

P844K

For Models: M844K, M844LK, NL844K,
NL844LK, M16C, M20CL, & M20CR

PARTS CATALOG

Marine Generators | Marine Diesel Engines | Land-Based Generators



NORTHERN LIGHTS





— CALIFORNIA —
Proposition 65 Warning:

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

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NORTHERN LIGHTS

PARTS CATALOG

for Models M844K, M844LK, NL844K, NL844LK, M16C, M20CL, & M20CR

Please read thoroughly before attempting to use this manual:

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Model Designation

MODELS INCLUDED

This manual covers the operating instructions for:

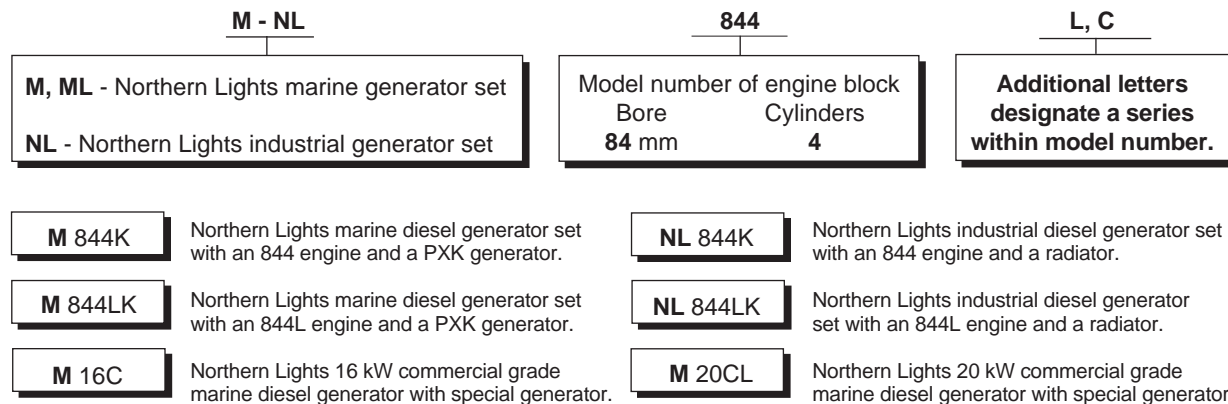
M844K, M16C, M20CR, & NL844K which use the 844 engine;

M844LK, M20CL & NL844LK which use the 844L engine.

Note: There are two versions of the 844 engine. The standard engine is designated 844. The long stroke engine is designated 844L. You will need to know which engine you have to use this manual and to order parts.

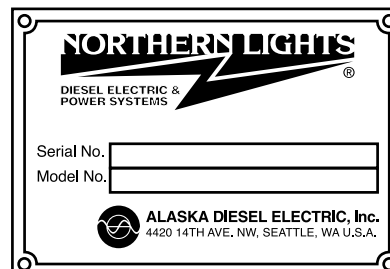
Model Numbers

Model numbers give the unit's application, block model, aspiration, and RPM:



Serial Numbers

Your set has three serial numbers: ① an engine number stamped on the block, ② a generator plate, and ③ a generator set plate. Use the serial number on the **generator set plate** when ordering parts or in correspondence. The generator set plate is found on the service side of the generator and resembles the drawing below.



Reading a Parts Page

IMPORTANT:

Before selecting parts, be sure that you are choosing parts from the correct page.
Check the model designation at the page top.
Do not use this illustration for parts purchasing.

| KEY | PART NUMBER | QTY. | DESCRIPTION | SERIALNUMBER |
|-----|-------------|------|---------------------|--------------|
| 0 | 185046210 | 1 | Alternator Assembly | - |
| 1 | 185446219 | 1 | Flywheel, complete | - |
| 2 | 185446217 | 1 | Plate, complete | - |
| 3 | 185716200 | 1 | Plate | - |
| 4 | 185446218 | 1 | Stator, complete | - |
| 5 | 040126210 | 2 | Bearing | - |
| 6 | 020210010 | 1 | Nut | - |
| 7 | 027100010 | 1 | Spring washer | - |
| 8 | 026100010 | 1 | Washer | - |
| 9 | 185446220 | 1 | Clamp | - |
| 10 | 015140408 | 1 | Screw | - |
| 11 | 015140425 | 2 | Screw | - |
| 12 | 199236510 | 1 | Collar | - |

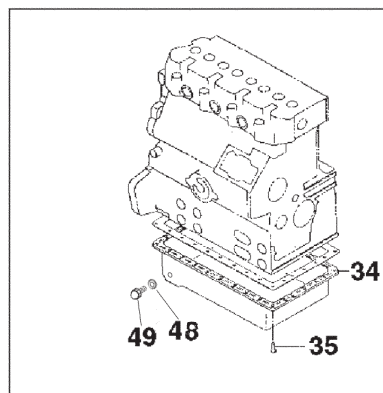
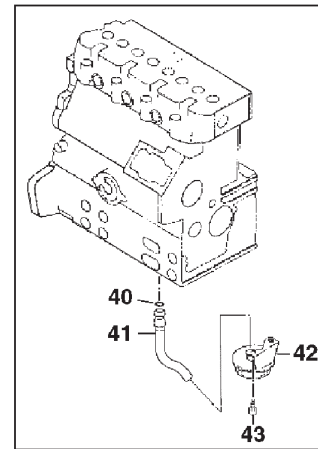
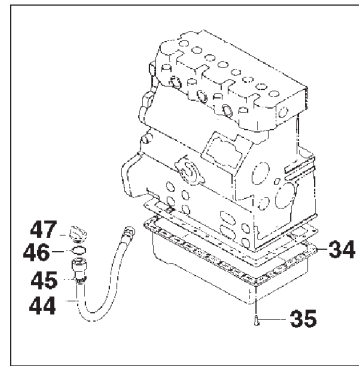
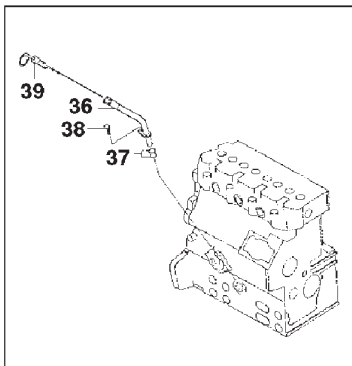
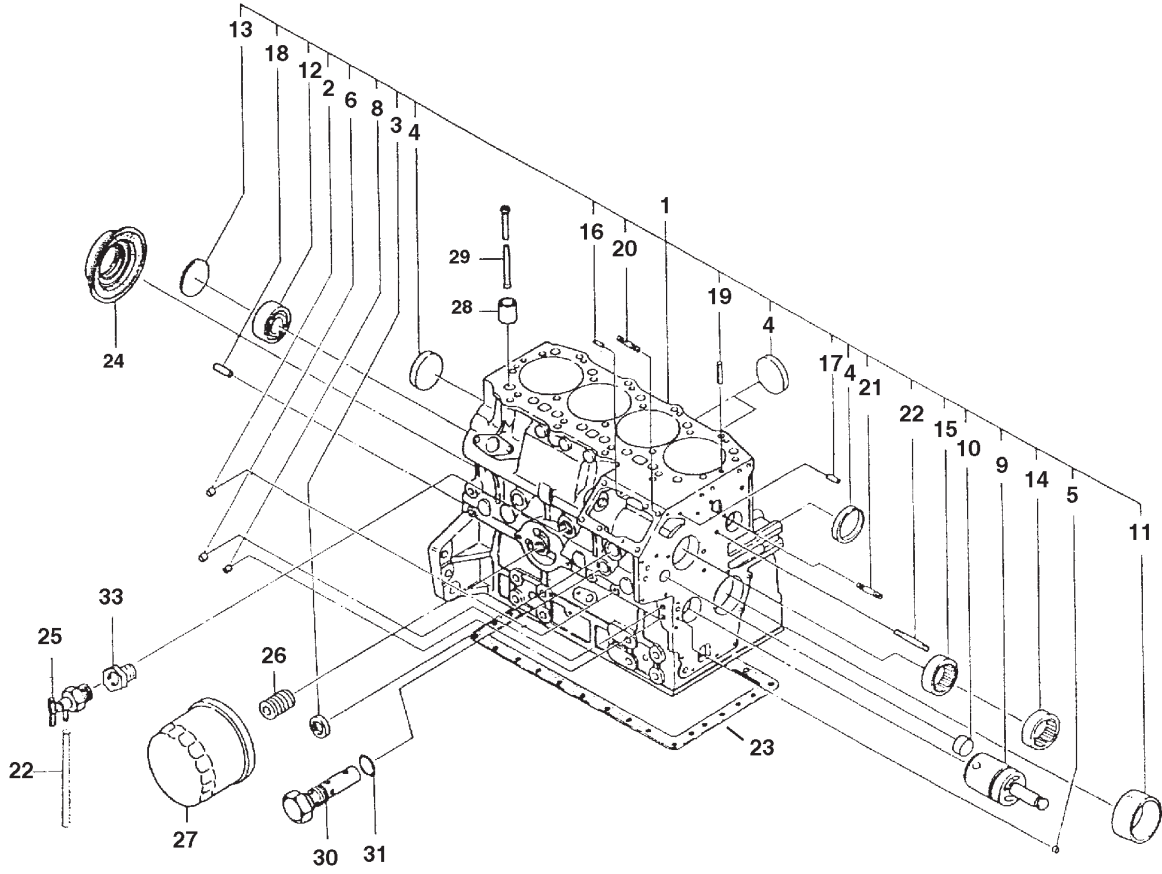
P844 06'96
5 - 2

REFERENCES:

1. Grouping section title.
2. Model designation of equipment that uses parts listed on this page.
3. Title and description of assembly.
4. Drawing numbers that correspond to key column numbers for parts identification.
5. Key column for locating parts shown on drawing.
6. Part number.
7. Quantity of parts used.
8. Description of each component part.
9. Serial number of unit the part fits.
10. Assembly or kit designated by Key 0 or ••/•.
11. Grouping index number.
12. Page number within the grouping index.
13. Manual title.
14. Page publication date.

NOTE: ⇨ Arrows always point toward the front of the engine.

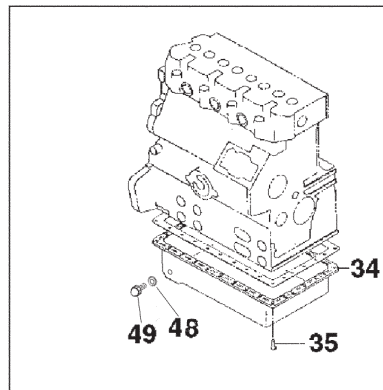
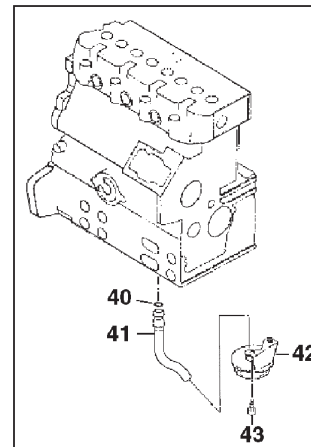
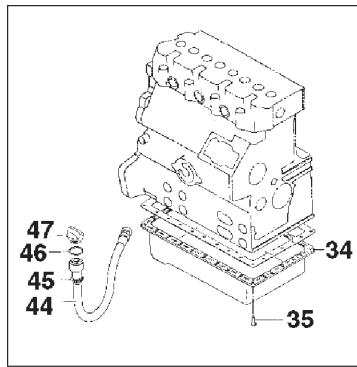
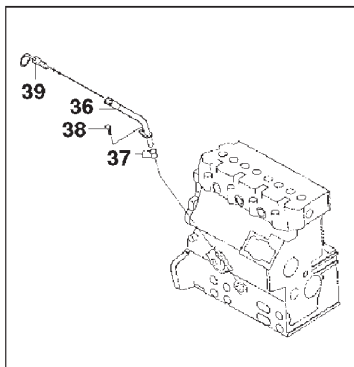
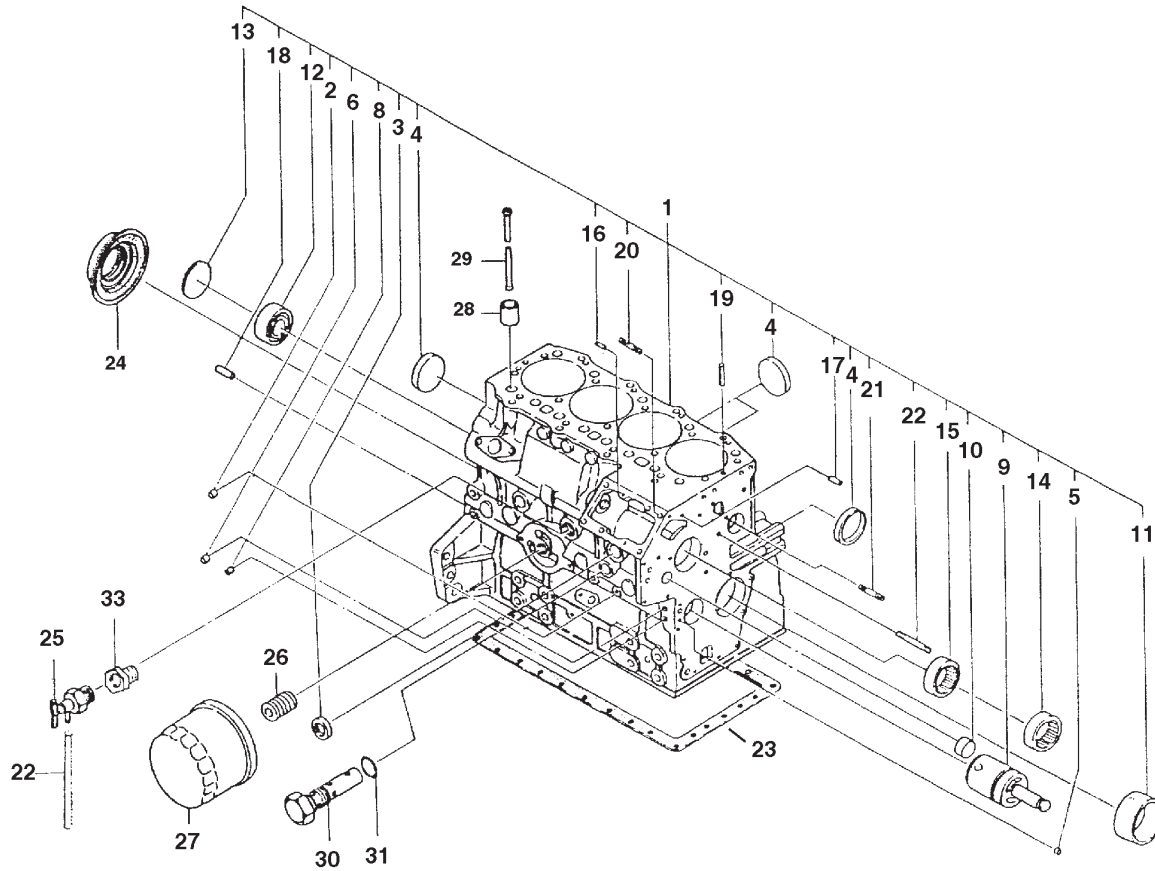
Cylinder Block Assembly: 844 & 16C



Cylinder Block Assembly: 844 & 16C

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 110107861 | 1 | Cylinder Block Assembly - Marine (includes keys #2 - 21) Formerly #110107860 | - |
| | 110107921 | 1 | Cylinder Block Assembly - Industrial (includes keys #2 - 21) Formerly #110107920 | - |
| 2 | 064410010 | ** | Plug | - |
| 3 | 064200025 | 2 | Expansion Plug 25 mm | - |
| 4 | 064200040 | 5 | Expansion Plug 40 mm | - |
| 5 | 198466010 | 3 | Plug | - |
| 6 | 198466020 | 4 | Plug | - |
| 8 | 198466070 | ** | Plug | - |
| 9 | 165296131 | 1 | Idle Gear Shaft Assembly (formerly #165296130) | - |
| 10 | 198466060 | ** | Plug | - |
| 11 | 198517221 | 1 | Bush; Standard (formerly #198517220) | - |
| | 198517225 | 1 | Bush; Undersize 0.25 mm (formerly #198517224) | - |
| | 198517228 | 1 | Bush; Undersize 0.50 mm (formerly #198517227) | - |
| 12 | 040106203 | 1 | Bearing | - |
| 13 | 064100045 | 1 | Expansion Plug 45 mm | - |
| 14 | 042309018 | 1 | Needle Bearing | - |
| 15 | 042309017 | 1 | Needle Bearing | - |
| 16 | 030500612 | 2 | Dowel Pin | - |
| 17 | 030500616 | 2 | Dowel Pin | - |
| 18 | 030501025 | 2 | Dowel Pin | - |
| 19 | 030309005 | 2 | Spring Pin | - |
| 20 | 012100820 | 1 | Stud Bolt M8 x 1.25 x 20 mm | - |
| 21 | 012100635 | 1 | Stud M6 x 1.0 x 35 mm | - |
| 22 | 012100660 | 1 | Stud M6 x 1.0 x 60 mm | - |
| 23 | 110996600 | 1 | Gasket | - |
| 24 | 198636170 | 1 | Oil Seal | - |
| | 00-02004 | ** | Wear Sleeve; Repair Type | - |
| 25 | 198736050 | 1 | Drain Cock - Marine | - |
| | 198736120 | 1 | Drain Cock - Industrial (no longer available - use marine type & #33) | - |
| 26 | 140546020 | 1 | Joint | - |
| 27 | 24-03100 | 1 | Oil Filter | - |
| 28 | 120116160 | 8 | Tappet | - |
| 29 | 120456250 | 8 | Push Rod | - |
| 30 | 140036120 | 1 | Relief Valve Assembly | - |
| 31 | 052100150 | 1 | O-Ring | - |
| 32 | 068115250 | 1 | Tube | - |
| 33 | 198486770 | 1 | Bushing - Marine only | - |
| 34 | 110707730 | 1 | Oil Pan - Marine (formerly #110707730) | - |
| | 110707751 | 1 | Oil Pan - Industrial (formerly #110707750) | - |
| 35 | 010109235 | 30 | Bolt | - |
| 36 | 110756070 | 1 | Dipstick Tube | - |
| 37 | 052100100 | 2 | O-Ring | - |
| 38 | 011300612 | 1 | Bolt | - |
| 39 | 198416320 | 1 | Dipstick | - |
| 40 | 052109076 | 1 | O-Ring | - |
| 41 | 140986630 | 1 | Oil Pipe | - |
| 42 | 140406360 | 1 | Suction Filter | - |
| 43 | 011310612 | 2 | Bolt | - |
| 44 | 140606710 | 1 | Drain Hose* | - |
| 45 | 198756200 | 1 | Hose Clamp* | - |
| 46 | 052100280 | 1 | Gasket* (formerly #054109013) | - |
| 47 | 398430560 | 1 | Cap* (formerly #398430080) | - |
| 48 | 025100012 | 2 | Seal Washer - Industrial | - |
| 49 | 010401212 | 2 | Plug M12 x 1.25 - Industrial | - |
| | | | *Marine Application Only. | |
| | | | **As required. | |

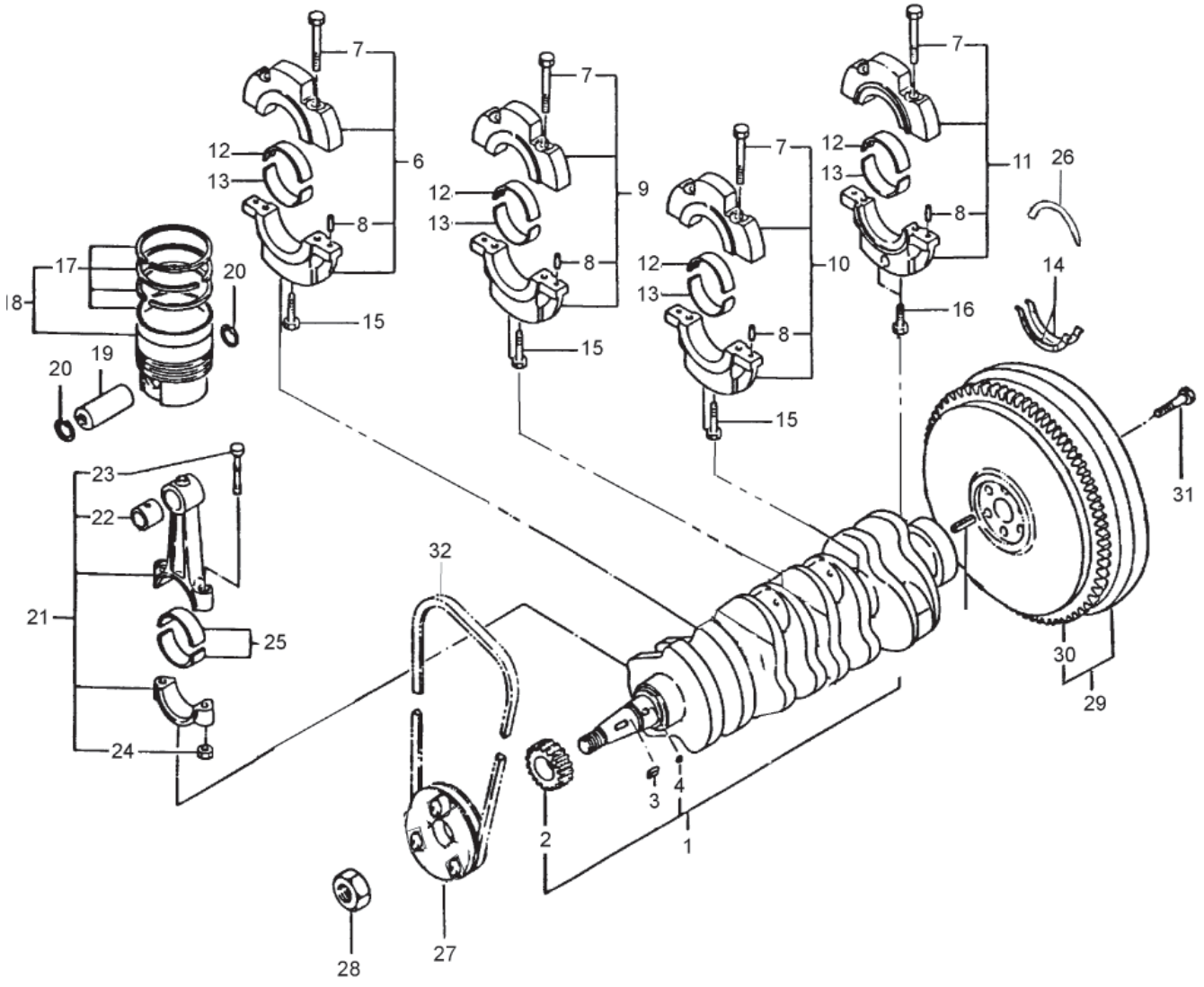
Cylinder Block Assembly: 844L & 20CL



Cylinder Block Assembly: 844L & 20CL

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 110107811 | 1 | Cylinder Block Assembly - Marine (includes keys #2 - 21) Formerly #110107810 | - |
| | 110107841 | 1 | Cylinder Block Assembly - Industrial (includes keys #2 - 21) Formerly #110107840 | - |
| 2 | 064410010 | ** | Plug | - |
| 3 | 064200025 | 2 | Expansion Plug 25 mm | - |
| 4 | 064200040 | 5 | Expansion Plug 40 mm | - |
| 5 | 198466010 | 3 | Plug | - |
| 6 | 198466020 | 4 | Plug | - |
| 8 | 198466070 | ** | Plug | - |
| 9 | 165296131 | 1 | Idle Gear Shaft Assembly (formerly #165296130) | - |
| 10 | 198466060 | ** | Plug | - |
| 11 | 198517221 | 1 | Bush; Standard (formerly #198517220) | - |
| | 198517225 | 1 | Bush; Undersize 0.25 mm (formerly #198517224) | - |
| | 198517228 | 1 | Bush; Undersize 0.50 mm (formerly #198517227) | - |
| 12 | 040106203 | 1 | Bearing | - |
| 13 | 064100045 | 1 | Expansion Plug 45 mm | - |
| 14 | 042309018 | 1 | Needle Bearing | - |
| 15 | 042309017 | 1 | Needle Bearing | - |
| 16 | 030500612 | 2 | Dowel Pin | - |
| 17 | 030500616 | 2 | Dowel Pin | - |
| 18 | 030501025 | 2 | Dowel Pin | - |
| 19 | 030309005 | 2 | Spring Pin | - |
| 20 | 012100820 | 1 | Stud M8 x 1.25 x 20 mm | - |
| 21 | 012100635 | 1 | Stud M6 x 1.0 x 35 mm | - |
| 22 | 012100660 | 1 | Stud M6 x 1.0 x 60 mm | - |
| 23 | 110996600 | 1 | Gasket | - |
| 24 | 050209083 | 1 | Oil Seal | - |
| | 00-02004 | ** | Wear Sleeve; Repair Type | - |
| 25 | 198736050 | 1 | Drain Cock - Marine | - |
| | 198736120 | 1 | Drain Cock - Industrial (no longer available - use marine type & #33) | - |
| 26 | 140546020 | 1 | Joint | - |
| 27 | 24-03100 | 1 | Oil Filter | - |
| 28 | 120116160 | 8 | Tappet | - |
| 29 | 120456310 | 8 | Push Rod | - |
| 30 | 140036220 | 1 | Relief Valve Assembly | - |
| 31 | 052100150 | 1 | O-Ring | - |
| 32 | 068115250 | 1 | Tube | - |
| 33 | 198486770 | 1 | Bushing - Marine only | - |
| 34 | 110707731 | 1 | Oil Pan - Marine (formerly #110707730) | - |
| | 110707751 | 1 | Oil Pan - Industrial (formerly #110707750) | - |
| 35 | 010109235 | 30 | Bolt | - |
| 36 | 110756070 | 1 | Dipstick Tube | - |
| 37 | 052100100 | 2 | O-ring | - |
| 38 | 011300612 | 1 | Bolt | - |
| 39 | 198416320 | 1 | Dipstick | - |
| 40 | 052109076 | 1 | O-ring | - |
| 41 | 140986630 | 1 | Oil Pipe | - |
| 42 | 140406360 | 1 | Suction Filter | - |
| 43 | 011310612 | 2 | Bolt | - |
| 44 | 140606710 | 1 | Drain Hose* | - |
| 45 | 198756200 | 1 | Hose Clamp* | - |
| 46 | 052100280 | 1 | Gasket* (formerly #054109013) | - |
| 47 | 398430560 | 1 | Cap* (formerly #398430080) | - |
| 48 | 025100012 | 2 | Seal Washer - Industrial | - |
| 49 | 010401212 | 2 | Plug M12 x 1.25 Industrial | - |
| | | | *Marine Application Only. | |
| | | | **As required. | |

Crankshaft Assembly: 844 & 16C

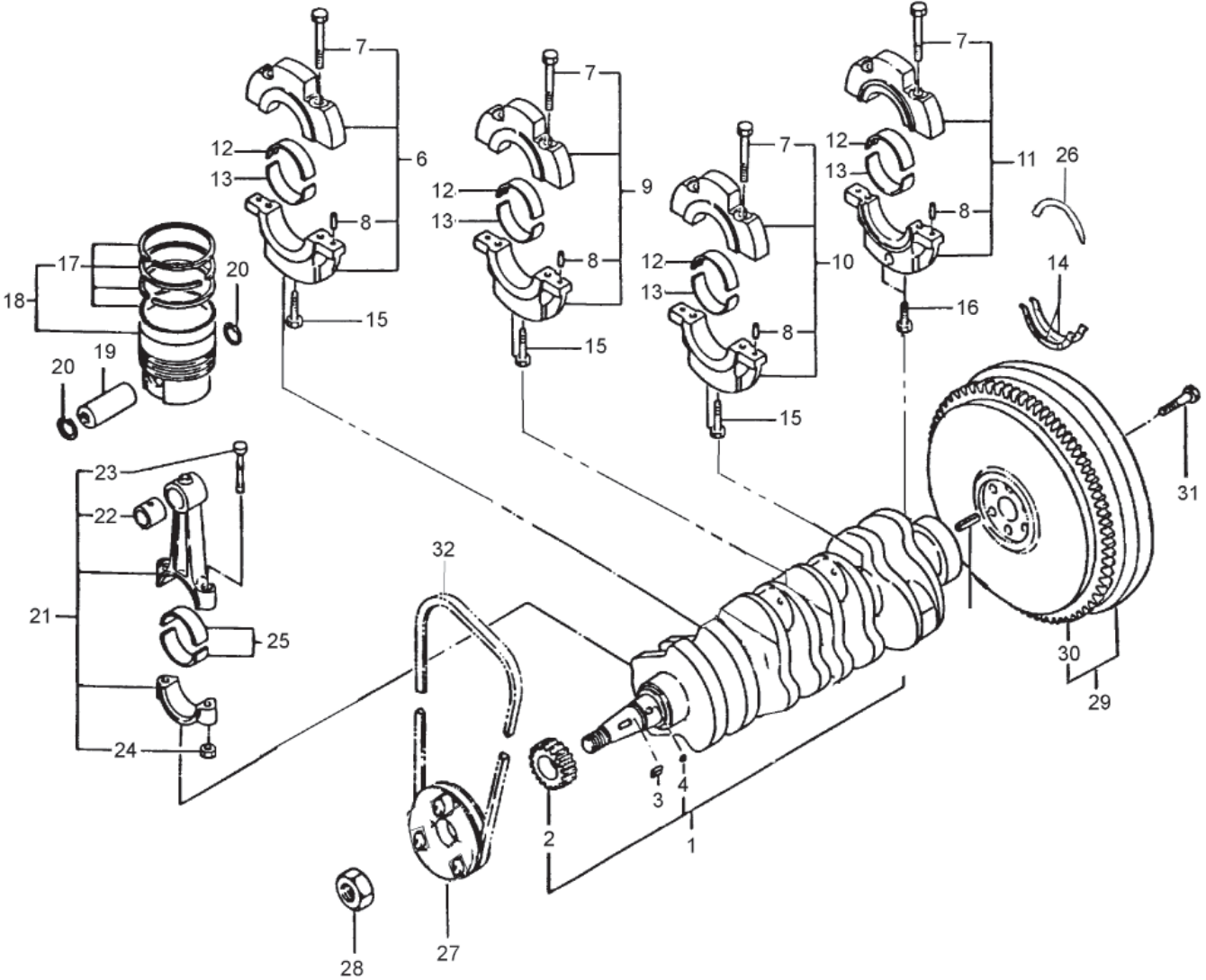


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Crankshaft Assembly: 844 & 16C

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------------|
| 1 | 115256630 | 1 | Crankshaft Assembly (includes keys #2 - #5) | - |
| 2 | 115276200 | 1 | Gear | - |
| 3 | 034100508 | 1 | Key | - |
| 4 | 030509020 | 1 | Dowel Pin | - |
| 6 | 110156360 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 7 | 010109406 | 8 | Bolt | - |
| 8 | 030500612 | 8 | Dowel Pin | - |
| 9 | 110156370 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 10 | 110156380 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 11 | 110156390 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 12 | 198517231 | 4 | Bearing; Standard (formerly #198517230) | - |
| | 198517235 | 4 | Bearing; Undersize 0.25 mm (formerly #198517234) | - |
| | 198517238 | 4 | Bearing; Undersize 0.50 mm (formerly #198517237) | - |
| 13 | 198517241 | 4 | Bearing; Standard (formerly #198517240) | - |
| | 198517245 | 4 | Bearing; Undersize 0.25 mm (formerly #198517244) | - |
| | 198517248 | 4 | Bearing; Undersize 0.50 mm (formerly #198517247) | - |
| 14 | 199266200 | 2 | Thrust Washer | - |
| 15 | 011511075 | 3 | Bolt | - |
| 16 | 010700865 | 2 | Bolt | - |
| 17 | 115107840 | 4 | Ring Kit; Standard | - |
| | 115104084 | 4 | Ring Kit; Oversize 0.50 mm (formerly #115017293) | - |
| | 115104087 | 4 | Ring Kit; Oversize 1.00 mm (formerly #115017295) | - |
| 18 | 115016810 | 4 | Piston Kit; Standard (includes key #17) | - |
| | 115016814 | 4 | Piston Kit; Oversize 0.50 mm (includes key #17) | - |
| | 115016817 | 4 | Piston Kit; Oversize 1.00 mm (includes key #17) | - |
| 19 | 115326220 | 4 | Piston Pin | - |
| 20 | 036500028 | 8 | Snap Ring | - |
| 21 | 115026251 | 4 | Connecting Rod Assembly (includes keys #22 - #24) | - |
| 22 | 198517265 | 4 | Bushing | - |
| 23 | 115176140 | 8 | Connecting Rod Bolt | - |
| 24 | 020109120 | 8 | Nut | - |
| 25 | 198517251 | 8 | Bearing; Standard (formerly #198517250) | - |
| | 198517255 | 8 | Bearing; Undersize 0.25 mm (formerly #198517254) | - |
| | 198517258 | 6 | Bearing; Undersize 0.50 mm (formerly #198517257) | - |
| 26 | 199266210 | 1 | Thrust Washer | - |
| 27 | 115397620 | 1 | Pulley | - |
| 28 | 020109086 | 1 | Nut | - |
| 29 | 115357050 | 1 | Flywheel Assembly (Includes key #30) SAE #7-1/2 | - |
| 30 | 115376040 | 1 | Ring Gear (109 teeth) | - |
| 31 | 010109341 | 6 | Bolt | - |
| 32 | 40-02003 | 1 | Drive Belt (with 12V/35A alternator) | - |
| | 40-02004 | 1 | Drive Belt (with 24V/35A alternator) Formerly #40-74500 | up to S/N xxxx-xxxx |
| | 40-02005 | 1 | Drive Belt (with 12V/51A and 24V/35A alternators) | from S/N xxxx-xxxx |

Crankshaft Assembly: 844L & 20CL



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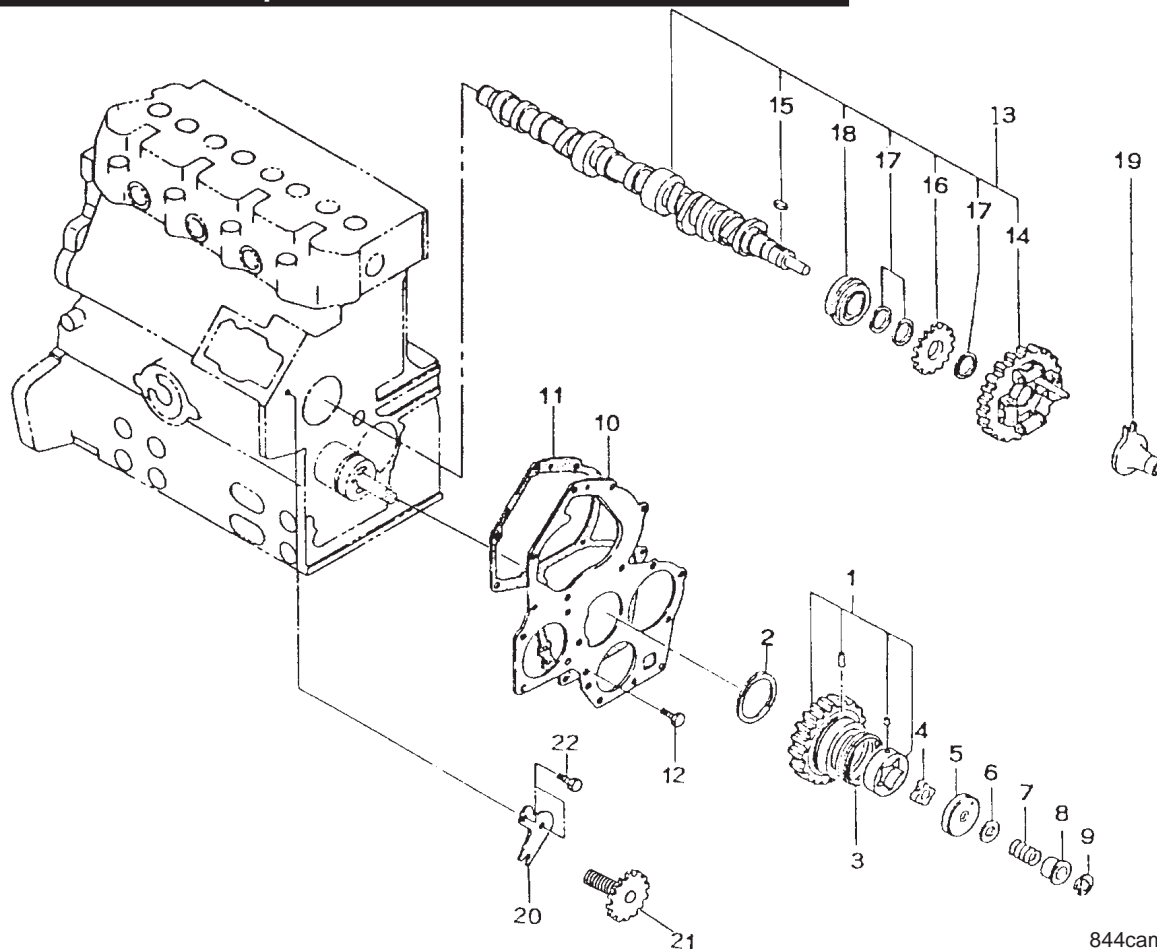
Crankshaft Assembly: 844L & 20CL

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|------------------------|
| 1 | 115256750 | 1 | Crankshaft Assembly (includes keys #2 - #5) | - |
| 2 | 115276200 | 1 | Gear | - |
| 3 | 034100508 | 1 | Key | - |
| 4 | 030509020 | 1 | Dowel Pin | - |
| 6 | 110156360 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 7 | 010109406 | 8 | Bolt | - |
| 8 | 030500612 | 8 | Dowel Pin | - |
| 9 | 110156370 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 10 | 110156380 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 11 | 110156390 | 1 | Bearing Holder Assembly (includes keys #7 - #8) | - |
| 12 | 198517231 | 4 | Bearing; Standard (formerly #198517230) | - |
| | 198517235 | 4 | Bearing; Undersize 0.25 mm (formerly #198517234) | - |
| | 198517238 | 4 | Bearing; Undersize 0.50 mm (formerly #198517237) | - |
| 13 | 198517241 | 4 | Bearing; Standard (formerly #198517240) | - |
| | 198517245 | 4 | Bearing; Undersize 0.25 mm (formerly #198517244) | - |
| | 198517248 | 4 | Bearing; Undersize 0.50 mm (formerly #198517247) | - |
| 14 | 199266200 | 2 | Thrust Washer | - |
| 15 | 010109667 | 3 | Bolt (formerly #011511070) | - |
| 16 | 010700865 | 2 | Bolt | - |
| 17 | 115107840 | 4 | Ring Kit; Standard | - |
| | 115104084 | 4 | Ring Kit; Oversize 0.50 mm (formerly #115017293) | - |
| | 115104087 | 4 | Ring Kit; Oversize 1.00 mm (formerly #115017295) | - |
| 18 | 115016810 | 4 | Piston Kit; Standard (includes key #17) Replaced by #115017310 | up to S/N xxxxx-13662* |
| | 115016814 | 4 | Piston Kit; Oversize 0.50 mm (includes key #17) Replaced by #115017320 | up to S/N xxxxx-13662* |
| | 115016817 | 4 | Piston Kit; Oversize 1.00 mm (includes key #17) | up to S/N xxxxx-13662* |
| | 115017310 | 4 | Piston Kit; Standard | from S/N xxxxx-13633* |
| | 115017320 | 4 | Piston Kit; Oversize 0.50 mm (includes key #17) | from S/N xxxxx-13663* |
| 19 | 115326220 | 4 | Piston Pin | - |
| 20 | 036500028 | 8 | Snap Ring | - |
| 21 | 115026330 | 4 | Connecting Rod Assembly (includes keys #22 - #24) | - |
| 22 | 198517265 | 4 | Bushing | - |
| 23 | 115176140 | 8 | Connecting Rod Bolt | - |
| 24 | 020109120 | 8 | Nut | - |
| 25 | 198517251 | 8 | Bearing; Standard (formerly #198517250) | - |
| | 198517255 | 8 | Bearing; Undersize 0.25 mm (formerly #198517254) | - |
| | 198517258 | 6 | Bearing; Undersize 0.50 mm (formerly #198517257) | - |
| 26 | 199266210 | 1 | Thrust Washer | - |
| 27 | 115397620 | 1 | Pulley - Marine | - |
| | 115396870 | 1 | Pulley - Industrial | - |
| 28 | 020109086 | 1 | Nut | - |
| 29 | 115357470 | 1 | Flywheel Assembly (includes key #30) SAE #7-1/2 | - |
| 30 | 115376160 | 1 | Ring Gear (126 teeth) | - |
| 31 | 010109341 | 6 | Bolt | - |
| 32 | 40-08401 | 1 | Drive Belt (with 12V/35A alternator) | - |
| | 40-08404 | 1 | Drive Belt (with 24V/35A alternator) | - |
| | 40-08405 | 1 | Drive Belt (with 24V/35A alternator: Bertram spec) | - |

***NOTE:**

Earlier design pistons may not be substituted for new pattern items.

