

APPENDIX 6

MANUFACTORY REPAIR FLATE RATE FOR
FORD TRANSIT 350 MODEL

OPERATION	DESCRIPTION	TIME
Engine assembly		
Engine & transmission complete	Remove and Install	6.9
Engine & transmission complete - AC	Remove and Install	7.3
Full exchange engine	Remove and Install	12.9
Full exchange engine - AC	Remove and Install	13.3
Engine & transmission (out of vehicle)	Separate	0.7
Complete engine	Strip and Rebuild	19.8
Complete engine - AC	Strip and Rebuild	20.2
Cylinder block	Strip and Rebuild	16.5
Cylinder block - AC	Strip and Rebuild	16.9
Mounting - left (of engine bay)	Remove and Install	0.9
Mounting - right (of engine bay)	Remove and Install	0.9
Cylinder head		
Compression test	Check	4
Camshaft/valve cover & gasket	Remove and Install	1.6
Cylinder head & gasket	Remove and Install	10.5
Cylinder head-transfer components	Strip and Rebuild	11.7
Valves (all) including lapping	Remove and Install	12.9
Valve stem oil seals (all)	Remove and Install	3.4
Camshaft & drive gear		
Camshaft	Remove and Install	6.2
Camshafts (both/all)	Remove and Install	6.3
Camshaft drive belt/chain	Remove and Install	4.1
Camshaft drive belt/chain tensioner	Remove and Install	3.1
Camshaft chain cover & gasket	Remove and Install	3
Crankshaft & pistons		
Crankshaft/all main bearings	Remove and Install	12.9
Crankshaft/all main bearings - AC	Remove and Install	13.3
Crankshaft front oil seal	Remove and Install	0.8
Crankshaft rear oil seal	Remove and Install	4.3
Crankshaft pulley	Remove and Install	0.9
Conrods & pistons (all)	Remove and Install	16
Conrods & pistons (all) - AC	Remove and Install	16.4
Lubrication		
Engine oil & filter	Renew	0.6
Oil pressure	Check	0.8
Oil sump pan	Remove and Install	1.3
Oil cooler	Remove and Install	0.8
Auxiliary drive		
Alternator drive/serpentine belt	Remove and Install	0.5
Alternator drive/serpentine belt tensioner	Remove and Install	0.6

PAS drive/serpentine belt	Remove and Install	0.5
Air filter. manifolds & plenum chamber		
Air filter assembly	Remove and Install	0.4
Air filter element	Remove and Install	0.3
Intake manifold	Remove and Install	3.4
Throttle controls		
Throttle pedal	Remove and Install	0.3
Diesel injection system		
Control ECU	Remove and Install	0.4
Manifold pressure (MAP) sensor	Remove and Install	0.3
Air flow/Mass sensor unit	Remove and Install	0.3
Coolant temperature sensor	Remove and Install	0.3
Camshaft position (CMP) sensor	Remove and Install	0.4
Injection system	Bleed	0.3
Injection pump	Remove and Install	0.9
Injectors (all)	Remove and Install	1.2
Injection pipes (all)	Remove and Install	1
Injection pipe (one)	Remove and Install	0.7
Fuel rail	Remove and Install	1.3
Pre-heat plugs (all)	Remove and Install	3.6
Fuel supply		
Fuel pressure	Check	0.3
Fuel tank	Remove and Install	1
Fuel filter/sedimenter	Remove and Install	0.4
Fuel cut-off (inertia) switch	Remove and Install	0.3
Turbocharger		
Turbocharger	Remove and Install	1.4
Radiator. fan & intercooler		
Coolant/antifreeze	Drain and Refill	0.7
Pressure test system	Check	0.2
Cooling fan coupling	Remove and Install	0.3
Cooling fan	Remove and Install	0.4
Radiator	Remove and Install	1.7
Radiator - AC	Remove and Install	1.8
Thermostat	Remove and Install	0.7
Intercooler	Remove and Install	0.6
Pump & drive		
Water pump	Remove and Install	1.4
Header tank & hoses		
Header/expansion tank	Remove and Install	0.5
Radiator top hose	Remove and Install	0.7
Radiator bottom hose	Remove and Install	0.7
Header/expansion tank hose	Remove and Install	0.5
Manifold. pipes & silencers		
Exhaust manifold	Remove and Install	2.9
Exhaust manifold gasket	Remove and Install	2.9
Pipe - rear/tail/silencer	Remove and Install	0.5

