

ILLUSTRATION SHOWS TYPICAL PARTS ONLY. ORDER BY PART NUMBER. PARTS NOT LISTED ARE SUPPLIED BY OEM.



## Engine Parts List #1

| Ref # | Part Number | Qty | Description                                    |
|-------|-------------|-----|--|
| 1     | 33042       |     | Cylinder (Incl. 2, 4, 30 & 47) (3-1/2" Bore)   |
| 2     | 27652       |     | Pin, Dowel                                     |
| 4     | 31950       |     | Seal, Oil                                      |
| 5     | 31940       |     | Intake Valve (Std.)                            |
| 5     | 31941       |     | Intake Valve (1/32" OS) (Incl. 9)              |
| 6     | 31942       |     | Exhaust Valve (Std.)                           |
| 6     | 31943       |     | Exhaust Valve (1/32" OS) (Incl. 9)             |
| 7     | 650592      |     | Key, Flywheel                                  |
| 8     | 31944       |     | Spring, Valve                                  |
| 9A    | 31945       |     | Cap, Lower valve spring (Std.)                 |
| 9A    | 31946       |     | Cap, Lower valve spring (1/32" OS)             |
| 9     | 31946       |     | Cap, Lower valve spring (1/32" OS)             |
| 9     | 31945       |     | Cap, Lower valve spring (Std.)                 |
| 10    | 20810       |     | Pin, Valve spring retainer                     |
| 11    | 33390B      |     | Crankshaft (Incl. 12, 13, 78 & 79)             |
| 12    | 29783       |     | Pin, Crankshaft gear                           |
| 13    | 31931       |     | Gear, Crankshaft                               |
| 14    | 34511       |     | Piston, Pin & Ring Set (Std.) (3-1/2" Bore)    |
| 14    | 34512       |     | Piston, Pin & Ring Set (.010" OS)              |
| 14    | 34513       |     | Piston, Pin & Ring Set (.020" OS)              |
| 14    | 34524       |     | Piston, Pin & Ring Set (.030" OS)              |
| 14    | 34525       |     | Piston, Pin & Ring Set (.040" OS)              |
| 14A   | 32238B      |     | Piston & Pin Ass'y. (Std.)(Incl.16)(3 -1/2")   |
| 14A   | 32239B      |     | Piston & Pin Ass'y. (.010" OS) (Incl. 16)      |
| 14A   | 32240B      |     | Piston & Pin Ass'y. (.020" OS) (Incl. 16)      |
| 14A   | 32621B      |     | Piston & Pin Ass'y. (.030" OS) (Incl. 16)      |
| 14A   | 32622B      |     | Piston & Pin Ass'y. (.040" OS) (Incl. 16)      |
| 15    | 32241       |     | Ring Set (Std.) (3-1/2" Bore)                  |
| 15    | 32242       |     | Ring Set (.010" OS)                            |
| 15    | 32243       |     | Ring Set (.020" OS)                            |
| 15    | 32625       |     | Ring Set (.030" OS)                            |
