Office of Foreign Disaster Assistance

Vehicle Handbook

Revision: April 2012

OFDA Vehicle #_____

Vehicle Identification #_____

Table of Contents

1. Introduction

This U.S. Agency for International Development Office of Foreign Disaster Assistance (USAID/OFDA) Vehicle Handbook has been developed to provide standardized procedures and protocols to Disaster Assistance Response Teams (DART) and Regional Staff on responsible operation, documentation, and effective management of OFDA vehicles.

This handbook serves as a basic guideline for care of OFDA vehicles (armored and unarmored) deployed in the field for DARTs as well as repositioned stock to support staff located at various regional offices. OFDA staff responsible for deployed vehicle(s) should follow the guidelines laid out in this handbook and work closely with national staff assigned to operate and maintain the vehicle(s).

2. Vehicles and Record Keeping

2.1 Drivers Daily Checklist

Daily vehicle inspections will be conducted by the driver or DART team member assigned the vehicle. Before operating a vehicle, the following items will be inspected (see Appendix A).

1. Fuel Level
2. Fluid Levels (brake, radiator, engine oil, transmission fluid and power steering fluid)
3. Tire Pressure / Body Inspection
4. Vehicle Spare Parts Kit (see Appendix B)
5. First Aid Kit (NFES # 1604)
6. Fire Extinguisher(ABC)
7. Vehicle Documents (Logbook)
8. Personnel Emergency Kit* (see Appendix C) * Presence of Personnel Emergency Kits in OFDA vehicles is determined by Safety and Security Officer (SSO) and is dependent upon situation.
9. Communications Equipment (including radio check)
10. Safety & Security Plan (as required by the SSO)
11. Vehicle IED Search (if required by the SSO)

2.2 Logbook

All OFDA vehicles will contain a logbook to be kept with the vehicle at all times, including shipment to and from stockpiles.

Logbook Contents: (See Appendix N for Logbook cover page)

1. Daily Mileage and Fuel Log (and Inspection)
   - All drivers or DART team members assigned and/or responsible for vehicles will complete a Daily Mileage and Fuel Log at the conclusion of each operational day (see Appendix A)**.** A daily inspection of the vehicle will be conducted at the beginning of each operational day.

2. Preventive Maintenance Checklist
   - Monthly or bi-weekly preventive maintenance checks will be completed by all drivers or DART/Field Team members assigned vehicles. The preventive maintenance check schedule will be determined by DART/Field Logistics Officer/Fleet Manager, dependent on environmental and operational conditions. The Preventive Maintenance Checklist should serve as a guide during maintenance checks (see Appendix D).

   - Armored Glass Maintenance: Ballistic glass should be treated with care. Do not place decals, stickers or labels on the glass. All cracks or chips on the armored glass should be reported immediately.

     Note: Glass inspection revealing cracks or chips and/or reduced visibility are indications the integrity of the ballistic glass has been compromised.

     The armored vehicle glass has either a polycarbonate insert mounted on the inside of the original equipment glass unit or a laminated glazing unit with polycarbonate material bonded to the inside. The glazing requires the following special handling and cleaning:

     Clean polycarbonate materials with a soft 100 percent cotton cloth or clean sponge. Use an approved polycarbonate cleaning solution or wash the surface with lukewarm water and a mild household detergent solution. Dry using a clean soft cloth. Fresh paint, grease**,** and wet sealant may be removed by rubbing lightly with a soft cloth saturated with 50 percent isopropyl alcohol or ethanol in water followed by a thorough washing with water and a mild detergent, changing the cloth frequently.
     A mild automotive cleaner/polish can be used on the polycarbonate products to minimize the effects of hairline scratches and minor abrasions.

Avoid polycarbonate contact with abrasive cleaners, such as steel wool, Comet, Ajax, highly alkaline cleaners, squeegees, sharp instruments, razor blades, petrol, acetone, benzene, carbon tetrachloride, toluene, acids**,** or any cleaners with ammonia. Do not clean polycarbonate materials in the hot sun or elevated temperatures. Do not wipe the polycarbonate surface with dry or dirty rags. Do not allow the polycarbonate surface to be exposed to solvents other than those noted above.

Vehicles equipped with laminated glass/polycarbonate units should be parked under a shaded enclosure whenever possible. Exposure to direct sunlight and very hot temperatures for long periods of time will cause the glass/polycarbonate laminated units to delaminate.

Note: Do not wash armored vehicles with cold water. Ballistic glass may crack after vehicles have been in the hot sun for hours.

3. Vehicle Service Log
   - Servicing of vehicles will be completed at 1,500 mile intervals for usage in extreme conditions (dust, etc.), or according to manufacturer's guidelines listed in the owner's manual. However, all vehicles will be serviced at 3,000-mile intervals as a **minimum**. Service records will be noted on the Vehicle Service Log (see Appendix E).

   - The Fleet Manager and/or individual assigned to the vehicle will be responsible for all minor repair work on the vehicle. The Logistics Officer/Fleet Manager will determine what constitutes minor repair work. Consult manufacturer's guidelines in owner's manual for designated lift points when towing or lifting vehicles for maintenance. Frame and vital part damage may occur when the vehicle is lifted or towed incorrectly (see Appendix L for Run Flat tire repair procedures).

   - Repairs will be noted on Vehicle Service Logs and maintained in the Vehicle Logbook (see Appendix E).

4. Motor Vehicle Accident Report (SF-91)
   - All accidents will be reported to the Fleet Manager or DART Logistics Officer using the Motor Vehicle Accident Report Form, and the report will be forwarded to OFDA/Logistics/W (see Appendix F). The Fleet Manager will discuss the accident with OFDA/Logistics/W regarding the cause of the accident and needed repairs. All repair receipts will be forwarded to OFDA/Logistics/W for record keeping.

5. Vehicle Initial Inspection Form
   - An initial vehicle inspection will be conducted by the Fleet Manager for all vehicles entering or leaving the field fleet (see Appendix G). This form will be placed in the vehicle logbook.

   - One Vehicle Spare Parts Kit will be in each OFDA vehicle deployed to the field (see Appendix B). Kit contents will be based on vehicle type and model.

6. Support Vehicle Inventory Form
   - A Support Vehicle Inventory form will be maintained by the Fleet Manager (see Appendix H).

7. Parts Slip And Work Required Form
   - The DART/Field Logistics Officer/Fleet Manager will consult with OFDA/Logistics/W on repairs other than normal servicing of vehicle. Maintenance service, repairs and parts will be documented on the Parts Slip and Work Required Form (Appendix I) and forwarded to OFDA Logistics/W.

8. Motor Vehicle Record
   - The Motor Vehicle Record will be maintained by the Fleet Manager (see Appendix J).

9. Safety and Security Plan
   - **Note**: Presence of Safety and Security Plans in OFDA vehicles is determined by Safety and Security Officer (SSO) and is dependent upon situation.

10. Vehicle Improvised Explosive Devices (IED) Awareness, Detection & Search Brochure
    - Drivers should always be aware of the possibility of an IED attack. Routine security measures should be taken daily to prevent an attacker from accessing the vehicle. All security measures should be supported by thorough routine vehicle IED inspections, as directed by the Safety and Security Officer (SSO). The Vehicle IED Search Brochure should be followed to insure that a thorough, systematic and effective IED inspection is completed (See Appendix M).

11. Vehicle Security Incident Report Form
    - All security incidents will be reported to the Fleet Manager or DART Logistics Officer utilizing the Vehicle Security Incident Report Form, and the report will be forwarded to OFDA/Logistics/W (see Appendix N). The Fleet Manager will discuss the incident with OFDA/Logistics/W regarding the cause of the incident and needed actions.

3. Vehicle Stockpile and Storage

3.1 Transport Requirements and Procedures from Stockpile to field

The vehicle stockpile contact/contractor will maintain vehicles and complete an inspection of each vehicle before shipment to the field. This includes, but is not limited to:

1. Engine Oil and Filter Change
2. Belt inspection and/or Replacement
3. Hose inspection and/or replacement
4. All Fluid Levels Inspection
5. Tire Inspection
6. Brake Inspection
7. Under Carriage inspection
8. Spare Parts Kit and Tool Box Inspection
9. Personnel Emergency Kit Inspection
10. Communications Equipment Inspection
11. Stockpile Vehicle Service Log
12. Logbook

3.2 Transport Requirements and Procedures from field Assignment to Stockpile

The DART/Field Logistics Officer/Fleet Manager prior to returning vehicles to the stockpile will ensure that following procedures have been completed.

1. All items not on the vehicle inventory list are removed from the vehicle
2. All required maintenance and repairs are documented and left in the vehicle.
3. A copy of maintenance and repair documents are forwarded to OFDA/Logistics/W.

4. Fleet Manager and Driver Functions and Responsibilities

4.1 Fleet Manager Responsibility

The Fleet Manager supports the Logistics Officer in maintaining the DART/Field Motor Pool when DART complexity prevents the Logistics Officer from effectively managing logistics and daily fleet operations.

When assigned, the Fleet Manger is responsible for maintenance, repair, and assignment of vehicles in the DART/Field Motor Pool, as well as the safety briefings and/or training of drivers. If the Fleet Manager is a Foreign Service National (FSN), the Logistics Officer or DART Team Leader may delegate other personnel to provide appropriate training. Briefings/trainings may include, but are not limited to:

1. Use of Communications Equipment
2. Operation of Vehicles
3. Daily Maintenance of Vehicles
    - Fuel (Procurement mechanism to be established by OFDA Field Officer)
    - Vehicle Fluid Levels Inspection
    - Tire Inspection and Changing
    - Inspection of Vehicle Systems
    - Run Flat Tire Repair
    - Storage Requirements
4. Inspection of Vehicle Support Kits
5. Reporting Requirements
6. Procedures and Requirements for Vehicle Accidents
7. Checkpoint and Safety and Security Procedures and Requirements
8. Improvised Explosive Device (IED) Inspection

The DART/Field Logistics Officer/Fleet Manager, in consultation with the DART/Field Team Leader and SSO, is responsible for the enforcement of USG regulations concerning the proper use of OFDA DART/Field vehicles

4.2 Driver Responsibilities

Drivers are assigned to the DART/Field Motor Pool and report to the Fleet Manager/Logistics Officer. Drivers are responsible for the following:

1. Safe operation of DART vehicles
2. Knowledge of vehicle systems
3. Daily vehicle inspections
4. Vehicle keys (The primary set of keys is the direct responsibility of the driver. A backup set of keys needs to be kept secured in-country at the OFDA field office.)
5. Procedures and requirements for reporting documentation
6. Knowledge of checkpoint and safety and security procedures and requirements
7. Observation of local speed limits at all times and awareness of safe driving techniques in local communities
8. Insuring that all vehicle communications gear is turned off at the end of each day

4.3 Motor Pool

Motor Pools provide coordinated and scheduled vehicle use to maximize efficiency of OFDA DART/Field vehicle utilization. Other benefits of motor pools include:

1. Security from theft and vandalism
2. Standardized storage requirements to protect vehicles from weather elements

5. Fleet Maintenance Procedures

5.1 Arrival in Country

Upon arrival in country, OFDA DART/Field Vehicles will be inspected for damage during shipment. A Vehicle Initial Inspection form documenting damage and mechanical problems will be completed and forwarded to OFDA/Logistics/W by the DART/Field Logistics Officer/Fleet Manager (see Appendix G).

5.2 maintenance Procedures

The DART/Field Logistics Officer/Fleet Manager will ensure the following minimum maintenance procedures are occurring at the proper intervals and all documentation is forwarded to OFDA/Logistics/W.

Minimum Maintenance Intervals

Three-month inspection, every 3,000 miles or 5,000 KM (whichever comes first):

1. Change oil and filter
2. Replace air filter, PCV valve**,** and filter
3. Lubricate chassis
4. Check and "top off" all fluids
5. Check and adjust belts, all hoses and all lights
6. Check electrical, including all fuses
7. Check windshield wipers
8. Check and adjust doors
9. Check wheel alignment
10. Perform visual inspection of the brakes
11. Drive axle service
12. Check exhaust system

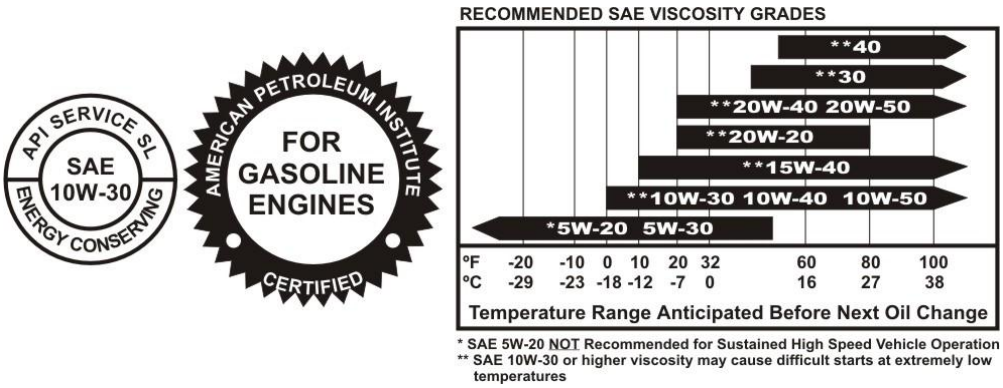
Six-month inspection, every 6,000 miles or 10,000 KM (whichever comes first):

1. All items listed in the three-month inspection
2. Inspect and rotate tires
3. Air-conditioning inspection and charge
4. Cooling system check
5. Tune-up engine (including replacement of fuel filter, spark plugs**,** and rotor)
6. Service transmission (includes replacing fluid, filter**,** and gasket)
7. Pack front wheel bearings and replace seals
8. Visual inspection of front and rear shocks

Twelve-month inspection, every 12,000 miles or 20,000 KM (whichever comes first):

1. All items listed in the three/six-month inspection
2. Clean and flush cooling system and replace with coolant recommended for the climate
3. Replace brake pads and shoes, and bleed brakes
4. Inspect front/rear axles and change fluids
5. Inspect shields and under hood insulation
6. Check thermostatically controlled engine cooling fan

Note: Use the Specific Manufactures Parts and Fluids. Do not use Generic or Local Brands.



5.3 Run Flat Tire Repair

The Anti-Flat Tire Insert System:

This system was designed to allow you to continue driving if the tire goes flat. The distance that can be traveled on a flat tire depends upon the temperature, road conditions, speed, and tire type and condition. When driving on an Anti-Flat Insert, the primary concern is heat buildup. Leave the danger zone as fast as possible and continue till you are out of sight, then reduce your speed. You may have to stop from time to time to cool off your tire inset, but safety first. Once in a safe area, change the tire and Flat Tire Insert consulting with the Run Flat Tire Repair (see Appendix L).

5.4 Accident Reporting

The DART/Field Logistics Officer/Fleet Manager will assist with investigations of accidents and damage to DART/Field Vehicles. He or she will ensure that all Motor Vehicle Accident Reports are completed and forwarded to OFDA/Logistics/W (see Appendix F). All damage and cost estimates for repair of vehicles will be discussed with OFDA/Logistics/W before actions are initiated.

5.5 Liability and Insurance

It is generally the US government policy that the United States is self-insured for its own property.
Office of Foreign Disaster Assistance follows agency policy contained in 6 FAM 228.2-2 and 228.4 concerning the liability and insurance for official vehicles.

1. It is USAID policy not to require waivers of USAID liability by either passengers or drivers for the use of motor vehicles
2. Under the authority of section 636(b) of the FAA, Missions are authorized to pay claims arising out of "other authorized uses" for which the Agency is not otherwise liable if the Mission determines that doing so is "necessary to accomplish the purposes of the Foreign Assistance Act," e.g. to avoid unfavorable publicity or harm to Agency-host government relations; however, the claim total must be less than $25,000. For claims above $25,000, the General Counsel (GC) or Deputy GC must determine the validity of and settle all tort claims (See **ADS 152,** Tort Claims). Coordinate with the Regional Legal Advisor (RLA) regarding the use of 636(b). (See **FAA, Section 636(b)**)

6. Vehicle Communications

6.1 Vehicle Communications Package

The following equipment is the "Basic Communications Package" for OFDA DART/Field vehicles. Communications packages are installed with a dedicated battery system and cutoff switch (see Appendix O).

Basic Communications Package

Codan HF Radio – NGT SR
Satellite Phone – Thrane & Thrane Mini-M
Motorola VHF Base Radio – GM 160/GM-360/CDM-1250
Motorola UHF – GM 160/GM-360/CDM-1250
PA system

Note: Motorola VHF/UHF Base Radio models may vary

6.2 Vehicle Transport

Equipment Storage and Transport

When the vehicles are transported from the US to the vehicle storage facilities, the communications equipment is packed and stored in crates to safeguard from damage during shipment.

Fuses – Shorting Pin

When transporting or storing the vehicle for more than 2 weeks, the shorting pin in the vehicle must be moved to ensure conservation of the vehicle battery.

Example of Toyota Land Cruiser fuse box with the shorting pin identified in Storage Mode

Note: While the shorting pin is in Storage Mode certain functions will not operate, such as the key remote, courtesy light, and radio.

After the vehicle is received the shorting pin can be moved to the operational position. See below:

Toyota Land Cruiser fuse box with the shorting pin identified in Normal Vehicle Operation Mode

7. Armored Vehicles

7.1 Definitions and Specifications

Armored vehicles are designed to provide occupants with limited protection against ballistic threats. The protection provided is separated into three categories:

1. Armor to protect from the initial attack
2. Ability of the vehicle to move from the danger zone
3. Mobile communications for requesting assistance

The key to the successful use of armored vehicles is the training of drivers in defensive driving techniques and handling of armored vehicles.

***EDITED FOR EXTERNAL USE**

Armored Vehicle Operation Warnings

1. **No Smoking inside Armored Vehicles**
   Smoke particles adhere to the inside flexible film of ballistic glass and cause irreversible damage to its optical qualities.

2. **Frontal Collisions**
   There is a probability the driver and /or front seat passenger may suffer injuries. Drivers will practice safe driving techniques and seat belts will be worn by all occupants at all times.

3. **Vehicle Control/Weight Issues**
   The armoring process results in additional weight on OFDA DART/Field armored vehicles which in turn affects the max gross vehicle weight, center of gravity, and performance/handling characteristics of the vehicle. Be aware that armored vehicles may rollover easier. They also take more time and longer distances to accelerate.

   Note: Max Gross Vehicle Weight (GVW) information will be found on driver's side door jam.

4. **Window Operation**
   Do not depress the rocker switch for more than two seconds after the window has completed its travel up or down to avoid blowing the 20A fuse or affecting another component.

   Do not close doors with the windows in the down position as the weight of the window may cause the glass edges to break.

   Leave doors closed at all times. Open doors put excessive weight on door hinges resulting in compromised armoring.

5. **Brakes**
   Brakes are critical to the safe operation of armored vehicles. Due to the additional weight of the armoring, armored vehicles require more frequent maintenance checks and replacement then traditional vehicles. Additionally, armored vehicles will take longer time and longer distances to stop.

6. **Tires**
   Proper tire replacement of factory-mounted tires, correct re-installation of run-flats and routine checking of pound-force per square inch (PSI) levels of tires on armored vehicles is critical. PSI levels need to be checked routinely since under-inflated tires on armored vehicles can cause extensive heat buildup and steel belt/tread separation leading to destructive tire damage. This is important in hot climates where tires can expand.

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Appendix A: Daily Mileage and Fuel Log (and Inspection)

OFDA Daily Mileage and Fuel Log (and Inspection)					
Vehicle ID.		Deployment			
Date (mm/dd/yr)	Start Mileage	End Mileage	Fuel Gallons/Liters	Destination	Driver Signature

Prior to operating the vehicle, the following must be inspected:

1. Fuel Level
2. Fluid Levels
3. Tire Pressure/ Body Inspection
4. Vehicle Spare Parts Kit
5. First Aid Kit
6. Fire Extinguisher
7. Vehicle documents (Logbook)
8. Personnel Emergency Kit (as req'd by the SSO)
9. Communications Equipment (including radio check)
10. Safety and Security Plan (as req'd by the SSO)
11. Vehicle IED Search (if req'd by the SSO)

Remove Form from Book for use **Please photocopy for additional copies**

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Appendix B: Vehicle Spare Parts List

Each OFDA DART/Field vehicle has one Vehicle Spare Parts Kit assigned to it based on the vehicle type and model. Additional items can be ordered and shipped to the DART/Field Offices by OFDA Logistics/W. Spare Parts Kits include the following, but not limited to:

CONTENTS TOYOTA MODEL 105 (DIESEL)

DESCRIPTION	ITEM CODE	QTY
FILTER, OIL	T90915-30002-8T	10
GASKET	T90430-12031	10
ELEMENT ASSY, FUEL F	T23390-64480	8
ELEMENT SUB-ASSY	T17801-17020	5
PAD KIT, DISC BRAKE	T04465-60230	1
PAD KIT, DISC BRAKE	T04466-60070	1
BELT SET, V	T90916-02452	1
THERMOSTAT	T90916-03089	1
GASKET, THERMOSTAT	T16346-66020	1
BLADE, FR WIPER, RH	T85212-60171	1
BLADE, FR WIPER, LH	T85222-60211	1
BELT, TIMING	T13568-19176	1
CYLINDER KIT, DISC	T04479-60040	1
CYLINDER KIT, DISC	T04479-60050	1
FUSIBLE LINK	T90982-08283	1
FUSIBLE LINK	T90982-08284	1
FUSIBLE LINK	T90982-08285	1
KIT HB4 B	T90981-YZZB2	1

CONTENTS TOYOTA MODEL 105 (PETROL)

DESCRIPTION	ITEM CODE	QTY
FILTER, OIL	T90915-20004	10
GASKET	T90430-12031	10
ELEMENT SUB-ASSY	T17801-17020	5
FILTER ASSY, FUEL	T23300-50110	5
PAD KIT, DISC BRAKE	T04465-60230	1
PAD KIT, DISC BRAKE	T04465-60070	1
BELT, V-RIBBED	T90916-02585	1
ABSORBER ASSY	T48510-69127	2
ABSORBER ASSY	T48530-69155	2
THERMOSTAT	T90916-03100	1
SPARK PLUG K20R-U	T90919-01166	10
BLADE, FR WIPER, RH	T85212-60171	1
BLADE, FR WIPER, LH	T85222-60211	1
CYLINDER KIT, DISC	T04479-60040	1
CYLINDER KIT, RR	T04479-60250	1
FUSIBLE LINK	T90982-08283	1
FUSIBLE LINK	T90982-08284	1
FUSIBLE LINK	T90982-08285	1
KIT HB4 B	T90981-YZZB2	1

CONTENTS TOYOTA MODEL 76 (DIESEL)

DESCRIPTION	ITEM CODE	QTY
FILTER, OIL		10
GASKET, OIL SUMP		10
FILTER, FUEL		8
FILTER, AIR		5
PAD KIT, FR DISC BRAKE		1
SHOE KIT, RR BRAKE		1
BELT V FAN /ALTERNATOR		1
BELT V COOLER COMPRESSOR		1
ABSORBER SHOCK FR		2
ABSORBER SHOCK RR		2
HOSE, RADIATOR, NO.1 TOP		1
HOSE, RADIATOR, NO.2 BOTTOM		1
THERMOSTAT ASSY		1
GASKET, THERMOSTAT		1
PLUG ASSY, GLOW		6
NOZZLE ASSY		6
PUMP ASS, WATER		1
BLADE FR WIPER RH		2
BLADE FR WIPER LH		2
WHEEL ASSY, DISC		1
GASKET, CYLINDER		1
SUPPORT EXHAUST PIPE		1
DAMPER ASSY		1
NUT, WHEEL		10
CYLINDER KIT, RR WHEEL		1
CYLINDER KIT, CLUTCH MASTER		1
CYLINDER KIT, CLUTCH RELEASE		1
SEAL		2
SEAL, TYPE S OIL		2
GASKET KIT, ENGINE VALVE GRIND		1
BULB/FUSE KIT H4A		1

Note: Spare Parts Kit Item Numbers unavailable at this time. See e rooms/ops/logistics/vehicles

CONTENTS TOYOTA LAND CRUISER TOOL KIT

CONTENTS MERCEDES G 500 (PETROL)

DESCRIPTION	PART NUMBER	QTY
FILTER, FUEL	A002-477-30-01	3
FILTER ELEMENT	A000-180-26-09	5
	A000-180-23-09	
SPARK PLUG	A004-159-19-03-26	32
	A003-159-19-03-26	
BELT	A-011-997-97-92	1
BATTERY, KEY	A-000-828-03-88	2
AIR FILTER	A-112-094-06-04	3
FILTER, OIL	A-140-277-00-95	1
WHEEL NUTS	A461-401-01-72	10
CAP, FUEL TANK	A124-470-00-05	1
BRAKE LINING, SET	A463-423-02-10	1
BRAKE PAD, FRONT	A601-420-76-20	1
BRAKE DISC FRONT AXLE	A463-421-00-12	2
BRAKE DRUM REAR AXLE	A460-423-00-01	2
SCREWS FOR DISC BRAKE	A460-421-02-71	4
SCREWS FOR DISC BRAKE	A460-990-01-01	4
REPAIR KIT FOR FRONT BRAKES	A463-991-00-06	2
BLADES, WIPER	A463-820-00-45	2
H 4 BULB	N000-000-000374	2
TIRE PRESSURE CHECKING DEVICE	B6-Q-6-58-81-40	1
BULBS, SPARE SET	B6-6-81-0016	1
SCREW FOR DOOR CLOSER	A381-723-00-38	10
RUBBER RING FOR EXHAUST SYS	A381-492-00-82	6
CAP, WHEEL	B6647-02-03	4
GLASS FOR REAR VIEW MIRROR, L	A463-810-16-16	1
GLASS FOR REAR VIEW MIRROR, R	A463-810-06-16	1
SHOCK ABSORBER FRONT AXLE	A005-323-94-00	2
ENGINE OIL COVER	A111-018-03-02	1
CATCH	A000-546-02-73	1
BULB	N072-601-01-2803	4
WOODEN PAD		1
HORN	A004-542-74-20	1
HORN	A203-542-01-20	1
GASKET	A113-016-02-21	2
GASKET	A113-016-03-21	2
ANTIFREEZE	A000-989-08-25-10	1
BRAKE FLUID	A000-989-08-07-13	1
SENDER UNIT	A202-540-07-17	8

CONTENTS MERCEDES G 270 (DIESEL)

DESCRIPTION	PART NUMBER	QTY
FILTER, FUEL	A611-092-00-01	3
FILTER ELEMENT	A611-180-00-09	4
V-BELT	A014-997-43-92	1
FILTER ELEMENT	A611-094-01-04	3
SET BRAKE LINING, REAR	A463-423-02-10	1
BRAKE SHOE	A004-420-14-20	1
WIPER BLADE	s463-820-00-45	2
BULBS, SPARE SET	B6-81-0016	1
HORN	A203-542-01-20	1
HORN	A203-542-02-20	1
GASKET	A646-016-13-21	5
GASKET	A612-016-00-21	1
ANTIFREEZE	A000-989-08-25-10	1
BRAKE FLUID	A000-989-08-07-17	1
SENDER UNIT	A460-540-06-17	1

