



# INSTRUCTIONS

**Product:** GEM - Global Electric Motorcars

**Models:** All

**Affected VIN Range:** 015748 - 021248

**Subject:** Instruction, Service Kit Parking Brake Update

**Estimated Completion Time:** .5 Hour

**Parts:** See Page # 7

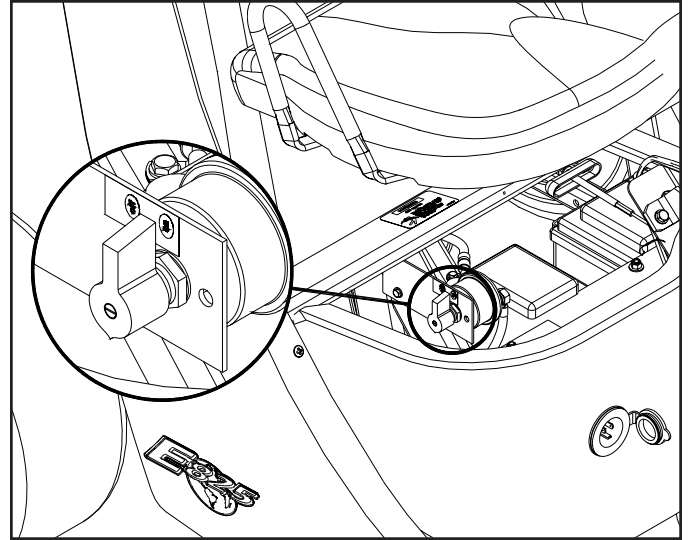


Fig. # 1 Switch master disconnect off

## REQUIRED TOOLS & SUPPLIES:

<b>Tools:</b>	(1) Needle Nose Pliers
(1) Hydraulic Jack	(1) 3/8" Socket
(2) Jack-Stands	(1) 1/2" Socket
(1) # 3 Phillips Screw-driver	(1) Drill
(1) Pliers	(1) 1/2" Open End Wrench
(1) Small Flat Screw-driver	<b>Supplies:</b>
(1) Medium Flat Screw-driver	Permatex® No. 27140
	Thread Locker

The following instructions are for inspecting for free rear wheel rotation and possible installation of return springs and spacers onto the parking brake cable of GEM vehicles.

To diagnose for free wheel rotation, and to install the parking brake kit, proceed as follows.

## WARNING!

To prevent personal injury or property damage: Be sure the ignition switch is in the "OFF" position and that the "KEY" is removed. Set the parking brake before servicing, adjusting, or repairing.

1. Park the vehicle on a flat level surface.
2. Remove bench seat cushion (for 2 passenger vehicles) (rear bench seat cushion for 4 passenger vehicles) to access the Master Disconnect switch. Switch master disconnect off. (See Fig. # 1)

## INSPECTION

1. Raise back end of vehicle from ground by jacking. Secure with jack stands. (See Fig # 2).

**NOTE:** Shock mount and spat are removed for illustrative puposes.

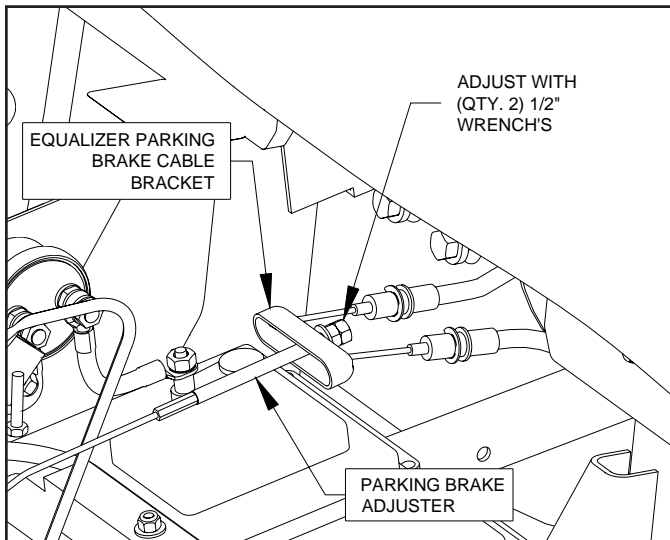


Fig. # 2 Raise vehicle to inspect

2. Set and release parking brake, spin rear wheel(s), pump brake pedal 3 to 4 times, spin rear wheel(s) (Should rotate freely). Drag is anything less than 2 revolutions.
3. Check each rear wheel to determine if wheels are dragging. If wheels are dragging, proceed to the next step. If no wheels are dragging, there is no need to continue and service work is complete.

