TurboMaster

TECHNICAL DATA

Garrett® Turbos

1.0 - 2006

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T SERIES

TBO2	TBO2	TAO3	TBO3	TCO3	TO4
TO4B	TO4E	TO4S	TBP4	TW4B	TO5B
TO6	TEO6	TO7	THO8A	T11	T12
T14	T18	T18A	TB25	TD25	TB28
T30	TA31	TB31	TA35	TP38	TB41
TA45	TB45	TA51	TM54	T60	TV60
TL61	TM61	TV61	TW61	TV63	TV65
TV70	TV71	TV72	TV73	TW73	TV75
BTV75	TL77	TV77	TL78	TV78	TW78
TL81	TV81	TW81	TV83	TW83	TV84
TV85	BTV85	TL91	TV91	TW91	TL92
TV92	TW92	TV94	TW94	T250	T300
T350					

GT SERIES

GT12	GT15	GT15P	GT15V	GT17	GT17V
GT18V	GT20	GT20V	GT22	GT22V	GT23V
GT25	GT25V	GT32	GT35	GT37	GT40
GT42	GT45	GT60	GT65		

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TECHNICAL DATA

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Turbochargers Technical Data - Model TBO2

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
BEARING HOUSING				
- Bearing bore diameter	.5465	.5469	13,880	13,890
- Piston ring bore diameter	.624	.626	15,850	15,900
CLEARANCE				
- Radial bearing clearance	.0022	.0050	0,056	0,127
- Axial end play	.0010	.0033	0,025	0,084

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- turbine housing	164	181	18,5	20,5

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TECHNICAL DATA

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Turbochargers Technical Data - Model TAO3

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	164	181	18,5	20,5
- compressor housing	145	165	16,4	18,6
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3
NUTS				
- actuator cover	80	100	9,0	11,3

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Turbochargers Technical Data - Model TBO3

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing (TBO303,09)	170	185	19,2	20,9
- turbine housing (rest of models)	164	181	18,5	20,5
- compressor housing	145	165	16,4	18,6
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3
NUTS				
- elbow assembly (TBO301,03,04,05,08,09,15,17)	170	185	19,2	20,9
- elbow assembly (TBO302,07)	164	181	18,5	20,5
- elbow assembly (TBO312,13)	220	240	24,9	27,1
- elbow assembly (TBO325)	133	151	15,0	17,0

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TECHNICAL DATA

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Turbochargers Technical Data - Model TCO3

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	164	181	18,5	20,5
- compressor housing	115	133	13,0	15,0
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

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TECHNICAL DATA

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Turbochargers Technical Data - Model TO4

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3
V CLAMP				
- nut of compressor housing v clamp	40	80	4,5	9,0

Updated 19/03/2003

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TECHNICAL DATA

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Turbochargers Technical Data - Model TO4B

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

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TECHNICAL DATA

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Turbochargers Technical Data - Model TO4E

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter	.709	.711	18,010	18,060
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				

- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

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TECHNICAL DATA

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Turbochargers Technical Data - Model TBP4

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3
NUTS				
- actuator cover	80	100	9,0	11,3

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TECHNICAL DATA

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Turbochargers Technical Data - Model TW4B

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

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Turbochargers Technical Data - Model TO5B

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.003	.008	0,07	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter	.822	.824	20,88	20,93
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0665	1,638	1,689
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter (TO5B10)	.6715	.6725	17,056	17,082
- Diameter (all others)	.677	.678	17,20	17,22
- Bore diameter	.3138	.3141	7,971	7,978
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
- Paralelismo entre planos		.0001		0,003
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3137	.3141	7,968	7,978
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,080	0,180

- Axial end play	.004	.007	0,10	0,18

TORQUE SPECIFICATIONS				
PART	**Pounds x Inch**		**Newton x Meters**	
	MIN.	**MAX**	**MIN.**	**MAX.**
BOLTS				
- backplate	40	50	4,5	5,7
- turbine housing	160	190	18,07	21,46
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- nut of compressor housing v clamp	40	80	4,5	9,0

