The Remington Models 591 M and 592 M are bolt action rifles chambered for the 5mm Rem. Rim Fire Magnum cartridge. The model 591 M is a clip fed repeater with a five shot capacity — one in the chamber and four in the magazine. Extra clips are available for this model. The model 592 M is a tubular fed repeater — loading, feeding and unloading in a similar manner to most rifles of its type. Both models have receivers grooved for tip-off type sight mounts.

MODEL 591M

Please package carefully if rifle is to be returned for factory service. Make sure all live ammunition is removed from magazine and barrel chamber.

See exploded view and parts list for identification of parts.

INDEX

<table>
<thead>
<tr>
<th>Component</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolt Assembly, Complete</td>
<td>1</td>
</tr>
<tr>
<td>Bolt Assembly, Complete - Components</td>
<td>1</td>
</tr>
<tr>
<td>Stock Assembly</td>
<td>1</td>
</tr>
<tr>
<td>Stock Assembly - Components</td>
<td>2</td>
</tr>
<tr>
<td>Barrel-Receiver-Action Group</td>
<td>2</td>
</tr>
<tr>
<td>Front Sight</td>
<td>2</td>
</tr>
<tr>
<td>Rear Sight Assembly</td>
<td>2</td>
</tr>
<tr>
<td>Rear Sight Assembly - Components</td>
<td>2</td>
</tr>
<tr>
<td>Rear Sight Rib</td>
<td>2</td>
</tr>
<tr>
<td>Trigger Housing Assembly</td>
<td>2</td>
</tr>
<tr>
<td>Magazine Guide-Magazine Latch (and screw) (591M)</td>
<td>2</td>
</tr>
<tr>
<td>Inner Magazine Tube Assembly (592M)</td>
<td>2</td>
</tr>
<tr>
<td>Inner Magazine Tube Assembly - Components</td>
<td>3</td>
</tr>
<tr>
<td>Outer Magazine Tube (592M)</td>
<td>3</td>
</tr>
<tr>
<td>Cartridge Feed Insert Assembly (592M)</td>
<td>3</td>
</tr>
<tr>
<td>Cartridge Feed Insert Assembly - Components</td>
<td>3</td>
</tr>
<tr>
<td>Barrel Bracket (592M)</td>
<td>3</td>
</tr>
<tr>
<td>Magazine Ring (592M)</td>
<td>3</td>
</tr>
<tr>
<td>Receiver - Barrel Assembly - Components</td>
<td>3</td>
</tr>
<tr>
<td>Receiver Assembly</td>
<td>4</td>
</tr>
<tr>
<td>Ejector Assembly, Ejector Cover, Ejector Rivet,</td>
<td></td>
</tr>
<tr>
<td>Ejector Plunger, Ejector Spring, Receiver Cover,</td>
<td></td>
</tr>
<tr>
<td>Receiver Cover Screws</td>
<td>4</td>
</tr>
<tr>
<td>Malfunctions</td>
<td>4</td>
</tr>
<tr>
<td>Parts List</td>
<td>5</td>
</tr>
<tr>
<td>Exploded View</td>
<td>6</td>
</tr>
<tr>
<td>Cycle of Operation</td>
<td>8</td>
</tr>
</tbody>
</table>

Send all guns for factory service and inquiries on service and parts to

REMINGTON ARMS COMPANY, INC.
Arms Service Division
Ilion, New York 13357

All other inquiries are to be addressed to

REMINGTON ARMS COMPANY, INC.
Bridgeport, Connecticut 06602
Unless otherwise described, all parts are interchangeable with no factory assembly required. A number of parts are used on both models. These common parts are listed below:

Bolt Assembly Pin
Bolt Assembly, Complete (and included parts)
Butt Plate (and screws)
Front Sight
Rear Sight Assembly (and included parts)
Rear Sight Base
Rear Sight Screw
Trigger Guard (and screw)

BOLT ASSEMBLY COMPLETE

To Disassemble:
Raise bolt handle as far as it will go and pull bolt rearward until travel is halted by stop. Push safety switch forward beyond FIRE position and pull bolt from rifle.

