

# TRE 4x4



# BOLT ON PORTAL

# 2GEN



# BOLT ON PORTAL



**4.5-INCH LIFT**



**5-YEAR WARRANTY**



**STEEL STRUCTURE HOUSING**

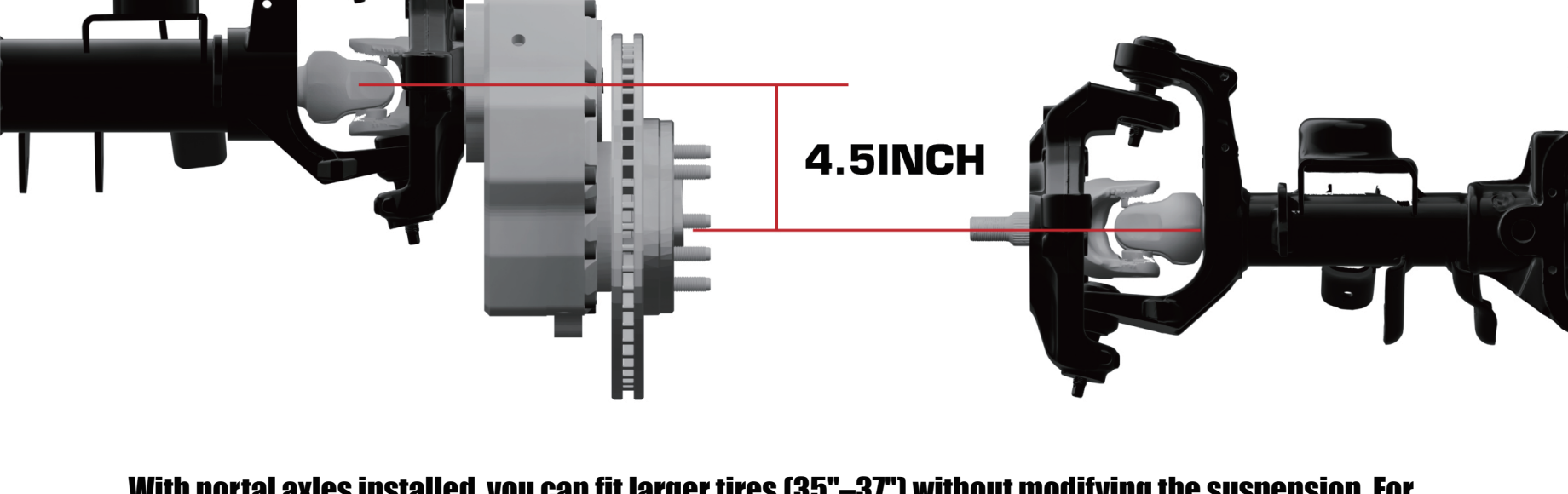


**FOUR-GEAR MECHANISM**



**CTIS TIRE INFLATION SYSTEM**

Portal axles raise the vehicle at the wheel hubs, outside the axle. The original suspension and drive shafts do not need any modifications; suspension travel and driveshaft angles remain the same as the stock vehicle, maximizing the vehicle's handling and ride comfort.

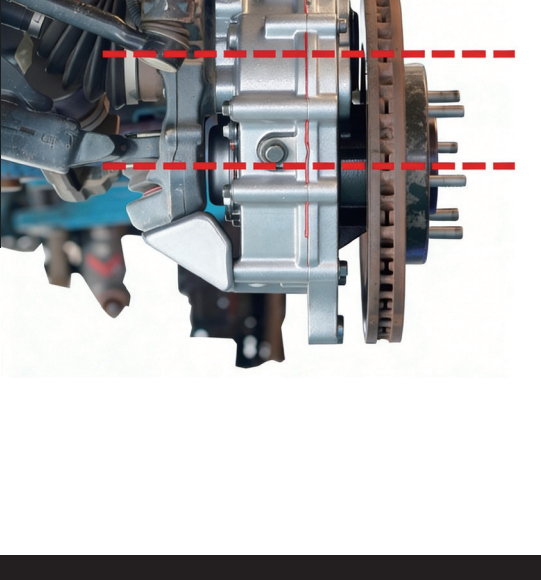


With portal axles installed, you can fit larger tires (35"-37") without modifying the suspension. For higher performance, you can also increase suspension travel; it is compatible with all existing Jeep Wrangler modification kits.

Portal axles provide a direct 4.5-inch lift, and with larger tires, you can easily achieve a total 6-inch lift.

