

## APPENDIX 5

### MANUFACTORY REPAIR FLATE RATE FOR NISSAN NAVARA D 40 MODEL

OPERATION	DESCRIPTION	TIME
<b>Engine assembly</b>		
Engine only	Remove and Install	7.4
Full exchange engine	Remove and Install	9.8
Short exchange engine	Remove and Install	12.9
Cylinder block	Strip and Rebuild	15.2
Mounting - left (of engine bay)	Remove and Install	0.6
Mounting - right (of engine bay)	Remove and Install	0.6
Mounting - front (of engine bay)	Remove and Install	0.6
Mounting - rear (of engine bay)	Remove and Install	1.5
<b>Cylinder head</b>		
Camshaft/valve cover & gasket	Remove and Install	0.8
Cylinder head & gasket	Remove and Install	7.1
Cylinder head	Strip and Rebuild	9.2
Cylinder head - transfer components	Strip and Rebuild	8.9
Valves (all) including lapping	Remove and Install	9.2
<b>Camshaft &amp; drive gear</b>		
Camshaft	Remove and Install	2.2
Camshaft driven sprockets/gears	Remove and Install	1.9
Camshaft drive belt/chain	Remove and Install	8.1
Camshaft drive belt/chain tensioner	Remove and Install	8
Camshaft chain cover & gasket	Remove and Install	7
<b>Crankshaft &amp; pistons</b>		
Crankshaft/all main bearings	Remove and Install	16
Crankshaft front oil seal	Remove and Install	1.1
Crankshaft rear oil seal	Remove and Install	6.3
Crankshaft pulley - Damper pulley	Remove and Install	1
Big end bearings	Remove and Install	12.4
Conrods & pistons (all)	Remove and Install	12.4
<b>Lubrication</b>		
Oil filter	Remove and Install	0.4
Oil pressure relief valve	Remove and Install	6.8
Oil sump pan	Remove and Install	5.5
Oil pick-up strainer	Remove and Install	5.5
Oil pump	Remove and Install	6.8
Oil cooler	Remove and Install	0.8
Oil cooler hoses	Remove and Install	1
Crankcase ventilation valve	Remove and Install	0.2
Turbocharger oil feed pipe	Remove and Install	0.5
Turbocharger oil return pipe	Remove and Install	0.5
<b>Auxiliary drive</b>		

Alternator drive/serpentine belt idler/guide pulley	Remove and Install	0.2
Fan/serpentine belt	Remove and Install	0.3
<b>Air filter. manifolds &amp; plenum chamber</b>		
Air filter assembly	Remove and Install	0.5
Air filter element	Remove and Install	0.2
Intake manifold	Remove and Install	2.6
Intake manifold gasket	Remove and Install	2.6
<b>Throttle controls</b>		
Throttle return spring	Remove and Install	0.5
Throttle pedal	Remove and Install	0.5
<b>Diesel injection system</b>		
Control ECU	Remove and Install	1.3
Air flow/Mass sensor unit	Remove and Install	0.3
Coolant temperature sensor	Remove and Install	0.4
Engine speed sensor	Remove and Install	0.4
Injection pump	Remove and Install	3.2
Injectors (all)	Remove and Install	1
Injection pipes (all)	Remove and Install	0.7
Fuel rail	Remove and Install	2.5
Pre-heat plugs (all)	Remove and Install	0.3
Throttle body	Remove and Install	0.4
<b>Fuel supply</b>		
Fuel tank	Remove and Install	1.4
Fuel filter (in-line)	Remove and Install	1.1
Carbon filter	Remove and Install	0.4
<b>Turbocharger</b>		
Turbocharger	Remove and Install	1.9
Turbocharger boost pressure sensor	Remove and Install	0.2
<b>Radiator. fan &amp; intercooler</b>		
Cooling fan coupling	Remove and Install	0.3
Cooling fan	Remove and Install	0.4
Cooling fan motor	Remove and Install	0.4
Cooling fan motor thermostswitch	Remove and Install	0.4
Radiator	Remove and Install	1.4
Radiator cowling	Remove and Install	0.9
Thermostat	Remove and Install	0.6
Intercooler	Remove and Install	0.4
<b>Pump &amp; drive</b>		
Water pump	Remove and Install	1.3
Water pump pulley	Remove and Install	0.3
<b>Header tank &amp; hoses</b>		
Header/expansion tank	Remove and Install	0.3
Radiator top hose	Remove and Install	0.4
Radiator bottom hose	Remove and Install	0.7
Header/expansion tank hose	Remove and Install	0.3

