sport IS

BY CSC TRIKES

Trike Conversion Kit
1988 - 2000
GL1500 Goldwing

Installation Instructions

Revised 3 - 2018

California Sidecar Parts & Technical Support
434.263.8866

Table of contents:

Warnings and Considerations:

1. **Disclaimer** - These instructions assume a level of understanding of motorcycle repair and maintenance beyond that of a "beginner" and/or "novice" and California Sidecar cannot be liable for an installer's failure to understand or follow these instructions as written. Likewise, California Sidecar cannot be responsible if any of the steps are omitted or shortcuts are taken, or parts other than those supplied by California Sidecar, are used in installing this trike kit.
2. "**WARNINGS**" are all printed in bold type and capitalized. They mean to use <u>extreme care</u> in a given step so as not to damage the part, motorcycle, and/or yourself.
3. **Always** wear safety glasses when using hand and/or power tools.
4. When working in and around the fuel system, **always** work in a well-ventilated area, free from sparks and open flames.
5. All directional references to the "right side" and the "left side" are as you were seated on the motorcycle.
6. All directional references to "forward" mean to the front of the motorcycle while"back" means the rear of the motorcycle unless otherwise stated.

Recommended Lubricants:

1. 80W-90 GL5 petroleum only, no synthetics.
2. Fluorinated grease for splines
3. Thread locking compound (Loctite 242 minimum).
4. High temperature Silicone sealant
5. Silicone spray

Torque Values of Fasteners:

1. 3/8 SHCS 25 FT-LBS
2. 1/2 HHCS 45 FT-LBS
3. M 8 HHCS 20 FT-LBS

HHCS = Hex Head Cap Screw
SHCS = Socket Head Cap Screw
BHSCS = Button Head Socket Cap Screw
FHSCS = Flat Head Socket Cap Screw

Maintenance Schedule: SPORT IS

Item \ Frequency	Daily	3,000	4,000	8,000	12,000	16,000	20,000	24,000
Brake Pads and Rotors [1&2]			I	I	I	I	I	I
Half Shaft Boots			L	L	L	L	L	L
Drive Shaft		I		I		I		I
Wheel Bearings [4]			I	I	I	I	I	I
Rear End Oil [5]		R					R	
Wheels and Tires			I	I	I	I	I	I
All Lighting	I							
Tire Pressure	I							
Brake fluid			I	I	R	I	I	R
PWR TRAK Head Bearings				T		T		T

I: Inspect and clean, adjust, lubricate, and/or replace if necessary.
R: Replace
L: Lubricate with Silicone Spray
T: Check Torque of Head Bearings (top nut 80 ft.-lbs. adjuster nut 35 ft.-lbs.)

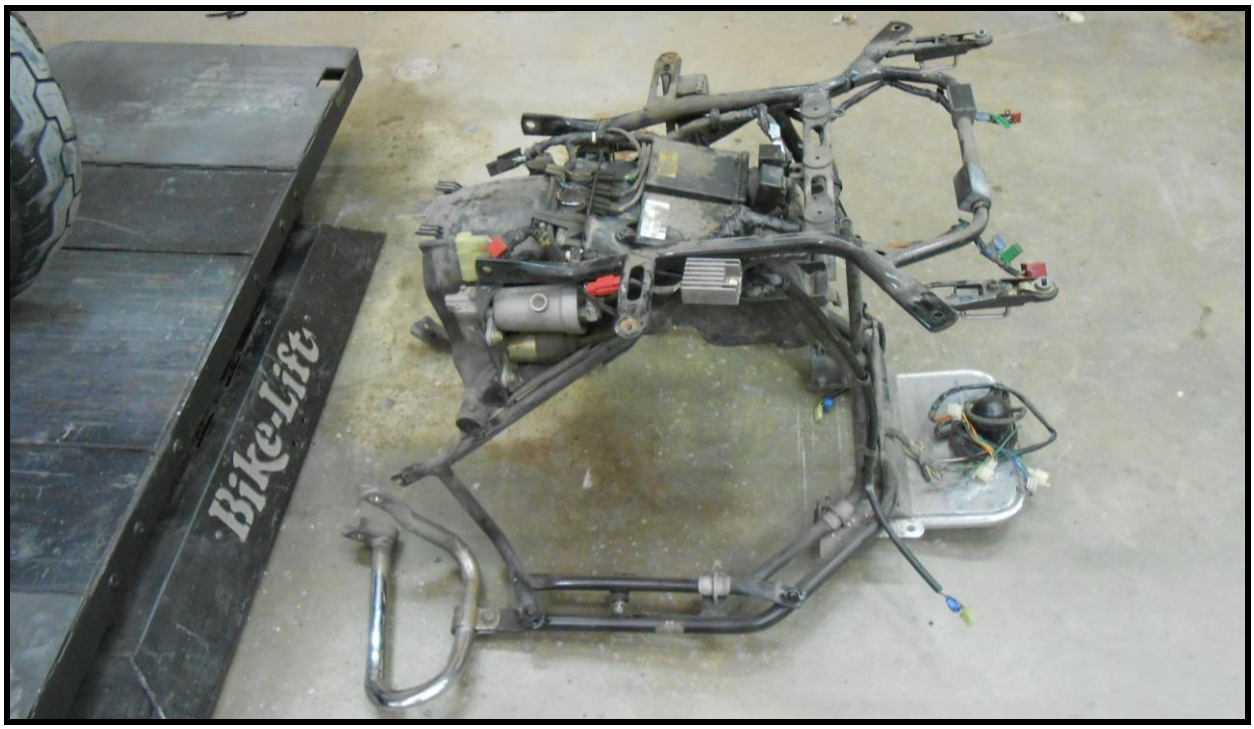
NOTE:
[1] Minimum pad thickness is **.04 inches (1.02mm)**
[2] Minimum Rotor thickness is **.290 inches (7.36mm)**
[3] Rear tire pressure: **15" & 16" wheels 28 PSI**
17" wheels 25 PSI
[4] Wheel bearing torque **200 FT. - LBS.**
[5] Rear end oil should be changed after the first 3 months or 3,000miles whichever comes first. Rear end oil should then be changed every 12 months or 20,000miles. Using only **NON-synthetic** 80W-90 GL-5 gear oil. The differential case should contain **no more** than 1 quart of gear oil.

<u>This Schedule is in addition to the Honda Maintenance Schedule</u>
<u>At higher odometer readings, repeat at frequency intervals established here.</u>

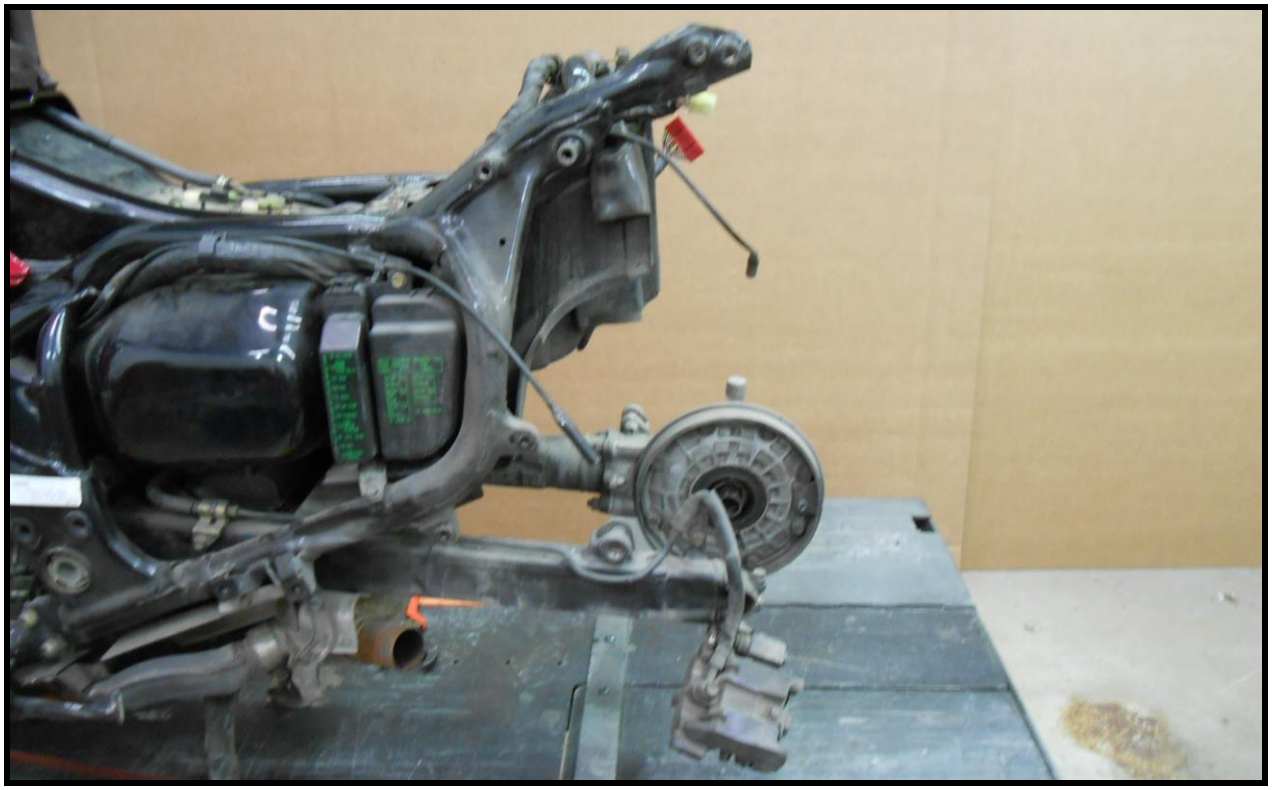
Disassembly of Motorcycle:

1. Place the motorcycle on the center stand or lift.
2. Set the air pressure to zero.
3. Remove the passenger handles and seat. 4 SHCS.
4. Remove the rear side covers.
5. Disconnect negative battery terminal.
6. Remove the exhaust covers. 2 Fasteners.
7. Remove the passenger floorboards. 4 fasteners. Two screws and chrome covers on each side on SE models.
8. Remove the top trunk under cover. 4 phillips screws.
9. Remove the latch cover from inside the rear of the top trunk. Remove the saddlebag release cables.
10. Unplug the top trunk wire connections and antenna cables.
11. Remove the top trunk. 4 fasteners.
12. Remove the four saddlebag grommets.
13. Remove the saddlebag corners and unplug taillights.
14. Remove and discard the saddlebags. 4 fasteners each.