- Using (Qty. 2) 1/2" open end wrench's, adjust the parking brake cable (See Fig. # 3).

**NOTE:** For 2 Passenger vehicles, work can be done by removing the front seat. (See Fig. # 3) For 4 Passenger vehicles, work must be done beneath the vehicle.



*Fig. # 3 Adjust parking brake cable*

- Inspect the brake operation again by repeating steps # 1, 2, & 3. If the wheels are still dragging, proceed to the next step.

## **BRAKE KIT INSTALLATION**

- Remove male push rivets securing shock cover with flat screwdriver. (See Fig. # 5)



*Fig. # 5 Remove rivets securing shock cover*

- Remove all female rivet plug securing shock cover with flat screwdriver. (See Fig. # 6)



*Fig. # 6 Remove rivets securing shock cover*

3. Remove shock cover. (See Fig. 7)



*Fig. # 7 Remove shock cover*

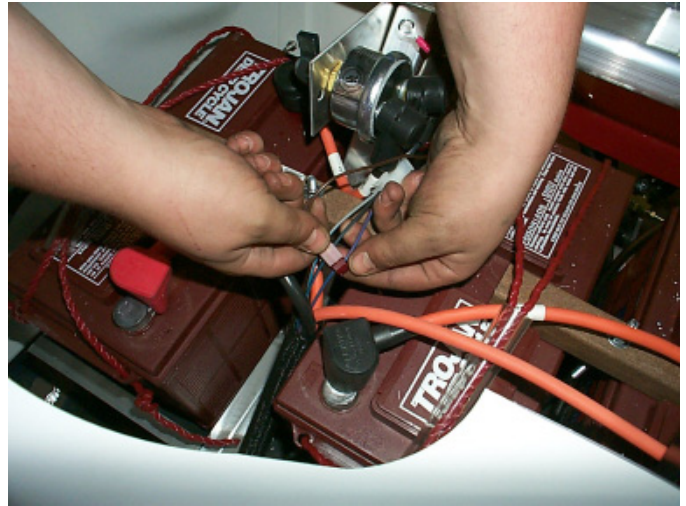
**NOTE:** For vehicles that have the rear illuminated license plate with light, perform the next step first.

4. Disconnect ground wire by removing screw. (See Fig. # 8).



*Fig. # 8 Remove ground screw*

5. Remove the positive wire from the rear license plate light from the purple wire near the master disconnect switch. (See Fig. # 9)



*Fig. # 9 Disconnect wire from purple wire*

6. Loosen the Qty. 8 phillips head screws securing the spat. **NOTE:** You may be able to loosen the screws and keep them in place on the spat, rather than removing.



*Fig. # 10 Remove screws securing spat*

7. Remove spat. (See Fig. # 11)



*Fig. # 11 Remove spat*

8. Loosen the parking brake to ease installation of return springs and spacer.
9. Using (Qty. 2) 1/2" open end wrench's, back the nuts off all the way. (See Fig. # 12)

**NOTE:** For 2 Passenger vehicles, work can be done by removing the front seat. (See Fig. # 12) For 4 Passenger vehicles, work must be done beneath the vehicle.

