



Lampiran 01. Surat Permohonan Pengambilan Data di SMK PGRI 2 Badung



KEMENTERIAN PENDIDIKAN TINGGI,
SAINS, DAN TEKNOLOGI
UNIVERSITAS PENDIDIKAN GANESHA
FAKULTAS TEKNIK DAN KEJURUAN
Jalan Udayana Nomor 11 Singaraja Bali
Laman: <http://ftk.undiksha.ac.id>

Nomor : 936/UN48.11.1/KM/2025

Singaraja, 16 April 2025

Perihal : Surat Permohonan Pengambilan Data

Yth. Kepala SMK PGRI 2 Badung
di tempat

Dengan hormat, sehubungan dengan proses penyelesaian Tugas Akhir/Skripsi, maka melalui surat ini kami mohon Bapak/Ibu berkenan memberikan data yang terkait dengan data yang dibutuhkan. Adapun mahasiswa yang akan melakukan pengambilan data seperti tersebut di bawah ini:

Nama : Masharlin Hawandi
NIM : 2115071004
Semester : VIII
Program Studi : Pendidikan Teknik Mesin
Jurusan : Teknologi Industri
Judul Skripsi : Analisis Pengaruh Kombinasi Panjang Kampas Ganda dengan Diameter Pegas Sentrifugal Terhadap Performansi Mesin Kendaraan dengan Sistem Transmisi CVT

Demikian kami sampaikan, atas perhatian dan kerjasamanya, diucapkan terima kasih.

a.n Dekan
Wakil Dekan Bidang Akademik,



Made Winda Antara Kesiman
NIP 198211112008121001



KEMENTERIAN PENDIDIKAN TINGGI, SAINS
DAN TEKNOLOGI

UNIVERSITAS PENDIDIKAN GANESHA

FAKULTAS TEKNIK DAN KEJURUAN

Alamat : Jalan Udayana No. 11 Singaraja-Bali Website ftk.undiksha.ac.id
Telepon/Faximile : (0362) 25571, Email : ftk@undiksha.ac.id Kode Pos 81116

Nomor : 137/UN48.11.6/KM/2025 Singaraja, 16 April 2025
Perihal : Surat Permohonan Pengambilan Data

Kepada Yth. Dekan FTK
Cq. Wakil Dekan I
di tempat

Dengan hormat,
Sehubungan dengan proses penyelesaian Tugas Akhir / Skripsi yang dilaksanakan oleh saudara mahasiswa:

Nama : Masharlin Hawandi
NIM : 2115071004
Semester : VIII
Program Studi : Pendidikan Teknik Mesin
Jurusan : Teknologi Industri
Fakultas : Teknik dan Kejuruan
Tempat Pengambilan Data: SMK PGRI 2 Badung.
Judul Penelitian : Analisis Pengaruh Kombinasi Panjang Kampas Ganda Dengan Diameter Pegas Sentrifugal Terhadap Performansi Mesin Kendaraan Dengan Sistem Transmisi CVT.

Bersama ini kami mohonkan kepada Bapak untuk berkenan memfasilitasi kebutuhan surat pengantar pengambilan data untuk **Tugas Akhir / Skripsi** mahasiswa yang bersangkutan.

Demikian surat keterangan ini dibuat dengan sebenarnya untuk dapat dipergunakan sebagaimana mestinya.
Mengetahui,

Ketua Jurusan Teknologi Industri

Sekretaris Jurusan Teknologi Industri



Ketut Udy Ariawan

Gede Widayana

NIP 197901232010121001

NIP 197301102006041002



Balai
Sertifikasi
Elektronik

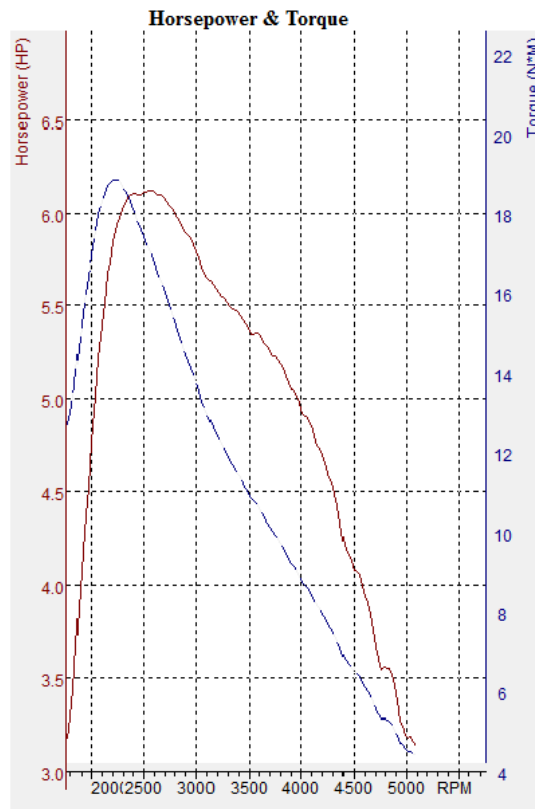
Catatan :

- UU ITE No. 11 Tahun 2008 Pasal 5 ayat 1 "Informasi Elektronik dan/atau Dokumen Elektronik dan/atau hasil cetaknya merupakan alat bukti hukum yang sah"
- Dokumen ini tertanda ditandatangani secara elektronik menggunakan sertifikat elektronik yang diterbitkan BnE
- Surat ini dapat dibuktikan keasliannya dengan menggunakan qr code yang telah tersedia

Lampiran 02. Lampiran Hasil Pengujian Dynotest Kampas Ganda dan Pegas Sentrifugal Standar

➤ Hasil Pengujian Ke 1

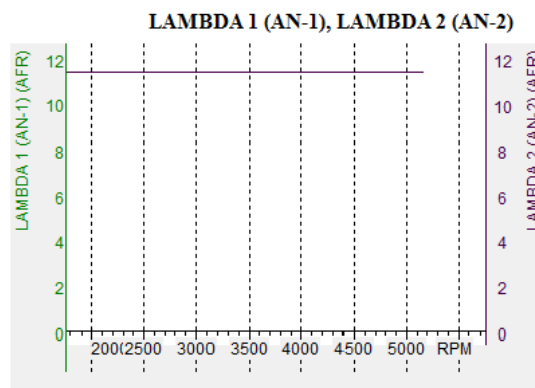
 www.sportdevices.com SportDyno-Ver date: 28-JUN-2019 (4.0.35.1) DYNAMOMETER: SMK PGRI 2 BADUNG Correction Factor: EC95 -1 Power: HP (mechanic)							
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1068	6.1 / 2561	18.84 / 2203	89.3	25.0	60	1000.0	11/05/2025 15:39:24



DATA FOR TEST: VARIO FI UNDIKSA_1068

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	4.9	17.27	1000.0
2203	5.9	18.84	1000.0
2250	6.0	18.80	1000.0
2500	6.1	17.40	1000.0
2561	6.1	16.92	1000.0
2750	6.0	15.58	1000.0
3000	5.8	13.64	1000.0
3250	5.5	12.10	1000.0
3500	5.4	10.88	1000.0
3750	5.2	9.91	1000.0
4000	4.9	8.78	1000.0
4250	4.6	7.69	1000.0
4500	4.1	6.44	1000.0
4750	3.5	5.31	1000.0
5000	3.2	4.54	1000.0

Wheel 6.1 HP 18.8 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.1HP 18.84N*M



➤ Hasil Pengujian Ke 2



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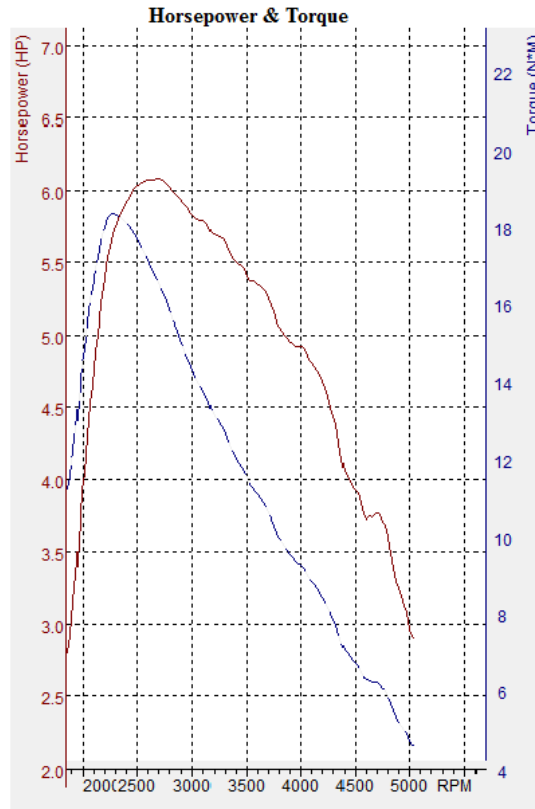
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

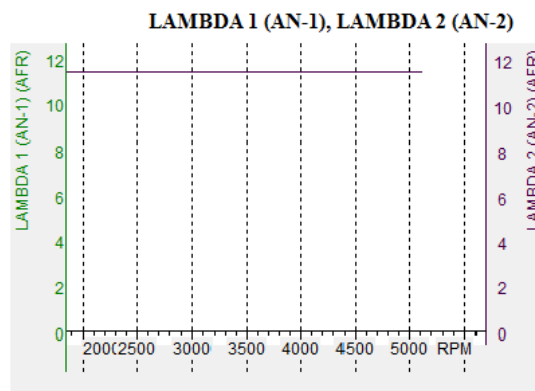
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1041	6.1 / 2667	17.84 / 2252	88.6	25.0	60	1000.0	11/05/2025 13:38:54



DATA FOR TEST: VARIO FI UNDIKSA_1041

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	4.0	14.36	1000.0
2250	5.7	17.83	1000.0
2252	5.7	17.84	1000.0
2500	6.0	17.15	1000.0
2667	6.1	16.12	1000.0
2750	6.1	15.66	1000.0
3000	5.8	13.81	1000.0
3250	5.7	12.40	1000.0
3500	5.4	10.98	1000.0
3750	5.1	9.73	1000.0
4000	4.9	8.75	1000.0
4250	4.6	7.62	1000.0
4500	3.9	6.19	1000.0
4750	3.7	5.55	1000.0
5000	2.9	4.17	1000.0

Wheel	6.1 HP	17.8 N*M
LOSSES	0.0 HP	0.0 N*M
TOTAL ENGINE:	6.1 HP	17.84 N*M



➤ Hasil Pengujian Ke 3



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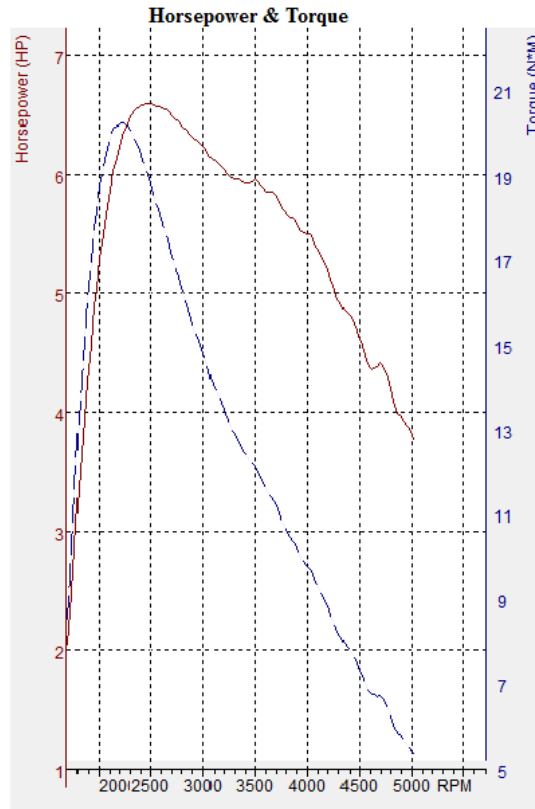
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

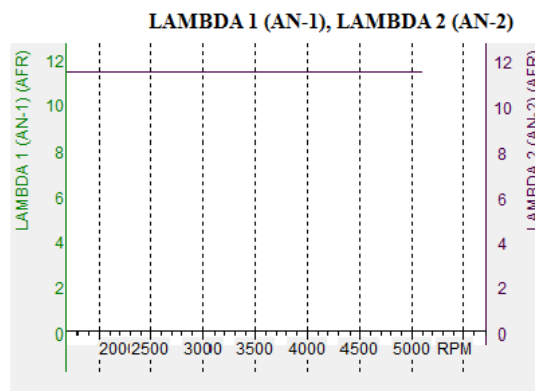
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1045	6.6 / 2468	20.22 / 2190	88.4	25.0	60	1000.0	11/05/2025 13:40:25



DATA FOR TEST: VARIO FI UNDIKSA_1045

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.8	11.31	1000.0
2000	5.3	18.78	1000.0
2190	6.3	20.22	1000.0
2250	6.4	20.18	1000.0
2468	6.6	18.84	1000.0
2500	6.6	18.71	1000.0
2750	6.4	16.60	1000.0
3000	6.2	14.73	1000.0
3250	6.0	13.09	1000.0
3500	6.0	12.11	1000.0
3750	5.7	10.83	1000.0
4000	5.5	9.77	1000.0
4250	5.0	8.44	1000.0
4500	4.6	7.29	1000.0
4750	4.3	6.48	1000.0
5000	3.8	5.41	1000.0

Wheel 6.6 HP 20.2 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.6HP 20.22N*M



➤ Hasil Pengujian Ke 4



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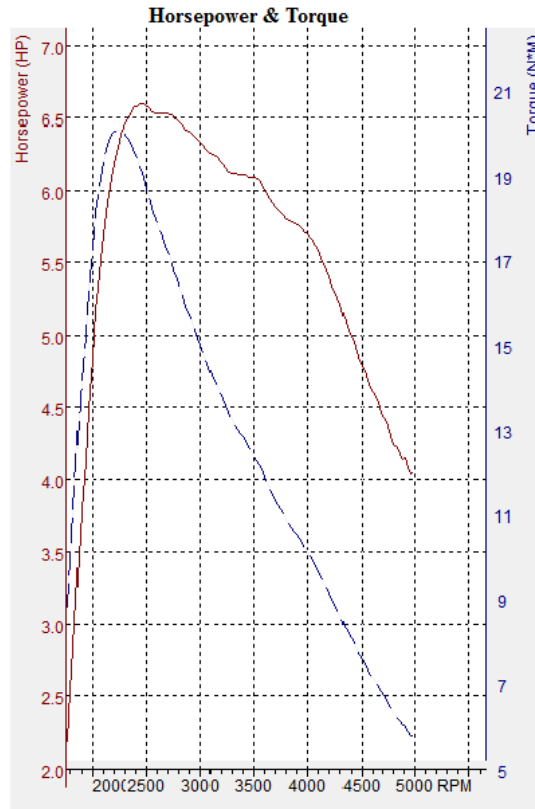
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1047	6.6 / 2432	20.09 / 2223	87.8	25.0	60	1000.0	11/05/2025 13:41:10

