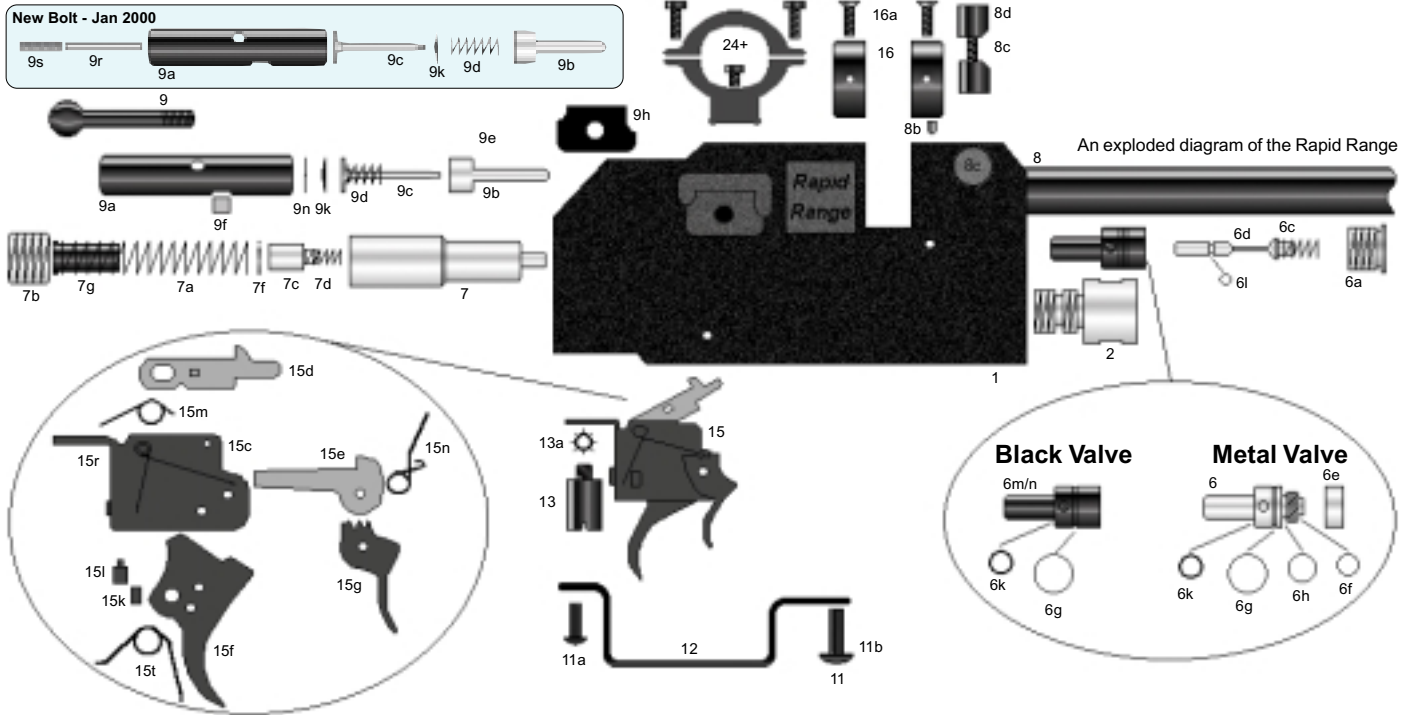
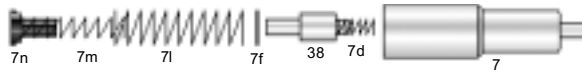




