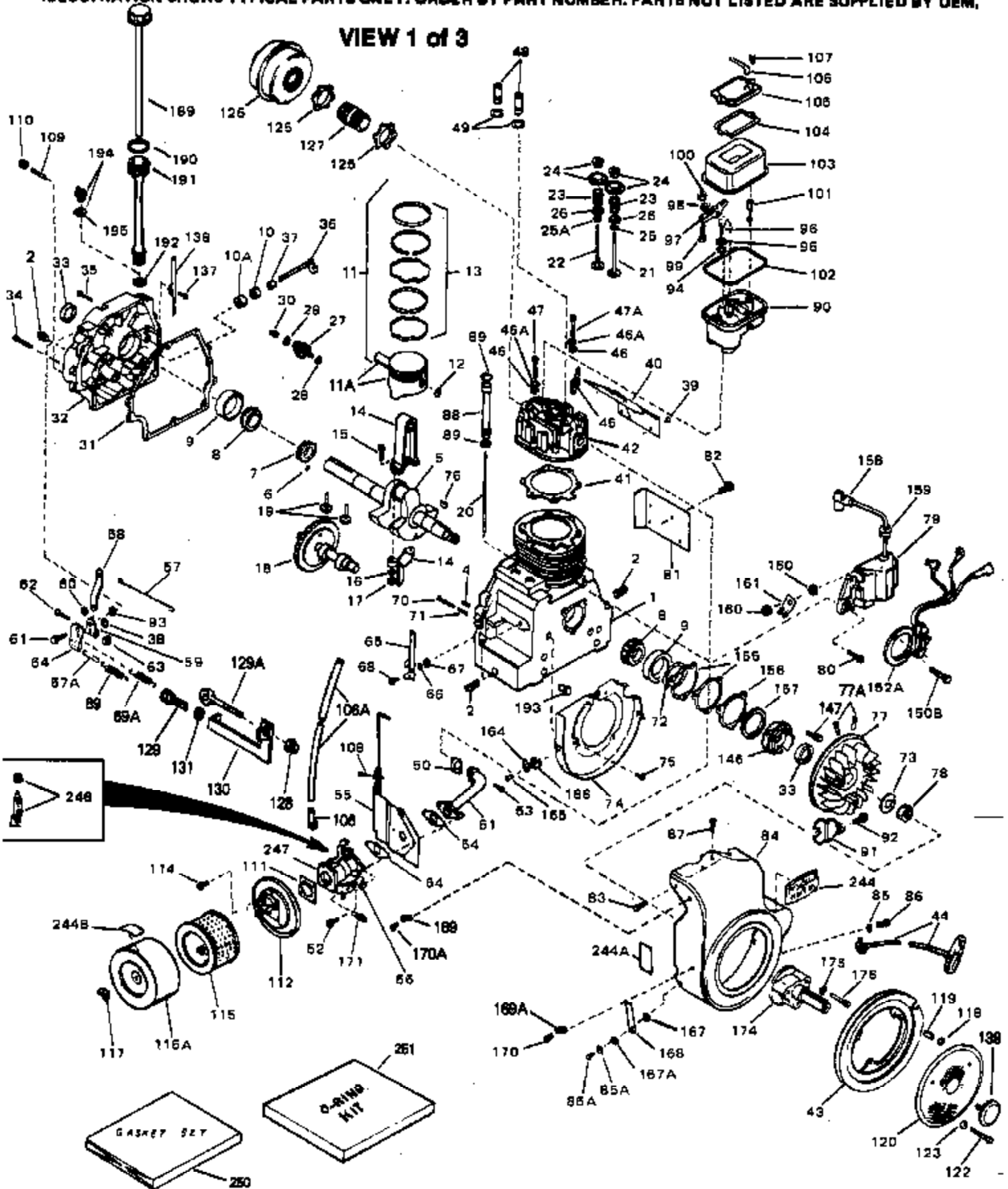


ILLUSTRATION SHOWS TYPICAL PARTS ONLY. ORDER BY PART NUMBER. PARTS NOT LISTED ARE SUPPLIED BY OEM.

