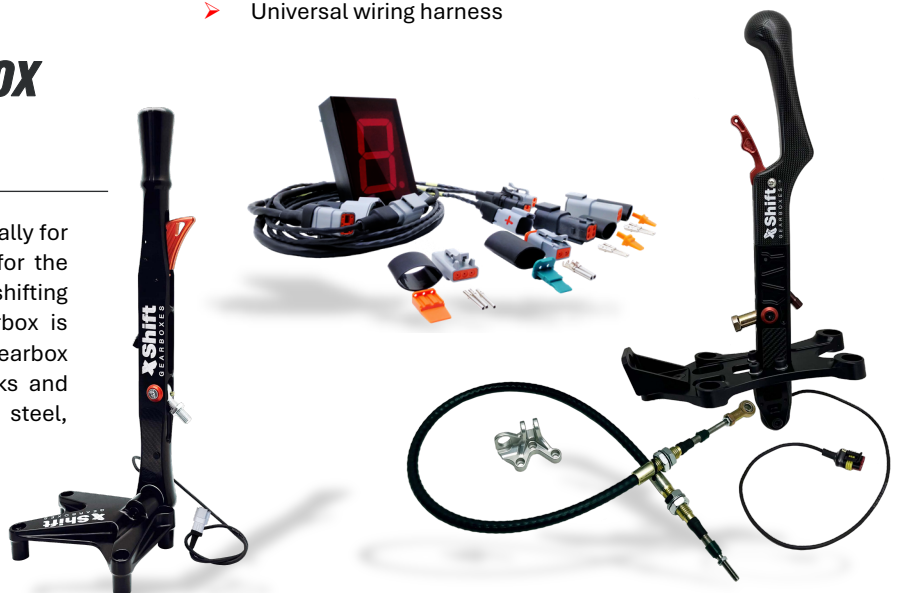
X Shift Toyota GR Yaris sequential gearbox provides the fastest shifting on the market. Designed with various gear and final drive ratios in 7 speed version for increased acceleration performance of G16-E engines. Is also possible to make BILLET sequential gearbox casings rated up to 1400Nm! Utilizing the most modern shifting mechanism and dog engagement, this gearbox is ideal for top-tier race cars.

WHAT DIFFERS OUR GEARBOX FROM OTHERS?

The first sequential gearbox designed specifically for the GR Yaris, offering a direct replacement for the OEM gearbox. Utilizing the most modern shifting mechanism and dog engagement, this gearbox is ideal for top-tier race cars. It is a complete gearbox with no OEM parts included. All shifting forks and shifting mechanism parts are made of billet steel, which ensures their strength!

SHIFT LEVER, BASE, DISPLAY AND WIRING

- The sequential shifting lever is designed to suit any race or street application!
- Lever contains an electronic tensometer for ignition cut – analog output 0-5V
- Available in aluminium, or carbon version
- Available in “race” (LHD/RHD) version (shift rod)
- Designed also in unique “street” version with bowden and base to fit to OEM center tunnel
- Small, or big LED programmable gear display
- Universal wiring harness

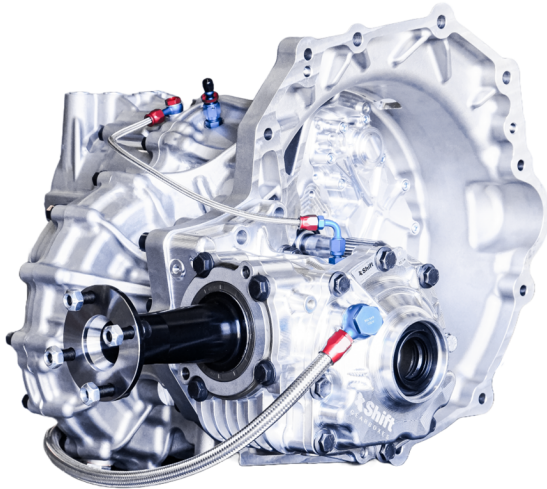


THE FULL BILLET TRANSFER CASE

TOYOTA GR YARIS/COROLLA

FRONT DRIVETRAIN

- Used high strength quality material Al 7075 with tensile strength 540 MPa
- Extra ribs added on the inside and outside case design, to further increase strength
- Higher oil volume + 25% against the OEM transfer case
- The transfer case can be removed without removing the gearbox
- Strong custom hypoid gearing with ratio 32/14- closer ratio to 50:50 torque distribution for enhanced durability and lifespan
- Upgraded SHD tube + nut – increased durability
- Upgraded SHD pinion bearing unit – better lifespan
- Casing has ready-made plugs for external oil circuit
- Casing has holes for connection to XSHIFT transfer case lubrication system (no further modification required)
- Supplied as a complete pre-assembled set

