

Table of Contents

EVO: Suspension	1
Rear Shock Info	1
Sub-Documents	1
1986-2003 Springs (Except 1200S)	1
1996-2003 Springs For 1200 Sport Model	2
2004-later Springs	2
2006-2007 1200L	4
Screaming Eagle Piggyback Shocks	4

[Go To Technical Menu](#)

EVO: Suspension

Rear Shock Info

Sub-Documents

- * ... [1200S Showa Shocks on a 08 1200N](#)
- * ... [2014 XL1200T - Checking Suspension Measurements & Modifications](#)
- * ... [1200S Shocks: Testing & Mods w/ Spring Rate Charts](#)
- * ... [Future Subject](#)

1986-2003 Springs (Except 1200S)

Complete Shock and Spring Assemblies ^{1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 11)}			
Year	Model	Part #	Standard/ Option
1986-1987	XLH 883	54568-82 (2)	Standard
1988-1990		54566-88 (2)	Standard
1991-1993		54566-91 (2)	Standard
1994-1996		54566-94 (2)	Standard
1997-2003		54566-97 (2)	Standard
1999-2003	883 Custom	54568-92 (2)	Standard
1986-1987	XLH 883 Deluxe	54568-82 (2)	Standard
1988-1990		54566-88 (2)	Standard
1991-1993		54566-91 (2)	Standard
1994-1996		54566-94 (2)	Standard
1987-1990	XLH 883 Hug	54568-82 (2)	Standard
1991		54568-91 (2)	Standard
1993-2003		54568-92 (2)	Standard
2002-2003	XL 883 Roadster	54566-97 (2)	Standard
1986	XLH 1100 Liberty	54568-82 (2)	Standard

1986-1987	XLH 1100	54568-82 (2)	Standard
1987	XLH 1100 Anniversary	54568-82 (2)	Standard
1988-1990	XLH 1200	54566-88 (2)	Standard
1991-1993		54566-91 (2)	Standard
1994-1996		54566-94 (2)	Standard
1997-2003		54566-97 (2)	Standard
1996-2003	XL 1200C	54568-92 (2)	Standard

1996-2003 Springs For 1200 Sport Model

- See [Suspension Settings for Factory 39mm Cartridge Valve Forks and Gas Canister Piggyback Shocks](#) for setting up the factory piggyback shocks.
- Length is 13.5" "eye to eye".
- The factory dampers for piggyback shocks for S models are now obsolete from the MoCo and not rebuild-able ¹²⁾. So when they go bad, they have to be replaced either with a used or aftermarket set.
- Some spring weights:
 - The 1200S shocks have a 54/78 lb/in spring. ¹³⁾
 - The 12.5" 412 has a standard 75/120 lb/in spring for 180 lb riders. ¹⁴⁾
 - The 12" 412 has a 90/130 spring. ¹⁵⁾
- Be careful, if you need to replace the bushings, not to crack the dampening wheel at the bottom of the shock. ¹⁶⁾

Complete Shock and Spring Assemblies ^{17) 18) 19) 20) 21) 22) 23) 24)}				
Year	Model	Left	Right	Standard/ Option
1996-1997	XL 1200S	54542-96	54552-96	Standard
1998-2003	XL 1200S	54542-96A	54552-96A	Standard

2004-later Springs

Complete Shock and Spring Assemblies ^{25) 26) 27) 28) 29) 30) 31) 32) 33) 34) 35)}									
Year	Model	Part #	Standard/ Option	Shock Travel	Spring Free Length	Spring Rate (lbs per inch).	Spring Installed Length	Spring Preload (ft/lbs)	
2004-2008	XL883 Domestic	54566-04 (2)	Standard	3.25" ³⁶⁾	11.33" ³⁷⁾	69 ³⁸⁾	9.64" ³⁹⁾	116 ⁴⁰⁾	
2009		54566-09 (2)	Standard						
2009		54566-09 (2)	Standard						
2004-2008	XL883C	54568-04 (2)	Standard						
2009-2010	Domestic	54568-09 (2)	Standard						

2005-2006	<u>XL883L</u> Domestic	54568-04 (2)	Standard						
2007-2010		54626-07 (2)	Standard						
2011-2015		54568-09 (2)	Standard						
2009	<u>XL883N</u> Domestic	54540-07 (2)	Standard						
2010-2015		54550-10 (2)	Standard						
2010-2013	HDI, England, Australia	54570-09 (2)	Standard						
2011-2013	Asia-Pacific		Standard						
2013	India		Standard						
2014-2015	HDI		Standard						
2014-2015	Japan	54550-10	Standard						
2005-2008	<u>XL883R</u> Domestic	54570-05 (2)	Standard						
2009-2015		54570-09 (2)	Standard						
2007	<u>XL-50 (1200)</u> Domestic	54568-04 (2)	Standard						
2004-2008	<u>XL1200C</u> Domestic	54568-04 (2)	Standard						
2009-2010		54568-09 (2)	Standard						
2012-2015		54568-09 (2)	Standard						
2013	<u>XL1200C Anniv</u> Domestic	54568-09 (2)	Standard						
2013-2015	<u>XL1200CA</u> Domestic	54568-09 (2)	Standard						
2013-2015	<u>XL1200CB</u> Domestic	54568-09 (2)	Standard						
2012-2015	<u>XL1200CP</u> Domestic	54568-09 (2)	Standard						
2007-2008	<u>XL1200L</u> Domestic	54568-04 (2)	Standard						
2009-2010		54568-09 (2)	Standard						
2011		54568-09 (2)	Standard						
2007-2009	<u>XL1200N</u> Domestic	54540-07 (2)	Standard						
		54550-10 (2)	Standard						
2010-2012	HDI, England, Australia	54570-09 (2)	Standard						
2011-2012	Asia-Pacific		Standard						
2004-2008	<u>XL1200R</u> Domestic	54566-04 (2)	Standard	3.25" ⁴¹⁾	11.33" ⁴²⁾	69 ⁴³⁾	9.64" ⁴⁴⁾	116 ⁴⁵⁾	
2009		54566-09 (2)	Standard						
2014-2015	XL1200T	54000060 (11 1/2") (L)	Standard (Showa)						
		54000061 (11 1/2") (R)	w/ dial adjuster (L)						
2016-2020		54000060 (11 1/2") (L)	w/o dial adjuster (R)						
		54000100 (R) ⁴⁶⁾	More Info & Testing						

