

RETREADING TIRES

Goodyear has been retreading aircraft tires since 1927. Today, most military and commercial airline tires are designed to be retreaded. Retreading an existing casing can provide more landings per tire at a lower cost per tread, giving a significantly lower overall operating cost.

As with new tires, retreads must pass airworthiness authority testing requirements. Inspection techniques, such as air injection, holography and shearography, ensure that used casings and the final retread meet all specifications. Again, as with new tires, retread materials and components are certified by quality assurance standards.

The following is a scenario of the retread process:

- Tires are received and assigned a process card and number that follows the tire throughout the complete process. All pertinent information is entered into a computer database.
- Tires are visually inspected and air needle pressure tested to reveal any separations or possible liner leaks.
- Tires are put into hot storage to shrink the nylon casing back to its original shape.
- Tires are then placed on a buffing machine with the casing under pressure to ensure roundness.
- The old tread is buffed off the casing along with any removable fabric reinforcement plies.
- New fabric reinforcement plies are applied, as required, along with the new tread rubber.
- Tires are then placed in a mold and the new tread materials are vulcanized (cured).

Along with the standard visual and air needle inspections, a major part of the Goodyear retread inspection process includes Holography or Shearography inspections.

Shearography Inspection

Goodyear uses shearography equipment as part of its state-of-the-art nondestructive inspection methods. It is capable of detecting very small anomalies that could affect tire performance. Its advantages are real-time inspections through CRT screen viewing and video data storage. It has the capability of bead-to-bead inspection.