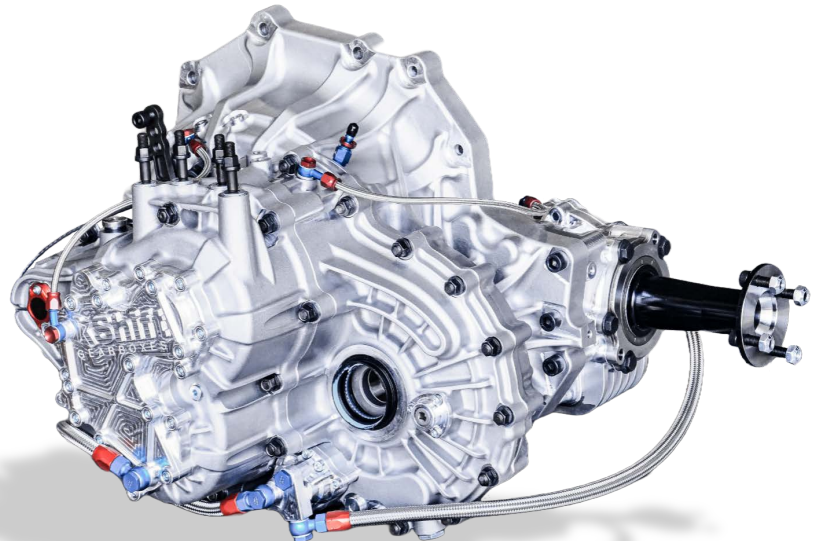


UNIQUE TRANSFER CASE LUBRICATION SYSTEM

In OEM front transfer case, heat buildup and poor oil circulation are critical issues that lead to accelerated wear and limited service life of hypoid gearing. The TCLS eliminates these weaknesses. By ensuring continuous oil flow by internal oil pump circuit, it reduce operating temperatures, maximizes durability and extends the life of critical drivetrain components – delivering the reliability that standard solutions simply cannot achieve.

SYSTEM ADVANTAGES

- Full compatibility with OEM and X SHIFT Billet Transfer Case (pre-machined for TCLS)
- Optimized oil flow & heat management
- Reduced wear, extended lifespan of whole transfer case
- Advanced engineering – gearbox and lubrication system developed as one complete motorsport solution
- Possible to easily add an **external oil cooler** to the system for further temperature reduction