15. Remove and discard the mufflers, clamps and gaskets.
16. Unplug the 3 large colored wire harness plugs.
17. Remove the airline from the air shock.
18. Remove and discard the rear crash guards. 4 fasteners.
19. Remove the rear subframe. 2 fasteners.

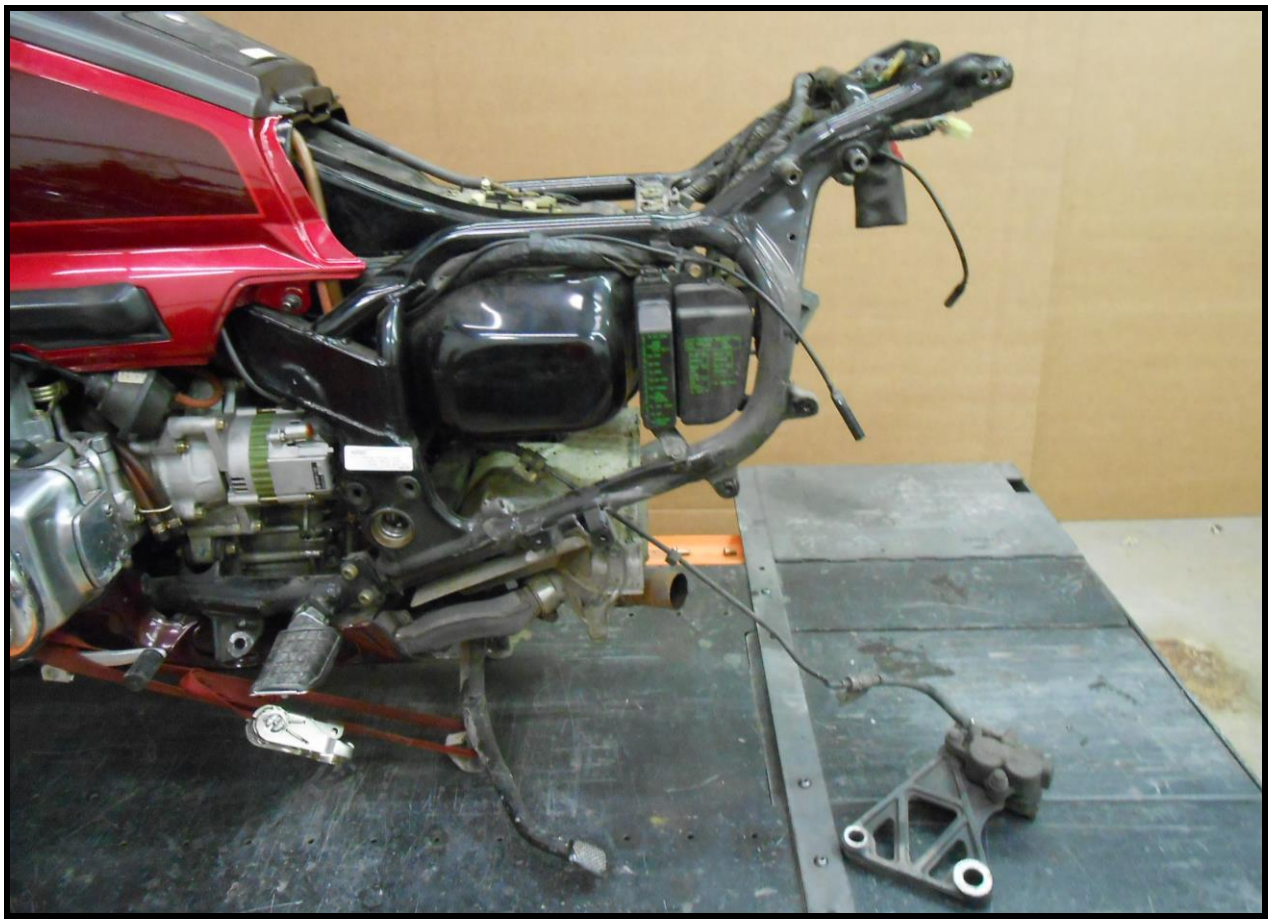


20. Remove the shock fasteners and washers, set the washers aside for reinstallation.
21. Remove and discard the shocks, rear axle and wheel.
22. Set rear caliper aside for now.



23. Remove the battery and battery box.
24. Remove and discard the wire harness clamp from under the battery box.
25. Remove the reverse resistor. Unplug the large 3 wire connector, 1 nut and the ground wire and 4 fasteners.
26. Remove the fasteners securing the rear brake line to the swingarm.

27. Remove and discard the swingarm pivot bolts, locking nut and swingarm.

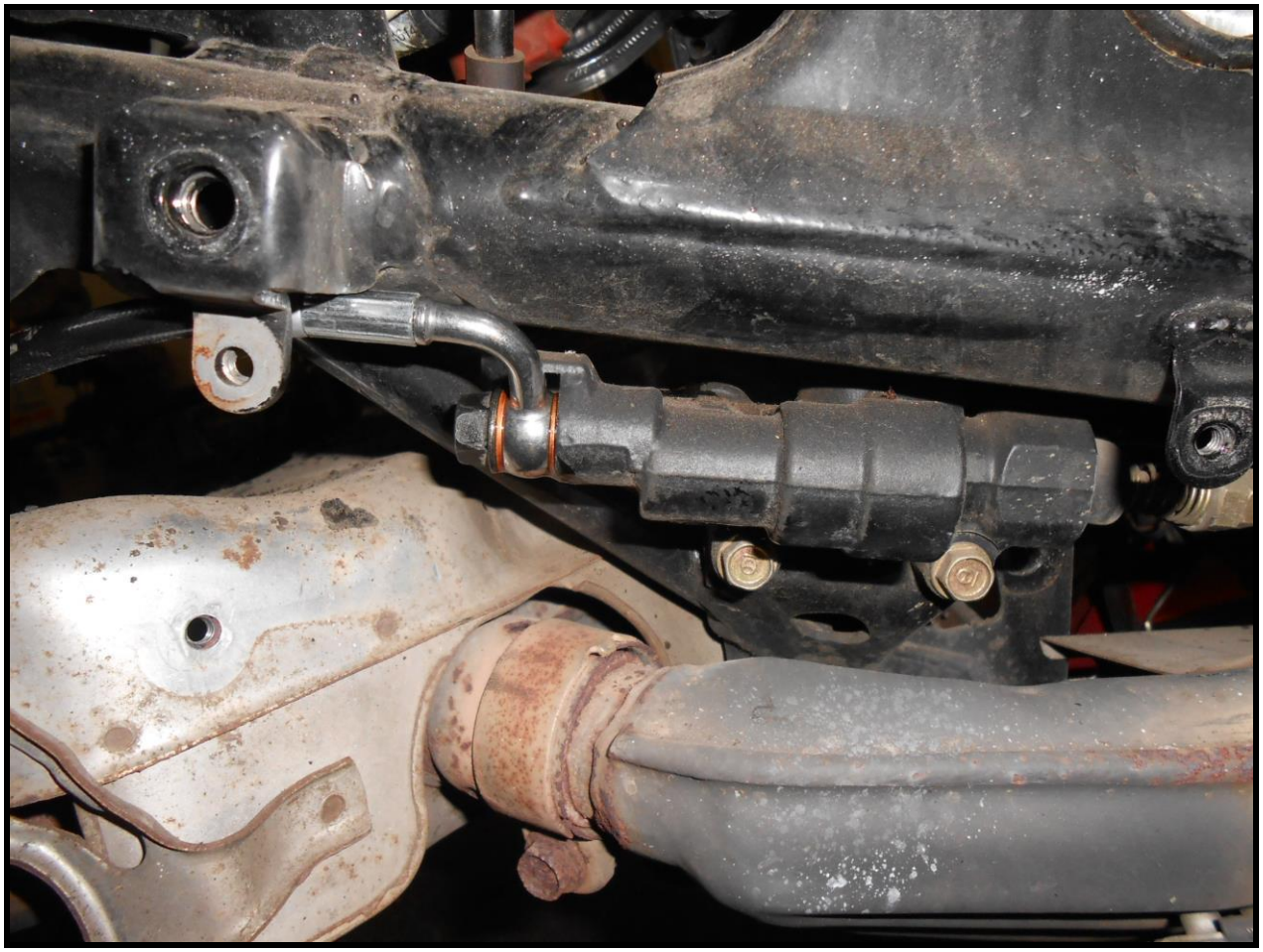


28. Remove the ground wire bolt from the rear of the front inner rear fender. Unhook the 3 relays from the right side of the inner fender.

