

\\\\\\ **The Magic Wand Oilier and more** \\\\\\
How To Break It In One Easy Lesson!

An overview By Bruno D Puglia
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East Coast Amusements

~~Canton, MA~~

A Special Bear Note message from Bruno

**What the hell is a
MAGIC WAND OILIER?**



Prevention is better then the cure!
A 13th century proverb.

I suspect when you get something free you will think it is a sale pitch, but wherever you buy a Magic Wand Oilier, a needle oilier can save you BIG bucks. If you read these notes you will discover this is not a sales pitch. This abstract can save you down time and money! This is a pitch to get you to do preventive maintenance on your acceptors. I realize most of you may only extract what you can to get an acceptor in a failure mode back on line and the word preventive may not exist in your world. Most of you may not get my message! These notes do not replace the manuals so you still have to read the book!

Cleaning and lubrication is required for Rowe bill acceptors. If you car is losing oil, would you wait until your engine freezes up before adding oil? Acceptors do not have sealed bearings so do not wait until the shafts, rollers, bearings, wear out and freeze up occurs before you decide to put a few drops of oil in an acceptor. Denial may cost you many hours of down time and a lot of money.

There is a learning curve when doing something new. These notes seem be the best way to supply some information to you. Networking is an important part of our business, but, since my writing style is negative, some of you may get

offended. Sorry'! All I know is; if you get my message and read the manual I may never see you in the repair shop unless it's to just say hello and that's ok with me! That is what preventive maintenance and Magic Wand oilier is all about.

A problem I call stick-a-tion occurs long before a full failure occurs. This occurs when the acceptor shafts, bearings and rollers are dry, dirty and worn. When an acceptor is at rest for a period and a bill is inserted, the acceptor speed is too slow to accept the bill. As the bill is re-inserted, the acceptor starts to get up to speed, and may, at some point, accept the bill/s. In time, it will not be able to get up to speed and the acceptor will no longer accept bills. When you check out an acceptor, you allow the acceptor to get up to speed and then it may accept 100's of bills in a row. After a period of non-use, (idle time), the acceptor speed slows down again and it has difficulty accepting bills. This type of stickation is one reason for lost income and panic service calls. You must consider doing preventive maintenance to prevent stickation and extensive damage to belts, shafts, rollers, motors, mag head/s, etc. Lubricating, cleaning and adjustments are required to reduce lost income, down time, travel time, expensive repair or exchange loan expenses, stress of panic service calls, panic disorder and extra expense outlays !

There are many factors to consider for a respectable maintenance schedule. Time is major element since the oil is always dehydrating. Assume in one year, the acceptor will be bone dry. Another consideration is the amount of use. An acceptor shaft may show fatigue at \$100,000. Early shaft wear might occur at \$30,000. A beach area, or a dirty factory, etc, will increase the amount of wear and tear on an acceptor. Looking at a busy beach season of 3 months and \$100,000 season, like a schedule for your car, you need a lube job at the start of the season, then at very \$30,000 or about once a month. With a jukebox doing \$ 200.00 a week time would be the main concern so let's do it twice a year.

Any device, such as an oilier, is only beneficial when the user knows what to do with it. A needlepoint oilier should be used for preventive maintenance rather than panic repair. Forget the

manuals which imply wisdom that says; 'When it squeaks', oil it! Use your common sense. Besides lubrication, cleaning the acceptor belts, rollers, head pressure roller/s (use scotch tape directly or a tpaee card), LEDs and cells are part of a full maintenance procedure. As a rule, when the equipment is not given proper TLC, the repair costs are much higher because of the extra wear and tear on the equipment. When a bill is stuck in an acceptor, out comes the knives, sharp probes, and/or kicks or bangs to your machine! Without TLC, the equipment and your pocket may be at risk!

Can you get into trouble with a Magic Wand oilier? You bet your ###! Will you over lubricate the acceptor and get oil all over the equipment? When you remove a CBA-2 from a juke or wall box, did you note where the metal spacer bars are, or were, and maybe you are not going to put them back? Without the spacers, the frame will be distorted when you re-install it. If you find the pot and adjusted the speed, lack of spacers may change the speed and the result will be poor or no acceptance. Do you have the proper small screwdriver to adjust the speed control? If you do, you may adjust the wrong pot. U/CBA-2 units with the switches on bottom do not have a speed adjustment.

Some play it safers and CBA/UCBAers will only lubricate what they can see and do not the rest of the acceptor. That is like putting 1 quart of oil in your car when it needs 4 quarts. Taking short cuts is a bad modus operandi.

Many vendors will attempt to work on a CBA/UBA but will not read the manual first. Are you so good you do not have to browse the manual? Do you have a manual? Some of you will attempt to remove a CBA/UCBA lower logic module by taking off the two screws on the back plate and lose the special hardware instead of taking off the one inlet screw/nut in the front inlet. Did you read the instructions for removing the lower cell assembly board? You can break the cell board or clips attached to the lower track. Lets see, so far you may have damaged the logic module, lost some parts, twisted the frame, screwed up the pot adjustments, broke a cell board or lower track, and did not look at the manual to see all the oil

points. If you did look at the manual for a CBA/UCBA did you miss the two very important input shaft bearings, did not have proper tools like small nut drivers, spring hooks, did not use scotch tape or tape card on pressure roller to remove metal particles and dirt, missed cleaning the belts and cells, did not check/set belt tensions, did not check for loose screws on the stacker motor, lube the stacker slides and the bottom of the plate in the bill box to get rid of the squeak. Gee, not bad for your first time out! Do you have a Spare? Did you write down the switch settings? BTW: 1 2 3 4 on is a stand alone test mode if you have a power supply transformer and/or an AC cord if the unit has a transformer supply on it. Some Coinco modules CBA-2's with switches don't work in the test mode with 1 2 3 4 on. It must be connected to power and coin mech before it will accept bills.

The status indicator on the back of the CBA/UCBA acceptor should be **OFF** when it is ready to accept bills. Do you ever look at the status LED?

Can you get into trouble using those pre-soaked cleaning cards? Yes! Early in the game Rowe said bill acceptors should be cleaned with de-natured alcohol (hardware or paint store). To use the cleaning cards open them up and let them dry out. Apply the denatured alcohol on the paper and use it but never leave the acceptor wet. Always run a dry paper card into the acceptor to assure it is completely dry. Wet pressure rollers can stick to the head/s.

