

### Lampiran 1: Spesifikasi Mesin BMW E36 318i type M43

*Engine configuration* : Inline 4 cylinder

*Valvetrain* : SOHC (Single Overhead Camshaft)

*Piston Stroke* : 81mm

*Cylinder Bore* : 84mm

*Compression Ratio* : 9,7:1

*Displacement* : 1796cc (109.6cu in)

*Power Output* : 85kW (115HP) at 5,500RPM

*Torque Output* : 168Nm (124Lb.ft) at 3,900RPM

*Redline* : 6300 RPM

### Lampiran 2 : Hasil Drag Race 201 Meter

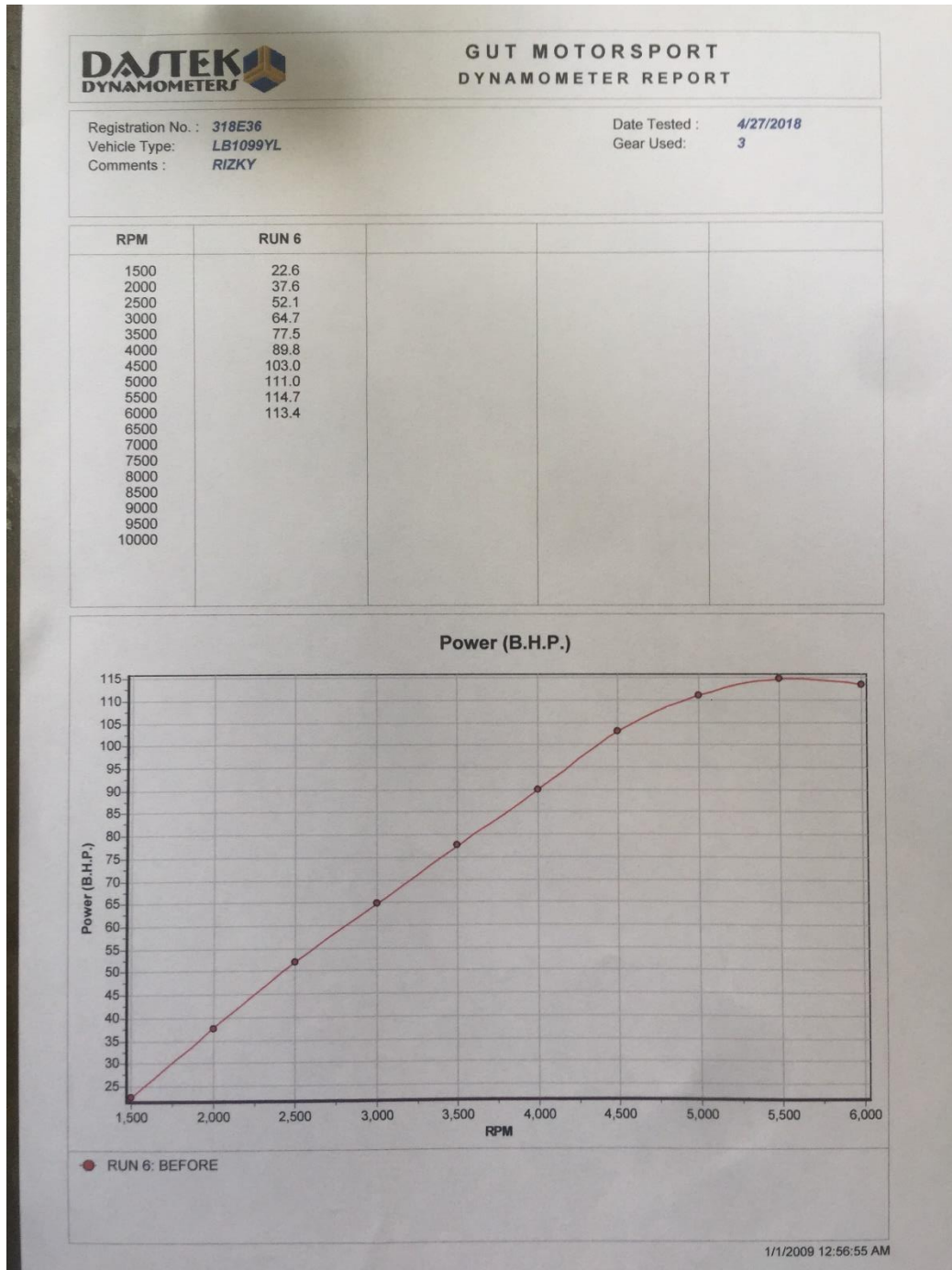
#### Full Exhaust system tuning

No Start	Nama	Team	Kelas	Mobil	RT	ET	TotalTime
13	13	13	Mobil	BMW	0.380	11,577	11,957
13	13	13	Mobil	BMW	0.799	11,456	12,255
13	13	13	Mobil	BMW	0.489	11,355	11,844
13	13	13	Mobil	BMW	0.097	11,492	11,589
4	4	4	Mobil	BMW	0.193	11,485	11,678
4	4	4	Mobil	BMW	0.366	11,598	11,986
4	4	4	Mobil	BMW	0.168	11,457	11,625
Time Keep by : SRP Professional Drag Timing							

