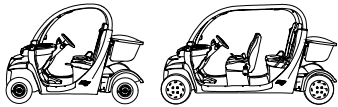




# INSTRUCTIONS

**Product:** (GEM) Global Electric Motorcars  
**Models:** GEM E825 - 2 Passenger NEV, & GEM E825 - 4 Passenger NEV



**Subject:** Instructions for installing / retrofitting the spat mount brackets.

**Estimated Completion Time:** .5 Hour

**Parts:** See Page # 7

## REQUIRED TOOLS & SUPPLIES:

- |                                   |   |
|-----------------------------------|---|
| (1) 3/8" Socket                   | (1) Ø1/8" Drill Bit                                       |
| (1) 1/2" Socket                   | (1) Ø9/32" Drill Bit or Step Drill Bit                    |
| (1) 1/2" Deep Socket              | (1) 16 oz. Ballpeen Hammer                                |
| (1) 3/4" Socket                   | (1) # 3 Phillips Bit                                      |
| (1) 3/8" Drive Ratchet            | (1) # 3 Phillips Screwdriver                              |
| (1) 3/4" Open End Wrench          | (1) Combination Square                                    |
| (1) Scribe or Pencil              | (1) Hacksaw, or Electric, Pneumatic, or Reciprocating Saw |
| (1) Wire Cutter                   | (1) 2" X 4" X 6" Long                                     |
| (1) Nut Driver                    |   |
| (1) Electric Drill                |   |
| (1) 0 - 100 Ft lbs. Torque Wrench |   |

## WARNING!

To prevent personal injury or property damage: Switch the 72-volt Master Disconnect to "OFF", be sure the ignition switch is always in the "OFF" position and that the "KEY" is removed. Set the parking brake before servicing, adjusting, or repairing.

## WARNING!

### HIGH VOLTAGE



You could be seriously or fatally injured by electric shock if you attempt to open, repair, test, inspect or adjust. Only qualified technicians should open and service. Consult service manual.

The following instructions are for installing / retrofitting the new spat mount brackets to the 2 and 4 passenger GEM. To install the spat mount brackets, proceed as follows.

## INSPECTION

1. Inspect for fracture cracks or breakage around the mounting hole locations of the spat.
2. If the problem above exists, proceed to step # 1 (INSTALLATION)
3. If no cracks exist, discontinue this service installation.

## INSTALLATION

1. Remove bench seat cushion (rear bench seat cushion for 4 passenger vehicles) to access the Master Disconnect switch. Switch master disconnect off. (See Fig. # 1.

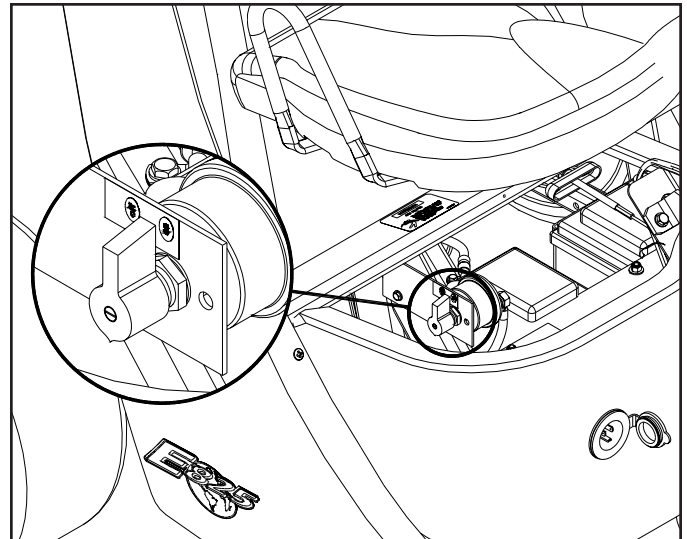
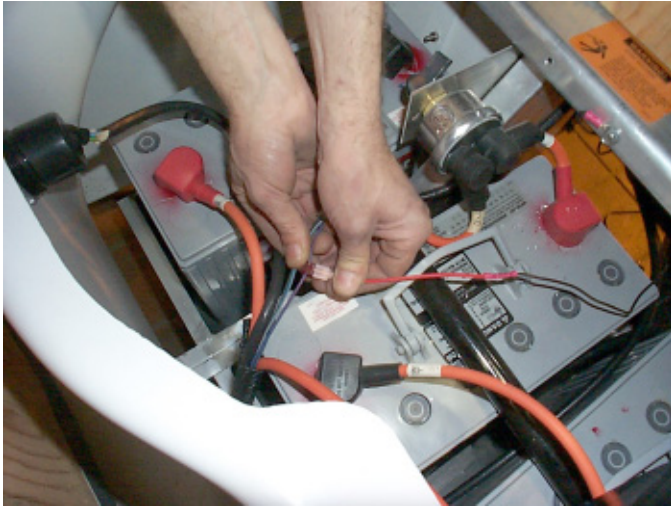


