

X52-S2.0

External forces and moments

Crankshaft type : Full crank pin

Rating R1 : 1910 kW/Cyl. / 120 rpm / Standard Tier2 Tuning

Engine Type			5X52-S2.0	6X52-S2.0	7X52-S2.0	8X52-S2.0
Speed			120 rpm	120 rpm	120 rpm	120 rpm
Power			9550 kW	11460 kW	13370 kW	15280 kW
Crank type			FCV2	FCV2	FCV2	FCV2
Massmoments / Forces						
Free Forces						
F1v	[±kN]		0	0	0	0
F1h	[±kN]		0	0	0	0
F2v	[±kN]		0	0	0	0
F4v	[±kN]		0	0	0	0
External Moments						
M1v	[±kNm]		121	0	72	243
M1h	[±kNm]		121	0	72	243
M2v	[±kNm]		1441	1002	291	0
M2v *)	[±kNm]		719	502	-	-
M4v	[±kNm]		9	70	198	80
Lateral H-Moments M_{LH}						
Ord.1	[±kNm]		0	0	0	0
Ord.2	[±kNm]		0	0	0	0
Ord.3	[±kNm]		0	0	0	0
Ord.4	[±kNm]		0	0	0	0
Ord.5	[±kNm]		1033	0	0	0
Ord.6	[±kNm]		0	848	0	0
Ord.7	[±kNm]		0	0	694	0
Ord.8	[±kNm]		0	0	0	529
Ord.9	[±kNm]		0	0	0	0
Ord.10	[±kNm]		154	0	0	0
Ord.11	[±kNm]		0	0	0	0
Ord.12	[±kNm]		0	80	0	0
Lateral X-Moments M_{LX}						
Ord.1	[±kNm]		96	0	57	192
Ord.2	[±kNm]		96	66	19	0
Ord.3	[±kNm]		78	141	155	198
Ord.4	[±kNm]		36	277	787	320
Ord.5	[±kNm]		0	0	61	769
Ord.6	[±kNm]		17	0	10	0
Ord.7	[±kNm]		139	0	0	25
Ord.8	[±kNm]		88	61	5	0
Ord.9	[±kNm]		6	110	12	11
Ord.10	[±kNm]		0	30	86	0
Ord.11	[±kNm]		2	0	50	64
Ord.12	[±kNm]		19	0	4	15
Torque variation						
	[±kNm]		1096.3	891.8	720.9	552.5

*) with iELBA applied at FE + DE

The values for other engine ratings are available on request

The resulting lateral guide force at the crosshead can be estimated as follows: FL=MLH x 0.325 [kN]

X52-S2.0

External forces and moments

Crankshaft type : Full crank pin

Rating R1 : 1910 kW/Cyl. / 120 rpm / Delta Tier2 Tuning

Engine Type			5X52-S2.0	6X52-S2.0	7X52-S2.0	8X52-S2.0
Speed			120 rpm	120 rpm	120 rpm	120 rpm
Power			9550 kW	11460 kW	13370 kW	15280 kW
Crank type			FCV2	FCV2	FCV2	FCV2
Massmoments / Forces						
Free Forces						
F1v	[±kN]		0	0	0	0
F1h	[±kN]		0	0	0	0
F2v	[±kN]		0	0	0	0
F4v	[±kN]		0	0	0	0
External Moments						
M1v	[±kNm]		121	0	72	243
M1h	[±kNm]		121	0	72	243
M2v	[±kNm]		1441	1002	291	0
M2v *)	[±kNm]		719	502	-	-
M4v	[±kNm]		9	70	198	80
Lateral H-Moments M_{LH}						
Ord.1	[±kNm]		0	0	0	0
Ord.2	[±kNm]		0	0	0	0
Ord.3	[±kNm]		0	0	0	0
Ord.4	[±kNm]		0	0	0	0
Ord.5	[±kNm]		1014	0	0	0
Ord.6	[±kNm]		0	829	0	0
Ord.7	[±kNm]		0	0	678	0
Ord.8	[±kNm]		0	0	0	518
Ord.9	[±kNm]		0	0	0	0
Ord.10	[±kNm]		150	0	0	0
Ord.11	[±kNm]		0	0	0	0
Ord.12	[±kNm]		0	78	0	0
Lateral X-Moments M_{LX}						
Ord.1	[±kNm]		95	0	57	190
Ord.2	[±kNm]		105	73	21	0
Ord.3	[±kNm]		77	139	152	194
Ord.4	[±kNm]		35	273	775	315
Ord.5	[±kNm]		0	0	60	756
Ord.6	[±kNm]		16	0	10	0
Ord.7	[±kNm]		136	0	0	25
Ord.8	[±kNm]		86	60	5	0
Ord.9	[±kNm]		5	108	12	11
Ord.10	[±kNm]		0	29	83	0
Ord.11	[±kNm]		2	0	49	62
Ord.12	[±kNm]		18	0	4	15
Torque variation						
	[±kNm]		1073.7	870.6	703.2	538.7

*) with iELBA applied at FE + DE

The values for other engine ratings are available on request

The resulting lateral guide force at the crosshead can be estimated as follows: FL=MLH x 0.325 [kN]

