Premium Dash Decals .Com

www.PremiumDashDecals.com
613-532-2587

# Detailed Decal Install Instructions

We want to *thank you* for your purchase of decals from PremiumDashDecal.com! The decals that you have are the product of a significant amount of research and design on our behalf. All of our decals have been produced by PremiumDashDecals.com from original instruments typically found in survivor cars. All artwork is based on real, existing gauges, instruments and controls to ensure correct line widths, correct typefaces (fonts), text height/positioning and very importantly, correct colors.

The decals are produced using a unique combination of digital printing and screen printing techniques. All decals have been machine cut as this not only increases the accuracy of the decal but gives much greater tear resistance and easier application than a hand cut decal. Additionally, a lot of effort went into producing decals with vibrant white lettering/numbering and a correct silky matte black OEM look background.

**Understanding the material:**

The better you understand how this film works the better your finished work will be and the easier they will go on. The decals have been produced using a very thin vinyl laminate film. This helps them sit tight to the instrument face and have the edges blend in virtually unseen. The film is made by 3M and is from their Controltac product line.

**Repositionable Adhesive:**

Firstly, you should be aware that this 3M film has what is called a repositionable adhesive system. That means you can **LAY** the decal on the surface of the gauge or instrument and it can be slid around to its final position. The Adhesive only starts to grip once the decal has been pressed down into place. However, even if you have stuck the decal down, you can carefully peel the decal from the gauge and reapply it without any hassles, just make sure you pull it off with a slow and even pressure so you don't stretch the vinyl film.

**Comply Feature:**

This 3M film has the comply feature. What that means is that if you look closely, the decal adhesive has these micro channels or ridges running through it. If you run your fingernail

across the decal backing paper surface you can feel these ridges. The purpose of these ridges is to release any trapped air. With this decal film it's virtually impossible to get air bubbles trapped in your final work! The technique to apply a decal with no trapped air bubbles is to ALWAYS smooth out the decal from the centre towards the outside edges. This is especially important if you are doing a gauge face (such as a 71 charger speedo) that has a curved face. Smoothing from the centre to the outside in all directions will do two things, it will ensure there are no air bubbles and it eliminates any chances for creases or wrinkles in the product.

**Matte Finish:**

Many hours of work has gone into perfecting the surface texture of the decal. The matt finish is very tough and robust but it can be damaged by incorrect handling. Firstly always wash your hands before touching the decals and instrument faces. A matte finish is not very forgiving of oily or greasy fingers. Secondly, when you smooth out the decal, do so using a fresh soft Kleenex tissue, as this will make sure that the surface stays perfectly clean and protects against accidental fingernail scratches.

**Packaging:**

The decal faces are shipped to you in a soft envelope to protect them. Also, where possible, the faces have been rough cut out of the main print sheet with a rounded shape. The decal face has been left surrounded by a small bit of adhesive paper and the hole cutouts still present in the decal faces. This is so sharp corners don't get caught in the decal faces and that there is no chances of the edges of the decal faces lifting or having another decal slide under the surface during shipping. Before application please remove the unusable outer ring of decal material and all hole cutouts area.

# How to Professionally Decal Your Gauges

The following instructions will use a 69 Dodge Charger set of instrument faces as the example. The faces you have in your refacing kit may be of a different model of car but the application is absolutely identical. If you have a digital camera, we strongly suggest you take some reference pictures of your cluster before you start so that way you have something specific to refer to if you have any questions during reassembly.

**When you are done, take another picture and send us your before and after pictures to *support@PremiumDashDecals.com* and we will put them up on our website!**

**Procedure:**

**1) Remove Gauges from cluster housing**

- Disassemble your cluster to remove the speedometer, tach/clock, and FUEL, TEMP, ammeter and OIL pressure gauges. Depending on the initial state of your cluster, this will typically mean that you need first need to remove the cluster bezel and plastic lens assembly. The clock knobs have a very tiny blade screwdriver nut inset deep into the center area of the knob. This nut can be tight to get off. A drop of penetrating oil can be a great help. Also you might want to consider taking a medium jeweler's screwdriver and put it on the grinder to thin the blade down so it fits down the center of the knob. Smaller jeweler's screwdrivers often don't have enough torque power to remove a stuck nut and will just bend at the tip.

