

INSTALLATION INSTRUCTIONS FOR ISCI SPYDER HANDBRAKE SPY-HB-RT-20

Great care has gone into providing complete and thorough installation instructions. Use the torque values listed on the Assembly Drawing when tightening all fasteners. Use the supplied Loctite on all fasteners that do not have any mechanical locking device. See terms and conditions located at the end of this document.

**NOTE: SOME PICTURES IN THESE INSTRUCTIONS ARE FROM A 2010 RT AND A 2015 F3. WHERE
THE DIFFERENCES ARE WILL BE NOTED!!**

1. Ensure that all parts and the proper quantities of parts that are listed in the Parts List on the Assembly Drawing are in the package. Some of these items are pre-assembled.
2. Refer to Spyder Shop Manual and remove all side body panels necessary from the right side to reveal the Side Member and the Rear Footrest Support as shown below.
3. Remove two Bolts holding the Side Member to the top of the Rear Footrest Support.



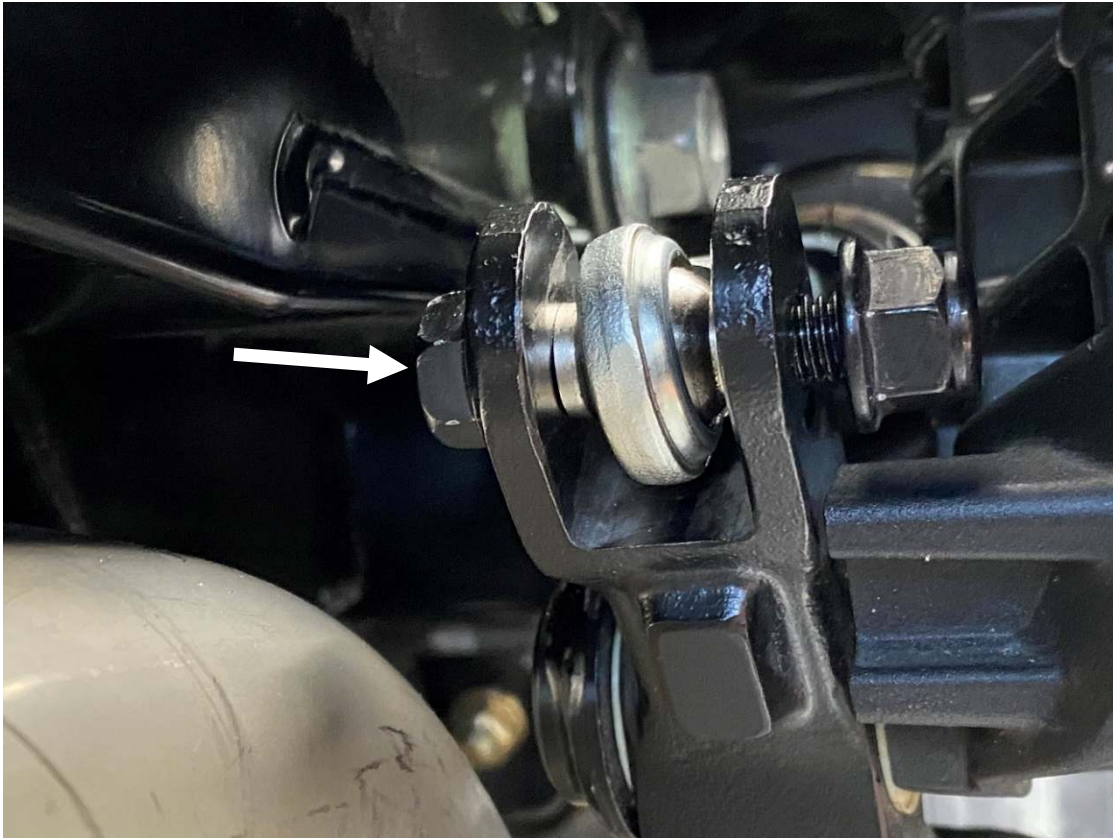
4. Unhook the Brake Switch Spring from the Rocker Rear as shown below.