Fig. # 1 Switch master disconnect off

2. Cut the cable tie securing the license plate lamp wires. Then disconnect the license plate lamp power wire from the t-tap. (See Fig. # 3)



*Fig. # 2 Disconnect license plate lamp power wire*

3. Use a 3/8" socket, to remove the screw securing the license plate lamp ground wire. (See Fig. # 4)



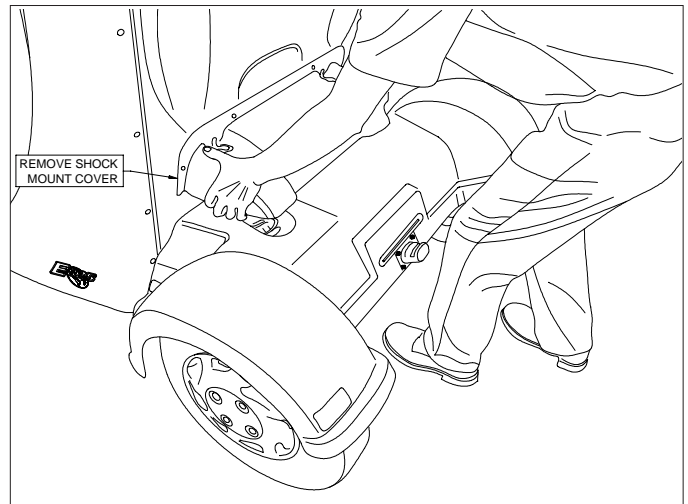
*Fig. # 3 Disconnect license plate lamp ground wire*

4. With a side cutter, remove and discard the (Qty. 4) push - tuflok rivets securing the shock cover mount. (See Fig. # 4)



*Fig. # 4 Remove the (qty. 4) push tuflok rivets securing the shock mount cover*

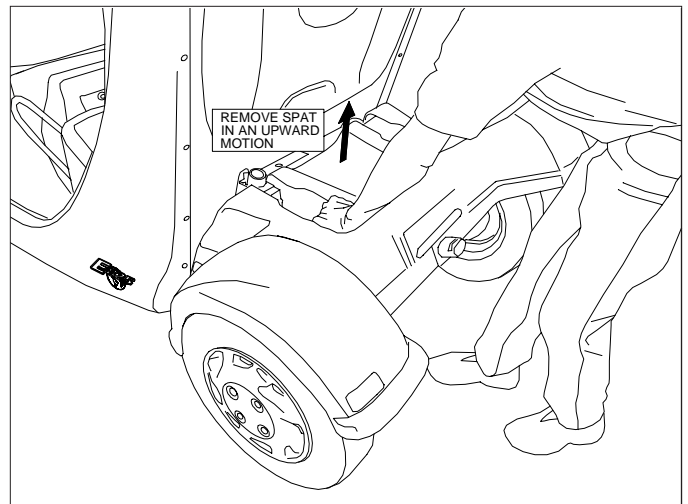
5. Remove the rear shock absorber mount cover. (See Fig. # 5)