Appendix C: Personnel Emergency Kit

Kit contents for DART/Field Vehicles are determined by the DART/Field Safety and Security Officer. Personnel Emergency Kits include the following, but not limited to:

CONTENTS:

DESCRIPTION	QTY
CASE MREs	1
DRINKING WATER (PER PERSON)	4
BLANKETS (WARM WEATHER)	2
SLEEPING BAGS (COLD WEATHER)	2
FLASHLIGHT W/ SPARE BATTERIES/BULB	1
EMERGENCY SIGNALING DEVICE	1

Appendix D: Preventive Maintenance Checklist

OFDA Monthly Vehicle Preventative Maintenance Checklist

(May be required bi-weekly or any other interval as determined by the fleet manager)

Vehicle #:	Mileage:	Tag #:

Exterior

ITEM	OK	NO	COMMENTS
Tires	☐	☐	
Lug Nuts	☐	☐	
Head Lights	☐	☐	
Tail Lights	☐	☐	
Brake Lights	☐	☐	
Windows	☐	☐	
Mirrors	☐	☐	
Doors/Body	☐	☐	
Turn Signal	☐	☐	
Clean	☐	☐	

Engine Compartment

ITEM	OK	NO	COMMENTS
Air Filter	☐	☐	
Engine Oil	☐	☐	
Brake Fluid	☐	☐	
Radiator Coolant	☐	☐	
Radiator Hoses	☐	☐	
Fan Belts	☐	☐	
Power Steering	☐	☐	
Battery	☐	☐	
Transmission Fluid	☐	☐	
Windshield wipers & fluid	☐	☐	
Clean	☐	☐	

Under Carriage

ITEM	OK	NO	COMMENTS
Drive Line/U Bolts	☐	☐	
Front Shocks	☐	☐	
Tie Rods	☐	☐	
Exhaust System	☐	☐	
Rear Shocks	☐	☐	
Fluid Leaks	☐	☐	
Clean	☐	☐	

Interior

ITEM	OK	NO	COMMENTS
Spare Tire(s)	☐	☐	
Jack	☐	☐	
Windshield Wipers	☐	☐	
Clutch	☐	☐	
Steering	☐	☐	
Brake Pads	☐	☐	
Emergency Brake	☐	☐	
Vehicle Kit	☐	☐	
Personnel Kit	☐	☐	
First Aid Kit	☐	☐	
Fire Extinguisher	☐	☐	
Communication Equipment	☐	☐	
Clean	☐	☐	

Next Service Check/Oil Change	Date:	Miles:

Description of Non-Operational Items and Correction Date:

Inspected by:		Date:	

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Appendix D: Preventive Maintenance Checklist

OFDA Monthly Vehicle Preventative Maintenance Checklist
(May be required bi-weekly or any other interval as determined by the fleet manager)

Vehicle #:	Mileage:	Tag #:

Exterior

ITEM	OK	NO	COMMENTS
Tires	☐	☐	
Lug Nuts	☐	☐	
Head Lights	☐	☐	
Tail Lights	☐	☐	
Brake Lights	☐	☐	
Windows	☐	☐	
Mirrors	☐	☐	
Doors/Body	☐	☐	
Turn Signal	☐	☐	
Clean	☐	☐	

Engine Compartment

ITEM	OK	NO	COMMENTS
Air Filter	☐	☐	
Engine Oil	☐	☐	
Brake Fluid	☐	☐	
Radiator Coolant	☐	☐	
Radiator Hoses	☐	☐	
Fan Belts	☐	☐	
Power Steering	☐	☐	
Battery	☐	☐	
Transmission Fluid	☐	☐	
Windshield wipers & fluid	☐	☐	
Clean	☐	☐	

Under Carriage

ITEM	OK	NO	COMMENTS
Drive Line/U Bolts	☐	☐	
Front Shocks	☐	☐	
Tie Rods	☐	☐	
Exhaust System	☐	☐	
Rear Shocks	☐	☐	
Fluid Leaks	☐	☐	
Clean	☐	☐	

Interior

ITEM	OK	NO	COMMENTS
Spare Tire(s)	☐	☐	
Jack	☐	☐	
Windshield Wipers	☐	☐	
Clutch	☐	☐	
Steering	☐	☐	
Brake Pads	☐	☐	
Emergency Brake	☐	☐	
Vehicle Kit	☐	☐	
Personnel Kit	☐	☐	
First Aid Kit	☐	☐	
Fire Extinguisher	☐	☐	
Communication Equipment	☐	☐	
Clean	☐	☐	

Next Service Check/Oil Change	Date:	Miles:

Description of Non-Operational Items and Correction Date:

Inspected by:		Date:	

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OFDA Monthly Vehicle Preventative Maintenance Checklist

(May be required bi-weekly or any other interval as determined by the fleet manager)

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Lug Nuts	☐	☐	
Head Lights	☐	☐	
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Windows	☐	☐	
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Doors/Body	☐	☐	
Turn Signal	☐	☐	
Clean	☐	☐	

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Power Steering	☐	☐	
Battery	☐	☐	
Transmission Fluid	☐	☐	
Windshield wipers & fluid	☐	☐	
Clean	☐	☐	

Under Carriage

ITEM	OK	NO	COMMENTS
Drive Line/U Bolts	☐	☐	
Front Shocks	☐	☐	
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Exhaust System	☐	☐	
Rear Shocks	☐	☐	
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Interior

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Spare Tire(s)	☐	☐	
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Windshield Wipers	☐	☐	
Clutch	☐	☐	
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Brake Pads	☐	☐	
Emergency Brake	☐	☐	
Vehicle Kit	☐	☐	
Personnel Kit	☐	☐	
First Aid Kit	☐	☐	
Fire Extinguisher	☐	☐	
Communication Equipment	☐	☐	
Clean	☐	☐	

Next Service Check/Oil Change	Date:	Miles:

Description of Non-Operational Items and Correction Date:

Inspected by:		Date:	

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Appendix D: Preventive Maintenance Checklist

OFDA Monthly Vehicle Preventative Maintenance Checklist
(May be required bi-weekly or any other interval as determined by the fleet manager)

Vehicle #:	Mileage:	Tag #:

Exterior

ITEM	OK	NO	COMMENTS
Tires	☐	☐	
Lug Nuts	☐	☐	
Head Lights	☐	☐	
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Brake Lights	☐	☐	
Windows	☐	☐	
Mirrors	☐	☐	
Doors/Body	☐	☐	
Turn Signal	☐	☐	
Clean	☐	☐	

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ITEM	OK	NO	COMMENTS
Air Filter	☐	☐	
Engine Oil	☐	☐	
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Radiator Coolant	☐	☐	
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Fan Belts	☐	☐	
Power Steering	☐	☐	
Battery	☐	☐	
Transmission Fluid	☐	☐	
Windshield wipers & fluid	☐	☐	
Clean	☐	☐	

Under Carriage

ITEM	OK	NO	COMMENTS
Drive Line/U Bolts	☐	☐	
Front Shocks	☐	☐	
Tie Rods	☐	☐	
Exhaust System	☐	☐	
Rear Shocks	☐	☐	
Fluid Leaks	☐	☐	
Clean	☐	☐	

Interior

ITEM	OK	NO	COMMENTS
Spare Tire(s)	☐	☐	
Jack	☐	☐	
Windshield Wipers	☐	☐	
Clutch	☐	☐	
Steering	☐	☐	
Brake Pads	☐	☐	
Emergency Brake	☐	☐	
Vehicle Kit	☐	☐	
Personnel Kit	☐	☐	
First Aid Kit	☐	☐	
Fire Extinguisher	☐	☐	
Communication Equipment	☐	☐	
Clean	☐	☐	

Next Service Check/Oil Change	Date:	Miles:

Description of Non-Operational Items and Correction Date:

Inspected by:		Date:	

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Appendix D: Preventive Maintenance Checklist

OFDA Monthly Vehicle Preventative Maintenance Checklist

(May be required bi-weekly or any other interval as determined by the fleet manager)

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Exterior

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Windows	☐	☐	
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Turn Signal	☐	☐	
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Engine Compartment

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Air Filter	☐	☐	
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Radiator Coolant	☐	☐	
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Fan Belts	☐	☐	
Power Steering	☐	☐	
Battery	☐	☐	
Transmission Fluid	☐	☐	
Windshield wipers & fluid	☐	☐	
Clean	☐	☐	

Under Carriage

ITEM	OK	NO	COMMENTS
Drive Line/U Bolts	☐	☐	
Front Shocks	☐	☐	
Tie Rods	☐	☐	
Exhaust System	☐	☐	
Rear Shocks	☐	☐	
Fluid Leaks	☐	☐	
Clean	☐	☐	

Interior

ITEM	OK	NO	COMMENTS
Spare Tire(s)	☐	☐	
Jack	☐	☐	
Windshield Wipers	☐	☐	
Clutch	☐	☐	
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Brake Pads	☐	☐	
Emergency Brake	☐	☐	
Vehicle Kit	☐	☐	
Personnel Kit	☐	☐	
First Aid Kit	☐	☐	
Fire Extinguisher	☐	☐	
Communication Equipment	☐	☐	
Clean	☐	☐	

Next Service Check/Oil Change	Date:	Miles:

Description of Non-Operational Items and Correction Date:

Inspected by:		Date:	

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Appendix D: Preventive Maintenance Checklist

OFDA Monthly Vehicle Preventative Maintenance Checklist
(May be required bi-weekly or any other interval as determined by the fleet manager)

Vehicle #:	Mileage:	Tag #:

Exterior

ITEM	OK	NO	COMMENTS
Tires	☐	☐	
Lug Nuts	☐	☐	
Head Lights	☐	☐	
Tail Lights	☐	☐	
Brake Lights	☐	☐	
Windows	☐	☐	
Mirrors	☐	☐	
Doors/Body	☐	☐	
Turn Signal	☐	☐	
Clean	☐	☐	

Engine Compartment

ITEM	OK	NO	COMMENTS
Air Filter	☐	☐	
Engine Oil	☐	☐	
Brake Fluid	☐	☐	
Radiator Coolant	☐	☐	
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Fan Belts	☐	☐	
Power Steering	☐	☐	
Battery	☐	☐	
Transmission Fluid	☐	☐	
Windshield wipers & fluid	☐	☐	
Clean	☐	☐	

Under Carriage

ITEM	OK	NO	COMMENTS
Drive Line/U Bolts	☐	☐	
Front Shocks	☐	☐	
Tie Rods	☐	☐	
Exhaust System	☐	☐	
Rear Shocks	☐	☐	
Fluid Leaks	☐	☐	
Clean	☐	☐	

Interior

ITEM	OK	NO	COMMENTS
Spare Tire(s)	☐	☐	
Jack	☐	☐	
Windshield Wipers	☐	☐	
Clutch	☐	☐	
Steering	☐	☐	
Brake Pads	☐	☐	
Emergency Brake	☐	☐	
Vehicle Kit	☐	☐	
Personnel Kit	☐	☐	
First Aid Kit	☐	☐	
Fire Extinguisher	☐	☐	
Communication Equipment	☐	☐	
Clean	☐	☐	

Next Service Check/Oil Change	Date:	Miles:

Description of Non-Operational Items and Correction Date:

Inspected by:		Date:	

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Appendix E: Vehicle Service Log

OFDA Vehicle Service Log				
Vehicle ID				
Date	**Mileage**	**Type of Service 3, 6 or 12 Month Inspection**	**Other Service**	**Description / Comment**
*See OFDA Vehicle Handbook for maintenance requirements for each inspection interval: Three month inspection, every 3,000 miles or 5,000 KM (whichever comes first) Six month inspection, every 6,000 miles or 10,000 KM (whichever comes first) Twelve month inspection, every 12,000 miles or 20,000 KM (whichever comes first)				

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Appendix E: Vehicle Service Log

OFDA Vehicle Service Log

Vehicle ID

Date	Mileage	Type of Service 3, 6 or 12 Month Inspection	Other Service	Description / Comment

*See OFDA Vehicle Handbook for maintenance requirements for each inspection interval:

Three month inspection, every 3,000 miles or 5,000 KM (whichever comes first)
Six month inspection, every 6,000 miles or 10,000 KM (whichever comes first)
Twelve month inspection, every 12,000 miles or 20,000 KM (whichever comes first)

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MINIMUM MAINTENANCE INTERVALS

Three-month inspection, every 3,000 miles or 5,000 KM (whichever comes first):

Change oil and filter
Replace air filter, PCV valve, and filter
Lubricate chassis
Check and "top off" all fluids
Check and adjust belts
Check all hoses
Check all lights
Check electrical, including all fuses
Check windshield wipers
Check and adjust doors
Check wheel alignment
Perform visual inspection of the brakes
Drive axle service
Check exhaust system

Six-month inspection, every 6,000 miles or 10,000 KM (whichever comes first):

All items listed in the three-month inspection
Inspect and rotate tires
Air-conditioning inspection and charge
Cooling system check
Tune-up engine (including replacement of fuel filter, spark plugs, and rotor)
Service transmission (includes replacing fluid, filter, and gasket)
Pack front wheel bearings and replace seals
Visual inspection of front and rear shocks

Twelve-month inspection, every 12,000 miles or 20,000 KM (whichever comes first):

All items listed in the three/six-month inspection
Clean and flush cooling system and replace with coolant recommended for the climate
Replace brake pads and shoes, and bleed brakes
Inspect front/rear axles and change fluids
Inspect shields and under hood insulation
Check thermostatically controlled engine cooling fan

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Appendix F: Motor Vehicle Accident Report

Remove forms for use

MOTOR VEHICLE ACCIDENT REPORT	Please read the Privacy Act Statement on Page 3.	INSTRUCTIONS: Sections I thru IX are filled out by the vehicle operator. Section X, Items 72 thru 82c are filled out by the operator's supervisor. Sections XI thru XIII are filled out by an accident investigator for bodily injury, fatality, and/or damage exceeding $500.

SECTION I - FEDERAL VEHICLE DATA

1. DRIVER'S NAME *(Last, first, middle)*	2. DRIVER'S LICENSE NO./STATE/LIMITATIONS	3. DATE OF ACCIDENT

4a. DEPARTMENT/FEDERAL AGENCY PERMANENT OFFICE ADDRESS	4b. WORK TELEPHONE NUMBER
	( )

5. TAG OR IDENTIFICATION NUMBER	6. EST. REPAIR COST	7. YEAR OF VEHICLE	8. MAKE	9. MODEL	10. SEAT BELTS USED
	$				☐ YES ☐ NO

11. DESCRIBE VEHICLE DAMAGE	

SECTION II - OTHER VEHICLE DATA *(Use Section VIII if additional space is needed.)*

12. DRIVER'S NAME *(Last, first, middle)*	13. DRIVER'S LICENSE NUMBER/STATE/LIMITATIONS

14a. DRIVER'S WORK ADDRESS	14b. WORK TELEPHONE NUMBER
	( )
15a. DRIVER'S HOME ADDRESS	**15b. HOME TELEPHONE NUMBER**
	( )
16. DESCRIBE VEHICLE DAMAGE	**17. ESTIMATED REPAIR COST**
	$

18. YEAR OF VEHICLE	19. MAKE OF VEHICLE	20. MODEL OF VEHICLE	21. TAG NUMBER AND STATE

22a. DRIVER'S INSURANCE COMPANY NAME AND ADDRESS	22b. POLICY NUMBER
	22c. TELEPHONE NUMBER ( )

23. VEHICLE IS	24a. OWNER'S NAME(S) *(Last, first, middle)*	24b. TELEPHONE NUMBER
☐ CO-OWNED ☐ RENTAL ☐ LEASED ☐ PRIVATELY OWNED		( )

25. OWNER'S ADDRESS(ES)

SECTION III - KILLED OR INJURED *(Use Section VIII if additional space is needed.)*

A

26. NAME *(Last, first, middle)*	27. SEX	28. DATE OF BIRTH

29. ADDRESS

30. MARK "X" IN TWO APPROPRIATE BOXES	31. IN WHICH VEHICLE	32. LOCATION IN VEHICLE	33. FIRST AID GIVEN BY
☐ KILLED ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☐ PEDESTRIAN	☐ FED ☐ OTHER (2)		

34. TRANSPORTED BY	35. TRANSPORTED TO

B

36. NAME *(Last, first, middle)*	37. SEX	38. DATE OF BIRTH

39. ADDRESS

40. MARK "X" IN TWO APPROPRIATE BOXES	41. IN WHICH VEHICLE	42. LOCATION IN VEHICLE	43. FIRST AID GIVEN BY
☐ KILLED ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☐ PEDESTRIAN	☐ FED ☐ OTHER (2)		

44. TRANSPORTED BY	45. TRANSPORTED TO

46. Pedestrian

a. NAME OF STREET OR HIGHWAY	b. DIRECTION OF PEDESTRIAN *(SW corner to NE corner, etc.)*	
	FROM	TO
c. DESCRIBE WHAT PEDESTRIAN WAS DOING AT TIME OF ACCIDENT *(Crossing intersection with signal, against signal, diagonally; in roadway playing, walking, hitchhiking, etc.)*		

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91-110

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Prescribed by GSA - FPMR 101-38.6

SECTION IV - ACCIDENT TIME AND LOCATION *(Use Section VIII if additional space is needed.)*

47. DATE OF ACCIDENT

48. PLACE OF ACCIDENT *(Street address, city, state, ZIP Code; Nearest landmark; Distance nearest intersection; Kind of locality (industrial, business, residential, open country, etc.); Road description).*

49. TIME OF ACCIDENT

AM
PM

50. INDICATE ON THIS DIAGRAM HOW THE ACCIDENT HAPPENED

Use one of these outlines to sketch the scene. Write in street or highway names or numbers.

a. Number Federal vehicle as 1, other vehicle as 2, additional vehicle as 3 and show direction of travel with arrow.

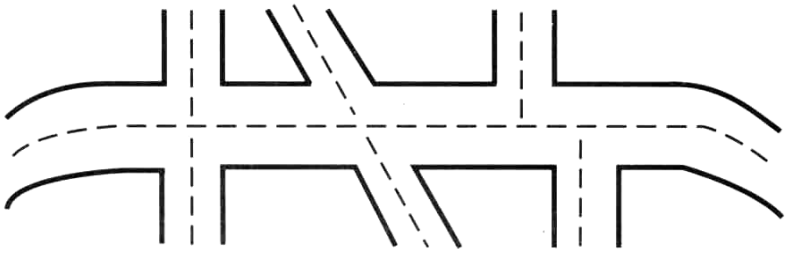
Example: → 1 2 ←

b. Use solid line to show path before accident → 2
and broken line after the accident - - - - - - - - - - - - 2

c. Show pedestrian by →

d. Show railroad by +++++++++++

e. Place arrow in this circle to indicate *NORTH*



51. POINT OF IMPACT *(Check one for each vehicle)*

FED	2	AREA
		a. FRONT
		b. R. FRONT
		c. L. FRONT
		d. REAR
		e. R. REAR
		f. L. REAR
		g. R. SIDE
		h. L. SIDE

52. DESCRIBE WHAT HAPPENED *(Refer to vehicles as "Fed", "2", "3", etc. Please include information on posted speed limit, approximate speed of the vehicles, road conditions, weather conditions, driver visibility, condition of accident vehicles, traffic controls (warning light, stop signal, etc.) condition of light (daylight, dusk, night, dawn, artificial light, etc.), and driver actions (making U-turn, passing, stopped in traffic, etc.).*

SECTION V - WITNESS/PASSENGER *(Witness must fill out SF 94, Statement of Witness) (Continue in Section VIII.)*

A

53. NAME *(Last, first, middle)*

54. WORK TELEPHONE NUMBER ( )

55. HOME TELEPHONE NUMBER ( )

56. BUSINESS ADDRESS

57. HOME ADDRESS

B

58. NAME *(Last, first, middle)*

59. WORK TELEPHONE NUMBER ( )

60. HOME TELEPHONE NUMBER ( )

61. BUSINESS ADDRESS

62. HOME ADDRESS

SECTION VI - PROPERTY DAMAGE *(Use Section VIII if additional space is needed.)*

63a. NAME OF OWNER

63b. OFFICE TELEPHONE NUMBER ( )

63c. HOME TELEPHONE NUMBER ( )

63d. BUSINESS ADDRESS

63e. HOME ADDRESS

64a. NAME OF INSURANCE COMPANY

64b. TELEPHONE NUMBER ( )

64c. POLICY NUMBER

65. ITEM DAMAGED

66. LOCATION OF DAMAGED ITEM

67. ESTIMATED COST $

SECTION VII - POLICE INFORMATION

68a. NAME OF POLICE OFFICER

68b. BADGE NUMBER

68c. TELEPHONE NUMBER ( )

69. PRECINCT OR HEADQUARTERS

70a. PERSON CHARGED WITH ACCIDENT

70b. VIOLATION(S)

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SECTION VIII - EXTRA DETAILS

SPACE FOR DETAILED ANSWERS. INDICATE SECTION AND ITEM NUMBER FOR EACH ANSWER. IF MORE SPACE IS NEEDED, CONTINUE ITEMS ON PLAIN BOND PAPER.

SECTION IX - FEDERAL DRIVER CERTIFICATION

In compliance with the Privacy Act of 1974, solicitation of the information requested on this form is authorized by Title 40 U.S.C. Section 491. Disclosure of the information by a Federal employee is mandatory as the first step in the Government's investigation of a motor vehicle accident. The principal purposes for using this information is to provide necessary data for legal counsel in legal actions resulting from the accident and to provide accident information/statistics in analyzing accident causes and developing methods of reducing accidents. Routine use of information may be by Federal, State or local governments, or agencies, when relevant to civil, criminal, or regulatory investigations or prosecutions. An employee of a Federal agency who fails to report accurately a motor vehicle accident involving a Federal vehicle or who refuses to cooperate in the investigation of an accident may be subject to administrative sanctions.

I certify that the information on this form *(Sections I thru VIII)* is correct to the best of my knowledge and belief.

71a. NAME AND TITLE OF DRIVER	71b. DRIVER'S SIGNATURE AND DATE

SECTION X - DETAILS OF TRIP DURING WHICH ACCIDENT OCCURRED

72. ORIGIN	73. DESTINATION

74. EXACT PURPOSE OF TRIP

75. TRIP BEGAN	DATE	TIME *(Circle one)*	76. ACCIDENT OCCURRED	DATE	TIME *(Circle one)*
		a.m. p.m.			a.m. p.m.

77. AUTHORITY FOR THE TRIP WAS GIVEN TO THE OPERATOR	78. WAS THERE ANY DEVIATION FROM DIRECT ROUTE
☐ ORALLY ☐ IN WRITING *(Explain)*	☐ NO ☐ YES *(Explain)*
79. WAS THE TRIP MADE WITHIN ESTABLISHED WORKING HOURS	80. DID THE OPERATOR, WHILE ENROUTE, ENGAGE IN ANY ACTIVITY OTHER THAN THAT FOR WHICH THE TRIP WAS AUTHORIZED.
☐ YES ☐ NO *(Explain)*	☐ NO ☐ YES *(Explain)*

81. COMPLETED BY DRIVER'S SUPERVISOR	a. DID THIS ACCIDENT OCCUR WITHIN THE EMPLOYEE'S SCOPE OF DUTY	b. COMMENTS
	☐ YES ☐ NO	

82a. NAME AND TITLE OF SUPERVISOR	82b. SUPERVISOR'S SIGNATURE AND DATE	82c. TELEPHONE NUMBER
		( )

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SECTION XI - ACCIDENT INVESTIGATION DATA

83. DID THE INVESTIGATION DISCLOSE CONFLICTING INFORMATION. ☐ YES ☐ NO *(If "Yes", explain below.)*

84. PERSONS INTERVIEWED

NAME	DATE	NAME	DATE
a.		c.	
b.		d.	

85. ADDITIONAL COMMENTS *(Indicate section and item number for each comment.)*

SECTION XII - ATTACHMENTS

LIST ALL ATTACHMENTS TO THIS REPORT

SECTION XIII - COMMENTS/APPROVALS

86. REVIEWING OFFICIAL'S COMMENTS

87. ACCIDENT INVESTIGATOR	88. ACCIDENT REVIEWING OFFICIAL
a. SIGNATURE AND DATE	a. SIGNATURE AND DATE
b. NAME *(First, middle, last)*	b. NAME *(First, middle, last)*
c. TITLE	c. TITLE
d. OFFICE	d. OFFICE
e. OFFICE TELEPHONE NUMBER ( )	e. OFFICE TELEPHONE NUMBER ( )

*U.S. GPO: 1993-300-892/60160

Appendix F: Motor Vehicle Accident Report

Remove forms for use

MOTOR VEHICLE ACCIDENT REPORT	Please read the Privacy Act Statement on Page 3.	INSTRUCTIONS: Sections I thru IX are filled out by the vehicle operator. Section X, Items 72 thru 82c are filled out by the operator's supervisor. Sections XI thru XIII are filled out by an accident investigator for bodily injury, fatality, and/or damage exceeding $500.