VIEW 1 of 3



## Engine Parts List #1

| Ref # | Part Number | Qty | Description                                                                                                                                                                                                                                                          |
|-------|-------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | 34291A      |     | Cylinder (Incl. 2, 4 & 33) (3-1/8" Bore)                                                                                                                                                                                                                             |
| 2     | 31927       |     | Pipe Plug, 3/8-18 sq. head (Use as required)                                                                                                                                                                                                                         |
| 2     | 28483       |     | Pipe Plug (3/8-18 hex countersunk) (As req.)                                                                                                                                                                                                                         |
| 2     |             |     | Pipe Plug (3/4-14 sq.hd.)(As req.)(Buy local)                                                                                                                                                                                                                        |
| 2     | 9556        |     | Pipe Plug (1/8-27 sq. hd.) (Use as required)                                                                                                                                                                                                                         |
| 2     | 28534       |     | Pipe Plug(1/8-27 hex c/sunk headless) (As req)                                                                                                                                                                                                                       |
| 4     | 27652       |     | Pin, Dowel                                                                                                                                                                                                                                                           |
| 5     | 34278B      |     | Crankshaft (Incl. 6 thru 9) NOTE: When using this crankshaft to repair older units equipped with straight cut cam and governor gears, it will be necessary to order 34751 helical governor gear assembly and 34752 helical camshaft in order to complete the repair. |
| 6     | 29783       |     | Pin, Crankshaft gear                                                                                                                                                                                                                                                 |
| 7     | 34692       |     | Gear Crankshaft (Helical)                                                                                                                                                                                                                                            |
| 8     | 31932       |     | Bearing, Tapered roller                                                                                                                                                                                                                                              |
| 9     | 31928       |     | Cup, Bearing                                                                                                                                                                                                                                                         |
| 11    | 34546       |     | Piston, Pin & Ring Set (Std.) (3-1/8" Bore)                                                                                                                                                                                                                          |
| 11    | 34547       |     | Piston, Pin & Ring Set (.010" OS)                                                                                                                                                                                                                                    |
| 11    | 34548       |     | Piston, Pin & Ring Set (.020" OS)                                                                                                                                                                                                                                    |
| 11A   | 34292B      |     | Piston & Pin Ass'y. (Std.)(3-1/8")(Incl. 12)                                                                                                                                                                                                                         |
| 11A   | 34293B      |     | Piston & Pin Ass'y. (.010" OS) (Incl. 12)                                                                                                                                                                                                                            |
| 11A   | 34294B      |     | Piston & Pin Ass'y. (.020" OS) (Incl. 12)                                                                                                                                                                                                                            |
| 12    | 31919       |     | Ring, Piston pin retaining                                                                                                                                                                                                                                           |
| 13    | 34297       |     | Ring Set (Std.) (3-1/8" Bore)                                                                                                                                                                                                                                        |
| 13    | 34298       |     | Ring Set (.010" OS)                                                                                                                                                                                                                                                  |
| 13    | 34299       |     | Ring Set (.020" OS)                                                                                                                                                                                                                                                  |
| 14    | 33093A      |     | Connecting Rod Assy.(Std.)(Incl. 15, 16 & 17)                                                                                                                                                                                                                        |
| 14    | 34383       |     | Connecting Rod Assy.(.010" US)(Incl. 15, 16, 17)                                                                                                                                                                                                                     |
