

# INSTALLATION INSTRUCTIONS FOR ISCI SPYDER F3 HANDBRAKE

Great care has gone into providing complete and thorough installation instructions. 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.

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. Disconnect the Brake Linkage Rod from where it connects to the Master Cylinder Rocker at the rear. This bolt and locknut will be reused so keep them.



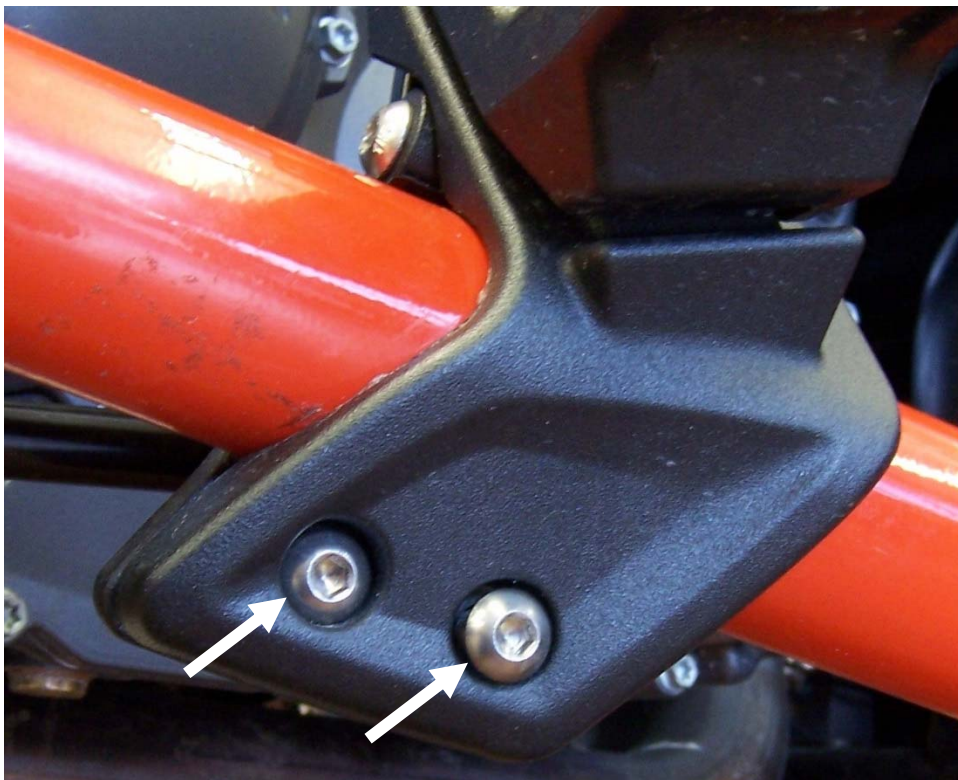
3. Remove two Button Head Screws (one on each side [front and rear]) that holds the Foot Peg on. Be careful when removing the Foot Peg as there are threaded brass inserts with two small ears that the Button Head Screws thread into. These ears line up with slots on the Foot Peg. They can be easily broken off!!



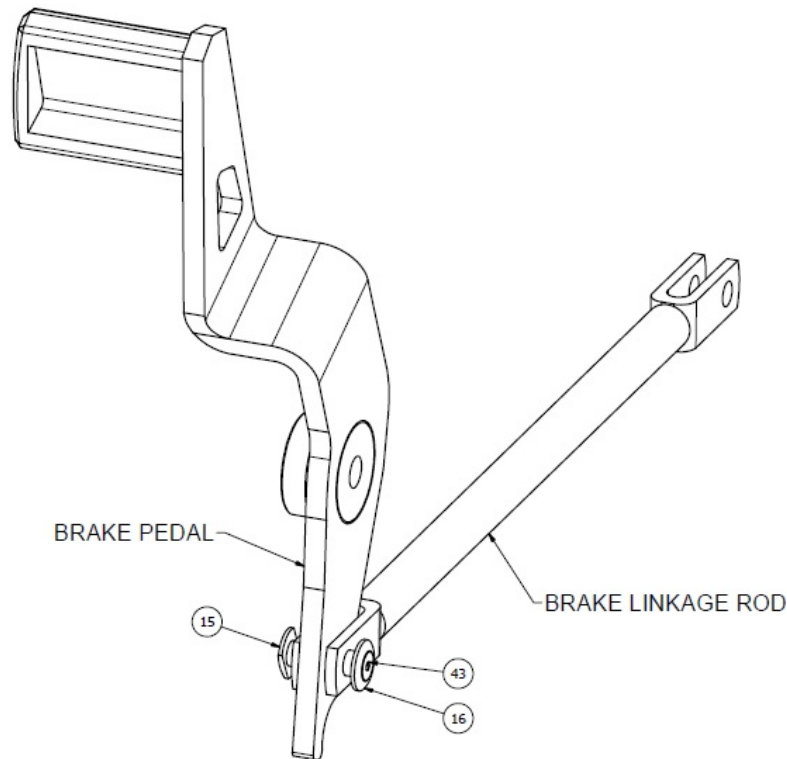
4. Loosen the two Button Head Screws (one on each side [front and rear] of the Outside, Slider).



