

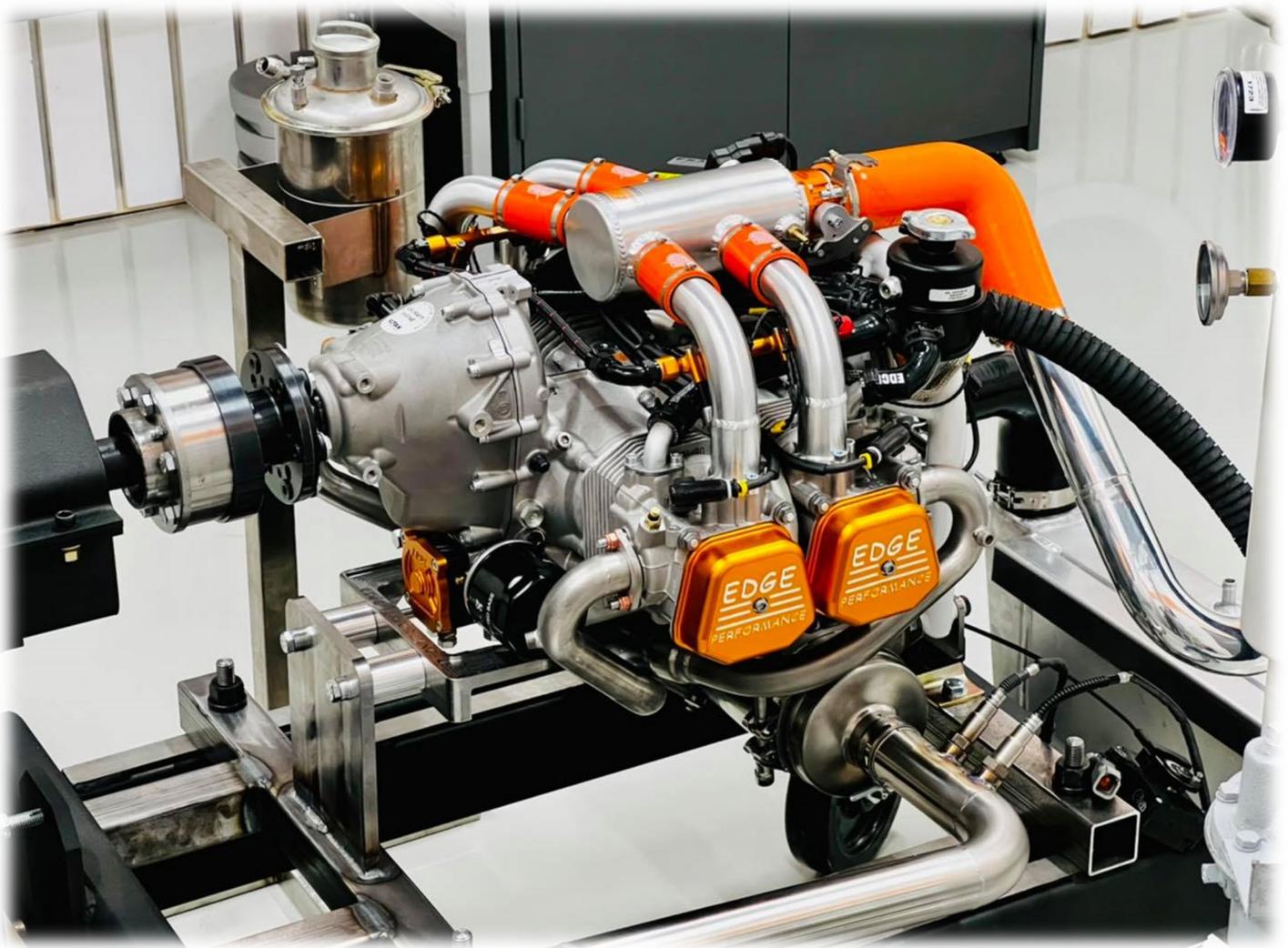


EDGE PERFORMANCE
AIRCRAFT ENGINES - FUEL INJECTION KITS - TURBO CONVERSIONS



EP912STi – Operation Limits

Operation limitations to ensure safe and reliable operation



28.122021

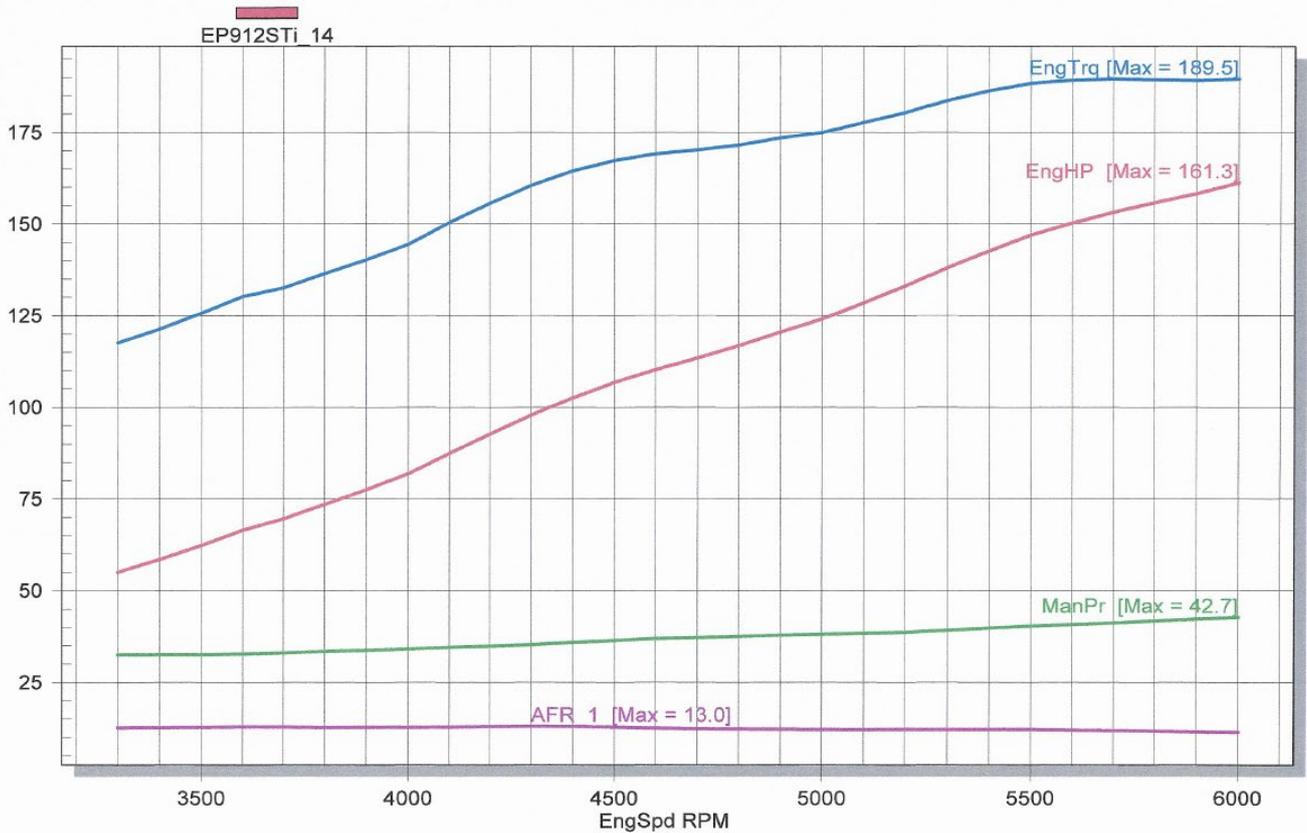
Copyright © - EdgePerformance AS. All rights reserved

Topics in this chapter:

1.1 Performance Graph.....
1.2 Introduction.....
1.3 Suitable Fluids.....
1.4 Operating Limits.....

1.1.

Measured Torque and Power
EP912STi_14,



12/21/21

Edge Performance AS
SuperFlow WinDyn™ V3.2

13:24:07

28.122021



Edge Performance AS

Merdevegen 4E
Notodden 3676
NO - Norway

"Measured Torque and Power" from test EP912STi_14.sfd

Test Information:

File name: EP912STi_14.sfd (EdgePerf.cfa)
Data page: Measured Torque and Power - 28 lines total
Tested on:

Test Description:

Enter any Test Description notes here...