| 15    | 32626       |     | Ring Set (.040" OS)                            |
| 15    | 32336       |     | Re-Ringing Set, Piston                         |
| 16    | 31919       |     | Ring, Piston pin retaining                     |
| 17    | 33093A      |     | Connecting Rod Ass'y.(Std.)(Incl.18, 19 & 20)  |
| 17    | 34383       |     | Connecting Rod Assy.(.010" US)(Incl.1 8,19,20) |
| 17    | 34384       |     | Connecting Rod Assy.(.020" US)(Incl.1 8,19,20) |
| 18    | 32077       |     | Bolt, Connecting rod                           |
| 19    | 26073       |     | Washer, Connecting rod                         |
| 20    | 28264       |     | Nut Assy., Lock                                |
| 21    | 32150       |     | Camshaft (MCR)                                 |
| 22    | 31939       |     | Lifter, Valve                                  |
| 23    | 32580A      |     | Cover, Cylinder (Incl. 4, 28, 30, 34, & 43)    |
| 23A   | 31956A      |     | * Gasket, Cylinder cover                       |
| 25A   | 29673       |     | * Gasket, Oil fill                             |
| 26    | 33069       |     | Dipstick (Incl. 25A)                           |
| 28    | 32426       |     | Spacer, Governor rod                           |
| 29    | 650588      |     | Screw, 1/4-20 x 2"                             |
| 30    | 31927       |     | Oil Drain Plug                                 |
| 31    | 31968       |     | Link, Governor                                 |
| 32    | 650451      |     | Screw, 1/4-20 x 1"                             |
| 33    | 31964       |     | Clamp, Governor lever                          |
| 34    | 29193       |     | Ring, Retaining                                |
| 35    | 31963       |     | Lever, Governor adjusting                      |
| 36    | 650518      |     | Lockwasher                                     |
| 37    | 650544      |     | Screw, 10-24 x 7/8"                            |
| 38    | 7975        |     | Nut, 10-24                                     |
| 39    | 31965       |     | Plate, Governor spring                         |

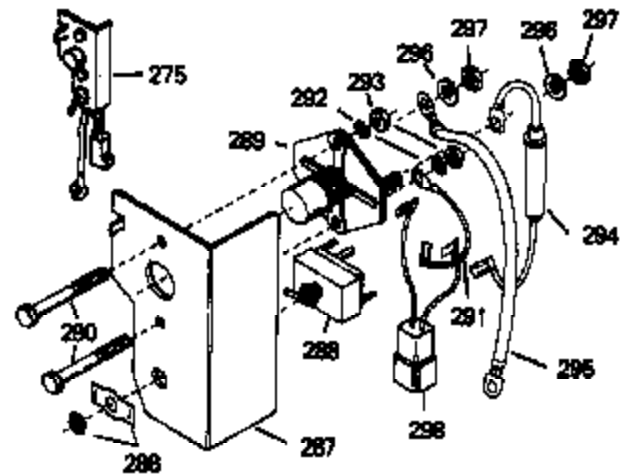
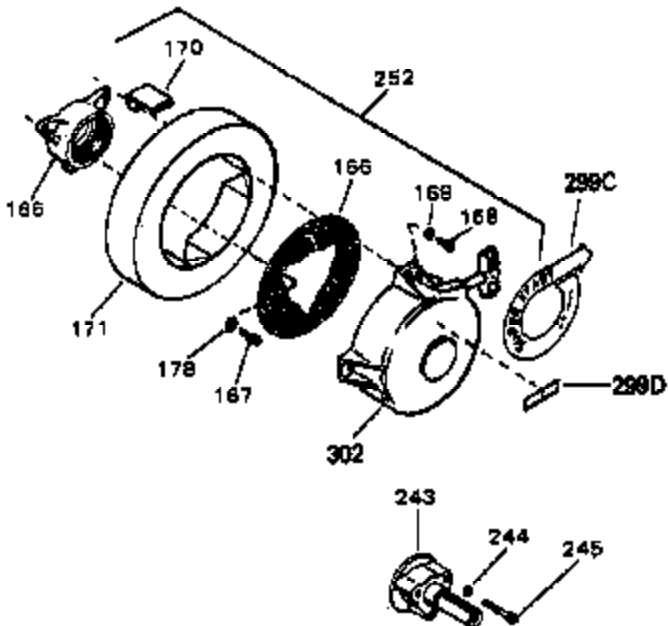
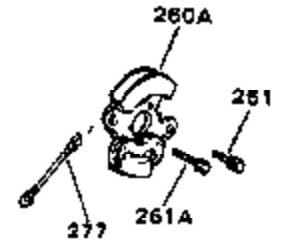
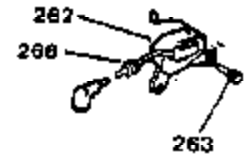
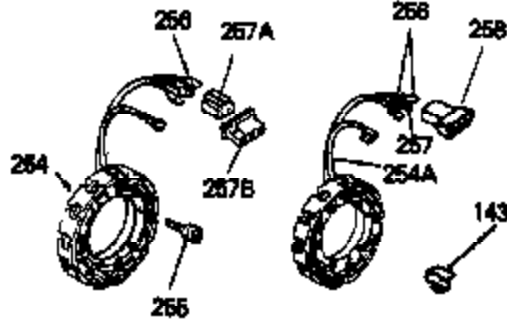
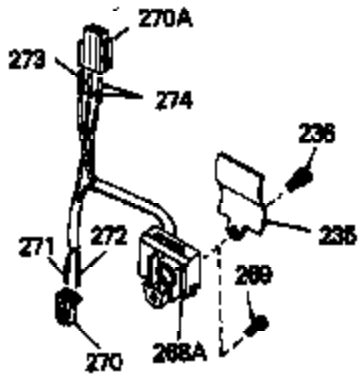
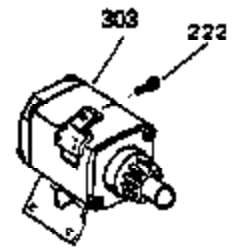
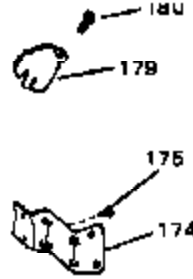
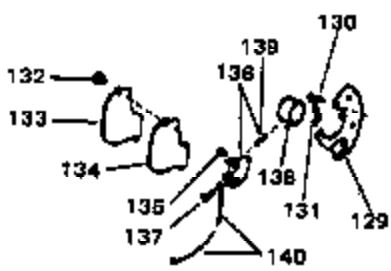
| Ref # | Part Number | Qty | Description   |
|-------|-------------|-----|---|
| 40    | 30312       |     | Screw, 10-32 x 1/2"   |
| 41    | 31967       |     | Spring, Governor  |
| 42    | 30590A      |     | Washer, Flat  |
