

## Transfer Case - 2.4L Duratorq-TDCi HPCR (103kW/140PS) - Puma -

### Lubricants

Item	Specification
Recommended oil	API GL4 or GL5, MIL-L-2105 or MIL-L-2105B
Capacity	2.3 litres, (4.0 pints)

**CAUTION:** Do not use any lubricant other than that specified

### General Specification - LT230Q

Item	Specification
Transfer case type	LT230QRS
Specification	Two speed reduction on main gearbox output, front and rear drive permanently engaged via a lockable differential
<b>Ratios:</b>	
High	1.211:1
Low	3.269:1

### Transfer case data

Item	Metric	Imperial
High/low selector finger width	15.90 to 15.95 mm	0.625 to 0.627 in
High/low selector fork finger width	7.37 to 7.47 mm	0.290 to 0.294 in
High/low selector shaft groove width	16.0 to 16.1 mm	0.63 to 0.64 in
High/low selector hub groove width	7.5 to 7.6 mm	0.295 to 0.30 in
Differential lock selector finger width	15.90 to 15.95 mm	0.625 to 0.627 in
Differential lock selector shaft groove width	16.0 to 16.1 mm	0.63 to 0.64 in
Differential lock selector fork finger width	7.92 to 7.9 mm	0.311 to 0.313 in
Differential lock selector spring free length	84.58 mm	3.33 in
Dog clutch selector fork groove width	8.05 to 8.20 mm	0.32 to 0.33 in
Differential front and rear half carrier gears load to turn:		
Used gears	0.45 kg	1.0 lb
New gears	1.72 kg	3.8 lb
Thrust washer thicknesses available	1.05 to 1.45 mm	0.04 to 0.06 in
In increments of:	0.10 mm	0.004 in
Total load to turn - both sun gears fitted:		
Used gears	0.90 kg	2.0 lb
New gears	3.44 kg	7.6 lb
Low range gear to high range hub clearance	0.05 to 0.15 mm	0.002 to 0.006 in
High range gear to high/low hub clearance	0.05 to 0.10 mm	0.002 to 0.004 in
Mainshaft input gear bearing pre-load	0.05 mm	0.002 in
Mainshaft input gear bearing shim thicknesses	3.15 to 4.00 mm	0.12 to 0.16 in
In increments of:	0.05 mm	0.002 in
Differential bearing pre-load	0.05 mm	0.002 in
Differential shim thicknesses available		
In increments of	0.05 mm	0.002 in
Transfer case gear train torque to turn	3.4 Nm max	30 lbf.in max

### Torque Specifications

Description	Nm	lb-ft
Drain plug	30	22
Transfer case breather banjo	15	11
Differential carrier bolts	60	44
Differential bearing nut	72	53
Differential lock selector lever nut	25	18
* Front output housing bolts	25	18
* Rear output housing bolts	45	33
*** Output flange nuts	162	120
* Differential lock selector housing bolts	25	18
High/low selector housing bolts	25	18
* Intermediate shaft retaining plate bolt	25	18
*** Intermediate shaft stake nut - Selective length non-collapsible spacer	88	65
* Bottom cover bolts	25	18
* Bearing housing cover plate bolts and stud nut	25	18
Transmission brake backplate bolts	72	54
Interlock solenoid cover bolts - if fitted	10	8
** Neutral warning lamp switch	25	18
Transfer case front drive flange to drive shaft	47	33