OK, its OBA time. You can oil the white roller's shafts and nylon bearings. You take the top sensor off, but when you clean the lower LED, and maybe move it out of place. When you put back the upper cell board you may pinch and short the white wire on the bottom between the board and metal block post the board mounts on. The front metal spring was put back and now it is shorting the cell board. You now have a V1 fault problem. Cleaning gray, red, or orange belts is a waste of time because these belts absorb the grease or oil so this is a short term fix. That's ok, you'll put on the new belts and the acceptor will not run correctly because you did not replace the bad shafts, cleaned the inside of rollers [wash and use a brush], lube the shafts/rollers when you re-

assembled them or did not install the new upgraded anticheat shaft assembly. If you mishandled the new head block by using those HI-LOW screws and maybe you cracked the head assembly block. Dump those HI-LOW screws in the head assembly and use the new retainer springs on long cover screws to hold the head block assembly in place.

Anticheat levers stick or slow down if lubricated so keep oil away from anticheat lever other wise you will end up with the acceptor eating bills. So... When oiling an assembled anticheat lever shaft and rollers, only oil the side away from the anticheat lever.

Let us do a BA-50. Be careful with special Hi-Low screws that look like sheet metals screws. Do not crack the head block! Be prepared to check ALL voltages at the acceptor. Pin 10 (frame) is ground and pin 3 is + 5 vdc. Is that information the book? No error message is valid unless the 5 vdc is correct. Got the latest software yet? What is not in the BCxx00 manuals is common sense information about lubrication. Look at the CBA/UCBA manual lubrication instructions and then look at a BA50. See how similar they are. See those rollers, bearings and shafts? You decide if it makes sense to lubricate the acceptor before it fails and needs every expensive head replacement. No oil on, or near, the anticheat. The BA50 has two head pressure rollers that will need scotch tape cleaning and/or with Rowe's pressure roller cleaning card. A rejected bill means 2 passes over 2 magnetic heads and shorter head life. Cleaning and lubrication is a must for reduced wear and tear and extended head life. How often? Every \$30,000 or once a year, which ever comes first. If you run less than \$30k a year than on a time line basis twice a year is good target schedule.

Rowe is now making double sided sticky tape cleaning cards to clean mag head pressure roller/s on the BA50 and other Rowe bill acceptors. They also work on other types of acceptors. On some of the other OEM acceptors you may have to hand crank the taped paper into the acceptor. I always hand crank through all acceptors. Rowe also makes a tape card for the RBA-7 which has an upper and lower mag head.

What is the Kodak lens cleaner for; those LEDs and Photo cells ? Some cleaners including glass cleaners may actually reduce the amount of light and/or damage the optic devices. There are other cleaners but I stick to the Kodak cleaner.

Do you have Dry/Slick for hoppers and coin mech (nothing else in a Rowe bill changers), denatured alcohol, Hopper brush/chisel, switch/contact cleaner, eraser, lens cleaner, paper cleaner cards, paper-tape cards, a small bent tool for changing the U/CBA switches, other tools such as small nut drivers and screw drivers, plastic or mylar strip for junk removal from a UBA/CBA and now the Magic Wand Oilier!

Do not get gross by putting a quart of oil in the acceptor. Do not over-lubricate the acceptors. One vendor I know always marks the lubrication date on the acceptor.

When the oilier is empty, pat yourself on the back for using all the oil! If you have not taken short-cuts you are now a full member of the; "No More Stickation Club" and maybe "I Read the Manual Club." Now you can buy another Magic Wand Oilier, Keep your Club memberships active. For those of you who do not want to become a full member of the 'No More Stickation Club', keep reading. There will come a point in time when the head assembly and many parts will have to be replaced. If the acceptor has problems accepting bills, there will X numbers of rejects. This shortens the life of acceptor parts like shafts, heads, belts, motor, rubber rollers, etc, by that X amount! I have no way of measuring what the X wear and tear is, but most acceptors I see will not accept any bills. When I ask, 'It won't accept a single bill now. Didn't you see the bill box getting less and less money week after week? The answer is generally "yes."

While lubrication may restore the acceptor some level of acceptance, the extra damage, (wear and tear), has already occurred. Many of the dry, dirty, acceptors require mag head replacement and they may have other major problems. If you think you can wait until acceptor will not accept any bills, you may find the X wear leaves you with a very poor level of acceptance. Parts such as motor, belts, head, shaft assembly/s, control unit, or logic

assembly may have to be replaced. At this point, a simple lube job will no longer work. Consider what happens when a bill gets stuck inside an acceptor, someone might get irate or even worst, get out a sharp object of some kind and attempt to get their bill back. More than likely, the lower track (or other parts) will be damaged. Even worst, they may mutilate the upper track which is the mag head and amp assembly. This may cost you many man-hours, down time and \$\$\$!

Once level 1 cleaning and lubrication can be done by a Magic Wand club member they are now ready to go on to level 2 repairs. Full club members can replace the electronic logic module, Mag head assembly, lower cell assembly board or other parts and have a good working acceptor because they can do level 1 Magic Wanding.

The New Versions (NV) of CBA/UBA logic modules has no speed adjustments and the switches are on the bottom. They have a water/salt shield over the module. There are 3 versions of modules; Coinco, CBA-2 and UCBA-2. Take note that 4900, SBC-2 and Juke boxes which use the small 2 wire plug (Rowelink) on older modules the switches can be seen when you open the bill box and you use the connector on the side but the correct connector on the new modules (switches on the bottom) the connector used is on the bottom near the reset push button switch. Do not use the connector on the side.

The stacker assembly can be removed by removing the plug/wires, screws and sliding the assembly down and out, but check the head wires/plug. The wires can catch on the pusher plate and you can pull out the connector from the mag head assembly. The stacker motor screws may be loose or you have stacker motor stickation and have to remove the stacker assembly the motor. You may find the upper belt drive pulley assembly has cracked away from the shaft and the belt/s may not move. You can remove stacker, top plate and front roller assembly and free the belts up and replace the drive assembly. You need the tool to remove the retainer ring holding the gear on the shaft. You might also lose the retainer clip, so have an extra clip handy. Normally a unit with a broken upper drive pulley may also need cleaning and lubrication so allow time to the entire

job.

In 2002 I asked an 81 old Mr Water man who had been shown by me many years earlier how to lube an OBA to show me who he did it, Near sighted, so without glasses, he lubricated the OBA acceptor as well as I can. Can you do what he did? Once you get the first unit back on line, you you have taken your first step towards becoming a full member of the clubs. You can now re-read these notes with a totally new perspective. You have gone from "I can't" or "I don't know how" to a "I did it!" position.