5. Remove two Button Head Screws that clamps the Outside, Slider and the Inside, Slider to the Footrest Support Tube. These two screws and the Nut Plate for them will not be used.

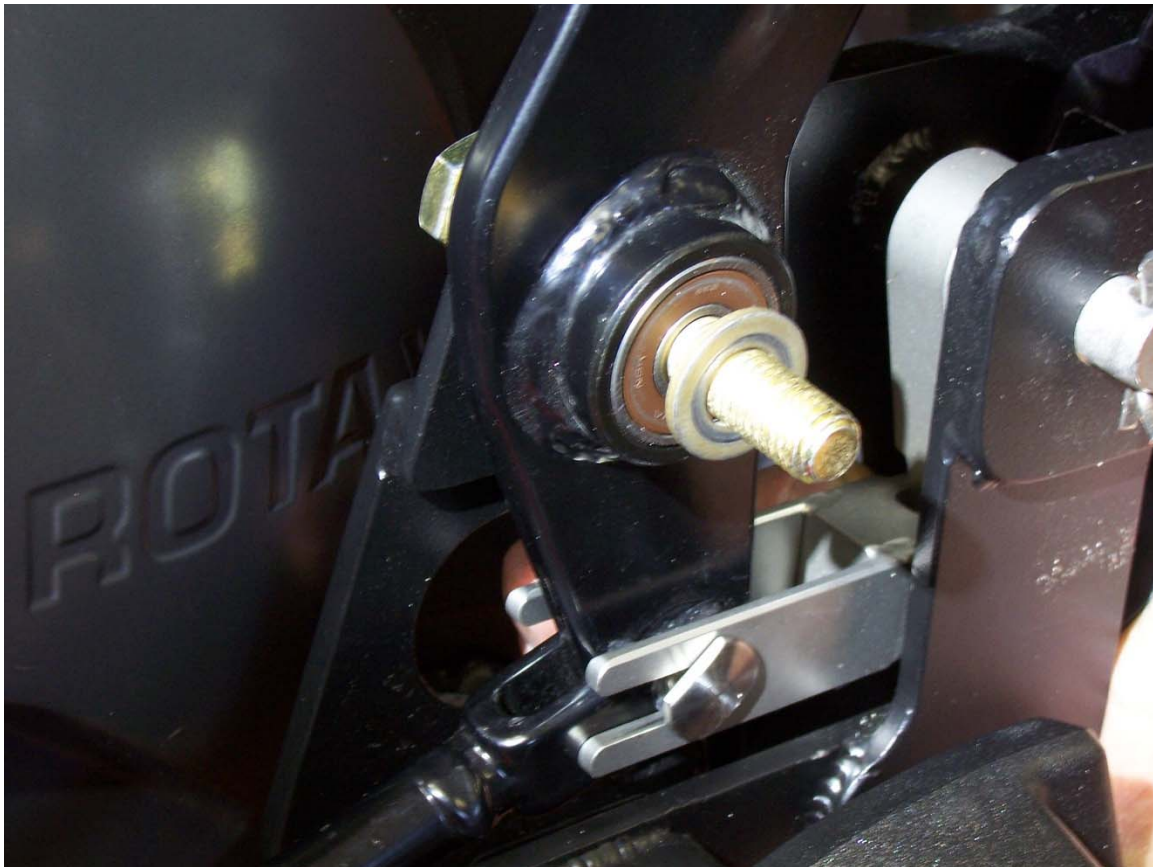
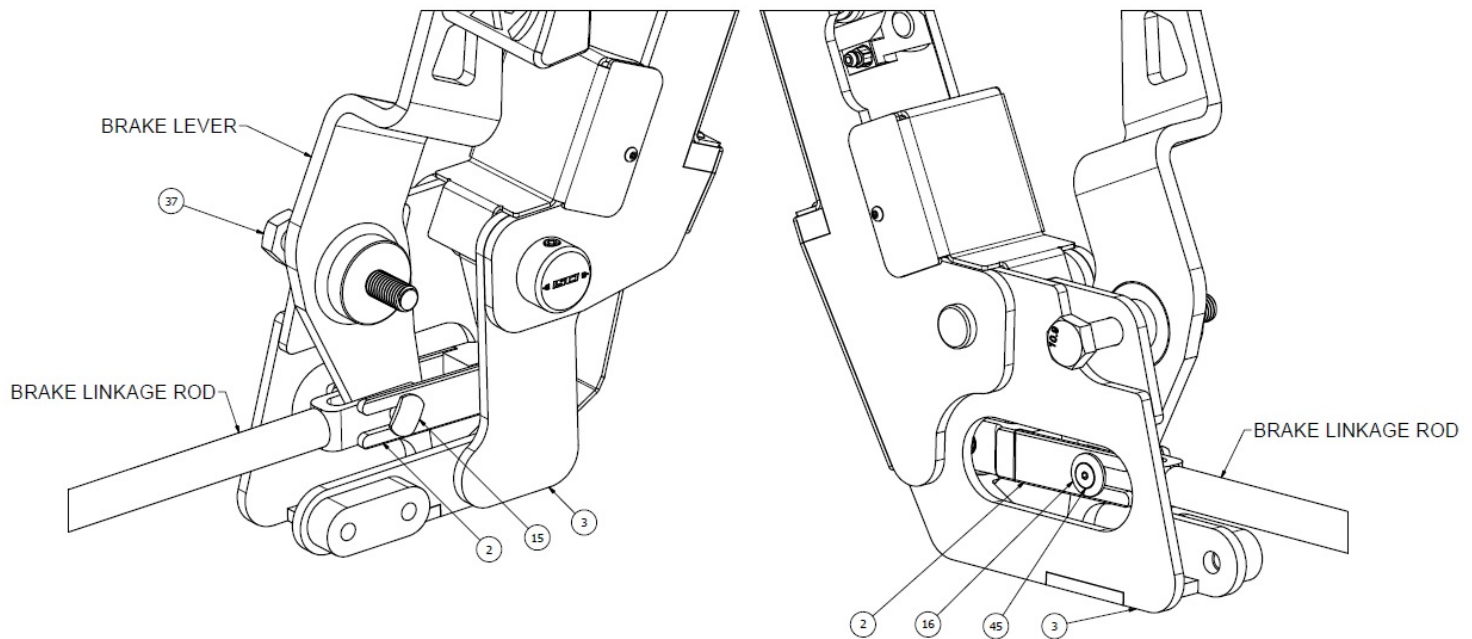


