



大连海事大学
DALIAN MARITIME UNIVERSITY

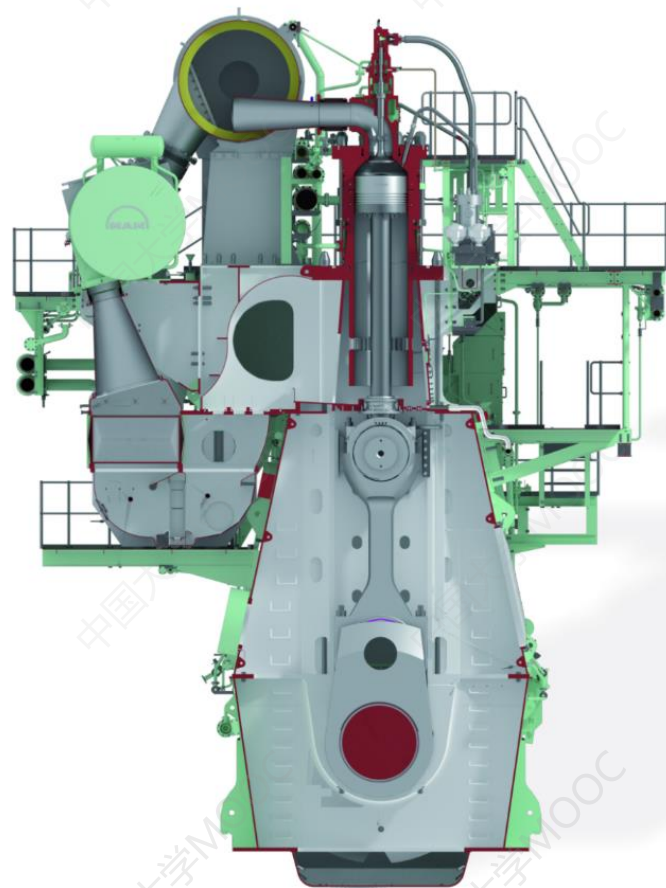


中国大学MOOC

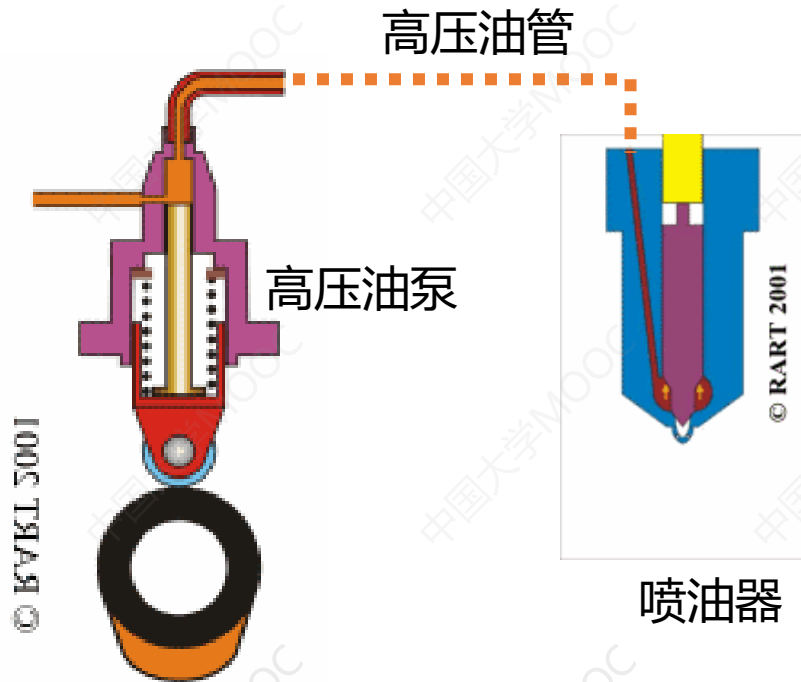
十字头式柴油机

Acknowledgements: The technical contents of this presentation are mainly from the websites and training files of Wärtsilä, Win G&D and MAN Energy Solutions. Many thanks to them.