"May the oilier be with you"

A Side note. And now the rest of the story. March 03, 2005. Today I went to Mr. Water man's place for my 5 gallons of water. He asked me to look over his 2 BC's and a BC100. Mr. Water man is 84 and he has a BC100 that he got in 1992. When he got the BC100 from us, I gave him my Bear note for lubing a BA50. Today for the first time I worked on the BA-50 acceptor. It was dated 92-04. The dollar counter read 115,895. The upper belts were a little shiny and slightly loose. They did not really need replacing right now. Mr. Water man is world class and wants his equipment in top-notch condition so at his request worked on the BA50. I put two new upper belts on his BA50 and **I did not have to** replace lower belts or any shafts. Generally, I always have to replace the three little shafts in the front and the rear lower shaft. The magnetic head was on very good shape and I gave it just a light magnetic head Dremeling and degaussed it. I cleaned the pressure rollers with tape. They were in good shape too. We are not talking a large amount of total dollars collected buy this changer but we are talking about a changer that is just 2 months shy of being 13 years old and even with \$115,895 of \$1 bills we are only talking about just 2 upper belts and nothing else. The reason for so little wear is the Magic Wanding that the acceptor got and this means when a bill was put into the acceptor is accepted on the first pass. There is seldom a rejected bill Mr. Water man and I back maybe 18 years when he purchased a 2nd BC-1. He is one of the best Magic Wanders I have ever worked with. You should be one half as good as he is! BTW: The BC100 dispenses 10 dimes per dollar and he

cleans them with a wood chisel and the hopper brush and dry/slicks the coin assembly [another Bear note]. His hopper went click click..etc like it was new, maybe even better than new and that's after already paying out over 1 million dimes. To be precise 1,115,895 dimes.

THE MAGIC WAND

Part #2:

These notes have been edited or expanded many times since the original two-page issue. Feedback from the vendors has been limited and I really do not know what specific impact these notes have had on most of the vendors who have read them. Some feedback has come from those who have read the manuals and used an oilier. Other vendors report they do not have time so preventive maintenance so it is out of the question. From what I see, some vendors did use the oilier only when a failure had occurred and others do only partial lubrication. An example is lubricating a CBA/UCBA but only doing the few rollers and shafts they could see. They do not remove the cover inlet nor the module so they can do the entire CBA/UCBA. I am writing this because today I had to work on a CBA-2 with a broken upper drive pulley. I noted that only parts that could be seen without taking the unit apart had been lubricated. The vendor questioned why was the input roller assembly was changed and why did shaft pins have to be cleaned and rotated 180 degrees. The answer was simple: The acceptor ran till it failed and it failed because of Lack of Lubie!! The magnetic head test showed the head was only fair and it had reached a point where it was starting its downward slide. Without proper lubrication, the next time I see the acceptor the head will be gone and maybe the motor too. Other parts like pin shafts, belts, etc, too. I give it two years and the first year is only because it was just cleaned and lubricated. The question then will be; "Why is it such an expensive repair?" My Magic Wanders friends know why because they have seen the results of Magic Wandering their acceptors.

People who do quickies, or are paying cheap prices to get an acceptor back on line are really doing more damage than good. You may even think you are getting the job done right but that not be the case. You may feel you have beaten the system but in the long run that is not the case. There is, and will be, enough information in these notes to make that point very clear.

Yes, Wanders are out there and I just do not see their OBAs, CBAs, UCBA's too often. One vendor has 31 BC-1s and in the last five years, I have seen

only two of his OBAs. One needed a motor gear to nylon gear adjustment and one head block adjustment. It took Just minutes, not hours to fix them and now he knows what to look for and can now make these adjustments himself. By the way, he found out those pre-soaked cleaning card cracked his upper belts after 8 months of use and now he uses denatured alcohol on cards which have dried out to do the routine cleaning of the belts, then follows that with a dry card.

All I can say is spend some time to look at your trouble calls, down time, stress, etc, and take it from there. I have noticed those vendors who are Magic Wanders, even at the simplest levels, now have a large sense of pride because they are Magic Wanders and have looked at manual. I do see some of the Wander's equipment and I hear; " I did everything right, so what is wrong?" I love it! This is what I meant when I said I do get some feedback from the Wanders. These Wanders are in fact heading for full level 2 repairs that are where they should be going! You cannot reach level 2 without learning Magic Wandering first. What is the sense of changing an upper pulley, head assembly or logic module on a CBA/UCBA if the rest of it is not lubricated? What is the good of just changing the belts on any acceptor? Most of what is in these notes may end up as vendor denial, or because of business pressures of time and money, the result will be a lack of preventive maintenance and lubrication. When a vendor has a new acceptor starting to have trouble in 9 months (a worst case, dirty, sunny location) and they did the cleaning of belts and lubrication (but only the points they could see) they cannot understand why the motor runs too slow to accept bills after a period of rest, then is ok once it gets going. Some vendors use a can of air to clean acceptors and they think this is good enough clean the LEDs and photocell dirt film. It does not work that way!

Why do bills get stuck in the acceptor? Why are the belts too loose? The vendor thinks his crew has been doing the preventive maintenance correctly and their short cuts are valid. These vendors would never put 2 quarts of oil in their truck when it needs 6 quarts and does not have a spare acceptor. This vendor has my notes but did they read them? They were even shown how and what to lubricate in a CBA-2. Histories shows

their acceptors (CBA/UBA-2s and OBAs) were run into the ground and have breakage failures like pulleys cracking and belt dirt in pulleys, plus have stretched belts, worn heads, and motors all of which is a result of stickation which brings on poor acceptance rates. All Rowe acceptors need preventive lubrication and those who take short cuts are in denial. Are you?

In 1995 Rowe revised the prices for equipment and parts. The price increases are reflected back to you as the end user. This is one more reason to reconsider your position on preventive maintenance. When is the last time you lubricated the shafts and bearings on your acceptors including the BA3, 20, 25, 35 line of acceptor? Do not oil anticheat levers/shafts. As side note, what do you think is your answer to the question; "What was the error code when you had the problem?"

What about OBA vendor denial? Here is an OBA that was marked "fussy". Some one did put new belts on the acceptor at some point but who ever did the job took short cuts and there was lot of other items causing problems. The acceptor did not move at all with my 12 vdc test. The motor belt and both lower belts were much too tight. The VF (flipper) spring hook was put on the top rather than the lower section of the flipper. The flipper action was too tight. The front center spring was bent out of shape and too loose. I stripped the acceptor and found the shafts had not been replaced. They were worn so they had to be replaced and re-assembled with clean rollers. The head was worn and had to be replaced and the pressure roller was bad too. The magnetic head pressure roller was hard and had the shape of an egg. The acceptor was very dirty and there was dirt in the tooth pulleys which caused a great deal of wow and flutter. The acceptor was re-assembled with the proper Magic Wand lubrication, adjusted, tested and returned to the vendor.