6. Mark the Footrest Support Tube with a piece of tape at the rear of the Slider/Brake Pedal assembly showing the location. The Inside, Slider should hinge open on the two screws that were loosened in Step 4. Once opened remove the entire Slider/Brake Pedal Assembly from the Footrest Support Tube.
7. Remove the 10mm Hex Head Bolt holding the Brake Pedal to the Outside, Slider. There are two washers, one on both sides of the Brake Pedal Bearing. You will only be using one of these washers and the bolt will be replaced.
8. Now remove the Brake Linkage Rod from where it connects to the Brake Pedal. You will not be using this nut and bolt.
9. Reattach the Brake Linkage Rod to the Brake Pedal using Rear Clevis Pin (Item #15), Pivot Pin Retainer (Item #16) and #8 FHCS (Item #43) as shown in the drawing. **Be sure to use Loctite on this screw!!!**

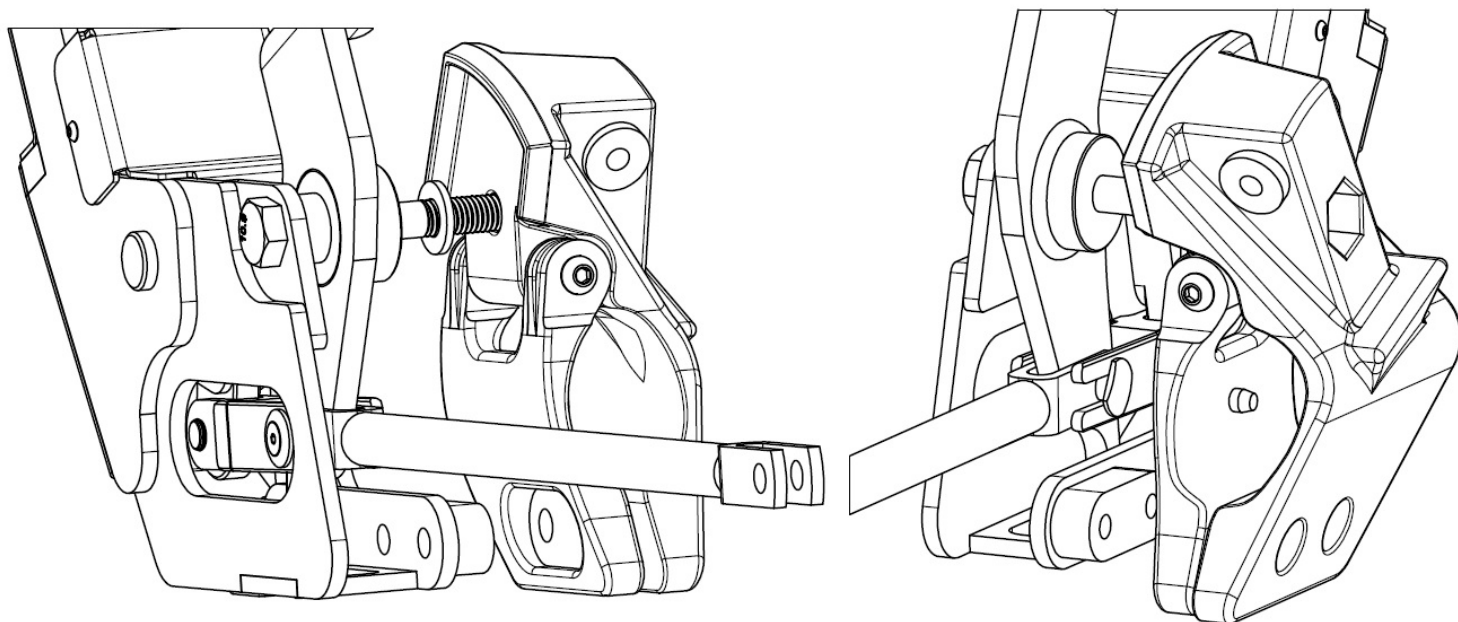




10. Use the supplied M10 x 70mm Hex Head Bolt (Item #37) and insert it through the Brake Bracket/Slave Cylinder Assembly and then through the Brake Pedal. Rotate the Brake Pedal so that the Brake Actuating Clevis (Item #2) straddles the Brake Linkage Rod and the forks of the Brake Actuating Clevis slide onto the Rear Clevis Pin. Place the single Washer from Step 8 onto the M10 x 70mm Hex Head Bolt against the Brake Pedal and set this assembly to the side.



11. Place the Outside/Inside Slider Assembly back onto the Footrest Support Tube in its original location. Close the Inside, Slider around the Footrest Support Tube and tighten the Button Head Screws that were loosened in Step 4. If you have an SE Semi-Automatic version there is less space between the Outside/Inside Slider Assembly and the Engine/Transmission than what is shown in these pictures so you will have to assemble everything towards the front of the Spyder and slide it back along the Footrest Support Tube into place
12. Attach the Brake Bracket/Slave Cylinder Assembly to the Outside/Inside, Slider Assembly by pushing the M10 Hex Head Bolt into the hole in the Outside/Inside, Slider Assembly.



13. Put the OEM M10 Locknut into the hex shaped hole in the Outside, Slider and start the M10 Hex Head Bolt into it.  
**Do not tighten at at this time!!**
14. Use the supplied M8 x 30mm BHCS (Item #30) to replace the OEM Button Head Screws removed in Step 5. These will thread into the Brake Bracket/Slave Cylinder Assembly. Tighten the M10 Hex Head Bolt and the M8 BHCS securely. **Make sure to use Loctite on the two M8 BHCS!!**

