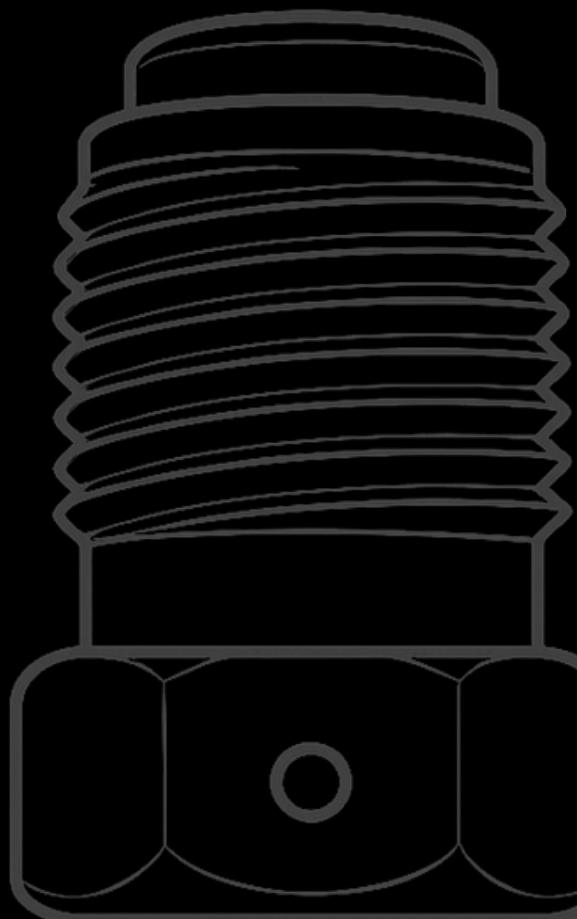
SCUBA CYLINDER BURST DISK & PRESSURE RELIEF DEVICES

TECHNICAL REFERENCE GUIDE TO PRESSURE RELIEF DEVICES, BURST DISKS, VALVE CONFIGURATIONS, PRESSURE RATINGS, INSTALLATION, INSPECTION & TROUBLESHOOTING



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About This Technical Guide

A scuba cylinder valve contains several components that are critical to the safe management of compressed gas. Among the smallest but most important is the burst disk, also commonly referred to as a rupture disk, bursting disc, or Pressure Relief Device (PRD).

A burst disk is not a regulator, pressure-control device, or normal operating component. It is a dedicated pressure-relief component designed to provide a controlled failure path when the pressure condition reaches the specified limit for the particular cylinder and valve system.
Correct PRD selection involves considerably more than matching a thread or choosing a component that physically fits the valve. The cylinder specification, service pressure, valve design, PRD configuration, release characteristics, sealing system, gas service, assembly and applicable standards all need to be considered.

This guide provides a detailed technical reference for understanding scuba cylinder burst disks and pressure-relief assemblies, including common 3/8-24 UNF and 1/2-inch configurations, one-piece and multi-piece assemblies, valve identification, installation considerations, inspection, failure analysis and troubleshooting.

Important: This guide is an educational and technical reference. It does not replace the cylinder manufacturer's, valve manufacturer's or PRD manufacturer's instructions, applicable regulations, or the procedures of a qualified cylinder technician. Safety-critical pressure components should always be selected and installed according to the applicable specifications.

1. PRESSURE RELIEF DEVICES IN SCUBA CYLINDERS

1.1 What Is a Pressure Relief Device?

A Pressure Relief Device, or PRD, is a safety device designed to protect a pressure vessel from an unsafe pressure condition.
In compressed-gas cylinders, pressure relief may be provided by different types of devices, including:

- Rupture disks / burst disks
- Fusible plugs
- Combination rupture-disk/fusible devices
- Pressure relief valves

The appropriate device depends on the cylinder, gas service, valve design, applicable specification and regulatory requirements.

The Compressed Gas Association's CGA S-1.1 addresses selection of pressure relief devices for cylinders containing compressed gases, while CGA S-7 addresses selection for compressed gas mixtures. CGA S-9 specifically addresses correct assemblies and installation of rupture-disk and fusible-plug type PRDs.

2. BURST DISK VS. PRESSURE RELIEF VALVE

A burst disk and a pressure relief valve perform the same broad safety function—protecting against excessive pressure—but they operate differently.

Burst Disk

A burst disk is a non-reclosing pressure-relief device.
When its rupture element reaches the specified activation condition, the disk ruptures and provides an opening through which gas can escape.

Once activated:
The burst disk must be replaced.

Pressure Relief Valve

A pressure relief valve is designed to open at a specified pressure and may close again as pressure decreases, depending on its design.