I can write, and have written, many sad stories about OBA, CBA, U/CBA, BAs and quick fixes where a vendor goes off in the wrong directions because no one looked at error code or blinks, etc. As shown above, Vendor Denial is a major and root problem. A Magic Wander does a complete job. Thinking you can only do part of job is not good enough to resolve all equipment problems

and short cuts translates to a lot of down time, repeat service calls, expensive repair and exchange bills, and real dollar loss in your bill boxes too.

On the other hand, there are some real Magic Wanders out there and it is nice to hear from a vendor who gets their first a no, or poor, acceptance acceptor back on line after they do the Magic Wanding. Getting the first one back on line is like getting a plane off the runway and your flight is just beginning. There will be a lot of good stuff ahead of you. Are you non-Wanders ready to take off yet? Why not? Do you like running around in a panic mode to get an acceptor back on line? Do you really enjoy buying new equipment or paying those expensive repair/exchange invoices and finding empty bill boxes?

May the Magic Wand be with you!

I have to admit what I have proposed in the way of preventive maintenance is almost impossible to handle without having a spare acceptor. There is a learning curve that takes time and most people just do not have the time. The spare is a key factor in keeping equipment on line with a minimum loses of time, money, and the spare offers you a way to do preventive maintenance too. When a failure occurs you may not be able to get a right now fix in a few hours. We do keep some units on the exchange shelf but there are many times when they are on loan or back at the factory. Just calling for an exchange is not a good idea unless you are willing to pay for factories rebuild acceptor because that is what we keep on the shelf. While yours has some use on it you may not need an expensive re-built acceptor. Calling for a re-built before inspection of the acceptor is not a good idea money wise unless you know the acceptor is really bad in terms getting it re-built.

We had seen CBAs and UBAs with worn/bad magnetic heads and motors and we have seen 1988/9 units which were ok after good cleaning and lubrication. I will write about testing magnetic heads and motors in other Bear notes.

The BA-3 to BA25 acceptors are no longer exchanged or rebuilt by the factory so the price of repairing and rebuilding these acceptors can be

quite high. A spare unit or units are the only way to go. Be prepared to spent money to get the acceptor repaired or re-built depending on the condition of the acceptor.

OBA's have been around a long time and are still being used in 2005. Here again repairing or re-building may be expensive if we start looking at the head plus the motor. Many OBA's have reached the stage where both the motor and head are bad.

BA50 are going strong and a spare can be expensive.

I have to add as an update to these notes Magic Wanding pays off and that will keep your cost down. Now-a-days there is a chance to find a spare by using the internet and auction sites like Ebay. Depending on the condition, consider you may have to get the acceptor rebuilt.

As far as I know no one else rates magnetic heads the way I do. The Bruno mag head test was built by me to put a figure of merit on a magnetic head. I found out that just accepting a few bills today did not mean the acceptor would still be accepting bills down the road. This test allows me to test the mag head before doing anything else. With the test data on head and motor I can determine the best course of action to take for the vendor. For those who know the way I work know I go for long term fixes rather than short term fixes. This may be calling for a factory exchange. Without the Bruno test data, no one could not make any choice because the acceptor must be in good shape to see if it would accept bills or not. In other words; you would have to fix the acceptor up first. With the Bruno mag head test I don't have to do that work to test the mag head assembly. The test also tells me if the head is OK and does not have to be replaced. I do not shotgun head replacements and replace only those that really need replacing. You will find more details in the Bear's Mag Head Loop Secrets docs.

In terms of getting error reports, error messages, status conditions and/or number of blinks many of you have not gotten the message yet. You have not understood the importance of these reports and many continue to go along ignoring error codes

and messages. Where you got the idea we do not need these reports and error code blinks and messages is beyond me. Perhaps you will take time to re-consider your position on this subject if you are one of those who refuse to note error codes, status indicator [ON, OFF, number of blinks] and messages. This lack of reporting has been a serious problem but because of the type of problems we are seeing now-a-days it is now every important. An error report system exists in most of the current equipment and many just refuse to use and report them. My Magic Wand is only good for lubrication and I do not have a crystal ball. I am not a physic. Some of you non-reporters of errors displayed and/or not reported Status indicator conditions have already gotten back units marked tested ok only to have them fail again within a few days, weeks, or months. With a valid detailed report I may be able to find or shotgun the repair the first time around. Never reset or power off/on the equipment without first looking at and writing down the error message and/or condition of the status indicators.

A vendor pointed out to me why they don't get the messages "LOOK FIRST". For years we have gone up to a machine with a problem and the first two things we do is look for a stuck bill or something inside the acceptor and do a reset. This is the way we have done things for years! It may be wrong, but this is the way it is. You have to tell us right out it we have to do things differently now-a-days because looking at error codes or status indicators is the last thing we do. OK then, The Bear is telling you right out that the times and the types of problems has changed:

"Look before you leap" or:

"Look before you do anything else !"

May the error report and status condition and blinks be with equipment !

We go round and round and what we get back to is cleaning, Magic Wanding and having your own spares. As I see it, half way measures and quick fixes (even if you pay for them) are just that and lead to more expensive repairs or exchanges down the road. Of course, the choice is yours but after reading these notes you know where I'm coming from. Yes, I am bearish about these things. Cba, Motor mouth Oba, Motor gear OBA (my acceptor

friends in my very Sad short stories) and others have told me: "Don't give up trying to explain Magic Wanding because it was the only hope they have for staying alive." In these pages I have not given up and still trying to get the messages to you people. My acceptor friends who have been, and are now, being regularly being cleaned and Magic Wanded also wanted me to thank all of you Magic Wanders.

Oba, Cba, Baba and others asked me to give you another important message. As some of you tried Magic Wanding your acceptors you found the acceptor started to work again. Some people felt more lubrication would be better when the acceptor was in trouble but acceptors have been killed with too much oil. Once the oil reaches the belts it is all over! I fear many of you will fall into the: To much of a good thing trap and kill your acceptors. I do not know anyone who will put 8 quarts of oil in car when it needs 4 quarts so I do not know where the logic of over lubrication comes from. Perhaps it is a panic mode thing but wherever it comes from the over lubrication of an acceptor is a big **no no!**

Rowe is using, and recommending, a silicone lubricant for acceptor lubrication. They have put it into a 1/2 FL. Oz. in a needlepoint oilier. The part number is 270628-01. While the price seems high but it makes sense to use it for Magic Wanding your acceptors.

One rubber restorer and belt cleaner is called Re-Grip. Apply with soft cloth until clean and dry off the excess. This is the closest to the old restorer I could find.

I have attached a cleaning Card Bear note for the BA50 which as two pressure rollers but you can make a similar card for any acceptor with a pressure roller. Just make you cut in the strip to line up with the head pressure roller, use the double sided tape and you don't have to cut any holes in the strip.

