

Sportster Front Pulley Installation

32 Tooth TS & TAS 2004 - Up

INTRODUCTION

The belt does not need to be replaced for any of our pulleys. The 2004 & Up 31 & 32 Tooth pulleys are wider with greater inboard offset than original Harley Davidson Pulleys. These pulleys do not have or require a belt guide.



The 32 pulleys will cause the speedometer to read slower than actual road speed. The later charts show calculated percentage change and mph at different rpm. The speedometer can be corrected with the use of "The Corrector" available from us. If your ignition module has not been upgraded you may purchase a high performance ignition module. Some offer speedometer correction.

If you desire "more gear" than just the 32, we offer 66 tooth rear pulleys.

Calculated Drive Train Ratios											
Years	Engine	Primary	Engine	Clutch	Ratio	Trans	Wheel	Ratio	Final	Engine	Years
'91-03	883	35/56	35	56	1.60	27	61	2.26	3.86	883	'91-03
'91-03	883	35/56	35	56	1.60	28	61	2.18	3.78	883	'91-03
'91-03	883	35/56	35	56	1.60	29	61	2.10	3.70	883	'91-03
'91-03	883	35/56	35	56	1.60	30	61	2.03	3.63	883	'91-03
'91-03	883	35/56	35	56	1.60	32	61	1.91	3.51	883	'91-03
'91-03	1200	35/56	35	56	1.60	29	55	1.90	3.50	1200	'91-03
'91-03	1200	35/56	35	56	1.60	29	61	2.10	3.70	1200	'91-03
'91-03	1200	35/56	35	56	1.60	30	61	2.03	3.63	1200	'91-03
'91-03	1200	35/56	35	56	1.60	32	61	1.91	3.51	1200	'91-03
2004+	883	34/57	34	57	1.68	28	66	2.36	4.03	883	2004+
2004+	883	34/57	34	57	1.68	29	66	2.28	3.95	883	2004+
2004+	883	34/57	34	57	1.68	30	66	2.20	3.88	883	2004+
2004+	883	34/57	34	57	1.68	32	66	2.06	3.74	883	2004+
2004+	883	34/57	34	57	1.68	28	68	2.43	4.11	883	2004+
2004+	883	34/57	34	57	1.68	29	68	2.34	4.02	883	2004+
2004+	883	34/57	34	57	1.68	30	68	2.27	3.94	883	2004+
2004+	883	34/57	34	57	1.68	32	68	2.13	3.80	883	2004+
2004+	1200	38/57	38	57	1.50	28	66	2.36	3.86	1200	2004+
2004+	1200	38/57	38	57	1.50	29	66	2.28	3.78	1200	2004+
2004+	1200	38/57	38	57	1.50	30	66	2.20	3.70	1200	2004+
2004+	1200	38/57	38	57	1.50	32	66	2.06	3.56	1200	2004+
2004+	1200	38/57	38	57	1.50	29	68	2.34	3.84	1200	2004+
2004+	1200	38/57	38	57	1.50	30	68	2.27	3.77	1200	2004+
2004+	1200	38/57	38	57	1.50	32	68	2.13	3.63	1200	2004+

PULLEY REMOVAL

- Do not loosen the axle nut or adjusters until the pulley nut has been loosened with an impact wrench.
- Remove rear cylinder exhaust and Pulley Cover
- Remove lock plate screws and lock plate
- Remove Pulley Nut, left hand thread. Usually requires an impact wrench and a Pulley Holder.
- Loosen axle nut, remove the axle adjuster nuts
- Move rear tire forward, push down on the belt to get movement started



PULLEY INSTALLATION

- Install pulley, nut is left hand thread. Splines are tighter than stock pulley. Use Blue Loctite.
- Torque pulley nut to 50 Ft Lb + 30-45 degrees, continue to tighten until holes in lock plate align with the mounting holes in the pulley.
- Force the rear axle backwards, reinstall the adjuster nuts and adjust the belt tension/deflection at about 10 lbs force;
 - 883, 883R, 1200R = 3/8-7/16"
 - All Others = 1/4-5/16"
- Axle must be straight; distance axle to swing arm centers. Cut a wire shirt hanger and bend it to compare each side. There is no measurement, just each side must be equal.
- Torque axle nut to 60-65 ft lb.
- Install the pulley cover and exhaust
- Test drive and then enjoy freeway cruising!
- If the belt rubs, it will be "shinny". File the bosses until the belt does not rub.