*Fig. # 5 Remove shock mount cover*

6. Remove the (Qty. 8) screws and flat washers securing the spat to the spat brackets.

7. Carefully remove rear spat. (See Fig. # 9)

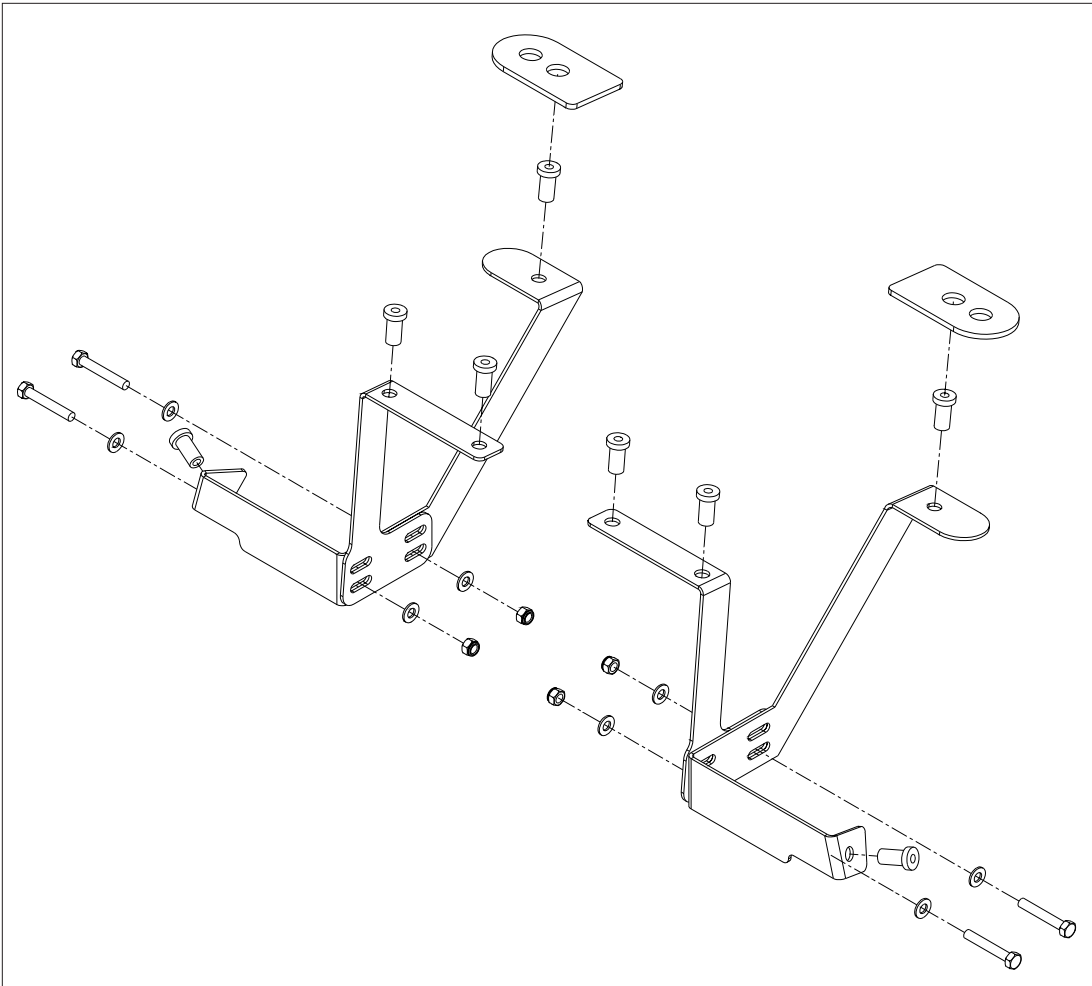


*Fig. # 6 Remove spat*

8. Remove the (Qty. 4) 5/16" bolts, 5/16" nuts, & 5/16" washers securing the old spat brackets. (See Fig. # 7)



*Fig. # 7 Remove and discard old spat mounting brackets*



*Fig. # 8 Remove and discard parts shown*

- Pre-assemble the new spat mounting brackets as shown in (Fig. # 9)

