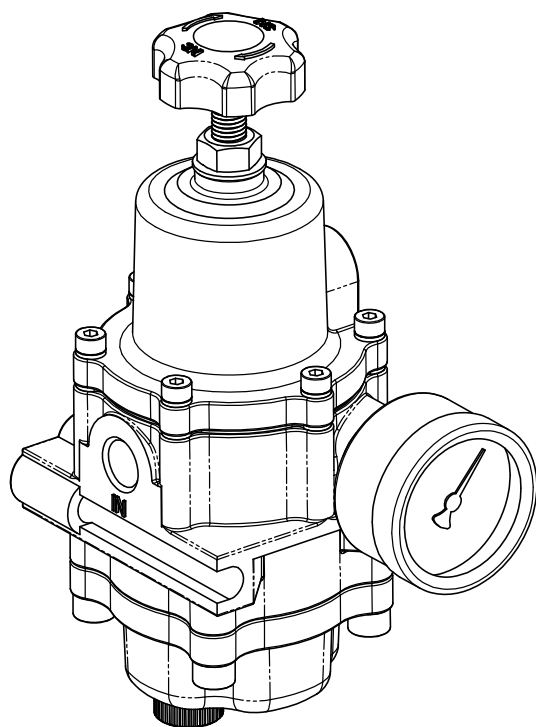


空气过滤减压阀 Air Filter Regulator

YT-200, YT-205

使用说明书

PRODUCT MANUAL



产品简介 Product Description

空气过滤减压阀YT-200(YT-205)使用在气动控制阀上, 接收主空气管道的气源压力, 按照设定压力值经过减压后, 给定位器或其它相关产品传送稳定气源压力的装置。

Air filter regulator, YT-200 / 205 / 220 / 225, receives the main supply air pressure and supplies to the desirable level of pressure to a positioner or other pneumatically operating devices.

产品特点 Main Features and Functions

- 维持稳定的设定压力, 对于压力设定反应灵敏。
- 使用压铸铝材质, 坚固耐用。
- 内置5微米滤网, 可以过滤气源中的微小颗粒, 并且可以通过排水盖排出凝集水。
- 如果输出压力比设定压力高, 那么通过自动排气维持稳定的输出压力。
- Maintains desirable pressure level, regardless of fluctuation of the main supply pressure.
- By using aluminum or stainless steel body, it has high durability in various environments.
- 5 micron filter filters most particles in the main supply pressure.
- Relief function is available which discharges to the atmosphere, if the output pressure is higher than setting pressure.