29. Remove and discard the inner fender and the 3 relay holder.

30. Remove the rear brake master cylinder heat shields.
31. Remove the rear caliper brake line.

32. Install the new supplied OEM Honda Rear Brake Master Cylinder.
33. Install the CSC rear brake line reusing the OEM banjo bolt and new crush washers.

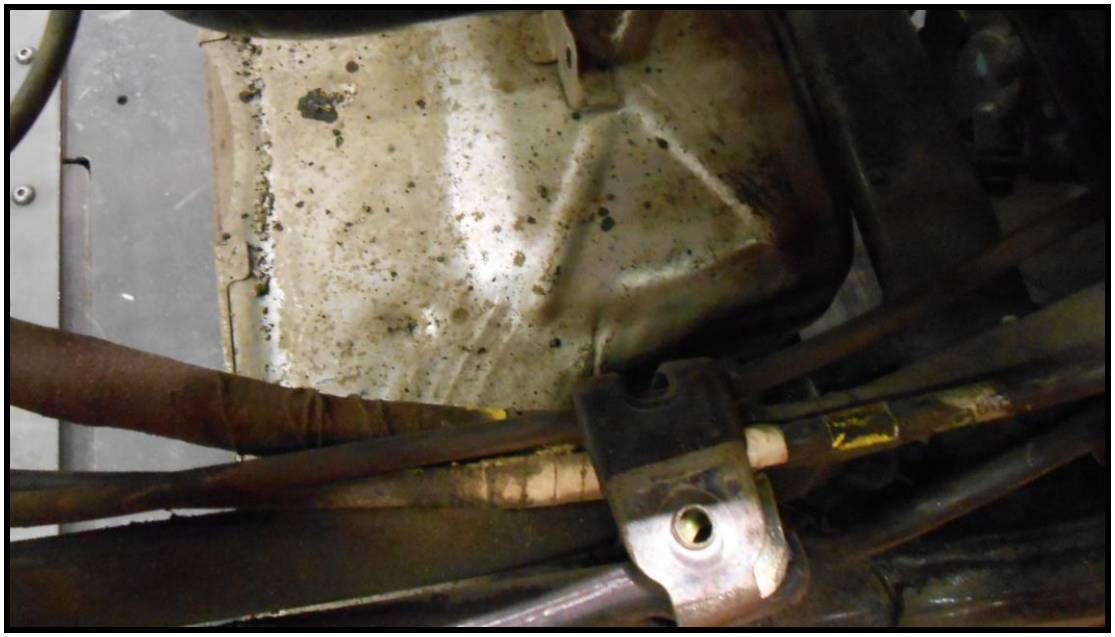


34. Reinstall the rear brake master cylinder heat shields.

Modification of Motorcycle:

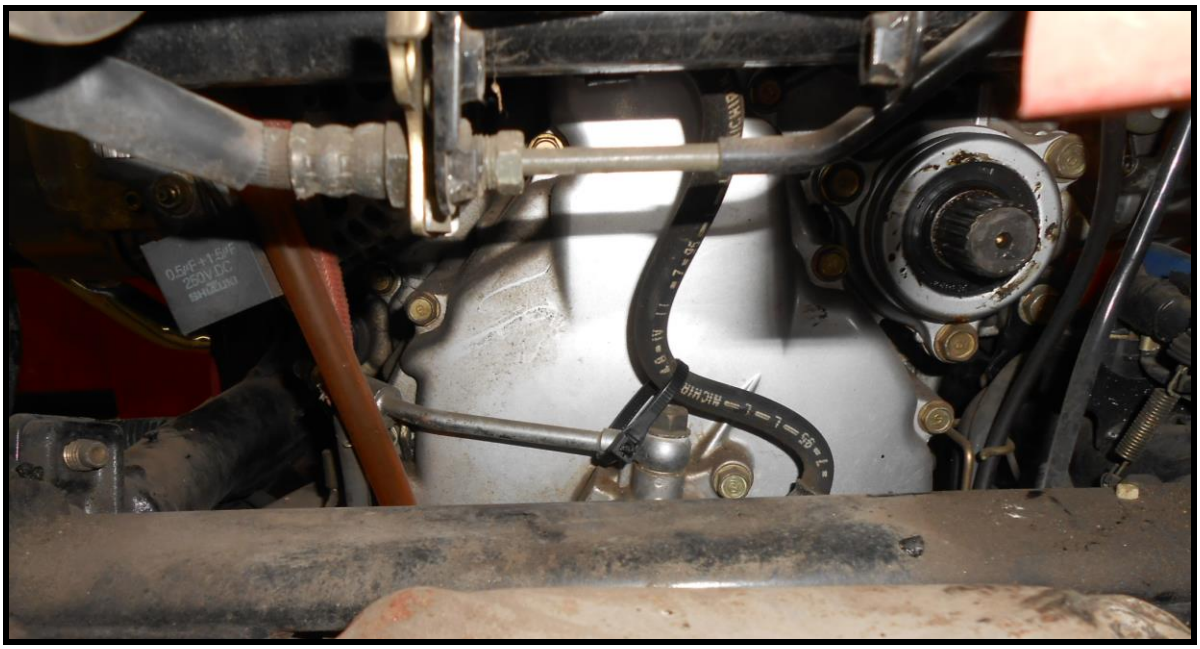
1. Modify the exhaust shield for driveshaft clearance as shown.

BEFORE



AFTER

2. Secure the clutch hose to the left as far as possible for driveshaft clearance.



3. Bent down the left rear of the exhaust shield for mount clearance.
4. Break off the rear left 2 fins from the reverse resistor for Driveshaft clearance.

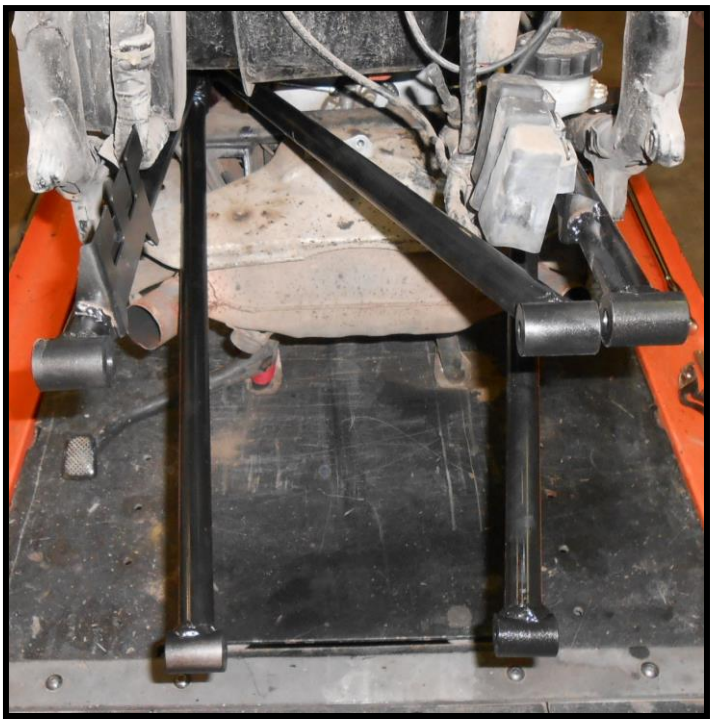
Frame mount Installation:

1. Install the CSC pivot bolts into the motorcycle frame and Torque 80 FT/LBS. They are the same left and right.
2. Install the CSC master cylinder reservoir relocation mount as shown reusing OEM fastener in the frame and using two BHSCS securing the reservoir to the mount.

The two BHSCS are NOT shown.

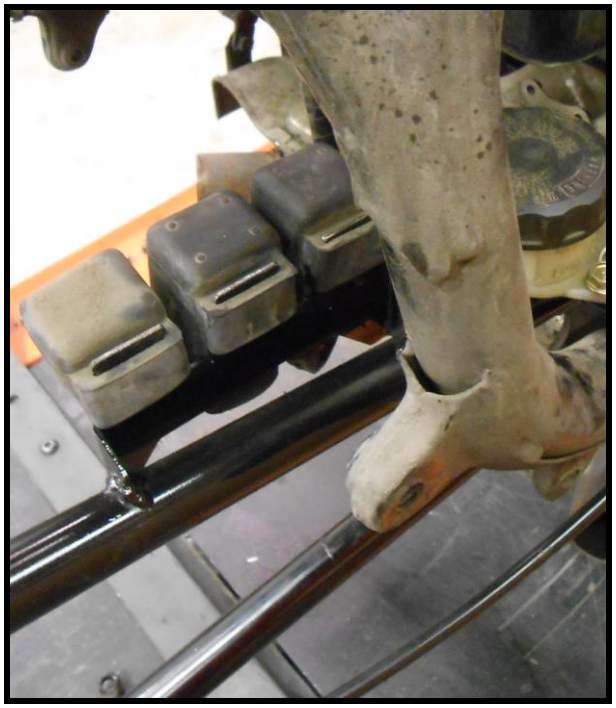
3. Position the right frame mount over the pivot bolt and route the master cylinder reservoir hose to the inside with the wire harness as shown.