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TECHNICAL DATA

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Turbochargers Technical Data - Model TEO6

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.003	.008	0,07	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (TEO679)	.822	.824	20,88	20,93
- Piston ring bore diameter (ALL OTHERS)	.812	.813	20,62	20,65
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6251	.6254	15,878	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove width	.073	.077	1,85	1,96
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.677	.678	17,20	17,22
- Bore diameter	.3138	.3141	7,971	7,978
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
- Paralelismo entre planos		.0001		0,003
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3137	.3141	7,968	7,978
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,080	0,180
- Axial end play	.004	.007	0,10	0,18

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	40	50	4,5	5,7
- turbine housing	160	190	18,07	21,46
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- nut of compressor housing v clamp	40	80	4,5	9,0

Updated 22/03/2003

Turbochargers Technical Data - Model TH08A

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3136	.3739	9,489	9,497
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter	.812	.813	20,62	20,65
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6251	.6254	15,878	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.698	.702	17,730	17,830
- Piston ring groove width	.068	.072	1,730	1,830
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,080	0,180
- Axial end play	.003	.008	0,08	0,20
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
- turbine housing	160	190	18,1	21,5
SHAFT NUT				
1º Thighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an additional turn of 140º				
V CLAMP				
- nut of compressor housing v clamp	40	80	4,5	9,0

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TECHNICAL DATA

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Turbochargers Technical Data - Model T12

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
INSERT PLATE				
- Piston ring bore diameter	.6870	.6880	17,449	17,475
- Piston ring gap between ends (install)	.003	.008	0,07	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.821	.823	20,85	20,90
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.7955	.7965	20,205	20,231
- Piston ring groove width	.065	.072	1,65	1,82
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.677	.678	17,20	17,22
- Bore diameter	.3138	.3141	7,971	7,978
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
- Paralelismo entre planos		.0001		0,003
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3137	.3141	7,968	7,978
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,080	0,180
- Axial end play	.006	.0013	0,15	0,33

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	30	40	3,4	4,5
- turbine housing	160	190	18,07	21,46
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- nut of compressor housing v clamp	110	130	12,43	14,69

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TECHNICAL DATA

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Turbochargers Technical Data - Model T18

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3736	.3739	9,489	9,497
INSERT PLATE				
- Piston ring bore diameter	.6870	.6880	17,449	17,475
- Piston ring gap between ends (install)	.003	.008	0,07	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	1.029	1.031	26,14	26,19
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter (T1815,78)	.6247	.6250	15,867	15,875
- Journal diameter (resto modelos)	.6250	.6254	15,875	15,885
- Seal hub diameter	.995	.997	25,270	25,320
- Piston ring groove width	.0645	.0665	1,638	1,689
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.486	.487	12,34	12,37
- Diameter	.6715	.6725	17,247	17,259
- Bore diameter	.3754	.3758	9,535	9,545
- Piston ring groove width	.0695	.0715	1,765	1,816
- Piston ring groove diameter	.604	.608	15,34	15,44
- Paralelismo entre planos		.0002		0,005
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.004	.009	0,10	0,23
- Axial end play	.004	.0009	0,10	0,23

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	30	40	3,4	4,5
- turbine housing	160	190	18,07	21,46
- compressor housing	100	110	11,3	12,4
SHAFT NUT				
1º Thighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	15	25	1,7	2,8
4º Plus an additional turn of 130º				

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TECHNICAL DATA

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Turbochargers Technical Data - Model T18A

