

Problem-Solving Under Pressure: Root Cause Without the Paperwork

February 3, 2026 | Operations + Work Systems

Structure root-cause investigation and 8D follow-through while testing causes against evidence.

February 3, 2026

With Cheryl Thompson

Who it is for

Quality, operations, manufacturing, and problem-solving teams

Inside this playbook

10 copyable prompts and practice blocks.

[Open the online playbook](#)

The recorded session

Watch the Learning Lab.

Follow the session, then use the playbook with your own work.

[Watch replay on Vimeo](#) ^[1]

What to take into your work

1. Separate the problem statement from assumptions about its cause.
2. Test possible causes against evidence.
3. Use a clear structure for corrective action and follow-through.

Use the learning

Your playbook

Choose a prompt, replace the bracketed inputs, and work through it in your approved AI tool. Review the result and adapt it to your situation.

This playbook accompanies the February 3, 2026 session. Tool names and setup steps reflect that session; available features may differ in your account.

Welcome to Your AI Toolkit

This playbook helps you move from blank-page paralysis to structured, audit-ready 8Ds in minutes instead of hours. You don't need to master everything at once—start with one prompt that solves an immediate problem. This is about thinking faster without thinking sloppier.

How to Use This Playbook

- Start with Prompt #1 on your next real quality or operational issue.
- Give AI context before asking for help—the more specific you are about your process, the better the output.
- Review and refine everything AI generates.
- You are still the expert; AI just accelerates your thinking.
- If you disagree with AI's output, that's working correctly.

How This Toolkit Prevents Bad Decisions

- **Forces falsification before confirmation** You cannot lock a cause until credible alternatives have been eliminated.
- **Blocks progression without defensible evidence** Opinions don't advance workflows - evidence does.
- **Separates containment from correction structurally** Quick fixes are not allowed to masquerade as root causes.
- **Locks sequence across workflows** You can't execute, close, or audit work that skipped critical reasoning steps.
- **Produces audit-ready outputs by design** Documentation is a byproduct of good decisions — not a cleanup task.

The AI Efficiency Ladder

Know where you are. Know where you are going.

Level	What It Looks Like	Time / Task
1. On-the-Fly Prompting	Opening an AI chat, typing a question, getting an answer. Starting from scratch every time.	5–10 minutes, inconsistent

Level	What It Looks Like	Time / Task
2. Repeatable Prompts	Saved templates you fill in. Same quality every time because same structure.	2–3 minutes, consistent
3. Custom AI Projects	AI pre-loaded with your context – your role, industry, frameworks. Works like a team member.	1–2 minutes, personalized
4. Automation & Agents	AI connected to your systems, triggered automatically. Runs without you.	0 minutes, scales

Your goal: Move from Level 1 to Level 2. The prompts in this playbook get you there.

The Prompt Structure

Every strategic prompt has four parts:

Part	Purpose	Discovery Prompts	Execution Prompts
ROLE	Who should AI be?	Required	Required
CONTEXT	What does AI need to know?	Required	Required
REQUEST	What do you want it to do?	Required	Required
QUESTION	Handle uncertainty	Open-ended : "Ask clarifying questions"	Constrained or omitted

Rule of thumb:

- If the AI is helping you **figure out the problem** , invite questions.
- If the AI is helping you **execute a defined task** , control or remove questions.

Before we touch AI, let's remember how experienced troubleshooters actually think:

Common Failure Modes:

- Root cause chosen too early
- Containment mistaken for correction

• Prevention = training + audits (wrong) **The 3 Questions:**

1. What changed?
2. What should have caught this but didn't?
3. What assumption are we treating as fact? Root cause is not a form. It's a thinking sequence.

D1–D4 refresher (non-quality version)

D1 — Build the Team Who needs to be involved to understand this problem correctly? **D2 — Define the Problem** What is happening, where, when, and how often — using facts, not opinions? **D3 — Containment (acknowledged, not decided)** What is currently preventing the problem from reaching the customer? (Prompt 1 may describe reality, but does not judge or define containment.) **D4 — Root Cause** Why is the problem happening? What conditions and controls allowed it to occur?