| 14    | 34384       |     | Connecting Rod Assy.(.020" US)(Incl. 15, 16, 17)                                                                                                                                                                                                                     |
| 15    | 32077       |     | Bolt, Connecting rod                                                                                                                                                                                                                                                 |
| 16    | 26073       |     | Washer, Connecting rod                                                                                                                                                                                                                                               |
| 17    | 28264       |     | Nut Assy.                                                                                                                                                                                                                                                            |
| 18    | 34752       |     | Camshaft (MCR) (Helical)                                                                                                                                                                                                                                             |
| 19    | 33472       |     | Lifter, Valve                                                                                                                                                                                                                                                        |
| 20    | 33471       |     | Rod, Push                                                                                                                                                                                                                                                            |
| 21    | 33505       |     | Intake Valve (Std.)                                                                                                                                                                                                                                                  |
| 21    | 33645       |     | Intake Valve (1/32" OS)                                                                                                                                                                                                                                              |
| 22    | 33506       |     | Exhaust Valve (Std.)                                                                                                                                                                                                                                                 |
| 22    | 33646       |     | Exhaust Valve (1/32" OS)                                                                                                                                                                                                                                             |
| 23    | 33507       |     | Spring, Valve                                                                                                                                                                                                                                                        |
| 24    | 33508       |     | Retainer & Cap Set, Keeper valve                                                                                                                                                                                                                                     |
| 25    | 33509       |     | * "O" Ring (Intake only) (Also Incl. in 251)                                                                                                                                                                                                                         |
| 25A   | 34410       |     | * "O" Ring (Exhaust only) (Also Incl. in 251)                                                                                                                                                                                                                        |
| 26    | 33510       |     | Cap, Valve                                                                                                                                                                                                                                                           |
| 27    | 34751       |     | Governor Gear Ass'y. (Helical)                                                                                                                                                                                                                                       |
| 28    | 650745      |     | Washer, Flat                                                                                                                                                                                                                                                         |
| 29    | 35479       |     | Washer, Flat (Use with 35322 spool)                                                                                                                                                                                                                                  |
| 30    | 35322       |     | Spool, Governor                                                                                                                                                                                                                                                      |
| 31    | 31956B      |     | * Gasket, Cylinder cover                                                                                                                                                                                                                                             |
| 32    | 32685       |     | Cyl. Cover Assy. (Incl. 2, 33, 36, 37, 38, 19 4 & 195)                                                                                                                                                                                                               |
| 33    | 31950       |     | * Seal, Oil                                                                                                                                                                                                                                                          |
| 34    | 650451      |     | Screw, 1/4-20 x 1"                                                                                                                                                                                                                                                   |
| 35    | 650588      |     | Screw, 1/4-20 x 2"                                                                                                                                                                                                                                                   |
