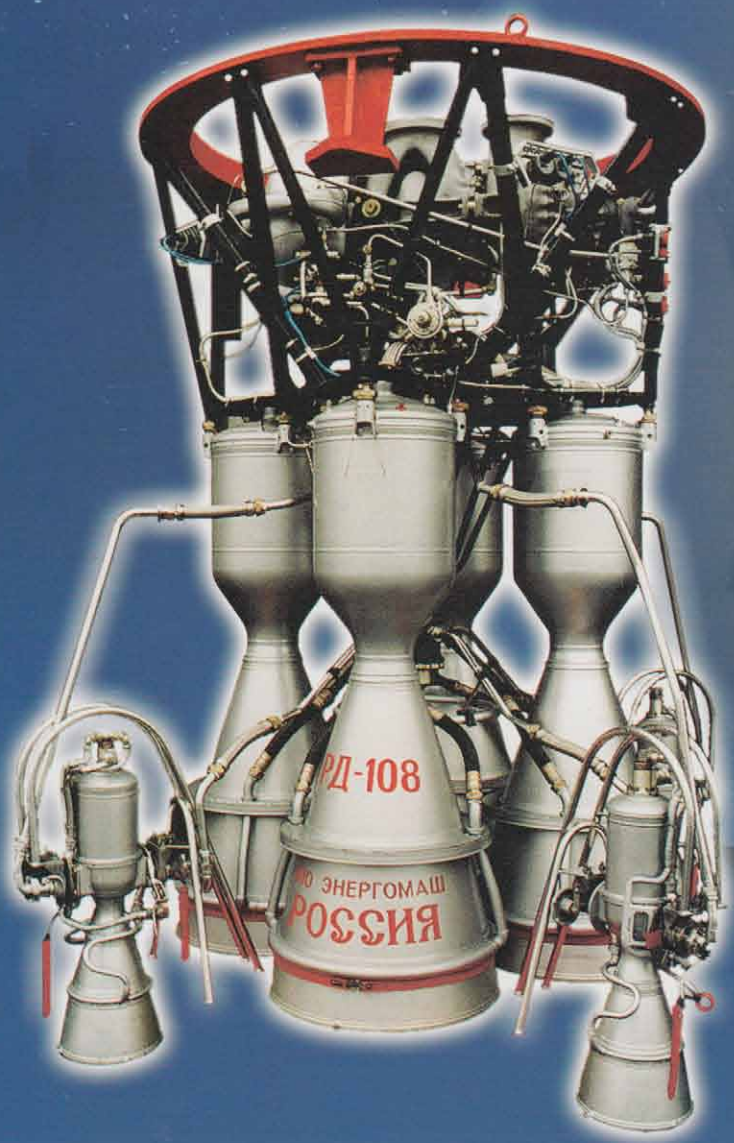
NPO ENERGOMASH
named after academician V.P. Glushko
founded in 1929

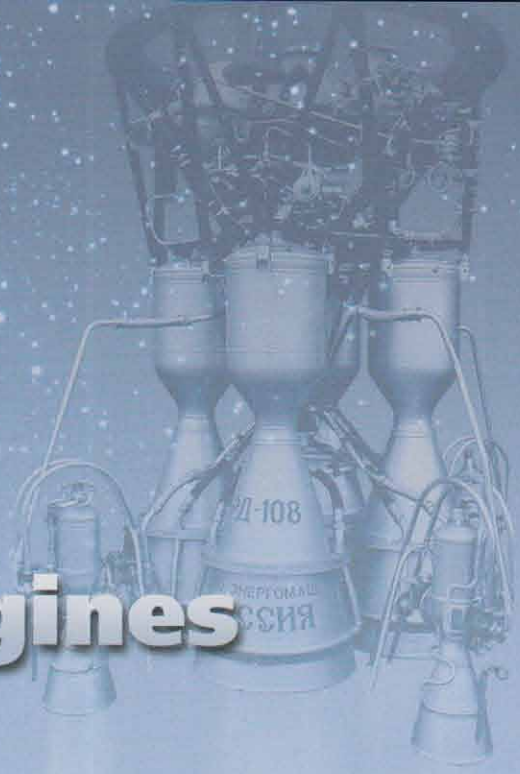


RD-107/108 engines

Liquid propellant rocket engines
for first and second stages
of «Soyuz» LV family