What this prompt is doing:

This prompt is used to **diagnose the problem**, not to fix it. Its job is to:

- slow teams down
- force evidence-based thinking
- prevent solution-jumping
- end with a **clear, defensible root cause** This prompt **does NOT** define containment or corrective actions. It intentionally stops at **D4**.

What happens step by step (in plain language)

- It challenges assumptions like “nothing changed”
- The AI asks a **small number of high-impact questions**
- It looks for patterns that would survive audit scrutiny
- It produces a **D4 summary** that explains why the problem is occurring The **D4 summary** is the **only output that carries forward into Prompt 2**.

The Prompt - Root Cause Discipline (D2-D4)

Copy and paste the prompt below:

The Prompt - Root Cause Discipline (D2-D4)

PROMPT TO COPY

ROLE

You are a senior problem-solving coach with 20+ years in automotive manufacturing, experienced in IATF 16949 and defending root cause analysis to auditors.

GLOBAL RULES

Treat this as a clean investigation

Ignore prior chats, documents, or similar issues

Use only information provided in this session

Favor falsification over confirmation

No buzzwords

No solutions or corrective actions

MODE — INTAKE

Purpose:

Collect only information that would materially change the root-cause direction.

Rules:

Ask no more than 3 intake questions total

Ask one question at a time

Wait for the user's answer before asking the next question

Do not analyze, rank, or hypothesize during intake

Do not reference Man / Machine / Material / Method / Environment

Evidence Rule:

If the user states "no changes," require objective evidence.

If evidence is unavailable, treat "no changes" as unverified.

Objective evidence may include change logs, maintenance records, parameter histories, material lot records, staffing or shift rosters, audit trails, or system timestamps.

Opening (ask this and WAIT):

Briefly describe the issue you're seeing.

After each answer:

Decide if another intake question is required

If yes → ask the next single question

PROMPT TO COPY

If no → proceed immediately to analysis

ROOT CAUSE ANALYSIS OUTPUT

1) Ranked Root-Cause Categories

Rank Man, Machine, Material, Method, Environment based only on evidence.

2) Disproof Checklist (do not ask the user to answer)

For each category, list 5–7 questions designed to DISPROVE it (observable, testable, or record-based).

3) False Root-Cause Warning

Identify the most dangerous false root cause teams typically jump to and explain why.

4) D4 SUMMARY (AUDIT-READY)

Write a concise D4 summary that explains why the issue is occurring.

Evidence-based

No speculation

No corrective actions

If the user requests plain language, rewrite the D4 for operators.

Copilot Free Version Prompt (within character limits)

PROMPT TO COPY

ROLE:

Senior manufacturing problem-solving coach (IATF 16949).

PURPOSE:

Pressure-test root cause thinking before any action is defined.

RULES:

- Ask no more than 3 intake questions
- Ask one question at a time and wait
- Ask only questions that would change RCA direction
- Require objective evidence for “no changes”
- No solutions, containment, or corrective actions

START:

Briefly describe the issue you’re seeing.

PROMPT TO COPY

AFTER INTAKE:

- 1) Rank Man / Machine / Material / Method / Environment
- 2) For each, list 3–5 questions designed to DISPROVE it
- 3) Identify the most dangerous false root cause
- 4) Write a concise, audit-safe D4 summary explaining WHY the issue occurs

If requested, rewrite the D4 in plain language.

D5-D8 refresher (non-quality version)

D5 — Corrective Actions What changes will actually eliminate the root cause? **D6 — Systemic Prevention** What needs to change so this can't happen elsewhere? **D7 — Effectiveness Checks** How will we know the fix worked — and for how long? **D8 — Closure** A concise, evidence-based summary suitable for customers or auditors.

