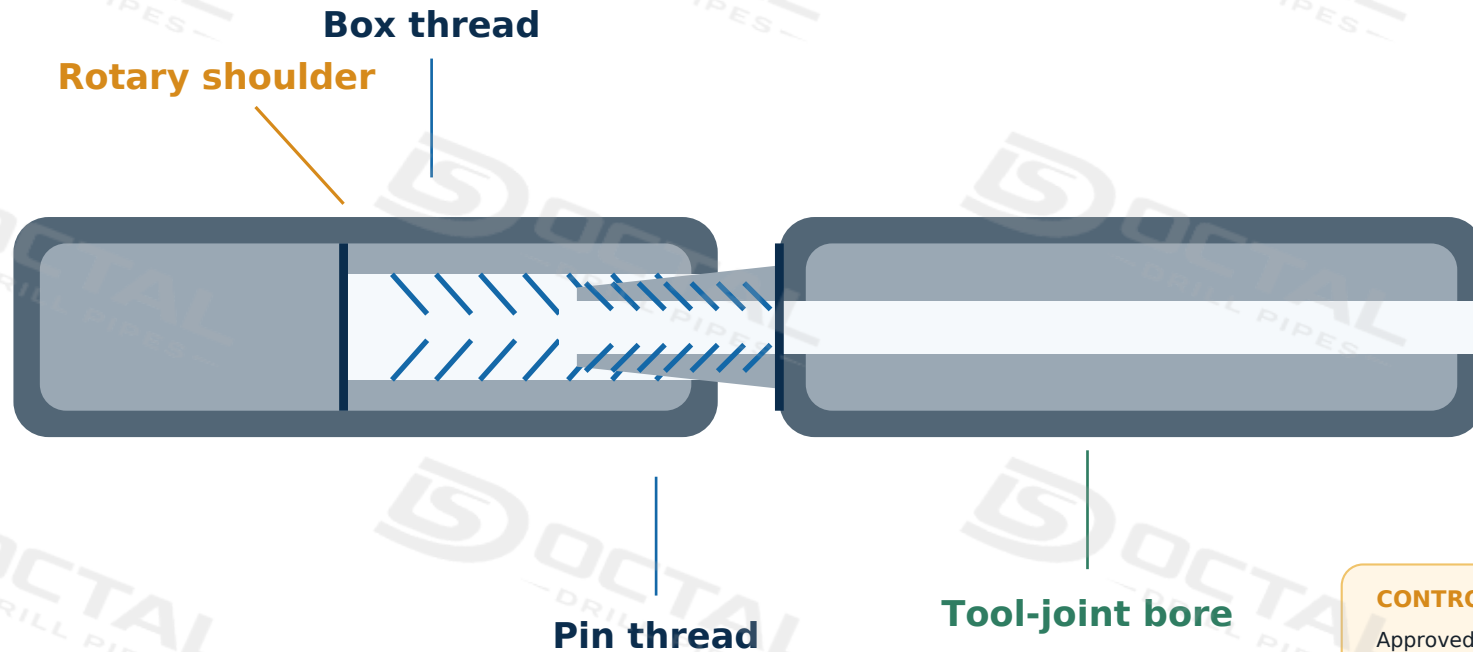


NC50 Connection Inspection Before Shipment

5 Inch API 5DP Drill Pipe - Inspection, Gauging and Traceability



CONTROL BASIS

Approved drawing, purchase order, applicable API 7-2 gauging requirements and project ITP.



IDENTIFY

Connection and document match



EXAMINE

Thread, shoulder and bore condition



GAUGE

Pin and box working-gauge verification



TRACE

Pipe-level release and packing records

1 Identity & Document Match

Confirm that the finished pin and box are NC50 and that the physical connection matches every release document.

- Pipe marking and individual pipe number
- Production traveler and machining record
- Inspection report and packing list

HOLD POINT

Any mismatch keeps the pipe segregated until identity is resolved.

2 Cleaning & Visual Examination

Remove chips, dirt, heavy preservative and excess compound before the connection is judged or gauged.

- Thread crests, roots and flanks
- Pin nose and box entry
- Rotary shoulder and bore transition

PRACTICAL RULE

Do not conceal damage with thread compound. Repair and reinspect.

3 Gauging & Dimensional Checks

Use the correct calibrated working gauges and compare the result with the approved acceptance criteria.

- Ring gauge for the pin
- Plug gauge for the box
- Gauge ID, calibration and stand-off
- Required dimensional checks per ITP

RELEASE CONDITION

Acceptance is recorded against a traceable pipe or serial number.

Why the sequence matters

1 Correct identity

Prevents mixing 5 inch bodies with different connection configurations.



2 Clean inspection surface

Avoids false readings and exposes damage that may affect make-up.



