Na-W/P-RFMD-02b “BULLDOG” Rapid Fire Mass Driver

The RFMD-02b “BULLDOG” Rapid Fire Mass Driver, so named for its intense firepower and fierce recoil when firing on automatic, is a heavy suppression weapon system developed for the Aggressor Assault Armorsuit.

About the BULLDOG

Feeding

The BULLDOG uses multiple sets of firing rails to increase its rate of fire. A mechanized disintegrating-link belt feed system loads Universal Mass Driver canisters into the weapon, which are about the size of a soda can, discarding the cheap and compact carbon-coated ferrous belt links out of an ejector port behind and below the firing system. The segmented belt feed is armored with a light and flexible durandium sheath to protect the UMD canisters in transit from the magazine to the weapon.

Rails

The RFMD-02b’s single barrel is lined with nine electromagnetic firing rails which fire in sets of three, the other six rails retract into the durandium-armored barrel sheathing to avoid contact with the fired UMD round. After one set of firing rails fires they retract into the barrel sheathing and are replaced by another set; this process repeats between the three rail sets to reduce wear and extend the operation life of the firing rails. This system allows the RFMD-02b to achieve sustainable firing speeds of up to 120 rounds per minute.

Powered Assistance

The BULLDOG Mass Driver is a large weapon; minus the 400-round magazine, which is stored in an Extended Weapons Case on the Aggressor’s backpack, the BULLDOG is a meter longer than the Assault Ordinance Projector. A powered robotic arm attached to the Aggressor’s belt helps to brace the BULLDOG and keep it on target while maneuvering.

The powered assist system takes up space generally used for the ammunition stores of the Aggressor’s standard primary weapons, as such it is optional and may be removed to carry more equipment at the expense of accuracy and mobility. Firing the BULLDOG one-handed, even with the powered assist system installed, is not recommended, as the weapon’s recoil can throw off the aim of even a well-braced shot if the firer does not use both hands to steady the Mass Driver.

Usage

Theoretically, an Aggressor can mount two RFMD-02b units at the cost of replacing all of its weapon systems because of space constraints, but accuracy would be severely limited by the lack of control when firing the BULLDOG one-handed on any setting but single fire and practically impossible without the powered assist system.

The BULLDOG RFMD system replaces the Aggressor's primary weapon and one EWC Missile Launcher or PAL system, relegating it to a heavy support option. The Assault Mass Repeater is generally favored over the RFMD or AOP for its larger ammunition capacity. However, it may be noted that the AMP is not capable of heavy engagement as the AOP or RFMD is, the BULLDOG being a compromise between the AMP and AOP in terms of power, ammunition, and rate of fire.

Statistics

- Location: Hand-Held, Ammunition Case attached to Extended Weapons Case hardpoint
- Type: Heavy Assault Support Weapon
- Primary Purpose: Medium-Range Squad Support
- Seconday Purpose: Long-Range Mobile Artillery
- Length: 2 meters of Durandium-sheathed barrel, launcher adds another meter to the weapon.
- Mass: 82kg for the barrel and sheathing, launcher and feed belt weighs another 50kg, ammo case weighs about one ton full, optional power assist arm adds 40kg to the weapon but accounts for roughly half the total weight (minus ammo case) and some recoil while maneuvering.
- Damage Rating: variable, depending on munitions loaded.
- Effective Range 3,000 meters in atmosphere, 5,000 meters in space.
- Maximum Range: 16,000 meters, capable of modulated-charge indirect ballistic fire to 32,000 meters; theoretically unlimited in space.
- Muzzle Velocity: 2,000 meters per second in atmosphere, 5,000 meters per second in space.
- Muzzle Blast: Small static discharge as the hypersonic canister leaves the barrel; delayed sonic boom in atmosphere.
- Rate of Fire: 30~120RPM (.5~2 canisters per second) in several settings; single fire and multiple-round bursts increasing accuracy at the cost of firing speed:
- Single fire (30RPM, 1 canister per 2 seconds)
- 2-round burst (60RPM, 2 canisters per 2 seconds)
- 3-round burst (90RPM, 3 canisters per 2 seconds)
- Fully automatic (120RPM, 2 canisters per second)
- Payload 400 UMD canisters of variable type in an Extended Weapons Case.

