

SQUIRE SS-100 REGISTRY

CLBCOM 30
December 1992

Hard to believe it's the end of another year again. It's been an interesting year however, with some real progress in our goals.

Member Tim Sharon (Los Angeles) has sent in a second article on ABS (Automatic Braking System) except that he has tried this one. In a phone conversation he told me his Chevy Suburban was so hard to stop he was ready to sell it. Then he installed the Brake Guard and says the results almost defy description. He states "It is a 100% improvement for the braking. This could be used on the Squire very well. System was \$500.00 plus \$50.00 installation and worth every dollar". Attachments are included.

We had some fun last month. Member Ed Spielman (Los Angeles) had some business in Phoenix and he decided to fly over. Member John Fulton (Dallas) decided it was time for a long Squire trip and he drove over. John and I totally suprised Ed Spielman when we picked him up at the airport with two bright red Squires. We then drove out to Glendale (AZ) and reviewed the progress on Member Bill Lieske's Squire. (That may be the first time three Squires have been together since they left the showroom.) As a finale' we all drove out to Squire Mastermechanic Terry Becker's home and played cars for a few hours. That was one of the best Saturday's I've had in a long time! We left John's car there for twenty four hours and Terry welded in gussets under the motor mounts and installed the recommended cross member. Photos are attached. Also attached is John's report on his harrowing return to Dallas. Some trip, huh?

Meet new members Larry & Charlene Sparks. Their address is Rt. 2, Box 119, Caryville, TN 37714. - Area 615+562-1347. Caryville is in East Tennessee about thirty miles northwest of Knoxville. Larry and a friend buy and sell an occasional sports car and he recently picked up Squire #11046545. It's white with black interior and manual shift. Larry says all the pieces are there and work except one fog lamp and he's not sure of the mileage because the speedometer had been broken. He bought the car for resale and then spotted our ad in Deals On Wheels and called me. Photo copies attached. Welcome to the Registry, Larry and Charlene.

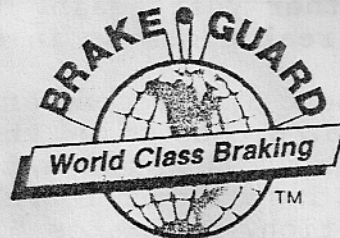
With the Sparks car we have now found #46 in the manufacturing sequence and that brings our head count to seventeen. It will be eighteen if Michael Lindgren (New York) nails down the one in Boston and he has reported that he may be on the trail of yet another one in New Hampshire?

Not much more to say this time except Merry Christmas, Happy Hanukkah and a Joyous New Year.

NEW VEHICLE INSTALLATION OF Brake Guard ABS

DOES NOT VOID OR ALTER NEW VEHICLE
WARRANTIES!

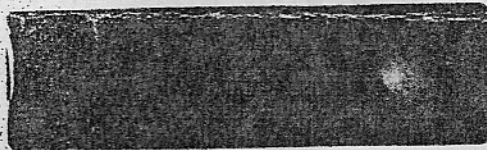
REFERENCE SOURCE: General Motors Corp. - Ford
Motor Co. - Chrysler - Nissan - Toyota - Subaru



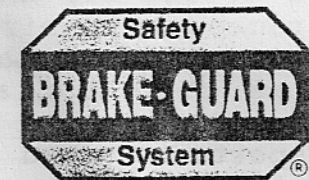
Qualification for A.B.S. Insurance Rate Discount

The Brake • Guard Safety System meets or exceeds the Society of Automotive Engineers (SAE) wheel slip brake control system road test code SAE J46. The Brake • Guard Safety System is A*B*S "Anti-Lock Braking System" and is in compliance with the National Highway Traffic Safety Administration, (NHTSA) a division of the Department of Transportation (DOT) as defined by their standard No. 105; Hydraulic Brake System. The (S4) definition "Anti-Lock Systems" means a portion of the service brake system that automatically controls the degree of rotational wheel slip at one or more road wheels of the vehicle during braking.

LIMITED WARRANTY:
100,000 miles or 10 years.
Brake • Guard Products, Inc.
Spokane, Wa., U.S.A.



