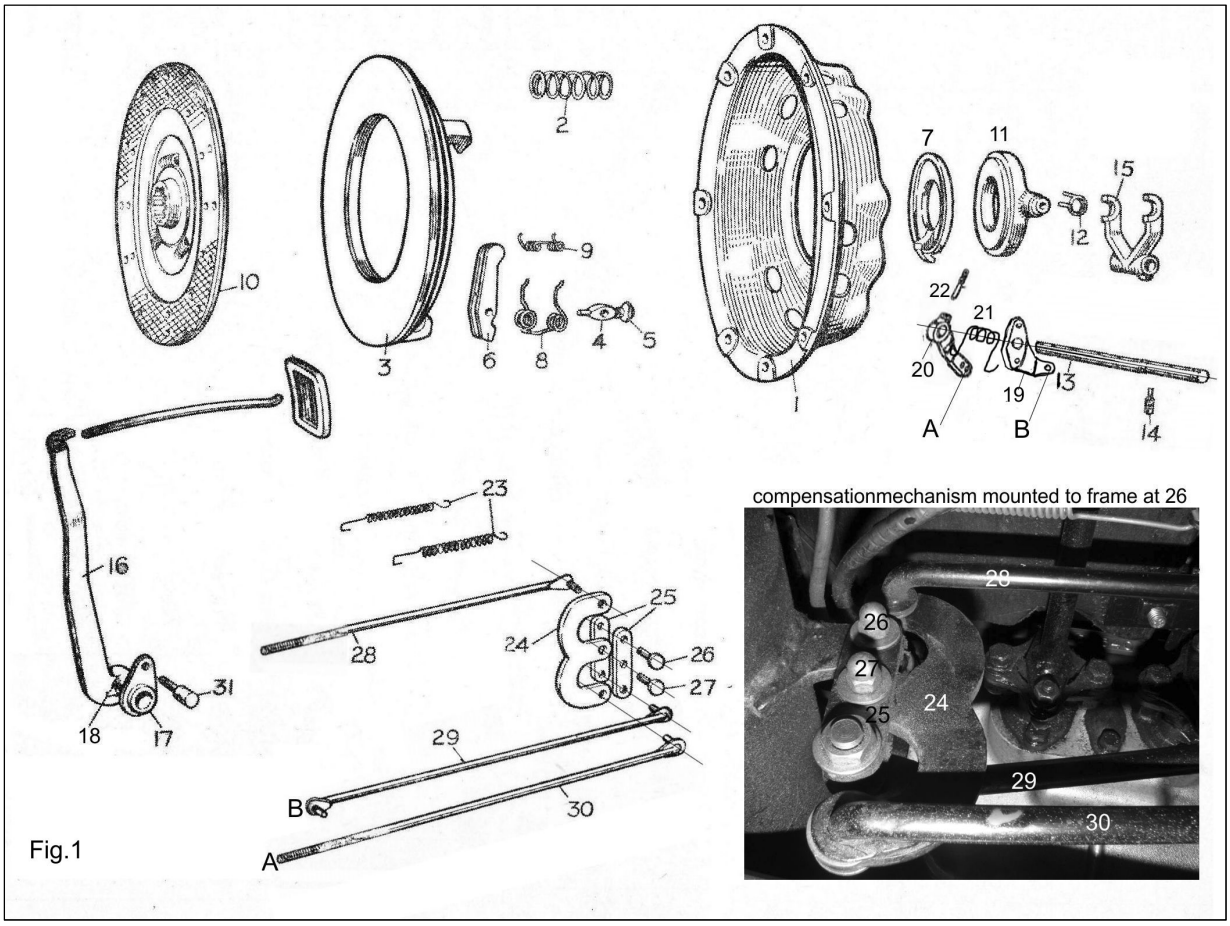
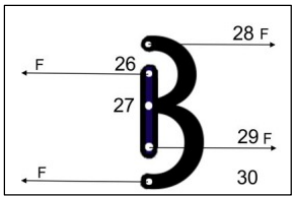
Roadster 2000 clutch control by Paul Alting van Geusau

In September 1948 the 2088 cc Standard Vanguard engine, transmission, and rear axle were fitted to the 1949 Roadster models. This article concentrates on the clutch and clutch control and the later modifications of this assembly in the Standard Vanguard and TR models. The clutch control operates by means of three rods and includes a force compensation arrangement (24, 25). Without such compensation the pulling force on the clutch lever would also pull on the clutch housing. The force compensationmechanism consists of a rod 29 fixed to the clutch housing whereby the pulling force on the clutch housing is compensated by the same amount as the clutch pedal force working on the clutch lever. This is a feature unique to the Roadster which I have not seen on other cars. Very little information is available about the compensation-mechanism so in order to facilitate understanding I modified a drawing to show more clearly where the different rods and swivel joints are located.



1. Clutch cover	12. Spring, bearing retainer	22. Square headed pin, lever to shaft
2. Thrust springs	13. Shaft, clutch operating	23. Pull off springs, pedal return
3. Pressure plate	14. Pin for lever to shaft	24. Lever, clutch, intermediate
4. Eye bolt	15. Fork, clutch operating	25. Compensation links
5. Nut, eye bolt	16. Clutch pedal assembly	26. Joint pin, lever to frame
6. Release lever	17. Bush	27. Joint pin, lever to link
7. Plate, release lever	18. Nipple	28. Clutch rod assembly top
8. Retainer lever	19. Clutch housing bracket	29. Control link rod assembly
9. Anti-rattle spring	20. Clutch operating shaft lever	30. Clutch rod assembly
10. Driven plate	21. Clutch operating shaft spring	31. Swivel pin
11. Graphite bearing release		

Compensation mechanism



Depressing the clutch pedal results in a pull forward on rod 28. This pulling force not only rotates "E" link 24 and moves rod 30 backwards to actuate the clutch lever 20 but also, by pulling on pin 27, swivels the levers 25 around pin 26 forwards. Rod 29, connected to the lower end of links 25 and at its other end to the clutch housing bracket 19, is thereby pushed forwards, compensating the backwards pulling force on rod 30 (see inserted picture in Fig. 1).