| 43    | 32425       |     | Rod Assy., Governor   |
| 44    | 31948       |     | Spool, Governor   |
| 45    | 29193       |     | Ring, Retaining   |
| 46    | 31947       |     | Gear Assy., Governor  |
| 47    | 31930       |     | Shaft, Mechanical Governor  |
| 48    | 32246A      |     | * Gasket, Cylinder head   |
| 49    | 33034       |     | Head, Cylinder  |
| 51    | 650694A     |     | Screw, 5/16-18 x 2" (Use as required)   |
| 51    | 650711      |     | Screw, 5/16-18 x 1-5/8" (Use as required)   |
| 51    | 650628A     |     | Screw, 5/16-18 x 2-3/8" (Use as required)   |
| 51    | 650695A     |     | Screw, 5/16-18 x 2-1/4" (Use as required)   |
| 51    | 650714      |     | Screw, 5/16-18 x 1-5/8" (Use as required)   |
| 51    | 650697A     |     | Screw, 5/16-18 x 2-1/2" (Use as required)   |
| 51    | 650692      |     | Screw, 5/16-18 x 1-3/4" (Use as required)   |
| 51    | 650603      |     | Screw, 5/16-18 x 5/8" (Use as required)   |
| 53    | 33636       |     | Resistor Spark Plug (RJ-8C)   |
| 53    | 34251       |     | Resistor Spark Plug (RJ-17LM)   |
| 54    | 33035       |     | Cover, Cylinder head  |
| 55    | 28537       |     | Washer, Plain   |
| 57    | 650691      |     | Washer, Flat (Use as required)  |
| 58    | 650690      |     | Washer, Belleville (Use as required)  |
| 58    | 8274        |     | Washer, Lock (Use as required)  |
| 59    | 650128      |     | Screw, 10-24 x 1/2"   |
| 60    | 31976       |     | Extension, Blower housing   |
| 61    | 31978       |     | Bracket, Fuel tank  |
| 63    | 410144B     |     | Fuel Cap (White Plastic)(Std.)(As required)   |
| 63    | 34210       |     | Fuel Cap (Red Plastic) (Spurt resistant, High profile) (Use as required)  |
| 64    | 31979       |     | Strap, Fuel tank  |
| 65    | 650451      |     | Screw, 1/4-20 x 1"  |
| 66    | 650456      |     | Nut, Flange whiz-lock, 1/4-20   |
| 67    | 650517      |     | Screw, 1/4-20 x 27/32" (Use as required)  |
| 67    | 650561      |     | Screw, 1/4-20 x 5/8" (Use as required)  |
| 67    | 30063       |     | Screw, 1/4-20 x 1/2" (Use as required)  |
| 67    | 792028      |     | Screw, 5/16-18 x 7/8" (Use as required)   |
| 70B   | 29683       |     | Strainer & Shut-off, Fuel   |
| 71    | 26460       |     | Clamp, Fuel line (Use as required)  |
| 72    | 30705       |     | Fuel Line (Braided) (16") (Use as required)   |
| 72    | 30962       |     | Fuel Line (Braided) (32") (Use as required)   |
| 72    | 30965       |     | Fuel Line (Braided) (48") (Use as required)   |
| 72    | 29774       |     | Fuel Line (Braided) (8.25") (Use as required)   |
| 73    | 31975       |     | Baffle, Blower housing  |
