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Avalanche Blaster Safety Toolkit
Avalanche Blaster Check List
Petr Explosives Group

1. DAILY MISSION CHECKLIST
Tap to complete each item:
Terrain & Avalanche Conditions
☐ Terrain reviewed
☐ Avalanche problem identified
☐ Weak layer depth confirmed
☐ Weather/wind/visibility assessed

Plan & Roles
☐ Route + escape paths
☐ Shot list & sequence
☐ Roles assigned (Blaster / Assistant / Overwatch)
☐ Radio channels confirmed

Explosive Prep
☐ Daily fuse burn test completed
☐ Charge inventory logged
☐ Misfire plan reviewed
☐ Emergency plan reviewed

2. PPE CHECK
Required Gear Toggle:
☐ Beacon (ON & transmitting)
☐ Shovel & probe
☐ Avalanche airbag
☐ Helmet
☐ Goggles / Eye protection
☐ Explosives-rated gloves
☐ Flame-resistant outerwear

☐ Radio + spare battery
☐ First-aid kit
Auto-warning: If any item is unchecked →
Red status: NOT cleared to deploy

3. EXPLOSIVES HANDLING MODULE
Charge Assembly
☐ Detonators kept separate
☐ Charges inspected
☐ Fuse length set using burn rate
☐ Consistent assembly method
☐ Keep explosives dry & protected
Detonating Cord (SOP Required)
☐ Approved cutting method
☐ Bend-radius limits
☐ No friction hazards
☐ Priming method confirmed
☐ Retreat path clear
Suspended Charges
☐ Anchor type approved
☐ Attachment load-rated
☐ Height ≥ required minimum
☐ Wind limit met
☐ Misfire plan ready

Safety Flag: 🔴 If SOP missing → "Do NOT use detonating cord or suspended charges."

4. STATIC ELECTRICITY RISK TOOL
Static Risk Factors (auto-scoring)
Toggle each condition:
☐ Dry powder snow
☐ Cold, low-humidity day
☐ High winds or blowing snow
☐ Synthetic base layers
☐ Nylon harness or seat
☐ No grounding before handling caps
☐ Removing gloves in cold dry air
☐ Handling explosives near running machinery
Static Prevention Prompts
•Touch grounded metal before handling detonators
•Avoid synthetic clothing
•Keep gloves on
•Keep detonators isolated
•Stop immediately if you feel a static "snap"

5. STORM HAZARD TOOL
Toggle current weather conditions:
☐ Blowing snow
☐ Lightning or electrical storm
☐ Wind > 25 mph
☐ Graupel impacts(*hails, dippin-dots snow*)
☐ Heavy snow transport
☐ Poor visibility (<20 m)

Special Rule: *Static discharge risk increases sharply during dry, cold snowstorms → automatic warning added.*

6. MISFIRE PROTOCOL – INTERACTIVE
Tap through steps:

1 STOP ALL MOVEMENT

2 Announce: "Misfire — hold positions"

3 **Start 1-hour timer**

4 **Document location** (GPS autofill)

5 Log: **charge weight, fuse length, snow conditions**

6 **Notify supervisor**

7 **Add to Spring Retrieval List**

Auto-lockout: Prevents early "*misfire clearance*" before **1 hour expires.**

7. PUBLIC SAFETY MODULE
Pre-Blast Requirements
☐ Hazard zones secured
☐ Ski runs or roads closed
☐ Barricades/signs placed
☐ Public evacuated
☐ Lookouts assigned
Post-Blast Requirements
☐ Detonation confirmed
☐ No misfires unaccounted for
☐ Debris and avalanche path inspected
☐ Supervisor clearance given

Auto-Warning: 🔴 **If public not cleared: "Do NOT fire."**

8. PHOTO / VIDEO POLICY
Allowed
☐ Training documentation
☐ Shot placement photos
☐ Misfire or incident documentation

Prohibited

🚫 Posting to social media

🚫 Filming explosive assembly

🚫 Public filming from hazard areas

🚫 Any imagery showing detonators

Tap for reminder: All media must be cleared by avalanche operations leadership.

9. EMERGENCY ACTION MODULE

If Blaster Injured
☐ Scene safe
☐ Announce emergency
☐ Provide medical care
☐ Prevent hypothermia
☐ Begin evacuation procedure

If Blaster Missing/Buried
☐ Beacon search
☐ Mark last known point
☐ RECCO / probing steps
☐ Suspend blasting
☐ Notify command

If Fatality
☐ Document conditions
☐ Notify medical director, law enforcement,
   coroner, OSHA, ATF
☐ Secure scene

10. SPRING RETRIEVAL MANAGER

Automatically generated from misfire logs
Each misfire includes:
•GPS location
•Charge type
•Date misfired
•Safe-access notes
•Required counter-detonation steps

Users tap "Completed" when:
☐ Charge recovered
☐ Charge counter-detonated
☐ Inventory updated
☐ ☐ Team psychological support activated
☐ ATF report closed

CORE PRINCIPLES
•Never work alone
•Static electricity must be managed
•Safety > Speed
•Every charge accounted for
•Photos/videos restricted
•Respect terrain, explosives, and team