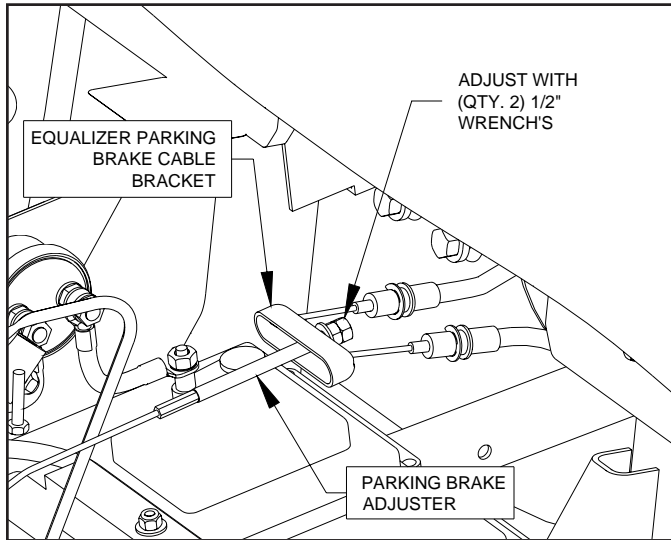


Fig. # 12 Loosen parking brake

10. Raise the rear end of the vehicle. (See Fig. # 13)



Fig. # 13 Raise vehicle to inspect

11. Remove e-clip securing brake line to bracket with a medium flat screwdriver. (See Fig. # 14)



Fig. # 14 Remove e-clip securing brake line to bracket

12. Remove cotter pin and clevis pin securing the brake line to lever. (See Fig. # 15)



Fig. # 15 Remove cotter pin and clevis pin

13. Remove parking brake cable from position. (See Fig. # 16)



Fig. # 16 Remove parking brake cable from position

14. Remove the (Qty. 2) top bolts securing the wheel assy. to the rear axle weldment. (See Fig. # 17)



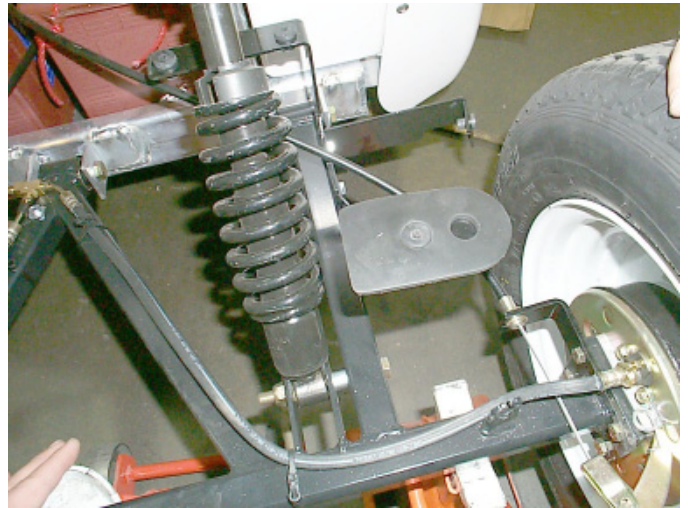
*Fig. # 17 Remove rivets securing shock cover*

15. Apply thread locker to the (Qty. 2) bolts you just removed.
16. Install the specified bracket LH or RH to the rear axle weldment, secure with original bolts. (See Fig. # 18)



*Fig. # 18 Install bracket*

17. Re-route parking brake cable as shown in (Fig. # 19) and attach to newly installed bracket, secure with e-clip.



*Fig. # 19 Attach cable to bracket*

18. Install clevis pin and cotter pin.
19. Install spacer to brake cable. (See Fig. # 20)

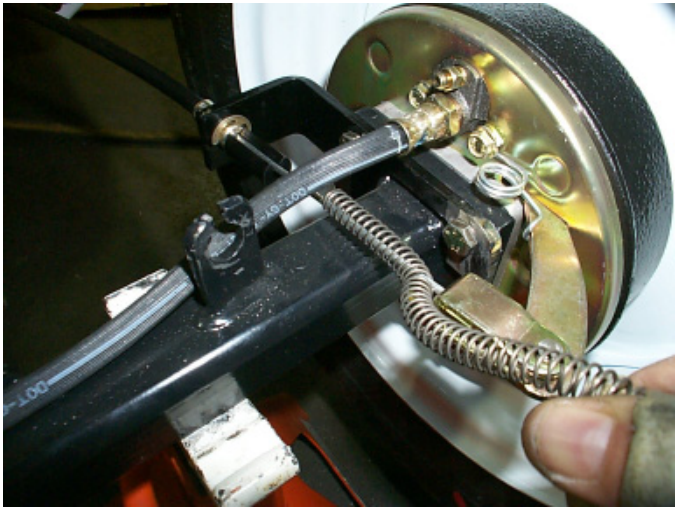


*Fig. # 20 Install spacer to brake cable*

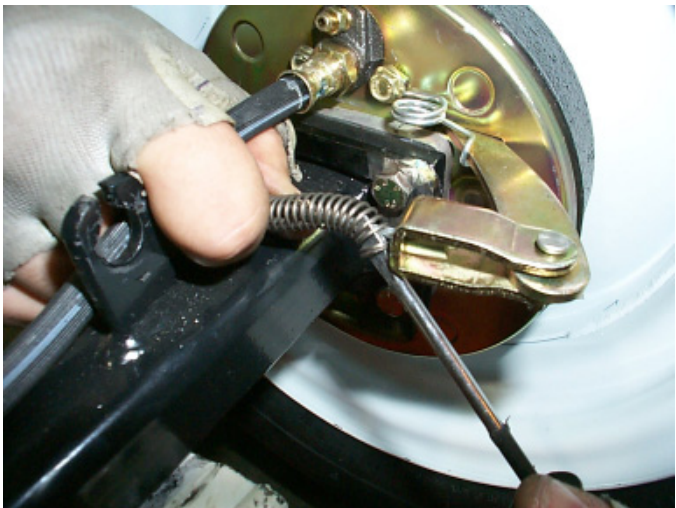
20. Install spring to brake cable. (See Fig. # 21, 22, & 23)