| 36    | 32425       |     | Rod Assy., Governor                                                                                                                                                                                                                                                  |
| 37    | 32426       |     | Spacer, Governor rod                                                                                                                                                                                                                                                 |
| 38    | 29193       |     | Ring, Retaining                                                                                                                                                                                                                                                      |
| 39    | 650736      |     | Screw, 10-16 x 3/8"                                                                                                                                                                                                                                                  |

## Engine Parts List #1

| Ref # | Part Number | Qty | Description                                     |
|-------|-------------|-----|-------------------------------------------------|
| 40    | 33495       |     | Cover, Cylinder head                            |
| 41    | 34302A      |     | * Gasket, Cylinder head                         |
| 42    | 34767       |     | Head, Cylinder                                  |
| 43    | 31980       |     | Pulley, Starter                                 |
| 44    | 32046       |     | Rope Assy., Starter                             |
| 45    | 35552       |     | Spark Plug (RL-82C)                             |
| 46A   | 650691      |     | Washer, Flat                                    |
| 46    | 650690      |     | Washer, Belleville                              |
| 47A   | 650746      |     | Screw, 5/16-18 x 1-3/8"                         |
| 47    | 650692      |     | Screw, 5/16-18 x 1-3/4"                         |
| 48    | 730218      |     | Valve Guide Kit (Incl. 49)                      |
| 49    | 792035      |     | Ring, Retaining                                 |
| 50    | 33515A      |     | * Gasket, Intake pipe                           |
| 51    | 33475       |     | Pipe, Intake                                    |
| 52    | 650378      |     | Screw, Torx T-30, 5/16-18 x 1-1/8"              |
| 53    | 792028      |     | Screw, 5/16-18 x 7/8"                           |
| 54    | 33476A      |     | * Gasket, Carburetor                            |
| 55    | 33477A      |     | Baffle, Air cleaner                             |
| 56    | 792075      |     | Nut, Lock 5/16-24 (Used in early production)    |
| 57    | 33478       |     | Link, Governor lever-to-throttle lever          |
| 58    | 31963       |     | Lever, Governor                                 |
| 59    | 31964       |     | Clamp, Governor lever                           |
| 60    | 650518      |     | Lockwasher, No. 10 E.T.                         |
| 61    | 30312       |     | Screw, 10-32 x 1/2"                             |
| 62    | 650544      |     | Screw, Torx T-25, 10-24 x 7/8"                  |
| 63    | 7975        |     | Nut, 10-24                                      |
| 64    | 31965       |     | Plate, Governor spring                          |
| 65    | 31984A      |     | Lever Assy., Control                            |
| 66    | 28558       |     | Washer, Wave                                    |
| 67    | 31966       |     | Bushing, Governor lever                         |
| 68    | 650597      |     | Screw, 10-24 x 5/8"                             |
| 69    | 31967       |     | Spring, Governor                                |
| 70    | 650591      |     | Screw, 10-24 x 2"                               |
| 71    | 33099       |     | Spring                                          |
| 72    | 32599       |     | "O" Ring (Incl. in 251)                         |
| 73    | 650666      |     | Washer, Lock                                    |
| 74    | 32579       |     | Baffle, Blower housing                          |
| 75    | 650561      |     | Screw, 1/4-20 x 5/8"                            |
| 76    | 650592      |     | Key, Flywheel                                   |
| 77A   | 730201      |     | Trigger Pin Kit (Use as required)               |
| 77    | 610909      |     | Flywheel                                        |
| 78    | 650594      |     | Nut, Flywheel                                   |
| 79    | 610906      |     | Solid State Magneto (Incl. 158 thru 161)        |
| 80    | 650661      |     | Screw, 1/4-20 x 3/4"                            |
| 81    | 33479       |     | Extension, Blower housing                       |
| 83    | 650751      |     | Screw, 1/4-20 x 7/16"                           |
| 84    | 34195B      |     | Blower Hsg.(Incl.218,219)(For electric starter) |
| 85A   | 8274        |     | Washer, Lock                                    |
| 85    | 8274        |     | Washer, Lock                                    |
| 86    | 650595      |     | Screw, 5/16-24 x 3/8"                           |
| 86A   | 650595      |     | Screw, 5/16-24 x 3/8"                           |
| 87    | 650752      |     | Screw, 1/4-20 x 7/16"                           |
| 88    | 35475       |     | Tube, Push rod                                  |
| 89    | 33481       |     | * "O" Ring (Also Incl. in 251)                  |
| 90    | 34754       |     | Housing, Rocker arm                             |
| 94    | 33484       |     | * "O" Ring (Also Incl. in 251)                  |
| 95    | 650168      |     | Washer, Flat                                    |
| 96    | 32610A      |     | Screw, 1/4-20 x 29/32"                          |

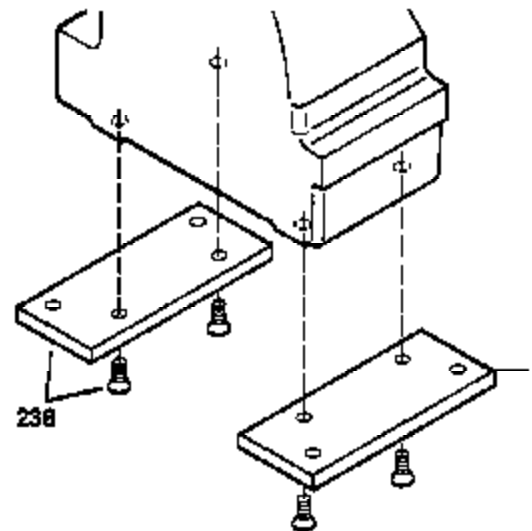
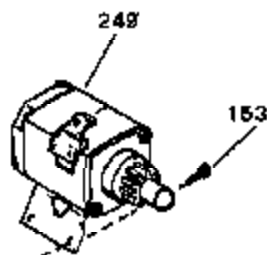
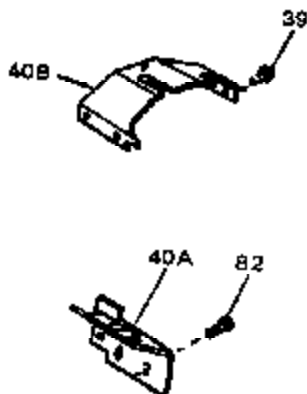
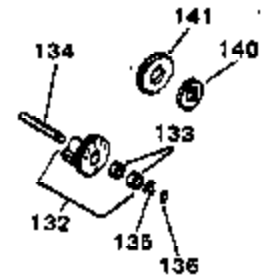
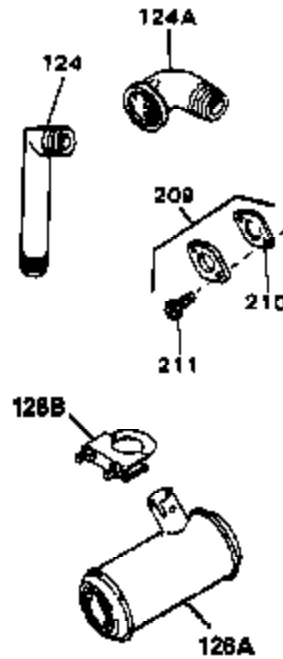
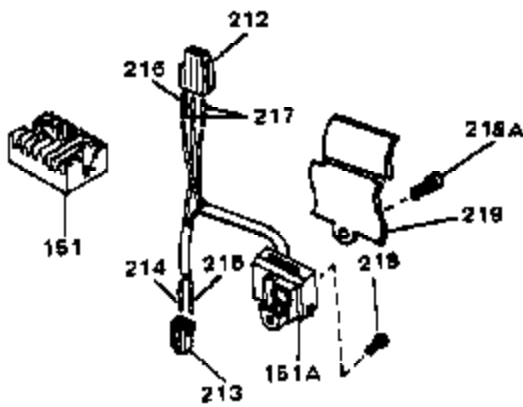
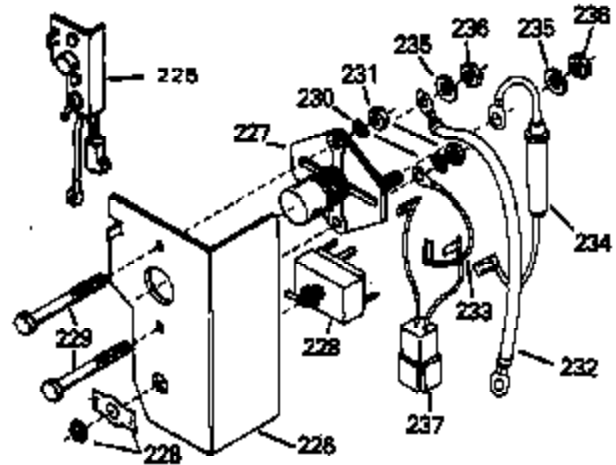
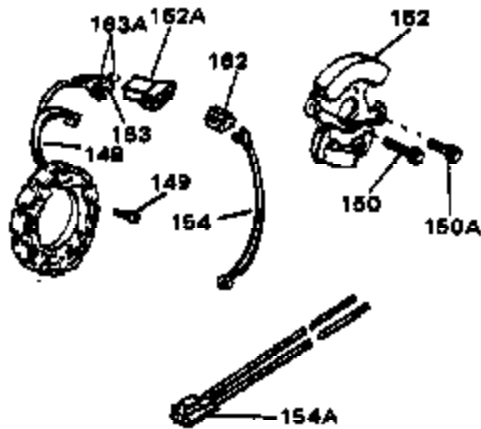
| Ref # | Part Number | Qty | Description                                                                                                                                                                                                                                                                                               |
|-------|-------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 97    | 33485       |     | Arm, Rocker                                                                                                                                                                                                                                                                                               |
