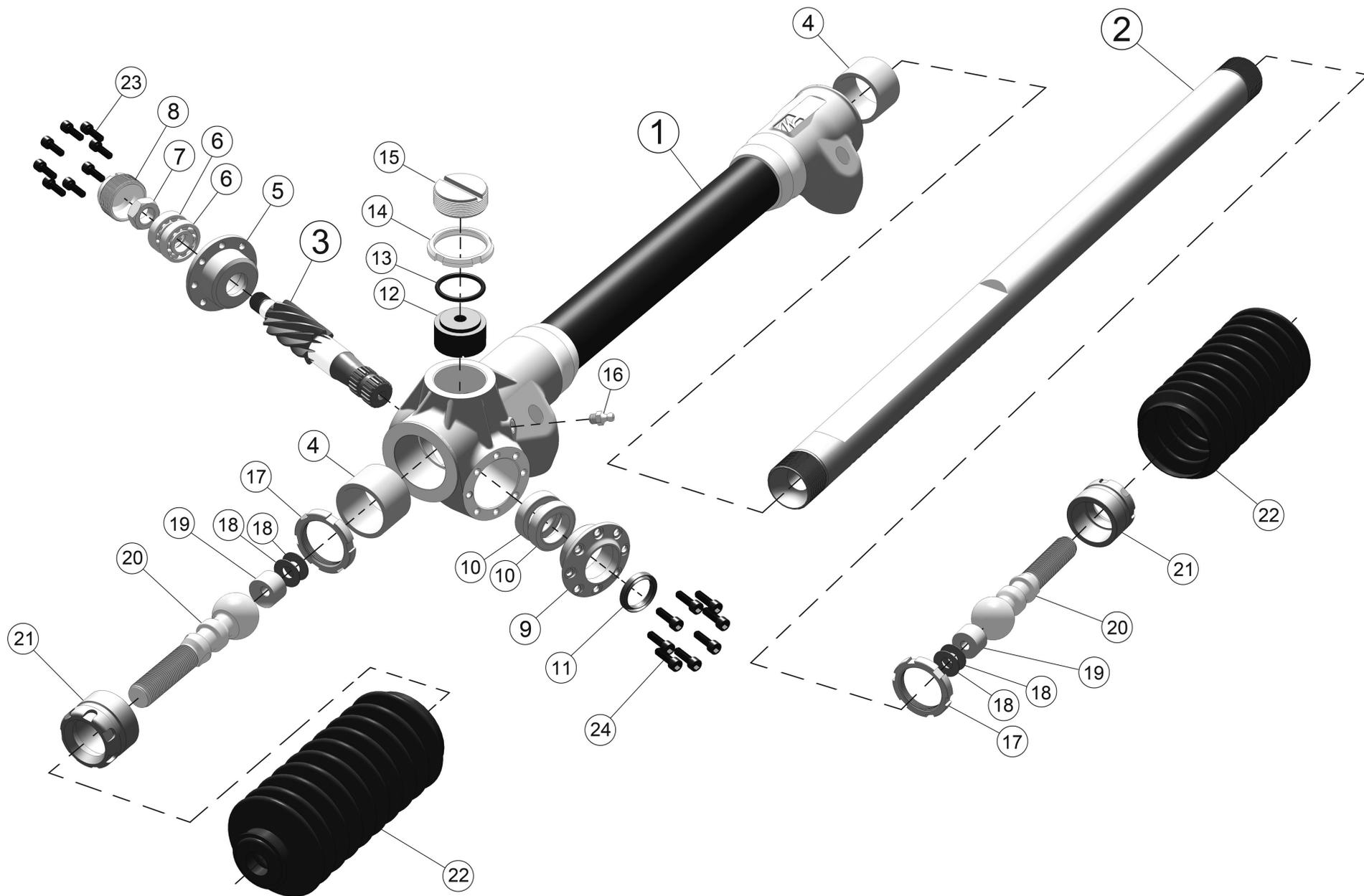


# Type JL Heavy Duty Manual Rack and Pinion exploded view

(the assembly sequence is the same for all models, right hand or left hand)



# Type JL parts list

Dwg no.	Part no.	Description
1	JL100	Short housing for LH front steer or RH rear steer
	JL100R	Short housing for RH front steer or LH rear steer
<i>The short housing is a one-piece casting made for rackshafts 16.25 through 18.25 long.</i>		
	JL100-XXXX	Long housing for LH front steer or RH rear steer
	JL100R-XXXX	Long housing for RH front steer or LH rear steer
<i>The long housing is a 3-piece made-to-order assembly and is specified by a four-digit number corresponding to the length in inches of the rackshaft it is made for; e.g., the standard housing for a 27.25 inch LH front steer rack would be JL100-2725.</i>		
2	JL230-8-XXXX	Rackshaft for 8 tooth pinion (2.09 in./53mm per turn)
	JL230-9-XXXX	Rackshaft for 9 tooth pinion (2.36 in./60mm per turn)
	JL230-10-XXXX	Rackshaft for 10 tooth pinion (2.62 in./67mm per turn)
<i>The rackshaft is specified by a four-digit number corresponding to its length in inches ("rack length" is the distance between spherical centers). Type JL rackshafts work with both left and right hand drive. Note: JL rackshafts, although very similar, will not work in a GE/HE/GL/HL steering rack.</i>		
3	GE308	Pinion, 8T, left hand spiral (2.09 in./53mm per turn)
	GE309	Pinion, 9T, left hand spiral (2.36 in./60mm per turn)
	GE310	Pinion, 10T, left hand spiral (2.62 in./67mm per turn)
	GE308R	Pinion, 8T, right hand spiral (2.09 in./53mm per turn)
	GE309R	Pinion, 9T, right hand spiral (2.36 in./60mm per turn)
	GE310R	Pinion, 10T, right hand spiral (2.62 in./67mm per turn)
<i>A housing with R in its part number requires a right hand pinion. The teeth of a right hand gear twist clockwise away from you like the threads of a screw; a left hand gear twists counterclockwise.</i>		
4	JL101	Rack bushing (2), 1.5 OD x 1.25 ID x 1.0 L
5	JL500	Eccentric bearing adjuster, thrust side ("large cap")
6	GE340	Thrust ball bearing (2), #R8 open
7	GE331	Pinion locknut, 1/2-20, thin height, elastic insert type
8	GE341	Bearing retainer plug
9	JL400	Eccentric bearing adjuster, radial side ("small cap")

Dwg no.	Part no.	Description
10	GE321	Radial ball bearing (2), #6804 sealed
11	GE323	Grease seal
12	GE102	Snubber
13	GE103	Snubber O-ring, #214, Buna-N 70 duro
14	VH587	Snubber lock nut
15	JL104	Snubber adjusting screw
16	NPN	Zerk fitting, 1/4-28, straight
17	M511	Monoball locking nut
18	M503	Belleville spring washer (2 per monoball)
19	M505	Preloader (2 per monoball)
20	M512	Ball stud, 5/8-18 RH thread
	M513	Ball stud, 3/4-16 RH thread
	M514	Ball stud, 14mm x 1,5 RH thread
21	M510	Monoball adjuster
22	M360	Boot
23	NPN	#10-24 x 5/8 SHCS (8)
24	NPN	#10-24 x 1/2 SHCS (8)

Note: The mounting holes in JL racks are M14 (14mm x 2.0) thread and the bolts used should have a minimum of 25mm (one inch) engagement in the casting.

*Do not attempt to install a JL rack using 1/2-13 bolts from a GE/HE rack!*