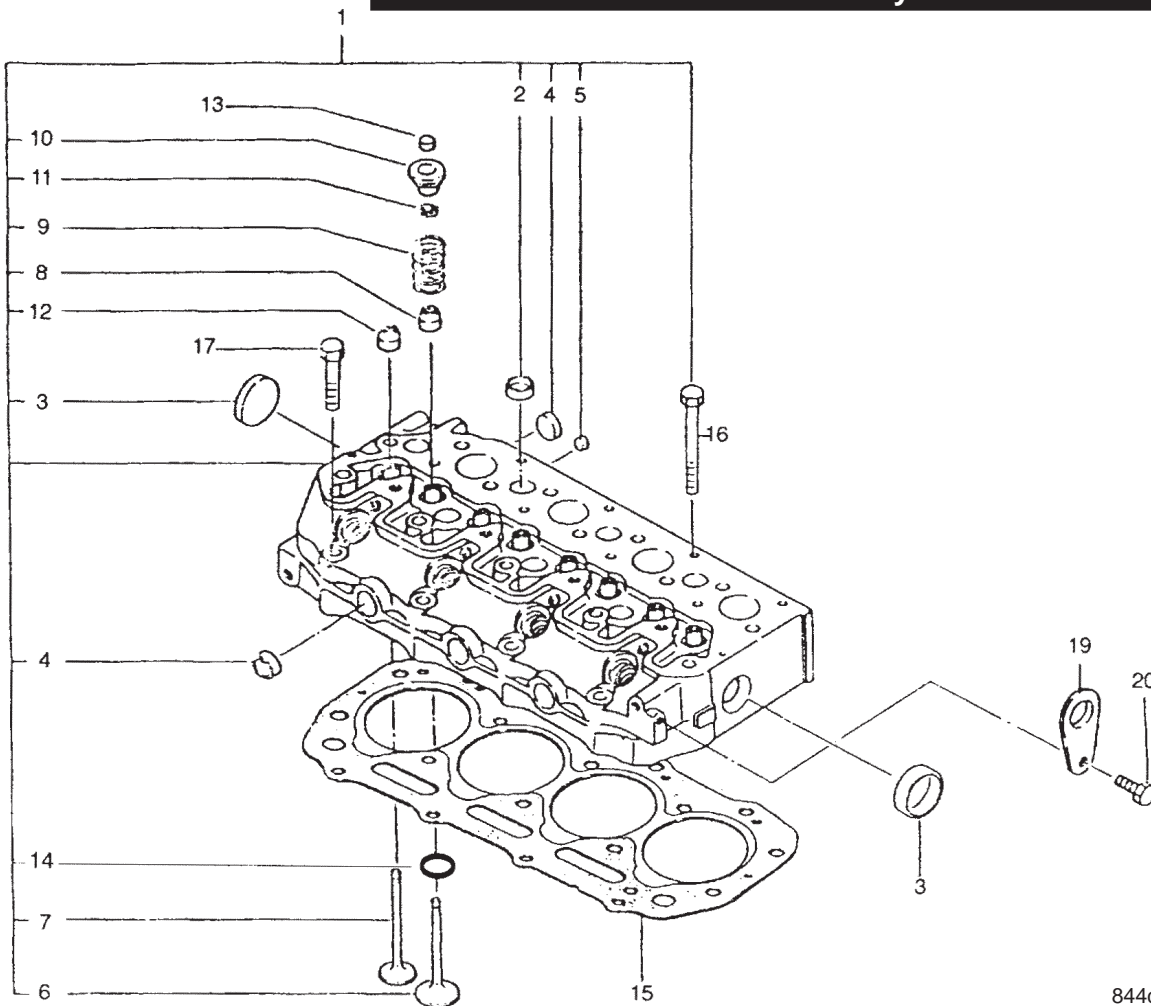
Camshaft & Oil Pump



844camshaft

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 165026120 | 1 | Idle Gear Assembly (includes key #3) | - |
| 2 | 199266180 | 1 | Thrust Washer | - |
| 3 | 198216821 | 1 | Spring | - |
| 4 | 140166140 | 1 | Rotor | - |
| 5 | 140116140 | 1 | Oil Pump Cover | - |
| 6 | 199286150 | 1 | Shim; t = 0.10 | - |
| | 199286160 | 1 | Shim; t = 0.15 | - |
| | 199286170 | 1 | Shim; t = 0.20 | - |
| | 199286180 | 1 | Shim; t = 0.50 | - |
| 7 | 198216720 | 1 | Spring | - |
| 8 | 199236540 | 1 | Collar | - |
| 9 | 036800010 | 1 | Snap Ring | - |
| 10 | 165166450 | 1 | Front Plate - Marine | - |
| | 165166290 | 1 | Front Plate - Industrial | - |
| 11 | 165996361 | 1 | Gasket | - |
| 12 | 011300612 | 2 | Bolt | - |
| 13 | 120026320 | 1 | Camshaft Assembly (includes keys #14 - 18) | - |
| 14 | 120016050 | 1 | Cam Gear | - |
| 15 | 034100508 | 1 | Key | - |
| 16 | 120736081 | 1 | Gear | - |
| 17 | 199216230 | 3 | Spacer | - |
| 18 | 040109057 | 1 | Bearing | - |
| 19 | 125256120 | 1 | Slider | - |
| 20 | 199566750 | 1 | Plate | - |
| 22 | 011310612 | 2 | Bolt | - |

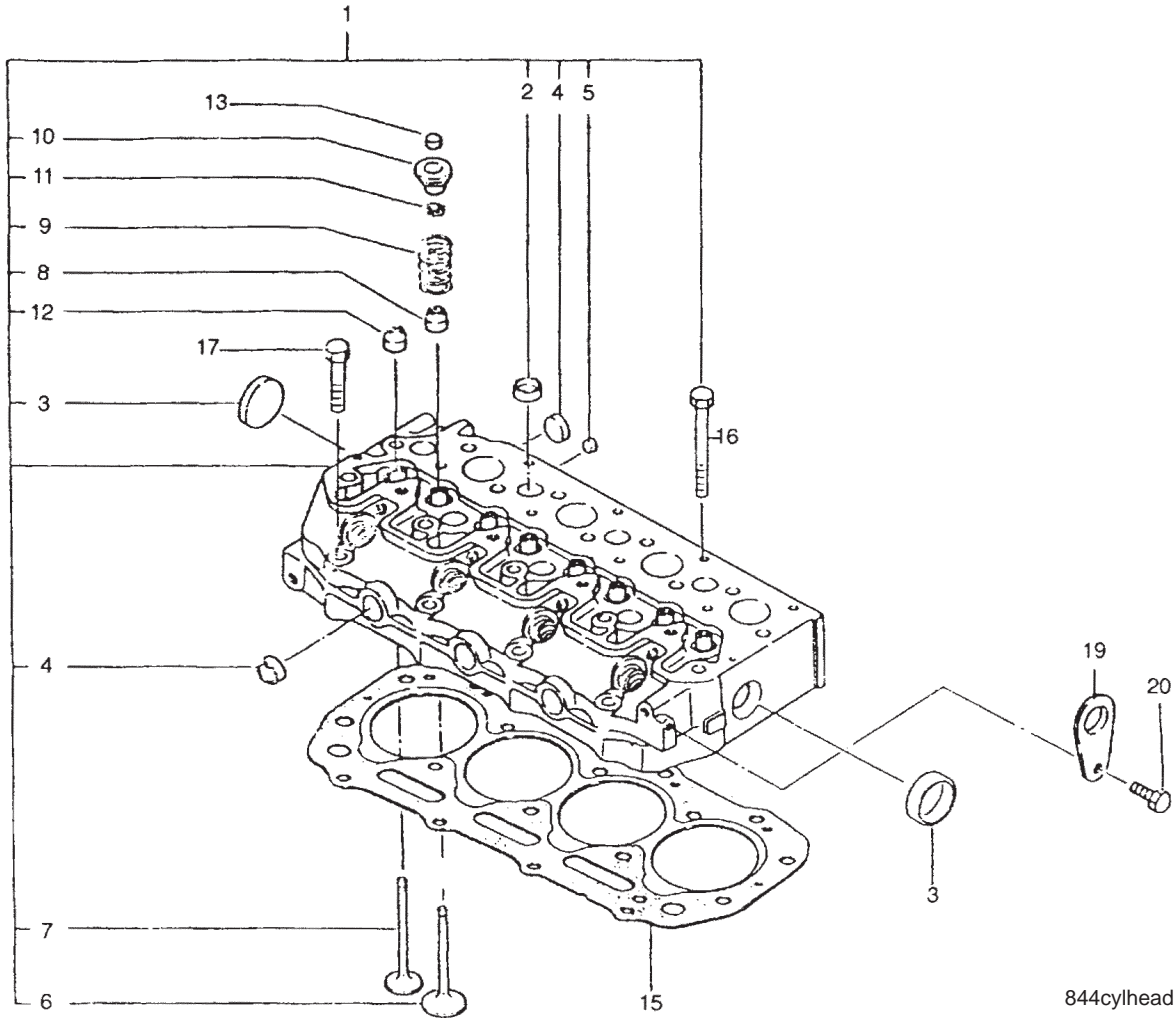
Cylinder Head: 844 & 16C



844cylhead

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 111017450 | 1 | Cylinder Head Assembly - Marine (includes keys #2 - 14) | - |
| | 111017530 | 1 | Cylinder Head Assembly - Industrial (includes keys #2 - 14) | - |
| 2 | 064200018 | 7 | Expansion Plug 18 mm | - |
| 3 | 064200030 | 2 | Expansion Plug 30 mm | - |
| 4 | 064200025 | 6 | Expansion Plug 25 mm | - |
| 5 | 064200010 | 3 | Expansion Plug 10 mm | - |
| 6 | 120166290 | 4 | Intake Valve | - |
| 7 | 120176300 | 4 | Exhaust Valve | - |
| 8 | 120406070 | 4 | Valve Gude Seal - Intake | - |
| 9 | 198216700 | 8 | Spring | - |
| 10 | 120186080 | 8 | Retainer | - |
| 11 | 120226070 | 16 | Keeper | - |
| 12 | 120406050 | 4 | Valve Gude Seal - Exhaust | - |
| 13 | 120216040 | 8 | Cap | - |
| 14 | 110136400 | 4 | Valve Seat - Intake | - |
| 15 | 111147520 | 1 | Head Gasket; t = 1.4 mm (formerly #111147200) | - |
| 16 | 111136360 | 14 | Head Bolt (17 mm Hex) | - |
| | 111136480 | 14 | Head Bolt (14 mm Hex) | - |
| 17 | 111136370 | 4 | Head Bolt (17 mm Hex) | - |
| | 111136490 | 4 | Head Bolt (14 mm Hex) | - |
| 19 | 195816540 | 2 | Lifting Eye | - |
| 20 | 011510816 | 2 | Bolt | - |

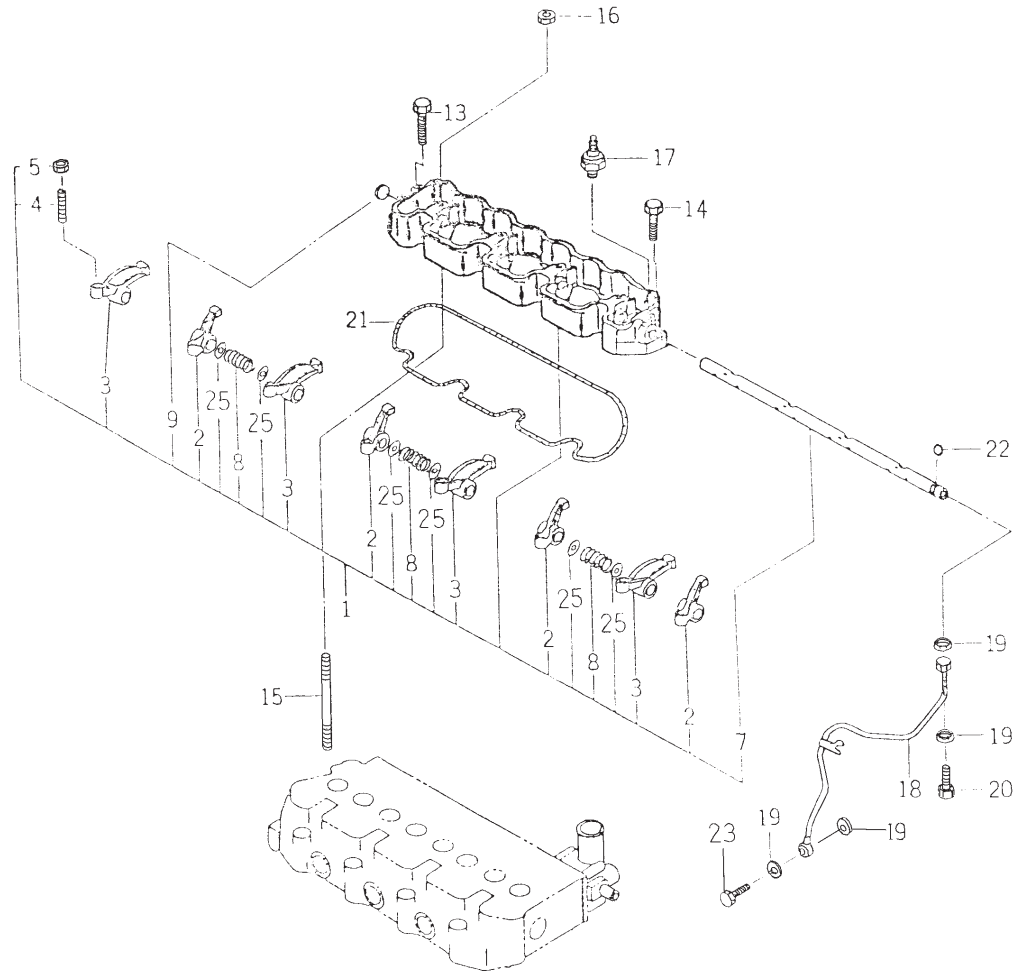
Cylinder Head: 844L & 20CL



844cylhead

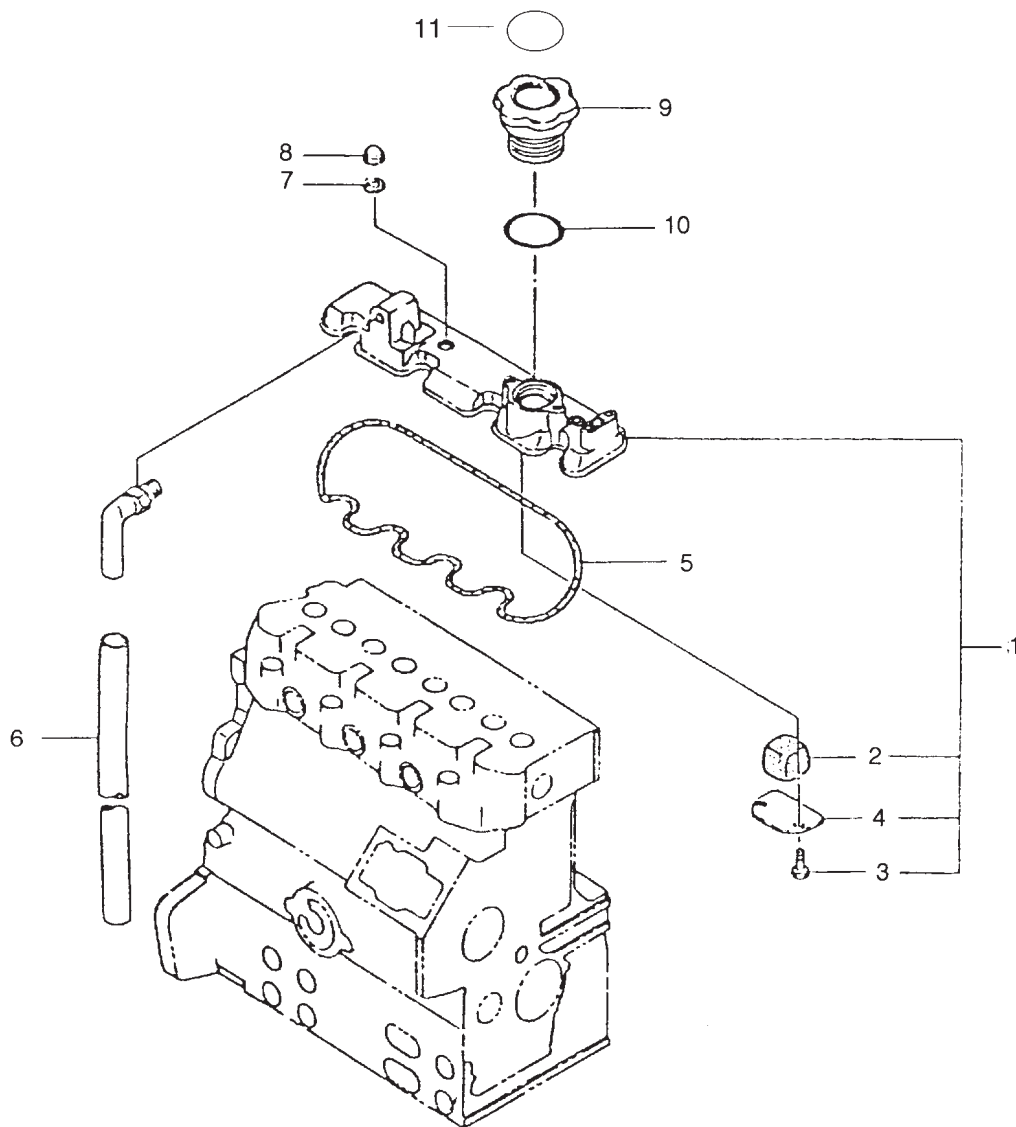
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 111017430 | 1 | Cylinder Head Assembly - Marine (includes keys #2 - 14) | - |
| | 111017440 | 1 | Cylinder Head Assembly - Industrial (includes keys #2 - 14) | - |
| 2 | 064200018 | 7 | Expansion Plug 18 mm | - |
| 3 | 064200030 | 2 | Expansion Plug 30 mm | - |
| 4 | 064200025 | 6 | Expansion Plug 25 mm | - |
| 5 | 064200010 | 3 | Expansion Plug 10 mm | - |
| 6 | 120166350 | 4 | Intake Valve | - |
| 7 | 120176360 | 4 | Exhaust Valve | - |
| 8 | 120406070 | 4 | Valve Gude Seal - Intake | - |
| 9 | 198216700 | 8 | Spring | - |
| 10 | 120186080 | 8 | Retainer | - |
| 11 | 120226070 | 16 | Keeper | - |
| 12 | 120406050 | 4 | Valve Gude Seal - Exhaust | - |
| 13 | 120216040 | 8 | Cap | - |
| 15 | 111147460 | 1 | Head Gasket; t = 0.5 mm | - |
| 16 | 111136360 | 14 | Head Bolt (17 mm Hex) | - |
| | 111136480 | 14 | Head Bolt (14 mm Hex) | - |
| 17 | 111136370 | 4 | Head Bolt (17 mm Hex) | - |
| 16 | 111136490 | 4 | Head Bolt (14 mm Hex) | - |
| 19 | 195816540 | 2 | Lifting Eye | - |
| 20 | 011 310816 | 2 | Bolt | - |

Rocker Arm Assembly



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 120036661 | 1 | Rocker Arm Assembly - Marine (includes keys #2 - 9) | - |
| | 120036402 | 1 | Rocker Arm Assembly - Industrial (includes keys #2 - 9) | - |
| 2 | 120356131 | 4 | Rocker Arm - Intake | - |
| 3 | 120356141 | 4 | Rocker Arm - Exhaust | - |
| 4 | 199486220 | 8 | Screw | - |
| 5 | 020109076 | 8 | Nut | - |
| 7 | 120316200 | 1 | Rocker Arm Shaft | - |
| 8 | 198217170 | 2 | Spring | - |
| 9 | 064200015 | ** | Expansion Plug 15 mm | - |
| 13 | 011300650 | 1 | Bolt | - |
| 14 | 011300625 | 4 | Bolt | - |
| 15 | 012109044 | 1 | Stud M10 x 1.25 x 80 mm | - |
| 16 | 14-00814 | 4 | Hex Nut M10 x 1.25 | - |
| 17 | 185246011 | 1 | Oil Pressure Switch | - |
| 18 | 140606720 | 1 | Oil Pipe (844 & 16C) | - |
| | 140607020 | 1 | Oil Pipe (844L & 20CL) | - |
| 19 | 198996060 | 4 | Gasket | - |
| 20 | 198486780 | 1 | Banjo Bolt | - |
| 21 | 052109074 | 1 | Gasket | - |
| 22 | 052109076 | 1 | O-Ring | - |
| 23 | 198487590 | 1 | Banjo Bolt | - |
| 25 | 199280300 | 6 | Shim | - |
| | | | **As required. | |

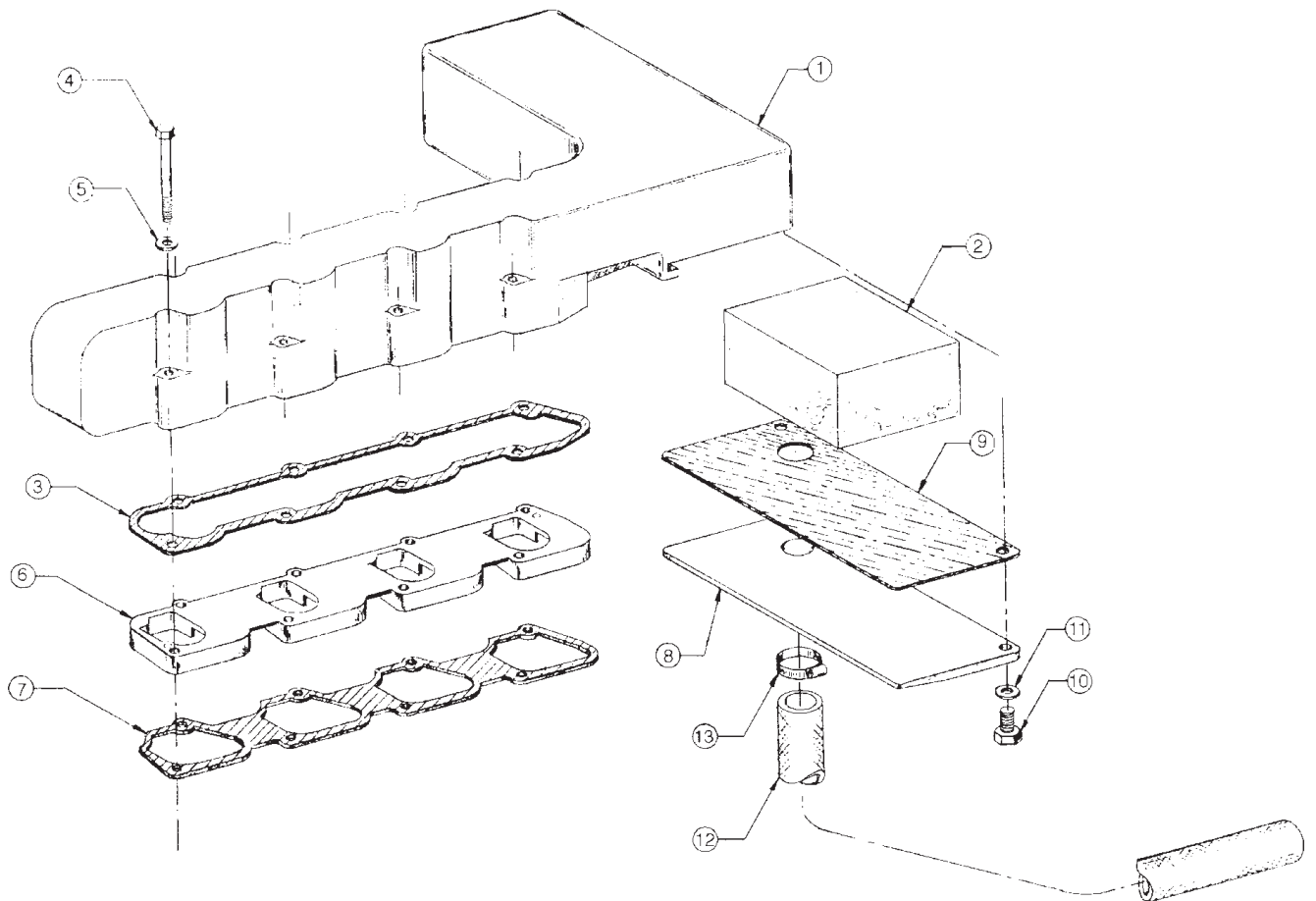
Rocker Arm Cover



844rockercover

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 111026920 | 1 | Rocker Arm Cover - Marine (includes keys #2 - 4) | - |
| | 111026840 | 1 | Rocker Arm Cover - Industrial (includes keys #2 - 4) | - |
| 2 | 110666090 | 1 | Filter | - |
| 3 | 011300612 | 2 | Bolt | - |
| 4 | 110666050 | 1 | Oil Stopper | - |
| 5 | 052109072 | 1 | O-ring | - |
| 6 | 068109036 | 1 | Tube | - |
| 7 | 198996071 | 4 | Gasket | - |
| 8 | 024600010 | 4 | Cap Nut | - |
| 9 | 198436010 | 1 | Filler Cap | - |
| 10 | 052100400 | 1 | O-ring | - |
| 11 | 190197400 | 1 | Caution Label | - |

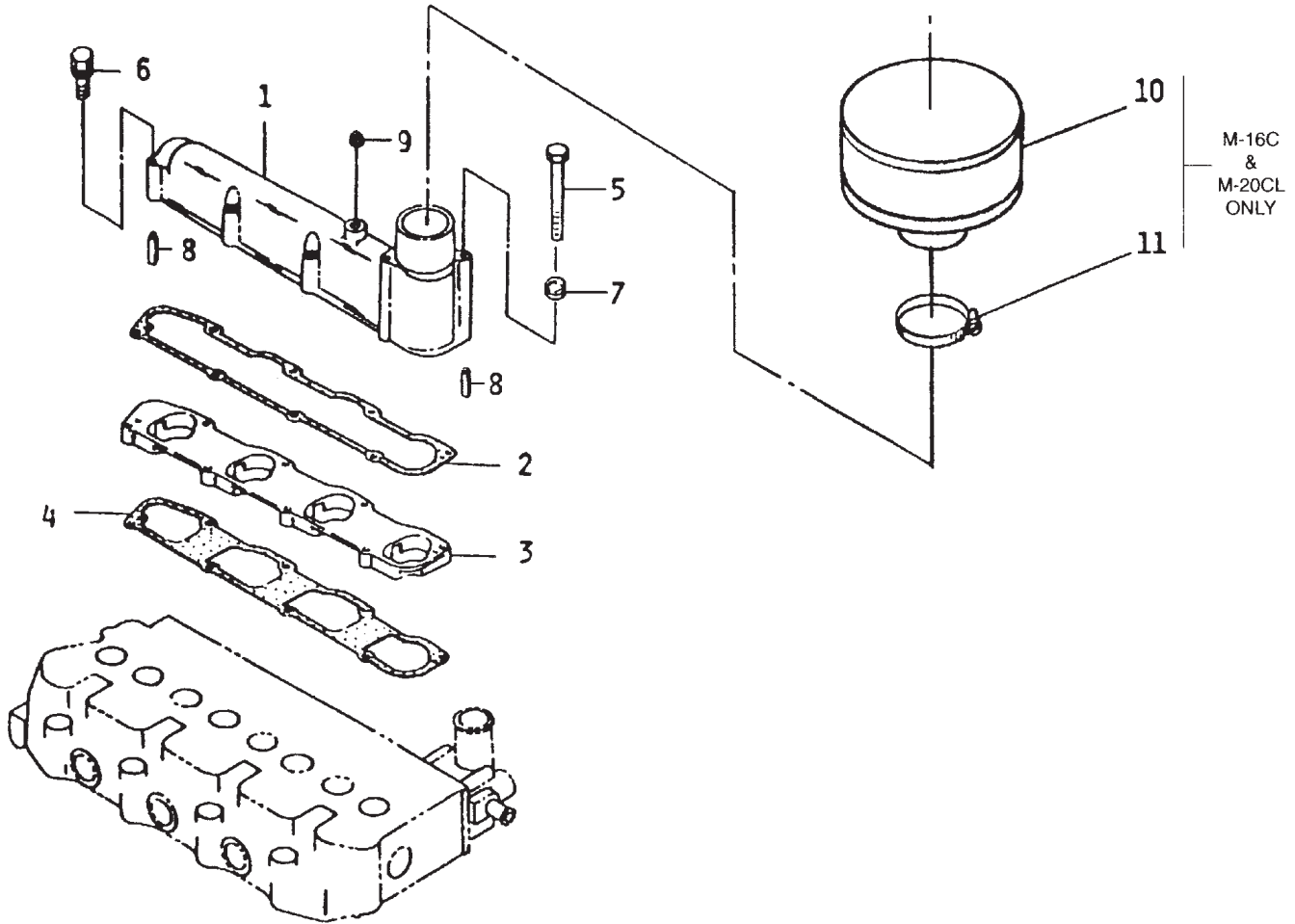
Air Intake & Filter: M844 & M844L



A-6257 / D-2442

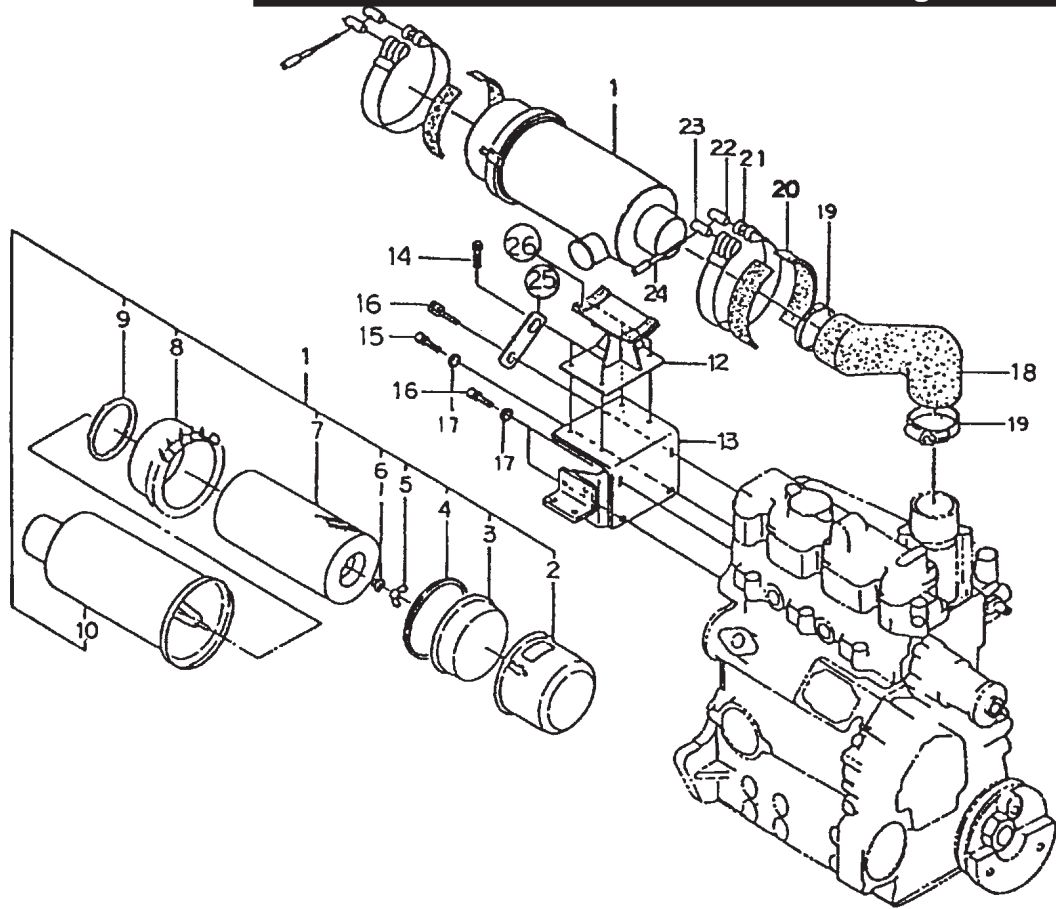
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|--|-------------|-----|--------------------------------------|---------------|
| 1 | 10-28101 | 1 | Air Intake Manifold | - |
| 2 | 24-28101 | 1 | Air Filter Element | - |
| 3 | 135996480 | 1 | Gasket | - |
| 4 | 12-01125 | 8 | Capscrew, Hex Head M6 x 1.0 x 65 mm | - |
| 5 | 12-00008 | 8 | Flat Washer M6 | - |
| 6 | 135597340 | 1 | Spacer | - |
| 7 | 135996600 | 1 | Gasket | - |
| 8 | 28-28102 | 1 | Air Intake Cover* | - |
| 9 | 11-28101 | 1 | Gasket | - |
| 10 | 12-00711 | 2 | Capscrew, Hex Head M8 x 1.25 x 20 mm | - |
| 11 | 15-00701 | 2 | Flat Washer M8 | - |
| 12 | 18-28102 | 1 | Air Intake Hose* | - |
| 13 | 19-00024 | 1 | Hose Clamp #24* | - |
| <p>*NOTE: Items marked replace earlier Cover #28-28101, Hose #18-28101 & Clamp #19-00020.</p> | | | | |

Air Intake & Filter: M16C, M20CL & NL844



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--------------------------------------|---------------|
| 1 | 135596710 | 1 | Intake Manifold (M-16C & M-20CL) | - |
| | 135596720 | 1 | Intake Manifold (NL-844 & 844L) | - |
| 2 | 135996480 | 1 | Gasket | - |
| 3 | 135597340 | 1 | Spacer (M-16C & M-20CL) | - |
| 1 | 135596930 | 1 | Spacer (NL-844 & 844L) | - |
| 4 | 135996600 | 1 | Gasket | - |
| 5 | 12-01137 | 2 | Capscrew, Hex Head M6 x 1.0 x 105 mm | - |
| 6 | 12-01133 | 6 | Capscrew, Hex Head M6 x 1.0 x 60 mm | - |
| 7 | 15-00008 | 8 | Flat Washer M6 | - |
| 8 | 030300410 | 2 | Spring Pin | - |
| 9 | 064500010 | 1 | Plug 1/8 BSPT | - |
| 10 | 24-28401 | 1 | Air Filter (M-16C & M-20CL) | - |
| 11 | 19-00036 | 1 | Hose Clamp #36 | - |

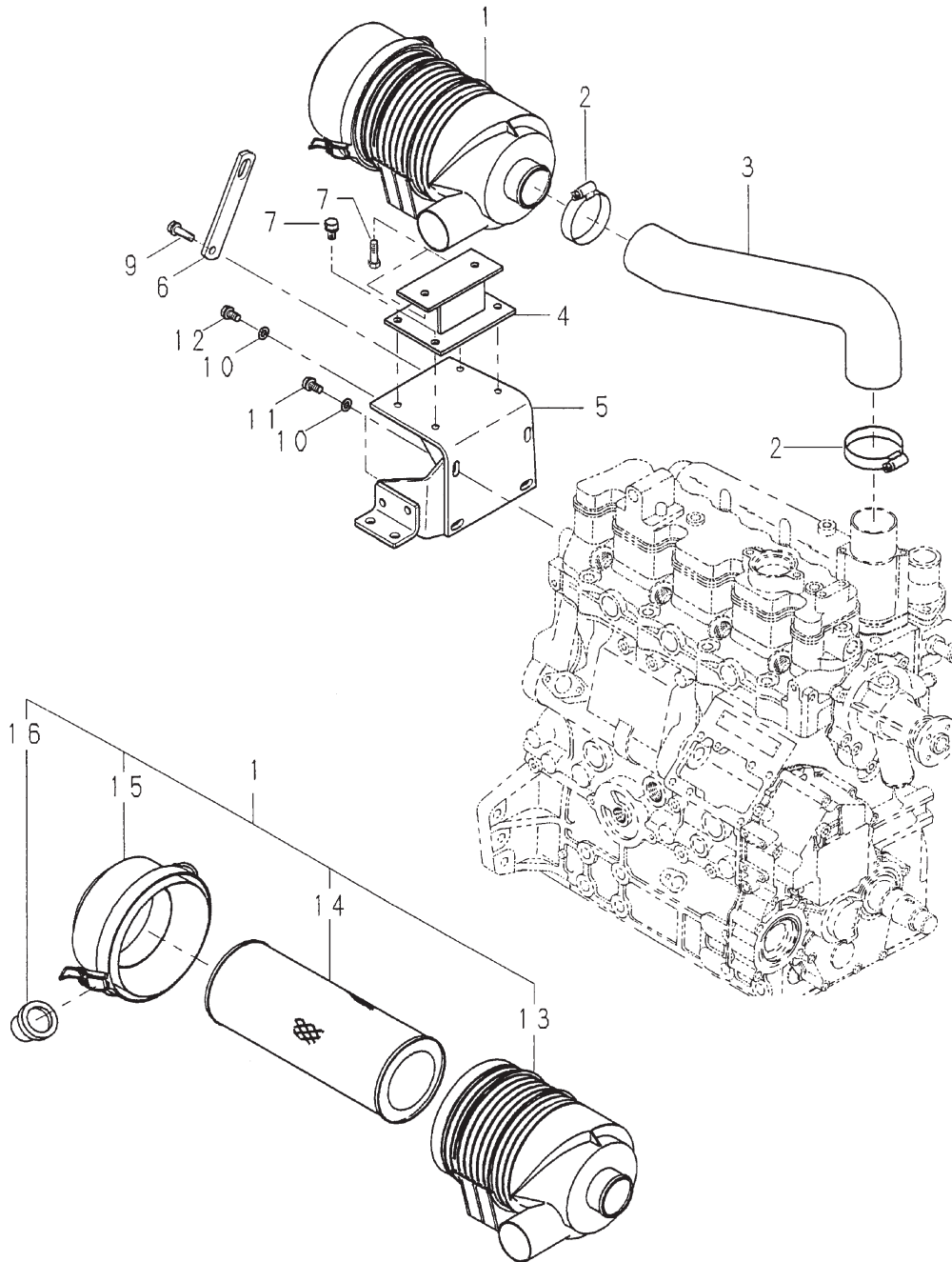
Air Filter & Mounting: NL844 & 844L



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 314500371 | 1 | Air Cleaner Assembly (includes keys #2 - 10) | - |
| 2 | 314531104 | 1 | Casing Assembly | - |
| 3 | 314531062 | 1 | Dust Cap | - |
| 4 | 314531061 | 1 | Gasket | - |
| 5 | 024100008 | 1 | Wing Nut | - |
| 6 | 314531125 | 1 | Seal Washer | - |
| 7 | 314531127 | 1 | Element (marked #314531065) | - |
| 8 | 314531058 | 1 | Wing | - |
| 9 | 314531057 | 1 | Gasket | - |
| 10 | 314531105 | 1 | Cap Assembly | - |
| 12 | 135976430 | 1 | Bracket | - |
| 13 | 135976420 | 1 | Bracket | - |
| 14 | 011310816 | 4 | Bolt | - |
| 15 | 011310820 | 1 | Bolt | - |
| 16 | 011310825 | 3 | Bolt | - |
| 17 | 026100008 | 3 | Washer | - |
| 18 | 135597330 | 1 | Intake Hose | - |
| 19 | 19-00036 | 2 | Hose Clamp #36 | - |
| 20 | 398113190 | 4 | Rubber Cushion | - |
| 21 | 314630020 | 2 | Clamp | - |
| 22 | 399610110 | 2 | Pin | - |
| 23 | 399610100 | 2 | Pin | - |
| 24 | 399480070 | 2 | Screw | - |
| 25 | 195816100 | 1 | Lifting Eye | - |
| 26 | 398117800 | 2 | Rubber Cushion | - |

Air Filter & Mounting NL844 & 844L

Late Production



844aircleaner

Air Filter & Mounting NL844 & 844L

Late Production

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 135016300 | 1 | Air Cleaner Assembly (includes keys #13-16) | - |
| 2 | 198756220 | 2 | Hose Band | - |
| 3 | 135597710 | 1 | Hose | - |
| 4 | 135976600 | 1 | Bracket | - |
| 5 | 135976420 | 1 | Bracket | - |
| 6 | 195816100 | 1 | Lifting Eye | - |
| 7 | 011510816 | 6 | Bolt | - |
| 9 | 011510825 | 1 | Bolt | - |
| 10 | 026100008 | 3 | Washer | - |
| 11 | 011510825 | 2 | Bolt | - |
| 12 | 011510820 | 1 | Bolt | - |
| 13 | 135326197 | 1 | Housing | - |
| 14 | 24-27302 | 1 | Element | - |
| 15 | 135326199 | 1 | Cover Assembly | - |
| 16 | 135326196 | 1 | Valve | - |

Exhaust Manifold & Muffler: NL844

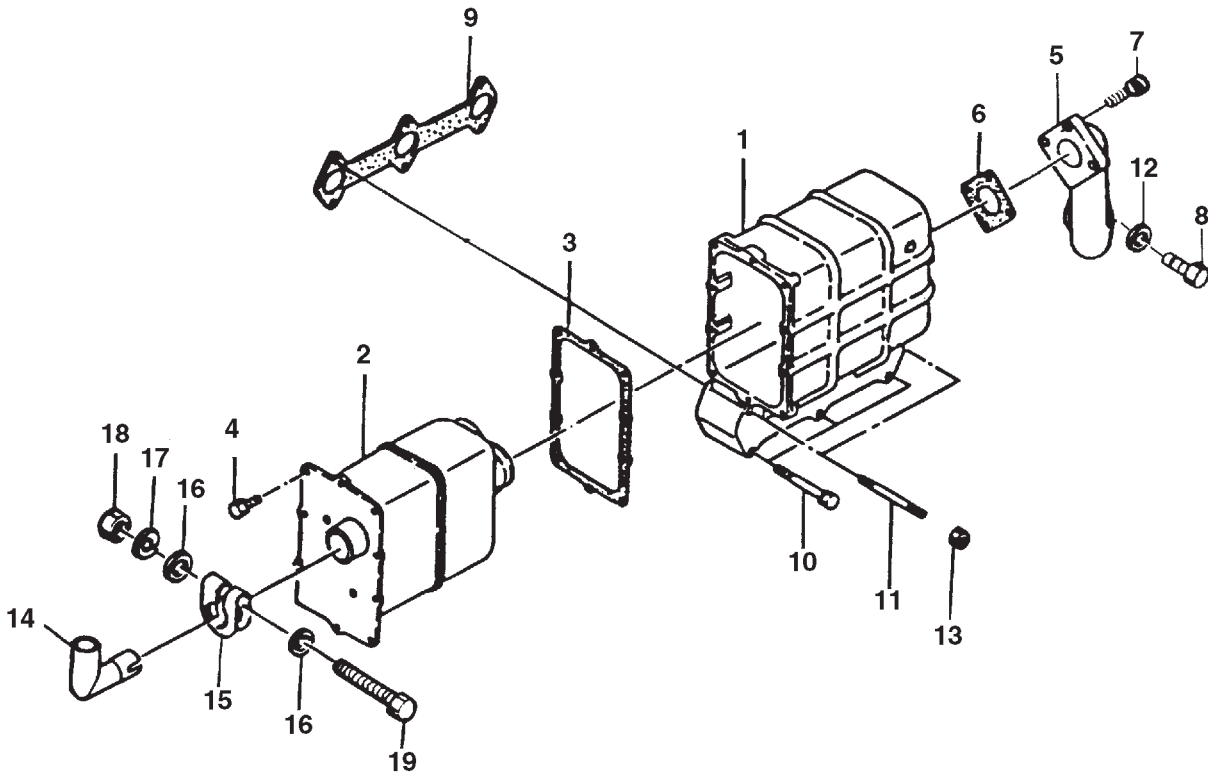


Fig. 2-4

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 135616700 | 1 | Exhaust Manifold | - |
| 2 | 135406230 | 1 | Muffler Element | - |
| 3 | 135996530 | 1 | Gasket | - |
| 4 | 011300612 | 10 | Capscrew, Hex Head with Washer M6 x 1.0 x 12 mm | - |
| 5 | 135656130 | 1 | Exhaust Pipe | - |
| 6 | 135996550 | 1 | Gasket | - |
| 7 | 011310625 | 3 | Capscrew, Hex Head with Washer M6 x 1.0 x 25 mm | - |
| 8 | 12-00031 | 2 | Hex Nut M6 x 1.0 x 25 mm | - |
| 9 | 135996720 | 1 | Gasket | - |
| 10 | 12-00063 | 4 | Capscrew, Hex Head M6 x 1.0 x 70 mm | - |
| 11 | 012110670 | 2 | Stud M6 x 1.0 x 70 mm | - |
| 12 | 15-01132 | 1 | Lock Washer M8 | - |
| 13 | 14-01131 | 2 | Hex Nut M6 x 1.0 | - |
| 14 | 27-33102 | 1 | Exhaust Elbow 1-1/2 NPT | - |
| 15 | 314410020 | 1 | Clamp | - |
| 16 | 15-00701 | 2 | Flat Washer M8 | - |
| 17 | 15-00702 | 1 | Lock Washer M8 | - |
| 18 | 14-00711 | 1 | Hex Nut M8 x 1.25 | - |
| 19 | 12-00718 | 2 | Capscrew, Hex Head M8 x 1.25 x 65 mm | - |