| 74    | 650561      |     | Screw, 1/4-20 x 5/8"  |
| 75    | 33356       |     | Terminal  |
| 76    | 28545       |     | Grommet, Plastic  |
| 77    | 650760      |     | Screw, 8-32 x 3/8"  |
| 78    | 31932       |     | Bearing, Tapered roller   |
| 79    | 31928       |     | Cup, Bearing  |
| 80    | 32031       |     | Spacer, Steel (.010" thick) NOTE: Determine the gap between the cover and the machined surface on the cylinder which can be from .001" up to .007" in which case no shim gaskets will be required. Use of gasket must be limited to a combined total of .010" thick. Steel spacers must be used as required |

| Ref # | Part Number | Qty | Description   |
|-------|-------------|-----|---|
| 81    | 31971       |     | * Gasket, Shim (.004/.005 thick) NOTE: Determine the gap between the cover and the machined surface on the cylinder which can be from .001" up to .007" in which case no shim gaskets will be required. Use of gasket must be limited to a combined total of .010" thick. Steel spacers must be used as req |
| 82    | 31972       |     | * Gasket, Shim (.005/.007 thick) NOTE: Determine the gap between the cover and the machined surface on the cylinder which can be from .001" up to .007" in which case no shim gaskets will be required. Use of gasket must be limited to a combined total of .010" thick. Steel spacers must be used as req |
| 82A   | 32599       |     | "O" Ring  |
| 83    | 32677       |     | Cover, Cylinder NOTE: Determine the gap between the cover and the machined surface on the cylinder which can be from .001" up to .007" in which case no shim gaskets will be required. Use of gasket must be limited to a combined total of .010" thick. Steel spacers must be used as required to eliminat |
| 84    | 650668      |     | Screw, 10-32 x 1"   |
| 84A   | 650679      |     | Lockwasher, 5/16" (Use as required)   |
| 85    | 650666      |     | Washer, Lock  |
| 86    | 650594      |     | Nut, Flywheel, 3/4-16   |
| 87    | 33037       |     | Blower Housing  |
| 91    | 8274        |     | Washer, Lock  |
| 92    | 650595      |     | Screw, 5/16-24 x 3/8"   |
| 93    | 32039       |     | Switch, Stop  |
| 94    | 650890      |     | Washer, Shakeproof  |
| 95    | 26073       |     | Washer, Flat  |
| 96    | 650624      |     | Screw, 5/16-24 x 9/16"  |
| 98    | 31958       |     | * Gasket, Breather  |
| 99    | 31957       |     | Breather Assy.  |
| 100   | 35350       |     | Tube, Breather  |
| 101   | 650128      |     | Screw, 10-24 x 1/2"   |
| 102   | 28558       |     | Washer, Wave  |
| 103   | 31966       |     | Bushing, Control lever  |
| 104   | 31984A      |     | Lever, Control  |
| 105   | 650597      |     | Screw, 10-24 x 5/8"   |