X52-S2.0

External forces and moments

Crankshaft type : Full crank pin

Rating R1 : 1910 kW/Cyl. / 120 rpm / LowLoad Tier2 Tuning

Engine Type			5X52-S2.0	6X52-S2.0	7X52-S2.0	8X52-S2.0
Speed			120 rpm	120 rpm	120 rpm	120 rpm
Power			9550 kW	11460 kW	13370 kW	15280 kW
Crank type			FCV2	FCV2	FCV2	FCV2
Massmoments / Forces						
Free Forces						
F1v	[±kN]		0	0	0	0
F1h	[±kN]		0	0	0	0
F2v	[±kN]		0	0	0	0
F4v	[±kN]		0	0	0	0
External Moments						
M1v	[±kNm]		121	0	72	243
M1h	[±kNm]		121	0	72	243
M2v	[±kNm]		1441	1002	291	0
M2v *)	[±kNm]		719	502	-	-
M4v	[±kNm]		9	70	198	80
Lateral H-Moments M_{LH}						
Ord.1	[±kNm]		0	0	0	0
Ord.2	[±kNm]		0	0	0	0
Ord.3	[±kNm]		0	0	0	0
Ord.4	[±kNm]		0	0	0	0
Ord.5	[±kNm]		1010	0	0	0
Ord.6	[±kNm]		0	827	0	0
Ord.7	[±kNm]		0	0	677	0
Ord.8	[±kNm]		0	0	0	519
Ord.9	[±kNm]		0	0	0	0
Ord.10	[±kNm]		151	0	0	0
Ord.11	[±kNm]		0	0	0	0
Ord.12	[±kNm]		0	79	0	0
Lateral X-Moments M_{LX}						
Ord.1	[±kNm]		95	0	57	190
Ord.2	[±kNm]		109	76	22	0
Ord.3	[±kNm]		75	136	149	190
Ord.4	[±kNm]		35	272	772	314
Ord.5	[±kNm]		0	0	60	753
Ord.6	[±kNm]		16	0	10	0
Ord.7	[±kNm]		136	0	0	24
Ord.8	[±kNm]		86	60	5	0
Ord.9	[±kNm]		5	108	12	11
Ord.10	[±kNm]		0	30	84	0
Ord.11	[±kNm]		2	0	50	64
Ord.12	[±kNm]		18	0	4	15
Torque variation						
	[±kNm]		1068.9	866.9	700.6	538.5

*) with iELBA applied at FE + DE

The values for other engine ratings are available on request

The resulting lateral guide force at the crosshead can be estimated as follows: FL=MLH x 0.325 [kN]

X52-S2.0

External forces and moments

Crankshaft type : Full crank pin

Rating R1 : 1910 kW/Cyl. / 120 rpm / DeltaBypass Tier2 Tuning

Engine Type			5X52-S2.0	6X52-S2.0	7X52-S2.0	8X52-S2.0
Speed			120 rpm	120 rpm	120 rpm	120 rpm
Power			9550 kW	11460 kW	13370 kW	15280 kW
Crank type			FCV2	FCV2	FCV2	FCV2
Massmoments / Forces						
Free Forces						
F1v	[±kN]		0	0	0	0
F1h	[±kN]		0	0	0	0
F2v	[±kN]		0	0	0	0
F4v	[±kN]		0	0	0	0
External Moments						
M1v	[±kNm]		121	0	72	243
M1h	[±kNm]		121	0	72	243
M2v	[±kNm]		1441	1002	291	0
M2v *)	[±kNm]		719	502	-	-
M4v	[±kNm]		9	70	198	80
Lateral H-Moments M_{LH}						
Ord.1	[±kNm]		0	0	0	0
Ord.2	[±kNm]		0	0	0	0
Ord.3	[±kNm]		0	0	0	0
Ord.4	[±kNm]		0	0	0	0
Ord.5	[±kNm]		1025	0	0	0
Ord.6	[±kNm]		0	841	0	0
Ord.7	[±kNm]		0	0	688	0
Ord.8	[±kNm]		0	0	0	527
Ord.9	[±kNm]		0	0	0	0
Ord.10	[±kNm]		154	0	0	0
Ord.11	[±kNm]		0	0	0	0
Ord.12	[±kNm]		0	79	0	0
Lateral X-Moments M_{LX}						
Ord.1	[±kNm]		96	0	57	191
Ord.2	[±kNm]		99	69	20	0
Ord.3	[±kNm]		78	140	153	196
Ord.4	[±kNm]		36	275	782	318
Ord.5	[±kNm]		0	0	61	764
Ord.6	[±kNm]		17	0	10	0
Ord.7	[±kNm]		138	0	0	25
Ord.8	[±kNm]		87	61	5	0
Ord.9	[±kNm]		6	110	12	11
Ord.10	[±kNm]		0	30	86	0
Ord.11	[±kNm]		2	0	50	64
Ord.12	[±kNm]		18	0	4	15
Torque variation						
	[±kNm]		1085.1	881.1	712.7	547.3

*) with iELBA applied at FE + DE

The values for other engine ratings are available on request

The resulting lateral guide force at the crosshead can be estimated as follows: FL=MLH x 0.325 [kN]

5-8 X52-S2.0 / Free external mass moments
Power Related Unbalance (PRU)
Rating R1 1910 kW/Cyl @ 120 rpm

Crankshaft type: Full crank pin

