



■ PROJECT:
King Ray

When taking on a frame-off restoration, there are many more factors that need to be considered over a frame-on type of project. Whether to keep the body on the frame or remove it is best determined by what you find under the surface of the body.

While King Ray looked great from the top side, underneath, it was a different story. As the old adage goes, "Paint covers a multitude of sins."

If that is indeed the case, King Ray has

Body Building

GETTING OUR 'GLASS BACK IN SHAPE

BY ANDY BOLIG \ PHOTOGRAPHY BY J & M CORVETTE AUTO BODY

had a fun life. Under the surface, there were additional seams and blobs of who knows what where someone was trying to fill holes or cracks. If we were ever going to get this body back to the way

GM designed it, we needed to totally dissect it, and that's exactly what J & M Corvette Auto Body did. Follow along as we take you through King Ray's body-building process.



20



21

from Eckler's. You only have about 20-25 minutes to work with the adhesive before it starts to set up. In that time the entire panel must be completely bonded, so he can't waste any time. John likes to wait 8-24 hours before removing the clamps and smoothing the panels.

21 John will liberally apply bonding adhesive to the surfaces of the car so that they spill out a little bit once the panel is in place. This assures complete adhesion, and it replicates the factory application.

Corvettes are all we do.

Since 1977, Zip Products has supplied parts and accessories to Corvette enthusiasts the world over. From the earliest '53 to the latest C6, Zip is Corvettes!



www.zip-corvette.com
1-800-962-9632

©2006 Zip Products 804-746-2290 **FREE CATALOGS for Corvettes!**

LEADER OF THE PACK

Random Technology has always been the leader in high flow catalytic converters. So when it comes to horsepower, quality, value or warranty coverage, Random Technology SuperStainless™ catalytic converters are the best. Not the cheapest. Just the best. Don't be confused by cheaper look-alike copies. The important differences are on the inside. Only RT Cats™ feature our exclusive PSX™ technology, which combines advanced chemistry with high quality ceramic or metal matrix substrates. **Don't be taken for a ride by a copycat. Trust the original, the one and only RT Cats.**



Doesn't your Corvette deserve the best?



Available for
**C3, C4,
C5 & C6**

- The highest flow for MAXIMUM power
- Highest efficiency for optimum emissions control
- Longest performance warranty - 50,000 miles
- Unrivaled fit and finish

**Random
Technology**

4430 Tuck Road, Loganville, GA 30052
770-554-4242
FAX 770/554-4244, www.randomtechnology.com

Federal law prohibits the removal or replacement of properly functioning original equipment catalytic converters. Aftermarket catalytic converters are not legal for installation on OBD - II vehicles in California.



CORVETTE WEBSITE

www.muskegonbrake.com

- Calipers
- Pads
- Brake Lines
- Master Cylinders
- Rotors
- Shocks
- Leaf Springs
- Parking Brake Components
- Power Steering Pumps
- Control Valves
- Front & Rear Suspension
- Slave Cylinders
- TRW Design Composite Springs
- HD Rear End Covers
- And Much More!

See a complete list of parts on the web or order your FREE catalog today!



848 E. Broadway
Muskegon, MI 49444
(231) 733-0874 TECH LINE
FAX (231) 733-0635
TOLL FREE 800-442-0335

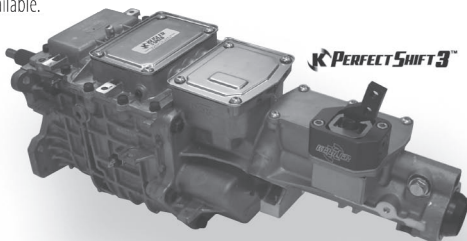
KEISLER Upgrades 5-Speed with All New PERFECTSHIFT 3™

KEISLER ENGINEERING, maker of the PerfectFit TKO 5-SPEED SYSTEM for CORVETTES from 1955 through 1996 has long been the top producer of CORVETTE retrofit systems. For 2006 KEISLER has taken a highly successful product and made it even better, improving shift feel, reducing noise transfer into the cabin and making installation even easier than it was before.