I have to say "thanks" to those who have been (and are starting to) providing written notes why equipment was sent in for repair or exchange. "Reject E, 3 blinks, 6 blinks, Right motor chatters, etc" rather than just It don't work or It don't accept

bills, etc, makes quite a difference to both you and me. At one point in time I thought is was hopeless to think many of you would ever provide valid reports I was very wrong. I still get those useless reports but more and more I am getting valid and pointed reports with error codes, number of blinks and error messages. What better way to end these notes then with a big **THANKS!!!**

MAY THE MAGIC WAND BE WITH YOU!

Bruno (The Bear) D Puglia

Cleaning Mag Head Pressure Rollers

Rowe has designed a card using paper and thin double sided tape to clean ink, dirt, and other contaminants off the magnetic head pressure rollers. The one sticky side is attached to the paper and when you are ready to use the card remove the protective aper to expose the sticky tape. Then stick the card into the acceptor. While the cards were made for the BA50 acceptor they can be used on all Rowe acceptors (except the RBA-7) and other acceptors. Some aceptorsts do not pull the paper into the acceptor so you will have to hand crack the acceptor. People who have seen me work know I always use tape to clean the roller/s under the magnetic head/s.



Rowe Part #
252548-01

Rowe now has a card
for the RBA-7.
Use
252548-03

Bruno

Clean51T.pgs Mar 05, 2005 1T



To join the MAGIC WAND CLUB buy one of NECo's Trinity Oilers or a similar type.

Your dues are:

- 1 Buy an oiler, Trinity, Radio Shack's Lubricator # 64-2301A or Rowe's silicone lubricant 270628-01
- 2 Use it for preventive maintenance.

- Warning -
3 Over lubrication and/or getting oil on the belts voids your membership. More is not always better !

When the oiler is empty you will be a full member in the :

**The
MAGIC
Wand
CLUB !**
Bruno



The Bear does use them !



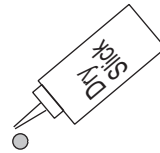
Rubber and belt cleaning should be done when cleaning and lubricating the acceptor. It should be at least once a year and more often in a dirty location. Do not over use the rubber cleaner ! Apply evenly with a soft cloth until clean. Wipe off all excess including the edges. Re-Grip is a cleaner and revitalizer.

Re-Grip
Rubber
Cleaner

Cleaning Rowe Hoppers and Dry Slick !

What can you use to clean and lubricate Rowe Hoppers and clean coin mechs ? Brushing alone is not good enough. Make a wooden or plastic chisel to clean off the hard dirt on either side of the chain. You can grind or file the end of the hopper brush to make a chisel. The product called Dry/Slick is a very good cleaner when wet and when it dries it leaves a surface film which does not collect dirt. It also lubricates the hopper chain. I do not recommend Dry/Slick use where a build up will cause a serious tightening (such as tight shaft and nylon bearing). There is no problem when used on a Rowe hopper or on the coin mech area where the coin slides.

If you can't get hoppers to work right remember "Bruno" can refurbisher your hopper and fix the rivet problem too. . Generally the cost per hopper is \$80-\$100 if it has normal wear and tear.



More good stuff !



Using those Cleaning Cards on Rowe Acceptors ?

Rowe original recommended using **denatured alcohol** (paint or hardware store) to clean Rowe bill acceptors so how can you use these cleaning cards? First, let the cards dry and then apply denatured alcohol on the paper to clean the acceptor. After cleaning with a wet card **ALWAYS run a dry card into the acceptor.**

Over kill should be avoided so **do not** use the cards every week, or month, but just when the belts start to get dirty. You can judge time between card use after the first time use by inspecting the amount of dirt picked up on the card.

SPEED ADJUST ON OBA 4-50575-xx UNITS

Speed adjust is a must ! There is only a 3 % acceptance range. The speed must be adjusted BEFORE using my mag adjust procedure, With a good lubricated acceptor, good control unit with good cable and clean connectors start with the FAULT indicator OFF. Turn switch #6 ON as marked on the cover and press the TEST switch. Slowly adjust the speed until the FAULT indicator stays OFF. If you can not keep it off, keep it off as much as possible. Blinking on and off may mean you need another acceptor or you have a problem in the system. You can leave #6 on if you are going to use the [Bruno] Mag adjust system

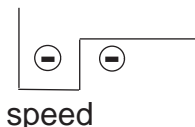
Where they exist, Speed and/or Mag adjustments is a must. Many acceptors do not have a speed and/or mag adjustment.

SPEED ADJUSTMENTS OTHER THAN 4-50575-xx Units

Before doing a Mag adjust, you must make the speed adjustment first. No amount of speed and/or Mag adjusting will fix an acceptor which has stickation problem and it needs lubrication. After you adjust the speed, it may accept bills for a short period but if the acceptor has stickation, and you take no action, you will be back.

Most control units use a status or fault indicator for adjusting the speed. Press the TEST button or the reset button. Adjust the speed until the status (or fault) indicator stays on all the time. If it blinks perhaps there is an acceptor or a control unit problem.

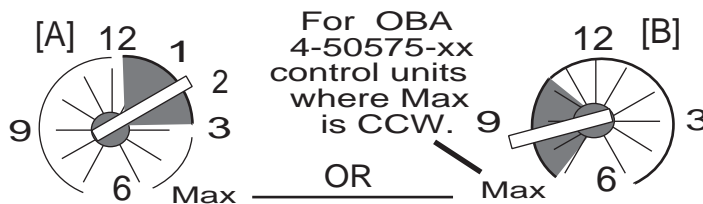
Older CBA/UCBA-2s have a speed adjustment pot. New upside down modules do not. Make sure you adjust the "speed " pot and not one of the other pots.



Spd_mag1M March 03, 2003 1M

Adjusting Rowe Mag Gains

There are many reasons to adjust the mag gain as listed below. If a speed adjust exists, adjust the speed FIRST. With an average bill, start at one end and insert the bill. Move one clock position and reinsert the bill and repeat the process until it is accepted. Note this position, say 12 noon. Go to the other end of the pot and repeat the process again going back one clock position till the bill is accepted. Say 3 pm. Set the mag gain between the 2 accept points (shaded area) at 1:30 or 2. See [A]. With OBA 4-50575-xx [B] units Max is CCW. You may find the range is between 7:30 and 10 so you would set the gain at 9 or 8:30. If it does not work when tested, repeat the process with another bill. In checking, you may find you get some rejections and the adjustment wants to be closer to the Max position or Min position. If the unit gives an error code when the bill is rejected. Use them and the manual as an aid. With the new \$5 conversion follow the procedure given in the installation note. Then you may have to try this system.



