MANCRAFT
AIRSOFT ENGINEERING & MACHINING

PDIK V2 gen.2

Pneumatic drop-in kit V2 gen 2 is a single shot (semi) engine designed to operate with input pressure between 100 and 240 PSI (7-16 bar) using HPA (High Pressure Air) or CO2. It operates using build-in two-way gas valve and set of cylinders to the deliver same volume of gas every shot. To work properly a pressure regulator and an HPA bottle/CO2 adaptor is required. The PDIK is fitted to Tokyo Marui and TM clone type replicas with gearbox type of V2.
No batteries or accumulator is required.

Unboxing

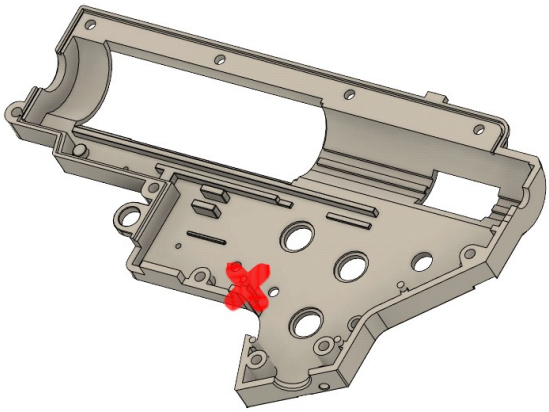
Box contains:
-PDIK v2 gen2 conversion kit with 1.2m hose attached
-Buffer tube holder
-Spring
-Mancraft patch
-Packing foam

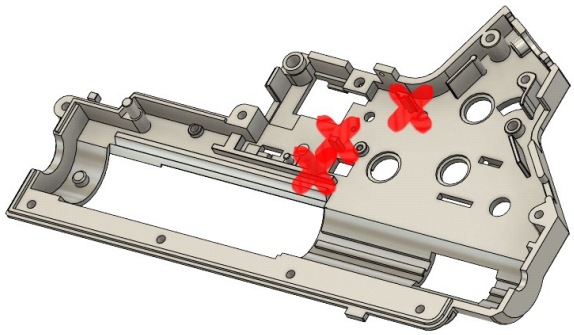
Preparation for installation

The PDIK is a replacement for the original AEG gearbox or parts of the gearbox. PDIK comes without trigger plate, trigger and safety lever. To lead pressure hose to the back some modifications in replica's body may be needed.
Nozzle length have to be adjusted to meet original AEG dimensions. To work properly PDIK unit have to be aligned to barrel.
To change nozzle lenght look at the end of this manual for instructions.

Installation

To install a PDIK v2 unit you need to remove upper receiver, unscrew a handle, remove body pins, unscrew magazine catch and pull out AEG gearbox. If PDIK comes with gearbox you need to unscrew and open it to **install original trigger, selector plate and safety lever**. Install PDIK unit in the place of AEG cylinder, place buffer tube holder (aluminium part from set) at the back end of GB. Put spring in-between the PDIK and the tube holder. When installing trigger you may have to push a valve of PDIK. Some AEG triggers may need to be slightly modified to work properly. To use your original gearbox shell modification is needed. Remove these parts:





Some gearbox shells are reinforced in a place of the gears, these would not fit to PDIK v2.
Put PDIK inside lower receiver, hose through grip (where electric motor gear was) and install all other components.
To check alignment you have to install upper receiver without barrel and HU chamber. Look into the barrel and verify if the nozzle is in centric. To correct alignment put spacers between the lower receiver and gearbox shell.

To fix nozzle alignment you have to loosen the buffer tube and the grip and put spacers:
If the nozzle is too high put a spacer between the rear of the gearbox and lower receiver.
If the nozzle is too low put a spacer under the gearbox in front of the lower receiver.
If the nozzle deviate left or right put a spacer in-between left/right side of the lower receiver and gearbox.
Then tighten the grip and buffer tube and check the result.