Complete exhaust system	Remove and Install	0.7
Catalytic converter		
Catalytic converter	Remove and Install	1.3
Lambda sensor	Remove and Install	0.4
Exhaust gas recirculation valve	Remove and Install	2.5
Diesel particulate filter	Remove and Install	0.7
Clutch pedal. linkage & hydraulics		
Pedal return spring	Remove and Install	0.4
Master cylinder	Remove and Install	0.6
Slave cylinder	Remove and Install	3.7
Release bearing	Remove and Install	3.7
Clutch unit & flywheel		
Clutch plate. cover & release bearing	Remove and Install	3.8
Flywheel	Remove and Install	4.1
Starter ring gear	Remove and Install	4.4
Gearbox unit & casing		
Gearbox	Remove and Install	3.6
Gear control. linkage & selectors		
Lever	Remove and Install	0.6
Propshaft. centre differential & transfer box		
Propshaft - rear	Remove and Install	0.7
Front axle		
Wheel bearing set	Remove and Install	1.2
Wheel bearing set (both)	Remove and Install	2.1
Hub assembly	Remove and Install	1.2
Hub assembly (both)	Remove and Install	2.4
Rear axle		
Rear axle - complete	Remove and Install	2.2
Final drive pinion oil seal	Remove and Install	0.8
Halfshaft	Remove and Install	0.6
Halfshaft (both)	Remove and Install	0.8
Wheel bearing set	Remove and Install	1.1
Wheel bearing set (both)	Remove and Install	1.9
Hub assembly	Remove and Install	1.4
Hub assembly (both)	Remove and Install	2.4
Front suspension		
Subframe/crossmember	Remove and Install	1.9
Strut assembly	Remove and Install	1.1
Strut assembly (both)	Remove and Install	1.8
Strut top mounting	Remove and Install	1.1
Strut top mounting (both)	Remove and Install	1.8
Road spring	Remove and Install	1.1
Road spring (both)	Remove and Install	1.8
Suspension lower arm	Remove and Install	1.2
Suspension lower arm (both)	Remove and Install	1.5
Suspension lower arm bushes	Remove and Install	2
Ball joint - lower	Remove and Install	1.1

Ball joint - lower (both)	Remove and Install	1.5
Anti-roll bar	Remove and Install	0.7
Anti-roll bar bushes (all)	Remove and Install	0.5
Anti-roll bar link - outer	Remove and Install	0.4
Anti-roll bar link - outer (both)	Remove and Install	0.5
Swivel hub/stub axle assembly	Remove and Install	1
Swivel hub/stub axle assembly (both)	Remove and Install	1.7
Rear suspension		
Road spring	Remove and Install	0.8
Road spring (both)	Remove and Install	1.3
Shock absorber	Remove and Install	0.4
Shock absorbers (pair)	Remove and Install	0.6
Anti-roll bar	Remove and Install	0.7
Anti-roll bar bushes (all)	Remove and Install	0.6
Anti-roll bar link - outer	Remove and Install	0.4
Anti-roll bar link - outer (both)	Remove and Install	0.5
Steering geometry		
Geometry - front	Check	0.9
Geometry - rear	Check	0.9
Front wheel alignment (toe)	Check and Adjust	0.6
Steering mechanism		
Steering rack/box	Remove and Install	1.6
Rack gaiter	Remove and Install	1.2
Track rod	Remove and Install	1.8
Track rod (both)	Remove and Install	2
Track rod end joint	Remove and Install	1.1
Track rod end joint (both)	Remove and Install	1.2
Steering column		
Steering wheel	Remove and Install	0.4
Steering column	Remove and Install	1.1
Steering column joint	Remove and Install	0.5
Power assisted steering		
Fluid reservoir	Remove and Install	0.4
High pressure hose	Remove and Install	0.8
Power steering fluid cooler	Remove and Install	0.8
Wheels		
Wheel	Remove and Install	0.3
Wheels - (both)	Remove and Install	0.4
Wheels - (all)	Remove and Install	0.6
Braking system hydraulics		
Hydraulic system	Bleed	0.9
Fluid reservoir (separate)	Remove and Install	0.9
Master cylinder	Remove and Install	1
Front brake caliper (one)	Remove and Install	0.9
Front brake caliper (both)	Remove and Install	1.3
Rear brake caliper (one)	Remove and Install	0.9
Rear brake caliper (both)	Remove and Install	1.4

Front brake hose (one)	Remove and Install	0.7
Rear brake hose (one)	Remove and Install	0.7
Pressure compensator/load valve (one)	Remove and Install	1.1
Pressure compensator/load valve (one) - ABS	Remove and Install	0.8
Footbrakes		
Front brake pads (all)	Remove and Install	0.6
Front brake pads (all) - wheels removed	Remove and Install	0.3
Rear brake pads (all)	Remove and Install	0.7
Front brake disc (both) - including pads	Remove and Install	1.8
Rear brake disc (both) - including pads	Remove and Install	2.7
Brake pedal & servo		
Servo	Remove and Install	1.4
Vacuum hose to manifold	Remove and Install	0.3
ABS or ABS/ESP		
ECU	Remove and Install	0.4
Wheel sensor - front (one)	Remove and Install	0.4
Wheel sensor - rear (one)	Remove and Install	0.4
Motor & pump	Remove and Install	1.4
Parking brake		
Parking brake freeplay	Check and Adjust	0.4
Parking brake cable - primary/single	Remove and Install	0.7
Battery & cables		
Battery	Check	0.4
Battery	Remove and Install	0.3
Cable to body earth	Remove and Install	0.3
Charging system		
Charging system	Check	0.3
Alternator	Remove and Install	0.7
Starting system		
Starter motor - pre-engaged	Remove and Install	0.6
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	0.5
Headlamp - (both)	Remove and Install	0.7
Fog lamp - one	Remove and Install	0.4
Rear lamps		
Rear combination lamp assembly	Remove and Install	0.2
Rear combination lamp printed circuit	Remove and Install	0.2
Number plate lamp - one	Remove and Install	0.2
High mounted brake lamp	Remove and Install	0.3
Interior lamps		
Interior lamp - front	Remove and Install	0.2
Switches		
Starter/ignition switch	Remove and Install	0.3