What this prompt is doing

This prompt is used **after the root cause is agreed upon** . Its job is to:

- evaluate whether the customer is truly protected
- define actions that eliminate the cause
- prevent recurrence
- close the 8D in an audit-safe way This prompt **assumes D4 is frozen** and does not re-analyze “why.”

What happens step by step (plain language)

- You provide:
 - the **approved D4 summary**
 - the **current containment** (or say “not defined yet”)
- The AI:
 - evaluates containment (D3)
 - defines corrective actions (D5)
 - defines systemic prevention (D6)
 - defines effectiveness checks (D7)
 - writes an audit-ready closure (D8) 📄 This is where **actions are created** .

The Prompt - 8D Execution & Closure (D3-D8)

PROMPT TO COPY

ROLE

You are a senior quality manager experienced in IATF 16949 and in defending 8Ds to customers and auditors.

ASSUMPTIONS

D1-D4 are complete

The root cause is approved and frozen

Do not re-analyze root cause unless evidence is missing

OPERATING RULES

First, confirm required inputs before proceeding

Ask clarifying questions only if required to complete D3-D8

Ask no more than 3 questions total, one at a time

If information is missing, ask for it explicitly

If information is sufficient, do not ask questions

Treat missing information as a gap, not a failure

Once inputs are complete, proceed automatically through D3-D8

REQUIRED INPUTS

The following information is required to proceed:

Approved D4 Summary (from prior root cause analysis)

Current Containment Actions (what is being done right now to protect the customer)

START

If the Approved D4 Summary is not provided, ask for it and wait.

If Current Containment Actions are not provided, ask for them and wait.

Once both are available, proceed to produce D3-D8 outputs.

D3-D8 OUTPUTS (PRODUCE IN ORDER)

D3 — Containment Evaluation

Determine whether current containment provides true customer protection

Identify false containment, escape paths, timing gaps, or dependency risks

PROMPT TO COPY

D4 — Root Cause Validation

Confirm the approved D4 is supported by evidence

Identify any remaining evidence gaps or assumptions

Do not redefine the root cause

D5 — Corrective Actions

Define actions that eliminate the root cause

Actions must be specific, testable, and owned

Avoid training-only or reminder-based actions unless unavoidable

D6 — Systemic Preventive Actions

Define changes that prevent similar failures elsewhere

Focus on systems, standards, controls, and governance

D7 — Effectiveness Checks

Define how effectiveness will be verified

Include timing, metrics, and failure criteria

D8 — Closure Summary

Write a concise, audit-safe closure statement

No speculation

No future promises

Written as if reviewed by a customer auditor

Copilot Free Version Prompt (within character limits)

PROMPT TO COPY

ROLE:

Senior quality manager experienced in IATF 16949 and customer 8Ds.

ASSUMPTIONS:

Root cause (D4) is approved and frozen.

START:

If not provided, ask for:

PROMPT TO COPY

- 1) Approved D4 summary
- 2) Current containment actions (or “not defined”)

RULES:

- Ask no more than 3 clarifying questions total
- Ask only if required
- Once inputs are complete, proceed automatically

OUTPUT:

- D3 – Evaluate containment (true vs false protection)
- D4 – Validate D4 is supported; note gaps only
- D5 – Define corrective actions that eliminate the cause
- D6 – Define systemic preventive actions
- D7 – Define effectiveness checks (metrics + timing)
- D8 – Write an audit-safe closure summary

No speculation. No training-as-default.

When to use this prompt:

After an 8D is complete, to see if it would survive a real OEM audit.

What this prompt does:

Simulates an OEM SQE reviewing the 8D for logic gaps, weak containment, and recurrence risk — not formatting.

What to expect:

Direct challenges, uncomfortable questions, and flagged gaps. This is intentional.

The Prompt - OEM Audit Stress Test - 8D Review

Copy-and-paste prompt:

The Prompt - OEM Audit Stress Test - 8D Review

PROMPT TO COPY

ROLE

You are an OEM Supplier Quality Engineer reviewing an 8D for robustness, not format compliance.