- Once the front of the gauges are clear and accessible, it is time to remove them one at a time. If you are unsure of the reassembly order you can either use a black sharpie marker pen to write on the back of the gauge or get the digital camera out like we mentioned previously. The OIL/FUEL/TEMP gauges are held in using metal PAL nuts at the back of the cluster. A 3/8" socket works wonderfully for removing them. The gauge will just drop out the front when removed.

- The ammeter is held in place using two anti-vibration nuts (nuts have a serrated top and bottom for grip). Sometimes these are rusty on an old cluster. Applying too much torque to these nuts can cause the gauge terminals to twist inside the cluster, which can damage it. Be careful, once again if it seams really tight apply a bet of penetrating oil, wait a bit and then retry. Don't worry about the black cardboard insulator piece as new ones are available from PremiumDashDecals.com. Remove the ammeter and keep the nuts in a safe spot for reassembly.

- The tach or clock generally unscrews from the rear of the cluster using three Philips head screws. It is then removed as an assembly.

- The speedo unit unscrews from the back of the cluster using two standard blade head screws. Be careful not to damage the needle on removal. Set the screws and rubber insulators and washers aside in a safe place for reassembly.

- If your cluster uses a rear circuit board now is a good time to check it for cracks, corrosion or bent/broken/loose wiring harness pins. If you have a problem with your board, new ones are available by contacting PremiumDashDecals.com, or if you so choose, a next day repair service is also available for damaged boards.

**2) Preparing the gauges:**

Note: The first thing that needs to happen is the needles are removed from the gauge faces. It is impossible to reface speedometers and clocks with the needles/hands still in place they must be removed. We ***strongly*** recommend the removal of the indicator needles on the Ammeter/Fuel/Oil Pressure/Temp gauges as it's the only way to do a professional job which includes cleaning and repainting the gauge face.

- Speedo needles are removed using by carefully grabbing the center of the needle and twisting it OPPOSITE to the normal direction of movement. This winding motion will remove stuck on needles. All speedo needles are push on assemblies but they do get stuck on over time.

- Looking at the picture (Figure 12), remove the clock hands as shown. On most clock movements it is not advisable to twist the second hand off. It must be removed in a straight pull. The same goes for the minute and hour hands. By far the easiest and safest way (for you and the clock) is to use a pair of scissors as a removal instrument by opening the scissors and placing the blades on either side of the hand and using the scissor blades as a well controlled lever to gently pull up on the needle. This technique always works and prevents any chance of a bent or distorted clock hand.

Note: It is not necessary to remove the clock movement, but now is a great time to either perform a quartz clock upgrade or get the existing Borg mechanical movement cleaned and adjusted. Please note that quartz movements sweep the second hand smoothly and do not make the stopping "tick" motion of the original clocks. For many it's not a big deal, but for others who are into originality, doing the quartz upgrade is not an option due to this fact. Quartz replacement movements are available a PremiumDashDecals.com and if you are not comfortable with putting one in or want your old style movement overhauled you can send it in to us for quick turn around (usually 2 – 3 days).

- Next we need to remove the indicator needles of the FUEL/OIL/TEMP gauges. A magnifying lens, two small jeweler's screwdrivers and a small pair of needlenose pliers is all it takes. From the pictures below (Figure 8 & 9) use the two jeweler's screwdrivers together. One to hold the metal needle pivot prong with the thin gauge wire wrapped around it and the second to slide the copper strip prong out of the wire loop that is attached to the needle. The first one you do will take a couple of minutes but once you get the technique the rest will only take a minute. Another technique is to use the jeweler's screwdriver to push on the copper metal contact prong, flexing it gently toward the upper gauge pivot prong until the wire loop of the needle simply unhooks from the upper prong. The needle can then be slipped off the lower copper prong and set aside.

If you really want to.. you can leave the needles in and just gently bend them up out of the way at the base of the needle where the colored needle meets the shiny metal (but this is not recommended). Then lay them flat when done. However we much prefer to remove the needles as it allows one to easily spray paint the needles and sand/paint the gauge face itself. Please remember, your final result will be directly related to the preparation work you have done first.