5. Remove bolt from the clevis of the Link Rod Assembly as shown below.



6. Remove the bolt that connects the Master Cylinder Tie Rod End to the Rocker Rear. Do not let the Piston Rod come out of the Bellows once the bolt has been removed. Slide 5/16" Clevis Pin (Item #25) from the inside to the outside as shown in the second picture below.



7. Place Washer (Item #31) onto clevis pin then install Rue Ring Cotter (Item #35) by inserting the straight pin of the cotter (Yellow arrow) into the hole of the clevis and pushing until it snaps into place.



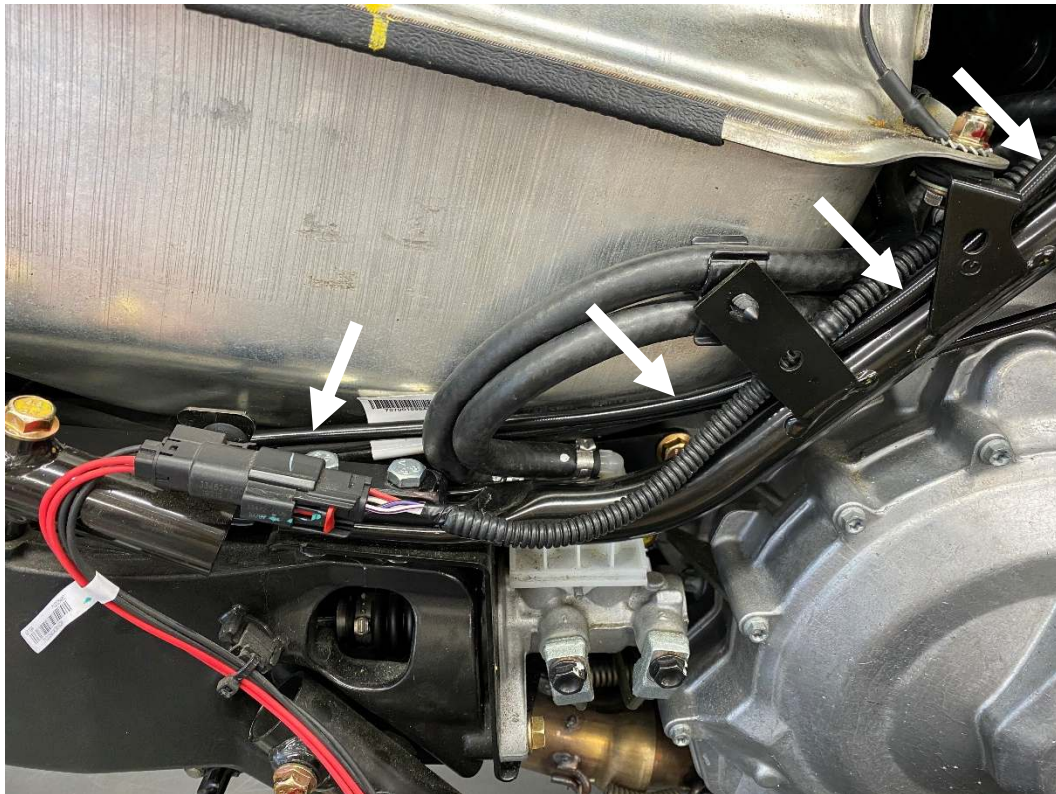
8. Bolt brake line to the Slave Cylinder with the Banjo Bolt and 2 Crush Washers. Bring bracket and slave assembly underneath the Spyder so that the holes in the bracket line up with the holes in the top of the Side Member and the Rear Footrest Support and the new clevis straddles the Rocker Rear as shown below engaging the Clevis Pin installed in the previous two steps. **Note: The picture directly below is showing the 2010 model being installed but the process is still the same. The bottom picture is a 2020 RT model installed.**



