

Restoration plan for 1960 Bugeye Sprite

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1. PREP, TIPS

clean it before doing anything else; vacuum, leaf blower out the junk
take LOTS of pictures as you dismantle things;

show how things go together, how wires/lines run, how brackets fits, etc
take notes, too

have tons of storage space; big shelving units if you can
keep big stuff together, e.g front suspension, until you are ready to work on it
put bolts back in place so they are part of the bigger part
bag and tag all parts

use labelled bins to store stuff

use labelled zip-lock bags for smaller stuff

save everything; you can use it as pattern if needed

2. EVALUATE

What do you have? These are easy tests with engine still in car...

test engine to determine if it needs rebuilding

compression,

leak down test of engine;

see if it'll start

generator output - should be 13.5-14.5V

check gauges; what works, what needs rebuilding/replacing?

the rest (brakes,.etc..) can wait until that subassembly is removed

3. MODS

Plan for possible modifications...

replace generator with alternator

upgrade to modern fuse block, with relays on headlights and horn

spin-on (modern) oil filter

3rd high-mounted brake light

3 point seat belts (auto-retract)

LED lights (all)

relay headlights, horn

front-tilt bonnet, Spitfire latches

disk brakes

roll bar

sway bar

minilite/panasport wheels

rear storage opening

 small bluetooth amp, speakers to play from smartphone

 USB port for charging phone

 built in unit in combination with the center mounted brake, high turn signals

4. DISMANTLE

interior

 seats, dash, mats/carpets

bolt-on body parts

 to open things up for removal of other stuff ...

 top and frame

 side screens, windscreen

 bonnet

 bumpers

 doors

 ! if shell is weak, adjust shell so doors fit, then weld in braces

 mark location of door hinges with awl to get them back in the same place

 use impact driver on door screws

powertrain

 drain the engine, transmission, radiator

 remove the heater box/fan

 remove the radiator, engine, transmission

electrical

battery, lights, wiper assembly, switches, gauges, fuse block
wiring; keep harness in one piece

hydraulics

brakes, clutch, lines (do this before engine removal?)

suspension

do this last, to keep it a roller

steering

wheel, column

rack & pinion

front

shock, spring, lower perch

rear

shocks, springs,

rear end, drive shaft

you should be down to the shell

5. ROTISSERIE

to ease rust repair, put it on a rotisserie

I'm going to try this:

2xs in an H, braced with plywood

2x6 horizontally, to transfer the load

2x4s vertically, as legs

front centered in the middle of the radiator supports

rear centered on the lower rear tail lights,

determine dimensions

build H on floor

jack up shell

attached H-frames

lower shell onto frame legs

to rotate

move shell to one side of work area

lift side of shell, setting shell on side of H-frame; shell is on edge

move shell back to side of work area

lift and set down on "top" legs; shell is now upside down

6. BODYWORK

fix rust

- sills (before floor?)

 - inner, outer

- floors

 - driver, passenger

- other rust areas

 - bonnet, doglegs, spring perches, ...

fix dents

add mods

- mount points for 3-point belts

- convert bonnet to flip front

- how to secure "rear console"

7. PAINT

strip paint

- keep original paint?

- poly strip wheel

enamel? clear coat? LVLP? brand?

paint unattached parts (doors, bonnet) off car

paint interior (inner boot, seat area)

paint exterior (engine bay, sills, wings, outer boot)

underseal bottom?

8. SUSPENSION

refurbish entire suspension, esp. rubber bits ...

front

- remove shock

- remove lower perch

- remove spring

- clean up bits,

- paint bits

- install lower perch, spring, shock assembly

rear

- remove shock
- unbolt, lower springs
- remove rear end
- clean up the bits
- paint the bits
- install springs with rear end
- install shock
- fresh oil in rear end

steering

- clean up bits
- paint the bits
- install column
- wait on steering wheel until dash is in

9. HYDRAULICS

shell rolls, now to stop it ...

clean or replace hardlines and clips

brakes

- upgrade to disks?
- rebuild primary, secondary cylinders
- new pads
- clean up exterior bits
- install cylinders
- fill, bleed

clutch

- wait until engine is in?
- rebuild primary, secondary cylinders
- new disk, pressure plate
- fill, bleed

10. ELECTRICAL

clean up bits

new rubbers?

new harness?

install harness

install lights

wait on battery to end

mods

- relays for headlights

- louder horn

- put in tiny amp to speakers in trunk access

 - bluetooth to feed amp from smart phone

- build low riding, black panel above rear deck for brake light, signals

- hidden USB charging outlets

11. POWERTRAIN

engine

- clean block

- flush coolant out

- change oil, filter

- if compression good ...

 - paint

 - new seals, valve cover, dipstick

- if poor compression

 - rebuild

 - cheap new rings, valve guides, gaskets

 - right: get it rebuilt (rebored, new cylinders, etc.)

 - or 1275cc

transmission

- flush, fill

- clean exterior

- paint

- join to engine

install engine/transmission as unit?

- new mounts

radiator

- new or recore?

- install

- new cap and gasket

- new hoses

- flush, fill with antifreeze

heater

- flush core

- paint

- install

- new hoses

12. INTERIOR

floors

- pickup-bed spray?

- sound deadener

- carpet

dash

- fill holes

- cover with vinyl?

- clean up gauges, switches

- install gauges, switches

seats

- clean, paint frame

- new foam

- new covers

- work a removable headrest onto it?

- install new 3-point restraints

door panels

13. BODY PARTS

doors

- polish aluminum
- new bolts

bumpers

- polish
- paint brackets
- install

bonnet

- install bonnet on flip-front hinges
- wire up headlights, signals
- install plate

top

- no, tonneau, yes

14. FETTLE

change oil if needed

put in battery

put in gas

crank it up

test ride

- make list of what needs tweaking
- tweak what needs tweaking

enjoy!