TOLERANCE SPECIFICATIONS

PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter (T18A15,31,40,73,74,76,77)	.3736	.3739	9,489	9,497
- Bore diameter (T18A66,85,90,94,95,98)	.4374	.4378	11,110	11,120
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
BEARING HOUSING				
- Bearing bore diameter	.9830	.9835	24,968	24,981
- Piston ring bore diameter (labyrinth type)	1.010	1.012	25,65	25,70
- Piston ring bore diameter (T18A44,51,70,72,73,75)	1.019	1.021	25,88	25,93
- Piston ring bore diameter (all others)	1.029	1.031	26,14	26,19
- Piston ring gap between ends (install	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter (T18A15,73,74,77)	.6250	.6254	15,875	15,885
- Journal diameter (all others)	.6247	.6250	15,867	15,875
- Seal hub diameter	.995	.997	25,270	25,320
- Piston ring groove diameter	.880	.885	22,35	22,48
- Piston ring groove width	.0645	.0665	1,638	1,689
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght (T18A85,90,94,95,98)	.651	.652	16,54	16,56
- Total lenght (all others)	.516	.517	13,11	13,13
- Diameter (T18A97)	.677	.678	17,20	17,22
- Diameter (all others)	.6715	.6725	17,247	17,259
- Bore diameter (T18A85,90,94,95,98)	.4392	.4396	11,156	11,166
- Bore diameter (all others)	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
- Paralelismo entre planos		.0001		0,003

THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter (T18A85,90,94,95,98)	.4392	.4396	11,156	11,166
- Bore diameter	.3755	.3759	9,535	9,545
CLEARANCE				
- Radial bearing clearance	.003	.006	0,08	0,15
- Axial end play	.004	.009	0,10	0,23

TORQUE SPECIFICATIONS

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate (aluminium)	90	110	10,2	12,4
- backplate (iron)	160	180	18,1	20,3
- turbine housing	100	110	11,3	12,4
SHAFT NUT				
For 3/8 shaft 1º Thighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	15	25	1,7	2,8
4º Plus an additional turn of 140º				
For 7/16 shaft 1º Thighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	15	25	1,7	2,8
4º Plus an additional turn of 120º				
V CLAMPS				
- nut of compressor housing v clamp	40	60	4,5	6,8

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TECHNICAL DATA

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Turbochargers Technical Data - Model TB25

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
BEARING HOUSING				
- Bearing bore diameter	.5465	.5469	13,880	13,890
- Piston ring bore diameter	.624	.626	15,850	15,900
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- turbine housing	164	181	18,5	20,5

Updated 23/03/2003

Turbochargers Technical Data - Model TB28

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
BEARING HOUSING				
- Bearing bore diameter	.5465	.5469	13,880	13,890
- Piston ring bore diameter	.624	.626	15,850	15,900
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- turbine housing	164	181	18,5	20,5
- compressor housing	145	165	16,4	18,6

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TECHNICAL DATA

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Turbochargers Technical Data - Model TA31

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter	.709	.711	18,010	18,060
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				

- backplate	75	90	8,5	10,2
- turbine housing	115	133	13,0	15,0
- compressor housing	164	181	18,5	20,5
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 110º	18	20	2,0	2,3

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TB31

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter	.709	.711	18,010	18,060
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				

- backplate	75	90	8,5	10,2
- turbine housing	164	181	18,5	20,5
- compressor housing	145	165	16,4	18,6
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3
NUTS				
- actuator cover	80	100	9,0	11,3

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TECHNICAL DATA

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Turbochargers Technical Data - Model TA35

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter (step)	.709	.711	18,010	18,060
- Piston ring bore diameter (smoth)	.699	.701	17,750	17,810
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

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TECHNICAL DATA

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Turbochargers Technical Data - Model TB41

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter	.709	.711	18,010	18,060
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.

BOLTS				
- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

Updated 11/07/2003

Turbochargers Technical Data - Model TA45

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter		.3124		7,935
BACKPLATE				
- Piston ring bore diameter		.6890		17,500
BEARING HOUSING				
- Bearing bore diameter		.7948		20,188
- Piston ring bore diameter		.8240		20,930
TURBINE WHEEL				
- Journal diameter	.5115		12,992	
- Seal hub diameter	.7860		19,960	
- Piston ring groove diameter	.6880		17,475	
- Piston ring groove width		.0685		1,740
THRUST COLLAR				
- Total lenght		.1748		4,440
- Bore diameter		.3128		7,945
CLEARANCE				
- Radial bearing clearance	.0048	.0065	0,120	0,165
- Axial end play	.0020	.0032	0,050	0,080

