

Frame Group

Paige, Jackie, Heather





Gas Tank

Fenders

Frame



Taking it apart



Whitworth wrenches



Sawing off nut

Frame in the Shop Manual



INDEX TO FIG. 34

Index No.	Description.	Index No.	Description.
1	Frame, front.	19	Nut.
2	Frame, rear.	20	Distance piece.
3	Stud, seat stays.	21	Stand, centre.
4	Washer, spring.	22	Spring, centre stand.
5	Nut.	23	Bolt, stand pivot.
6	Swinging fork.	24	Nut.
7	Bolt, fork spindle.	25	Stand, prop.
8	Washer, spring.	26	Bolt, prop. stand.
9	Suspension unit.	27	Lockwasher.
10	Support, pillion footrest, L.H.	28	Spring, prop. stand.
11	Support, pillion footrest, R.H.	29	Cup, steering race.
12	Stud, support to frame.	30	Bolt, petrol tank fixing.
13	Washer, spring.	31	Nut.
14	Nut.	32	Bolt, twinseat front.
15	Bolt, suspension unit top.	33	Nut.
16	Washer, plain.	34	Spindle, brake pedal.
17	Nut.	35	Washer, spring.
18	Bolt, engine fixing.	36	Nut.

Rear Suspension

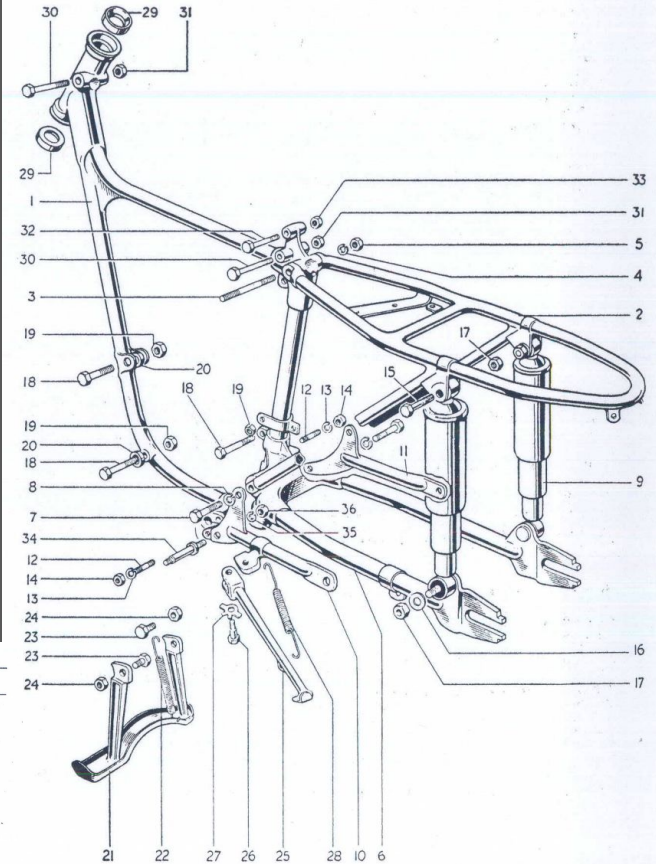
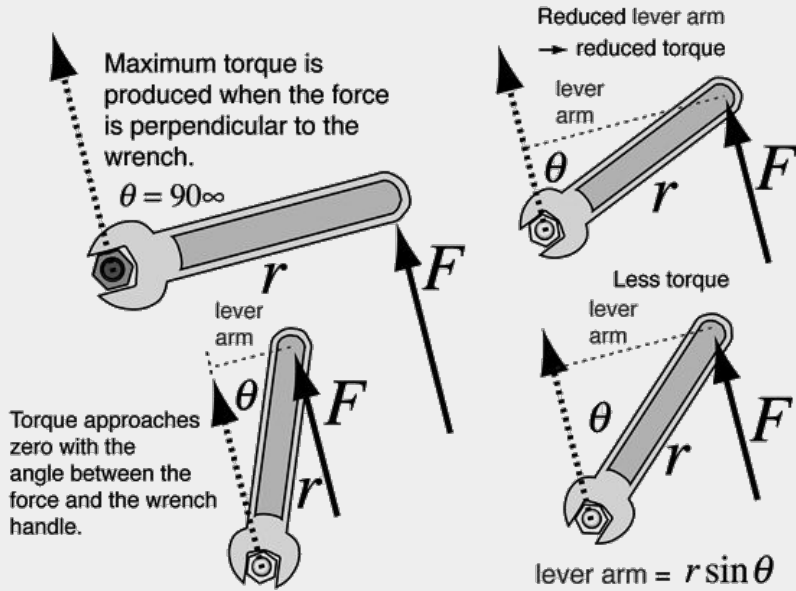


Fig. 34. FRAME AND REAR SUSPENSION.