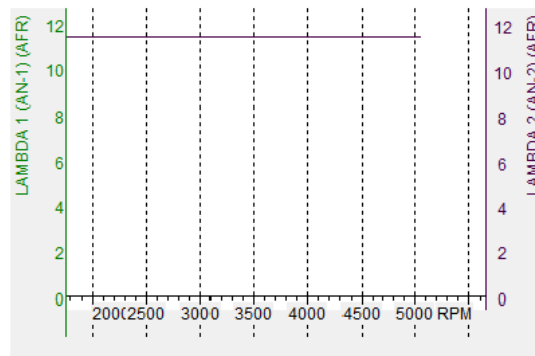


DATA FOR TEST: VARIO FI UNDIKSA_1047

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	5.0	17.71	1000.0
2223	6.3	20.09	1000.0
2250	6.4	20.06	1000.0
2432	6.6	19.21	1000.0
2500	6.6	18.66	1000.0
2750	6.5	16.80	1000.0
3000	6.3	14.99	1000.0
3250	6.1	13.42	1000.0
3500	6.1	12.36	1000.0
3750	5.9	11.10	1000.0
4000	5.7	10.11	1000.0
4250	5.3	8.84	1000.0
4500	4.8	7.57	1000.0
4750	4.3	6.49	1000.0
5000	4.0	5.69	1000.0

Wheel	6.6 HP	20.1 N*M
LOSSES	0.0 HP	0.0 N*M
TOTAL ENGINE:	6.6 HP	20.09 N*M

LAMBDA 1 (AN-1), LAMBDA 2 (AN-2)



➤ Hasil Pengujian Ke 5



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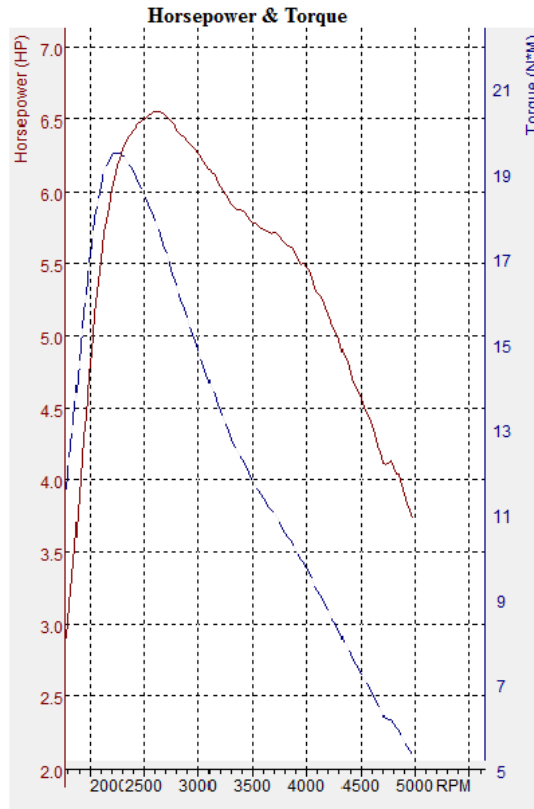
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1048	6.6 / 2639	19.49 / 2245	87.6	25.0	60	1000.0	11/05/2025 13:46:23

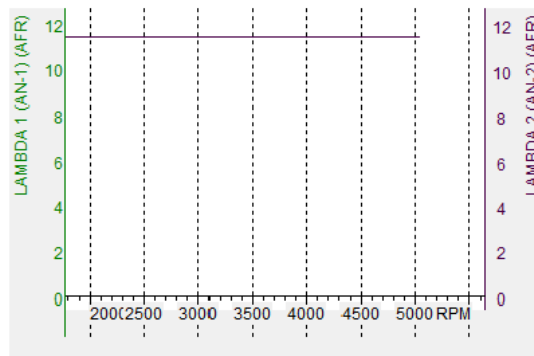


DATA FOR TEST: VARIO FI UNDIKSA_1048

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	4.9	17.27	1000.0
2250	6.2	19.49	1000.0
2245	6.2	19.49	1000.0
2500	6.5	18.44	1000.0
2639	6.6	17.56	1000.0
2750	6.5	16.74	1000.0
3000	6.3	14.85	1000.0
3250	6.0	13.01	1000.0
3500	5.8	11.72	1000.0
3750	5.7	10.76	1000.0
4000	5.5	9.73	1000.0
4250	5.0	8.43	1000.0
4500	4.5	7.16	1000.0
4750	4.1	6.16	1000.0
5000	3.6	5.18	1000.0

Wheel	6.6 HP	19.5 N*M
LOSSES	0.0 HP	0.0 N*M
TOTAL ENGINE:	6.6 HP	19.49 N*M

LAMBDA 1 (AN-1), LAMBDA 2 (AN-2)



➤ Hasil Pengujian Ke 6



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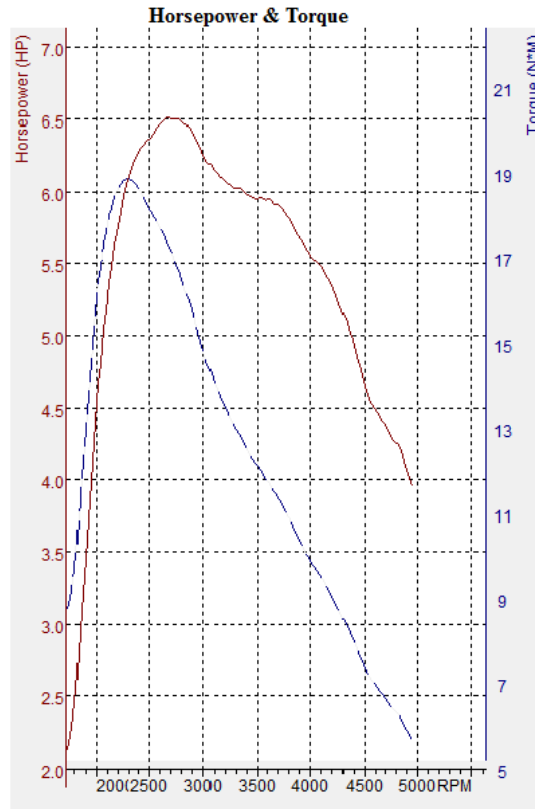
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

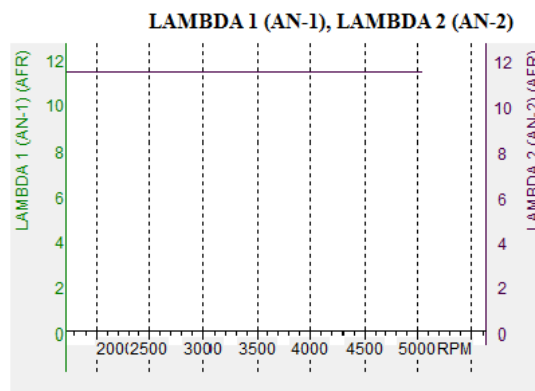
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1049	6.5 / 2654	18.88 / 2278	87.4	25.0	60	1000.0	11/05/2025 13:46:46



DATA FOR TEST: VARIO FI UNDIKSA_1049

RPM	HP (HP)	TQ (N*M)	Tempol (T C-A) (°C)
1750	2.2	8.90	1000.0
2000	4.5	16.10	1000.0
2250	6.0	18.84	1000.0
2278	6.1	18.88	1000.0
2500	6.4	18.10	1000.0
2654	6.5	17.38	1000.0
2750	6.5	16.80	1000.0
3000	6.3	14.81	1000.0
3250	6.0	13.22	1000.0
3500	6.0	12.09	1000.0
3750	5.9	11.12	1000.0
4000	5.5	9.85	1000.0
4250	5.2	8.77	1000.0
4500	4.7	7.35	1000.0
4750	4.3	6.40	1000.0
5000	4.0	5.88	1000.0

Wheel 6.5 HP 18.9 N*M
 LOSSES 0.0 HP 0.0 N*M
 TOTAL ENGINE: 6.5HP 18.88 N*M



➤ Hasil Pengujian Ke 7



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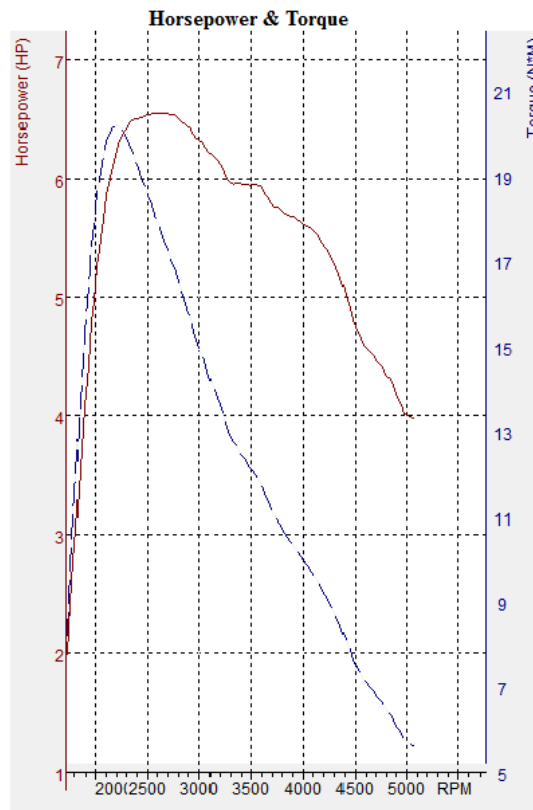
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

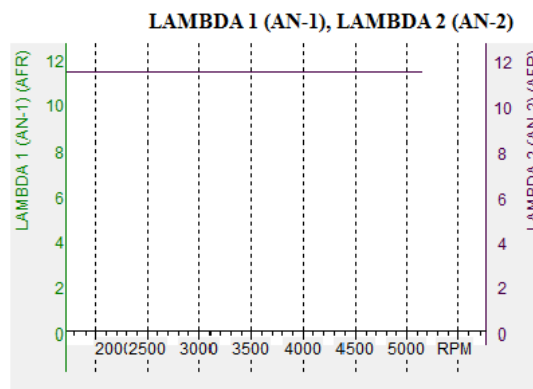
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1051	6.5 / 2599	20.19 / 2177	89.3	25.0	60	1000.0	11/05/2025 13:47:32



DATA FOR TEST: VARIO FI UNDIKSA_1051

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.3	9.40	1000.0
2000	5.3	18.62	1000.0
2177	6.2	20.19	1000.0
2250	6.4	20.10	1000.0
2500	6.5	18.54	1000.0
2599	6.5	17.78	1000.0
2750	6.5	16.83	1000.0
3000	6.3	14.97	1000.0
3250	6.0	13.17	1000.0
3500	5.9	12.06	1000.0
3750	5.8	10.91	1000.0
4000	5.6	9.95	1000.0
4250	5.4	8.98	1000.0
4500	4.7	7.48	1000.0
4750	4.4	6.61	1000.0
5000	4.0	5.69	1000.0

Wheel 6.5 HP 20.2 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.5HP 20.19N*M



➤ Hasil Pengujian Ke 8



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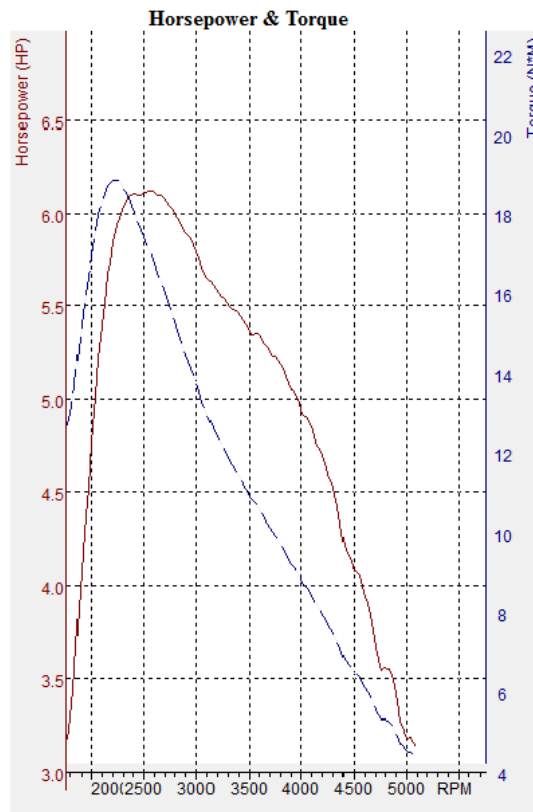
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

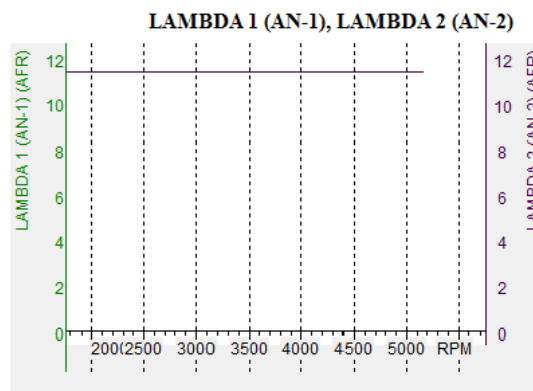
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1068	6.1 / 2561	18.84 / 2203	89.3	25.0	60	1000.0	11/05/2025 15:39:24



DATA FOR TEST: VARIO FI UNDIKSA_1068

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	4.9	17.27	1000.0
2203	5.9	18.84	1000.0
2250	6.0	18.80	1000.0
2500	6.1	17.40	1000.0
2561	6.1	16.92	1000.0
2750	6.0	15.58	1000.0
3000	5.8	13.64	1000.0
3250	5.5	12.10	1000.0
3500	5.4	10.88	1000.0
3750	5.2	9.91	1000.0
4000	4.9	8.78	1000.0
4250	4.6	7.69	1000.0
4500	4.1	6.44	1000.0
4750	3.5	5.31	1000.0
5000	3.2	4.54	1000.0

Wheel: 6.1 HP 18.8 N*M
 LOSSES: 0.0 HP 0.0 N*M
 TOTAL ENGINE: 6.1 HP 18.84 N*M



➤ Hasil Pengujian Ke 9



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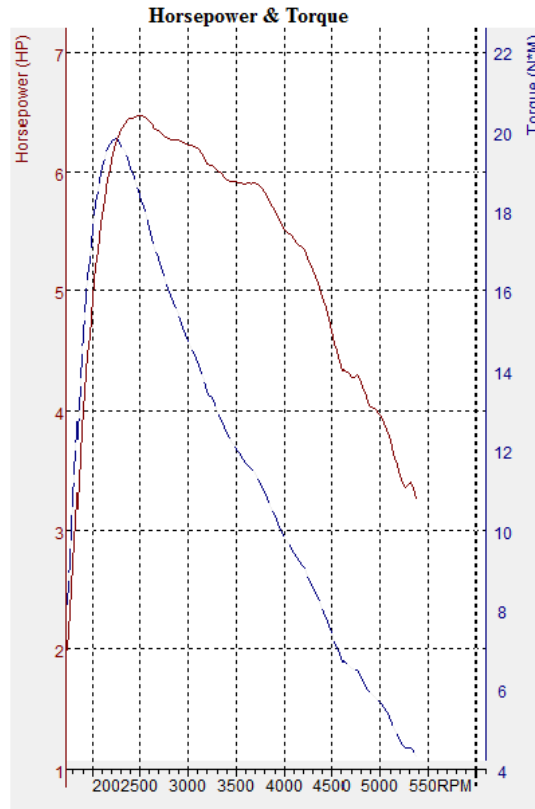
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