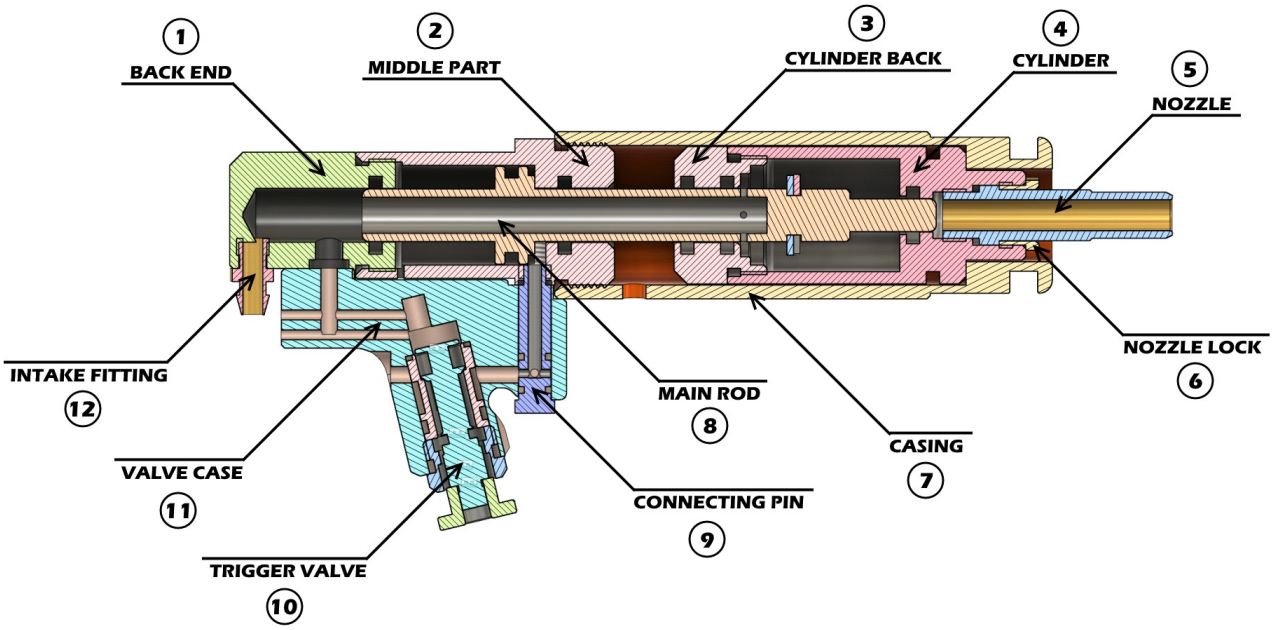
PDIK v2 gen2 is designed to work properly on barrel length of 400mm and more. For a shorten barrel we provide 3D printed gas volume reducer. Please check installation guide at the end of this manual.

Gas supply, fittings and settings

PDIK operates using high pressure gas that runs through a 6mm tube. To provide gas you need regulator and HPA bottle tank. We recommend using our HRR High Rate Regulator for the best performance.
You can connect PDIK with regulator by:
-directly choosing the 6mm L-shape fitting on the regulator
-using quick detach (QD) fitting for 6mm hose (in EU or US standard)
-using HP line that connects QD in regulator directly to QD in replica
You can regulate the BB velocity by changing air pressure of the regulator. PDIK v2 gen 2 works properly from 100psi (7bar) and should not be used over 250psi (16bar). Remember to check BB velocity before the game and don't exceed your field limits.
Regulator manual is avaliable at our site*: "HRR Regulator Manual*"

Maintenance

To keep your conversion kit operational you have to keep it clean from dust and dirt. Water would not damage PDIK directly, but could wash out grease. Dry and lubricate your PDIK after a water exposure.
As a perfect lubricant we recommend Gun Sav Tech grease. In case of malfunctions please contact us directly.



Changing nozzle, setting nozzle length

1. Tools:

-size 6 socked wrench

-size 10 flat wrench

-pliers

-insulation tape

2. Preparations:

Wrap a pliers grips with tape to protect the nozzle from scratches.

