

Squire SS-100 Registry

CLBCOM 51
OCTOBER 1994

Our newest Associate Members are Joe & Susan Scotto, 15 Williams Drive, Massapequa Park, NY 11762, Home: 516-795-1428. Some years ago Joe owned Squire #2, now owned by Nick Cuneo. Joe attended Squire Sunday held on Long Island last month and has decided that getting back into the Squire hobby will be considered once he completes the addition to his garage. Good on 'ya, Joe.

MORE good news! Joe Scotto has a friend who imports items from Italy and one of them is the FIAMM horns used on our Squires. Joe reports that the new horns are still the same as our old ones and he can secure them at the wholesale price of about \$35.00 a pair. Contact Joe Scotto directly to order. Arthur's Tip: Order these horns in pairs to achieve the correct sound and appearance.

TECH TIP - SPLINE DRIVE REMOVAL

From time to time it is necessary to remove the spline drive from the brake drum to inspect brake shoes, wheel cylinders, etc. During my trip to New York last month we tried to remove the drive on Mark Offenbergs Squire with an open end wrench with lousy results - we rounded off three of the square corners on one nut and quit without ever getting the drive off. Later in the week we were working on Nick Cuneo's Squire and I noted that the nuts retaining his spline drive were bigger than Mark's. I've done a little digging since I've returned home and offer the following: Apparently, Ford used two different sized nuts to secure the wheel (and in our case the spline drive) to the drum, 3/4" OD and 13/16" OD, both with the same thread pattern. On both sized nuts the space between the wall of the drive and the outside of the nut is so narrow that you cannot use a conventional socket; the socket wall is too thick to seat the socket all the way home. I have discovered that with the 3/4" nut, a Sears Roebuck Craftsman 3/8" drive, 3/4" 6-point deep socket will seat almost all the way home. The same socket in 1/2" drive simply will not fit, it's wall is too thick. There may be other brands of similar sockets that will work but I offer Sears not as an endorsement but as a brand most of us can get easily. I would suggest that while you may wish to pick up the correct socket if you happen to be at Sears, do nothing until you have a reason to remove the drive. Then, if your Squire has the 13/16" nuts (or if your 3/4" nuts are buggered up) pick up twenty of the 3/4" tapered lug nuts in Grade 8 if possible (Grade 5 minimum) and replace them. Most good parts stores like NAPA and many tire stores like Goodyear will have them in stock. Take along a sample and/or tell the man it's for a standard Ford 5-lug drum and you must have 3/4" OD.

TECH TIP - SPARK PLUGS

Next time you tune-up you may wish to consider a set of SplitFire sparkplugs. Their claim is 5% more horsepower, 4.7% gain in mileage and 50% less hydrocarbon emissions. Local opinion from tune-up mechanics is that they really work on older design engines like ours. Use SplitFire # SF4E gapped at .035 and priced in Phoenix at \$5.92 each. Yes, I have installed a set but can't report on performance until the next time I race Bill Lieske on Old US 66.

Member John Fulton (Dallas) has accepted employment in Saudi Arabia for an indefinite period and his first letter contained this. "I have a piece of fun arithmetic for you. I passed a classy downtown Riyadh full service gas station complete with uniformed attendants at each pump. Took a look at the price. 33 halalahs per liter, a halalah being 1/100 of a riyal, 3.75 riyals to the U.S. dollar. You'll love the answer in gallons". (No, I have not solved it.Ed.)

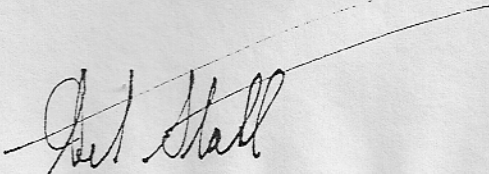
We seem to have talked a lot about wheel maintenance in the past year or so and the reason is that the subject keeps coming up. The wheels, spline drive and knock-offs are the single most expensive item to replace on our cars and in the case of the knock-offs, no over-the-counter replacement is available that we are aware of. I have included a Lieske drawing of a wheel wrench that you could have made up locally if necessary and a tech-sheet on wheel care I made up for later inclusion in the Repair/Maintenance Manual.