Direction indicator switch	Remove and Install	0.3
Main lighting switch	Remove and Install	0.3
Dip/main/flash switch	Remove and Install	0.3
Horn switch	Remove and Install	0.4
Wash/wipe switch	Remove and Install	0.3
Hazard warning lights switch	Remove and Install	0.6
Reversing lights switch	Remove and Install	0.3
Stop lamps switch	Remove and Install	0.2
Parking brake warning lamp switch	Remove and Install	0.3
Instruments		
Instrument panel	Remove and Install	0.5
Cigarette lighter	Remove and Install	0.6
Transducers. sensors & transmitters		
Horn	Remove and Install	0.3
Oil pressure transmitter	Remove and Install	0.3
Fuel level sensor	Remove and Install	1.1
Motors		
Front wiper motor	Remove and Install	0.6
Rear wiper motor	Remove and Install	0.6
Front washer motor	Remove and Install	0.5
Front window lift motor	Remove and Install	0.9
Headlamp levelling motor - one	Remove and Install	0.3
Control & audio units		
CD player	Remove and Install	0.3
Roof aerial/antenna	Remove and Install	0.9
Roof aerial/antenna - cable	Remove and Install	0.9
Windscreen wipers/washers		
Wiper arm	Remove and Install	0.3
Wiper linkage	Remove and Install	0.6
Washer jet - one	Remove and Install	0.2
Washer jet - (both)	Remove and Install	0.2
Washer reservoir	Remove and Install	0.5
Washer hose	Remove and Replace	0.4
Rear screen wipers/washers		
Washer reservoir	Remove and Install	0.5
Heating & ventilation system		
Heater unit - complete	Remove and Install	3.7
Heater unit - complete - AC	Remove and Install	4.7
Heater hose - from engine	Remove and Install	0.8
Heater hose - to engine	Remove and Install	0.7
Heater matrix	Remove and Install	3.8
Heater matrix - AC	Remove and Install	4.8
Heater blower motor	Remove and Install	2.4
Heater blower control module/resistor - front	Remove and Install	0.5
Cabin filter	Remove and Install	0.2
Air conditioning		
System leak test	Check and Adjust	0.4

System evacuation/recharging	Check and Adjust	0.8
Receiver/drier	Remove and Install	1.2
Compressor to condenser line	Remove and Install	1.3
Condenser to evaporator line	Remove and Install	1.8
Compressor	Remove and Install	1.6
Compressor clutch	Remove and Install	1.8
Condenser	Remove and Install	1.7
Evaporator - front	Remove and Install	4.8
Switch - low/cycling pressure	Remove and Install	0.3
Front bumper/spoiler		
Front bumper - complete	Remove and Install	0.5
Front bumper - complete - Fog lamps	Remove and Install	0.6
Windscreen		
Windscreen	Remove and Replace	2
Front door		
Door window	Remove and Install	0.6
Window winder mechanism	Remove and Install	0.9
Window winder mechanism - electric	Remove and Install	0.9
Quarter light	Remove and Install	0.5
Lock barrel	Remove and Install	0.5
Door mirror - one	Remove and Install	0.7
Door mirror - electrically adjusted - one	Remove and Install	0.7
Mirror glass and support	Remove and Replace	0.3
Interior/Seats/Seatbelts		
Ignition lock	Remove and Replace	0.3
Airbag - driver	Remove and Replace	0.4
Airbag - passenger	Remove and Replace	0.9
Airbag control module	Remove and Install	0.3
Airbag spiral cable/slip ring (clock spring)	Remove and Replace	0.5
Seat belt buckle - front	Remove and Install	0.2
Front seat belt and buckle - complete	Remove and Install	0.5
Rear seat belt - outer	Remove and Install	0.5
Seat belt buckle - rear outer	Remove and Install	0.2
Seat belt buckle - rear centre	Remove and Install	0.2
Rear seat belt and buckle - outer	Remove and Install	0.5
Rear seat belt and buckle - centre	Remove and Install	0.5
Rear bumper		
Rear bumper - complete	Remove and Install	0.5
Rear bumper with parking aid	Remove and Install	0.6
Rear hatch/tailgate		
Lock barrel	Remove and Replace	0.4