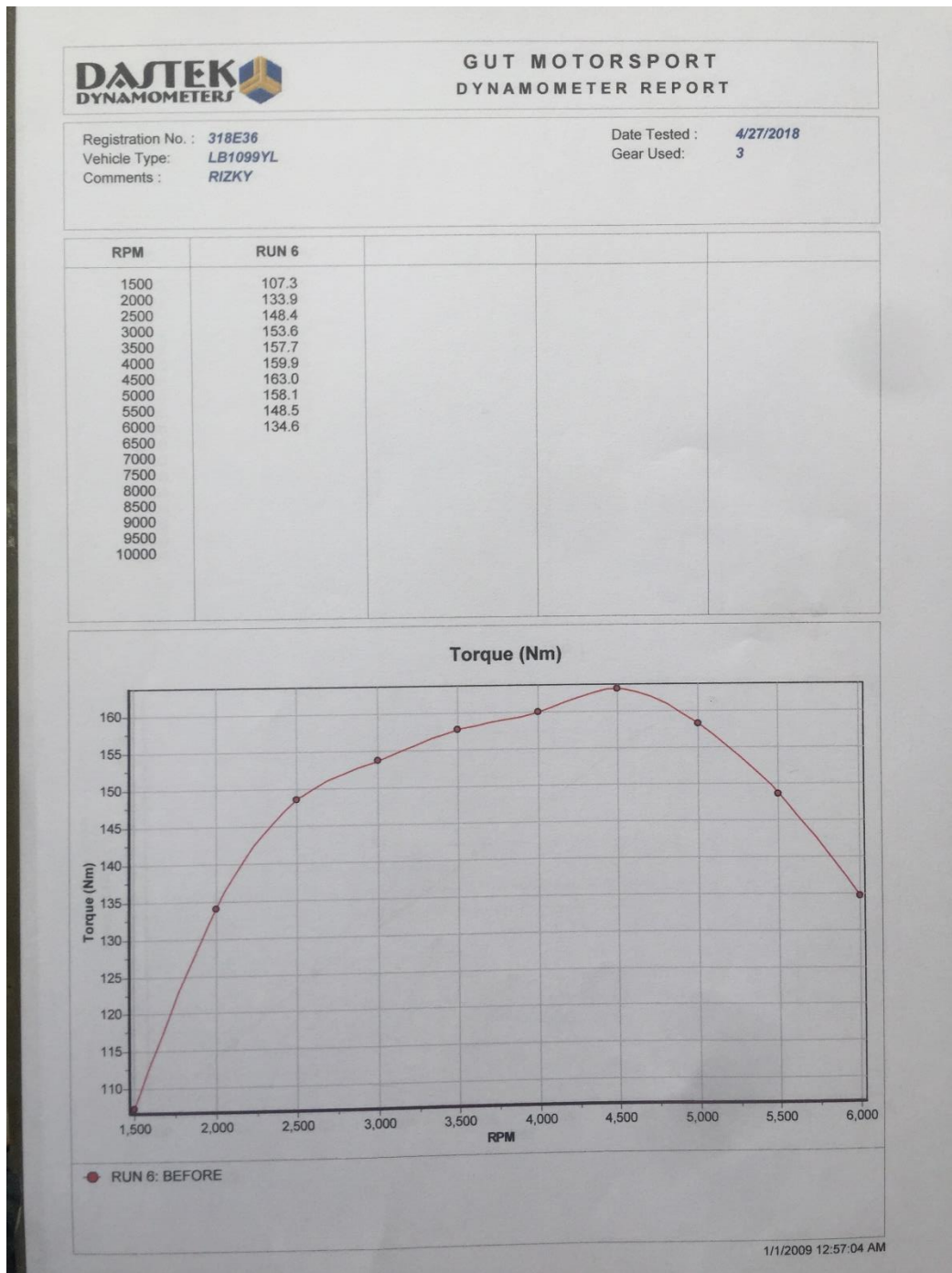
#### Exhaust Standar

No Start	Nama	Team	Kelas	Mobil	RT	ET	TotalTime
10	10	10	Mobil	BMW	0.218	12,371	12,689
10	10	10	Mobil	BMW	0.223	12,21	12,433