Contact us: dmumde@163.com



- 柱塞泵式燃油喷射系统



※ MAN MC-C燃油喷射系统

- 高压油泵
 - 1 pc/cyl
- 高压油管
 - 2 pcs/cyl
- 喷油器/燃油阀
 - 2 pcs/cyl

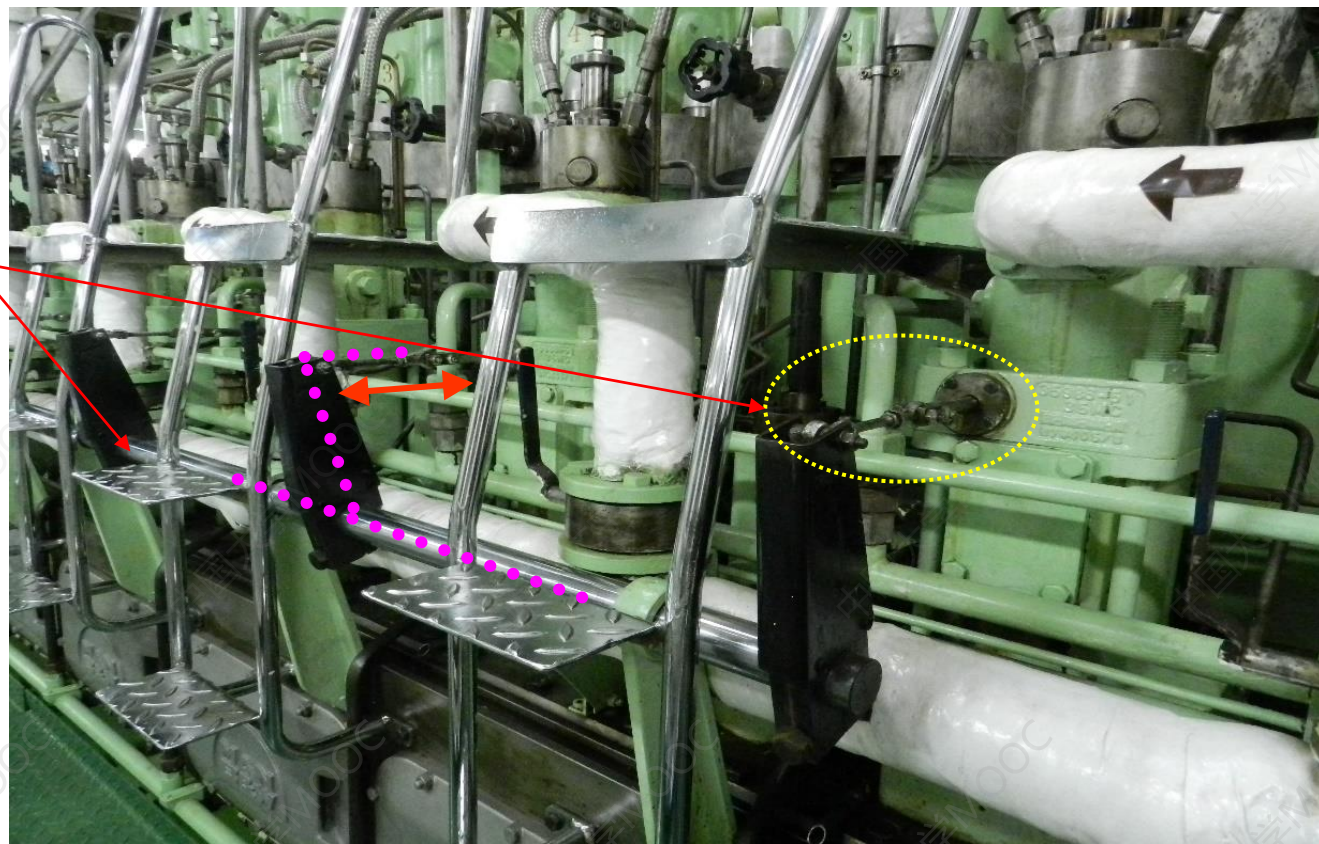


※ MAN MC-C燃油喷射系统