To Reassemble:
Bolt must be cocked to reassemble into rifle. Should bolt become uncocked cocking piece (See Fig. 1) will snap forward into cocking cam at rear of bolt. Slide cocking piece rearward (it is recommended that vise jaws or other suitable clamping be used) and rotate bolt plug counterclockwise or lift handle until cocking piece will snap into detent on rear edge of bolt. Align bolt-stop slot on bolt body with rib on bottom of bolt head (See Fig. 2). Rotate and hold safety switch completely forward. With firing pin on top of bolt head in 12 o'clock position, insert and push bolt forward into receiver. When locking lugs on bolt are no longer visible, safety switch may be released.

BOLT ASSEMBLY, COMPLETE – COMPONENTS: Includes bolt body assembly, bolt assembly pin, bolt head, bolt plug, extractor, firing pin, firing pin retaining pin, latch, striker assembly.

To Disassemble:
Remove bolt assembly from rifle. Using suitable clamping, retract cocking piece rearward in bolt plug as far as possible. Unscrew and remove bolt plug and striker assembly. Remove clamping and slide striker assembly out of bolt plug. Drive out bolt assembly pin and remove bolt head from bolt body assembly. Lift claw of extractor to clear bolt face and push extractor rearward until disassembled from bolt head. Drive out firing pin retaining pin and remove firing pin.

NOTE: The latch is factory assembled in proper position and staked in place. Disassembly of this component is not recommended unless necessary for replacement or repair.

To Replace:
Replacement of striker assembly as a unit is recommended. Special factory processes are used to assemble this unit. If necessary to replace latch, insert into forward end of dovetail slot in bolt head and drive forward as far as possible. When properly assembled, latch should flex into slot when rear is pushed inward. Restake. (See Fig. 3).

STOCK ASSEMBLY

To Disassemble:
Unscrew take down screw and remove stock assembly from rifle. Remove clip magazine in Model 591 M before stock assembly is removed. Extra four (4) shot clips are available.

To Replace:
Interchangeable (as assembly) with no factory adjustment required. NOTE: Each model requires own type of stock assembly. See parts list.

To Reassemble:
Follow reverse order. Tighten take down screw securely.
To Reassemble:
Follow reverse order.

INNER MAGAZINE TUBE ASSEMBLY – COMPONENTS:
Includes inner magazine tube, magazine follower, magazine pin, magazine plug, magazine spring.

To Disassemble:
Support inner tube properly and drive magazine pin from tube. Remove magazine plug carefully, slowly releasing tension on magazine spring. Remove spring and follower from tube.

To Reassemble:
Follow reverse order.

OUTER MAGAZINE TUBE (592M)

To Disassemble:
With inner magazine tube assembly removed, turn rifle upside down and press down on small pierced tab between cartridge feed insert and barrel bracket. Tube may then be pulled from rifle.

To Reassemble:
Follow reverse order. Small bent tab must fit into slot at rear of barrel bracket. Pierced tab should re-lock tube into bracket. If necessary, tab may be bent outwards by reaching inside tube and pressing tab with small tool.

CARTRIDGE FEED INSERT ASSEMBLY (592 M) is designed to receive cartridges as they are fed into rifle from magazine tube and lift them upward into position for feeding into chamber.

To Disassemble:
Drive cartridge feed insert pin from receiver and remove assembly.

To Reassemble:
Place assembly into receiver, align holes and drive in cartridge feed insert pin.

BARREL BRACKET (592 M)

To Disassemble:
Tap or push barrel bracket out of dovetail slot in barrel.

To Reassemble:
Follow reverse order.

MAGAZINE RING (592 M)

To Disassemble:
Unscrew and remove from barrel.

To Reassemble:
Follow reverse order.