Could You Stop?



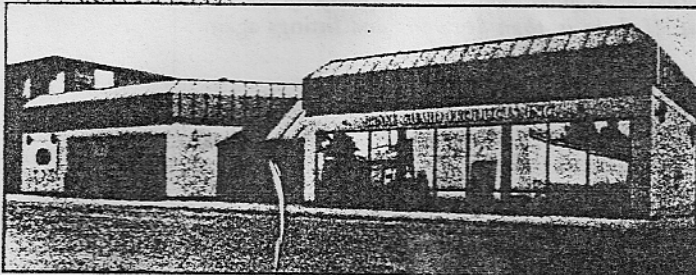
**REDUCES WHEEL LOCK-UP
FOR ALL VEHICLES
WITH HYDRAULIC BRAKES**

What Is Brake • Guard?

- It is a Safety System with "Anti-lock" benefits for all vehicles with hydraulic brakes, including motor homes and trucks, etc.
- It works to inhibit wheel lock-up, skidding and loss of control when braking.
- It stops vehicles straighter and shorter with better steering control and power.
- It operates automatically, every time the brakes are applied.

How Brake • Guard Works:

Heat and other dimension factors cause brake drums and rotors to become slightly warped and out-of-round. So, when the brakes are applied, the contact surfaces are correspondingly uneven causing an unequal transmission of braking effort from the wheels to the roadway resulting in premature wheel lock-up, early brake fade, uneven wear, skidding and loss of control. Like a computer, BRAKE • GUARD's patented systems (modified gas/hydraulic) compensate 4-wheel braking at 120-140 times per second @ 60 mph, *every time brakes are applied* resulting in smoother, shortened and controlled stopping with nearly double the braking power, efficiency and control.



BRAKE • GUARD INTERNATIONAL HEADQUARTERS

Safety Scoreboard

LIFE SAVING FEATURES	BRAKE GUARD Safety Systems		ALL OTHER ELECTRONIC A.B.S.		
	YES	NO	YES	NO	SOME- TIMES
1. Stops Vehicle In A Shorter Distance	✓				X
2. Operates Automatically Every Time The Brakes Are Applied	✓			X	
2. Helps Steering Control During "Panic" Stops	✓		X		
4. Reduces Brake Fade, Hot Spots, And Brake Wear	✓			X	
5. Increases Braking Power	✓			X	
6. Helps Compensate for Unequal Brake Adjustment, Air and Wear Differences in Tire and Uneven Loading	✓			X	
7. Reduces Wear to Front End Assembly, Tires and Master Cylinder	✓			X	
8. Nearly Doubles Over-all Braking Efficiency	✓			X	
9. Available for All Vehicles With Hydraulic Brakes - Including Motor Homes, Etc.	✓			X	
10. Available As An "Aftermarket" (Retrofit) System	✓				X
11. Transferable From One Vehicle To Another In Less Than One Hour	✓			X	

ROAD SURFACE	COHESION FACTOR
Dry Asphalt	80%-90%
Wet Surface ...	30%-40%
Snow	15%-20%
Ice	5%-0%

Brake • Guard will reduce skidding under all conditions. However, it is still possible to lock wheels and skid especially at slower speeds and on slippery surfaces.

BRAKE • GUARD IS PATENTED INTERNATIONALLY AND UNDER U.S. PATENT NUMBERS 4,571,009 and 5,074,625. OTHER PATENTS ARE PENDING.



BRAKE • GUARD ABS INSTALLATION GUIDE



A. ALL VEHICLES WITH HYDRAULIC BRAKES

Two BRAKE-GUARD units installed at the master cylinder or on the wheel side of proportioning valve or other T intersection. On vehicles with single or dual brake lines *two* units are also required. On trucks with "hydravac" power brakes, install BRAKE-GUARD units *after* booster (toward wheels) for best operation. On some motor homes (where master cylinder is too difficult), units can be installed under vehicle at the front and the rear where brake lines intersect. BRAKE-GUARD ABS can be installed with nearly all other electronic ABS while maintaining "full-time" operation and benefits. Do not mix or interchange any parts from one box of product to another.