**REGULAR LIFT**

**BOLT ON PORTAL AXLE LIFT**



# BOLT ON PORTAL

## WARRANTY INFORMATION

**PORTAL AXLE MAIN BODY: 5-YEAR WARRANTY**

**BRAKE LINES: 5-YEAR WARRANTY**

**AXLE SHAFTS: CONSUMABLE PARTS**

**TIRES UP TO 37 INCHES (INCLUDING 37 INCHES)**

**ONE-TIME WARRANTY WITHIN 5 YEARS**

**BRAKE DISCS AND PADS: NOT COVERED BY WARRANTY**



**70 km/h ≈ 40 dB**  
(humming sound of a refrigerator in operation)

**GEAR RATIO**

**1:1.25**

RECOMMENDED TIRE SIZE  
**35 INCHES**

**1:1.31**

RECOMMENDED TIRE SIZE  
**37 INCHES**

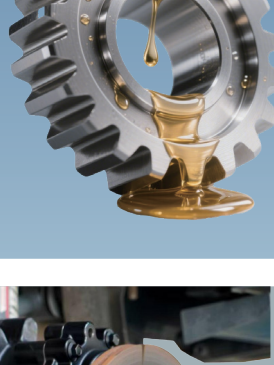
**4 TRANSMISSION GEAR DESIGN, STEEL GEARS**

Most off-road vehicles operate in rear-wheel drive on paved roads, so rear axle oil requires more frequent changes than front axle oil.

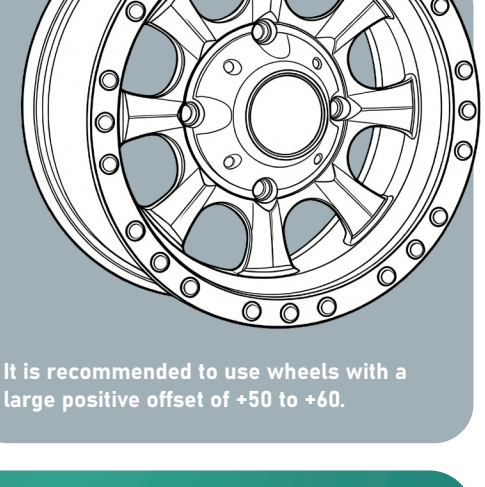
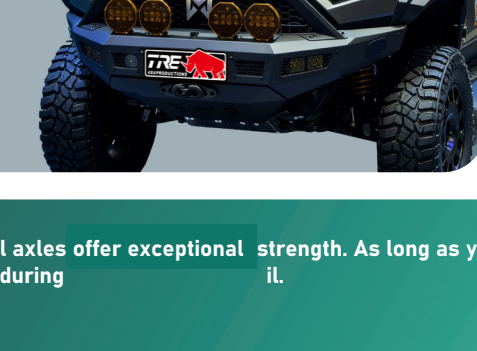
For vehicles used primarily in rear-wheel drive, we recommend changing the rear axle oil twice for every one front axle oil change.

Any reputable brand of 85W-140 gear oil is suitable.

In an emergency, 85W-90 may be used as a temporary alternative.



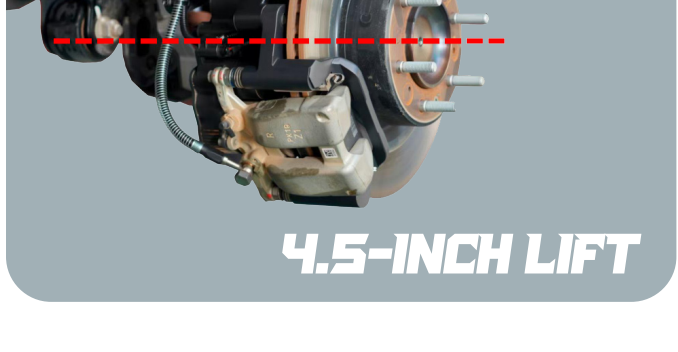
First change: 800-1000 km  
Second change: 2000 km  
Third change: 4000 km  
Fourth change: 8000 km or 6 months, whichever comes first.  
Subsequent maintenance every 10,000 km.



It is recommended to use wheels with a large positive offset of +50 to +60.

Portal axles offer exceptional strength. As long as you keep the gear oil clean and at the proper level during

Portal axle oil seals should be replaced every 2 years during routine maintenance. Frequent off-roading in sand and water can accelerate seal wear; if oil leakage is observed, replace the seals promptly. Oil seals are low-cost parts, so there's no need to worry about replacement expenses.