Why the Difference Matters

A burst disk is a one-time safety component.
It is not intended to regulate cylinder pressure during filling or diving.
It should therefore be considered a last-line pressure protection device, rather than a component that controls normal cylinder operation.

3. HOW A BURST DISK WORKS

A typical burst disk system consists of a thin engineered rupture element installed within a holder or assembly. During normal operation, the rupture element remains intact.
As pressure increases, mechanical stress is applied to the disk. When the specified rupture condition is reached, the disk fails and creates an opening.
Compressed gas can then escape through the designed discharge path.

The basic sequence is:



The behavior of the system depends on the complete assembly, not only the thin metal disk.

4. COMPONENTS OF A BURST DISK ASSEMBLY

Depending on the design, a scuba PRD assembly can contain several components.

Typical elements may include:

1. Rupture element / burst disk
2. Disk holder
3. Retaining component
4. Sealing washer or gasket
5. O-ring, where applicable
6. Valve-side interface
7. Gas discharge / vent openings
8. Markings and identification features

Not every design uses all of these components separately. This distinction is important because some manufacturers supply a complete one-piece assembly, while other valve systems may use separate components.

5. ONE-PIECE VS. THREE-PIECE PRD ASSEMBLIES

1.1 What Is a Pressure Relief Device?

A one-piece PRD assembly is supplied as a matched safety component intended for a particular application.
The major advantage is that the technician does not have to independently select and combine the individual rupture element, holder and associated components.
A correctly specified one-piece assembly helps reduce the possibility of:

- Component mismatch
- Incorrect pressure specification
- Incorrect assembly
- Missing sealing components
- Incorrect component orientation

This is one reason complete PRD assemblies are often preferred when the correct replacement assembly is available.



5.2 Three-Piece Assembly

Some valve configurations use a three-piece PRD arrangement, where individual components are supplied separately. Depending on the specific design, the three components can include the rupture element and associated holder/sealing components.
Separate-component systems require greater attention to:



- Correct part identification
- Component matching
- Assembly order
- Sealing surfaces
- Correct installation
- Manufacturer specifications

Individual components should not be mixed simply because they have compatible-looking dimensions.

Practical Rule

If the valve manufacturer specifies a complete assembly, use the complete assembly.
If a three-piece configuration is specified, use the exact components intended for that configuration.

6. BURST PRESSURE, RELEASE PRESSURE AND SERVICE PRESSURE

One of the most important concepts in understanding burst disks is the difference between several pressure terms.

6.1 Cylinder Service Pressure

The cylinder's service or working pressure is the pressure for which the cylinder is designed and approved to operate under its applicable specification.
Common scuba cylinder markings can include:



- 200 bar
- 232 bar
- 300 bar
- 3,000 psi
- 3,442 psi
- Other manufacturer/specification-specific ratings

The exact value must always be taken from the cylinder markings and applicable documentation.

6.2 Test Pressure

A cylinder may also be subjected to a pressure during a qualification or hydrostatic test that is different from its normal service pressure.
Test pressure should never be confused with normal operating pressure.

6.3 PRD Release / Rupture Characteristics

The burst disk is selected according to its specified pressure-relief characteristics and the requirements of the complete cylinder/valve system.
The pressure marking on a PRD should therefore not be interpreted simply as:
"This cylinder has the same pressure, so this disk must be correct."
That approach is unsafe.
The correct PRD is determined by the applicable specifications for the cylinder and valve system.

7. PRESSURE UNITS

Pressure relief components may be marked in different units. Common units:

Unit	Description
psi	Pounds per square inch
bar	bCommon pressure unit in scuba gear
MPa	Megapascal
kPa	Kilopascal

Useful conversions:
1 bar ≈ 14.5038 psi
1 MPa = 10 bar
1 MPa ≈ 145.038 psi
These conversions are mathematical conversions only. They do not establish whether a particular cylinder or PRD is approved for that pressure.

8. WHY THE PRD PRESSURE MARKING MATTERS

Burst disk assemblies may contain markings identifying the pressure characteristics of the component.

Depending on the manufacturer, markings may include:

- Pressure value
- Manufacturer
- Part number
- Production information
- Traceability information



The marking is useful for identification and verification.
However, pressure marking alone is not a compatibility certificate.