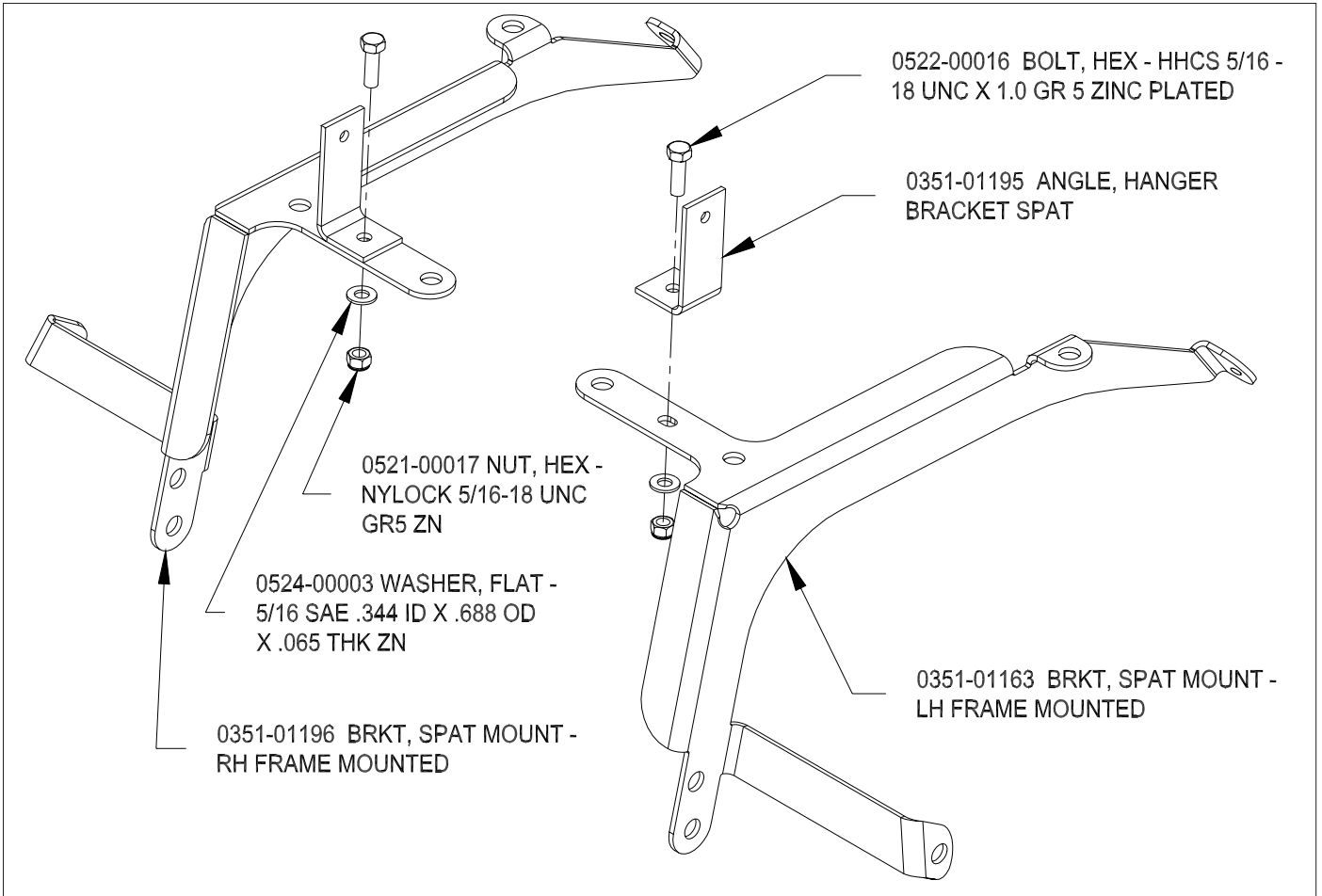


Fig. # 9 Remove bolt and nut securing rear sus. assembly to frame

- Remove the M12 bolt, nut, and washers securing the rear suspension assembly to the frame. Discard the nut. If the frame does not reassemble (Fig. # 10), then proceed to step # 10. Otherwise proceed to step # 12.