选型方法 Product Code

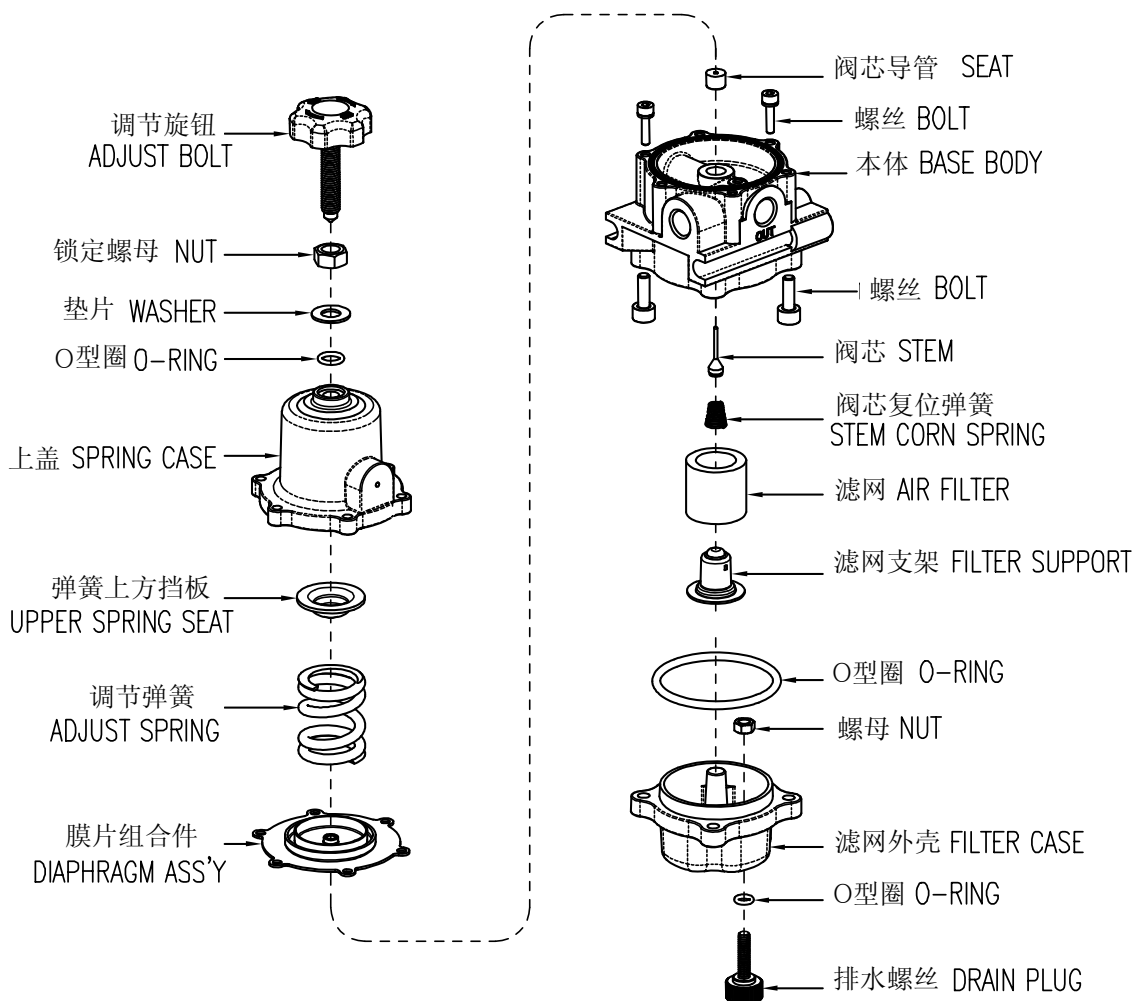
YT-200 / 205 / 220 / 225 1 2 3 4 5

① 压力调节范围 Adjustable range	A : 0~4.2kgf/cm ² 空白 : 0~8.4kgf/cm ² C : 0~2.1kgf/
② 气源接口规格 Air Connection type	P : PT N: NPT
③ 压力表 Gauge	0 : 无 1 : 4kgf/cm ² 2 : 10kgf/cm ²
④ 环境温度 Ambient Temperature	1 : -20 ~ 70℃ 2 : -20 ~ 120℃ 3 : -40 ~ 70℃