SECTION I - FEDERAL VEHICLE DATA

1. DRIVER'S NAME *(Last, first, middle)*	2. DRIVER'S LICENSE NO./STATE/LIMITATIONS	3. DATE OF ACCIDENT

4a. DEPARTMENT/FEDERAL AGENCY PERMANENT OFFICE ADDRESS	4b. WORK TELEPHONE NUMBER
	( )

5. TAG OR IDENTIFICATION NUMBER	6. EST. REPAIR COST	7. YEAR OF VEHICLE	8. MAKE	9. MODEL	10. SEAT BELTS USED
	$				☐ YES ☐ NO

11. DESCRIBE VEHICLE DAMAGE	

SECTION II - OTHER VEHICLE DATA *(Use Section VIII if additional space is needed.)*

12. DRIVER'S NAME *(Last, first, middle)*	13. DRIVER'S LICENSE NUMBER/STATE/LIMITATIONS

14a. DRIVER'S WORK ADDRESS	14b. WORK TELEPHONE NUMBER
	( )
15a. DRIVER'S HOME ADDRESS	15b. HOME TELEPHONE NUMBER
	( )
16. DESCRIBE VEHICLE DAMAGE	17. ESTIMATED REPAIR COST
	$

18. YEAR OF VEHICLE	19. MAKE OF VEHICLE	20. MODEL OF VEHICLE	21. TAG NUMBER AND STATE

22a. DRIVER'S INSURANCE COMPANY NAME AND ADDRESS	22b. POLICY NUMBER
	22c. TELEPHONE NUMBER ( )

23. VEHICLE IS	24a. OWNER'S NAME(S) *(Last, first, middle)*	24b. TELEPHONE NUMBER
☐ CO-OWNED ☐ RENTAL ☐ LEASED ☐ PRIVATELY OWNED		( )

25. OWNER'S ADDRESS(ES)

SECTION III - KILLED OR INJURED *(Use Section VIII if additional space is needed.)*

A

26. NAME *(Last, first, middle)*	27. SEX	28. DATE OF BIRTH

29. ADDRESS

30. MARK "X" IN TWO APPROPRIATE BOXES	31. IN WHICH VEHICLE	32. LOCATION IN VEHICLE	33. FIRST AID GIVEN BY
☐ KILLED ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☐ PEDESTRIAN	☐ FED ☐ OTHER (2)		

34. TRANSPORTED BY	35. TRANSPORTED TO

B

36. NAME *(Last, first, middle)*	37. SEX	38. DATE OF BIRTH

39. ADDRESS

40. MARK "X" IN TWO APPROPRIATE BOXES	41. IN WHICH VEHICLE	42. LOCATION IN VEHICLE	43. FIRST AID GIVEN BY
☐ KILLED ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☐ PEDESTRIAN	☐ FED ☐ OTHER (2)		

44. TRANSPORTED BY	45. TRANSPORTED TO

46. Pedestrian

a. NAME OF STREET OR HIGHWAY	b. DIRECTION OF PEDESTRIAN *(SW corner to NE corner, etc.)*	
	FROM	TO

c. DESCRIBE WHAT PEDESTRIAN WAS DOING AT TIME OF ACCIDENT *(Crossing intersection with signal, against signal, diagonally; in roadway playing, walking, hitchhiking, etc.)*

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Previous edition not usable

91-110

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Prescribed by GSA - FPMR 101-38.6

SECTION IV - ACCIDENT TIME AND LOCATION *(Use Section VIII if additional space is needed.)*

47. DATE OF ACCIDENT	48. PLACE OF ACCIDENT *(Street address, city, state, ZIP Code; Nearest landmark; Distance nearest intersection; Kind of locality (industrial, business, residential, open country, etc.); Road description).*
49. TIME OF ACCIDENT AM PM	

50. INDICATE ON THIS DIAGRAM HOW THE ACCIDENT HAPPENED

Use one of these outlines to sketch the scene. Write in street or highway names or numbers.

a. Number Federal vehicle as 1, other vehicle as 2, additional vehicle as 3 and show direction of travel with arrow.

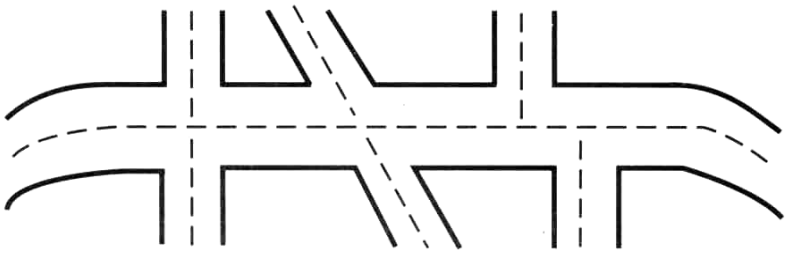
Example: → 1 2 ←

b. Use solid line to show path before accident → 2
and broken line after the accident - - - - - - - - - - - - 2

c. Show pedestrian by →

d. Show railroad by +++++++++++++

e. Place arrow in this circle to indicate *NORTH*



51. POINT OF IMPACT *(Check one for each vehicle)*

FED	2	AREA
		a. FRONT
		b. R. FRONT
		c. L. FRONT
		d. REAR
		e. R. REAR
		f. L. REAR
		g. R. SIDE
		h. L. SIDE

52. DESCRIBE WHAT HAPPENED *(Refer to vehicles as "Fed", "2", "3", etc. Please include information on posted speed limit, approximate speed of the vehicles, road conditions, weather conditions, driver visibility, condition of accident vehicles, traffic controls (warning light, stop signal, etc.) condition of light (daylight, dusk, night, dawn, artificial light, etc.), and driver actions (making U-turn, passing, stopped in traffic, etc.).*

SECTION V - WITNESS/PASSENGER *(Witness must fill out SF 94, Statement of Witness) (Continue in Section VIII.)*

A	53. NAME *(Last, first, middle)*	54. WORK TELEPHONE NUMBER ( )	55. HOME TELEPHONE NUMBER ( )
	56. BUSINESS ADDRESS	57. HOME ADDRESS	
B	58. NAME *(Last, first, middle)*	59. WORK TELEPHONE NUMBER ( )	60. HOME TELEPHONE NUMBER ( )
	61. BUSINESS ADDRESS	62. HOME ADDRESS	

SECTION VI - PROPERTY DAMAGE *(Use Section VIII if additional space is needed.)*

63a. NAME OF OWNER	63b. OFFICE TELEPHONE NUMBER ( )	63c. HOME TELEPHONE NUMBER ( )
63d. BUSINESS ADDRESS	63e. HOME ADDRESS	
64a. NAME OF INSURANCE COMPANY	64b. TELEPHONE NUMBER ( )	64c. POLICY NUMBER

65. ITEM DAMAGED	66. LOCATION OF DAMAGED ITEM	67. ESTIMATED COST $

SECTION VII - POLICE INFORMATION

68a. NAME OF POLICE OFFICER	68b. BADGE NUMBER	68c. TELEPHONE NUMBER ( )
69. PRECINCT OR HEADQUARTERS	70a. PERSON CHARGED WITH ACCIDENT	70b. VIOLATION(S)

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SECTION VIII - EXTRA DETAILS

SPACE FOR DETAILED ANSWERS. INDICATE SECTION AND ITEM NUMBER FOR EACH ANSWER. IF MORE SPACE IS NEEDED, CONTINUE ITEMS ON PLAIN BOND PAPER.

SECTION IX - FEDERAL DRIVER CERTIFICATION

In compliance with the Privacy Act of 1974, solicitation of the information requested on this form is authorized by Title 40 U.S.C. Section 491. Disclosure of the information by a Federal employee is mandatory as the first step in the Government's investigation of a motor vehicle accident. The principal purposes for using this information is to provide necessary data for legal counsel in legal actions resulting from the accident and to provide accident information/statistics in analyzing accident causes and developing methods of reducing accidents. Routine use of information may be by Federal, State or local governments, or agencies, when relevant to civil, criminal, or regulatory investigations or prosecutions. An employee of a Federal agency who fails to report accurately a motor vehicle accident involving a Federal vehicle or who refuses to cooperate in the investigation of an accident may be subject to administrative sanctions.

I certify that the information on this form *(Sections I thru VIII)* is correct to the best of my knowledge and belief.

71a. NAME AND TITLE OF DRIVER	71b. DRIVER'S SIGNATURE AND DATE

SECTION X - DETAILS OF TRIP DURING WHICH ACCIDENT OCCURRED

72. ORIGIN	73. DESTINATION

74. EXACT PURPOSE OF TRIP

	DATE	TIME *(Circle one)*		DATE	TIME *(Circle one)*
75. TRIP BEGAN		a.m. p.m.	76. ACCIDENT OCCURRED		a.m. p.m.

77. AUTHORITY FOR THE TRIP WAS GIVEN TO THE OPERATOR	78. WAS THERE ANY DEVIATION FROM DIRECT ROUTE
☐ ORALLY ☐ IN WRITING *(Explain)*	☐ NO ☐ YES *(Explain)*
79. WAS THE TRIP MADE WITHIN ESTABLISHED WORKING HOURS	80. DID THE OPERATOR, WHILE ENROUTE, ENGAGE IN ANY ACTIVITY OTHER THAN THAT FOR WHICH THE TRIP WAS AUTHORIZED.
☐ YES ☐ NO *(Explain)*	☐ NO ☐ YES *(Explain)*

81. COMPLETED BY DRIVER'S SUPERVISOR	a. DID THIS ACCIDENT OCCUR WITHIN THE EMPLOYEE'S SCOPE OF DUTY ☐ YES ☐ NO	b. COMMENTS

82a. NAME AND TITLE OF SUPERVISOR	82b. SUPERVISOR'S SIGNATURE AND DATE	82c. TELEPHONE NUMBER
		( )

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SECTION XI - ACCIDENT INVESTIGATION DATA

83. DID THE INVESTIGATION DISCLOSE CONFLICTING INFORMATION. ☐ YES ☐ NO *(If "Yes", explain below.)*

84. PERSONS INTERVIEWED

NAME	DATE	NAME	DATE
a.		c.	
b.		d.	

85. ADDITIONAL COMMENTS *(Indicate section and item number for each comment.)*

SECTION XII - ATTACHMENTS

LIST ALL ATTACHMENTS TO THIS REPORT

SECTION XIII - COMMENTS/APPROVALS

86. REVIEWING OFFICIAL'S COMMENTS

87. ACCIDENT INVESTIGATOR	88. ACCIDENT REVIEWING OFFICIAL
a. SIGNATURE AND DATE	a. SIGNATURE AND DATE
b. NAME *(First, middle, last)*	b. NAME *(First, middle, last)*
c. TITLE	c. TITLE
d. OFFICE	d. OFFICE
e. OFFICE TELEPHONE NUMBER ( )	e. OFFICE TELEPHONE NUMBER ( )

*U.S. GPO: 1993-300-892/60160

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Appendix G: Vehicle Initial Inspection

OFDA Vehicle Initial Inspection Report
(To be completed by Fleet Manager for vehicles entering or leaving the field fleet)

Vehicle #:	Mileage:	Tag #:
Last oil/filter change date _____ Mileage_____ Is maintenance on schedule? ☐ Yes ☐ No Is maintenance being done today? ☐ Yes ☐ No	NOTE MAJOR MAINTENANCE/REPAIR SINCE LAST SURVEY.	

EXTERIOR

ITEM	OK	NO	COMMENTS
Body condition (reverse side of form)	☐	☐	
Head Lights	☐	☐	
Tail Lights	☐	☐	
Brake Lights	☐	☐	
Turn Signals	☐	☐	
Windows	☐	☐	
Window Wipers	☐	☐	
Mirrors	☐	☐	
Horn	☐	☐	
	☐	☐	

TIRES & ACCESSORIES

ITEM	OK	NO	COMMENTS
Left Front	☐	☐	
Right Front	☐	☐	
Left Rear	☐	☐	
Right Rear	☐	☐	
Spare	☐	☐	
Lug Nuts	☐	☐	
Jack	☐	☐	
Lug Nut Wrench	☐	☐	

UNDER CARRIAGE

ITEM	OK	NO	COMMENTS
Drive Line	☐	☐	
Front Shocks	☐	☐	
Rear Shocks	☐	☐	
Tie Rods	☐	☐	
Exhaust System	☐	☐	
Springs	☐	☐	
Frame	☐	☐	

COMMUNICATION EQUIPMENT

ITEM	OK	NO	COMMENTS
Capsat Phone	☐	☐	
HF (Codan) Radio	☐	☐	
VHF Radio	☐	☐	
UHF Radio	☐	☐	

ENGINE FLUIDS

ITEM	OK	NO	COMMENTS
Radiator Coolant	☐	☐	
Engine Oil	☐	☐	
Brake Fluid	☐	☐	
Power Steering Fluid	☐	☐	
Windshield Wiper Fluid	☐	☐	
Transmission Fluid	☐	☐	

ENGINE COMPARTMENT

ITEM	OK	NO	COMMENTS
Hoses	☐	☐	
Belts	☐	☐	
Battery	☐	☐	
Air Filter	☐	☐	
Radiator	☐	☐	
Master Brake Cylinder	☐	☐	
Fluid Leakage	☐	☐	
Clean	☐	☐	

OPERATIONAL CONDITION

ITEM	OK	NO	COMMENTS
Engine Running	☐	☐	
Clutch	☐	☐	
Steering	☐	☐	
Brakes	☐	☐	
Parking Brake	☐	☐	
Air Conditioning	☐	☐	
Radio / CD Player	☐	☐	
Windows / Doors	☐	☐	

INTERIOR

ITEM	OK	NO	COMMENTS
Upholstery	☐	☐	
Instrument Panel	☐	☐	
Fire Extinguisher	☐	☐	
First Aid Kit	☐	☐	
Vehicle Emergency Kit	☐	☐	
Personnel Emerge. Kit	☐	☐	

Description of Non-Operational Items and Correction Date:

Indicate any damage to the vehicle exterior on the graphic on the reverse side (or next page).

Inspected by:		Date:	

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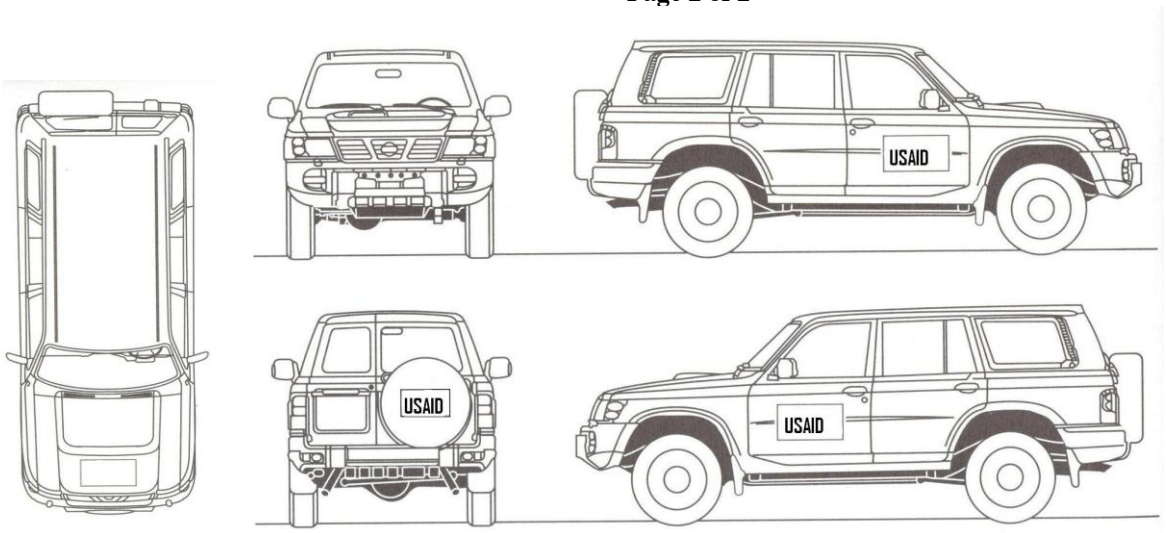
VEHICLE INITIAL INSPECTION REPORT
EXTERIOR DAMAGE

Page 2 of 2



Indicate any damage to the vehicle in the space provided below using your own words and/or the following legend. Circle the damaged area(s) on the drawings above.

H – Hairline Scratch	PT – Pitted	T – Torn	B – Bent	GC – Class Cracked
M – Missing	SM – Smashed	R – Rusty	CR – Creased	S – Scratched
ST – Stained	BR – Broken	D – Dented		

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OFDA Vehicle Initial Inspection Report
(To be completed by Fleet Manager for vehicles entering or leaving the field fleet)

Vehicle #:				**Mileage:**			**Tag #:**
Last oil/filter change date _____ Mileage_____ **Is maintenance on schedule?** ☐ Yes ☐ No **Is maintenance being done today?** ☐ Yes ☐ No				NOTE MAJOR MAINTENANCE/REPAIR SINCE LAST SURVEY.			
EXTERIOR				**ENGINE FLUIDS**			
ITEM	**OK**	**NO**	**COMMENTS**	**ITEM**	**OK**	**NO**	**COMMENTS**
Body condition (reverse side of form)	☐	☐		Radiator Coolant	☐	☐	
Head Lights	☐	☐		Engine Oil	☐	☐	
Tail Lights	☐	☐		Brake Fluid	☐	☐	
Brake Lights	☐	☐		Power Steering Fluid	☐	☐	
Turn Signals	☐	☐		Windshield Wiper Fluid	☐	☐	
Windows	☐	☐		Transmission Fluid	☐	☐	
Window Wipers	☐	☐		**ENGINE COMPARTMENT**			
Mirrors	☐	☐		**ITEM**	**OK**	**NO**	**COMMENTS**
Horn	☐	☐		Hoses	☐	☐	
	☐	☐		Belts	☐	☐	
TIRES & ACCESSORIES				Battery	☐	☐	
ITEM	**OK**	**NO**	**COMMENTS**	Air Filter	☐	☐	
Left Front	☐	☐		Radiator	☐	☐	
Right Front	☐	☐		Master Brake Cylinder	☐	☐	
Left Rear	☐	☐		Fluid Leakage	☐	☐	
Right Rear	☐	☐		Clean	☐	☐	
Spare	☐	☐		**OPERATIONAL CONDITION**			
Lug Nuts	☐	☐		**ITEM**	**OK**	**NO**	**COMMENTS**
Jack	☐	☐		Engine Running	☐	☐	
Lug Nut Wrench	☐	☐		Clutch	☐	☐	
UNDER CARRIAGE				Steering	☐	☐	
ITEM	**OK**	**NO**	**COMMENTS**	Brakes	☐	☐	
Drive Line	☐	☐		Parking Brake	☐	☐	
Front Shocks	☐	☐		Air Conditioning	☐	☐	
Rear Shocks	☐	☐		Radio / CD Player	☐	☐	
Tie Rods	☐	☐		Windows / Doors	☐	☐	
Exhaust System	☐	☐		**INTERIOR**			
Springs	☐	☐		**ITEM**	**OK**	**NO**	**COMMENTS**
Frame	☐	☐		Upholstery	☐	☐	
COMMUNICATION EQUIPMENT				Instrument Panel	☐	☐	
ITEM	**OK**	**NO**	**COMMENTS**	Fire Extinguisher	☐	☐	
Capsat Phone	☐	☐		First Aid Kit	☐	☐	
HF (Codan) Radio	☐	☐		Vehicle Emergency Kit	☐	☐	
VHF Radio	☐	☐		Personnel Emerge. Kit	☐	☐	
UHF Radio	☐	☐					
Description of Non-Operational Items and Correction Date:							
Indicate any damage to the vehicle exterior on the graphic on the reverse side (or next page).							
Inspected by:				**Date:**			

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VEHICLE INITIAL INSPECTION REPORT
EXTERIOR DAMAGE

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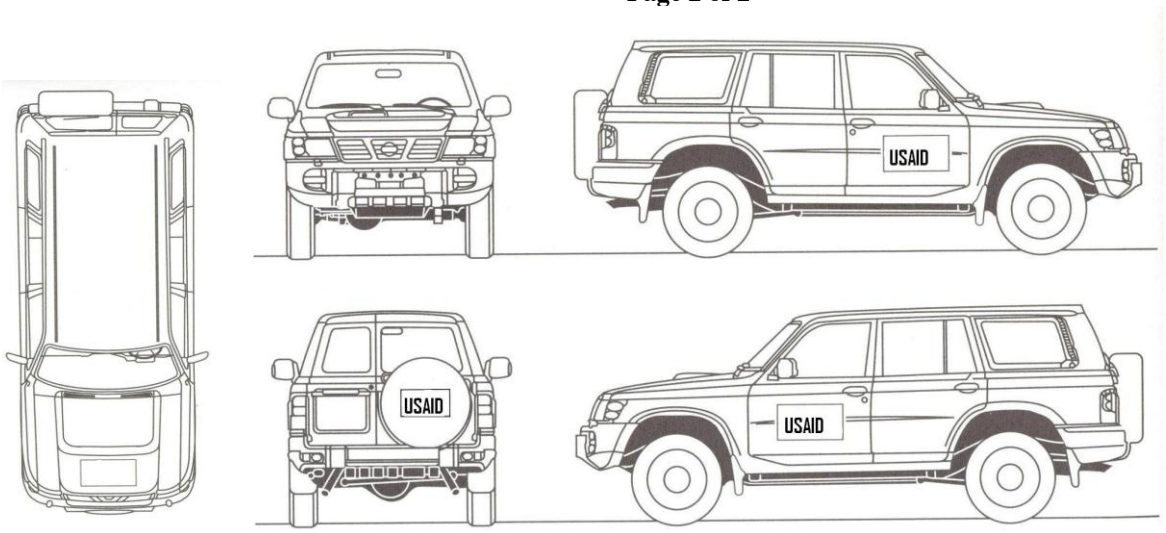

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Appendix G: Vehicle Initial Inspection

OFDA Vehicle Initial Inspection Report
(To be completed by Fleet Manager for vehicles entering or leaving the field fleet)

Vehicle #:	Mileage:	Tag #:
Last oil/filter change date _____ Mileage_____ Is maintenance on schedule? ☐ Yes ☐ No Is maintenance being done today? ☐ Yes ☐ No	NOTE MAJOR MAINTENANCE/REPAIR SINCE LAST SURVEY.	

EXTERIOR				ENGINE FLUIDS			
ITEM	OK	NO	COMMENTS	ITEM	OK	NO	COMMENTS
Body condition (reverse side of form)	☐	☐		Radiator Coolant	☐	☐	
Head Lights	☐	☐		Engine Oil	☐	☐	
Tail Lights	☐	☐		Brake Fluid	☐	☐	
Brake Lights	☐	☐		Power Steering Fluid	☐	☐	
Turn Signals	☐	☐		Windshield Wiper Fluid	☐	☐	
Windows	☐	☐		Transmission Fluid	☐	☐	
Window Wipers	☐	☐		ENGINE COMPARTMENT			
Mirrors	☐	☐		ITEM	OK	NO	COMMENTS
Horn	☐	☐		Hoses	☐	☐	
	☐	☐		Belts	☐	☐	
TIRES & ACCESSORIES				Battery	☐	☐	
ITEM	OK	NO	COMMENTS	Air Filter	☐	☐	
Left Front	☐	☐		Radiator	☐	☐	
Right Front	☐	☐		Master Brake Cylinder	☐	☐	
Left Rear	☐	☐		Fluid Leakage	☐	☐	
Right Rear	☐	☐		Clean	☐	☐	
Spare	☐	☐		OPERATIONAL CONDITION			
Lug Nuts	☐	☐		ITEM	OK	NO	COMMENTS
Jack	☐	☐		Engine Running	☐	☐	
Lug Nut Wrench	☐	☐		Clutch	☐	☐	
UNDER CARRIAGE				Steering	☐	☐	
ITEM	OK	NO	COMMENTS	Brakes	☐	☐	
Drive Line	☐	☐		Parking Brake	☐	☐	
Front Shocks	☐	☐		Air Conditioning	☐	☐	
Rear Shocks	☐	☐		Radio / CD Player	☐	☐	
Tie Rods	☐	☐		Windows / Doors	☐	☐	
Exhaust System	☐	☐		INTERIOR			
Springs	☐	☐		ITEM	OK	NO	COMMENTS
Frame	☐	☐		Upholstery	☐	☐	
COMMUNICATION EQUIPMENT				Instrument Panel	☐	☐	
ITEM	OK	NO	COMMENTS	Fire Extinguisher	☐	☐	
Capsat Phone	☐	☐		First Aid Kit	☐	☐	
HF (Codan) Radio	☐	☐		Vehicle Emergency Kit	☐	☐	
VHF Radio	☐	☐		Personnel Emerge. Kit	☐	☐	
UHF Radio	☐	☐					

Description of Non-Operational Items and Correction Date:			
Indicate any damage to the vehicle exterior on the graphic on the reverse side (or next page).			
Inspected by:		Date:	

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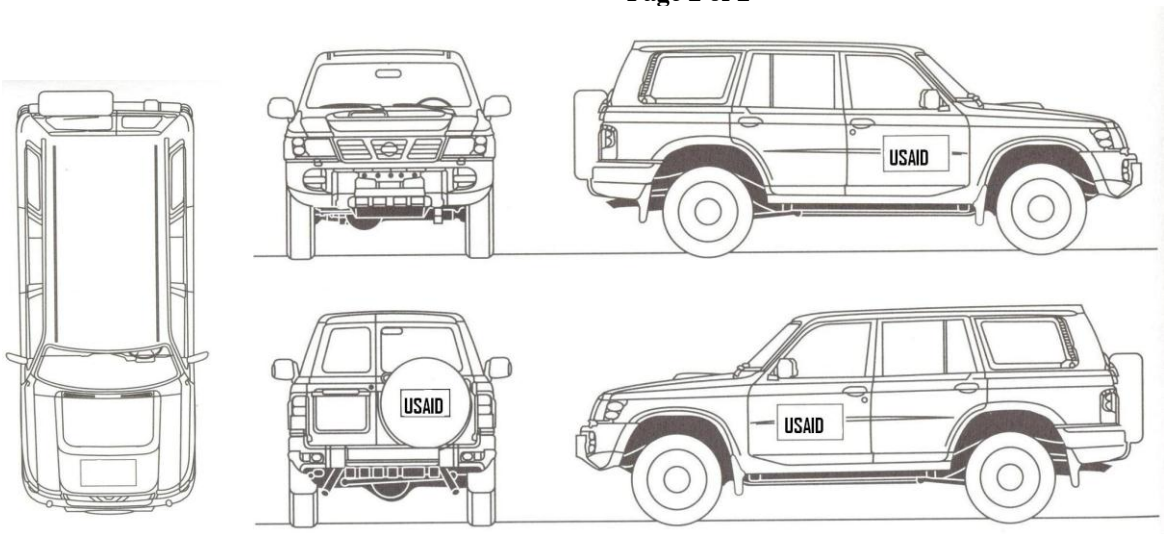
VEHICLE INITIAL INSPECTION REPORT
EXTERIOR DAMAGE

Page 2 of 2



Indicate any damage to the vehicle in the space provided below using your own words and/or the following legend. Circle the damaged area(s) on the drawings above.