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MODIFICATIONS FOR 32 PULLEY

There are three mounting “bosses” on the engine case and rear of Pulley Cover. The front and bottom bosses must be modified, filed flat on the belt side, to allow the 32 pulley to operate without belt rub.

File both the forward and bottom bosses on the engine case and Pulley cover until there is ~1/16-1/8” clearance for the belt. The lower exhaust bracket that mounts to the lower boss must also be filed. The standoffs on the Cover require more filing at their base than at the end as they are tapered, “fatter” where they meet the cover. The following dimensions are a good start point to begin the modifications.

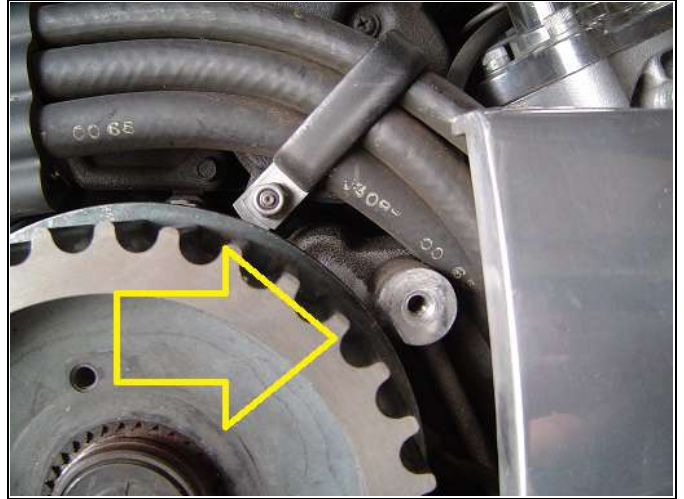
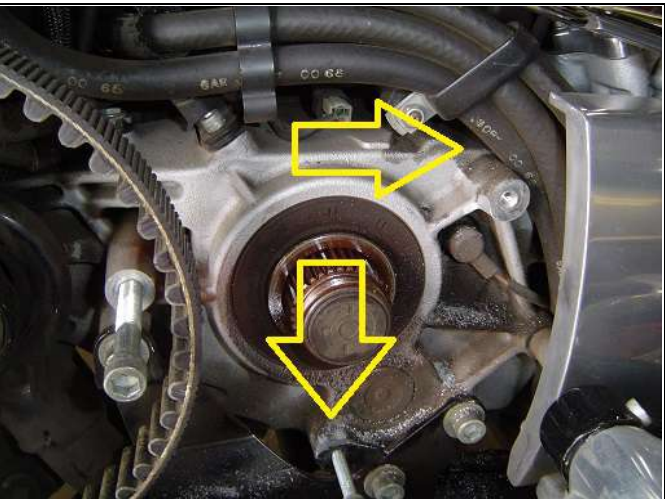
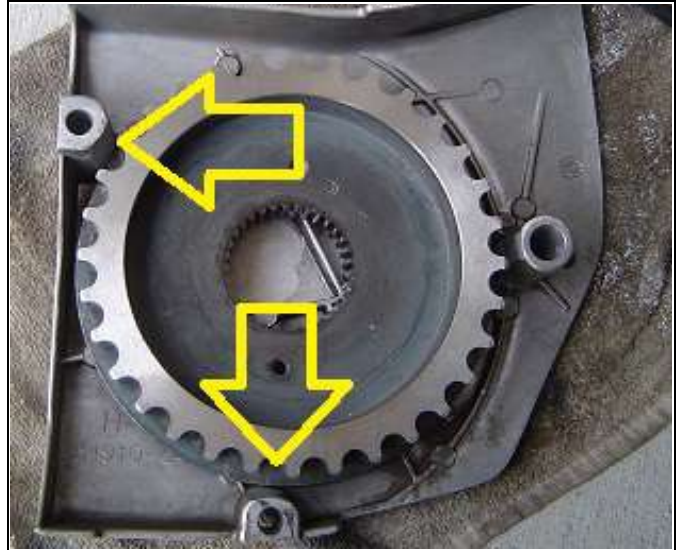
Boss Location	Width	Depth
Front	5/8”	1/8”
Bottom	5/8”	1/8”
Rear	3/8”	1/16”