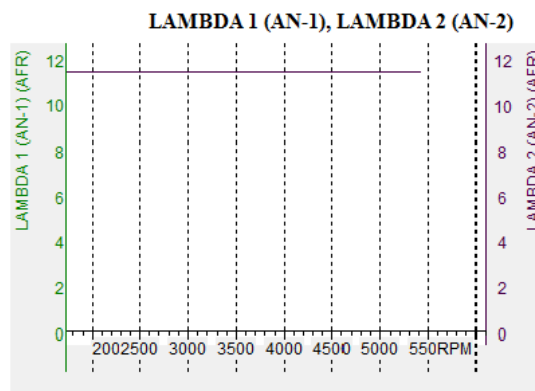
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1072	6.5 / 2481	19.81 / 2223	94.3	25.0	60	1000.0	11/05/2025 15:41:04



DATA FOR TEST: VARIO FI UNDIKSA_1072

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.1	8.36	1000.0
2000	4.9	17.54	1000.0
2223	6.2	19.81	1000.0
2250	6.3	19.81	1000.0
2481	6.5	18.49	1000.0
2500	6.5	18.38	1000.0
2750	6.3	16.24	1000.0
3000	6.2	14.75	1000.0
3250	6.0	13.22	1000.0
3500	5.9	12.01	1000.0
3750	5.9	11.11	1000.0
4000	5.5	9.79	1000.0
4250	5.3	8.78	1000.0
4500	4.7	7.36	1000.0
4750	4.3	6.44	1000.0
5000	4.0	5.62	1000.0
5250	3.4	4.54	1000.0

Wheel 6.5 HP 19.8 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.5HP 19.81N*M



➤ Hasil Pengujian Ke 10



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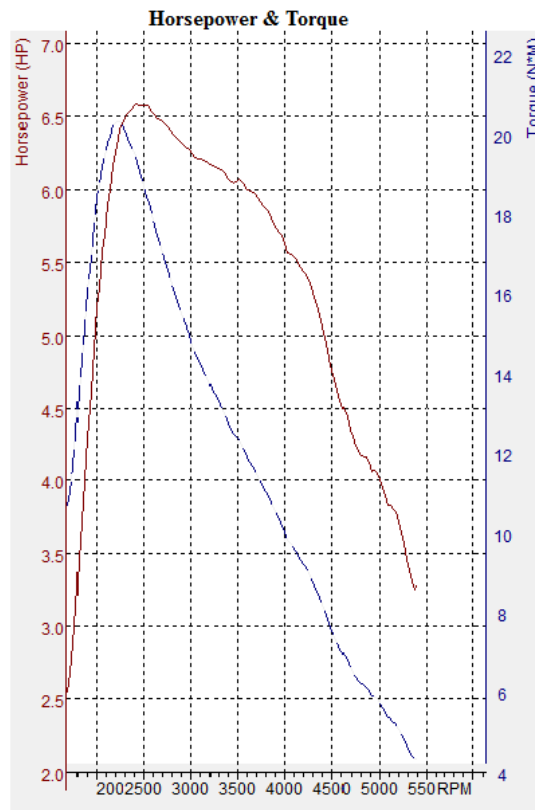
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1073	6.6 / 2389	20.31 / 2211	94.6	25.0	60	1000.0	11/05/2025 15:41:29

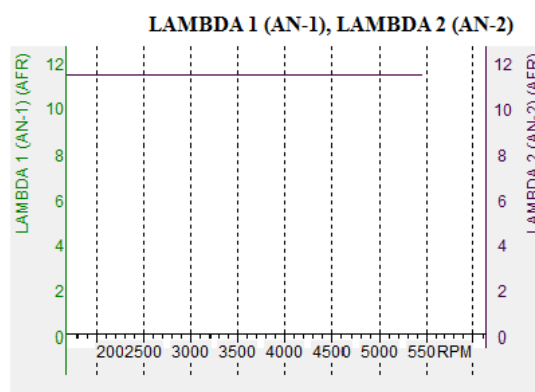


DATA FOR TEST: VARIO FI UNDIKSA_1073

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.9	11.64	1000.0
2000	5.2	18.43	1000.0
2211	6.4	20.31	1000.0
2250	6.4	20.24	1000.0
2389	6.6	19.43	1000.0
2500	6.6	18.70	1000.0
2750	6.4	16.55	1000.0
3000	6.3	14.79	1000.0
3250	6.2	13.43	1000.0
3500	6.1	12.33	1000.0
3750	5.9	11.18	1000.0
4000	5.6	9.97	1000.0
4250	5.4	9.00	1000.0
4500	4.7	7.49	1000.0
4750	4.2	6.33	1000.0
5000	4.0	5.68	1000.0
5250	3.6	4.87	1000.0

Wheel LOSSES: 6.6 HP
 0.0 HP
 TOTAL ENGINE: 6.6HP

20.3 N*M
 0.0N*M
 20.31N*M



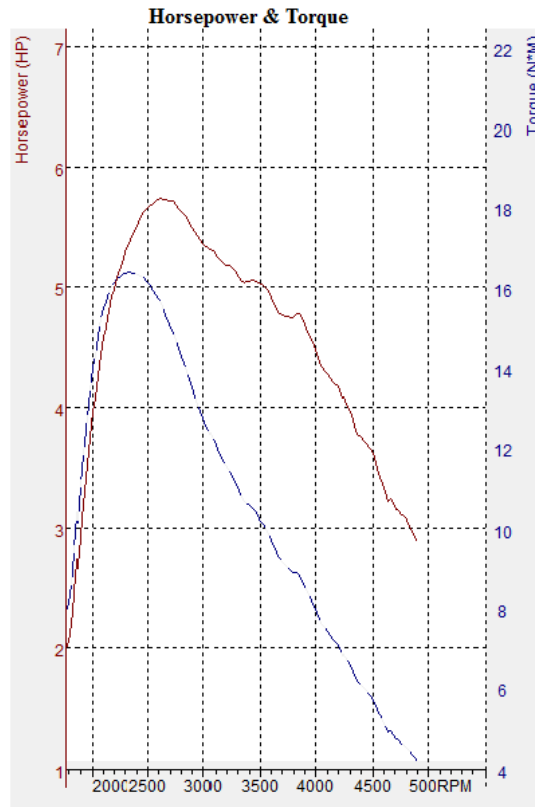
Lampiran 03. Lembar Hasil Pengujian Dynotest Kampas Ganda dan Pegas Sentrifugal Variasi 1

➤ Hasil Pengujian Ke 1



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 SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)
 DYNAMOMETER: SMK PGRI 2 BADUNG
 Correction Factor: EC95 -1
 Power: HP (mechanic)

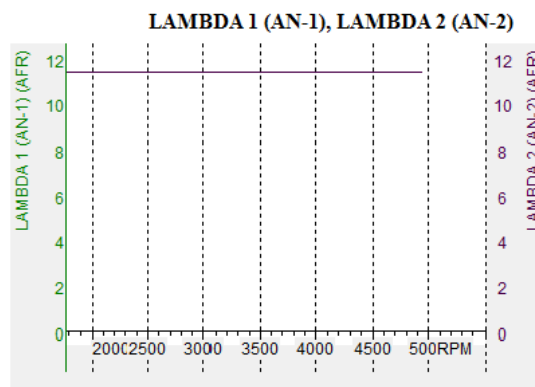
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1053	5.7 / 2606	16.38 / 2330	85.7	25.0	60	1000.0	11/05/2025 14:57:08



DATA FOR TEST: VARIO FI UNDIKSA_1053

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	4.0	14.03	1000.0
2250	5.2	16.29	1000.0
2330	5.4	16.38	1000.0
2500	5.7	16.11	1000.0
2606	5.7	15.60	1000.0
2750	5.7	14.61	1000.0
3000	5.4	12.69	1000.0
3250	5.2	11.28	1000.0
3500	5.0	10.20	1000.0
3750	4.7	8.99	1000.0
4000	4.5	7.91	1000.0
4250	4.0	6.76	1000.0
4500	3.6	5.71	1000.0
4750	3.1	4.64	1000.0

Wheel 5.7 HP 16.4 N*M
 LOSSES 0.0 HP 0.0 N*M
 TOTAL ENGINE: 5.7 HP 16.38 N*M



➤ Hasil Pengujian Ke 2



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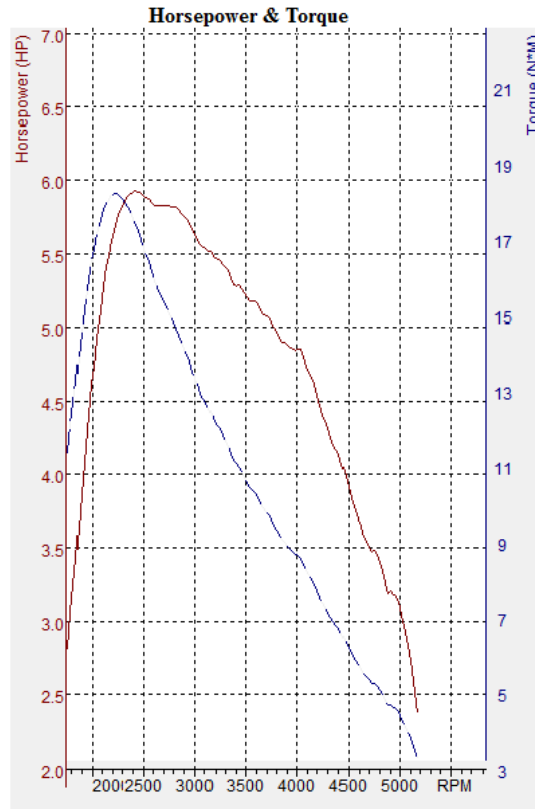
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

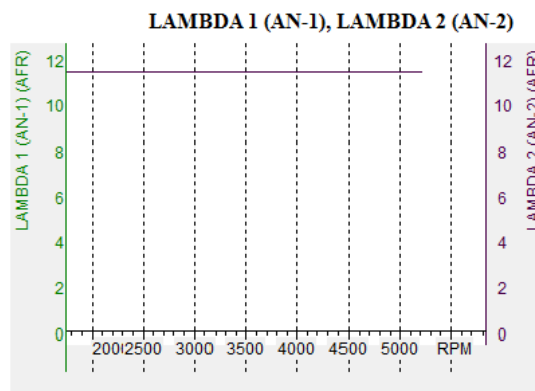
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1054	5.9 / 2407	18.20 / 2210	90.4	25.0	60	1000.0	11/05/2025 14:57:28



DATA FOR TEST: VARIO FI UNDIKSA_1054

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.7	11.12	1000.0
2000	4.7	16.70	1000.0
2210	5.7	18.20	1000.0
2250	5.8	18.17	1000.0
2407	5.9	17.44	1000.0
2500	5.9	16.74	1000.0
2750	5.8	15.03	1000.0
3000	5.6	13.33	1000.0
3250	5.4	11.87	1000.0
3500	5.2	10.58	1000.0
3750	5.0	9.54	1000.0
4000	4.9	8.62	1000.0
4250	4.4	7.35	1000.0
4500	3.9	6.13	1000.0
4750	3.5	5.22	1000.0
5000	3.0	4.32	1000.0
5250	2.3	3.15	1000.0

Wheel 5.9 HP 18.2 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 5.9HP 18.20N*M



➤ Hasil Pengujian Ke 3



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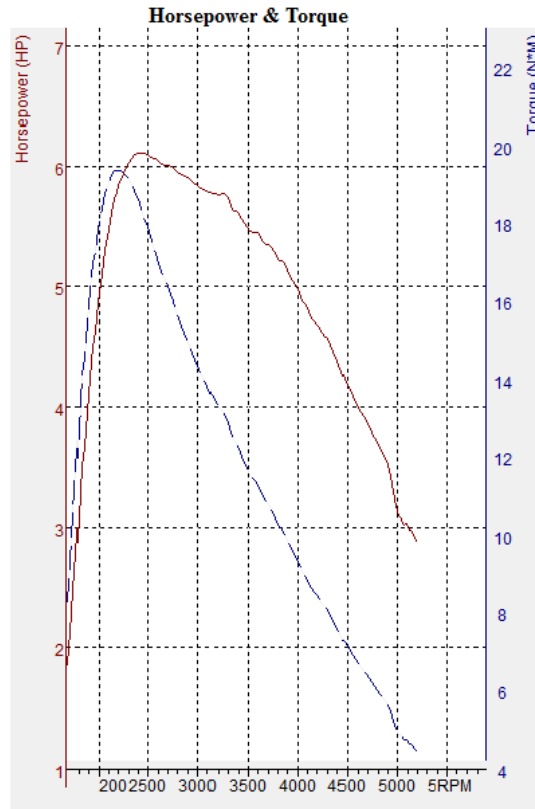
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

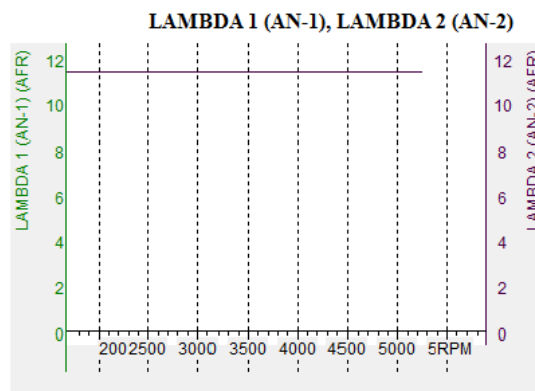
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1055	6.1 / 2429	18.88 / 2185	91.0	25.0	60	1000.0	11/05/2025 14:57:50



DATA FOR TEST: VARIO FI UNDIKSA_1055

RPM	HP (HP)	TQ (N*M)	Tempol (T C-A) (°C)
1750	2.6	10.44	1000.0
2000	5.0	17.64	1000.0
2185	5.8	18.88	1000.0
2250	6.0	18.81	1000.0
2429	6.1	17.79	1000.0
2500	6.1	17.30	1000.0
2750	6.0	15.41	1000.0
3000	5.8	13.80	1000.0
3250	5.8	12.60	1000.0
3500	5.5	11.09	1000.0
3750	5.3	10.02	1000.0
4000	5.0	8.81	1000.0
4250	4.6	7.71	1000.0
4500	4.2	6.59	1000.0
4750	3.8	5.65	1000.0
5000	3.1	4.43	1000.0
5250	2.9	3.97	1000.0

Wheel 6.1 HP 18.9 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.1HP 18.88N*M