Exhaust Manifold & Muffler: NL844L

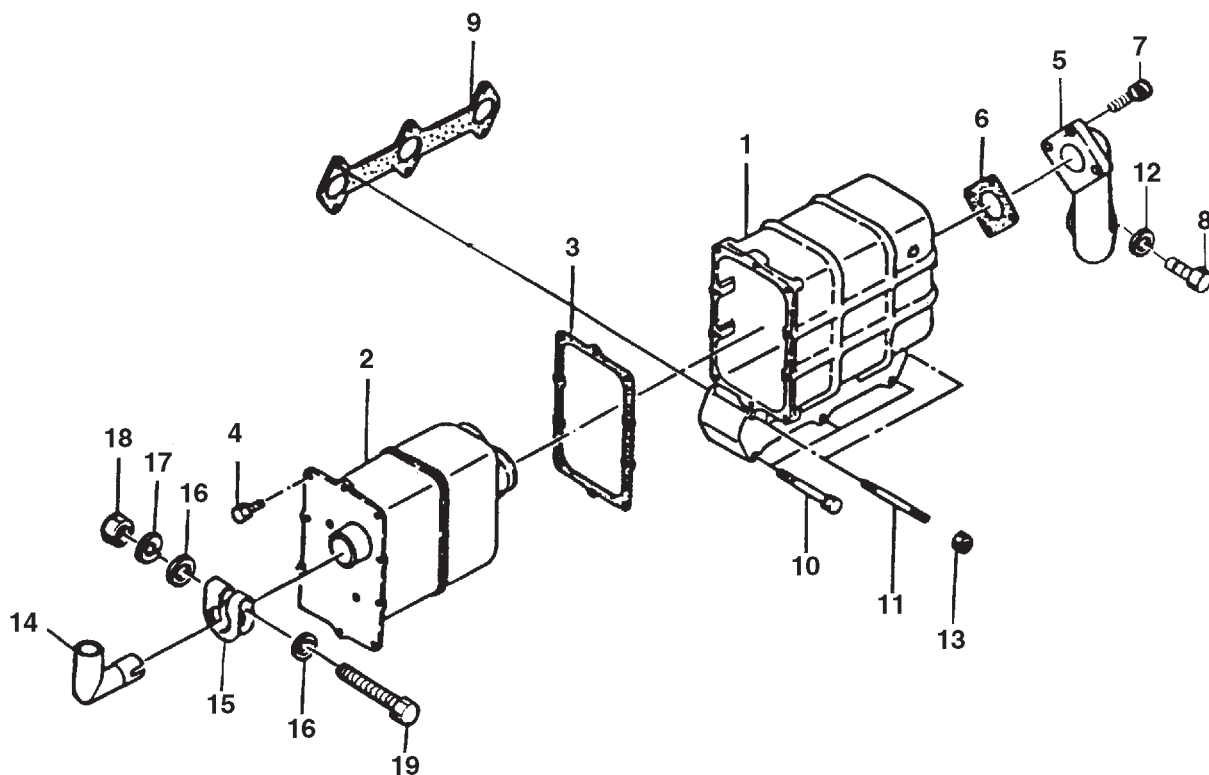
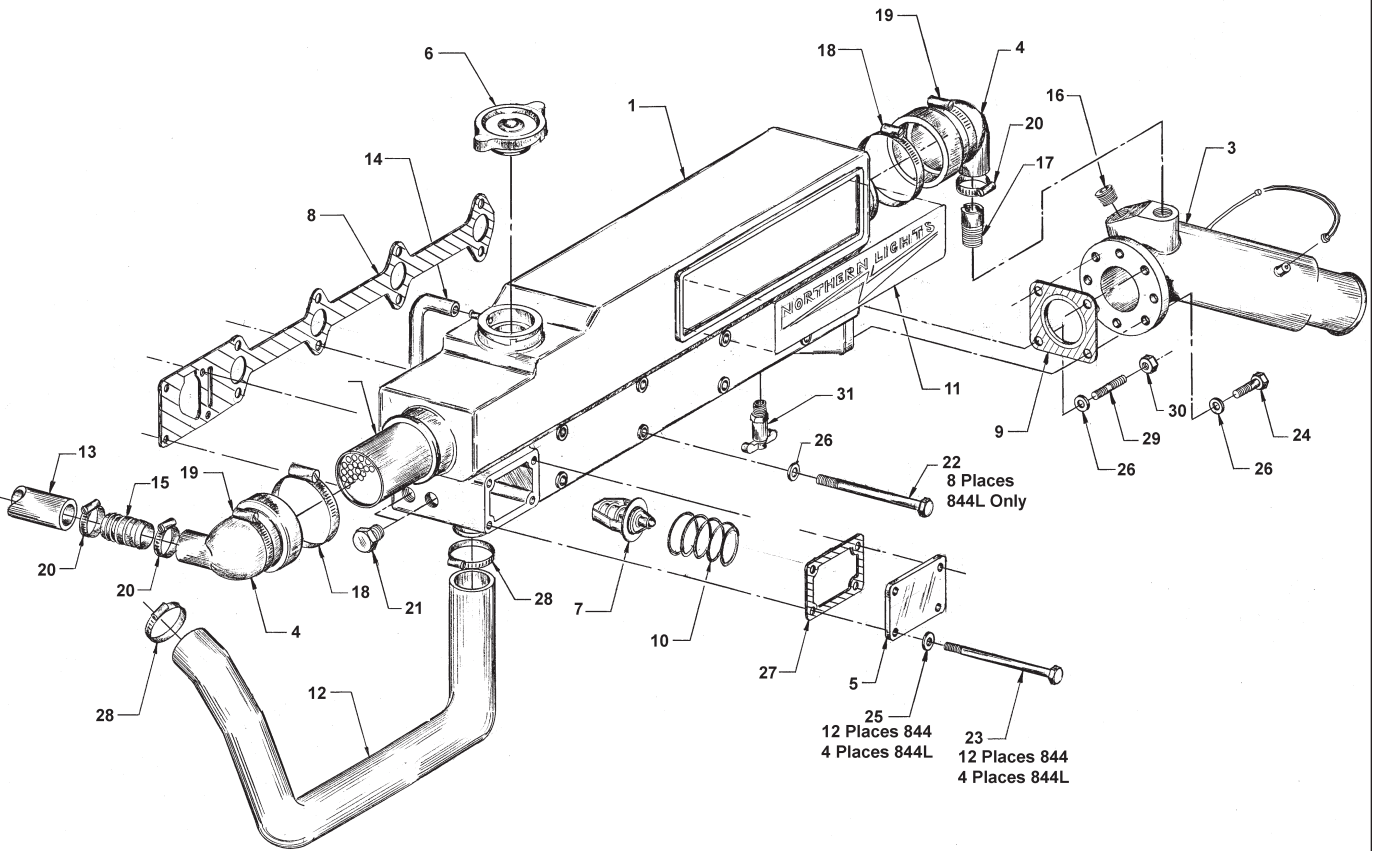


Fig. 2-4

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 135617170 | 1 | Exhaust Manifold | - |
| 2 | 135406230 | 1 | Muffler Element | - |
| 3 | 135996530 | 1 | Gasket | - |
| 4 | 011300612 | 10 | Capscrew, Hex Head with Washer M6 x 1.0 x 12 mm | - |
| 5 | 135656140 | 1 | Exhaust Pipe | - |
| 6 | 135996550 | 1 | Gasket | - |
| 7 | 011310625 | 3 | Capscrew, Hex Head with Washer M6 x 1.0 x 25 mm | - |
| 8 | 12-00056 | 2 | Capscrew, Socket Head M8 x 1.25 x 25 | - |
| 9 | 135996780 | 1 | Gasket | - |
| 10 | 12-34801 | ** | Capscrew, Hex Head M8 x 1.25 x 70 mm | - |
| 11 | 012100870 | ** | Stud M8 x 1.25 x 70 mm | - |
| 12 | 15-00704 | 2 | Lock Washer, Hi-Collar M8 | - |
| 13 | 14-00711 | ** | Hex Nut M8 x 1.25 | - |
| 14 | 135606340 | 1 | Exhaust Elbow | - |
| | 27-33103 | 1 | Exhaust Elbow 1-1/2 NPT | - |
| 15 | 314410020 | 1 | Clamp | - |
| 16 | 15-00701 | 2 | Flat Washer M8 | - |
| 17 | 15-00702 | 1 | Lock Washer M8 | - |
| 18 | 14-00711 | 1 | Hex Nut M8 x 1.25 | - |
| 19 | 12-00718 | 1 | Capscrew, Hex Head M8 x 1.25 x 65 mm | - |
| | | | **As required. | |

Heat Exchanger & Exhaust Manifold



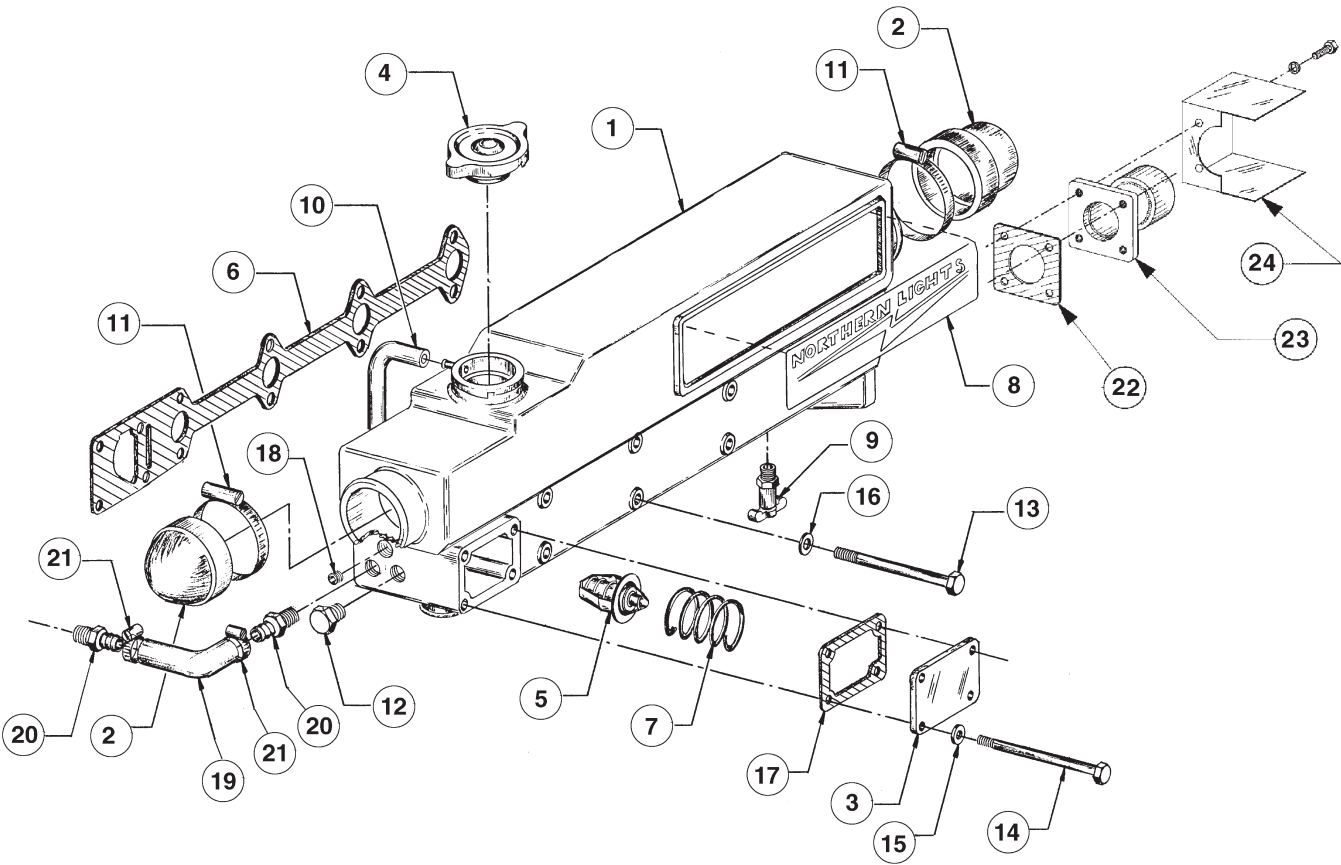
Heat Exchanger & Exhaust Manifold

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|------------------|
| 1 | 10-38101 | 1 | Exhaust Manifold/Expansion Tank | - |
| 2 | 20-18101 | 1 | Heat Exchanger Element (formerly #145506480) | - |
| 3 | 27-32003 | 1 | Wet Exhaust Elbow (bronze) | - |
| | 135616233 | 1 | Wet Exhaust Elbow (cast iron) | - |
| 4 | 145536370 | 2 | End Cap | - |
| 5 | 28-13101 | 1 | Cover Plate | - |
| 6 | 21-12007 | 1 | Filler Cap (7 PSI) | - |
| 7 | 145206022 | 1 | Thermostat (82° C) | - |
| 8 | 11-38101 | 1 | Gasket | - |
| 9 | 314990030 | 1 | Gasket | - |
| 10 | 00-13101 | 1 | Spring | - |
| 11 | 00-71001 | 1 | Decal, "Northern Lights" | - |
| 12 | 18-13107 | 1 | Hose | - |
| 13 | 18-13108 | 1 | Hose 3/4" ID x 18-1/2" | - |
| 14 | 18-13109 | 1 | Hose 5/16" ID x 25" | - |
| 15 | 21-13102 | 1 | Union 3/4 Hose Barb x 3/4 Hose Barb | - |
| 16 | 198436140 | 1 | Plug, Socket Head 1/2 NPT | - |
| 17 | 145986150 | 1 | Connector, Male 1/2 BSPT x 3/4 Hose Barb | - |
| 18 | 19-00048 | 2 | Hose Clamp #48 | - |
| 19 | 19-00040 | 2 | Hose Clamp #40 | - |
| 20 | 19-00012 | 3 | Hose Clamp #12 | - |
| 21 | 21-31003 | ** | Hex Head Plug 3/8 NPT | - |
| 22 | 12-00701 | 8 | Capscrew, Hex Head M8 x 1.25 x 110 mm (M-844L) | - |
| 23 | 12-01138 | 12 | Capscrew, Hex Head M6 x 1.0 x 110 mm (M-844) | - |
| | 12-01138 | 4 | Capscrew, Hex Head M6 x 1.0 x 110 mm (M-844L) | - |
| 24 | 12-00712 | 3 | Capscrew, Hex Head M8 x 1.25 x 25 mm | - |
| 25 | 15-00008 | 12 | Flat Washer M6 (M-844) | - |
| | 15-00008 | 4 | Flat Washer M6 (M-844L) | - |
| 26 | 15-00701 | 4 | Flat Washer M8 (M-844) | - |
| | 15-00701 | 12 | Flat Washer M8 (M-844L) | - |
| 27 | 11-13101 | 1 | Gasket | - |
| 28 | 19-00024 | 2 | Hose Clamp #24 | - |
| 29 | 13-00710 | 1 | Stud M8 x 1.25 x 20 x 25 mm (35 mm OAL) | - |
| 30 | 14-00711 | 1 | Hex Nut M8 x 1.25 | - |
| 31 | 21-10002 | 1 | Drain Cock 1/4 NPT | - |
| 32 | 22-42014 | 1 | Switch, High Exhaust Temperature | up to xxx-31937C |
| | 22-42070 | 1 | Switch, High Exhaust Temperature | from xxxx-31938C |
| 33 | 22-40482 | 1 | Harness, Exhaust Temperature Switch | from xxx-31938C |

**As required.

Expansion Tank & Exhaust Manifold: M844 & M844L

Keel Cooled Applications



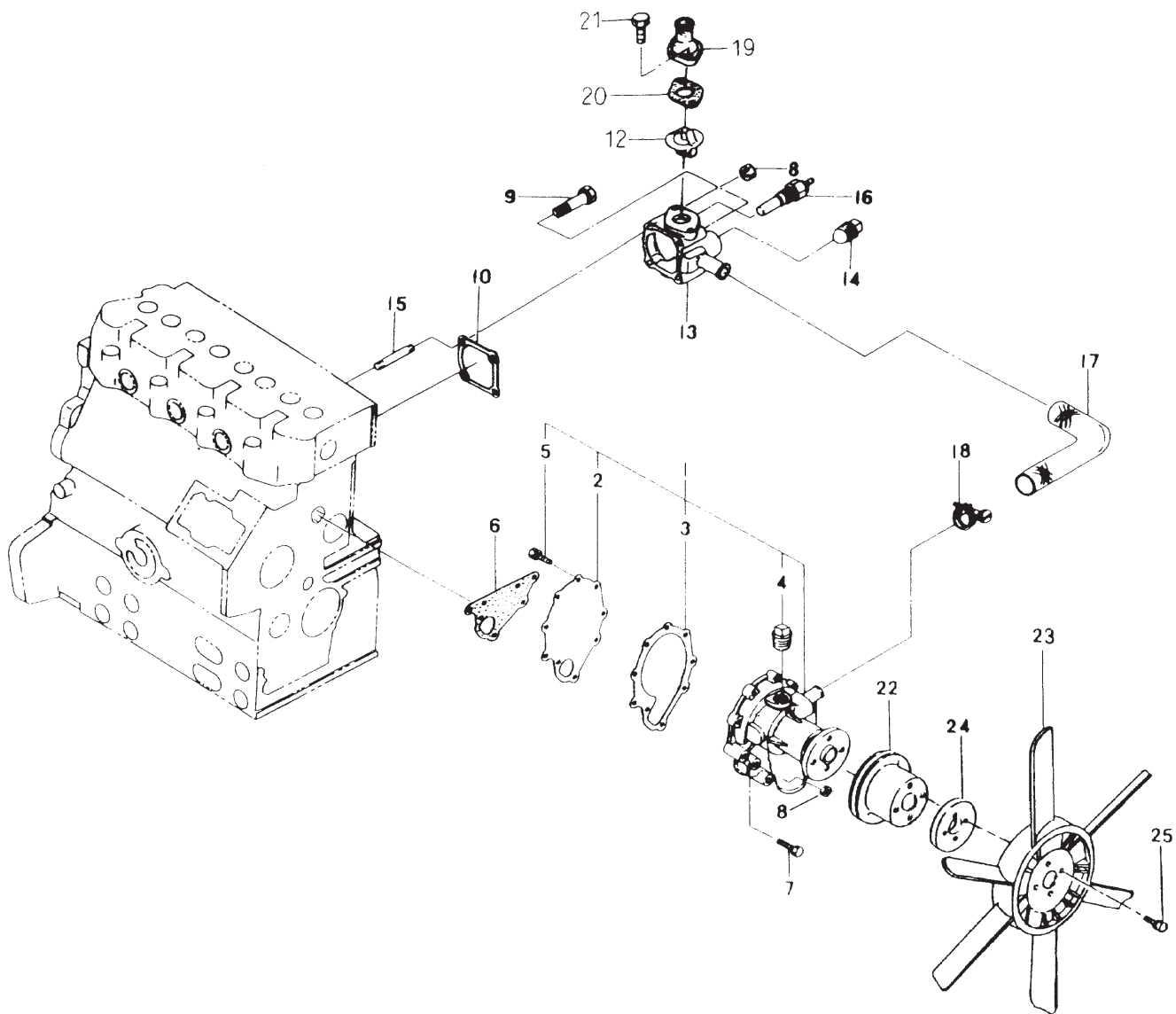
A-6420, A-6510 / D-2460

Expansion Tank & Exhaust Manifold: M844 & M844L

Keel Cooled Applications

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 10-38101 | 1 | Exhaust Manifold/Expansion Tank | - |
| 2 | 20-12019 | 2 | End Cap | - |
| 3 | 28-13101 | 1 | Cover Plate | - |
| 4 | 21-12007 | 1 | Filler Cap (7 PSI) | - |
| 5 | 145206022 | 1 | Thermostat (82° C) | - |
| 6 | 11-38101 | 1 | Gasket | - |
| 7 | 00-13101 | 1 | Spring | - |
| 8 | 00-71001 | 1 | Decal, "Northern Lights" | - |
| 9 | 21-10002 | 1 | Drain Cock 1/4 NPT | - |
| 10 | 18-13109 | 1 | Hose, Overflow 5/16" ID x 25" | - |
| 11 | 19-02044 | 2 | Hose Clamp #44 | - |
| 12 | 21-31003 | 1 | Plug, Hex Head 3/8 NPT | - |
| 13 | 12-00701 | 8 | Capscrew, Hex Head M8 x 1.25 x 110 mm (M-844L & M-20CL) | - |
| 14 | 12-01138 | 12 | Capscrew, Hex Head M6 x 1.0 x 110 mm (M-844) | - |
| | 12-01138 | 4 | Capscrew, Hex Head M6 x 1.0 x 110 mm (M-844L & M-20CL) | - |
| 15 | 15-00008 | 12 | Flat Washer M6 (M-844) | - |
| | 15-00008 | 4 | Flat Washer M6 (M-844L & M-20CL) | - |
| 16 | 15-00701 | 8 | Flat Washer M8 | - |
| 17 | 11-13101 | 1 | Gasket | - |
| 18 | 21-51900 | 1 | Plug, Socket Head 1/8 NPT | - |
| 19 | 145536050 | 1 | Hose | - |
| 20 | 21-12205 | 2 | Male Connector 3/8 NPT x 1/2 HB | - |
| 21 | 19-00006 | 2 | Hose Clamp #6 | - |
| 22 | 11-31902 | 1 | Gasket | - |
| 23 | 27-31921 | 1 | Adapter, Dry Exhaust Straight 1-1/2 NPT | - |
| 24 | 00-12000 | 1 | Heat Shield | - |

Coolant Pump – Industrial Applications: NL844 & 844L

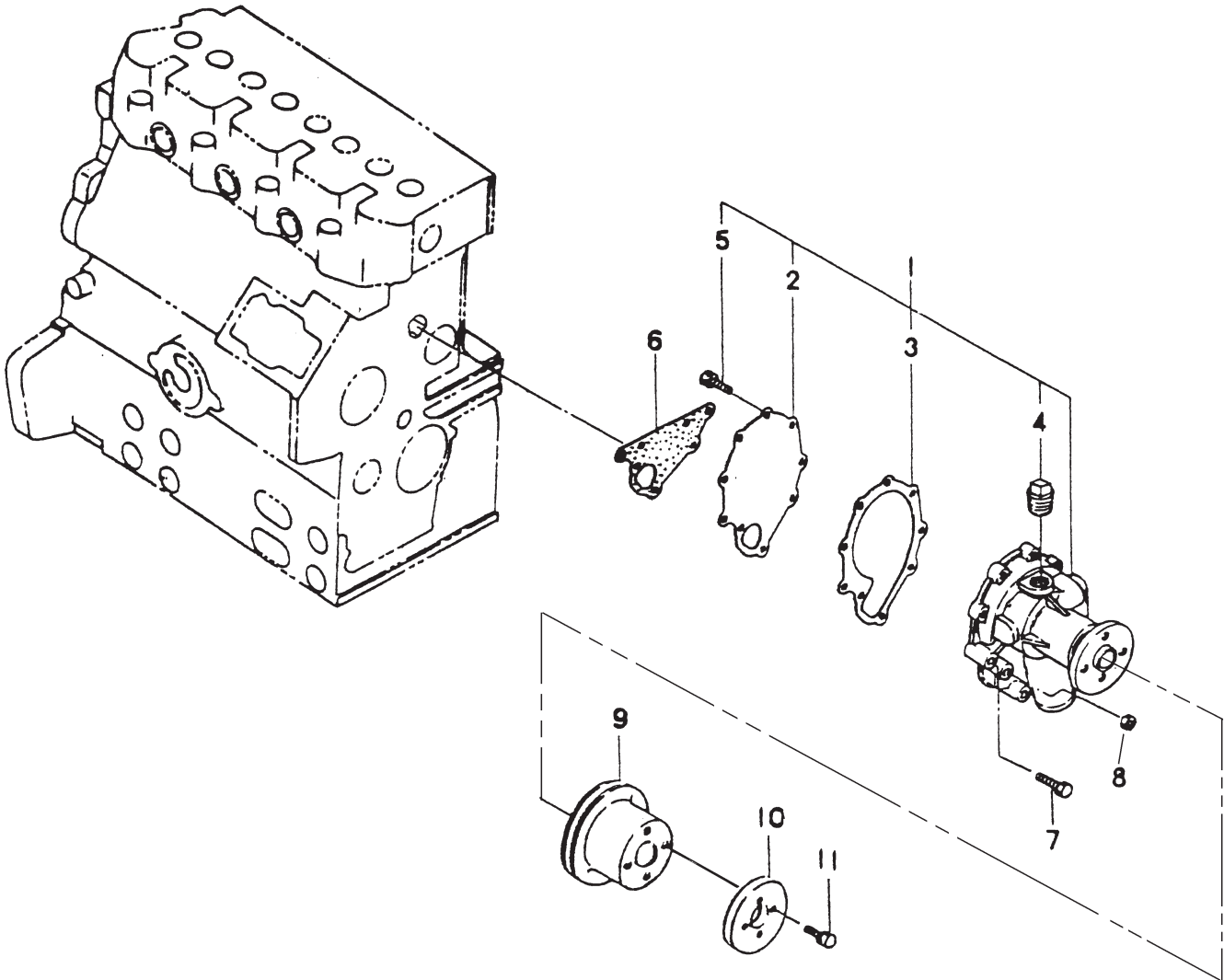


Coolant Pump – Industrial Applications: NL844 & 844L

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 145016891 | 1 | Coolant Pump Assembly (includes keys #2 - 5, formerly #145016890 and 145016891) | - |
| 2 | 145146320 | 1 | Backing Plate | - |
| 3 | 145996680 | 1 | Gasket (formerly #145996460) | - |
| 4 | 064500030 | ** | Plug | - |
| 5 | 015300614 | 5 | Screw | - |
| 6 | 145996370 | 1 | Gasket | - |
| 7 | 011300635 | 4 | Bolt | - |
| 8 | 023100006 | 3 | Nut | - |
| 9 | 011300645 | 2 | Bolt | - |
| 10 | 145996360 | 1 | Gasket | - |
| 12 | 145206182 | 1 | Thermostat 180°F/ 82°C (replaces #145206180 & 145206181) | - |
| 13 | 145216390 | 1 | Thermostat Housing | - |
| 14 | 064500030 | 1 | Plug | - |
| 15 | 012100645 | 2 | Stud M6 x 1.0 x 45 mm | - |
| 16 | 385720230 | 1 | Temperature Switch (212° F) | - |
| 17 | 145536051 | 1 | Hose | - |
| 18 | 19-00006 | 2 | Hose Clamp #6 | - |
| 19 | 145226330 | 1 | Thermostat Cover | - |
| 20 | 145996051 | 1 | Gasket | - |
| 21 | 011500820 | 2 | Bolt | - |
| 22 | 145336620 | 1 | Pulley | - |
| 23 | 145306550 | 1 | Cooling Fan | - |
| 24 | 145386390 | 1 | Plate | - |
| 25 | 011310620 | 4 | Bolt | - |

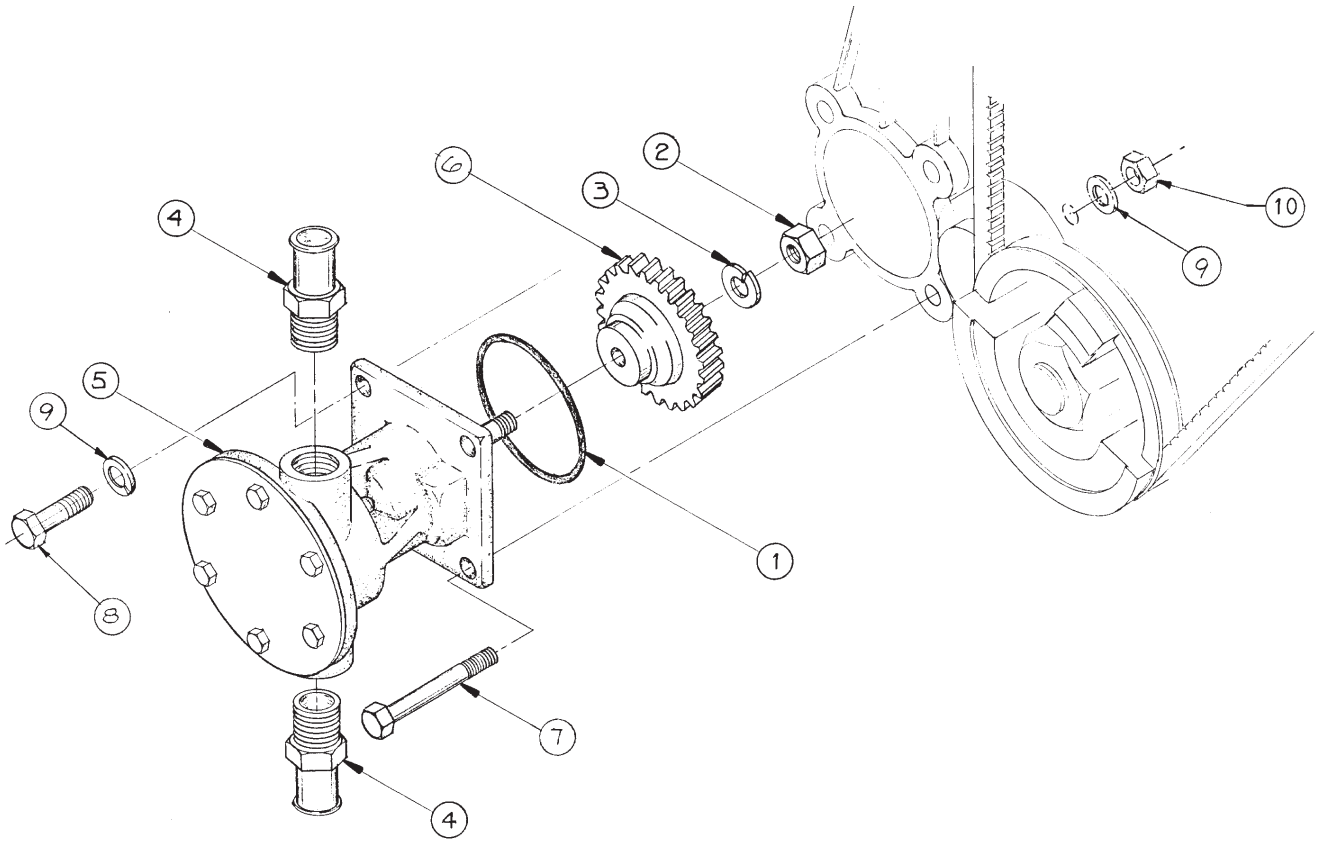
**As required.

Coolant Pump – All Marine Applications



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 145017350 | 1 | Coolant Pump Assembly (includes keys #2 - 5) | - |
| 2 | 145146320 | 1 | Backing Plate | - |
| 3 | 145996680 | 1 | Gasket (formerly #145996460) | - |
| 4 | 064500030 | ** | Plug | - |
| 5 | 015300614 | 5 | Screw | - |
| 6 | 145996370 | 1 | Gasket | - |
| 7 | 011300635 | 4 | Bolt | - |
| 8 | 023100006 | 1 | Nut | - |
| 9 | 145336620 | 1 | Pulley | - |
| 10 | 145386390 | 1 | Spacer | - |
| 11 | 011310616 | 4 | Bolt (844) | - |
| | 011310620 | 4 | Bolt (844L) | - |
| | | | **As required. | |

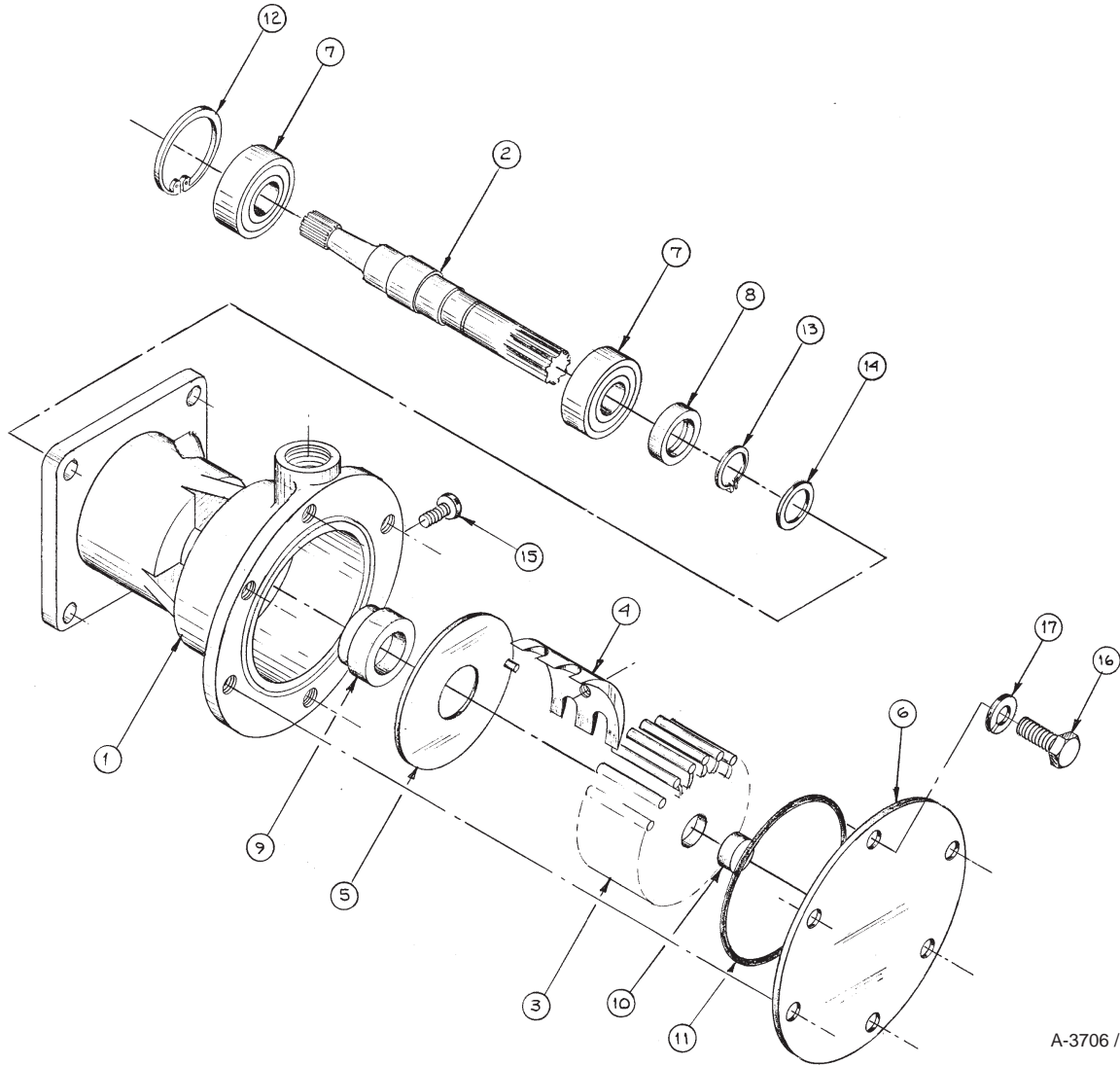
Raw Water Pump & Mounting – All Marine Applications



A-4779 / B-3842

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--------------------------------------|---------------|
| 1 | 16-13101 | 1 | O-ring | - |
| 2 | 14-00811 | 1 | Nut M10 x 1.5 | - |
| 3 | 15-00802 | 1 | Lock Washer M10 | - |
| 4 | 21-00129 | 2 | Fitting 1/2 NPT x 3/4 HB | - |
| 5 | 25-12057 | 1 | Raw Water Pump (see parts detail) | - |
| 6 | 340460141 | 1 | Drive Gear | - |
| 7 | 12-00718 | 3 | Capscrew, Hex Head M8 x 1.25 x 65 mm | - |
| 8 | 12-00717 | 1 | Capscrew, Hex Head M8 x 1.25 x 60 mm | - |
| 9 | 15-00702 | 4 | Lock Washer, Helical M8 | - |
| 10 | 14-00711 | 3 | Hex Nut M8 x 1.25 | - |

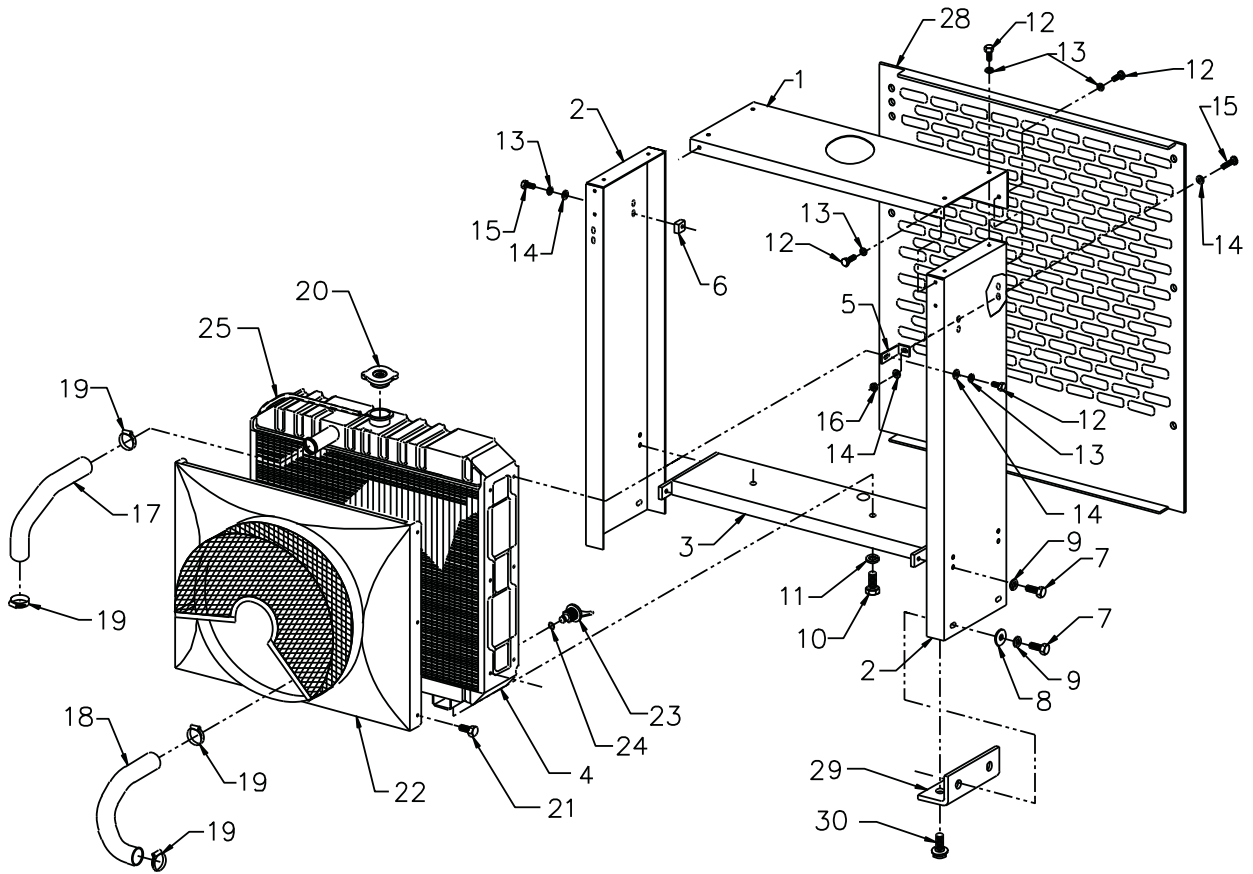
Raw Water Pump Assembly



A-3706 / C-2204

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 25-12057 | 1 | Raw Water Pump Assembly (includes keys #1 - 17) | - |
| • | 25-12004 | 1 | Repair Kit (includes keys #3 - 9 & 11) | - |
| 1 | 25-12058 | 1 | Housing | - |
| 2 | 25-12059 | 1 | Shaft | - |
| 3 | 25-12060 | 1 | Impeller | - |
| 4 | 25-12061 | 1 | Cam | - |
| 5 | 25-12062 | 1 | Wear Plate | - |
| 6 | 25-12063 | 1 | End Cover | - |
| 7 | 25-12064 | 1 | Bearing | - |
| 8 | 25-12065 | 1 | Lip Seal | - |
| 9 | 25-12066 | 1 | Mechanical Seal | - |
| 10 | 25-12017 | 1 | Spline Seal | - |
| 11 | 25-12067 | 1 | O-ring | - |
| 12 | 25-12068 | 1 | Retaining Ring | - |
| 13 | 25-12069 | 1 | Retaining Ring | - |
| 14 | 25-12070 | 1 | Washer | - |
| 15 | 25-12071 | 1 | Pan Head Screw #10-32 x 3/8" | - |
| 16 | 25-12072 | 6 | Hex Head Screw #10-32 x 3/8" | - |
| 17 | 25-12073 | 1 | Lock Washer #10 | - |

Radiator & Guard – Industrial Applications: NL844 & 844L



A-6306 / D-2457

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 39-18103 | 1 | Top Panel | - |
| 2 | 39-18102 | 2 | Side Panel | - |
| 3 | 39-18104 | 1 | Radiator Support | - |
| 4 | 145506320 | 1 | Radiator Assembly (includes keys #20 - 26) | - |
| 5 | 23-18101 | 1 | Bracket, Upper Radiator Support | - |
| 6 | 21-18101 | 2 | Spacer, Radiator Support | - |
| 7 | 12-00711 | 8 | Capscrew, Hex Head M8 x 1.25 x 20 mm | - |
| 8 | 15-00701 | 8 | Flat Washer M8 | - |
| 9 | 15-00702 | 8 | Lock Washer M8 | - |
| 10 | 12-00805 | 2 | Capscrew, Hex Head M10 x 1.5 x 20 mm | - |
| 11 | 15-00802 | 2 | Lock Washer M10 | - |
| 12 | 12-00097 | 9 | Capscrew, Hex Head M6 x 1.0 x 12 mm | - |
| 13 | 15-01132 | 10 | Lockwasher M6 | - |
| 14 | 15-00008 | 3 | Flat Washer M6 | - |
| 15 | 12-01131 | 2 | Capscrew, Hex Head M6 x 1.0 x 20 mm | - |
| 16 | 14-04803 | 1 | Hex Nut M6 x 1.0 | - |
| 17 | 145536870 | 1 | Hose, Radiator Inlet | - |
| 18 | 145536640 | 1 | Hose, Radiator Outlet | - |
| 19 | 067100046 | 4 | Hose Clamp | - |
| 20 | 310110010 | 1 | Radiator Cap | - |
| 21 | 011150610 | 6 | Bolt | - |
| 22 | 145546470 | 1 | Shroud with Fan Guard | - |
| 23 | 408130010 | 1 | Drain Cock | - |
| 24 | 052100070 | 1 | O-Ring | - |
| 25 | 145546510 | 1 | Hose | - |
| 26 | 00-70021 | 1 | Decal "Northern Lights" (not shown) | - |
| 27 | 31-18101 | 1 | Air Duct Adapter (optional - not shown) | - |