B. INSTALLATION — Each Brake-Guard unit should be installed as close to vertical as possible (bleeder valve pointing up). If you have two lines, install one BRAKE-GUARD unit on each line on the master cylinder, one front, one rear. If you have three or four lines (don't worry) just install one unit on one line (top or bottom) toward fire wall (rear), and the other unit (top or bottom) toward (front) of vehicle. Even with this type of application, BRAKE-GUARD delivers full function to all four wheels! The Brake-Guard ABS works in conjunction with most electronic ABS, four wheel or two wheel.

C. THE "TEE" (ADAPTER) (see other side)

Provides the means for connecting BRAKE-GUARD at the master cylinder or other brakeline intersection. There are several different size tees relating to different vehicles. The master cylinder usually has two brake lines, each of the two lines usually require different size tees. The chart (over) shows the most common of the manufactured brake tee sizes. It may often require trying several tees to find one that stops and locates in the desired direction for the BRAKE-GUARD unit to install properly. *If at first you don't succeed, tee and and tee again.* NOTE: NEVER loosen or tighten tee without first loosening brake line nut going into tee — doing so could crimp brake line and cause other problems with connections.

D. THE "O" RING CONNECTOR — PLEASE NOTE: BE SURE TO LUBRICATE "O" RINGS LIBERALLY WITH BRAKE FLUID BEFORE INSTALLATION. Allows easy installation of BRAKE-GUARD to the tee, where space is usually restricted. This patented connector allows installation without having to tumble or rotate the units, and serves as a dependable "no leak" seal. It also allows for off set (non-vertical) installation in tight places. Be sure to check "O" rings for damage in shipping or handling.

E. BLEEDING PROCEDURE

After installation, each BRAKE-GUARD unit *must* be purged of *all* air. This requires a second person to operate the brake pedal, unless you have a "power bleeder."

- 1) Screw both bleeder valves down tight to form a good seat first.
- 2) Open both bleeder valves and gently depress the brake pedal until all air bubbles and brake fluid appear, then close both bleeder valves.
- 3) Then bleed both units one at a time, repeating this procedure until all air is purged from the units. Do not release brake pedal until bleeder valve is shut each time, otherwise air can be sucked back into the system.
- 4) To complete the "bleeding" procedure, loosen brake line at the tee, then depress brake pedal lightly, then quickly tighten when fluid appears, *then* release brake pedal. This will remove any trapped air inside the tee area. Do not release brake pedal until *all* fittings are tightly shut; to keep air out of system.

F. CHECKING INSTALLATION

After completing "bleeding" procedure, a careful check of the installation is *always* necessary. Proper checking will insure the installation is *correct* — and that there are absolutely *no leaks*. This is the *most important part* of the entire installation procedure.

- 1) Carefully *dry off* the BRAKE-GUARD units and *all* fittings, especially on the *underside*, using dry terry cloth or similar material. Use special care to insure that *both* units and fittings are *dry by feeling with fingers, then look at fingers to see if there is any fluid. If there is, then dry units and fittings again until no fluid shows on fingers, then —*
- 2) Push brake pedal *hard* — *with engine-off* and hold for 15 seconds or so, while feeling with fingers and observing for any possible leak. If no leak shows, then do the *same* — *with engine running* only push brake pedal *medium hard*. This allows for a much *higher* pressure check if vehicle has power brakes (most vehicles do). Check carefully to *insure* that there are absolutely no leaks.
- 3) *Always* check master cylinder *fluid level* by "removing the cover," then filling with proper brake fluid. *Never* assume or take anybody's word for it, (that reservoir is full) but *always* remove cover, check and fill.

Break-In: BRAKE-GUARD Safety System requires *no* break-in, *but* the hydraulic brakes do. Immediately after installation, make several hard/fast stops just below the skid point (50-55 mph), if conditions permit. This will "teach" the brake pistons at each wheel to operate with the BRAKE-GUARD "air system." However, the complete breaking-in process takes a little time; the overall braking should continue to improve during this period. NOTE: After the "break-in" run, *always* re-check *all* fittings again, (by rubbing fingers under fittings, then look for any possible leak). *Be sure there are no leaks.*



Suggested tools and equipment for installing BRAKE-GUARD Anti-Lock Safety System

Be sure to visually inspect "O" rings before installation.