Bruno's "STICKATION"

STICKATION describes is a condition which occurs when an acceptor can not come up acceptance speed. Generally this occurs because the acceptor needs lubrication. If it has been at rest for a while, it can not make speed. With repeated inserts of the bill or adjusting the speed, the acceptor works but after a period of idle time, it slows down AGAIN.. Preventive lubrication is required and this will also cut down on wear and tear which leads to expensive repairs and exchanges costs. This is what Magic Wandings all about.

The Magic Wand Club !



Every \$30,000 or once a year which ever comes first !

OBA Acceptor lubrication, cleaning & rebuilding

Warning: Do not over lubricate or get oil on the belts

Use wire hold down springs on newer Mag head assembly

Part # 35112301

upper rear rollers
Keep oil away from the anticheat lever, Oil outside edges only

2 top belt input rollers

2 Take up rollers

2 large rollers

Gear shaft pin

Older OBAs have a motor belt roller.

2 side shaft bearings 2 (4) total

Top view Upper input assembly

Note: Cleaning gray or orange upper belts is only a short term fix. Replace with semi-clear belts. Blacks when worn.

Lower input rubber roller assembly Look for E clips

Bottom view

The Rowe OBA manual does not give a preventive maintenance schedule for lubrication. If you wait till acceptor slows down, the damage to all parts has already occurred. Lubrication should be done at least once a year or more often when the OBA gets high usage. Save yourself expensive repair costs and keep the bill box filled !

Clean the photo cells and LEDs with Kodax lens cleaner, belts with rubber drive cleaner or denatured alcohol (Paint supply store), and the mag head pressure roller with scotch tape. Do not remove the mag head from the head assembly because it is normally factory aligned with a special alignment fixtur.

If you use those pre-soaked cleaning cards, let them dry first, then put denatured alcohol (paint store) on them. ALWAYS finish by running a dry card into the acceptor. Never leave the Mag head pressure roller wet. Clean only when dirty.

Replacing worn belts may require replacing worn shafts, cleaning rollers (use gun wire brush) and lubrication. If you take short cut the acceptor may not operate correctly. OBAs may have a lot of wear so the mag head and pressure roller may need replacement. Always use the newer extended tab anticheat and lighter (blue) spring. Do not use those hi-low sheet metal screws in the head holder. Use the hold down springs.

OBA_Lube Jan 6,2002 1 T



To join the MAGIC WAND CLUB buy one of NECo's Trinity Oilers or a similar type.

Your dues are:

1 Buy an oiler, Radio Shack's lubricator # 64-2301A or Rowe's silicone lubricant 270628-01

2 Use it for preventive maintenance.

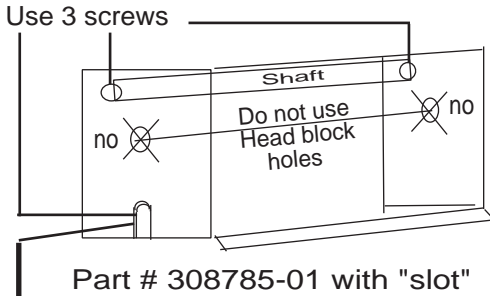
- Warning -
3 Over lubrication and/or getting oil on the belts voids your membership. More is not always better !

When the oiler is empty you will be a full member in the :



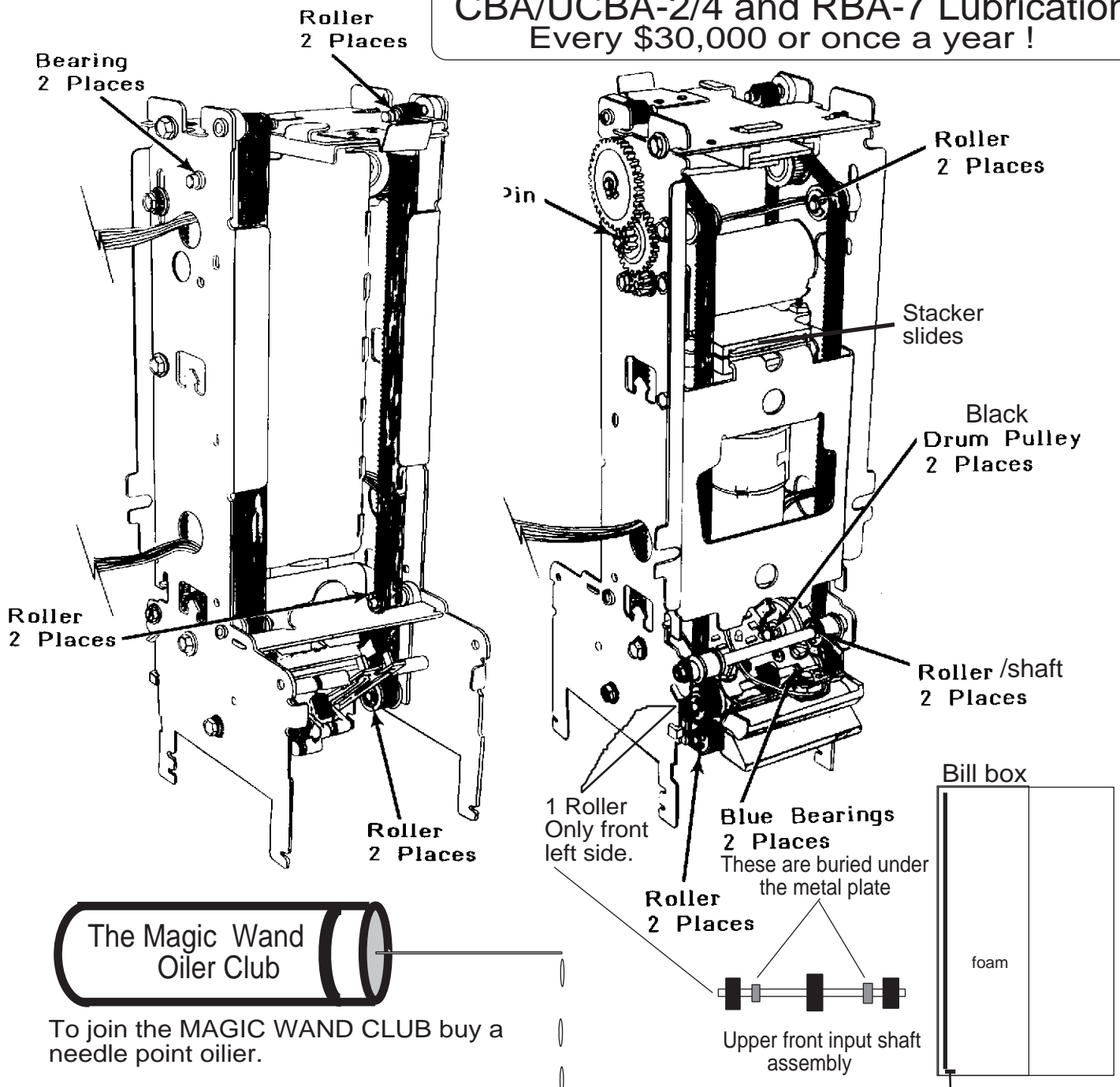
4900 Single board ,OBA Bracket

With an OBA with a new Head assembly (no metal inserts for screws) use the Hold-Down wire springs [part # 35112301 and use the newer OBA 4900 bracket. use only three (3) screws. If you have the older bracket which does not have the slot-hole drill a new hole in the older bracket.