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- thrust bearing		22		2,5
- backplate		80		9,0
- compressor housing	80	100	9.0	11,3
SHAFT NUT				

1º Tighten to 2º Plus an aditional turn of 125º	32	42	3,6	4,7
V CLAMP				
- turbine housing	150	170	16,9	19,1

Updated 23/03/2003

Turbochargers Technical Data - Model TB45

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter		.3124		7,935
BACKPLATE				
- Piston ring bore diameter		.6890		17,500
BEARING HOUSING				
- Bearing bore diameter		.7948		20,188
- Piston ring bore diameter		.8240		20,930
TURBINE WHEEL				
- Journal diameter	.5115		12,992	
- Seal hub diameter	.7860		19,960	
- Piston ring groove diameter	.6880		17,475	
- Piston ring groove width		.0685		1,740
THRUST COLLAR				
- Total lenght		.1748		4,440
- Bore diameter		.3128		7,945
CLEARANCE				
- Radial bearing clearance	.0048	.0065	0,120	0,165
- Axial end play	.0020	.0032	0,050	0,080

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- thrust bearing		22		2,5
- backplate		80		9,0
- compressor housing	80	100	9.0	11,3
SHAFT NUT				

1º Tighten to 2º Plus an aditional turn of 125º	32	42	3,6	4,7
V CLAMP				
- compressor housing	150	170	16,9	19,1
- turbine housing	150	170	16,9	19,1

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Turbochargers Technical Data - Model TA51

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter		.3124		7,935
BACKPLATE				
- Piston ring bore diameter		.6890		17,500
BEARING HOUSING				
- Bearing bore diameter		.7948		20,188
- Piston ring bore diameter		.8240		20,930
TURBINE WHEEL				
- Journal diameter	.5115		12,992	
- Seal hub diameter	.7860		19,960	
- Piston ring groove diameter	.6880		17,475	
- Piston ring groove width		.0685		1,740
THRUST COLLAR				
- Total lenght		.1748		4,440
- Bore diameter		.3128		7,945
CLEARANCE				
- Radial bearing clearance	.0048	.0065	0,120	0,165
- Axial end play	.0020	.0032	0,050	0,080

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- thrust bearing		22		2,5
- backplate		80		9,0
- compressor housing	80	100	9.0	11,3
SHAFT NUT				

1º Tighten to 2º Plus an aditional turn of 125º	32	42	3,6	4,7
V CLAMP				
- turbine housing	150	170	16,9	19,1

Updated 25/03/2003

Turbochargers Technical Data - Model TL61

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TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter	.822	.824	20,88	20,93
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 08/05/2003

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TECHNICAL DATA

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Turbochargers Technical Data - Model TV61

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
BACKPLATE				
- Piston ring bore diameter	.6870	.6880	17,449	17,475
- Piston ring gap between ends (install)	.003	.008	0,07	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.821	.823	20,85	20,90
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.7955	.7965	20,205	20,231
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.065	.072	1,65	1,82
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 05/05/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TW61

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.822	.824	20,88	20,93
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,340	15,440
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 05/05/2003

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TV63

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	.003	.007	0.08	0.18
- Axial end play	.003	.010	0,08	0,25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 05/05/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

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Turbochargers Technical Data - Model TV71

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3736	.3739	9,489	9,497
INSERT PLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.821	.823	20,85	20,90
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 01/04/2003

Turbochargers Technical Data - Model TV72

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3736	.3739	9,489	9,497
INSERT PLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.821	.823	20,85	20,90
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an additional turn of 130º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 02/04/2003

Turbochargers Technical Data - Model TV73

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	.003	.007	0.08	0.18
- Axial end play	.003	.010	0,08	0,25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 03/04/2003

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TECHNICAL DATA

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Turbochargers Technical Data - Model TW73

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.0025	.004	0,064	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 07/03/2003

Turbochargers Technical Data - Model TV75

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	.003	.007	0.08	0.18
- Axial end play	.003	.010	0,08	0,25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 05/04/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

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Turbochargers Technical Data - Model BTV75