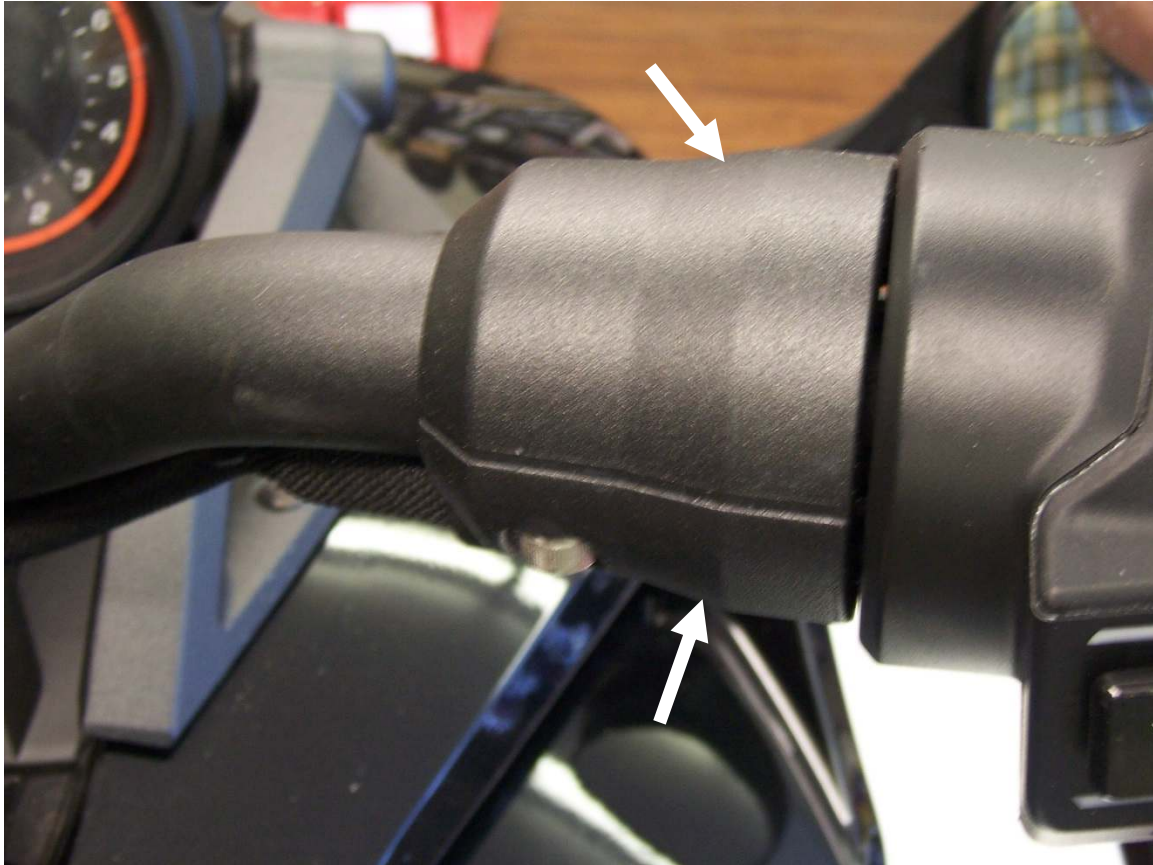
9. Be aware that the OEM Brake Reservoir hoses will need to be pushed up out of the way for the RS/RT Slave Cylinder Bracket (Item #1) to fit properly.