H – Hairline Scratch	PT – Pitted	T – Torn	B – Bent	GC – Class Cracked
M – Missing	SM – Smashed	R – Rusty	CR – Creased	S – Scratched
ST – Stained	BR – Broken	D – Dented		

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Appendix H: Support Vehicle Inventory

DART-- SUPPORT VEHICLE INVENTORY	1. Disaster Name						2. Date Prepared	
Vehicle/Equipment Information								
Ref #	Vehicle Make	Vehicle Model	VIN or Chassis Number	Vehicle License	# of Seats	Color	Fuel Type Gas or Diesel	Armor None, Light or Full
Page of			5. Prepared by					

To be used by Logistics lead on DART deployments

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Appendix H: Support Vehicle Inventory

DART-- SUPPORT VEHICLE INVENTORY	1. Disaster Name						2. Date Prepared	
Vehicle/Equipment Information								
Ref #	Vehicle Make	Vehicle Model	VIN or Chassis Number	Vehicle License	# of Seats	Color	Fuel Type Gas or Diesel	Armor None, Light or Full
Page of			5. Prepared by					

To be used by Logistics lead on DART deployments

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Appendix I: Parts Slip and Work Required Form

USAID TO PARTS SLIP AND WORK REQUIRED		INVOICE NUMBER	
DATE AND TIME IN	**DATE AND TIME OUT**	**JOB NUMBER**	
TYPE AND SIZE	**INITIAL INSPECTION (INITIALS)**	☐	**1000 miles (1610 kilometers) or monthly**
MAKE, MODEL, YR	**FINAL INSPECTION (INITIALS)**	☐	**6000 miles (9660 kilometers) or six months**
Plate Number	**Mileage and Kilometers (Only Fill in 1)**	☐	**Other**

PARTS

Quantity	Stock Number	Description	Unit Cost	Cost
Reqr.	**Rec**			
				3.00
				4.00
				5.00
				6.00
				7.00
Received by (Signature)			**Total Parts**	**25.00**

MAINTENANCE

Mech #	Description of Work	Est. Time	Act. Time	Insp.	Labor Cost
Signature of Foreman or Inspector		Total Labor Cost ➢			**1.00**
TO CONVERT	**MULTIPLY BY**	**Total Cost (Parts &Labor)** ➢			**0.00**
Miles into Kilometers	**1.61**				
Pounds to Kilograms	**.45**				
Gallon into Liters	**3.79**				

Remove Form from Book for use **Please photocopy for additional copies**

Instructions

1. Parts Slip and Work Required Forms, consisting of (2)two copies, is used to record all maintenance services or repairs accomplished and as an authorization document to obtain and account for vehicle repair parts.
2. Specific work to be Accomplished by maintenance personnel, estimated time and any known parts required will be entered in appropriate sections by inspecting personnel prior to a vehicle entering the maintenance shop. Both copies of the form are sent to the maintenance shop with the vehicle.
3. On completion of required maintenance service or repairs, completed original copy will be used to accumulate required statistical data ant to post job costs on Vehicle Repair Data Record. Original copy will then be filled in vehicle jacket file. Duplicate copy of form which reflects any issue of repair parts will be filled in the parts supply to substantiate repair parts issue.
4. Heading will be completed by W/O clerk (Work Order Clerk).
   a. Inv. number - Enter the card number block 2, Motor Vehicle Record, Form AID 5-197.
   b. Date and Time in - Enter current date and time vehicle was released for maintenance service or repair by the dispatcher.
   c. Date and Time out - Enter current date and time vehicle was released by inspecting personnel on completion of final inspection to the dispatcher.
   d, Job number - Enter job order number from job register. Job order numbers will be assigned to both scheduled and unscheduled services or repairs.
   e. Type - Enter correct nomenclature of vehicle as per Motor Vehicle Record Form AID 5-197.
   f. Initial inspection (Initials) - Enter the initials of personnel inspecting the vehicle prior to entering the maintenance shop.
   g. Type of work(x) one - Enter x mark by type of maintenance service required. Block entitled other will be checked when lubrication or unscheduled repairs are required .
   h. Model and Make - Enter the model of vehicle , 1963 Chevrolet, 1961 Ford, etc
   i. Final inspection (initials)- Enter the initial of personnel accomplishing final inspection.
   j Mileage - Enter current mileage of the vehicle.
5. Parts - When repair parts are required , both copies of the form will be presented to the repair parts supply clerk.
   a. When available, repair parts are issued, receipted for and for the duplicate copy is retained in the repair parts supply to substantiate issue. The original copy reflecting repair parts issue is returned to the requester.
   b. When any or all of the repair parts are not available, the original copy, reflecting any issues made, will be returned to the repair parts requester. The original is then used as a basis to initiate local or off-shore procurement action for the repair parts not available. After procurement action for repair parts which were not available has been initiated, the following will be effected :
      (1) When the vehicle remains inoperative due to lack of repair parts, the original is held in suspense pending receipt of repair parts. The job order will remain open until repair parts are received and issued.
      (2) When the inspector determine that the vehicle can safely continue in operation with out the required repair part, the duplicate copy reflecting issues will be finalized and the job order closed. When the required part is received , the supply clerk will take action to notify the Motor Transport Supervisor. A new job order will be issued and necessary work accomplished.
   c. Parts portion of form will be accomplished as follows:
      (1) Quantity required - inspector or mechanic will enter quantity of item required.
      (2) Quantity received - Repair parts clerk will enter quantity of item issued form repair parts supply.
      (3) Stock number - repair part clerk will enter stock number of the required item
      (4) Description - Inspector or mechanic will enter description of required item.
      (5) Unit price - repair part clerk will enter unit price of item.
      (6) Cost - Repair part clerk will enter total cost for item received.
      (7) Received by - Enter signature of individual receiving repair parts.
      (8) Total parts cost - Enter total cost for all parts received on the job order.
6. Maintenance
   a. Only maintenance services or repairs indicated by inspecting personnel will be accomplished. Where additional work is required that was not entered on form during initial inspection, the inspector or shop foreman will be notified and a determination made as to whether work will be accomplished or deferred.
   b. Maintenance portion of form will be completed as follows:
      (1) Mechanic number - Enter the number assigned to Inspector or maintenance personnel.
      (2) Description of work - Enter the description of specific work to be performed . Work performed by inspection personnel will also be shown.
      (3) Estimated time - Inspecting personnel will enter estimated time required to accomplish each specific item of work shown on form. Estimated time will be obtained form flat rate manuals. Where not available in flat rate manuals, estimated time will be based on mission averages for similar items.
      (4) Actual time - Inspecting and maintenance personnel will enter the actual time required to accomplish each item of work shown on the form.
      (5) Initials - Enter the initials of personnel accomplishing each item of work shown on the form.
      (6) Labor cost - Enter the labor cost for accomplishing each item of work shown on the form. Labor rates will be based on individual salary of person accomplishing the work
      (7) Signature - Enter the signature of person supervising accomplishment of require work.
      (8) Total labor Cost - Enter total labor cost for all work accomplished.
      (9) Total cost (parts and labor) - Enter the total cost for parts and labor.

NOTE:

All Cost to be U.S. All liquids measures in U.S. and metrics.

AID 5-238(4/92) Back

Appendix I: Parts Slip and Work Required Form

USAID TO PARTS SLIP AND WORK REQUIRED		INVOICE NUMBER	
DATE AND TIME IN	**DATE AND TIME OUT**	**JOB NUMBER**	
TYPE AND SIZE	**INITIAL INSPECTION (INITIALS)**	☐	**1000 miles (1610 kilometers) or monthly**
MAKE, MODEL, YR	**FINAL INSPECTION (INITIALS)**	☐	**6000 miles (9660 kilometers) or six months**
Plate Number	**Mileage and Kilometers (Only Fill in 1)**	☐	**Other**

PARTS

Quantity	Stock Number	Description	Unit Cost	Cost
Reqr.	**Rec**			
				3.00
				4.00
				5.00
				6.00
				7.00
Received by (Signature)			**Total Parts**	**25.00**

MAINTENANCE

Mech #	Description of Work	Est. Time	Act. Time	Insp.	Labor Cost
Signature of Foreman or Inspector		Total Labor Cost ➢			**1.00**
TO CONVERT	**MULTIPLY BY**	**Total Cost (Parts &Labor)** ➢			**0.00**
Miles into Kilometers	**1.61**				
Pounds to Kilograms	**.45**				
Gallon into Liters	**3.79**				

Remove Form from Book for use **Please photocopy for additional copies**

Instructions

1. Parts Slip and Work Required Forms, consisting of (2)two copies, is used to record all maintenance services or repairs accomplished and as an authorization document to obtain and account for vehicle repair parts.
2. Specific work to be Accomplished by maintenance personnel, estimated time and any known parts required will be entered in appropriate sections by inspecting personnel prior to a vehicle entering the maintenance shop. Both copies of the form are sent to the maintenance shop with the vehicle.
3. On completion of required maintenance service or repairs, completed original copy will be used to accumulate required statistical data ant to post job costs on Vehicle Repair Data Record. Original copy will then be filled in vehicle jacket file. Duplicate copy of form which reflects any issue of repair parts will be filled in the parts supply to substantiate repair parts issue.
4. Heading will be completed by W/O clerk (Work Order Clerk).
   a. Inv. number - Enter the card number block 2, Motor Vehicle Record, Form AID 5-197.
   b. Date and Time in - Enter current date and time vehicle was released for maintenance service or repair by the dispatcher.
   c. Date and Time out - Enter current date and time vehicle was released by inspecting personnel on completion of final inspection to the dispatcher.
   d, Job number - Enter job order number from job register. Job order numbers will be assigned to both scheduled and unscheduled services or repairs.
   e. Type - Enter correct nomenclature of vehicle as per Motor Vehicle Record Form AID 5-197.
   f. Initial inspection (Initials) - Enter the initials of personnel inspecting the vehicle prior to entering the maintenance shop.
   g. Type of work(x) one - Enter x mark by type of maintenance service required. Block entitled other will be checked when lubrication or unscheduled repairs are required .
   h. Model and Make - Enter the model of vehicle , 1963 Chevrolet, 1961 Ford, etc
   i. Final inspection (initials)- Enter the initial of personnel accomplishing final inspection.
   j Mileage - Enter current mileage of the vehicle.
5. Parts - When repair parts are required , both copies of the form will be presented to the repair parts supply clerk.
   a. When available, repair parts are issued, receipted for and for the duplicate copy is retained in the repair parts supply to substantiate issue. The original copy reflecting repair parts issue is returned to the requester.
   b. When any or all of the repair parts are not available, the original copy, reflecting any issues made, will be returned to the repair parts requester. The original is then used as a basis to initiate local or off-shore procurement action for the repair parts not available. After procurement action for repair parts which were not available has been initiated, the following will be effected :
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      (7) Signature - Enter the signature of person supervising accomplishment of require work.
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MAKE, MODEL, YR	**FINAL INSPECTION (INITIALS)**	☐	**6000 miles (9660 kilometers) or six months**
Plate Number	**Mileage and Kilometers (Only Fill in 1)**	☐	**Other**

PARTS

Quantity	Stock Number	Description	Unit Cost	Cost
Reqr.	**Rec**			
				3.00
				4.00
				5.00
				6.00
				7.00
Received by (Signature)			**Total Parts**	**25.00**

MAINTENANCE

Mech #	Description of Work	Est. Time	Act. Time	Insp.	Labor Cost
Signature of Foreman or Inspector		Total Labor Cost ➢			**1.00**
TO CONVERT	**MULTIPLY BY**	**Total Cost (Parts &Labor)** ➢			**0.00**
Miles into Kilometers	**1.61**				
Pounds to Kilograms	**.45**				
Gallon into Liters	**3.79**				

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Appendix J: Motor Vehicle Record

1. COUNTRY CODE (SEE HB 18)	2. VEHICLE SERIES & NUMBER A B	3. MISSION	4. TYPE OF VEHICLE
			1A ☐ SMALL 1B ☐ SUBCOMPACT 1C ☐ COMPACT (CLASS II SEDAN) 1D ☐ MID-SIZE (CLASS II SEDAN) 1E ☐ LARGE (CLASS IV SEDAN) 5 ☐ TRUCK, 8500 LBS. & UNDER 4X4 ☐ TRUCK, 3825 KILOS & UNDER 4X4 6 ☐ TRUCK, 8500 LBS. & UNDER 4X2 ☐ TRUCK, 3825 KILOS & UNDER 4X2 7 ☐ TRUCK, 8501 – 23,999 LBS ☐ TRUCK , 3826 – 10,000 KILOS 2A ☐ STATION WAGON (I/B SUBCOMPACT) 2B ☐ STATION WAGON (CLASS II COMPACT) 2C ☐ STATION WAGON (CLASS III MID-SIZE) 2D ☐ STATION WAGON (CLASS IV LARGE) 3 ☐ AMBULANCE 4 ☐ BUS (INDICATE NO. OF PASSENGERS IN ITEM 11. 8 ☐ TRUCK, 24,000 LBS & OVER ☐ TRUCK, 10,800 KILOS & OVER
5. ACQUISITION DATA A. ☐ AID/W C. ☐ DIRECT PROCUREMENT B. ☐ GSA D. ☐ OTHER (Enter details in item 8 remarks)			
6. P.O. DATE (Mo.&YR.)	7. P.O. NUMBER		

8. REMARKS (Limit to 18 char.)	9. MODEL	10. TECHNICAL EQUIPMENT	11. SYSTEMS & EQUIPMENT A. A/C | B. ENGINE | C. TRANS. | D. RT HAND DRIVE | E. NO. OF PASS.

12. ACQUISITION COST (F.O.B.)	13.ADDITIONAL SYSTEM COST	14. SHIIPING & OTHER COST	15. YEAR REC'D (Mo. & YR.)	16. YR. OF VEHICLE	17. MAKE OF VEHICLE A. MAKE | B. CODE	18. SERIAL NO.

19. DISPOSITION AUTHORITY P.D.A. NO.	20. DATE OF DISPOSAL (Mo. & Yr.)	21. PROCEEDS FROM DISPOSAL	22. A. MILEAGE AT DISPOSAL B. KILOMETER AT DISPOSAL

23. REASON FOR DISPOSAL	24. METHOD OF DISPOSAL
1. ☐ AGE & MILES ☐ AGE & KILOMETERS 2. ☐ MILES ☐ KILOMETERS 3. ☐ AGE 4. ☐ UNECONOMICAL TO REPAIR 5. ☐ ACCIDENT 6. ☐ EXCESS 7. ☐ THEFT 8. ☐ CIVIL STRIFE 9. ☐ FORCE MAJEURE	S. ☐ SALE G. ☐ GRANT-IN-AID D. ☐ DONATION T. ☐ TRANSFER F. ☐ TRANSFER WITHIN AGENCY A. ☐ ADMINISTRATIVE R. ☐ SCRAPPED

AID 5-197 (4/92) ORIGINAL - MISSION COPY (retain as Property Inventory Record)

Instructions for completing form AID 5-197 MOTOR VEHICLE RECORD

A. SEE CHAPTER 6, AID HANDBOOK 23-OVERSEAS SUPPORT.
B. UPON RECEIPT OF A VEHICLE COMPLETE BLOCKS 1-18.
C. UPON DISPOSAL, COMPLETE BLOCKS 19-24.

BLOCK

1. Enter Country Code.
2. Assigned by FA/OMS (M/AS/OMS).
3. Enter Country Name.
4. Check appropriate box.
5. Check appropriate box to indicate how acquired.
6. 15 & 20. Enter two digit number for month and year. (i.e., 02-74 for February 1974)
7. Enter entire purchase order number, or transfer number if transferred.
8. Limit remarks to 18 letters, i.e., Trfd FM.
9. If 5, 6, 7, is checked in block 4, enter vehicle category codes.
10. Technical Equipment
    1=Armor 2=Transceiver/Radio
    3=Items 1 & 2
11a. If air conditioned, enter "X."
11b. Enter engine code.
11c. Enter transmission code.
11d. If right hand drive, enter "X."
11e. If bus, enter number of passengers.
12. Enter in U.S. dollars.
13. Enter cost of additional system in U.S. dollars.
14. Enter estimated shipping and other cost in U.S. dollars.
15. Enter month and year received. (i.e., 1-87 for January 1987)
16. Enter year vehicle manufactured. (i.e., 74 for 1974)

17. Enter popular name. (i.e., Nova and make code)

AUTOMOBILE		TRUCK	
MAKE	CODE	MAKE	CODE
Chevrolet	01	Chevrolet	20
Ford	02	Ford	21
Plymouth	03	Chrysler	22
AMC	04	International	23
Falcon RH	05	GMC	24
Dodge	06	AMC	25
Pontiac	07	White	26
Oldsmobile	08	Mack	27
Mercury	09	REO	28
Buick	10	Kenworth	29
Chrysler	11	Peterbilt	30
Holden	12	Diamond-T	31
Other	13	Autocar	32
Toyota	14	Minibus	35
Peugeot	15	Euclid	36
Renault	16	Other	37
Nissan	17	Land Rover	38
Honda	18	Toyota	39
Mazda	19	Nissan	40
Mercedes	20	Bedford	41

18. Enter last six digits of serial number ONLY.
19. List P.D.A. No assigner. DO NOT exceed 5 digits.
21. Enter to nearest dollar. (i.e. $2000)
22. Enter in U.S. miles and kilometers.
23. & 24. Check appropriate box.

AID 5-197 (4/92)

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Appendix J: Motor Vehicle Record

1. COUNTRY CODE (SEE HB 18)	2. VEHICLE SERIES & NUMBER A B	3. MISSION	4. TYPE OF VEHICLE
5. ACQUISITION DATA A. ☐ AID/W C. ☐ DIRECT PROCUREMENT B. ☐ GSA D. ☐ OTHER (Enter details in item 8 remarks)			1A ☐ SMALL 1B ☐ SUBCOMPACT 1C ☐ COMPACT (CLASS II SEDAN) 1D ☐ MID-SIZE (CLASS II SEDAN) 1E ☐ LARGE (CLASS IV SEDAN) 5 ☐ TRUCK, 8500 LBS. & UNDER 4X4 ☐ TRUCK, 3825 KILOS & UNDER 4X4 6 ☐ TRUCK, 8500 LBS. & UNDER 4X2 ☐ TRUCK, 3825 KILOS & UNDER 4X2 7 ☐ TRUCK, 8501 – 23,999 LBS ☐ TRUCK , 3826 – 10,000 KILOS 2A ☐ STATION WAGON (I/B SUBCOMPACT) 2B ☐ STATION WAGON (CLASS II COMPACT) 2C ☐ STATION WAGON (CLASS III MID-SIZE) 2D ☐ STATION WAGON (CLASS IV LARGE) 3 ☐ AMBULANCE 4 ☐ BUS (INDICATE NO. OF PASSENGERS IN ITEM 11. 8 ☐ TRUCK, 24,000 LBS & OVER ☐ TRUCK, 10,800 KILOS & OVER
6. P.O. DATE (Mo.&YR.)	7. P.O. NUMBER		

8. REMARKS (Limit to 18 char.)	9. MODEL	10. TECHNICAL EQUIPMENT	11. SYSTEMS & EQUIPMENT A. A/C	B. ENGINE	C. TRANS.	D. RT HAND DRIVE	E. NO. OF PASS.

12. ACQUISITION COST (F.O.B.)	13.ADDITIONAL SYSTEM COST	14. SHIIPING & OTHER COST	15. YEAR REC'D (Mo. & YR.)	16. YR. OF VEHICLE	17. MAKE OF VEHICLE A. MAKE	B. CODE	18. SERIAL NO.

19. DISPOSITION AUTHORITY P.D.A. NO.	20. DATE OF DISPOSAL (Mo. & Yr.)	21. PROCEEDS FROM DISPOSAL	22. A. MILEAGE AT DISPOSAL B. KILOMETER AT DISPOSAL

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C. UPON DISPOSAL, COMPLETE BLOCKS 19-24.

BLOCK

1. Enter Country Code.
2. Assigned by FA/OMS (M/AS/OMS).
3. Enter Country Name.
4. Check appropriate box.
5. Check appropriate box to indicate how acquired.
6. 15 & 20. Enter two digit number for month and year. (i.e., 02-74 for February 1974)
7. Enter entire purchase order number, or transfer number if transferred.
8. Limit remarks to 18 letters, i.e., Trfd FM.
9. If 5, 6, 7, is checked in block 4, enter vehicle category codes.
10. Technical Equipment
    1=Armor 2=Transceiver/Radio
    3=Items 1 & 2
11a. If air conditioned, enter "X."
11b. Enter engine code.
11c. Enter transmission code.
11d. If right hand drive, enter "X."
11e. If bus, enter number of passengers.
12. Enter in U.S. dollars.
13. Enter cost of additional system in U.S. dollars.
14. Enter estimated shipping and other cost in U.S. dollars.
15. Enter month and year received. (i.e., 1-87 for January 1987)
16. Enter year vehicle manufactured. (i.e., 74 for 1974)

17. Enter popular name. (i.e., Nova and make code)

AUTOMOBILE MAKE	CODE	TRUCK MAKE	CODE
Chevrolet	01	Chevrolet	20
Ford	02	Ford	21
Plymouth	03	Chrysler	22
AMC	04	International	23
Falcon RH	05	GMC	24
Dodge	06	AMC	25
Pontiac	07	White	26
Oldsmobile	08	Mack	27
Mercury	09	REO	28
Buick	10	Kenworth	29
Chrysler	11	Peterbilt	30
Holden	12	Diamond-T	31
Other	13	Autocar	32
Toyota	14	Minibus	35
Peugeot	15	Euclid	36
Renault	16	Other	37
Nissan	17	Land Rover	38
Honda	18	Toyota	39
Mazda	19	Nissan	40
Mercedes	20	Bedford	41

18. Enter last six digits of serial number ONLY.
19. List P.D.A. No assigner. DO NOT exceed 5 digits.
21. Enter to nearest dollar. (i.e. $2000)
22. Enter in U.S. miles and kilometers.
23. & 24. Check appropriate box.

AID 5-197 (4/92)

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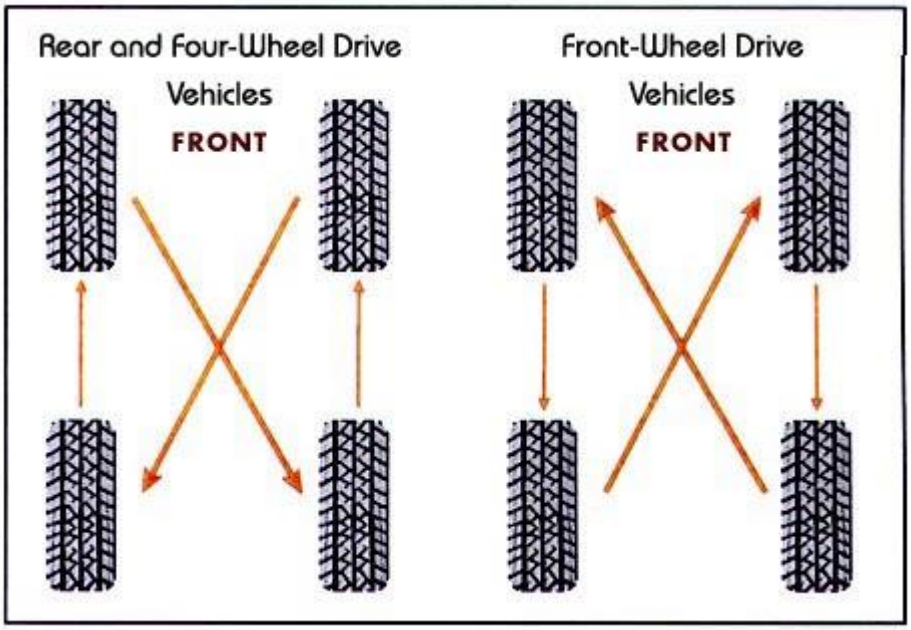
Appendix K: Tire Specifications/Procurement

Tire information and certifications labels contain information on tires and load limits. This information indicates the armored vehicles manufacturers' information before and after armoring. It includes:

- Recommended Tire Size
- Recommended Tire Inflation Pressure (PSI)
- Vehicle Capacity Weight (VCW-the maximum occupant and cargo weight a vehicle is designed to carry)
- Front and Rear Gross Axle Weight ratings (GAWR-gross A the maximum weight the axle systems are designed to carry)

TIRE ROTATION

Rotation tires from front to back and from side to side can reduce irregular wear, See Tire Rotation Chart below:

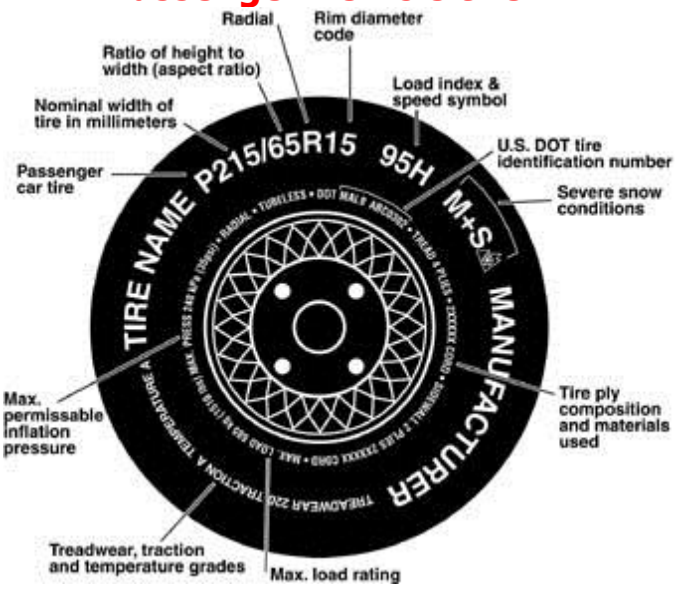


TIRE SPECIFICATIONS

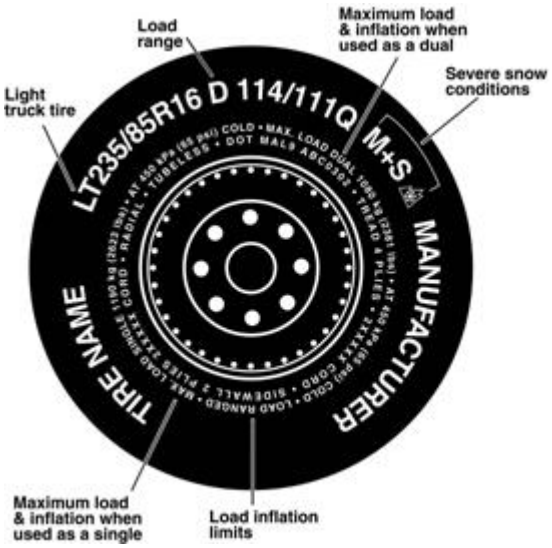
Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and recall notification.

Please refer to the diagram below:

Passenger Vehicle tire



Light Truck Tire



P
The "P" indicates the tire is for passenger vehicles.

NEXT NUMBER
This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge.

NEXT NUMBER
This two-digit number, known as the aspect ratio, gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R
The "R" stands for radial. Radial ply construction of tires has been the industry standard for the past 20 years.

NEXT NUMBER
This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

NEXT NUMBER
This two- or three-digit number is the tire's load index. It is a measurement of how much weight each tire can support. You may find this information in your owner's manual. If not, contact OFDA/Logistics/W. **Note:** You may not find this information on all tires because it is not required by Federal law.

M+S
The "M+S" or "M/S" indicates that the tire has some mud and snow capability. Most radial tires have these markings; hence, they have some mud and snow capability.

SPEED RATING
The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time. The ratings range from 99 miles per hour (mph) to 186 mph. These ratings are listed below. **Note:** You may not find this information on all tires because it is not required by Federal law.

Letter Rating	Speed Rating
Q	99 mph
R	106 mph
S	112 mph
T	118 mph
U	124 mph
H	130 mph
V	149 mph
W	168* mph
Y	186* mph

U.S. DOT TIRE IDENTIFICATION NUMBER

This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built.