To Disassemble:
With assembly removed from rifle, release tension on carrier spring by forcing ends of spring down and away from small bent tabs at rear of insert. (See Fig. 4).

To Reassemble:
Place carrier into cartridge feed insert so that holes in carrier and insert align. Slide carrier spring over rear end of insert and push carrier pin through spring, insert and carrier. Bend on spring should be to rear of stud on carrier. See Fig. 4. Rotate open ends of spring counter-clockwise and hook under tabs on rear of insert. Spring is then engaged. See Fig. 4.

Fig. 5
RECEIVER – BARREL ASSEMBLY – COMPONENTS: includes barrel, barrel assembly pin (2), receiver assembly.

To Disassemble:
These components are factory assembled in proper head-spaced position. Disassembly is not recommended unless necessary for replacement of damaged parts. Drive out barrel assembly pins. If pins bind, it may be necessary to exert force against barrel with 5/16" screw through tapped hole in bottom of receiver assembly (see Fig. 5).

Pull barrel from receiver assembly.
To Replace:

NOTE: Action must be completely assembled with bolt in locked position. Seat replacement barrel (undrilled) into receiver and back against bolt face with extractor slots in barrel aligned with extractors. Secure barrel firmly back to properly headspace with bolt. Force barrel upwards in receiver with 5/16" screw through tapped hole in bottom of receiver. Using receiver holes as guide, drill through barrel. Use No. 22 drill (.157"). Remove 5/16" screw.

To Reassemble:

Follow reverse order. Realign holes and drive in barrel assembly pins.

RECEIVER ASSEMBLY: includes ejector assembly, ejector rivet, receiver and trigger housing stud. Special factory processes are used to weld the trigger housing stud to receiver. Replace as an assembly.

EJECTOR ASSEMBLY (includes ejector and ejector release)
EJECTOR COVER, EJECTOR RIVET, EJECTOR PLUNGER, EJECTOR SPRING, RECEIVER COVER, RECEIVER COVER SCREWS

NOTE: Disassembly of these parts is not recommended unless necessary for cleaning or for replacement due to damage or malfunction.

To Disassemble:

Should disassembly be required proceed as follows: Remove stock assembly from action. On Model 592-M, remove outer magazine tube and rotate cartridge feed insert downward to clear inside of receiver. Remove ejector cover. Unscrew receiver cover screws and remove receiver cover. See Fig. 6 (NOTE: screws are sealed at factory with loctite)

Lift ejector spring and plunger out of receiver. Remove bolt assembly from rifle. Support receiver and, using a No. 43 (.089) drill, carefully drill out riveted end of ejector rivet. Ejector rivet may then be driven out and ejector assembly removed from receiver. The ejector assembly is factory listed to include ejector and ejector release. Disassembly is not recommended. Replace as an assembly.

To Reassemble:

With ejection port facing up, insert ejector assembly into receiver. Position assembly along inside wall of receiver and slide forward as far as possible. Front of ejector should fit into heading cut in chamber. See Fig. 7. Hold ejector assembly in position with finger and rotate receiver so ejection port faces downward. Insert ejector rivet into ejector assembly through opening in left side of receiver. See Fig. 8.

With ejection port facing up, place firm support beneath head of ejector rivet and rivet or stake small end of rivet through ejection port of receiver. Ejector assembly should slide freely back and forth along inside wall of receiver. Reassemble bolt assembly into receiver. Insert ejector spring and plunger into slot in left side of receiver behind head of ejector rivet with plunger facing rearward. Hold spring and plunger inward and place ejector cover over opening. Reassemble receiver cover and tighten receiver cover screws securely.

See safety performance check.

MALFUNCTIONS
Cause and Correction

FAILS TO EXTRACT

Cause:
1. Extractor damaged.
2. Chamber damaged, fouled or rusty.
3. Latch damaged or out of position.