- If the frame of the vehicle you are servicing looks like (Fig. # 11), it will be necessary to cut the upper brace.

**NOTE: Only remove one side at a time.**



Fig. # 10 Remove bolt and nut securing rear sus. assembly to frame



Fig. # 11 Older frame style

11. Scribe a line with a combination square to be cut.  
(See Fig. # 12, & 13)



*Fig. # 12 Scribe lines to be cut*



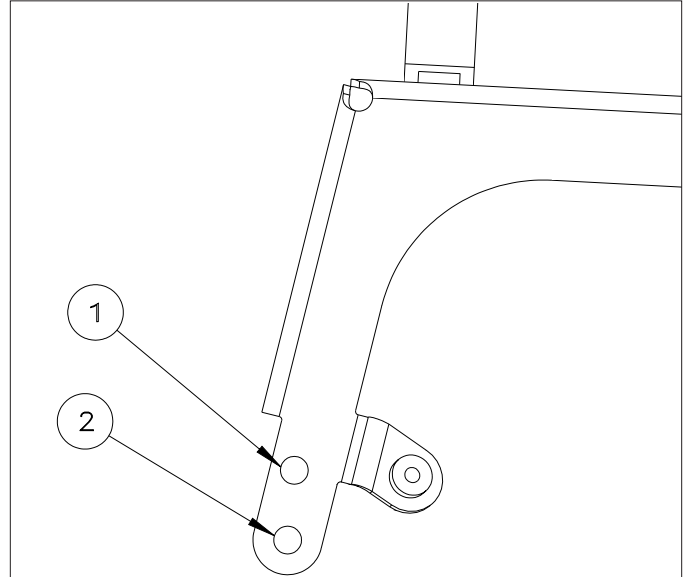
*Fig. # 13 Scribe lines to be cut*

12. Cut away material as shown in (Fig. # 14).



*Fig. # 14 Cutting operation complete*

## IMPORTANT



### Note

- 1) USE THE UPPER MOUNTING LOCATION FOR VEHICLES WITH 10 INCH WHEELS AND SMALL DIAMETER TIRES.
- 2) USE THE LOWER MOUNTING LOCATION FOR VEHICLES WITH 12 INCH WHEELS AND LARGE DIAMETER TIRES.

13. Attach pre-assembled spat bracket to vehicle. Secure with (Qty. 1 "new" 0521-00023 NUT, HEX - NYLOCK M12 X 1.75 ZN, existing 12mm bolt and washers. Snug bolts at this time.



*Fig. # 15 Install new spat mounting brackets*

14. Adjust the spat brackets to allow a 1.37" to 1.50" gap between the back of the new spat brackets and the face of the frame as shown in (Fig. # 16)