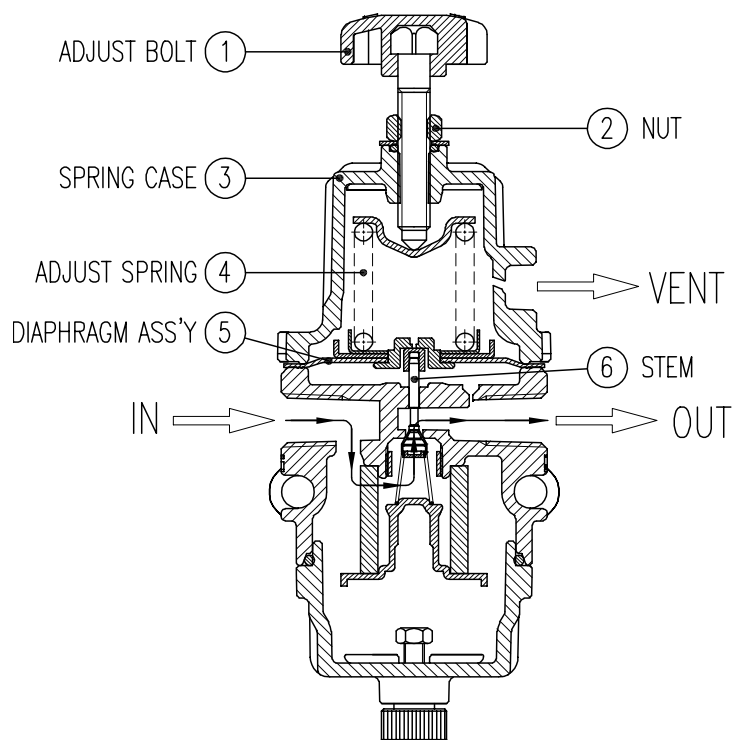
参数 Product Specification

项目 Model	YT-200		YT-205
	A	空白	C
最大输入压力 Max. Supply Pressure	15kgf/cm ² (231psi)		
最大调节压力 Max. Out Pressure	4.2kgf/cm ²	8.4kgf/cm ²	2.1kgf/cm ²
气源接口规格 Air Connection	PT(NPT) 1/4		
压力表接口规格 Gauge Connection	PT(NPT) 1/4		
温度范围 Ambient Temperature	-20℃~70℃(标准型 Standard), -20℃~120℃(高温型 High), -40℃~70℃(低温型 Low)		
最小过滤尺寸 Min. Filtering Size	5 micron		
材质 Housing Material	Aluminum		Stainless Steel 316
重量 Weight	0.6kg		1.4kg

主要部件和结构图 Parts and Assembly



动作原理 Operation Logic



当顺时针旋转①调节螺栓时产生的作用力会迫使④调节弹簧促动⑤隔膜和⑥阀杆下移，随后供给压力(IN)将输出至次级输出端口(OUT)。当次级端口的压力达到设定压力时，此压力将通过输出压力感测孔传递至⑤隔膜底部，在与④调节弹簧的作用力保持平衡后将保持设定压力恒定。若次级端口上的压力高于设定压力，经由输出压力感测孔传递的压力会向上推动⑤隔膜，使隔膜与⑥阀杆分离。这样压力经由③弹簧盒孔释放到环境中，从而保持设定压力恒定。

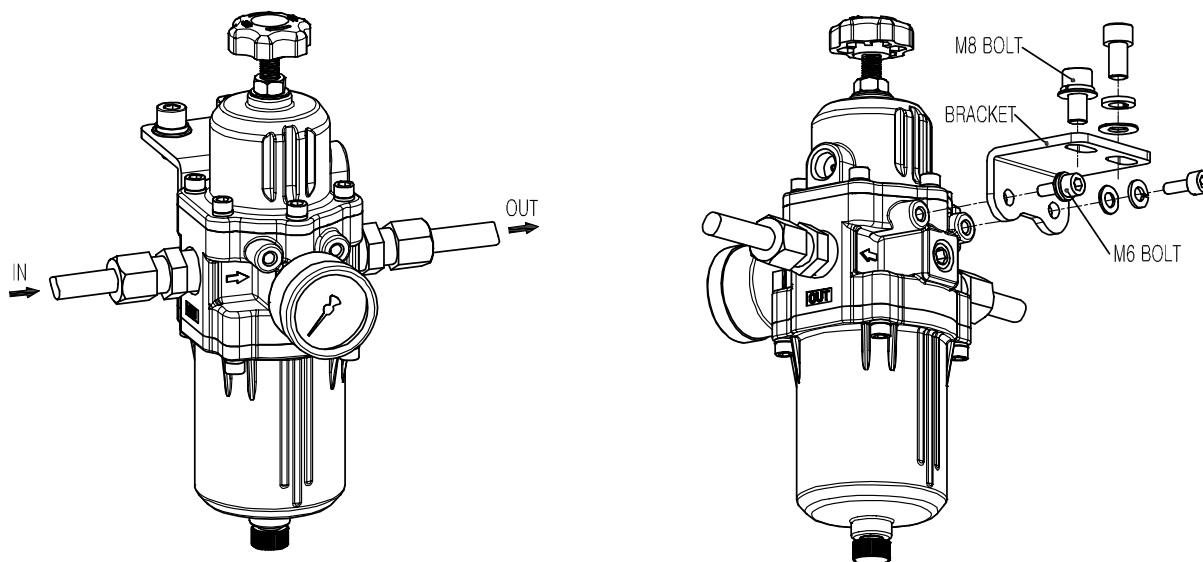
When ①the adjustment bolt is turned clockwise, ④the adjusting spring will take the force pressing ⑤the diaphragm and ⑥the stem will move downward and the supply pressure (IN) will go out to the secondary output port (OUT). When the pressure on the secondary port reaches set pressure, this pressure is transmitted to the bottom of ⑤the diaphragm through the output pressure sensing hole, and the set pressure is maintained by balancing the force with ④the adjusting spring. If the pressure on the secondary port is higher than the set pressure, the pressure delivered through the output pressure sensing hole pushes up ⑤the diaphragm and opens between the diaphragm and ⑥the stem. It is discharged to the atmosphere through ③the spring case hole to maintain the set pressure.

