Triumph Tiger Cub '65 - Frame Team

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The frame is the foundation of the motorcycle which provides support for all other bolted pieces.

Frame is responsible for holding the wheel, brake, and suspension components together.

Made of welded aluminum, steel alloy, or carbon fiber.

http://tonupclassics.blogspot.com/2013/06/triumph-pre-unit-twin-tiger-cub-and.html
1. Handlebars
2. Swing arm
3. Front Main Frame
4. Shocks
5. Fork
Disassembly

We used Whitworth wrenches and socket wrenches to remove bolts and nuts from the pieces attached to the frame.

We bagged and labeled nuts, bolts, washers, and parts corresponding to their labels in the Tigercub manual and diagrams.
The seat is one of the first pieces removed from the bike.

The fenders and other parts come off the rest of the bike.
Gas and oil tanks come off the frame and are emptied.
Cleaning

Cleaning makes it easier to look for cracks in the frame. It also helps make sure sand from the sandblaster does not stick to the frame.

Removing grime, grease, and dirt with

Citrus Degreaser

Yield

Wire Brush/Shop Towels

"Elbow grease"
Cleaning

*Using citrus degreaser to clean off frame parts*
Sandblasting

Sandblasting: forcibly propelling sand against the motorcycle frame under a high pressure. This smooths the rough surface and takes off the old paint or rust.

Sandblasting takes place in a closed container, using gloves. Sand is blasted through a compressed hose/nozzle.

For user safety, the hose is never pointed directly towards the gloves to avoid ripping through the gloves and damaging the skin.
Sandblasting machinery/ sandblasted parts
Powder Coating

Powder coating achieves an effect similar to that of paint, but it is applied as a free-floating powder.

Because it is not applied as a liquid, it can be applied more thickly than paint, and it will not run. This gives us a better and stronger finish.

We catalogued sandblasted parts and then sent them off to be powder coated.
Cataloguing parts to be powder coated
Buffing/Polishing

English wheel: 2 wheels which are used to shape metal and buff out dents. We used the english wheel to fix dents in the fender.

Buffing: smoothing out and removing scratches, preparing to polish. We also buffed the shine out of front fender of the ‘58 bike to prep for priming.

Scotch brite pads/drill

Grit papers

Polishing: making metal surfaces on the motorcycle shiny (fenders and engine cover).

White polishing compound
Buffing/Polishing

Scotch brite pad with drill

English wheel with fender
Buffing/Polishing

Buffing the ‘58 fender to prep for priming

Polishing compounds
Painting Room

Paint Room:
enclosed room
with a wall of
filters and a fan
to keep out
paint fumes.
Painting-Mask

Mask (half-face respirator): worn to protect user from paint fumes. Air purifying respirator masks use filters to remove toxins from the air.
Compressed-air spray gun: with a low-force applied to the trigger, compressed air is released to clear particles off the desire surface. When a stronger-force is applied, the paint is released in flat-stream (vertical line) form due to the type of nozzle attached.
Science of Spray Guns

The spray gun breaks the paint into individual particles and disperses them into a uniform pattern through the arrangement of the flat-stream nozzle.

Some painters use electrostatic charges to help spray paint stick to the metal of the motorcycle.

“The paint spray goes past a high voltage positive needle as it leaves the spray gun and the tiny droplets of paint pick up a positive charge....The [motorcycle] is then given a high voltage negative charge which attracts the positively charged paint droplets...

The paint droplets are attracted to the negative metal [motorcycle], and so less paint will be wasted by landing on the floor or the walls of the paint shop.”

Painting Technique

Moving the spray gun perpendicular to the fender back and forth in a continuous motion to avoid paint build up or running.

Adjusting angles to accommodate curvature of the fender.
Reassembly

● Using the parts we disassembled, labeled, and placed into bags, along with the parts sent to the powder coater, we reassembled the frame of the bike laying the foundation for the rest of the parts to be added on.
Thanks to the class and shop instructors for a great job on the bike!