4. Loosely install a 3/8-16 X 1 3/4 SHCS with thread locking agent into the frame mount threaded boss.
5. Slide the left side frame mount into place.



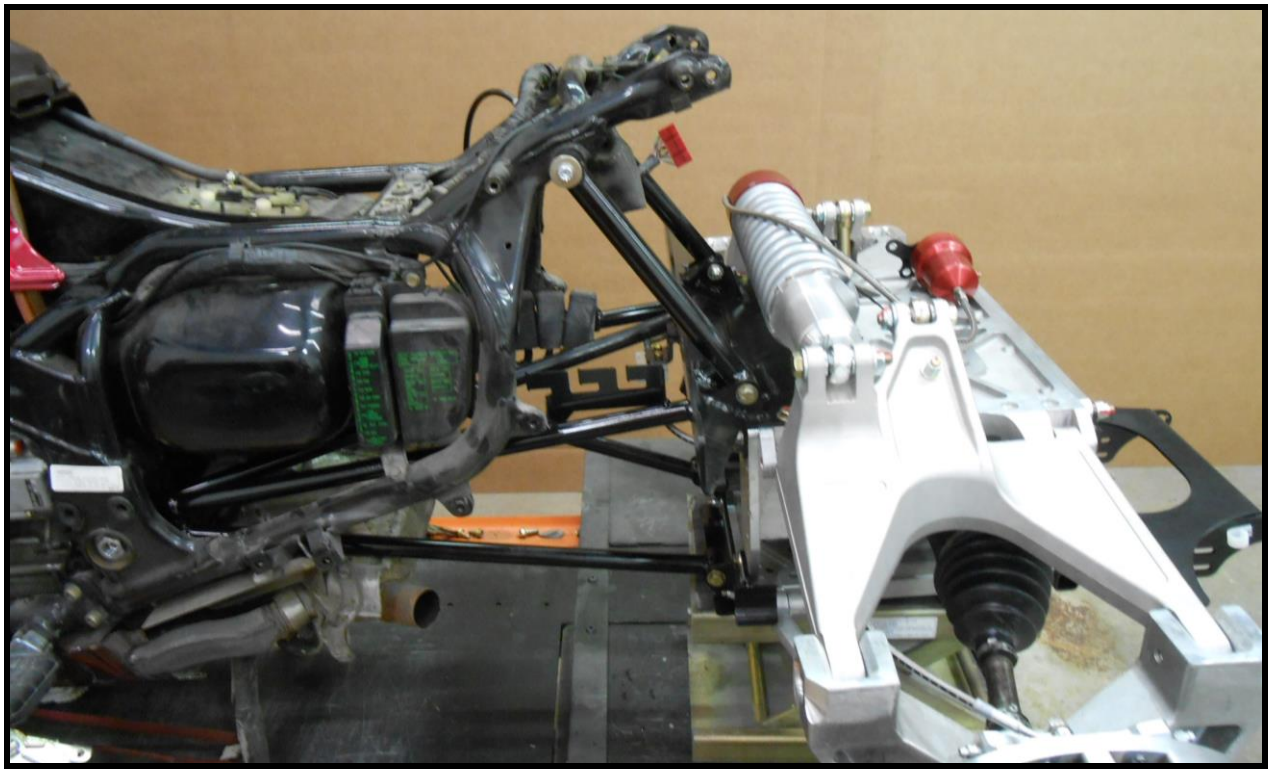
6. Loosely thread the 3/8-16 X 2 1/2 SHCS through the left pivot bolt and the frame mount then into the diagonal brace as shown.

7. Install the 3 relays onto the right frame mount as shown.



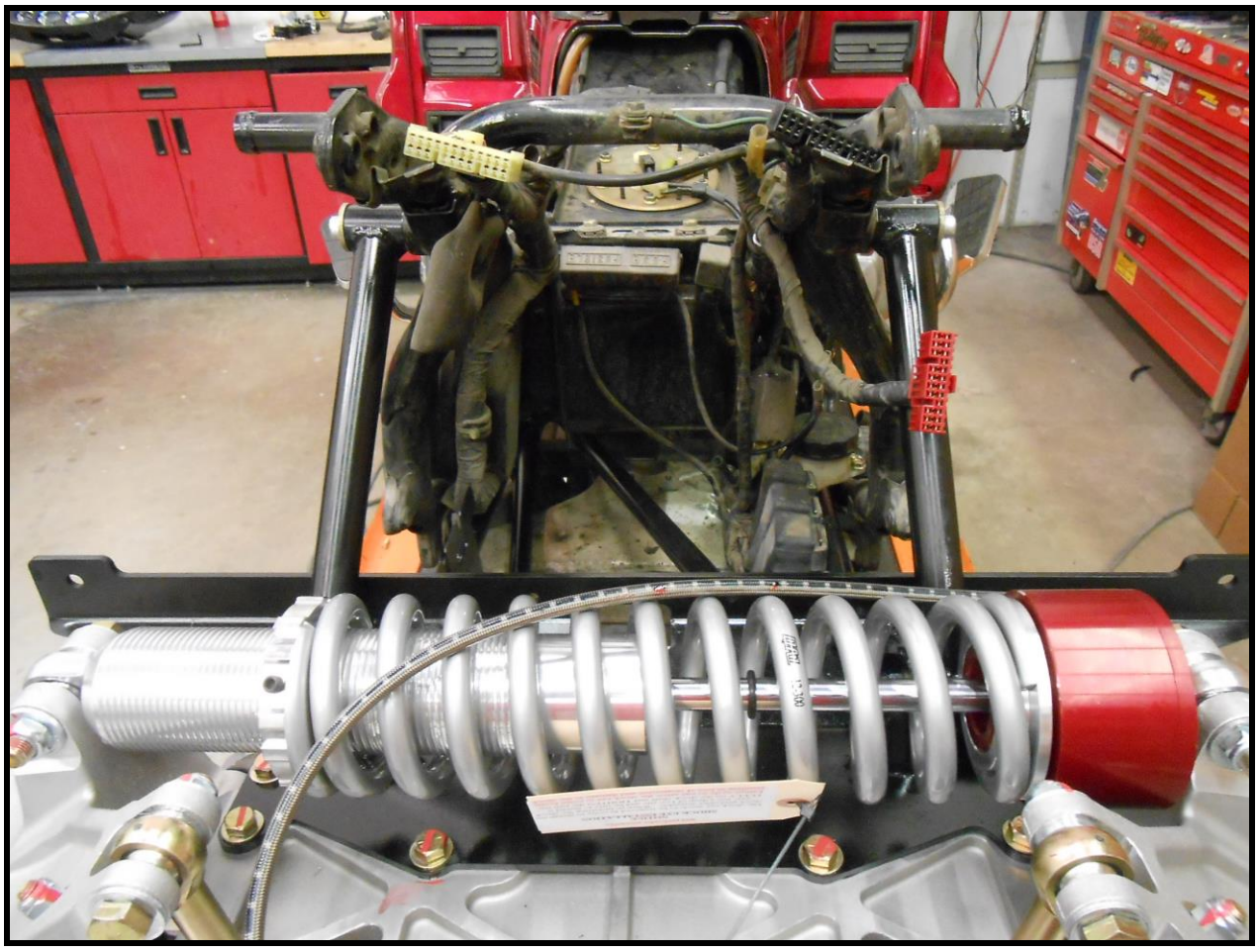
Rear Suspension Unit Installation:

1. Place the rear suspension unit onto a flat jack.
2. Slide rear suspension unit forward behind prepared motorcycle frame.



3. Moving the rear end forward. Align the frame mount bosses to the tabs on the lower front mount and the tabs on the intermediate mount.
4. Lower frame mount threaded bosses go to the inside of the lower mount tabs.
5. Upper frame mount bosses go to the outside of the intermediate mount tabs.
6. The diagonal brace goes to the inside of the right intermediate mount tab.
7. Leave all the fasteners in the next steps loss until all of them are started.

8. Loosely install the two 3/8-16 X 1 HHCS and flat washers into the lower front mount and thread them into the lower frame mount bosses using thread locking agent.
9. Install a 3/8-16 X 1 3/4 SHCS into the left upper boss and secure with a flat washer and nyloc nut.
10. Install a 3/8-16 X 2 1/2 SHCS through the right upper frame mount boss into the intermediate tab and thread it into the diagonal brace. Using thread locking agent.
11. Install the two upper frame struts. Slide them over the shock boss on the motorcycle frame then insert them between the tabs on the top of the intermediate mount.

