

MANUFACTORY REPAIR FLAT RATE FOR MERCEDES Vito Tourer 116 CDI MODEL

OPERATION	DESCRIPTION	TIME
 Engine assembly		
Engine with transmisson	Remove and Install	5
Full exchange engine - AT+AC	Remove and Install	6
 Lubrication		
Engine oil and oil filter	Renew	0.5
Oil sump pan - upper	Remove and Install	8.8
Oil cooler	Remove and Install	4.1
Auxiliary drive		
Alternator drive/serpentine belt	Remove and Install	0.6
Fan/serpentine belt tenssioner	Remove and Install	0.8
Air filter, manifolds & plenum chamber		
Air filter assembly	Remove and Install	0.3
Air filter element	Remove and Install	0.1
Intake manifold	Remove and Install	2.9
Intake manifold gasket	Remove and Install	3
Fuel supply diesel		
Fuel pump - in tank	Remove and Install	1.3
Fuel tank	Remove and Install	1.1
Turbocharger		
Turbocharger	Remove and Install	2.4
 Radiator, fan & intercooler		
Coolant/antifreeze	Drain and Refill	0.7
Radiator - PAS	Remove and Install	1.9
Thermostat	Remove and Install	1.6
Pump & drive		
Water pump	Remove and Install	1.4
Header tank & hoses		
Header/expansion tank	Remove and Install	0.6
Radiator top hose	Remove and Install	1
Radiator bottom hose	Remove and Install	0.9
Header/expansion tank hose	Remove and Install	0.2
Manifold, pipes & silencers		
Exhaust manifold	Remove and Install	3.2
Pipe - front/downpipe	Remove and Install	2.1
Pipe - rear/tail/silencer	Remove and Install	0.5
Catalytic converter - diesel		
Catalytic converter front	Remove and Install	1
Catalytic converter rear	Remove and Install	1.2
 Transmission, housing & fluid system		
Transmission unit	Remove and Install	3.7

Transmission fluid	Drain and Refill	2.1
Propshaft, centre differential & transfer box		
Propshaft - front/single	Remove and Install	1.6
Propshaft assembly	Remove and Install	0.8
Front axle		
Driveshaft - left	Remove and Install	1.1
Driveshaft - right	Remove and Install	1.1
Driveshaft - both	Remove and Install	1.9
Rear axle		
Rear axle - complete	Remove and Install	2.2
Halfshaft (both)	Remove and Install	2.8
Front suspension		
Road spring	Remove and Install	2
Road spring (both)	Remove and Install	2.3
Shock absorber	Remove and Install	1.3
Shock absorbers (pair)	Remove and Install	1.8
Suspension upper arm	Remove and Install	1
Suspension upper arm (both)	Remove and Install	1.5
Anti-roll bar bush - outer (one)	Remove and Install	0.5
Anti-roll bar bushes (all)	Remove and Install	0.7
Swivel hub/stub axle assembly	Remove and Install	2.5
Rear suspension		
Road spring	Remove and Install	0.3
Road spring (both)	Remove and Install	0.5
Shock absorber	Remove and Install	0.6
Shock absorbers (pair)	Remove and Install	0.7
Steering geometry		
Geometry - complete vehicle	Check	1.2
Geometry - complete vehicle	Check and Adjust	0.9
Front wheel alignment (toe)	Check and Adjust	2.2
Steering column		
Steering wheel	Remove and Install	0.6
Steering column	Remove and Install	1
Power assisted steering		
Pump	Remove and Install	0.9
High pressure hose	Remove and Install	1.1
Wheels		
Wheels - (all)	Remove and Install	0.5
Braking system hydraulics		
Hydraulic system	Bleed	0.3
Master cylinder RHD	Remove and Install	0.6
Master cylinder LHD	Remove and Install	0.6
Front brake caliper (one)	Remove and Install	0.8
Front brake caliper (both)	Remove and Install	1.1
Rear brake caliper (one)	Remove and Install	0.5
Rear brake caliper (both)	Remove and Install	0.5
Front brake hose (both)	Remove and Install	0.5

Rear brake hose (both)	Remove and Install	0.5
Footbrakes		
Front brake pads (all)	Remove and Install	0.7
Rear brake pads (all)	Remove and Install	0.8
Front brake disc (both)	Remove and Install	0.4
Rear brake disc (both)	Remove and Install	1
Rear backplate (one)	Remove and Install	0.7
Brake pedal & servo		
Pedal assembly - LHD	Remove and Install	1.6
Vacuum pump - diesel	Remove and Install	3
ABS or ABS/ESP		
Wheel sensor - front (one)	Remove and Install	0.4
Wheel sensor - front (both)	Remove and Install	0.6
Wheel sensor - rear (one)	Remove and Install	0.4
Wheel sensor - rear (both)	Remove and Install	0.6
Parking brake		
Parking brake freeplay	Check and Adjust	0.7
Battery & cables		
Battery	Check	0.2
Battery	Remove and Install	0.3
Charging system		
Alternator	Remove and Install	0.8
Starting system		
Starter motor - pre-engaged	Remove and Install	1.8
Bulbs		
Headlamp bulb	Remove and Install	0.3
Rear combination bulb (any)	Remove and Install	0.3
Front lamps		
Headlamp alignment	Check and Adjust	0.2
Headlamp - one	Remove and Install	0.8
Rear lamps		
Rear combination lamp assembly	Remove and Install	0.3
Number plate lamp - one	Remove and Install	0.2
Interior lamps		
Interior lamp - front	Remove and Install	0.5
Switches		
Ignition switch	Remove and Replace	0.4
Main lighting switch	Remove and Install	0.3
Dip/main/flash switch	Remove and Install	0.5
Stop lamps switch	Remove and Install	0.4
Instruments		
Instrument panel	Remove and Install	0.4
Transducers, sensors & transmitters		
Horn	Remove and Install	0.2
Coolant temperature sensor	Remove and Install	0.6
Fusebox & Relays		
Headlamps relay	Remove and Install	0.1

Heated rear window relay	Remove and Install	0.1
Control & audio units		
CD player	Remove and Install	0.8
Windscreen wipers/washers		
Wiper arm - (both)	Remove and Install	0.1
Wiper linkage	Remove and Install	0.3
Washer jet - (both)	Remove and Install	0.2
Washer reservoir	Remove and Install	0.4
Rear screen wipers/washers		
Washer jet	Remove and Install	0.2
Heating & ventilation system		
Heater unit - complete	Remove and Install	4.4
Heater hose - from engine	Remove and Install	0.8
Heater hose - to engine	Remove and Install	0.8
Heater blower motor	Remove and Install	0.3
Air conditioning		
System evacuation/recharging	Check and Adjust	0.7
Compressor	Remove and Install	1.8