For example, the numbers 3197 means the 31st week of 1997. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

TIRE PLY COMPOSITION AND MATERIALS USED
The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

MAXIMUM LOAD RATING
This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

MAXIMUM PERMISSIBLE INFLATION PRESSURE
This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

TIRE PROCUREMENT

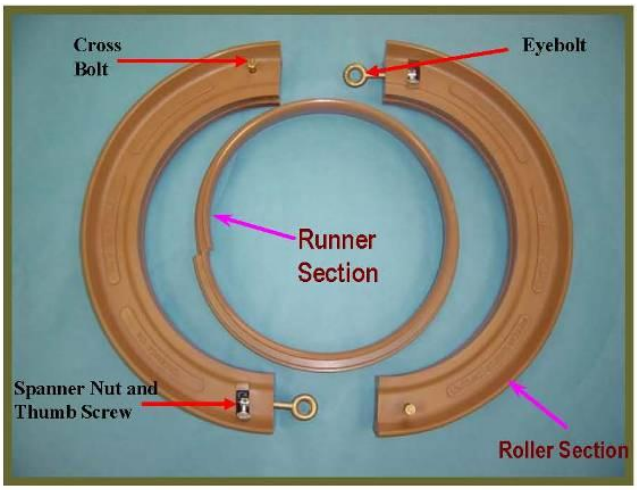
TIRE BRANDS

Tires are an important item on OFDA/Dart/Field vehicles, due to the additional armoring weight, only high quality name-brand replacement tires are recommended, such as Goodyear, Michelin, BF Goodrich, Uniroyal, Dunlop, Bridgestone, Continental and Firestone. Off-brand or questionable source tires are not recommended and should not be utilized on armored vehicles. Armored vehicles require E level rated tires, depending on GVW. E level refers to load carrying capacity. (Example: Goodyear E level tires are rated a 3415 lbs. max load x 4 tires = 13660 max collective weight capacity.) E level tires cannot be mixed with other lover rated tires as the weight of the armored vehicle needs to be equally spread among all four tires for proper road handling and weight distribution.

Procurement of armored vehicle tires should be coordinated through OFDA/Logistics/W.

Appendix L: Run Flat Tire Repair

Toyota Series 100/200 Models 105/76
OFDA Primary Run Flat System



American Superior Compounds

2221 Kenmore Avenue
Tonawanda. New York 14207

Phone (716) 873-1209
Fax (716) 873-1241

Email: Sales@ascompounds.com
Web: www.ascompounds.com

Rotary Run Flat Installation Instructions:

Hardware and Tools

- Metal tire valve
- Tightening tool for turning the spanner.
- 9/16" socket ratchet.
- Loctite tube for securing thumbscrews.
- Tire stand or tire mounting machine and tools
- Spacer blocks.
- Rim label - run flat reference

Installation Procedure

1. Take a part the two roller segments by removing the cross bolts connecting the two segments.

   NOTE: A high temperature lubricant is applied to the runner and roller bearing surface. DO NOT remove this lubricant.

2. Remove the thumb screw from the spanner nut and loosen the spanner nut until only 2-3 threads of the eye bolt are engaged.

3. Place the rim on the tire mounting machine or tire stand with the outboard side of the wheel facing up.

4. Install the lower bead of the tire on the rim and leave the tire upper bead outside the rim.

Figure # 1

5. Pull up the upper tire bead and insert the runner section of the run-flat system (Figure# 1) and have it fit around the rim in the drop center area. Ensure the runner side that is marked "Outboard" is facing up toward the rim outboard.

6. Push down on the side of the tire at the valve stem and rotate the runner section if required to locate the valve stem in between the openings of runner. (Figure# 2) . Also pull the runner up to ensure it is situated firmly in the drop center area.

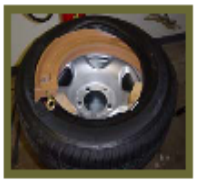
Figure # 2

7. Utilize several wood blocks (typically 2" x 4" block size) and place them at different areas around the wheel , between the tire and the edge of the rim. This will provide adequate clearance for the installer to reach inside the tire and conduct the run-flat installation. (Figure# 3)

Figure # 3

8. Take one of the roller sections with the "outboard" side facing upward and guide it inside the tire (figure# 4). Repeat the same procedure for the second roller section.

9. Align roller sections eye bolts while they are inside the tire and insert them into the slots located at the other end of each roller section. Turn the roller sections while they are engaged together until the hardware location of each of the rollers is located at about 90 degrees from the wheel tire valve opening.



Fig# 4

10. Insert wooden blocks between the the inside wall of the tire and the run-flat roller surface (Figure# 5) to keep the the rollers engaged with the runner and be able to insert the cross bolt as described in the next step.

Fig# 5

11. Pull the tire bead back to see the hardware section of the run flat. Orient the eye bolt so the eye is lined up with the hole in the roller. In the event that the eye and the hole do not line up, you will need to loosen or tighten the spanner until they line up.

Cross Bolt

Fig# 6

12. Insert the cross bolt through the roller hole and the eye bolt and tighten securely using 9/16" socket extension ratchet (Figure# 6). Repeat the same procedure to secure the other hardware section.

Fig# 7

13. Turn the spanner nuts at each end of the roller sections and tighten both ends equally to reach a gap of approximately 3/16" between each end. (Figure# 7)

Fig# 8

14. Apply Loctite to the thread of thumb screw and thread it into the spanner nut. Tighten the thumb screw securely by using a hand pliers Turn the spanner with the thumb screw to rest the thumb screw against the edge of the spanner slot opening. (Figure# 8)

    Note: At this point ensure all wooden blocks and tools are removed from inside the tire.

Fig# 9

15. Apply installation label to the wheel outboard after it been cleaned to indicate a run flat is installed on the wheel. (Figure# 9).

Balance assembly after inflating the tire to the manufacturer recommended air pressure

Toyota Series 100/200 Models 105/76
OFDA Secondary Run Flat System (used on older vehicles)

ASO

Static Run Flat

Installation Instructions

American Superior Compounds

2221 Kenmore Avenue
Tonawanda. New York 14207

Phone (716) 873-1209
Fax (716) 873-1241

Email: Sales@ascompounds.com
Web: www.ascompounds.com

Static Run Flat Installation Instructions:

Hardware and Tools

- Metal tire valve
- Run flat Lubricant
- Mechanical locks washer and screws
- Steel mounting rods and adjustment strap
- Loctite tube for securing connection bolts.
- Installation Labels (provided)
- Standard tubeless tire mounting tools
- Standard tire mounting machine
- Ensure the wheel is clean and metal valve that is supplied with Static run-flat is installed on the wheel.

Installation Procedure

Figure # 1

1. **Apply the run flat lubricant around the inside crown of the tire as shown** (Figure# 1).

   Place the wheel on the tire mounting machine or a tire stand.

Figure # 2

2. **Remove the bolts that are connecting the run-flat together. Insert the two sections of Static run-flat unit into the tire.** (Figure# 2)

Figure # 3

3. **Connect the two segments of run-flat system together at one end only using one of the connection bolts and keep the bolt loose.** (figure # 3)

4. **Place the tire with the run-flat inside it on the wheel** (Figure# 4). **Fit the bottom bead of tire on the rim and allow the run-flat inside the tire to fall in place around the rim and to move into rim drop center.**

Figure # 4

5. **Pull up the tire outboard bead as shown in** (figure # 5) **and place the mounting metal rods in the designated ½" holes at each end of the Static run-flat sections. Slip adjustment metal strap over mounting rods and pull out on The end of each of the rods to bring the two Static run-flat sections together against the rim drop center. Line up the bolt hole and insert the bolt into it. Conduct the same procedure to tighten the second bolt. Tighten both bolts to 30 ft-lb. Note: Apply Loctite on the bolt before inserting it.**

Figure # 5

Figure # 6

6. **Place each of the two mechanical locking clips over each of the connection bolts and secure it using the supplied screws.** (Figure # 6).

7. **After the completion of run-flat installation, mount the tire outboard bead onto the rim and inflate the tire to the proper tire pressure recommended by the tire manufacturer.**

Figure # 7

8. **Apply installation label to the wheel outboard after it been cleaned to indicate a run flat is installed on the wheel.** (Figure # 7).

➡ Balance assembly after inflating the tire to the manufacturer recommended air pressure

Mercedes Models G-270/G-500
Installation Instructions for Composite Runflat (CRF)

HUTCHINSON WORLDWIDE

Installation Instructions
Hutchinson Composite Runflat (CRF)

1. Wheel and tire preparation

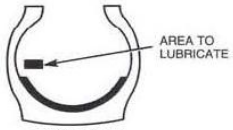


FIGURE 1

- Clean wheel and install metal valve supplied.
- Use a soft cloth or brush to apply supplied lubricant to evenly inside crown of the tire, around entire circumference. (refer to Figure 1)

For sedans/SUV's apply 1 full tube per assembly. For trucks: Apply (2) tubes for 17.5" & 19.5", Apply (3) for 22.5"

2. Ensure the CRF properly fits the wheel before mounting the tire

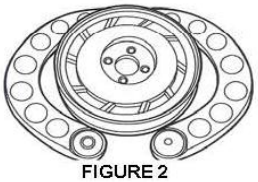


FIGURE 2

- With flanges and washers facing up, position CRF arcs against wheel and confirm they are properly mated to wheel profile. (refer to Figure 2)
- Install bolts to ensure CRF is secure to the wheel drop center. Bolts should be tightened to 30 +/- 5 ft.lbs. If needed place the steel mounting rods in the ½" holes on each side of the CRF joint. Slip adjustment band over rods and pull outward to bring arcs together.
- Attempt to rotate CRF around wheel to assure it is snug. For additional tightness, unfasten set screw on washer, rotate one or both washers 180° as needed. Re-install set screw.

3. Runflat Installation in tire

- Insert arcs into the tire with the flanges and washers facing up. (refer to Figure 3)
- Apply supplied loctite to one bolt. Connect arcs loosely with one bolt (Refer to Figure 4)
- Fit inboard tire bead on wheel and allow CRF to move into wheel's drop center (refer to Figure 5)
- With outboard tire bead above the wheel flange, place steel mounting rods vertically in ½" holes on each side of CRF joint. Rotate CRF until the joint is centered over the valve (refer to Figure 6)
- Slip adjustment band over mounting rods. Laterally spread the rods at top closing the CRF. Apply loctite on the remaining bolt and tighten ALL bolts to 30 +/- 5 ft.lbs
- Secure mechanical lock over all connection bolts. Attached with #2 phillips head screw driver. (refer to Figure 7)
- Mount outer tire bead and inflate to manufacturer's recommended pressure for load carried. Balance assembly
- Place sticker on wheel as shown (refer to Figure 8)

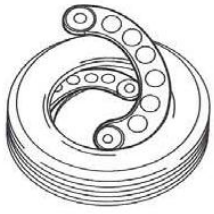


FIGURE 3

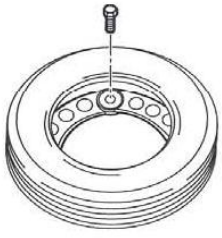


FIGURE 4

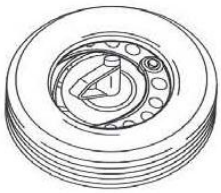


FIGURE 5

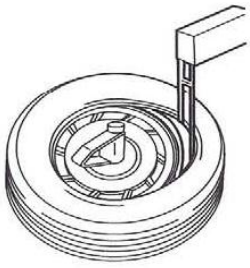


FIGURE 6

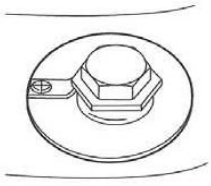


FIGURE 7

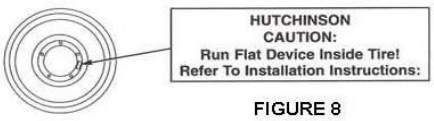


FIGURE 8

92 Monsignor Valente Drive
Buffalo, NY 14206
(716) 852-1435 (716) 852-7690 fax
www.rodgard.com

Supplemental Instructions for CRF Installation

RODCARD

Supplemental Instructions for 19.5" Hutchinson CRF Installation

Tire 225/70R19.5 LR:G Michelin XZE

**Follow the general instructions of the CRF installation in terms of tire and wheel preparation.

1. Connect CRF arcs loosely with one bolt as shown in the following photo. A few turns of the thread are all that is needed.

2. Snake the roller halves into the tire as shown in the following photo

Supplemental Instructions for CRF Installation cont'd

3. Lubricate the bottom bead and mount the bottom bead on the tire leaving the top bead outside the wheel flange. The CRF should fall into the tire when the bead is seated. If the CRF does not fall into the tire, push the CRF at the connected portion with a tire iron until it falls into the tire.

4. Once the bottom bead is seated, locate the open end of the CRF inside the tire and move the CRF so the open end of the arcs is located at the valve hole location. You may use the installation bars or tire iron to move the CRF to the proper location. See the following photo.

Supplemental Instructions for CRF Installation cont'd

5. Install the two mounting bars in the installation holes located at the end of each side of the CRF arcs. See the previous photo.

6. Install the metal strap around the bars and push down firmly until the strap is snug. Pull outward on the bars until both CRF arcs come together exposing the bolt hole. Using another person, have them install the bolt into the hole and fasten by hand until snug.

7. Continue to tighten the bolt down until the bolt is secure to 30 ft lbs.

Supplemental Instructions for CRF Installation cont'd

8. Loosen the safety clip mounting screw and install the bolt safety clip over the nut. Secure the mounting screw.

9. Rotate the tire to the other loosely connected arc and complete steps 7 & 8.

Supplemental Instructions for CRF Installation cont'd

10. Generously lubricate the outer tire bead and install with the machine. If the tire bead becomes tight it will be necessary to use tire irons. Extra caution must be taken not to damage tire beads.

11. Inflate to pressure and Balance

Appendix M: Vehicle IED Search Brochure

ITI STUDENT REFERENCE

A Handbook for Use by ITI Students

VEHICLE Improvised Explosive Devices (IED)

AWARENESS, DETECTION & SEARCH

INTERNATIONAL TRAINING INC.

www.itiwsi.com

IED AWARENESS:

An IED is designed and built to cause death or serious injury by using explosives alone or in combination with toxic chemicals, biological toxins, or radiological material. Bomb makers can utilize commercial or military explosives, homemade explosives, or military ordnance and ordnance components. IED's vary in size, appearance, functioning methods, containers, and delivery methods.

An IED can be triggered in any number of ways to include, but not limited to a cell phone, hand held commercially available walkie talkie, remote control radio frequency device, pager, alarm clock, etc.

IED's are unique because the IED builder improvises the design with the materials at hand based upon the target and the environment.

VEHICLE IED DETECTION:

Terrorists use IED's because they are easy to obtain, easy to conceal, cause mass damage and can be triggered in a variety of ways. Increased awareness around vehicles used to transport potential targets is the key to detecting and avoiding an IED attack.

The first line of defense against becoming a car bomb victim is to deny the attacker access to the vehicle. Security measures must include keeping the vehicle in a locked, alarmed facility. When the vehicle is not secured in the garage, it should always be attended. All security measures should be supported by thorough routine vehicle inspections.

When Leaving the Vehicle:

- Observe positions of all interior components such as mirrors, gear selector, head rests, seat belts, steering wheel, etc.
- Lower sun visors and open all compartments such as ashtrays, glove box, and console. Doing so facilitates the vehicle search process as later discussed.
- Note anything left in the vehicle so that you can easily spot anything added while you were away. Remove trash and debris from the interior.
- Lock all doors.
- As you leave the vehicle, pay attention to the area around it so that you can determine if there is anything new or different when you return that could conceal an IED such as a shopping bag, soda can or litter of any kind.

- **Upon Returning to the Vehicle:**
- Begin looking at the vehicle from a distance that allows you to view the underside and the roof of the vehicle. The visual search should cover the vehicle from all sides.
- Then repeat the all-sides visual search from a closer distance, noting any debris on the ground, fingerprints on the vehicle, footprints near the vehicle, etc. You might want to use a small flashlight to help inspect the vehicle.
- Note positions of mirrors, visors, ashtrays, headrests, steering wheel, seat belts, etc.
- Before entering the vehicle note anything (inside or out) that could have changed since leaving the vehicle.
- Enter and search the interior of the vehicle using extreme caution avoiding contact with any object or part of the vehicle that has not been searched.

VEHICLE IED SEARCH:

(Looking for things that do not belong)

- As you approach the vehicle, note anyone watching you.

- Conduct a 360° visual external search of the vehicle from a safe distance using whatever space is available (the farther away the better).

- Continue the exterior search moving closer.

- Examine pipes, wheel wells, door handles, undercarriage, etc. A flashlight is a necessary component for conducting an IED search. A mirror can be helpful.

- Look for fingerprints, disturbed dirt, or debris near the vehicle. Look through all windows for signs of tampering inside the vehicle.

- The IED could be wired to detonate when the vehicle is opened. Look for trigger devices or connections before opening. Be wary of opening the driver's door first.

- Once inside, look under all seats and floor mats, behind trim panels, speaker boxes, dash areas, ashtrays, glove box, console, vents, spare tire, etc.

- Look for wires attached to the steering wheel, gear selector, foot pedals, seat adjustment, or anywhere that might be set to detonate an IED when disturbed

- Visually check storage compartments for evidence that they may have been opened.

- Use the same technique to open interior compartments as used for exterior doors.

- Once the interior is cleared, search under the hood and in the trunk.

Suggestion:
Becoming familiar with and taking pictures of the configuration of the engine components and undercarriage can be used in comparison during the vehicle inspection when looking for things that do not belong.

VEHICLE IED SEARCH STEPS:

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Appendix N:

VEHICLE SECURITY INCIDENT REPORT

Name: _____

Date of Incident: _____

Vehicle Description (Year/Make/Model/License #) _____

_____

Describe in detail any suspicious or unusual activities that could jeopardize the security of the vehicle, its contents or its occupants.

Examples include but are not limited to:

- Unauthorized use of the vehicle
- Changes made to the vehicle without proper authorization
- Attempt to gain unauthorized access to the vehicle or to its contents
- Acts of violence against the vehicle or its contents resulting in vehicle damage

_____

_____

_____

_____

_____

_____

_____

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Remove Form from Book for use **Please photocopy for additional copies**

Appendix N:

VEHICLE SECURITY INCIDENT REPORT

Continued from front page

Appendix O: OFDA Vehicle Communications Reference Guide – Mini M

OFDA Quick Reference Guide

Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov

Communications Equipment on the 76 Model Land Cruiser:

OFDA Logistics maintains a fleet of armored and unarmored vehicles. The latest, model 76 Series was added to the fleet in 2010.

Each vehicle has been configured with our standard communications package. This package was designed to provide OFDA personnel with a full complement of redundant communications options no matter where the vehicle is based.

This guide is divided into 2 sections:

1. Basic function of each piece of communications equipment.
2. A trouble shooting guide.

OFDA Quick Reference Guide

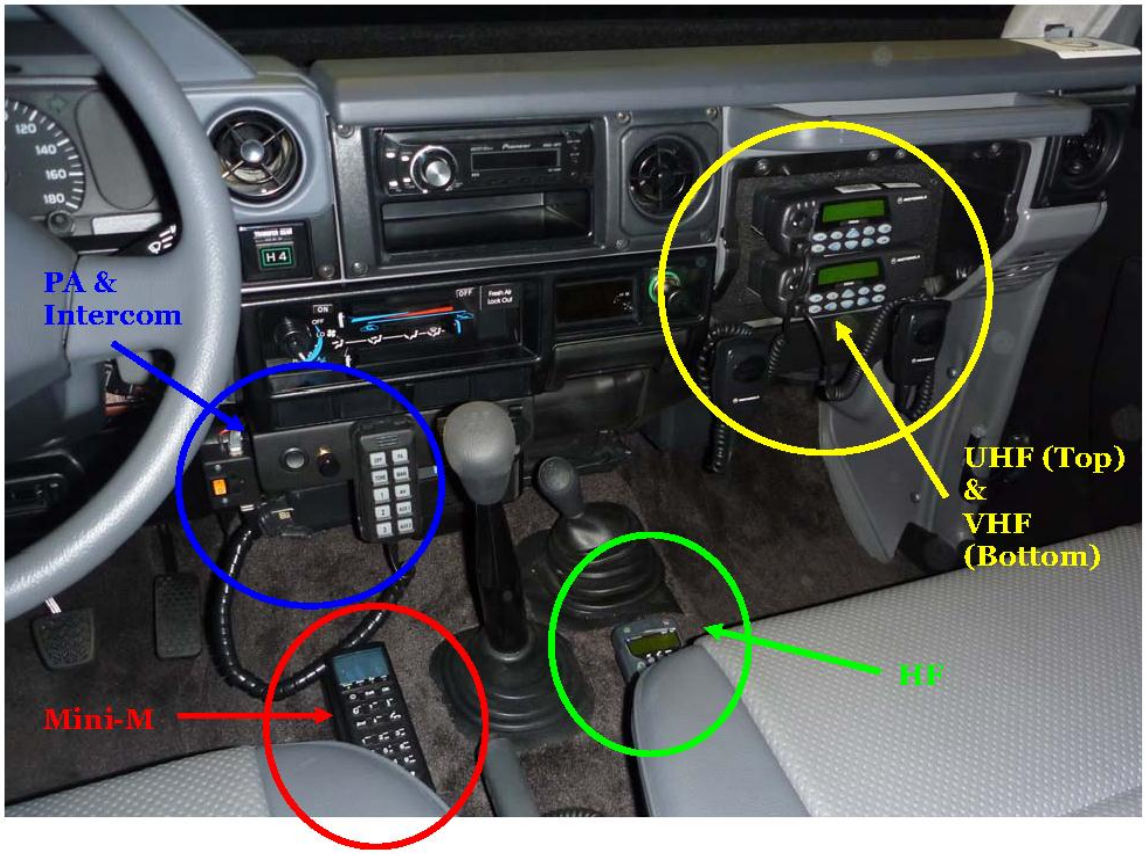
Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov

Overview:

Each vehicle is configured with the following communications equipment:

1. Mini-M satellite phone
2. UHF (Ultra High Frequency) and VHF (Very High Frequency) mobile radio
3. HF (High Frequency) radio
4. Public Address and Intercom system

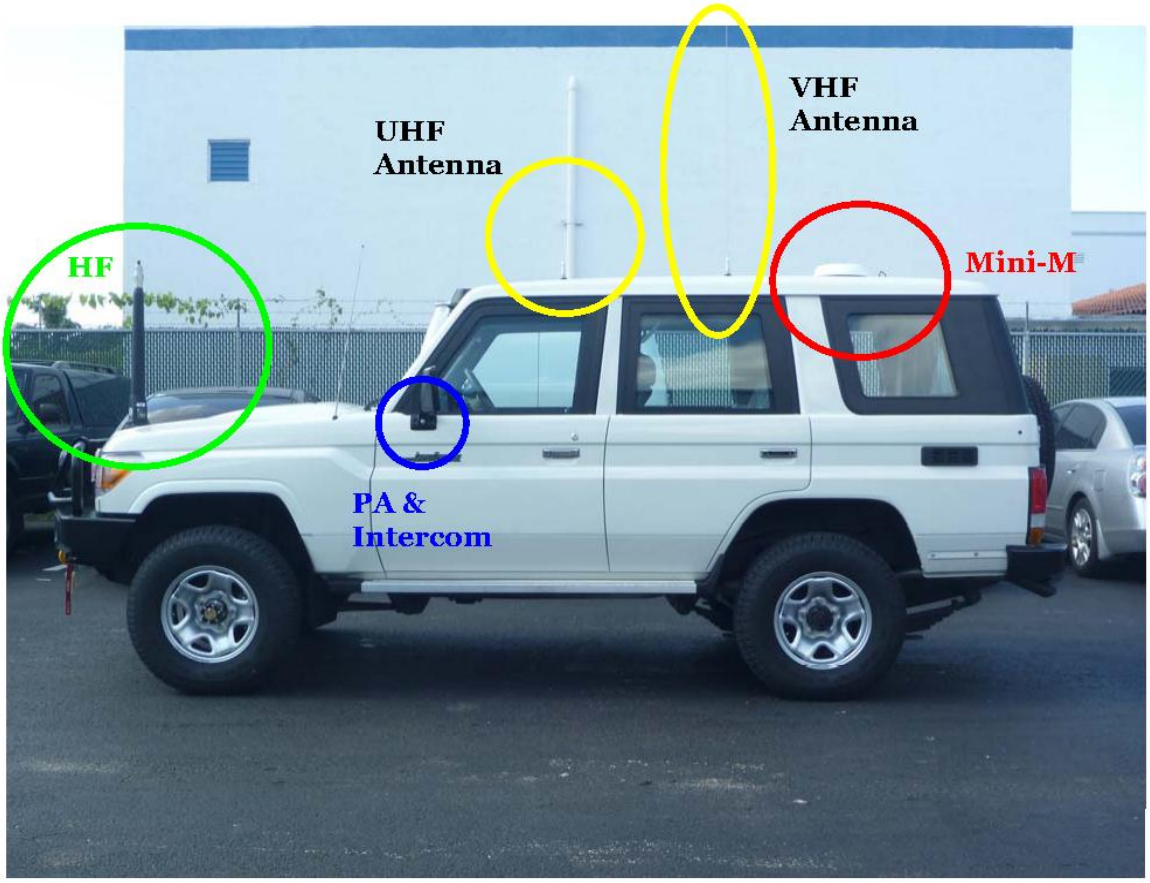
Please review the image below for a quick look at where the communications equipment is located inside the vehicle:



OFDA Quick Reference Guide

Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov

Each piece of equipment has an external counterpart detailed in the image below:



The Mini-M satellite phone provides redundant worldwide voice communications to complement your cellphone, blackberry, Thuraya or Iridium.

The UHF and/or VHF radio provide short range communications to travelers. Communications includes that between vehicles (or handheld radios) and contact with Embassy and/or UN organizations in country when available.

HF provides long range radio communications to the Embassy and/or UN Organizations when available.

The PA and Intercom system allow the traveler to communicate to persons outside without having to exit the vehicle.

OFDA Quick Reference Guide

Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov

Mini-M Satellite Phone:

The handset for the Mini-M satellite phone is located to the left of the gear shift. With the Mini-M you can make a phone call to anywhere in the world from nearly anywhere.

POWER: The Mini-M will power on automatically when the key is turned on the vehicle.

Please note however that you MUST turn off the Mini-M manually when you turn off the vehicle. Failure to do so will drain the vehicle's battery!

Once powered on, the Mini-M will begin to "search" for a satellite signal. This means the Mini-M antenna, located on the roof, must have line-of-site (LOS) to the Inmarsat satellite system.

To make a call from the Mini-M:

Please refer to the International Dialing Quick Reference Guide (QRG) for detailed information on calling to/from a Mini-M. Here are the basics:

1. Remove the handset from the cradle.
2. Enter the phone number:

   00 + Country Code + number

3. Press the # key.
4.

Lift the receiver to answer calls.

OFDA Quick Reference Guide

Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov

UHF and VHF Radio:

The Ultra High Frequency (UHF) and Very High Frequency (VHF) radios installed in the vehicle are often referred to as UHF/VHF mobile or base radios. These complement the UHF/VHF handheld radios you may be issued.

The radios can be found across from the front side passenger as he/she will serve as the radio operator. The UHF radio will always be above the VHF.

Please note: There is an additional clip in the middle console for the radio handset. This can be used when the Driver is the only person in the vehicle.