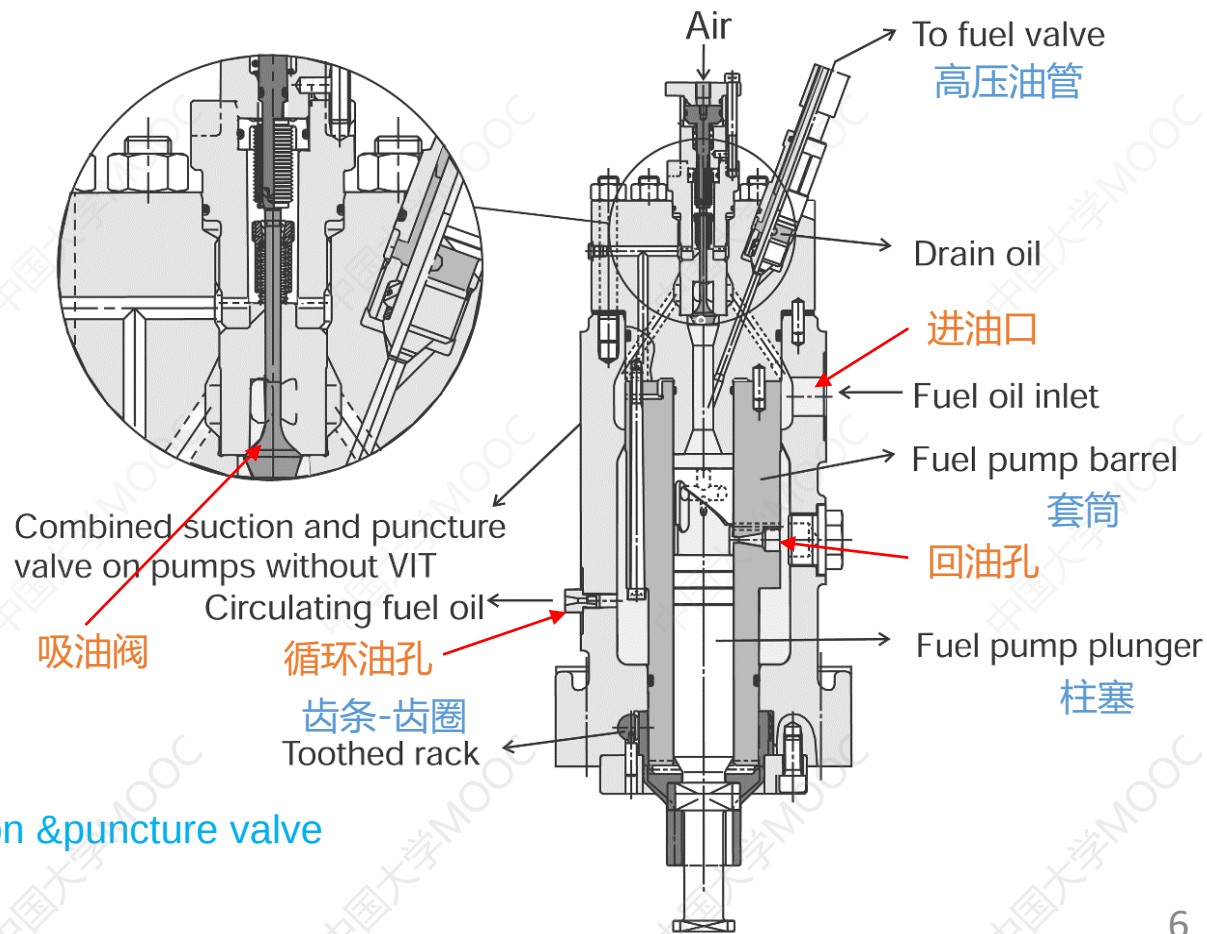
- 油量调节

- 整机

- 单缸

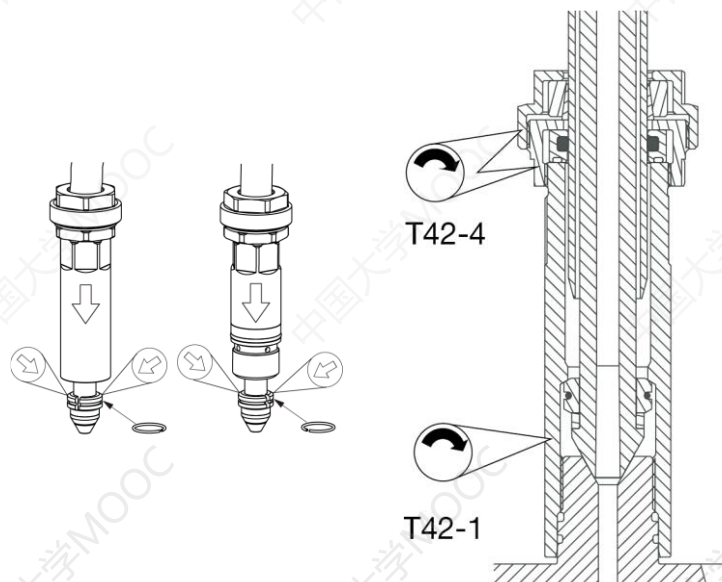


- 柱塞
 - 直槽
 - 斜槽
 - 环形槽
- 柱塞下行→进油
 - 吸油阀
 - 常开→?
 - 常闭→?
 - 回油孔
- 无出油阀&出油阀弹簧
- 循环油孔: 油经泵体循环