Correction:
1. Replace.
2. Replace barrel or clean and polish.
3. Replace or adjust.
## REMINGTON
### FIELD SERVICE MANUAL

<table>
<thead>
<tr>
<th>View No.</th>
<th>Part No.</th>
<th>NAME OF PART</th>
<th>(Restricted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1468</td>
<td>Barrel (591) 5mm Rem. Mag.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14740</td>
<td>Barrel (592) 5mm Rem. Mag.</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>2</td>
<td>91342</td>
<td>Barrel Assembly Pin</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>14793</td>
<td>Barrel Bracket (592)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31310</td>
<td>Bolt Assembly Complete</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>4</td>
<td>18382</td>
<td>Bolt Assembly Pin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>29001</td>
<td>Bolt Body Assembly</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>6</td>
<td>14728</td>
<td>Bolt Head</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>14005</td>
<td>Bolt Plug</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>8</td>
<td>14002</td>
<td>Bolt Stop</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>9</td>
<td>14024</td>
<td>Bolt Stop Spring</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>10</td>
<td>17578</td>
<td>Butt Plate</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>25410</td>
<td>Butt Plate Screw</td>
<td></td>
</tr>
<tr>
<td></td>
<td>29006</td>
<td>Cartridge Feed Insert Assembly (592)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>14094</td>
<td>Carrier (592)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>14017</td>
<td>Carrier Pin (592)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>14018</td>
<td>Carrier Spring (592)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>14003</td>
<td>Cartridge Feed Insert (592)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>14020</td>
<td>Cartridge Feed Insert Pin (592)</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>14708</td>
<td>Cartridge Feed Insert Bushing (592)</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>14007</td>
<td>Cocking Piece</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>19</td>
<td>90374</td>
<td>Ejector</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>20</td>
<td>32415</td>
<td>Ejector Assembly</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>21</td>
<td>14732</td>
<td>Ejector Cover</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>21a</td>
<td>90375</td>
<td>Ejector Release</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>22</td>
<td>14072</td>
<td>Ejector Pivot</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>23</td>
<td>14736</td>
<td>Ejector Spring</td>
<td>(Restricted)</td>
</tr>
<tr>
<td></td>
<td>32415</td>
<td>Ejector Assembly</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>24</td>
<td>14052</td>
<td>Elevation Screw</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>90532</td>
<td>Extractor</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>14722</td>
<td>Firing Pin</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>14735</td>
<td>Firing Pin Retaining Pin</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>14069</td>
<td>Floor Plate (592)</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>14099</td>
<td>Floor Plate Screw (592)</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>14469</td>
<td>Front Sight</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>14619</td>
<td>Grip Cap</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>25380</td>
<td>Grip Cap Screw</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>14026</td>
<td>Housing</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>34</td>
<td>14031</td>