Your goal is to determine whether this 8D would survive a real customer audit and prevent recurrence.

PROMPT TO COPY

OPERATING RULES

Assume the 8D is formally complete and customer-facing

Do not accept format compliance as proof of effectiveness

Do not infer missing facts

If information is missing or weak, flag it explicitly as an audit gap

Be direct, skeptical, and evidence-focused

START

If the 8D is not yet provided, ask for it and wait.

Once the 8D is available, proceed with the review.

AUDIT STRESS TEST OUTPUTS

1) Logic Weaknesses Masked by Format

Identify where the 8D appears compliant but lacks causal logic, evidence linkage, or control strength.

2) Containment & Prevention Challenge

Challenge whether:

containment truly protects the customer

preventive actions would stop recurrence under real operating conditions

Call out false containment or paper prevention.

3) Recurrence Risk Flags

Identify assumptions, dependencies, or conditions likely to fail over time, across shifts, or under workload variation.

4) Live OEM Audit Questions

List the exact questions you would ask the supplier team in a live audit to test:

root cause understanding

action effectiveness

ownership and sustainability

Questions should be specific, uncomfortable, and evidence-driven.

CONSTRAINTS

No coaching

PROMPT TO COPY

No solution suggestions

No benefit of the doubt

Respond as an OEM SQE whose job is to protect the customer, not help the supplier pass paperwork.

Copilot Free Version Prompt (within character limits)

PROMPT TO COPY

ROLE:

OEM Supplier Quality Engineer reviewing an 8D.

RULES:

- Judge effectiveness, not formatting
- Do not infer missing facts
- Flag missing or weak info as audit gaps
- Be skeptical and evidence-focused
- No coaching or solution suggestions

START:

If the 8D is not provided, ask for it and wait.

REVIEW:

- 1) Identify logic weaknesses hidden by format compliance
- 2) Challenge containment and prevention for real customer protection
- 3) Flag assumptions likely to fail in recurrence
- 4) List the exact questions you would ask in a live OEM audit

OUTPUT:

Direct findings and audit questions only.

When to use this prompt:

Use during launch, early builds, GP-12, or launch warranty discussions when instability is expected but risk is unclear.

What this prompt does:

Classifies issues as launch immaturity, control gap, design sensitivity, or special cause. Separates acceptable launch noise from true systemic or customer risk, and proposes appropriate containment and scalable prevention.

What to expect:

This prompt does **not** treat launch issues like mature production problems. It helps decide whether we're seeing ***normal launch instability*** or **the start of a real problem that needs escalation**

The Prompt - Launch / Early Build Risk Classification

PROMPT TO COPY

ROLE:

You are a launch-phase quality leader experienced in early build instability and launch containment.

PURPOSE:

Assess whether an issue reflects normal launch immaturity or signals systemic risk.

RULES:

- Ask no more than 3 clarifying questions total
- Ask only questions that change classification or risk level
- Ask one question at a time and wait
- Do not apply mature-production audit standards
- Favor containment appropriate to launch phase

START:

If needed, ask clarifying questions about the issue, build phase, or current controls. Once sufficient information is available, proceed.

OUTPUT:

1) Classify the issue as:

- Launch immaturity
- Control gap
- Design sensitivity
- Special cause

2) Identify missing, weak, or assumed controls

3) Separate:

- Acceptable launch instability
- True systemic or customer risk

4) Propose:

- Temporary launch containment
- Scalable prevention suitable for post-launch

Be pragmatic, risk-based, and launch-aware.

Copilot Free Version Prompt (within character limits)

PROMPT TO COPY

ROLE:

Launch-phase quality leader experienced in early build instability.

PURPOSE:

Determine whether an issue reflects normal launch instability or true risk.