NEW SHIFTER TOWER: this new blue anodized billet aluminum assembly features silky smooth action for the life of the transmission and a great new look. **ADJUSTABLE SPRING TENSION:** The new tower also features owner adjustable tension springs. Choose between 5 color coded, quick-change spring rates for the ultimate custom shift feel. Changes in just a few minutes. **QUICK RELEASE TOWER YOKE:** New linkage allows the installation of the shift tower with a solid yoke and bolts rather than the previous roll pin design. **CONSTANT GRIP CUP™:** Advanced, permanently lubricated materials provide constant positive contact between the ball and cup for reduced noise, vibration and harshness (NVH). This is a vast improvement over the factory design. **FULLY ISOLATED LINKAGE:** A new relationship between all tail housing linkages provides smooth operation while eliminating the possibility of noise and vibration. **AUTOMATED QUALITY TESTING:** KEISLER now performs Air Pressure Decay leak testing instead of passive oil leak testing. While this represents a large investment for equipment, this style of leak testing insures leak free operation and 100% accuracy. This method is used by TREMEC and other large manufacturers. **TRUE INTERNAL OFFSET DESIGN:** KEISLER'S innovative patented design offers the only true 1:1 offset making shift quality unsurpassed and allows the most shift position flexibility available.

KEISLER Offers Corvette Enthusiasts the Best 5-Speed Overdrive Transmission Systems on the Market with NO Engine Removal & NO HACK JOB Installation.

ORDER NOW
865-609-8187 X1
www.keislerauto.com
gmsales@keislerauto.com



ONLINE ORDERING & VIDEO TESTIMONIALS



18

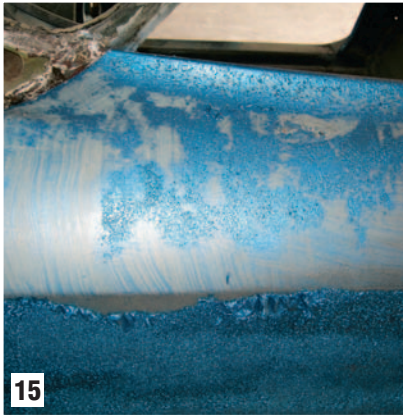


19

18 Before finalizing anything, John trial-fits the quarter panel to the car to make sure everything lines up. Measure twice, cut once really means something.

19 Once everything is fitted properly, John marks the area for the bonding strips and uses a sand blaster to freshen up the surface to allow the bonding agent to adhere properly to the panel.

20 He applied the panel-bonding adhesive (PN34266)



15



16



17

15 What WAS left of King Ray was treated to a bath in Captain Lee's chemical stripper to remove any old paint.

16 After being thoroughly stripped and cleaned, all the bonding surfaces were treated with a grinder or sandblaster.

17 We've given our rear tires a little more clearance by cutting a small, pie-shaped section out of the quarter panels and joining the two edges together.

bloomington
GOLD
America's Preservation Standard

Q: WHAT DO THESE ITEMS HAVE IN COMMON?
• Artwork • Furniture • Guns • Stamps
• Coins • Toys • Historic Artifacts

A: REFINISHING HURTS THEIR COLLECTOR VALUE.
Why should cars be any less important?

June 16, 17 & 18 • Pheasant Run Resort • St. Charles, IL

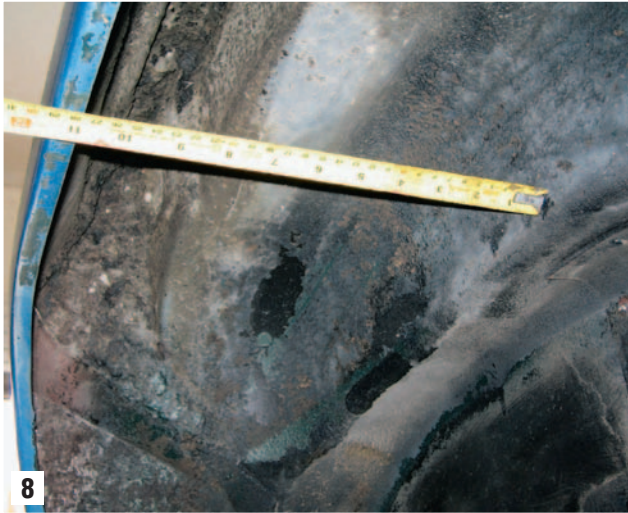
Register or inquire at:
www.BloomingtonGold.com
309-888-4477

www.streetshopinc.com 256/233-5809

Street Shop Inc.

