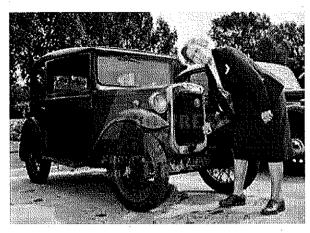
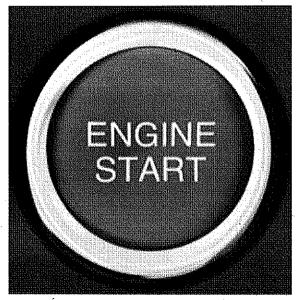
Daily Operations



from the British people

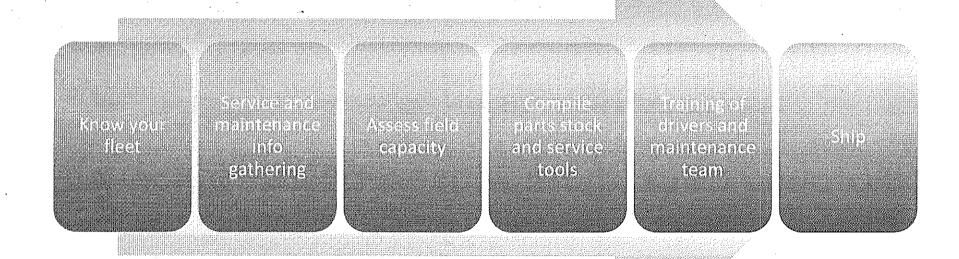
Where to start?







Preparedness



Service and maintenance Information gathering

- Workshop manuals
- Armourers recommendations
- Build specifications
- Internet search
- Ground truth (those with experience in the field)

SDS TOYOTA LAND CRUISER Station Wagon Diesel VDJ200 2007/08-2010/07

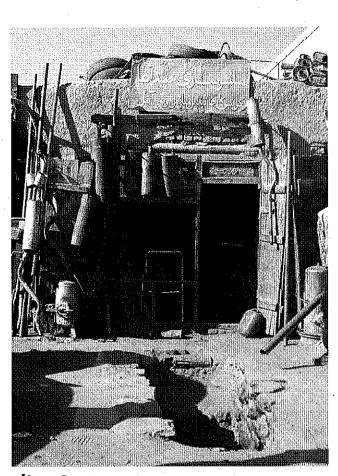


							
8801	A	162.7 to 172.7 (6.41 to 6.79)	164.8 to 174.8 (6.49 to 6.88)				
	В	5 to 15 (0.197 to 0.591)					
A E	C	1 20	(0.787)				
Mm (in.)		SAE J1703 or FMVSS No. 116 DOT3					
® (a)							
//\\ .	Α	147.1 to 157.1 (5.80 to 6.18)	149.1 to 159.1 (5.87 to 6.26)				
	В	1 to 6 (0.03	94 to 0.236)				
	C¹	56 67 (2.64)	16 67.5 (2.66)				
mm (in.)		SAE J1703 or FM\	/SS No. 116 DOT3				
200 N (20 kgf, 45 lbf)		5 to 7					
A							
B	Α	BB 1.0 (0.0394)				

· ·		(
)					
			Standard 4.15 to 4.25 (4.39 to 4.49, 3.66 to 3.74)			
Liter (US qts, Imp. qts)		1.85 to 1.95 (1.96 to 2.06, 1.63 to 1.71)	w/ LSD w/ Differential Lock 4.10 to 4.20 (4.34 to 4.43, 3.60 to 3.69)			
		Toyota Genuine Differential gear oil LT 75W-85 GL-5 or equivalent	w/o LSD Toyota Genuine Differential gear oil LT 75W-85 GL-5 or equivalent w/ LSD Toyota Genuine Differential gear oil LX 75W-85 GL-5 or equivalent			
	A	37 (38	30, 27)			
	В	20 (20)4, 15)			
N*m (kgf*cm, ft.*lbf)	С	37 (37	7, 27)			
	D	39 (400, 29)	49 (500, 36)			
		VDJ				
			num Wheel 336, 97)			
Alter (leaf and	. A +16.5	For Steel Wheel				
N*m (kgf*cm	i, it. IDI)	209 (2131, 154)				

Assessing field maintenance capacity

- Fuel quality
 - Re assess at intervals
- Local dealerships
 - Parts stock
 - Level of competence
- Tyre fitment
 - Ability to deal with runflats
- Base of operations
 - Security, space, shelter, power/lighting, storage