No slot, then drill a new hole in the bracket !

**CBA/UCBA-2/4 and RBA-7 Lubrication
Every \$30,000 or once a year !**



To join the MAGIC WAND CLUB buy a needle point oiler.

Your membership requirements are :

- 1 Buy an oiler; Trinity oiler, Radio Shack's lubricator # 64-2301A or Rowe's silicone lubricant 270628-01
- 2 Use it for preventive maintenance. Every \$30,000 or once a year which ever comes first !

- Warning -

3 Over lubrication and/or getting oil on the belts voids your membership. More is not always better !

When the oiler is empty you will be a full member in the :



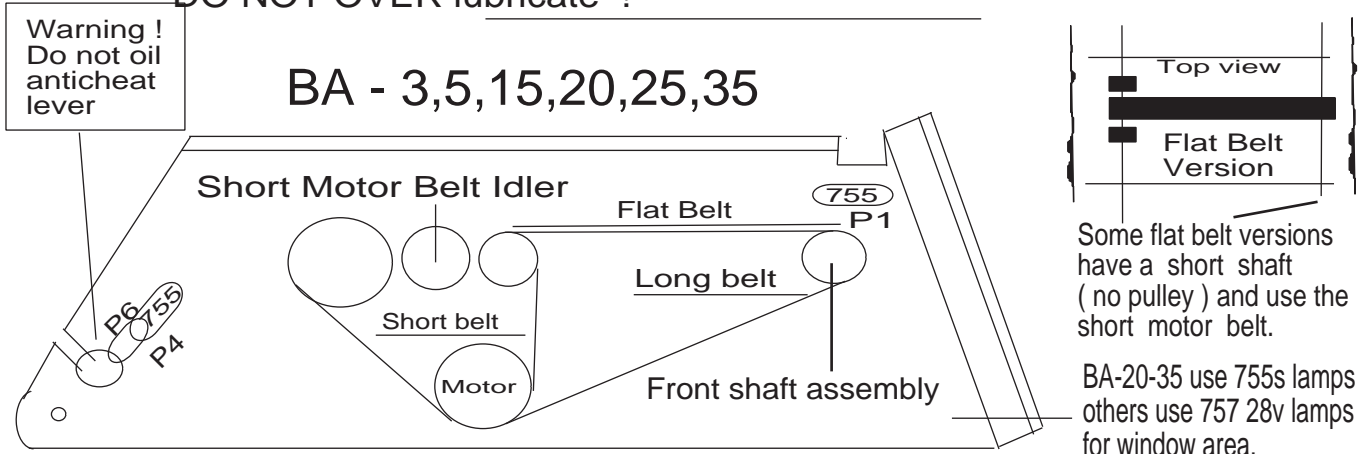
**The
Magic
Wand
Club!**



Bruno
CBAULUBE.PGS
Feb 16, 2005 2B

BA 3-35 Acceptor lubrication and cleaning

Needle point lubricate every \$30,000 or at least twice a year.
DO NOT OVER lubricate !



Clean the photo cells and plastic lenses with Kodax lens cleaner. Clean the center flat belt (flat belt version) and rubber rollers with rubber drive cleaner or denatured alcohol, and the mag head pressure roller with scotch tape as needed. Needle point lubricate ALL the small nylon bearings and the motor belt idler shaft and roller. DO NOT get oil near or in the anticheat (flipper) lever. Use only # 755 bulbs on top plate assembly.

There are three (3) different types of front shaft assemblies. Nylon roller with no belt pulley (short belt), nylon roller with long belt pulley and rubber roller with long belt pulley. If you need one, get the right version.

BA_lube.ps Jan 01, 2002 1G



To join the MAGIC WAND CLUB buy one of NECo's Trinity Oilers or a similar type.

Your dues are:

- 1 Buy an oiler, Trinity, Radio Shack's lubricator # 64-2301A or Rowe's silicone lubricant 270628-01
- 2 Use it for preventive maintenance.

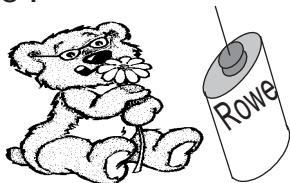
- Warning -

- 3 Over lubrication and/or getting oil on the belts voids your membership. More is not always better !

When the oiler is empty you will be a full member in the :

MAGIC Wand CLUB !

Bruno



755 Bulbs

While other bulbs may work with Rowe equipment, it is best to use # 755 bulbs. Other bulb types have caused problems which would not have occurred if the # 755 bulb was used. You can buy bare 755s, or with the wires already soldered to the bulbs.

Always center the 755 hot spot over plastic lenses and adjust both P1 and P4.