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play				

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
ROTOR				
1º Place a drop of oil in the thread of the compresor wheel 2º Tighten to (by hand)	182	210	20,0	23,0

Updated 09/02/2003

Turbochargers Technical Data - Model TL77

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
INSERT PLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter	.822	.824	20,88	20,93
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 02/04/2003

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TECHNICAL DATA

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Turbochargers Technical Data - Model TV77

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
INSERT PLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.821	.823	20,85	20,90
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an additional turn of 130º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 03/04/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TL78

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
INSERT PLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter	.822	.824	20,88	20,93
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TV78

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.822	.824	20,88	20,93
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,340	15,440
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 07/05/2003

Turbochargers Technical Data - Model TW78

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3121	.3124	7,927	7,935
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter	.822	.824	20,88	20,93
- Piston ring gap between ends	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,340	15,440
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an additional turn of 135º-145º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 07/05/2003

Catalog 1.0 - 2006

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Turbochargers Technical Data - Model TL81

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3736	.3739	9,489	9,497
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter	.822	.824	20,88	20,93
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 02/04/2003

Turbochargers Technical Data - Model TV81

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3736	.3739	9,489	9,497
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
- Piston ring gap between ends (install)	.001	.008	0,02	0,20
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.822	.824	20,88	20,93
- Piston ring gap between ends (install)	.008	.015	0,20	0,38
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,34	15,44
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 02/04/2003

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TECHNICAL DATA

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Turbochargers Technical Data - Model TW81

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.3736	.3739	9,489	9,497
BACKPLATE				
- Piston ring bore diameter	.6875	.6885	17,463	17,488
BEARING HOUSING				
- Bearing bore diameter	.9827	.9832	24,961	24,973
- Piston ring bore diameter (step)	.822	.824	20,88	20,93
TURBINE WHEEL				
- Journal diameter	.6250	.6254	15,875	15,885
- Seal hub diameter	.795	.797	20,190	20,240
- Piston ring groove diameter	.688	.692	17,480	17,580
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST SPACER				
- Total lenght	.516	.517	13,110	13,130
- Diameter	.6715	.6725	17,056	17,082
- Bore diameter	.3755	.3758	9,538	9,545
- Piston ring groove width	.0685	.0695	1,740	1,765
- Piston ring groove diameter	.604	.608	15,340	15,440
THRUST COLLAR				
- Total lenght	.299	.300	7,59	7,62
- Bore diameter	.3755	.3759	9,535	9,545
- Paralelismo entre planos		.0003		0,008
CLEARANCE				
- Radial bearing clearance	.003	.007	0,08	0,18
- Axial end play	.003	.010	0,08	0,25
TORQUE SPECIFICATIONS				

PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	80	100	9,0	11,3
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,43	14,69
- turbine housing v clamp nut	110	130	12,43	14,69

Updated 07/05/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

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Turbochargers Technical Data - Model TV83

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	.003	.007	0.08	0.18
- Axial end play	.0025	.0045	0,064	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 02/04/2003

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TECHNICAL DATA

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Turbochargers Technical Data - Model TW83

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	.003	.007	0.08	0.18
- Axial end play	.0025	.0045	0,064	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 07/05/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

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Turbochargers Technical Data - Model TV84

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	.003	.007	0.08	0.18
- Axial end play	.003	.010	0,076	0,254

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 02/04/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TV85

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.0025	.0040	0,064	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	105	10,2	11,9
- thrust bearing	30	35	3,4	3,9
SHAFT NUT				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 130º	125 35	150 55	14,1 4,0	17,0 6,2
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	152	168	17,2	19,0

Updated 05/04/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model BTV85

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play				

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
ROTOR				
1º Place a drop of oil in the thread of the compresor wheel 2º Tighten to (by hand)	182	210	20,0	23,0

Updated 11/02/2003

Turbochargers Technical Data - Model TL91

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TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	0.003	0.007	0.08	0.18
- Axial end play	0.003	0.010	0.08	0.25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	330	360	37,3	40,7
- turbine housing	324	372	36,6	42,0
SHAFT NUT				
1º Tighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an aditional turn of 130º-145º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7