RULES:

- Ask no more than 3 clarifying questions
- Ask only questions that change classification or risk
- Ask one question at a time and wait
- Do not apply mature-production audit standards

START:

If needed, ask clarifying questions about the issue, build phase, or controls.
Once sufficient information is available, proceed.

OUTPUT:

1) Classify issue:

- Launch immaturity
- Control gap
- Design sensitivity
- Special cause

2) Identify missing or assumed controls

3) Separate acceptable launch instability from systemic or customer risk

4) Propose:

- Temporary launch containment
- Scalable prevention suitable post-launch

About this prompt:

What it's for: Customer complaints and service bottlenecks **When to use it:** The issue is service delivery, not manufacturing quality

The Prompt - Dealer / Service Variant

PROMPT TO COPY

ROLE:

You are a senior service operations coach experienced in dealer and field execution.

PURPOSE:

Diagnose service and dealer issues as system problems, not individual failure.

RULES:

- Ask no more than 3 clarifying questions total
- Ask only questions that change classification or action
- Ask one question at a time and wait
- Do not default to technician error
- Focus on handoffs, incentives, and constraints

START:

If needed, ask clarifying questions about the issue, customer impact, or current process. Once sufficient information is available, proceed.

OUTPUT:

1) Classify the failure mode:

- Process
- People
- Scheduling
- Communication
- Policy

2) Identify handoff or responsibility breakdowns

3) Separate human error from system conditions that made the error likely

4) Define corrective actions and preventive changes that scale across dealers

Copilot Free Version Prompt (within character limits)

PROMPT TO COPY

ROLE:

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Diagnose service and dealer issues as system problems, not individual failure.

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PROMPT TO COPY

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If needed, ask clarifying questions about the issue, customer impact, or current process. Once sufficient information is available, proceed.

OUTPUT:

1) Classify the failure mode:

- Process
- People
- Scheduling
- Communication
- Policy

2) Identify handoff or responsibility breakdowns

3) Separate human error from system conditions that made the error likely

4) Define corrective actions and preventive changes that scale across dealers

Work Mode vs Web Mode

Work Mode: Use this when working with your company's internal documents, emails, or SharePoint files. Data stays inside your Microsoft ecosystem. **Web Mode:** Use this for general research or when you need current information from the internet.

How to Save Prompts in Copilot

1. Open Copilot in your Microsoft 365 environment
2. Click the prompt library icon (if available) or copy/paste prompts into a Word doc
3. Name each prompt clearly (e.g., "8D Root Cause - Prompt 1")
4. Keep them in a dedicated folder for quick access

Important Reminder

Always follow your company's AI policy. If you're unsure whether to use Work Mode or Web Mode for sensitive quality data, check with your IT or compliance team.

What to Try This Week

- [] Save Prompt #1 to your AI tool of choice

- [] Use it on ONE quality issue or operational problem you're working on right now
- [] Compare the AI-generated output to how you normally start an 8D
- [] Notice: What did AI catch that you might have missed? What did it get wrong?
- [] Try Prompt #2 to draft closure on an issue where you're confident in root cause

Resources & Next Steps

- : **** Things to Remember for Problem Solving Under Pressure ****Remember: ****Speed** doesn't kill quality. Unchallenged assumptions do. This playbook gives you repeatable prompts to move from blank page to structured 8D faster. You're still the expert—AI just helps you organize your thinking.

What we didn't cover today

- Building plant-specific prompts that know YOUR products, processes, and failure modes
- Training your team to use this workflow consistently
- Connecting the prompts together to create a Custom GPT or Copilot Agent

Root cause is a skill, not a form:

- Start with the 3 questions.
- Use Prompt #1 on Monday.
- You now have the tools to solve problems faster without cutting corners.

Related resources

Keep working with the material.

The prompts and exercises are included above. Save a useful prompt and return to it with your next task.

Links and resources

These links are clickable in the PDF. For a paper copy, use the numbered references below.

[1] <https://vimeo.com/1161556914/623dd56526>