Use 755s

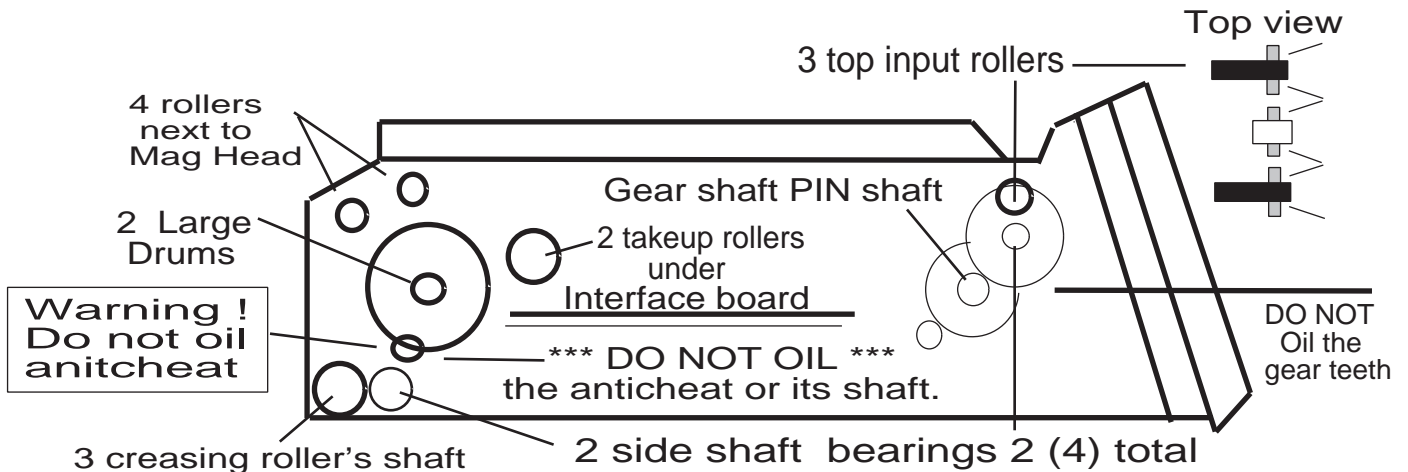
Bruno



BA-50 Acceptor Lubrication and Cleaning

Needle point lubricate every \$30,000 or at least twice a year.

WARNING : DO NOT OVER lubricate or get oil on the belts.



Clean the photo cells and LEDs with Kodax lens cleaner, belts with rubber drive cleaner or denatured alcohol and the mag head pressure rollers with scotch tape or a magnetic pressure roller cleaning card. I have listed the information on Rowe's pressure cleaning card below. Even with normal use the ink from bills will contaminate the two pressure rollers. Keep those two pressure rollers clean.

Note: The Rowe manual does not cover lubrication details for the BA50 so read the CBA-2/UCBA-2 manual's lubrication instructions and after that do what your common sense tells you to do !

Over lubricate or get oil on the belts your Magic Wand Club membership will be canceled !



To join the MAGIC WAND CLUB buy one of Neco's Trinity Oilers or a similar type.

Your dues are:

1 Buy an oiler, Radio Shack's lubricator # 64-2301A or **Rowe's silicone lubricant 270628-01**

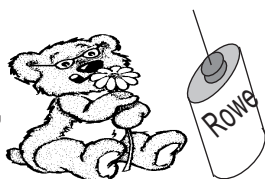
2 Use it for preventive maintenance.

- Warning -
3 Over lubrication and/or getting oil on the belts voids your membership. More is not always better !

When the oiler is empty you will be a full member in the :

MAGIC Wand CLUB !

Bruno



Cleaning Mag Head Pressure Rollers

Rowe has designed a new type of card using paper and thin double sided tape to clean ink, dirt, and other contaminants off the magnetic head pressure rollers without taking the acceptor apart. The sticky side is attached to the paper and when you are ready to use the card remove the protective paper to expose the sticky tape. Then stick the card into the acceptor. While the cards were made for the BA50 acceptor they can be used on all Rowe acceptors **except the RBA-7**. It can work with other acceptors but some do not pull the paper into the acceptor so you will have to hand crack the acceptor. People who have seen me work know I always use tape to clean the roller/s under the magnetic head/s. For the RBA-7 use part # 252548-03



Rowe Part # 252548-01

Bruno



A BA50 MAGIC WAND

Template for a plastic tape cleaner to clean metal particles, ink and other contaminants off the BA-50 Mag head pressure rollers without taking the acceptor apart. You may have to take the acceptor apart if this does not work or you may have to replace the rollers. Serious particle problems may be addressed by replacing the rollers with 2 nylon rollers. The Rowe roller part number is 3 50806-05

13 "

TOP

TOP VIEW

SIDE VIEW

Rowe's Version

June 26, 1995 Rowe has designed a new type of card using paper and thin double sided tape. The sticky side is attached to the paper and when you are ready to use the card simple remove the protective paper and expose the sticky tape. In case you want to buy Rowe's cards the part # is: 252548-01.

It can be used with other acceptors but if the motor does not pull it in far enough you can turn off the power and hand crank the motor.

Double tape

Put scotch tape over the openings.

Soft plastic .008 - .012 thick



Bruno

Except for this cut and the side view, the rest is shown to scale.

It must be SOFT enough to pass through the creasing rollers in the back of the BA-50 acceptor. For those who have the "Hands On" school booklets, you can use the plastic covers. Those covers are comb plastic booklet covers which are .011 - .012 thick. IBICO comb presentation cover IBICLEAR # 23210 Heavy.

Use the motor gear to hand crank the strip down the bill path. Handfeed the plastic past the creasing rollers.

You can also use Scotch double coated (double sided adhesive on both sides) tape #665 on a plastic strip. I used sheet material used for notebooks.

Double tape

There is no need to cut holes in the strip with this tape..

March 06, 2005 , 2005 Bx50clean1G.pgs

At some point in time you may want to check out my other Bear notebook articles because they contain a great deal of related material. You will find them on Bruno's Page in <http://www.eastcoastamusements.com/> then: left click on: **Visit his page for service notes and tips.** **OR:** <http://www.eastcoastamusements.com/services.htm> and then click on the BEAR with the flower!!

Note: These files were checked with Acrobat Reader 7.0. Earlier versions **may not** view/print correctly. I know version 5.0 will not work correctly.

If you click on that tile name and if your computer is loaded with the Adobe reader the file this will open up an Adobe window. If you want to save the Bear Notes .pdf file/s from the Bruno page you can right click on the article title and a window will appear on the screen. One of the selections will be Save Target As. Left click on it and a Save As box will appear and you can select where you want to save the .pdf file. You can save the file on your own computer.

You will want to check the East Coast Amusements site for revised or new articles. I do have more titles in the works. Here are some the posted articles.

ROWE 4900 ACCEPTOR ISSUES
ROWE BC-1 BILL CHANGER
THE MAGIC WAND (Dick's - my favorite)!
CONNECTORS - FIXING AND TESTING (another good one)
ROWE BILL CHANGER HOPPER REPAIR
MEASURING VOLTAGES
BUCKET POWER ON ERRORS
ROWE STACKERS
MAG HEAD LOOP SECRETS
DREMEL & ROWE STUFF
FEK MOTOR TEST UNIT
OBA ACCEPTORS
JACKPOTTING, FS, BUCKET POWER ON & CRASHES
BC-8 to BC-35 Bill Changers
CBA_UCBA
Basics_101
BCxx00_bill_changers

If you have trouble printing some Acrobat drawing pdf pages:
Adobe Acrobat printing of some drawn picture pages correctly may require using Acrobat printer setup and setting Print to image on.

Please take note that East Coast Amusements is supplying the Bear Note pages on their web site for you and for me at their expense. I just write and East Coast Amusements does all the rest.

To East Coast Amusements
> THANKS ! Bruno

1F