| 98    | 33486       |     | Ring, Retaining                                                                                                                                                                                                                                                                                           |
| 99    | 650755      |     | Screw, 1/4-20 x 3/4"                                                                                                                                                                                                                                                                                      |
| 100   | 650864      |     | Nut, Hex, 1/4-20                                                                                                                                                                                                                                                                                          |
| 101   | 650756      |     | Stud, Rocker arm                                                                                                                                                                                                                                                                                          |
| 102   | 33487       |     | * "O" Ring (Also Incl. in 251)                                                                                                                                                                                                                                                                            |
| 103   | 33488       |     | Cover, Rocker arm                                                                                                                                                                                                                                                                                         |
| 104   | 31958A      |     | * Gasket, Breather (Also Incl. in 251)                                                                                                                                                                                                                                                                    |
| 105   | 33489       |     | Body Assy., Breather                                                                                                                                                                                                                                                                                      |
| 106   | 33490       |     | Tube, Breather                                                                                                                                                                                                                                                                                            |
| 107   | 30102       |     | * Screw, 10-32 x 5/8" (Also Incl. in 25 1)                                                                                                                                                                                                                                                                |
| 108   | 650738      |     | Screw, 1/4-20 x 5/8"                                                                                                                                                                                                                                                                                      |
| 111   | 35471       |     | * Gasket, Air cleaner                                                                                                                                                                                                                                                                                     |
| 114   | 650399      |     | Screw, 10-32 x 5/8"                                                                                                                                                                                                                                                                                       |
| 115   | 32008       |     | Element, Air cleaner                                                                                                                                                                                                                                                                                      |
| 117   | 650513      |     | Nut, Wing                                                                                                                                                                                                                                                                                                 |
| 119   | 31992       |     | Spacer, Screen                                                                                                                                                                                                                                                                                            |
| 120   | 33776       |     | Screen, Pulley                                                                                                                                                                                                                                                                                            |
| 122   | 650680      |     | Screw, 1/4-20 x 1-1/2"                                                                                                                                                                                                                                                                                    |
| 123   | 27070       |     | Washer, Lock                                                                                                                                                                                                                                                                                              |
| 125   | 650590      |     | Nut, Conduit                                                                                                                                                                                                                                                                                              |
| 126   | 32043B      |     | Muffler                                                                                                                                                                                                                                                                                                   |
| 127   | 32143       |     | Nipple, Exhaust                                                                                                                                                                                                                                                                                           |
| 146   | 32577       |     | 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 gaskets must be limited to a combined total of .010" thick. Steel spacers must be used as required to eli |