General Arrangement: M - NL844 & M16C

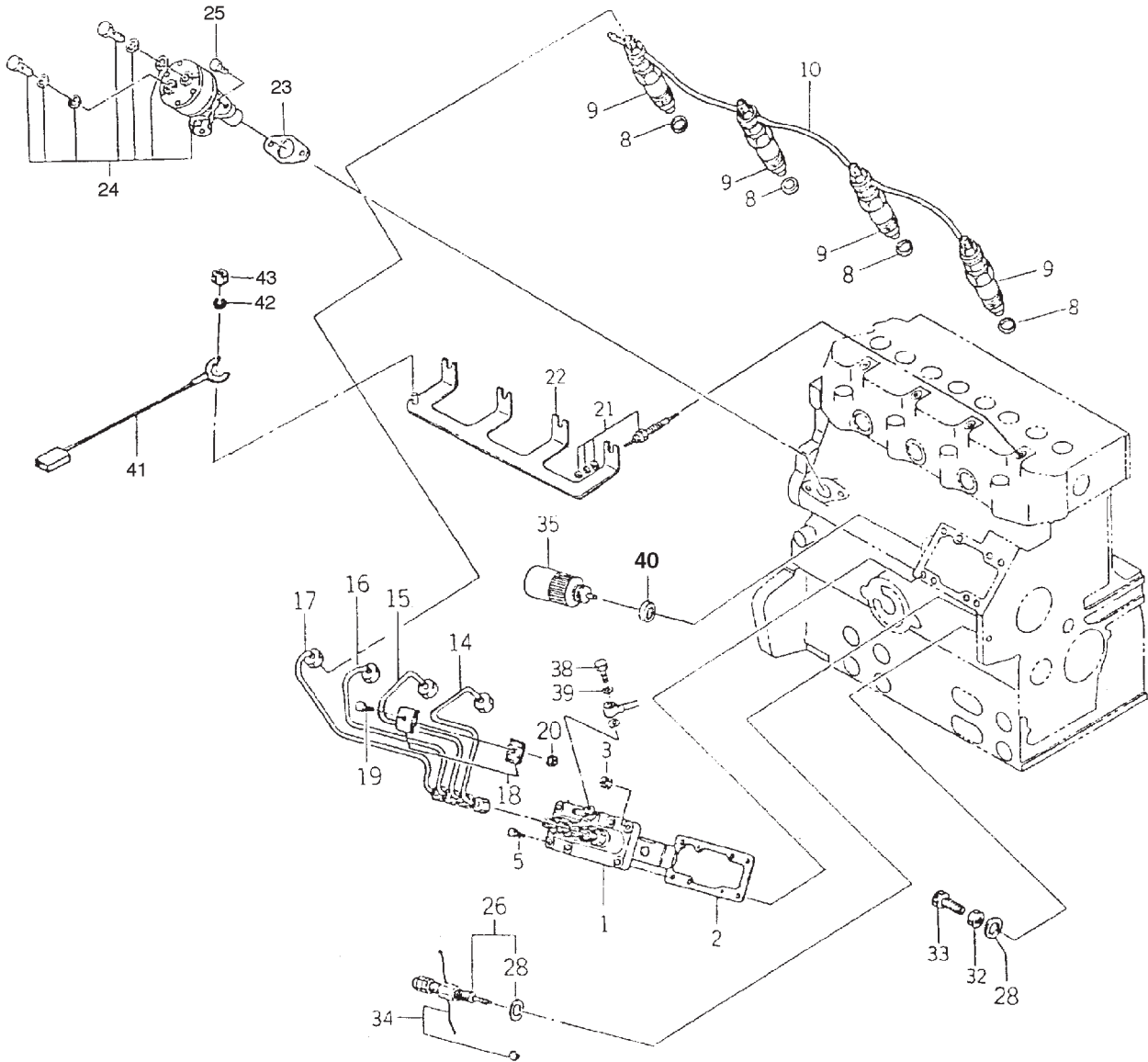


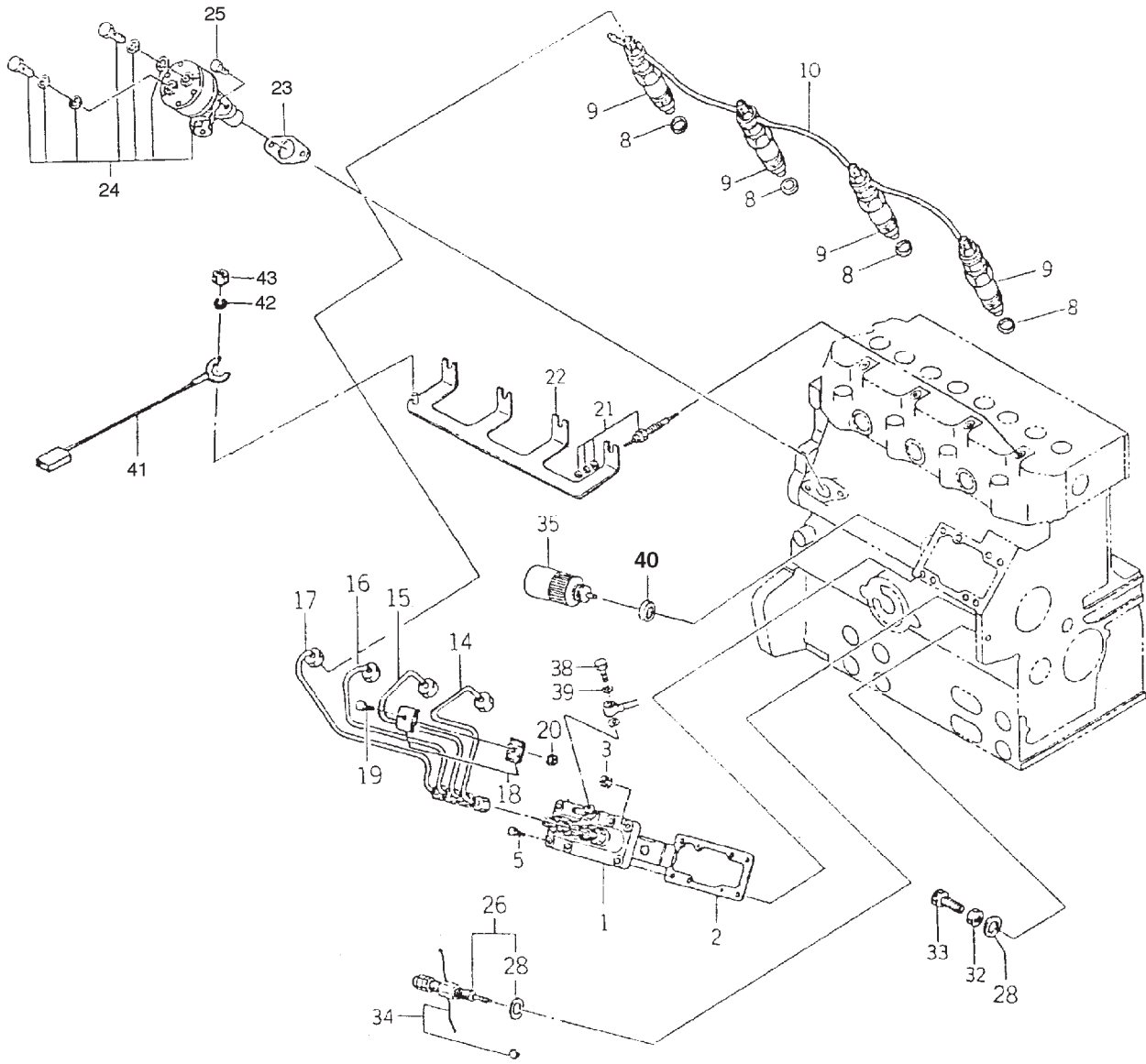
Fig. 4-0

General Arrangement: M - NL844 & M16C

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 131017600 | 1 | Injection Pump Assembly (see parts detail page) | - |
| 2 | 131426320 | 1 | Shim | - |
| 3 | 023100008 | 3 | Nut | - |
| 5 | 010800820 | 3 | Bolt | - |
| 8 | 131426200 | 4 | Gasket | - |
| 9 | 131406360 | 4 | Fuel Injector (see parts detail page) | - |
| 10 | 131606620 | 1 | Return Line | - |
| 14 | 131507450 | 1 | Injection Line #1 | - |
| 15 | 131507460 | 1 | Injection Line #2 | - |
| 16 | 131507470 | 1 | Injection Line #3 | - |
| 17 | 131507480 | 1 | Injection Line #4 | - |
| 18 | 199106020 | 6 | Clamp | - |
| 19 | 010100625 | 3 | Bolt | - |
| 20 | 023100006 | 3 | Nut | - |
| 21 | 185366060 | 4 | Glow Plug - 12 Volt* | - |
| | 185366100 | 4 | Glow Plug - 24 Volt* | - |
| 22 | 185376150 | 1 | Connector | - |
| 23 | 130996070 | 1 | Gasket | - |
| 24 | 130506140 | 1 | Feed Pump Assembly (see parts detail page) | - |
| 25 | 011300616 | 2 | Bolt | - |
| 26 | 131046160 | 1 | Smoke Set | - |
| 28 | 025100010 | 2 | Seal Washer | - |
| 32 | 023109002 | 1 | Nut | - |
| 33 | 010109271 | 1 | Bolt | - |
| 34 | 198236030 | 1 | Lock Wire | - |
| 35 | 185206082 | 1 | Stop Solenoid - 12 Volt (Standard Ground)* | - |
| | 185206190 | 1 | Stop Solenoid - 12 Volt (Isolated Ground)* | - |
| | 185206200 | 1 | Stop Solenoid - 24 Volt (Isolated Ground)* | - |
| 38 | 131136420 | 1 | Screw | - |
| 39 | 025100008 | 2 | Seal Washer | - |
| 40 | 025100016 | 1 | Seal Washer | - |
| 41 | 185606170 | 1 | Wire Harness | - |
| 42 | 027100004 | 1 | Spring Washer | - |
| 43 | 020100004 | 1 | Nut | - |

*NOTE: See Electrical System

General Arrangement: M - NL844L & M20CL



General Arrangement: M - NL844L & M20CL

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 131017600 | 1 | Injection Pump Assembly (see parts detail page) | - |
| 2 | 131426320 | 1 | Shim | - |
| 3 | 023100008 | 3 | Nut | - |
| 5 | 010800820 | 3 | Bolt | - |
| 8 | 131426200 | 4 | Gasket | - |
| 9 | 131406360 | 4 | Fuel Injector (see parts detail page) | - |
| 10 | 131606560 | 1 | Return Line | - |
| 14 | 131507520 | 1 | Injection Line #1 | - |
| 15 | 131507530 | 1 | Injection Line #2 | - |
| 16 | 131507540 | 1 | Injection Line #3 | - |
| 17 | 131507550 | 1 | Injection Line #4 | - |
| 18 | 199106020 | 6 | Clamp | - |
| 19 | 010100625 | 3 | Bolt | - |
| 20 | 023100006 | 3 | Nut | - |
| 21 | 185366060 | 4 | Glow Plug - 12 Volt* | - |
| | 185366100 | 4 | Glow Plug - 24 Volt* | - |
| 22 | 185376150 | 1 | Connector | - |
| 23 | 130996070 | 1 | Gasket | - |
| 24 | 130506140 | 1 | Feed Pump Assembly (see parts detail page) | - |
| 25 | 011300616 | 2 | Bolt | - |
| 26 | 131046160 | 1 | Smoke Set | - |
| 28 | 025100010 | 2 | Seal Washer | - |
| 32 | 023109002 | 1 | Nut | - |
| 33 | 010109271 | 1 | Bolt | - |
| 34 | 198236030 | 1 | Lock Wire | - |
| 35 | 185206082 | 1 | Stop Solenoid - 12 Volt (Standard Ground)* | - |
| | 185206190 | 1 | Stop Solenoid - 12 Volt (Isolated Ground)* | - |
| | 185206200 | 1 | Stop Solenoid - 24 Volt (Isolated Ground)* | - |
| 38 | 198487450 | 1 | Screw | - |
| 39 | 025100008 | 2 | Seal Washer | - |
| 40 | 025100016 | 1 | Seal Washer | - |
| 41 | 185606170 | 1 | Wire Harness | - |
| 42 | 027100004 | 1 | Spring Washer | - |
| 43 | 020100004 | 1 | Nut | - |

*NOTE: See Electrical System.

Governor & Timing Gear Case

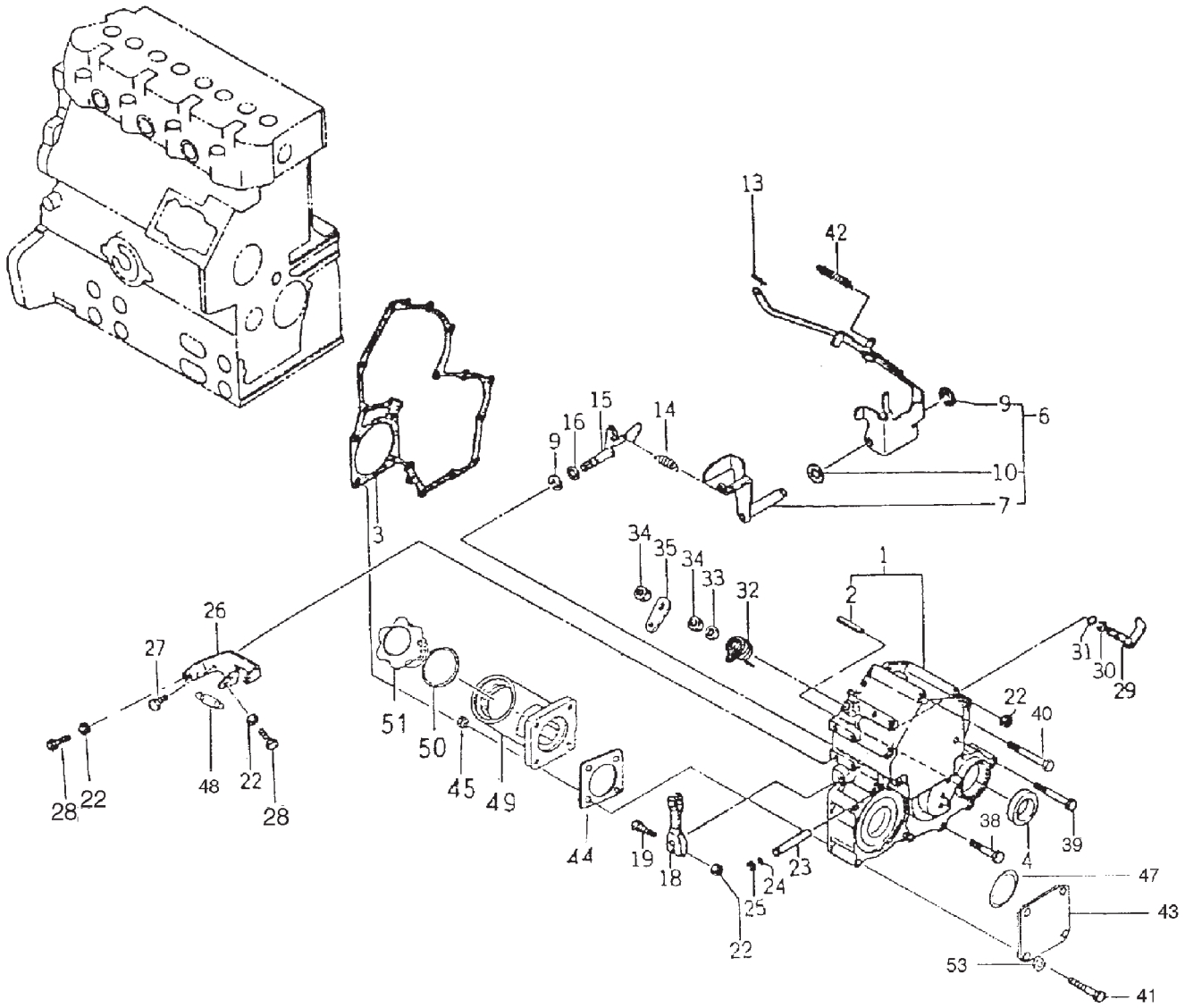
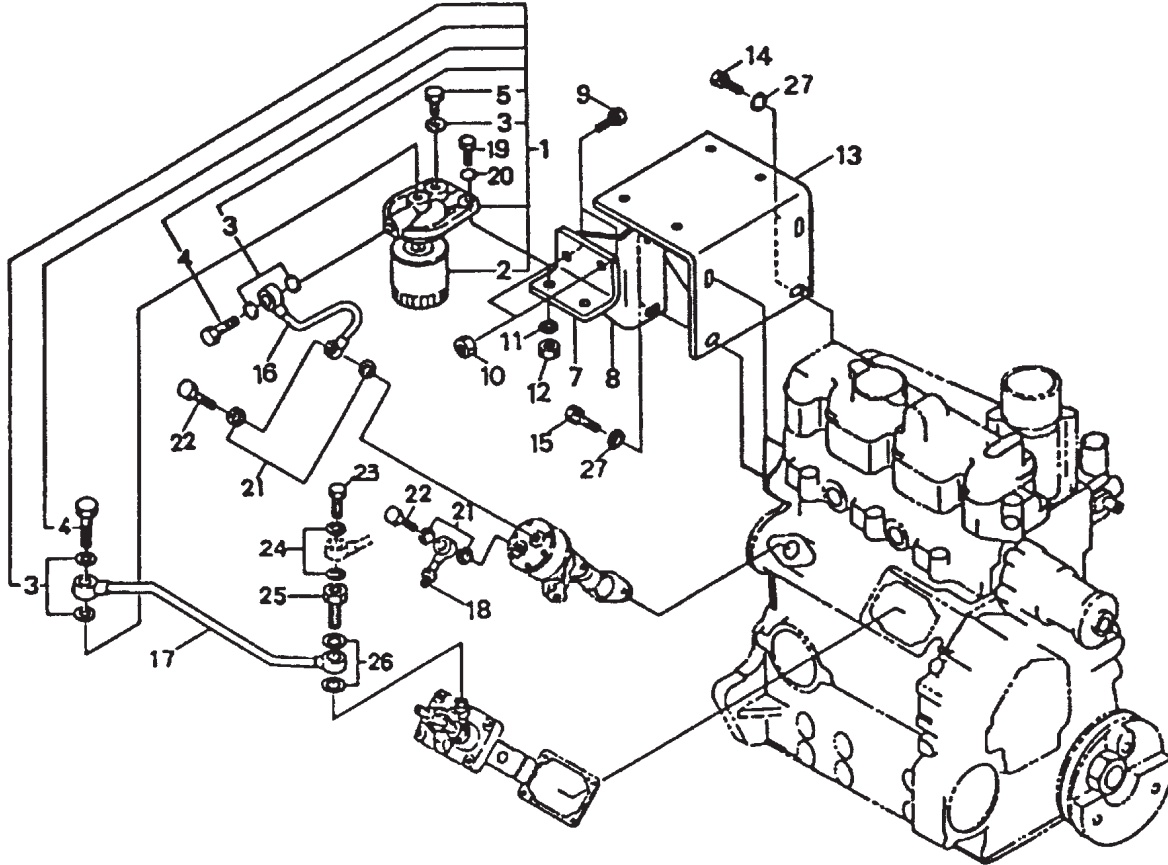


Fig. 4-4

Governor & Timing Gear Case

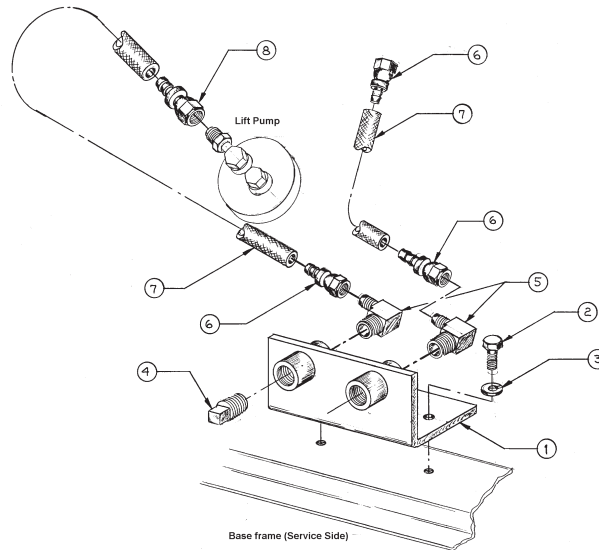
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 165106400 | 1 | Timing Gear Case Complete - Marine (includes key #2) | - |
| | 165106380 | 1 | Timing Gear Case Complete - Industrial (includes key #2) | - |
| 2 | 030300414 | 1 | Spring Pin | - |
| 3 | 165996351 | 1 | Gasket | - |
| 4 | 198636160 | 1 | Oil Seal | - |
| | 00-02003 | ** | Wear Sleeve; Repair Type | - |
| 6 | 125046170 | 1 | Governor Lever Assembly (includes keys #7 - 10, Formerly #125046280) | - |
| 7 | 125406080 | 1 | Tension Lever | - |
| 9 | 036800008 | 2 | Snap Ring | - |
| 10 | 026200010 | 1 | Washer | - |
| 13 | 031100004 | 1 | Snap Pin | - |
| 14 | 198217040 | 1 | Spring | - |
| 15 | 125156250 | 1 | Arm | - |
| 16 | 052100070 | 1 | O-Ring | - |
| 18 | 125416020 | 1 | Governor Lever | - |
| 19 | 010110630 | 1 | Bolt | - |
| 22 | 023100006 | 4 | Nut | - |
| 23 | 125116141 | 1 | Shaft (formerly #125116140 single o-ring) | - |
| 24 | 052100030 | 1 | O-ring | - |
| 25 | 036800005 | 1 | Snap Ring | - |
| 26 | 125976120 | 1 | Bracket | - |
| 27 | 011300616 | 2 | Bolt | - |
| 28 | 010109264 | 1 | Bolt | - |
| 29 | 125156180 | 1 | Arm | - |
| 30 | 036800006 | 1 | Snap Ring | - |
| 31 | 052100050 | 1 | O-Ring | - |
| 32 | 198216760 | 1 | Spring | - |
| 33 | 026200008 | 1 | Washer | - |
| 34 | 020300008 | 2 | Nut | - |
| 35 | 125176180 | 1 | Stop Lever (formerly #125176080) | - |
| 38 | 011300645 | 6 | Bolt | - |
| 39 | 011300660 | 5 | Bolt | - |
| 40 | 011300680 | 2 | Bolt | - |
| 41 | 12-00717 | 1 | Capscrew, Hex Head M8 x 1.25 x 60 mm | - |
| | 12-00718 | 3 | Capscrew, Hex Head M8 x 1.25 x 65 mm | - |
| 42 | 198216731 | 1 | Start Spring | - |
| 43 | 165206320 | 1 | Cover - Keel Cooled Marine only | - |
| | 165206150 | 2 | Cover - Industrial only | - |
| 44 | 165996110 | 1 | Gasket | - |
| 45 | 14-00711 | 3 | Hex Nut M8 x 1.25 - Marine | - |
| | 14-00711 | 4 | Hex Nut M8 x 1.25 - Industrial | - |
| 46 | 398210070 | 1 | Spring (not shown) | - |
| 47 | 052300600 | 1 | O-ring | - |
| 49 | 110766200 | 1 | Oil Fill Elbow | - |
| 50 | 052300400 | 1 | O-ring | - |
| 51 | 198436010 | 1 | Cap | - |
| 52 | 190197400 | 1 | Caution Label (not shown) | - |
| 53 | 15-00702 | 3 | Lock Washer M8 | - |
| | | | **As required. | |

Fuel Filter & Piping



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 130306190 | 1 | Fuel Filter Assembly (includes keys #1 - 6 & 19 - #20) | - |
| 2 | 24-52020 | 1 | Fuel Filter Cartridge | - |
| 3 | 130326051 | 5 | Gasket | - |
| 4 | 130436011 | 2 | Banjo Bolt | - |
| 5 | 130396030 | 1 | Plug | - |
| 7 | 130976470 | 1 | Bracket - Marine | - |
| | 130976450 | 1 | Bracket - Industrial | - |
| 8 | 130976460 | 1 | Bracket - Marine | - |
| | 130976440 | 1 | Bracket - Industrial | - |
| 9 | 011500820 | 2 | Bolt | - |
| 10 | 023100008 | 2 | Nut | - |
| 11 | 027100010 | 2 | Spring Washer | - |
| 12 | 020900010 | 2 | Nut | - |
| 13 | 135976420 | 1 | Bracket - Industrial | - |
| 14 | 12-00751 | 1 | Capscrew, Hex Head M8 x 1.25 x 16 mm - Industrial | - |
| 15 | 12-00751 | 2 | Capscrew, Hex Head M8 x 1.25 x 16 mm - Marine | - |
| | 12-00711 | 3 | Capscrew, Hex Head M8 x 1.25 x 20 mm - Industrial | - |
| 16 | 130556760 | 1 | Pipe | - |
| 17 | 130556750 | 1 | Pipe | - |
| 18 | 130556680 | 1 | Fuel Fitting | - |
| 19 | 011301030 | 2 | Bolt | - |
| 20 | 026200010 | 2 | Washer | - |
| 21 | 130516069 | 4 | Gasket | - |
| 22 | 130516092 | 2 | Banjo Bolt | - |
| 23 | 198487450 | 1 | Banjo Bolt | - |
| 24 | 025100008 | 2 | Gasket | - |
| 25 | 131246170 | 1 | Banjo Bolt | - |
| 26 | 131296255 | 2 | Gasket | - |
| 27 | 026100008 | 4 | Washer | - |

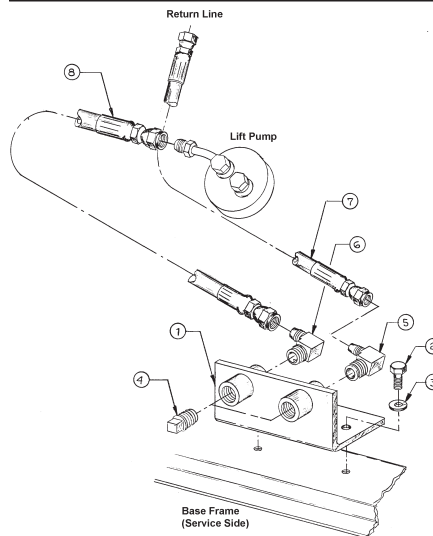
Fuel Line Connection



A-6426 / C-2920

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 10-51099 | 1 | Manifold | - |
| 2 | 12-00031 | 2 | Capscrew, Hex Head M6 x 1.0 x 20 mm | - |
| 3 | 15-01132 | 2 | Lock Washer M6 | - |
| 4 | 21-00046 | 2 | Plug, 1/4 NPT (for shipping) | - |
| 5 | 21-71044 | 2 | Male Elbow 90°, brass 1/4 NPT x 1/4-45T | - |
| 6 | 21-71045 | 3 | Female Swivel, brass 1/4 HB x 1/4-45T | - |
| 7 | 18-52007 | 2 | Hose 1/4" ID x 26" | - |
| 8 | 21-71048 | 1 | Female Swivel, brass 1/4 HB x 5/16-45T | - |

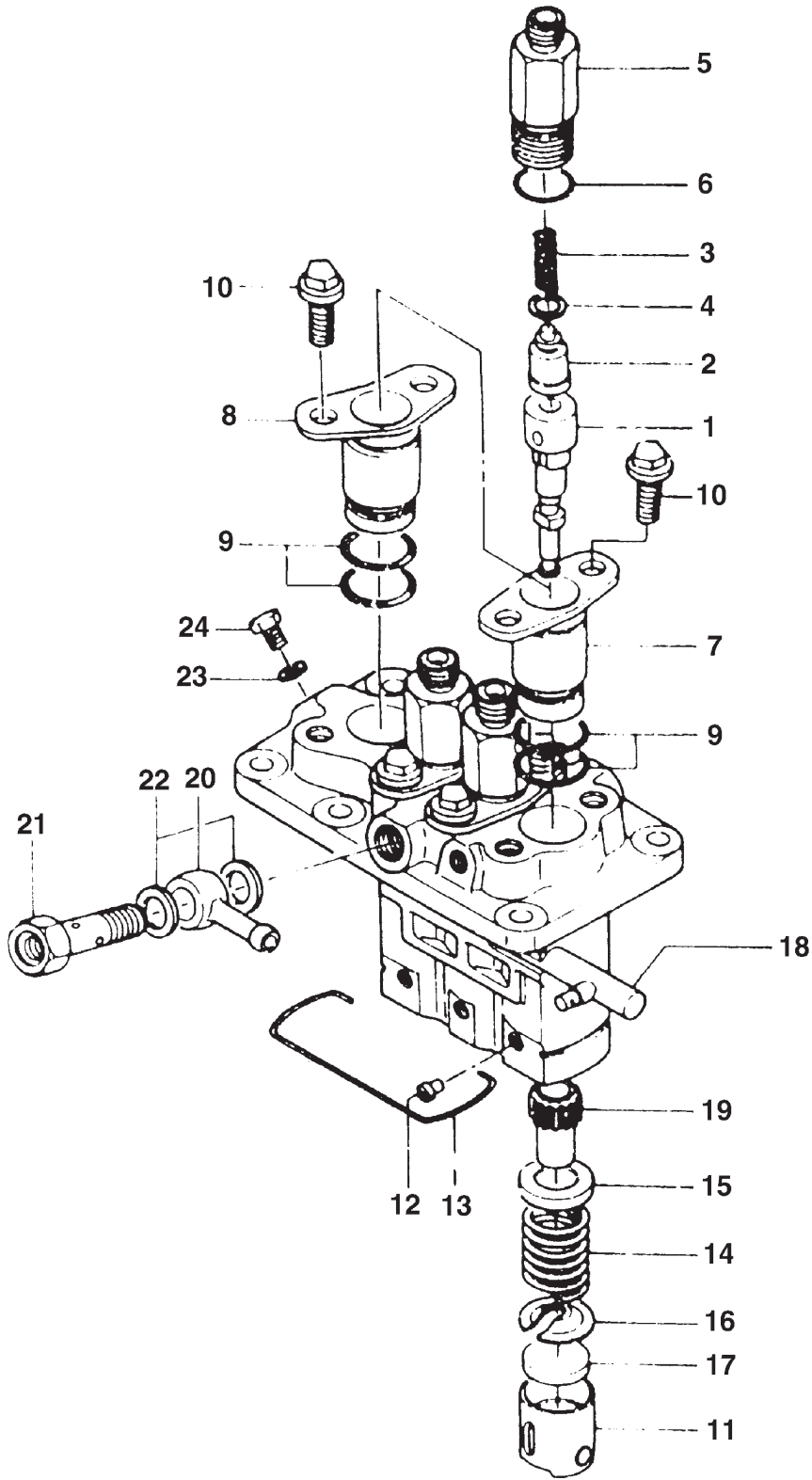
U.S. Coast Guard Approved Fuel Lines



A-6684
A-6495 / C-2936

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 10-51099 | 1 | Manifold | - |
| 2 | 12-01131 | 2 | Capscrew, Hex Head M6 x 1.0 x 20 mm | - |
| 3 | 15-01132 | 2 | Lock Washer M6 | - |
| 4 | 21-31624 | 2 | Plug, Hex Head Brass 1/4 NPT (for shipping) | - |
| 5 | 21-71049 | 1 | Male Elbow 90°, steel 1/4 NPT x 1/4-37T | - |
| 6 | 21-74411 | 1 | Male Elbow 90°, steel 1/4 NPT x 5/16-37T | - |
| 7 | 18-52113 | 1 | Hose Assembly 1/4" ID x 26-1/2" | - |
| 8 | 18-58401 | 1 | Hose Assembly 1/4" ID x 26" (844L) | - |
| | 18-58101 | 1 | Hose Assembly 1/4" ID x 17" (844) | - |

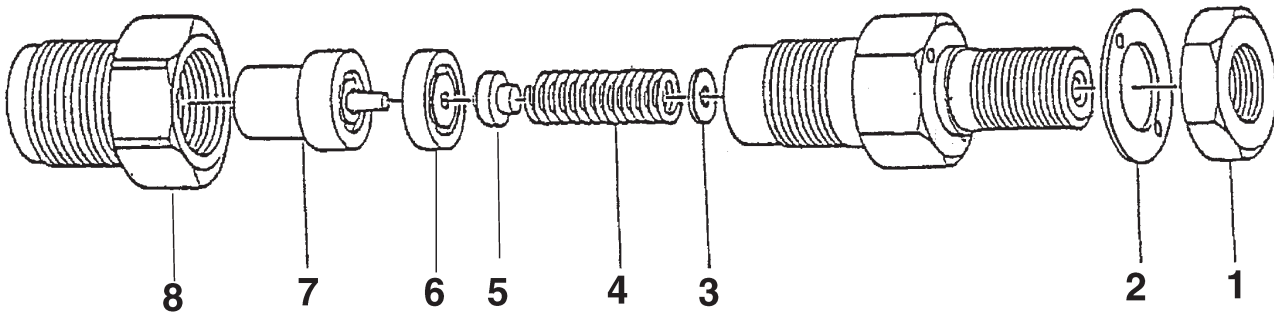
Fuel Injection Pump



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 131017600 | 1 | Injection Pump Assembly (includes keys #1 - 24) | - |
| 1 | 140154-7920 | 4 | Plunger Assembly | - |
| 2 | 140110-3620 | 4 | Delivery Valve | - |

| Fuel Injection Pump | | | | |
|----------------------------|--------------------|------------|------------------------|----------------------|
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
| 3 | 140112-2900 | 4 | Spring, Delivery Valve | - |
| 4 | 140115-1400 | 4 | Gasket | - |
| 5 | 140116-7520 | 4 | Holder, Delivery Valve | - |
| 6 | 016500-1520 | 4 | O-ring | - |
| 7 | 140131-0521 | 3 | Sleeve Flange | - |
| 8 | 140131-1021 | 1 | Sleeve Flange | - |
| 9 | 016550-1920 | 8 | O-ring | - |
| 10 | 140124-0200 | 8 | Bolt | - |
| 11 | 140200-1620 | 4 | Tappet | - |
| 12 | 140212-0300 | 4 | Pin | - |
| 13 | 140313-1500 | 1 | Snap Ring | - |
| 14 | 140215-1900 | 4 | Plunger Spring | - |
| 15 | 140216-0800 | 4 | Spring Seat | - |
| 16 | 140217-2200 | 4 | Spring Seat | - |
| 17 | 140217-5000 | ** | Plate | - |
| | 140217-5100 | ** | Plate | - |
| | 140217-5200 | ** | Plate | - |
| | 140217-5300 | ** | Plate | - |
| | 140217-5400 | ** | Plate | - |
| | 140217-5500 | ** | Plate | - |
| | 140217-5600 | ** | Plate | - |
| | 140217-5700 | ** | Plate | - |
| | 140217-5800 | ** | Plate | - |
| | 140217-5900 | ** | Plate | - |
| | 140217-6000 | ** | Plate | - |
| | 140217-6100 | ** | Plate | - |
| | 140217-6200 | ** | Plate | - |
| | 140217-6300 | ** | Plate | - |
| | 140217-6400 | ** | Plate | - |
| | 140217-6500 | ** | Plate | - |
| | 140217-6600 | ** | Plate | - |
| | 140217-6700 | ** | Plate | - |
| | 140217-6800 | ** | Plate | - |
| | 140217-6900 | ** | Plate | - |
| | 140217-7000 | ** | Plate | - |
| | 140217-7100 | ** | Plate | - |
| | 140217-7200 | ** | Plate | - |
| | 140217-7300 | ** | Plate | - |
| | 140217-7400 | ** | Plate | - |
| | 140217-7500 | ** | Plate | - |
| | 140217-7600 | ** | Plate | - |
| | 140217-7700 | ** | Plate | - |
| | 140217-7800 | ** | Plate | - |
| | 140217-7900 | ** | Plate | - |
| | 140217-8000 | ** | Plate | - |
| 18 | 140243-5620 | 1 | Control Rack | - |
| 19 | 140241-2700 | 4 | Control Sleeve | - |
| 20 | 029711-2050 | 1 | Eye | - |
| 21 | 140402-1300 | 1 | Eye Bolt | - |
| 22 | 026512-1540 | 2 | Gasket | - |
| 23 | 026508-1240 | 1 | Gasket | - |
| 24 | 140420-1400 | 1 | Bolt | - |
| | | | **As required | |

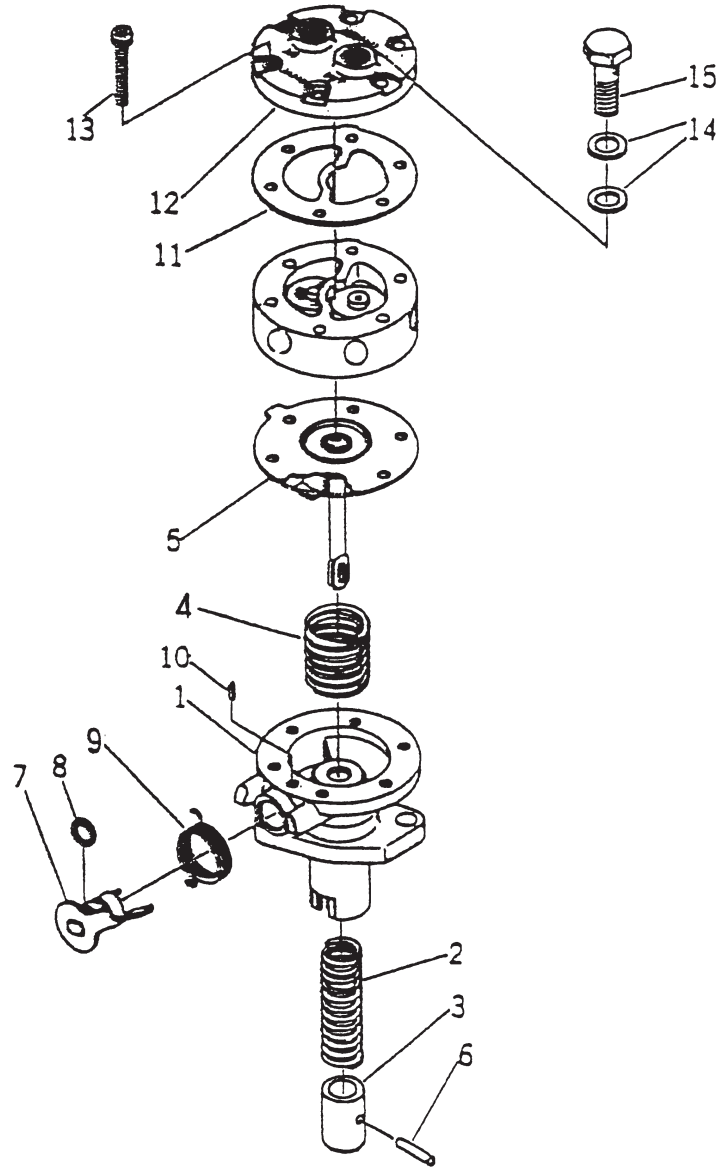
Fuel Injector



844inj

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 131406360 | 1 | Injector Assembly (includes keys #1 - 8) | - |
| 1 | 131446006 | 1 | Nut | - |
| 2 | 131426230 | 1 | Gasket | - |
| 3 | 131437360 | 3 | Shim | - |
| 4 | 131446074 | 1 | Spring | - |
| 5 | 131446075 | 1 | Spring seat | - |
| 6 | 131446076 | 1 | Spacer | - |
| 7 | 131416170 | 1 | Nozzle | - |
| 8 | 131446077 | 1 | Nut | - |

Fuel Feed Pump

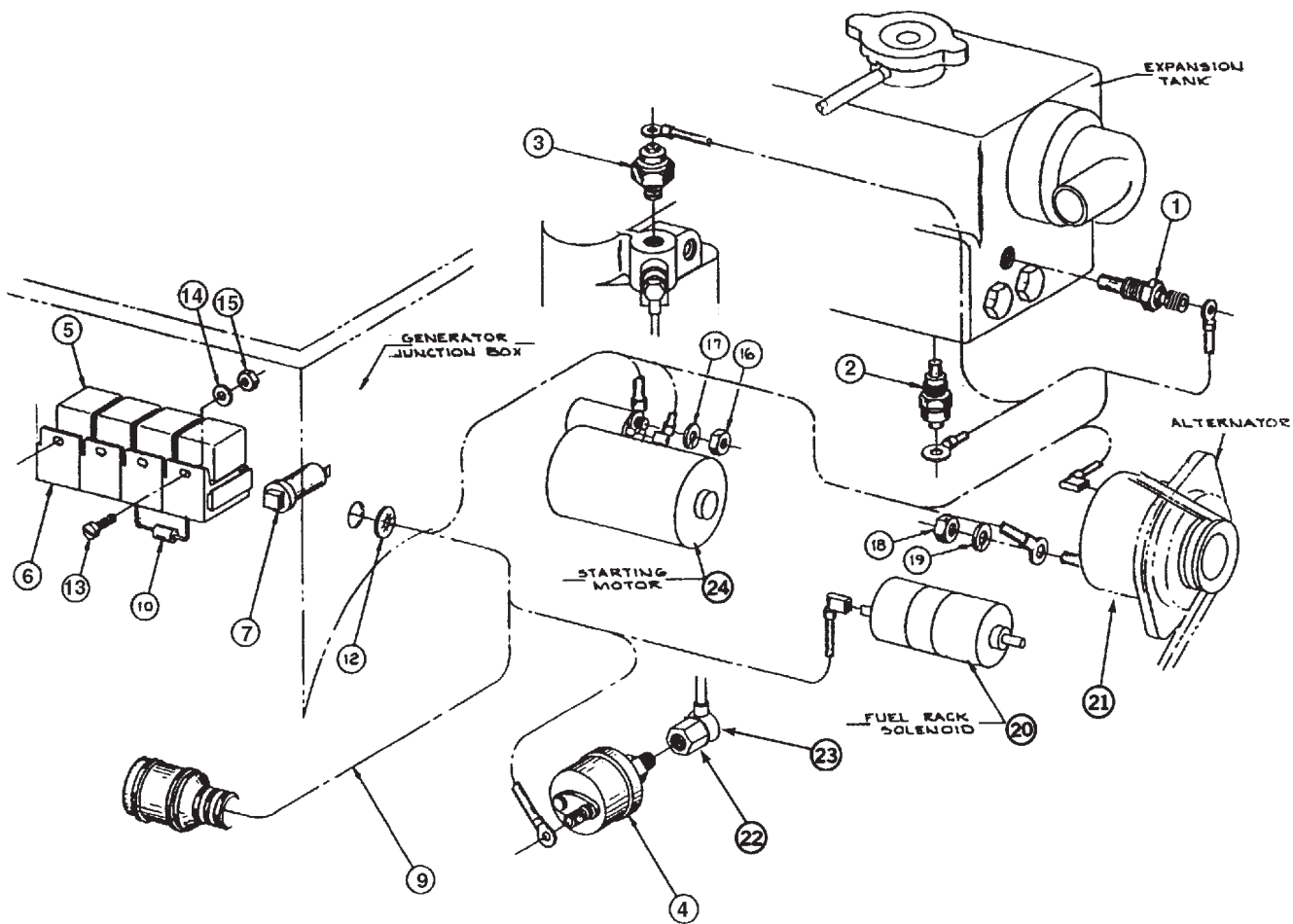


844fuelfeedpump

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 130506140 | 1 | Feed Pump Assembly (includes keys #1 - 15) | - |
| 1 | 130516080 | 1 | Body | - |
| 2 | 130516081 | 1 | Spring | - |
| 3 | 130516082 | 1 | Piston | - |
| 4 | 130516083 | 1 | Spring | - |
| 5 | 130516084 | 1 | Diaphragm | - |
| 6 | 130516085 | 1 | Pin | - |
| 7 | 130516086 | 1 | Lever | - |
| 8 | 131226180 | 1 | O-Ring | - |
| 9 | 130516087 | 1 | Spring | - |
| 10 | 130516088 | 1 | Guide | - |
| 11 | 130516089 | 1 | Gasket | - |
| 12 | 130516090 | 1 | Cap | - |
| 13 | 130516091 | 6 | Screw | - |
| 14 | 130516069 | 4 | Gasket | - |
| 15 | 130516092 | 2 | Banjo Bolt | - |

