

## Test-and-Inject Plug

Provides the ability to test casing and establish injectivity

### Applications

- High-angle wells completed in tight, low-permeability formations that require fracturing
- Cemented casing strings that require pump-down wireline perforating guns
- Wells that require casing-pressure testing before establishing injectivity

### Features and Benefits

- The plug provides the ability to test the casing to high pressure and establish well circulation/perforation at low pressure.
- The plug eliminates the need for additional pressure-activated equipment, reducing equipment cost and risk.
- It shortens the shoe track, which increases exposure to the formation.
- The plug can be used in conjunction with the Weatherford wet shoe system to increase formation exposure to injectivity.
- The plug provides confirmation of well integrity and injectivity immediately after cementing operations.
- It enables a full casing integrity test before cement is set, which reduces the risk of a micro annulus.
- The plug facilitates the use of pump-down wireline perforating devices, eliminating the need for a rig and tubing-conveyed equipment, which reduces operations cost and non-productive time.
- The plug incorporates a modular design composed of one or more high-pressure plugs with high-, medium-, and low-pressure rupture disks to provide plug flexibility for various well conditions.
- It can be configured in a combination of sizes for use in tapered casing strings.
- Polyurethane fins provide enhanced wiping capabilities and abrasion resistance, resulting in a clean casing ID, which avoids the need and cost of a cleanup run.
- The plug is compatible and recommended for use with Weatherford Model 3EHD, 30HDG (gas-tight) float shoes and Model 4E2HL (4EHDG gas-tight) float collars.



The test-and-inject plug provides confirmation of well integrity and injectivity after cementing.



# Test-and-Inject Plug

## Options

- Single, dual, and triple top and bottom plugs are available for optimum wiping efficiency.
- HNBR plug fins are available for high-temperature applications of 392°F (200°C) in 4 1/2-, 5-, and 5 1/2-in. sizes, including combinations of these sizes.
- Multiple bottom plug latch-in plugs can be equipped with large-diameter high-pressure rupture disks available from 750 to 6,000 psi (5.17 to 41.37 MPa).

## Tool Description

The Weatherford test-and-inject plug is run as the final wiper plug that is latched and sealed into Weatherford high-pressure float equipment. This simple test and inject device optimizes performance of the Weatherford wet-shoe system by providing the ability to test casing and establish injectivity. The test-and-inject plug, used in concert with the wet-shoe system, reduces equipment cost and maximizes pay zone exposure by shortening the shoe track. By providing the ability to establish casing integrity and confirm injectivity immediately after the well is cemented, the plug replaces the need for well preparation operations prior to hydraulic fracturing.

The test-and-inject plug can be run in combination with toe sleeves to provide redundant test-and-inject capabilities. It can be adapted to combination wiper plugs that will wipe and clean tapered casing strings, reduce cost, eliminate NPT, and place the well on production at lower cost than alternative conventional procedures. The superior wiping capability of the polyurethane fins eliminates the need for a cleanout trip.

