

R200/R230 05/12 R51 Nissan Pathfinder

Pathfinder R200 Differential



R200 Differential

Found in the 2005-2012 VQ40DE (V6)  
Pathfinders

\*The V8 VK56DE 2008-2012 (V8) Pathfinder  
use a R230 Differential in the rear which comes  
from a Nissan Armada.



R230 Differential

# Gear Ratio Options for the R200/R230 2005-2012 Nissan Pathfinder

V6 Motor - R200 Differential

2wd - 3.13

4wd - 3.36

R200 type - Open Differential.

LSD - None available

Air Locker - None available. ARB had one in Research and Development but never released the final product.

V8 Motor - R230 Differential (Nissan Armada  
Rear Differential)

2wd - 2.93 Gear Ratio

4wd - 3.36 Gear Ratio

R230 Type - Open Differential

LSD - None Available

Air Locker - Yes ARB Part #RD137 (3.54  
Gearing and up).

## Gear Ratio Options for the R180/M205 Nissan Pathfinder Front Differentials



R180 Differential for  
05-15 Xterra, 05-20 Frontier, and 05-12  
Pathfinder

2005-2012 Nissan Pathfinder

V6 Motor - R180 Differential

05-12 Pathfinder 2wd - 3.13

05-12 Pathfinder 4wd - 3.36

\*Frontier and Xterra R180 Differentials offer  
the same gear ratios however they also offer the  
3.54 and 3.69 ratios\*

\*The 3.54 and 3.69 Gear Ratio R180 differentials are found on manual transmission 05/20 Nissan frontiers or 05/15 Xterras with the pro4x/Nismo off road package. They are swappable with the R180s from a R51 05-12 Nissan Pathfinder.

R180 type - Open Differential.

LSD - None available

Air Locker - Yes ARB Part #RD180 (3.69 gear ratio and up) Part #RD181 (3.54 Gear Ratio and down)

## V8 Motor - M205 Differential (Nissan Titan/Armada Front Differential)



M205 Differential

2wd - 2.93 Gear Ratio

4wd - 3.36 Gear Ratio

\* Titan and Armadas have the same ratio options. no higher gear changes unlike the 05/20 Nissan frontier and 05/15 Xterras mentioned above. The CV axles are wider on the armada and titan but shorter on the V8 Pathfinder\*

R230 Type - Open Differential

LSD - None Available

Air Locker - Yes ARB Part# RD224 (All Gear Ratio Ranges according to ARBS application guide for Nissan Vehicles)

OEM PART NUMBERS FOR 05-12  
PATHFINDER REAR DIFFERENTIALS  
VQ40DE - R200 Differential

Differential Side Bearings - 38440-0C000

Side Oil Seals - 38342-P9010

Differential Pinion Inner Bearing - 38120-  
0C000 > 38120-EC000

Pinion Crush Sleeve - 38165-0C020

Differential Pinion Outer Bearing - 38140-  
0C00A

Differential Front Seal (Pinion Seal) - 38189-  
P0117



VK56DE - R230 Differential

Differential Side Bearings - 38440-0C000

Side Oil Seals - 38342-P9010

Differential Pinion Inner Bearing - 38120-0C000 > 38120-EC000

Pinion Crush Sleeve - 38165-0C020

Differential Pinion Outer Bearing - 38140-0C00A

Differential Front Seal (Pinion Seal) - 38189-P0117

\*THE R200 BASIC AND COMPLETE BEARINGS/SEALS REBUILD KIT YOU GUYS SELL ON Z1PERFORMANCE.COM WORKS FOR THE 05-12 PATHFINDERS WITH THE R200 AND R230 REAR DIFFERENTIALS\*

<https://www.z1motorsports.com/rear-differential/nissan/oem-differential-bearings-and-seals-kit-r200-p-7528.html>

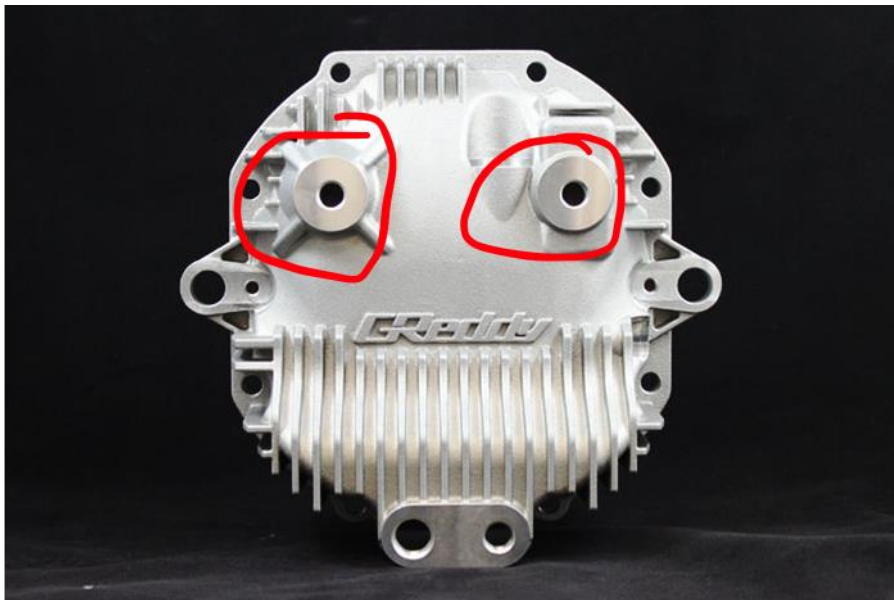
\*If someone swaps the G/Z R200 carrier into the 05-12 Pathfinder, the following parts will not work\*

