

Diesel Hydraulic Locomotives. D.833 and
D.6306 Classes. Engine Speed Regulators

In view of the number of failures experienced on the above locomotives due to the engines reverting to idling when the engine top speed is selected, an investigation has now been made regarding the setting of these regulators.

It has been found that the trouble results from the 'G' finger of the speed regulator motor switch passing through the 'gate' of the cam disc and making contact with the 'down' relay contact ring. However, this condition can be obviated by careful adjustment of the speed regulator sprocket in relation to the maximum and minimum stops of the Becker operating mechanism in the Vee of the engine.

It has been established that a complete revolution of the regulator cam disc corresponds almost entirely to the travel of the Becker Gear from stop to stop, and consequently it is possible to adjust the cam of the regulator in relation to the Becker Gear so that the minimum stop will prevent the speed regulator being turned too far.

To achieve this, the following procedure should be adopted:-

1. Remove chain from sprockets of speed regulator and hand control.
2. Rotate sprocket of speed regulator to position 'gate' of cam disc equidistant between 'A' and 'G' fingers. Note the sprocket should be rotated in the direction of minimum travel to achieve this position, and when so located all fingers, must be in contact with the 'UP' relay contact ring (inner).
3. Remove clevis pin from the coupling between the Becker Gear and the governor speed setting elastic link. Swing link clear.
4. Rotate handwheel adjacent to flywheel to full extent in a clockwise direction to ensure that the Becker Gear is on the minimum stop.

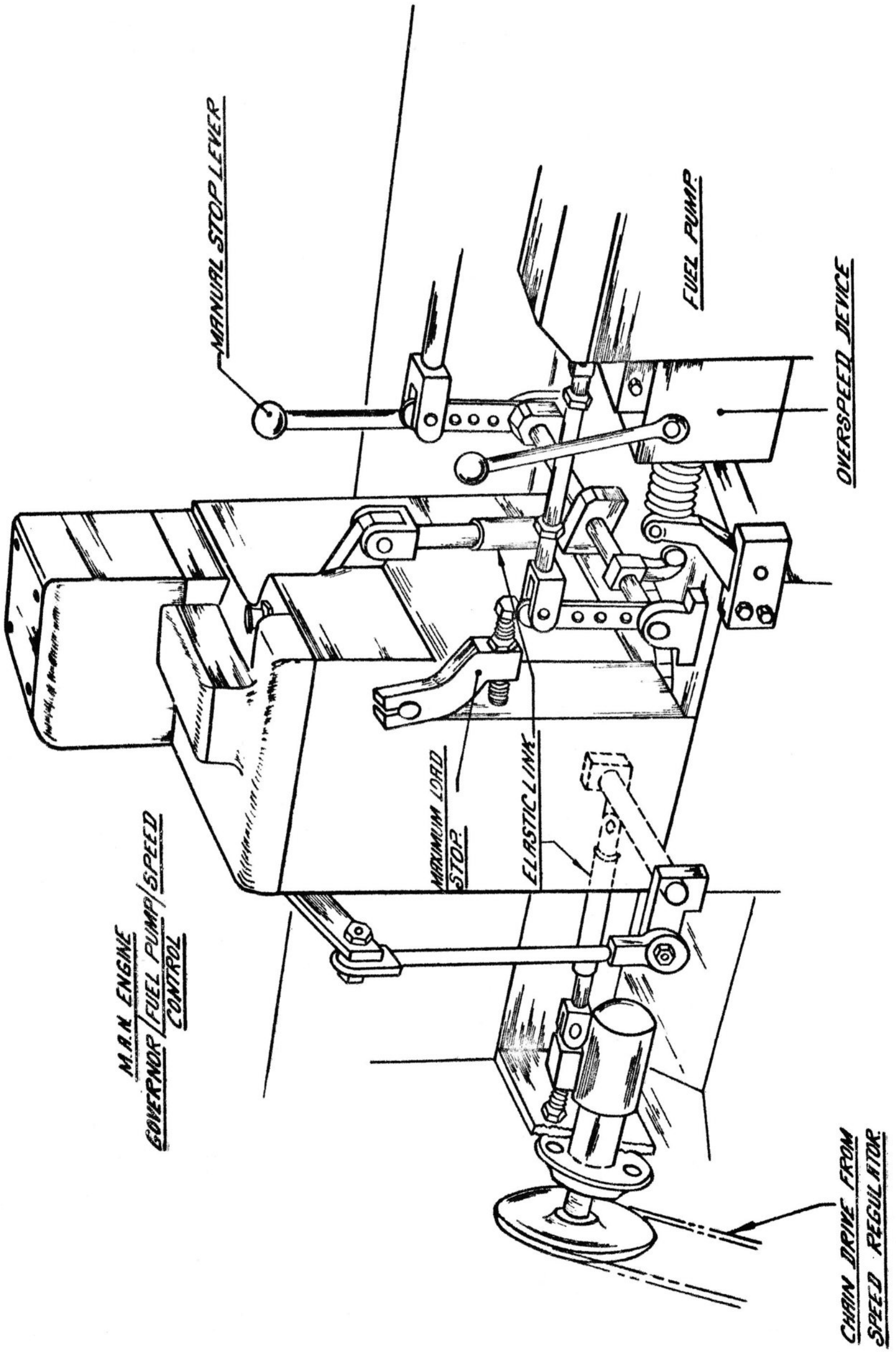
5. Replace chain on regulator and handwheel sprockets. The regulator sprocket may be rotated slightly to engage the chain on the sprocket teeth.
6. To check the idling speed position rotate the handwheel anti-clockwise until 'A' finger makes contact with the down relay contact ring (outer). Insert Forward/Reverse handle, switch on group switch. The motor should now turn in a clockwise direction until notch 0 position is reached.
7. Ensure governor speed setting lever is in idling position by pushing speed setting elastic link toward governor as far as possible, without compressing elastic link, and refit to Becker Gear.

If necessary the length of the elastic link may be adjusted by turning the forked end as required, to shorten or lengthen the link, so that the clevis pin may be inserted without causing the elastic coupling to be initially compressed.

It may be necessary to cut additional threads on the fork end of the elastic link to enable the clevis pin to fit.

8. While engine is running turn handwheel adjacent to flywheel anti-clockwise until elastic link stretches 1/16" thus ensuring the internal stop of governor is in maximum position and the engine revolutions are 1530 r.p.m. Set the "Setting Stop" oil Becker Control linkage to give 0.015" minimum clearance.
9. Check the speed range and adjust intermediate speeds by the contact finger as required to the speeds below:-

<u>D.833</u>	<u>D.6306</u>
Notch 0 600	Notch 0 650
2 950	FILL 600
3 1140	1 900
4 1270	2 1025
5 1370	3 1150
6 1460	4 1275
7 1530	5 1400
	6 1530



M.A.N. ENGINE
GOVERNOR / FUEL PUMP / SPEED
CONTROL

MANUAL STOP LEVER

FUEL PUMP

OVERSPEED DEVICE

MAXIMUM LOAD
STOP

ELASTIC LINK

CHAIN DRIVE FROM
SPEED REGULATOR