The following should be considered together:

CYLINDER + VALVE + PRD + PRESSURE SPECIFICATION + GAS SERVICE + ASSEMBLY

9. THREAD CONFIGURATIONS USED IN SCUBA PRD SYSTEMS

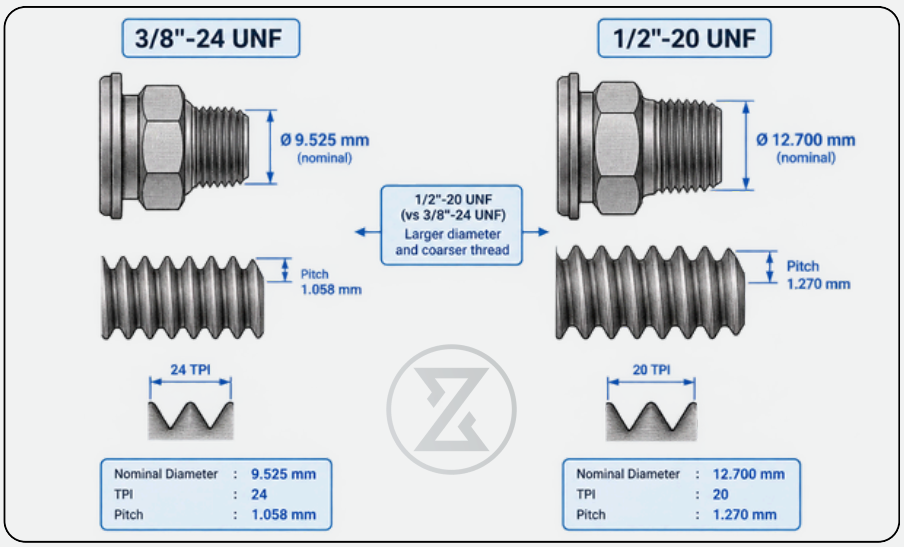
One of the most common identification questions is:
"Is this a 3/8-inch or 1/2-inch burst disk?"
The answer requires care because "size" can refer to different dimensions.
A PRD should be identified according to its actual valve interface and manufacturer's specification, not merely by visually estimating the diameter.
Two configurations commonly encountered in scuba valve servicing are:

3/8-24 UNF

A configuration using a 3/8-24 UNF threaded interface.

1/2-Inch PRD Configuration

A larger PRD configuration encountered on certain valve designs.
These should be treated as separate configurations unless the valve manufacturer documentation specifically confirms compatibility.



9.1 UNDERSTANDING 3/8-24 UNF

3/8-24 UNF identifies a Unified National Fine thread.
The designation means:

- Nominal major diameter: approximately 3/8 inch
- Thread count: 24 threads per inch
- Thread series: UNF — Unified National Fine

This is a thread designation, not a pressure rating.
A 3/8-24 UNF thread does not by itself tell you:

- The correct burst pressure
- The correct valve
- The correct sealing method
- The correct disk material
- The correct assembly
- Whether the component is suitable for Nitrox or oxygen service

Thread Identification Is Only One Step In PRD Identification.

9.2 3/8-24 UNF PRD CONFIGURATIONS IN SCUBA VALVES

3/8-24 UNF PRD configurations are encountered across various scuba valve designs and product generations.
Examples of manufacturers whose valve families may include configurations of this type include:

- Thermo
- XS Scuba
- Dive Rite
- Sea Elite
- Blue Steel
- OMS

This list should be treated as an identification reference, not a universal compatibility chart. A particular manufacturer can have multiple valve generations and configurations.

9.3 1/2-INCH PRD CONFIGURATIONS

A different class of PRD configuration is encountered on certain scuba valves associated with manufacturers such as:

- Sherwood
- Genesis
- Harrison
- Earlier OMS valve designs

Again, this should not be interpreted as:
"Every valve from this brand uses a 1/2-inch burst disk."
Valve models, production generations and regional configurations can differ.
The exact valve and PRD should always be verified.

10. VALVE GENERATION MATTERS

One of the biggest sources of incorrect PRD identification is ignoring the age or generation of the valve.
Manufacturers can change:

- PRD holder design
- Thread configuration
- Sealing method
- Rupture element
- Vent geometry
- Pressure specification
- Valve body
- Assembly design

Two valves carrying the same manufacturer's name may therefore use different PRD assemblies.
This is particularly important when servicing older or discontinued equipment.

11. LEGACY AND OLDER VALVES

Older scuba valves can be difficult to identify because:

- Markings may be worn
- Part numbers may no longer be visible
- Manufacturer catalogs may have changed
- Current replacement parts may differ
- The valve may have been serviced previously with incorrect components

When dealing with an older valve, photographs of the complete valve and existing PRD can be extremely useful.
Where necessary, identification should be confirmed against historical manufacturer documentation.