- 应急停车: Combined suction & puncture valve

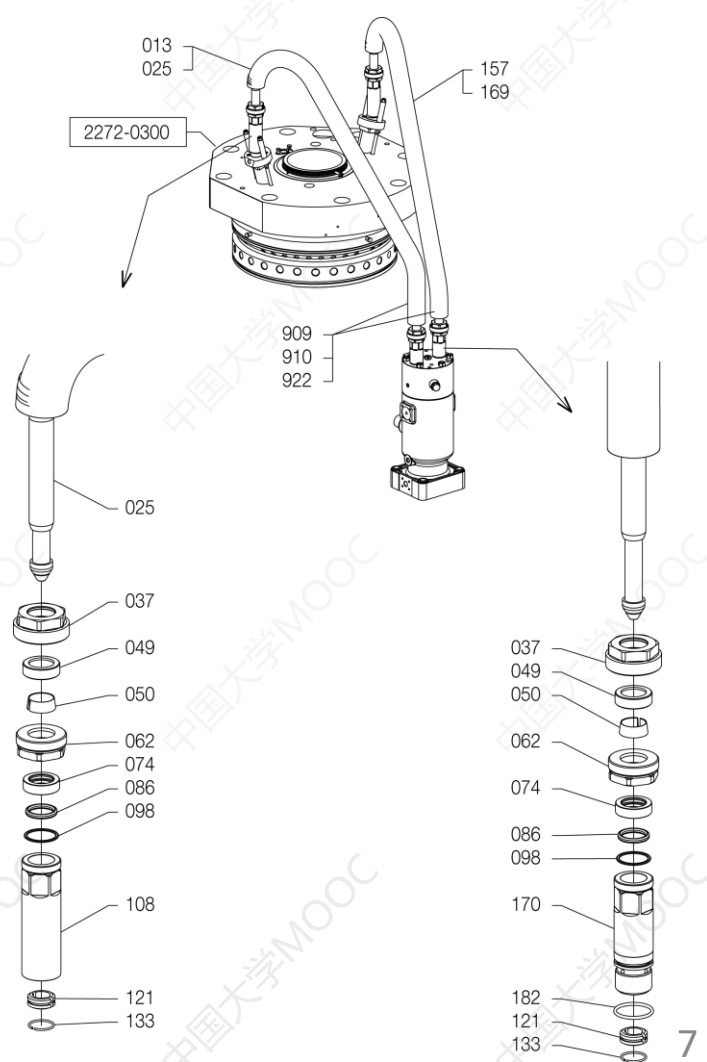


※ MAN MC-C高压油管

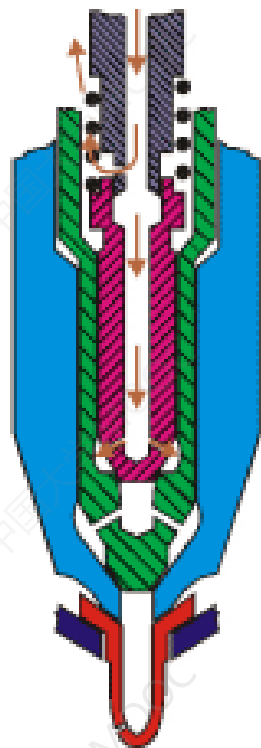
- 双层套管
 - double-walled fuel oil high pressure pipe
- 夹层引流至高压油管漏油报警装置