Lastly, Member Ed Spielman (Los Angeles) has had difficulty getting his wheels balanced truly and he contacted Bruce Erfer of British Wire Wheel in Santa Cruz, CA who has granted us permission to reprint his article on that subject and it is reproduced here. The article makes sense and deserves further exploration. I personally have had good luck with the computerized balancers but that could be a fluke. I suspect that there are still some bubble-balancers or spin-balancers-on-the-car around but you may have to do some leg work on the phone to find one. Will you members be kind enough to give me a call or post card with the results, positive or negative, and I'll report the aggregate in a later newsletter.

For those of you that call me from time-to-time, Arizona will revert to the Mountain Time Zone by November 1st. I'm home most evenings and week-ends and we do not use an answering machine.

We have located one more Squire SS-100, this one in Pennsylvania. Meet Paoline Leone of 111 Pearl Drive, Southampton, PA 18966. This is the 35th Squire we have found and I'm on the trail of a few more.

More next month.



SQUIRE TECH-TIP, WHEELS

The cast brass, machined and plated wheel knock-offs on our cars are one of a kind and irreplaceable unless you are willing to have some cast and machined, or, machined from a solid billet of brass, a very expensive project at best. Further, we have found no other knock-offs that will serve to replace ours, such as Jaguar. It will pay us then, to take very good care of the ones we have.

REMOVAL & REPLACEMENT

The knock-offs are designed to tighten toward the rear of the car to take advantage of the wheel inertia. Therefore, the two on the left, or drivers side loosen counter clockwise and tighten clockwise. Conversely, the two on the right, or passenger side loosen clockwise and tighten counter clockwise. Remember, tighten toward the REAR of the car and loosen toward the FRONT on all four grounded wheels. The spare works in the conventional way as on the driver side.

REMOVAL TOOL & TECHNIQUE

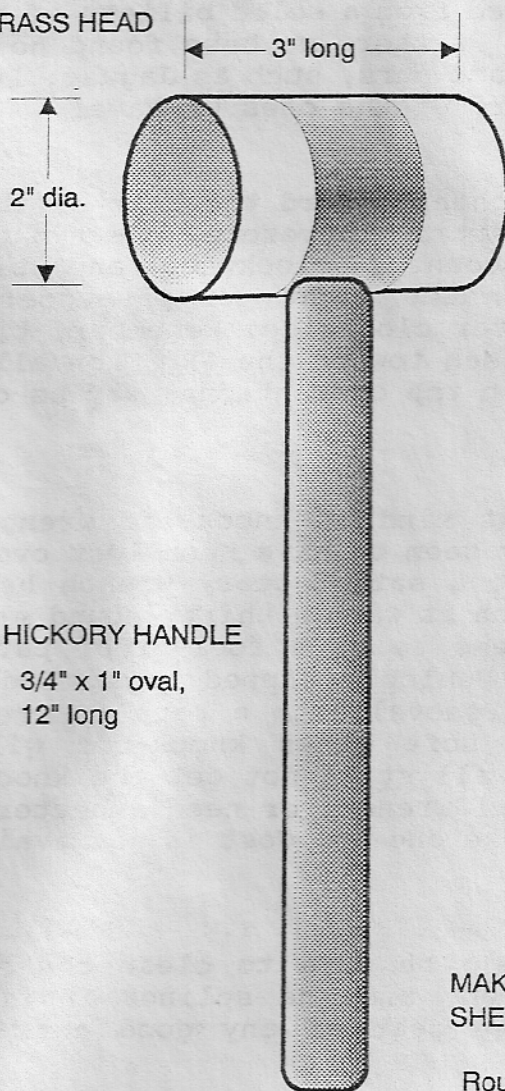
No one seems to know exactly what kind of knock-off wrench our Squires were shipped with and many seem to have been lost over the years. We have designed and built a satisfactory wrench here in Phoenix, as long as you don't beat on it with a thirty pound sledge. Recently we have secured what seems to be a fool-proof pattern, just like the ones shipped with Dunlop equipped cars. Under NO circumstances should you attempt removal with a pipe or crescent type wrench. The damage to the soft brass knock-off will be considerable and you most likely will still not get the knock-off removed. If you do not have a wheel wrench, or need a better one, contact me in Phoenix and we'll make one up. Cost is not available at this time.