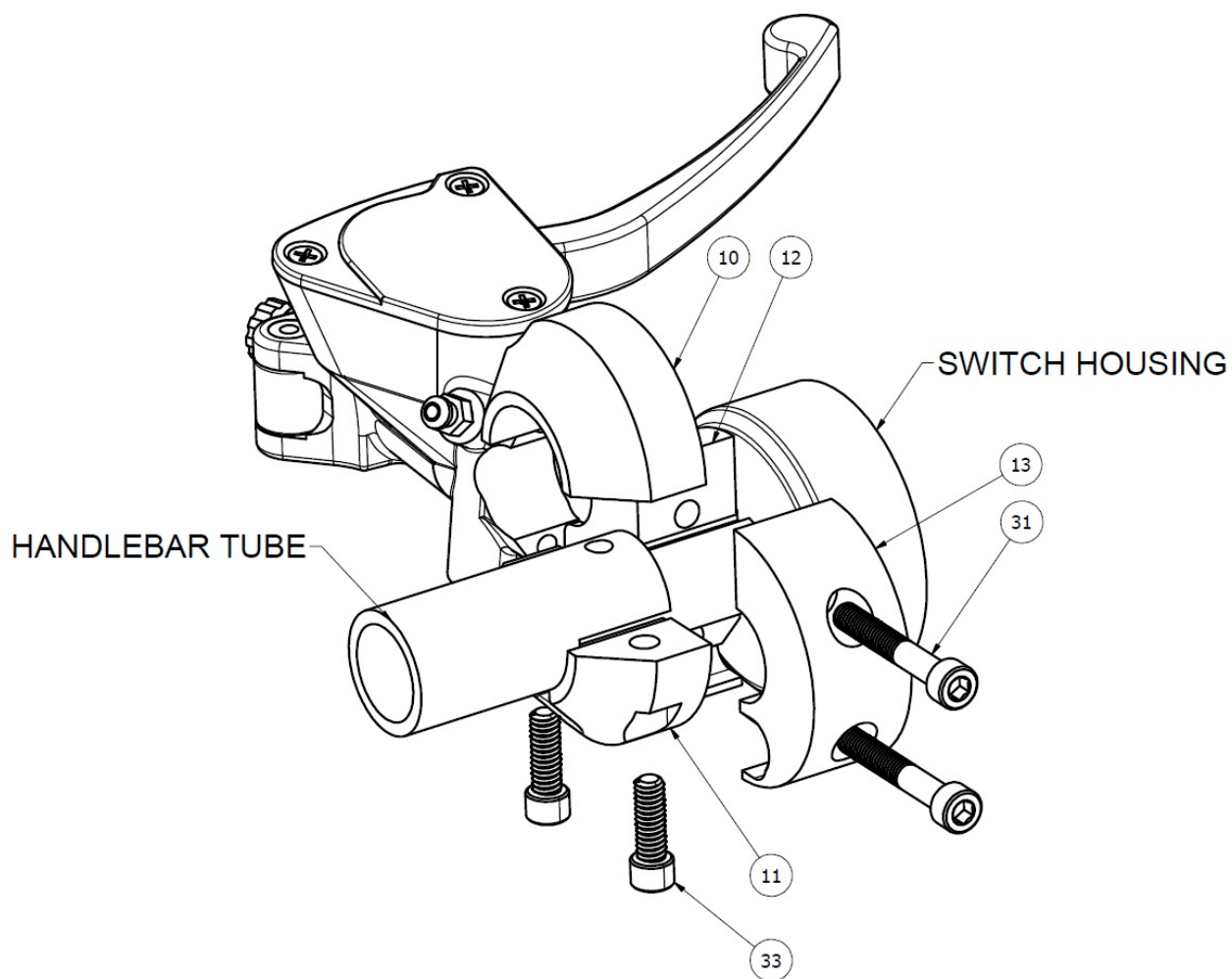


15. Reattach the Brake Linkage Rod to the Master Cylinder Rocker using the OEM Bolt and Locknut that was removed in Step 1.
16. Remove the Upper and Lower Clamp from the RH side of the Handlebar next to the Switch Housing.