➤ Hasil Pengujian Ke 4



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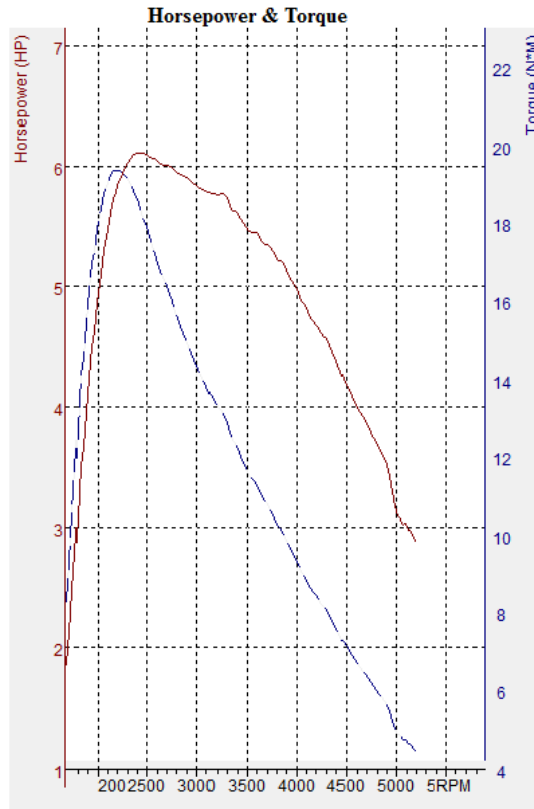
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

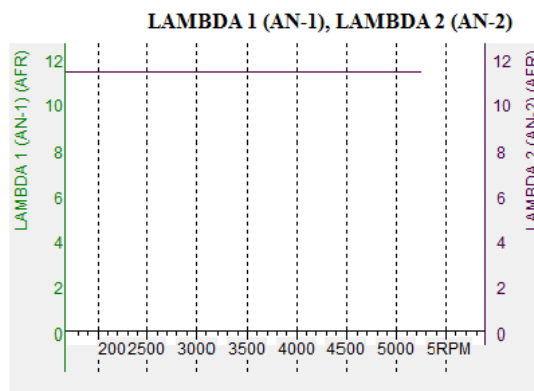
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1055	6.1 / 2429	18.88 / 2185	91.0	25.0	60	1000.0	11/05/2025 14:57:50



DATA FOR TEST: VARIO FI UNDIKSA_1055

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.6	10.44	1000.0
2000	5.0	17.64	1000.0
2185	5.8	18.88	1000.0
2250	6.0	18.81	1000.0
2429	6.1	17.79	1000.0
2500	6.1	17.30	1000.0
2750	6.0	15.41	1000.0
3000	5.8	13.80	1000.0
3250	5.8	12.60	1000.0
3500	5.5	11.09	1000.0
3750	5.3	10.02	1000.0
4000	5.0	8.81	1000.0
4250	4.6	7.71	1000.0
4500	4.2	6.59	1000.0
4750	3.8	5.65	1000.0
5000	3.1	4.43	1000.0
5250	2.9	3.97	1000.0

Wheel 6.1 HP 18.9 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.1HP 18.88N*M



➤ Hasil Pengujian Ke 5



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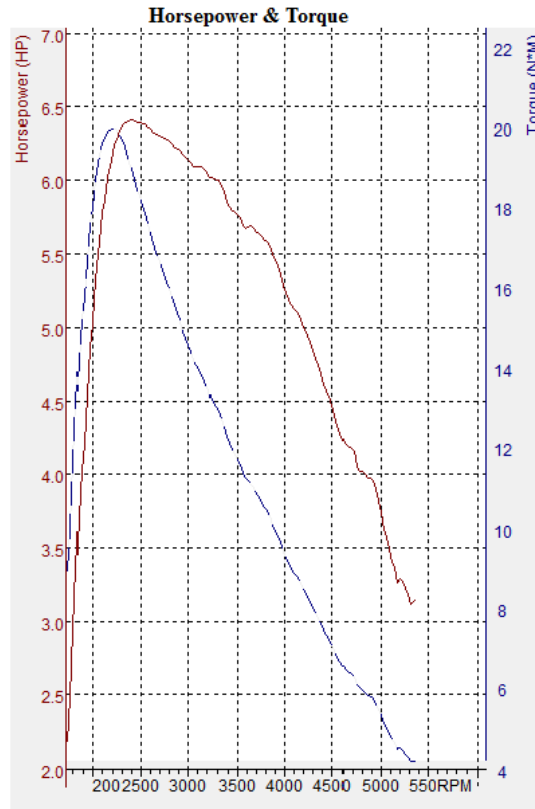
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

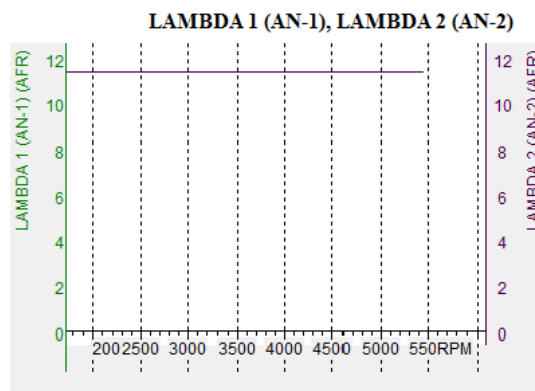
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1057	6.4 / 2364	19.98 / 2196	94.2	25.0	60	1000.0	11/05/2025 14:58:37



DATA FOR TEST: VARIO FI UNDIKSA_1057

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.4	9.61	1000.0
2000	5.2	18.38	1000.0
2196	6.2	19.98	1000.0
2250	6.3	19.88	1000.0
2364	6.4	18.99	1000.0
2500	6.4	18.06	1000.0
2750	6.3	16.23	1000.0
3000	6.1	14.49	1000.0
3250	6.0	13.16	1000.0
3500	5.8	11.69	1000.0
3750	5.6	10.64	1000.0
4000	5.2	9.33	1000.0
4250	4.9	8.24	1000.0
4500	4.4	7.01	1000.0
4750	4.0	6.06	1000.0
5000	3.7	5.28	1000.0
5250	3.2	4.36	1000.0

Wheel 6.4 HP 20.0 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.4HP 19.98N*M



➤ Hasil Pengujian Ke 6



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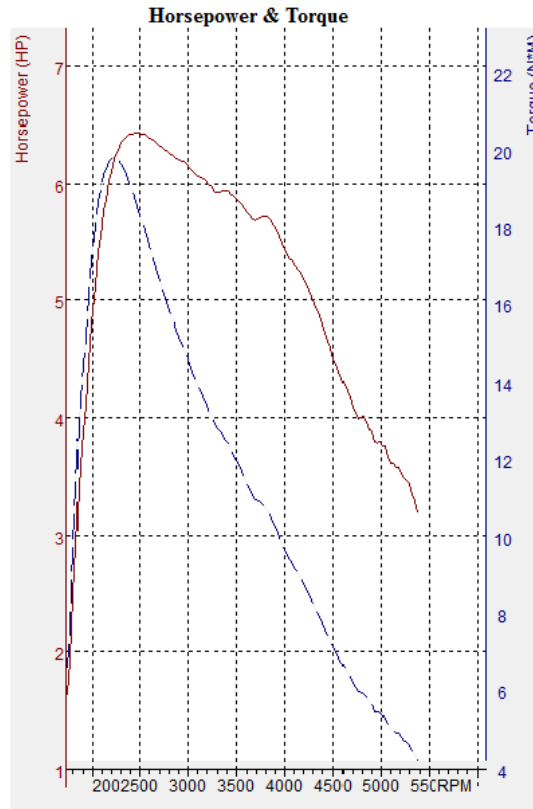
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

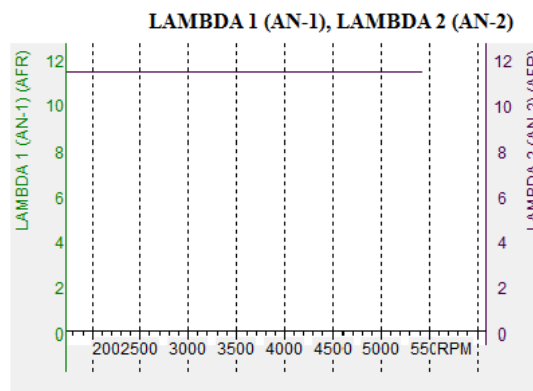
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1061	6.4 / 2442	19.84 / 2208	94.1	25.0	60	1000.0	11/05/2025 15:10:08



DATA FOR TEST: VARIO FI UNDIKSA_1061

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	1.7	6.83	1000.0
2000	5.0	17.61	1000.0
2208	6.2	19.84	1000.0
2250	6.3	19.77	1000.0
2442	6.4	18.68	1000.0
2500	6.4	18.19	1000.0
2750	6.3	16.27	1000.0
3000	6.2	14.56	1000.0
3250	6.0	13.04	1000.0
3500	5.9	11.90	1000.0
3750	5.7	10.85	1000.0
4000	5.4	9.64	1000.0
4250	5.1	8.52	1000.0
4500	4.5	7.12	1000.0
4750	4.0	5.98	1000.0
5000	3.8	5.37	1000.0
5250	3.5	4.69	1000.0

Wheel 6.4 HP 19.8 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.4HP 19.84N*M



➤ Hasil Pengujian Ke 7



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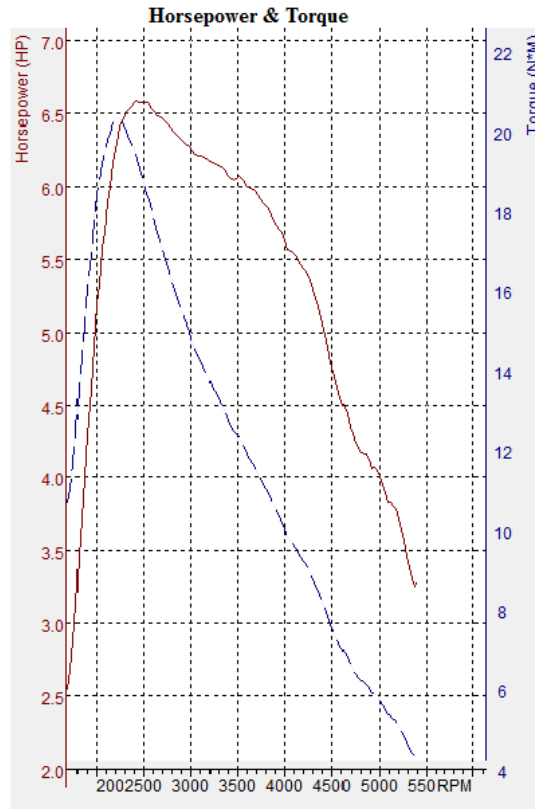
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

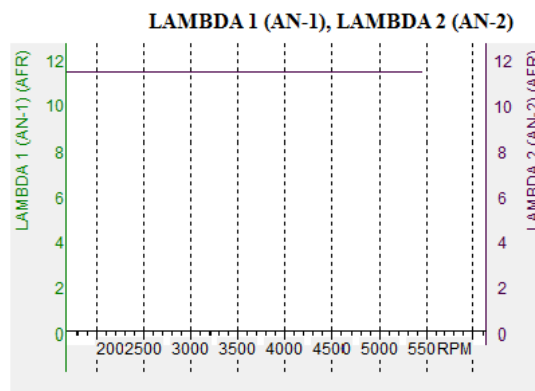
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1073	6.6 / 2389	20.31 / 2211	94.6	25.0	60	1000.0	11/05/2025 15:41:29



DATA FOR TEST: VARIO FI UNDIKSA_1073

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.9	11.64	1000.0
2000	5.2	18.43	1000.0
2211	6.4	20.31	1000.0
2250	6.4	20.24	1000.0
2389	6.6	19.43	1000.0
2500	6.6	18.70	1000.0
2750	6.4	16.55	1000.0
3000	6.3	14.79	1000.0
3250	6.2	13.43	1000.0
3500	6.1	12.33	1000.0
3750	5.9	11.18	1000.0
4000	5.6	9.97	1000.0
4250	5.4	9.00	1000.0
4500	4.7	7.49	1000.0
4750	4.2	6.33	1000.0
5000	4.0	5.68	1000.0
5250	3.6	4.87	1000.0

Wheel LOSSES: 6.6 HP 0.0 HP 20.3 N*M 0.0N*M
TOTAL ENGINE: 6.6HP 20.31N*M



➤ Hasil Pengujian Ke 8



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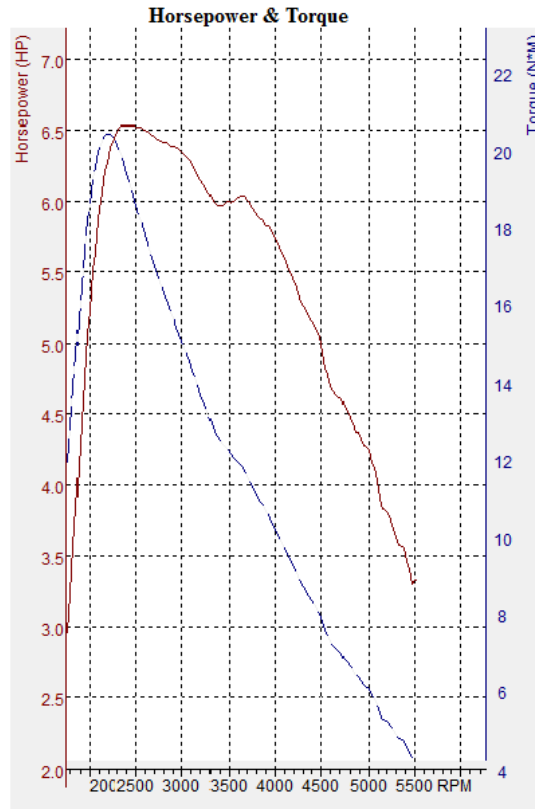
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

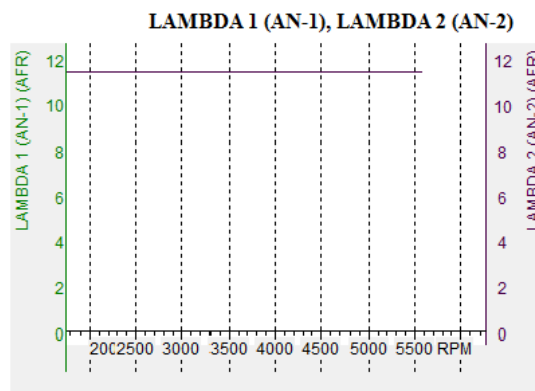
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1064	6.5 / 2369	20.43 / 2188	96.8	25.0	60	1000.0	11/05/2025 15:11:25



DATA FOR TEST: VARIO FI UNDIKSA_1064

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	5.4	18.93	1000.0
2188	6.3	20.43	1000.0
2250	6.4	20.30	1000.0
2369	6.5	19.54	1000.0
2500	6.5	18.45	1000.0
2750	6.4	16.57	1000.0
3000	6.3	14.98	1000.0
3250	6.1	13.32	1000.0
3500	6.0	12.18	1000.0
3750	6.0	11.29	1000.0
4000	5.7	10.16	1000.0
4250	5.3	8.92	1000.0
4500	4.9	7.81	1000.0
4750	4.5	6.77	1000.0
5000	4.2	6.03	1000.0
5250	3.7	5.04	1000.0
5500	3.3	4.30	1000.0

Wheel LOSSES: 6.5 HP 20.4 N*M
 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.5HP 20.43N*M