安装 Installation

安装空气过滤减压阀时是否使用支架取决于现场条件。空气过滤减压阀用于向定位器，执行器，电磁阀等设备供给恒定气压。在不使用独立支架的情况下，只能使用气动管道安装产品。连接之前，请务必吹扫所有管道以防止杂质进入产品内，同时确保其规格满足所需风量。

如需安装支架，请查看上一页图表中的尺寸，根据需要制作适合各个型号的支架。以下是使用支架安装YT-220的示例。

The air filter regulator can be installed with or without a bracket depending on the field conditions. The air filter regulator is used to supply constant air pressure to various devices such as positioner, actuator and solenoid valve. The product can be installed using only pneumatic piping without a separate bracket. Before connecting, be sure to blow out all piping to prevent impurities from entering in to the product and ensure that it is the right size meeting the required capacity. If you require brackets for installation, you can check the dimensions mentioned in the diagram on previous page and make the desired bracket type to suit each models. Below is an example of YT-220 with bracket installation.



安全

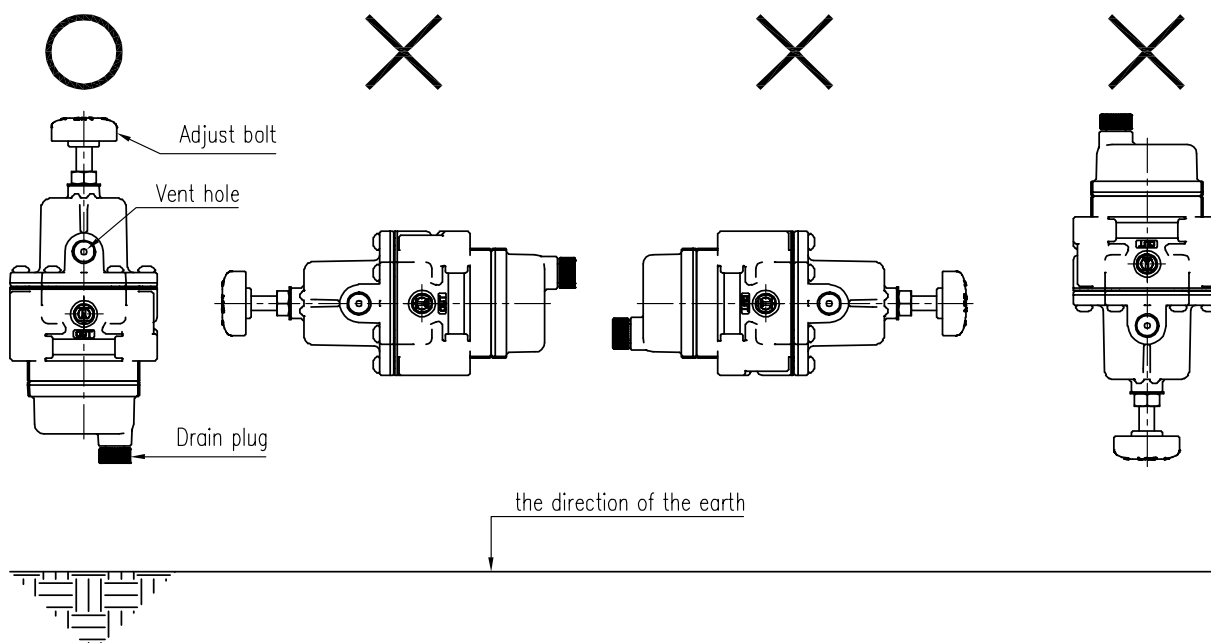
- 请务必穿戴防护装备并遵守安全规程。
- 完成压力设置后，固定螺母以防止调节螺栓转动。
- 使用清洁空气供给压力。

- 按照手册中的规格正确使用。超出规格可能导致产品损坏或引发事故。
- 若产品遭受冲击，则可能导致产品故障或失效，因此搬运，安装和操作产品时必须谨慎。
- 定期打开产品底部的排放塞释放冷凝水对产品进行维护。
- 通过弹簧盒旁边的排气孔（通风孔）将气体排放至环境中。
- 务必在调节螺栓朝上的情况下安装产品。否则，可能缩短产品寿命，或者湿气和异物可能进入通风孔内导致内部部件损坏。

Safety

When installing a unit, please ensure to read and follow safety instructions.

