Asset Register + Parts Inventory (Template + Example)

Small Scale (SS) Dual-View NII Mobile X-ray Inspection Vans

This document provides (1) a field definition (data dictionary) for an asset register, (2) an example asset register for a representative van unit, and (3) a starter parts inventory and preventive maintenance summary.

A. Asset Register Data Dictionary

Field	Definition
Asset ID	Unique identifier for the asset (e.g., VS-SSDV-001-NII-001).
Asset category	Vehicle, NII (scanner), Conveyor, Power, HVAC, IT/Network, Safety, Tools.
Make	Manufacturer or OEM of the asset.
Model	Model name/number as stated by the OEM.
Serial / VIN	Serial number; for vehicle use VIN.
Location	Physical location within the van or storage (e.g., rear equipment bay, roof, control console).
Status	In service, in repair, in storage, retired.
Power requirement	Electrical requirement (VAC/VDC, phase, Hz, amps, kVA) if applicable.
Dimensions	Key physical dimensions (L x W x H) in inches or mm.
Weight	Approximate weight (lb or kg) for handling and payload planning.
Calibration interval	If applicable, how often calibration verification is required.
PM interval	Preventive maintenance frequency (e.g., monthly, quarterly, annually, hours of operation).
PM procedure reference	Reference to the PM procedure section/document used by maintainers.

Warranty status	Warranty start/end dates and coverage type.
Notes	Free text for configuration details, part numbers, or constraints.

B. Example Asset Register - Unit ID: VS-SSDV-001

Replace bracketed fields (e.g., [SN], [VIN]) with the unit-specific information.

Asset ID	Category	Item	Make / Model	Serial / VIN	Location	Power requirement	Dims / Weight	Calibration + PM	PM procedure ref	Warranty	Notes
VS-SSDV-001-VEH-001	Vehicle	Chassis + body	Ford / Transit 350 HD (Extended, DRW, Low-Profile Body)	VIN: [VIN]	Vehicle	Diesel; 12 VDC system	L 248 in; W 96 in (no mirrors); H 97.5 in; GVWR 11,000 lb	Cal: N/A; PM: Per OEM schedule	OEM PM-VEH-001	Bumper-to-bumper / powertrain	Configured to meet <= 250 in length and <= 98 in height.
VS-SSDV-001-NII-001	NII	Dual-view X-ray scanner module	VectorScan / VS-DV1000	SN: [SN]	Center bay	208 VAC, 1-ph, 60 Hz, 30 A (max)	Tunnel aperture 40 x 40 in (1016 x 1016 mm); 1,800 lb (installed)	Cal: Quarterly verification; PM: Quarterly	PM-NII-001	1-year failure-free warranty	Dual-view (top + side) imaging; 36 AWG; >=24 mm steel penetration.
VS-SSDV-001-XRAY-001	NII	X-ray generator (top view)	VectorScan / XG-160T	SN: [SN]	Center bay (top)	Internal HV; supplied by VS-DV1000	Integrated; Integrated	Cal: Quarterly verification; PM: Annually	PM-NII-002	Included with NII	160 kV class; interlocked.
VS-SSDV-001-XRAY-002	NII	X-ray generator (side view)	VectorScan / XG-160S	SN: [SN]	Center bay (side)	Internal HV; supplied by VS-DV1000	Integrated; Integrated	Cal: Quarterly verification;	PM-NII-002	Included with NII	Side-view tube + collimator

								PM: Annually			assembly.
VS-SSDV-001-DET-001	NII	Detector array (top)	VectorScan / DA-1K-T	SN: [SN]	Center bay	24 VDC (via scanner PSU)	Integrated; Integrated	Cal: Quarterly verification; PM: Annually	PM-NII-003	Included with NII	Line detector array; replaceable LRU.
VS-SSDV-001-DET-002	NII	Detector array (side)	VectorScan / DA-1K-S	SN: [SN]	Center bay	24 VDC (via scanner PSU)	Integrated; Integrated	Cal: Quarterly verification; PM: Annually	PM-NII-003	Included with NII	Line detector array; replaceable LRU.
VS-SSDV-001-CONV-001	Conveyor	Conveyor assembly	VectorScan / CV-1000	SN: [SN]	Center bay + fold-out	24 VDC motor drive; 120 VAC service outlet	Belt W 39.4 in (1000 mm); total belt L 142 in (3600 mm); 350 lb	Cal: N/A; PM: Monthly	PM-CNV-001	Included	Infeed/outfeed fold-down; belt height 35-37 in from ground (adjustable).
VS-SSDV-001-CONV-002	Conveyor	Motor + drive controller	VectorScan / MD-24V-750W	SN: [SN]	Conveyor bay	24 VDC, 40 A peak	Integrated; Integrated	Cal: N/A; PM: Quarterly	PM-CNV-002	Included	Variable speed 0.15-0.25 m/s.
VS-SSDV-001-PWR-001	Power	Diesel generator	VectorScan / DG-12kW	SN: [SN]	Rear equipment bay	12 kW, 120/240 VAC split-phase (ATS)	Approx 36 x 22 x 24 in; 450 lb	Cal: N/A; PM: Semi-annual	PM-PWR-001	Included	Supports full operation without shore power.
VS-SSDV-001-PWR-002	Power	On-line UPS	VectorScan / UPS-5kVA	SN: [SN]	Rear equipment bay	Input 120/240 VAC;	24 x 10 x 20 in; 180 lb	Cal: Battery test quarterly;	PM-PWR-002	Included	Ride-through for orderly