12. HOW TO IDENTIFY A BURST DISK CORRECTLY

The most reliable identification process is:

Step 1 — Identify the Cylinder

Record:

- Manufacturer
- Model or specification
- Service pressure
- Cylinder material
- Inspection/requalification information

Step 2 — Identify the Valve

Record:

- Manufacturer
- Model
- Part number
- Markings
- Production generation, if known

Step 3 — Identify the PRD

Record:

- Pressure marking
- Part number
- Manufacturer marking
- Thread/configuration
- Assembly type

Step 4 — Photograph Everything

Take clear photographs of:

- Complete valve
- PRD
- PRD markings
- Cylinder neck
- Valve body markings

Step 5 — Confirm the Assembly

Determine whether the system uses:

- One-piece assembly
- Three-piece assembly
- Another manufacturer-specific configuration

Step 6 — Verify the Specification

Only after the above information has been established should the replacement PRD be selected.

Physical compatibility does not necessarily mean technical compatibility.

13. MATERIALS USED IN BURST DISK

Burst disks are manufactured using engineered materials selected for the intended pressure, temperature, gas service and application.
Potential material categories can include:

- Stainless steels
- Nickel-based alloys
- Other engineered metallic materials

Material selection can influence:

- Corrosion resistance
- Mechanical strength
- Fatigue behavior
- Temperature response
- Compatibility with the gas service

A visually similar disk made from a different material should not be treated as an equivalent replacement.

14. CORROSION AND MATERIAL DEGRADATION

Corrosion is particularly important because a burst disk is a thin pressure-sensitive component.
Possible sources of degradation include:

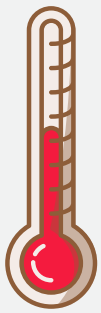
- Moisture
- Saltwater exposure
- Contamination
- Galvanic interaction
- Improper cleaning
- Storage conditions
- Chemical exposure

Corrosion can alter the condition of the rupture element or holder.
Any PRD showing significant corrosion, pitting, deformation or other damage should be evaluated by a qualified technician.

15. TEMPERATURE EFFECTS

Gas pressure is affected by temperature.
A cylinder filled under one temperature condition can show a different pressure after heating or cooling.
Temperature can therefore be relevant when analyzing a PRD event.

This is one reason why a cylinder should not be assessed solely from a pressure reading without considering:



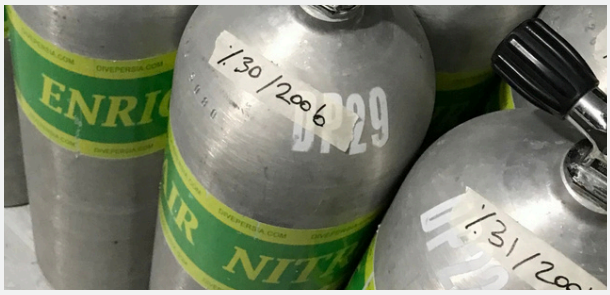
- Gas temperature
- Cylinder temperature
- Filling rate
- Ambient conditions
- Time since filling

Temperature effects are especially important when investigating a PRD that activated unexpectedly.



16. BURST DISKS AND NITROX

Nitrox introduces additional considerations because the gas contains an oxygen concentration above normal atmospheric air. When components are used with oxygen-enriched gas, attention must be given to:



- Material compatibility
- Cleanliness
- Hydrocarbon contamination
- Lubricants
- Assembly procedures
- Manufacturer approval
- Applicable oxygen-service requirements

A component suitable for ordinary air service should not automatically be assumed to be appropriate for oxygen-enriched service.

17. OXYGEN SERVICE

Oxygen service requires particularly careful control of contamination.
Potentially hazardous contamination can include:



- Hydrocarbon oils
- Grease
- Incorrect lubricants
- Organic residues
- Cleaning chemicals
- Foreign particles

Where oxygen service is involved, the complete assembly and service procedure should follow the applicable manufacturer and oxygen-cleaning requirements.
Never improvise a sealing or lubrication procedure for oxygen service.



18. SEALING SYSTEMS

Different PRD assemblies can use different sealing arrangements.
Possible methods include:

- Metal sealing washers
- Gaskets
- O-rings
- Machined sealing surfaces
- Manufacturer-specified thread sealing

The correct sealing method depends on the design.
A seal that looks physically similar may have different material, dimensions or compression characteristics.



