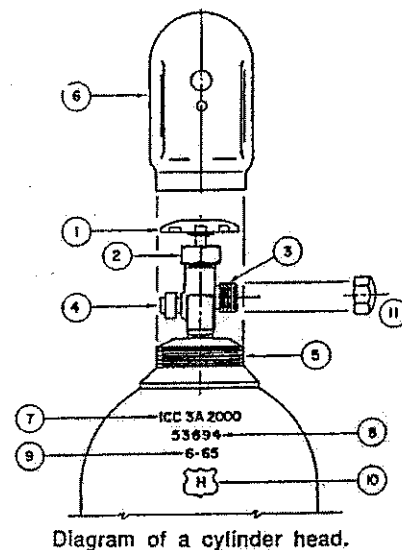


COMPRESSED GAS CYLINDER INSPECTION UPON RECEIPT

It is the responsibility of the person receiving and the PI using compressed gas cylinders to inspect them upon receipt.

The following **CYLINDER INFORMATION** will serve to familiarize laboratory personnel with cylinder parts and terminology as well as the meaning of important cylinder markings:

1. Valve handwheel: used to open and close cylinder valve. Valves are occasionally not equipped with handwheels, and require special wrenches to effect operation.
2. Valve pack nut: contains packing gland and packing around stem. Adjusted only occasionally; usually tightened if leakage is observed around valve stem. Should not be tampered with for diaphragm type valves.
3. Valve outlet connection: for connection to pressure- and/or flow-regulating equipment. Various types of connections are provided to prevent interchange of equipment for incompatible gases. Usually identified by a CGA (Compressed Gas Association) number; for example, No. 350 for hydrogen service.
4. Safety device: to permit gas to escape if the temperature gets high enough to endanger the cylinder by increased unsafe pressures.
5. Cylinder collar: holds cylinder cap (6) at all times, except when regulating equipment is attached to cylinder valve.
6. Cylinder cap: to protect cylinder valve.
7. This number signifies that the cylinder conforms to Department of Transportation specification DOT-3A governing materials of construction, capacities, and test procedures, and that the service pressure for which the cylinder is designed is 2000 pounds per square inch gage at 700 F.
8. This number is the cylinder serial number.
9. This number indicates the date (month and year; in this case, June 1965) of initial hydrostatic testing. Thereafter, hydrostatic pressure tests are performed on cylinders, for most gases, every five years to determine their fitness for further use. At this time new test dates are stamped into the shoulder of the cylinder. Present regulations permit visual tests in lieu of hydrostatic tests for low-pressure cylinders in certain gases free of corrosive agents; special permits allow for hydrostatic pressure tests at ten-year intervals for cylinders in high pressure service for certain gases.
10. Original inspector's insignia for conducting hydrostatic and other required tests to approve the cylinder under DOT specifications.
11. Valve outlet cap: protects valve threads from damage and keeps out-let clean; not used universally.



Cylinders that require hydrostatic testing every 10 years have a five-pointed star stamped next to hydrostatic test date.

Reference: Manufacturing Chemists Association, Guide for Safety in the Chemical Laboratory, 2nd Edition. New York: Van Nostrand, Reinhold Company, 1972. Pp 165 - 167.

Do not accept tanks (return to vendor) if:

- (1) there is no label describing contents.
- (2) there is no cylinder valve protection cap.
- (3) the last hydrostatic test date is over five years old (no star).
- (4) the last hydrostatic test date is over ten years old (five-pointed star).