NPO ENERGOMASH
named after academician V.P. Glushko
founded in 1929

1, Burdenko St., Khimki, Moscow Region, 141400, Russia
Tel. (495) 777-27-27, fax (495) 251-75-04
E-mail: energo@online.ru



RD-107/108 engines

Main parameters of RD-107/108 engines

Liquid propellant rocket engine with open cycle

Propellant: LOX + kerosene

Engine modification	RD-107	RD-108	RD-107A (14D22)	RD-108A (14D21)
Thrust, sea level / vacuum, tf	83 / 102	76 / 96	79 / 96*	70 / 87*
Specific impulse, sea level/vacuum, sec	256 / 313	248 / 315	263,3/320,2	257,7 / 320,6
Pressure in combustion chamber, kgf/cm²	60	52	61,2	55,5
Mass, dry / filled, kg	1190 / 1300	1278 / 1402	1090 / 1156	1075 / 1151
Dimensions, height / diameter, mm	2865 / 1850	2865 / 1950	2578 / 1850	2865 / 1950
Development period	1954–1959	1954–1959	1993–2001	1993–2001
Destination	«Vostok» LV	«Vostok» LV	«Soyuz» LV	«Soyuz» LV

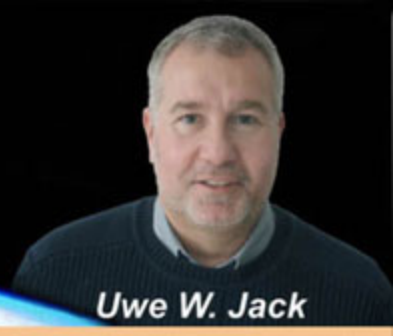
** For main combustion chambers only (without steering chambers)*

«Soyuz» LV engines (14D21 and 14D22) modernization program

Modification activity was began in 1986.
Advanced project was issued in 1993.
New design of injector head, increasing of specific impulse (from 316 up to 320,5 sec).
First fire tests were began in 1999 (3 engines – 20 fire tests).
23 development engines were produced – 163 fire tests totally.
First launch of «Progress» – May, 2001; first launch of manned «Soyuz» LV – October, 2002.

New modification with chemical ignition – chemical ignition system instead of pyrotechnical is developed.
12 fire tests at 2 engines with chemical ignition; full readiness to certification and flight tests program.

Jack's Aerospace History Files



This is a document from Uwe W. Jack's archive.

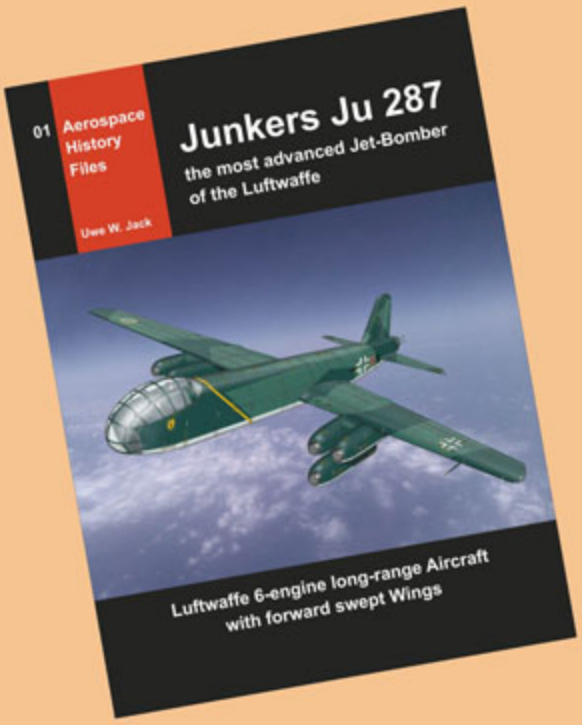
These documents are intended to illustrate aspects of aerospace history.

You are free to share it with friends.
commercial use is prohibited.

Uwe W. Jack occasionally puts new documents on his website.

Please visit:

www.aerospace-jack.com



Junkers Ju 287

The most advanced Jet-Bomber of the Luftwaffe

This is the story of an aircraft that might have changed the air-war in 1945/46. Lots of photos, drawings, information, data and more than 6000 words give a detailed insight into the development of this unique piece of aviation.

Available as eBook on

Amazon

and

smashwords