By-pass hose	Remove and Install	1
<b>Manifold. pipes &amp; silencers</b>		
Exhaust manifold	Remove and Install	2.2
Exhaust manifold gasket	Remove and Install	2.2
Pipe - front/downpipe	Remove and Install	0.3
Pipe - middle/silencer	Remove and Install	0.3
Pipe - rear/tail/silencer	Remove and Install	0.7
<b>Catalytic converter</b>		
Catalytic converter	Remove and Install	1.1
Lambda sensor - front	Remove and Install	0.3
Lambda sensor - rear	Remove and Install	0.3
Exhaust gas recirculation valve	Remove and Install	0.5
<b>Clutch pedal. linkage &amp; hydraulics</b>		
Pedal assembly	Remove and Install	0.7
Pedal return spring	Remove and Install	0.7
Master cylinder	Remove and Install	1.6
Slave cylinder	Remove and Install	1.1
Release lever	Remove and Install	3
Release bearing	Remove and Install	3
<b>Clutch unit &amp; flywheel</b>		
Clutch plate. coveRemove and Replaceelease bearing	Remove and Install	3
Flywheel	Remove and Install	3.5
Starter ring gear	Remove and Install	4
Spigot bearing	Remove and Install	3
<b>Gearbox unit &amp; casing</b>		
Gearbox	Remove and Install	2.3
<b>Gear control. linkage &amp; selectors</b>		
Lever	Remove and Install	0.4
<b>Gears. bearings &amp; seals</b>		
Speedometer drive gear	Remove and Install	4.1
<b>Propshaft. centre differential &amp; transfer box</b>		
Propshaft - front/single	Remove and Install	0.5
Transfer box	Remove and Install	2.2
Transfer box input oil seal	Remove and Install	0.5
Transfer box output oil seal	Remove and Install	0.5
<b>Front axle</b>		
Final drive	Remove and Install	1.4
Final drive	Drain and Refill	0.4
Final drive pinion oil seal	Remove and Install	1.1
Driveshaft - left	Remove and Install	0.8
Driveshaft - right	Remove and Install	0.8
Driveshaft (both)	Remove and Install	1.4
Driveshaft joint gaiter - outer left	Remove and Install	1.2
Driveshaft joint gaiter - outer right	Remove and Install	1.2

Driveshaft joint gaiter (all)	Remove and Install	2.2
Wheel bearing set	Remove and Install	0.6
Wheel bearing set (both)	Remove and Install	0.9
Hub assembly	Remove and Install	0.6
Hub assembly (both)	Remove and Install	1
<b>Rear axle</b>		
Final drive	Remove and Install	1.9
Final drive	Drain and Refill	0.5
Final drive pinion oil seal	Remove and Install	1
Halfshaft	Remove and Install	1.3
Halfshaft (both)	Remove and Install	2.2
<b>Front suspension</b>		
Road spring	Remove and Install	0.9
Road spring (both)	Remove and Install	1.3
Shock absorber	Remove and Install	0.7
Shock absorbers (pair)	Remove and Install	1.1
Suspension upper arm	Remove and Install	0.6
Suspension upper arm (both)	Remove and Install	1
Suspension lower arm	Remove and Install	2.3
Suspension lower arm (both)	Remove and Install	2.7
Ball joint - upper	Remove and Install	0.6
Ball joint - upper (both)	Remove and Install	1
Ball joint - lower	Remove and Install	2.9
Ball joint - lower (both)	Remove and Install	3.7
Anti-roll bar	Remove and Install	0.6
Anti-roll bar bush - outer (one)	Remove and Install	0.2
Anti-roll bar bush - outer (one) - LH	Remove and Install	0.3
Swivel hub/stub axle assembly	Remove and Install	2.7
Swivel hub/stub axle assembly (both)	Remove and Install	3.4
<b>Rear suspension</b>		
Road spring	Remove and Install	0.7
Road spring (both)	Remove and Install	1.2
Shock absorber	Remove and Install	0.3
Shock absorbers (pair)	Remove and Install	0.4
Spring shackles (rear)	Remove and Install	0.3
Spring shackles (both)	Remove and Install	0.4
Spring shackles (both sides)	Remove and Install	0.4
<b>Steering geometry</b>		
Geometry - complete vehicle	Check and Adjust	1.1
Front wheel alignment (toe)	Check and Adjust	0.6
<b>Steering mechanism</b>		
Steering rack/box	Remove and Install	2.4
Rack gaiter	Remove and Install	1.2
Rack gaiter (both)	Remove and Install	1.6
Track rod	Remove and Install	1.4