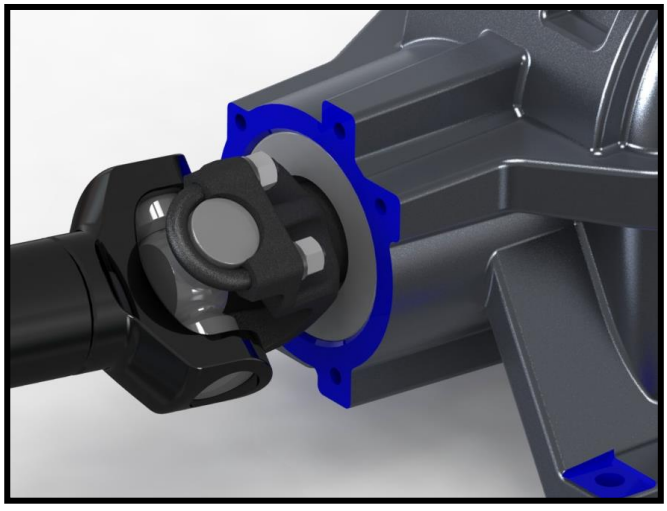


12. Secure with two 3/8-16 X 2 1/2 HHCS, four flat washers and two nyloc nuts.

13. Reuse the OEM flat washer and new M8 X 25mm HHCS at the shock mount boss using thread locking agent
14. Now that all mounts are installed and all fasteners are started, tighten all fasteners.
    a. 2 SHCS, pivot bolts
    b. 2 SHCS, upper rear frame mounts
    c. 2 HHCS, lower rear frame mounts
    d. 2 HHCS w/nyloc nuts, bottom of the frame strut
    e. 2 HHCS, top of the frame strut

3/8 fasteners Torque 25 FT/LBS
M8 Fasteners Torque 20 FT/LBS

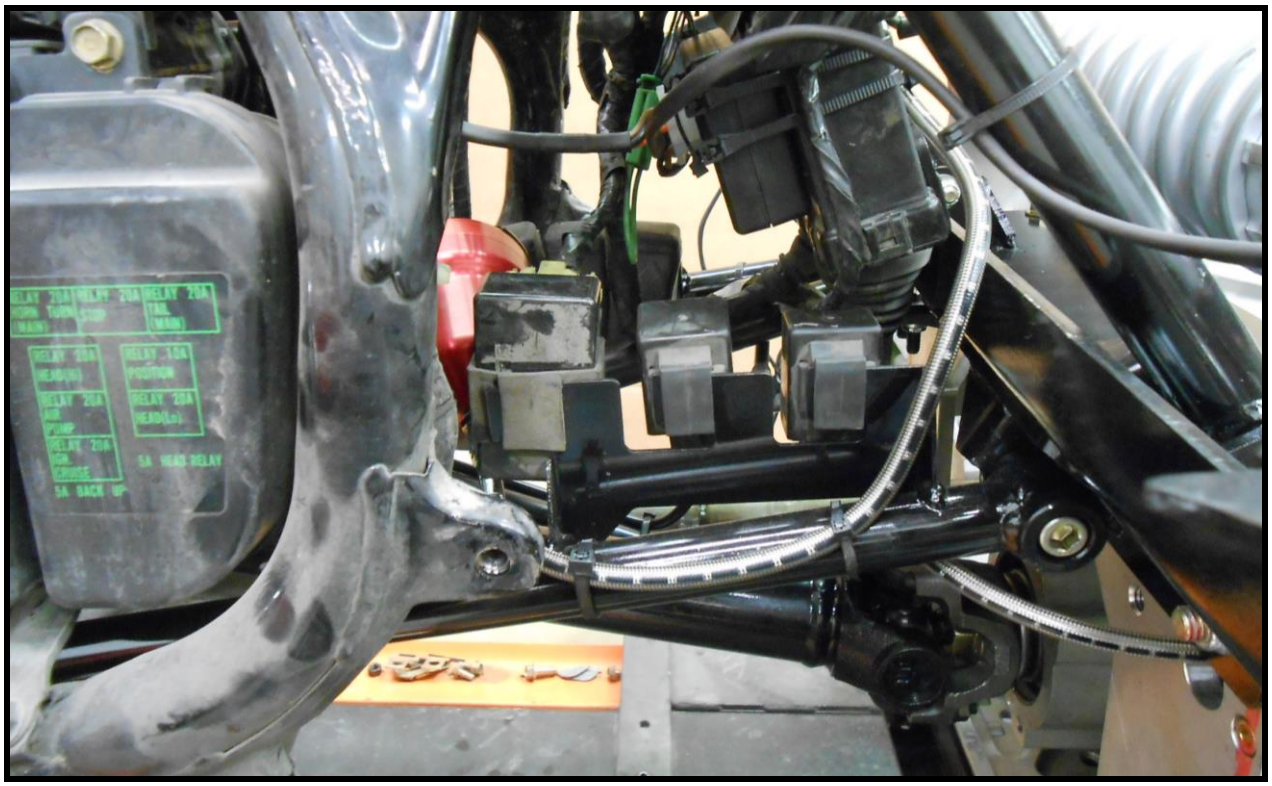
15. Install the driveshaft.
16. Using the moly grease provided, grease the splines on the driveshaft front yoke and the transmission output shaft.
17. Slide the driveshaft onto the transmission output shaft as far as possible. Making sure the splines are fully engaged.
18. Loosen the four 3/8 HHCS from underneath the lower tray that secure the differential.
19. Slide the rear differential all the way forward aligning the driveshaft u-joint with the differential yoke.
20. Install the U-bolts on the u-joint and tighten.
21. With the right front engine side cover removed confirm that the driveshaft is forward and fully seated on the transmission output shaft.



22. Tighten the four 3/8 HHCS and nyloc nuts that secure the differential to the lower suspension tray.
23. Check that the differential is full with **exactly one quart** of specified gear oil.

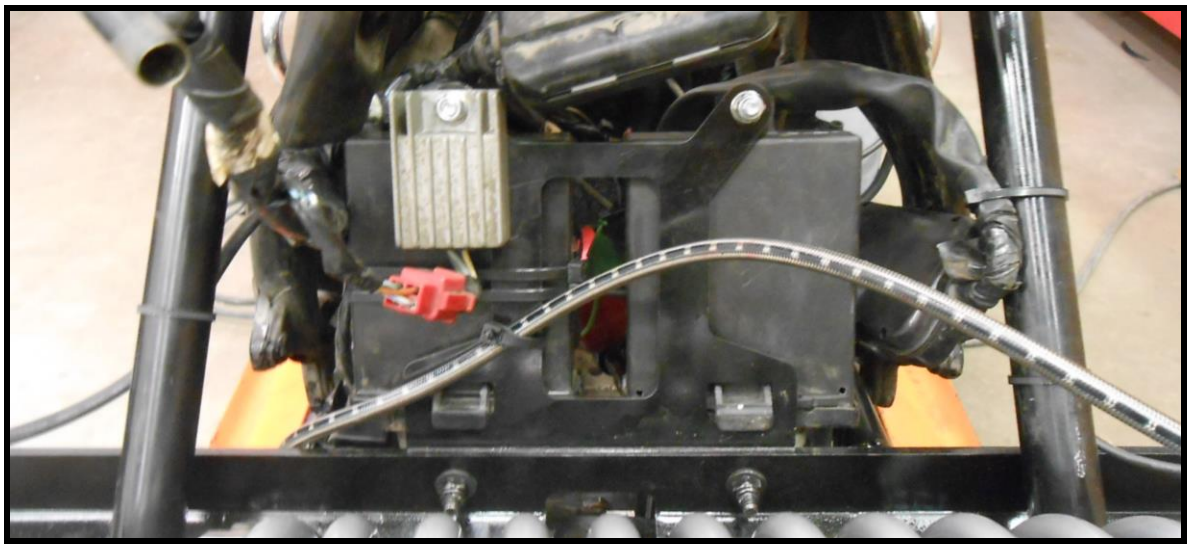
DO NOT OVERFILL.