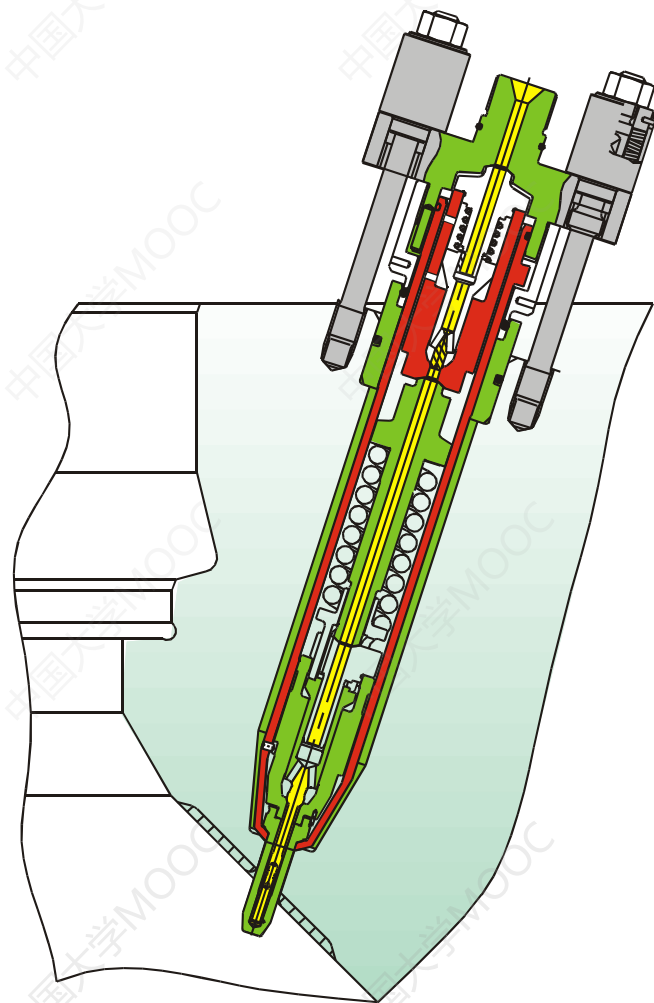
- 037 - Union nut
- 049 - Cone
- 050 - Cone
- 062 - Union nut
- 074 - Housing
- 086 - O-ring
- 098 - Sealing ring
- 108 - Union nipple
- 121 - Sleeve divided
- 133 - Retaining ring
- 170 - Union nipple
- 182 - O-ring
- 909 - Insulation, pipe



※ MAN MC-C喷油器



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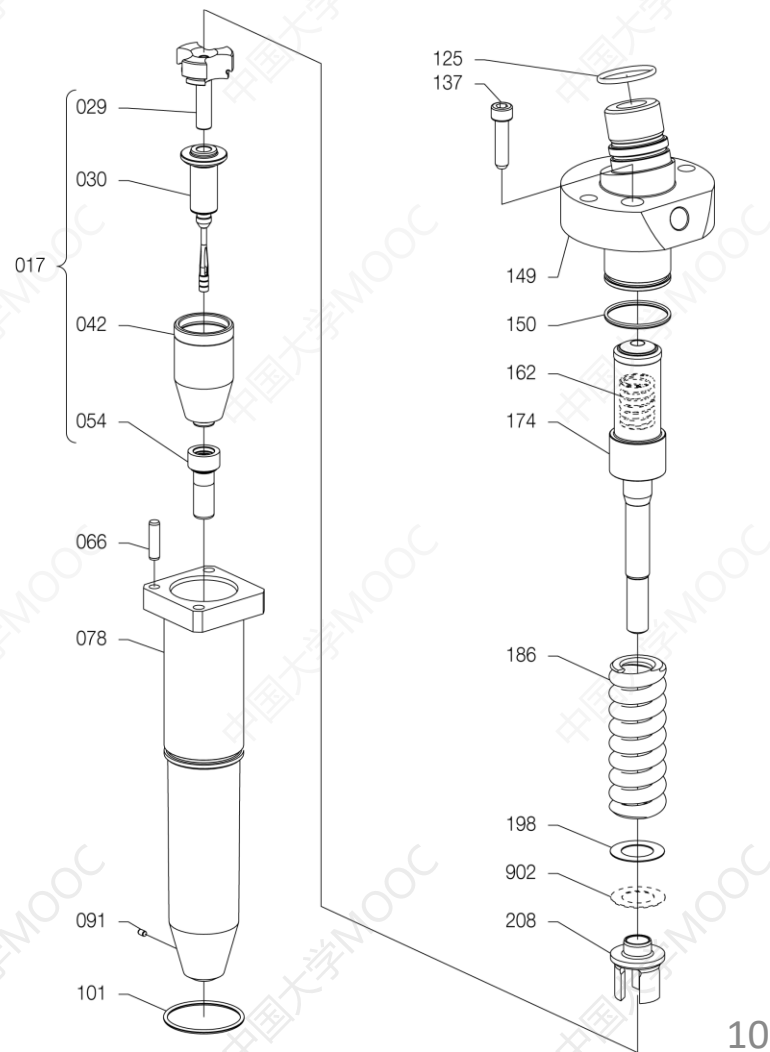
No 燃油喷射系统