➤ Hasil Pengujian Ke 9



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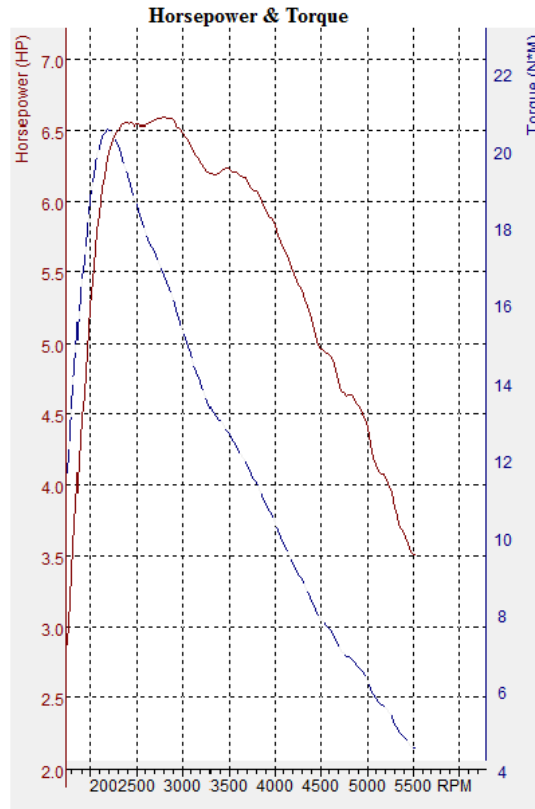
SportDyna-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

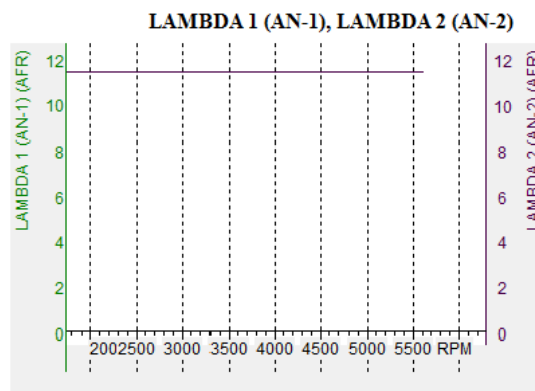
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1066	6.6 / 2798	20.55 / 2162	97.1	25.0	60	1000.0	11/05/2025 15:12:16



DATA FOR TEST: VARIO FI UNDIKSA_1066

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.9	11.64	1000.0
2000	5.4	19.07	1000.0
2162	6.3	20.55	1000.0
2250	6.5	20.36	1000.0
2500	6.5	18.59	1000.0
2750	6.6	17.00	1000.0
2798	6.6	16.65	1000.0
3000	6.5	15.33	1000.0
3250	6.2	13.55	1000.0
3500	6.2	12.65	1000.0
3750	6.1	11.50	1000.0
4000	5.8	10.34	1000.0
4250	5.4	9.07	1000.0
4500	5.0	7.85	1000.0
4750	4.6	6.94	1000.0
5000	4.4	6.24	1000.0
5250	4.0	5.38	1000.0
5500	3.5	4.55	1000.0

Wheel 6.6 HP 20.6 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.6HP 20.55N*M



➤ Hasil Pengujian Ke 10



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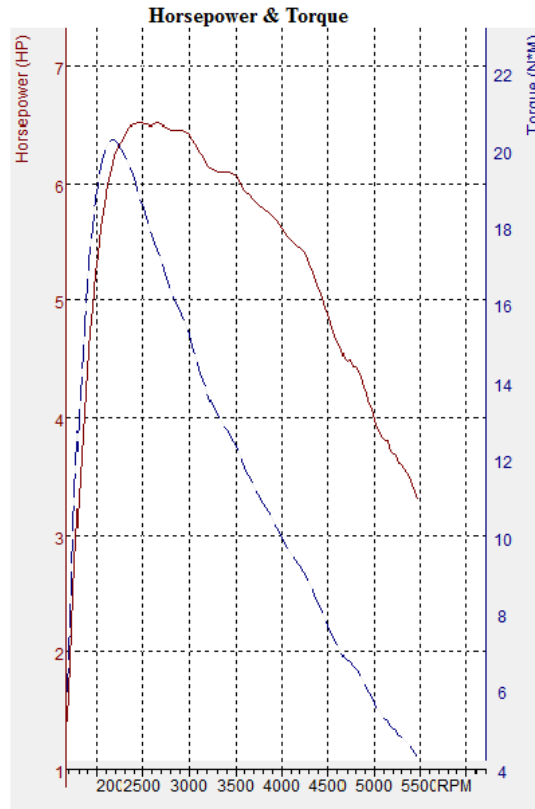
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

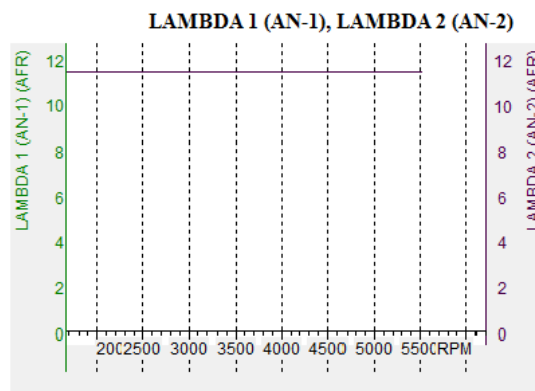
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1063	6.5 / 2433	20.30 / 2163	95.7	25.0	60	1000.0	11/05/2025 15:10:58



DATA FOR TEST: VARIO FI UNDIKSA_1063

RPM	HP (HP)	TQ (N*M)	Temp (C-A) (°C)
1750	2.7	10.75	1000.0
2000	5.4	19.10	1000.0
2163	6.2	20.30	1000.0
2250	6.4	20.02	1000.0
2433	6.5	18.90	1000.0
2500	6.5	18.52	1000.0
2750	6.5	16.68	1000.0
3000	6.4	15.23	1000.0
3250	6.1	13.34	1000.0
3500	6.1	12.34	1000.0
3750	5.8	11.01	1000.0
4000	5.6	9.97	1000.0
4250	5.4	9.02	1000.0
4500	4.9	7.67	1000.0
4750	4.5	6.66	1000.0
5000	4.0	5.64	1000.0
5250	3.6	4.90	1000.0
5500	3.4	4.43	1000.0

Wheel 6.5 HP 20.3 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.5HP 20.30N*M



Lampiran 04. Lembar Hasil Pengujian Dynotest Kampas Ganda dan Pegas Sentrifugal Variasi 2

➤ Hasil Pengujian Ke 1



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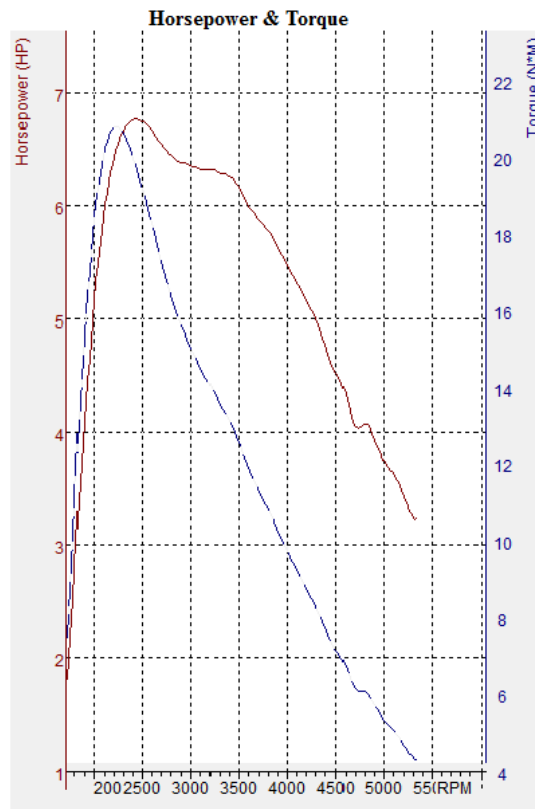
SportDyna-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

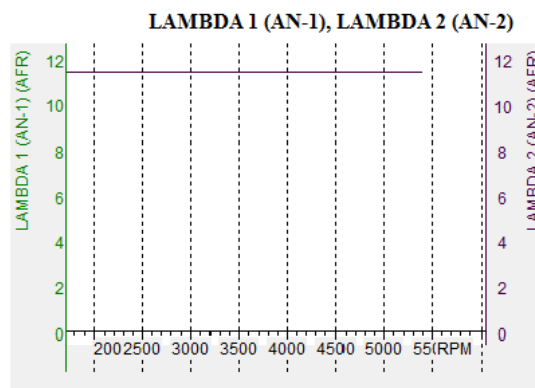
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1076	6.8 / 2407	20.81 / 2210	93.6	25.0	60	1000.0	11/05/2025 15:56:10



DATA FOR TEST: VARIO FI UNDIKSA_1076

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.2	8.82	1000.0
2000	5.3	18.82	1000.0
2210	6.5	20.81	1000.0
2250	6.6	20.77	1000.0
2407	6.8	19.84	1000.0
2500	6.7	19.13	1000.0
2750	6.5	16.76	1000.0
3000	6.4	15.04	1000.0
3250	6.3	13.82	1000.0
3500	6.2	12.50	1000.0
3750	5.8	11.02	1000.0
4000	5.5	9.72	1000.0
4250	5.1	8.48	1000.0
4500	4.5	7.13	1000.0
4750	4.0	6.05	1000.0
5000	3.7	5.32	1000.0
5250	3.3	4.48	1000.0

Wheel 6.8 HP 20.8 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.8HP 20.81N*M



➤ Hasil Pengujian Ke 2



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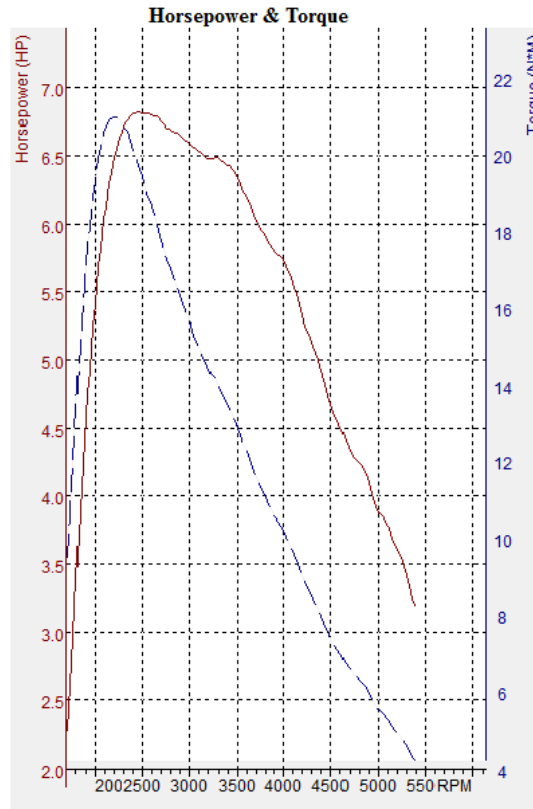
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

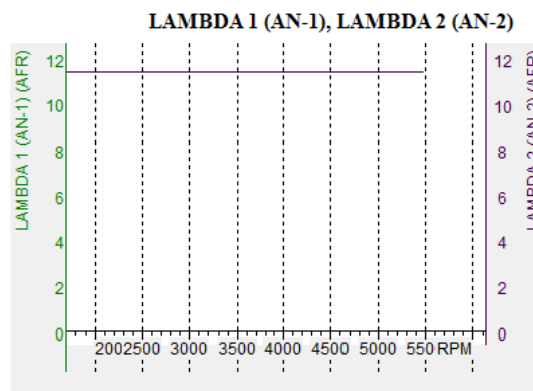
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1077	6.8 / 2431	20.97 / 2190	94.8	25.0	60	1000.0	11/05/2025 15:56:33



DATA FOR TEST: VARIO FI UNDIKSA_1077

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.8	11.54	1000.0
2000	5.5	19.64	1000.0
2190	6.5	20.97	1000.0
2250	6.6	20.89	1000.0
2431	6.8	19.73	1000.0
2500	6.8	19.30	1000.0
2750	6.7	17.38	1000.0
3000	6.6	15.56	1000.0
3250	6.5	14.18	1000.0
3500	6.3	12.86	1000.0
3750	6.0	11.31	1000.0
4000	5.7	10.15	1000.0
4250	5.2	8.70	1000.0
4500	4.7	7.34	1000.0
4750	4.3	6.39	1000.0
5000	3.9	5.49	1000.0
5250	3.5	4.79	1000.0

Wheel 6.8 HP 21.0 N*M
 LOSSES 0.0 HP 0.0 N*M
 TOTAL ENGINE: 6.8HP 20.97N*M



➤ Hasil Pengujian Ke 3



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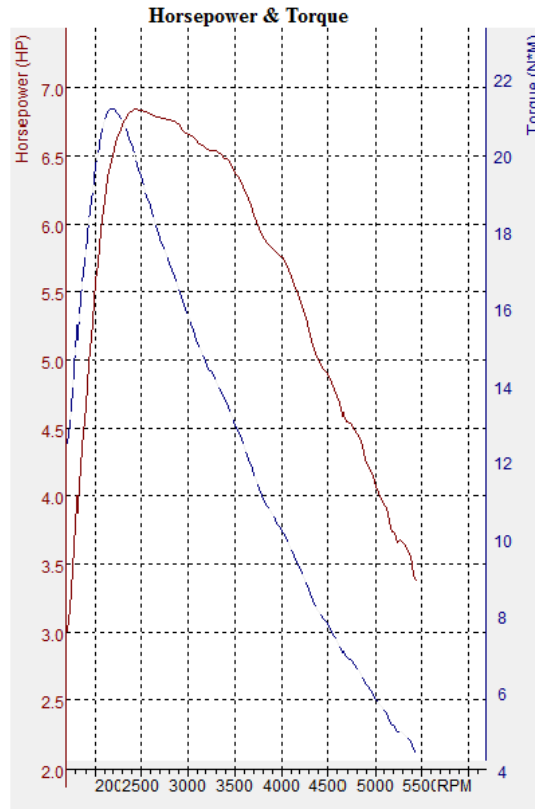
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

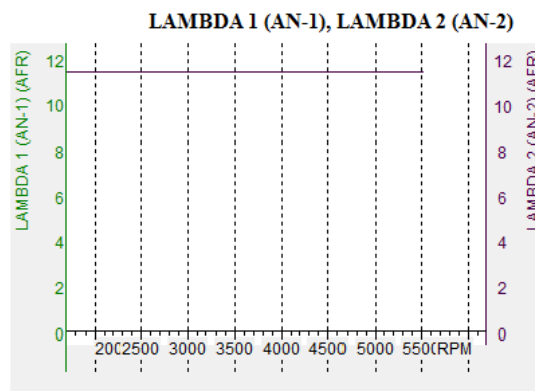
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1079	6.8 / 2417	21.18 / 2159	95.5	25.0	60	1000.0	11/05/2025 15:57:25



