

ECOBOOST TURBO IS BUILT TO LAST WITH SPACE SHUTTLE SUPERALLOY

Ford and BorgWarner™ engineers selected a material originally used for the high-pressure turbo pumps in the Space Shuttle main engines to ensure the turbine wheel in the 2.0-liter EcoBoost® engine meets exacting durability requirements.



Space Shuttle main engines

2.0-liter EcoBoost

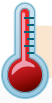


The nickel-cobalt-tungsten superalloy (MAR M246) used in the turbocharger of the 2.0-liter Fusion enables it to withstand the stresses of a lifetime of the most spirited driving.



2.0-liter EcoBoost Space Shuttle Main Engines

| | | |
|---------------------------------------|--|--|
| Maximum rpm: | 190,000 rpm | 28,120 rpm (high-pressure turbo pump) |
| Maximum thrust: | 240 horsepower (252 for Focus ST) | 418,000 pounds (about 19.5 million horsepower) |
| Fuel consumption: | 23, 33 mpg ¹ (estimated) | 350 gallons/second (about 0.0139 mpg at 17,500 mph) |
| Maximum boost pressure: | 14.7 psi | 4,400 psi (high-pressure oxidizer turbo pump) |
| Maximum running time per tank: | 467 minutes ² | 8.5 minutes |
| Maximum speed: | 135 mph | 17,500 mph |



Maximum temperature:

EcoBoost
1,050° Celsius

Shuttle engines
3,315° Celsius



Time to orbit Earth:

EcoBoost³
355.7 hours

Shuttle engines⁴
About 90 minutes



¹ Projected fuel economy ² 70 mph projected 33 mpg ³ 70 mph ⁴ Approximately 120 miles up