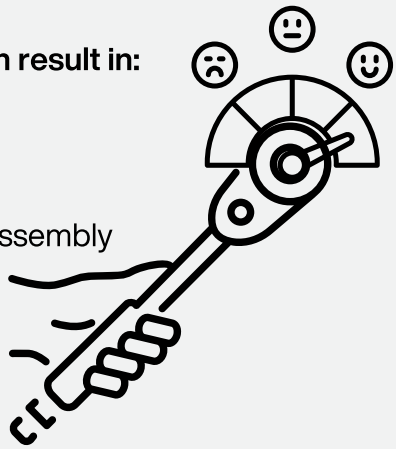
PTFE tape or other thread sealants should not be automatically applied to every PRD.
Before using any sealant, determine:

- Whether the assembly is designed to use one.
- Which product is specified.
- Whether the sealant is compatible with the gas service.
- Whether the manufacturer permits its use.
- Whether the application could interfere with the pressure-relief mechanism.

This is particularly important for oxygen-enriched applications.

19. TORQUE REQUIREMENTS

Correct torque is essential when installing pressure-relief components.



Insufficient torque can result in:

- Leakage
- Loosening
- Poor sealing
- Movement of the assembly

Excessive torque can result in:

- Damaged threads
- Distorted sealing surfaces
- Damaged holder
- Damaged valve body
- Difficult future removal

The correct torque value should come from the applicable manufacturer documentation.
A torque value should never be transferred from one PRD design to another simply because both use a similar thread.

20. INSTALLATION PROCEDURE , GENERAL REFERENCE

The following is a general workflow, not a substitute for the manufacturer's installation procedure.

1. Depressurize the Cylinder
Never remove a pressure-relief component from a pressurized cylinder.

2. Verify the Correct Part
Confirm:

- Valve
- Cylinder
- PRD
- Pressure specification
- Assembly
- Gas service

3. Inspect the Threads
Check for:

- Damage
- Cross-threading
- Corrosion
- Contamination

4. Inspect Sealing Surfaces
Make sure the sealing surfaces are clean and undamaged.

5. Install the Correct Components
Use the exact components specified for the assembly.

6. Apply the Correct Installation Procedure
Follow the manufacturer's specified method and torque.

7. Inspect the Finished Assembly
Verify:

- Correct orientation
- Correct components
- Proper seating
- No visible damage

8. Leak Check / Final Verification
Perform the applicable inspection or leak check before returning the equipment to service.



Never:

- Install a PRD simply because it fits.
- Substitute a higher-pressure disk without authorization.
- Substitute a lower-pressure disk without authorization.
- Mix components from different PRD assemblies.
- Reuse a ruptured disk.
- Modify the rupture element.
- Drill or enlarge the discharge opening.
- Block the vent path.
- Use an unapproved sealant.
- Apply grease where it is not specified.
- Install an oxygen-incompatible component in oxygen service.

Ignore a repeated PRD failure.

21. WHAT HAPPENS WHEN A BURST DISK RUPTURES?

A high-pressure cylinder can release a large amount of gas rapidly.
Depending on the cylinder pressure and valve design, the event may involve:

- Loud noise
- Rapid pressure loss
- Strong gas discharge
- Cooling
- Frost or icing
- Vibration
- Cylinder movement

The discharge direction is particularly important.
The PRD assembly and valve body should be designed so that escaping gas is directed through the intended discharge path.

22. IF A BURST DISK ACTIVATES DURING FILLING

A burst disk that activates during filling requires investigation.
Do not immediately assume that the disk itself was defective.
Potential causes include:

- Excessive pressure
- Excessive temperature
- Incorrect PRD
- Incorrect assembly
- Damaged PRD
- Valve problem
- Filling equipment problem
- Filling procedure
- Cylinder condition

Recommended sequence:

STOP
Stop the filling operation.
▼
ISOLATE
Keep personnel away from the discharge path.
▼
MAKE SAFE
Allow the system to reach a safe condition.
▼
INSPECT
Inspect cylinder, valve and PRD.
▼
IDENTIFY
Determine the likely cause.
▼
REPLACE
Install the correct PRD.
▼
VERIFY
Complete the required inspection before returning the cylinder to service.

Repeated PRD activation is a warning sign. If a newly installed burst disk repeatedly activates, do not simply continue replacing disks.

Investigate:

- Filling pressure
- Filling temperature
- PRD specification
- Valve configuration
- PRD assembly
- Cylinder condition
- Filling equipment
- Pressure gauge accuracy
- Installation
- Component contamination

Repeated failures may indicate a problem elsewhere in the system.

23. LEAKING BURST DISK

A leaking PRD can result from:

- Incorrect component
- Damaged seal
- Incorrect assembly
- Damaged thread
- Damaged sealing surface
- Contamination
- Corrosion
- Incorrect installation torque

Do not attempt to solve the problem by simply tightening the PRD beyond the specified torque.
The cause should be identified.