GROUP 5 – ELECTRICAL SYSTEM

12 Volt Engine - Marine: PX-316K & PX-320K Generators

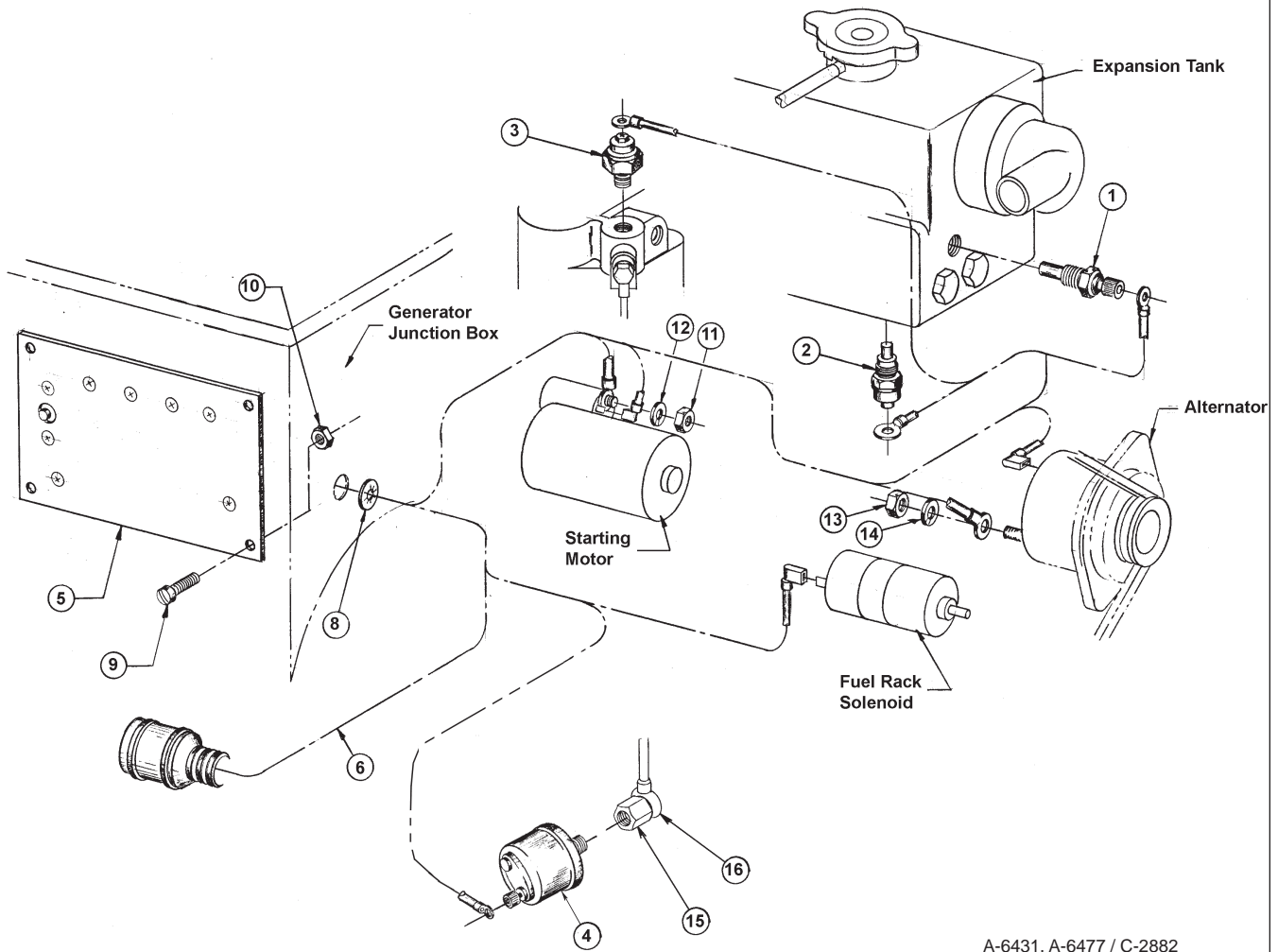


12 Volt Engine - Marine: PX-316K & PX-320K Generators

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 22-42055 | 1 | Engine Temperature Sender, Standard Ground | - |
| | 22-40352 | 1 | Dual Station Engine Temperature Sender, Standard Ground | - |
| | 22-40353 | 1 | Dual Station Engine Temperature Sender, Isolated Ground | - |
| 2 | 385720110 | 1 | Engine Temperature Switch 95°C, Standard Ground | - |
| 3 | 185246011 | 1 | Oil Pressure Switch, Standard Ground | - |
| 4 | 22-41016 | 1 | Oil Pressure Sender, Standard Ground | - |
| | 22-71016 | 1 | Dual Station Oil Pressure Sender, Standard Ground | - |
| | 22-74803 | 1 | Dual Station Oil Pressure Sender, Isolated Ground | - |
| 5 | 22-42047 | 4 | Relay, 12 Volt SPDT | - |
| 6 | 22-41032 | 4 | Relay Base | - |
| 7 | 22-42043 | 1 | Circuit Breaker, DC 15 Amp | - |
| 8 | 22-90006 | 1 | Control Panel, S1-B (see detail) | - |
| 9 | 22-48101 | 1 | Engine Wire Harness | - |
| 10 | 22-41060 | 2 | Diode, 6 Amp 50 Volt PIV | - |
| 11 | 22-40930 | 1 | Wire Harness Extension 20' (not shown) | - |
| 12 | 00-41015 | 1 | Universal Bushing, Plastic | - |
| 13 | 12-00094 | 2 | Machine Screw #10-32 x 3/8" S/S | - |
| 14 | 15-00032 | 2 | Flat Washer #10 | - |
| 15 | 14-00006 | 2 | Hex Nut, Nylock #10-32 | - |
| 16 | 14-00711 | 1 | Hex Nut, M8 x 1.25 | - |
| 17 | 15-00702 | 1 | Lock Washer M8 | - |
| 18 | 14-04401 | 1 | Hex Nut, M5 x 0.8 | - |
| 19 | 15-04400 | 1 | Lock Washer M5 | - |
| 20 | 185206082 | 1 | Stop Solenoid 12 Volt (see also Fuel System) | - |
| 21 | | 1 | Alternator 12 Volt (see mounting detail) | - |
| 22 | 198487590 | 1 | Banjo Bolt (formerly #198486870) - Used with #25 only | - |
| 23 | 140606701 | 1 | Oil Line | - |
| 24 | | 1 | Starter 12 Volt (see mounting detail) | - |
| 25 | 21-42001 | ** | Elbow 90° Steel 1/8 BSPT X 1/8 NPT (not shown) | - |

**As required.

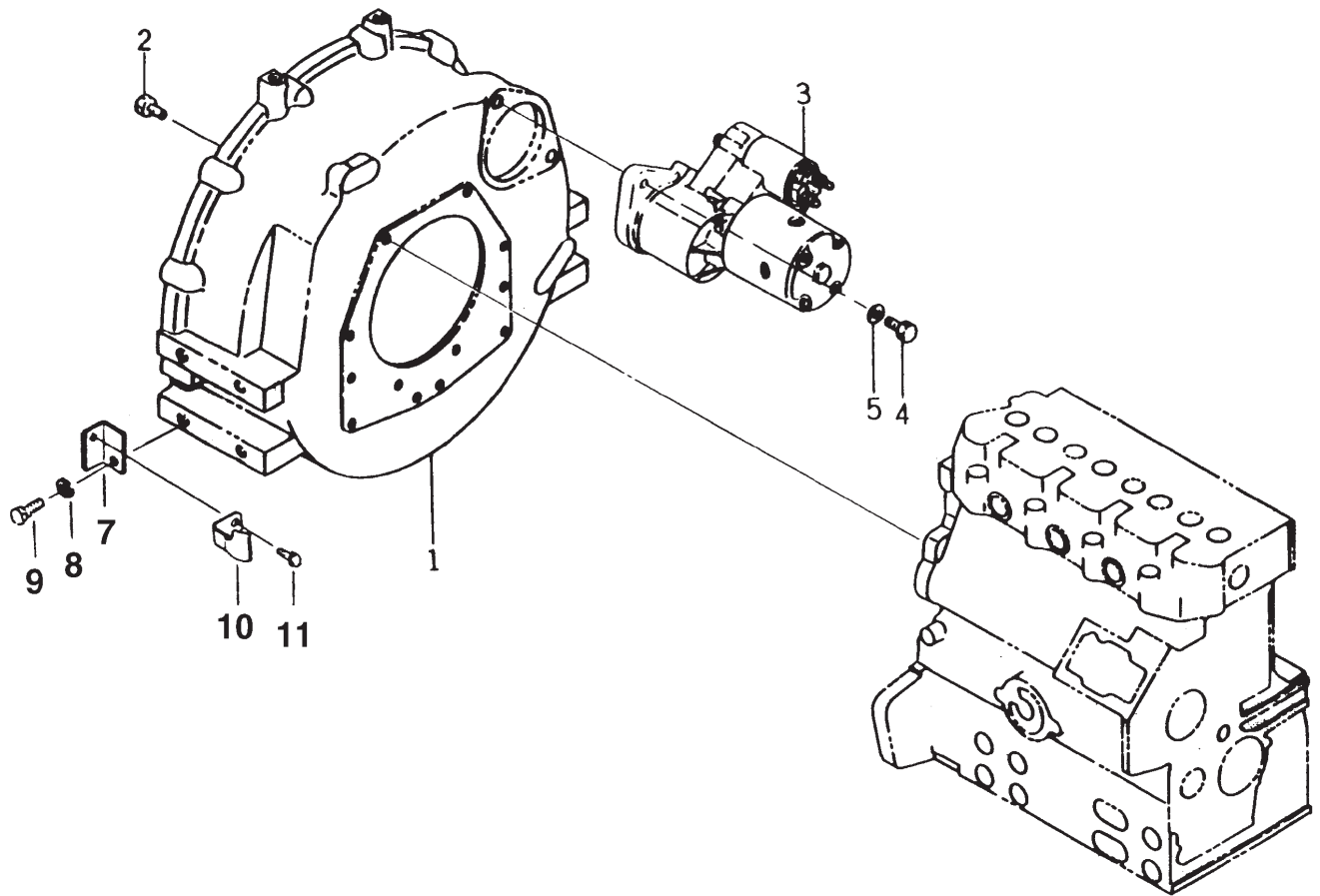
12 Volt Engine - Marine & Industrial: 184 Frame Generators



A-6431, A-6477 / C-2882

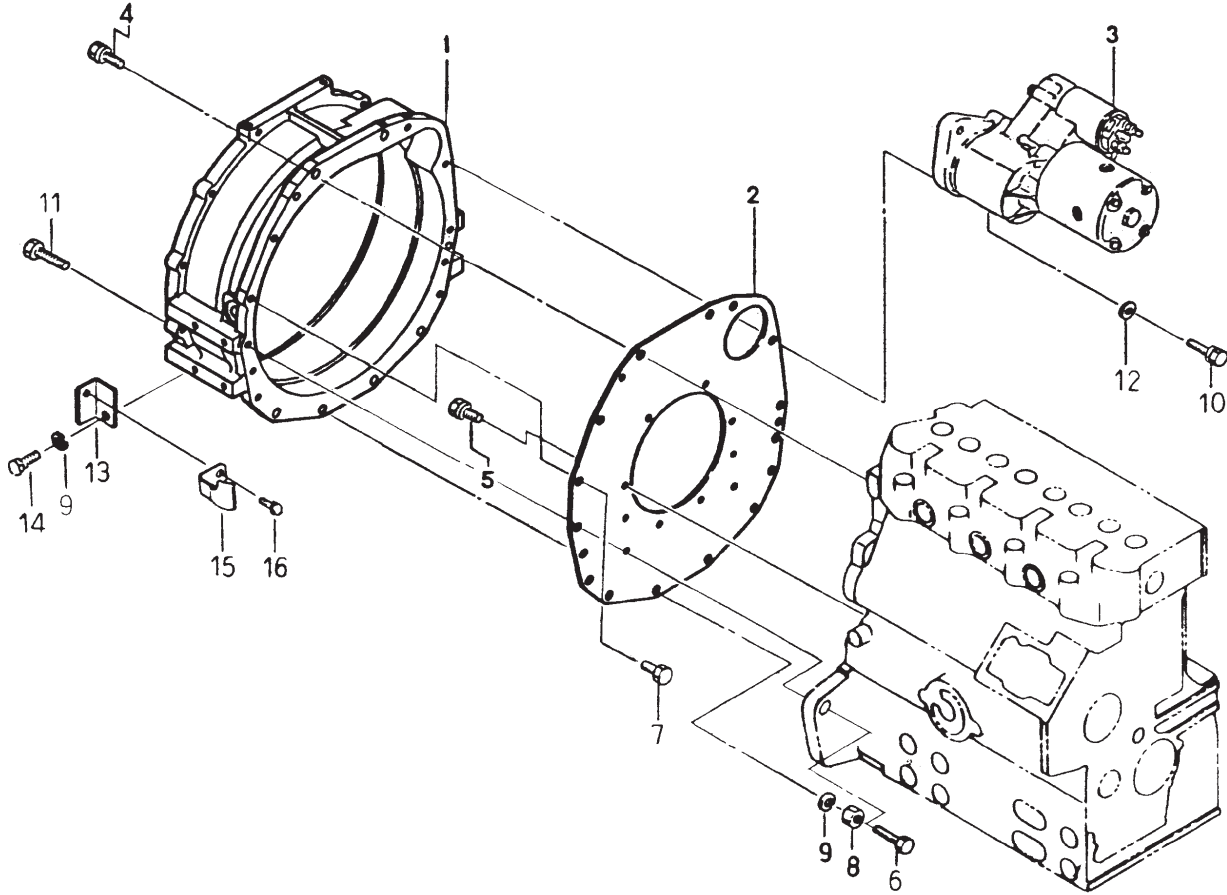
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 22-71026 | 1 | Engine Temperature Sender - Dual Station | - |
| | 22-42055 | 1 | Engine Temperature Sender - Single Station | - |
| 2 | 385720110 | 1 | Temperature Switch 203° F - Marine | - |
| | 385720230 | 1 | Temperature Switch 212° F - Industrial | - |
| 3 | 185246011 | 1 | Oil Pressure Switch | - |
| 4 | 22-71016 | 1 | Oil Pressure Sender - Dual Station | - |
| | 22-41016 | 1 | Oil Pressure Sender - Single Station | - |
| 5 | 22-92007 | 1 | Relay Board/Side Cover 12Volt - Marine | - |
| | 22-98405 | 1 | Relay Board/Control Panel 12Volt - Industrial | - |
| 6 | 22-48104 | 1 | Engine Wire Harness | - |
| 7 | 22-40930 | 1 | Wire Harness Extension 20' (not shown) | - |
| 8 | 00-41015 | 1 | Universal Bushing | - |
| 9 | 12-00000 | 4 | Machine Screw #10-32 x 1/2" | - |
| 10 | 14-00006 | 4 | Hex Nut, Nylock #10-32 | - |
| 11 | 14-00711 | 1 | Hex Nut M8 x 1.25 | - |
| 12 | 15-00702 | 1 | Lock Washer M8 | - |
| 13 | 14-04401 | 1 | Hex Nut M5 x 0.8 | - |
| 14 | 15-04400 | 1 | Lock Washer M5 | - |
| 15 | 198487590 | 1 | Banjo Bolt (formerly #198486870) | - |
| 16 | 140606701 | 1 | Oil Line | - |

Starter & Flywheel Housing: M844 - NL844 & M16C



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 110446890 | 1 | Flywheel Housing - Marine SAE #4 | - |
| | 110446880 | 1 | Flywheel Housing - Industrial SAE #4 | - |
| 2 | 011500820 | 10 | Bolt | - |
| 3 | 185086410 | 1 | Starter - 12 Volt - Standard Ground (marked M2T54091)* | - |
| | 185086500 | 1 | Starter - 12 Volt - Standard Ground (marked M2T58981)* | - |
| | 185086550 | 1 | Starter - 12 Volt - Standard Ground (marked M001T55081)* | - |
| | 22-48102 | 1 | Starter - 12 Volt - Isolated Ground | - |
| | 22-43108 | 1 | Starter - 24 Volt - Standard Ground | - |
| | 22-48103 | 1 | Starter - 24 Volt - Isolated Ground | - |
| 4 | 011501030 | 2 | Bolt | - |
| 5 | 026200010 | 2 | Washer | - |
| 7 | 130976310 | 1 | Bracket | - |
| 8 | 027100010 | 1 | Lock Washer | - |
| 9 | 199436350 | 2 | Bolt | - |
| 10 | 140976040 | 1 | Bracket, Drain Hose Support | - |
| 11 | 011500812 | 1 | Bolt | - |
| 12 | 31-48101 | 1 | Spacer (used with 24 Volt starters only) | - |
| | | | *See parts detail. | |

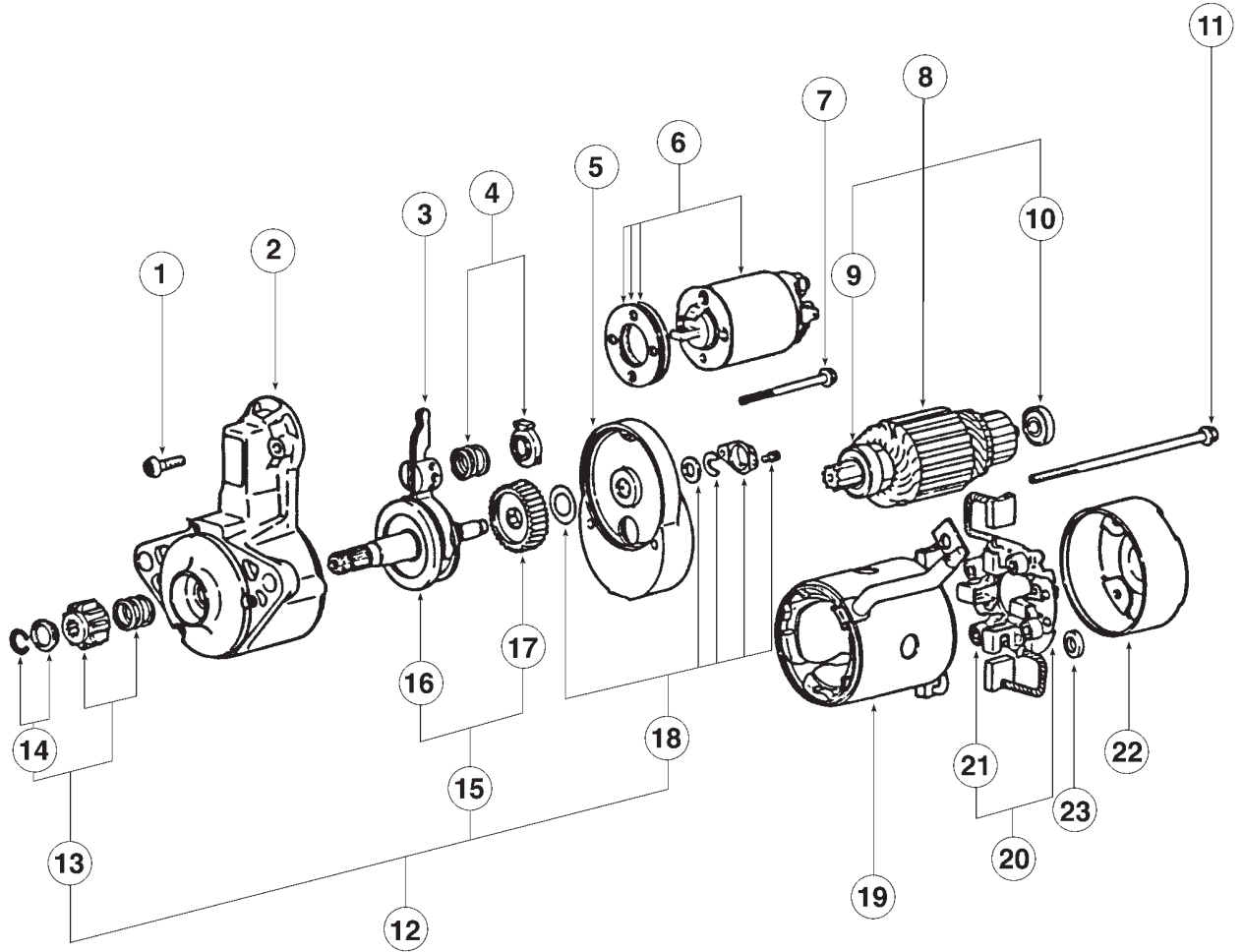
Starter & Flywheel Housing: M - NL844L & M20CL



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 31-68401 | 1 | Flywheel Housing - Marine SAE #4 (used with 24 Volt starters only) | - |
| | 110446991 | 1 | Flywheel Housing - Marine SAE #4 | - |
| | 110447000 | 1 | Flywheel Housing - Industrial | - |
| 2 | 110367590 | 1 | Back Plate - Marine | - |
| | 110367610 | 1 | Back Plate - Industrial | - |
| 3 | 185086410 | 1 | Starter - 12 Volt - Standard Ground (marked M2T54091)** | - |
| | 185086500 | 1 | Starter - 12 Volt - Standard Ground (marked M2T58981)** | - |
| | 185086551 | 1 | Starter - 12 Volt - Standard Ground (marked M001T55081)** | - |
| | 22-48106 | 1 | Starter - 12 Volt - Isolated Ground (formerly #22-48102) | - |
| | 22-43108 | 1 | Starter - 24 Volt - Standard Ground | - |
| | 22-48103 | 1 | Starter - 24 Volt - Isolated Ground | - |
| 4 | 011501235 | 2 | Bolt | - |
| 5 | 011500816 | 10 | Bolt | - |
| 6 | 011501050 | 6 | Bolt | - |
| 7 | 011501020 | 2 | Bolt | - |
| 8 | 020100010 | 4 | Nut | - |
| 9 | 027100010 | 4 | Lock Washer | - |
| 10 | 011501030 | 2 | Bolt | - |
| 11 | 010301030 | 4 | Bolt | - |
| 12 | 026200010 | 2 | Washer | - |
| 13 | 130976310 | 1 | Bracket, Drain Hose Support* | - |
| 14 | 199436350 | 1 | Bolt* | - |
| 15 | 140976040 | 1 | Bracket* | - |
| 16 | 011500812 | 1 | Bolt* | - |
| 17 | 31-48101 | 1 | Spacer (used with 24 Volt starters only) | - |
| 18 | 00-68401 | 1 | Cover (for 31-68401) | - |

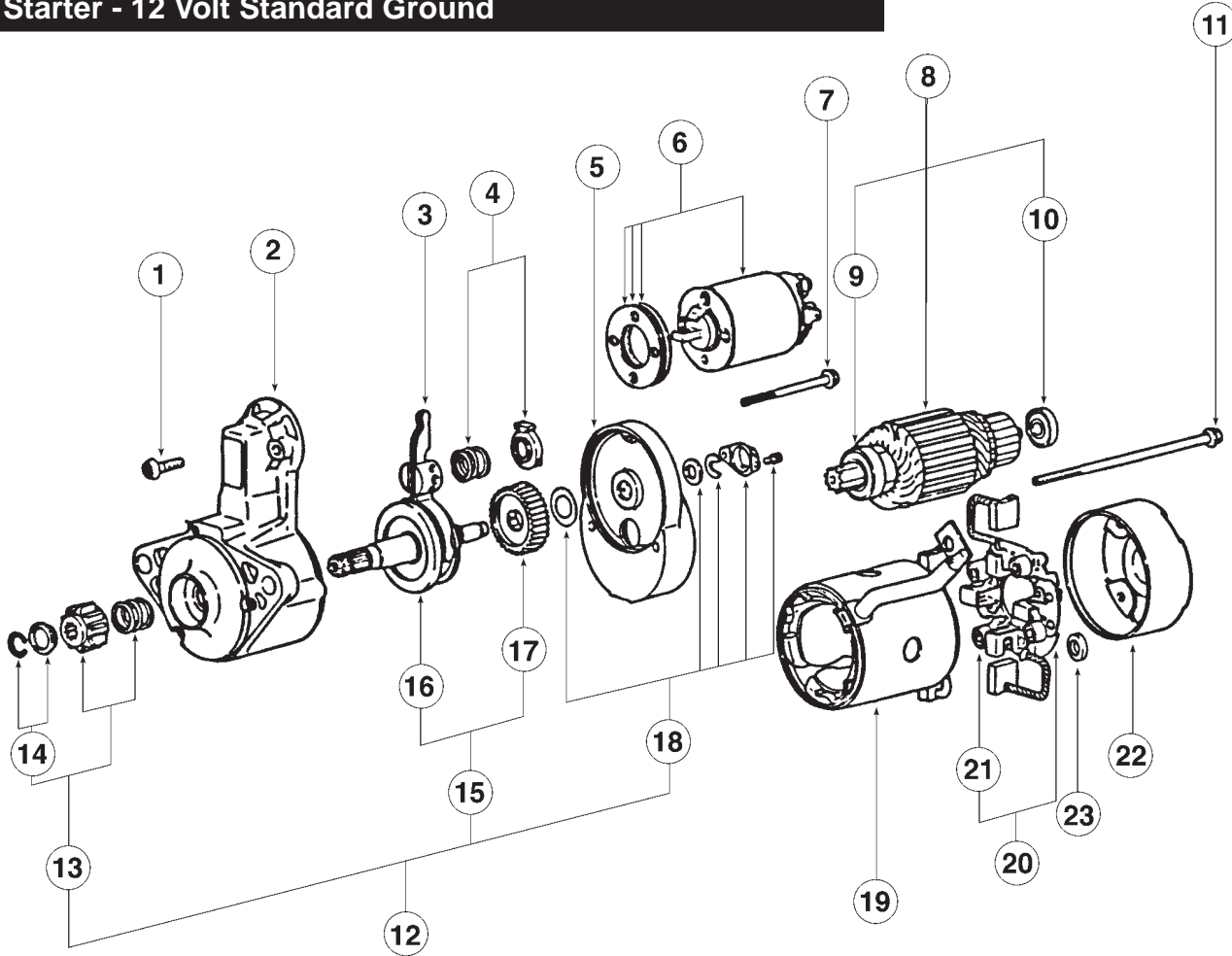
***NOTE:** #13-16 Marine application only. **See parts detail

Starter - 12 Volt Standard Ground



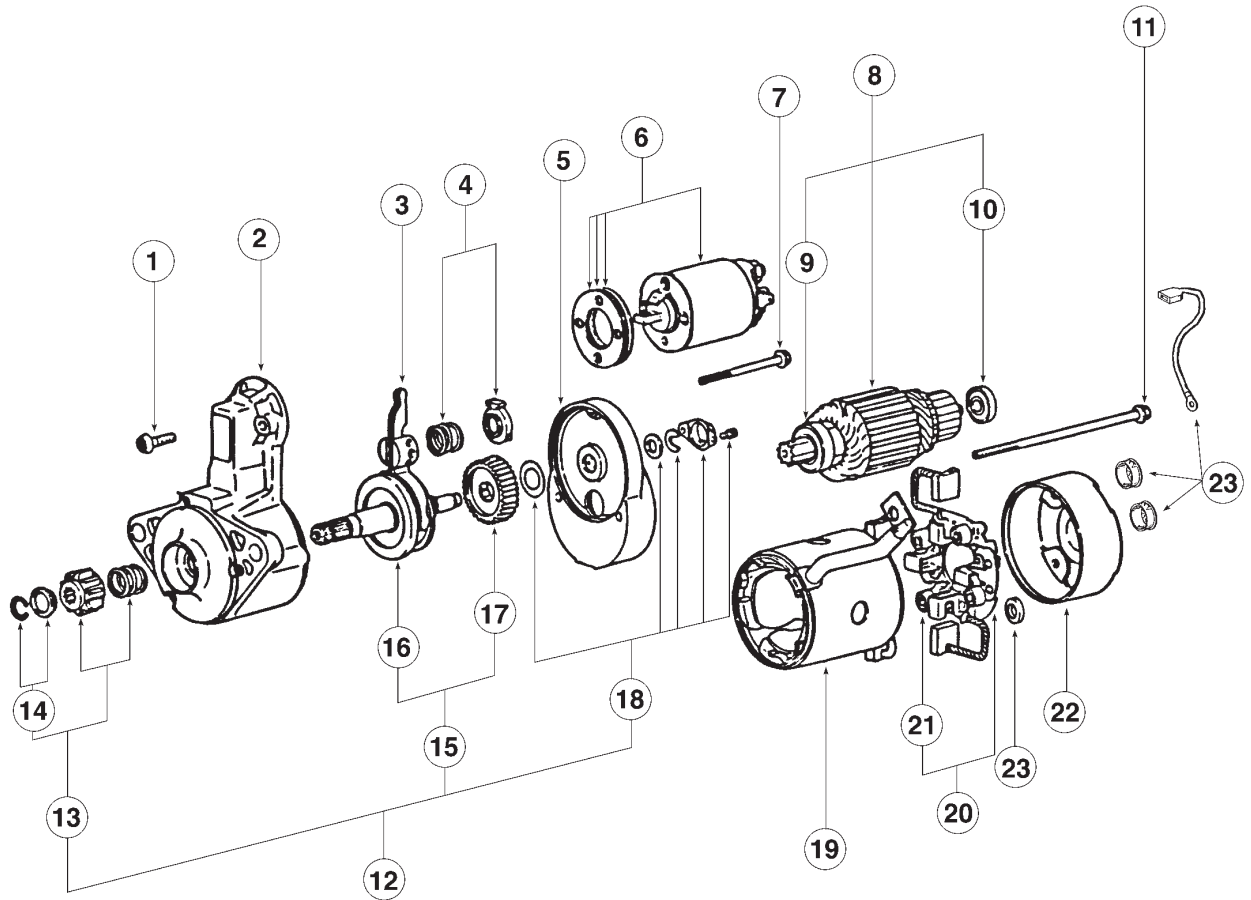
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 185086500 | 1 | Starter (includes all keys - marked M2T58981) | - |
| 1 | 185846317 | 1 | Set Screw | - |
| 2 | 185846530 | 1 | Bracket Assembly | - |
| 3 | 185846319 | 1 | Lever Assembly | - |
| 4 | 185846320 | 1 | Spring Set | - |
| 5 | 185846321 | 1 | Center Bracket Assembly | - |
| 6 | 185816120 | 1 | Switch Assembly | - |
| 7 | 185846322 | 1 | Bolt | - |
| 8 | 185846529 | 1 | Armature Set (includes keys #9 - 10) | - |
| 9 | 185846324 | 1 | Bearing | - |
| 10 | 185846325 | 1 | Bearing | - |
| 11 | 185846363 | 2 | Bolt | - |
| 12 | 185866180 | 1 | Clutch Shaft Assembly (includes keys #13 - 18) | - |
| 13 | 185846406 | 1 | Pinion Set | - |
| 14 | 185846327 | 1 | Stopper Set | - |
| 15 | 185846328 | 1 | Gear Set | - |
| 16 | 185866130 | 1 | Piston Shaft Assembly | - |
| 17 | 185846329 | 1 | Gear | - |
| 18 | 185846330 | 1 | Cover Set | - |
| 19 | 185846364 | 1 | Housing & Field Coil Assembly | - |
| 20 | 185846360 | 1 | Brush Holder Assembly (includes key #21) | - |
| 21 | 185846361 | 4 | Spring Brush | - |
| 22 | 185846362 | 1 | Rear Bracket | - |

Starter - 12 Volt Standard Ground



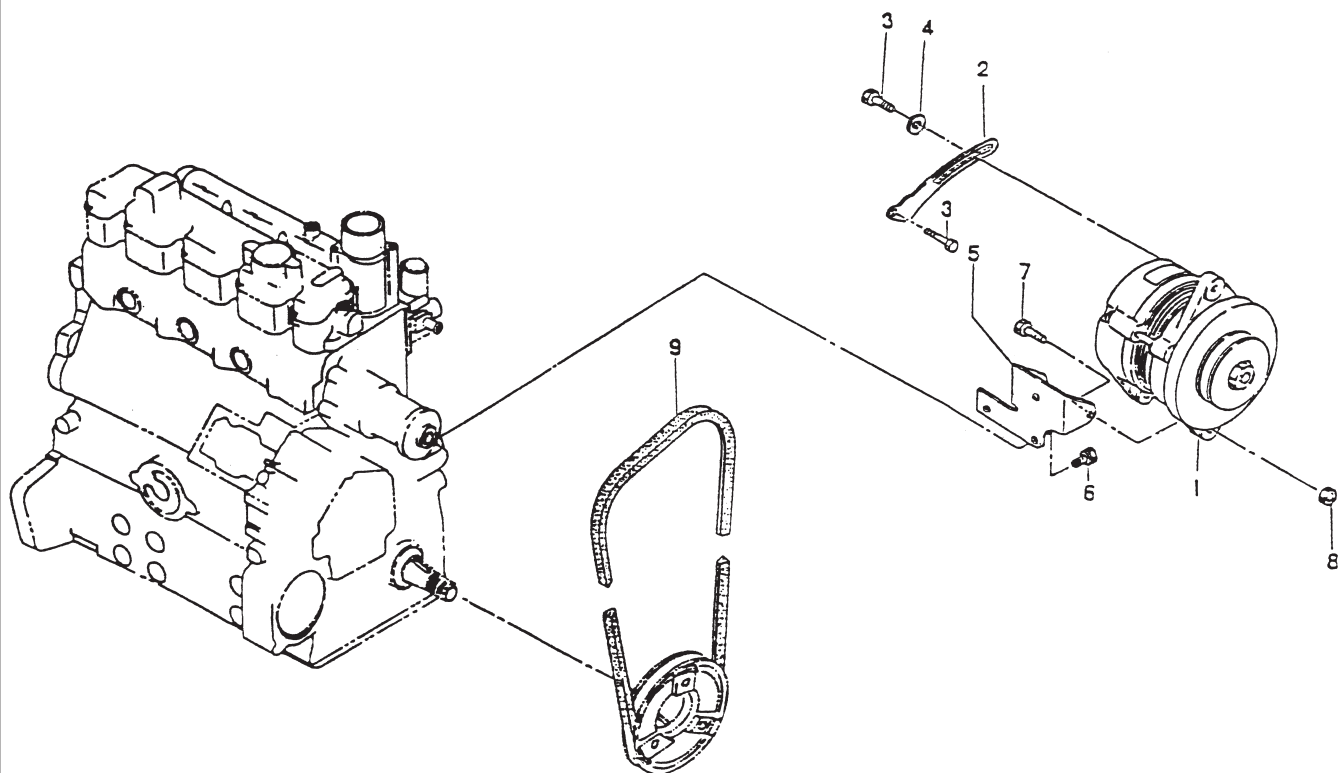
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 185086410 | 1 | Starter (includes keys #1 - #22) Marked M2T54091 | - |
| 1 | 185846317 | 1 | Screw Set | - |
| 2 | 185846493 | 1 | Front Cover | - |
| 3 | 185846494 | 1 | Lever Assembly | - |
| 4 | 185846495 | 1 | Spring Set | - |
| 5 | 185846496 | 1 | Center Housing | - |
| 6 | 185816240 | 1 | Solenoid Assembly | - |
| 7 | 185846322 | 1 | Bolt | - |
| 8 | 185846357 | 1 | Armature Set (includes keys #9 - #10) | - |
| 9 | 185846324 | 1 | Bearing | - |
| 10 | 185846325 | 1 | Bearing | - |
| 11 | 185846363 | 2 | Bolt | - |
| 12 | 185866270 | 1 | Clutch Shaft Assembly (includes keys #13 - #18) | - |
| 13 | 185846497 | 1 | Pinion Set (includes key #14) | - |
| 14 | 185846327 | 1 | Stopper Set | - |
| 15 | 185846498 | 1 | Gear Set (includes keys #16 - #17) | - |
| 16 | 185866280 | 1 | Pinion Shaft Assembly | - |
| 17 | 185846329 | 1 | Gear | - |
| 18 | 185846499 | 1 | Cover Set | - |
| 19 | 185846364 | 1 | Housing & Field Coil Assembly | - |
| 20 | 185846360 | 1 | Brush Holder Assembly (includes key #21) | - |
| 21 | 185846361 | 4 | Brush Spring | - |
| 22 | 185846362 | 1 | Rear Cover | - |

Starter - 12 Volt Isolated Ground



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 22-48102 | 1 | Starter (includes keys #1 - 22) Marked M2T54091 | - |
| 1 | 185846317 | 1 | Screw Set | - |
| 2 | 185846493 | 1 | Front Cover | - |
| 3 | 185846494 | 1 | Lever Assembly | - |
| 4 | 185846495 | 1 | Spring Set | - |
| 5 | 185846496 | 1 | Center Housing | - |
| 6 | 22-48107 | 1 | Solenoid | - |
| 7 | 185846322 | 1 | Bolt | - |
| 8 | 185846357 | 1 | Armature Set (includes keys #9 - 10) | - |
| 9 | 185846324 | 1 | Bearing | - |
| 10 | 185846325 | 1 | Bearing | - |
| 11 | 185846363 | 2 | Bolt | - |
| 12 | 185866270 | 1 | Clutch Shaft Assembly (includes keys #13 - 18) | - |
| 13 | 185846497 | 1 | Pinion Set (includes key #14) | - |
| 14 | 185846327 | 1 | Stopper Set | - |
| 15 | 185846498 | 1 | Gear Set (includes keys #16 - 17) | - |
| 16 | 185866280 | 1 | Pinion Shaft Assembly | - |
| 17 | 185846329 | 1 | Gear | - |
| 18 | 185846499 | 1 | Cover Set | - |
| 19 | 185846364 | 1 | Housing & Field Coil Assembly | - |
| 20 | 22-48108 | 1 | Brush Holder Assembly (includes key #21) | - |
| 21 | 185846361 | 4 | Brush Spring | - |
| 22 | 22-48109 | 1 | Rear Cover | - |
| 23 | 22-48111 | 1 | Insulator Kit | - |

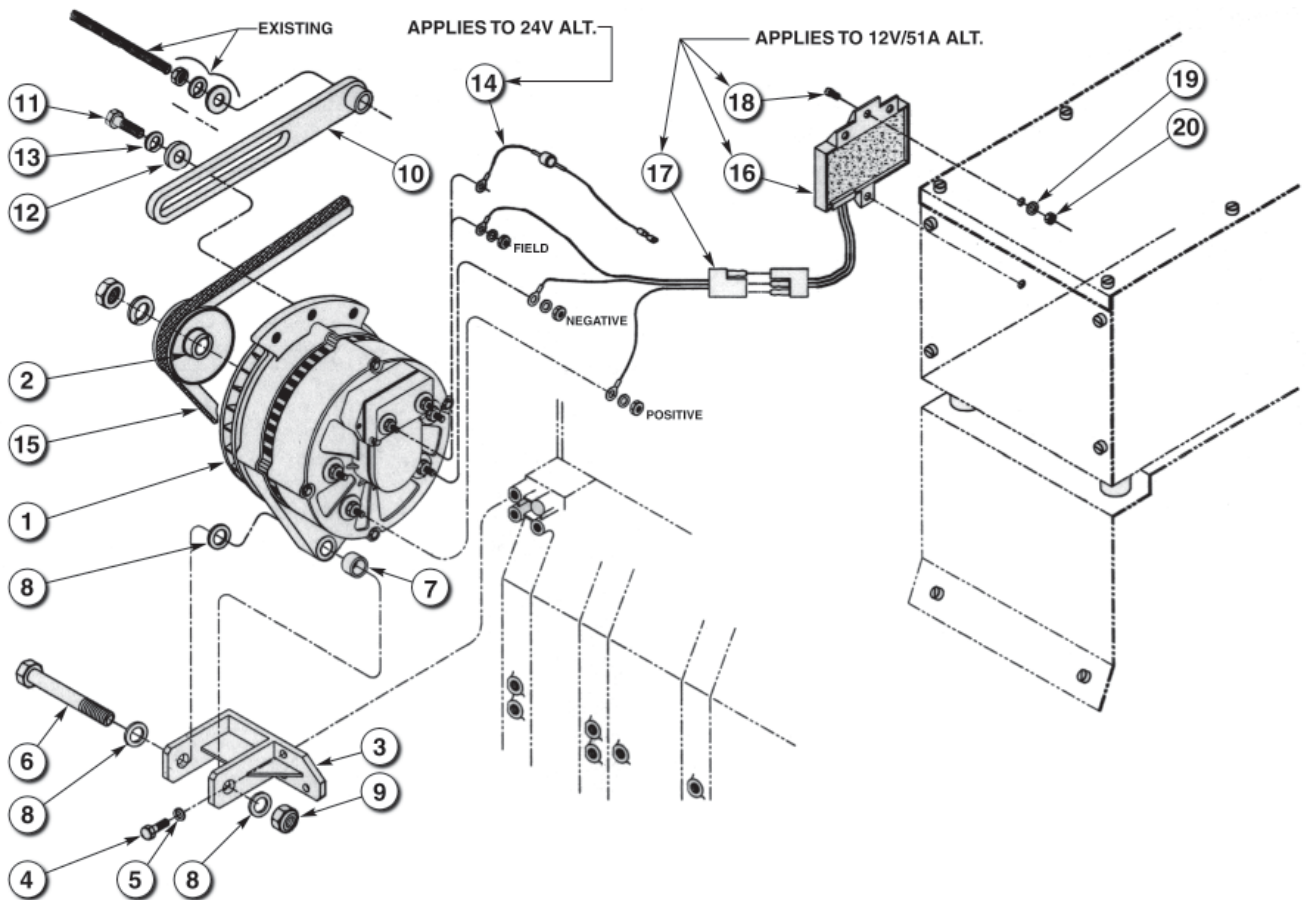
Alternator Mounting - 12 Volt/35 Amp: Standard & Isolated Ground