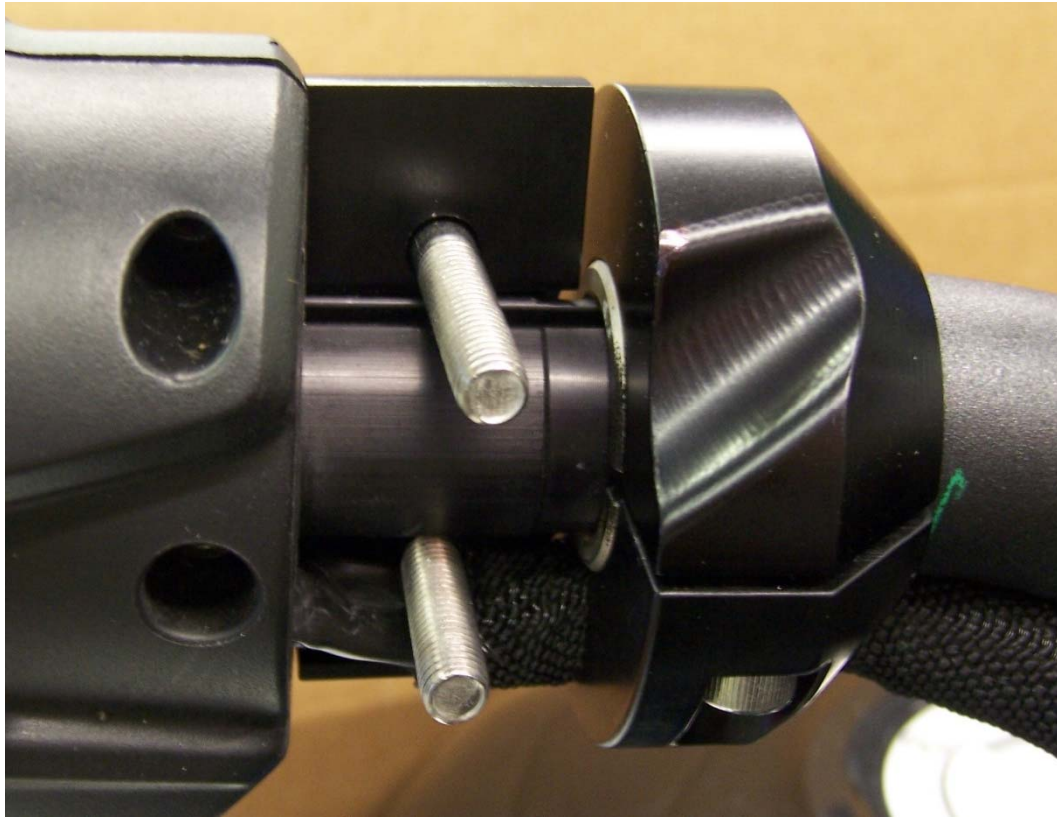




17. Assemble the Handlebar Clamp, Upper (Item #10) and the Handlebar Clamp, Lower (Item #11) as shown in the drawing using the supplied  $\frac{1}{4}$ -20 x  $\frac{7}{8}$ " SHCS (Item #33). Make sure that the wire bundle isn't pinched in any way.



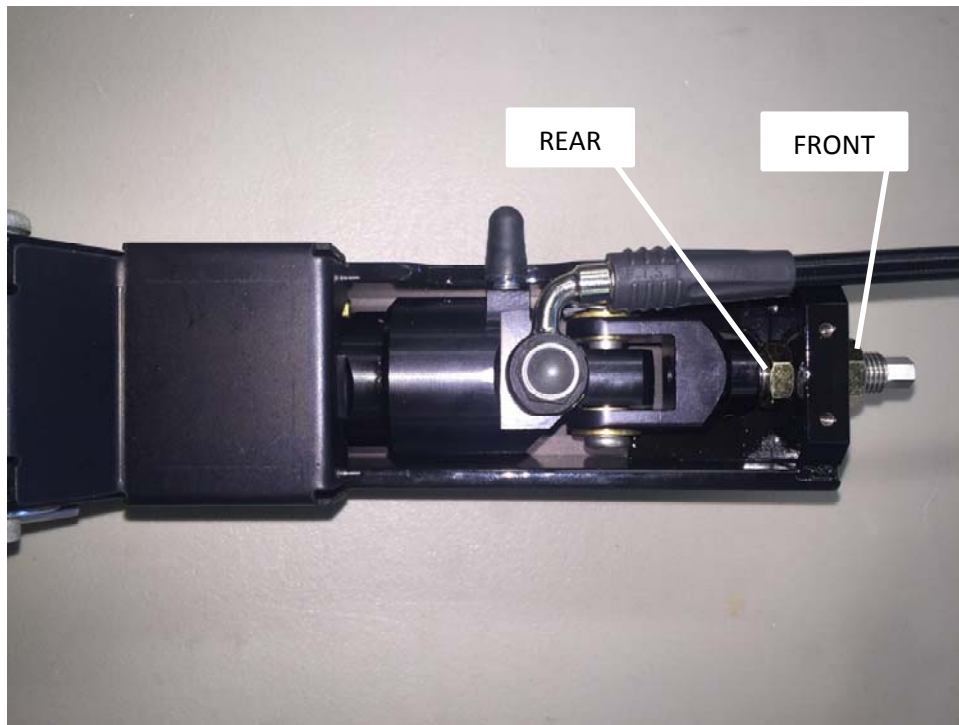
18. Assemble the Master Cylinder Clamp, Forward (Item #12) and the Master Cylinder Clamp, Rear (Item #13) with the supplied M6 x 40mm SHCS (Item #31) going through the Clamps threading into the Master Cylinder. Also make sure that the wire bundle isn't pinched in any way.