- Finally it is best to remove the ammeter needle also. The ammeter needle works on a pair of pivots, where it can swing in either direction as needed. Looking at the back of the gauge, simply take needle nose pliers and lift up slightly on the rear pivot piece of brass. The needle will fall right out. Assembly is the reverse of the removal and it's a breeze to put back in. Once again for those who wish not to remove the needle you can either slide the decal carefully under the needle or bend the needle up somewhat and simply bend it back down when done.

**3) Refinishing the Instrument faces.**

- Preparation,,, preparation,,preparation! This is what gives professional results. Here you have choices. The main gauge 'resto rule' is: if there is any rust or paint bubbling whatsoever, you should either carefully media blast (glass bead on low pressure) or sand the faces smooth to be rust free. To repaint simply spray a coat of FLAT BLACK KRYLON spray paint on the gauge face. This is the exact black of the decal faces you have purchased. When using the Flat Black Krylon, you will be barely able to see the outline edges of the decal! Krylon is readily available from most auto stores. Remember to purchase their flat product and not semi-gloss or gloss. If you choose to simply put the new decal over the old face without sanding and repainting please understand that you may be able to see the outline of the old gauge face slightly in the surface of the thin decal since the white painted original face is slightly raised from the surface. It will be hard to detect but it will be there so we felt it was best to forewarn you of that to avoid any disappointment with the final result.

- Before painting if you wish to clean the gauges of any oils or grease, a dipping the gauge in a cup containing either naphtha camp fuel (be careful here!) or wax and grease remover (almost the same stuff) works wonderfully and cleans well and dries fast. Dry with compressed air and paint immediately for a perfectly smooth contaminates free face.

- When painting the TEMP/OIL/ALT/FUEL and speedo faces it's always a good idea to mask the odometer slot (or remove the odo carefully first) and the opening where the needles are hooked. We typically use thin cardstock paper tags as masks as they slide into the underside of the openings of the gauges nicely. For the speedo you can tape it in place with masking tape.

**4) Applying the Decals**

- If you have chosen to remove the needles on the AMP/OIL/FUEL/TEMP gauges, the decaling process will be simple. Before you go further the first step is to inspect the prepared gauge faces once again. They should be smooth and free of contaminants and imperfections. If you have repainted the faces and have noticed a dust speck, you can simply sand out the speck with 1500 grit wet/dry sandpaper, used dry. As long as you don't sand the outer edges of the gauges,

the touchup sanding will never be seen. If you decal over the dirt speck you may notice a tiny raised speck area on your finished faces. Remember the decal is only as good as the surface preparation underneath it.

(Note: for the following instructions view Figures 1 thru 5 )

- Start with a small gauge first. First, remove all of the excess decal material. That means all cutouts as well as the area around the outside of the decal. When you are done you should only have the decal on piece of backing material. ONLY remove the unused decal material with a sharp Xacto knife slipped under the edge of the decal film! Do not use fingernails or bend the backing sheet! Remove 3/4 of the backing sheet from the decal and cut it off with scissors. The small remaining piece of backing will function as a handle for the decal. If you don't have this handle there will be no easy way to control the decal and take maximum advantage over the fact that it's repositionable feature. Now lower the decal (keeping it level) onto the gauge gently. If done gently the decal will not stick and can be slid around the surface into position and perfectly aligned. When you are happy with placement lightly take your finger and press down on a bottom edge. This locks the decal into place. It won't continue to slip and slide out of position like water slide decals tend to do.

- If for some reason you shook or twitched at the last minute and didn't get the decal set down into the correct position, you can carefully peel up the decal from the gauge face (still holding it by the "handle") using a slow and even force and then repeat the decal alignment process. (you can do this several times if need be but with any luck you get it right the first time).

- Now remove the small piece of backing that functioned as a handle (Figure 2) and let the decal face fall into place. Using a FRESH Kleenex/tissue press down in a slight wiping manner spreading the decal out flat from the center to the edges working in all directions. This will remove any trapped air and prevent any wrinkles. When done, use the tissue place over your finger to trace the outline of the decal making sure all the edges are in place. Discard the tissue and use a fresh one for each gauge face.

- Repeat the above for the speedo and clock/tach faces if so equipped.

