

Weights of principal components

618 kg	Rocker arm casing with rocker arms		
400 kg	Rocker arm casing		
1302 kg	Cylinder head with valves		
1024 kg	Cylinder head		
23 kg	Inlet valve		
93 kg	Exhaust valve with cage and flange		
691 kg	Cylinder liner		
829 kg	Backing ring of cylinder liner		
106 kg	Top land ring		
106 kg	Piston with connecting rod big end and piston pin		
584 kg	Piston without piston pin		
337 kg	Piston pin		
102 kg	Connecting rod (conrod shank, connecting rod big end, big-end bearing cap)		
655 kg	Connecting rod big end		
139 kg	Connecting rod shank		
289 kg	Big-end bearing cap		
152 kg	Main bearing cap		
516 kg	Main bearing shell (shell half)		
12 kg	Crankshaft with balance weight		
20018 kg	12V 48/60		
22943 kg	14V 48/60		
25877 kg	16V 48/60		
28812 kg	18V 48/60		
525 kg	Balance weight of the crankshaft		
518 kg	Crankshaft gear wheel (two parts)		
6311 kg	Torsional vibration damper (crankshaft)		
1780 kg	Damper mass		
54150 kg	12V 48/60	approx.	
61200 kg	14V 48/60	approx.	
68400 kg	16V 48/60	approx.	
75600 kg	18V 48/60	approx.	
125 kg	Tierod		
16 kg	Tierod (external bearing)		
14 kg	Cross tierod		
36 kg	Cylinder head bolt		
2418 kg	12V 48/60		Camshaft
2697 kg	14V 48/60		
3046 kg	16V 48/60		
3329 kg	18V 48/60		
353 kg	Torsional vibration damper (camshaft)		
106 kg	Fuel injection pump		
24 kg	Fuel injection valve		

Injection system

Crankcase/tierod

Components from top downwards





Weights of complete engines

12V 48/60	191 t
14V 48/60	218 t
16V 48/60	242 t
18V 48/60	269 t

Others

NA 48 Turbocharger	3000 kg
Charge air cooler	approx. 2550 kg
Charge air pipe (section)	257 kg
Exhaust pipe	4016 kg
Exhaust pipe	12V 48/60
Exhaust pipe	14V 48/60
Exhaust pipe	16V 48/60
Exhaust pipe	18V 48/60
Exhaust gas pipe (section)	approx. 219 kg
Oil pump for cylinder lubrication	7 kg
Block distributor for cylinder lubrication	5 kg
Oil pump for valve seat lubrication	20 kg
Injection time adjusting device	approx. 220 kg
Speed governor	approx. 160 kg

system