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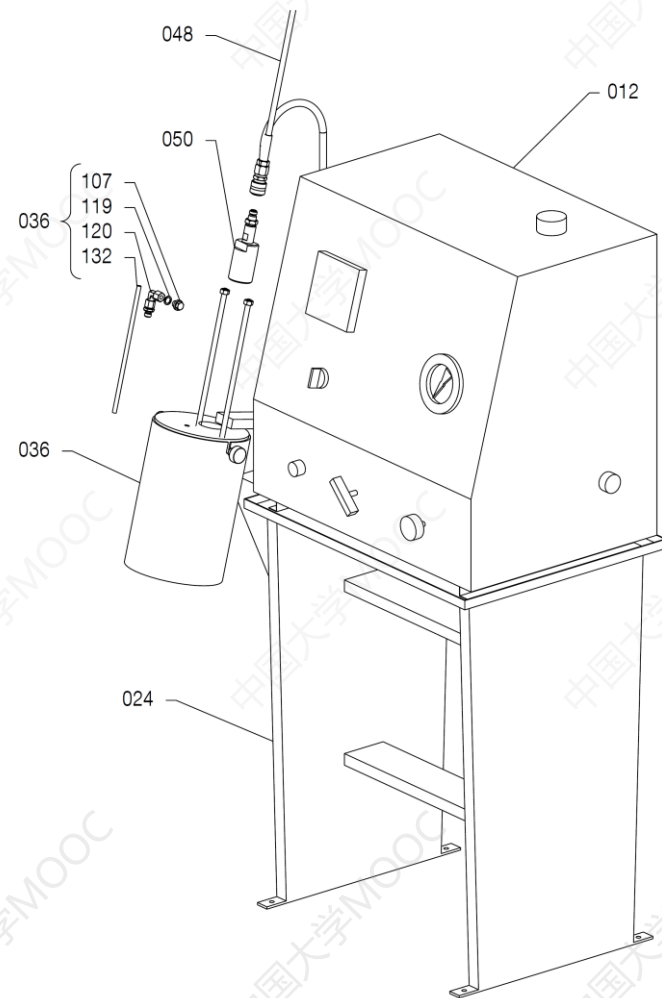
※ MAN MC-C喷油器



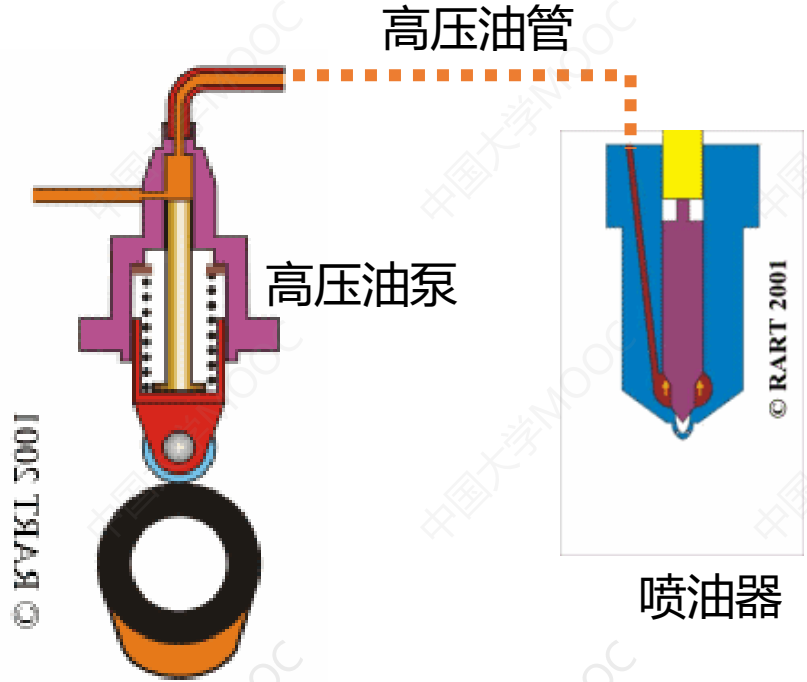
- 017 - Spindle guide, complete
- 029 - Thrust piece*
- 030 - Cut-off shaft*
- 042 - Spindle guide*
- 054 - Fuel nozzle
- 066 - Guide pin
- 078 - Holder
- 091 - Guide pin
- 101 - Sealing ring
- 125 - Sealing ring
- 137 - Screw
- 149 - Fuel valve head
- 150 - Sealing ring
- 162 - Spring
- 174 - Non-return valve, complete
- 186 - Spring
- 198 - Disc
- 208 - Spring guide
- 902 - Disc**