<td>Housing Pin</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>35</td>
<td>14027</td>
<td>Housing Lock Screw</td>
<td>(Restricted)</td>
</tr>
<tr>
<td></td>
<td>29116</td>
<td>Inner Magazine Tube Assembly (592)</td>
<td>(Restricted)</td>
</tr>
<tr>
<td>36</td>
<td>14096</td>
<td>Inner Magazine Tube</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>14730</td>
<td>Latch</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>30320</td>
<td>Magazine Assembly (591)</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>14095</td>
<td>Magazine Follower (592)</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>14738</td>
<td>Magazine Guide (591)</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>14048</td>
<td>Magazine Latch (591)</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>14049</td>
<td>Magazine Latch Screw (591)</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>25090</td>
<td>Magazine Pin (592)</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>29051</td>
<td>Magazine Plate (591)</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>14099</td>
<td>Magazine Plate Screw (591)</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>26097</td>
<td>Magazine Plug (592)</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>14268</td>
<td>Magazine Spring (592)</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>14813</td>
<td>Magazine Ring (592)</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>14884</td>
<td>Main Spring</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>14286</td>
<td>Outer Magazine Tube (592)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31870</td>
<td>Rear Sight Assembly</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>View No.</th>
<th>Part No.</th>
<th>NAME OF PART</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>14237</td>
<td>Rear Sight Base</td>
</tr>
<tr>
<td>52</td>
<td>14238</td>
<td>Rear Sight Eyepiece</td>
</tr>
<tr>
<td>53</td>
<td>15728</td>
<td>Rear Sight Leaf</td>
</tr>
<tr>
<td>54</td>
<td>14891</td>
<td>Rear Sight Rib</td>
</tr>
<tr>
<td>55</td>
<td>29396</td>
<td>Rear Sight Screw</td>
</tr>
<tr>
<td>56</td>
<td>29129</td>
<td>Receiver Assembly (591)</td>
</tr>
<tr>
<td></td>
<td>29130</td>
<td>Receiver Assembly (592)</td>
</tr>
<tr>
<td>56a</td>
<td>90383</td>
<td>Receiver Cover</td>
</tr>
<tr>
<td>56b</td>
<td>90384</td>
<td>Receiver Cover Screw</td>
</tr>
<tr>
<td>57</td>
<td>14026</td>
<td>Safety Switch</td>
</tr>
<tr>
<td>58</td>
<td>14015</td>
<td>Safety Switch Pivot Pin</td>
</tr>
<tr>
<td>59</td>
<td>14044</td>
<td>Safety Switch Pivot Pin Retaining Washer</td>
</tr>
<tr>
<td>60</td>
<td>14032</td>
<td>Safety Switch Plunger</td>
</tr>
<tr>
<td>61</td>
<td>14029</td>
<td>Safety Switch Plunger Spring</td>
</tr>
<tr>
<td>62</td>
<td>14254</td>
<td>Safety Switch Retaining Screw</td>
</tr>
<tr>
<td>63</td>
<td>14030</td>
<td>Sear</td>
</tr>
<tr>
<td>64</td>
<td>14031</td>
<td>Sear Pin</td>
</tr>
<tr>
<td>65</td>
<td>29059</td>
<td>Stock Assembly (591)</td>
</tr>
<tr>
<td>66</td>
<td>29060</td>
<td>Stock Assembly (592)</td>
</tr>
<tr>
<td>67</td>
<td>29110</td>
<td>Striker Assembly</td>
</tr>
<tr>
<td>68</td>
<td>14014</td>
<td>Striker</td>
</tr>
<tr>
<td>69</td>
<td>14565</td>
<td>Striker Cross Pin</td>
</tr>
<tr>
<td>70</td>
<td>14012</td>
<td>Striker Washer</td>
</tr>
<tr>
<td>71</td>
<td>14071</td>
<td>Take Down Screw (591)</td>
</tr>
<tr>
<td>72</td>
<td>14043</td>
<td>Take Down Screw (592)</td>
</tr>
<tr>
<td>73</td>
<td>14265</td>
<td>Take Down Screw Escutcheon (592)</td>
</tr>
<tr>
<td>74</td>
<td>14033</td>
<td>Trigger</td>
</tr>
<tr>
<td>75</td>
<td>14248</td>
<td>Trigger Guard</td>
</tr>
<tr>
<td>76</td>
<td>14042</td>
<td>Trigger Guard Screw</td>
</tr>
<tr>
<td>77</td>
<td>14240</td>
<td>Windage Screw</td>
</tr>
</tbody>
</table>