						Output conditioned		PM: Quarterly			shutdown; power conditioning.
VS-SSDV-001-HVAC-001	HVAC	Aux climate control (roof)	VectorScan / AC-24kBTU-LP	SN: [SN]	Roof	120 VAC, 15 A	Low-profile; 130 lb	Cal: N/A; PM: Quarterly	PM-HVAC-001	Included	Maintains scanner bay 60-86 F (16-30 C).
VS-SSDV-001-IT-001	IT/Network	Operator workstation	VectorScan / OWS-2U	SN: [SN]	Control console	120 VAC, 5 A	Rack mount; 35 lb	Cal: N/A; PM: Annually	PM-IT-001	Included	Dual monitors; image processing and storage.
VS-SSDV-001-IT-002	IT/Network	Rugged switch + router	VectorScan / NET-RUG-01	SN: [SN]	Control console	12 VDC, 3 A	Compact; 5 lb	Cal: N/A; PM: Annually	PM-IT-002	Included	Supports LTE/5G option and wired Ethernet.
VS-SSDV-001-SAFE-001	Safety	Area radiation monitor	VectorScan / ARM-01	SN: [SN]	Exterior mount	Battery/12 VDC	Handheld; 2 lb	Cal: Calibration annually; PM: Annually	PM-SAFE-001	Included	Used for verification during set-up and after service.
VS-SSDV-001-SAFE-002	Safety	Emergency stop circuit	VectorScan / E-STOP-RED	SN: N/A	Infeed/ outfeed + console	24 VDC safety loop	N/A; N/A	Cal: Functional test monthly; PM: Monthly	PM-SAFE-002	Included	Category 3 safety loop; de-energizes X-ray and conveyor.
VS-SSDV-001-SAFE-003	Safety	Door/cover interlocks	VectorScan / INTLK-SET	SN: N/A	All access panels	24 VDC safety loop	N/A; N/A	Cal: Functional test monthly;	PM-SAFE-003	Included	Prevents X-ray generation if a panel is

								PM: Monthly			open.

C. Parts Inventory - Starter List

Quantities shown are indicative and should be tailored to fleet size, location, and SLA tier.

Part ID	Description	Qty on hand	Reorder point	Lead time	Storage / notes
SP-001	Conveyor belt, 1000 mm wide, cut to length	1	2	2-4 weeks	Store flat; avoid UV; inspect quarterly.
SP-002	Conveyor motor (24 VDC, 750 W) + gearbox	1	2	4-6 weeks	
SP-003	Motor drive controller (24 VDC)	1	2	4-6 weeks	
SP-004	Photoeye sensor (infeed/outfeed)	4	6	2-3 weeks	
SP-005	E-stop mushroom button	2	4	1-2 weeks	
SP-006	Safety relay module	1	2	3-5 weeks	
SP-007	UPS battery pack	1	2	6-8 weeks	Shelf life per OEM; record install date.
SP-008	HV filter set (scanner PSU)	1	2	6-8 weeks	
SP-009	Detector module (top) - LRU	0	1	10-14 weeks	Enhanced spares cache.
SP-010	Detector module (side) - LRU	0	1	10-14 weeks	Enhanced spares cache.
SP-011	Generator service kit (filters, belts)	1	2	2-3 weeks	
SP-012	Assorted fuses/relays kit	1	2	1-2 weeks	

D. Preventive Maintenance Procedures (Summary)

Detailed step-by-step procedures are maintained in the PM checklist and maintenance manual. This summary is provided to support RFI response automation.

Daily / Per shift

- Verify safety standoff markings and physical barriers are in place.
- Perform E-stop and interlock functional check (pre-op).
- Inspect conveyor belt for damage and verify tracking; remove debris.
- Verify workstation boot and image acquisition; confirm dual-view alignment check pattern within limits.

Monthly

- Inspect and torque-check conveyor frame fasteners; verify fold-down latches and supports.
- Inspect cable harnesses and connectors for chafing; verify strain relief points.
- Check air filters and HVAC operation; confirm bay temperature control setpoints.
- Run image quality check using standard test piece; record results and trends.

Quarterly

- Verify radiation leakage with calibrated survey meter around cabinet per safety procedure.
- Verify detector calibration status and perform calibration verification routine.
- UPS self-test and battery health check; confirm generator ATS operation (if installed).

Semi-annual

- Generator oil and filter service (or per hour-meter); inspect fuel lines and mounts.
- Inspect shielding panels and seams for integrity; verify door/cover interlocks.

Annual

- Full preventive maintenance visit including mechanical, electrical, and software checks.
- Calibration verification and documentation package (as required by customer safety program).
- Review maintenance logs and update parts reorder points based on failure history.