DATA FOR TEST: VARIO FI UNDIKSA_1079

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	3.4	13.57	1000.0
2000	5.6	19.73	1000.0
2159	6.5	21.18	1000.0
2250	6.7	21.01	1000.0
2417	6.8	19.92	1000.0
2500	6.8	19.35	1000.0
2750	6.8	17.48	1000.0
3000	6.7	15.79	1000.0
3250	6.5	14.31	1000.0
3500	6.4	12.95	1000.0
3750	6.0	11.29	1000.0
4000	5.8	10.23	1000.0
4250	5.3	8.89	1000.0
4500	4.9	7.71	1000.0
4750	4.5	6.77	1000.0
5000	4.1	5.79	1000.0
5250	3.7	4.98	1000.0
5500	3.4	4.45	1000.0

Wheel 6.8 HP 21.2 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.8HP 21.18N*M



➤ Hasil Pengujian Ke 4



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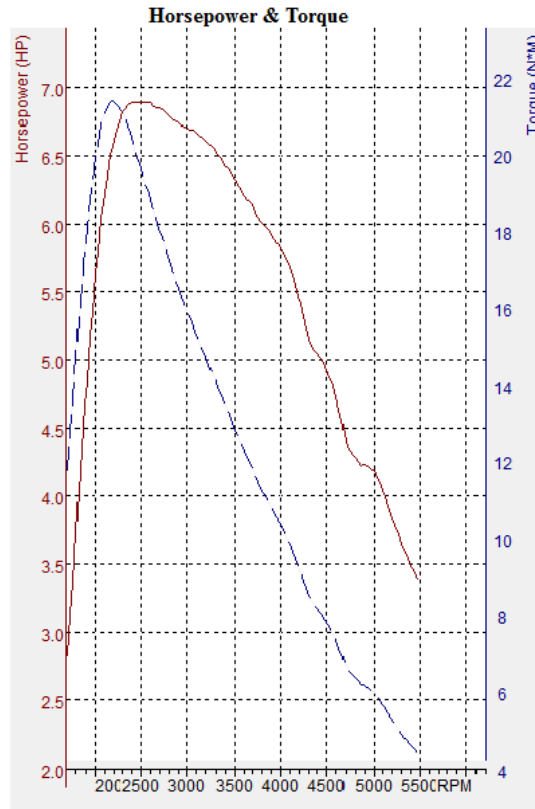
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

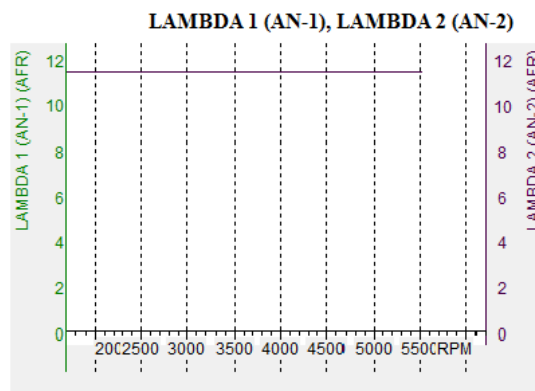
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1080	6.9 / 2422	21.38 / 2170	95.8	25.0	60	1000.0	11/05/2025 15:57:50



DATA FOR TEST: VARIO FI UNDIKSA_1080

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	3.2	13.19	1000.0
2000	5.6	19.99	1000.0
2170	6.6	21.38	1000.0
2250	6.8	21.23	1000.0
2422	6.9	20.19	1000.0
2500	6.9	19.50	1000.0
2750	6.8	17.58	1000.0
3000	6.7	15.85	1000.0
3250	6.6	14.35	1000.0
3500	6.3	12.83	1000.0
3750	6.0	11.46	1000.0
4000	5.8	10.31	1000.0
4250	5.3	8.83	1000.0
4500	4.9	7.77	1000.0
4750	4.3	6.44	1000.0
5000	4.2	5.95	1000.0
5250	3.7	5.06	1000.0
5500	3.5	4.54	1000.0

Wheel 6.9 HP 21.4 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.9HP 21.38N*M



➤ Hasil Pengujian Ke 5



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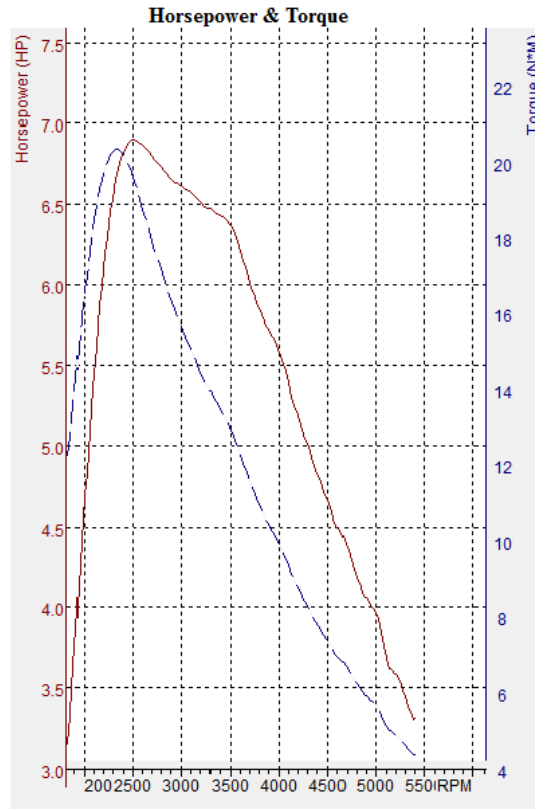
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

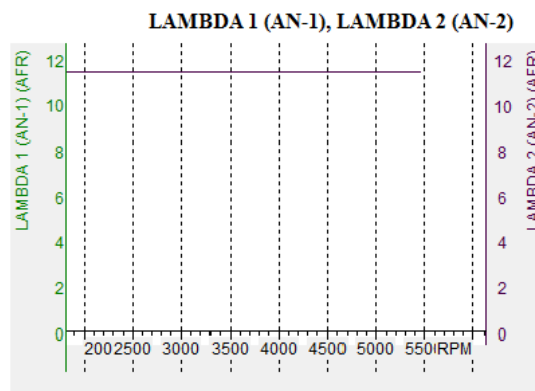
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1083	6.9 / 2494	20.36 / 2302	94.9	25.0	60	1000.0	11/05/2025 16:07:28



DATA FOR TEST: VARIO FI UNDIKSA_1083

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
2000	4.7	16.63	1000.0
2250	6.4	20.11	1000.0
2302	6.7	20.36	1000.0
2500	6.9	19.60	1000.0
2494	6.9	19.60	1000.0
2750	6.8	17.40	1000.0
3000	6.6	15.65	1000.0
3250	6.5	14.16	1000.0
3500	6.4	12.94	1000.0
3750	5.9	11.19	1000.0
4000	5.6	9.91	1000.0
4250	5.1	8.48	1000.0
4500	4.7	7.36	1000.0
4750	4.3	6.38	1000.0
5000	4.0	5.63	1000.0
5250	3.5	4.74	1000.0

Wheel 6.9 HP 20.4 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.9HP 20.36N*M



➤ Hasil Pengujian Ke 6



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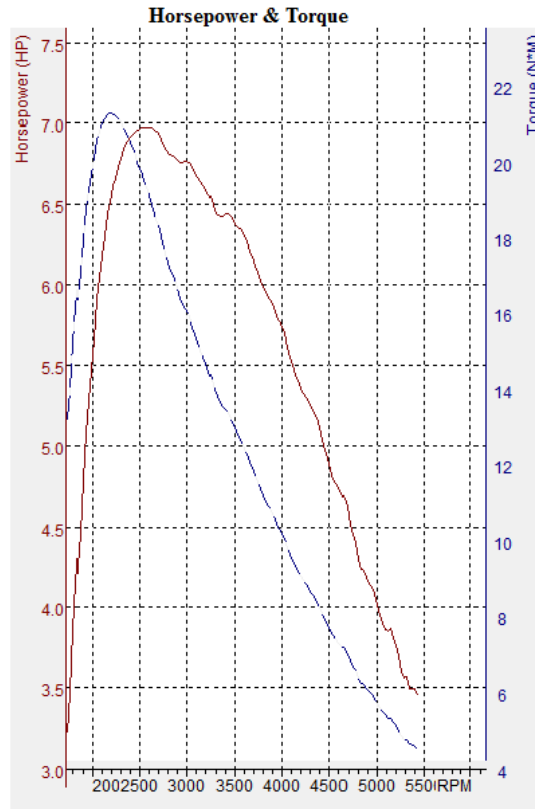
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

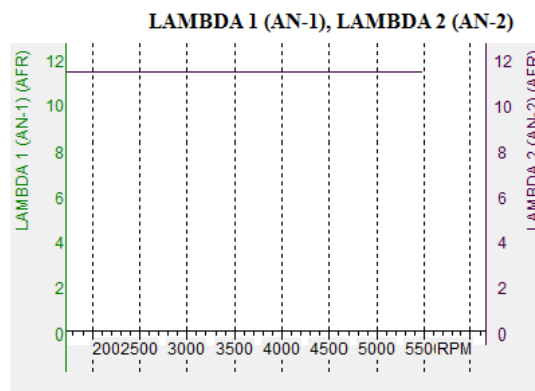
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1084	7.0 / 2553	21.26 / 2168	95.1	25.0	60	1000.0	11/05/2025 16:07:51



DATA FOR TEST: VARIO FI UNDIKSA_1084

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	3.3	13.58	1000.0
2000	5.7	20.11	1000.0
2168	6.5	21.26	1000.0
2250	6.7	21.16	1000.0
2500	7.0	19.78	1000.0
2553	7.0	19.39	1000.0
2750	6.9	17.73	1000.0
3000	6.8	16.01	1000.0
3250	6.5	14.29	1000.0
3500	6.4	12.95	1000.0
3750	6.1	11.49	1000.0
4000	5.7	10.19	1000.0
4250	5.3	8.86	1000.0
4500	4.9	7.70	1000.0
4750	4.4	6.64	1000.0
5000	4.0	5.71	1000.0
5250	3.6	4.94	1000.0
5500	3.5	4.52	1000.0

Wheel 7.0 HP 21.3 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 7.0HP 21.26N*M



➤ Hasil Pengujian Ke 7



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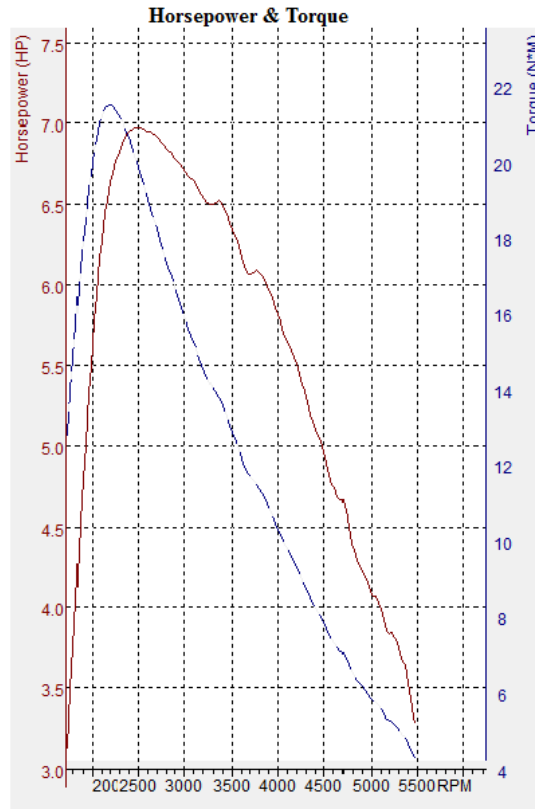
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

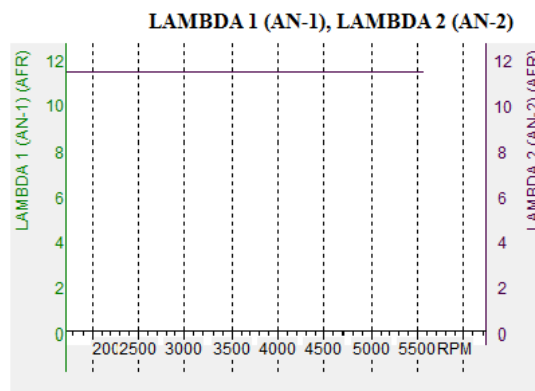
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1085	7.0 / 2484	21.49 / 2160	96.2	25.0	60	1000.0	11/05/2025 16:08:15



DATA FOR TEST: VARIO FI UNDIKSA_1085

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	3.2	13.16	1000.0
2000	5.6	20.02	1000.0
2160	6.6	21.49	1000.0
2250	6.8	21.34	1000.0
2484	7.0	19.88	1000.0
2500	7.0	19.73	1000.0
2750	6.9	17.70	1000.0
3000	6.7	15.82	1000.0
3250	6.5	14.23	1000.0
3500	6.3	12.87	1000.0
3750	6.1	11.52	1000.0
4000	5.8	10.30	1000.0
4250	5.4	9.03	1000.0
4500	4.9	7.78	1000.0
4750	4.5	6.74	1000.0
5000	4.1	5.79	1000.0
5250	3.8	5.15	1000.0
5500	3.3	4.26	1000.0

Wheel 7.0 HP 21.5 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 7.0HP 21.49N*M



➤ Hasil Pengujian Ke 8



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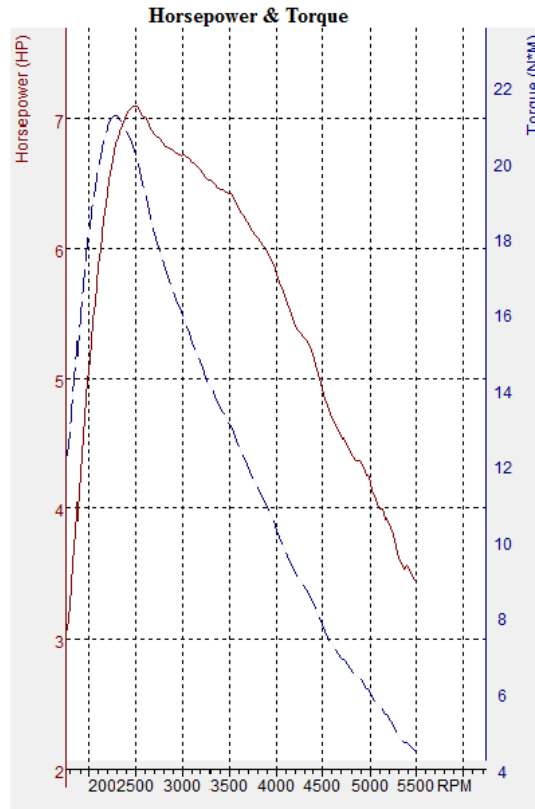
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

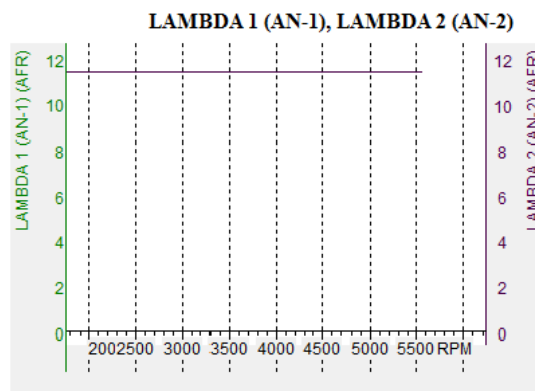
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1086	7.1 / 2445	21.20 / 2238	96.4	25.0	60	1000.0	11/05/2025 16:08:41