- Be sure to have protective equipment and comply with safety regulations.
- After setting the pressure, secure the nut so that the adjustment bolt does not turn.
- Supply pressure should be used with clean air.
- Use within specifications specified in the manual. Exceeding the specification may result in damage to the product or accident.
- If there is any impact on the product, it may cause malfunction or failure, so be careful during handling, installation and operation.
- For maintenance, periodically open the drain plug at the bottom of the product to discharge the condensate.
- Exhaust to the atmosphere are made through a small exhaust hole(vent hole) next to the spring case.
- Install the product with the adjustment bolt facing up. Otherwise, the life cycle of the product may be shortened or moisture and foreign substance may enter into the vent hole, leading to damaging internal parts.



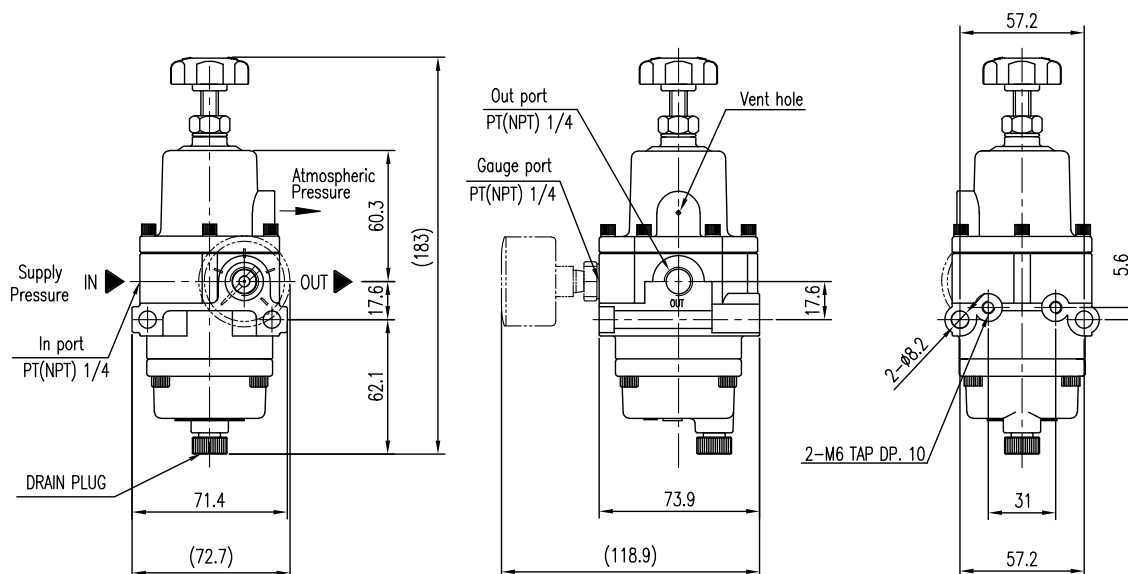
使用方法

- (1) 给YT-200提供压力前, 要把调节螺丝反时针充分旋转, 始调节弹簧不受压力。
- (2) 在压力表接口或出气口部分安装压力表。这个压力表显示的压力是从进气口输入的气压通过减压阀进行减压后输出的压力。
- (3) 把出口和压力表接口用球阀等堵住后通过输入接口输入气源压力。
- (4) 手动调整调节螺丝, 出口压力上升到设定压力后, 停止旋转调节螺丝, 并拧紧锁定螺母。

How to Use

- (1) Before supplying air pressure to the product, turn the adjustment bolt counterclockwise so that the adjustment spring is not pressed at all.
- (2) Install a pressure gauge on the output port (OUT). This pressure gauge will show the output pressure that is depressurized from the primary pressure (IN).
- (3) Connect the output port to ball valves or other device with fittings, and the supply air pressure to the input port (IN).
- (4) Turn the adjust bolt clockwise, and then the secondary pressure goes up to the set value, turn the adjusting nut of the adjusting bolt clockwise to lock it completely to prevent the adjust bolt from moving.

