MGB DIFFERENTIAL CLUNK REMEDIATION by Michael Cooke, Ottawa MG Club, 2018-06-01

1. **Ensure can remove diff oil <u>fill</u> plug**. Drain oil from bottom drain plug, replace drain plug
2. Remove wheel
3. Disconnect hand brake (save pin)
4. Remove 4 nuts on brake drum
5. Pry off drum
6. Remove split pin from axle castle nut
7. Mark axle shaft alignment with chisel ready for split pin replacement at re-assembly
8. Remove axle nut (150 foot-pounds torque, check spec) 1 5/16 inch
9. Remove break line – seal with 'red condom' **SEE ALTERNATE PROCEDURE ON PAGE 2**
10. Remove 4 nuts then remove brake plate complete
11. Pry off bearing cap/axle seal plate
12. Remove bearing with special puller (held in place by axle castle nut)
13. Pull axle out 1 inch
14. Remove diff cover – note which bolts go where – catch excess diff oil
15. Put paper towel in bottom of diff
16. Tap out roll pin
17. **<u>DANGER</u>**: Drive out pinion pin **<u>only</u>** until roll pin hole is visible
18. **<u>Rotate to remove pinion pin – note orientation of flats for replacement — To Left !</u>**
19. Spin big diff wheels to remove small pinion wheels
20. Remove diff wheels
21. Test fit new fibre thrust washers.
22. Pre-oil thrust washers
23. Replace big diff wheels with fibre thrust washers – 1st onto fixed axle, then 2nd one
24. Push axle shaft back in about ¼ inch to hold 2nd diff wheel
25. *Replace oil seal. Press out from bearing cap. Replace new. Press in bearing ¼ inch (cap inverted) ****
26. Insert bottom pinion wheel (<u>no thrust washer yet</u>)
27. Rotate big diff wheel to almost eject pinion wheel to back of cage
28. Insert top pinion wheel & rotate to align both pinion wheels in place
29. Check all holes line up with cage
30. Insert lower thrust washer – confirm line-up
31. Rotate cage to access pinion pin hole
32. Insert pinion pin, flats correct, etc.
33. Insert upper thrust washer. Push pinion pin to capture washer
34. Push pinion pin fully home aligning roll pin holes. Insert roll pin
35. Finish pushing bearing onto axle – Bearing race still sticking out ¼ inch
36. Press in new oil seal to bearing cap ****
37. Lubricate bearing and axle
38. Put bearing cap back and tighten
39. Remove bolts and install brake unit with same bolts
40. Replace driving flange, line up cotter pin hole with shaft
41. Torque on the axle nut (150 foot-pounds)
42. Add drum and tighten bolts
43. Put wheel on – further torque up castle nut to previously made mark
44. Replace cotter pin
45. Spread gasket compound on diff gasket (one side, hold with 2 bolts, other side, remove 2 bolts)
46. Bolt on cover
47. Fill with gear oil
48. Reconnect handbrake

49. Reconnect brake line

    **SEE ALTERNATE PROCEDURE BELOW as conducted at a Technical Session on May 10th 2022 for Pierre Ranger MGB**

50. Bleed brakes

ALTERNATE PROCEDURE FOR BRAKE LINE

To avoid having to remove, re-install and bleed brake line the following can be done.

Skip step 9.
10a. remove clip(s) that hold brake line onto axle.
10b. remove brake plate complete and move off to side, suspending it from a zip-tie so as not to bend line.
49a. remove zip-tie and re-install brake plate.
49b. re-install clips to hold brake line onto axle.