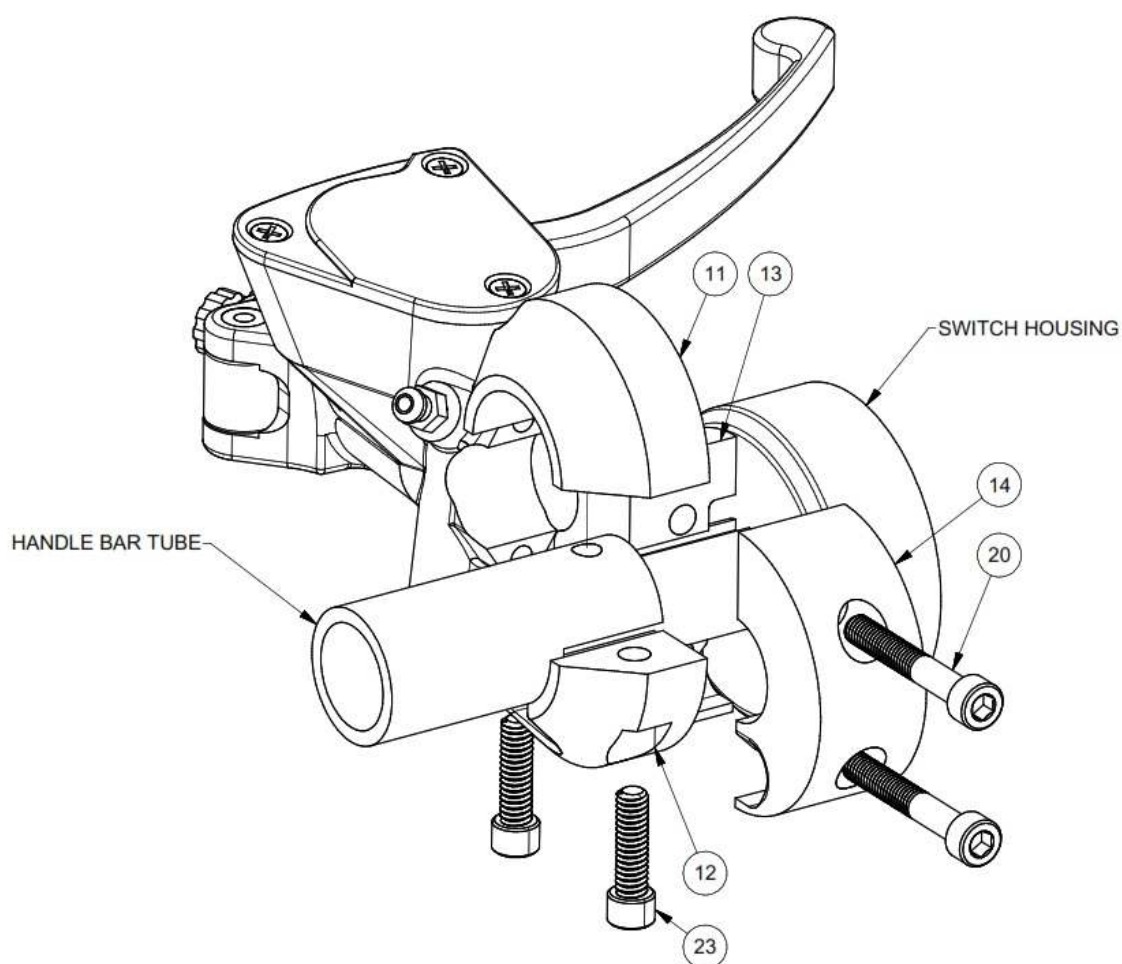
10. Install two M8x40mm Hex Head Bolts (Item #19) through the bracket and into the top of the Side Member and the Rear Footrest Support.
11. Route the Braided Brake Line from Slave Cylinder to the Handle Bar as shown in the following pictures.