FLARE NUT WRENCHES:

Standard Set

3/8" x 7/16"

1/2" x 9/16"

5/8" x 11/16"

Metric Set

9mm x 11mm

10mm x 12mm

13mm x 14mm

OTHER TOOLS:

6" Crescent Wrench

8" Crescent Wrench

5/8" open-end x box-end Wrench

Channel Locks

Medium-size Screw Driver

OTHER EQUIPMENT:

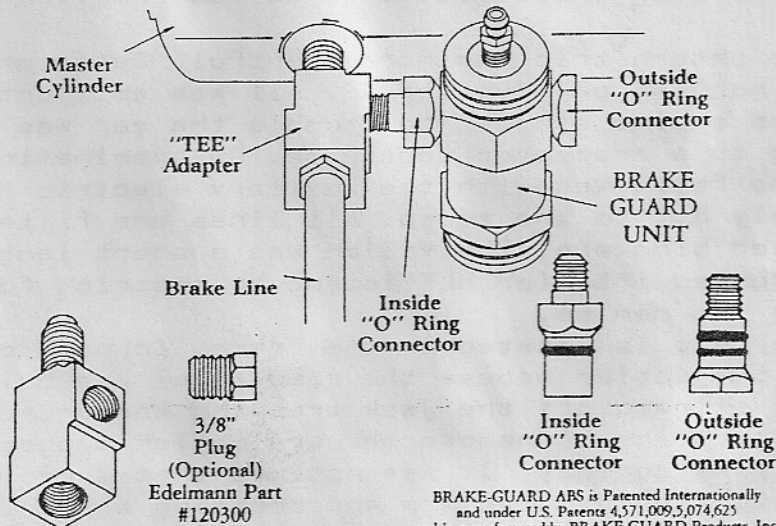
Fender cover

Extra Brake Fluid

Extra "TEE" Fittings

Metric and Standard Size

Extra clean rags



BRAKE-GUARD ABS is Patented Internationally and under U.S. Patents 4,571,009; 5,074,625 and is manufactured by BRAKE-GUARD Products, Inc. Spokane, WA U.S.A. Other Patents are pending. Inspected by 01.QC-2716.QA.BG, — D.O.T. —

Note: Plug allows for removal of "O" Ring adapter without removing the "Tee."

TEE ADAPTER

Always screw tees in by hand to insure correct size, and that they are not cross threaded. When hand tight, finish tightening with correct wrench, usually 1/4 to 1/3 turn will do it. Tighten for "no leak," but do not over-tighten; may damage master cylinder.

Note: #1 & 2, and #5 & 6 respectively have the same O.D. (OUTSIDE DIAMETER), but the I.D. (INSIDE DIAMETER, BORE) are different. Also #2 & 3 have the same O.D., but with a different thread size. ALWAYS check carefully by turning several complete turns BY HAND first before using a wrench. For correct tee applications refer to your local auto parts store. Failure to use the correct tees may result in master cylinder damage. If your vehicle is serviced for brake fluid change, it is advised that the units be re-bled under the same procedure as stated in paragraph "E" on the reverse side of this guide.

STANDARD TEES:

	O.D.	Tekonsha	Weatherhead	Everco	Kelsey	Thread Size
1.	9/16"	100851	7933	N/A	78496	18
2.	9/16"	100852	7904	27BY	78497	18
3.	9/16"	100853	7905	27CY	78498	20
4.	1/2"	100854	7906	27DB	78499	20
5.	7/16"	100856	7914	N/A	94971	24
6.	7/16"	66237	7901	27CB	42323	24
7.	3/8"	66247	7900	27B	42324	24

All "TEE" adapters use either the inverted flare or bubble flare contact and must be secure to prevent leakage.