| 106   | 650591      |     | Screw, 10-24 x 2"   |
| 107   | 33099       |     | Spring  |
| 108   | 32042       |     | Nipple, Exhaust pipe  |
| 109   | 32043B      |     | Muffler   |
| 112   | 33038       |     | Plug, Button (Use as required)  |
| 113   | 29752       |     | Nut & Lockwasher Assy.  |
| 114   | 650587      |     | Stud, Carburetor  |
| 115   | 27272       |     | * Gasket, Air cleaner   |
| 120   | 650399      |     | Screw, 10-32 x 5/8"   |
| 121   | 30767       |     | Spacer, Air cleaner   |
| 122D  | 32378       |     | Bracket, Air cleaner  |
| 122E  | 32376       |     | Bracket, Air cleaner  |
| 125A  | 32009       |     | Cover, Air cleaner  |
| 126   | 650513      |     | Nut, Wing   |
| 128   | 650713      |     | Screw, 5/16-18 x 5/8" (Use as require d)  |
| 128   | 650429      |     | Screw, 5/16-18 x 3/4" (Use as require d)  |
| 128   | 792028      |     | Screw, 5/16-18 x 7/8" (Use as require d)  |
| 141A  | 8274        |     | Lockwasher, Split (Use as required)   |

| Ref # | Part Number | Qty | Description  |
|-------|-------------|-----|--|
| 141   | 26073       |     | Washer, Flat (Use as required)   |
| 145   | 31960       |     | * Gasket, Carburetor   |
| 147   | 31959       |     | Baffle, Air  |
| 156   | 730201      |     | Trigger Pin Kit (Use as required)  |
| 173   | 610118      |     | Cover, Spark plug (Use as required)  |
| 176   | 31992       |     | Spacer, Screen   |
| 177   | 8345        |     | Washer, 1/4 plain (Use as required)  |
| 178   | 27070       |     | Washer, Lock 1/4 E.T. (Use as required)  |
| 178   | 650675      |     | Washer, Flat 1/4 (Use as required)   |
| 184   | 27793       |     | Clip, Conduit  |
| 185   | 28942       |     | Screw, 10-32 x 3/8"  |
| 187   | 650713      |     | Screw, 5/16-18 x 5/8"  |
| 188   | 26073       |     | Washer, Flat   |
| 246   | 33776       |     | Screen, Starter pulley   |
| 247   | 31980       |     | Pulley, Starter  |
| 248   | 650680      |     | Screw, 1/4-20 x 1-1/2"   |
| 249   | 32046       |     | Rope Assy., Starter (Use as required)  |
| 266   | 610750      |     | Grommet, Lead wire   |
| 278   | 610758      |     | Flywheel   |
| 299B  | 550223      |     | Decal, Name  |
| 299B  | 32676       |     | Decal, Solid State   |
| 299   | 34346       |     | Decal, Instruction   |
| 299A  | 31752       |     | Decal, Air cleaner   |
| 300   | 32255A      |     | Valve, Seat, Spring & Gasket Assy.   |
| 301   | 631533      |     | Carburetor (Incl. 145) (Refer to Division 5, Section A, page 94 for breakdown) |
| 304   | 33237A      |     | * Gasket Set (Incl. items marked *)  |

This illustration may not depict actual equipment and is for reference only!