844alt

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|----------------------|
| 1 | 185046201 | 1 | Alternator - 12 Volt/35 Amp - Standard Ground (see parts detail) | up to S/N xxxx-15589 |
| | 185046320 | 1 | Alternator - 12 Volt/40 Amp - Standard Ground (see parts detail) | from S/N xxxx-15590 |
| | 22-43109 | 1 | Alternator - 12 Volt/35 Amp - Isolated Ground | - |
| 2 | 185727000 | 1 | Tensioner | - |
| 3 | 011500820 | 2 | Bolt | - |
| 4 | 026109017 | 1 | Washer | - |
| 5 | 185976510 | 1 | Bracket | - |
| 6 | 011500816 | 3 | Bolt | - |
| 7 | 010301035 | 2 | Bolt | - |
| 8 | 023100010 | 2 | Nut | - |
| 9 | 40-02003 | 1 | Drive Belt (M-844 & M-16C) (formerly #080109061) | - |
| | 40-08403 | 1 | Drive Belt (M-844L & M-20CL) (formerly #080109080) | - |

Alternator Options: 12Volt / 51Amp and 24Volt / 35 & 40Amp



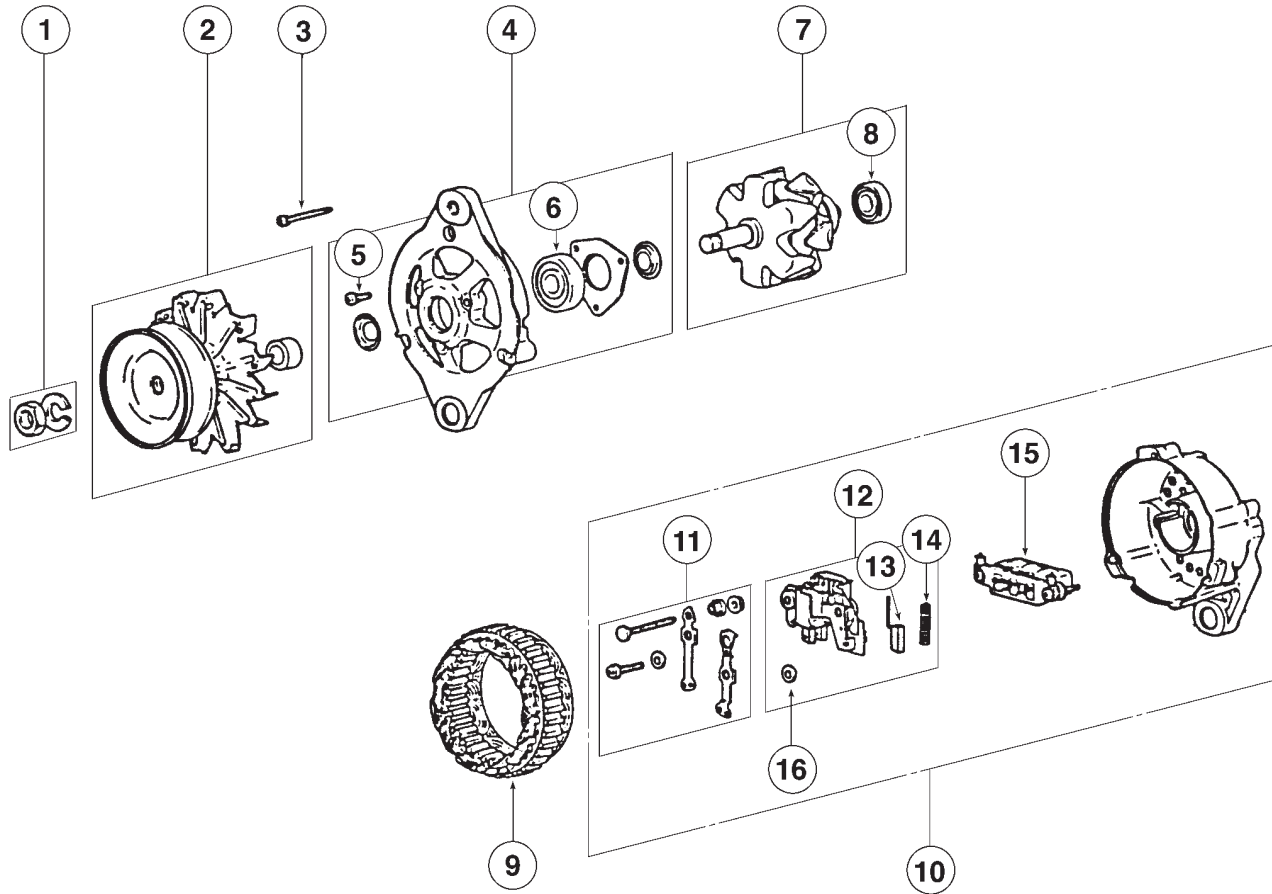
A-7631, A-7632, A-7633, A-7634, A-7635, A-7636 & D-2926

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 22-40333 | 1 | Alternator 12 Volt/51 Amp Isolated Ground | - |
| | 22-40278 | 1 | Alternator 24 Volt/40 Amp Standard Ground | - |
| | 22-71052 | 1 | Alternator 24 Volt/35 Amp Isolated Ground | - |
| 2 | 34-42001 | 1 | Pulley 1-A x 2-1/2" x 5/8" ID | - |
| 3 | 23-43107 | 1 | Bracket, Alternator Mounting | - |
| 4 | 12-00711 | 3 | Capscrew, Hex Head M8 x 1.25 x 20 mm | - |
| 5 | 15-00702 | 3 | Lock Washer, Helical M8 | - |
| 6 | 12-00519 | 1 | Capscrew, Hex Head 1/2-13 x 2-3/4" | - |
| 7 | 21-42206 | 1 | Spacer | - |
| 8 | 15-00504 | ** | Flat Washer, 1/2 SAE | - |
| 9 | 14-00512 | 1 | Hex Nut, Nylock 1/2-13 | - |
| 10 | 23-42005 | 1 | Tensioning Arm | - |
| 11 | 12-00212 | 1 | Capscrew, Hex Head 5/16-18 x 1" | - |
| 12 | 15-00201 | 1 | Stud Washer 5/16 | - |
| 13 | 15-00202 | 1 | Lock Washer, Helical 5/16 | - |
| 14 | 22-70048 | 1 | Diode Harness Addition | - |
| 15 | 40-02005 | 1 | Drive Belt (844) | - |
| | 40-08404 | 1 | Drive Belt (844L) | - |
| 16 | 22-40334 | 1 | D.C. Voltage Regulator, 12V, Adjustable | - |
| 17 | 16-1 | 1 | Wire Harness 36" (844) | - |
| 18 | 12-00001 | 2 | Machine Screw #10-32 x 3/4" S/S | - |
| 19 | 15-70002 | 2 | Flat Washer #10 S/S | - |
| 20 | 14-00032 | 2 | Hex Nut, Nylock #10 S/S | - |

} 12 Volt / 51 Amp Alternator Only

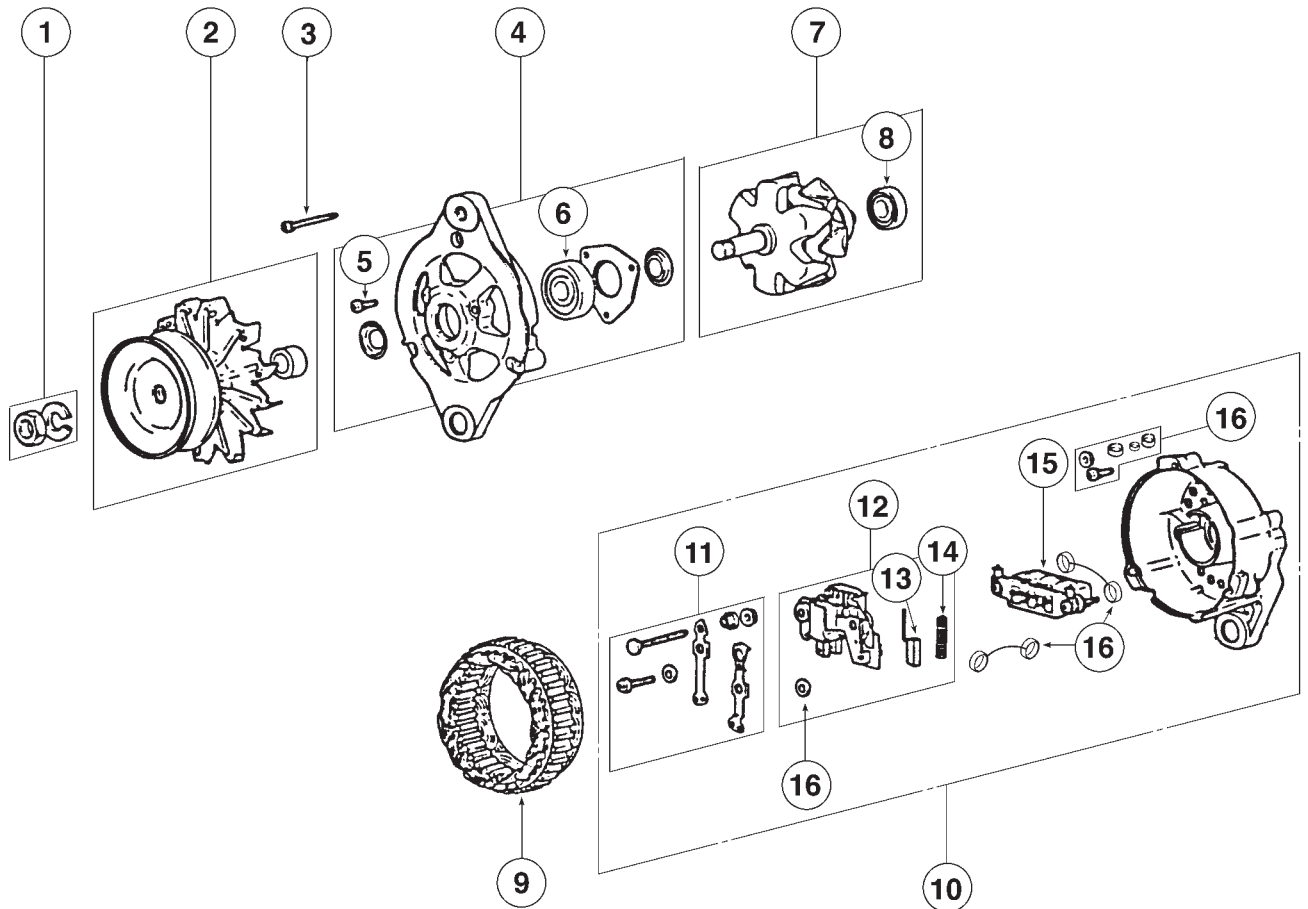
**As required.

Alternator Assembly - 12 Volt/35 Amp: Standard Ground



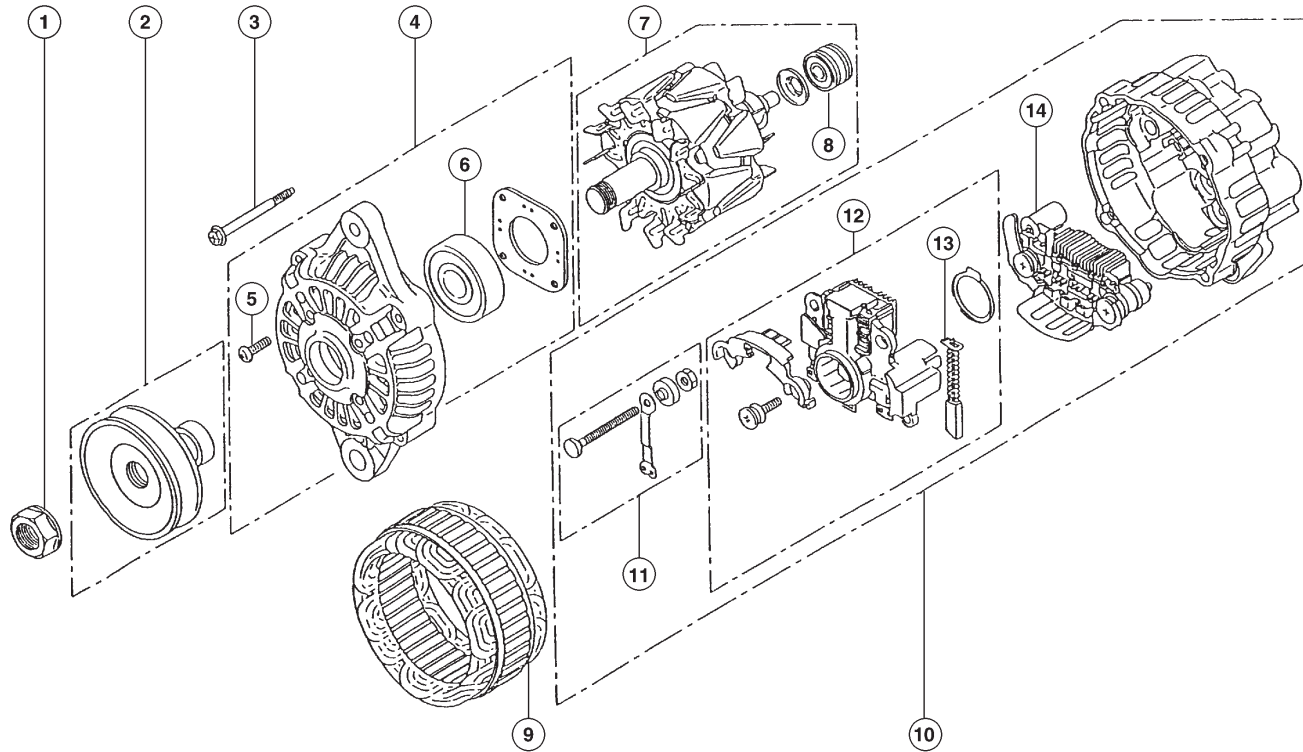
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 185046201 | 1 | Alternator Assembly (includes keys #1 - 15) | - |
| 1 | 185446175 | 1 | Nut | - |
| 2 | 185436120 | 1 | Pulley Assembly | - |
| 3 | 185446158 | 1 | Screw Set | - |
| 4 | 185426130 | 1 | Front Cover Assembly (includes keys #5 - #6) | - |
| 5 | 185446182 | 1 | Screw Set | - |
| 6 | 185446246 | 1 | Ball Bearing | - |
| 7 | 185446252 | 1 | Rotor Assembly (includes key #8) | - |
| 8 | 185446251 | 1 | Ball Bearing | - |
| 9 | 185446162 | 1 | Stator Assembly | - |
| 10 | 185426200 | 1 | Rear Cover Assembly (includes keys #11 - #15) | - |
| 11 | 185446188 | 1 | Terminal Set | - |
| 12 | 185446187 | 1 | Regulator Assembly (includes keys #13 - #14) | - |
| 13 | 185416300 | 2 | Brush | - |
| 14 | 185446165 | 2 | Spring | - |
| 15 | 185446253 | 1 | Rectifier Assembly | - |

Alternator Assembly - 12 Volt/35 Amp: Isolated Ground



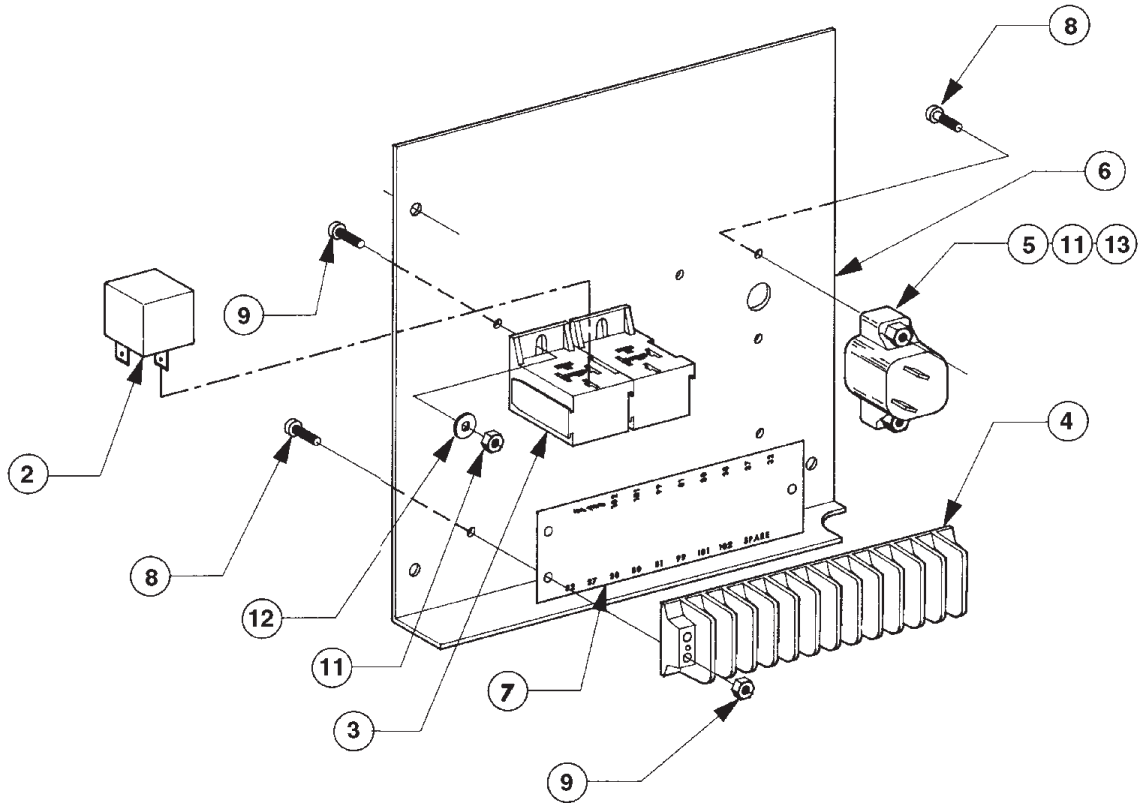
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 22-43109 | 1 | Alternator Assembly (includes keys #1 - 15) | - |
| 1 | 185446175 | 1 | Nut | - |
| 2 | 185436120 | 1 | Pulley Assembly | - |
| 3 | 185446158 | 1 | Screw Set | - |
| 4 | 185426130 | 1 | Front Cover Assembly (includes keys #5 - 6) | - |
| 5 | 185446182 | 1 | Screw Set | - |
| 6 | 185446246 | 1 | Ball Bearing | - |
| 7 | 185446252 | 1 | Rotor Assembly (includes key #8) | - |
| 8 | 185446251 | 1 | Ball Bearing | - |
| 9 | 185446162 | 1 | Stator Assembly | - |
| 10 | 185426200 | 1 | Rear Cover Assembly (includes keys #11 - 15) | - |
| 11 | 185446188 | 1 | Terminal Set | - |
| 12 | 22-43114 | 1 | Regulator Assembly (includes keys #13 - 14) | - |
| 13 | 185416300 | 2 | Brush | - |
| 14 | 185446165 | 2 | Spring | - |
| 15 | 185446253 | 1 | Rectifier Assembly | - |
| 16 | 22-43116 | 1 | Insulator Kit | - |

Alternator Assembly - 12 Volt/35 Amp: Standard Ground



| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|----------------------|---------------|
| •• | 185046320 | 1 | Alternator Assembly | - |
| 1 | 185446269 | 1 | Nut | - |
| 2 | 185436180 | 1 | Pulley Assembly | - |
| 3 | 185446270 | 1 | Screw Set | - |
| 4 | 185426210 | 1 | Front Cover Assembly | - |
| 5 | 185446271 | 1 | Screw Set | - |
| 6 | 185446272 | 1 | Ball Bearing | - |
| 7 | 185446273 | 1 | Rotor Assembly | - |
| 8 | 185446274 | 1 | Ball Bearing | - |
| 9 | 185446275 | 1 | Stator Assembly | - |
| 10 | 185426220 | 1 | Rear Cover Assembly | - |
| 11 | 185446278 | 1 | Terminal Set | - |
| 12 | 185446277 | 1 | Regulator Assembly | - |
| 13 | 185416480 | 2 | Brush | - |
| 14 | 185446276 | 1 | Rectifier Assembly | - |

Relay Board/J-Box Side Cover - 12 Volt: 184 Frame Generator

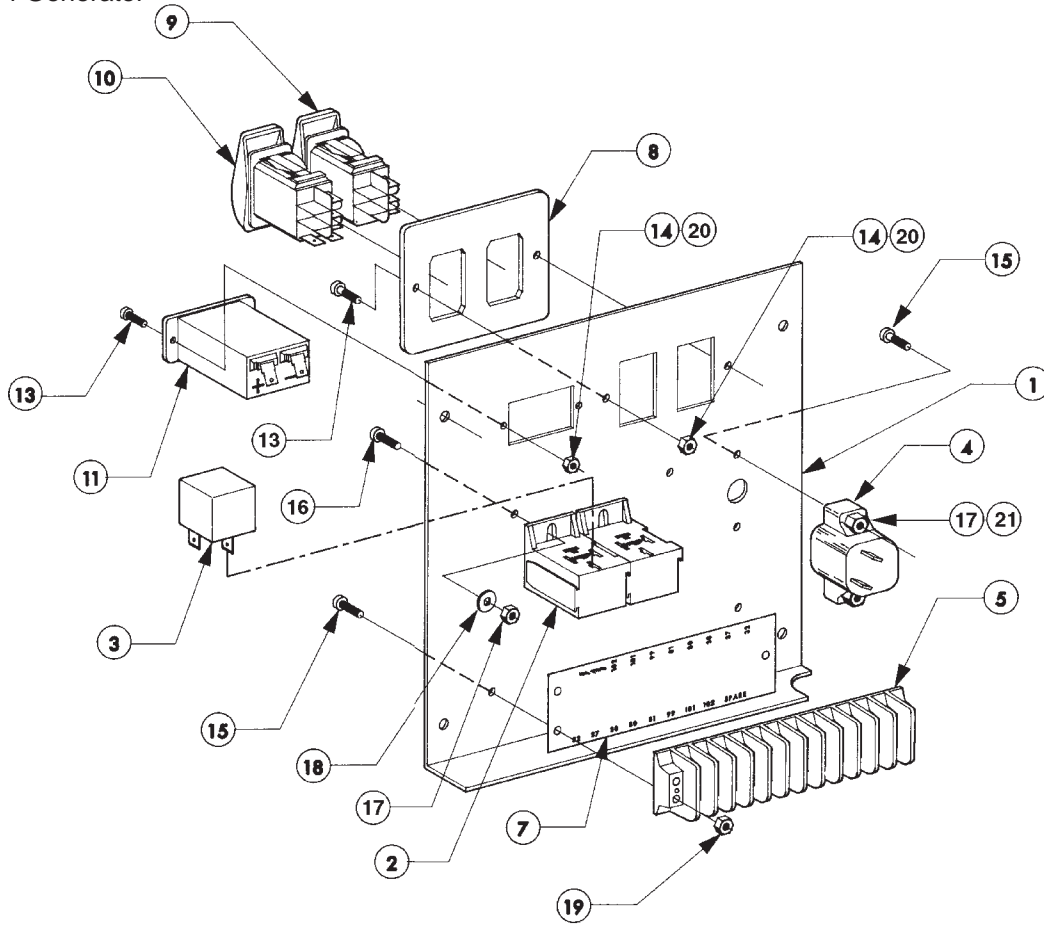


A-6476 / B-4619

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 22-92007 | 1 | Relay Board/J-Box Side Cover Assembly (includes all keys) | - |
| 1 | 22-41060 | 2 | Diode, 6 Amp 1000 PIV (not shown) | - |
| 2 | 22-42047 | 4 | Relay, 12 Volt SPDT | - |
| 3 | 22-41032 | 4 | Relay Base | - |
| 4 | 22-40193 | 1 | Terminal Board, 12 Connection 600 VAC | - |
| 5 | 22-40018 | 1 | Circuit Breaker 10 Amp | - |
| 6 | 28-90006 | 1 | Mounting Plate | - |
| 7 | 22-00063 | 1 | Number Strip | - |
| 8 | 12-00005 | 2 | Machine Screw, Binding Head, Phillips #8 - 32 x 3/4" | - |
| 9 | 12-00004 | 2 | Machine Screw, Binding Head, Phillips #8 - 32 x 3/8" | - |
| 10 | 14-00003 | 2 | Hex Nut, Nylock #8-32 | - |
| 11 | 14-00000 | 4 | Hex Nut #8-32 | - |
| 12 | 15-00001 | 2 | Flat Washer #8 | - |
| 13 | 15-00000 | 2 | Lock Washer #8 | - |

Control Panel / Relay Board: Industrial & Marine

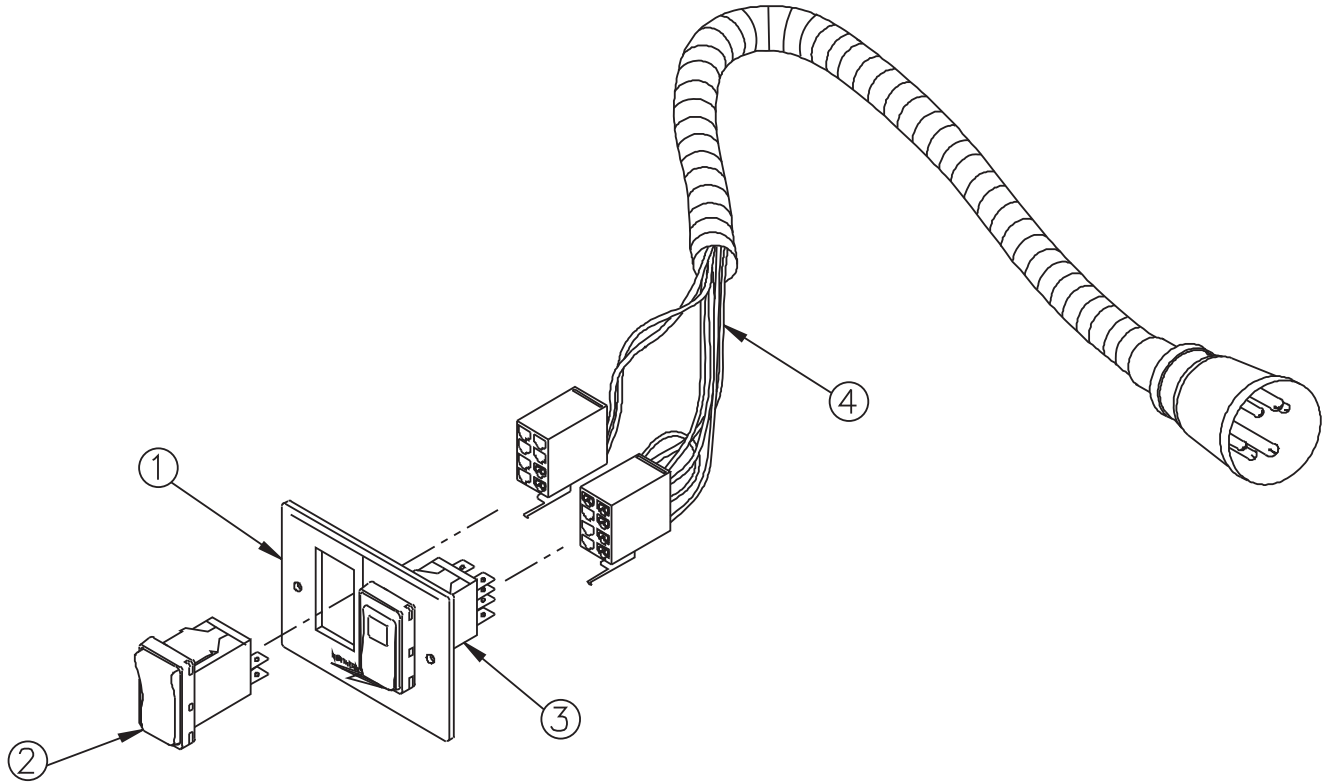
With 184 Generator



A-6432 / C-2911

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 29-98405 | 1 | Control Panel / Relay Board (includes all keys) | - |
| 1 | 28-90004 | 1 | Plate | - |
| 2 | 22-41032 | 4 | Relay Base | - |
| 3 | 22-42047 | 4 | Relay, SPDT | - |
| 4 | 22-40018 | 1 | Circuit Breaker 10 Amp | - |
| 5 | 22-40193 | 1 | Terminal Board | - |
| 6 | 28-41060 | 1 | Diode | - |
| 7 | 22-00063 | 1 | Number Strip | - |
| 8 | 00-40013 | 1 | Label | - |
| 9 | 22-90007 | 1 | Preheat / Shutdown - Bypass Switch | - |
| 10 | 22-90008 | 1 | Engine Control Switch | - |
| 11 | 22-90009 | 1 | Hour Meter | - |
| 12 | 22-40019 | 1 | Wire Harness | - |
| 13 | 12-00093 | 2 | Machine Screw, Round Head, Phillips #6-32 x 1/2" | - |
| 14 | 14-00002 | 4 | Hex Nut #6-32 | - |
| 15 | 12-00005 | 4 | Machine Screw, Binding Head, Slotted #8-32 x 3/4" | - |
| 16 | 12-00004 | 2 | Machine Screw, Binding Head, Slotted #8-32 x 3/8" | - |
| 17 | 14-00000 | 4 | Hex Nut #8-32 | - |
| 18 | 15-00001 | 2 | Flat Washer #8 | - |
| 19 | 14-00003 | 2 | Hex Nut, Nylock #8-32 | - |
| 20 | 15-00009 | 4 | Lock Washer #6 | - |
| 21 | 15-00000 | 2 | Lock Washer #8 | - |

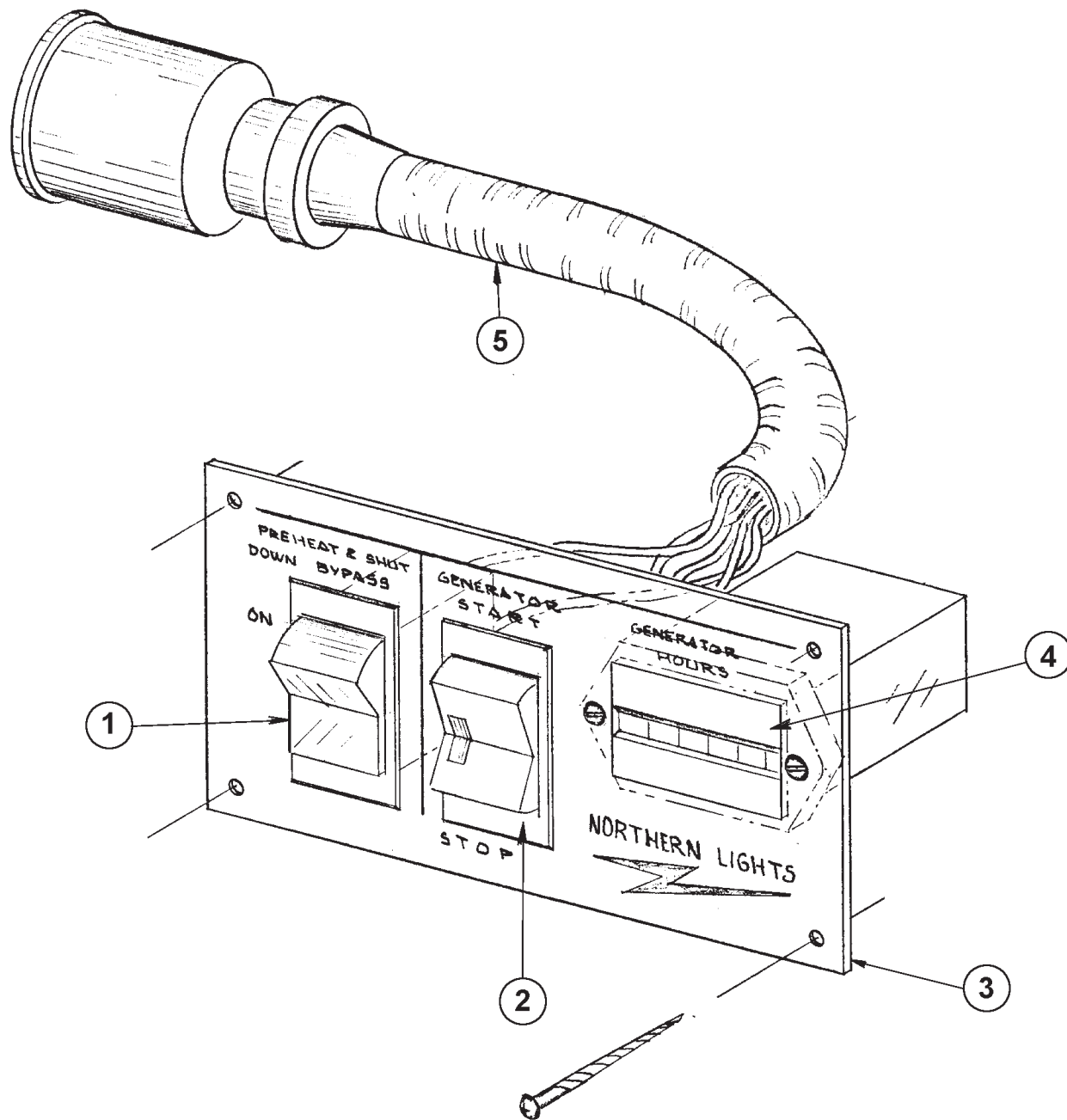
S-1 Control Panel 12 & 24 Volt



A-8551, A-8552 / B-5970

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 22-92110 | 1 | S-1 Start/Stop Control Panel, 12 Volt (includes all keys) | - |
| •• | 22-92115 | 1 | S-1 Start/Stop Control Panel, 24 Volt (includes all keys) | - |
| 1 | 00-40013 | 1 | Plate, S-1 Control Panel | - |
| 2 | 22-90167 | 1 | Rocker Switch | - |
| 3 | 22-90168 | 1 | Rocker Switch | - |
| 4 | 22-42066 | 1 | Wire Harness, 12 Volt | - |
| | 22-42067 | 1 | Wire Harness, 24 Volt | - |
| 5 | 00-00013 | 1 | Label "12 Volt" * | - |
| | 00-00014 | 1 | Label "24 Volt" * | - |
| 6 | 22-40012 | 1 | Resistor, 200 Ohm, 3 Watt (24 Volt Panel only) * | - |
| | | | *Not shown | |

Series 1-B Control Panel: 12 & 24 Volt

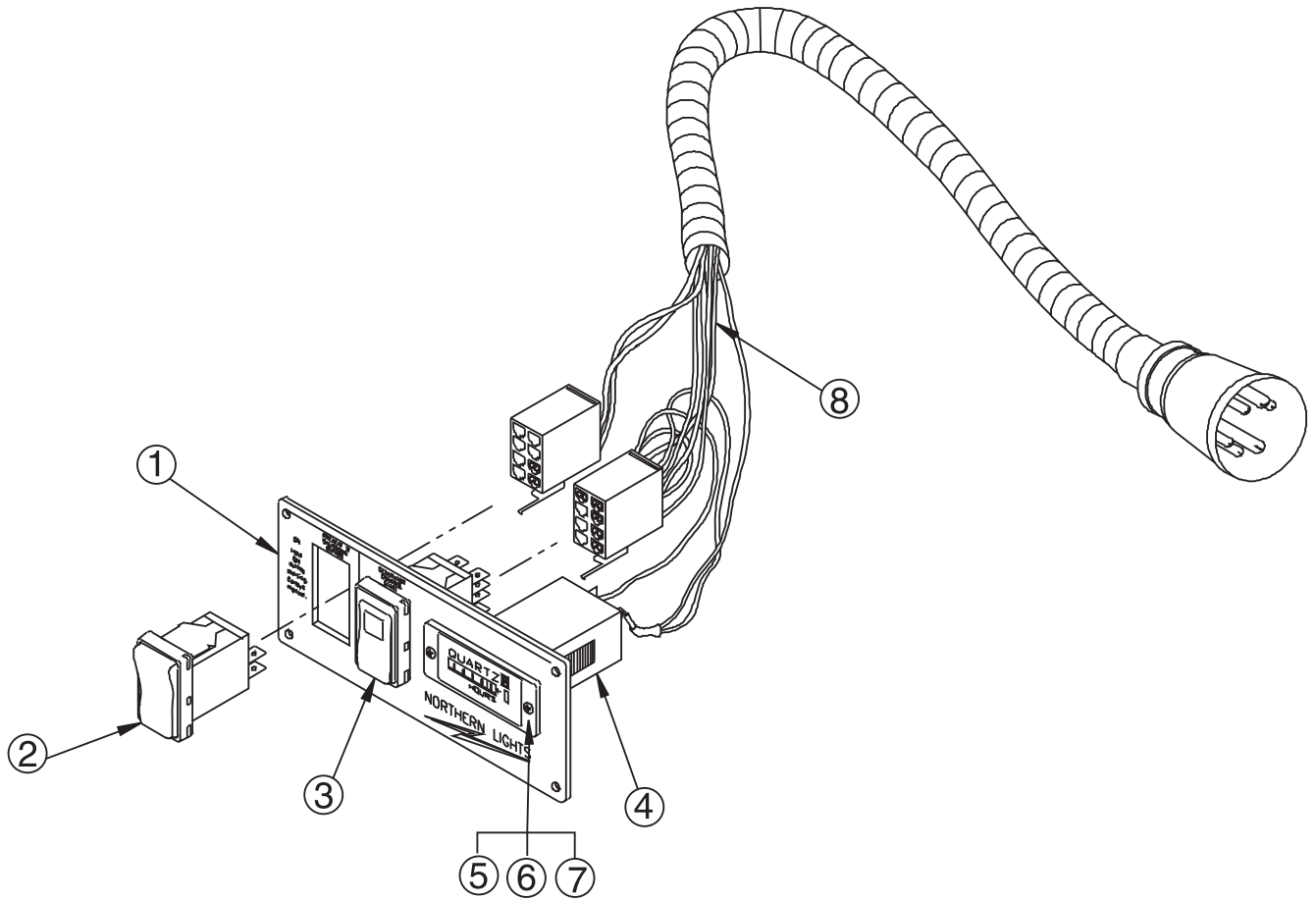


A-4791, A-3171 / C-1911

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 22-90006 | 1 | Series 1-B Control Panel - 12 Volt (includes all keys) | - |
| •• | 22-95430 | 1 | Series 1-B Control Panel - 24 Volt (includes all keys) | - |
| 1 | 22-90007 | 1 | Preheat / Shutdown - Bypass Switch | - |
| 2 | 22-90008 | 1 | Engine Control Switch with Lamp 12 Volt | - |
| 3 | 28-90003 | 1 | Series 1-B Face Plate | - |
| 4 | 22-90009 | 1 | Hour Meter | - |
| 5 | 22-40019 | 1 | Wire Harness | - |
| 6 | 22-40012 | 1 | Resistor 200 Ohm, 24 Volt Only (not shown) | - |

Series 1-B Start-Stop Control Panel

12 and 24 Volts, Late Production

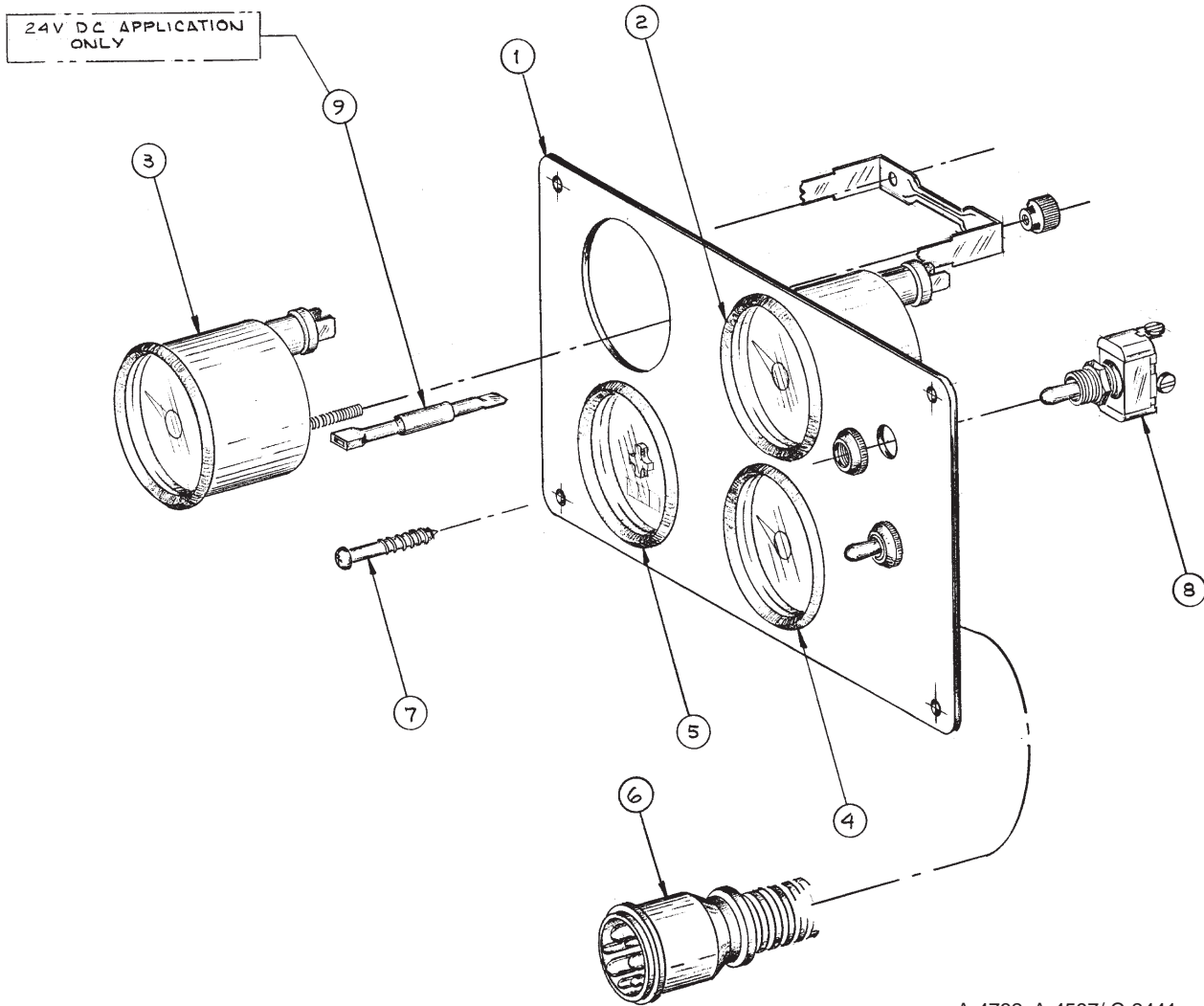


A-8553/ B-5971

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 22-92120 | 1 | S 1-B Start/Stop Control Panel - 12 Volt (includes all keys) | - |
| •• | 22-92125 | 1 | S 1-B Start/Stop Control Panel - 24 Volt (includes all keys) | - |
| 1 | 28-90003 | 1 | Plate | - |
| 2 | 22-90167 | 1 | Rocker Switch | - |
| 3 | 22-90168 | 1 | Rocker Switch | - |
| 4 | 22-90009 | 1 | Hour Meter | - |
| 5 | 12-00093 | 2 | Machine Screw, Round Head Philips #6 - 32 x 1/2" | - |
| 6 | 15-00030 | 2 | Star Washer, Internal #6, Stainless Steel | - |
| 7 | 14-00015 | 2 | Hex Nut #6 - 32, Stainless Steel | - |
| 8 | 22-42063 | 1 | Wire Harness - 12 Volt Panels | - |
| | 22-42064 | 1 | Wire Harness - 24 Volt Panels | - |