DATA FOR TEST: VARIO FI UNDIKSA_1086

RPM	HP (HP)	TQ (N*M)	Tempol (T C-A) (°C)
2000	5.1	18.28	1000.0
2250	6.8	21.20	1000.0
2238	6.8	21.20	1000.0
2445	7.1	20.42	1000.0
2500	7.1	20.12	1000.0
2750	6.9	17.72	1000.0
3000	6.7	15.95	1000.0
3250	6.6	14.32	1000.0
3500	6.4	13.04	1000.0
3750	6.1	11.62	1000.0
4000	5.8	10.30	1000.0
4250	5.4	8.95	1000.0
4500	4.9	7.72	1000.0
4750	4.5	6.72	1000.0
5000	4.2	5.92	1000.0
5250	3.8	5.12	1000.0
5500	3.4	4.46	1000.0

Wheel 7.1 HP 21.2 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 7.1HP 21.20N*M



➤ Hasil Pengujian Ke 9



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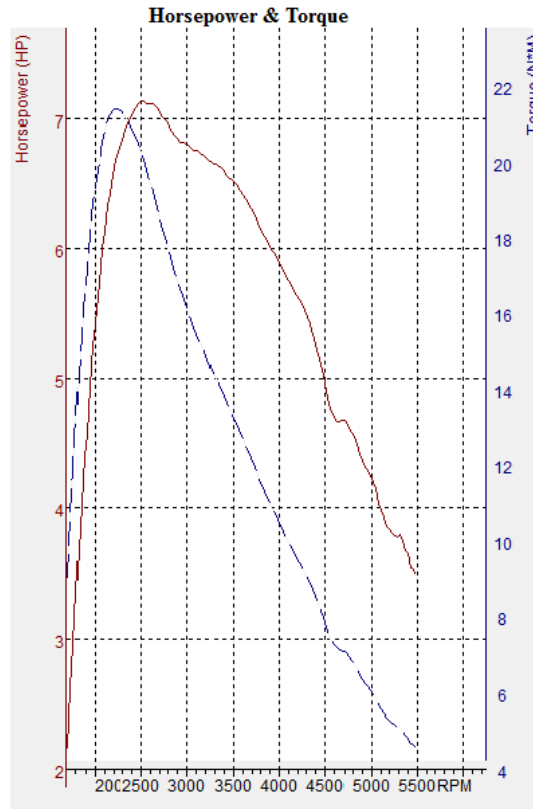
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

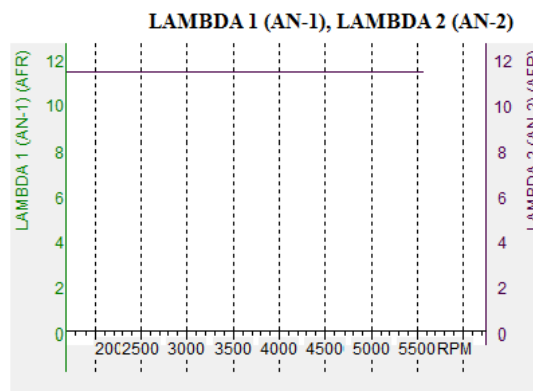
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1087	7.1 / 2508	21.38 / 2194	96.3	25.0	60	1000.0	11/05/2025 16:09:04



DATA FOR TEST: VARIO FI UNDIKSA_1087

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.8	11.49	1000.0
2000	5.6	19.69	1000.0
2194	6.6	21.38	1000.0
2250	6.8	21.34	1000.0
2500	7.1	20.24	1000.0
2508	7.1	20.10	1000.0
2750	7.0	18.05	1000.0
3000	6.8	16.08	1000.0
3250	6.7	14.62	1000.0
3500	6.5	13.23	1000.0
3750	6.2	11.75	1000.0
4000	5.9	10.47	1000.0
4250	5.6	9.31	1000.0
4500	4.9	7.79	1000.0
4750	4.6	6.91	1000.0
5000	4.2	5.98	1000.0
5250	3.8	5.14	1000.0
5500	3.4	4.42	1000.0

Wheel 7.1 HP 21.4 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 7.1HP 21.38N*M



➤ Hasil Pengujian Ke 10



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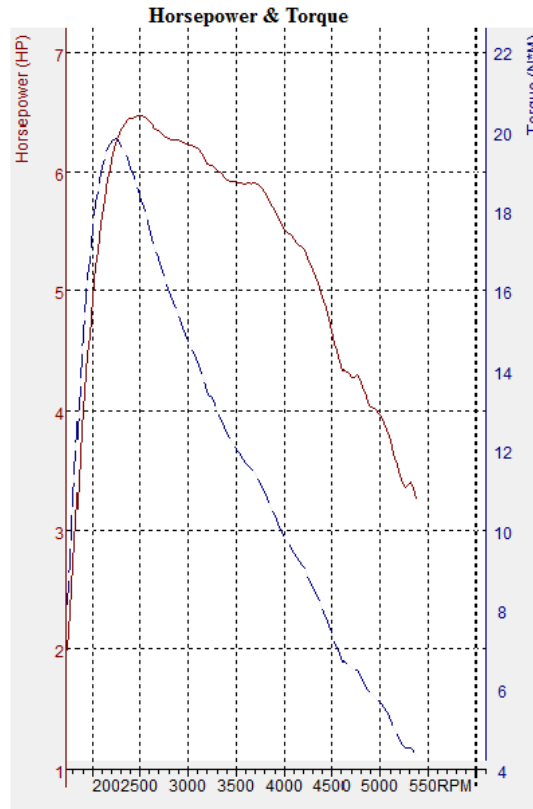
SportDyno-Ver date: 28-JUN-2019 (4.0.35.1)

DYNAMOMETER: SMK PGRI 2 BADUNG

Correction Factor: EC95 -1

Power: HP (mechanic)

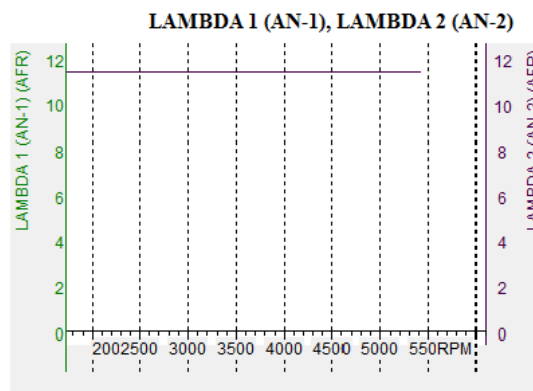
Name	HP/RPM	N*M/RPM	KMH	Temp. (°C)	Humidity (%)	Pressure (mbar)	Date/Time
VARIO FI UNDIKSA_1072	6.5 / 2481	19.81 / 2223	94.3	25.0	60	1000.0	11/05/2025 15:41:04



DATA FOR TEST: VARIO FI UNDIKSA_1072

RPM	HP (HP)	TQ (N*M)	Termol (T C-A) (°C)
1750	2.1	8.36	1000.0
2000	4.9	17.54	1000.0
2223	6.2	19.81	1000.0
2250	6.3	19.81	1000.0
2481	6.5	18.49	1000.0
2500	6.5	18.38	1000.0
2750	6.3	16.24	1000.0
3000	6.2	14.75	1000.0
3250	6.0	13.22	1000.0
3500	5.9	12.01	1000.0
3750	5.9	11.11	1000.0
4000	5.5	9.79	1000.0
4250	5.3	8.78	1000.0
4500	4.7	7.36	1000.0
4750	4.3	6.44	1000.0
5000	4.0	5.62	1000.0
5250	3.4	4.54	1000.0

Wheel 6.5 HP 19.8 N*M
 LOSSES 0.0 HP 0.0N*M
 TOTAL ENGINE: 6.5HP 19.81N*M



Lampiran 05. Lembar Hasil Pengujian Konsumsi Bahan Bakar

Waktu Konsumsi Bahan Bakar untuk Setiap Variasi Putaran Mesin

Waktu Konsumsi Bahan Bakar untuk Setiap Variasi Putaran Mesin (Kg/Jam)				
Putaran Mesin (RPM)	Pengulangan Pengujian	Variasi Panjang Kampas Ganda dan Diameter Pegas Sentrifugal		
		25 mm dan 11 mm (standar)	39 mm dan 10 mm (variasi 1)	55 mm dan 12 mm (variasi 2)
2000	1	276.6	276.8	276.9
	2	276.8	276.6	276.7
	3	276.7	276.8	276.9
	4	276.7	276.7	276.8
	5	276.8	276.7	276.9
	6	276.7	276.6	276.9
	7	276.6	276.8	276.8
	8	276.7	276.8	276.7
	9	276.6	276.7	276.7
	10	276.7	276.8	276.9
Rata-rata		276.73	276.75	276.89
25000	1	243	242	249
	2	242	243	243
	3	242	243	249
	4	249	249	243
	5	243	242	243
	6	243	243	242
	7	242	243	249
	8	242	249	243
	9	243	243	249
	10	242	242	249
Rata-rata		242.8	242.7	242.8
3000	1	207.8	207.7	207.9
	2	207.6	207.8	207.7
	3	207.9	207.8	207.9
	4	207.5	207.9	207.8
	5	207.7	207.8	207.6
	6	207.5	207.7	207.8
	7	207.8	207.6	207.9
	8	207.7	207.7	207.7
	9	207.5	207.8	207.8
	10	207.7	207.6	207.9
Rata-rata		207.77	207.79	207.82
3500	1	159.9	159.8	161.1
	2	159.7	159.7	159.9
	3	159.7	160.8	160.8
	4	160.8	160.8	161.1
	5	161.1	157.7	160.9
	6	159.7	161.1	161.1
	7	159.6	160.9	160.8
	8	159.8	160.7	160.9
	9	159.7	160.7	161.1

	10	159.8	160.9	161.1
Rata-rata		159.78	159.93	161.19
4000	1	91.7	91.6	91.8
	2	91.5	91.9	91.7
	3	91.6	91.8	91.6
	4	91.7	91.7	91.7
	5	91.5	91.5	91.8
	6	91.6	91.8	91.7
	7	91.5	91.6	91.5
	8	91.7	91.7	91.6
	9	91.6	91.8	91.8
	10	91.6	91.5	91.8
Rata-rata		91.6	91.67	91.68
4500	1	63.1	63.3	63.9
	2	63.83	63.9	63.3
	3	63.3	63.2	63.9
	4	63.1	63.3	63.2
	5	63.2	63.9	63.1
	6	63.2	63.2	63.2
	7	63.4	63.3	63.9
	8	63.3	63.9	63.3
	9	63.1	63.2	63.9
	10	63.2	63.3	63.2
Rata-rata		63.28	63.45	63.29
5000	1	92.1	92.3	92.5
	2	92.3	92.9	92.9
	3	92.2	92.2	92.5
	4	92.1	92.3	92.9
	5	92.4	92.5	92.2
	6	92.3	92.1	92.5
	7	92.2	92.2	92.9
	8	92.1	92.3	92.9
	9	92.1	92.1	92.5
	10	92.3	92.2	92.9
Rata-rata		92.21	92.26	92.27

Konsumsi Bahan Bakar Persatuan Waktu

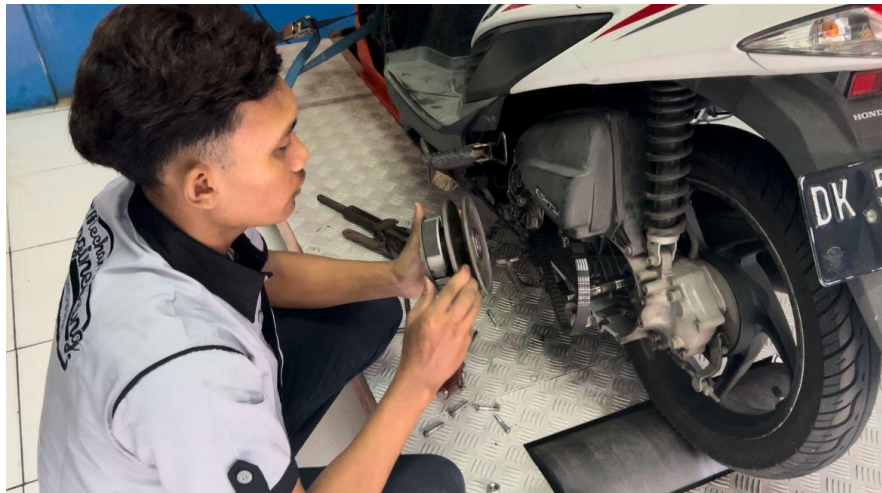
Konsumsi Bahan Bakar Persatuan Waktu (kg/jam)

Putaran Mesin (RPM)	Pengulangan Pengujian	Variasi Panjang Kampas Ganda dan Diameter Pegas Sentrifugal		
		25 mm dan 11 mm (standar)	39 mm dan 10 mm (variasi 1)	55 mm dan 12 mm (variasi 2)
2000	1	95.17	93.10	95.17
	2	93.10	94.57	94.40
	3	94.57	94.40	95.17
	4	94.40	95.43	93.40
	5	93.57	93.40	94.57
	6	95.10	94.40	94.40
	7	94.24	94.57	93.57
	8	94.17	95.17	93.40
	9	95.17	93.10	94.57
	10	94.40	94.57	93.57
Rata-rata		94.45	94.31	94.22
25000	1	106.51	104.51	106.35
	2	104.35	104.42	105.42
	3	105.42	106.35	106.35
	4	106.35	104.51	104.51
	5	106.35	106.35	105.35
	6	105.51	105.51	104.42
	7	106.35	106.29	105.51
	8	106.55	107.35	106.35
	9	105.42	104.51	104.42
	10	106.35	106.35	105.51
Rata-rata		105.80	105.62	105.52
3000	1	111.16	112.19	111.16
	2	112.19	112.16	112.19
	3	110.15	110.16	110.15
	4	111.15	111.16	110.15
	5	112.16	111.15	111.15
	6	110.19	110.15	110.15
	7	110.16	110.16	110.15
	8	111.15	111.15	110.15
	9	112.15	112.16	110.16
	10	111.15	110.19	112.16
Rata-rata		111.15	111.05	110.85
3500	1	120.68	121.16	121.56
	2	120.56	121.68	117.46
	3	121.68	119.68	121.68
	4	121.56	120.56	120.68
	5	121.68	121.68	121.68
	6	120.76	121.56	120.76
	7	121.68	120.68	119.68
	8	121.56	121.68	120.56
	9	121.68	120.56	121.46

	10	120.68	121.68	121.68
	Rata-rata	121.23	121.12	120.90
4000	1	137.49	137.49	137.49
	2	136.02	136.02	136.02
	3	137.02	137.49	137.57
	4	137.02	137.49	137.49
	5	136.02	136.02	136.99
	6	137.02	137.49	137.57
	7	137.02	137.49	137.49
	8	136.99	137.57	136.02
	9	137.49	136.99	136.49
	10	136.49	136.02	136.99
	Rata-rata	136.90	136.76	136.61
4500	1	149.37	143.89	149.37
	2	143.89	142.58	142.58
	3	149.37	149.37	142.58
	4	142.58	143.89	149.37
	5	142.58	143.89	143.89
	6	149.37	143.89	142.58
	7	149.37	142.58	143.89
	8	143.89	143.89	143.89
	9	143.89	143.89	149.37
	10	149.37	149.37	142.58
	Rata-rata	143.87	143.72	143.51
5000	1	162.71	162.71	160.52
	2	160.52	161.19	161.19
	3	160.52	161.19	162.71
	4	161.19	162.71	160.52
	5	162.71	160.52	160.52
	6	162.71	162.71	161.19
	7	160.52	162.71	162.71
	8	162.71	160.52	160.52
	9	162.71	161.19	162.71
	10	161.19	160.52	160.52
	Rata-rata	161.75	161.60	161.38