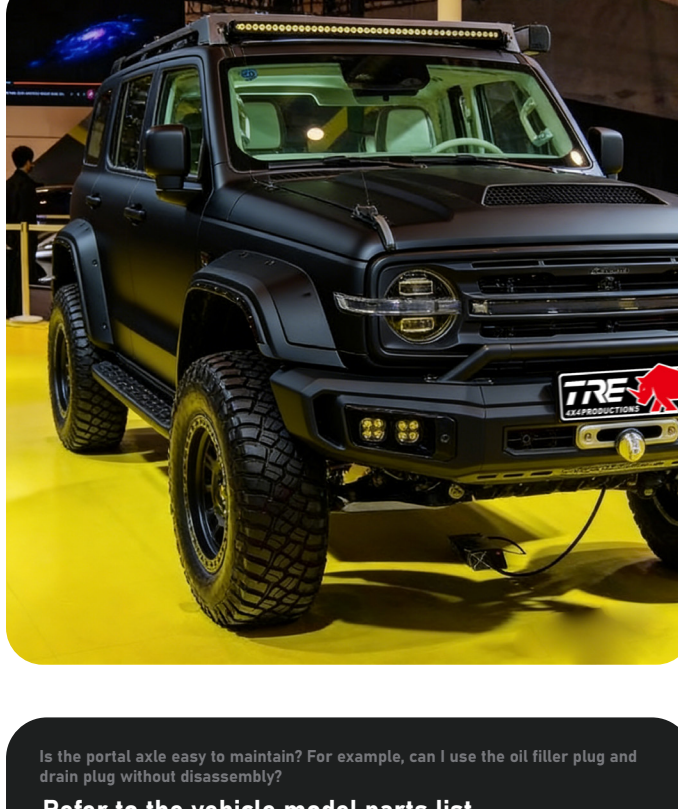
**4.5-INCH LIFT**



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TOYOTA	JEEP
LC120	JEEP JL
LC150	JEEP JK
LC200	
LC250	NISSAN
LC78	Y60
LC79	Y61
LC80	
LC300	

# BOLT ON PORTAL Q&A



Maximum torque capacity of the axle shaft  
**Jeep Wrangler JK**  
rear axle shaft 7531.7 N · m

Is the portal axle suitable for long-term use on highways?  
If yes, what is the maximum speed?  
**10% below the speedometer reading**

Will negative offset wheels cause interference, pressure, or affect the lifespan of the portal axle?  
**The larger the wheel negative offset, the greater the pressure on the portal axle**

Do I need to replace the wheels when installing a portal axle?  
**Refer to the vehicle model parts list**

For models like LC79, LC80, F280 (which have full-floating rear axles), should I use a matching axle housing or cut the original rear axle for installation?  
**No cutting required**



Is the portal axle easy to maintain? For example, can I use the oil filler plug and drain plug without disassembly?  
**Refer to the vehicle model parts list**

At highway speeds, is gear whine or overheating a concern?  
**Ensure strict adherence to maintenance requirements; it can be used normally at high speeds**

Will the portal axle affect steering, stability, or road vibration?  
**Depends on the tire size**

What about noise at high speeds?  
**Very low—quieter than tire noise (40 decibels at 80km/h)**

How convenient is maintenance and repair?  
**Equipped with oil filler and drain ports**

Is the portal axle easy to maintain? For example, can I use the oil filler plug and drain plug without disassembly?  
**Equipped with oil filler and drain ports**

When replacing seals, bearings, or internal components, do I have to purchase parts from your factory?  
**Seals are universal models**

Can you provide exploded views of the portal axle for each vehicle model?  
**Available upon request**

What is the estimated impact on fuel consumption?  
**Based on our comparison before and after portal axle installation, fuel consumption barely increases**

Will negative offset wheels cause interference, pressure, or affect the lifespan of the portal axle?  
**Larger negative offset means wider track width—almost no impact on the portal axle. For solid-axle vehicles, the axle tube may deform over time; for independent suspension vehicles, the knuckles and control arms also risk deformation over time**

How convenient is maintenance and repair?  
**Very convenient: oil filler port is on the inner side of the portal axle, drain port is at the bottom**

What is the function of the breather tube?  
**Heat dissipation, exhaust, and water ingress prevention**

Are there any limitations on towing capacity or payload?  
**Follow the original vehicle's load data**

After off-road use, is it recommended to check the installation torque?  
**We recommend checking**



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