3 Geometry confirmed

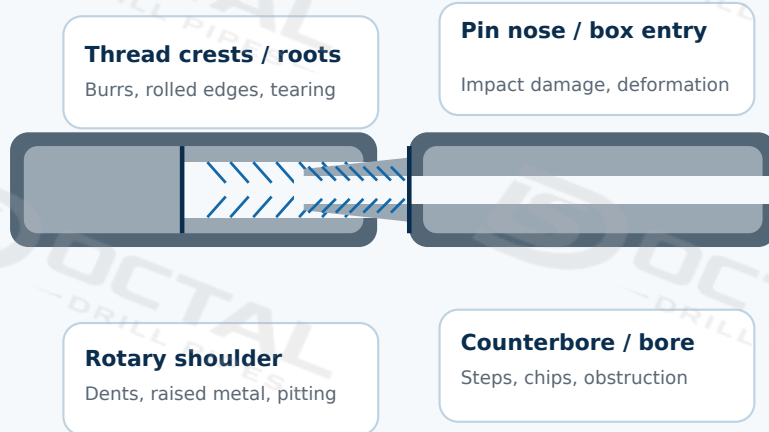
Verifies that the connection is compatible, not merely visually acceptable.



4 Record closed

Links acceptance to the pipe, gauge, inspector and packing position.

Connection Areas Under Review



Disposition logic

- **CLEAN / ACCEPTABLE** Continue to gauging
- **REMOVABLE CONTAMINATION** Clean and reinspect
- **GEOMETRY-AFFECTING DAMAGE** Hold, repair and reinspect

Inspection Area	Condition to Check	Practical Risk Controlled
Thread crests and roots	Burrs, dents, rolled edges, tearing or incomplete machining	Difficult engagement, galling or gauge rejection
Thread flanks	Local damage, abnormal tool marks or corrosion	Uneven load transfer after make-up
Rotary shoulder	Raised metal, impact dents, pitting or embedded particles	Incomplete or uneven shoulder contact
Pin nose and box entry	Handling damage, deformation or sharp edges	Cross-threading during initial engagement
Counterbore and bore transition	Steps, chips, eccentric machining or obstruction	Reduced drift clearance or disturbed internal flow
Connection surfaces	Rust, moisture, dirt or residual metal particles	Contamination and storage deterioration

INSPECTION NOTE

A visually clean connection can still fail geometry checks; surface acceptance is only the gateway to gauging.

Working-Gauge Sequence

1

Verify the gauge

Correct NC50 gauge, legible ID, valid calibration and clean contact surfaces.

2

Prepare the connection

Clean the thread and shoulder; ensure the connection is free from damage and debris.

3

Gauge the pin / box

Use the corresponding ring gauge for the pin and plug gauge for the box.

4

Record the result

Capture gauge position or stand-off and link it to the individual pipe identity.



Ring gauge - pin



Plug gauge - box

Verification Item	Inspection Purpose	Typical Record
Pin / box gauge stand-off	Confirms working-gauge acceptance	Thread gauging report
Thread taper	Checks radial geometry along the thread length	Dimensional inspection sheet
Lead or pitch	Confirms axial thread progression	Thread measurement record
Thread height and profile	Detects incomplete or incorrect machining	Profile inspection result
Tool-joint OD and ID	Confirms external clearance and internal passage	Dimensional report
Counterbore / bore dimension	Confirms transition and drift compatibility	Bore inspection record
Connection concentricity	Checks alignment between thread and bore	Machining or final inspection report
Shoulder relationship	Confirms shoulder location and contact geometry	Connection inspection sheet

SCOPE CONTROL

The exact dimensional scope is governed by the approved manufacturing plan and project ITP; optional checks should not be presented as universal requirements.

Pipe-Level Traceability Chain



Minimum Release Record

- **Pipe or serial number** Links the connection to one identifiable joint.
- **NC50 pin and box designation** Confirms the ordered connection configuration.
- **Working-gauge identification** Shows which calibrated gauge was used.
- **Inspection date and inspector** Establishes responsibility and timing.
- **Repair / rework reference** Preserves the original disposition and action taken.
- **Final reinspection result** Confirms closure before protection and packing.

Final Release Checklist

- ✓ Physical connection matches the order and pipe marking
- ✓ Thread and shoulder surfaces are free from rejectable damage
- ✓ Required working-gauge result is acceptable
- ✓ Tool-joint bore and transition remain compatible with the specified drift
- ✓ Inspection and reinspection records are complete and traceable
- ✓ Correct NC50 pin and box protectors are fitted and secure

RELEASE PRINCIPLE

A 5 inch pipe body does not automatically confirm an NC50 finished connection. Identity, geometry and records must remain linked through packing and shipment.