
4WAY HYDRAULIC UNIT

OVERVIEW

The 4Way Hydraulic unit is a race designed product that allows any sequential gearbox to be shifted hydraulically via an input signal. In most cases paddle shifting. Alternatively, it can be used in combination with the Hydraulic Clutch Unit from Kotouc Gearboxes, or for a combination of both products. The 4Way Hydraulic unit can be used to allow the clutch to be depressed automatically when shifting. It is recommended that a strong double or triple plate clutch is used.

INSTALLATION

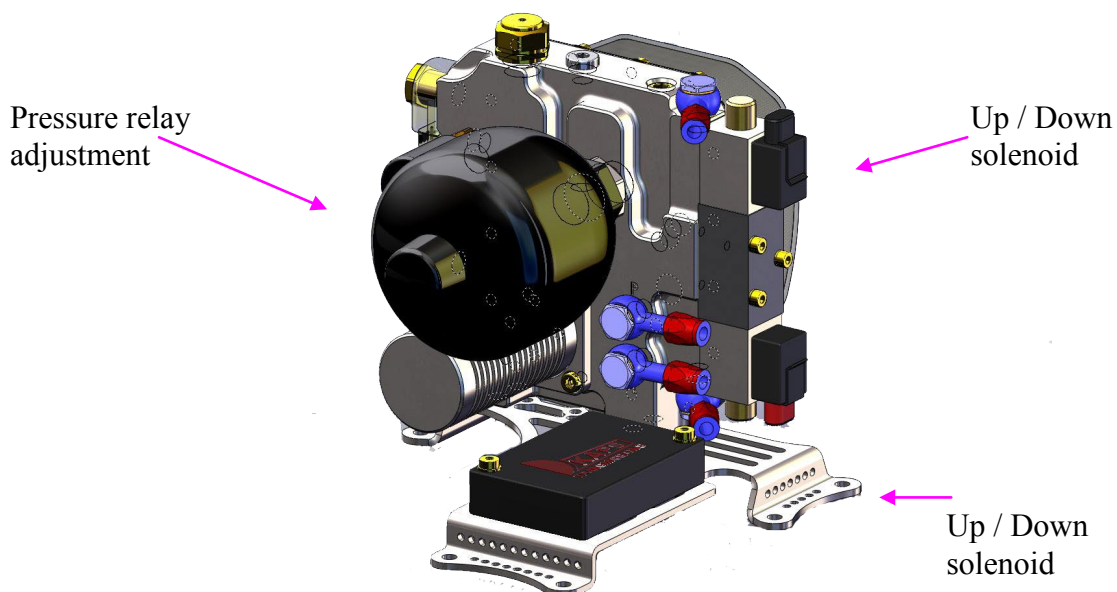
The unit should be installed in the car away from heat. The closer to the gearbox the better, as the hydraulic piping can be kept to a minimum length and not add to additional weight in the car. Drill and Screw to the body of the car where required. Refer to the alternative manual „4way Hydraulic Shifting Unit Piping Setup“ for information on the piping connections.

It is recommended upon setup that you install a manual pressure gauge on the unit to ensure that the system is pressurised correctly. Max 100 bar. The unit is fully tested in Kotouc Gearboxes workshop before shipment. Alternatively the electronic relay provides digital pressure output.

ELECTRIC CONNECTION

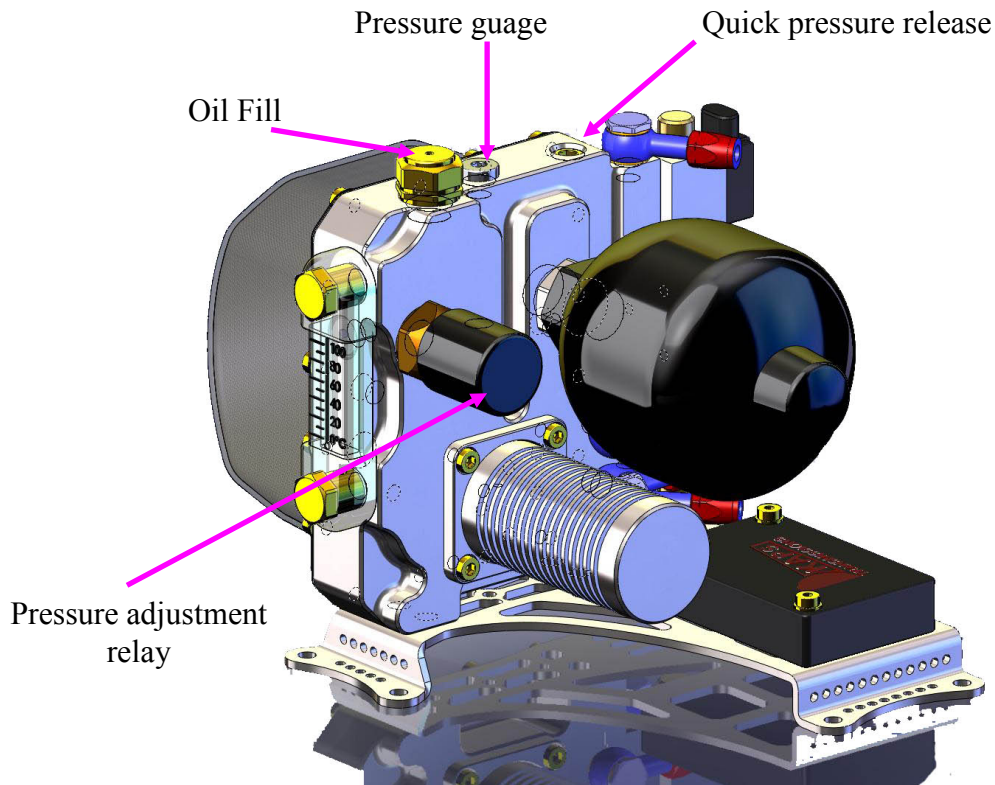
Required is a very good ground and power connection for the system. From the small control box on the hydraulic unit, there is a thick red and black and small red. The thick silicon wires, RED is +12v directly to battery with 40A fuse and BLACK is ground (best also is direct to battery). The 4 pin connector contains wiring from the electronic relay. Red: 12v power supply, Black: ground, White: 0-10v output. Small red wire from the control box is 12v regulation for on and off of the electronic motor for making pressure in the system. There are 2 solenoids on the 4Way Hydraulic Unit. They are to be used for shifting up and down. If you find that the gearbox is shifting opposite to your setup, then for quick remedy, you can swap the solenoid connectors.

If the hydraulic unit can universally be used with aftermarket ECUs. Our SHIFTBOX has been developed that functions seamlessly with the hydraulic unit. If another ECU is used, the installer accepts all responsibility for functioning of the hydraulic unit.



ADJUSTMENT OF SYSTEM PRESSURE

When used in conjunction with SHIFTBOX, the range of pressure set in the system is between 80-95 bar. This is the recommended pressure level for maximum functionality. Approximately 7-8 shifts can be made before repressurisation will occur. When combined with an alternative ECU, it is important to set this level for start and stop. To do this, the relay switch that is on the body of hydraulic unit 0-10v electronic relay provides output and can be programmed for maximum and minimum range. White wire to be connected to ECU for programming.



In the case where assistance is required, you must call Neal Mendham on +420 725 790 769. The unit is tested as per requirements and sent as a fully operational unit. Should a fault be detected, it must be returned to Kotouc Gearboxes for complete inspection. Opening of the control box or disassembling of any component on the unit will null and void any manufacturer compensation for review.



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