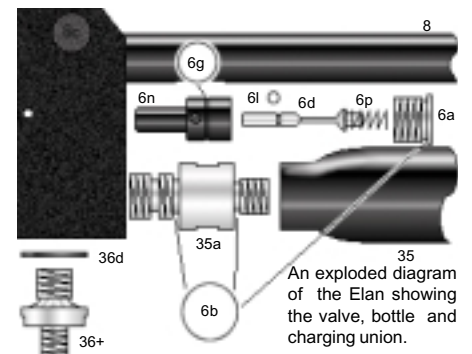
RAPID RANGE TECHNICAL INFORMATION SHEET



- | | | | | |
|----------------------------------|-----------------------------------|--------------------------------|-------------------------------|--------------------------------|
| 1 Body | 7c Inertia Weight | 9e Bolt Circlip | 13a Star Washer | 30 Rear (GMT) Trigger Boss |
| 2 Bottle Inlet Adaptor | 7d Inertia Spring | 9f Dog | 15 Trigger Assembly (Sporter) | 35a Bottle Neck Adaptor (Elan) |
| 2b Inlet Adaptor o-ring (BS015) | 7f M6 Washer | 9g Dog Screw | 15a Trigger Pin | 36+ Charging Union (Elan) |
| 3a 280cc Bottle Neck | 7g Hammer Spring Guide (std) | 9h Bolt Plate | 16 Blips (pair) | 36d Dowty Seal (Elan) |
| 3b 280cc Schrader Valve (HP9914) | 7i Hammer Spring (.177/Elan) | 9j Bolt Plate Screw | 16a Blip Screws | 37+ Charging Hose (Elan) |
| 3d 280cc Bottle o-ring (BS111) | 7m Int. Hammer Spring (.177/Elan) | 9k Spring Washer | 25+ Gold Medal Trigger (GMT) | 38 Inertia Weight (Elan) |
| 4a 400cc Bottle Neck | 7n Spring Guide (.177/Elan) | 9l Probe (.20 cal) | 27 GMT Hammer | FAC parts not listed |
| 4f 400cc Bottle o-ring (BS111) | 8 16 inch Barrel (.22 cal) | 9m Probe (.25 cal) | | |
| 6 Metal Valve Body | 8b Barrel Location Screw | 9n Crinkle Washer (shim) | | |
| 6a Blanking Screw | 8c Barrel Clamp & Screw | 9o Probe (.177 cal) | | |
| 6b Blanking Screw o-ring (015) | 8e 16 inch Barrel (.20 cal) | 9r Bolt Adjustment Rod | | |
| 6c Valve Spring | 8h 16 inch Barrel (.177 cal) | 9s Bolt Adjustment Screw | | |
| 6d Valve Stem | 9 Bolt Handle | 9t Front Stock Screw (1/4 UNF) | | |
| 6e Metal Valve Cap | 9a Bolt Body | 11a Rear Stock Screw (2ba) | | |
| 6f Theoben 008 seal | 9b Bolt (specify calibre) | 11b Blacked M6 Washer | | |
| 6g Valve o-ring (011) | 9c Bolt Spring | 12 Trigger Guard | | |
| 6h Valve o-ring (013) | | 13 Rear (sporter) Trigger Boss | | |
| 6j Valve Location Screw | | | | |
| 6k Valve o-ring (4.1 x 1.6) | | | | |
| 6l Valve Stem o-ring (607) | | | | |
| 6m Black Valve | | | | |
| 6n Elan Black Valve | | | | |
| 6p Elan Valve Spring | | | | |
| 7 Hammer | | | | |
| 7a Progressive Hammer Spring | | | | |
| 7b Rear Screw Cap | | | | |



The Elan hammer set up.
The rest of the parts in the Elan are the same as the parts in the Rapid Range as shown in the top diagram.



SETTING THE POWER

These calculations are approximate, based on the most accurate pellet not the most powerful.

Formula to convert feet per second to foot pounds energy

$$\frac{FPS \times FPS \times Grns}{450240} = \text{Muzzle Energy}$$

WARNING - Changing the rifle from the manufacturers setting could take the rifle over the legal limit. This is an offence and could result in rifle confiscation or prosecution.