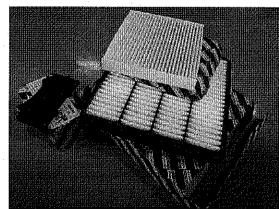


Parts provision

- Examples of OEM parts
 - Filters
 - Bulbs
 - Wipers
- Examples of special parts
 - Shock absorbers
 - Clutch
 - Runflat insert



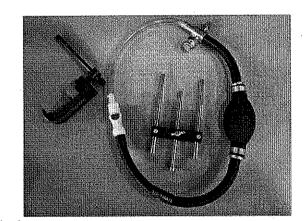
"An armoured vehicle can be out of service for weeks just waiting for parts"





Tools and equipment considerations

- Examples of specialist tools
 - Fuel system bleeding tool
 - OBD reader
 - Oil filter wrench
 - Torque wrench



- Examples of general workshop tools
 - Trolley jack (of ample capacity)
 - Axle stands
 - Hand tools (Socket sets etc)
 - Compressor (clearing of dust, tyre inflation)

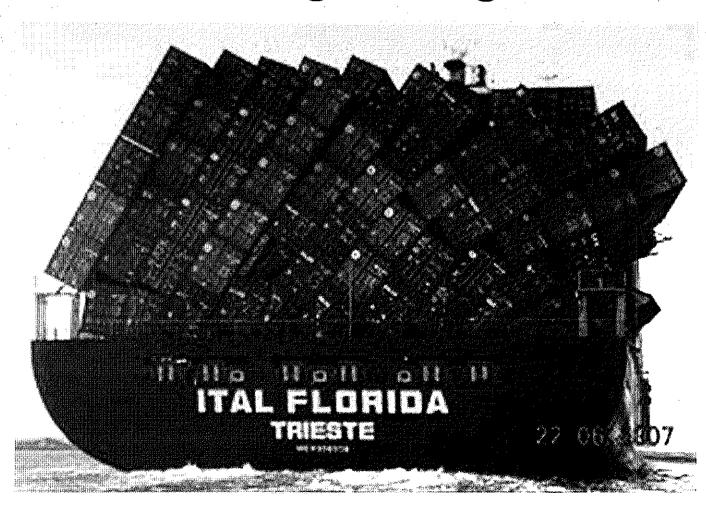
Deployable support modules



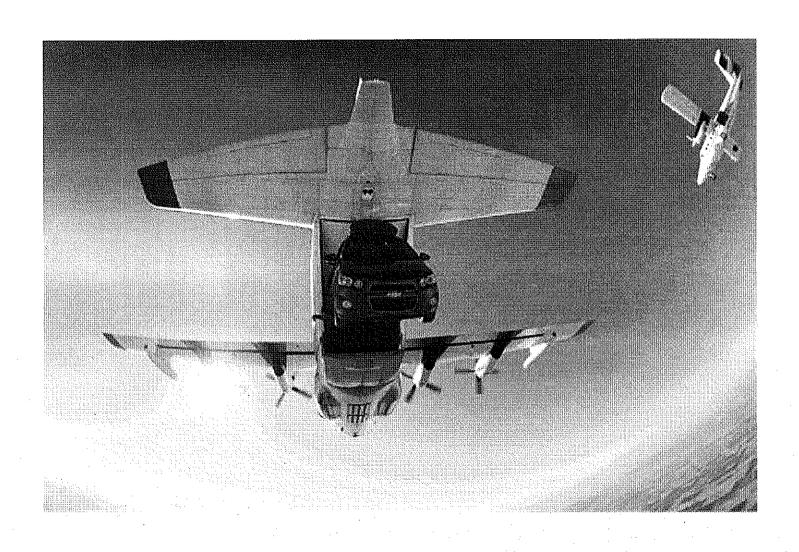
Checks and maintenance training

- Vehicle Familiarisation
- Potential weak/stress points
- Safe working
- Record keeping
- Vehicle checks
- Service scheduling
- Periodic inspections

It can all start going wrong before a working life begins



Ensure your cargo is secure



Seek guarantee of safe delivery



Maintenance paperwork

- Recording and reporting
- Daily checks
- Weekly checks
- Manufacturers periodic maintenance schedule
- Armourers recommended

Vehicle daily check sheet

Vehicle make	Model
Asset number	Sheet number



Report any addition of oil or fluids to the fleet manager
Report any faults found during field trips if considered detrimental
Refer to check sheet notes and vehicle handbooks for detailed information

Check	Date	Initials	Fuel level	Date	Initials	Fuel level	Date	Initials	Fuel level	Date	Initials	Fuel level
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Engine Oil	1				-1	1	 	 	ļ			
Oil leaks												
Brake fluid		3	4.				1					
Coolant												
Clutch fluid											•	
Steering fluid					···			***************************************				
Tyre inflation and								·		1		
condition												
Lights												·
Brakes												
Wipers/washers												
Emergency kit								-				
Under body check		· .										
for loose items or												
debris		-										
Communications												
checks Damage report		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·					-				
Short road test												
<u> </u>			***************************************			-					<u>-</u>	-
Abnormal engine, running gear or						•			-			
gearbox noises								·				,

Report any concerns or faults to fleet manager, even if rectified.