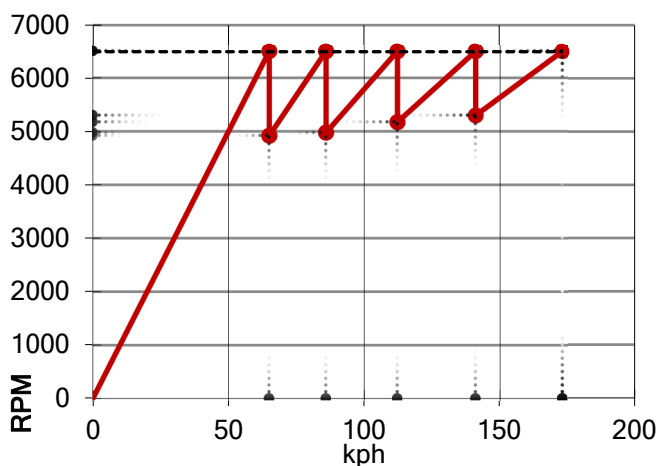


5 and 6 speed gear ratios

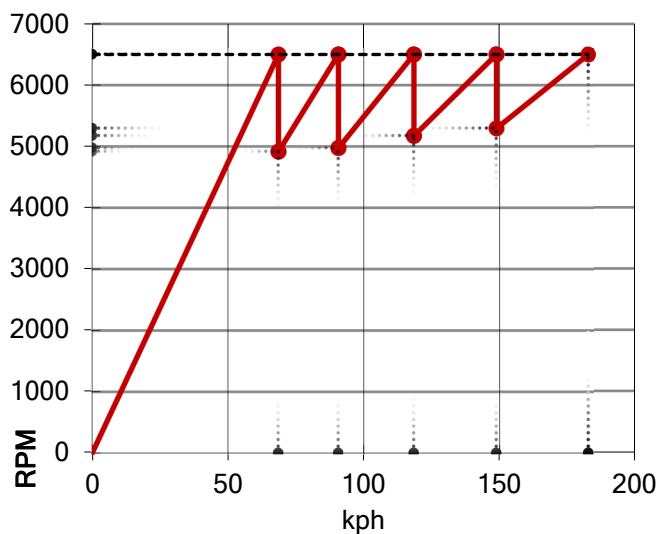
suitable for rally events

5 speed

TY5-GR (FD 4:1) = 173,0 kph at 6500 rpm

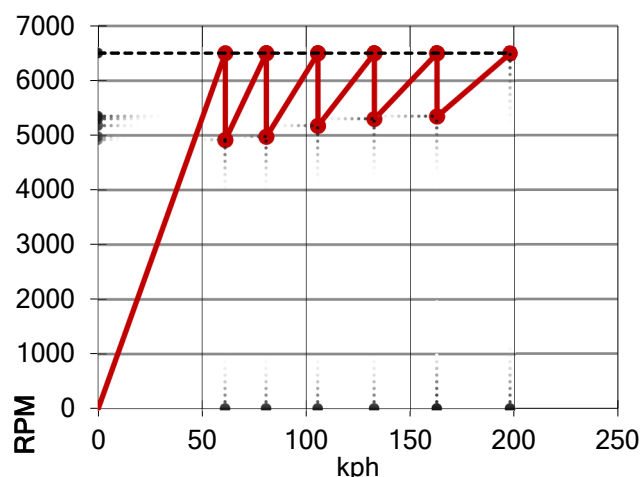


TY5-GR (FD 3,79:1) = 182,8 kph at 6500 rpm

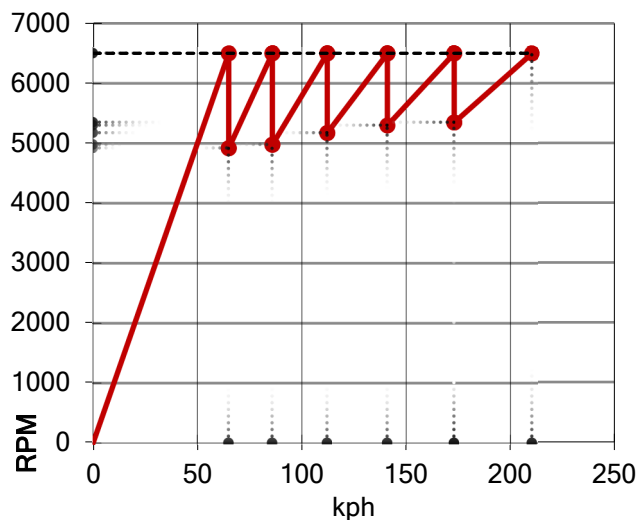


6 speed

TY6-GR (FD 4,25:1) = 198,0 kph at 6500 rpm



TY6-GR (FD 4:1) = 210,3 kph at 6500 rpm



6500 RPM	tire diameter: 650mm		Available final drives			
Gear	Ratio	4,58:1 (12/55)	4,25:1 (12/51)	4:1 (12/48)	3,79:1 (14/53)	3,4:1 (15/51)
1	3,08	56,4	61,1	65,0	68,6	76,4
2	2,33	74,5	80,8	85,9	90,7	101,0
3	1,79	97,3	105,6	112,2	118,5	132,0
4	1,42	122,3	132,7	141,0	148,9	165,8
5	1,16	150,1	162,8	173,0	182,8	203,5
6	0,95	182,4	198,0	210,3	222,2	247,5

* 7 speed version can be ordered; custom final drive ratio can be designed upon request

ACCESSORIES

- Pneumatic paddleshift kit • OEM /AP Racing CSC hose kit • Different LSD ramps • Different preload setting
- LSD preload tools • Paddle mount for OEM steering wheel



GR YARIS RALLY IN THE WORLD





GEARBOXES

MANUFACTURING PROFESSIONAL RACING GEARBOXES



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