24. WHAT IF THE BURST DISK IS CORRODED?

A PRD with significant corrosion should not be assumed to remain within its original design characteristics.
Inspect:

- Rupture element
- Holder
- Threads
- Sealing surfaces
- Vent openings

If the condition is questionable, replace the component according to the applicable specification.



25. OVERFILLED CYLINDERS

An overfilled cylinder should be treated seriously.
Even if the pressure later falls to a normal reading, the cylinder has experienced a different pressure history than intended.
If a PRD activates following an overpressure event, the cause should be investigated before the cylinder returns to normal service.
Depending on the circumstances and applicable requirements, further cylinder or valve inspection may be necessary.



CYLINDER TESTING

26. HYDROSTATIC TESTING AND PRD INSPECTION

Hydrostatic testing and PRD replacement are related but not identical procedures. A hydrostatic test evaluates the pressure vessel according to the applicable cylinder specification and regulatory requirements. The PRD is a separate safety component. Whether a PRD must be replaced at a particular inspection or hydrostatic interval depends on:

- Cylinder specification
- Applicable regulation
- Valve manufacturer
- PRD manufacturer
- Condition
- Service history
- Local procedure

Therefore, there is no universal rule that every burst disk must automatically be replaced every time a cylinder undergoes hydrostatic testing.

27. VISUAL INSPECTION CHECKLIST

During inspection, look for:

Burst Disk

- Corrosion
- Pitting
- Deformation
- Damage
- Missing markings
- Evidence of activation

Holder

- Damage
- Corrosion
- Cracks
- Deformation

Threads

- Cross-threading
- Damage
- Corrosion
- Contamination

Sealing System

- Damaged washer
- Damaged gasket
- Damaged O-ring
- Contamination
- Incorrect component

Valve

- Physical damage
- Markings
- Correct PRD configuration
- Discharge openings

V.I.P

28. BURST DISK AND CYLINDER MATERIAL

PRD selection should be considered in the context of the cylinder system.
Common scuba cylinder constructions include:

- Steel
- Aluminum alloy
- Composite / fiber-reinforced designs

Different cylinder specifications can have different pressure-relief requirements.
The PRD should therefore be selected according to the applicable cylinder and valve specification—not simply because the cylinder is "steel" or "aluminum."

29. PRESSURE-TEMPERATURE RELATIONSHIP

Compressed gas pressure changes with temperature.
For a fixed quantity of gas in a fixed volume, pressure can increase as temperature increases. This is one reason filling procedures need to account for temperature. A cylinder filled rapidly can become warmer during filling and subsequently cool after filling.
The pressure reading can therefore change as the cylinder returns toward ambient temperature. This should be considered when diagnosing apparent pressure anomalies.

30. BURST DISK STORAGE

Replacement PRDs should be stored appropriately.
Avoid:

- Excessive humidity
- Salt contamination
- Chemical exposure
- Physical damage
- Contact with inappropriate lubricants
- Crushing or deformation

Small components can easily become contaminated or damaged while being stored alongside general hardware.
For oxygen-service components, storage and packaging should also follow the applicable cleanliness requirements.

31. HANDLING A NEW BURST DISK

Avoid unnecessary handling of the rupture element.
Do not:

- Scratch it
- Bend it
- Press on it
- Attempt to test it manually
- Modify it
- Polish it
- Flatten it

A burst disk is a precision pressure-relief component, not a conventional washer.

32. HANDLING A NEW BURST DISK

No meaningful field test should be performed by simply pressing, bending or manipulating the disk. The pressure-relief characteristics are part of the engineered component. Testing pressure-relief devices requires appropriate equipment and procedures. A technician should not attempt to "test" a PRD by artificially pressurizing a scuba cylinder until the disk ruptures.

33. CAN YOU TEST A BURST DISK BY HAND?

No meaningful field test should be performed by simply pressing, bending or manipulating the disk. The pressure-relief characteristics are part of the engineered component. Testing pressure-relief devices requires appropriate equipment and procedures.
A technician should not attempt to "test" a PRD by artificially pressurizing a scuba cylinder until the disk ruptures.

34. BURST DISK REPLACEMENT AFTER ACTIVATION

After activation:

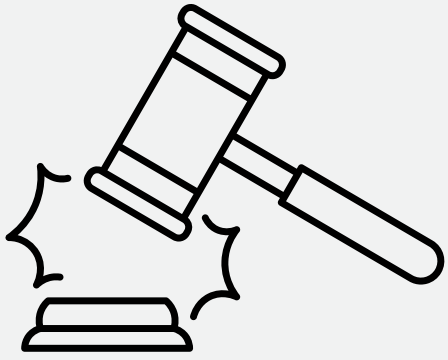
1. Determine why the disk activated.
2. Inspect the cylinder.
3. Inspect the valve.
4. Confirm the correct PRD specification.
5. Replace the PRD.
6. Inspect the complete assembly.
7. Verify the discharge path.
8. Complete any required leak or service checks.
9. Document the service where appropriate.