| 147   | 792028      |     | Screw, 5/16-18 x 7/8"                                                                                                                                                                                                                                                                                     |
| 155   | 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 gaskets must be limited to a combined total of .010" thick. Steel spacers must be used a |
| 156   | 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 gaskets must be limited to a combined total of .010" thick. Steel spacers must be used a |
| 157   | 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 gaskets must be limited to a combined total of .010" thick. Steel spacers must be used as re |
| 158   | 610118      |     | Cover, Spark plug                                                                                                                                                                                                                                                                                         |
| 159   | 610750      |     | Grommet, Lead wire                                                                                                                                                                                                                                                                                        |
| 160   | 610408      |     | Nut, 8-32                                                                                                                                                                                                                                                                                                 |
| 161   | 610908      |     | Terminal, Female                                                                                                                                                                                                                                                                                          |
| 169A  | 27793       |     | Clip, Conduit                                                                                                                                                                                                                                                                                             |
| 170   | 28942       |     | Screw, 10-32 x 3/8"                                                                                                                                                                                                                                                                                       |
| 171   | 29634       |     | Fitting, Fuel line                                                                                                                                                                                                                                                                                        |
| 189   | 33068       |     | Dipstick (Incl. 190)                                                                                                                                                                                                                                                                                      |
| 190   | 29985       |     | "O" Ring                                                                                                                                                                                                                                                                                                  |

## Engine Parts List #1

| Ref # | Part Number | Qty | Description                                                                          |
|-------|-------------|-----|--------------------------------------------------------------------------------------|
| 191   | 32352       |     | Tube, Oil filler                                                                     |
| 192   | 29673       |     | * Gasket, Oil filler tube                                                            |
| 244   | 34346       |     | Decal, Instruction                                                                   |
| 244A  | 35532       |     | Decal, Name                                                                          |
| 244B  | 31752       |     | Decal, Air cleaner                                                                   |
| 246   | 631687      |     | Valve, Seat & Spring Assy.                                                           |
| 247   | 632506      |     | Carburetor (Incl. 54 & 246) (Refer to Division 5, Section A, page 204 for breakdown) |
| 250   | 33516G      |     | * Gasket Set (Incl. items marked *)                                                  |
| 251   | 35075       |     | "O" Ring Kit (Incl. Nos. items marked +)                                             |

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

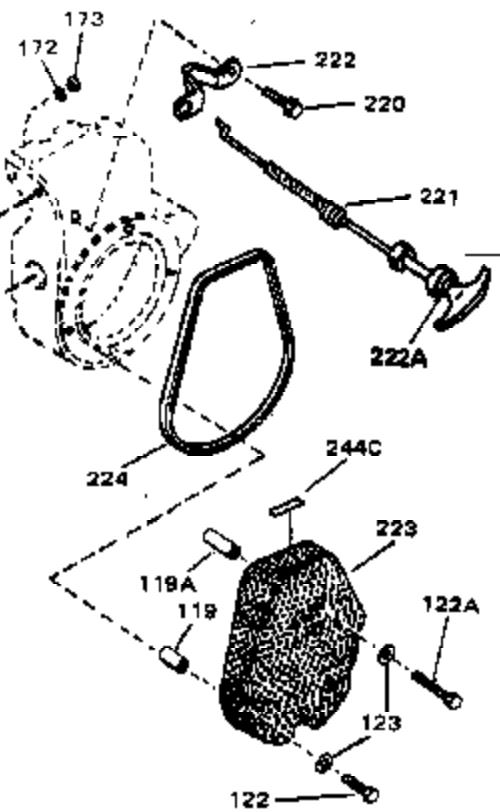
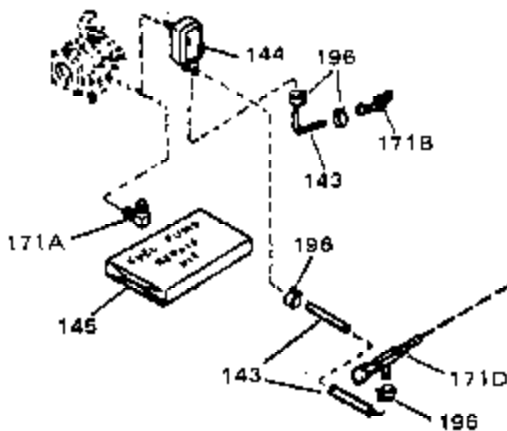
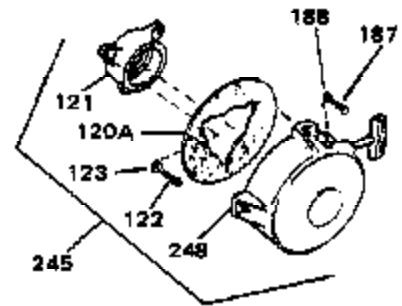
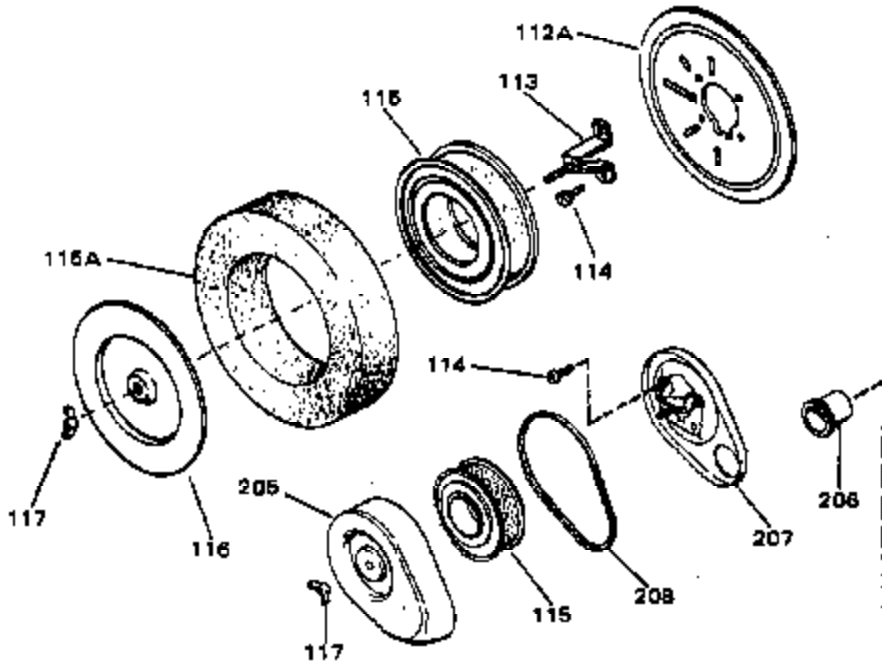
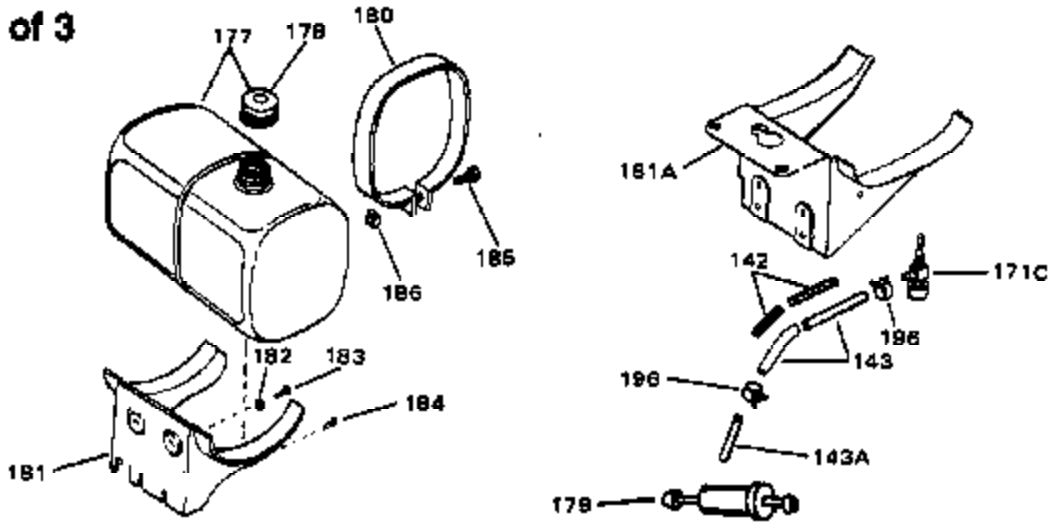
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| Ref # | Part Number | Qty | Description                                                                                                                                                                                                                                                                                                 |
|-------|-------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 39    | 650736      |     | Screw, 10-16 x 3/8"                                                                                                                                                                                                                                                                                         |
| 126A  | 35731       |     | Muffler (Incl. 126B)                                                                                                                                                                                                                                                                                        |
| 141   |             |     | Gear, Counterbalance weight (Straight teeth) (For replacement see Ref. 132. Order correct kit for your enginemodel number.)                                                                                                                                                                                 |
| 148   | 610902      |     | Alt.Coil Ass'y. (Incl.162,163,163A) ( 20 amp)                                                                                                                                                                                                                                                               |
| 149   | 650521      |     | Screw, 10-32 x 1-1/8"                                                                                                                                                                                                                                                                                       |