2013-2015	<u>XL1200V</u> Domestic	54568-09 (2)	Standard					
2010-2015	<u>XL1200X</u> Domestic	54550-10 (2)	Standard					
	HDI, England	54568-09 (2)	Standard					
2013	England, Australia Asia-Pacific, India		Standard					
2014-2015	HDI		Standard					
2014-2015	Japan	54550-10	Standard					
2009-2010	<u>XR1200</u> Domestic	54668-08 (2)	Standard - Re-designed top mount					
2010-2013	<u>XR1200X</u> Domestic	54671-10 (L) 54700-10 (R)	Standard - Piggy-backs					

2006-2007 1200L

- 2007 Harley 1200 Low Springs 100 pounds per inch progressive wound (but built by Harley to go progressive too late to help much. It goes to hard rate at a spring height of 6" or a shock length of about 10.5")⁴⁷⁾
- 2006 Harley 1200 R shocks a little too much low extension damping but appears to be acceptable⁴⁸⁾
 - Preload adjuster set to full hard to give about 20lb. of spring preload at 13.25 c to c on the shock (the only setting that is acceptable due to spring length).⁴⁹⁾
 - Ride height ends up 1.33" from full compression, (with a 200 lb. rider) and 1.9" from full extension (bike on a jack) 12.5" shock c to c with the bike on the Low stand.⁵⁰⁾
- Shock length fully extended: 13.25" (you are in this range any time you crest a hill at high speed the trick is to keep the tire on the road at all cost)⁵¹⁾
- Shock length with bike straight up no rider weight: 12.1" (you are in this range every time the road goes down, it happens just as often as the road goes up)⁵²⁾
- Shock length with a 200 lb. rider: 11.4" (you are in this range right after a raised or rising bump)⁵³⁾
- This is all spring rate trying to save hardware.
 - Shock length fully compressed 10"⁵⁴⁾
 - Shock length with the bike on the kickstand 12.5" (this is a bling thing and it's not significant for handling).⁵⁵⁾

Screaming Eagle Piggyback Shocks

- 340 mm / 13.39 inches center to center with 92mm / 3.62 inches of travel.
 - <https://www.harley-davidson.com/store/screamin-eagle-fully-adjustable-piggyback-shocks>

Go To Technical Menu

1)

1986-1990 HD Parts Catalog pg 72

2)

1991-1992 HD Sportster Parts catalog pg 68

3)

1993-1994 HD Sportster Parts Catalog pg 68

4) 17)

1995-1996 HD Sportster Parts Catalog pg 70

5)

1997 HD Sportster Parts Catalog pg 63

6) 19)

1998 HD Sportster Parts Catalog pg 66

7) 20) 31)

1999 HD Sportster Parts Catalog pg 70

8) 21) 32)

2000 HD Sportster Parts Catalog pg 70

9) 22) 33)

2001 HD Sportster Parts Catalog pg 72

10) 23) 34)

2002 HD Sportster Parts Catalog pg 72

11) 24) 35)

2003 HD Sportster Parts Catalog pg 72

12)

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<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-suspension-frame-forks-handlebars-fuel-tank-oil-tank-fenders/171907-disassemble-xl1200s-shocks?t=1843302&highlight=piggyback>

13) 15)

XLXR

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-suspension-frame-forks-handlebars-fuel-tank-oil-tank-fenders/45904-1200s-shocks-on-1200n/page4?t=164018&highlight=piggyback&page=4>

14)

XLXR <http://xlforum.net/forums/showthread.php?t=164018&highlight=piggyback&page=4>

16)

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<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-suspension-frame-forks-handlebars-fuel-tank-oil-tank-fenders/28685-harley-database-of-springs-and-shocks/page5?t=47542&highlight=1200s+shocks&page=5>

18)

1997 HD Sportster Parts Catalog pg 70

25)

2004 HD Parts Catalog pg 68

26)

2005 HD Sportster Parts catalog pg 72

27)

2006 HD Sportster Parts Catalog pg 72

28)

2007 HD Sportster Parts Catalog pg 75

29)

2008 HD Sportster Parts Catalog pg 75

30)

2009 HD Sportster Parts Catalog pgs 113, 115

36) 37) 38) 39) 40) 41) 42) 43) 44) 45)

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<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-suspension-frame-forks-handlebars-fuel-tank-oil-tank-fenders/28685-harley-database-of-springs-and-shocks/page2?t=47542&highlight=1200s+shocks&page=2>

46)

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-suspension-frame-forks-handlebars-fuel-tank-oil-tank-fenders/202095-xl1200t?t=2079233>

47) 48) 49) 50) 51) 52) 53) 54) 55)

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<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-suspension-frame-forks-handlebars-fuel-tank-oil-tank-fenders/28685-harley-database-of-springs-and-shocks/page3?t=47542&highlight=1200s+shocks&page=3>

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