



## Industrial Rubber Inc.

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### *Industrial Rubber, Inc.* *Type B Basket Cementing Shoe*



The IRI Type B Basket Cementing Shoe of casing is employed as:

- A **Shoe** to protect the Running-in String even through irregular and deviated holes.
- A **Basket** to protect the formations below the shoe from cement contamination in the open hole, in washed out sections, in under-reamed and bell holes and/or in zones determined too weak to support the weight of the cement column alone.

<b>Specifications</b>		
Casing Size	Compressed OD	Expanded OD
2.5	4.5	10
3	3.625	11
4.5	5.75	12
5.5	6.75	14
7	8.375	18

The Industrial Rubber Shoe is a precision-built tool and an effective and economical way to perform its special functions as described below:

1. The **Shoe** permits unobstructed circulation through the guide nose while running in.
2. The **Basket** is held tight against the core mandrel by a petal retainer for running in clearance.
3. After the setting depth is reached, the ball is dropped to release the basket petal retainer, which until now has prevented any pre-expansion foul-ups.
4. The ball gravitates to the seat, stopping circulation through the shoe. This diverts all the pressure to expanding the basket so that it readily conforms to a hole of almost any shape.
5. The IRI Basket is made of strong **Spring Steel Ribs** reinforced with overlapping rubber **Liners**, so that it packs off tightly where other baskets have leakage problems.
6. All internal parts of the shoe are easily drillable. Industrial Rubber's aluminum alloy has been specially formulated to break into small pieces, circulate out easily, and leave no aluminum residue.
7. The entire assembly is durable and has high resistance to abrasion and corrosion.
8. All parts have the added strength to handle the stresses created by unforeseen circumstances

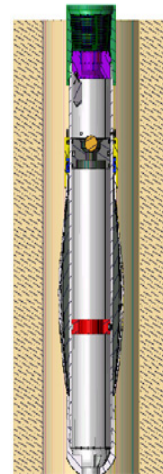
### **Manufacturer's Statement**

Industrial Rubber's Oil Tool Division has endeavored to furnish you with the very finest Cementing Shoe in the industry. In striving to become the leader in the quality tools needed for well completions, we are endeavoring to provide the finest workmanship at reasonable prices. We want you to return so that we are doing all we can to provide the **most tool** for your industry dollar. Come to us if you need special handling or have a problem.

We want to make our tools **right!**

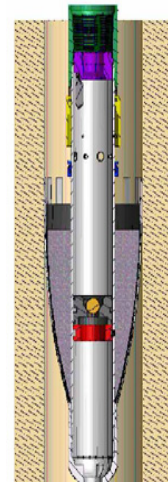
### *Tripping Ball is Dropped*

The shoe is made up on the casing string with the basket closed, and it is run where the casing is to be cemented. The ball is dropped and it gravitates to the seat inside the piston.



### *Tripping Ball Opens the Cementing Ports*

The pump pressure is increased to approximately 400 psi and the piston slides downward, opening up the cementing ports. Pressure inside the casing forces the petal retainer upward, releasing the basket petals. The basket petals expand outward and press against the wall of the hole as the cement flows out of the ports and into the rubber liner. The cement continues to fill the basket and proceeds upward into the annulus over the basket.



### *Flapper Valve Seals Back Pressure*

After the cementing is completed, the flapper valve closes and seals to prevent the backflow of fluids into the casing.