## ACCESSORIES

- 25571 Sling Strap Assembly and Mountings, Complete (590 and 591)
- 29090 Sling Strap Assembly and Mountings, Complete (592)

DELIVERIES ARE F.O.B. IJON, N.Y.

PARTS SUBJECT TO CHANGE WITHOUT NOTICE
FOLLOWS DOWN
Cause:
1. Trigger binds.
2. Sear binds.

Correction:
1. Return firearm to the factory.
2. Return firearm to the factory.
3. Replace.
4. Return firearm to the factory.

HEAVY TRIGGER PULL
Cause:
1. Rough notch on sear or trigger.
2. Trigger binds.

Correction:
1. Return firearm to factory.
2. Return firearm to factory.

FAILS TO GROUP
Cause:
1. Bore leaded.
2. Barrel bore damaged at crown.
3. Rough or damaged bore.
4. Loose sights.

Correction:
1. Lead or replace barrel.
2. Re-crown or chamfer muzzle.
3. Replace barrel.
4. Tighten.

FIRES ON SAFE
Cause:
1. Safety switch plunger missing.
2. Bent safe.

Correction:
1. Return firearm to the factory.
2. Return firearm to the factory.

POINT OF IMPACT
Cause:
1. Barrel not straight.
2. Improper or loose sights.

Correction:
1. Straighten or replace.
2. Tighten or change sights.

BULGED OR BLOWN CASES
Cause:
1. Chamber damaged.
2. Maximum head space.
3. Damaged extractor slot in barrel.
4. Faulty ammunition.

Correction:
1. Replace barrel.
2. Replace bolt.
3. Replace barrel.
4. Replace ammunition.

STEMS CHAMBER
Cause:
1. Excessive space between feed lips of clip (591) or cartridge feed insert (592).
2. Extractors out of adjustment or damaged.

Correction:
1. Replace.
2. Adjust or replace.

LIGHT TRIGGER PULL
Cause:
1. Broken down sear notch.
2. Broken down trigger.

Correction:
1. Return firearm to factory.
2. Return firearm to factory.

BOLT OPENS HARD
Cause:
1. Broken cocking piece.
2. Damaged chamber.

Correction:
1. Replace.
2. Polish chamber or replace barrel.
3. Free up or replace.
BOLT BINDS
Cause:
1. Latch damaged.
2. Ejector out of position.

Correction:
1. Replace.
2. Adjust.
3. Adjust or replace bolt.

BOLT CLOSES HARD
Cause:
1. See Bolt Binds.
2. Damaged extractor.

Correction:
1. See Bolt Binds.
2. Replace.

FAILS TO FEED UP (OVER RIDE) 591M
Cause:
1. Position of magazine clip not correct.
2. Follower binds.
3. Damaged ears on magazine clip.

Correction:
1. Adjust or replace clip.
2. Adjust or replace clip.
3. Adjust or replace clip.

FAILS TO FEED UP (M/592)
Cause:
1. Cartridge feed insert ears improperly spaced.
2. Carrier binds.

Correction:
1. Adjust or replace.
2. Free up or replace cartridge feed insert.

FAILS TO FEED BACK (M/592 Only)
Cause:
1. Cartridge feed insert damaged.
2. Inner magazine tube damaged.
3. Weak magazine spring.
4. Carrier binds.
5. Countersink in cartridge feed insert rough or damaged.

Correction:
1. Adjust or replace.
2. Repair or replace.
3. Replace.
5. Free up or replace cartridge feed insert.

FAILS TO EJECT
Cause:
1. Incorrect tension on extractor.
2. Ejector spring damaged.
3. Fouled ejector, ejector retainer, ejector spring, or extractor.
4. Ejector retainer damaged.
5. Latch damaged or out of position.
6. Ejector damaged.

Correction:
1. Adjust or replace.
2. Replace.
3. Clean.
4. Replace.
5. Replace or adjust.
6. Replace.

MISFIRES
Cause:
1. Firing pin protrusion short.
2. Firing pin broken or bent.

Correction:
1. Replace firing pin.
2. Replace firing pin.
3. Adjust or replace.

CYCLE OF OPERATION

The Models 591 M and 592 M are bolt action rifles chambered for the 5mm Remington Rim Fire Magnum cartridge. The 591 is a clip fed repeater and the 592 a tubular magazine repeater.