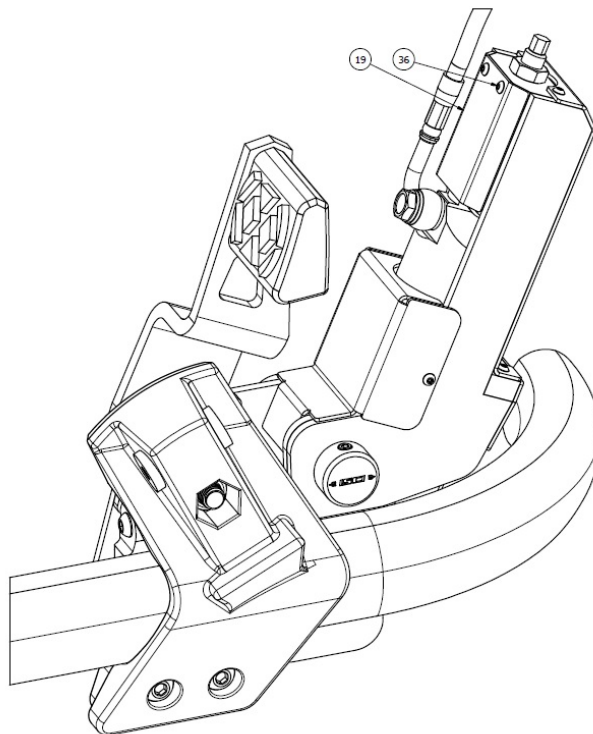




19. The supplied Brake Line is long. It is a standard length that we use on all our brake systems. The end with the 90° fitting attaches to the Slave Cylinder, the end with the 45° fitting attaches to the Master Cylinder. It is very simple to route the brake line under the body panels to the steering column and up to the Master Cylinder but you will have to create a loop approximately 6"-8" in diameter to take up the excess Brake Line. Use the supplied Zip Ties to secure the Brake Line in place so that it isn't close to the exhaust and it isn't able to rub on any sharp edges.
20. Attach brake line to the Slave Cylinder as shown in the picture on the next page and to the Master Cylinder using the supplied black banjo bolts and crush washers (two crush washers for each fitting top and bottom). Fill Master Cylinder with DOT 4 brake fluid and bleed the Master Cylinder until 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 Master 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 12 and 13 of these instructions for more information about the bleeder valve on the Slave Cylinder.**



21. Loosen the two Jam Nuts shown in the picture above at the rear of the slave cylinder so that the brake pedal is in its upmost position. Tighten the Rear Jam Nut against the bracket until the brake pedal starts to move down and then back off that Jam Nut  $\frac{1}{2}$  turn. Check to make sure that the brake lights are not on. If they are on continue backing off the Rear Jam Nut  $\frac{1}{4}$ - $\frac{1}{2}$  turn at a time until the brake lights are no longer on. At this time tighten the Front Jam Nut securely.
22. Attach Upper Rear Guard (Item #19) using two #4-40 x  $\frac{1}{4}$ " BHCS (Item #36).



23. Reinstall Foot Peg.
24. 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.
- 25. 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 isnt ridden very often.**

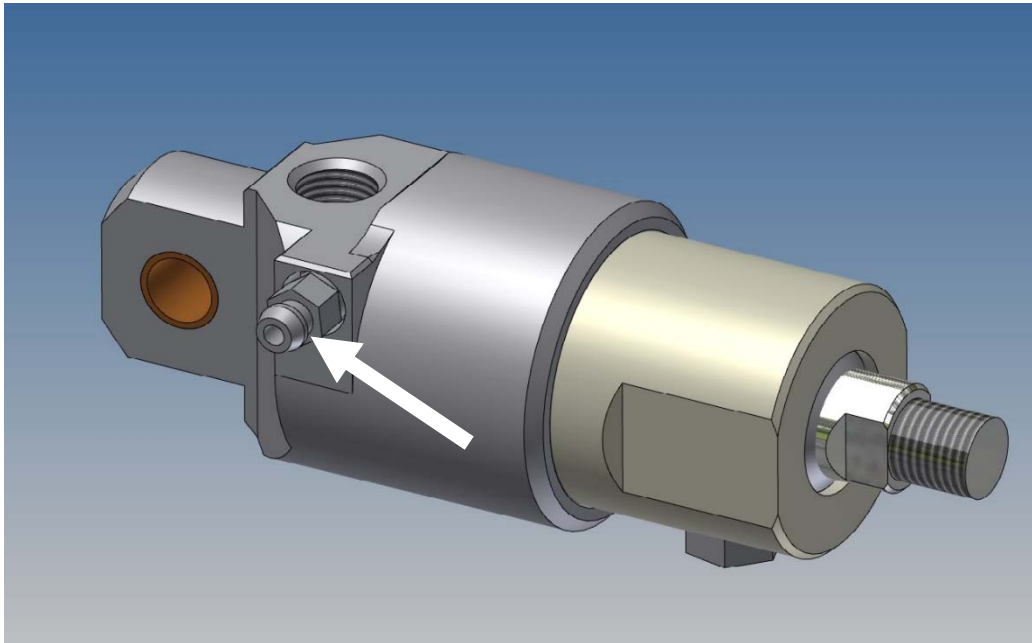
If for some reason you are having trouble with any part of this installation please do not hesitate to give us a call at 334-277-2224. Ask for Jeff Kranzusch or Robert Kawzinski.