Flush Mount Dual Station Control Panel 12 & 24 Volt

VDO Standard Line Black Bezel Gauges

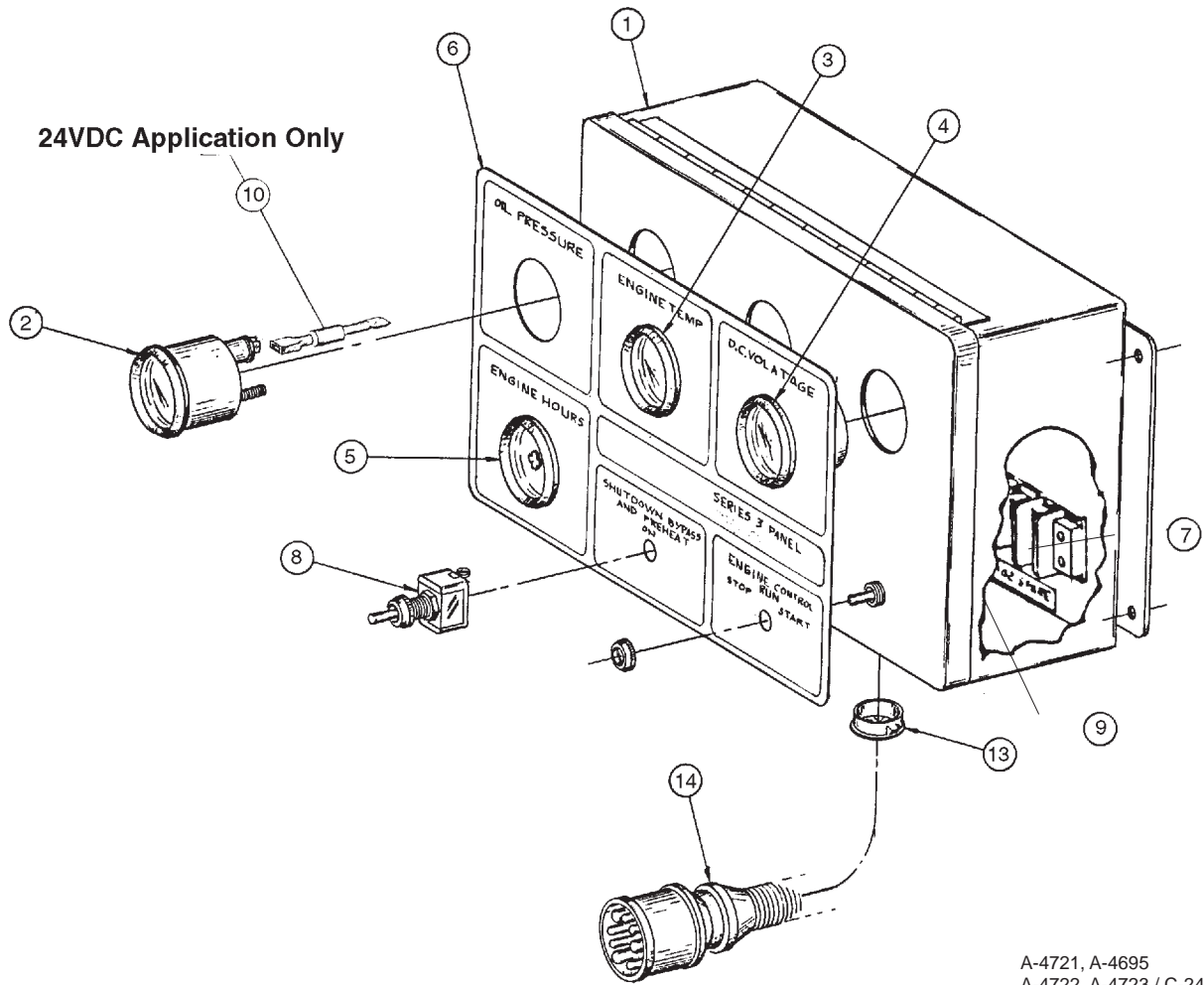


A-4732, A-4597/ C-2441

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 22-92015 | 1 | S-3C Control Panel, 12 Volt (includes all keys) | - |
| •• | 22-92014 | 1 | S-3C Control Panel, 24 Volt (includes all keys) | - |
| 1 | 28-90010 | 1 | Panel Plate | - |
| 2 | 37-40010 | 1 | Oil Pressure Gauge, 0-80 PSI | - |
| 3 | 37-40011 | 1 | Engine Temperature Gauge, 0-250° F | - |
| 4 | 37-40012 | 1 | DC Voltmeter, 12 Volt | - |
| | 37-40014 | 1 | DC Voltmeter, 24 Volt | - |
| 5 | 37-40013 | 1 | Hourmeter | - |
| 6 | 22-42024 | 1 | Panel Wire Harness | - |
| 7 | 12-90007 | 4 | Self Tapping Screw, Oval Head Phillips #6 x 3/4" | - |
| 8 | 22-41051 | 2 | Toggle Switch | - |
| 9 | 22-40004 | 2 | Resistor Kit (24 volt panel only) | - |
| 10 | 22-44852 | ** | 12 Volt Bulb (not shown) | - |
| | 22-44853 | ** | 24 Volt Bulb (not shown) | - |
| | | | **As required | |

Surface Mount Dual Station Control Panel 12 & 24 Volt

VDO Standard Line Black Bezel Gauges

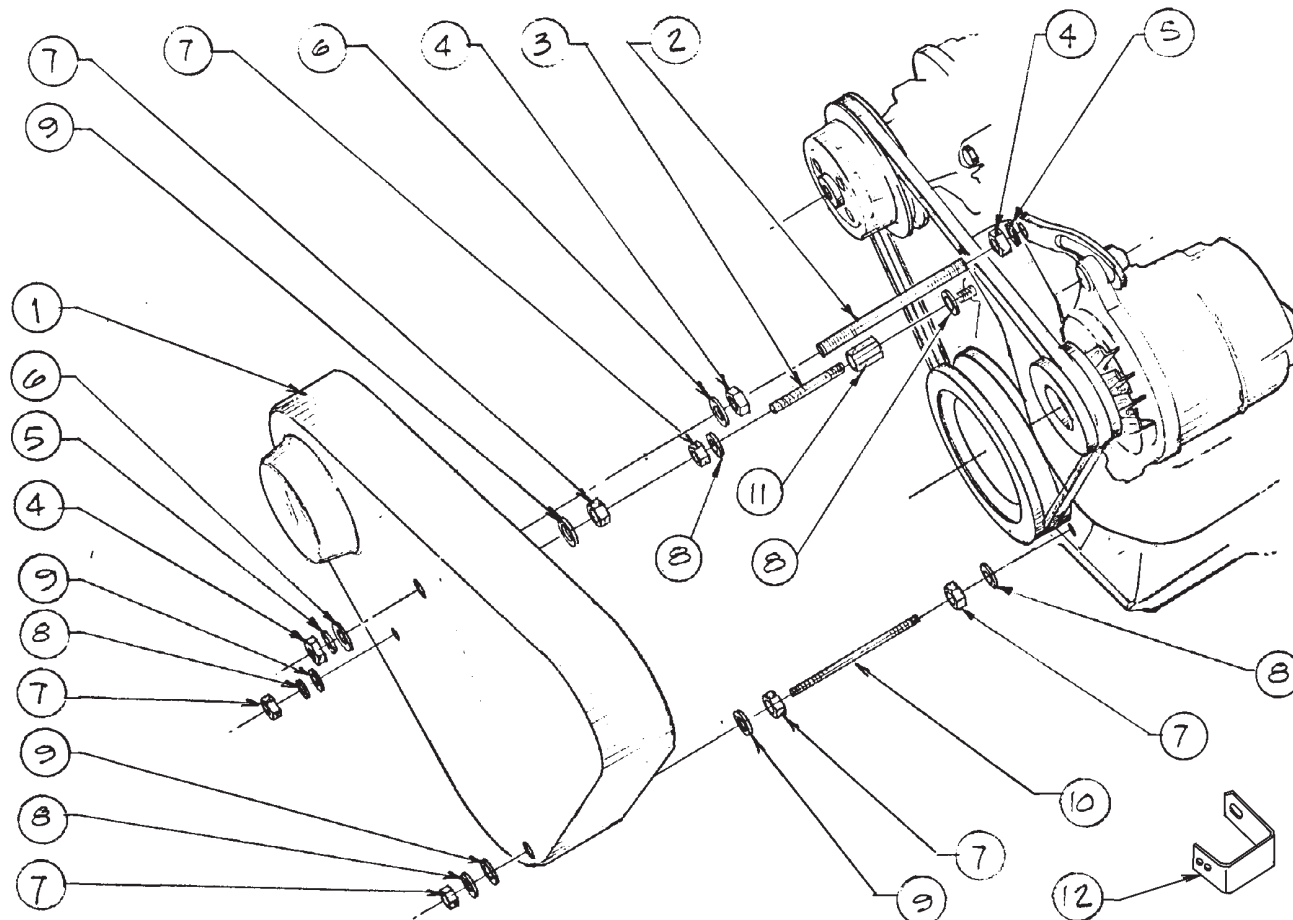


A-4721, A-4695
A-4722, A-4723 / C-2470

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| •• | 22-92031 | 1 | S-3B Control Panel, 12 Volt (includes all keys) | - |
| •• | 22-95420 | 1 | S-3B Control Panel, 24 Volt (includes all keys) | - |
| 1 | 39-40008 | 1 | Enclosure | - |
| 2 | 37-40010 | 1 | Oil Pressure Gauge, 0-80 PSI | - |
| 3 | 37-40011 | 1 | Engine Temperature Gauge, 0-250° F | - |
| 4 | 37-40012 | 1 | DC Voltmeter, 12 Volt | - |
| | 37-40014 | 1 | DC Voltmeter, 24 Volt | - |
| 5 | 37-40013 | 1 | Hourmeter | - |
| 6 | 00-91018 | 1 | Panel Decal | - |
| 7 | 22-41077 | 1 | Terminal Board | - |
| 8 | 22-41051 | 2 | Toggle Switch (not shown) | - |
| 9 | 22-00052 | 1 | Number Strip (not shown) | - |
| 10 | 22-40004 | 2 | Resistor Kit (24 volt panel only) | - |
| 11 | 22-44852 | ** | 12 Volt Bulb (not shown) | - |
| | 22-44853 | ** | 24 Volt Bulb (not shown) | - |
| 12 | 22-40257 | 1 | Wire Harness (not shown) | - |
| 13 | 00-41015 | 1 | Plastic Bushing | - |
| 14 | 22-40062 | 1 | Connection Harness | - |
| | | | **As required | |

GROUP 5 – ELECTRICAL SYSTEM

Belt Guard Assembly: M844 & M16C

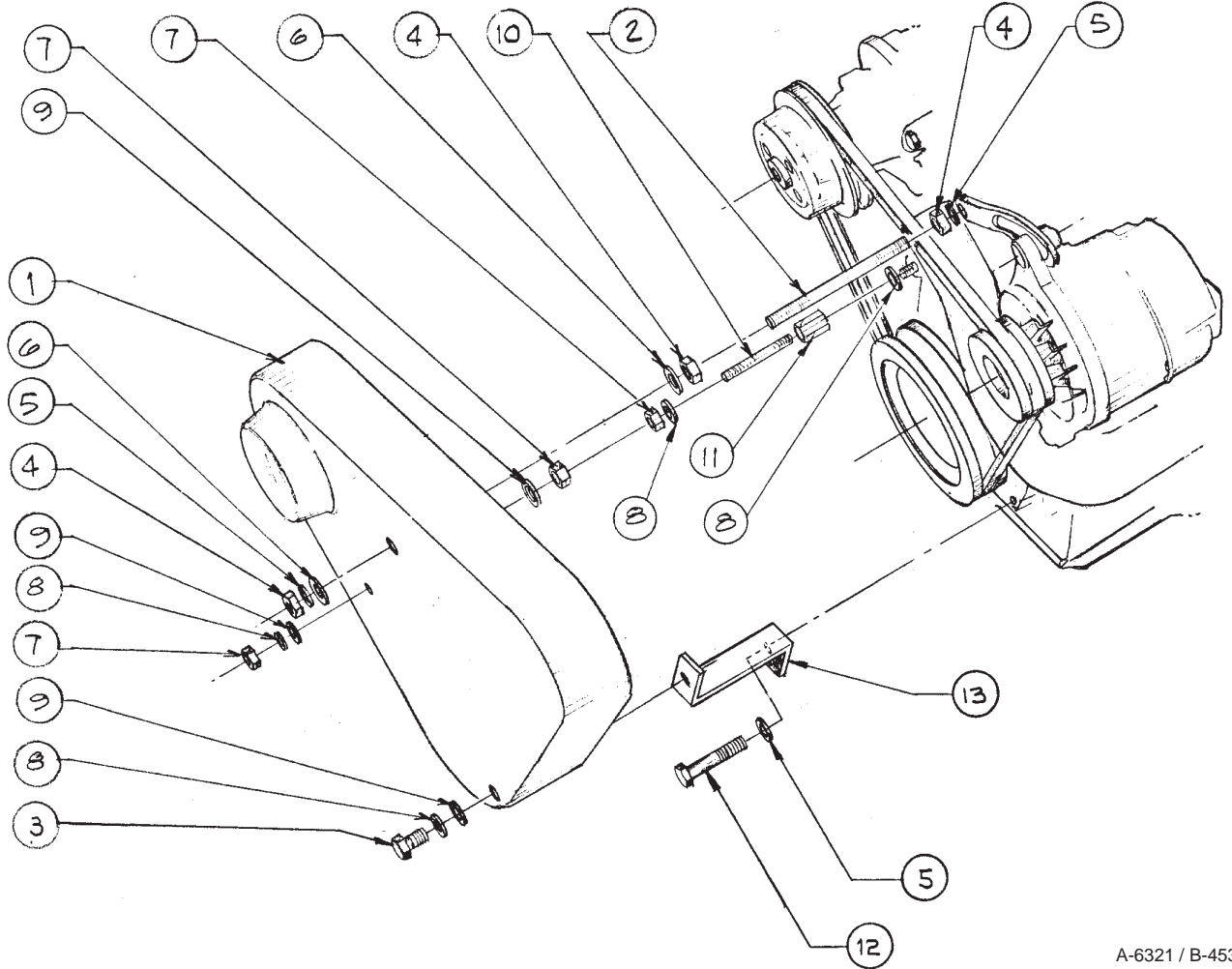


A-5004 / B-3986

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 00-73143 | 1 | Belt Guard (vacuu-formed plastic) | - |
| | 00-73148 | 1 | Belt Guard, Standard Alternator (with PTO) | - |
| | 00-08402 | 1 | Belt Guard, Frame | - |
| | 00-08401 | 1 | Belt Guard, Frame | - |
| 2 | 13-03101 | 1 | Stud, All Thread M8 x 1.25 x 110 mm | - |
| 3 | 13-03102 | 1 | Stud, All Thread M6 x 1.0 x 140 mm | - |
| 4 | 14-00711 | 3 | Hex Nut M8 x 1.25 S/S | - |
| 5 | 15-00705 | 2 | Lock Washer M8 S/S | - |
| 6 | 15-00706 | 2 | Flat Washer M8 S/S | - |
| 7 | 14-01132 | 6 | Hex Nut M6 x 1.0 S/S | - |
| 8 | 15-00610 | 5 | Lock Washer M6 S/S | - |
| 9 | 15-01134 | 4 | Flat Washer M6 S/S | - |
| 10 | 13-03103 | 1 | Stud, All Thread M6 x 1.0 x 70 mm | - |
| 11 | 14-73100 | 1 | Hex Nut, X-L M6 x 1.0 x 19 mm | - |
| 12 | 23-78403 | ** | Bracket (used with 00-73148 only) | - |
| | 23-78402 | ** | Bracket (used with 00-08401 and 00-08402 only) | - |
| 13 | 00-73147 | 1 | PTO Guard (not shown) | - |

**As required.

Belt Guard Assembly: M844L & M20CL



A-6321 / B-4533

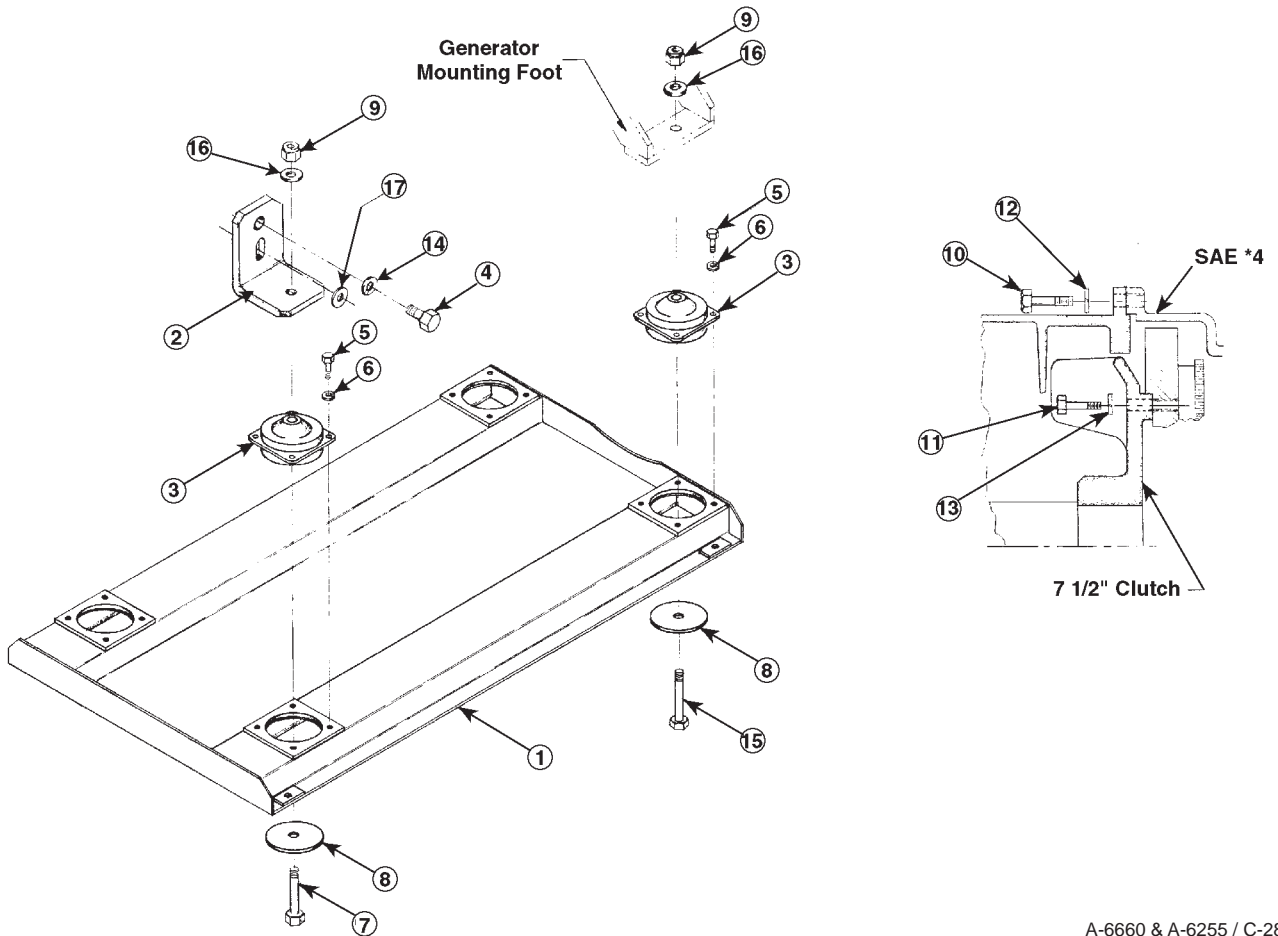
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|----------------|-------------|-----|--|---------------|
| 1 | 00-73143 | 1 | Belt Guard, Small Frame Alternators (without PTO) | - |
| | 00-73148 | 1 | Belt Guard, Small Frame Alternators (with PTO) | - |
| | 00-08402 | 1 | Belt Guard, Medium Frame Alternators (without PTO) | - |
| | 00-08401 | 1 | Belt Guard, Medium Frame Alternators (with PTO) | - |
| 2 | 13-03101 | 1 | Stud, All Thread M8 x 1.25 x 110 mm | - |
| 3 | 12-01102 | 1 | Capscrew, Hex Head M6 x 1.0 x 16 mm S/S | - |
| 4 | 14-09711 | 2 | Hex Nut M8 x 1.25 S/S | - |
| 5 | 15-00705 | 2 | Lock Washer M8 S/S | - |
| 6 | 15-00706 | 2 | Flat Washer M8 S/S | - |
| 7 | 14-01132 | 3 | Hex Nut M6 x 1.0 S/S | - |
| 8 | 15-00610 | 5 | Lock Washer M6 S/S | - |
| 9 | 15-01134 | 3 | Flat Washer M6 S/S | - |
| 10 | 13-03103 | 1 | Stud, All Thread M6 x 1.0 x 70 mm | - |
| 11 | 14-73100 | 1 | Hex Nut, X-L M6 x 1.0 x 19 mm | - |
| 12 | 12-01124 | 1 | Capscrew, Hex Head M6 x 1.0 x 50 mm | - |
| 13 | 23-78401 | 1 | Bracket (not used with PTO applications) | - |
| 14 | 23-78403 | ** | Bracket (used with 00-73148 only - not shown) | - |
| | 23-78402 | ** | Bracket (used with 00-08401 and 00-08402 only - not shown) | - |
| 15 | 00-73147 | 1 | PTO Guard (not shown) | - |
| **As required. | | | | |

GROUP 6 – GASKET SETS

| Gasket Sets | | | | |
|--------------------|-------------|-----|---|---------------|
| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
| •• | 29-08100 | 1 | Gasket Set – Marine (includes all keys) | - |
| •• | 195906940 | 1 | Gasket Set – Industrial (includes keys #1 - 45) | - |
| 1 | 052100400 | 1 | O-Ring | - |
| 2 | 052109072 | 1 | O-Ring | - |
| 3 | 052109076 | 2 | O-Ring | - |
| 4 | 052109074 | 1 | O-Ring | - |
| 5 | 198996060 | 7 | Gasket | - |
| 6 | 135996480 | 1 | Gasket | - |
| 7 | 135996600 | 1 | Gasket | - |
| 8 | 198636170 | 1 | Oil Seal | - |
| 9 | 050209083 | 1 | Oil Seal | - |
| 10 | 052100100 | 2 | O-Ring | - |
| 11 | 052100150 | 1 | O-Ring | - |
| 12 | 025100012 | 2 | Seal Washer | - |
| 13 | 131426200 | 4 | Gasket | - |
| 14 | 130326051 | 5 | Gasket | - |
| 15 | 130516069 | 4 | Gasket | - |
| 16 | 131296255 | 2 | Gasket | - |
| 17 | 025100008 | 2 | Seal Washer | - |
| 18 | 025100016 | 1 | Seal Washer | - |
| 19 | 130996070 | 1 | Gasket | - |
| 20 | 131426320 | 1 | Shim Set | - |
| 21 | 025100010 | 2 | Seal Washer | - |
| 22 | 145996360 | 1 | Gasket | - |
| 23 | 145996370 | 1 | Gasket | - |
| 24 | 145996460 | 1 | Gasket | - |
| 25 | 165996361 | 1 | Gasket | - |
| 26 | 165996351 | 1 | Gasket | - |
| 27 | 052100070 | 1 | O-Ring | - |
| 28 | 052100050 | 1 | O-Ring | - |
| 29 | 198636160 | 1 | Oil Seal | - |
| 30 | 052300600 | 1 | O-Ring | - |
| 31 | 052300700 | 1 | O-Ring | - |
| 32 | 052100030 | 1 | O-Ring | - |
| 33 | 165996110 | 1 | Gasket | - |
| 34 | 135996720 | 1 | Gasket | - |
| 35 | 135996780 | 1 | Gasket | - |
| 36 | 135996550 | 1 | Gasket | - |
| 37 | 135996530 | 1 | Gasket | - |
| 38 | 120406050 | 4 | Valve Guide Seal (Ex) | - |
| 39 | 120406070 | 4 | Valve Guide Seal (In) | - |
| 40 | 111147200 | 1 | Head Gasket | - |
| 41 | 111147460 | 1 | Head Gasket | - |
| 42 | 054109013 | 1 | Gasket | - |
| 43 | 052300400 | 1 | O-Ring | - |
| 44 | 110996600 | 1 | Gasket | - |
| 45 | 145996050 | 1 | Gasket | - |
| 46 | 11-28101 | 1 | Air Intake Cover Gasket | - |
| 47 | 11-38101 | 1 | Exhaust Manifold Gasket | - |
| 48 | 11-13101 | 1 | Thermostat Cover Gasket | - |
| 49 | 16-13101 | 1 | O-ring | - |

Base Frame Assembly: M - ML844 & 844L

282/283 & 306/307 Frame Generators

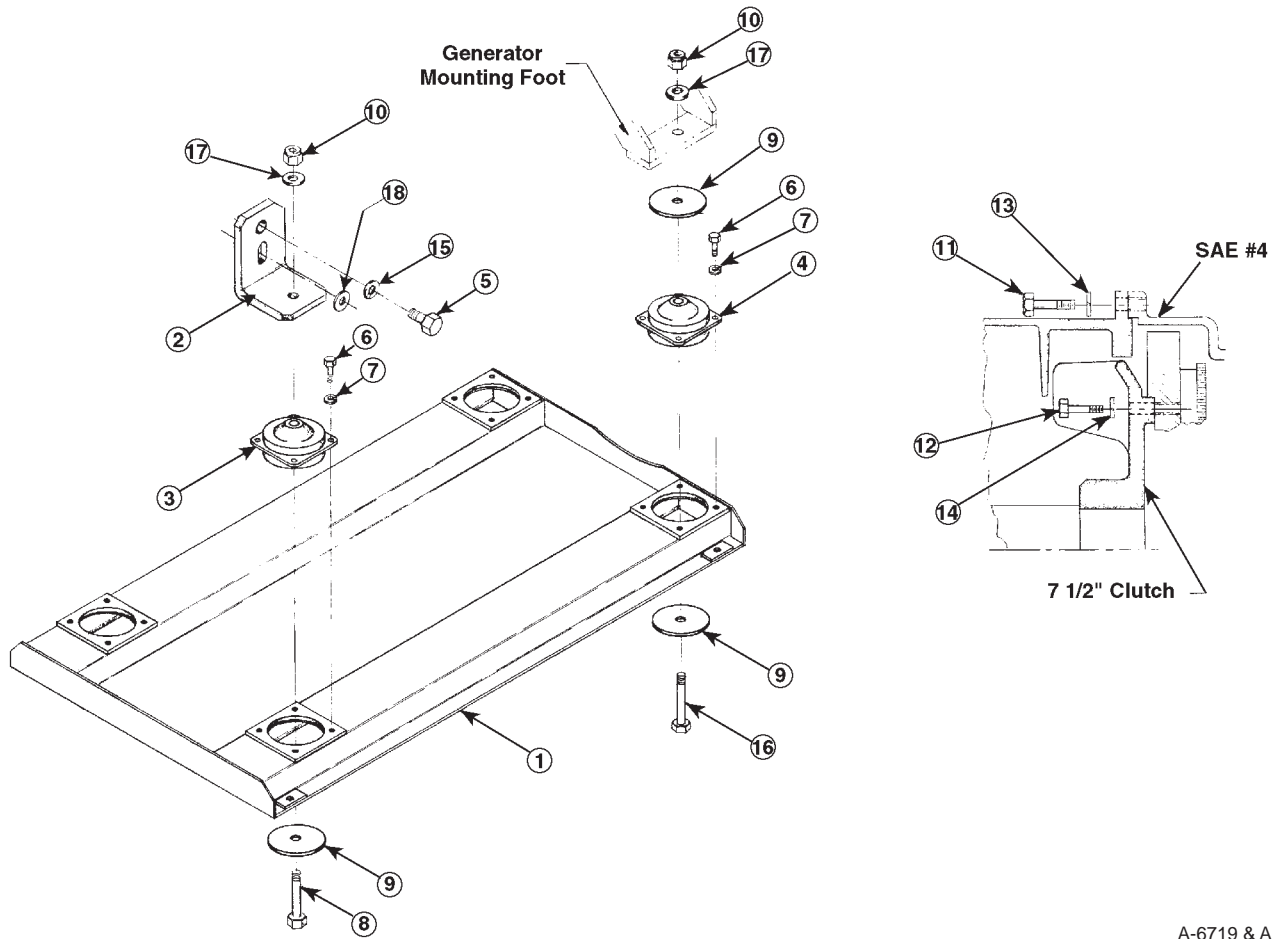


A-6660 & A-6255 / C-2885A

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 39-88401 | 1 | Base Frame, Steel | - |
| | 39-88402 | 1 | Base Frame, Aluminum | - |
| 2 | 23-88103 | 2 | Bracket | - |
| 3 | 33-82205 | 4 | Platform Mount (without PTO – front & rear) | - |
| | 33-83106 | 2 | Platform Mount (with PTO – front only) | - |
| 4 | 12-01100 | 4 | Capscrew, Hex Head M14 x 1.5 x 30 mm | - |
| 5 | 12-00776 | 16 | Capscrew, Hex Head M8 x 1.25 x 20 mm Stainless Steel | - |
| 6 | 12-00705 | 16 | Lock Washer M8, Stainless Steel | - |
| 7 | 12-00502 | 2 | Capscrew, Hex Head 1/2-13 x 3-1/2" Stainless Steel (without PTO) | - |
| | 12-00503 | 2 | Capscrew, Hex Head 1/2-13 x 3-3/4" Stainless Steel (with PTO) | - |
| 8 | 15-00020 | 4 | Snubbing Washer | - |
| 9 | 14-00501 | 4 | Hex Nut, Nylock 1/2-13 Stainless Steel | - |
| 10 | 12-00313 | 12 | Capscrew, Hex Head 3/8-16 x 1-1/4" (306/307 Frame Generators) | - |
| | 12-00314 | 12 | Capscrew, Hex Head 3/8-16 x 1-1/2" (282/283 Frame Generators) | - |
| 11 | 12-00214 | 8 | Capscrew, Hex Head 5/16-18 x 1-1/2" (306/307 Frame Generators) | - |
| | 12-00209 | 8 | Capscrew, Hex Head 5/16-18 x 3/4" (282/283 Frame Generators) | - |
| 12 | 15-00302 | 12 | Lock Washer 3/8 | - |
| 13 | 15-00202 | 8 | Lock Washer 5/16 | - |
| 14 | 15-01402 | 4 | Lock Washer M14 | - |
| 15 | 12-00503 | 2 | Capscrew, Hex Head 1/2-13 x 3-3/4" Stainless Steel | - |
| 16 | 15-00505 | 4 | Flat Washer 1/2 Stainless Steel | - |
| 17 | 15-01401 | 2 | Flat Washer M14 | - |

Base Frame Assembly: MY844 & 844L

184 Frame Generators

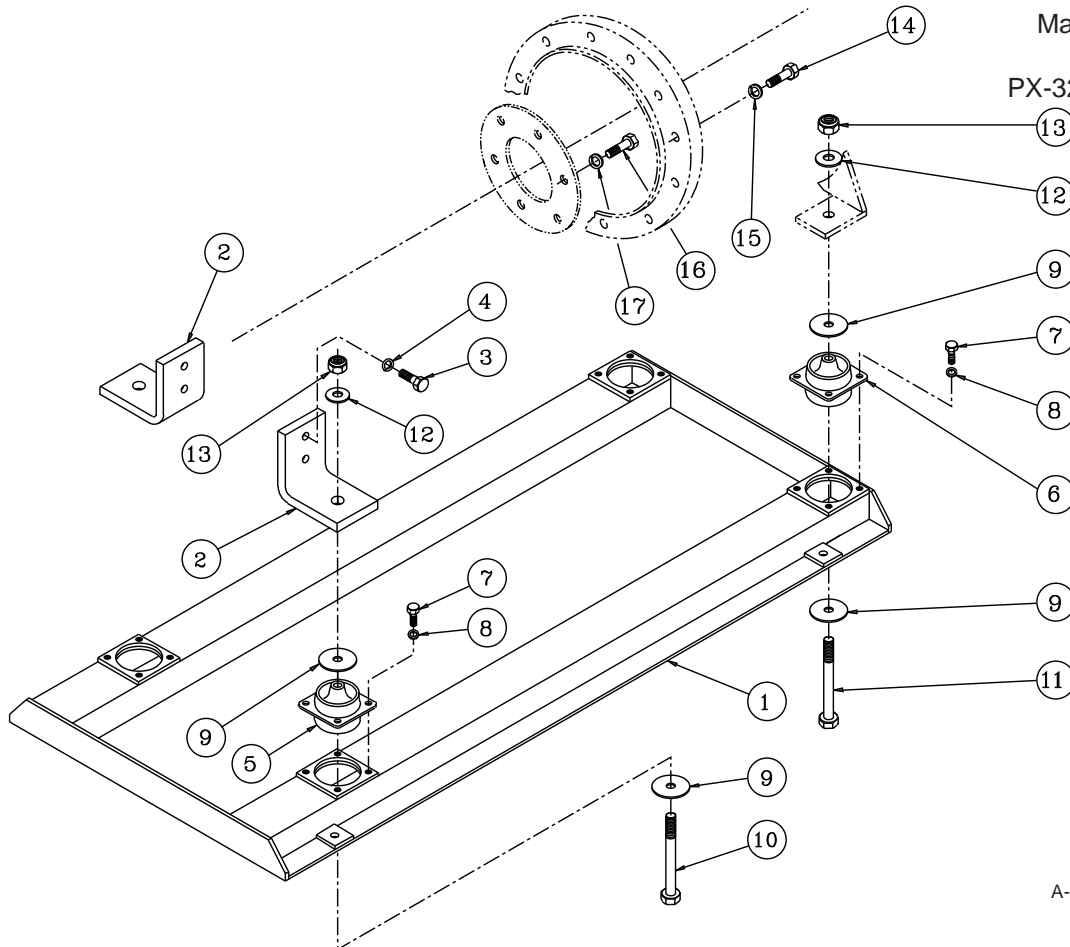


A-6719 & A-6678

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 39-88403 | 1 | Base Frame, Steel | - |
| | 39-88404 | 1 | Base Frame, Aluminum | - |
| 2 | 23-88103 | 2 | Bracket | - |
| 3 | 33-82205 | 2 | Platform Mount (without PTO) | - |
| | 33-83106 | 2 | Platform Mount (with PTO) | - |
| 4 | 33-82206 | 2 | Platform Mount | - |
| 5 | 12-01100 | 4 | Capscrew, Hex Head M14 x 1.5 x 30 mm | - |
| 6 | 12-00776 | 16 | Capscrew, Hex Head M8 x 1.25 x 20 mm Stainless Steel | - |
| 7 | 15-00705 | 16 | Lock Washer M8, Stainless Steel | - |
| 8 | 12-00502 | 2 | Capscrew, Hex Head 1/2-13 x 3-1/2" Stainless Steel | - |
| | 12-00503 | 2 | Capscrew, Hex Head 1/2-13 x 3-3/4" Stainless Steel | - |
| 9 | 15-00020 | 6 | Snubbing Washer | - |
| 10 | 14-00501 | 4 | Hex Nut, Nylock 1/2-13 Stainless Steel | - |
| 11 | 12-00313 | 8 | Capscrew, Hex Head 3/8-16 x 1-1/4" | - |
| 12 | 12-00214 | 8 | Capscrew, Hex Head 5/16-18 x 1-1/2" | - |
| 13 | 15-00302 | 8 | Lock Washer 3/8 | - |
| 14 | 15-00202 | 8 | Lock Washer 5/16 | - |
| 15 | 15-01402 | 4 | Lock Washer M14 | - |
| 16 | 12-00503 | 2 | Capscrew, Hex Head 1/2-13 x 3-1/2" Stainless Steel | - |
| 17 | 15-00505 | 4 | Flat Washer 1/2 Stainless | - |
| 18 | 15-01401 | 2 | Flat Washer M14 | - |
| 19 | 00-71614 | 2 | Grommet 1-5/8"ID x 2-1/4"OD (not shown) | - |

Base Frame Assembly

Marine Application
- PX-316K &
PX-320K Generators

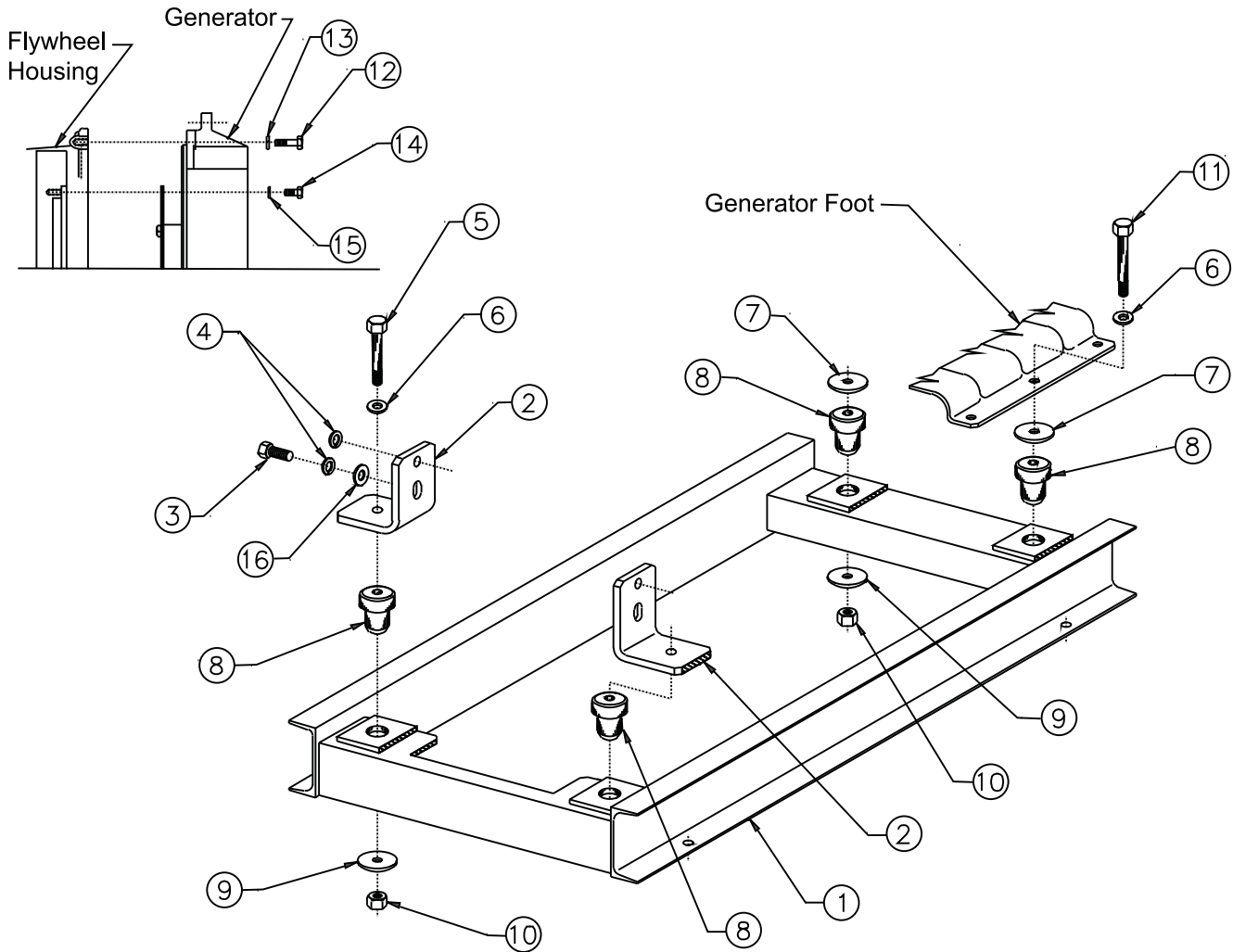


A-7894 & A-7895/ D-3012

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 39-88108 | 1 | Base Frame, Steel (316 Frame Generators) | - |
| | 39-88113 | 1 | Base Frame, Aluminum (316 Frame Generators) | - |
| | 39-88109 | 1 | Base Frame, Steel (320 Frame Generators) | - |
| | 39-88407 | 1 | Base Frame, Aluminum (320 Frame Generators) | - |
| 2 | 23-88104 | 2 | Bracket | - |
| 3 | 12-59100 | 4 | CapscREW, Hex Head M14 x 1.5 x 30 mm S/S | - |
| 4 | 15-09402 | 4 | Lock Washer M14 S/S | - |
| 5 | 33-85402 | 2 | Platform Mount, 220 lb. (316 Frame Generators) | - |
| | 33-83106 | 2 | Platform Mount, 310 lb. (320 Frame Generators) | - |
| 6 | 33-85402 | 2 | Platform Mount, 220 lb. (316 Frame Generators) | - |
| | 33-83106 | 2 | Platform Mount, 310 lb. (320 Frame Generators) | - |
| 7 | 12-00776 | 16 | CapscREW, Hex Head M8 x 1.25 x 20 mm S/S | - |
| 8 | 12-00705 | 16 | Lock Washer, Helical M8 S/S | - |
| 9 | 15-00020 | 8 | Snubbing Washer | - |
| 10 | 12-00501 | 2 | CapscREW, Hex Head 1/2-13 x 3" S/S (316 Frame Generators) | - |
| | 12-00503 | 2 | CapscREW, Hex Head 1/2-13 x 3-3/4" S/S (320 Frame Generators) | - |
| 11 | 12-00501 | 2 | CapscREW, Hex Head 1/2-13 x 3" S/S (316 Frame Generators) | - |
| | 12-00503 | 2 | CapscREW, Hex Head 1/2-13 x 3-3/4" S/S (320 Frame Generators) | - |
| 12 | 15-00505 | 4 | Flat Washer 1/2 S/S | - |
| 13 | 14-00501 | 4 | Hex Nut, Nylock 1/2-13 S/S | - |
| 14 | 12-00313 | 12 | CapscREW, Hex Head 3/8-16 x 1-1/4" | - |
| 15 | 15-00302 | 12 | Lock Washer, Helical 3/8 | - |
| 16 | 12-00214 | 8 | CapscREW, Hex Head 5/16-18 x 1-1/2" | - |
| 17 | 15-00202 | 8 | Lock Washer, Helical 5/16 | - |