24. Install the 2 flashers and the diode assembly on the left frame mount as shown.



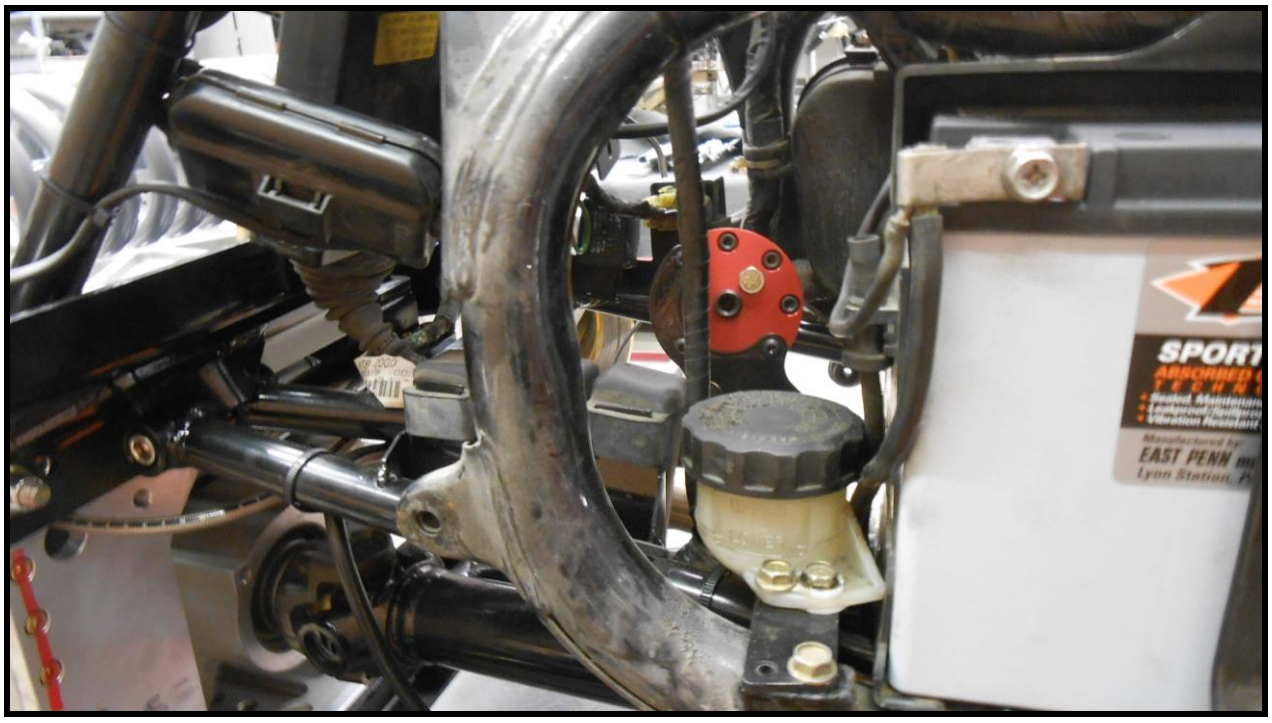
25. On the GREEN 3 pin connector for the Bank Angle Sensor connect the red and green wires together.
26. Install the control unit mount to the front of the intermediate mount with two 1/4-20 HHCS, four flat washers and two nyloc nuts.

27. Install the control units to its mount. Insert the finger on the bottom of the control units into the slot cutout on the lower part of the mount.
28. Insert the M6 HHCS with a flat washer through the control units then use 3 flat washers as a spacer now through the mount. On the left side place the starter relay regulator on the HHCS and secure both with a flat washer and nyloc nut.



29. If installing GRD EFX secure the GRD EFX control module to a control unit as shown.

30. If installing the Shock Spring Preloader. Secure the adjuster to the diagonal brace with 2 p-clamps and 1/4-20 HHCS positioned as shown.
31. Install the 2 p-clamps around the diagonal brace with the tabs upward, and then secure with the HHCS, flat washer and nyloc nuts.



32. Reinstall the Reverse Resistor with the OEM hardware.
33. Reinstall the Battery box and Battery with the OEM hardware.
34. Secure all wiring, brake lines and the Shock Spring Preloader line to the motorcycle frame or the trike kit frame mount as needed.
35. Install the Spoiler relay to the frame tab with the Ground wire. (top rear of motorcycle frame)

Brake Line Installation:

1. Secure the CSC brake line to the distribution block using the provided banjo bolt and new crush washers.

Brake Bleeding Procedure:

1. Remove all fluid from the rear brake master cylinder reservoir. Then wipe clean with a paper towel.
2. Fill reservoir with DOT 4 brake fluid from a clean sealed container.
3. Using a vacuum bleeder, follow this procedure **carefully**.

    a. Front Wheel: Left front bleed valve.
    b. Rear caliper bleed valves outsides first then insides on each side.

4. Hand bleed the system using the above sequence. Until all air is removed from the lines.
5. Allow the bike to set for a minimum of 20 minutes and recheck.
6. If there is excessive pedal travel on the first pump, repeat step 4.

Suspension Setup:

Use this chart to select the correct spring preload. Rotate the adjuster nut on the shock until the spring is set to the desired length. Now tighten the set screw on the adjuster nut or tighten the lock nut on the fully adjustable shock.

Load: Typical weight the customer adds to the stock trike. This includes riders, luggage, and weight of a trailer tongue.
When in doubt assume a higher weight than actual.

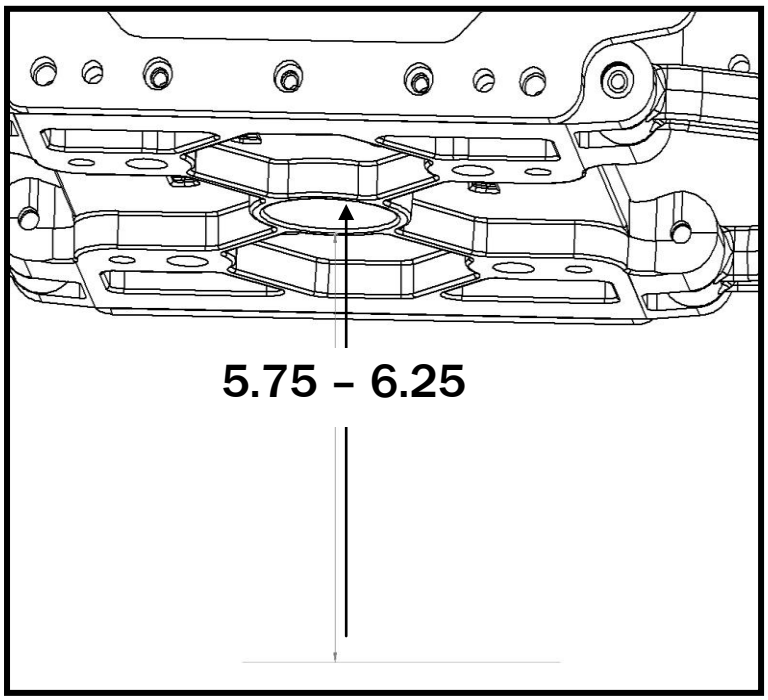
Length: Suggested length the spring should be adjusted to with the suspension completely unloaded and the preloader set to zero.

SPORT I/S								
SHOCK with GREY SPRING								
	LOAD	LENGTH		LOAD	LENGTH		LOAD	LENGTH
250 LB/IN SPRING	100	11 1/16	300 LB/IN SPRING	100	11 1/4	350 LB/IN SPRING	100	11 7/16
	200	10 7/8		200	11 1/16		200	11 1/4
	300	10 5/8		300	10 7/8		300	11 1/8
	400	10 5/16		400	10 5/8		400	10 15/16
	500	10 1/8		500	10 7/16		500	10 3/4
				600	10 1/4		600	10 5/8
							700	10 1/2
							800	10 3/8

SPORT I/S								
SHOCK with RED SPRING								
	LOAD	LENGTH		LOAD	LENGTH		LOAD	LENGTH
250 LB/IN SPRING	100	13 1/16	300 LB/IN SPRING	100	13 1/4	350 LB/IN SPRING	100	13 7/16
	200	12 7/8		200	13 1/16		200	13 1/4
	300	12 5/8		300	12 7/8		300	13 1/8
	400	12 5/16		400	12 5/8		400	12 15/16
	500	12 1/8		500	12 7/16		500	12 3/4
				600	12 1/4		600	12 5/8
							700	12 1/2
							800	12 3/8

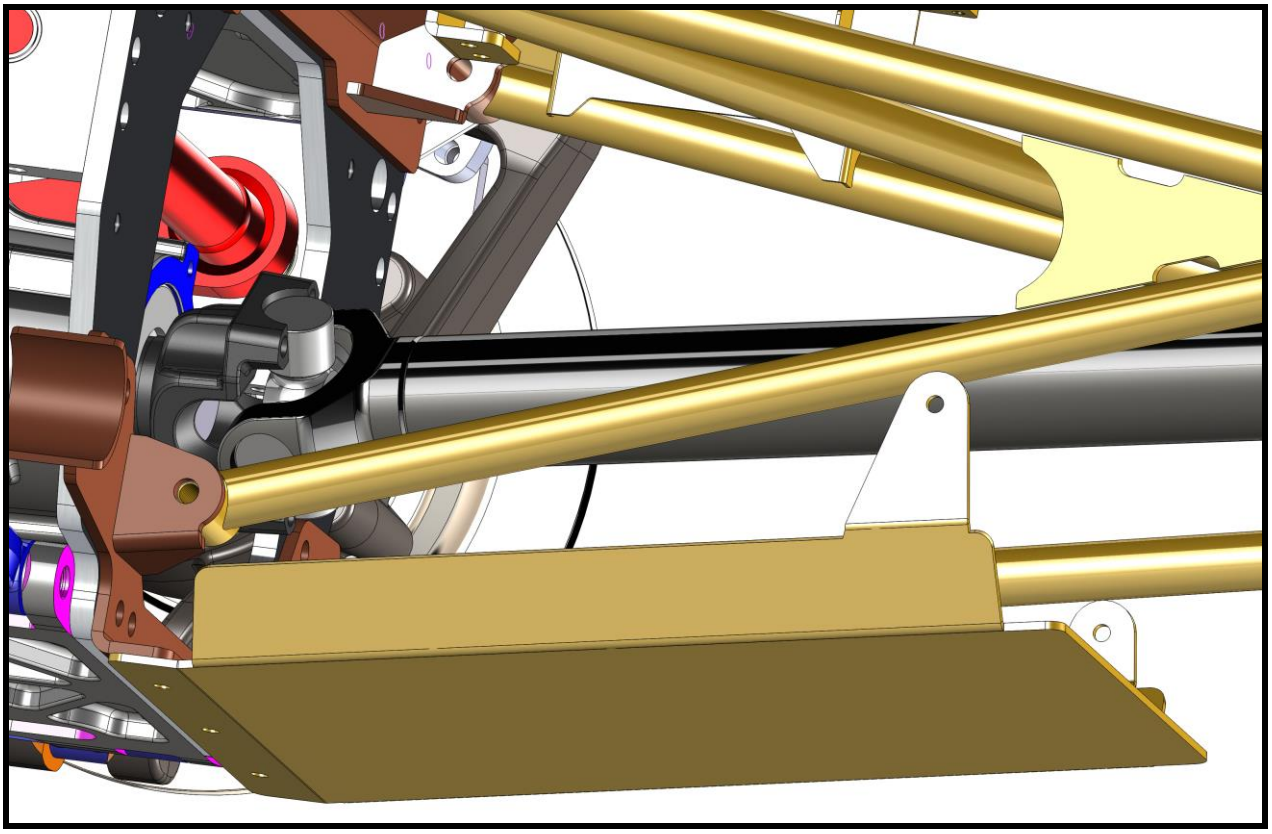
1. Align the preloader so that the banjo bolt is pointing up.
2. Tighten the setscrew on the preloader against the preloader centering sleeve and on the spring locking nut.