FIRING

With safety switch in forward stop or FIRE position, rifle can be fired each time by pulling trigger. Pulling trigger will release a spring-loaded striker against firing pin. Firing pin then thrusts forward to indent and fire chambered cartridge. As trigger is pulled, support of trigger under sear is removed. With support removed, cocked engagement of sear against cocking piece is removed. Sear is then forced downward by forward movement of striker. Re-engagement of sear to cock rifle occurs again only during locking cycle.

UNLOCKING

After firing, raising of bolt handle will unlock action. As bolt handle is raised, bolt body is turned. This rotates multiple bolt lugs clear of rear lock-up recesses in receiver. A total bolt lift of approximately 88 degrees completes this cycle. Primary extraction and cocking of bolt also occurs during unlocking cycle. After unlocking, bolt can be pulled back to open action.
COCKING

During unlocking cycle, as bolt handle is raised, bolt is cocked. When bolt rotates to unlock a cam cut on rear of bolt forces striker assembly back until cocking piece engages cocking notch on rear rim of bolt. This engagement holds until bolt handle is lowered again during locking cycle. Engagement is then transferred to sear to cock rifle.

EXTRACTION

After firing cartridge, raising bolt handle and pulling bolt rearward will extract cartridge case from chamber in barrel. Primary extraction occurs as the final lift of bolt handle cams bolt approximately 1/8" back from barrel. This movement unlocks bolt lugs from locking recesses in receiver. At this time, the ejector, which slides axially inside of the receiver, begins the extraction of cartridge case from chamber. During initial extraction of case, the ejector is held to bolt head by the latch and the two parts move rearward together. The latch is disengaged by the ejector release as release is forced inward at tip when contacting a camming surface in receiver. Ejector is then free to return forward under force of ejector spring to original position.

The extractor, having slid down ramp cut on breech end of barrel, is free to complete extraction of cartridge as bolt is moved rearward.

EJECTION

As bolt is pulled rearward, the rim of the cartridge case slides along ejector surface (now in forward position) until rim falls into notches in ejector. Further rearward motion of the bolt pulls ejector rearward, compressing ejector spring. When case clears chamber, ejector is released and snaps forward under force of the compressed ejector spring. This motion, coordinated with the gripping of the extractor, ejects case from ejection port.

In extraction of a loaded round, ejection does not occur until tip of bullet clears chamber.

FEEDING

M/591M – As ejection cycle is completed, bolt clears magazine and is halted by bolt stop. Cartridge is urged upward by magazine spring and follower and held in loading position by feeding lips and follower on magazine.

M/592M – As ejection cycle is completed, bolt clears cartridge feed insert. The following cartridge from tubular magazine is urged back and upward by magazine follower and carrier and stops against feed lips of insert. In both models, this cartridge, thus held in loading position, is then carried forward by the closing bolt and into loading cycle.

LOADING

The cartridge in M/591M loads from feed lips of clip magazine; the cartridge in M/592M loads from feed lips of cartridge feed insert. The bolt, in closing action, carries cartridge forward from loading position into chamber in barrel.

LOCKING

As bolt completes load cycle, bolt handle can be turned down to lock action closed. With handle down, cartridge is securely locked into cartridge chamber of barrel. Two (2) other bolt engagements are made as lock cycle is completed, viz:

1. Multiple locking lugs on bolt are now securely supported in locking recesses in rear of receiver.

2. Cocking engagement of cocking piece on rear rim of bolt is transferred to a sear engagement. Rifle is thus “cocked” for firing cartridge. Trigger can be pulled for firing cycle with safety switch pushed forward to FIRE position.

SAFETY SWITCH

A safety switch plunger in trigger housing with two (2) diameters is spring loaded outward against safety switch.

1. In rear stop SAFE position, large diameter of plunger contacts top front surface of trigger. This prevents movement of trigger to fire rifle.

2. In forward stop FIRE position, small diameter of plunger is in position which permits trigger to be pulled for firing rifle. Small diameter acts as trigger stop.

3. Further pressure of safety switch in forward position ahead of FIRE position depresses bolt stop. This allows bolt to be removed from rifle.