CHANGES IN MPH & ENGINE RPM

2004+ Speedometer Versus Road Speed and RPM (68 Tooth Rear)																	
Road Speed					Engine RPM					Road Speed					Engine RPM		
883	3.6%	7.1%	10.7%	14.3%						1200	3.4%	6.7%	10.3%				
28	29	30	31	32	28	29	30	31	32	29	30	31	32	29	30	31	32
20	20.7	21.4	22.1	22.9	1078	1041	1006	973	943	20	20.7	21.4	22.1	929	898	869	842
25	25.9	26.8	27.7	28.6	1347	1301	1257	1217	1179	25	25.9	26.8	27.6	1161	1123	1086	1053
30	31.1	32.1	33.2	34.3	1617	1561	1509	1460	1415	30	31.0	32.1	33.1	1394	1347	1304	1263
35	36.3	37.5	38.8	40.0	1886	1821	1760	1704	1650	35	36.2	37.5	38.6	1626	1572	1521	1474
40	41.4	42.9	44.3	45.7	2156	2081	2012	1947	1886	40	41.4	42.8	44.1	1858	1796	1738	1684
45	46.6	48.2	49.8	51.4	2425	2341	2263	2190	2122	45	46.6	48.2	49.7	2091	2021	1956	1895
50	51.8	53.6	55.4	57.1	2694	2602	2515	2434	2358	50	51.7	53.5	55.2	2323	2245	2173	2105
55	57.0	58.9	60.9	62.9	2964	2862	2766	2677	2593	55	56.9	58.9	60.7	2555	2470	2390	2316
60	62.1	64.3	66.4	68.6	3233	3122	3018	2920	2829	60	62.1	64.2	66.2	2787	2694	2608	2526
65	67.3	69.6	72.0	74.3	3503	3382	3269	3164	3065	65	67.2	69.6	71.7	3020	2919	2825	2737
70	72.5	75.0	77.5	80.0	3772	3642	3521	3407	3301	70	72.4	74.9	77.2	3252	3144	3042	2947
75	77.7	80.4	83.0	85.7	4042	3902	3772	3651	3537	75	77.6	80.3	82.8	3484	3368	3259	3158
80	82.9	85.7	88.6	91.4	4311	4163	4024	3894	3772	80	82.8	85.6	88.3	3717	3593	3477	3368
85	88.0	91.1	94.1	97.1	4581	4423	4275	4137	4008	85	87.9	91.0	93.8	3949	3817	3694	3579
90	93.2	96.4	99.6	102.9	4850	4683	4527	4381	4244	90	93.1	96.3	99.3	4181	4042	3911	3789
95	98.4	101.8	105.2	108.6	5120	4943	4778	4624	4480	95	98.3	101.7	104.8	4413	4266	4129	4000
100	103.6	107.1	110.7	114.3	5389	5203	5030	4867	4715	100	103.4	107.0	110.3	4646	4491	4346	4210
105	108.8	112.5	116.3	120.0	5658	5463	5281	5111	4951	105	108.6	112.4	115.9	4878	4715	4563	4421
110	113.9	117.9	121.8	125.7	5928	5723	5533	5354	5187	110	113.8	117.7	121.4	5110	4940	4781	4631
115	119.1	123.2	127.3	131.4	6197	5984	5784	5598	5423	115	119.0	123.1	126.9	5343	5164	4998	4842
120	124.3	128.6	132.9	137.1	6467	6244	6036	5841	5658	120	124.1	128.4	132.4	5575	5389	5215	5052