12. Remove the Upper and Lower Clamp from the right hand side of the Handle Bars located next to the Switch Housing. **Please note that the picture below is from an F3 not an RT but they look the same.**



13. Assemble the Handlebar Clamp, Upper (Item #11) and the Handlebar Clamp, Lower (Item #12) as shown in the drawing using the supplied $\frac{1}{4}$ -20 x $\frac{7}{8}$ " SHCS (Item #23). Make sure that the wire bundle isn't pinched in any way. **Please note that the picture below is from an F3.**



14. Assemble the Master Cylinder Clamp, Forward (Item #13) and the Master Cylinder Clamp, Rear (Item #14) with the supplied M6 x 40mm SHCS (Item #20) going through the Clamps threading into the Master Cylinder. Also make sure that the wire bundle isn't pinched in any way. **Please note that the two pictures below are from an F3.**



15. Below shows the Master Cylinder properly installed to the Handle Bars on the 2020 RT.

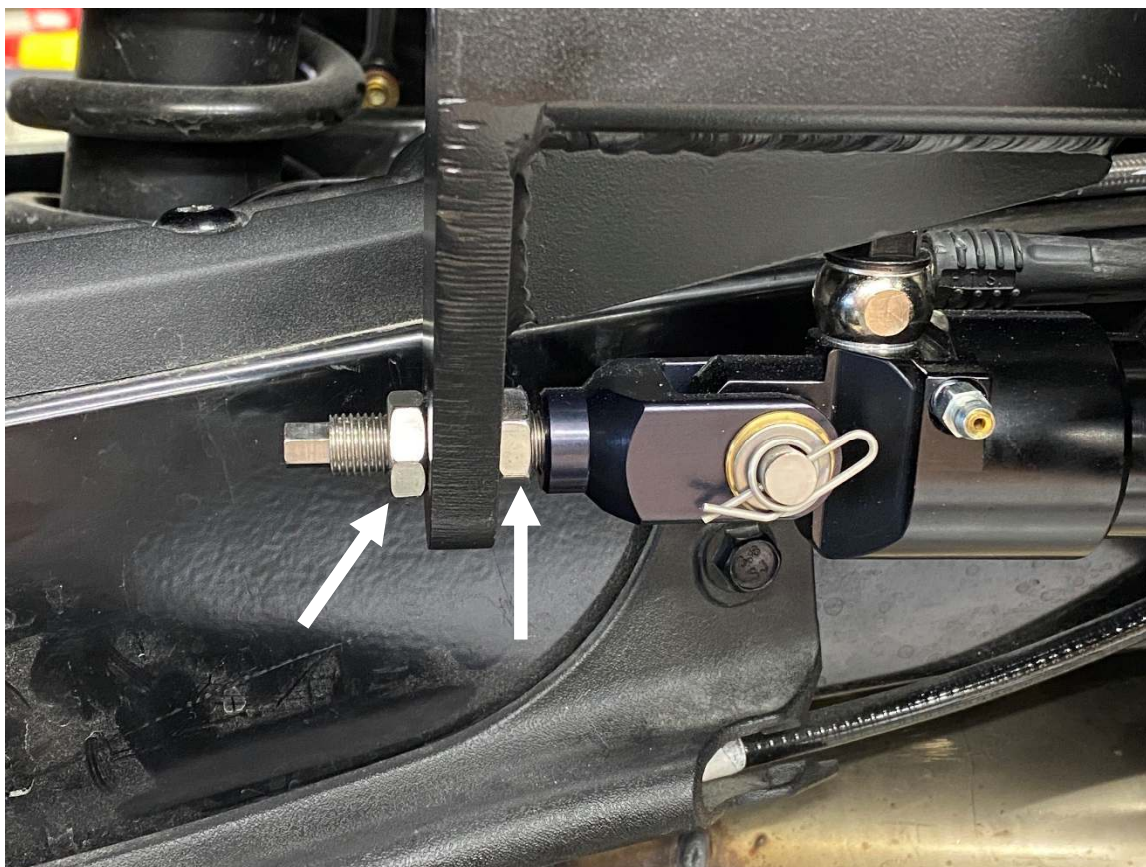


16. Attach brake line to the master cylinder using the supplied black banjo bolt and two crush washers. Fill master cylinder with DOT 4 brake fluid and bleed till there is no air coming out of the bleeder valve. Connecting the supplied clear tube to the bleeder will help from making a mess and you can easily see when there is no more air coming from the slave cylinder. Once the Master Cylinder has been bled proceed to the Slave Cylinder and bleed it until no air bubbles come out. The reservoir of the Master Cylinder is small so keep an eye out that you don't run it dry as you are bleeding the system. **See pages 15 and 16 of these instructions for more information about the bleeder valve on the Slave Cylinder.**



