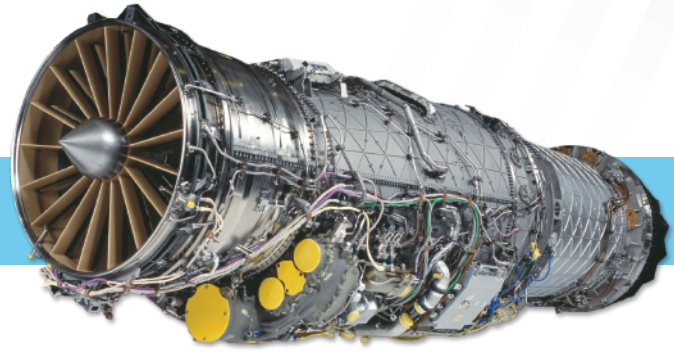




GO BEYOND

PRATT & WHITNEY F135 ENGINE FAST FACTS | Q3 2020

F135 The World's Most Advanced Fighter Engine



UNMATCHED CAPABILITY FOR THE WARFIGHTER



40K+ LBS
OF THRUST



5TH GENERATION
STEALTH
TECHNOLOGIES



13x SAFER
THAN 4TH GENERATION
FIGHTER ENGINES



>94%
PROPULSION MISSION
CAPABILITY RATE

PRODUCTION



650+
engines delivered
in total



Reduced average
cost of an F135
BY 50%
to date



OVER \$500M
invested in capital and
process improvements to
enable increase in output



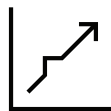
**THREE PRODUCTION
& TEST FACILITIES**

Middletown, CT
West Palm Beach, FL
Mizuho, Japan (IHI)

SUSTAINMENT



10x MORE RELIABLE
in service than 4TH generation
fighter engines



**MORE THAN A 250%
IMPROVEMENT**
in unscheduled engine removals over
4TH generation fighter engines



Targeting
50% REDUCTION IN COST
per flight hour

MODERNIZATION

Growth in aircraft capability must be matched with propulsion growth. Fortunately, the F135 has ample design margin to permit agile upgrades. Our Enhanced Engine Program approach enables us to insert next-generation adaptive technologies into current platforms as they become available.



FUEL BURN

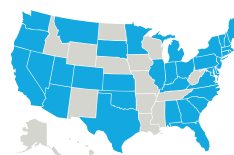


THRUST



PTMS CAPACITY
(Power & Thermal Management System)

ECONOMIC IMPACT



● SUPPLIER LOCATIONS

The F135 program supports
37,000+ JOBS
in the U.S.

More than
220 SUPPLIERS
IN 35 U.S. STATES
provide parts for the F135



60 SUPPLIERS
IN 12 COUNTRIES
provide parts for the F135

The F135 program provides
\$41B IN INDUSTRIAL
PARTICIPATION
for international partner nations

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PRATT & WHITNEY F135 ENGINE FAST FACTS | Q3 2020

F135

The World's Most Advanced Fighter Engine



F135-PW-100
Conventional Takeoff and Landing (CTOL)
Carrier Variant (CV)

F135-PW-600
Short Takeoff/Vertical
Landing (STOVL)

PROGRAM AT A GLANCE (AS OF JULY 1)



535+
aircraft delivered



290,000+
flight hours



24
bases worldwide
(includes ship activations)



8
services have
declared IOC

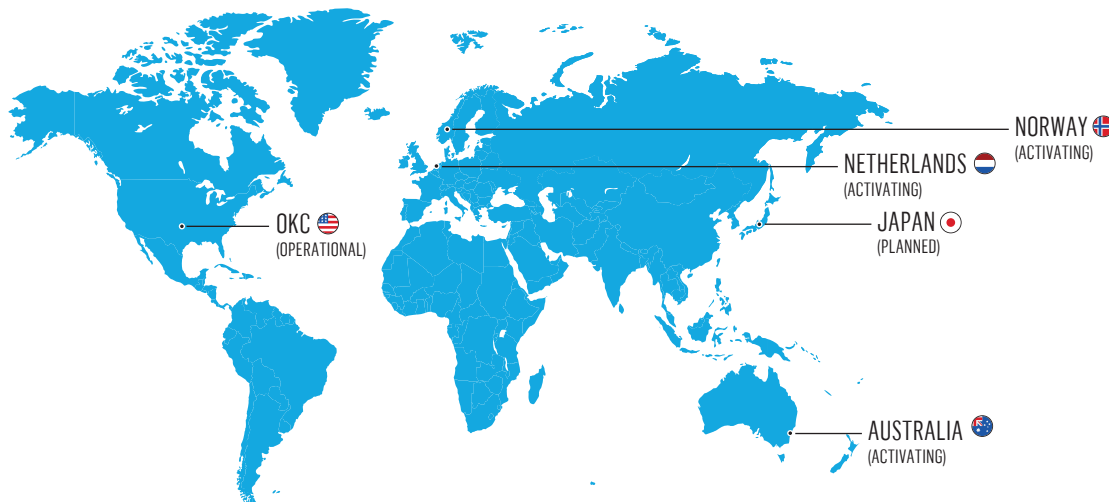
PROGRAM OF RECORD

U.S.A. 1,763 F-35As 693 F-35B/Cs	U.K. 138 F-35s	ITALY 60 F-35As 30 F-35Bs	NETHERLANDS 46 F-35As
AUSTRALIA 100 F-35As	NORWAY 52 F-35As	DENMARK 27 F-35As	CANADA 88 F-35As
ISRAEL 50 F-35As	JAPAN 105 F-35As 42 F-35Bs	REPUBLIC OF KOREA 40 F-35As	FOREIGN MILITARY SALES
BELGIUM 34 F-35As	POLAND 32 F-35As		

F135 ENGINE SPECS

F135 ENGINE SPECS	F135-PW-100 Conventional Takeoff and Landing (CTOL) Carrier Variant (CV)	F135-PW-600 Short Takeoff/Vertical Landing (STOVL)
Maximum Thrust Class	43,000 lbs	41,000 lbs
Intermediate Thrust Class	28,000 lbs	27,000 lbs
Short Takeoff Thrust Class	—	40,740 lbs
Hover Thrust Class	—	40,650 lbs
Length	220 in	369 in
Inlet Diameter	43 in	Main engine: 43 in Lift fan: 51 in
Maximum Diameter	46 in	Main engine: 46 in Lift fan: 53 in

F135 GLOBAL MRO&U NETWORK



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