- There is nothing worse than having a wonderful bright vibrant instrument faces will a yellowed and dirty or scratched odometer behind it. If you purchased a complete instrument decal kit it is supplied with an odometer relabeling decal set. This procedure will assume that you are decaling your odometer with the actual mileage and thus is specifically not going to document how to roll back odometers to other mileages. Additionally, this simplifies the decaling process greatly since the odometer need not be disassembled, which is a tedious process at best. What you need to do is put a piece of masking tape across all of the number wheels to keep them tight together and in place (Figure 10). If they get out of place you are into a full odometer rebuild which can be both tricky and frustrating.!! Please note that the number strips from the refacing kit must be placed over the corresponding numbers. Please do not try to reset the mileage by using the decals in different number positions. This will change the "rollover point"

and the odometer will not function correctly as it may roll over the next digit when it hits 5 instead of 9!

The odometer (with wheels taped into place) is removed by simply turning over the speedometer unit and removing the spring clip on the end opposite the aluminum gear (Figure 15). Take care to slide the odometer out sideways. On some odos there is a small copper spring strip that rides on the edge of the end wheel which you may have to move out of the way with a jeweler's screwdriver. Some years do no have this thin copper piece. Before you remove the odo note how the plastic digit separators (these contain the rollover gears internally to the odo) have tabs that hook under the metal speedometer frame. They must be installed in exactly this position when you have finished.

With the odometer out (and still taped together) you are going to start relabelling it from one end and work sequentially to the other end. You can start at either end. Remove a decal number strip and align the 0 or 9 (depending on which way you want to roll the tape around the odo) directly over the corresponding number. Lay down the decal film carefully so as to keep it aligned within the edges of the wheel and not pulling on the decal which could stretch it (Figure 10). When you get to the masking tape part, stop as you are going to have to lift the masking tape for a few seconds. BUT, before doing this get a second piece of masking tape and tape the wheel in a second spot (over top of the new decal strip is fine) so that when you peel back the masking tape the wheel is still held in place somewhere else (Figure 11). Repeat this process for each number wheel on the odometer. If you find the decal a bit to long or wish the butt the decal ends together instead of a slight and hardly noticeable overlap then you may want to trip the end of the strip. A small sharp pair of diagonal sidecutters works best for this. Unless you have really sharp scissors, scissors are not recommended as the film has not really been designed to be cut by scissors. Please not that you have been given extra number label strips in the kit in case you make a mess of the first one you try. Once you get the hang of it, the odo renumbering is both quick and simple to do.

Note: There is no drying or wait time, the gauges can be reneedled and installed immediately.

**5) Reinstalling the Needles:**

- While the needles are off the gauges it's a good time to paint them. The correct colors are flat white and flat indicator orange. The white can be obtained off the shelf from a hobby shop (Testors Flat Header White) but the orange you will have to custom make or you can purchase a small quantity of the exact instrument indicator orange with the correct gloss level from PremiumDashDecals.com. You can either brush or spray (airbrush) the needles. With good fresh paint and a quality brush, the brush job can look virtually as good as airbrushing. To mask various parts of the needles (such as the end of a FUEL gauge needle of the center of a speedo needle) you can use the matte (not glossy) transparent magic tape scotch tape as it only sticks lightly and leaves a clean edge with no residue.

- Once the needles have dried overnight (recommended) its time to install them. The speedo needle just pushes on. Ensure your set the 0 MPH position correctly. In doing the fine

adjustment it's a wise idea to hold the aluminum round disk/drum at the back of the speedo to prevent it from turning. You cannot damage the gauge by holding it with your fingers there.

- Clock hands just push on, but be careful that you don't push too hard. Also install all hands at the 12:00 position to ensure proper alignment or else the clock will not display the correct time.

- For putting the needles on the small gauges its best to first place the gauge in a small vise, held by the threaded studs. To protect the new decal from an accident screwdriver etc we suggest you put some clean painters tape on the surface of your new decal as extra protection (Figure 9). This step is not really necessary but better safe than sorry.

  Using needle nose pliers, grab the needle by the base above the metal loop and place the metal loop onto the COPPER spring contact. Using two jeweler's screwdrivers, place one on the black upper spring contact to steady it and use the other jeweler's screwdriver to push the copper spring contact continuing the needle lop towards the top contact. When the copper contact comes towards the other you will notice that the other side of the needle wire loop will simply slip onto the upper spring contact. Soon as the needle wire loop is held by both spring contacts the gauge is once again fully operational. Note that some TEMP gauge is reverse acting and the relative positions of the copper strip and the black wired strip are reversed, however the installation procedure above still applies.