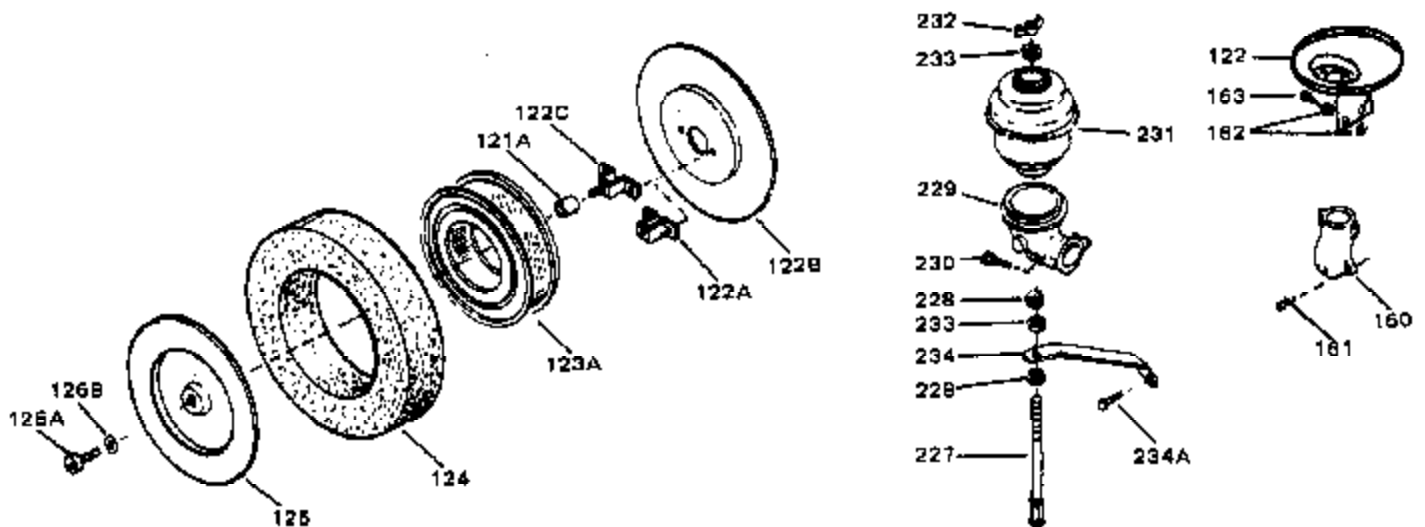
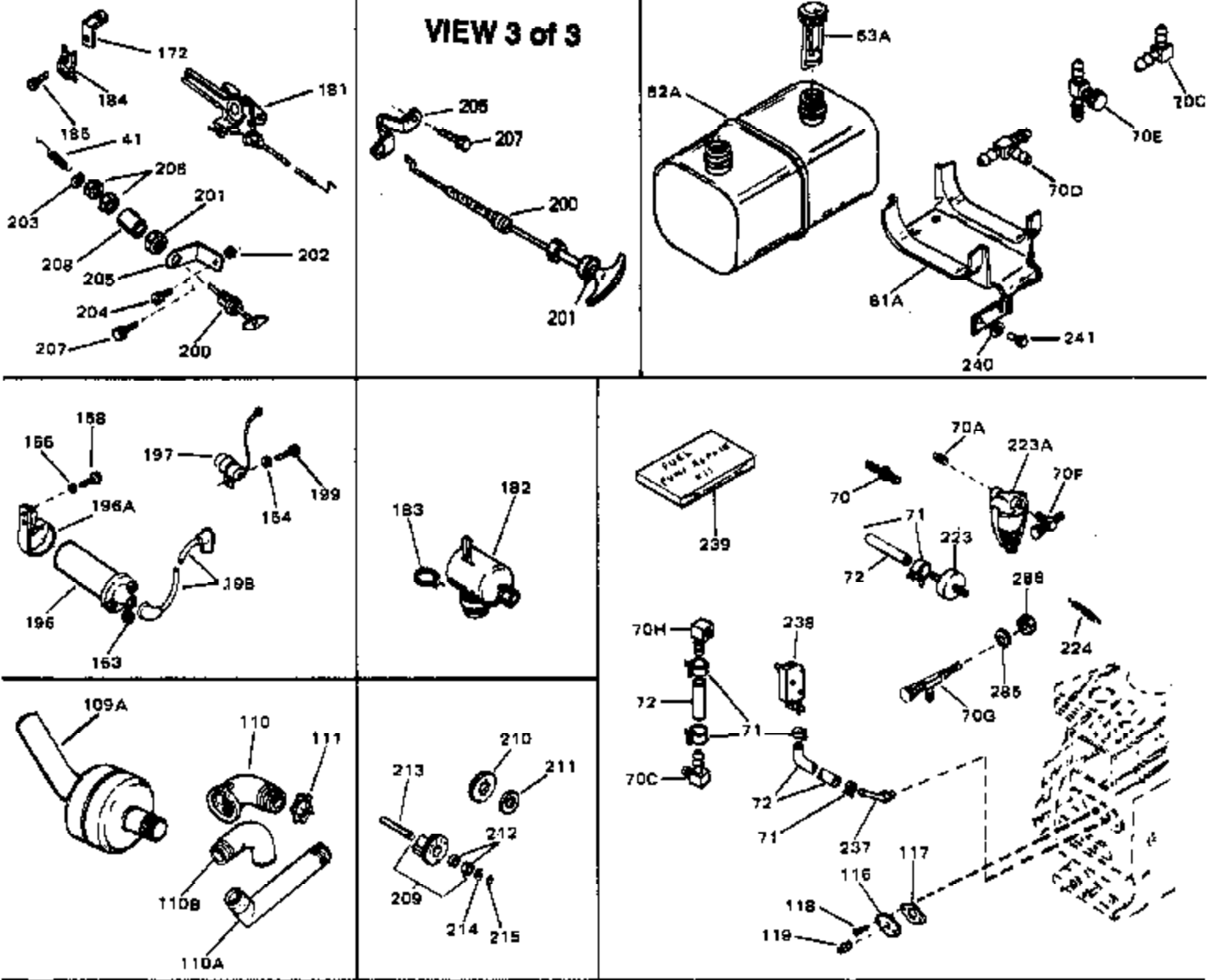
VIEW 2 of 3



| Ref # | Part Number | Qty | Description   |
|-------|-------------|-----|---|
| 178   | 27070       |     | Washer, Lock 1/4 E.T. (Use as require d)  |
| 178   | 650675      |     | Washer, Flat 1/4 (Use as required)  |
| 180   | 650701      |     | Screw, 8-18 x 7/16" (Use as required)   |
| 222   | 792028      |     | Screw, 5/16-18 x 7/8" (Use w/32817 st r.motor)                                    |
| 222   | 650781      |     | Screw,5/16-18 x 11/16"(Use w/33835 st r.motor)                                    |
| 235   | 34276       |     | Plate, Cover (Use as required to cover regulator mounting hole in blower housing) |
| 236   | 650736      |     | Screw, 10-16 x 3/8" (Use as required)   |
| 252   | 730134      |     | Rewind Starter Kit (Incl. 165, 166, 167, 168, 169 & 291) (Use as required)        |
| 253   | 33018       |     | Harness Assy., Adapter (Use as requir ed)   |
| 257B  | 610824      |     | Flat Connector (Female terminals) (As req.)                                       |
| 260A  | 610759      |     | Solid State Magneto   |
| 261   | 650489      |     | Screw, 1/4-20 x 5/8"  |
| 261A  | 650669      |     | Screw, 5/16-18 x 1-1/4"   |
| 262   | 610760      |     | Solid State Transformer Ass'y.(Incl.1 73,266)                                     |
| 263   | 650561      |     | Screw, 1/4-20 x 5/8"  |
