



Performance Test

Sti Stock Intercooler vs. TSD Coating Sti Stock Intercooler

☆Test objective: Compare the Subaru STi performance (HP, Torque, intake temperature) for TSD Coating intercooler.

☆Test method:

Step 1: Stock vehicle (No TSD BN coating) were placed on Dyno equipment to measure HP, TORQUE, and INTAKE TEMPERATURE.

Step 2: Vehicle received TSD Coating onto intercooler and radiator and received Dyno for HP, TORQUE, and INTAKE TEMPERATURE.

☆Test Condition:

Test date: September 3~5, 2007

Weather: 34~35 degree Celsius.

☆Result:

	TSD Coating Stock Intercooler	Factory Intercooler	Improve	
			#	%
Peak Horse Power (hp)	313	301	12	4%
Peak Torque (Nm)	382	367	15	4%
Intake Temp. (°C) @ 2100 RPM	59	70	11	16%
Intake Temp. (°C) @ 4100 RPM	55	72	17	24%
Intake Temp. (°C) @ 7000 RPM	53	66	13	20%

☆Conclusion:

Test subject vehicle (STi) produced 4% horse power and torque increase result of lower intake temperature with TSD Coating onto intercooler.

Benefits with TSD Coating onto intercooler:

- | *Reduce operating temperature.*
- | *Increase HP and Torque*
- | *Improve fuel economy*
- | *Long last engine components*
- | *Reduce engine thermal fatigue*
- | *Quicker acceleration*
- | *Cost saving*

MODIFIED LIST

2004 Silver Subaru Impreza Sti

* Intake:

1. HKS air filter direct stock replacement
2. Factory intake manifold

* Power:

1. Stock VF37 twinscroll turbo
2. Boost 1.2 bar
3. Hydra stand-alone computer

* Exhaust

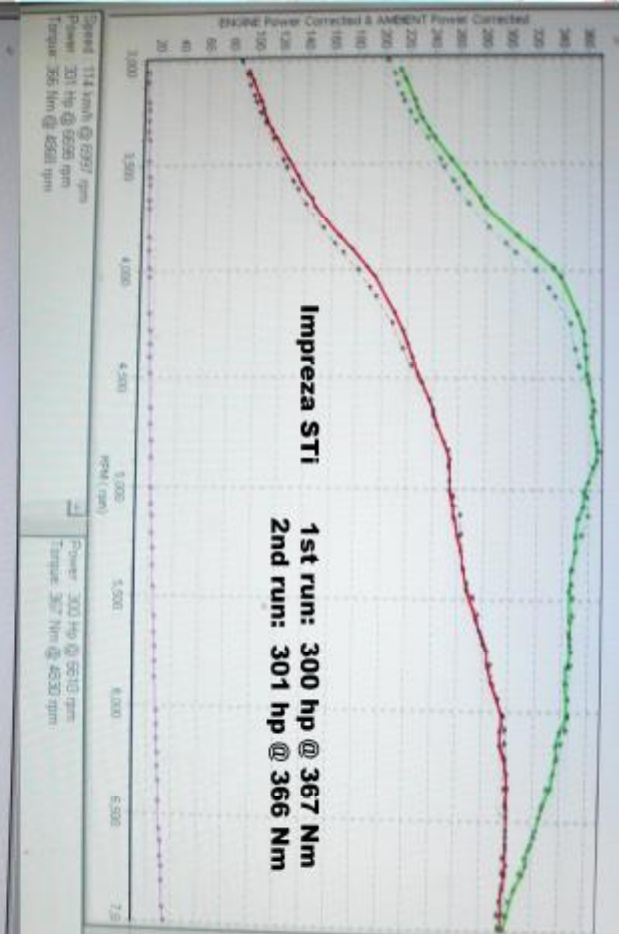
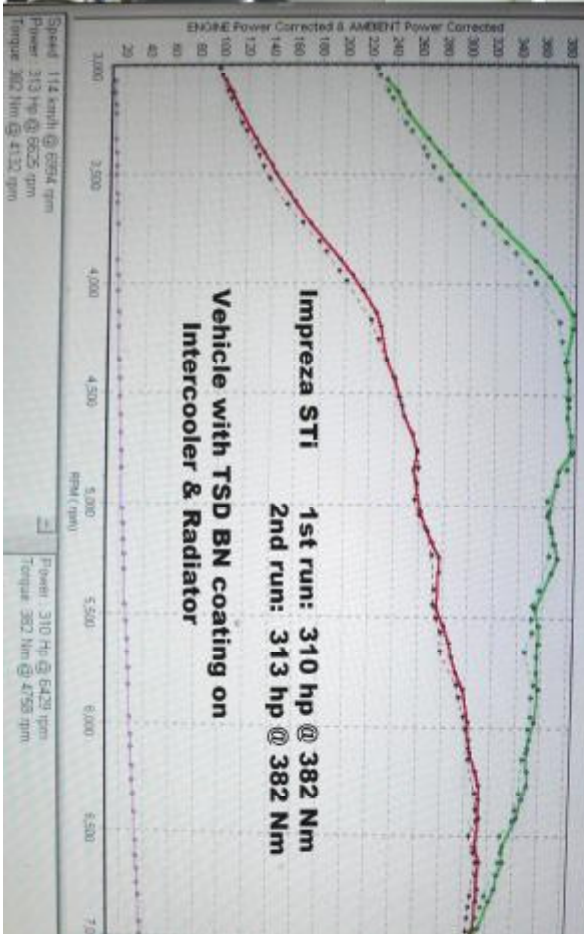
1. Factory exhaust manifold
2. Factory exhaust catalyst converter removed
3. Custom downpipe
4. FGK exhaust cat-back