The objective is not simply to restore the valve to its previous appearance.

THE OBJECTIVE IS TO RESTORE THE PRESSURE-RELIEF SYSTEM TO THE CORRECT SPECIFIED CONFIGURATION.

34. REGULATORY DIFFERENCES

Cylinder and PRD requirements can vary between jurisdictions.
For example, equipment manufactured or serviced under U.S. DOT requirements may be subject to different regulatory documentation than equipment operated under European or other national frameworks.
A scuba cylinder's physical appearance does not determine which regulatory requirements apply. The cylinder marking and applicable certification should be considered.



35. TROUBLESHOOTING TABLE

Problem	Possible Cause	Recommended Direction
PRD leaking	Incorrect seal, damaged thread, incorrect assembly	Inspect complete assembly
PRD ruptures during filling	Overpressure, temperature, wrong PRD, equipment issue	Investigate before replacement
Repeated PRD failure	System problem or incorrect PRD	Inspect cylinder, valve and filling system
PRD does not fit	Wrong configuration	Re-identify valve
Correct thread but wrong assembly	Similar-looking component	Verify manufacturer specification
Corroded PRD	Moisture/contamination/environment	Replace and investigate cause
Damaged thread	Cross-threading/over-torque	Remove from service and inspect
Unknown old valve	Legacy configuration	Identify model/generation before ordering

36. BUILDING A PROFESSIONAL PRD DATABASE

For dive centers and service departments, maintaining a PRD database can greatly improve identification accuracy.
Recommended fields include:

- **Brand**
- **Valve Model**
- **Valve Generation**
- **PRD Part Number**
- **Assembly Type**
- **Thread**
- **Pressure Marking**
- **Seal Type**
- **Material**
- **Gas Service**
- **Compatible Cylinder**
- **Manufacturer Reference**
- **Superseded Part Number**
- **Replacement Part Number**
- **Photograph**
- **Technical Drawing**
- **Service Notes**

This approach is considerably more reliable than keeping only a photograph or a generic description such as "3/8 burst disk."

37. CONCLUSION

The burst disk is one of the smallest components on a scuba cylinder valve, but it performs an important safety function. Understanding the system requires more than knowing the diameter of the component.

A correct PRD selection considers:

- Cylinder specification
- Service pressure
- Valve design
- Valve generation
- PRD configuration
- Thread
- Release characteristics
- Assembly
- Sealing system
- Gas service
- Installation procedure
- Applicable standards



The commonly encountered 3/8-24 UNF and 1/2-inch configurations demonstrate why identification matters. Although both may serve the same general purpose, they are not interchangeable simply because they are both pressure-relief components.

Likewise, a one-piece assembly and a three-piece assembly should not be treated as interchangeable unless the manufacturer documentation confirms the equivalence.

The safest approach is always:

IDENTIFY → VERIFY → SELECT → INSTALL → INSPECT → DOCUMENT

A burst disk should never be selected by guesswork.

FINAL TECHNICAL NOTE

This guide is intended to help technicians, dive centers, equipment dealers and experienced divers understand the principles behind scuba cylinder burst disks and pressure-relief assemblies.
It should not be used to override manufacturer instructions or applicable regulations.

Where there is uncertainty regarding a PRD's identity, pressure specification, thread, assembly, material or gas-service compatibility, the correct action is to stop the installation and verify the component before the cylinder is returned to service.