Nuts & Bolts: Torque

Torque on wrench = Force x lever arm



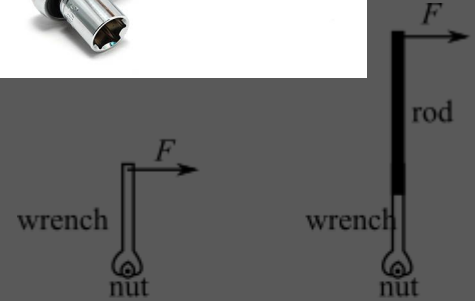
Socket wrench-stronger grip



Lever arm = $r \sin \theta$



WD-40- Penetrating oil

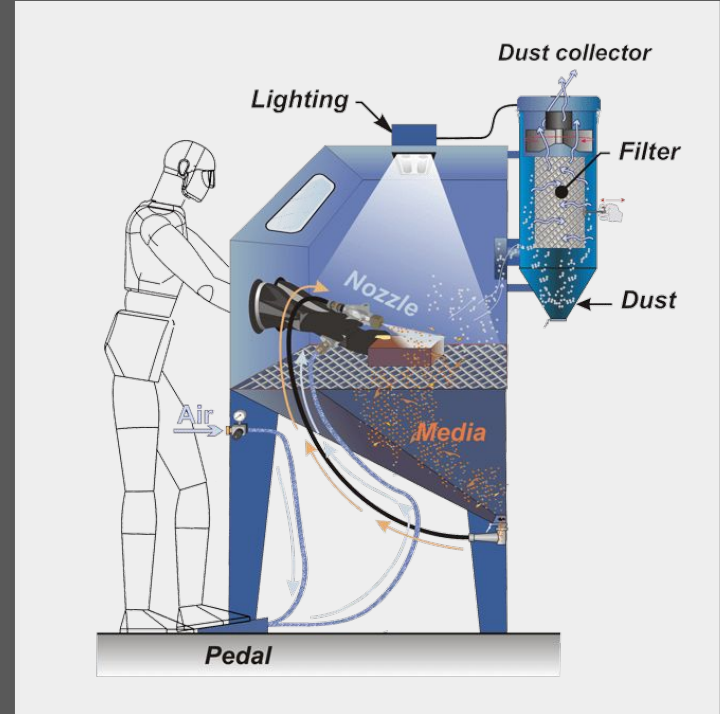


Stripped bolt

Sandblasting, Sanding

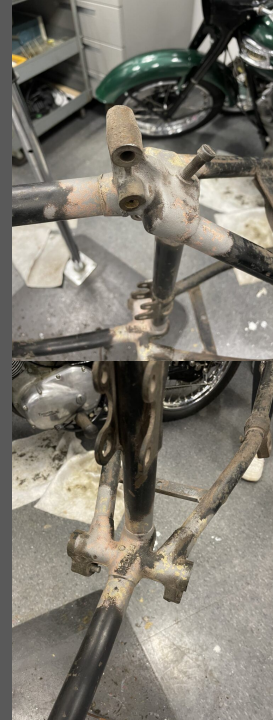


Sandblasting joints to find fractures before powder coating

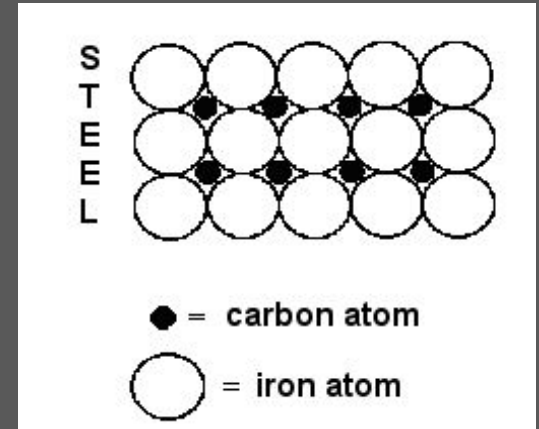


Science: why do things break?