*Fig. # 21 Install spring to cable*



*Fig. # 22 Install spring to cable*



*Fig. # 23 Install spring to cable*

21. Repeat for other side.

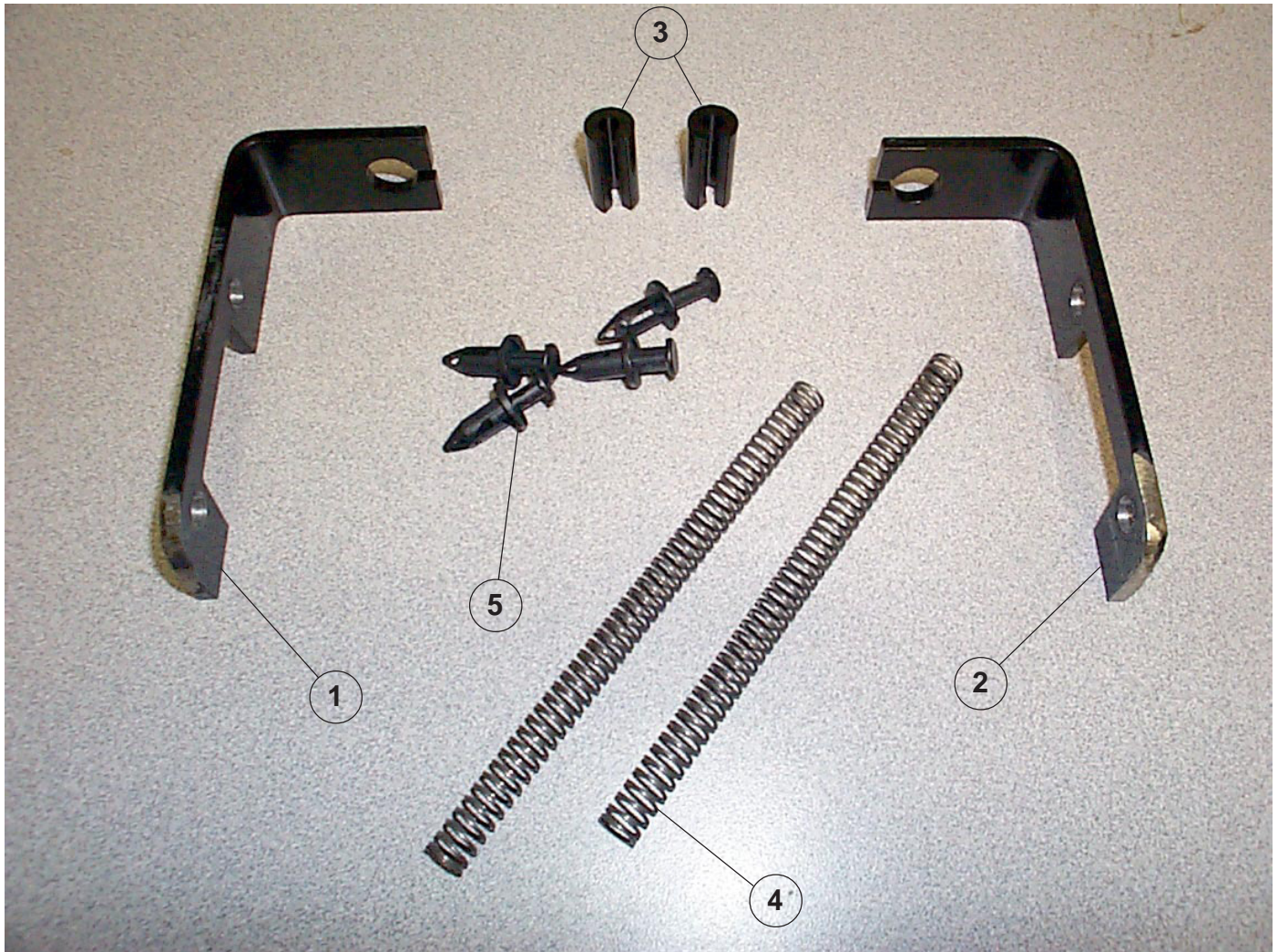
22. Assemble spat, shock mount, and license plate light wiring in reverse dis-assembly procedure.