Detach PDIK from gearbox shell.

Clean outer surface from dirt and grease.3. Changing nozzle/ setting nozzle lenght:

3.1 Loosen connecting pin (part 9) using a socked wrench.

3.2 Unscrew casing by hands turning it counter-clockwise (part 7).

3.3 Using a flat wrench losen nozzle lock (part 6) turning it counter-clockwise.

3.4 Using pliers unscrew nozzle (part 5) counter-clockwise to make it longer or turn clockwise to shorten.

3.5 Take shorten or longher nozzle from PDIK parts set if needed.

3.7 To confirm preffered lenght you need to put all parts together an place conversion inside a gearbox shell. If lenght is set properly proceed.

3.8 Using wrench thigten a nozzle lock (part 6) turning it clockwise.

3.9 Put back casing (part 7) turning it clockwise.

3.10 Thighten connecting rod (part 9)

To meake sure nozzle is set properly take a airseal test with a hop-up chamber. It should be airsealed before shot and also make a space for a BB after shot, when trigger is pressed. Be carefull when checking PDIK nozzle lenght becouse without air pressure the nozzle can move forward and backward. You have to be sure nozzle is fully forward.

Installing gas reduction

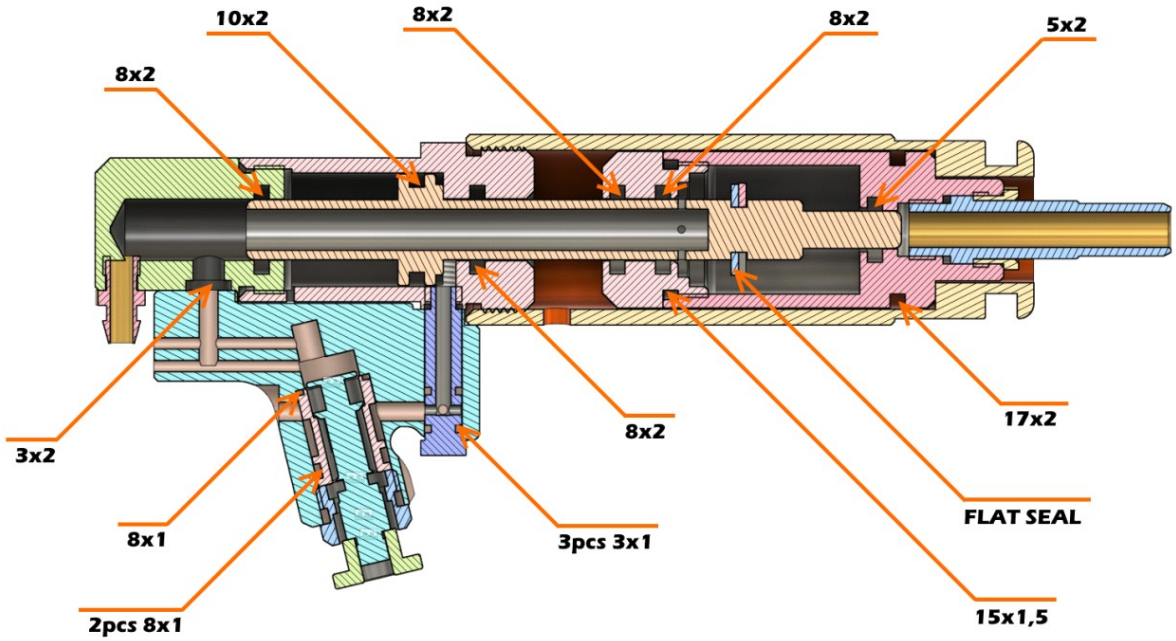
1. Remove orange colored CASING (part number 7) by unscrewing it counter-clockwise.

2. Separate CYLINDER (part number 4) from CYLINDER BACK (part number 3) by unscrewing counter-clockwise.

3. Insert gas reduction tube inside CYLINDER (part number 4).

4. Put parts together turning them clockwise.

Oring dimensions and placement:



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