

# Extendor™ Combustion System

## Benefits

- Increased production
- Higher efficiency
- Compliance with environmental regulations
- Availability and Reliability**
- Life extension

Reducing wear on combustion system components can extend gas turbine combustion inspection intervals. Customer savings are realized by **eliminating labor costs** associated with combustion inspections, **reduced component repair costs**, and **increased unit availability**.

Planned maintenance intervals can be raised up to a 24,000 hr basis

## What it is

GE heavy-duty gas turbines require periodic combustion inspections. For any given machine, the duty cycle, type(s) of fuel(s) used, and the amount of water and steam injected are the key factors in determining the recommended combustion inspection intervals because these factors directly influence the amount of TBC coating erosion, material creep, thermal stress and wear of combustion components. The Extendor™ Combustion System can increase combustion inspection intervals by significantly reducing combustion component wear and by reducing transition piece creep.



## How it works

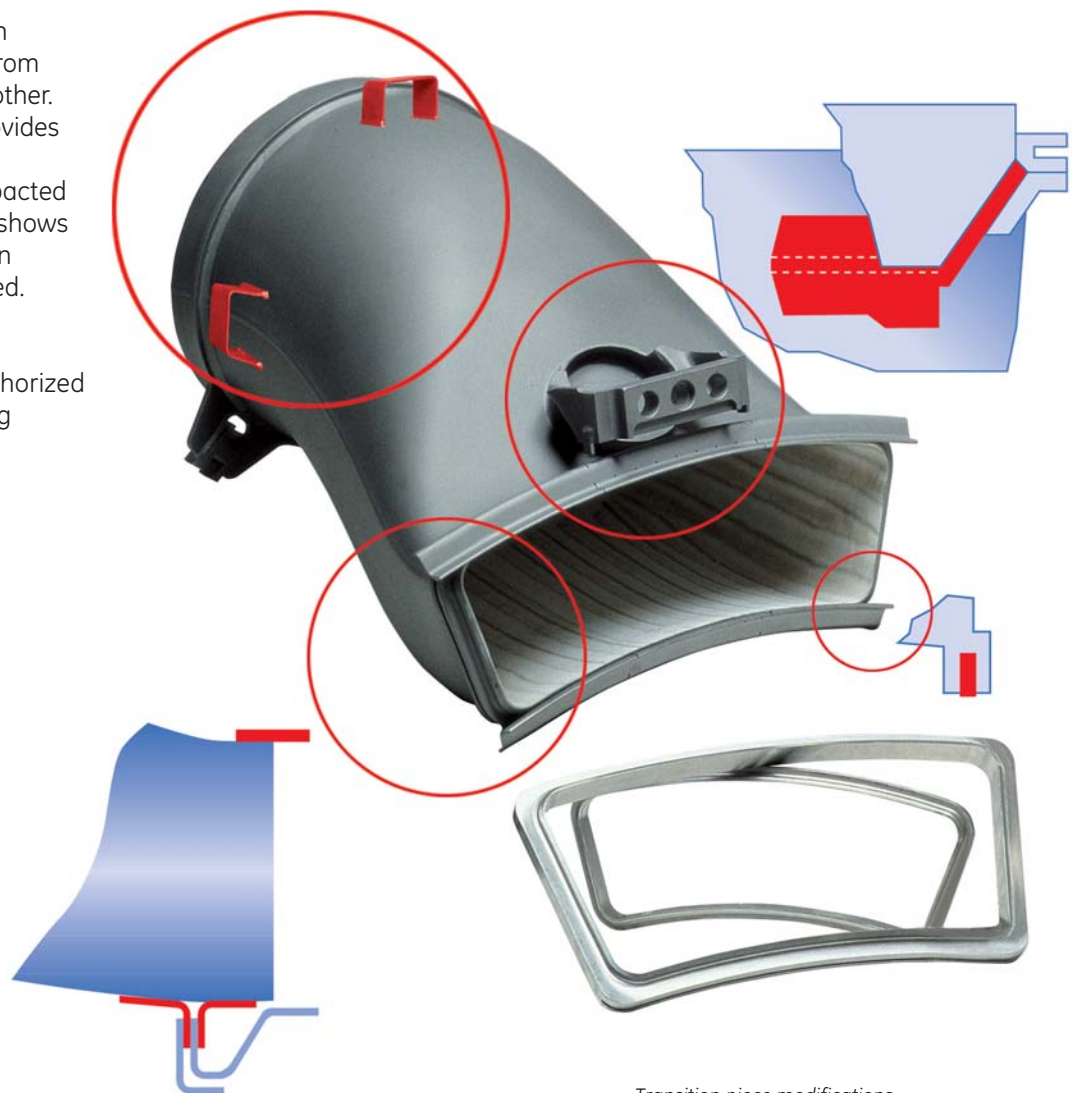
Since each Frame size has its unique combustion system, the operating characteristics of each model are different. Combustion systems have different diameters, different lengths, and different dynamics and they experience varying amounts of wear at each of the key wear interfaces. These different combustion systems require that each Extendor™ system be a unique design. Although each Extendor™ system will use the same basic wear reduction techniques, the actual design configurations included in each Extendor™ package will vary from one combustion system to another. The illustration on the right provides an indication of some of the components and locations impacted by Extendor™ treatment and shows that virtually every combustion chamber component is affected. Extendor™ can be applied to combustion components by modifying hardware at an authorized GE Service Center or by having

Extendor™ features built into (or “pre-applied” to) new combustion components during the manufacturing process. Until recently, only the former alternative was available (even for new combustion components). Extendor™ is a hard coating that reduces wear on various components of the combustion system. Upon installation of the full

Extendor™ package, GE can recommend an extension of the combustion system inspection interval.

The Extendor™ kit includes:

- Transition piece
- Combustion liners
- Fuel nozzle tips
- Cross-fire tubes and cross-fire retainers
- Combustion chambers modification



GE imagination at work