Updated 09/05/2004

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TV91

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	0.003	0.007	0.08	0.18
- Axial end play	0.003	0.010	0.08	0.25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	330	360	37,3	40,7
- turbine housing	324	372	36,6	42,0
SHAFT NUT				
1º Tighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an aditional turn of 130º-145º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7

Updated 18/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TW91

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	0.003	0.007	0.08	0.18
- Axial end play	0.003	0.010	0.08	0.25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	330	360	37,3	40,7
- turbine housing	324	372	36,6	42,0
SHAFT NUT				
1º Tighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an aditional turn of 115º-125º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7

Updated 07/05/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TV92

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	0.003	0.007	0.08	0.18
- Axial end play	0.003	0.010	0.08	0.25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	330	360	37,3	40,7
- turbine housing	324	372	36,6	42,0
SHAFT NUT				
1º Tighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an aditional turn of 130º-145º				

Updated 18/03/2003

Turbochargers Technical Data - Model TW92

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TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	0.003	0.007	0.08	0.18
- Axial end play	0.003	0.010	0.08	0.25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	330	360	37,3	40,7
- turbine housing	324	372	36,6	42,0
SHAFT NUT				
1º Apretar hasta 1º Tighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an aditional turn of 130º-145º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7

Update 22/04/2006

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model TV94

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	0.003	0.007	0.08	0.18
- Axial end play	0.003	0.010	0.08	0.25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	330	360	37,3	40,7
- turbine housing	324	372	36,6	42,0
SHAFT NUT				
1º Tighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an aditional turn of 130º-145º				
V CLAMPS				
- compressor housing	110	130	12,4	14,7
- turbine housing	110	130	12,4	14,7

Updated 19/03/2003

Turbochargers Technical Data - Model TW94

Garrett®

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance	0.003	0.007	0.08	0.18
- Axial end play	0.003	0.010	0.08	0.25

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	330	360	37,3	40,7
- turbine housing	324	372	36,6	42,0
SHAFT NUT				
1º Apretar hasta 1º Tighten to	125	150	14,1	17,0
2º Loosen the nut				
3º Thighten again to	35	55	4,0	6,2
4º Plus an aditional turn of 130º-145º				
V CLAMP				
- compressor housing v clamp nut	110	130	12,4	14,7
- turbine housing v clamp nut	110	130	12,4	14,7

Update 21/04/2006

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model T250

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
ALOJAMIENTO COJINETES				
- Diámetro del soporte de los cojinetes	.5465	.5469	13,880	13,890
- Diámetro del alojamiento del segmento	.624	.626	15,850	15,900
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- turbine housing	170	185	19,2	20,9

Updated 19/03/2003

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model T300

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter	.709	.711	18,010	18,060
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				

- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

Updated 19/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model T350

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
COMPRESSOR WHEEL				
- Bore diameter	.2498	.2501	6,345	6,353
BACKPLATE				
- Piston ring bore diameter	.4995	.5005	12,687	12,713
BEARING HOUSING				
- Bearing bore diameter	.6220	.6223	15,799	15,806
- Piston ring bore diameter	.709	.711	18,010	18,060
TURBINE WHEEL				
- Journal diameter	.3997	.4000	10,152	10,160
- Seal hub diameter	.679	.684	17,250	17,370
- Piston ring groove diameter	.567	.572	14,400	14,530
- Piston ring groove width	.0645	.0685	1,638	1,740
- Excentricity		.0005		0,013
THRUST COLLAR				
- Total lenght	.722	.724	18,340	18,390
- Bore diameter	.2501	.2505	6,353	6,363
- Thrust bearing groove width	.1740	.1748	4,420	4,440
- Thrust bearing groove diameter	.370	.380	9,400	9,650
- Piston ring groove width	.638	.653	1,621	1,659
- Piston ring groove diameter	.405	.410	10,290	10,410
- Paralelismo entre planos		.0001		0,003
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				

- backplate	75	90	8,5	10,2
- turbine housing	100	130	11,3	14,7
- compressor housing	110	130	12,4	14,7
SHAFT NUT				
1º Tighten to 2º Plus an aditional turn of 125º	18	20	2,0	2,3