These lengths are only estimates. If you would like to confirm a correct setting, load the completed trike to the customers typical riding situation and measure from the ground to the middle of the lower suspension plate. The center hole should be 5.75” – 6.25” from the ground. **Attention:** This is the only suspension adjustment needed. All other settings are factory set and should not be tampered with. There is no need to remove trike from the lift to check camber, toe, or the drop links.



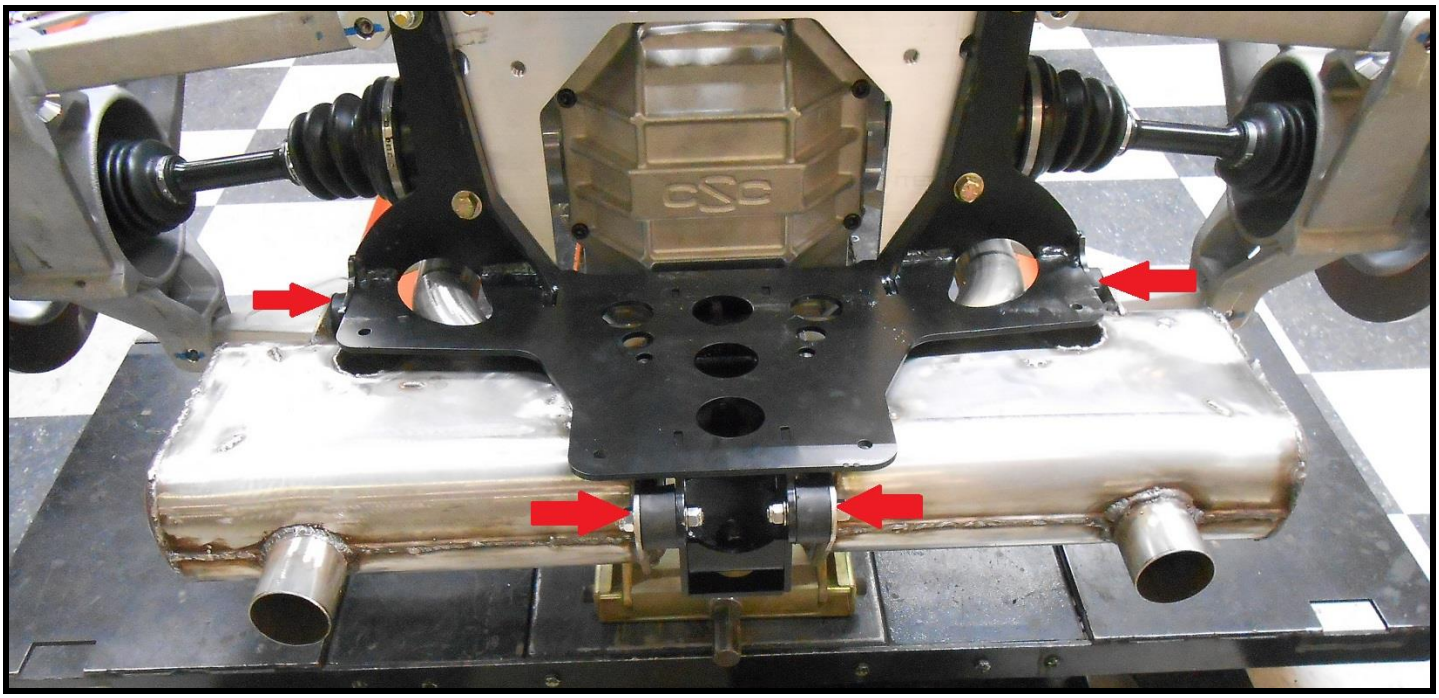
Gravel pan Installation:

1. Install the Gravel pan under the lower front mount with 1/4-20 HHCS and flat washers. Insert the HHCS from the bottom up and secure with flat washers and nyloc nuts.
2. Place p-clamps on the frame tubes then secure the Gravel pan with 1/4-20 HHCS flat washers and nyloc nuts.



Exhaust Tailpipe and Muffler Installation:

1. Install the smaller muffler clamp onto the front of each tailpipe and install onto each head pipe.
2. Install the 4 rubber sandwich mounts with flat washers and nyloc nuts to the Body Frame, leave loose. Refer to **RED ARROWS**.



3. Slide 2 clamps on each side, 63 onto the rear of the tailpipes.
4. Install the mufflers on to the studs of the sandwich mounts and the tailpipe. Refer to previous picture.
5. Secure mufflers with flat washers and nyloc nuts.
6. Tighten all 8 nyloc nuts.
7. Make sure muffler is flat and square to the body then tighten the 6 exhaust clamps.
8. Install the muffler tips using 2 clamps, 63.
9. Adjust so they look even in the body cutout and tighten clamps.

Body Installation:

1. Install the saddlebag side cover grommets into the body. It may be necessary to grind inside of body for proper grommet fit.
2. Lower the body onto the trike with the front of the body pointing slightly downward until it comes to rest onto the upper tray and body frame.
3. Route the emergency release cable for the trike body door on the inside of the motorcycle frame up to the fuse box area.
4. Reinstall the lower exhaust covers.
5. Reinstall the passenger floorboards.

Top Trunk Installation:

1. Place the top trunk onto its mount plate on the top of the body.
2. Be sure the wiring and the release cable is free.
3. Secure the top trunk with HHCS and nyloc nuts in the rear and long HHCS fender washers and nyloc nut inside the body in the front.
4. Install the release cable and plug in the taillight connectors.
5. Reinstall the top trunk under cover. 4 phillips screws.
6. Reconnect the top trunk wiring and antenna cables.
7. Remove the pockets from the trunk and install the antenna ground cables.
8. Remove the lower antenna bolt and insert it into the ground strap eyelet and secure the lower bolt.
9. Black wire on the radio antenna (right side) and the raw ground strap on the CB antenna (left side).

10. Route the ground straps forward to the motorcycles ground tab.
11. Reinstall the pockets.

Trike Body Alignment:

1. Install the rear side covers onto the grommets in the body. Make sure that the pins in the side cover fully seat into position.
2. The trike body can move left, right, forward, backward, up, down, and angled. Shimming with the provided 1/4 and 1/8 rubber washers may be required to get the trike body into alignment.
3. Initial trike body fitting: First raise the front of the body to obtain the vertical location of the rear side covers front pinhole.
4. Then slide the body front to back to get the horizontal location of the rear side cover front pin hole.
5. With the body temporarily held into place, raise the adjustable 90° body support brackets until they seat against the body's inner liner. Tighten the two HHCS.
6. Center the Trike Body left to right with the mufflers. You can also measure off the brake rotors to the fender well with a carpenter square.

Securing the Trike Body:

Note: A small section of trike body carpet has not been glued at the location of the trike body frame mounting tabs to allow removal of the bolts used in shipping, and installation of the trike body mounting hardware. The predrilled bolt holes may need to be enlarged or

relocated for trike body attachment to the trike body frame mounting tabs. If relocation is necessary, the preexisting holes will need to be sealed with silicone sealant.

1. Using a 5/16 twist drill, drill up through the trike body frame mounting tabs.
2. Insert two 5/16–18 x 1 1/4 HHCS, fender washers, and rubber washers if necessary through the holes drilled in step 1.
3. Secure with two nyloc nuts and flat washers.
4. Repositioning of the adjustable 90° body support brackets may be necessary once the body is in alignment and rear bolts are secured.
5. Using a 5/16 twist drill, drill up through the adjustable 90° body support brackets.
6. Insert two 5/16–18 x 1 1/4 HHCS and two fender washers through the adjustable 90° body support brackets.
7. Secure with two nyloc nuts and flat washers.

