

# Stealth Fighter Soon Powered by Local Engines

*Defense-aerospace*

A domestically developed engine will soon power the nation's latest stealth fighter jet, according to a senior scientist working for Aero Engine Corp of China.

"It will not take a long time for our fifth-generation combat plane to have China-made engines," said Chen Xiangbao, vice-president of the AECC Beijing Institute of Aeronautical Materials. Chen, also a member of the Chinese Academy of Engineering, was referring to the J-20 stealth fighter.

"The engine's development is proceeding well. We also have begun to design a next-generation aviation engine with a thrust-to-weight ratio that is much higher than that of current types," he said. Thrust-to-weight ratio is considered the top indicator of an aviation engine's capability.

Chen, who is a member of the Chinese People's Political Consultative Conference National Committee, spoke to China Daily on the sidelines of the political advisory body's annual session.

The People's Liberation Army Air Force recently confirmed, without elaborating, that the J-20 has been put into active service. Aviation industry observers said the plane is still equipped with Russian-made engines due to the lack of a suitable domestically developed engine.

Chen said Chinese scientists and engineers are striving to catch up to the world's top players in terms of research and development into cutting-edge aviation engines, but the country still has a long way to go before it can develop and produce world-class engines, Chen said.

"For instance, we are able to develop the two most important components in an advanced engine — the single crystal superalloy turbine blades and powder metallurgy superalloy turbine disks — but in mass production, the products' quality is not very satisfactory," he said. It is a matter of time and persistence to make reliable engines, he said. "The road to success is filled with setbacks and failures. Each of the world's engine powers has walked this road," Chen added.

Yin Zeyong, head of AECC's science and technology commission, previously said that a good engine is the result of not only good design but also time-consuming experiments and tests.

Despite China's tremendous achievements in science, technology and manufacturing industries over the past several decades, aircraft engine-making remains one of the few fields in which the country still lags behind top players like the United States and Russia. Because of the sophistication of advanced aircraft engines, such as the afterburning turbofan engine, which drives the US Lockheed Martin F-22 and Russia's Sukhoi Su-35, only the five permanent

members of the United Nations Security Council have the technical wherewithal to develop and produce them.

Tang Changhong, chief designer of China's Y-20 strategic transport plane and a member of the CPPCC National Committee, told West China City Daily that the Y-20 will be equipped with indigenously developed engines around 2018 or 2019.