17. Use ty-wraps to secure brake line along the Side Member Tube.

18. Loosen the two Jam Nuts at the rear of the slave cylinder so that the brake pedal is in its upmost position. Tighten the front jam nut against the mounting bracket until the brake pedal starts to move down and then back off that jam nut ½ turn. Check to make sure that the brake lights are not on. If they are on continue backing off the front jam nut ½ turn at a time until the brake lights are no longer on. At this time tighten the rear jam nut securely.



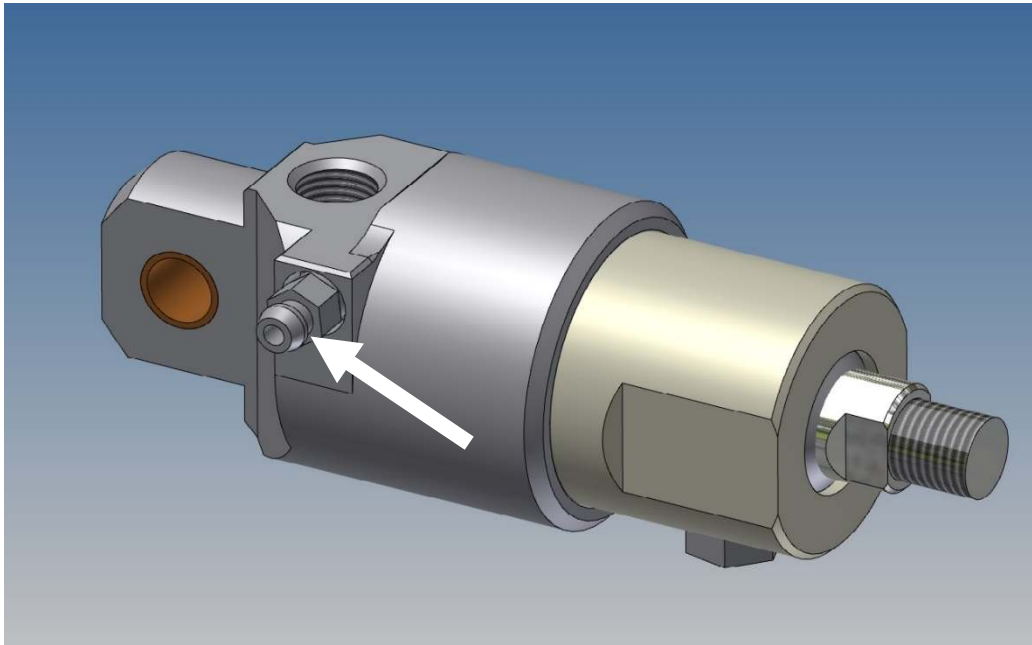
19. Reinstall all body panels that were removed and the installation is complete.
20. Perform a visual inspection of the slave cylinder every 3000-5000 miles by wiping the cylinder rod clean and checking that the vent is not caked up with road grime.
21. **It is recommended that the brake system's fluid be changed and the system flushed to remove moisture and contamination build up every year or every 12,000 miles, which ever comes first. Also do this if the Spyder isn't ridden very often.**

If for some reason you are having trouble with any part of this installation please do not hesitate to give us a call at 334-277-2224. Ask for Jeff Kranzusch or Robert Kawzinski.

ATTENTION!!

All of our slave cylinders now feature a Made in the USA Speed Bleeder® bleeder screw installed into the Cylinder End Cap for easier bleeding of the Handbrake System. The unique and patented Speed Bleeder® has a built in check valve to allow for easier and less messy bleeding of the system!!