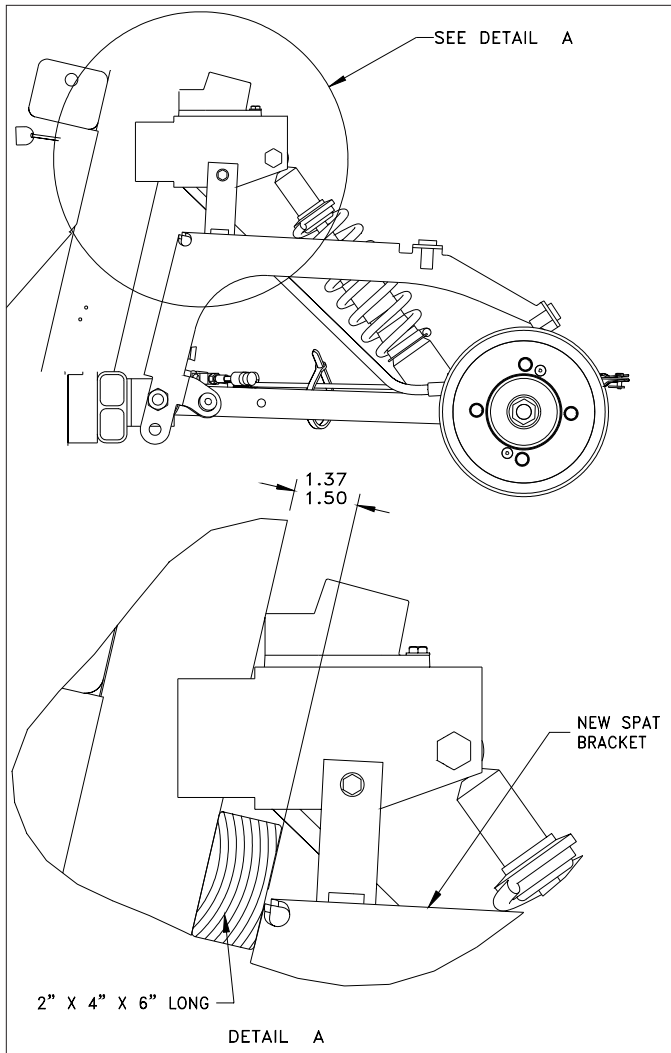


Fig. # 16 Set proper spat bracket angle

15. With the spat brackets at the correct angle, install (Qty. 1 per side) P/N 0523-00032 - 1/4 X .75 Hex Screw. (See Fig. # 17)



Fig. # 17 Secure spat bracket

16. Torque the M12 bolts that secure the rear suspension assembly to the frame to 60 Ft. Lbs.
17. Insert (Qty. 8) Well nuts to the spat brackets. Do not install the (Qty. 2) well nuts to the rear of the spat brackets at this time.