| 151A  | 610996      |     | Regulator (20 Amp) (Incl. 212 thru 21 8)                                                                                                                                                                                                                                                                    |
| 153   | 792028      |     | Screw, 5/16-18 x 7/8"(Use w/32817 str .motor)                                                                                                                                                                                                                                                               |
| 153   | 650781      |     | Screw,5/16-18 x 11/16"(Use w/33835 st r.motor)                                                                                                                                                                                                                                                              |
| 154A  | 34393       |     | Cord Assy., Alternator adapter                                                                                                                                                                                                                                                                              |
| 162A  | 610903      |     | Connector, Flat                                                                                                                                                                                                                                                                                             |
| 163   | 610904      |     | Terminal                                                                                                                                                                                                                                                                                                    |
| 163A  | 610905      |     | Terminal                                                                                                                                                                                                                                                                                                    |
| 209   | 730178      |     | Ech.Adapter Kit (Incl.210 & 211)(As r equired)                                                                                                                                                                                                                                                              |
| 210   | 34102B      |     | Gasket, Exhaust (Use as required)                                                                                                                                                                                                                                                                           |
| 211   | 30196       |     | Screw, 5/16-18 x 3/4" (Use as require d)                                                                                                                                                                                                                                                                    |
| 212   | 610990      |     | Connector, Male                                                                                                                                                                                                                                                                                             |
| 213   | 610921      |     | Connector                                                                                                                                                                                                                                                                                                   |
| 214   | 610922      |     | Terminal                                                                                                                                                                                                                                                                                                    |
| 215   | 610989      |     | Terminal                                                                                                                                                                                                                                                                                                    |
| 216   | 610992      |     | Terminal, Female                                                                                                                                                                                                                                                                                            |
| 217   | 610991      |     | Terminal, Female                                                                                                                                                                                                                                                                                            |
| 218   | 30063       |     | Screw, 1/4-20 x 1/2"                                                                                                                                                                                                                                                                                        |
| 225   | 730198      |     | Electric Starter Switch Kit (Incl. 22 6-237)                                                                                                                                                                                                                                                                |
| 226   | 34614       |     | Bracket, Starter button                                                                                                                                                                                                                                                                                     |
| 227   | 34616       |     | Switch, Starter                                                                                                                                                                                                                                                                                             |
| 228   | 34615       |     | Switch, Toggle                                                                                                                                                                                                                                                                                              |
| 229   | 792026      |     | Screw, 1/4-20 x 7/8"                                                                                                                                                                                                                                                                                        |
