

S04 — Inventory & Requisitions — Screen Spec (MVP)

Status: Draft (locked decisions captured; refine during build)

Last updated: 2026-02-16

Depends on: S02 Tasks & Work Orders (T&WO;), E&M; (Equipment & Machinery)

Feeds: S03 WOT Reports, Reports & History, VOS counters, Notifications

1) Purpose

Provide an engineer-first way to:

- Track onboard **stock by location** and category.
- **Consume** parts quickly (bulbs/screws/fuses) and/or consume parts as part of WO execution.
- Automatically generate **requisition drafts** from low stock, missing parts, or WO needs.
- Track **ordering → receiving** so supply is visible and auditable.
- Track simple **subscriptions** (recurring AV/IT and operational spend reminders) without cluttering primary inventory workflows.
- Create long-term **usage/performance data** (parts used per equipment, per time window, per operating profile).

2) Inputs (what the user captures here)

A) Inventory items (parts catalog)

- Part name / description
- Category (aligned to E&M; domains)
- Unit of measure (ea, L, m, kg, etc.)
- Supplier (optional)
- Part number / OEM reference (optional)
- Minimum stock / reorder point (optional but recommended)
- Stock by location (qty per location)
- Attachments (optional): photo, spec, invoice

Categories (MVP baseline):

Engines, Generators, Electrical, Lighting, HVAC/AC, Plumbing, Pumps, Fuel, Lube/Oils, Filters, Safety, AV/IT, Comms, Misc.

B) Stock movements (audit trail)

- Receive stock (qty + location)
- Transfer stock (from location A → B)
- Consume stock (qty + location)
- Return stock (if allocated/unused)

Each movement logs:

- Source (WO / Task / Defect / Manual / Subscription)
- Linked equipment (optional)
- User + timestamp
- Notes

C) Quick Consume (engineer-first)

A minimal “tap to consume” flow for small parts:

- Select item (search/recent)
- Qty + location
- Optional note
- Deduct immediately (MVP) or mark “used pending report” (optional mode)

D) Requisitions

Requisition line items:

- Item (or free-text item if not in catalog yet)
- Qty
- Needed by date (optional)
- Linked source: WO / Task / Defect / Subscription / Manual
- Supplier suggestion (optional)
- Estimated unit cost (optional)

E) Subscriptions (tab)

Recurring reminder records (MVP-light):

- Name (e.g., Starlink, VSAT top-up, Navionics, CCTV cloud, Crestron license)
- Vendor/supplier

- Category (AV/IT, Comms, Software, Safety, Engineering misc)
 - Frequency (monthly/quarterly/annual)
 - Next due date
 - Estimated cost + currency
 - Notes + optional attachment
 - Optional link to system/equipment (E&M;)
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3) Outputs (what it creates/updates elsewhere)

A) To S02 execution and WO workflows

- “Parts required” lists can pull from inventory.
- During WO execution, user can mark parts as used (consumption workflow).

B) To S03 WOT reports

- Parts used + costs are prefilled into WOT report.
- Optional prompt: “Save as default kit for this service?” (post-MVP enhancement).

C) Requisition outputs

- Auto-create **Requisition Drafts** when:
 - Stock falls below min level
 - WO/Task lists a part not in stock
 - User adds free-text item
- Status tracking for supply visibility.

D) VOS counters (MVP)

Inventory/Requisition counters:

- **Requisitions Pending** (Draft + Submitted)
- **Parts On Order** (On Order + Partially Received)
- **Low Stock Items** (below reorder)

Subscriptions counters:

- **Subscriptions Due**
- **Subscriptions Overdue**

E) Reports & History

All stock movements + requisition events + subscription logs store into Reports & History for audit and analytics.

4) Tabs / sections / subviews (layout)

A) Top-level tabs

- 1) **Inventory**
- 2) **Requisitions**
- 3) **Subscriptions**
- 4) **Transactions / Movements** (audit log)

B) Inventory tab

List view:

- Item, category, total on board
- Per-location quick view (expand)
- Low-stock badge
- Quick actions: Receive, Transfer, Consume

Filters:

- Category, location, low-stock, supplier, search

Item detail view:

- Stock by location
- Min stock/reorder point
- Linked equipment (optional)
- Recent transactions
- “Create requisition” CTA

C) Requisitions tab

Sub-tabs by status:

- Draft
- Submitted
- On Order

- Partially Received
- Received
- Cancelled/Denied

Requisition detail:

- Line items + quantities
- Supplier + notes
- Linked WO/Task/Defect/Subscription
- Status changes + timestamps (audit)

D) Subscriptions tab

List view:

- Name, vendor, next due, estimated cost
- Badges: Due / Overdue
- CTA: “Create requisition draft” (optional)

E) Transactions / Movements tab

Audit log:

- Date, type (receive/transfer/consume/return), item, qty, location, source link

5) Rules & behaviors (automations + triggers)

A) Approval gate (MVP)

- Any user can create **Draft** requisitions (including auto-generated drafts).
- Only Engineer (or authorized role) can move:

- Draft → Submitted → On Order → Received

B) Requisition lifecycle (MVP)

- Draft
- Submitted
- On Order
- Partially Received
- Received
- Cancelled/Denied

C) Consumption policy (engineer-first)

Two consumption patterns:

- 1) **Quick Consume**: immediate deduction (ideal for bulbs/screws/fuses).
- 2) **WO-linked consume**: mark used during execution; finalized/confirmed in WOT report.

(MVP can implement Quick Consume first; WO-linked finalize can follow but is recommended.)

D) Low stock automation

- If stock < reorder point:
 - Flag item as Low Stock
 - Suggest or auto-create Requisition Draft (configurable)
 - Feed VOS counter + notifications

E) Subscription notifications + override

- Due/overdue subscriptions send notifications and feed VOS counters.
- Mute/snooze requires:
 - Override password
 - Reason
 - Audit log (who/when/why)

F) Performance/usage data capture

Every movement records:

- Source (WO/Task/Defect/Manual/Subscription)
- Equipment link (if known)
- Location

This enables analytics over time (consumption baselines).

6) Links to other screens (drill-down + create-from-here actions)

From S04 you can jump to:

- **S02 T&WO**; (WO detail, parts required/used)

- **S03 WOT Reports** (parts/time/cost autopopulated)
- **E&M;** (link parts to equipment; later “kits”)
- **Contractors/Suppliers** (post-MVP expansion)
- **VOS / Notifications** (badges deep-link to requisition or subscription due items)
- **Reports & History** (audit logs)

MVP notes (scope control)

- Skip complex “warehouse reservations” in MVP; use Draft/Allocated/Consumed/Returned later if needed.
- Keep subscriptions as reminders + optional requisition creation (no billing system).