REINSTALLING THE WHEEL

Before reinstallation of the wheel, be sure to clean the spline drive hub bolted to the brake drum, and the splines inside the wheel, and treat with an adequate coat of any good anti-sieze lubricant.

Last, be sure the wheel is seated firmly against the drum before you install the knock-off. Last, tighten the knock-off very firmly but it is not necessary to use a pile driver technique. Remember, you'll have to get that sucker off some day so use just enough force to keep it on. My own system is to use a 30" length of plumber's pipe slipped over the handle of my wheel wrench. That, and the use of my 200 + lbs leaning on the end seems to get the job done for me. I store my wheel wrench in the tool box under the hood and the extension pipe behind the seats.

3.5 LB. BRASS HEAD

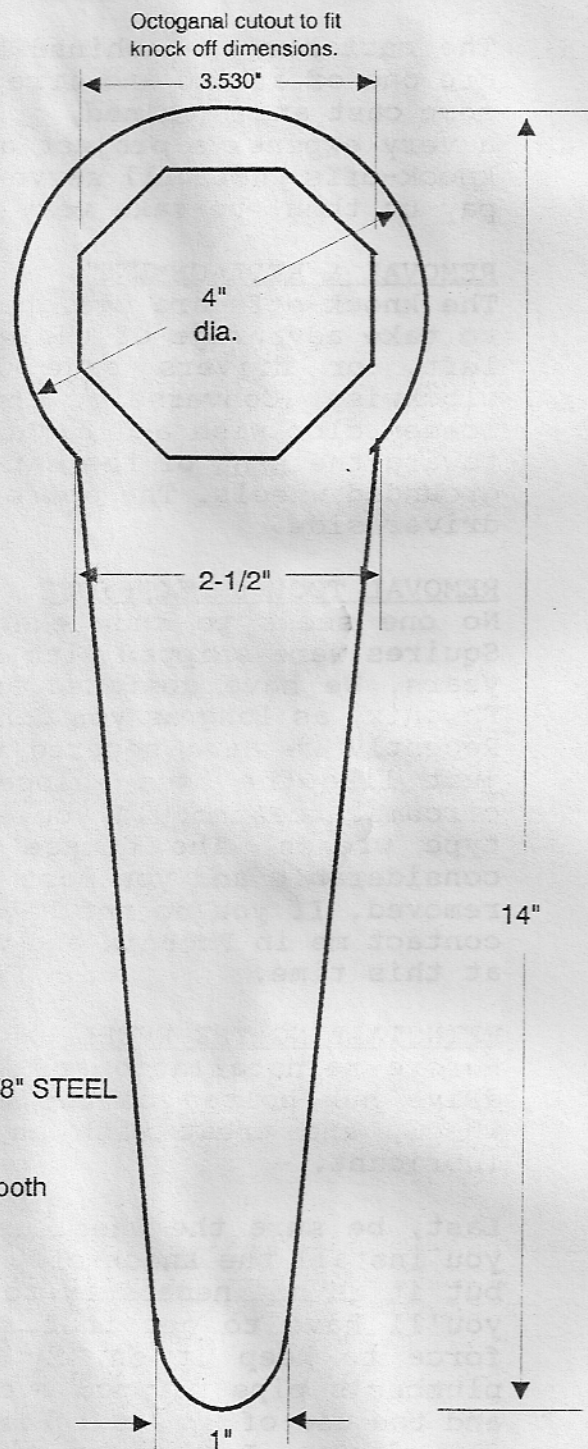


HICKORY HANDLE

3/4" x 1" oval,
12" long

MAKE FROM 3/8" STEEL
SHEET STOCK

Round and smooth
all edges.