Track rod (both)	Remove and Install	1.9
Track rod end joint (both)	Remove and Install	1
<b>Steering column</b>		
Steering wheel	Remove and Install	0.6
Steering column lock	Remove and Install	1.3
Steering column	Remove and Install	1
Steering column joint	Remove and Install	0.2
<b>Power assisted steering</b>		
Pump	Remove and Install	1.3
Fluid reservoir	Remove and Install	0.3
High pressure hose (both)	Remove and Install	1.6
Power steering fluid cooler	Remove and Install	1.6
<b>Braking system hydraulics</b>		
Hydraulic system	Bleed	0.6
Master cylinder	Remove and Install	1
Front brake caliper (one)	Remove and Install	0.5
Front brake caliper (both)	Remove and Install	0.7
Rear brake caliper (one)	Remove and Install	0.5
Rear brake caliper (both)	Remove and Install	0.8
Front brake hose (one)	Remove and Install	0.5
Front brake hose (both)	Remove and Install	0.7
Rear brake hose (one)	Remove and Install	0.5
Rear brake hose (both)	Remove and Install	0.7
<b>Footbrakes</b>		
Front brake pads (all)	Remove and Install	0.4
Rear brake pads (all)	Remove and Install	0.6
Rear brakes shoes (all)	Remove and Install	1.2
Front brake disc (both)	Remove and Install	0.7
Rear brake disc (both)	Remove and Install	0.9
Rear brake drum (both)	Remove and Install	0.5
<b>Brake pedal &amp; servo</b>		
Pedal assembly	Remove and Install	0.5
Pedal return spring	Remove and Install	0.5
Servo	Remove and Install	1.6
Vacuum hose to manifold	Remove and Install	0.2
Vacuum pump - diesel	Remove and Install	2.6
<b>ABS or ABS/ESP</b>		
ECU	Remove and Install	1.4
Modulator	Remove and Install	1.4
Wheel sensor - front (one)	Remove and Install	0.5
Wheel sensor - front (both)	Remove and Install	0.7
Wheel sensor - rear (one)	Remove and Install	0.3
Wheel sensor - rear (both)	Remove and Install	0.3
Actuator	Remove and Install	1.4
<b>Parking brake</b>		