Custom Replacement Chassis for 53-82 Corvettes

■ TECHNICAL BODY BUILDING



8



9



10



11



12



13



14

8 J&M moved to the rear quarter panels, measuring from the inside of the rear wheelwell to the outer lip to ensure proper placement. A few tricks will give us a little more space for a wider tire without having to modify the inner wheelwell. This measurement helps us see how much we've gained.

9 Another place to measure is between the rearmost portions of the quarter panels.

10 Just like the front section, the rear quarter seams under the panel must be separated. The two rivets holding the filler panel in place are not stock. The panel should be bonded in place instead.

11 Notice that there are only three areas where John needed to pry on the brace to free it from the panel. There are few areas where it adhered well to the panel.

12 Someone tried to repair a section by filling it with body filler. You couldn't see it from the top side, but would YOU want this under your Corvette's surface?

13 For a permanent repair, John simply removed the taillight section from the body and will replace it with a correct and properly installed new piece.

14 King Ray had to shed a few pounds to get into shape.



1



2



3



4



5



6



7

1 The first cut is the deepest, and the guys at J & M are used to taking to body panels with pry bars. You have to get under the skin and break the bonding surfaces free to remove the panels.

2 The front end of King Ray needed to be removed, since it was rebuilt in pieces years ago. Some spots are original, some are not, and additional seams abound. We want a complete front end with all the original seams – and only the originals.

3 “Fiberglass manipulation” would be the best way to describe the process. The goal is to remove the unwanted pieces without significantly damaging the parts you want to keep. Just because you’re dismantling the body doesn’t mean you can be destructive.

4 After breaking loose all the bonding surfaces, John and his son, Tim, can remove the entire front clip. A new Sermersheim press-molded front clip will replace all these parts.

5 Here you can see all the seams, even the additional ones. Notice how the gill area has a different color from the top of the fender. That’s because they kept the original gills but used “chopper-gun” fenders as replacements instead of the press-molded units like the factory used.

6 On the car, the seams will be cleaned up and used for the next front end. Notice how little fiberglass was disturbed on the front bonding area. That’s because it wasn’t bonded completely, and simply pulled off. We’d want our Corvette’s body stronger than that.

7 With the entire front end removed, the firewall and underside of the body are much more accessible, another plus of the body-off restoration.

■ TECHNICAL BODY BUILDING



22



23



24



25



26



27

22 Once the bonding agent has dried, the clamps are removed and the surface is smoothed. You can notice a difference in the body lines immediately after the door but, with paint on the car, the difference should be negligible.

23 All the rear panels were replaced in this manner, even the rear valance. More importantly, they are correct pieces, installed correctly.

24 After repeatedly trial-fitting the front end, John prepares to do the same bonding up front. The same preparation for proper bonding was performed on the panels in the front of the car.

25 A benefit of using a Sermersheim press-molded front clip is that the panels all have a consistent thickness, unlike a chopper-gun-style panel. John has been installing these for years and prefers their uniformity and consistency.

26. John makes sure that everything is right before the bonding agent is allowed to dry — you saw how the old panels needed to come off. You don't want to do that with your new panels.

27 With the installation of the front end, King Ray was set to the side to give the bonding agent time to harden. Once everything has set up, the clamps will be removed and the final fitting of the body panels can begin. ■

FOR YOUR INFORMATION:

ECKLER'S
(800) 284-3906
www.ecklers.com

J & M CORVETTE AUTO BODY
(352) 796-5264

SERMERSHEIM'S FIBERGLASS INC.
(812) 424-4701