# 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!!



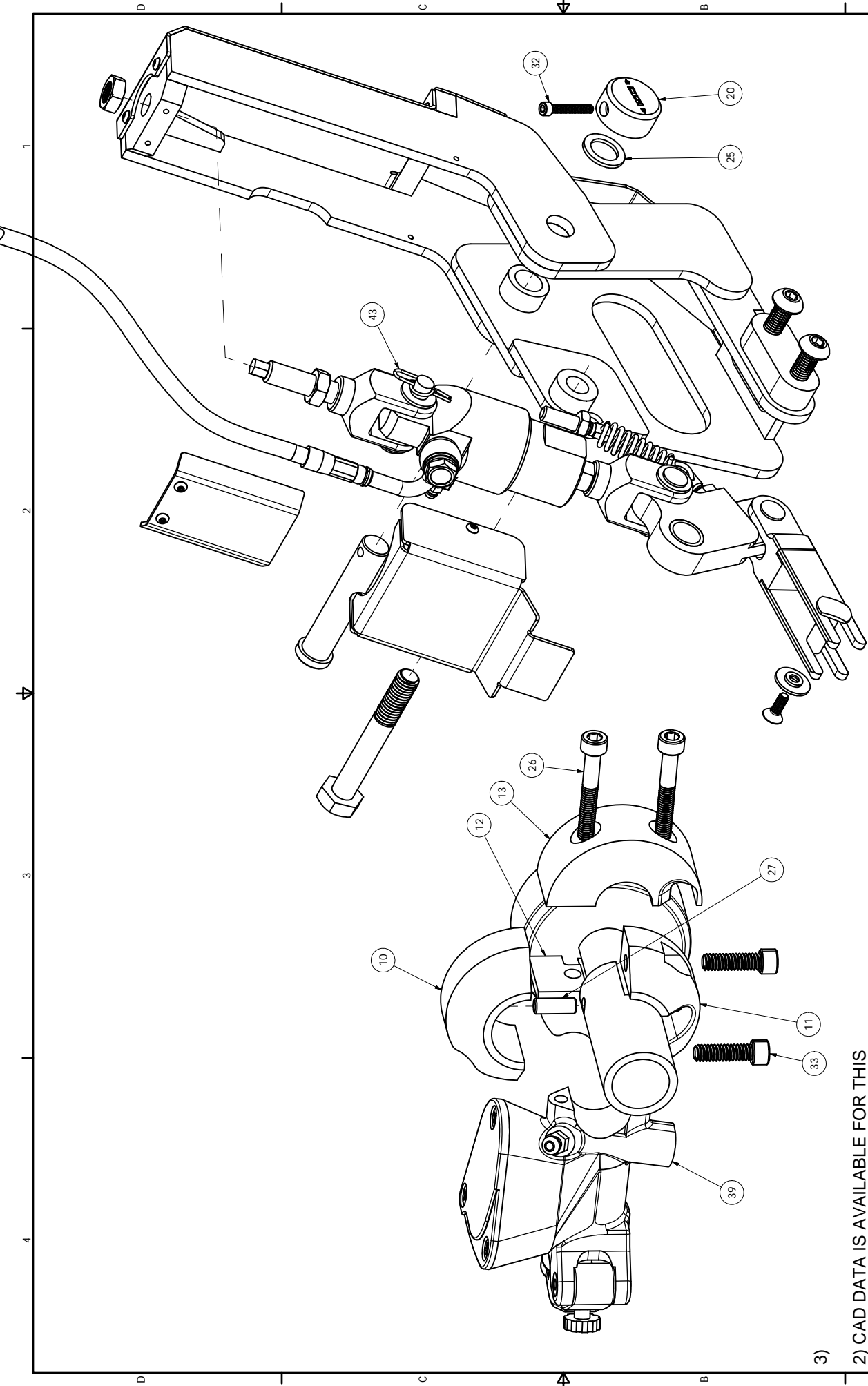


Once you are at the point of filling and then bleeding the system all you have to do is open the Speed Bleeder®  $\frac{1}{4}$  to  $\frac{1}{2}$  of a turn and leave it open with the clear tubing supplied on the nipple of the Speed Bleeder® while pumping the Master Cylinder Lever. Opening and closing 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](http://www.speedbleeder.com)







3)

2) CAD DATA IS AVAILABLE FOR THIS FILE

1) BREAK ALL SHARP CORNERS, DEBUR AS NECESSARY

NOTES:

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 Unless Noted Otherwise		Date	Material		Dimensions		Revision	
Inches				.xxx	.xx	2/13/2015	Part #		Finish		A	
Fract.				±.003 ±.01	±.02	R.L.K.	SPY-HB-F3		Company		Industrial Specialty Co. Inc.	
Metric				±.13 ±.25	±.5	1002.12 in²	Surface Area		Project		Precision Machining / Engineered Products / Anodizing	
Angle				±0°-30°	8.40 lbmass	1002.12 in²	Used in Assembly #		Model File #		50 Forest Hills Dr. - P.O. Box 3262 - Montgomery, AL 36109	
Scale: NTS				Drawing Unit: IN. [mm]		±0°-30°	Approx. Weight		File #		PH (334) 277-2224 FX (334) 277-5646	
						8.40 lbmass					\\SCISRV01\Inventor\34917-12015 F3\SPY-HB-F3\SPY-HB-F3.iam	
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