Vehicle weekly check sheet

Vehicle make	Model
Asset number	Sheet number



Report any addition of oil or fluids to the fleet manager
Report any faults found during field trips if considered detrimental
Refer to check sheet notes and vehicle handbooks for detailed information

Check	Note	
Check service records and log sheets	For faults/observations, fuel consumption	
Fluid leaks	Coolant, steering, gearboxes, brakes, clutch, axles	
Brake fluid level	See specific 200 procedure for checking	
Engine Oil		
Engine drive belts	For debris, damage and wear	
Fuel filter	See additional diesel fuel notes	
Inspect air filter	Initial check weekly and adjust subsequent checks accordingly. Order resupply in dusty environments	
Glazing	Inspect for cracks and de-lamination. Drop glass operation	
Check shock absorbers for leaks		
Check tyre pressures	Including spare/s	
Inspect tyres for foreign objects and damage	Check all tread and sidewalls	
Check for brake pad wear		
Inspect Armour plate mountings underside		
Check fire extinguishers	Check charge level on handheld and warning lamps on under bonnet systems.	
Inspect suspension and steering joints		
Check door catches, locks and hinges	Central locking operation, gas struts,	
Seat belts	Check for retraction rate, abrasion damage and catch operation	
Damage report	External bodywork, underside and interior	
Abnormal engine, running gear or gearbox noises		
10 km road test	Including - Engine performance and running, exhaust smoke, braking performance and pedal feel, engine running temperature, gear change and low range with diff locks, clutch operation, suspension and shock absorbers (tramping of wheels)	

Drivers log sheet

	Drivers log sheet	
Vehicle Asset number	DFID	ukaid
	· · · · · · · · · · · · · · · · · · ·	from the British people

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Comms equipment recording

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Job card

Job card Kemble



Job Number	·	Model	
Date	· ,	Chassis number	
Asset number		Fuel	**************************************
Odometer		Issued by	

Task	Remarks	Initials	Hours

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Notes for vehicle checks

Notes for Vehicle check sheets

Checks to be carried out on return from last trip Report any addition of oil or fluids to the fleet manager Report any faults found during field trips if considered detrimental



	Note:
; Oil	Check when the engine is warm, leave to stand for 5 mins, record if low and top up if necessary
ks	Look under the vehicle and around the engine, gearbox & axles. At this point look for loose vehicle parts or debris
fluid	If this level drops by a noticeable amount it must be reported. DO NOT OVERFILL BRAKE FLUID! FOR 200 IGNITION OFF, PUMP BRAKE PEDAL 40 TIMES AND CHECK
nt	Check level in expansion tank. There should be no need to remove radiator cap
fluid	Report if low, as this level maybe included within the brake fluid reservoir/container
ng fluid	Take note of hot and cold level markings on dip stick. Some models have clear tanks and no dipstick
iflation and	Visual inspection including spares; check actual tyre pressures weekly. Check
on	tread depth and look for damage, tears, nails thorns etc
	Include brake lights and number plate lights
3	Depress brake pedal before moving, and report any differences in the feel of the brakes whilst driving
s/washers	Check the washer bottle level, and wiper function
vel	If below half - fill the tank or follow SOPs for field office, don't forget sub tank(105)
ency kit	Check that spare water, tools, jack, wheel brace, sand tracks or snow chains (if necessary), first aid kit and that any necessary paperwork is present
unications.	Carry out both HF, VHF radio checks. Sat comms phone check if applicable
je report	Check bodywork, glass, interior and tyres for damage and report any to fleet manager
oad test Check for 'free play' in steering before moving off, with engine off and ru Check handbrake operation. Does the vehicle pull to one side? Is steering wheel aligned? If not steering gear maybe damaged. Under braking is the pedal firm with no excess travel? Does the vehicle pull to one side under	
	braking on a level road? Listen for knocks or rattles on uneven ground.
mal engine, g gear or ox noises	With bonnet open listen for 'harsh' noises or rattles

Report any concerns or faults to fleet manager, even if rectified.