| 230   | 27513       |     | Lockwasher, Split                                                                                                                                                                                                                                                                                           |
| 231   | 650864      |     | Nut, Hex                                                                                                                                                                                                                                                                                                    |
| 232   | 34618       |     | Wire Assy., Starter                                                                                                                                                                                                                                                                                         |
| 233   | 34619       |     | Wire Assy., Guard                                                                                                                                                                                                                                                                                           |
| 234   | 34620       |     | Wire & Fuse Assy.                                                                                                                                                                                                                                                                                           |
| 235   | 8274        |     | Lockwasher, Split (Incl. in 251)                                                                                                                                                                                                                                                                            |
| 236   | 650586      |     | Nut, Jam                                                                                                                                                                                                                                                                                                    |
| 237   | 34617       |     | Adapter Cord Assy.                                                                                                                                                                                                                                                                                          |
| 238   | 730212      |     | Adapter Plate Kit (Optional) NOTE: If you are having mounting problems in using a HH100 thru OH180 inplace of a large frame competitivebrand, we would like to call your attention to 730212 adapter plate kit. The kit converts the bottom mounting system found on HH100 thru OH180 to a top mounting sys |
| 249   | 33835       |     | Electric Starter Motor (12-Volt) (Refer to Division 5, Section D for breakdown)                                                                                                                                                                                                                             |

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

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| Ref # | Part Number | Qty | Description                                                                   |
|-------|-------------|-----|-------------------------------------------------------------------------------|
| 114   | 650399      |     | Screw, 10-32 x 5/8"                                                           |
| 115   | 32008       |     | Element, Air cleaner                                                          |
| 117   | 650513      |     | Nut, Wing                                                                     |
| 119   | 31992       |     | Spacer, Screen                                                                |
| 122   | 650680      |     | Screw, 1/4-20 x 1-1/2"                                                        |
| 123   | 27070       |     | Washer, Lock                                                                  |
| 142   | 34148       |     | Spring, Fuel line                                                             |
| 143   | 29774       |     | Fuel Line (Braided 8.25")(21 cm)(As required)                                 |
| 143   | 30705       |     | Fuel Line (Braided 16")(41 cm)(As required)                                   |
| 143   | 30962       |     | Fuel Line (Braided 32")(81 cm)(As required)                                   |
| 144   | 33715       |     | Pump, Impulse fuel                                                            |
| 145   | 33010       |     | Repair Kit, Impulse fuel pump                                                 |
| 177   | 33979       |     | Fuel Tank (Incl. 178)                                                         |
| 178   | 410144B     |     | Fuel Cap (White Plastic)(Std)(As required)                                    |
| 178   | 34210       |     | Fuel Cap (Red Plastic) (Spurt resistant, High profile) (Use as required)      |
| 180   | 33980       |     | Strap, Fuel tank                                                              |
| 181   | 33978       |     | Bracket, Fuel tank                                                            |
| 182   | 650787      |     | Washer, Belleville                                                            |
| 183   | 650786      |     | Screw, 1/4-20 x 5/8"                                                          |
| 184   | 650785      |     | Screw, 5/16-18 x 5/8"                                                         |
| 185   | 650488      |     | Screw, 1/4-20 x 1-1/4"                                                        |
| 186   | 650456      |     | Nut, Lock                                                                     |
| 196   | 26460       |     | Clamp, Fuel line (Use as required)                                            |
| 205   | 34193       |     | Cover, Air cleaner                                                            |
| 206   | 34194A      |     | Tube, Air cleaner                                                             |
| 207   | 35473       |     | Bracket, Air cleaner                                                          |
| 208   | 34197       |     | Gasket, Air cleaner                                                           |
| 220   | 650561      |     | Screw, 1/4-20 x 5/8"                                                          |
| 221   | 34403       |     | Speed Control Assy.                                                           |
| 222A  | 650641      |     | Nut, Hex                                                                      |
| 222   | 34404       |     | Bracket, Control                                                              |
| 245   | 730134      |     | Rewind Starter Kit (Incl.120A, 121, 122, 187, 188 & 248)<br>(Use as required) |