Base Frame Assembly M16C & M20CL

184 Frame Generators

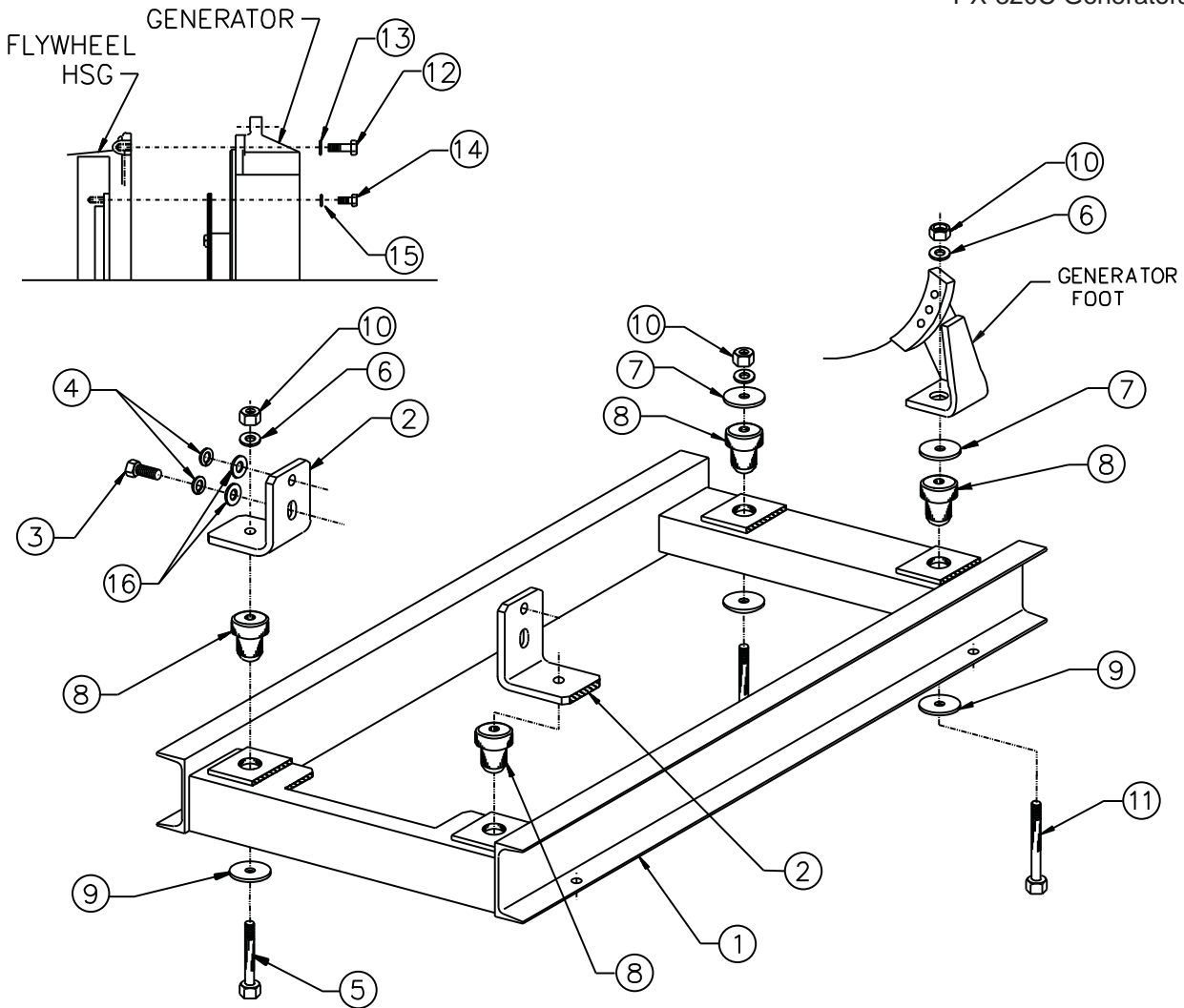


A-6427/ D-2458

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---------------------------------------|---------------|
| 1 | 39-88106 | 1 | Base Frame | - |
| 2 | 23-88103 | 2 | Bracket | - |
| 3 | 12-01100 | 4 | Cap screw, Hex Head M14 x 1.5 x 30 mm | - |
| 4 | 15-01402 | 4 | Lock Washer M14 | - |
| 5 | 12-00552 | 2 | Cap screw, Hex Head 1/2- 13 x 3- 1/2" | - |
| 6 | 15-00504 | 4 | Flat Washer 1/2 SAE | - |
| 7 | 15-00016 | 2 | Head Washer | - |
| 8 | 33-82254 | 4 | Mount | - |
| 9 | 15-00026 | 4 | Tail Washer | - |
| 10 | 14-00512 | 4 | Hex Nut, Nylock 1/2-13 | - |
| 11 | 12-00550 | 2 | Cap screw, Hex Head 1/2- 13 x 3 | - |
| 12 | 12-00313 | 8 | Cap screw, Hex Head 3/8- 16 x 1- 1/4 | - |
| 13 | 15-00302 | 8 | Lock Washer 3/8 | - |
| 14 | 12-00209 | 8 | Cap screw, Hex Head 5/16-18 x 3/4 | - |
| 15 | 15-00202 | 8 | Lock Washer 5/16 | - |
| 16 | 15-01410 | 2 | Flat Washer M14 | - |

Base Frame Assembly M20CR

PX-320C Generators

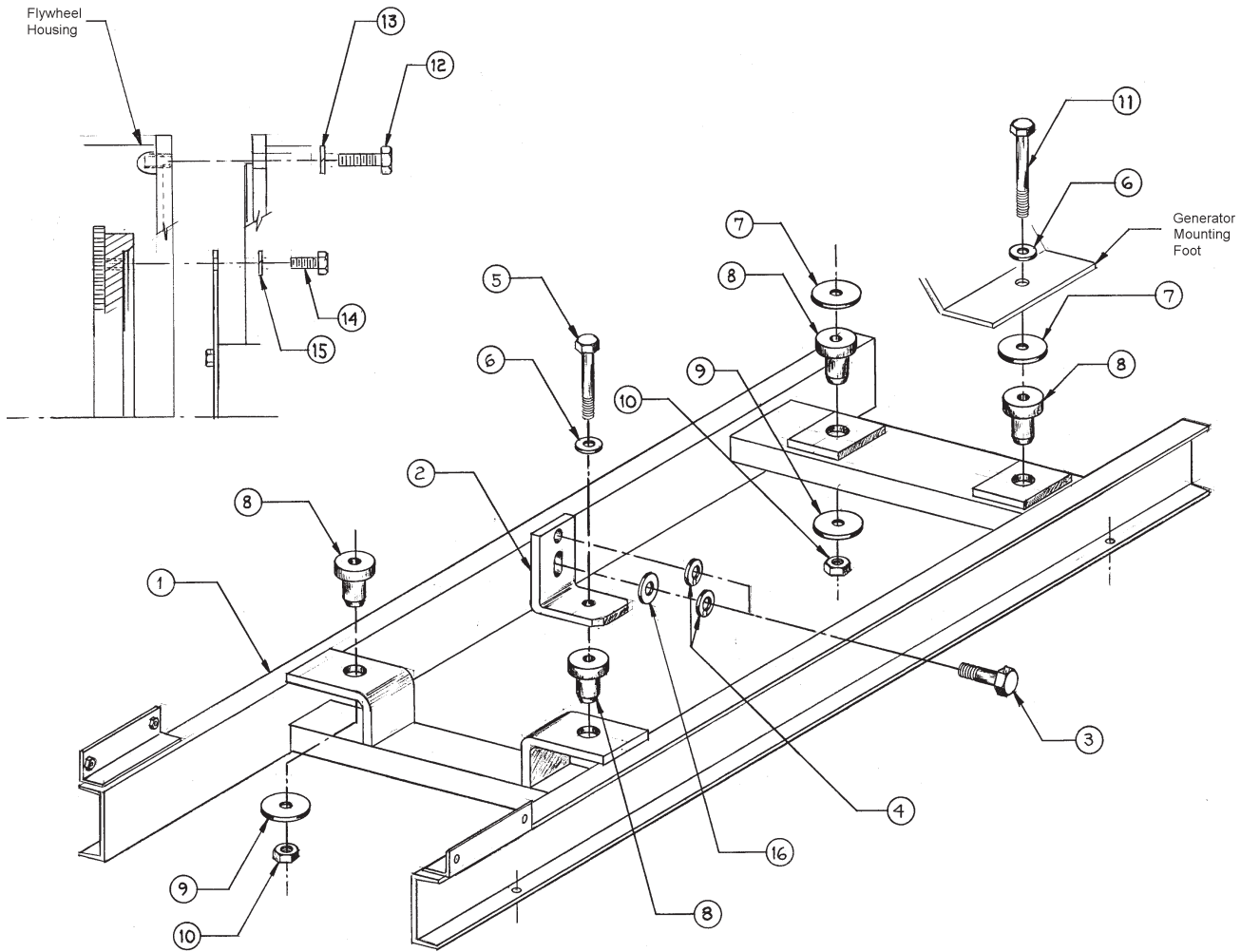


A-9412/ D-3649

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 39-88408 | 1 | Base Frame | - |
| 2 | 23-88104 | 2 | Bracket | - |
| 3 | 12-59100 | 4 | Capscrew, Hex Head M14 x 1.5 x 30 mm S/S | - |
| 4 | 15-09402 | 4 | Lock Washer M14 S/S | - |
| 5 | 12-09922 | 2 | Capscrew, Hex Head M12 x 1.75 x 90 mm S/S | - |
| 6 | 15-09007 | 4 | Flat Washer M12 S/S | - |
| 7 | 15-00016 | 2 | Head Washer | - |
| 8 | 33-82254 | 4 | Mount, Centerbonded 300 lbs. | - |
| 9 | 15-00026 | 4 | Tail Washer | - |
| 10 | 14-09830 | 4 | Hex Nut, Nylock M12 x 1.75 S/S | - |
| 11 | 12-95501 | 2 | Capscrew, Hex Head M12 x 1.75 x 75 mm S/S | - |
| 12 | 12-00313 | 8 | Capscrew, Hex Head 3/8- 16 x 1- 1/4 | - |
| 13 | 15-00302 | 8 | Lock Washer 3/8 | - |
| 14 | 12-00214 | 8 | Capscrew, Hex Head 5/16-18 x 1-1/2" | - |
| 15 | 15-00202 | 8 | Lock Washer 5/16 | - |
| 16 | 15-09401 | 4 | Flat Washer M14 | - |

Base Frame Assembly: NL844 & NL844L

184 Frame Generators

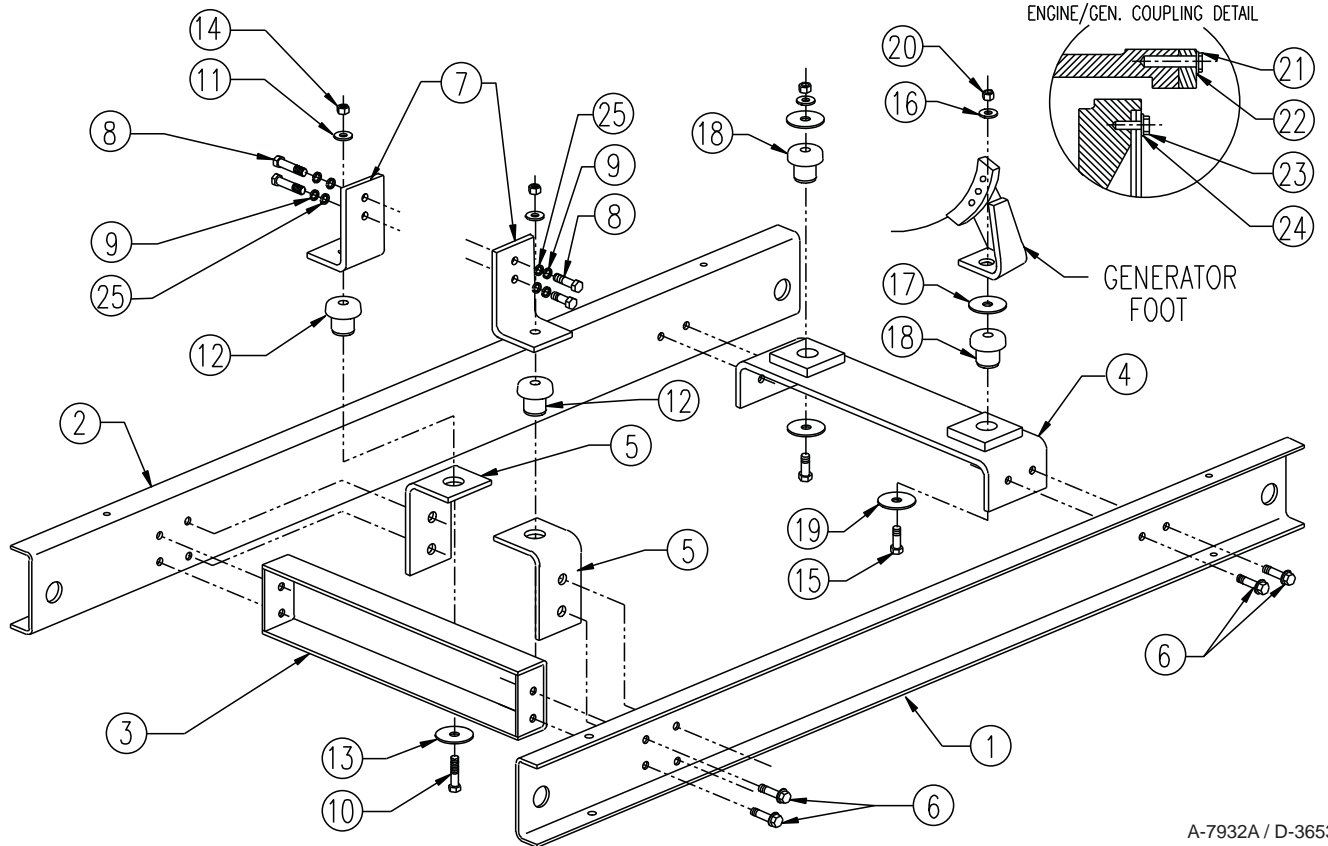


A-6383, A-6307 / D-2452

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--------------------------------------|---------------|
| 1 | 39-88104 | 1 | Base Frame (BC184 frame generator) | - |
| | 39-88103 | 1 | Base Frame (UC184 frame generator) | - |
| 2 | 23-88103 | 2 | Bracket | - |
| 3 | 12-01100 | 4 | Capscrew, Hex Head M14 x 1.5 x 30 mm | - |
| 4 | 15-01402 | 4 | Lock Washer M14 | - |
| 5 | 12-00552 | 2 | Capscrew, Hex Head 1/2-13 x 3-1/2" | - |
| 6 | 15-00504 | 4 | Flat Washer 1/2" SAE | - |
| 7 | 15-00016 | 2 | Head Washer | - |
| 8 | 33-82254 | 4 | Mount | - |
| 9 | 15-00026 | 4 | Tail Washer | - |
| 10 | 14-00512 | 4 | Hex Nut, Nylock 1/2-13 | - |
| 11 | 12-00550 | 2 | Capscrew, Hex Head 1/2-13 x 3" | - |
| 12 | 12-00313 | 8 | Capscrew, Hex Head 3/8-16 x 1-1/4" | - |
| 13 | 15-00302 | 8 | Lock Washer 3/8 | - |
| 14 | 12-00209 | 8 | Capscrew, Hex Head 5/16-18 x 3/4" | - |
| 15 | 15-00202 | 8 | Lock Washer 5/16 | - |
| 16 | 15-01401 | 2 | Flat Washer M14 | - |

Base Frame Assembly

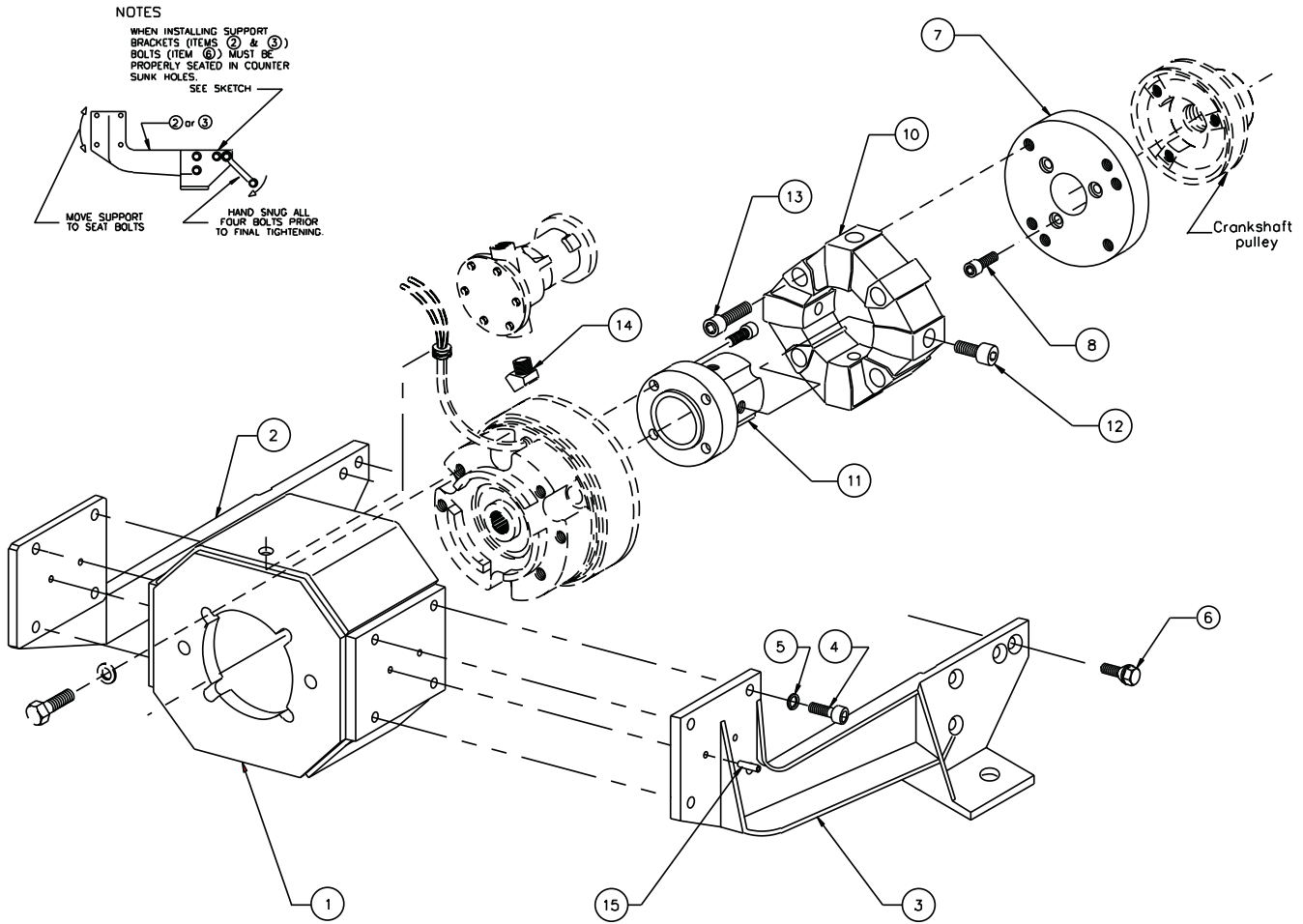
Industrial Application - NL844LK with PX-320K



A-7932A / D-3653

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 39-88411 | 1 | Side Rail, Left Hand | - |
| 2 | 39-88412 | 1 | Side Rail, Right Hand | - |
| 3 | 39-88413 | 1 | Cross Member Forward | - |
| 4 | 39-68406 | 1 | Generator Support | - |
| 5 | 23-88406 | 2 | Bracket, Lower Engine Support | - |
| 6 | 01435-01020 | 12 | Capscrew, Hex Head Flanged M10 x 1.5 x 20 mm | - |
| 7 | 23-88104 | 2 | Bracket, Front Engine Mounting | - |
| 8 | 12-01100 | 4 | Capscrew, Hex Head M14 x 1.5 x 30 mm | - |
| 9 | 15-01402 | 4 | Lock Washer M14 | - |
| 10 | 12-00817 | 2 | Capscrew, Hex Head M10 x 1.5 x 55 mm | - |
| 11 | 15-00805 | 2 | Flat Washer M10 | - |
| 12 | 33-83151 | 2 | Mount, Centerbonded 200 lb. | - |
| 13 | 15-00014 | 2 | Head/ Tail Washer | - |
| 14 | 14-00812 | 2 | Hex Nut, Nylock M10 x 1.5 | - |
| 15 | 12-00922 | 2 | Capscrew, Hex Head M12 x 1.75 x 90 mm | - |
| 16 | 15-00007 | 2 | Flat Washer M12 | - |
| 17 | 15-00016 | 2 | Head Washer | - |
| 18 | 33-82254 | 2 | Mount, Centerbonded 300 lb. | - |
| 19 | 15-00026 | 2 | Tail Washer | - |
| 20 | 14-00830 | 2 | Hex Nut, Nylock | - |
| 21 | 12-00313 | 12 | Capscrew, Hex Head 3/8- 16 x 1- 1/4" | - |
| 22 | 15-00302 | 12 | Lock Washer | - |
| 23 | 12-00214 | 8 | Capscrew, Hex Head 5/16- 18 x 1- 1/2" | - |
| 24 | 15-00202 | 8 | Lock Washer | - |
| 25 | 15-01401 | 2 | Flat Washer | - |

PTO Adapter Parts M844- 844L

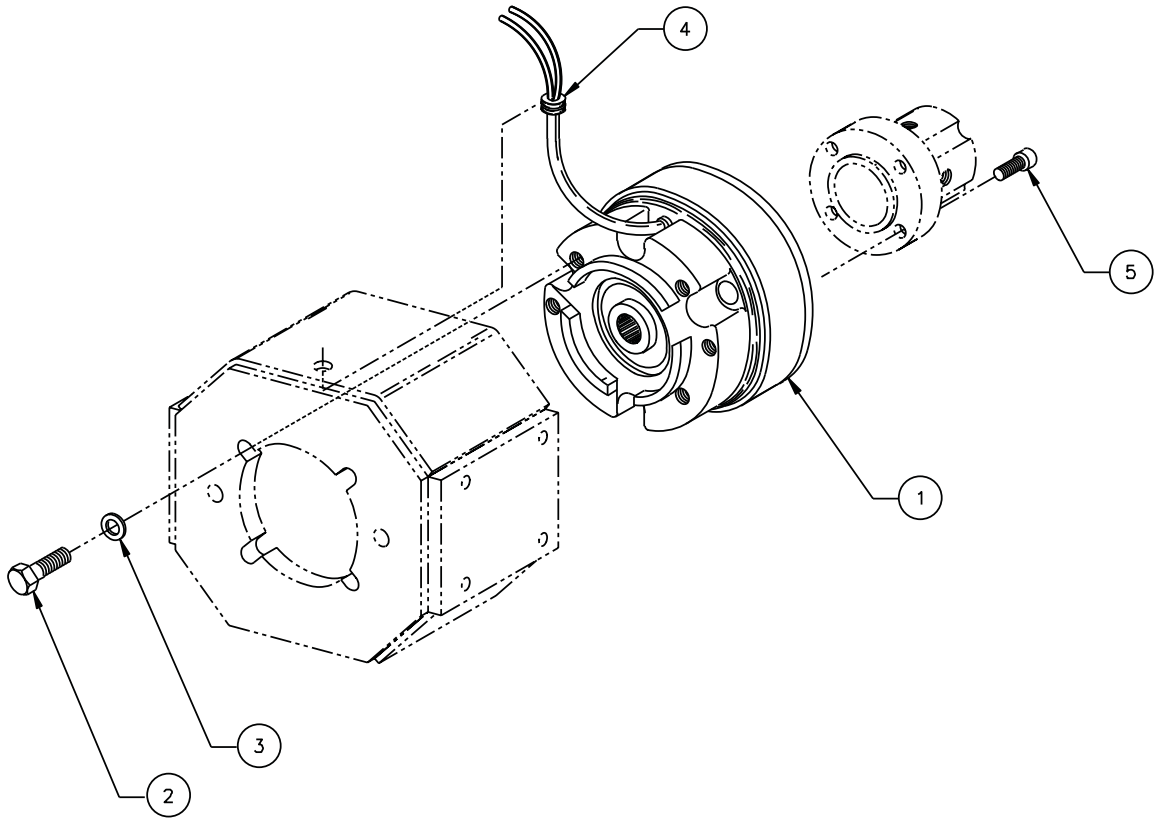


A-6560C / D-3154

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 10-65401 | 1 | PTO Clutch Housing | - |
| 2 | 23-68101 | 1 | PTO Support Bracket, Right Hand | - |
| 3 | 23-68102 | 1 | PTO Support Bracket, Left Hand | - |
| 4 | 12-00831 | 8 | Capscrew, Hex Head M10 x 1.5 x 25 mm | - |
| 5 | 15-00804 | 8 | Wave Washer M10 | - |
| 6 | 12-68101 | 6 | Capscrew, Hex Head with Tapered Seat M14 x 1.5 x 30 mm | - |
| 7 | 31-68101 | 1 | PTO Drive Adapter | - |
| 8 | 12-20912 | 3 | Capscrew, Socket head M12 x 1.75 x 25 mm | - |
| 9 | 15-04802 | 3 | Lock Washer Hi-collar M12 | - |
| 10 | 34-65406 | 1 | Coupling Assembly | - |
| 11 | 34-65407 | 1 | Hub | - |
| 12 | 12-20920 | 4 | Capscrew, Socket Head M12 x 1.75 x 40 mm | - |
| 13 | 12-20914 | 4 | Capscrew, Socket Head M12 x 1.75 x 35 mm | - |
| 14 | 21-00128 | 1 | Street Elbow, Brass 1/2 NPT x 1/2 NPT | - |
| 15 | 32-60001 | 4 | Taper Pin #4 x 1" | - |

Electric Clutch

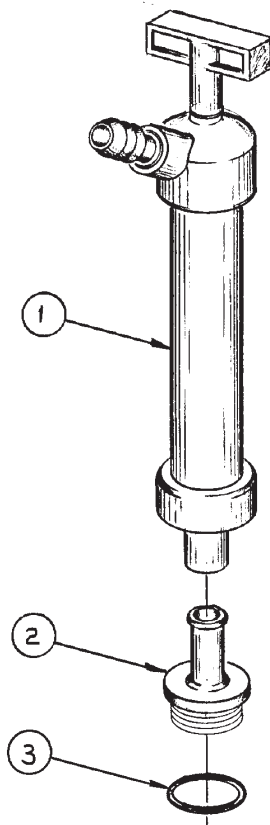
H-28 B-Spline 12 & 24 Volt



A-6291, A-6346 / C-3020

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|-------------------------------------|---------------|
| 1 | 34-60031 | 1 | Electric Clutch Assembly (12 Volt) | - |
| | 34-60032 | 1 | Electric Clutch Assembly (24 Volt) | - |
| 2 | 12-00513 | 4 | Capscrew, Hex Head 1/2- 13 x 1- 1/4 | - |
| 3 | 15-00007 | 4 | Flat Washer M12 | - |
| 4 | 00-61003 | 1 | Grommet | - |
| 5 | 12-63800 | 4 | Capscrew, Socket Head 3/8- 24 x 3/4 | - |

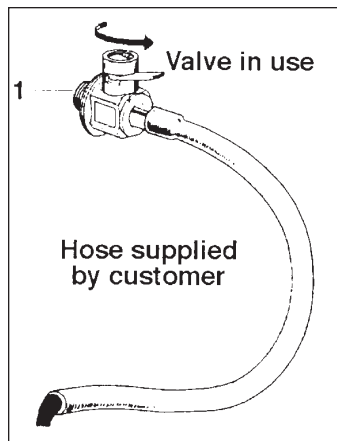
Oil Drain Kit: M844, M844L & M20CL



A-5024 / B-3990

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| •• | 34-70010 | 1 | Oil Drain Kit Complete (includes all keys) | - |
| 1 | 36-72002 | 1 | Hand Pump | - |
| 2 | 31-70001 | 1 | Adapter, Oil Drain | - |
| 3 | 16-70001 | 1 | O-ring | - |

Oil Drain Kit: NL844L

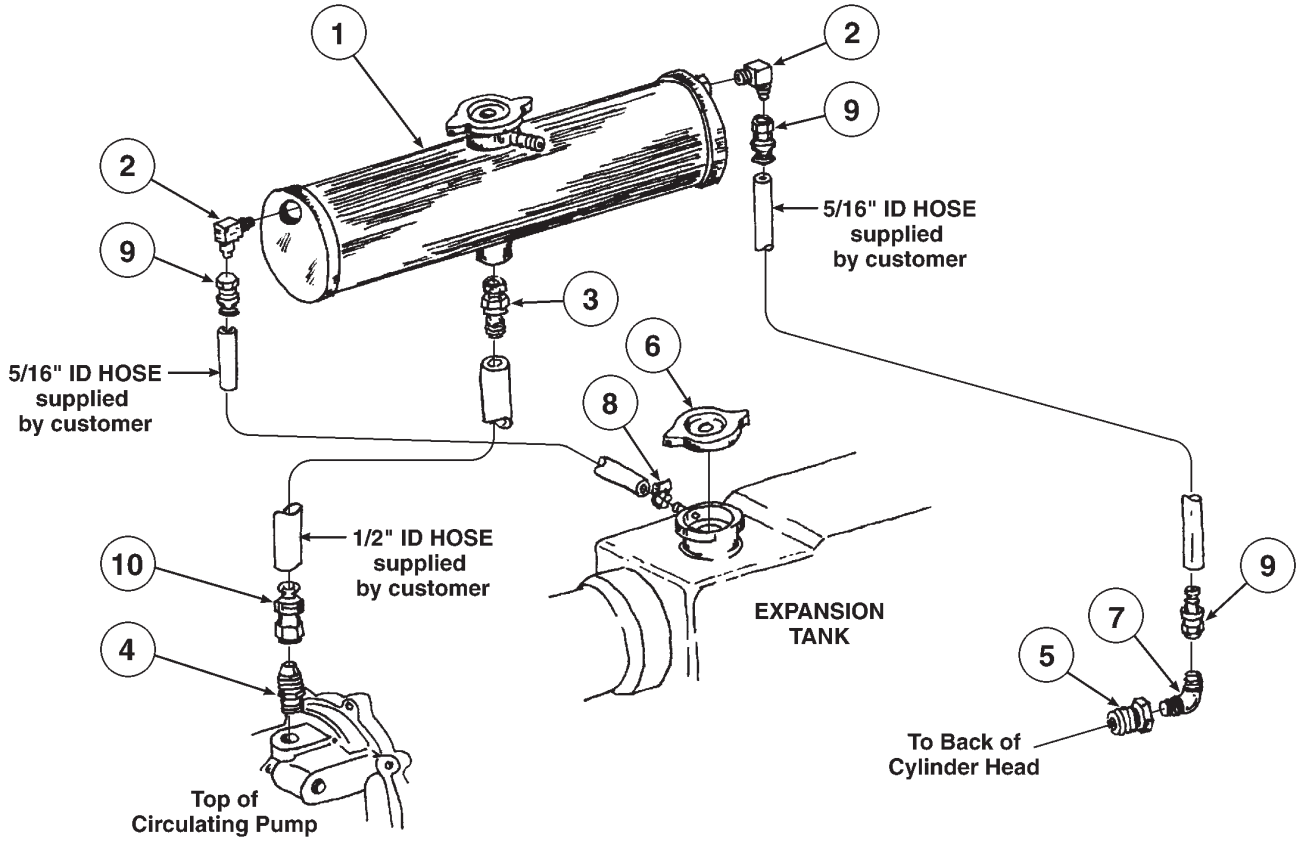


A-6480

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|-------------|---------------|
| 1 | 36-72003 | 1 | Drain Valve | - |

Remote Expansion Tank

Early Production

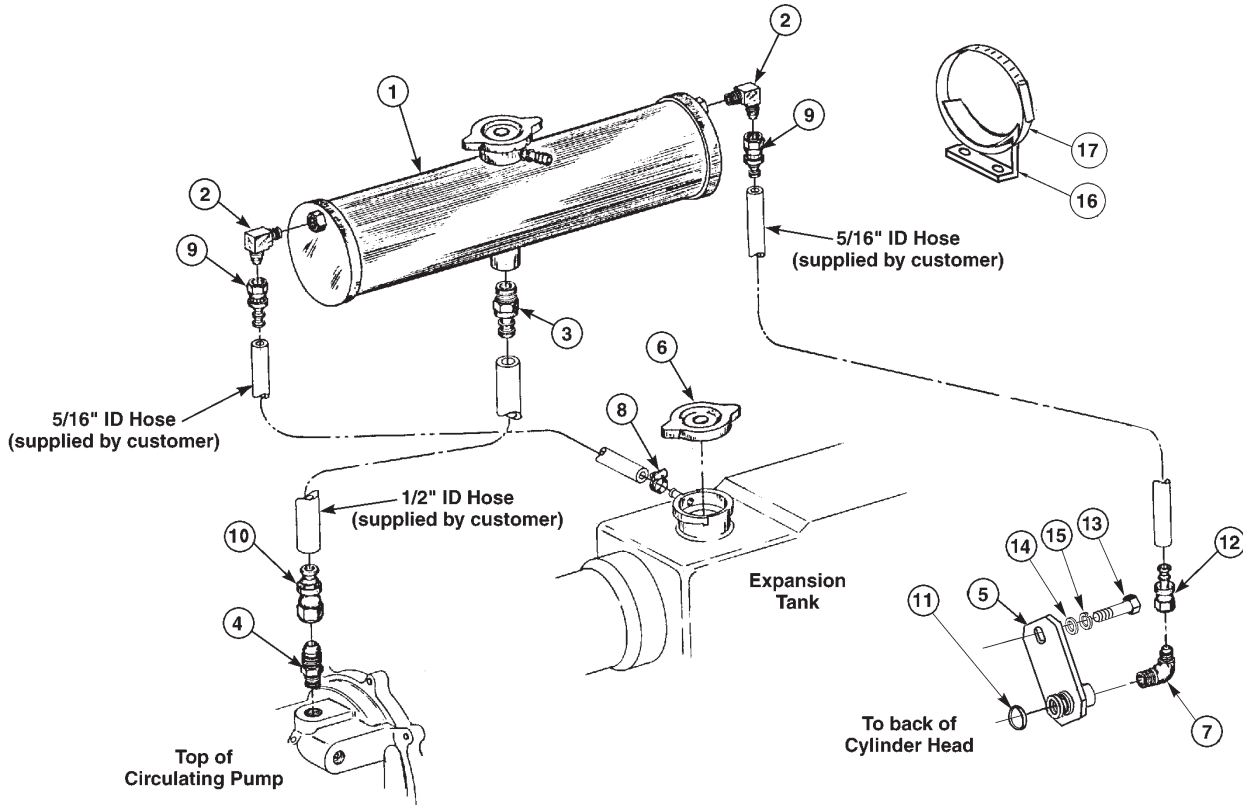


A-5931A / D-2345

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 10-12002 | 1 | Tank Assembly (includes Keys #11 - #12) | - |
| 2 | 21-52245 | 2 | Male Elbow, Brass 1/4 NPT x 5/16-45T | - |
| 3 | 21-51093 | 1 | Male Connector, Brass 1/2 NPT x 1/2 HB | - |
| 4 | 21-71093 | 1 | Male Connector, Brass 3/8 NPT x 1/2 HB | - |
| 5 | 21-65005 | 1 | Bushing, Steel 1" NPT x 3/8 NPT | - |
| 6 | 21-12008 | 1 | Filler Cap | - |
| 7 | 21-01013 | 1 | Male Elbow, 90° Brass 3/8 NPT x 5/16-45T | - |
| 8 | 19-00004 | 1 | Hose Clamp #4 | - |
| 9 | 21-71056 | 3 | Female Swivel, Brass 5/16 HB x 5/16-45T | - |
| 10 | 21-71042 | 1 | Female Swivel, Brass 1/2 HB x 1/2-45T | - |
| 11 | 23-75404 | 2 | Bracket, Tank Mtg. | - |
| 12 | 19-00064 | 2 | Hose Clamp | - |

Remote Expansion Tank

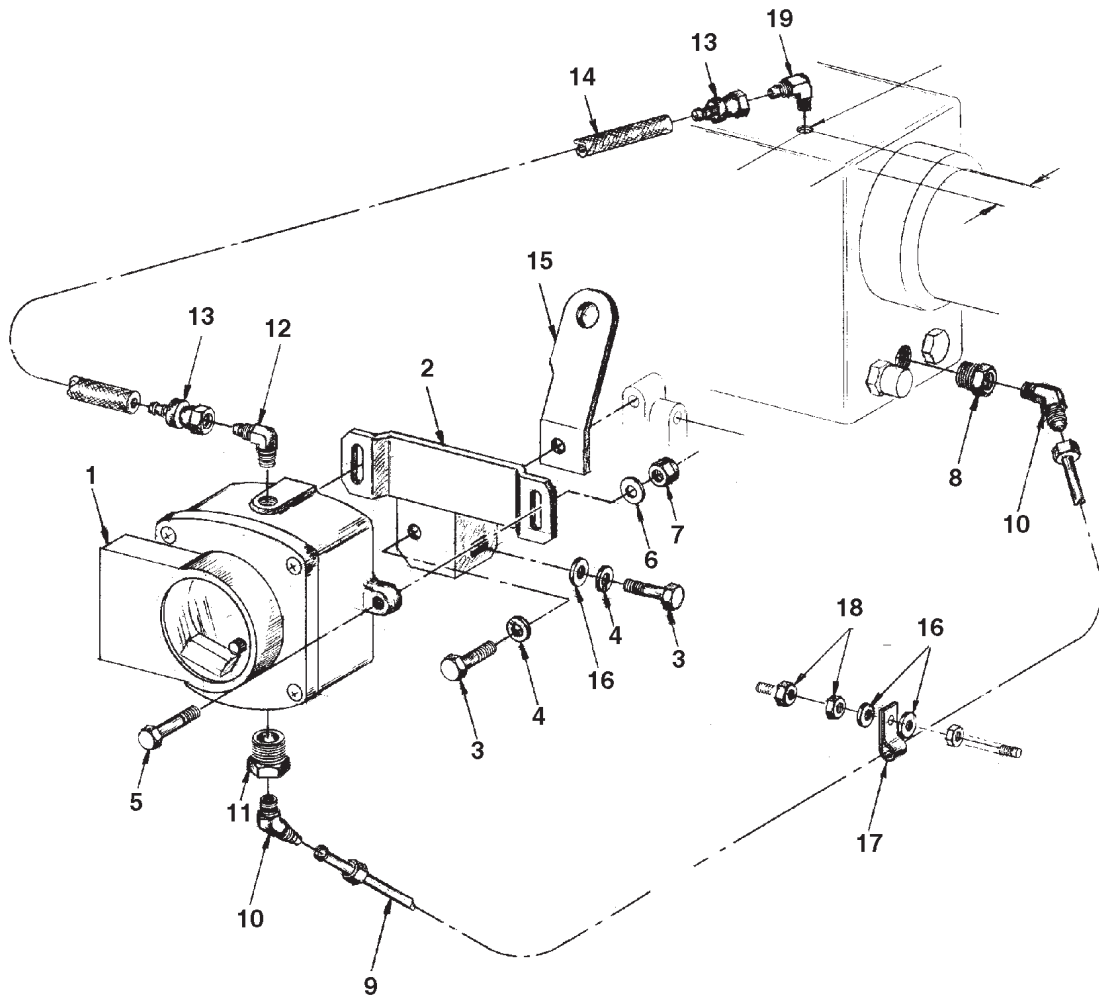
Late Production



A-7463/ D-2345

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|--|---------------|
| 1 | 10-12002 | 1 | Tank Assembly (includes keys #2, 11 - 12) | - |
| 2 | 21-52245 | 2 | Male Elbow, Brass 1/4 NPT x 5/16- 45T | - |
| 3 | 21-51093 | 1 | Male Connector, Brass 1/2 NPT x 1/2 HB | - |
| 4 | 21-71093 | 1 | Male Connector, Brass 3/8 NPT x 1/2 HB | - |
| 5 | 31-12001 | 1 | Port Adapter (requires #11) | - |
| 6 | 21-12008 | 1 | Filler Cap | - |
| 7 | 21-10030 | 1 | Male Elbow, 90° Brass 3/8 Port x 5/16- 37T | - |
| 8 | 19-00004 | 1 | Hose Clamp #4 | - |
| 9 | 21-71056 | 2 | Female Swivel, Brass 5/16 HB x 5/16- 45T | - |
| 10 | 21-71042 | 1 | Female Swivel, Brass 1/2 HB x 1/2- 45T | - |
| 11 | 16-90001 | 1 | O-ring | - |
| 12 | 21-70007 | 1 | Female Swivel, Brass 5/16 HB x 5/16- 37T | - |
| 13 | 12-00751 | 1 | Capscrew, Hex Head M8 x 1.25 x 16 mm | - |
| 14 | 21-00701 | 1 | Flat Washer M8 | - |
| 15 | 15-00702 | 1 | Lock Washer M8 | - |
| 16 | 23-75404 | 2 | Mounting Foot | - |
| 17 | 19-00064 | 2 | Hose Clamp #64 (for tank mounting) | - |

Low Water Level Switch/Gauge



A-5847 / C-2837

| KEY | PART NUMBER | QTY | DESCRIPTION | SERIAL NUMBER |
|-----|-------------|-----|---|---------------|
| 1 | 22-10003 | 1 | Water Level Switch / Gauge, Isolated Ground | - |
| 2 | 23-73106 | 1 | Bracket | - |
| 3 | 12-00712 | 2 | Capscrew, Hex Head M8 x 1.25 x 25 mm | - |
| 4 | 15-00702 | 2 | Lock Washer, Helical M8 | - |
| 5 | 12-00031 | 2 | Capscrew, Hex Head M6 x 1.0 x 25 mm | - |
| 6 | 15-00008 | 2 | Flat Washer M6 | - |
| 7 | 14-04803 | 2 | Hex Nut, Nylock M6 x 1.0 | - |
| 8 | 21-00010 | 1 | Bushing, Steel 3/8NPT x 1/4NPT | - |
| 9 | 27-13101 | 1 | Tube Assembly | - |
| 10 | 21-05404 | 1 | Male Elbow, 45° Steel 1/4NPT x 1/4-37T | - |
| 11 | 21-00135 | 1 | Bushing, Brass 1/2NPT x 1/4NPT | - |
| 12 | 21-71049 | 1 | Male Elbow, 90° Steel 1/4NPT x 1/4-37T | - |
| 13 | 31-80002 | 2 | Female Swivel, 1/4HB x 1/4-37T | - |
| 14 | 18-52205 | 1 | Hose 1/4"ID x 13" | - |
| 15 | 00-73146 | 1 | Lifting Eye | - |
| 16 | 15-00701 | 3 | Flat Washer M8 | - |
| 17 | 19-72251 | 1 | Adelle Clamp | - |
| 18 | 14-00711 | 2 | Hex Nut M8 x 1.25 | - |
| 19 | 21-71053 | 1 | Male Elbow 90° Steel 1/8NPT x 1/4-37T | - |



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