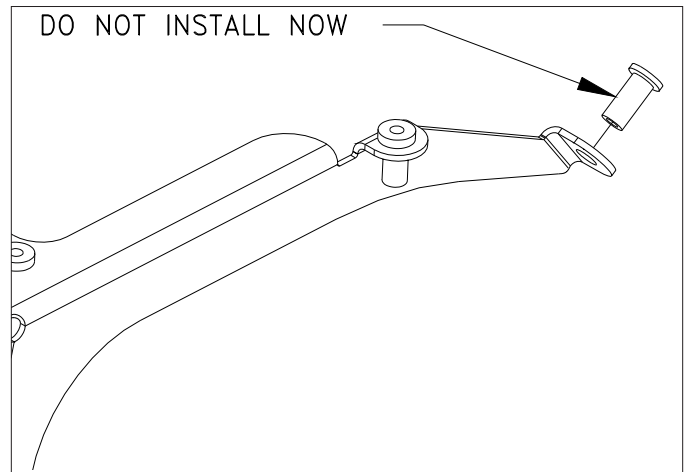
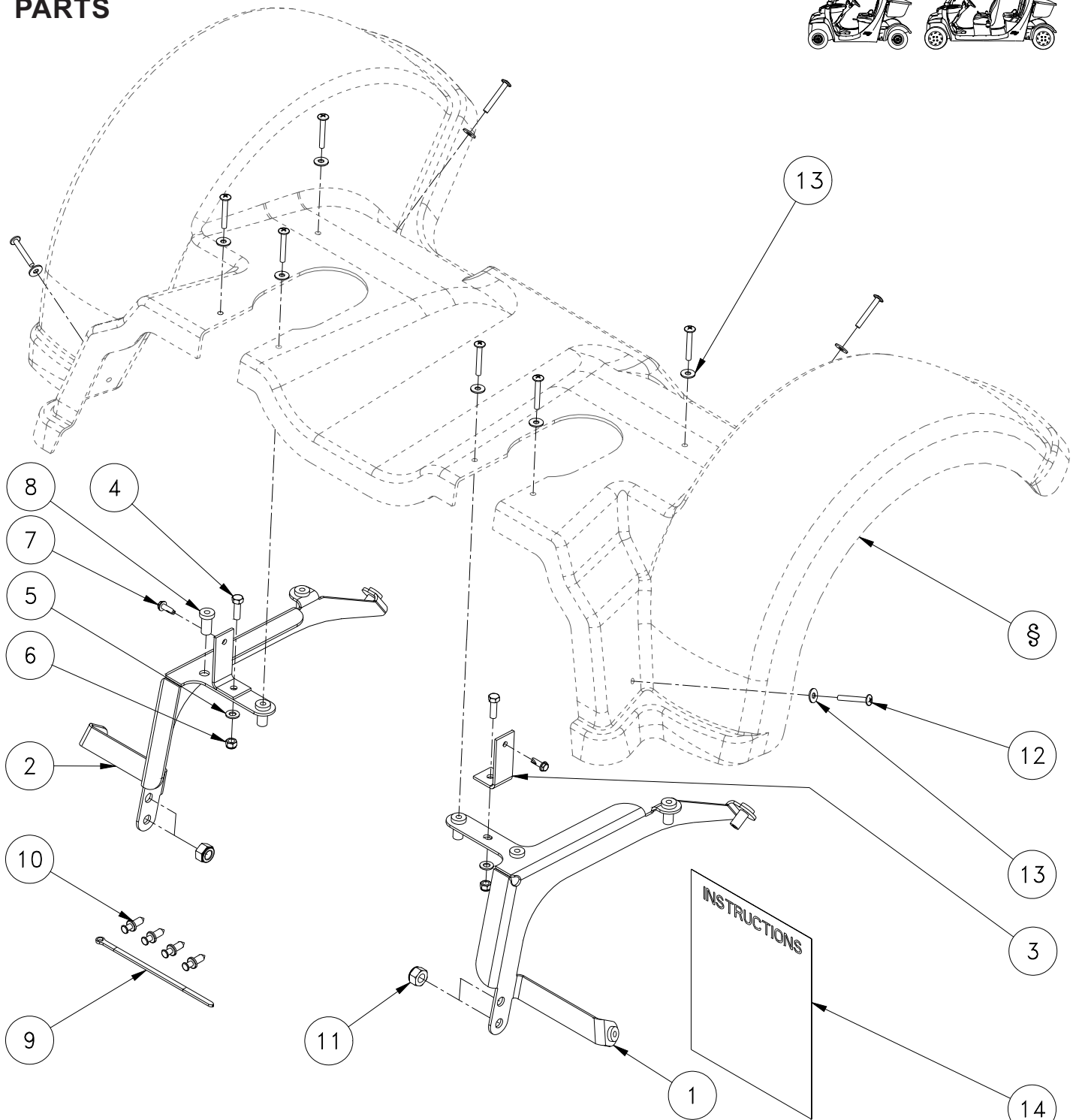
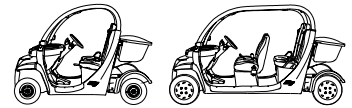


Fig. # 18

18. Install the spat.
19. Secure the spat to the spat brackets with two screws to hold it in place to mark the holes to be drilled.
20. Mark the holes to be drilled. (They are the rear most holes on the brackets).
21. Remove spat.
22. Drill holes to  $\text{Ø}9/32$ ". To avoid chipout, drill to  $\text{Ø}1/8$ " from the inside of spat, then from outside of spat with a  $\text{Ø}9/32$ " drill bit. Or use a step drill bit.
23. Install the last two well nuts.
24. Install spat
25. Secure the spat to the spat brackets with (Qty. 10) screws and flat washers.
26. Re-install wiring for the rear license plate lamp.
27. Installation complete.