10	10	10	Mobil	BMW	0.321	12,244	12,565
Time Keep by : SRP Professional Drag Timing							

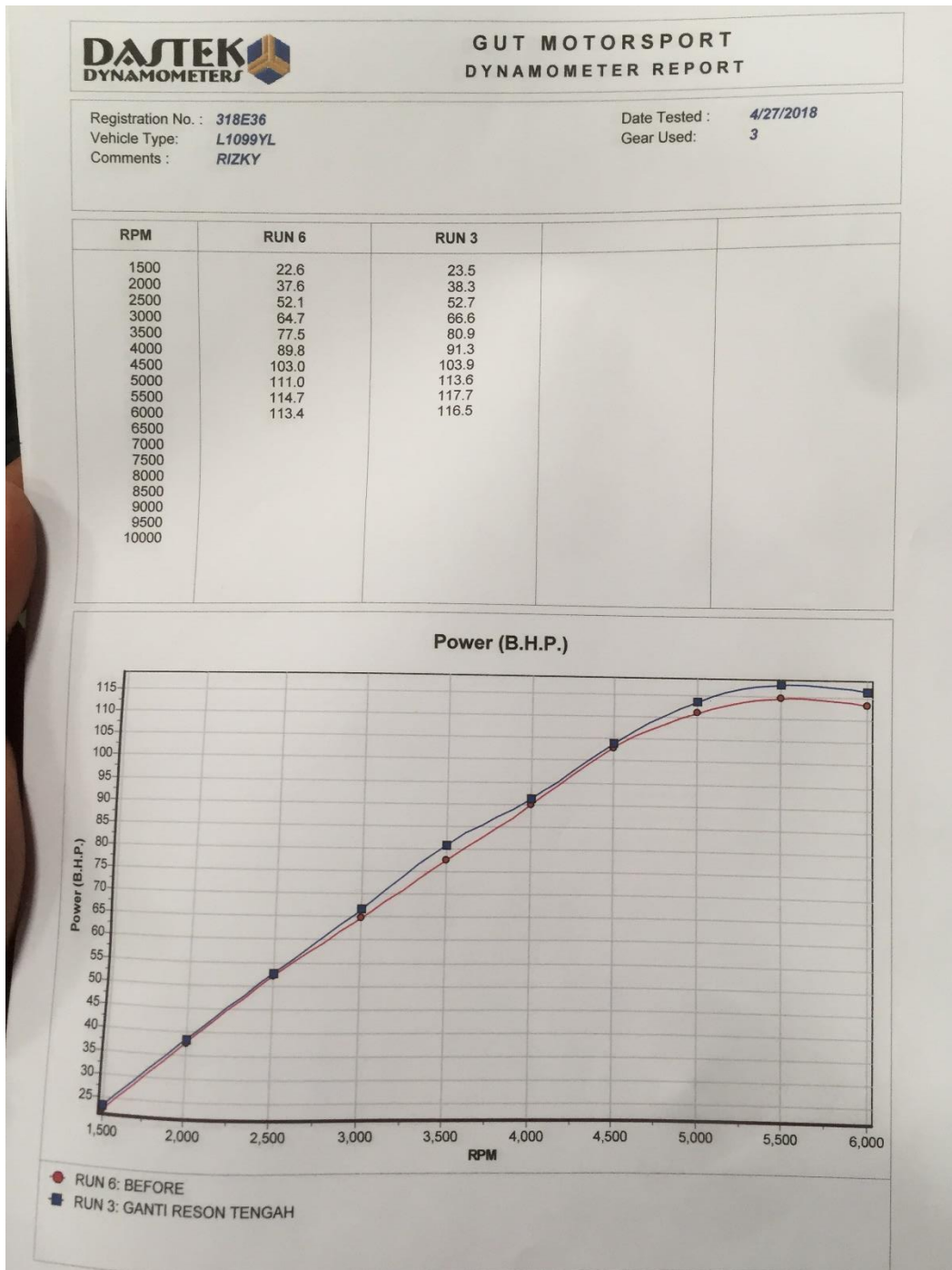
### Lampiran 3 : Hasil Dyno Resonator Panjang (Daya)