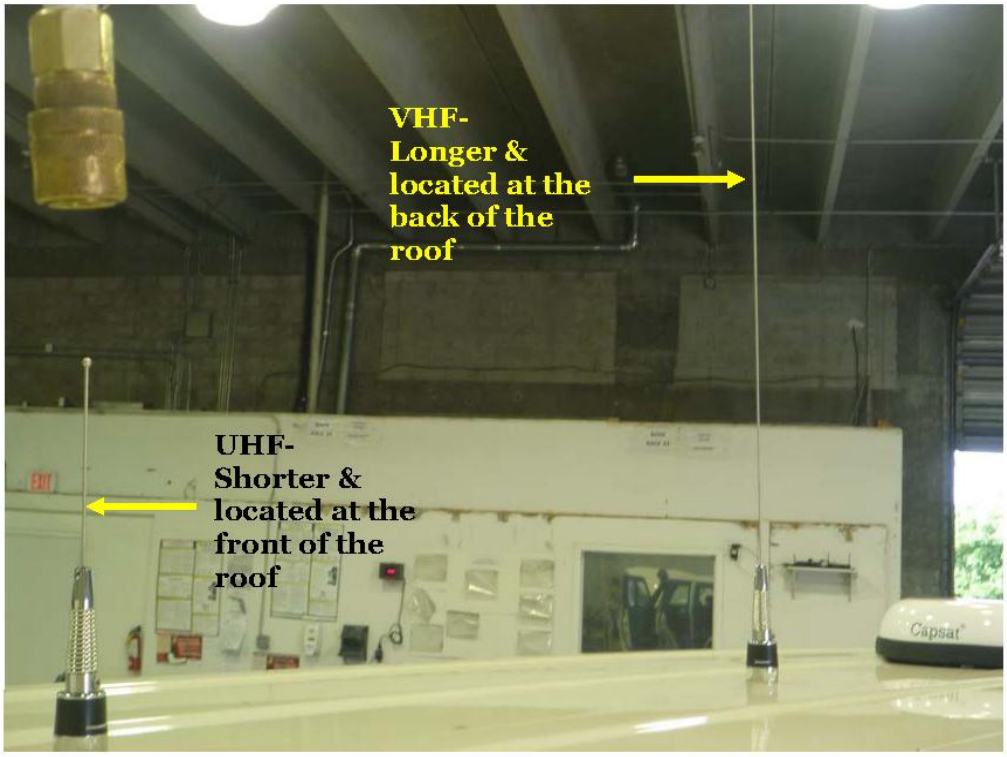
POWER: To turn the radio on press the power button. The screen will illuminate displaying the channel number.

Use the channel up/down buttons to change channels.

You can turn the power knob right/left to adjust the volume. Press the power button to turn the radio off.

The radios will be programmed with the appropriate channels when it reaches its final destination. Please refer to the Communications Plan for details on which channel you should be using.

Each radio has a corresponding antenna.



OFDA Quick Reference Guide

Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov

HF Radio:

The High Frequency (HF) radio installed in OFDA vehicles allows the user "world wide" radio coverage.

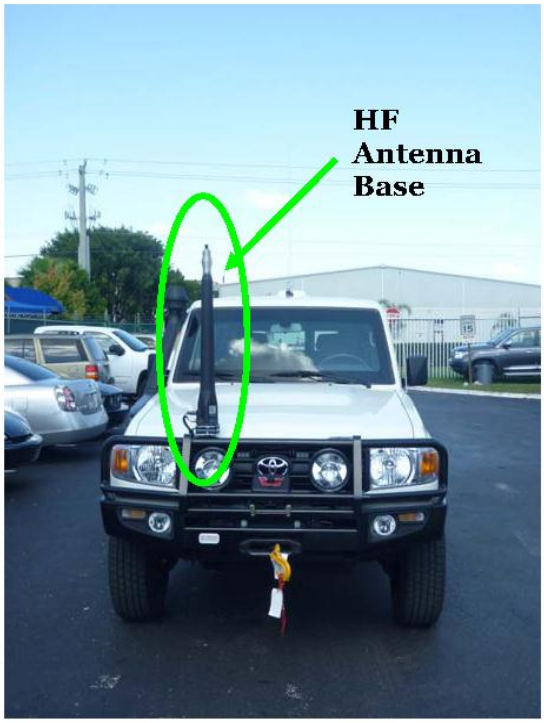
The HF handset is located on the floor to the right of the gearshift. The HF speaker is located to the right of the PA handset.

POWER: The HF will automatically power on/off when the car is turned on/off. You can manually turn on/off the unit by pressing the power button.

The HF radio will be programmed with the appropriate channels when it reaches its final destination. Please refer to the Communications Plan for details on which channel you should be using.

OFDA Quick Reference Guide

Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov



The **HF antenna base** is located on the front bumper.

In addition to the base, in order for HF to function, you must install an **antenna mast** on the top of the antenna base**.** There are 2 antenna mast options. These masts can be found inside the vehicle clipped to the passenger side roof.

1. Solid black fiberglass. Provides longer range but not flexible. Can be damaged when driver through foliage or caught on wires.
2. Wire. Shorter range but flexible.

Be sure to store antennas back on rack when not in use. If lost or damaged your HF will not function.

OFDA Quick Reference Guide

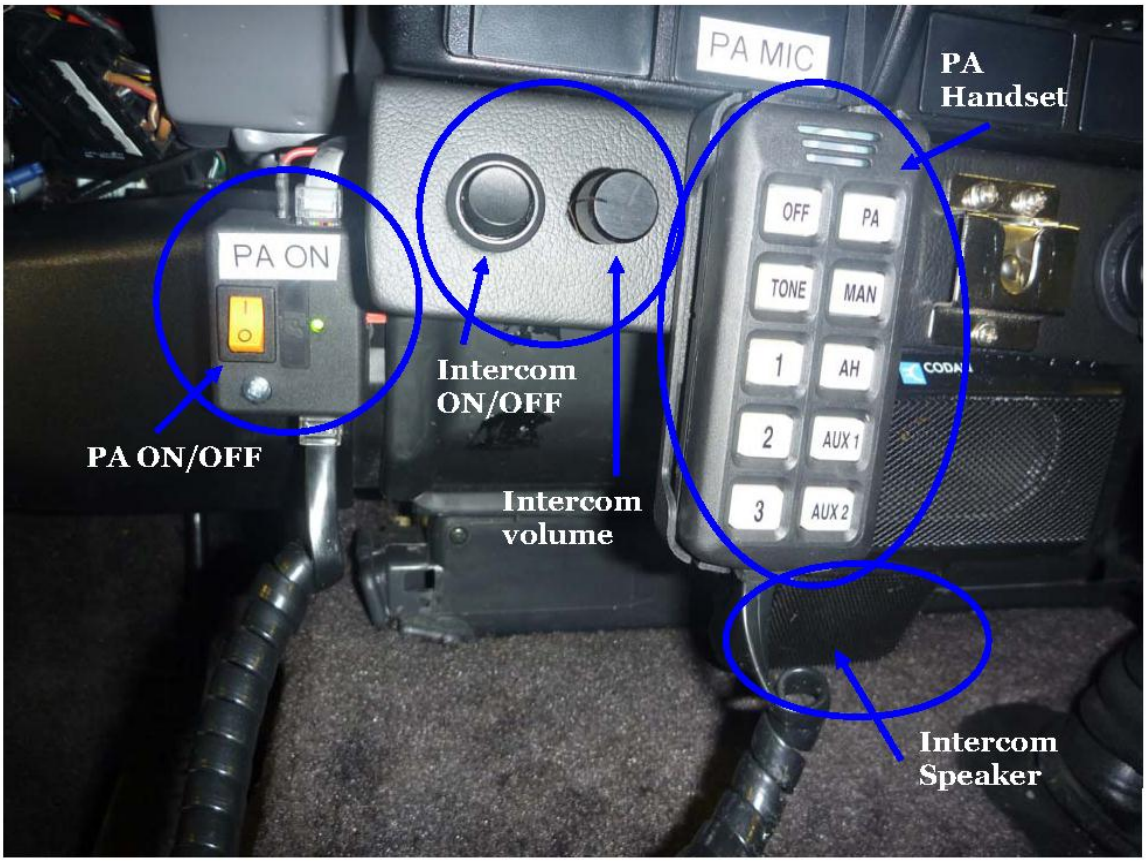
Comms DO: 202-661-9330 IT DO: 202-661-9310 ofdasupport@usaid.gov

PA & Intercom:

For the safety & security of all passengers an Intercom and Public Address system has been installed.

The PA system allows you to speak from inside the vehicle without having to open the doors. It also controls the siren, horn and blue lights (located in the front grill)

The Intercom allows you to hear what is being said outside, again, without having to open the doors. Both are located at the bottom of the center console.



Using the PA system:

To speak to someone outside the vehicle:

1. Make sure the PA system is turned on.
2. Remove the PA handset from the holder.
3. Press PA and speak into the MIC (at the top of handset). Release when you are finished.

Additional functions:

To operate the additional functions:

1. Press the appropriate button.
2. Press OFF when you are finished

TONE, AUX 1 and AUX 2 are not programmed at this time.

Please note: When you key the PA system it mutes the Intercom to avoid interference and feedback. If you still get feedback, hold the PA handset away from the Intercom and turn down the Intercom volume.

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Using the Intercom system:

When the Intercom is on you will hear all talking and/or noise outside the vehicle.

The microphones for the Intercom system are located outside at the base of each side mirror.

It may sound muffled if there is a lot of background noise or the person you are talking to is not close enough to the microphones.

Adjust the volume as necessary. You will hear what's going on outside from the Intercom speaker located below the Codan speaker and PA handset.

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Troubleshooting the Mini-M:

You may encounter 2 problems with the Mini-M unit:

1. No power
2. No satellite signal

Please note: If the Mini-M fails entirely and you have been issued an Iridium satellite phone you can use that (with external antenna) in place of the Mini-M.

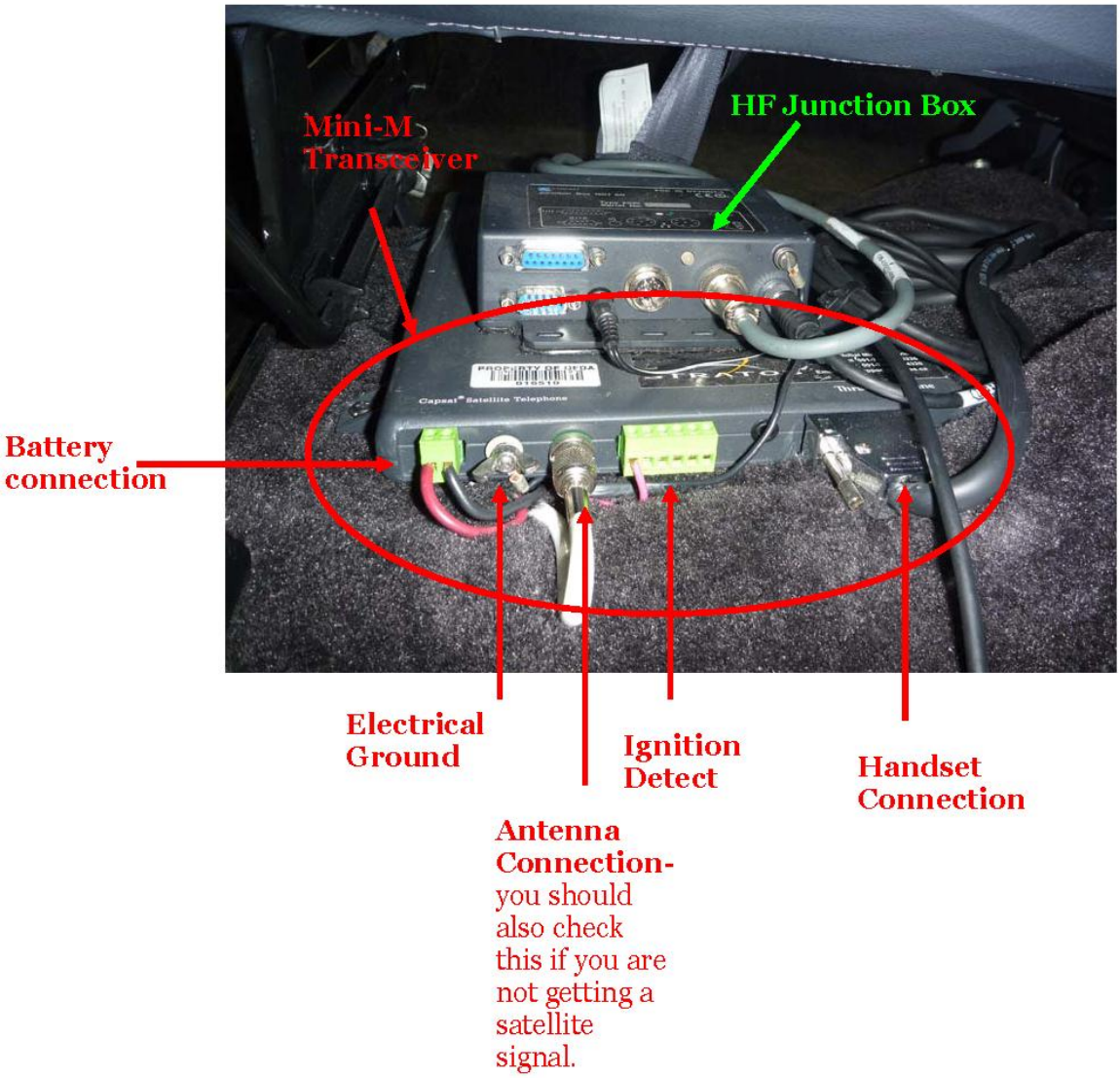
If there is no power:

1. Make sure the handset is plugged into the cradle.

2. Check the connections to the transceiver.

   The transceiver is located under the front passenger seat. The Mini-M transceiver is on the bottom. Check that all wires and cables are firmly connected.

   Other possible problems could be a bad transceiver or bad cables.



3. Check the fuses.

   There is a fuse box under the drivers seat. This box contains 6 fuses that control power to the power windows, fog lights, PA system and the Mini-M. Note the Mini-M fuse in the image below.

   Carefully pull the fuse out. If it is broken replace it with another 20 Amp fuse. There should be extra fuses in the vehicle's recovery box.

Please note: The fuse box is covered and includes labels for all the fuses in the box:

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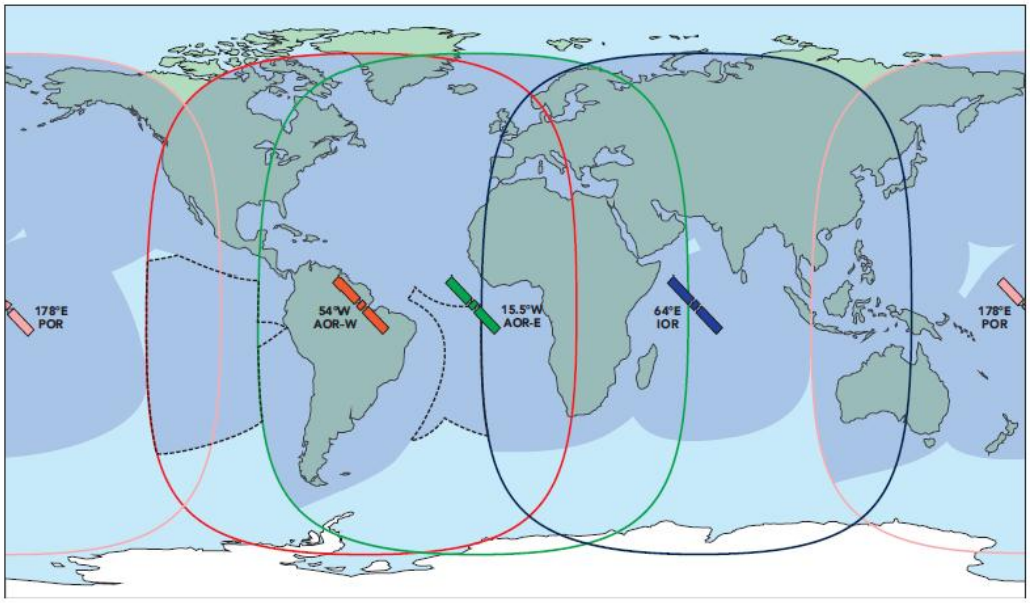
If there is power to the Mini-M but not satellite signal:

1. Make sure you are in an area free of tree, buildings or other obstructions. The antenna must have line-of-sight (LOS) to the Inmarsat satellite system.

2. Check that the Mini-M is set for the correct Area. Refer to the map below to determine which Area you are in. **Please note: AOR-E is no longer an option.**



   a. From the Handset press **2nd** and **3** to get to the Area Menu.
   b. Use the scroll up/down keys 

to highlight the appropriate area.
   c. Press **OK** to select the Area.

3. Check the antenna connection on the transceiver.

4. Check the antenna connection on the roof.

   The Mini-M antenna is located on the roof of the vehicle. Magnets at the base of the antenna keep it from sliding off the roof. The antenna cable is connected to the port at the rear of the vehicle.

   Please note: When the vehicle is shipped or the Mini-M antenna is not connected you MUST cap the antenna connector with the black cap. An extra cap has been shipped with the vehicle and can be found in the recovery box.

   WARNING! The Mini-M antenna radiates microwaves for up to 6 feet. Be sure the Mini-M power is off before you begin any work on the antenna.

If you have satellite signal but no service:

1. Check that the Mini-M is set to the correct Land Earth Station (LES).

   a. From the handset press **2nd** and **Menu**.
   b. Use the scroll up/down keys and select **Default LES**.
   c. Scroll up/down to choose **Stratos**, **Station 12** or **Xantic**. They will likely be 12th in the list of Land Earth Stations.
   d. Press **OK**.

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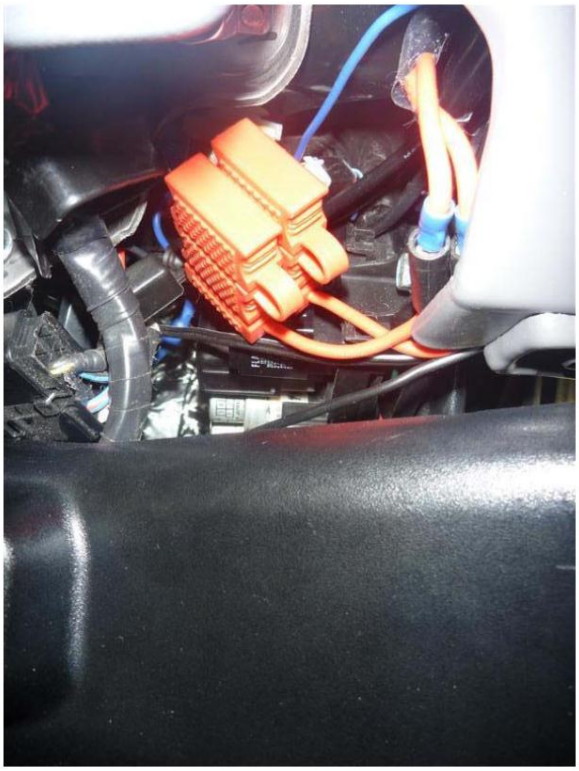
Troubleshooting the UHF & VHF radios:

1. If there is no power to the radios check the fuses.

The radio fuses are located behind the steering column. Open the red covers and carefully pull out the fuse. If it is broken, replace with a 15 Amp fuse. Extra fuses can be found in the recovery box.



2. If there is power to the radios but you can not communicate:
   a. Make sure you are keying your mic properly.

      Press the PPT, pause and speak.

Updated 11/2/10

b. Make sure the mic is connected to the radio.

c. Make sure the antenna(s) are secure on the roof.

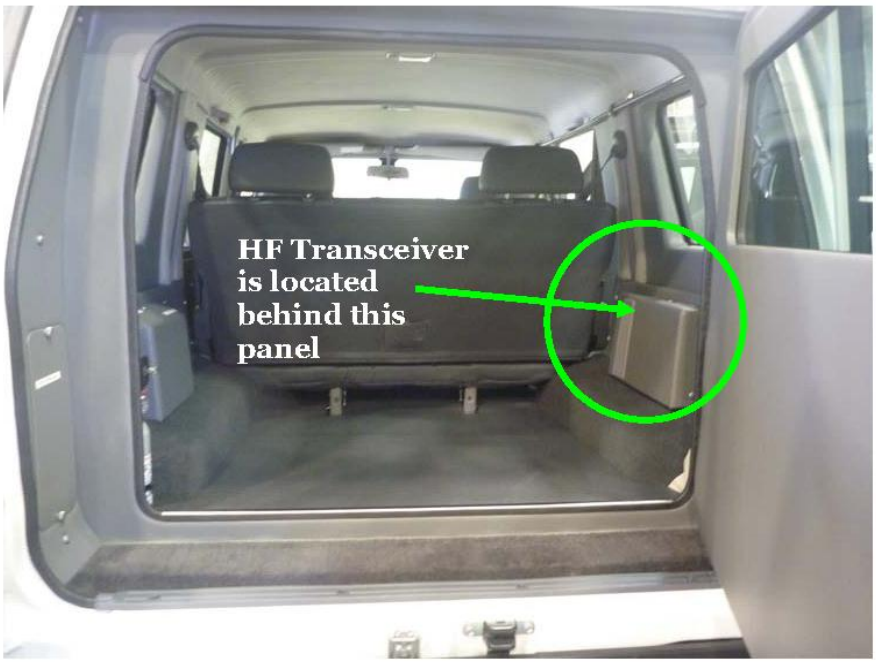
If the fuses are in tact and connections are firmly in place it could be an issue with:

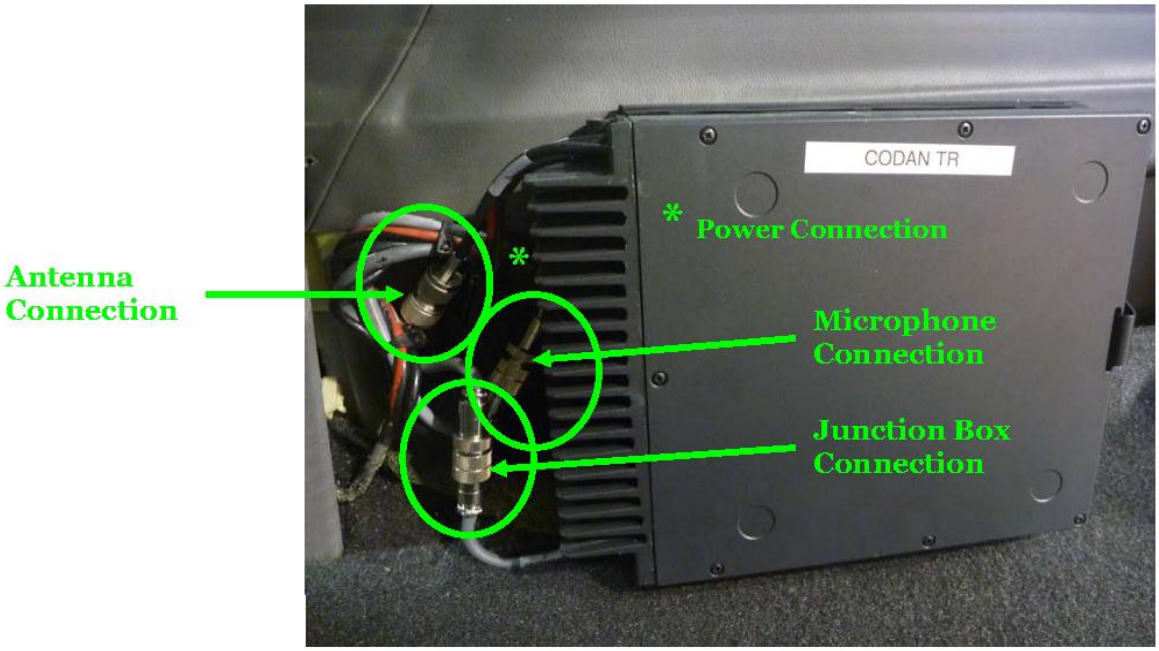
1. Radio's not programmed properly.
2. The vehicle being out of range from those that you are trying to communicate with.
3. A problem on the receivers end.

HF Troubleshooting:

1. If there is no power to the handset:
    a. Check the connections at the junction box.

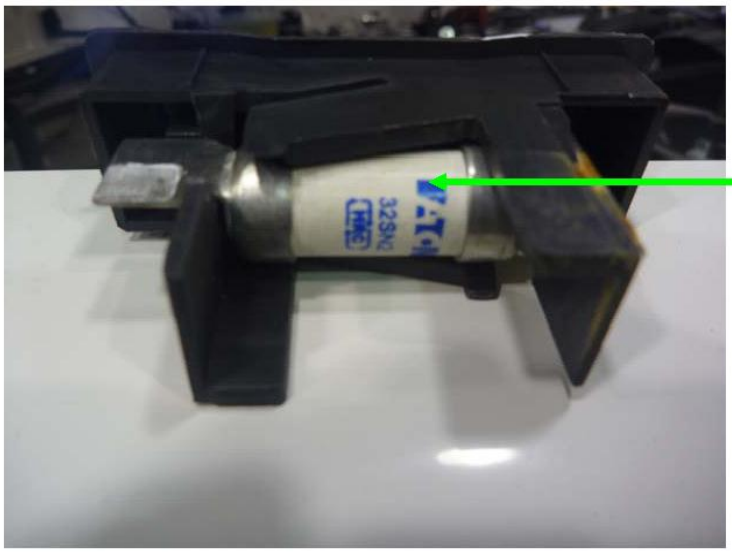
b. Check the connections in the rear of the vehicle





c. Check the fuse.

Located under the hood, left side near 2nd battery



Remove fuse, check for damage. Replace if necessary. Extra fuses in Recovery Box.