- Fuel Valve Testing Tools



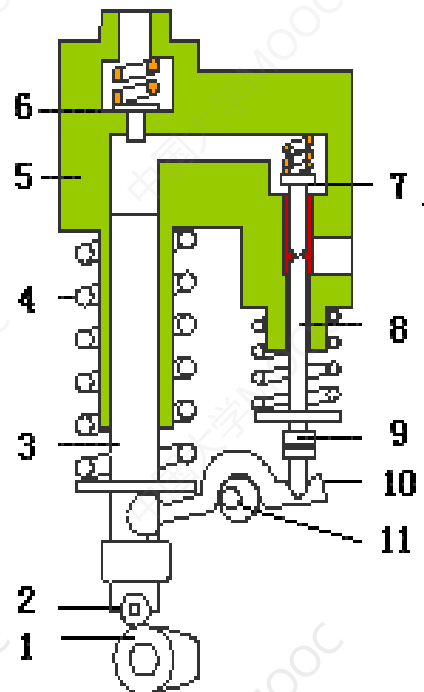
• 柱塞泵式燃油喷射系统



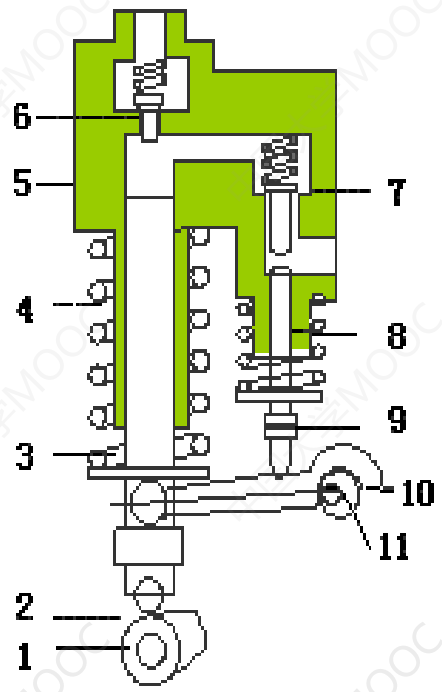


1-凸轮；2-滚轮；3-柱塞；4-弹簧；5-泵体；6-出油阀；
7-进/回油阀；8-顶杆；9-调节螺钉；10-摆杆；11-偏心轮

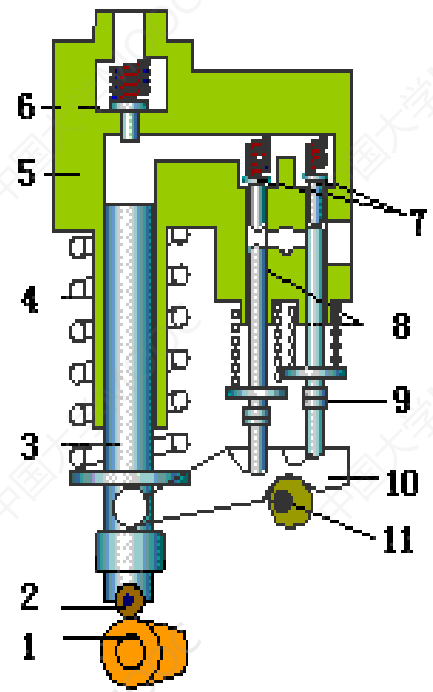
• 回油阀式喷油泵



始点调节式



终点调节式



始终点调节式

• 回油阀式喷油泵