2004+ Speedometer Versus Road Speed and RPM (66 Tooth Rear)																	
Road Speed					Engine RPM					Road Speed					Engine RPM		
883	6.5%	10.0%	13.6%	17.2%	Stock						1200	6.3%	9.6%	12.6%			
28	29	30	31	32	28	29	30	31	32	29	30	31	32	29	30	31	32
20	21.3	22.0	22.7	23.4	1046	1010	976	945	915	20	21.3	22.6	24.1	902	872	844	817
25	26.6	27.5	28.4	29.3	1308	1263	1220	1181	1144	25	26.6	28.3	30.1	1127	1090	1055	1022
30	31.9	33.0	34.1	35.2	1569	1515	1465	1417	1373	30	31.9	33.9	36.1	1353	1308	1265	1226
35	37.3	38.5	39.8	41.0	1831	1768	1709	1654	1602	35	37.2	39.6	42.1	1578	1526	1476	1430
40	42.6	44.0	45.4	46.9	2092	2020	1953	1890	1831	40	42.5	45.2	48.1	1804	1743	1687	1635
45	47.9	49.5	51.1	52.7	2354	2273	2197	2126	2059	45	47.9	50.9	54.1	2029	1961	1898	1839
50	53.2	55.0	56.8	58.6	2615	2525	2441	2362	2288	50	53.2	56.5	60.1	2255	2179	2109	2043
55	58.6	60.5	62.5	64.5	2877	2778	2685	2598	2517	55	58.5	62.2	66.2	2480	2397	2320	2247
60	63.9	66.0	68.2	70.3	3138	3030	2929	2835	2746	60	63.8	67.9	72.2	2705	2615	2531	2452
65	69.2	71.5	73.8	76.2	3400	3283	3173	3071	2975	65	69.1	73.5	78.2	2931	2833	2742	2656
70	74.5	77.0	79.5	82.0	3661	3535	3417	3307	3204	70	74.4	79.2	84.2	3156	3051	2953	2860
75	79.9	82.5	85.2	87.9	3923	3788	3661	3543	3432	75	79.8	84.8	90.2	3382	3269	3164	3065
80	85.2	88.0	90.9	93.7	4184	4040	3905	3779	3661	80	85.1	90.5	96.2	3607	3487	3374	3269
85	90.5	93.5	96.6	99.6	4446	4293	4150	4016	3890	85	90.4	96.1	102.2	3833	3705	3585	3473
90	95.8	99.0	102.3	105.5	4707	4545	4394	4252	4119	90	95.7	101.8	108.3	4058	3923	3796	3678
95	101.1	104.5	107.9	111.3	4969	4798	4638	4488	4348	95	101.0	107.4	114.3	4284	4141	4007	3882
100	106.5	110.0	113.6	117.2	5230	5050	4882	4724	4577	100	106.3	113.1	120.3	4509	4359	4218	4086
105	111.8	115.5	119.3	123.0	5492	5303	5126	4961	4805	105	111.7	118.8	126.3	4734	4577	4429	4291
110	117.1	121.0	125.0	128.9	5754	5555	5370	5197	5034	110	117.0	124.4	132.3	4960	4795	4640	4495
115	122.4	126.5	130.7	134.8	6015	5808	5614	5433	5263	115	122.3	130.1	138.3	5185	5013	4851	4699
120	127.8	132.1	136.3	140.6	6277	6060	5858	5669	5492	120	127.6	135.7	144.3	5411	5230	5062	4904

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Heel/Toe Shifter



Oil Temperature Gage



Halo Headlight



Triple Light



LED Rear Lamp Replacement Kit



Interstate Handlebars



Speedometer Corrector



Pulley Holder Kit