- rear differential cover
- differential cover mounting stud
- Axle Flange (output shaft)
- Pinion Flange (companion Flange)
- Solid Diff mount bushing
- LSD from a G35, G37, 350Z, 370Z

# NOTES ABOUT NON-SWAPPABLE PARTS

**REAR COVER** – the pathfinder rear cover has the same 8 bolt pattern as the G and Z rear covers, but it has 2 mounting studs instead of 1 mounting stud found on the G and Z diffs.

\*The GReedy Differential Cover Part #14520350 may work with the 05-12 R200 diff in the pathfinder as it has 2 mounting stud holes. See picture down below\*



**Mounting Studs** - Pathfinder R200 differential mounting studs use a different thread pitch.

Axle Flanges - Pathfinder Axle flanges are larger than the Z and G axle flanges. they have threaded mounting holes for the CV axles instead of using a nut and bolt combo.

\*The spline count on both the Pathfinder and G/Z axle flanges are the same thus they are swappable between the R200 differentials\*

Pinion Flange - Pathfinder Pinion flange is bigger than the G and Z pinion flange. Some G35, and G37 pinion flanges have a triangular shaped flange while the Zs have a circular flange. Those came on the Automatic Transmission Models.

Solid Diff Mount Bushings – Zs and Gs use a larger mounting bushing than the pathfinder uses.

LSD from a G35, G37, 350Z, 370Z – This Differential uses shorter “Stub” Axle Flanges. The stock pathfinder axle flanges would have to be shortened by 0.7 inches before they would fit. Nissan never offered Stub Axle Flanges for the R51 Pathfinder R200 Differential.

## Pictures of my R200 G35 Differential Swap



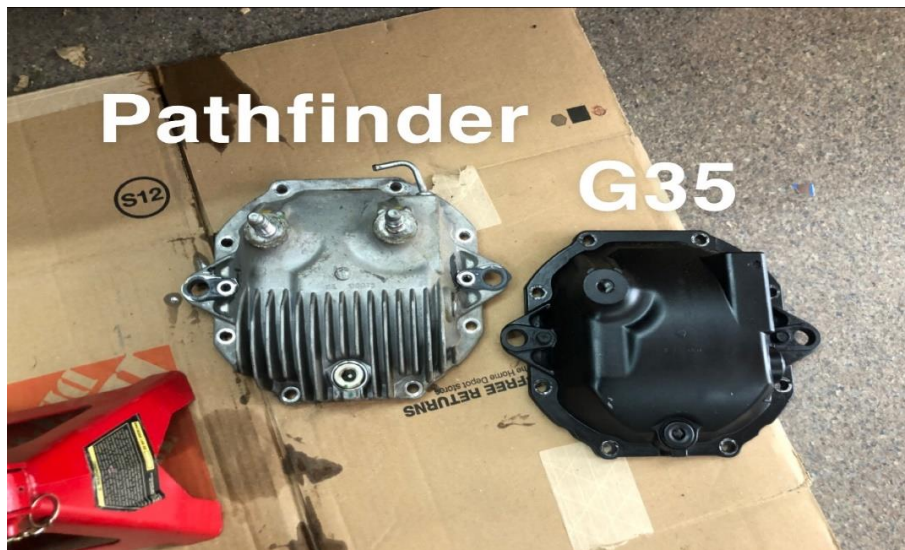
R200 Differential Comparison



Pinion Flange Comparison



Axle Flange Comparison



Rear Cover Comparison





Converted G35 to  
Pathfinder R200  
Differential





## Part Numbers for Pathfinder swapped parts:

### Rear Cover:

VQ40DE: 38351-0C075

VK56DE: 38351-ZS60A

### Axle Flanges:

VQ40DE: 38220-EA000

VK56DE: 38220-EB310

### Pinion Flange:

VQ40DE: 38210-EC010

VK56DE: 38220-EB310

### Diff Cover Mounting Stud:

VQ40DE: 38354-1BY0A

VK56DE: 38354-1BY0A