| 266   | 610750      |     | Grommet, Lead wire  |
| 275   | 730198      |     | Starter Switch Kit(Incl. 287-298) (As req.)                                       |
| 277   | 30831       |     | Ground Wire (Incl. 75)  |

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VIEW 3 of 3





| Ref # | Part Number | Qty | Description                                   |
|-------|-------------|-----|---|
| 41    | 31967       |     | Spring, Governor                              |
| 62A   | 31977       |     | Fuel Tank (Incl. 63)                          |
| 70    | 29634       |     | Fitting, Fuel line                            |
| 71    | 26460       |     | Clamp, Fuel line (Use as required)            |
| 72    | 30705       |     | Fuel Line (Braided) (16") (Use as required)   |
| 72    | 30962       |     | Fuel Line (Braided) (32") (Use as required)   |
| 72    | 30965       |     | Fuel Line (Braided) (48") (Use as required)   |
| 72    | 29774       |     | Fuel Line (Braided) (8.25") (Use as required) |
| 119   | 28534       |     | Pipe Plug, 1/8-27 (Use as required)           |
| 119   | 9556        |     | Plug, Pipe, 1/8-27 (Use as required)          |
| 123A  | 32008       |     | Element, Air cleaner                          |
| 184   | 27793       |     | Clip, Conduit                                 |
| 185   | 28942       |     | Screw, 10-32 x 3/8"                           |