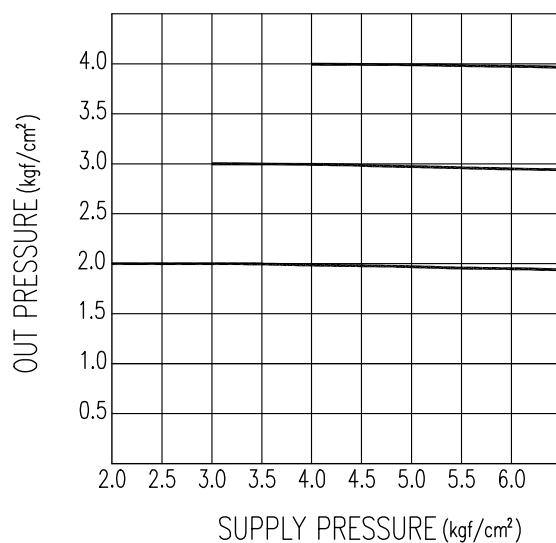
外形尺寸 Product Dimension



压力和流量特性 Pressure and Flow Characteristics

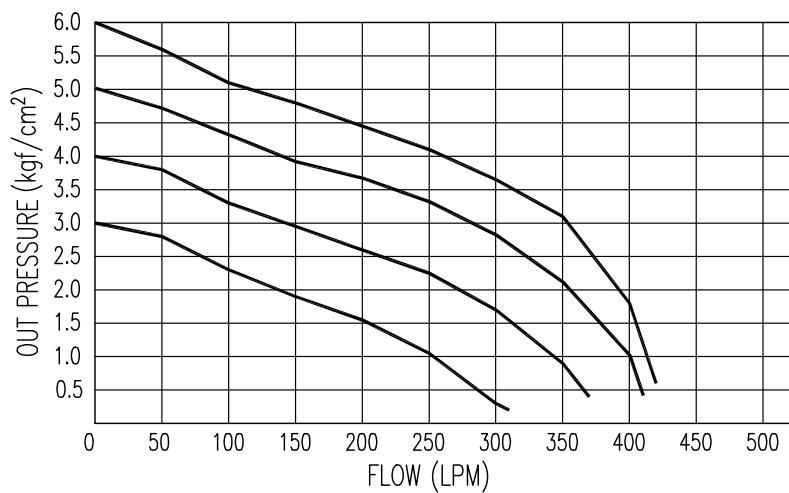
压力特性 Pressure characteristic

[Pressure Effect]



流量特性 Flow characteristic

Supply : 7 kgf/cm²



维护 Maintenance

排放冷凝水

- ① 在排放冷凝水时，必须完全关闭产品的主供给压力，或者将压力等级调节至1 kgf/cm²或以下。
- ② 缓慢打开排放塞将冷凝水排出。
- ③ 完成排放后，请务必将排放塞关闭。

Draining condensed water

- ① When draining out condensed water, the main supply pressure to the product must be shut down completely or adjust the pressure level of 1 kgf/cm² or below.
- ② Slowly open drain plug to drain condensed water.
- ③ After the draining, please close the drain plug surely.

更换隔膜组件

- ① 在更换隔膜组件时，必须完全关闭产品的主供给压力，或者将压力等级调节至1 kgf/cm²或以下。
- ② 拧松调节螺栓上的螺母，然后沿逆时针旋转调节螺栓使输出压力完全降至零。
- ③ 沿对角线方向拧下弹簧盒上的6个螺栓。
- ④ 更换隔膜组件。
- ⑤ 将6个螺栓重新锁定在弹簧盒组件上。拧紧时注意避免用力过大损坏隔膜。
- ⑥ 提高空气过滤减压阀的供给压力，然后沿顺时针旋转调节螺栓设置“设定压力”。再拧紧调节螺栓上的螺母。

Replacing Ass'y-diaphragm

- ① When replacing the ass'y-diaphragm, the main supply pressure to the product must be shut down completely or adjust the pressure level of 1 kgf/cm² or below.
- ② Loosen the nut of the adjust bolt and turn the adjust bolt counterclockwise to completely drop the output pressure to zero.
- ③ Unscrew 6 bolts on spring case assembly in diagonal direction.
- ④ Replace the diaphragm assembly.
- ⑤ Lock the six bolts back on the spring case assembly. Be careful not to damage the diaphragm due to excessive torque when tightening.
- ⑥ Raise the supply pressure to the air filter regulator and turn the adjust bolt clockwise to set the “set pressure”. Tightened the nut of the adjust bolt.

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