Updated 15/11/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT12

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play	0.002	0.005	0,050	0,126

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- compressor housing	55	72	6,0	8,0
TUERCAS				
- turbine housing v clamp				

Updated 10/03/2003

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT15

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 29/03/2003

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT15P

TOLERANCIAS				
PIEZA	PULGADAS		MILIMETROS	
	MIN.	MAX	MIN.	MAX.
TURBINA Y EJE				
- Excentricidad		.0004		0,010
HOLGURAS				
- Radial				
- Axial	.001	.003	0.02	0.08

PARES DE APRIETE				
PIEZA	Libras x Pulgada		Newton x metro	
	MIN.	MAX	MIN.	MAX.
TORNILLOS				
- del plato	62	75	6,8	8,2
- de la caracola de admisión	55	72	6,0	8,0
- de la caracola de escape	91	127	10,0	14,0
TUERCA DEL EJE (standar)				
1º Apretar hasta		52		5,7
2º Aflojar la tuerca				
3º Reapretar hasta	18	29	2,0	3,2
4º Dar un giro adicional de 70º-80º				
TUERCA DEL EJE (ruedas roscadas)				
1º Apretar hasta		59		6,5
TUERCAS				
- del pistón tobera	50	86	5,5	9,5
ADAPTADORES				
- racor de entrada de aceite	155	210	17,0	23,0

Updated 19/03/2003

Turbochargers Technical Data - Model GT15V

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- stud of bearing housing actuator end	34	45	3,0	4,0
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 24/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT17

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 29/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT17V

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- stud of bearing housing actuator end	34	45	3,0	4,0
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 24/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model BTV75

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- stud of bearing housing actuator end	34	45	3,0	4,0
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 24/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT20

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 29/03/2003

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT20V

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- stud of bearing housing actuator end	34	45	3,0	4,0
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 24/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT22

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 29/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT22V

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Eccentricity of small diameter		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- stud of bearing housing actuator end	34	45	3,0	4,0
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 24/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT23V

TOLERANCIAS				
PIEZA	PULGADAS		MILIMETROS	
	MIN.	MAX	MIN.	MAX.
TURBINA Y EJE				
- Excentricidad		.0004		0,010
HOLGURAS				
- Radial				
- Axial	.001	.003	0.02	0.08

PARES DE APRIETE				
PIEZA	Libras x Pulgada		Newton x metro	
	MIN.	MAX	MIN.	MAX.
TORNILLOS				
- del plato	62	75	6,8	8,2
- de la caracola de admisión	55	72	6,0	8,0
- de la caracola de escape	91	127	10,0	14,0
- del aro tobera	36	45	4,0	5,0
TUERCA DEL EJE (standar)				
1º Apretar hasta		52		5,7
2º Aflojar la tuerca				
3º Reapretar hasta	18	29	2,0	3,2
4º Dar un giro adicional de 70º-80º				
TUERCA DEL EJE (ruedas roscadas)				
1º Apretar hasta		59		6,5
TUERCAS				
- del espárrago del tope de la válvula	28	36	3,0	4,0
- del vástago de la válvula	50	62	5,6	6,8
- de la válvula al soporte	50	62	5,6	6,8
ADAPTADORES				
- racor de entrada de aceite	155	210	17,0	23,0

ESPARRAGOS				
- de la caracola de escape (M8 / 125)	110	155	12,0	17,0
- de la caracola de escape (M10 / 150)	110	155	12,0	17,0

Updated 12/11/2003

Catalog 1.0 - 2006

Garrett®
TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT25

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
BEARING HOUSING				
- Bearing bore diameter	.5465	.5469	13,880	13,890
- Piston ring bore diameter	.624	.626	15,850	15,900
CLEARANCE				
- Radial bearing clearance	.0030	.0065	0,076	0,165
- Axial end play	.0005	.0040	0,025	0,102

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- turbine housing	164	181	18,5	20,5