# PARTS



## 1205-00013 KIT, SPAT MOUNTING RETROFIT - SERVICE

ITEM	PART NO.	DESCRIPTION	QTY.
1	0351-01163	BRKT, SPAT MOUNT - LH FRAME MOUNTED	1
2	0351-01196	BRKT, SPAT MOUNT - RH FRAME MOUNTED	1
3	0351-01195	ANGLE, HANGER BRACKET SPAT	2
4	0522-00016	BOLT, HEX - HHCS 5/16 - 18 UNC X 1.0 GR 5 ZINC PLATED	2
5	0524-00003	WASHER, FLAT - 5/16 SAE .344 ID X .688 OD X .065 THK ZN	2
6	0521-00017	NUT, HEX - NYLOCK 5/16-18 UNC GR5 ZN	2
7	0523-00032	SCREW, HEX - WHSD 1/4 X .75 ZN --	2
8	0521-00279	NUT, WELL - 1/4 - 20 UNC x 1" --	10
9	0510-00137	TIE, CABLE W/#10 MOUNT HOLE 9" BLACK	1
10	0520-00073	RIVET, PUSH - TUFLOK FASTEX #M3.0800.16 BLACK PLASTIC	4
11	0521-00023	NUT, HEX - NYLOCK M12 X 1.75 ZN	2
12	0523-00347	SCREW, MACH TRUSS HEAD PHIL 1/4 - 20 UNC X 1.75 LG SST	10
13	0524-00053	WASHER, FLAT - 1/4 BLACK PLASTIC	10
14	1010-00135	INSTRUCTIONS, SPAT BRACKET RETROFIT - SERVICE	1

§ SPAT SHOWN FOR REFERENCE ONLY- SEE BODY SECTION OF THE PARTS CATALOG

## ADDITIONAL INFORMATION

If you have any questions or need assistance in completing this action, please contact GEM Technical Support at 866.764.0616

Remember to record the last six digits of your Vehicle Identification Number (V.I.N.) in the space provided below before calling. Use (Fig. # 18 & 19) to locate the V.I.N. plate.

V.I.N. \_\_\_\_\_

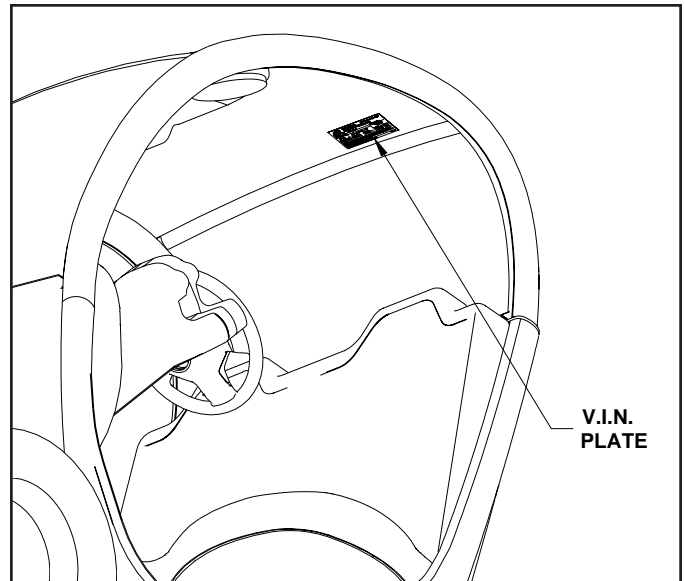



Fig. 18 V.I.N. plate location

		<b>MANUFACTURED BY:</b> U.S. Patent No. Des. 419,107 <b>Global Electric Motorcars, LLC.</b>	
		Web: <a href="http://www.gemcar.com">www.gemcar.com</a>	
GVWR: 953KG (2,100 LBS.)		DATE OF MFG: 1/5/01	
<b>GAWR</b>		<b>TIRE - DIMENSION - RIM</b>	
Front 468KG (1,023 LBS)	165/70R-12 T12x4J	<b>COLD INFLATION PRESSURE</b>	
Rear 468KG (1,077 LBS)	165/70R-12 T12x4J	KPA/PSI 207KPA (30PSI)	SGL/DUAL SINGLE
		207KPA (30PSI)	SINGLE
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR SAFETY, BUMPER, AND THEFT PREVENTION STANDARDS (FMVSS) IN EFFECT ON THE DATE OF MANUFACTURE SHOWN A			
V.I.N. XXXXXXXXXXXXXXX XXXX			
TYPE OF VEHICLE: _____			U.S. VIN

\_\_\_\_\_  
 LAST SIX NUMBERS OF V.I.N.

Fig. # 19 V.I.N. use last six numbers



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