Be sure to submit white copy of warranty to dealer

or mail to Brake-Guard Products, Inc., Attention Warranty division P.O. Box 9880, Spokane, WA 99209-9880

METRIC TEES:

	O.D.	Weatherhead	Edelmann	Flare	Thread Size
1.	M 10x1.0	7918	273100	IV (inverted flare)	8
2.	M 10x1.0	7919	273101	BF (bubble flare)	9
3.	M 11x1.5	7920	273105	BF (bubble flare)	10
4.	M 12x1.0	7921	273000	BF (bubble flare)	11
5.	M 13x1.5	7922	273135	BF (bubble flare)	12

—MANUFACTURED BY—

BRAKE-GUARD Products, Inc.

P.O. BOX 9880 • Spokane, WA 99209-9880 • (509) 326-9000

REV. 4/92

For the interest of Squire SS-100 drivers this report is canted to experiences of the road and omits the social events.

The trip started on Tuesday morning, November 10, 1992, leaving Dallas, Texas headed west on interstate 20. The machine was running well all the way. Too well. About a hundred miles west of Dallas where the Texas Highway Patrol saw fit to issue the driver a notice of 10 mph over the limit. The fuel consumption ranged from 8 to 17 mpg.

The return trip was more eventful. Departure from Phoenix occurred on the morning of November 16. All was well until just past Tucson. When the engine started to stumble the car was pulled onto an off ramp leading to a crossover underpass. On examination it was determined that the fault was with the auxiliary electric fuel pump which was extremely hot to the touch. All lines and filters were examined for suspected blockage. The villain was a short length of rubber line which had a gummed interior sufficient to restrict function of the pump thus causing its demise.

The pump is located on the frame, inboard of the left rear wheel. To achieve easier access the road wheel was being removed when the vehicle slipped off the jack trapping the drivers hand between the fender and tire. A nanosecond evaluation suggested a broken thumb, but of more urgency, it was noticed that a copious amount of blood was traveling down the arm and creating a puddle in the Arizona soil. Previous attempts to extract the hand were unsuccessful, but the potential for unpleasant results with the turn of events inspired abnormal strength to lift the fender sufficiently to free the trapped extremity.

After some effort a knit shirt was located in the onboard luggage and sacrificed as a compression bandage. Satisfied that I was no longer bleeding to death I attempted to solicit assistance via the CB radio. After two hours of unsuccessful effort I was contemplating the situation when an Arizona Highway Patrol officer appeared and transported me and my luggage to two auto shops seeking help. Negative results compelled me to phone Art Stahl in Phoenix who suggested I contact Bill Droste of Roadrunner Classics in Tucson. Bill was very cooperative and through the combined efforts of his wife Barb, was able to locate a proper replacement fuel pump which we secured to the frame with wire and made necessary connections. The Squire was on the road again after seven hours of downtime. Nine dollars left after repairs and 1000 miles to go !

The drive lasted to Benson, Arizona where a motel room was secured. Up early in the a.m. and the vehicle would crank strongly, but not start. A quick check verified that plenty of fuel was being supplied. Electrical check proved cold from plugs, distributor and coil. A two mile hike gained a bank advance and a new coil. Installation was accomplished to no avail. Malfunction was found to be closed ignition points despite all screws being secure. A matchbook gap was set and the engine roared to life. Departure time, twelve noon.

All was well to the nights destination of Las Cruces, New Mexico. The next morning the engine starts immediately and runs smoothly to the nearest station for fuel. Starting for the interstate and the engine is missing badly before highway speed can be attained. Started to pull over when some improvement became evident. Continued travel developed normal performance in about five miles. Each following engine stop resulted in the same scenario all the way to Dallas. Each fuel stop required an agonizing takeoff on the road shoulder.

After an overnight stay in Midland, Texas, a cold and rainy

-2-

start for the last leg of the journey. After completing the usual performance procedure the machine was ready for the interstate. Not so. Small delay. Flat tire on left rear. Roadside change with inclement weather enlisted the service of my 20 year old Pirelli spare. It served well for the remaining 400 miles. Unfortunately I reached the DFW metroplex at the worst of rush time in a heavy downpour. I used my wipers for the first time. Thank heaven for Rain-X ! I was in my front door by 7:30 p.m. on Thursday, November 19.