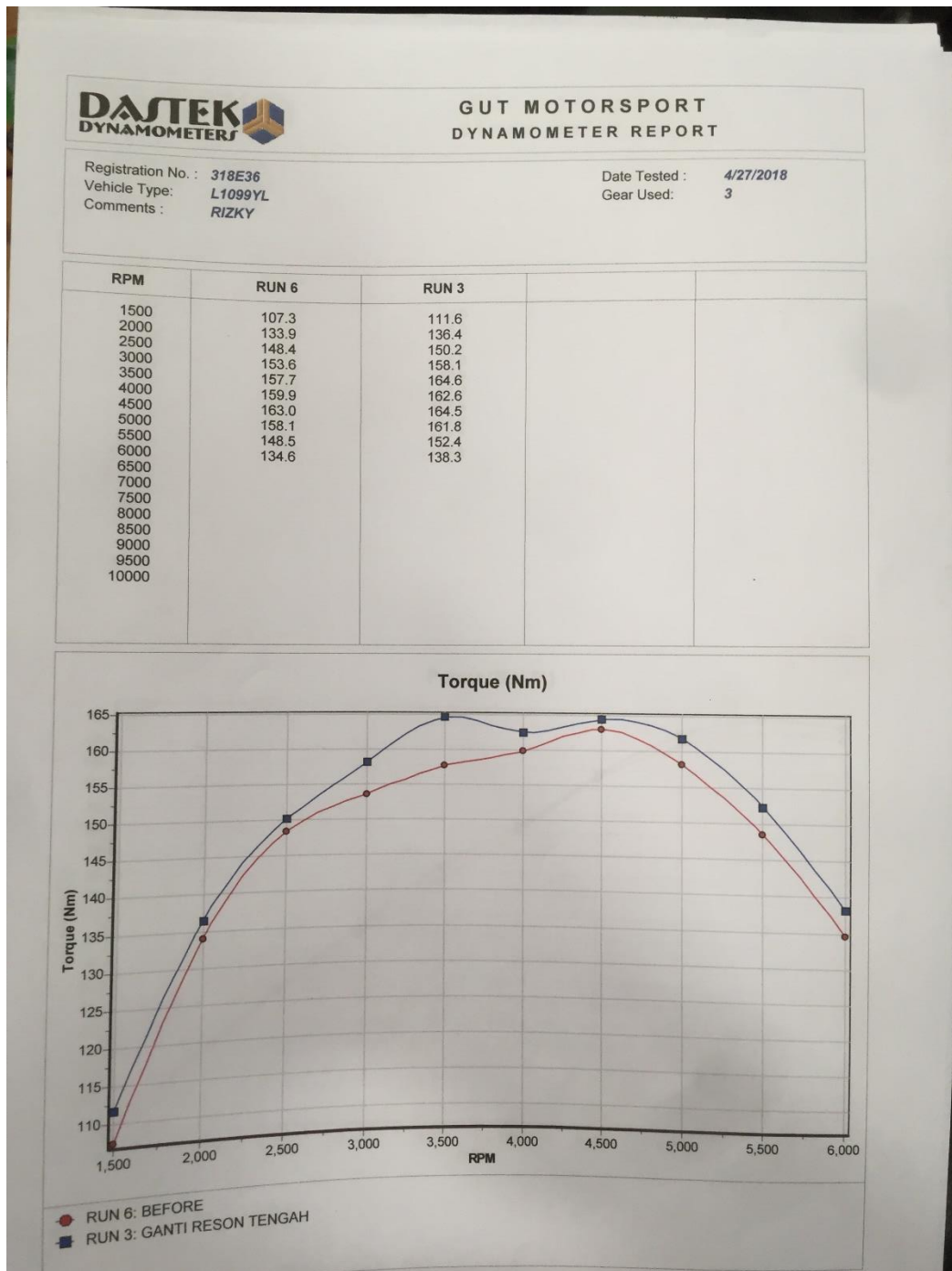
## Lampiran 4 : Hasil Dyno Torsi Resonator Panjang