Wiring:

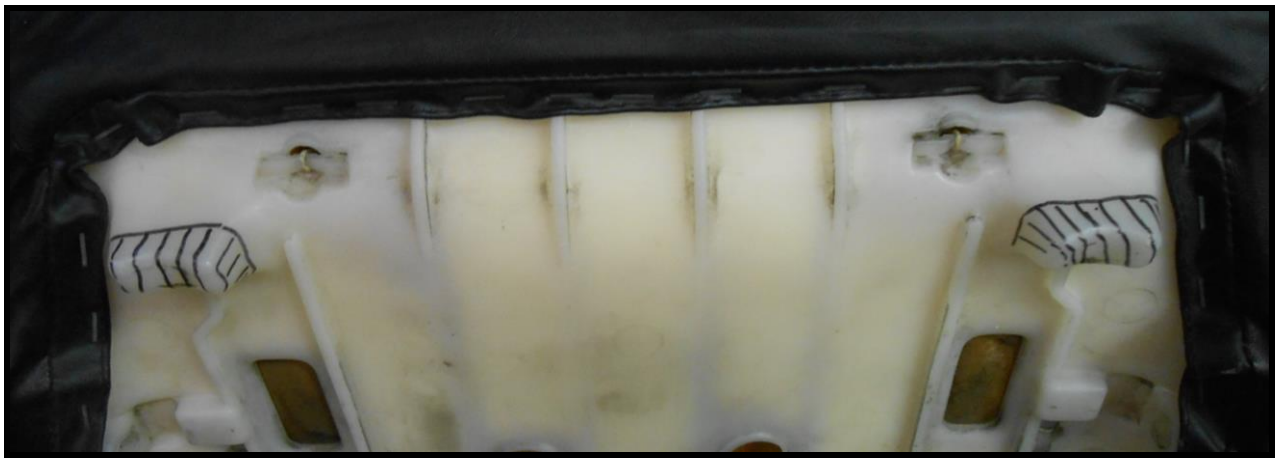
1. Route the red wire with the fuse holder to the (+) positive side of the battery.
2. Route the white wire in the trike body wiring harness to the NEGATIVE side of the battery.
3. Plug in the two white 6 pin connectors for the taillights into the red 6 pin OEM connectors.
4. Pay attention to the turn signal wire colors.
   Blue wire to blue, orange wire to orange.

Final Reassembly of the Motorcycle:

1. Reinstall the wheel and tire assemblies with ten m12 x 1.5 ET conical lug nuts. **Torque to 75 ft/lbs.**
2. Modify the rear of the seat for clearance as shown.

BEFORE

AREA MARKED TO BE REMOVED



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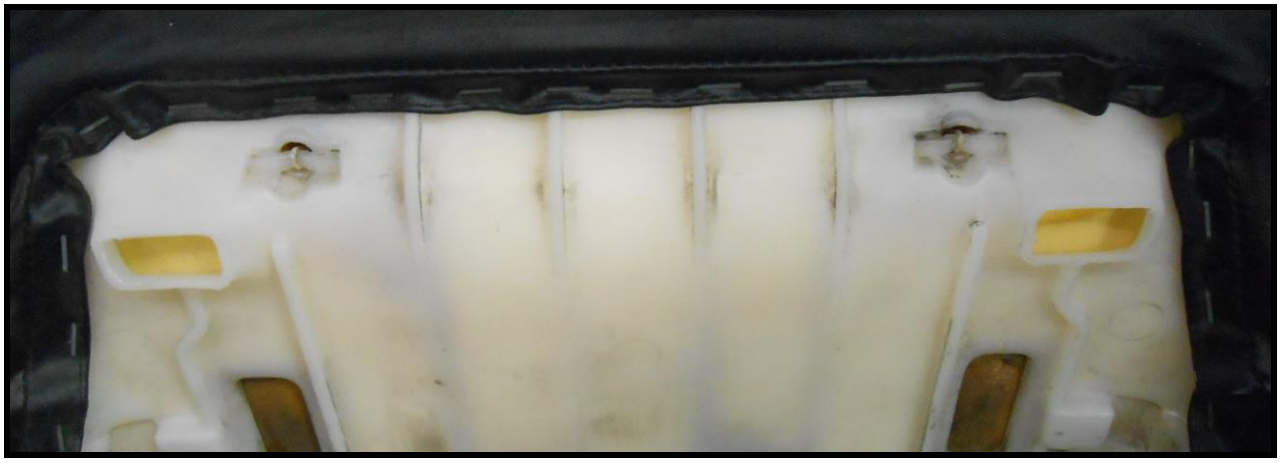


3. Replace the seat and passenger grip handles.
4. Recommended tire pressure
   15” & 16” wheels – 28 psi
   17” wheels – 25 psi

Initial Break In Procedure:

Ride the trike for 20 - 30 minutes to bring it to operating temperature. Allow to sit for 1 hour before riding again.

Refer to the Maintenance Schedule on p. 5 for details regarding future service inspections and maintenance.

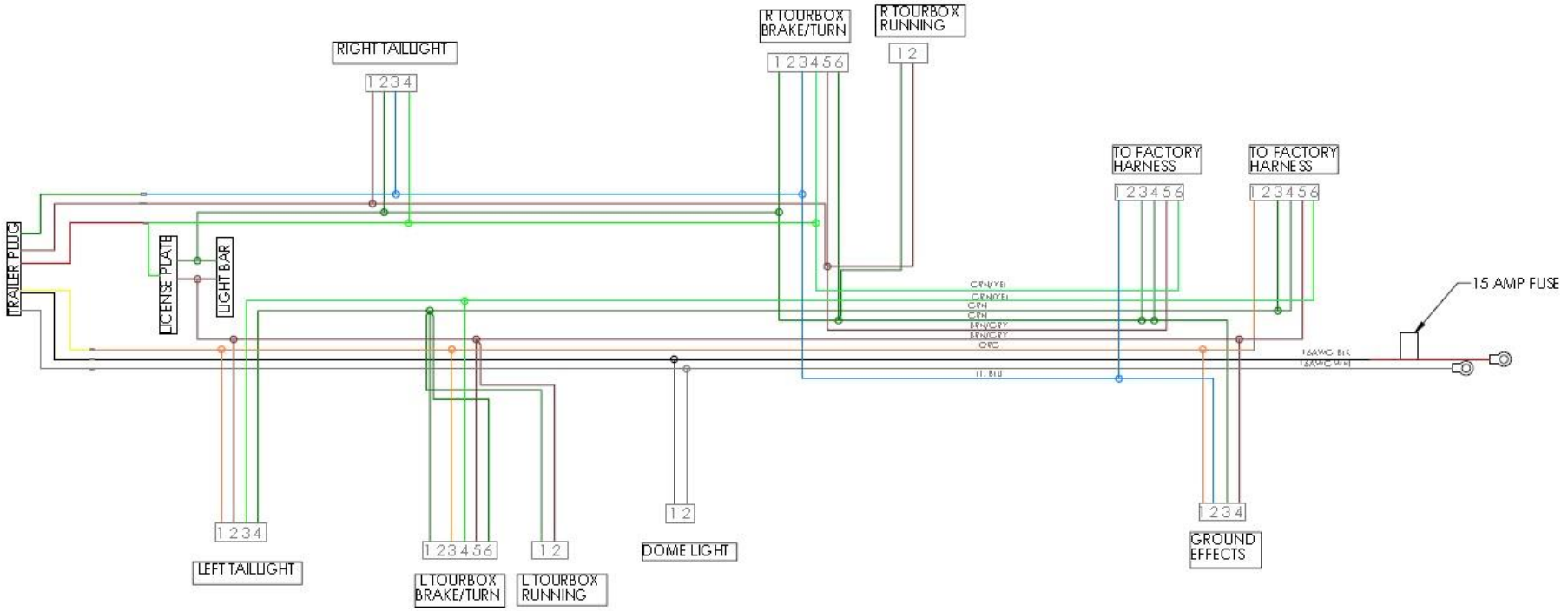
From all of us at California Sidecar.
Enjoy the ride.

TRAILER PLUG WIRE COLORS:

BROWN - RUNNING LIGHTS
YELLOW - LEFT TURN
GREEN - RIGHT TURN
RED - BRAKE
BLACK - 12V
WHITE - GROUND

BODY HARNESS WIRE COLORS:

BLACK - 12V
WHITE - GROUND
GREEN/YELLOW - BRAKE
GREEN - GROUND
BROWN - RUNNING
ORAGE - LEFT TURN
BLUE - RIGHT TURN



APPROVALS	DATE
DRAWN BY: J.BALL	3/19/14
CHECK	
APPROVED	

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES. DO NOT SCALE DRAWING.
ALL THREADS TO BE 2A (EXTERNAL) OR 2B (INTERNAL)

TOLERANCES:	
DECIMAL: X.XXX ±	0.010
X.XXXX ±	0.001
FRACTIONAL:	1/8
ANGULAR: deg	0.5
BEND: deg	1.0

THIRD ANGLE PROJECTION

California Side Car inc.
1100 MOTORCYCLE RUN ARRINGTON VA 22922

TITLE: WIRE HARNESS, SPORT IRS

SIZE	PART NUMBER	REV
B	ELC-76560	A
SCALE 1:16	VENDOR DRW NUMBER N/A	SHEET 3 OF 3