* Suspension:

1. Tanabe sustec pro7 shock absorber
2. Cusco front/rear upgrade stabilize
3. Chargespeed rear link
4. Cusco front 4-point under brace
5. Cusco rear strut brace
6. Cusco front strut brace



Dyno Graph



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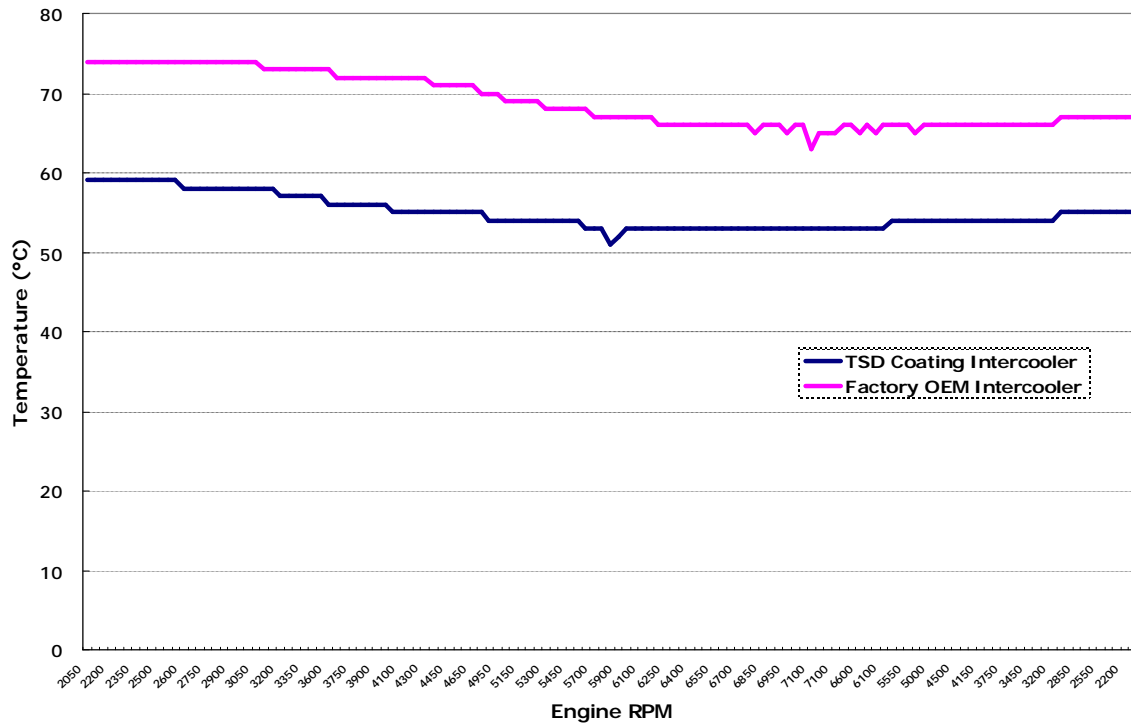
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Intercooler Intake Temperature Data Sheet

Impreza STi Intercooler Intake Temperature Test



engine speed (rpm)	TSD Coating	Stock	engine speed (rpm)	TSD Coating	Stock	engine speed (rpm)	TSD Coating	Stock	engine speed (rpm)	TSD Coating	Stock	engine speed (rpm)	TSD Coating	Stock
2050	59	74	3350	57	73	5150	54	69	6700	53	66	4500	54	66
2100	59	74	3450	57	73	5200	54	69	6750	53	66	4400	54	66
2150	59	74	3500	57	73	5250	54	69	6800	53	65	4300	54	66
2200	59	74	3600	56	73	5300	54	68	6850	53	66	4150	54	66
2250	59	74	3650	56	72	5300	54	68	6850	53	66	4050	54	66
2300	59	74	3700	56	72	5400	54	68	6900	53	66	3950	54	66
2350	59	74	3750	56	72	5450	54	68	6950	53	65	3750	54	66
2400	59	74	3800	56	72	5550	54	68	7000	53	66	3650	54	66
2450	59	74	3850	56	72	5650	53	68	7050	53	66	3550	54	66
2500	59	74	3900	56	72	5700	53	67	7100	53	63	3450	54	66
2550	59	74	3950	56	72	5750	53	67	7150	53	65	3400	54	66
2550	59	74	4050	55	72	5850	51	67	7200	53	65	3300	54	66
2600	58	74	4100	55	72	5900	52	67	7100	53	65	3200	54	66
2650	58	74	4200	55	72	5950	53	67	6900	53	66	3050	55	67
2700	58	74	4250	55	72	6000	53	67	6750	53	66	2950	55	67
2750	58	74	4300	55	72	6100	53	67	6600	53	65	2850	55	67
2800	58	74	4350	55	71	6150	53	67	6400	53	66	2750	55	67
2850	58	74	4400	55	71	6200	53	66	6250	53	65	2650	55	67
2900	58	74	4450	55	71	6250	53	66	6100	53	66	2550	55	67
2950	58	74	4550	55	71	6300	53	66	5800	54	66	2400	55	67
3000	58	74	4600	55	71	6350	53	66	5700	54	66	2300	55	67
3050	58	74	4650	55	71	6400	53	66	5550	54	66	2200	55	67
3100	58	73	4750	55	70	6450	53	66	5300	54	65	2100	55	67
3150	58	73	4850	54	70	6500	53	66	5150	54	66			
3200	57	73	4950	54	70	6550	53	66	5000	54	66			
3250	57	73	5050	54	69	6600	53	66	4850	54	66			
3300	57	73	5100	54	69	6650	53	66	4750	54	66			

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