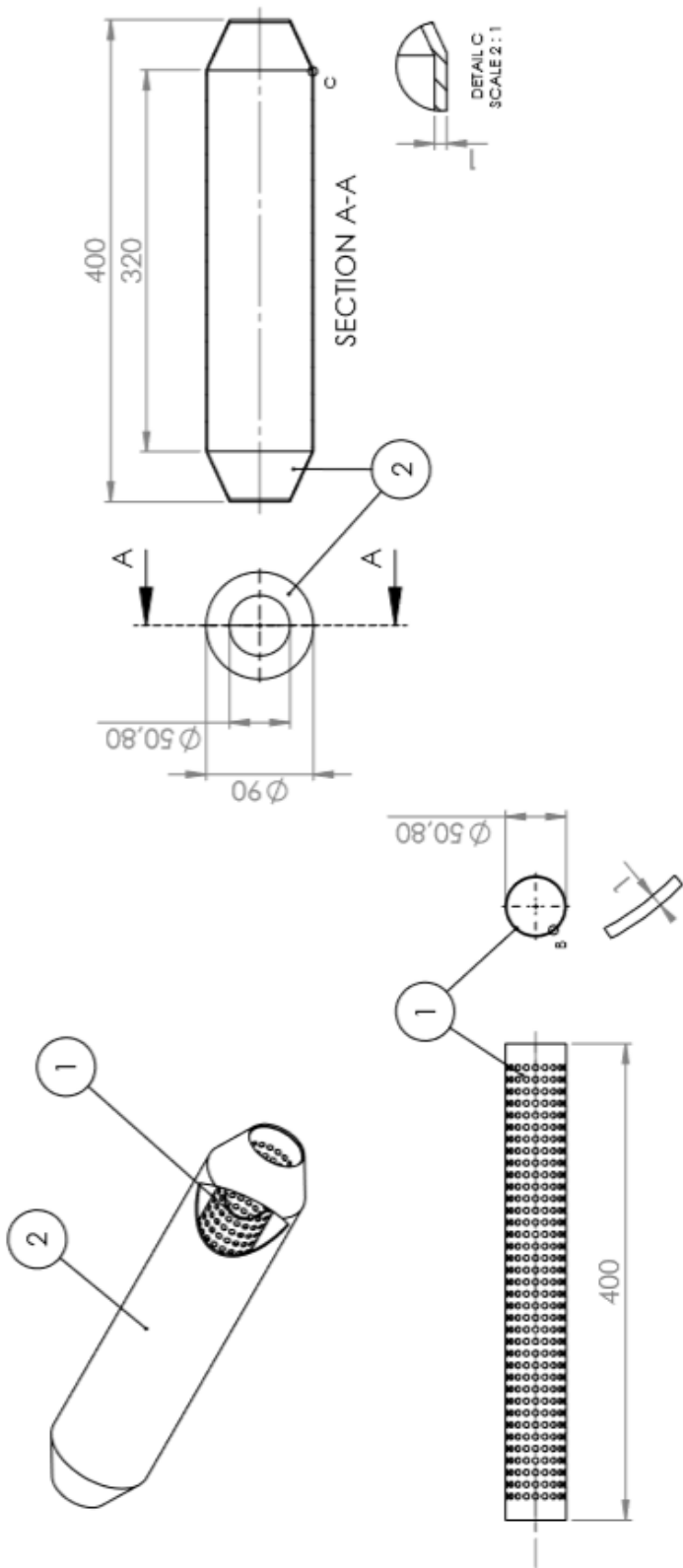


### Lampiran 5 : Dynotest Daya Setelah Penggantian Reson Pendek

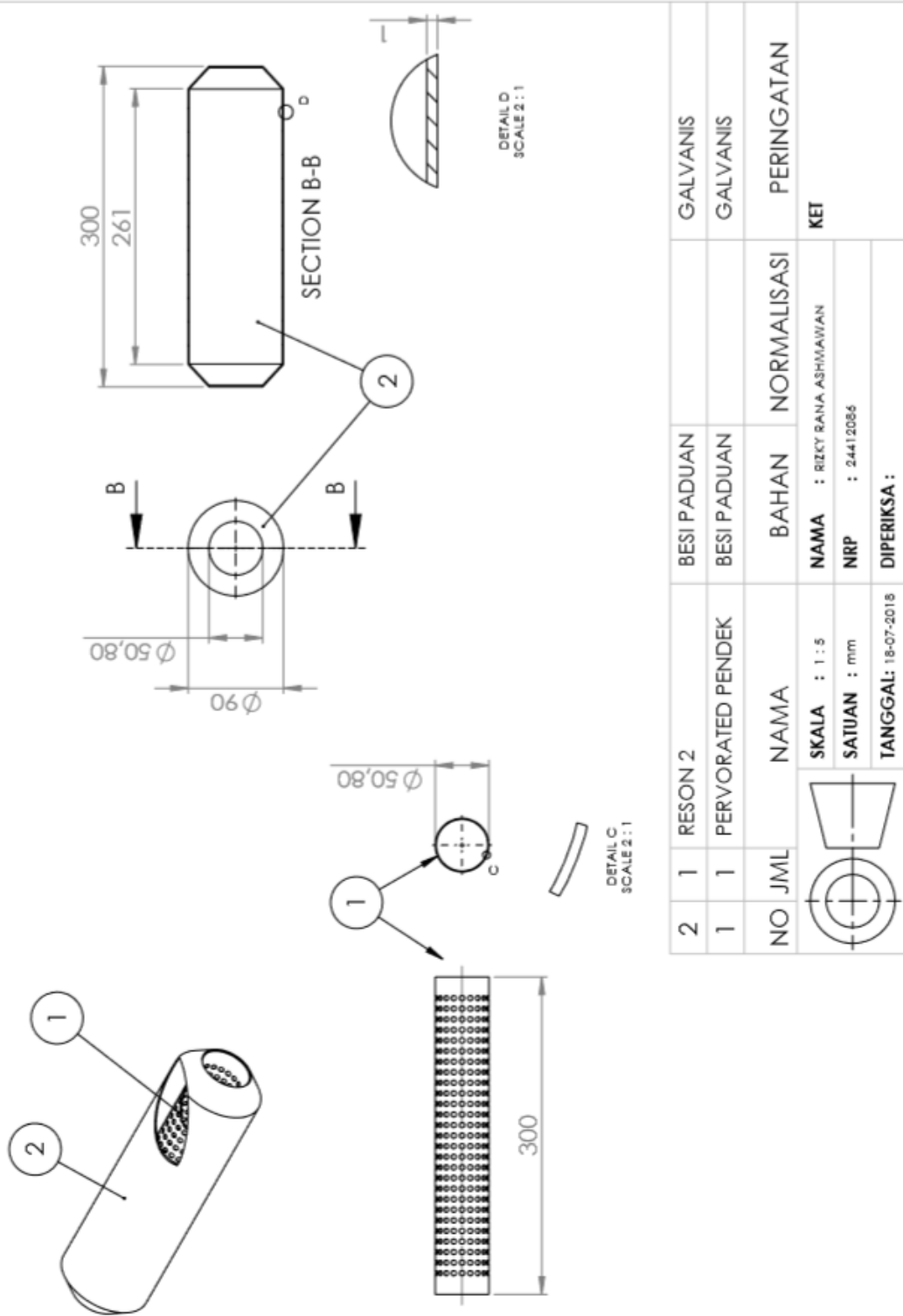


Lampiran 6 : Dynotest Torsi Setelah Penggantian Reson pendek





2	1	RESON 1	BESI PADUAN	GALVANIS	
1	1	PERVORATED PANJANG	BESI PADUAN	GALVANIS	
NO	JML	NAMA	BAHAN	NORMALISASI	PERINGATAN
		SKALA : 1 : 5	NAMA : RIZKY RANA ASHMAWAN		KET
		SATUAN : mm	NRP : 24412086		
		TANGGAL: 18-07-2018	DIPERIKSA :		
FT INDUSTRI		RESONATOR PANJANG		NO.1	A4



2	1	RESON 2	BESI PADUAN	GALVANIS	
1	1	PERVORATED PENDEK	BESI PADUAN	GALVANIS	
NO	JML	NAMA	BAHAN	NORMALISASI	PERINGATAN
			SKALA : 1 : 5	NAMA : RIZKY RANA ASHMAWAN	KET
			SATUAN : mm	NRP : 24412056	
TANGGAL: 18-07-2018			DIPERIKSA :		
FT INDUSTRI			RESONATOR PENDEK		NO.1 A4