Munition types

- RED *High Explosive Canister*: ADR3, 4 meter blast radius; can achieve ADR4 if shell penetrates target's armor before detonating.
- WHITE *Tungsten Penetrator Canister*: ADR4, reduced to ADR1 against shields.
- BLACK *Zanarium Sniper Canister*: ADR3, reduced to ADR2 against shields.

- BLUE *EMP Canister*: ADR3 to shields, minor electronic scrambling effects against unshielded targets.
- GREEN *Antimatter Canister*: ADR5 or ADR1 if fired in 'buckshot' mode.

Discharge Information

Munitions Type: Variable Warhead Mass Driver Canister

Firing Mechanism:[1)] Canisters are loaded into the firing chamber via motorised belt feed. A magnetic decoupler unfastens the feed chain from around the canister and a second magnetic device rapidly and accurately loads the round into the pre-charged barrel, decoupled feed links are discarded out of the weapon from the bottom of the launcher.

Power: the BULLDOG RFMD is powered entirely by the Aggressor's Fusion Cores and has no battery or core of its own.

Caliber: Roughly the size of a soda can, weighing about 4 to 5 pounds, depending on the warhead.

Recoil: Very Heavy, powered aiming assistance arms come standard, but are optional as they take up space on the PA's belt, which may be used to carry grenades, ammunition, and sidearms. With the powered assist arm equipped, an armor pilot may attempt to fire the weapon one-handed, but accuracy drops by 40% without both hands to steady to BULLDOG's kick. Without the power assist arm, accuracy drops by roughly 25%.

Weapon Mechanisms

Safties: Electronic, activated via voice or mental command.

Fire Mode Selector: Electronic, activated via voice or mental command.

Weapon Sights: No built-in sights; relies on powered armor targeting systems for accurate engagement.

Attachment Hardpoints: Munitions Case attaches to the Extended Weapons Case hardpoint on the Aggressor's backpack.

Munitions Tracking: The BULLDOG is slaved to the Aggressor's HUD system and displays ammunition remaining as well as diagnostic information that can be called up on command.

Maintenance Information

Field Maintenance Procedure: the BULLDOG is designed to be dissassembled in the field because of its size, should the pilot need to pack the weapon up to fit in a transport. Self-diagnostic systems in the weapon aid the pilot in repairing any, damage, faults, or failures in the parts.

Replacable Parts and Components: the RFMD's launcher and barrel can be dismantled piece by piece, and replaced accordingly; the power assist robotic arm is the most difficult to replace but can be easily discarded if heavily damaged, being made of relatively cheap, but durable motors and high-tensile framework. The links that form the belt feed of the weapon are cheap and easily replacable made of a carbon-coated ferrous alloy, they are discarded as each round is fired, most other parts are made of cheap-to-produce parts and common elements that can be easily recovered or acquired. The most expensive pieces of electronics are the diagnostic systems and firing capacitors, both of which are heavily protected against EMP damage and physical harm.

Firing Rail Maintenance Cycle: each set of (3) firing rails (three sets, nine rails total) is rated to launch 200 shells before requiring heavy maintenance, and can sustain roughly 300 firings before needing to be replaced. Regular maintenance and repair of the rails is recommended after every deployment. For extended engagements where the BULLDOG is expected to be used past these limits, the entire barrel can be detatched and replaced in a few minutes.

Launcher Maintenance Cycle: the launcher module is fairly robust, having few moving parts, it accomplishes its task mostly through magnetic manipulation. Routine diagnostics are expected after every deployment to keep the field emitters calibrated. Actual replacement of parts in the launcher occurs rarely, generally every two or three months, or when a part fails regular testing.

Belt Feed and Munitions Case: being armored casings for the storage and loading of UMD shells, these two units are seldom replaced, generally only when the casing wall is compromised by damage or after periods of use no less than four months, but replacement can be delayed well past eight months if the materials are in good condition.

[1)]

see above for additional description

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