Stealth Roller

Hello Passfire,

I have been using Ned's New Star Roller since June.
I have not rolled stars by any other method or machine…
It works great.
That noise from the ring gear was too much for me.

Before PGI, I added the 3M 08840 sound deadening material
To the drum and it helped take the edge off…

Two weeks ago, I came up with a solution I like.
It is quiet… very quiet.

I ordered 4 "new" parts.

97654A264 10 ea of 18-8 ¼-20 ¾" Flange Button Head Cap Screws $6.68

92949A539 50 ea 0f 18-8 ¼-20 5/8" Button Head Cap Screws $6.64

90630A110 25 ea of Grade 8 ¼-20 Nylon insert Hex Locknut $3.18
That is more nuts and bolts than you need, but the package sizes that they offer.

One Urethane roller from Fixtureworks.net Phone 586-294-1188
RR-92020-60UR-EX500 $24.55
1"wide 2"diameter 60A urethane roller ½" inside diameter
Plus small order handling fee $7.50
Plus shipping from both companies ???

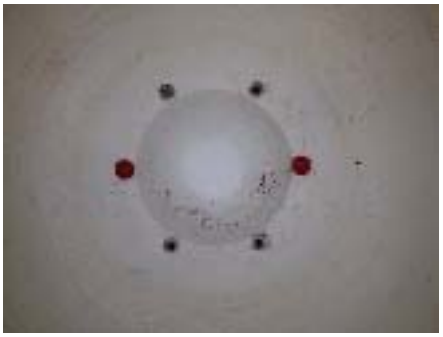
The roller must be bored to .592-.593 inches to fit the 15mm shaft on the Star roller. Machine shop? Your own lathe?

Once the parts are on hand and the roller has been bored to the proper size,
The real work begins:

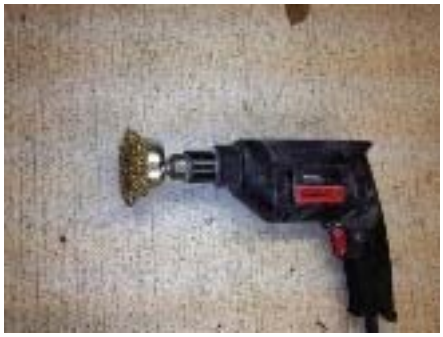
Step 1 Remove all of the nuts and bolts at the equator of the roller
Install 3 of the button head screws at 120 degree intervals
with the threaded end pointing toward the open end of the roller.
Secure them with 3 of the locknuts.
Before After

Step 2 Is creepy…

Using a sharp knife or box cutter – cut the caulking to remove the bucket
From the bottom of the roller.
Caution: Razor knives can make painful cuts and injuries.
Remove 4 of the six bolts holding the bowl to the flange and bearing,
Leave 2 of the bolts in place, 180 degrees from each other.



Step 3 Using a single edge razor blade in a suitable holder, remove as much caulk from
The bottom of the barrel as possible.
I used a cone shaped wire brush in a portable hand drill to remove the last bits
Of caulk. Move or replace the last 2 bolts to clean under them.
Remove the barrel from the roller and set it aside.

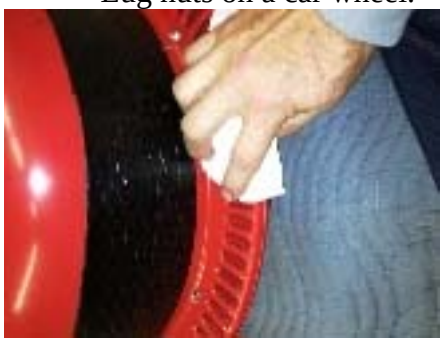


Step 4 To remove the pinion gear, you must drill a ¼ inch or larger “exit hole” for the roll pin
In the gear cover.
This hole is drilled through the gear cover between the teeth of the gear.
A few drops of penetrating oil may help to remove the roll pin.
Using a 3/16” punch drive the roll pin from the gear and out of the drilled hole.
Remove the gear and the cup shaped metal dust cover behind it.

Step 5 Inspect the shaft for any damage done during the removal of the roll pin and gear.
If any damage is found, carefully sand it off with crocus cloth or very fine sandpaper.

Step 6 Install the urethane roller with the set screws toward the motor. Be sure that the roller base Does not rub against the bearing or its housing. If it does rub, slide it off until it does not Rub. Tighten the set screws. (Your roller will probably be blue.)

Step 7 Clean the ring gear thoroughly to remove all traces of grease. The new roller depends On friction to turn the drum. You may benefit from solvent to remove the grease.
As always, be careful with solvents around flames or in enclosed spaces.
You may need a helper to place the bowl back in the machine and to put the flange Button head screws through the bowl and through the bearing faces.
Tighten the 6 locknuts in a diagonal pattern, similar to the way you would tighten the Lug nuts on a car wheel.



Step 8 The drum may be tilted a bit because the roller and the gear engagement is not exactly The same. Turn the barrel slowly by hand to be sure it turns freely.
There may be 3 or fewer small bumps as the roller bumps over the button heads of the Screws. Plug in the roller and turn it on to check for free and quiet movement. Adjust as Necessary.

Step 9 Prime and paint the bottom of the drum. Dry… Roll… Enjoy...

Notes and Discussion:

You may be able to buy the fasteners mentioned at a local store…
I mentioned McMaster part numbers, because you may get them all at once
Without the frustration of trying to find them.

It would have been nice if the flange head screws worked around the bowl,
But to me they made the action bumpier.

Shawn Ashbaugh 10/04/2012