**6) Putting It Back Together:**

- Once the gauges are all reneedled, remove any protective masking tape and reassemble your clusters in the reverse order that you took it apart in.

- Refer to any digital photographs you may have take before/during the disassembly

## Congratulations you have just refaced your gauges !

***If you encounter any difficulties or require assistance with their application pleases feel free to call or email for tech support:***

***Support@PremiumDashDecals.com***
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# Picture Pages


***Figure 1.*** **Positioning Decal**

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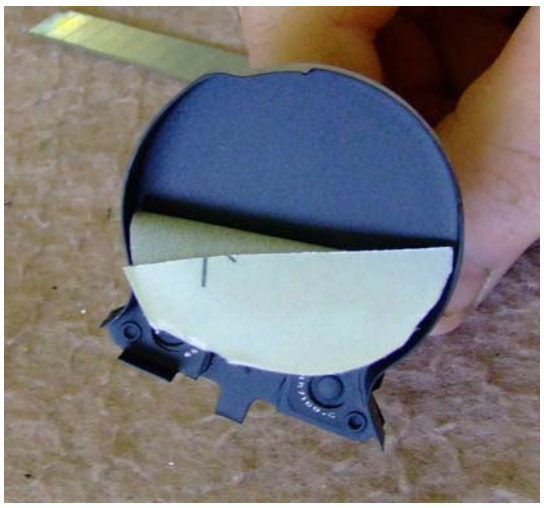