To regulate, fill bottle to . . . for most accurate reading	Calibre	Power	Pellet	Weight (grns)	FPS	Shots Based on a 400cc bottle	Full Pressure
1900psi 1900psi	.177	12 ft/lbs FAC	Crosman Premier Crosman Premier	7.9 10.5	825 715	170 170	2900psi 2900psi
2500psi 3000psi	.20	12 ft/lbs FAC	Crosman Premier Crosman Premier	14.3 14.3	610 930	270 40	3000psi 3200psi
2500psi 3000psi	.22	12 ft/lbs FAC	Crosman Premier Bisley Magnum	14.3 21	610 800	300 50	3000psi 3200psi
3200psi 3200psi	.25	FAC FAC	Crosman Premier H & N Rampoint	24.5 27	830 815	30 30	3200psi 3200psi
1700psi 1700psi	Elan .22	12ft/lbs 12ft/lbs	Crosman Premier H & N FT Trophy	14.3 15.3	610 594	50 50	2700psi 2700psi

METAL VALVE SERVICE KIT

Contains:

- Full Instructions
- Molykote 33 Grease (pack)
- 2 Theoben 008 white seal 6F
- 4 111 o-ring (buddy bottle) 3G
- 4 015 o-ring 6B
- 2 013 o-ring 6H
- 2 011 o-ring 6G
- 2 4.1 x 1.6 o-ring 6K
- 2 607 o-ring 6L
- 1 Allen key 3/16
- 1 Allen key 5/32
- 1 Allen key 1/8
- 1 Allen key 3/32
- 1 Allen key 1/16
- 1 Collet
- 1 Rod

This **service kit** contains everything necessary to do 2 services on your Rapid with a metal valve including a collet and rod needed for the job.

This **o-ring kit** contains the basic items required to do 1 service on your Rapid with a metal valve.

O-RING KIT

Contains:

- Full Instructions
- Molykote 33 Grease (pack)
- 1 Theoben 008 white seal 6F
- 2 111 o-ring (buddy bottle) 3G
- 2 015 o-ring 6B
- 1 013 o-ring 6H
- 1 011 o-ring 6G
- 1 4.1 x 1.6 o-ring 6K
- 1 607 o-ring 6L
- 1 Collet
- 1 Rod

COMPLETE VALVE SERVICING AND O-RING KITS ARE AVAILABLE FROM THEOBEN

BLACK VALVE SERVICE KIT

Contains:

- Full Instructions
- Molykote 33 Grease (pack)
- 1 Assembled Plastic Valve 6M
- 4 111 o-ring (buddy bottle) 3G
- 4 015 o-ring 6B
- 1 + 1 013 o-ring 6H
- 2 607 o-ring 6L
- 1 Allen key 3/16
- 1 Allen key 5/32
- 1 Allen key 1/8
- 1 Allen key 3/32
- 1 Allen key 1/16

This **service kit** contains a completely new and ready to fit black valve & the necessary o-rings for 2 services, including the tools needed for the job.

This **o-ring kit** contains the basic items required to do 1 service of your black valve.

O-RING KIT

Contains:

- Full Instructions
- Molykote 33 Grease (pack)
- 1 111 o-ring (buddy bottle) 3G
- 2 015 o-ring 6B
- 1 013 o-ring 6H
- 1 607 o-ring 6L

Black Acetal Valves are fitted in all current Rapids and over 90% produced since January 1998. Although service kits and replacement o-rings for the original Metal valve will be available for some time after this. Rifles built originally with metal valves are able to have the new style black valves fitted. These valves are easier to service and are more resistant to the type of damage that can cause failure. If your rifle needs servicing and you have never done it before, we recommend that you fit the new black valve even if your rifle is currently fitted with a metal valve. Please Note; Elans, 12ft/lbs and FAC Rapids are fitted with different size valves. When ordering please quote rifle type. Elan Service Kit is also available.