- improper use, overuse
- sharp edge, defect - concentrates force
 - eg. sandblasting frame joints - where the force is greatest bc where sharp edges come together
- toughness - ability to absorb energy and deform without breaking
 - steel is tough because of carbon atoms in the interstitial space

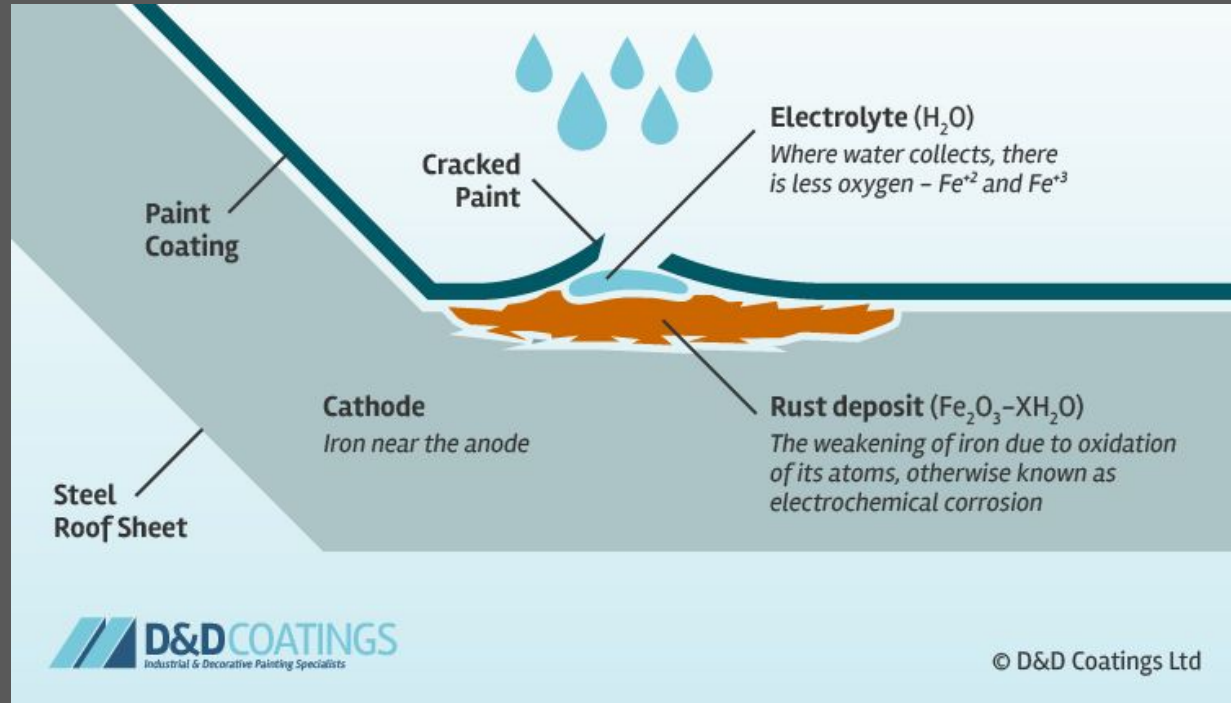


Joints sandblasted as force applied there from use risked possible fractures in the frame



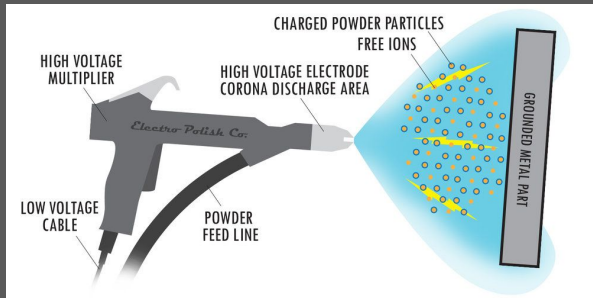
Science: Rust

- rust is corrosive
- iron bonds with oxygen through electrochemical rx
- iron differs from iron oxide (ceramic material, no conduction, brittle)
- solution:
 - paint
 - chroming
 - grease



Powder Coating

- powder stick to surface through static electricity
 - need electric field
 - sucked onto surface, coats everywhere
- could not powder coat gas tank because of bondo (not conductive & cannot withstand heat)



Bondo + Sanding

Bondo: a polyester putty commonly used as an automotive body filler, consists of a resin with a hardener mixed in

“This simple two-part solution includes a **resin-based filler and a hardener**. A tube of the hardener is included with Bondo® Body Filler. The consistency of both compounds is creamy, but as the hardener is blended together with the filler it acts as a **catalyst**, creating a chemical reaction which cures the product. This fast-curing body filler spreads easily and will adhere to correctly prepared surfaces.” (from [Bondo](#))

Why used: in order to fill in and repair imperfections in the fenders and gas tank, so that when painted they would appear as a smooth surface



Priming & Spray Painting

Primer: used to provide a smooth and uniform surface before painting

Wet Sanding: using water on wet sandpaper prevents further scratches by removing particles from surface

Spray Painting: used for both decorative and protective means; since rust weakens the material, providing a barrier between air and the metal components of the frame is necessary for preventing rust from forming

Glaze: used to fill small cavities and micro-scratches in paint, prevents gasoline from messing up paint



Links to Images Used

[Torque on Wrench Stripped Bolt](#)

[Sandblasting Diagram](#)

[Steel Alloy](#)

[Cause of rust image](#)

[Power Coating](#)