Parking brake freeplay	Check and Adjust	0.2
Parking brake cable - primary/single	Remove and Install	0.8
Parking brake cable - secondary	Remove and Install	0.7
Parking brake cables - (both) equal length	Remove and Install	1.1
Parking brake pads/shoes (all)	Remove and Install	1
Parking brake actuator	Remove and Install	0.8
<b>Battery &amp; cables</b>		
Battery	Remove and Install	0.5
Cable to starter/solenoid	Remove and Install	0.5
Cable to body earth	Remove and Install	0.5
<b>Charging system</b>		
Alternator	Remove and Install	0.6
<b>Starting system</b>		
Starter motor - pre-engaged	Remove and Install	0.7
Starter motor solenoid	Remove and Install	0.7
<b>Bulbs</b>		
Headlamp bulb	Remove and Install	0.2
Gas discharge headlamp bulb	Remove and Install	0.5
<b>Front lamps</b>		
Headlamp - one	Remove and Install	1.3
Gas discharge headlamp - one	Remove and Install	1.8
Fog lamp - one	Remove and Install	0.5
Direction indicator - one	Remove and Install	1.3
<b>Rear lamps</b>		
Rear combination lamp assembly	Remove and Install	0.2
Number plate lamp - one	Remove and Install	0.2
Fog lamp	Remove and Install	0.4
High mounted brake lamp	Remove and Install	0.2
<b>Interior lamps</b>		
Interior lamp - front	Remove and Install	0.2
<b>Switches</b>		
Starter/ignition switch	Remove and Install	1.3
Main lighting switch	Remove and Install	0.3
Dip/main/flash switch	Remove and Install	0.5
Horn switch	Remove and Install	0.6
Wash/wipe switch	Remove and Install	0.3
Hazard warning lights switch	Remove and Install	0.3
Inhibitor switch	Remove and Install	1.3
Stop lamps switch	Remove and Install	0.2
<b>Instruments</b>		
Instrument panel	Remove and Install	0.3
Cigarette lighter	Remove and Install	0.2
<b>Transducers. sensors &amp; transmitters</b>		
Horn (both)	Remove and Install	0.2

Oil pressure transmitter	Remove and Install	0.3
Speedo drive sensor	Remove and Install	3.1
Coolant temperature sensor	Remove and Install	0.4
Fuel level sensor	Remove and Install	1.2
<b>Fusebox &amp; Relays</b>		
Indicator relay/flasher unit	Remove and Install	0.9
Intermittent wiper relay	Remove and Install	0.5
<b>Motors</b>		
Front wiper motor	Remove and Install	0.5
Front washer motor	Remove and Install	0.6
Headlamp washer motor	Remove and Install	0.7
Front window lift motor	Remove and Install	0.5
Rear door window lift motor	Remove and Install	0.5
Sunroof motor	Remove and Install	0.2
Front central locking solenoid/actuator	Remove and Install	0.8
<b>Control &amp; audio units</b>		
Radio/cassette unit	Remove and Install	0.6
CD player	Remove and Install	0.7
Roof aerial/antenna	Remove and Install	0.9
Roof aerial/antenna - cable	Remove and Install	1
<b>Windscreen wipers/washers</b>		
Wiper arm	Remove and Install	0.2
Wiper linkage	Remove and Install	0.5
Washer jet - (both)	Remove and Install	0.4
Washer hose	Remove and Replace	0.7
<b>Headlamp wipers/washers</b>		
Washer jet - (both)	Remove and Install	0.5
Washer reservoir	Remove and Install	0.7
<b>Heating &amp; ventilation system</b>		
Heater unit - complete	Remove and Install	4.4
Heater unit - complete - AC	Remove and Install	5
Heater hose - from engine	Remove and Install	1.2
Heater hose - to engine	Remove and Install	1.2
Heater matrix	Remove and Install	4.5
Heater blower motor	Remove and Install	0.3
Heater blower control module/resistor - front	Remove and Install	0.2
Cabin filter	Remove and Install	0.3
<b>Air conditioning</b>		
System evacuation/recharging	Check and Adjust	0.6
Receiver/drier	Remove and Install	2.2
Accumulator/drier	Remove and Install	2.2
Compressor	Remove and Install	1.7
Compressor clutch	Remove and Install	1.2
Expansion valve - front	Remove and Install	4.9
Condenser	Remove and Install	2.2

Condenser blower motor	Remove and Install	0.9
Evaporator - front	Remove and Install	4.9
Air conditioning control panel	Remove and Install	0.3
Switch - low/cycling pressure	Remove and Install	0.2
Ambient temperature sensor	Remove and Install	0.2
Delivery temp sensor	Remove and Install	0.2
Air conditioning relay	Remove and Install	0.5
Blower control module/resistor - front	Remove and Install	0.2
Blower relay	Remove and Install	0.5