Wrench and hammer for Squire SS-100 wheel knock-offs



800+862-6000

BRITISH WIRE WHEEL

1650 MANSFIELD STREET SANTA CRUZ, CA 95062
(408) 479-4495

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INSTALLATION & BALANCING INSTRUCTIONS FOR SPLINE-DRIVE WIRE WHEELS

BALANCING

There are many opinions and misconceptions regarding balancing of "spline-drive" or "center-lock" wheels. To properly balance this special type of wheel, it must be centered in exactly the same manner that it is centered on your car. Figure #1 illustrates the two "seating surfaces" (the inside rear bevel, and the outside front bevel) that center the wheel. These two bevels are typically "machined" surfaces--as opposed to less exact surfaces that remain "rough cast." Note that the actual splines drive the wheel but do not center it--in fact, worn splines (on either the wheel or the hub of the car) can negatively affect the centering of the wheel, and cause the wheel to appear out-of-true.

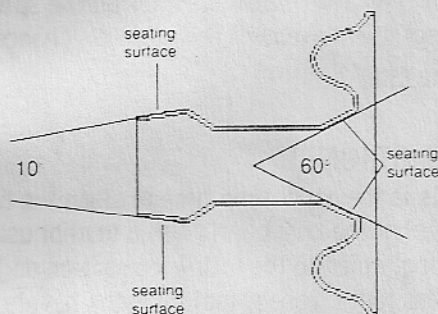


Figure #1

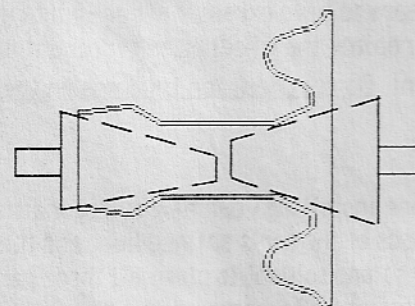


Figure #2

WHAT WON'T WORK

With the advent of the state-of-the-art computerized spin-balance machine, accuracy of balancing wheels was increased many-fold over the most popular prior method--the bubble balance. However, the computer spin-balancer cannot properly balance the spline-drive wheel unless it is centered in the manner described above. In most cases the operator of the spin-balancer will attempt to center wheels with the use of two cones (see Figure #2). The cones rarely center the wheel properly. The computer will advise the operator to apply weights to this non-centered wheel--which will usually throw the balance off even more than if there were no weights on the wheel at all. For those of you who doubt this, or get convinced by your local tire shop that they can balance your wire wheel on their spin-balancer with the "cone" method, try the following: If they get as far as putting weights on the wheel (that is, they haven't told you that the wheel is out-of-true; remember--it's not centered), it doesn't necessarily mean that it is balanced. As they're removing the wheel from the machine, ask them to rotate the wheel 180 degrees, put it back on the machine, and spin it again. If the wheel were properly centered and is balanced, the readings should indicate that no weights are needed. If the readings show that more than a quarter ounce is required--remove the weights and reread the above.

WHAT WILL WORK

The alternative is to find a spin-balancer (probably 1 chance in 100) that has a set of centering adapters made for center-lock wheels. These were made by Hoffman Co. about 20 years ago; don't confuse Hoffman spin-balancer machines with the center-lock adapters. These adapters duplicate the rear bevel and includes a "cap" which duplicates the inside bevel of the knock-off. In our opinion, this is the best way to balance your spline-drive wire wheels. A properly balanced wheel will almost always require weights on both the front and rear sides of the rim.

continued on reverse

WHAT WILL WORK --continued

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Excellent alternatives to the above include the simple bubble balance--this is the manner in which many of our wheels were balanced when the cars were new. Spin balancing on-the-car is another alternative. It is very useful when the car's suspension is worn and/or brake drums are out of balance. On-the-car balancing can be used after either of the above methods, to "fine-tune" the balance on the car. Drawbacks of on-the-car balancing are that you can't rotate tires, and if you remove a tire/wheel you must ensure it is returned in exactly the same position on the splined hub.