Unfortunately, due to relatively high forces and lack of lubrication, the compensation mechanism is prone to wear and often in need of repair. I drilled out any ovally worn holes in the "E" link and compensation links inserted brass bushes. Depending on the amount of wear select a brass tube size from which the bushes can be cut-off. Most of the wear occurs where the rods 28, 29 and 30 are supported. The pins 26, 27 were replaced by 8 mm bolts and usually wear is minimal at these bores. Furthermore the bent rod ends were provided with screw thread at their ends. By tightening the screw nuts the plates 25 can be adjusted to fit with little clearance to the "E" lever and frame lug and also by tightening the rod nuts a stable arrangement is provided in which rattling of the otherwise loosely assembled parts can no longer occur (see inserted picture in Fig. 1). I used Loctite for the nuts and bolts but you may also find suitable self-locking nuts. Allow some clearance because the movement of the engine/gearbox assembly on the rubber mountings would otherwise put too much stress on the compensation mechanism.

Later clutch modifications

The many rods involved and propensity to wear is perhaps the reason why Standard changed the clutch control in later Standard Vanguard models and the TR2-4 sports cars, to one with a hydraulic slave cylinder mounted directly on the engine-gearbox unit, thereby avoiding the necessity of compensation. Below is a picture of the clutch assembly used on such later models. It includes in addition to the slave cylinder a different release bearing assembly (12) and a modified clutch assembly because no release lever plate (7 in Fig 1) is necessary with this new bearing.

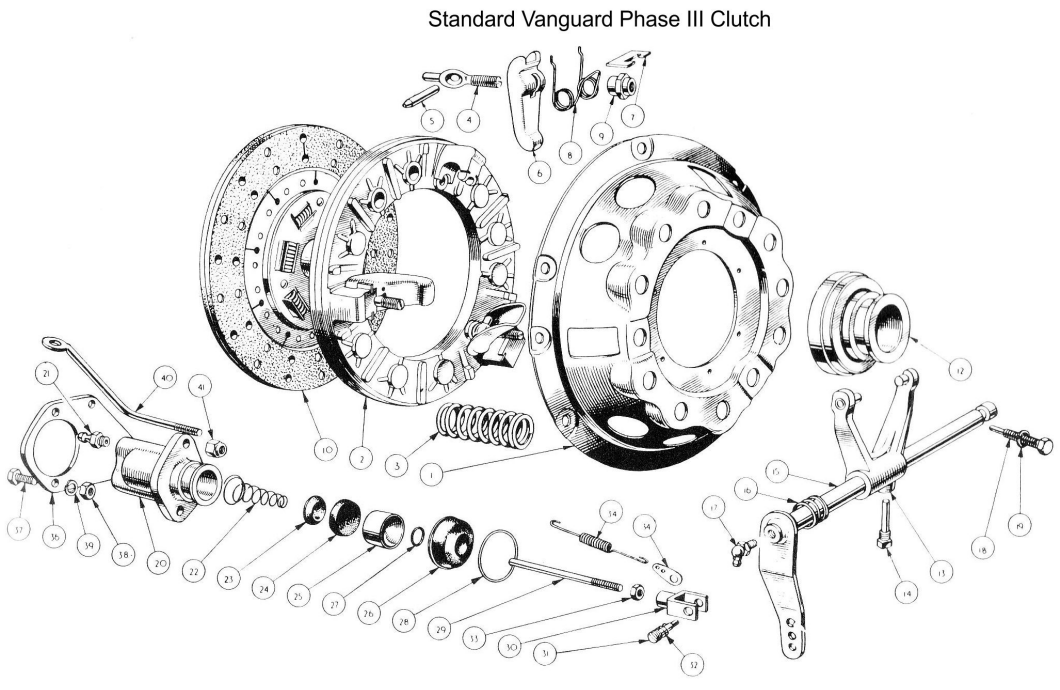


Fig. 2 **Exploded details of Clutch Assembly with Slave Cylinder.**

In the later clutch control the slave cylinder is on the left hand side of the clutch whereas the mechanical control was on the right hand side of the clutch. This means that the clutch operating shaft is different when compared to the earlier shaft (the hole for the clutch lever pin 14 is at a different position).
Now that Roadster clutches and the graphite release bearings are in short supply some Roadster owners adopted the later clutch assembly and release bearing because with some minor modification they will fit. In addition to the clutch assembly and new release bearing, the sleeve onto which the bearing is mounted and a new fork (14 in Fig.2) is necessary. The new fork fits onto the old shaft and the hole for the pin (14) is in the right position. The sleeve slides on a protruding member fitted to the gearbox, which is the further modification that should be carried out.
Mostly nowadays the thrust bearing is supported on an extended tube mounted over the gearbox primary input shaft for free sliding in the perpendicular direction of the bearing against the clutch release fingers. This causes application of equal pressure to all the release-fingers and ensures even loading of the springs and pressure plate. Because all these parts are also used on the TR models their supply is guaranteed for many years to come.


Graphite bearing clutch release assembly


Ball bearing clutch release assembly

The compensation arrangement as found on the 1800 Roadster (before restoration)