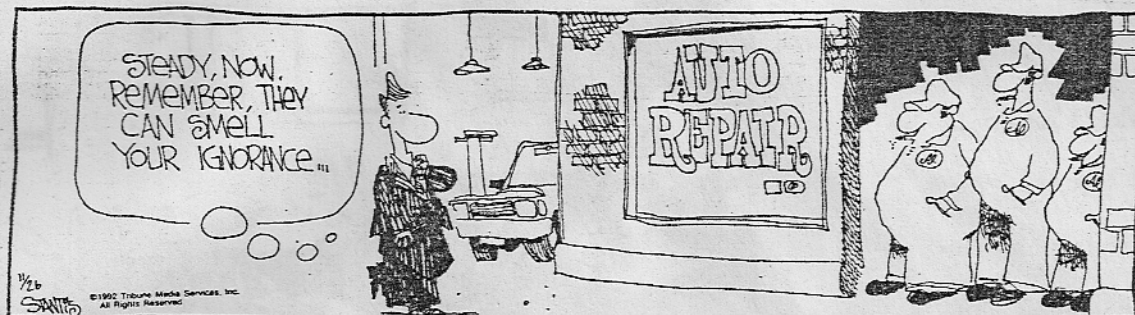
Door to door mileage for the entire trip was 2403. This required 31 fuel stops, 182.4 gallons, average \$1.32 per gallon and 13.17 mpg. Would I do it again ? Why not ?

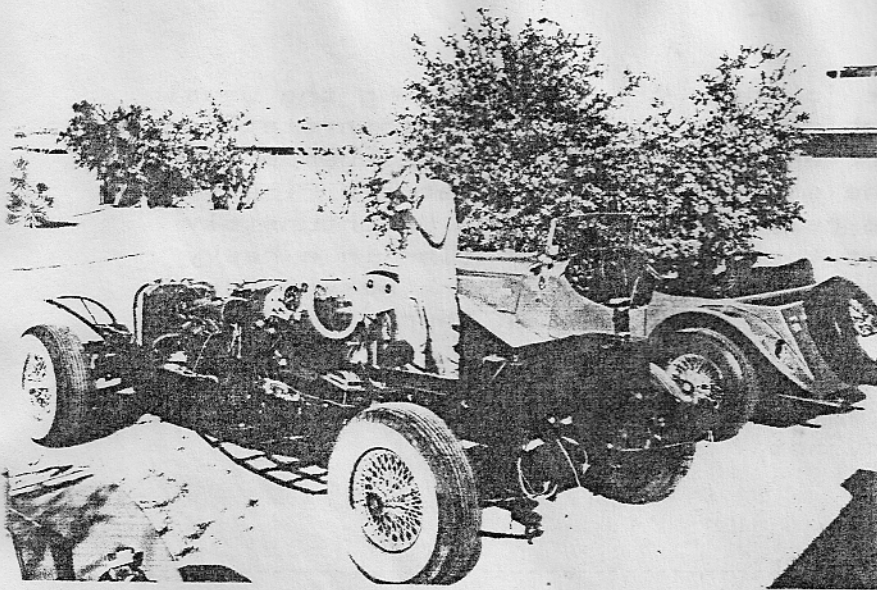
EDITOR'S NOTE:

Some simple math highlights some interesting data -

182.4 gal. X \$1.32 = \$240.77 - 2403 miles = .10¢ per mile, not great. The only road trip I have taken in mine yielded 17.5 mpg going North (uphill) and 19.5 mpg coming home. John had both fuel-flow and ignition problems on the trip which no doubt effected the total mileage. He called me after receipt of this report to say his garage had told him his points were sticking together after the engine had been shut off for a period of time. That problem is not that uncommon and is usually caused by a faulty point condensor or a faulty external resistor on the coil. John, we will all be interested to hear what the solution was?

Art Stahl





John Fulton taking a photo
of Bill Lieske's chassis



L to R - John Fulton, Ed Spielman & Bill Lieske

Bill Lieske's soon to be
completed Squire. He's
just finishing up the
wiring and a few odds & ends