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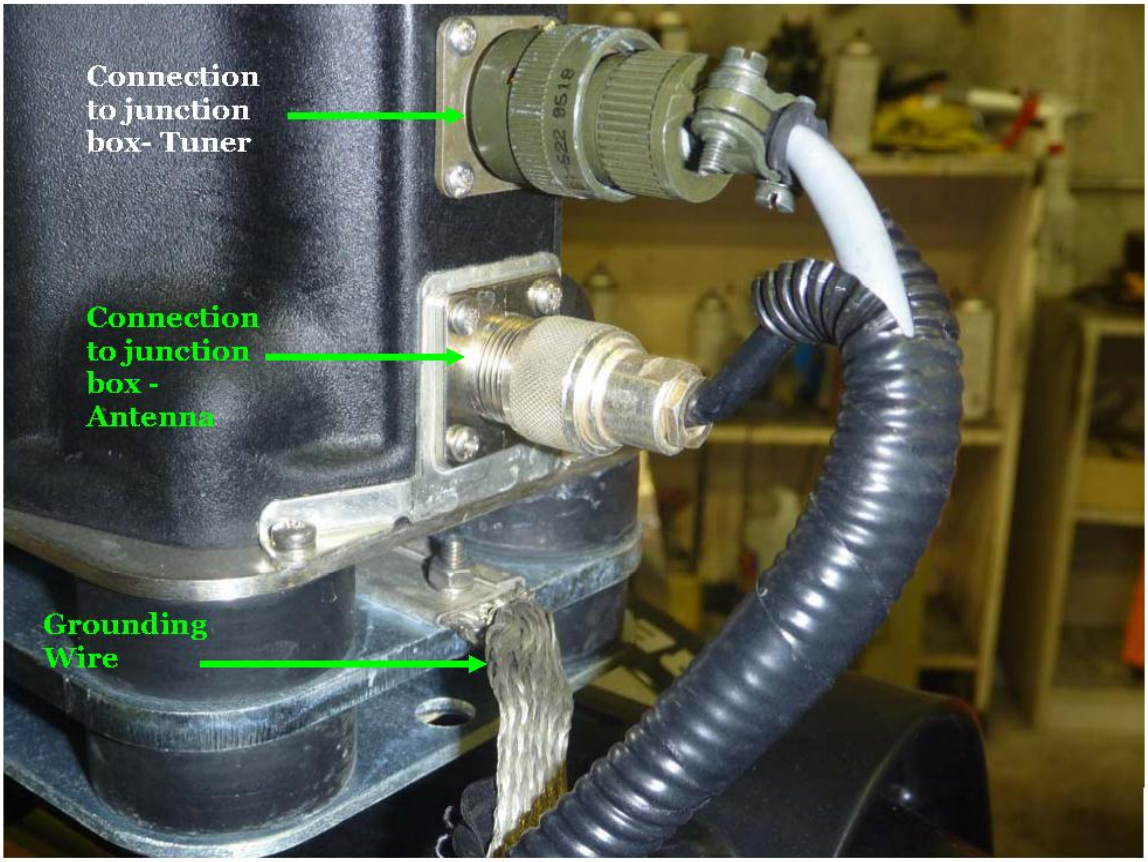
2. If there is power to the handset but you can not make a call:
   a. Check the connections at the junction box (See above).
   b. Check the connections at the antenna.



Please note: The grounding wire is connected to the chaise. If the antenna is not grounded there is a high risk of shock.

WARNING: Do not touch the HF antenna while the handset is being keyed.

PA & Intercom Troubleshooting:

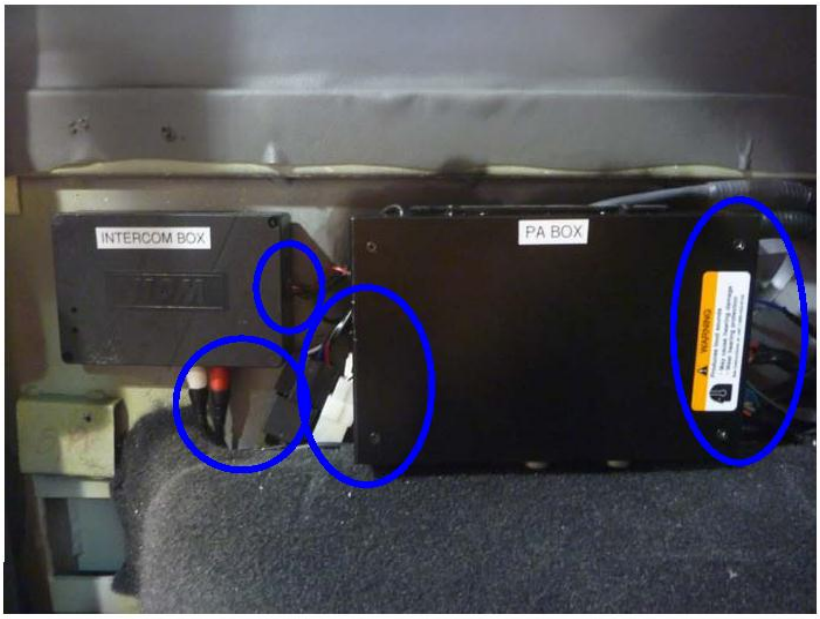
Worst case scenario, if the PA/Intercom system begins to fail the siren will go first followed by the handset then the control box. More likely the following steps will fix your problem.

If there is no power to the PA or Intercom system:

1. Make sure both power switches are on.
2. Check Fuse.

Carefully pull the fuse out. If it is broken replace it with another 20 Amp fuse. There should be extra fuses in the vehicle's recovery box.

3. Check connections



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If there is power to the PA/Intercom but you can not hear what is being said outside:

1. Adjust the Intercom volume

2. Have the person stand closer to the Intercom microphone.

The microphone is located at the base of both side mirrors.

If you have feedback when talking over the PA and/or Intercom:

1. Turn down the volume on the Intercom.
2. Hold the handset away from the Intercom speaker.

Questions or Problems?

Please contact the Comms Duty Officer (202-661-9330) for assistance.

Safe travels!

The Communications Team

Appendix P: Portable Air Compressors

Portable Air Compressor Kit Instructions (Model CKMP12)

1. Connections:

Position the compressor on a sturdy flat surface before opening the box.

Unlock and open the box using the two toggle clamps.

Make sure the switch is in the 'OFF' position by pressing down on the top of the switch rocker.

NOTE: The switch should normally already be in the 'OFF' position as it is designed to be moved into the 'OFF' position every time the box lid is closed.

Uncoil the power lead and connect the positive (**+**) alligator clamp (**RED** handle) directly to the positive (**+**) terminal of the vehicle's 12 volt battery.

Connect the negative (**-**) alligator clamp (**BLACK** handle) directly to the negative (**-**) terminal of the vehicle's 12 volt battery.

NOTE: The switch should now be illuminated but the compressor will not start until the switch rocker is pressed on the bottom. This tells you the compressor has now been connected to power.

Attach the air hose to the compressor by inserting the male end of the hose into the hose coupling on the compressor and simply pressing inward until the coupling sleeve clicks forward. The sleeve of the coupling does not need to be pulled back by hand at all.

Attach the tire filler (or other compatible device) to the opposite end of the hose in the same way.

Press the bottom of the rocker switch down to start the compressor and pressurize the manifold and hose.

NOTE: Once compressed air has expelled through the attached device (e.g., tire filler, air tool, etc.) the compressor should start running. It will continue to run until air use has stopped and the pressure in the manifold and hose reaches the pre-set pressure switch cut-out level.

2. Safety Precautions

Please carefully read and always abide by each of the following points when using a portable air compressor.

Never make connections to the battery with the isolating switch turned 'ON' as the resulting sparking at the battery terminals could pose a fire hazard.

Never attempt to stop or slow the flow of compressed air using direct exposure to skin.

NOTE: Normal textile clothing does not protect the skin against the risk of air embolism posed by exposure to compressed air.
NOTE: An air embolism is a serious condition of the blood stream which may result in severe injury or death.

For the same reason as above, never use compressed air to clean clothing, hair or body.

Wear suitable protective equipment (e.g., glasses, face shields, etc.) to control the risk of injury due to projectile particles.

Never point the hose at anyone and always see that bystanders are out of the line of air flow.

If using extension or replacement hoses other than genuine ARB hoses, use only sound strong hose with secure couplings and connections having a high temperature rating and a burst pressure of over 1380 Kpa [200 PSI].

If using compressed air accessories (e.g., extension or replacement hoses, or pneumatic devices like air tools) other than genuine ARB, avoid the danger of spontaneous disconnection by using only products with hose fittings that conform to one of the international standards listed in the specifications (ref: Section 1.3).

Air hoses should be securely held to prevent whipping.

Compressed air contains contaminants which makes it unsuitable for use in air-supplied respiratory protective devices such as spray painting hoods. Only use compressed air with such devices when appropriately filtered through approved filtration equipment.

3.Tire Filling

Connect the compressor to the vehicle's battery or other 12V DC power supply as in Section 2.1.

NOTE: If the vehicle is in a well-ventilated area, leaving the vehicle running at idle while running the compressor will give maximum compressor performance and avoid depleting your vehicle's battery.

Attach the tire filler (supplied) to the air hose coupling by inserting the male end of the filler into the hose coupling and simply pressing inward until the coupling sleeve clicks forward. The sleeve of the coupling does not need to be pulled back by hand at all.

Press the bottom of the rocker switch down to start and pressurize the compressor.

NOTE: ARB's tire filler attachment is equipped with a stop valve. Air will not pass through the tire filler attachment until it is connected to a tire valve.

Attach the tire filler attachment to any standard tire valve by depressing the latch lever of the filler and then pushing the filler onto the tire valve until a good seal is made.

NOTE: The compressor should automatically start now once air passes through the filler.

To keep air flowing without holding the filler simply release the lever on the filler while still holding the filler onto the tire valve and let go of the filler.

To stop filling and remove the filler from the valve depress the lever on the filler and pull the filler away from the tire valve.

NOTE: Periodically disconnect the filler and check the tire pressure with an automotive tire pressure gauge.

IMPORTANT: Do not fill your tires over the manufacturer's specified maximum pressure rating.

To protect the tire valve, always refit the tire valve cap once you have inflated your tires to the desired pressure.

4. Understanding the Built-In Protection Devices

This compressor has been equipped with both THERMAL and OVER PRESSURE protection devices in the interests of personal safety and to protect the unit from unnecessary internal damage.

NOTE: Never disable or modify any of the compressor's built-in protection devices.

5. Thermal Cutout Switch

The process of compressing air is a natural generator of heat. This heat generation is increased accordingly by increasing the compressed air flow rate or increasing the pressure level of the air flow.

The large DC electric motor inside the compressor is also a source of heat which increases with the amount of work being done by it.

The compressor has been designed to naturally disperse this heat into the air around it, however, the ambient temperature outside will have an effect on how fast this heat can be dispersed. If excessive levels of heat are allowed to build up inside the compressor the unit may be put at risk of internal damage. For this reason an internal electric switch has been designed into the back of the motor which will simply turn the compressor off if the temperature approaches a dangerous level, and will automatically reset and turn the compressor back on once the unit has cooled down to a safe temperature. This off time may last anywhere from just a few minutes up to half an hour depending on conditions around the compressor.

6. Over Pressure Safety Valve

This compressor is equipped with a pressure operated electric switch which has been factory set to turn off the compressor at a safe level of pressure, and then turn it back on again once the pressure has been exhausted down to a lower level. Should this switch fail for any reason the compressor may generate pressure well beyond its safe shut off limit.

A compressor which has reached its safe pressure maximum that has been left in direct sun or inside a hot vehicle may build up additional pressure past the safe working level. Connecting your compressor up to any air system which might already contain a residual pressure that is higher than the compressor's safe pressure limit may raise the internal pressure of the compressor past the safe pressure limit.

This compressor is equipped with a mechanical over pressure safety valve which has been factory set to bleed off to atmosphere any excessive pressure build up (i.e., from any of the situations above) before it can pose any personal danger or cause damage to compressor components.

7. Air Filter Service

The CKMP12 Portable Air Compressor comes factory fitted with a high density, high flow, sintered bronze air filter to protect the compressor components, and any accessories that might be used with the compressor, from damage caused by the ingress of dirt and fine dust particles. The filter element is removable and cleanable and should provide for years of continuous service. Follow the steps below to disassemble, clean and re-assemble the air filter.

- Unsnap and remove the air filter cover from the air filter base by applying slight prying pressure under the fingers of the cover.
- Remove the filter element disk.

- Vigorously wash the element in a solution of hot soapy water.
- Rinse the element in pure hot water.
- Dry thoroughly.
- Insert the element back into the air filter base making sure that the flattest face of the disk faces toward the compressor.
- Snap the air filter cover back onto the base and rotate the cover into the desired position.

8. Electrical Fuse Replacement

If the electrical fuse that is equipped in line with the positive (**+**) power lead (**RED**) requires replacing, it can be removed by opening the black rubber fuse housing cover and pulling straight outward on the fuse until it slides free of the fuse block. This fuse should only be replaced with a fuse of the same type (maxi blade type) and of the same amp rating or less.

9. Safety Valve Service

The CKMP12 Portable Air Compressor comes factory equipped with a safety valve to automatically and safely relieve any excessive pressure from inside the system. This pressure could occur as a result of a fault in the pressure switch circuit, pressure generated from prolonged exposure to direct sunlight, accidental connection to a higher source of pressure, etc. If it becomes necessary to service this valve to change the relief pressure (i.e., use alternate spring) or clean the valve seat then it can be easily disassembled as follows.

- Using a 4mm hex key, unscrew the safety valve fitting from its socket.
- Remove the spring and poppet from inside the valve socket.
- Clean or replace the valve components as required.
  NOTE: Replacing safety valve parts with non-genuine ARB parts or modifying these parts in any way could change the relief pressure value, and is therefore not recommended.
- Reassemble safety valve as below and tighten the fitting until the head of the fitting contacts the compressor head casting.

300P Portable Compressor

1. Always operate the compressor AT OR BELOW THE MAXIMUM PRESSURE RATING of the compressor. Refer to Specifications section of this manual.

2. Always OBSERVE THE MAXIMUM DUTY CYCLE of the air compressor. Refer to Specifications section of this manual for details. Operations exceeding maximum pressure ratings and or duty cycle will result in damage to air compressor..

3. Your air compressor is equipped with an AUTOMATIC THERMAL OVERLOAD PROTECTOR. This feature is designed to protect the air compressor from over-heating causing permanent damage to your air compressor. The thermal overload protector will automatically cut off power to air compressor should internal operating temperature of the air compressor rise above safe levels during excessive use.

4. Should at any time during use, your air compressor automatically shuts off, do not attempt to restart air compressor. Turn ON/OFF switch of air compressor to the OFF position. The automatic thermal overload protector will automatically reset when internal temperature of the air compressor drops below safe level. After allowing air compressor to cool off for about 30 minutes, you can safely resume use of the air compressor by turning on the air compressor.

5. Please note that you may experience a slight delay (about a second) of the compressor's motor starting when the On/Off Switch is turned on while compressor is pressurized (when there is pressure in the line that the compressor is connected to). This is a normal delayed reaction, not a Compressor ON/OFF switch malfunction. 6.

6. It is strongly recommended that you keep the vehicle's engine running while using the air compressor to prevent discharge of your vehicle's battery.

7. ONLY OPERATE THE AIR COMPRESSOR IN WELL VENTILATED AREAS. Compressor performance is enhanced when operating compressor with vehicle engine running.

TIRE INFLATION & DEFLATION

IMPORTANT: Before attaching air compressor power cord to power source, check to make sure that the ON\/OFF switch of your compressor is in the Off position. Attach the Positive (+) battery clamp (Red) to the Positive Terminal of the battery and the Negative (-) battery clamp (Black) to the Negative terminal of the battery. Always keep your vehicle engine running while operating compressor to avoid draining your vehicle's battery.

CAUTION: Your Portable Air Compressor is Moisture and Dust Resistant, but NOT WATER OR DUST PROOF. Never place compressor in soft sand while running the Compressor. Vibration from the compressor will cause the compressor to settle into soft sand, resulting in compressor drawing in foreign particles. Never expose compressor to water while running the compressor.

IMPORTANT: Make sure compressor sits upright while operating compressor. Avoid tugging at compressor if line is taut. Instead, move the compressor to the same side of vehicle as tires that are being aired up.

IMPORTANT: Always make sure the Portable Compressor's 8 foot power cord is uncoiled and fully extended when using your air compressor to avoid overheating the power cord.

5-in-1 INLINE INFLATOR / DEFLATOR HOSE

OPERATION INSTRUCTIONS:

This air compressor comes with quick connect stud. Your Inline Deflator comes with extension coil hose with quick coupler. Simply attach this multi-function extension coil hose to the quick connect stud and you are ready to inflate tires. The Inline Inflator/Deflator Hose can be used for both Airing Up and Airing Down. Please familiarize yourself with the following different functions of this versatile air tool:

A. TIRE INFLATION:

1. Attach quick connect coupler to air compressor.
2. Push the tire chuck, with the lever in the upright position, down over the tire valve stem and then push the lever down to the horizontal position to lock in place.
3. Check to make sure the Deflator Collar Lock is disengaged.
4. Turn compressor switch on to begin inflation. When desired pressure is reached, turn compressor off.

B. HANDS-FREE CONTINUOUS DEFLATION:

1. Push the tire chuck, with the lever in the upright position, down over the tire valve stem and then push the lever down to the horizontal position to lock in place.

2. Push Deflator Collar toward tire valve stem and turn Deflator Collar clockwise to engage lock.
3. When desired pressure if reached, turn Deflator Collar counterclockwise to disengage lock.

C. INTERMITTENT DEFLATION:

1. The intermittent deflation function offers fast downward pressure adjustments.
2. With tire chuck attached to tire valve stem, push Deflator Collar toward tire valve stem to decrease tire pressure.
3. Release Deflator Collar to halt deflation.

D. INLINE PRESSURE GAUGE:

1. The 2-inch Inline Pressure Gauge provides convenient tire pressure monitoring when airing up or down. This eliminates switching back and forth between a tire chuck and a tire pressure gauge.
2. Please note that during inflation and deflation, due to air velocity, pressure gauge cannot provide accurate pressure readings. Momentarily halt inflation or deflation to obtain accurate pressure readings.

SAFETY PRECAUTIONS

1. Always inflate tires to manufacturer's recommended tire pressures. Exercise extreme caution when driving with aired-down tires. Re-inflate tires before high-speed roadway travel.
2. Never exceed 20 M.P.H. when driving with partially inflated tires.
3. Never make sharp turns while driving with reduced tire pressure.
4. Re-inflate tires before high speed traveling onto roadways.
5. Use heat-resistant, minimum 200 PSI-rated working pressure extension hose. Do not use aftermarket hoses with less than 200 PSI working pressure. Some aftermarket hoses may not be suitable for use with this air compressor due to heat and pressure typically generated by this type of air compressors.
6. The use of a close-ended tire chuck will cause excessive pressure buildup if tire chuck is not attached to tire valve stem while air compressor is in operation.

IMPORTANT:
Always use an Open-Ended tire chuck such as the tire chuck equipped on the Deflator/Inflator Coil Hose for tire inflation when using a compressor without an air tank.

CAUTION: Never touch the air compressor or fittings connected to the air compressor other than the ON/OFF switch with bare hands during or immediately after use. The extension hose and fittings connected extension hose will become very HOT during and after use. If necessary, wear heat resistant gloves to remove hose from the compressor quick connect stud.

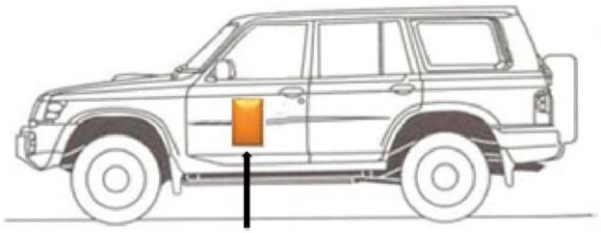
MAINTENANCE & REPAIRS

1. Your air compressor is equipped with permanently lubricated, maintenance-free motor. Never try to lubricate the compressor.
2. Regularly clean dust and dirt from compressor cooling fins and motor housing.
3. All repairs should be performed by Manufacturer or Manufacturer authorized service agencies

Appendix Q: Preparation for Transport Instructions

All vehicles must be prepared for transport as follows:

1. Cargo should be properly blocked and braced for transport in 1x20' container
2. Place two (2) OFDA Vehicle Handbooks inside of the vehicle
3. One complete set of keys to the vehicle must be placed in an envelope with vehicle chassis number indicated, labeled "**keys**" and secured to the driver side sun visor.
4. One complete set of keys will be placed in a large clear envelope and secured to the **EXTERIOR** of the driver's door. (See diagram below)
5. Vehicle fuel tank must be drained to 1/8 tank or the required level for surface shipment.
6. All vehicles contain two batteries. Both batteries must be disconnected for transit. Either physically disconnect the negative battery terminal or disengage the battery terminal switch if one is present.
7. All doors must be completely closed for transport.
8. All doors must be unlocked and remain this way throughout transport.
9. Complete the Preparation for Transportation Checklist and Place in the envelope attached to the **exterior** of the driver's door. (See diagram below)



Attach envelope with keys and this checklist to EXTERIOR driver's door (do not place adhesive on glass).

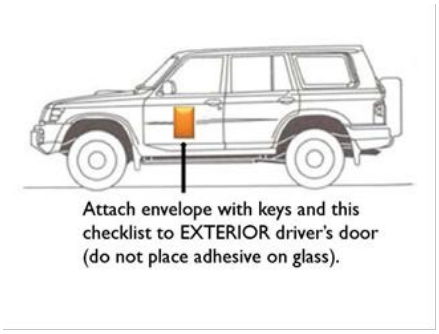
All vehicles going to locations where recovery equipment will be needed should have the following items:

- Hi Lift Jack (Must be locked to the mounting bracket)
- Winch
- Snatch Block
- Recovery Strap Kit

Please complete Preparation for Transport Checklist on next page

Preparation for Transport Checklist

The following items MUST be complete prior to transportation	Completed By
Cargo properly blocked and braced for transport in shipping container or flatbed	
Place two (2) OFDA Vehicle Handbooks inside of the vehicle	
One complete set of keys are to be vehicle placed in an envelope with vehicle chassis number indicated, labeled "**KEYS**" and secured to driver side sun visor	
One complete set of keys will be placed in a large clear envelope and secured to the exterior of the driver's door window (see diagram below)	
Vehicle fuel tank drained to 1/8 tank or the required level for surface shipment	
Vehicle batteries disconnected. Either physically disconnect negative battery terminal or disengage the battery terminal switch	
Ensure all doors are unlocked	
Firmly close all doors. All doors must be completely closed	
Place this checklist in envelope attached to the **exterior** driver's door (see below)	
For all vehicles going to locations where recovery equipment will be needed, please ensure the following equipment is with the vehicle.	**Completed By**
Hi-Lift Jack (***Must be locked to mounting bracket***)	
Winch	
Snatch Block	
Recovery Strap Kit	



Vehicle Manager: OFDALogistics@usaid.gov
Telephone: +1 202-712-0556 (USA)

PLACE THIS CHECKLIST IN THE ENVELOPE ATTACHED TO THE DRIVER'S DOOR EXTERIOR

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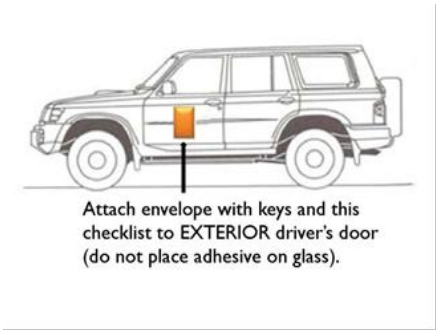
Preparation for Transport Checklist

The following items MUST be complete prior to transportation	Completed By
Cargo properly blocked and braced for transport in shipping container or flatbed	
Place two (2) OFDA Vehicle Handbooks inside of the vehicle	
One complete set of keys are to be vehicle placed in an envelope with vehicle chassis number indicated, labeled "**KEYS**" and secured to driver side sun visor	
One complete set of keys will be placed in a large clear envelope and secured to the exterior of the driver's door window (see diagram below)	
Vehicle fuel tank drained to 1/8 tank or the required level for surface shipment	
Vehicle batteries disconnected. Either physically disconnect negative battery terminal or disengage the battery terminal switch	
Ensure all doors are unlocked	
Firmly close all doors. All doors must be completely closed	
Place this checklist in envelope attached to the **exterior** driver's door (see below)	
For all vehicles going to locations where recovery equipment will be needed, please ensure the following equipment is with the vehicle.	**Completed By**
Hi-Lift Jack (***Must be locked to mounting bracket***)	
Winch	
Snatch Block	
Recovery Strap Kit	



Vehicle Manager: OFDALogistics@usaid.gov
Telephone: +1 202-712-0556 (USA)

PLACE THIS CHECKLIST IN THE ENVELOPE ATTACHED TO THE DRIVER'S DOOR EXTERIOR

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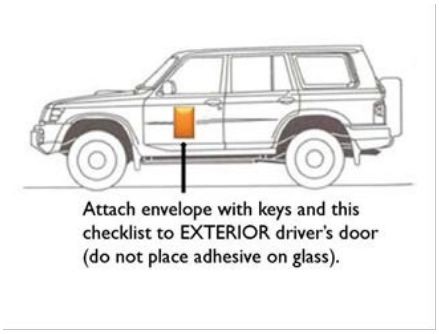
Preparation for Transport Checklist

The following items MUST be complete prior to transportation	Completed By
Cargo properly blocked and braced for transport in shipping container or flatbed	
Place two (2) OFDA Vehicle Handbooks inside of the vehicle	
One complete set of keys are to be vehicle placed in an envelope with vehicle chassis number indicated, labeled "**KEYS**" and secured to driver side sun visor	
One complete set of keys will be placed in a large clear envelope and secured to the exterior of the driver's door window (see diagram below)	
Vehicle fuel tank drained to 1/8 tank or the required level for surface shipment	
Vehicle batteries disconnected. Either physically disconnect negative battery terminal or disengage the battery terminal switch	
Ensure all doors are unlocked	
Firmly close all doors. All doors must be completely closed	
Place this checklist in envelope attached to the **exterior** driver's door (see below)	
For all vehicles going to locations where recovery equipment will be needed, please ensure the following equipment is with the vehicle.	**Completed By**
Hi-Lift Jack (***Must be locked to mounting bracket***)	
Winch	
Snatch Block	
Recovery Strap Kit	



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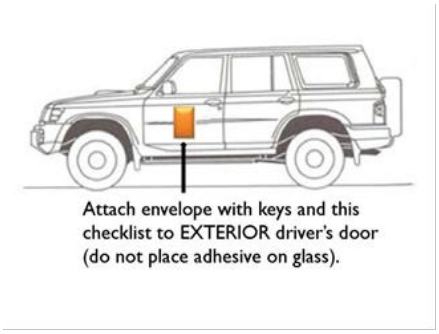

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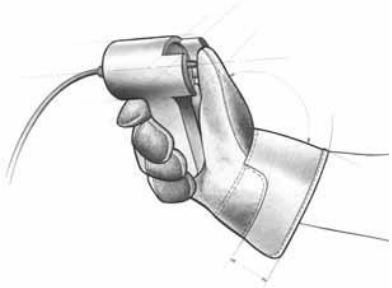
Appendix R: Recovery Equipment and Instructions for Use

Basic Guide for Winching Techniques

HOW THE WINCH WORKS:

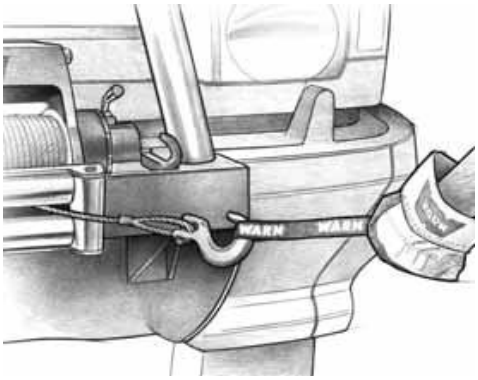
Winch Mechanics
The major advantage of an electric-powered winch is that it can provide reliable service for intermittent utility and recreational use even while the vehicle's engine is stalled — assuming, of course, that sufficient battery current is available. It is important to understand that the longer the pull, the more heat that is created, just like a hot plate. Prolonged winching without cooling the winch motor will damage the motor. Also, if the engine is idling during winching, the battery may drain faster than it is charging. So pay close attention to your voltage gauge to make sure you aren't draining your battery too low to start your vehicle.