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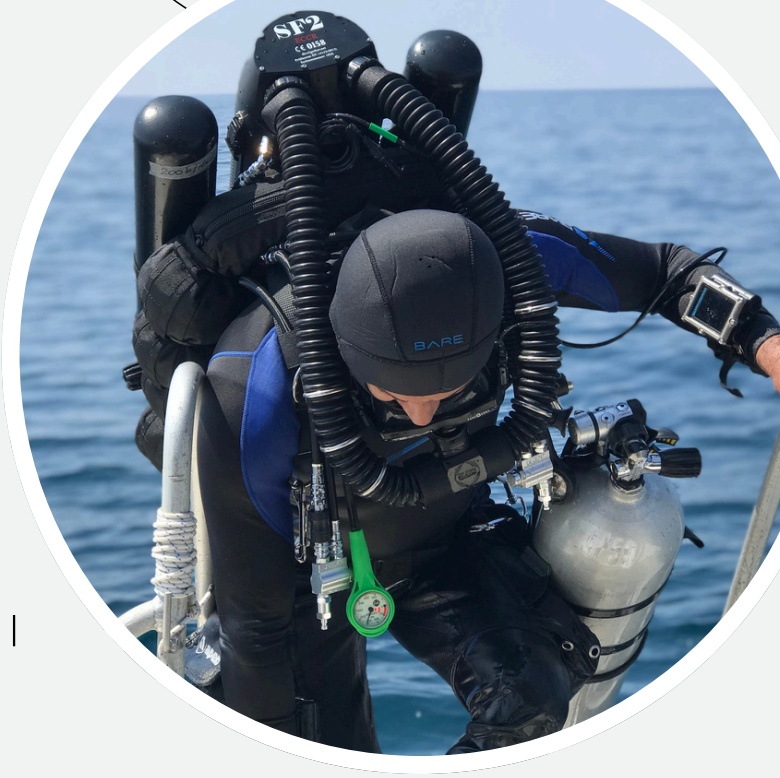
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Reference Note:

This publication is intended as a technical reference and educational resource. Applicable standards, regulations, manufacturer specifications, service procedures, and cylinder or valve requirements should always be verified against the current edition of the relevant document and the specific equipment being serviced.

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Mohammad Hosseinpour has been professionally involved in the diving industry for more than 20 years, with experience spanning diver education, technical diving, diving equipment, professional equipment service and maintenance, dive center management and operations, and marine environmental initiatives.

His professional background covers a broad range of diving activities, from recreational and professional diver training to advanced technical diving, sidemount and rebreather systems, as well as the practical aspects of diving equipment selection, configuration, servicing, troubleshooting, and maintenance. He has also managed and operated dive centers for many years, gaining practical experience in the day-to-day operational, technical, training, and equipment requirements of professional diving facilities.

As a TDI Instructor Trainer, Mohammad teaches technical diving from foundational levels through advanced technical and instructor-development programs. Within SDI, he serves as a Course Director Trainer, with experience in professional diver education and instructor development.

A significant part of his professional work has focused on diving equipment and technical systems. His experience extends from conventional scuba equipment to technical and rebreather systems, diving electronics, compressors, cylinder valves, cylinder inspection procedures, and specialized equipment servicing and maintenance. His direct professional relationships with international diving equipment manufacturers and established brands through distribution and dealer activities provide practical insight into equipment from the perspectives of design, manufacturing, field application, service, and end-user requirements.

He is also a Reef Check Trainer and has been involved for many years in initiatives supporting the protection and conservation of marine environments.

Across these areas, his approach is grounded in the connection between diving practice, training, equipment, technical knowledge, and real-world experience. This perspective forms the foundation of the articles, technical guides, and reference materials published through GTD Diving Equipment Trading LLC and its diving platforms.

The purpose of these publications is to share practical and technically informed knowledge with divers, instructors, technicians, dive centers, and other diving professionals, while making complex diving subjects accessible, useful, and relevant to real-world diving.

GTD DIVING

Two Decades of Diving Excellence "Gear, Service & Training"

About GTD Diving

GTD Diving is a diving company with more than 20 years of experience across the scuba diving industry. Our work brings together diving equipment distribution, professional servicing and maintenance, technical support, dive-center development, and diver education.

GTD works with established international diving brands as a distributor, dealer, and regional equipment partner, supplying recreational, technical, sidemount and CCR equipment across the Middle East. Our equipment portfolio is supported by professional technical services covering everything from regulators, BCDs and diving electronics to CCR systems, compressors, cylinder valves, inspection and specialized service requirements.

Through our training division and GoTechDive, we provide diving education from beginner and recreational levels through advanced technical diving, sidemount, CCR and instructor-level training. We also support dive centers with equipment selection, configuration, setup, maintenance and ongoing technical requirements.

Our retail platform, Dive Gear Zone, extends this experience online, providing scuba and technical diving equipment, spare parts and service components to divers and professionals. Rather than treating equipment as standalone products, our approach connects selection, configuration, training, maintenance and real-world application.

At the core of GTD is a simple principle: equipment, training, configuration, service, and technical support are all connected. Our experience across these areas allows us to support divers not only in choosing the right equipment, but also in using, maintaining, and developing it as their diving progresses. Our goal is to bring these elements together and provide divers, instructors, technicians and dive centers with the equipment, expertise and support they need, from their first dive to the most advanced levels of diving.

GTD Diving — Equipment. Service. Training.

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