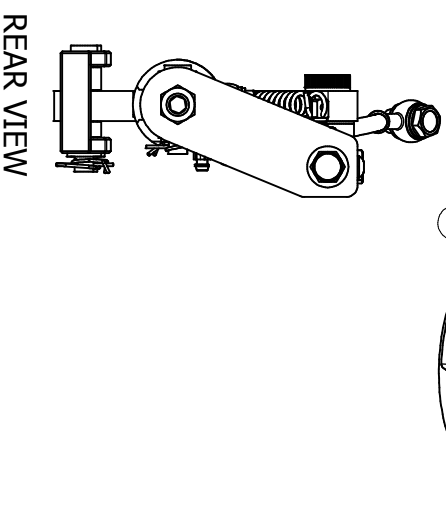
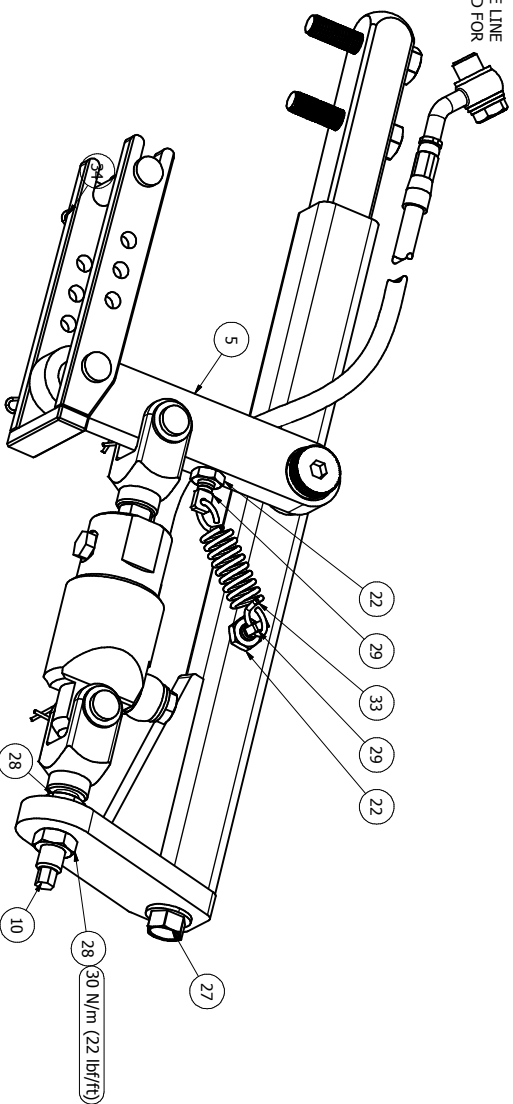


Once you are at the point of filling and then bleeding the system all you have to do is open the Speed Bleeder® ¼ to ½ of a turn and leave it open with the clear tubing supplied on the nipple of the Speed Bleeder® while pumping the Master Cylinder Lever. Opening and closing of the bleeder screw repeatedly is no longer necessary due to the built in check valve of the Speed Bleeder®. You will need to keep an eye on the brake reservoir so you don't empty it of brake fluid. Once all the air is removed and you have bubble free fluid coming out of the Slave Cylinder, tighten the Speed Bleeder® to close it. **DO NOT OVER TIGHTEN!!!** If it leaks after closing tighten it a little more **BUT NO MORE THAN 1/8 TURN!!** If you tighten any more than this you might break it off. Be sure to top off the master cylinder with fluid after the bleeding process is finished.