Please specify the type of kit you require and for which type of Rapid.

RAPID TROUBLE SHOOTING

Power failure

- 1 Buddy bottle not charged correctly i.e. overfilled or underfilled.
- 2 BS111 NI90 o-ring on bottle neck must be greased (Molykote 33) and at all times protected from dirt. Even a hair across an o-ring will cause leakage.
- 3 Metal valve main seal damaged (Theoben 008). This can happen if dirt is allowed into the charging system from bottles or via inlet adaptor on rifle. Seal will need replacing.
- 4 Black valve face damaged. May need replacing.
- 5 It is unlikely but possible that other o-rings in rifle assembly could fail. These can be changed using replacements from the service kit.

Low power

- 1 Rear cap (item 7B) needs turning clockwise to increase hammer spring pressure, thus increasing power. (Always use a chronograph).
- 2 Buddy bottles either over or under pressure.
- 3 Hammer and floating inertia not assembled correctly. (See diagram overleaf).
- 4 Oil in/on the hammer. It should run dry of lubricant.
- 5 Theoben 008 main valve seal flattened and surface enlarged, therefore slowing the flow of air. Remedy: change Theoben 008 main seal described on service sheet.

Accuracy

- 1 Wrong calibre silencer fitted
- 2 Dirty or leaded up barrel, See cleaning the barrel
- 3 Change rifle scope
- 4 Not using the recommended pellets i.e.

.177 STD Crosman Premier 7.9grain	FAC Crosman Premier 10.5grain
.20 STD Crosman Premier 14.3 grain	FAC Crosman Premier 14.3 grain
.22 STD Crosman Premier 14.3 grain	FAC Bisley Magnum 21 grain
.25 FAC Bisley Superfield 24.5 grain	FAC H & N Rampoint 27 grain

Magazine - 7 shot (.22 cal only), 12 shot (.20, .22, .25 cal) & 17 Shot (.177 cal only)

- 1 Dust, grit, pocket fluff and fragments of lead will cause the magazine fail.
- 2 Do not put any lubrication - oil, WD40 etc inside the mag as it will have a negative effect.
- 3 Magazines can be returned to the factory and serviced;

7 shot magazine	£7 (replacement parts included)
12 & 17 shot magazines	£5 (cost of major replacement parts not included)
- 4 If the magazine doesn't fit in the rifle - check there is clearance from the scope. Check barrel position. If the rifle has been dropped on the barrel end, the barrel could be moved too far into the magazine slot on the rifle body.

NOTE - MAGAZINES ARE NOT COVERED BY GUARANTEE.

Only use Theoben recommended lubricants. DO NOT USE silicone Oil/grease as it seriously impedes the correct operation of our rifles and accessories.

RIFLES, MAGAZINES AND BOTTLES MAY BE RETURNED TO THE FACTORY FOR SERVICING.

CONVERT YOUR RAPID TO FAC SPECIFICATION - except the Rapid Elan

If you have an Rapid in .20 or .22 calibre it can be converted at the factory to FAC for only £76 plus postage. This price does not include conversion to a 19 inch barrel, but using your existing 16 inch barrel. Some efficiency will be lost compared with the 19 inch barrel FAC version Rapid, but you can still expect about 26 ft/lbs for .20 calibre and 28 ft/lbs for .22 cal. However the benefit is a shorter, lighter rifle for easier use.

If you wish to convert your .177 cal a 19" barrel must be purchased. Exchange of your 16" barrel to 19" is only possible if the barrel is immaculate. If the barrel is damaged the cost is £105 for a new barrel.

We can also de-rate Rapids from FAC to under 12 ft/lbs. Please note that barrel size must be reduced to 16".

FAC conversion - up rate	£76.00
FAC barrel exchange	£74.00
FAC up rate inc barrel exchange	£150.00
Complete 17/17 FAC up rate	£150.00
12ft/lbs conversion - de rate	£76.00