Updated 24/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT25V

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
TURBINE WHEEL				
- Excentricity		.0004		0,010
CLEARANCE				
- Radial bearing clearance				
- Axial end play	.001	.003	0,02	0,08

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- seal plate	62	75	6,8	8,2
- compressor housing	55	72	6,0	8,0
- turbine housing	91	127	10,0	14,0
SHAFT NUT (standar)				
1º Thighten to 2º Loosen the nut 3º Thighten again to 4º Plus an additional turn of 70º-80º	18	52 29	2,0	5,7 3,2
SHAFT NUT (threaded)				
1º Thighten to		59		6,5
NUTS				
- stud of bearing housing actuator end	34	45	3,0	4,0
- rod end	50	62	5,6	6,8
FITTINGS				
- oil inlet fitting	155	210	17,0	23,0

Updated 24/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT32

TOLERANCIAS				
PIEZA	PULGADAS		MILIMETROS	
	MIN.	MAX	MIN.	MAX.
HOLGURAS				
- Radial				
- Axial				

PARES DE APRIETE				
PIEZA	Libras x Pulgada		Newton x metro	
	MIN.	MAX	MIN.	MAX.
TORNILLOS				
- del plato	185	215	20,9	24,3
- de la caracola de admisión ('Z' system)	185	215	20,9	24,3
- de la caracola de admisión (compact)	80	120	9,0	13,6
- de la caracola de escape	185	215	20,9	24,3
TUERCA EJE				
- ruedas compresoras sin agujero y con rosca	90	110	10,2	12,5
- ruedas compresoras con agujero roscado	90	110	10,2	12,5

Updated 11/02/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT35

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play				

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	185	215	20,9	24,3
- compressor housing ('Z' system)	185	215	20,9	24,3
- compressor housing (compact)	80	120	9,0	13,6
- turbine housing	185	215	20,9	24,3
SHAF NUT				
- boreless compressor wheels	90	110	10,2	12,5
- threaded compressor wheels	90	110	10,2	12,5

Updated 21/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT37

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play				

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	185	215	20,9	24,3
- compressor housing ('Z' system)	185	215	20,9	24,3
- compressor housing (compact)	80	120	9,0	13,6
- turbine housing	185	215	20,9	24,3
SHAF NUT				
- boreless compressor wheels	90	110	10,2	12,5
- threaded compressor wheels	90	110	10,2	12,5

Updated 19/03/2003

Catalog 1.0 - 2006

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TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT40

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play				

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	185	215	20,9	24,3
- compressor housing ('Z' system)	185	215	20,9	24,3
- compressor housing (compact)	80	120	9,0	13,6
- turbine housing	185	215	20,9	24,3
SHAF NUT				
- boreless compressor wheels	90	110	10,2	12,5
- threaded compressor wheels	90	110	10,2	12,5

Update 18/03/2003

Updated 22/02/2003

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT42

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play				

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	120	10,2	13,6
- compressor housing	80	120	9,0	13,6
- thrust bearing	30	35	3,4	4,0
SHAF NUT				
- boreless compressor wheels	130	150	14,7	17,0
- threaded compressor wheels	160	195	18,0	22,0
V CLAMPS				
- tubine housing	110	130	12,4	14,7

Updated 19/03/2003

Catalog 1.0 - 2006

Garrett®

TECHNICAL DATA

TurboMaster

Turbochargers Technical Data - Model GT45

TOLERANCE SPECIFICATIONS				
PART	INCHES		MILLIMETERS	
	MIN.	MAX	MIN.	MAX.
CLEARANCE				
- Radial bearing clearance				
- Axial end play				

TORQUE SPECIFICATIONS				
PART	Pounds x Inch		Newton x Meters	
	MIN.	MAX	MIN.	MAX.
BOLTS				
- backplate	90	120	10,2	13,6
- compressor housing	80	120	9,0	13,6
- thrust bearing	30	35	3,4	4,0
SHAF NUT				
- boreless compressor wheels	130	150	14,7	17,0
- threaded compressor wheels	160	195	18,0	22,0
V CLAMPS				
- tubine housing	110	130	12,4	14,7

Updated 18/03/2003