www.speedbleeder.com

PARTS LIST				DIMENSIONS	
ITEM	QTY	REV	PART NUMBER	DESCRIPTION	
1	1	C	34917104_RevC	RS/RT Slave Cylinder Bracket	
2	1	A	SPY050	2020 RT Brake Actuating Clevis	
3	1	F	7-8 Slave	Slave Cylinder	
4	2	F	SPY406	Slave Cylinder Clevis	3/4" X 1" X 1-3/4"
5	1	F	SPY505	Brake Actuating Lever	1/2" X 1" X 5-1/16"
6	1	B	SPY514	Bronze Flange Bushing	7/8" OD X 1/2" lg
7	1	A	SPY519	1/4" Spacer	9/16" OD X 1/4" lg
8	1	A	SPY521	3/8" Spacer	9/16" OD X 3/8" lg
9	4	B	SPY805	Bronze Flanged Bushing	5/8"OD X 5/16"
10	1	A	SPY1027	Adjusting Screw	3/8" 24 X 2"
11	1	C	SPY1718	Handle Bar Clamp, Upper	2-3/8" Dia. X 1-1/16" lg.
12	1	B	SPY1719	Handle Bar Clamp, Lower	2-3/8" Dia. X 1-1/16" lg.
13	1	D	SPY1720	Master Cylinder Clamp, Forward	2-3/8" Dia. X 1" lg
14	1	B	SPY1721	Master Cylinder Clamp, Rear	2-3/8" Dia. X 1" lg.
15	2		41750-06B	Banjo Bolt, M10 X 1	20mm lg
16	1		AMAC035K	Master Cylinder Assembly	THIS ITEM NOT SHOWN
17	1		6391K153	Bronze Bushing	3/8" OD X 5/16" ID X 1/2" lg
18	1		90298A707	Shoulder Bolt	1/2" Dia X 1/2" lg
19	2		91280A542	M8 Hex Head Grade 8.8	40mm lg
20	2		91292A142	SHCS M6 X 40MM	40mm lg.
21	1		91585A626	Dowel Pin	6mm OD X 16mm lg.
22	2		91847A029	Jam Nut	1/4-20
23	2		92196A541	1/4-20 SHCS	7/8" lg
24	2		92390A217	5/16" Clevis Pin	1-5/32" Usable Length
25	2		92390A222	5/16" Clevis Pin	1-25/32" Usable Length
26	1		92349A262	10-32 BHCS	5/16"lg
27	1		92979A245	5/16"-18 Hex Flange Cap Screw	5/8"lg
28	2		93839A815	Jam Nut, Grade 8	3/8"-24
29	2		95907A480	Spring Anchor	1/4-20
30	4		98017A690	5/16" Washer	5/16" ID X 9/16" OD X 1/16" thk
31	4		FK003D010A	Crush Washer	10mm ID X 15mm OD X 1.5mm thk
32	1		FK003D5-1	Braided Brake Line	
33	1		LE 075E 025	Extension Spring	.50" OD X 1-1/2" lg X .075 wire
34	4		RUE-10-S	Rue Ring Cotter	
35	1		SB1428	Speed Bleeder	1/4"-28

MASTER CYLINDER END OF BRAKE LINE
~BRAKE LINE SHOWN SHORTENED FOR
CLARITY~



REVISION HISTORY			DATE	APPROVED
REV	DESCRIPTION			
A	Released for Production		06/27/13	

Industrial Specialty Co. Inc. Proprietary Property This drawing is the proprietary property of Industrial Specialty Company Inc., and must not be used except in connection with our work, not in any manner disclosed to any third party without Industrial Specialty Company Inc.'s prior written consent, all rights of design and invention are reserved.				Tolerances		Date	Material		Dimensions		Revision	
Scale: NTS				Drawing Unit: [N, [mm]			Unless Noted Otherwise		6/27/2013		Part #	
				Inches			.xxx		.xxx		SPY-HB-RT-20	
				Metric			±.001		±.01		Description	
				Angle			±.1/32"		Surface Area		RT Handbrake Assembly	
							.xxx		X		Used in Assembly #	
							±.13		±.25		ISCI	
							±.0		2.25		Project	
											Spyder	
											Model File #	
											I:\Invention\34917-1\SPY-HB-RT-20 (HAND BRAKE RT	
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