EngSpd RPM	EngHP HP	EngTrq Nm	ManPr In/Hg	AFR_1 ratio	FuelFI l/hr	Colnt deg C	OilT deg C	TurOT deg C
3 300**	55,0	117,6	32,5	12,6	17,1	70	57	39
3 400	58,5	121,3	32,5	12,7	17,0	70	57	38
3 500	62,4	125,7	32,5	12,8	16,9	71	57	38
3 600	66,5	130,2	32,7	12,9	16,9	71	57	38
3 700	69,6	132,6	33,0	12,8	17,2	71	57	38
3 800	73,5	136,4	33,4	12,7	17,5	71	57	38
3 900	77,5	140,2	33,8	12,7	18,3	71	57	38
4 000	81,9	144,4	34,1	12,7	19,4	71	57	38
4 100	87,4	150,4	34,5	12,8	20,9	71	57	38
4 200	92,7	155,6	34,9	12,9	22,2	71	56	38
4 300	97,8	160,5	35,3	13,0	23,5	71	56	38
4 400	102,6	164,5	35,8	13,0	25,2	71	56	39
4 500	106,8	167,3	36,4	12,8	27,1	72	57	39
4 600	110,3	169,1	36,9	12,5	29,1	72	57	39
4 700	113,4	170,2	37,2	12,4	30,4	72	57	39
4 800	116,8	171,5	37,5	12,2	31,6	72	57	40
4 900	120,5	173,5	37,8	12,2	32,5	72	57	40
5 000	124,0	174,9	38,1	12,1	33,2	72	56	41
5 100	128,5	177,6	38,3	12,1	34,4	72	56	41
5 200	132,9	180,3	38,7	12,1	35,4	72	56	42
5 300	138,0	183,6	39,2	12,1	36,9	73	56	42
5 400	142,6	186,3	39,7	12,1	38,2	73	56	43
5 500	146,9	188,3	40,3	12,0	39,8	73	56	44
5 600	150,2	189,2	40,7	12,0	41,3	73	56	44
5 700	153,2	189,5	41,2	11,8	43,1	73	56	45
5 800	155,7	189,3	41,7	11,7	45,5	73	56	46
5 900	158,3	189,2	42,3	11,5	47,3	73	57	47
6 000**	161,3	189,5	42,7	11,4	48,8	73	57	48
Max** 6 000	161,3	189,5	42,7	13,0	48,8	73	57	48

1.2. Introduction

- All EP912STi engines must be operated within these given limitations in order to ensure proper and safe operation and maintaining engine life. Failing to do so can and will cause engine damage and ultimately engine failure.
- All engine data parameters are logged and store into the ECU. Deleting the log file or not providing the complete ECU log in case of engine trouble will result in voided warranty.

1.3. Suitable fluids

- Engine lubrication Aeroshell Sport Plus 4 (10W-40)
- Water based coolant 50/50 Glycol mix
- Fuel grade RON 98 / AKI 93 or greater. AVGAS UL91/96 and 100LL (LL AVGAS requires more frequent maintenance)

1.4.

- Oil Pressure: 3.5-5.0Bar, 0.8Bar below 3500rpm (7.0Bar at cold start)
 - Oil Temp: -20°C – 130°C
 - Coolant Temp: -20°C – 120°C
 - EGT: 750-900°C
 - EGT Split: 100°C above 25In/Hg Map
 - RPM: 1550rpm (IDLE) 5800rpm max (5 minutes) 5500rpm max continuous
 - MAP: 42In/HG (5.9psi boost)
 - Acceleration: max -0.5G for 5 seconds
 - Manifold Air Temp: 75°C max
 - Fuel Pressure: 2.5-4.0Bar
 - Ambient Temp: -20°C – 45°C
 - Fuel Consumption: 45.5ltr/hr @ 155HP (Typical cruise 18-26ltr/hr)
- (1Bar = 14.5psi)**
(1Liter = 0.264US Gallon)

Manifold Pressure VS RPM limitations

Manifold Pressure vs RPM Operation Table							
		RPM					
		3500	4000	4500	5000	5500	5800
MAP In/Hg	18						
	20						
	24						
	26						
	30						
	34						
	38						
	42						

INTENTIONALLY LEFT BLANK