If you have purchased a "Dayton Wheel Products" wire wheel (since 1989) with a forged center hubshell (as opposed to the original, thinner, stamped hubshell), the double-cone spin-balancing method will probably work quite well. The reason is that this forged hub is machined on all surfaces, allowing the two cones a pretty good chance of centering the wheel.

TESTING FOR TRUENESS

To test a wheel for "trueness" mount it on the car's rear splined hub (without tire if possible). Tighten the knock-off and spin the wheel slowly--using a pointer on the inside bead of the rim (where the tire seats). Movement of $1/32"$ is fine, even up to $1/16"$ can be acceptable. As mentioned above, worn splines (on either the wheel or on the hub of the car) can affect the centering of the wheel, and cause the wheel to appear out-of-true. Similarly, a worn rear bevel, or worn knock-off bevel can have a similar effect. If the wheel appears to have excessive "run-out" (either laterally or radially) when mounted on the splined hub, remove and replace the wheel after turning it 180 degrees. Check the movement now--if it's changed--something's worn! Do not check for trueness on the outer edge of the rim.

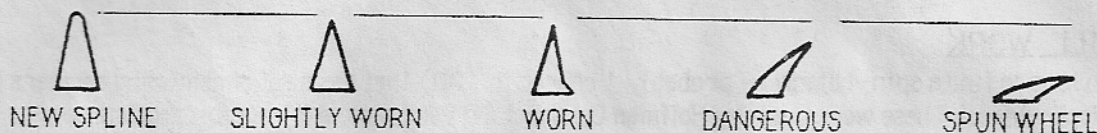
INSTALLATION

Before installing your new or reconditioned wire wheels is the opportune time to clean the bevel, splines, and threads of the car's splined hub, and the threads and bevel of the knock-off. Use a toothbrush (preferably not yours) and solvent to clean all these parts. After cleaning, refer to the following section on "Spline Wear and Inspection." Regrease, with a thin coating, all those areas just cleaned, including the bevels. We recommend a white, lithium-based grease. Most greases will do; marine, and anti-seize greases are great.

After screwing the knock-off on by hand, finish tightening with your knock-off hammer. We strongly recommend a soft-lead (emphasis on soft) 4-5 pound hammer; it should do no damage to the chromed knock-off. The original copper or hard-lead hammers will damage the knock-offs. Never use a rubber hammer or anything that weighs less than 2 pounds (don't laugh; some people who have, are still alive to talk about it). We do not recommend a plastic "shot" hammer. The knock-off should be tightened while the wheel is off the ground. Tighten until the knock-off does not move after being hit. Not everyone hits with the same force, or with the same weight hammer--make sure the knock-offs are tight! "Left"-side knock-offs go on the driver's side of the car (typical left-hand drive, U.S. car). "Right"-side knock-offs go on the passenger's side of the car. If in doubt, refer to your owners or shop manual.

SPLINE WEAR AND INSPECTION

Worn splines can be dangerous! Worn splines on a wheel will quickly wear the good splines on the splined hub of the car; worn splines on the hub of the car will quickly wear the good splines of a new wheel.



On the hubshell of the wheel, the rear-most portion of the splines (about $3/8"$) will show no wear (as they do not mesh with any splines on the hub of the car). This allows a very visual comparison between the front-most worn splines and the rear-most "new" splines. Also, by simply sliding a finger along the splines of the wheel, you will feel a ridge at the point that the "new" and worn splines meet.