Lampiran 06. Dokumentasi Pengambilan Data Torsi dan Daya

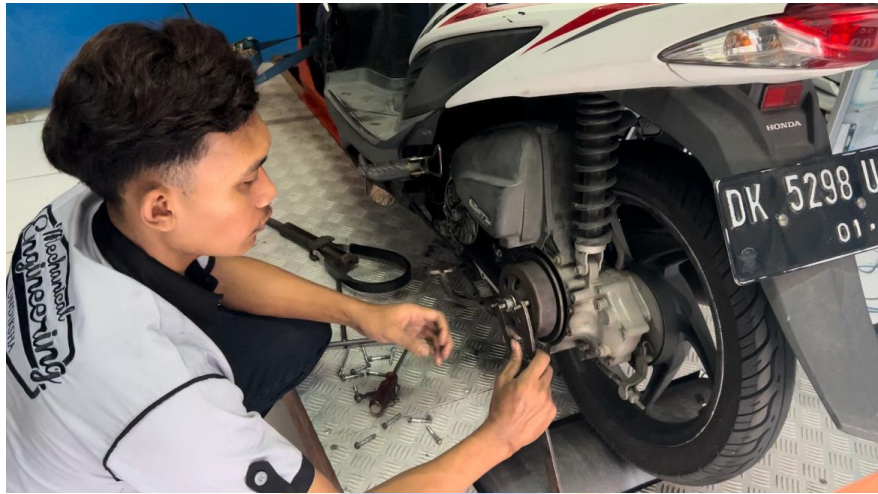
Melakukan Pergantian Kampas Ganda Dan Pegas Sentrifugal



Pelaksanaan Pengujian Dynotest Dibantu Oleh Guru SMK PGRI 2 Badung



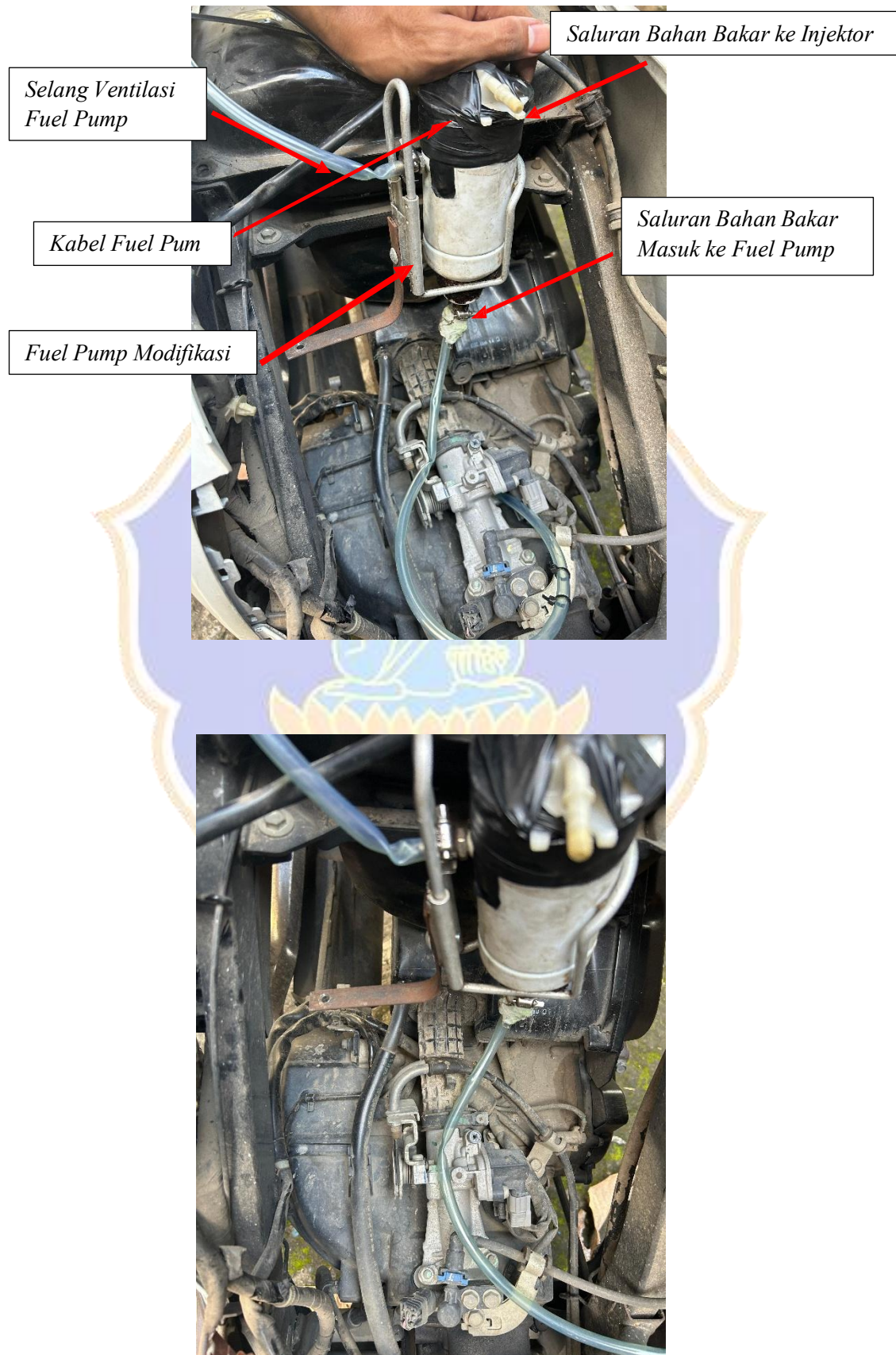
Melakukan Pemasangan Clutch Housing



Melakukan Pemasangan Bak / Penutup CVT



Lampiran 07. Dokumentasi Pengambilan Data Konsumsi Bahan Bakar

Instalasi Alat Uji Konsumsi Bahan Bakar

Lampiran 08. Cover Depan Modul



Lampiran 09. Jurnal

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Lampiran 10. HKI



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SURAT PENCATATAN CIPTAAN

Dalam rangka perlindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, dengan ini menerangkan:

Nomor dan tanggal permohonan	EC002025064329, 12 Juni 2025
Pencipta	
Nama	: Mashartin Hawandi, I Gede Wiratmaja, S. T., M. T. dkk
Alamat	: Banjar Pesinggahan, Pekutatan, Kab. Jembrana, Bali, 82262
Kewarganegaraan	: Indonesia
Pemegang Hak Cipta	
Nama	: Fakultas Teknik dan Kejuruan Universitas Pendidikan Ganesha
Alamat	: Kampus FTK Desa Jinengdalem, Buleleng, Kab. Buleleng, Bali, 81119
Kewarganegaraan	: Indonesia
Jenis Ciptaan	: Modul
Judul Ciptaan	: Analisis Pengaruh Kombinasi Panjang Kampas Ganda Dengan Diameter Pegas Sentrifugal Terhadap Performansi Mesin Kendaraan Dengan Sistem Transmisi CVT
Tanggal dan tempat diumumkan untuk pertama kali di wilayah Indonesia atau di luar wilayah Indonesia	11 Juni 2025, di Singaraja
Jangka waktu perlindungan	: Berlaku selama 50 (lima puluh) tahun sejak Ciptaan tersebut pertama kali dilakukan Pengumuman.
Nomor Pencatatan	000904590

adalah benar berdasarkan keterangan yang diberikan oleh Pemohon.

Surat Pencatatan Hak Cipta atau produk Hak terkait ini sesuai dengan Pasal 72 Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta.



a.n. MENTERI HUKUM
DIREKTUR JENDERAL KEKAYAAN INTELEKTUAL
u.b
Direktur Hak Cipta dan Desain Industri



Agung Damarsasongko, SH, MH.
NIP. 196912261994031001

 **Balai Besar Sertifikasi Elektronik**

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2. Surat Pencatatan ini telah disegel secara elektronik menggunakan segel elektronik yang diterbitkan oleh Balai Besar Sertifikasi Elektronik, Badan Siber dan Sandi Negara.
3. Surat Pencatatan ini dapat dibuktikan keasliannya dengan memindai kode QR pada dokumen ini dan informasi akan ditampilkan dalam browser.

Lampiran 11. Kutipan Daftar Nilai



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Website : <https://undiksha.ac.id> • Email : humas@undiksha.ac.id

KUTIPAN DAFTAR NILAI (KDN)

Nama : Masharlin Hawandi
 Tempat / Tanggal Lahir : Medewi / 05 November 2003
 Nomor Induk : 2115071004
 Fakultas : Fakultas Teknik dan Kejuruan
 Jurusan / Program Studi : Jurusan Teknologi Industri / Pendidikan Teknik Mesin (PTM) (S1)

NO.	MATA KULIAH	K.	N.	K/N	SM/TH.	NO.	MATA KULIAH	K.	N.	K/N	SM/TH.
1	PANGASIA	2	3,75	7,5	01/21/22	31	STRATEGI DAN DESAIN PEMBELAJARAN	2	3,75	7,5	03/22/23
2	Bahasa Indonesia	2	3,25	6,5	01/21/22	32	ASESMEN DAN EVALUASI PEMBELAJARAN	2	3,75	7,5	03/22/23
3	TREKHTAKARANA	2	3,75	7,5	01/21/22	33	PENDIDIKAN KEJURUAN	2	3,75	7,5	03/22/23
4	MATEMATIKA TEKNIK	2	3,25	6,5	01/21/22	34	KINEMATIKA DAN DINAMIKA	2	3,25	6,5	04/22/23
5	FISIKA TEKNIK	2	3,75	7,5	01/21/22	35	MANAJEMEN INDUSTRI	2	4	8	04/22/23
6	PENGENALAN KOMPUTER	2	4	8	01/21/22	36	MESIN KONVERSI ENERGI	2	4	8	04/22/23
7	MENGAMBIKAR TEKNIK	2	3,75	7,5	01/21/22	37	KEMERKASAAN	2	4	8	04/22/23
8	KIMIA TEKNIK	2	4	8	01/21/22	38	METODOLOGI PENELITIAN	2	3,75	7,5	04/22/23
9	WAWASAN KEPENDIDIKAN	2	3,75	7,5	01/21/22	39	PEMBELAJARAN MIKRO	2	3,75	7,5	04/22/23
10	PERKEMBANGAN PESERTA DIDIK	2	3,75	7,5	01/21/22	40	MESIN LISTRIK	2	3,25	6,5	04/22/23
11	PENDIDIKAN AGAMA ISLAM	2	4	8	02/21/22	41	PIAKTIKUM MESIN LISTRIK	2	3,75	7,5	04/22/23
12	Bahasa Inggris	2	3	6	02/21/22	42	MODIFIKASI TEKNIK OTOMOTIF	2	3,25	6,5	04/22/23
13	PENDIDIKAN KEMERKASAAN	2	3,75	7,5	02/21/22	43	TEKNOLOGI BODI KENDARAAN	2	3,25	6,5	04/22/23
14	PENGUKURAN TEKNIK	2	3,25	6,5	02/21/22	44	SISTEM PEMINDAH TENAGA	2	3	6	04/22/23
15	MENGAMBIKAR MESIN	3	3,25	9,75	02/21/22	45	HIKROLOGI DAN PNEUMATIK	2	3,75	7,5	04/22/23
16	ILMU BAHAN	2	4	8	02/21/22	46	DASAR-DASAR INSTALASI LISTRIK	3	3,75	11,25	05/23/24
17	MEKANIKA TEKNIK	3	3,75	11,25	02/21/22	47	PANEL HUBUNG BAGE	3	4	12	05/23/24
18	TERMODINAMIKA	2	3,75	7,5	02/21/22	48	TEKNIK LISTRIK DAN ELEKTRONIKA	2	4	8	05/23/24
19	MEKANIKA FLUIDA	2	3,25	6,5	02/21/22	49	ELEMEN MESIN	2	3,75	7,5	05/23/24
20	BELAJAR DAN PEMBELAJARAN	2	3,25	6,5	02/21/22	50	TEKNIK PEMELIHARAAN OTOMOTIF	2	3	6	05/23/24
21	TILAAH KURIKULUM	2	3,25	6,5	02/21/22	51	KARYA TEKNOLOGI TEKNIK OTOMOTIF	2	4	8	05/23/24
22	STATISTIKA	2	2,75	5,5	03/22/23	52	DIAGNOSIS KENDARAAN	2	2,75	5,5	05/23/24
23	PERPINDAHAN PANAS	2	3,25	6,5	03/22/23	53	MESIN MESIN TURBO	2	3,75	7,5	05/23/24
24	PROSES TEKNIK MANUFAKTUR	2	3	6	03/22/23	54	TEKNOLOGI ALAT BERAT	2	4	8	05/23/24
25	PIAKTIKUM PROSES TEKNIK MANUFAKTUR	2	3,25	6,5	03/22/23	55	SISTEM KELESTRIKAN PERANGKAT PENDINGIN	3	3,75	11,25	05/23/24
26	DASAR-DASAR TEKNIK OTOMOTIF	2	4	8	03/22/23	56	MAGANG 2	14	4	56	06/23/24
27	PIAKTIKUM DASAR-DASAR TEKNIK OTOMOTIF	2	4	8	03/22/23	57	PLP 1	2	4	8	07/24/25
28	TEKNIK PENDINGIN	2	3,75	7,5	03/22/23	58	PLP 2	8	4	32	07/24/25
29	PIAKTIKUM TEKNIK PENDINGIN	2	3,25	6,5	03/22/23	59	KKN KEPENDIDIKAN	4	4	16	07/24/25
30	KESELAMATAN DAN KESEHATAN KERJA	2	3,25	6,5	03/22/23	60	SEMINAR PROPOSAL SKRIPSI	1	4	4	08/24/25
TOTAL KREDIT		144 SKS									
IP KOMULATIF		3,67									



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 Tanggal dokumen diciptakan:
 30 Juni 2025



Lampiran 12. Riwayat Hidup

RIWAYAT HIDUP

Masharlin Hawandi lahir di Negara, 05 November 2003. Anak kedua dari tiga bersaudara dari pasangan suami istri Masrupawan dan Asmawati yang beralamat di Desa Medewi. Penulis menempuh jenjang Pendidikan Sekolah Menengah Kejuruan Negeri 2 Negara dengan jurusan TKRO dan lulus pada tahun 2021. Penulis saat ini melanjutkan pendidikan di Perguruan Tinggi Negeri Universitas Pendidikan Ganesha pada tahun 2021 mengambil Program Studi Pendidikan Teknik Mesin, Jurusan Teknologi Industri, Fakultas Teknik dan Kejuruan.