23. Adjust the parking brake.

24. Perform steps 2 & 3 on page # 1.

25. If wheels still drag during rotation, a new wheel assembly may need to be installed.

**PARTS**



**0111-00690 - ASSY, SERVICE KIT - PARKING BRAKE UPDATE**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	0311-00088	BRKT, BRAKE CABLE - LH PARKING BRAKE	1
2	0311-00116	BRKT, BRAKE CABLE - RH PARKING BRAKE	1
3	0311-00969	BUSHING, NYLON BLACK	2
4	0611-00305	SPRING, PARKING BRAKE CABLE	2
5	0520-00073	RIVET, PUSH - TUFLOK BLACK PLASTIC FASTEX #M3.0800.16	4
6	1010-00056	INSTRUCTION, SERVICE KIT PARKING BRAKE UPDATE (NOT SHOWN, THIS DOCUMENT)	1

## COMPLETION REPORTING AND REIMBURSEMENT

Claims for vehicles which have been serviced must be filed in the warranty claims section of GEM Connect for reimbursement.

<u>LABOR DESCRIPTION</u>	<u>LABOR OPERATION NUMBER</u>	<u>TIME ALLOWANCE</u>
Inspection for possible use for parking brake spring and spacers to parking brake cables.	BRK-01-070	.50 Hours

### 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. # 24 & 25) to locate the V.I.N. plate. Also the V.I.N. will be used when claiming warranty on GEM Connect.

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

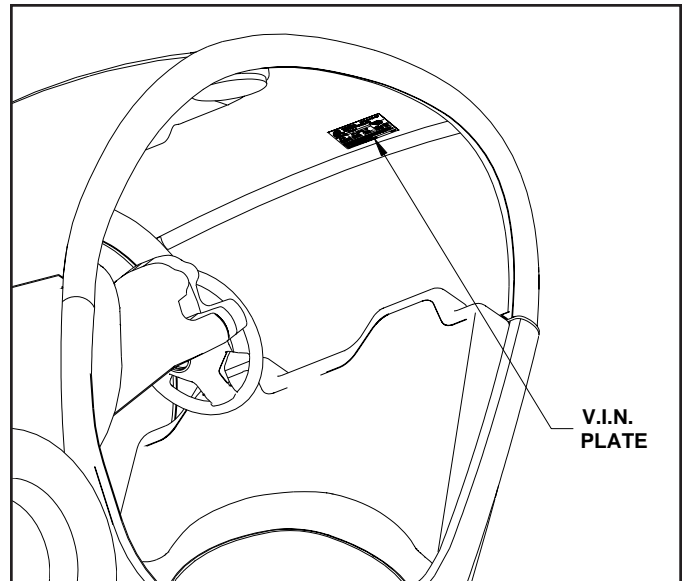



Fig. 24 V.I.N. plate location

		<b>MANUFACTURED BY:</b> U.S. Patent No. Des. 419,107 <b>Global Electric Motorcars, LLC.</b>	
<small>Web: www.gemcar.com</small>		<small>DATE OF MFG: 1/5/01</small>	
<small>GWR: 953KG (2,100 LBS)</small>		<small>COLD INFLATION PRESSURE</small>	
<b>GAWR</b>		<b>TIRE - DIMENSION - RIM</b>	
<small>Front 495KG (1,023 LBS)</small>	<b>165/70R-12</b>	<b>T12x4J</b>	<small>KPA/PSI</small>
<small>Rear 498KG (1,077 LBS)</small>	<b>165/70R-12</b>	<b>T12x4J</b>	<small>207KPA (30PSI)</small>
			<small>207KPA (30PSI)</small>
		<small>SGL/DUAL SINGLE</small>	
<small>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</small>			
<small>V.I.N. XXXXXXXXXXXXXXXX XXXX</small>			
<small>TYPE OF VEHICLE:</small>			<small>U.S. VIN</small>

LAST SIX NUMBERS OF V.I.N.

Fig. # 25 V.I.N. use last six numbers



**Global Electric Motorcars, LLC**

A DaimlerChrysler Company

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