Control of Your Winch
The winch is controlled by the hand held remote control to allow the operator to stand clear while controlling the winching process. The remote control provides control of the forward or reverse rotation of the spooling drum.



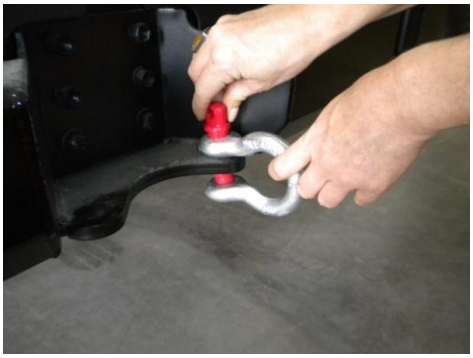
Gloves
Wire rope, through use, will develop "barbs" which can slice skin. It is extremely important to wear protective gloves while operating the winch or handling the wire rope. Avoid loose fitting clothes or anything that could become entangled in the wire rope and other moving parts.

Hook Strap Use to hold the hook and keep fingers away from the fairlead as the wire rope is being spooled in. Winches develop tremendous pulling forces and can easily remove fingers and limbs that are placed in pinch points. Put the hook into the loop and hold the strap between the thumb and forefingers.

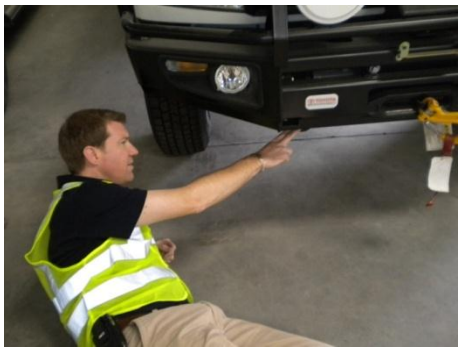


Snatch Block
Used properly, the multi-purpose snatch block allows you to:
(1) Increase your winch's pulling power; and (2) change your pulling direction without damaging the wire rope. Proper use of the snatch block is covered in "Before You Pull".

Clevis/D-Shackles
The D-Shackle is a safe means for connecting the looped ends of cables, straps and snatch blocks.
The shackle's pin is threaded to allow easy removal.



Tow Hooks
Secured properly to your vehicle's frame, tow hooks provide an attachment point for wire hooks, straps, and chains.



Recovery Strap
Never use a recovery strap in a winching operation. Because it is designed to stretch, it stores energy and could react like a rubber band should your rigging fail. Use the recovery strap to "snatch" out a stuck vehicle.

Shovels & Hand Tools
Quite often during winching activities, you'll find yourself in need of some additional help. You may want to stow equipment such as a shovel, an axe and a Hi-Lift jack for additional assistance when needed.

HOW TO WINCH:

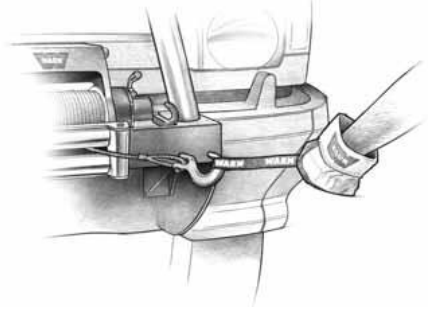
Practice using your winch before you get stuck. A real situation is no time to be learning how to use your winch. Make sure new wire rope is stretched before it is first used.

Rigging for the Pull
The following steps describe how to recover your vehicle with rigging a single line pull. Double or multiple line rigging techniques follow the same basic steps, but use a snatch block to assist the process.

Step 1: PUT ON GLOVES.

Step 2: DISENGAGE CLUTCH.
To allow free spooling of the winch drum, rotate the clutch lever on the winch to disengage. Freespooling conserves battery power.

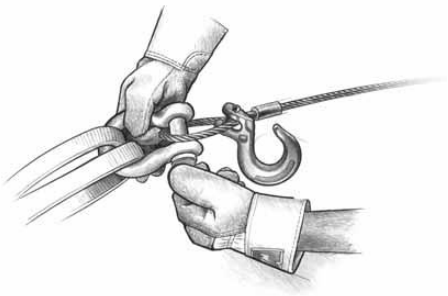
Step 3: FREE THE WINCH HOOK AND ATTACH HOOK STRAP.
Free the winch hook from its anchor point. Attach hook strap to the hook (if not attached).



Step 4: PULL WIRE TO ANCHOR POINT.
Pull out enough wire rope to reach your anchor point. Be sure to keep a certain amount of tension in the wire. It can become twisted and overwrap when slackened, leading to wire rope damage. To prevent losing the end, hold the winch hook in the hook strap while you work.

Step 5: SECURE TO THE ANCHOR POINT.
Once you've established your anchor point, secure the tree trunk protector or choker chain around the object.

Step 6: ATTACH THE CLEVIS/D-SHACKLE AND HOOK STRAP.
Attach the shackle to the two ends of the strap or chain and through the hook loop, being careful not to over tighten (tighten and back-off 1/2 turn).



Step 7: LOCK THE CLUTCH.
Lock the winch drum by rotating the clutch lever on the winch to Engage.

Never operate winch with less than 5 wraps of rope around the drum. Rope could come loose from the drum, as the rope attachment to the drum is not designed to hold a load.

Step 8: CONNECT THE REMOTE CONTROL.
Be careful not to let the remote control cord dangle in front of the winch. If you choose to control the winch from inside your vehicle, always pass the remote through a window to avoid pinching the cord in the door.

Always disconnect the remote control when not in use.

Step 9: PUT WIRE ROPE UNDER TENSION.
Using the winch switch, slowly wind the wire rope until no slack remains. Once the wire rope is under tension, stand well clear, and never step over it.

Step 10: CHECK YOUR ANCHOR.
Make sure all connections are secured and free of debris before continuing with the winching procedure.

Step 11: CHECK WIRE ROPE.
The wire rope should be neatly wound around the spooling drum. Improper winding can cause damage to the wire rope.

Step 12: LAY SOMETHING OVER THE WIRE ROPE
If you decide it is necessary, midway between the winch and the anchor point to absorb energy should the wire rope snap loose tree limbs, heavy jackets, chain, back pack and the like may be used for this purpose.

Step 13: MAKE YOUR INTENTIONS CLEAR.
Be sure that everyone in the immediate vicinity surrounding the winching operation is completely aware of your intentions before you pull. Declare where the spectators should not stand — never behind or in front of the vehicle and never near the wire rope or snatch block. Your situation may have other "no people" zones.

Step 14: BEGIN WINCHING.
With the winching vehicle's engine on and light tension already on the wire rope, begin winching slowly and steadily. Be sure that the wire rope is winding evenly and tightly around the spooling drum. For additional assistance, the winched vehicle can be slowly driven while being pulled by the winch.

Step 15: FOR VEHICLE RECOVERY,
Continue pulling until the vehicle is on stable ground. If you are able to drive the vehicle, the winching operation is complete.

Step 16: SECURE VEHICLE.
Once recovery of the vehicle is complete, be sure to secure the vehicle's brakes and put the Transmission in "park" (automatic) or "low" gear for (manual) transmissions. Release tension in the wire rope.

Step 17: DISCONNECT WIRE ROPE.
Disconnect from the anchor.

Step 18: REWIND WIRE ROPE.
The person handling the wire rope should walk the rope in and not let it slide through the hand and control the winch at all times.

Step 19: DISCONNECT REMOTE CONTROL.
Disconnect the remote control cord from the control box and store in a clean and dry place. Winching operations are now complete. Put the cap on the solenoid plug in.

RIGGING TECHNIQUES

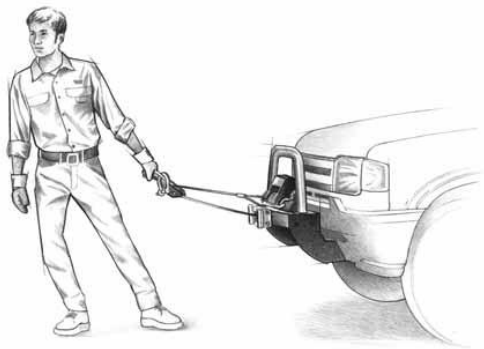
Various winching situations will require application of other winching techniques. These could range from too little distance to achieve maximum pull using straight line rigging, simply increasing pulling power, or maintaining a straight-line pulling situation. You will have to assess what technique is correct for your situation. Think "safety" at all times.

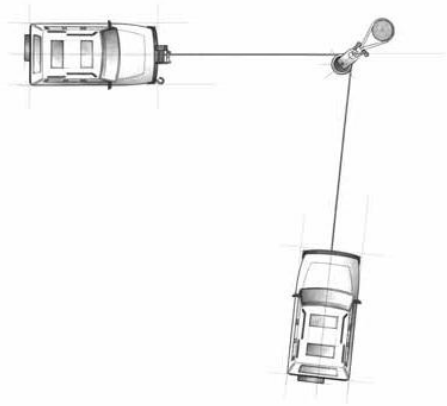
HOW TO CHANGE THE PULLING DIRECTION

All winching operations should have a straight line from the winch to the object being pulled. This minimizes the wire rope collecting on one side of the drum affecting pulling efficiency and damaging wire rope. A snatch block, secured to a point directly in front of the vehicle, will enable you to change your pulling direction while still allowing the wire rope to be at 90º to wind properly onto the spooling drum.

INCREASING PULLING POWER

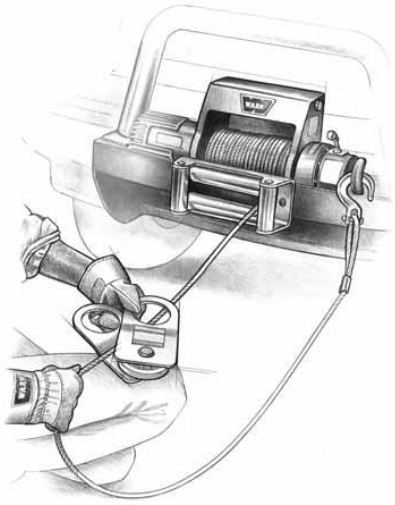
In some cases, you may find yourself needing more pulling power. The use of snatch blocks increases mechanical advantage and that increases your pulling power:





DOUBLE LINE

Because pulling power decreases with the number of layers of wire rope on the winch drum, you can use a snatch block to double line out more wire rope. This decreases the number of layers of wire rope on the drum, and increases pulling power. Start by feeding out enough wire rope to free the winch hook. Attach the hook to your vehicle's frame/tow hook and run the wire rope through a snatch block. Disengage the clutch and, using the snatch block, pull out enough wire to reach your anchor point. Do not attach hook to mounting kit. Secure to the anchor point with a tree trunk protector or choker chain. Attach the clevis/shackle. Attach the shackle to the two ends of the strap/chain, being careful not to over tighten (tighten and back-off 1/2 turn).



MAINTENANCE

- Inspect the wire rope before and after each winching operation. If the wire rope has become kinked or frayed, the wire rope needs to be replaced. Be sure to also inspect the winch hook and hook pin for signs of wear or damage. Replace if necessary.
- Keep winch, wire rope, and switch control free from contaminants. Use a clean rag or towel to remove any dirt and debris. If necessary, unwind winch completely (leaving a minimum of 5 wraps on spooling drum), wipe clean, and rewind properly before storage. Using a light oil on the wire rope and winch hook can keep rust and corrosion from forming.
- Operating your winch for a long period of time places an extra burden on your vehicle's battery. Be sure to check and maintain your battery and battery cables according to manufacturer guidelines. Also inspect switch control and all electrical connections to be certain they are clean and tight fitting.
- Inspect the remote control for damage, if so equipped. Be sure to cap the remote socket to prevent dirt and debris from entering the connections. Store remote control in a protected, clean, dry area.
- No lubrication is required for the life of the winch.

THE FINAL ANALYSIS

The basic guide to proper winching techniques cannot cover all the possible situations in which you may need to use a winch. In the final analysis, the decisions you make will determine the final outcome. So think through each situation and each step of use. Always be mindful of your own safety and the safety of others.

GUIDELINES FOR SAFE USE OF VEHICLE RECOVERY STRAPS (SNATCH STRAPS)

GENERAL INFORMATION

Recovery Straps are usually a nylon strap that can stretch under load and spring back to almost its original length. The combination of the recovery vehicle pull and the tension in the strap creates a 'snatching' effect that can pull a stranded vehicle free from being bogged or unable to move under its own power. When used in accordance with these guidelines, vehicles may be recovered with minimal injury risk to people or damage to vehicle equipment.

KEY INFORMATION AND SAFETY RECOMMENDATIONS

- Check the strap and its packaging for the stated Minimum Breaking Strength (MBS) of this Strap.
- It is recommended that the minimum breaking strength of the strap should be between 2 and 3 times the vehicle's gross vehicle mass (GVM);and
- The strap must be suited to the GVM of the lighter of the two vehicles used in the recovery process.
- Persons intending to use the strap should consider completing a nationally recognized four wheel drive training course or contact a four wheel drive club for comprehensive advice on the proper selection and use of the strap.
- The strap must not be used for lifting or conventional towing.
- Persons intending to use the strap must ensure that the strap is not damaged and is in usable condition.
- The strap's strength and stretch are reduced when the strap is saturated.
- Something like a recovery damper, heavy bag or blanket must be draped over the strap during use to reduce any unintentional rebound of the strap.
- While the strap is being used, persons situated outside the motor vehicles involved in the recovery process must -
  - Be kept at a safe distance (recommended as at least 1.5 times the length of the unstretched strap) from either of the vehicles involved in the recovery process;
  - Never situate themselves within the path of the vehicle performing the recovery.

WARNING - Always follow product instructions. It is important to correctly attach the motor vehicle recovery strap to a motor vehicle. A standard tow ball or vehicle tie-down point is not designed for this purpose and may result in the strap or a vehicle component detaching from a motor vehicle and striking and seriously injuring or killing a person. Only attach the strap to a vehicle recovery point or device that is suitably rated for use with the strap. Incorrect use has previously resulted in serious injury and death.

IMPORTANT

- **Never attempt to recover a vehicle without all the necessary equipment.**
- **Only use equipment that is properly rated for the particular situation. If in doubt, don't use it.**
- **Never exceed the Minimum Breaking Strength (MBS) of the strap or the Working Load Limit (WLL) of shackles.**

SELECTING THE RIGHT RECOVERY STRAP

It is very important the correctly rated strap is used. A strap with a 'too light' breaking strength may break under load. A strap with 'too heavy' a breaking strength may not stretch properly and more stress will be placed on the recovery points, possibly causing damage or injury. The Minimum Breaking Strength (MBS) of the strap should be between 2 and 3 times the Gross Vehicle Mass (GVM) of the 'lighter' of the two vehicles used in the recovery process. Be aware that the Recovery Strap will be under greater load if the vehicle is bogged in mud, sand or heavily loaded. If the GVM is not stated on the identification plate of a vehicle or its registration certificate it could be available from the owner's handbook or from the vehicle manufacturer.

KEEPING PEOPLE SAFE

Only the drivers of the stranded and recovery vehicle should be in those vehicles. Nobody else should be in or on those vehicles. Ensure bystanders stay at least 1.5 times the un-stretched strap length away, to the side of the line of recovery. NEVER stand between vehicles connected by a Recovery Strap.

SETTING UP THE RECOVERY

Assess the circumstances of the stranded vehicle. If it has bottomed out, clear under the vehicle body so it rests on its wheels. The recovery vehicle should be placed in line (no more than 10o off the straight line) with the stranded vehicle, for either a forward or reverse recovery operation. Distance between vehicles should be 2-3 meters less than the unstretched length of the Recovery Strap. Establish agreed signals between the vehicle drivers, by radio (preferably), hand signals or vehicle horn.

CONNECTING THE RECOVERY STRAP

Carefully inspect the Recovery Strap to determine that it is in good condition. If the strap is wet, dirty, cut or chaffed, it will not perform properly. A wet strap may be 20% under strength, a damaged strap may break. Do not allow the strap to contact hot surfaces or sharp edges.

Roll the strap out between the vehicles, and make sure there are no twists and leave about 2-3 meters slack between the vehicles. The joining of straps should be avoided wherever possible. NEVER USE A METAL OBJECT to join straps – if the strap breaks it can become a missile and cause damage or injury. Check your vehicle hand book for recovery point locations, or use correctly rated and fitted aftermarket recovery points. DO NOT CONNECT TO A TOW BALL OR TIE DOWN POINT. Connect Recovery Strap to recovery point, for any recovery point requiring the use of a shackle to attach the strap, use only load rated shackles. Only connect to correctly rated recovery points on the vehicles, with only 'Load Rated' shackles. Load ratings are marked on shackles as WLL (Working Load Limit). Bow Shackles are suitable for this purpose and should be rated at least 3.25t. To correctly tighten shackle pins, screw the pin until it seats then back off about ½ to 1 turn. Over tightening may lead to seized pins, due to the force exerted during recovery operations. To reduce the risk of vehicle damage and personal injury, hang a suitable recovery damper blanket, over the Recovery Strap, approximately midway to restrict the whipping action of a strap should it break. Last thing – Check all connections and clear bystanders to a safe distance (1.5 times the un-stretched Recovery Strap length) to the side of the recovery operation and NEVER in the line of recovery.

MAKING THE RECOVERY

1. Before the recovery operation drivers must agree on the point to which the stranded vehicle is to be recovered and the signal (radio, hand signal or horn blast) when that point is reached.

2. With communications maintained between both vehicles, and Recovery Strap secure, the recovery vehicle should gently accelerate, taking up the slack and proceeding at no faster than 10-12kph. For best results the stranded vehicle should be in 1st gear (or 2nd Low), and the driver should assist the recovery by trying to drive out approximately 3 seconds from when the recovery vehicle moves off.

3. If the vehicle is not recovered on the first attempt, check under the stranded vehicle, again, for obstacles, reset the slack in the Recovery Strap and try a little more speed by the recovery vehicle.
NOTE: Excessive speed or continual jerking action whilst using a Recovery Strap may result in damage to the recovery point, chassis and drive line of both vehicles.

4. When the stranded vehicle reaches the agreed point the driver should advise and the recovery vehicle should stop, then the stranded vehicle should stop.

5. Where proper use of a Recovery Strap is unsuccessful, use an appropriate sized recovery winch.

6. Do not attempt to remove the strap until both vehicles are stationary and secured.

7. NOTE: Recovery Straps require rest periods between use to return to their original length and capacity. Excessive pulls over a short period of time can cause heat buildup and possible failure.

GENERAL CARE AND MAINTENANCE

- Never allow your strap to rub against sharp or hot surfaces.
- Avoid twists & kinks, after washing, and when dry; always coil your strap for storage.
- Clean your strap with warm water and a mild detergent, allowing thorough drying before storage.
- Foreign material such as sand and grit can permanently damage the strap fibers.
- Check full length of straps for nicks and cuts before and after use. If damaged, replace it.
- Never use the strap as a lifting sling.
- Inspect shackles for damage; if pins are hard to turn, shackle has been overstressed. Replace.

High Lift Jack Usage

This device consists of a mechanism with a single fork sticking out one side and a long lever on the other, the mechanism climbs up and down a long vertical rack.

The fork bit is inserted under a form part of the vehicle and the handle is operated, as the mechanism climbs up the rack. It lifts the vehicle - up to 1.6 meters high! It is probably the single most dangerous device you will ever find relating to recovery - read, understand and adhere to the instruction manual. It almost goes without saying that you must NEVER step over the handle...

If the vehicle is so bogged that the chassis and axles are in the goop as well, you will need to use the high lift jack to lift the vehicle from the goop and "walk" it sideways.

- The vehicle is jacked up such that the wheels are well out of the holes - the vehicle will be very unstable at this point, be careful.
- Either fill the holes with stones, rocks, logs or whatever else you can find (Spare wheels), or stand on one side and physically push the vehicle to the firmest terrain such that it falls off of the jack and lands with its wheels on new ground. This is most efficiently done by jacking the vehicle to the full height of the jack before pushing it off.
- Repeat this procedure for the rear of the vehicle.
- After doing it a few times, not only will you be totally exhausted, but the vehicle will also be standing on a new surface and can then be driven to a safe place.

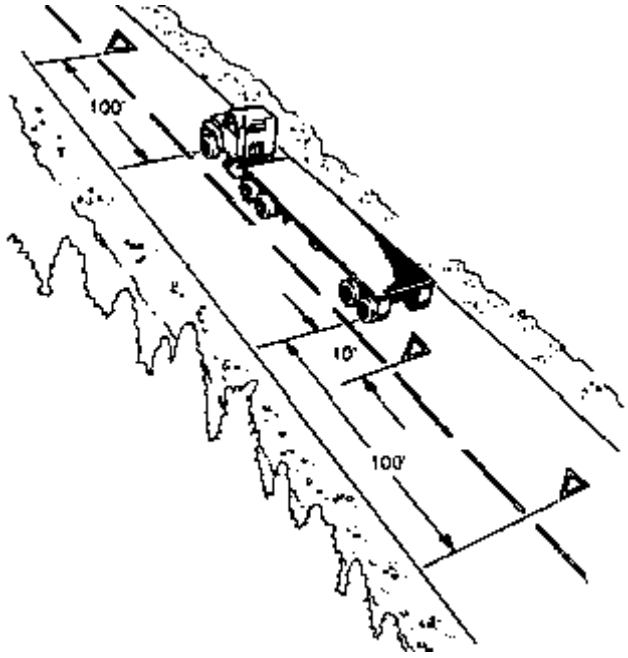
Warning Triangles Overview

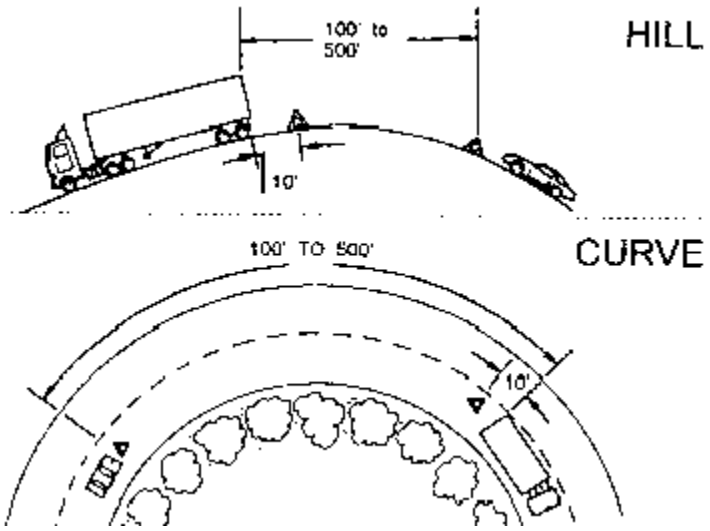
Traffic Safety Product Overview
Warning Triangles are one of those necessary accessories that should be carried in every vehicle. A set of three triangles are the universally recognized signal for help. They are fashioned with both fluorescent and reflective strips for maximum visibility warning effective day or night. The triangles also come with a weighted base and stand assembly to withstand 40 mph winds. They need no batteries and the reflectors are sealed from dust and moisture.

The Problem
If your vehicle becomes disabled and you are parked on the side of any road, be it freeway or back road (or anything in between) you must be able to warn other drivers traveling on that road that your vehicle is ahead, stopped on the side of the road and disabled. Other drivers may not notice your vehicle parked on the side of the road even when it is in plain sight.

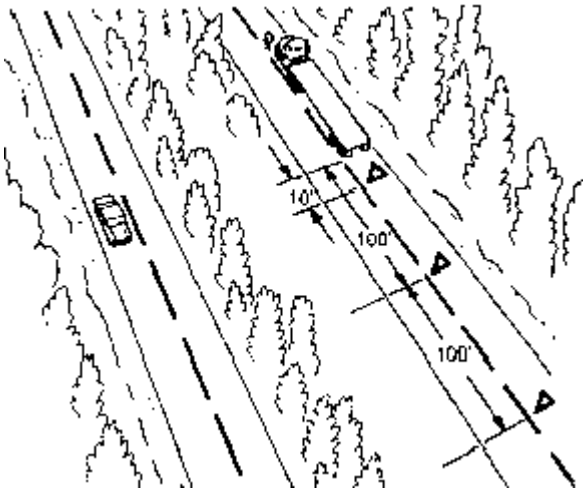
The Solution
The Warning Triangle Set is an absolute traffic-safety necessity that addresses the above problem. If you must stop on the road or on the shoulder of a road when your vehicle becomes disabled for any reason, you should always be prepared to put out your set of 3 reflective triangles within ten minutes to warn other drivers in both directions that you are stopped and disabled.

Operation
The Warning Triangle Set comes in a heavy plastic case and obviously must be removed prior to use. Each triangle is then assembled and erected in triangular fashion and turned perpendicular to its weighted base so that it will stand upright when placed on the ground. If on a two lane undivided road and on the traffic side of the disabled vehicle, the triangles are to be placed approximately 100 feet behind and ahead of the vehicle on the shoulder or in the lane you are stopped in. The third triangle should be placed within ten feet of the front or rear corner in the direction that traffic will be approaching from, in order to mark the location of the disabled vehicle.





If the disabled vehicle is located on a divided road back beyond any hill, curve, or other obstruction that prevents other drivers from seeing the disabled vehicle, triangles are to be placed behind the disabled vehicle at 10 feet and 500 feet with the third triangle 100 feet in front.



If you must stop on or by a one-way divided highway, place the warning triangles at 10 feet, 100 feet and 200 feet toward the approaching traffic.

Caution: Always watch for, and avoid oncoming traffic. When putting out the triangles, hold them between yourself and the oncoming traffic lane for your own safety, and so other drivers can see you.

Appendix S: References

https://trauma.ofda.gov/eRoom/Ops/logistics/vehicles

- **6 FAM 228.2 AND 228.4**
- **ADS 152, TORT CLAIMS**
- **ADS 536 - USE AND CONTROL OF OFFICIAL VEHICLES**
- **FAA, SECTION 636 (B)**
- **DART TOOLS FOLDER (FORMS)**
- **MERCEDES MANUAL.DOC**
- **RUN FLAT TIRE REPAIR INSTRUCTIONS (TOYOTA AND MERCEDES)**
- **TOYOTA LAND CRUISER LEVEL C GENERIC MANUAL.DOC**
- **SPARE PARTS UPDATES**
- **VEHICLE GUIDE (COMMUNICATIONS)**
- **ITI STUDENT REFERENCE HANDBOOK - Improvised Explosive Devices (IED) – WWW.ITIWSI.COM**
- **ARB CKMP12 COMPRESSOR MANUAL**
- **VIAIR 300P USER MANUAL**