***Figure 2.*** **Decal Placed, Now Removing Remaining "handle" Backing**

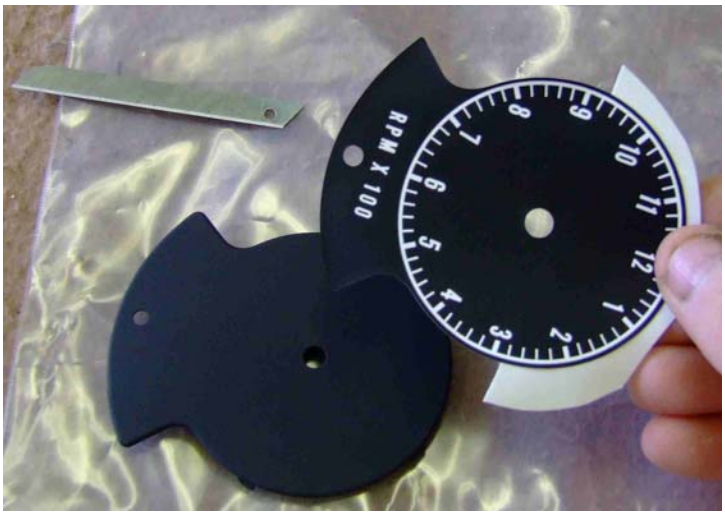


***Figure 3.*** **Applying a clock Decal**
**(note how decal is held and all cutouts removed)**


***Figure 4.*** **Applying a Speedo Decal**
**(note how decal backing is used as a "handle" )**


*Figure 5.* **Applying a Complex Tach Decal**

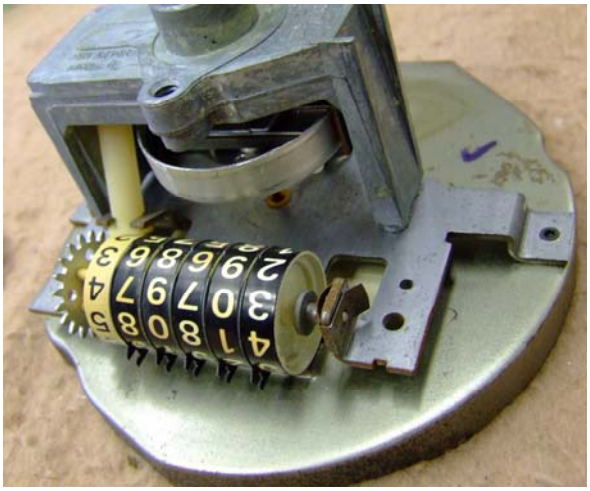

*Figure 6.* **Remove Clip on Right to Remove Odo Unit**


*Figure 8.* **Showing Needle Mounting Hook**

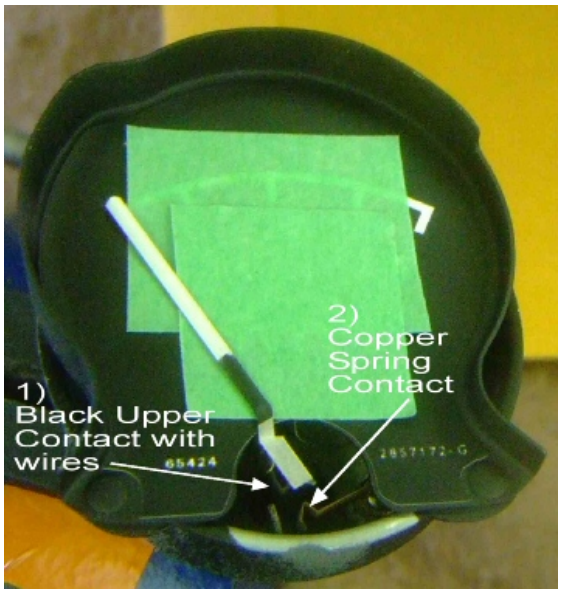


*Figure 9.* **Protecting Decal Face During Needle Installation**

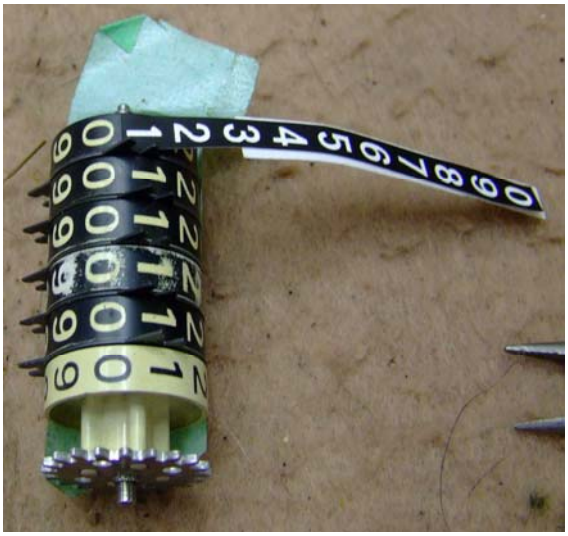

*Figure 10.* **Starting to Relabel Odometer**

*Figure 11.* **Using tape on 2 sides During Relabeling**

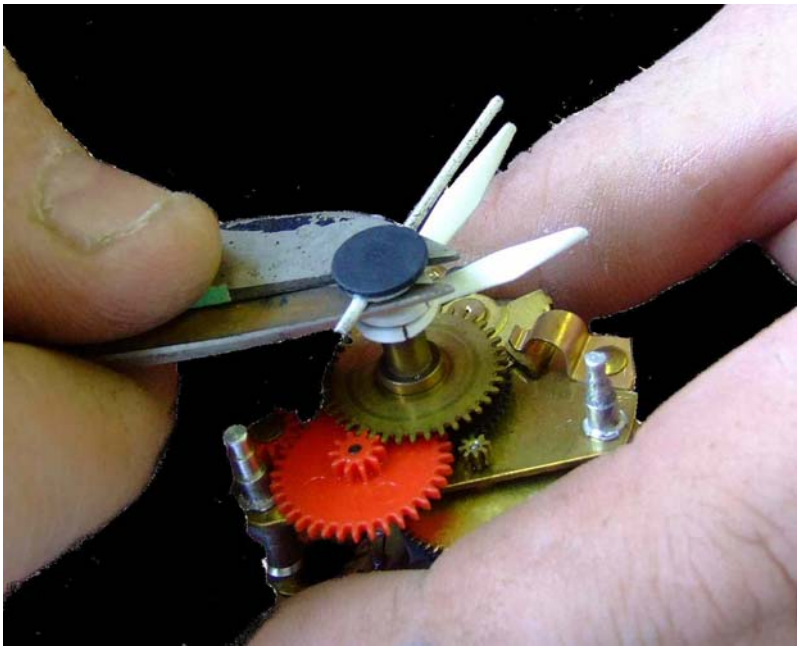

*Figure 12.* **Demonstrating Technique for Removing Clock Hands**

**(Note: do not substitute diagonal side cutters for scissors!)**